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INTERVENTO

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

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

LOTTO **3053/PN_2**

PROGETTO ESECUTIVO

TAV.	OGGETTO	DATA
TAB_14	TABULATI DI CALCOLO CIVICO 41 STATO DI PROGETTO	Settembre 2022
SCALA		N. DISEGNO

VERSIONE	DESCRIZIONE	DATA	REDATTO	VERIFICATO		APPROVATO
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TABULATI DI CALCOLO
CIVICO 41
STATO DI PROGETTO

Sommario

1 Risultati numerici 3
1.1 Sollecitazioni 3
1.2 Reazioni nodali 23
1.3 Pressioni massime sul terreno 757
1.4 Cedimenti fondazioni superficiali 764
1.5 Baricentri delle rigidezze 772
1.6 Risposta modale 772
1.7 Equilibrio globale forze 773
1.8 Risposta di spettro 774
1.9 Annotazioni solutore 775
1.10 Statistiche soluzione 775

1 Risultati numerici

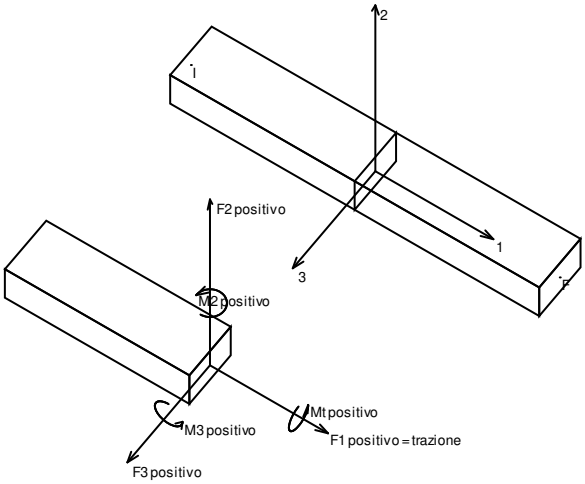
1.1 Sollecitazioni

1.1.1 Sollecitazioni aste

1.1.1.1 Convenzioni di segno aste

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

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



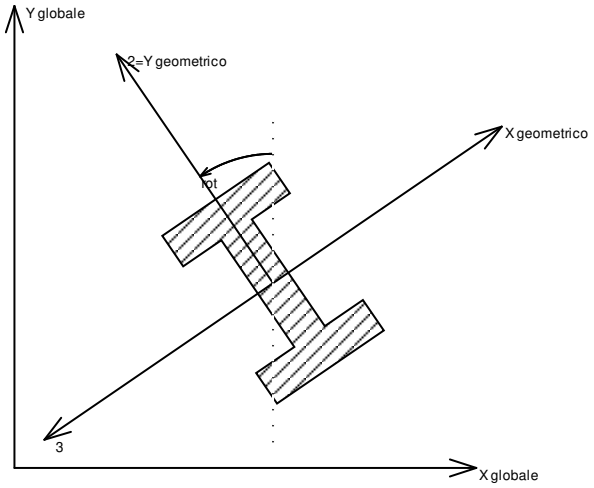
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

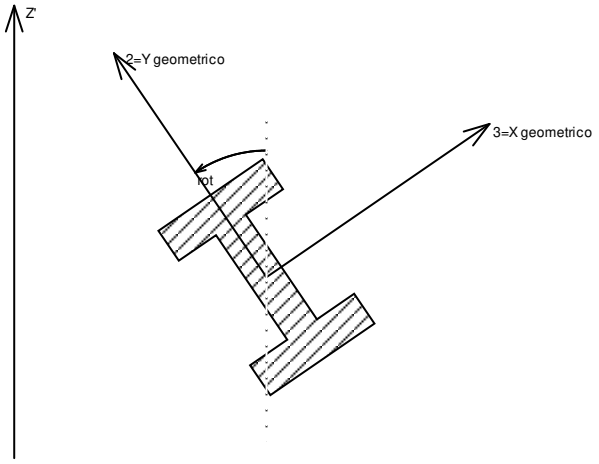
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

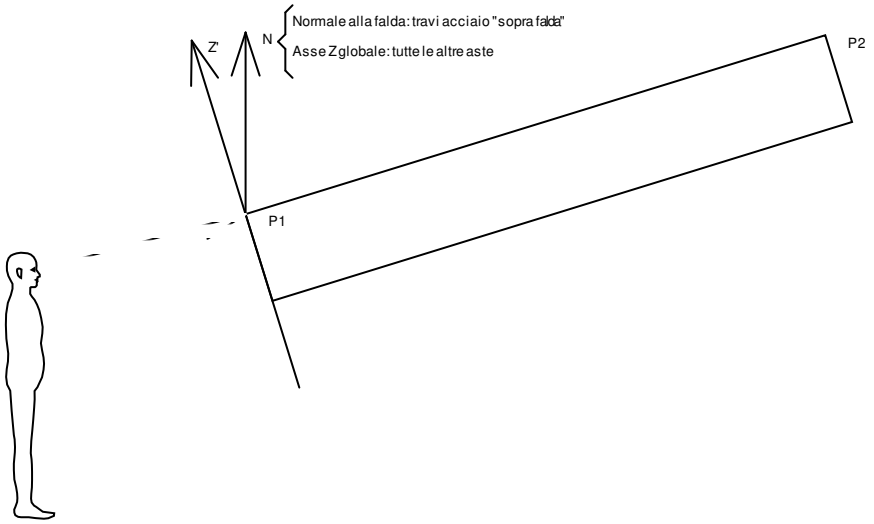
Sistema locale aste non verticali



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

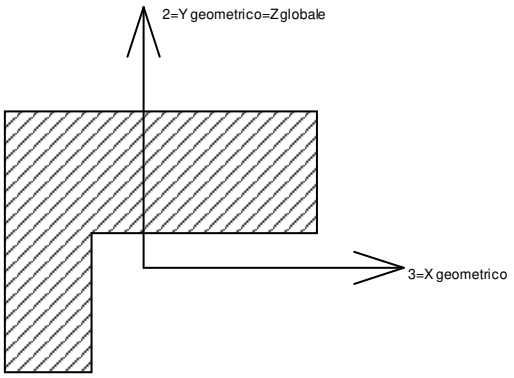
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.1.1.2 Sollecitazioni estreme aste

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

Sollecitazioni con sforzo normale (N) minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
949	SLV 16	1	-5.09	6.34	15.03	-763.78	-62.4	31.04	1.0144	-1.8105	40.8363
436	SLV 15	31	-6.52	-3.28	-1.56	-381.02	-4.14	-74.13	0.0311	-41.1054	-44.004
435	SLV 15	31	-6.52	-2.89	-1.56	-327.86	-10.42	-66.53	0.027	-30.0867	-31.3663
564	SLV 3	31	-14.65	6.23	-1.56	-309.19	123.17	25.63	-4.0895	5.5613	60.1644
719	SLV 3	1	-18.06	0.8	-1.56	-304.93	69.75	115.19	0.0528	-6.3893	26.1601

Sollecitazioni con sforzo normale (N) massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
949	SLV 1	1	-5.09	6.34	15.03	582.4	52.62	-21.01	-1.0884	1.2258	-31.5481
436	SLV 2	31	-6.52	-3.28	-1.56	201	-79.92	61.12	0.1777	28.5888	-6.5029
730	SLV X	31	-18.25	-3.28	-1.56	178.29	-17.39	-48.31	-0.0883	-22.1676	16.6778
653	SLV 15	1	-6.02	-2.89	-1.56	176.63	69.88	-66.47	-0.0103	-13.4639	-33.0208
711	SLV 3	31	-15.35	0.8	-1.56	166.32	-18.29	-15.66	0.3586	-9.7565	-25.061

Sollecitazioni con momento M2 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
855	SLV 2	1	-13.11	-0.33	-1.56	-115.97	-15.72	47.36	0.0436	-117.2319	-4.9569
315	SLV 15	1	-5.41	6.58	-1.56	-34.68	131.27	183.57	4.325	-106.3753	-52.7839
450	SLV 15	1	-5.16	0.8	-1.56	-287.55	-59.89	236.88	0.4138	-98.4777	-71.1944
561	SLU 84	1	-11.24	1.3	-1.56	-118.94	97.13	152.14	0.253	-90.8491	63.129
709	SLV 13	31	-14.11	-3.28	-1.56	23.08	-126.62	-83.25	-1.6244	-90.2003	22.4531

Sollecitazioni con momento M2 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
703	SLV 2	1	-17.05	-2.93	-1.56	-69.12	32.7	-187.03	-0.4655	135.7524	37.4355
663	SLV 13	31	-7.72	-2.93	-1.56	-112.75	-19.28	227.52	0.379	132.1617	36.8891
450	SLV 15	31	-6.02	0.8	-1.56	-298.51	-136.47	240.52	0.3765	106.8185	13.8246
683	SLV 2	31	-11.36	-3.28	-1.56	-69.13	-77.1	95.73	5.1153	106.3266	-5.8843
855	SLV X	1	-13.11	-0.33	-1.56	22.27	-0.07	-46.29	-0.021	94.788	-0.2419

Sollecitazioni con momento M3 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
367	SLV 3	1	-19.87	5.88	-1.56	-91.3	-66.89	-22.14	0.8163	3.8925	-157.5251
378	SLV 1	31	-19.37	4.85	-1.56	68.38	37.96	-8.99	-0.0985	-11.1993	-130.7487
437	SLV 15	1	-0.12	0.8	-1.56	20.74	-148.6	-2.19	0.0249	-4.2728	-121.6672
316	SLV 14	31	-5.41	5.81	-1.56	-39.9	37.09	155.24	-0.8781	28.9333	-120.582
290	SLV 4	31	-24.4	5.48	-1.56	-27.4	13.27	-30.09	9.5622	16.6256	-120.1335

Sollecitazioni con momento M3 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
619	SLV 15	1	-0.47	1.05	-1.56	-117.72	314.73	42.86	-3.9472	2.8059	235.6519
606	SLV 14	31	-0.47	1.05	-1.56	-150.31	-284.77	-51.38	4.3998	-35.7674	214.9577
555	SLU 84	31	-15.06	6.23	-1.56	-262.6	-244.16	-6.18	3.2725	21.0579	181.8053
299	SLV 4	31	-24.4	1.05	-1.56	-93.17	-221.76	29.29	-1.4764	17.2874	150.1543
577	SLU 83	1	-9.73	6.23	-1.56	-269.61	219.06	-8.69	-3.2546	42.2792	148.0731

1.1.2 Sollecitazioni gusci

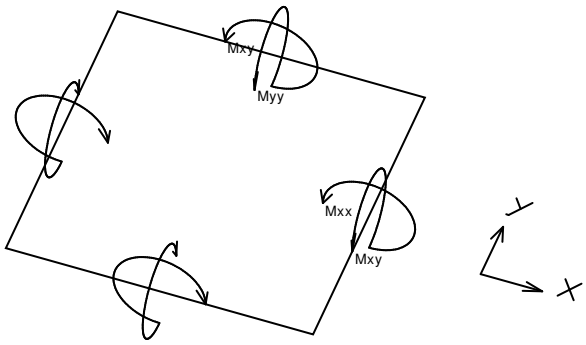
1.1.2.1 Convenzioni di segno gusci

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

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

Convenzione di segno per gusci non verticali

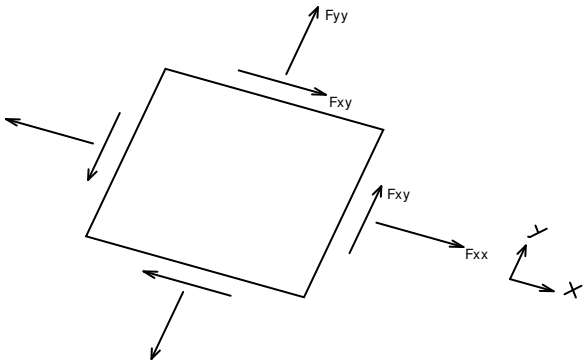
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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



Si definiscono:

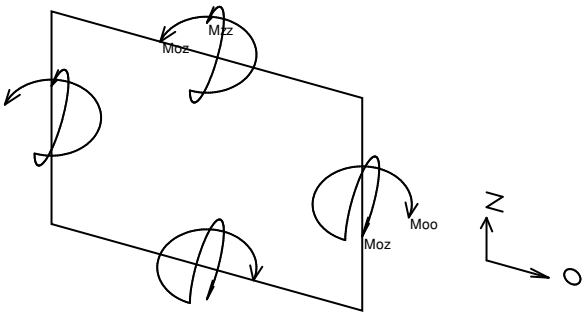
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

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

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

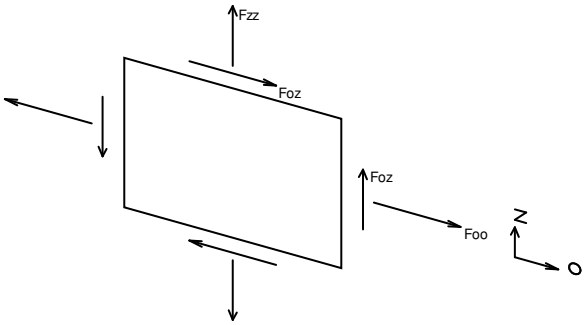
Convenzione di segno per gusci verticali

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



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

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



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

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

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

1.1.2.2 Sollecitazioni estreme gusci

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

Sollecitazioni con momento M11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16155	SLU 83	135	-487.34	54.7	485.68	93	-30	57	-1030	1089

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16136	SLU 83	212	-192.46	-42.77	34.88	-14	45	-39	884	26
16127	SLU 83	189	-176.85	-34.11	37.95	88	15	-100	751	19
16145	SLU 83	234	-128.73	-30.53	70.16	-51	24	6	739	-201
16154	SLV 14	281	-102.64	-19.61	-56.24	-63	17	32	546	745

Sollecitazioni con momento M11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16179	SLU 83	277	253.57	38.23	-11.23	-62	-58	-89	-473	425
16186	SLU 84	268	207.15	46.26	169.44	-513	-140	-410	-351	-599
16145	SLU 83	212	147.93	-42.4	69.72	-66	41	-33	736	-136
16154	SLU 83	234	140.61	-30.21	98.88	-100	9	-1	573	-306
16136	SLU 83	189	140.48	-39.35	69.89	-32	34	-99	884	-123

Sollecitazioni con momento M22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16356	SLV 3	623	25.02	28.94	-172.48	135	-11	-125	1	-446
16341	SLV 4	480	19.25	21.92	-140.97	150	15	-220	-33	-354
16360	SLV 14	2716	3.7	-20.15	-137.65	243	-130	-777	65	396
16151	SLV 14	284	-12.7	-23.68	-128.92	18	38	3	27	400
16346	SLV 4	480	3.89	-30.12	-128.77	-158	-220	-194	-47	-281

Sollecitazioni con momento M22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
16155	SLU 83	135	-487.34	54.7	485.68	93	-30	57	-1030	1089
16154	SLU 83	282	65.58	-37.75	200.8	-54	-8	15	-346	714
16356	SLV 14	623	-5.4	-33.16	194.3	57	50	-685	-60	497
16146	SLU 84	290	139.54	-30.85	179.29	-643	132	-346	-241	1118
16341	SLV 13	480	-6.68	-31.13	171.97	-300	154	-539	-11	446

Sollecitazioni con sforzo F11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17061	SLV 7	18410	-13.07	-0.37	-5.02	-4310	-12	-436	64	-11
17060	SLV 10	18410	12.28	-0.35	4.26	-4200	116	-433	60	10
17007	SLV 5	18419	10.88	-0.3	2.74	-3873	996	1026	-58	14
17008	SLV 12	18403	-10.07	-0.3	-2.25	-3514	-967	1013	-52	-8
16146	SLV 13	243	51.16	-7.13	-32.65	-1409	338	-64	-130	-151

Sollecitazioni con sforzo F11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17060	SLV 7	18410	-13.14	0.36	-5	4280	31	97	-64	-12
17061	SLV 10	18410	12.24	0.49	4.29	4213	184	304	-60	9
17007	SLV 12	18419	-10.21	0.29	-2.73	3553	-1314	-1363	54	-14
17008	SLV 5	18403	10.71	0.14	2.21	3534	766	-543	55	8
17063	SLV 10	18674	2.82	-0.92	1.65	1095	-224	-152	-6	5

Sollecitazioni con sforzo F22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17007	SLV 12	18419	-10.21	0.29	-2.73	3553	-1314	-1363	54	-14
17002	SLV 8	18929	0.44	-0.14	0.09	-225	-54	-1348	16	1
16977	SLV 1	19092	0.58	0	0.48	-77	1	-1334	-7	-2
3121	SLU 83	954	-0.05	0	-0.85	-65	0	-1277	0	-2
3087	SLV 16	955	0.14	0.15	0.56	44	-565	-1251	1	1

Sollecitazioni con sforzo F22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
17002	SLV 8	18925	-0.09	-0.02	0.16	539	78	1778	16	1
16977	SLV X	19092	-0.54	0	-0.14	53	-1	1277	6	1
17007	SLV 5	18672	-5.36	0.68	-1.75	1355	-525	1193	57	8
17008	SLV 8	18403	11.71	0.19	2.46	-3303	-939	1035	60	9
17001	SLV 5	18719	-0.05	-0.37	0.44	638	-460	986	3	-10

1.1.2.3 Sollecitazioni estreme gusci non verticali

***Shell**: elemento guscio a cui si riferiscono le sollecitazioni.*
***Ind**: indice del guscio.*
***Cont.**: contesto a cui si riferiscono le sollecitazioni.*
***N.br.**: nome breve della condizione o combinazione di carico.*
***Nodo**: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.*
***Ind**: indice del nodo.*
***Sollecitazione**: valori della sollecitazione.*

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

Sollecitazioni con momento Mxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16181	SLV 1	274	-128.88	-20.99	5.71	-7	-9	-14	286	24
16151	SLV 14	284	-127.43	27.05	-14.19	0	-38	20	-399	39
16182	SLV 1	273	-125.03	-15.62	-5.92	-21	21	-16	233	26
16163	SLU 83	184	-123.45	-100.65	-5.16	-17	49	27	452	-50
16152	SLV 14	283	-122.23	31.39	-15	3	-36	13	-471	54

Sollecitazioni con momento Mxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16155	SLU 83	135	483.93	-68.44	-485.6	57	31	92	-1103	-1015
16154	SLU 83	282	197.62	42.95	68.76	15	10	-53	-700	-374
16146	SLU 84	290	181.88	29.02	136.95	-358	-144	-631	-1127	-192
16186	SLU 84	268	160.76	-41.68	215.83	-383	127	-539	562	-408
16147	SLU 84	289	111.04	8.56	114.5	-301	-73	-58	-727	-166

Sollecitazioni con momento Myy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16155	SLU 83	135	483.93	-68.44	-485.6	57	31	92	-1103	-1015
16136	SLU 83	212	34.71	43.24	-192.28	-39	-45	-14	-28	884
16127	SLU 83	189	37.97	34.02	-176.87	-100	-15	88	-19	751
16145	SLU 83	234	69.47	32.67	-128.05	6	-23	-51	193	741
16154	SLV 14	281	-57.86	21.37	-101.03	33	-13	-65	-766	516

Sollecitazioni con momento Myy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16179	SLU 83	277	-14.58	-23.73	256.92	-83	59	-69	-450	-449
16186	SLU 84	268	160.76	-41.68	215.83	-383	127	-539	562	-408
16145	SLU 83	212	68.82	41.55	148.83	-32	-41	-67	128	738
16154	SLU 83	234	96.57	28.47	142.92	0	-5	-101	283	585
16136	SLU 83	189	69.73	39.21	140.64	-99	-35	-33	122	884

Sollecitazioni con sforzo Fxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16146	SLV 13	290	136.67	21.82	85.24	-691	-288	-1355	-890	-118
16186	SLV 2	268	124.95	-33.18	148.83	-612	218	-1047	468	-289
16147	SLV 13	289	80.28	7.34	69.3	-552	-148	-195	-602	-99
2232	SLV 2	4186	-0.52	0.31	-1.16	-389	51	-45	3	5
2371	SLV 1	3785	-0.05	-0.25	-0.01	-354	-15	-81	2	-1

Sollecitazioni con sforzo Fxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16186	SLV X	268	-21.01	6.6	-5.54	310	-115	617	-102	18
16155	SLV 15	135	432.64	-61.86	-368.65	263	-184	134	-990	-754
17033	SLV 15	18688	0.06	0	-0.01	228	0	-361	0	0
16156	SLV 15	133	9.22	-18.13	-17.23	221	-84	64	17	-63
16075	SLV 2	111	1.66	-0.86	-5.08	196	-241	730	-16	68

Sollecitazioni con sforzo Fyy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16146	SLV 13	243	-31.88	10.73	50.39	-96	-395	-1377	145	-137
16186	SLV 2	230	-27.81	-12.4	56.42	-147	326	-1133	9	-276
20	SLU 83	275	-0.33	0.54	-1.26	-243	44	-774	-2	16
7077	SLU 83	1143	-0.22	0.14	0.14	27	-3	-764	-1	-1
11014	SLV 1	4262	-4.21	0.11	0.22	-46	127	-734	-16	2

Sollecitazioni con sforzo Fyy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
16075	SLV 2	111	1.66	-0.86	-5.08	196	-241	730	-16	68
16186	SLV X	230	5.19	4.81	1.33	74	-171	662	-4	14
16146	SLV 4	243	-26.15	7.73	51.31	25	122	486	146	-156
17033	SLV 16	18663	-0.04	0	0.31	129	0	388	0	0
5622	SLV 6	3619	0.01	0.03	-7.6	-19	-1	384	0	39

1.1.2.4 Sollecitazioni estreme gusci verticali

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

Sollecitazioni con momento Moo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17060	SLV 3	18410	-39.67	1.02	-16.87	2373	39	-9	-194	-42
17061	SLV 3	18410	-39.56	-1.23	-16.96	-2395	21	-270	193	-38
17007	SLV 3	18411	-39.24	2.5	-15.38	-539	193	-182	-191	-10
17008	SLV 3	18411	-38.93	0.78	-14.69	327	178	25	192	-35
16346	SLV 15	480	-33.36	35.68	150.38	-90	-264	-393	-1	314

Sollecitazioni con momento Moo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17060	SLV 14	18410	38.82	-1.01	16.13	-2293	108	-327	190	40
17061	SLV 14	18410	38.73	1.35	16.23	2299	150	137	-189	36
17007	SLV 14	18411	38.57	-2.43	15.38	-243	83	-121	187	10
17008	SLV 14	18411	38.31	-0.91	14.77	149	87	-38	-189	36
16356	SLV 1	623	25.71	27.18	-165.05	178	-29	-87	-2	-424

Sollecitazioni con momento Mzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16356	SLV 3	623	25.02	28.94	-172.48	135	-11	-125	1	-446
16341	SLV 4	480	19.25	21.92	-140.97	150	15	-220	-33	-354
16360	SLV 14	2716	3.7	-20.15	-137.65	243	-130	-777	65	396
16346	SLV 4	480	3.89	-30.12	-128.77	-158	-220	-194	-47	-281
16310	SLV 15	2699	24.18	-7.66	-79.49	-71	-21	-156	-53	222

Sollecitazioni con momento Mzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
16356	SLV 14	623	-5.4	-33.16	194.3	57	50	-685	-60	497
16341	SLV 13	480	-6.68	-31.13	171.97	-300	154	-539	-11	446
16346	SLV 13	480	-31.71	36.14	152.42	-160	-275	-462	3	319
16795	SLV 7	582	-8.82	4.26	65.7	310	13	-39	-184	-150
16794	SLV 7	582	-5.27	16.92	59.42	93	-41	-34	-34	-136

Sollecitazioni con sforzo Foo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17061	SLV 7	18410	-13.07	-0.37	-5.02	-4310	-12	-436	64	-11
17060	SLV 10	18410	12.28	-0.35	4.26	-4200	116	-433	60	10
17007	SLV 5	18419	10.88	-0.3	2.74	-3873	996	1026	-58	14
17008	SLV 12	18403	-10.07	-0.3	-2.25	-3514	-967	1013	-52	-8
17062	SLV 10	18671	2.88	1.13	1.68	-1131	-210	61	7	5

Sollecitazioni con sforzo Foo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17060	SLV 7	18410	-13.14	0.36	-5	4280	31	97	-64	-12
17061	SLV 10	18410	12.24	0.49	4.29	4213	184	304	-60	9
17007	SLV 12	18419	-10.21	0.29	-2.73	3553	-1314	-1363	54	-14
17008	SLV 5	18403	10.71	0.14	2.21	3534	766	-543	55	8

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17063	SLV 10	18674	2.82	-0.92	1.65	1095	-224	-152	-6	5

Sollecitazioni con sforzo Fzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17007	SLV 12	18419	-10.21	0.29	-2.73	3553	-1314	-1363	54	-14
17002	SLV 8	18929	0.44	-0.14	0.09	-225	-54	-1348	16	1
16977	SLV 1	19092	0.58	0	0.48	-77	1	-1334	-7	-2
3121	SLU 83	954	-0.05	0	-0.85	-65	0	-1277	0	-2
3087	SLV 16	955	-0.14	0.15	-0.56	44	565	-1251	1	-1

Sollecitazioni con sforzo Fzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
17002	SLV 8	18925	-0.09	-0.02	0.16	539	78	1778	16	1
16977	SLV X	19092	-0.54	0	-0.14	53	-1	1277	6	1
17007	SLV 5	18672	-5.36	0.68	-1.75	1355	-525	1193	57	8
17008	SLV 8	18403	11.71	0.19	2.46	-3303	-939	1035	60	9
17001	SLV 5	18719	-0.05	-0.37	0.44	638	-460	986	3	-10

1.1.3 Sollecitazioni gusci armati

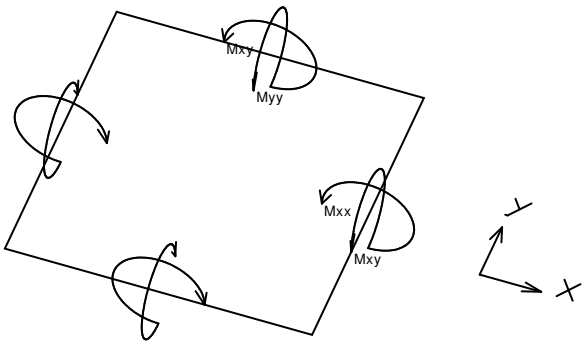
1.1.3.1 Convenzioni di segno gusci

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

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

Convenzione di segno per gusci non verticali

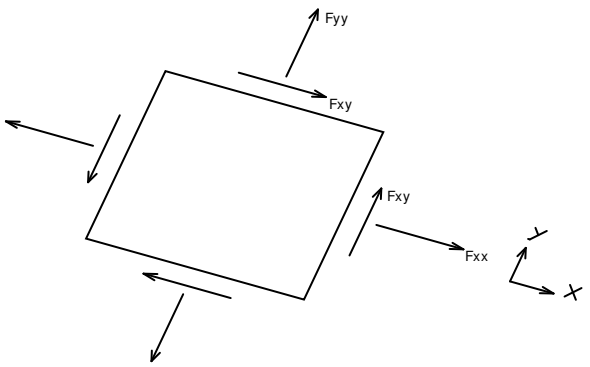
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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



Si definiscono:

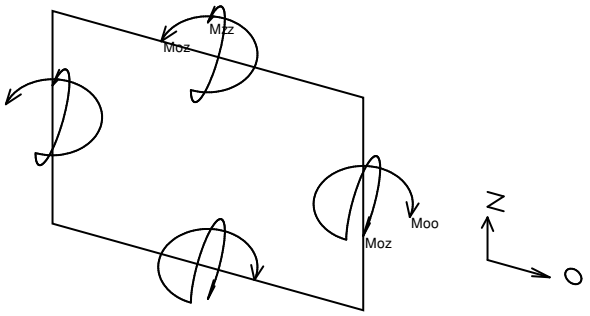
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

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

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

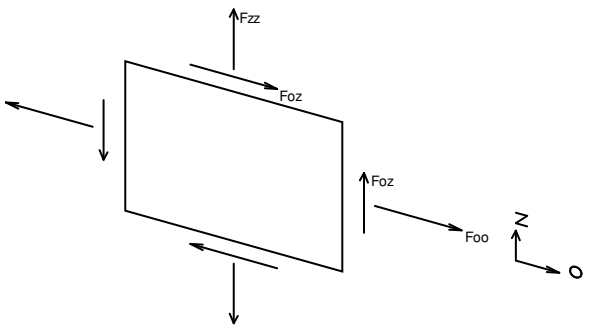
Convenzione di segno per gusci verticali

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



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

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



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

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

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

1.1.4 Sollecitazioni gusci muratura

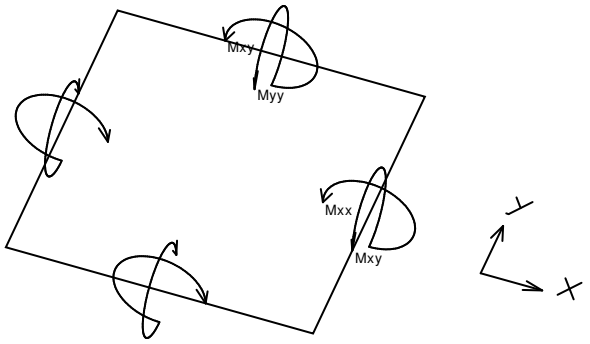
1.1.4.1 Convenzioni di segno gusci muratura

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

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

Convenzione di segno per gusci non verticali

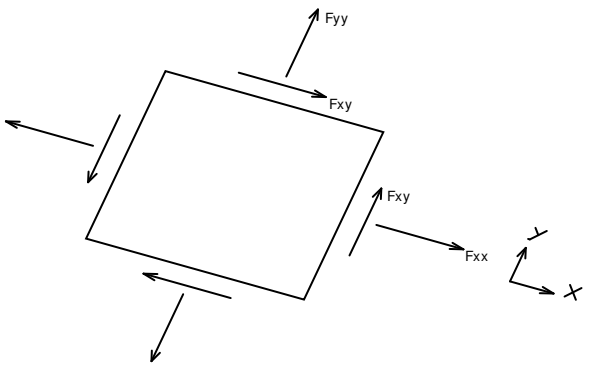
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione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



Si definiscono:

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

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

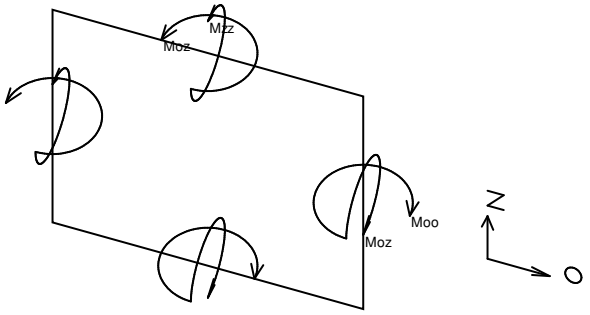


Si definiscono:

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

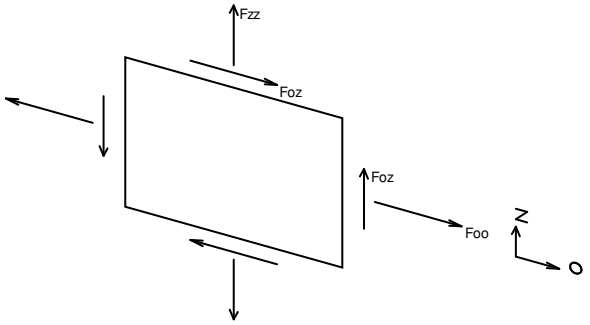
Convenzione di segno per gusci verticali

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



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

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



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

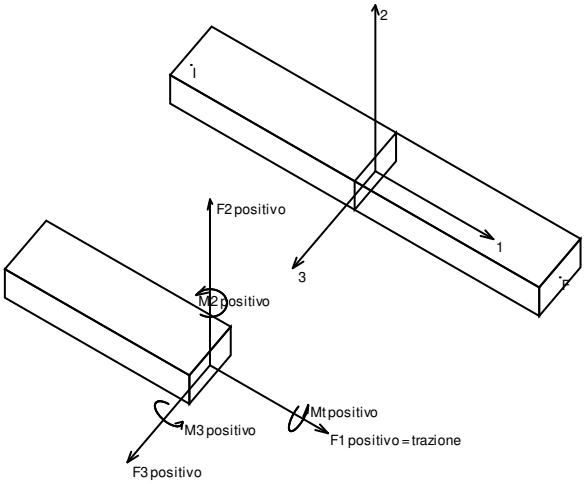
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia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

1.1.5 Sollecitazioni aste in muratura

1.1.5.1 Convenzioni di segno aste

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

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



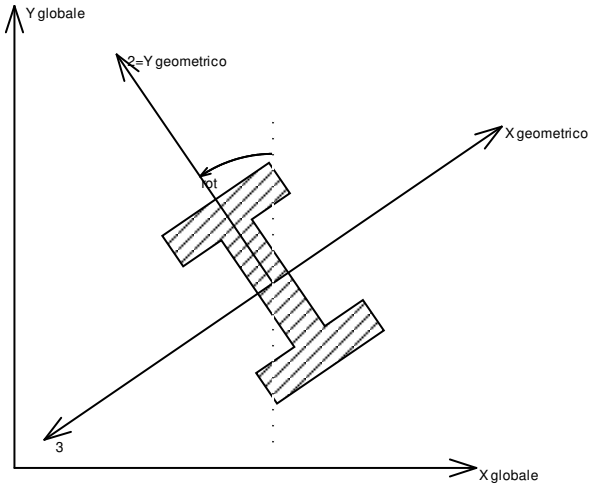
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

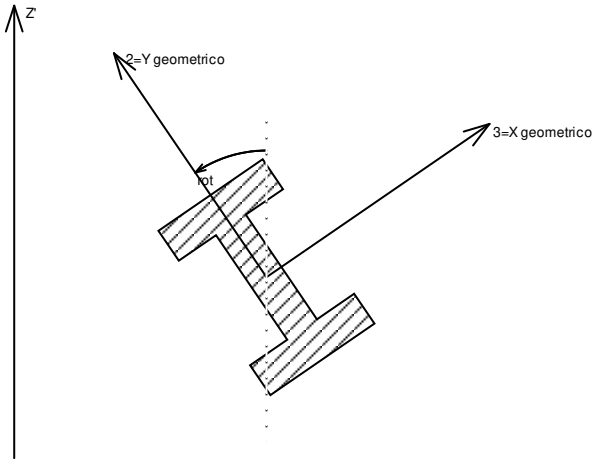
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

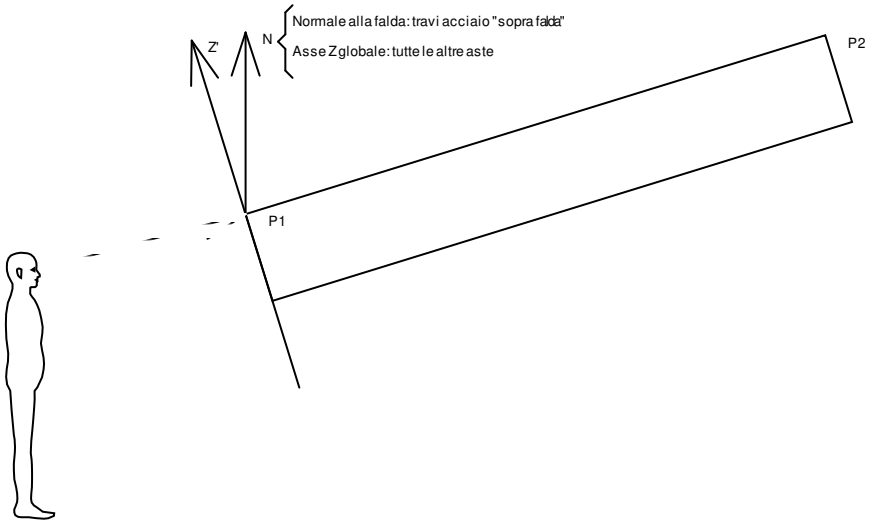
Sistema locale aste non verticali



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

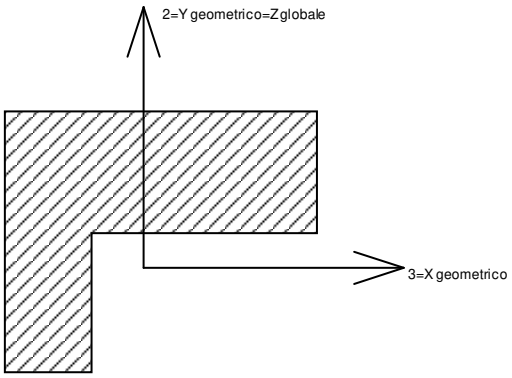
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



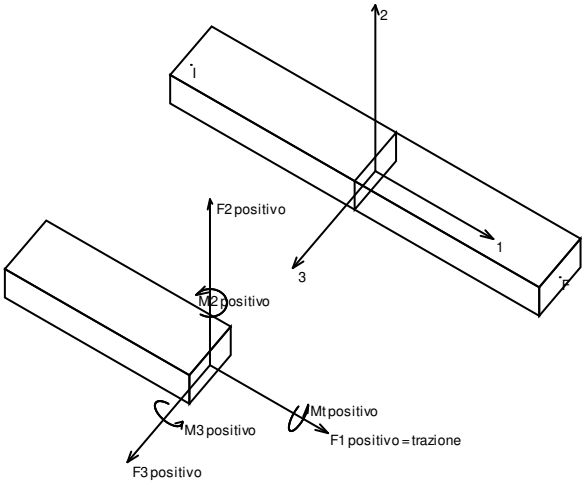
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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

1.1.6 Sollecitazioni aste in muratura FRCM

1.1.6.1 Convenzioni di segno aste

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

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



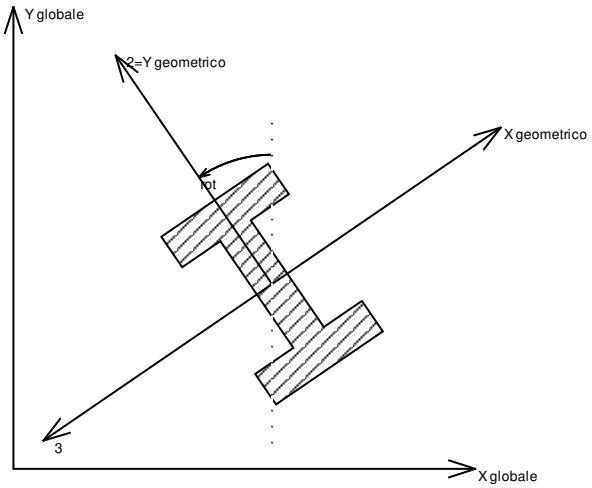
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

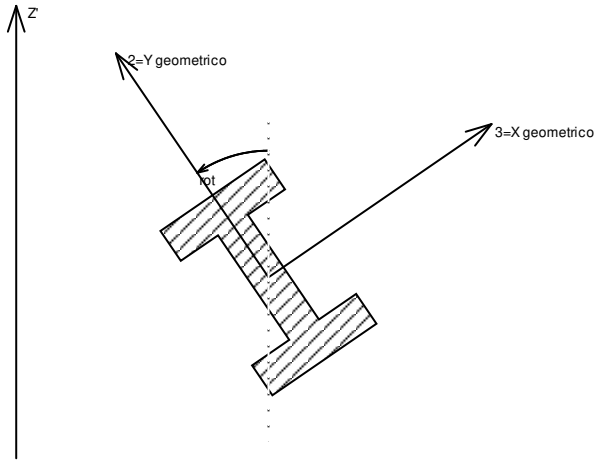
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

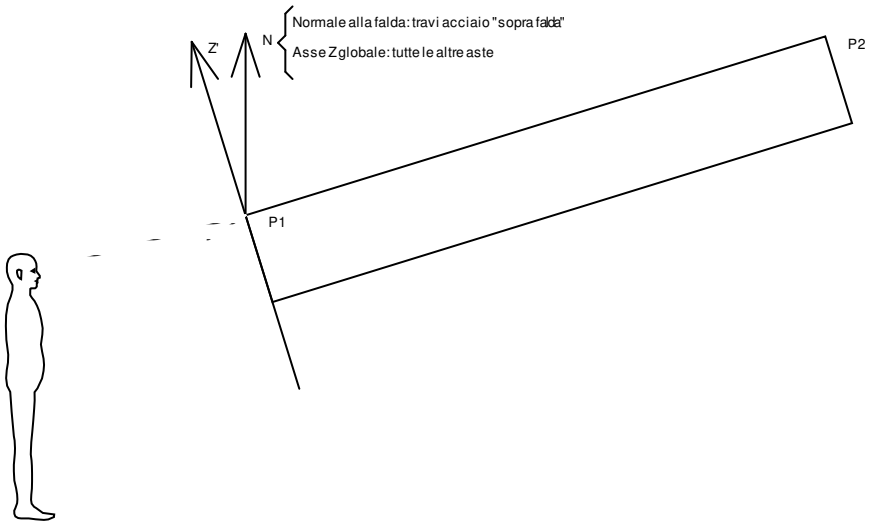
Sistema locale aste non verticali



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

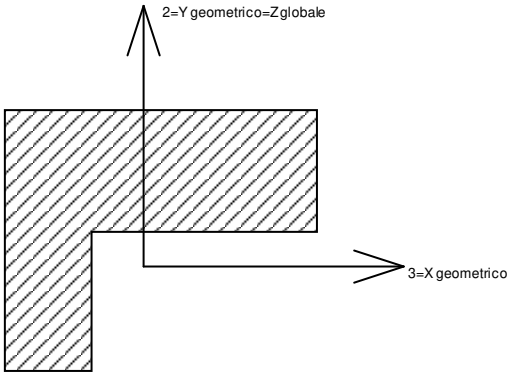
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



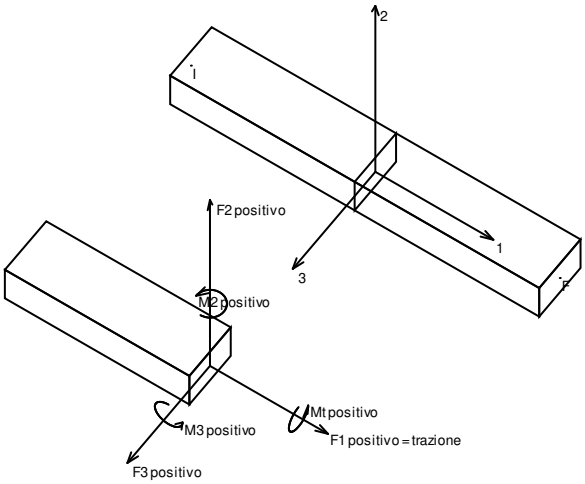
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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

1.1.7 Sollecitazioni aste in muratura armata

1.1.7.1 Convenzioni di segno aste

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

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



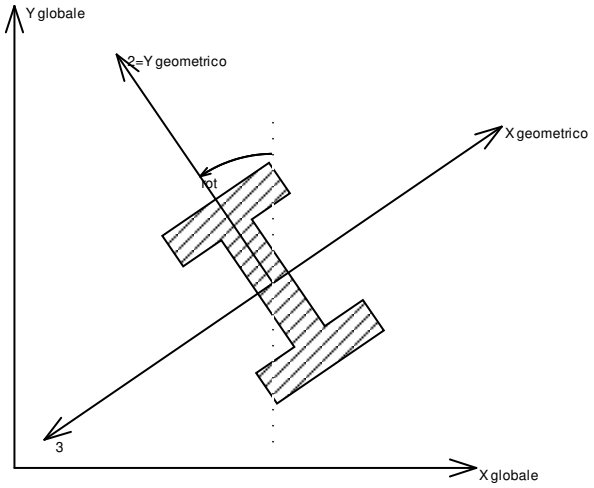
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando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

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

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

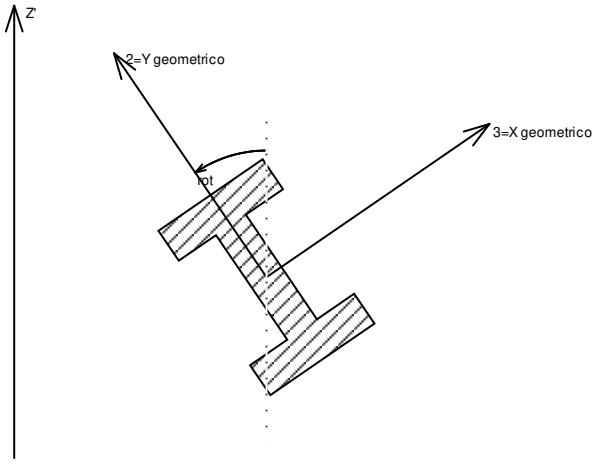
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



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

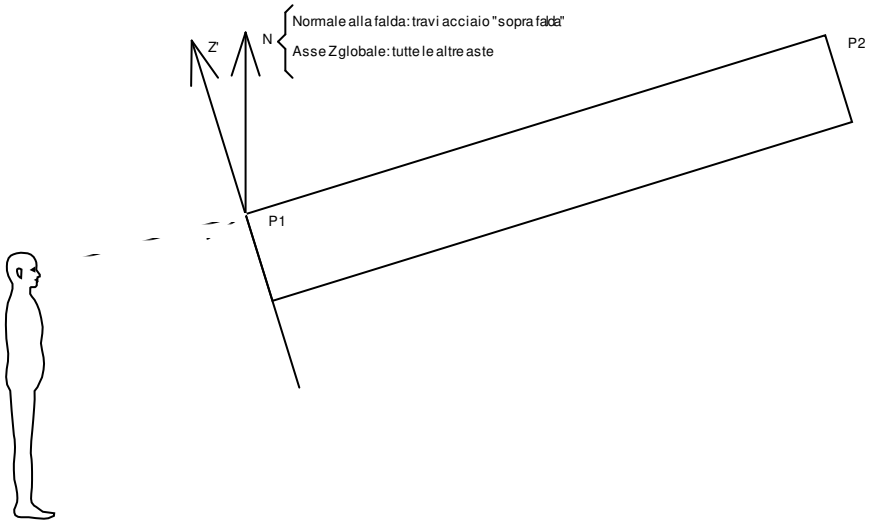
Sistema locale aste non verticali



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

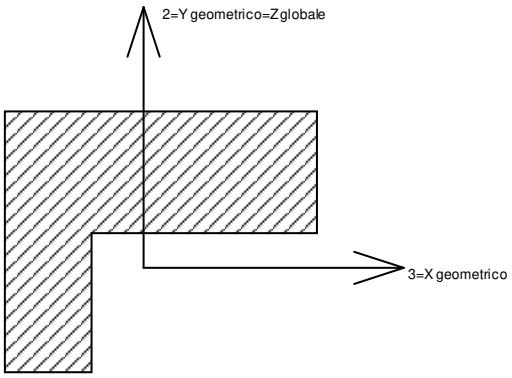
L'asse Z' è illustrato nella figura seguente dove:

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



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

Sistema locale aste derivanti da travi in c.a.



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

1.2 Reazioni nodali

1.2.1 Reazioni nodali estreme

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

Reazioni Fx minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18411	SLV 14	-77.72	13.85	30.36	7.469	-3.1871	0.9538

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18410	SLV 14	-67.85	508.6	31.74	2.402	-3.3189	-0.0504
678	SLV 16	-42.93	-5.41	167.18	-11.5439	-10.6723	-3.5729
616	SLV 16	-39.74	-7.79	205.33	24.3469	-1.8979	5.055
619	SLV 15	-34.23	-6.69	182.62	-27.5274	0.0613	-4.9234

Reazioni Fx massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18411	SLV 3	78.87	34.58	28.45	17.7733	3.1559	-0.9866
18410	SLV 3	69.47	-583.78	32.31	8.9415	3.4806	0.0466
616	SLV 1	39.11	10.28	193.79	26.23	-0.4209	-5.2838
678	SLV 1	38.6	-0.1	262.04	-20.2043	-15.2369	2.8542
619	SLV 2	33.76	6.27	168.62	-24.4293	0.0893	4.6582

Reazioni Fy minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18410	SLV 7	23.04	-1035.65	36.02	14.35	1.0312	0.0123
18411	SLV 12	-21.43	-983.31	32.94	22.1543	-0.8978	0.2613
678	SLV 8	8.86	-25.45	231.98	-17.6512	-14.122	-0.8916
616	SLV Y	-0.94	-20.48	2.73	-0.3614	-0.6523	-0.2456
619	SLV 12	-11.12	-19.31	183.82	-27.4106	-0.2674	-1.6284

Reazioni Fy massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18411	SLV 5	22.59	1031.75	25.86	3.088	0.8666	-0.2942
18410	SLV 10	-21.41	960.46	28.04	-3.0065	-0.8695	-0.0161
616	SLV 5	12.37	22.87	195.38	25.9122	-0.3458	-1.4566
678	SLV 9	-13.19	19.93	197.25	-14.097	-11.7871	0.1729
619	SLV 5	10.65	18.9	167.42	-24.5461	0.418	1.3632

Reazioni Fz minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
663	SLV X	-18.33	2.54	-79.99	4.3112	14.4192	-0.5167
678	SLV X	-40.4	5.11	-48.54	4.4298	2.4312	-2.7521
738	SLV X	-10.74	1.5	-45.03	8.198	6.8115	-1.6039
587	SLV X	-10.72	1.41	-42.49	0.183	-0.0831	-0.0084
588	SLV X	-10.74	1.39	-39.7	0.1899	-0.0802	-0.007

Reazioni Fz massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
678	SLU 84	-2.93	-3.85	315.39	-23.2953	-19.0437	-0.491
616	SLU 84	-0.32	1.97	294.45	37.3464	-1.7054	-0.1792
619	SLU 84	-0.22	-0.14	259.15	-38.311	0.1017	-0.1731
478	SLU 84	-0.67	-0.64	242.56	-8.6936	53.8157	-0.0496
603	SLU 84	-1.69	-3.11	228.3	-13.5142	-15.5099	-0.2741

1.2.2 Reazioni nodali in combinazioni di carico

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

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 1	0.01	-0.11	3.22	0	0	0
11	SLU 2	0.01	-0.11	3.22	0	0	0
11	SLU 3	0.01	-0.11	3.3	0	0	0
11	SLU 4	0.01	-0.11	3.29	0	0	0
11	SLU 5	0.01	-0.11	3.26	0	0	0
11	SLU 6	0.01	-0.11	3.34	0	0	0
11	SLU 7	0.01	-0.11	3.34	0	0	0
11	SLU 8	0.01	-0.11	3.31	0	0	0
11	SLU 9	0.01	-0.11	3.31	0	0	0
11	SLU 10	0.01	-0.11	3.63	0	0	0
11	SLU 11	0	-0.11	3.71	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 12	0	-0.11	3.71	0	0	0
11	SLU 13	0	-0.11	3.67	0	0	0
11	SLU 14	0	-0.11	3.75	0	0	0
11	SLU 15	0	-0.11	3.75	0	0	0
11	SLU 16	0	-0.11	3.72	0	0	0
11	SLU 17	0	-0.11	3.72	0	0	0
11	SLU 18	0	-0.11	3.81	0	0	0
11	SLU 19	0	-0.11	3.81	0	0	0
11	SLU 20	0	-0.11	3.85	0	0	0
11	SLU 21	0	-0.11	3.85	0	0	0
11	SLU 22	0.01	-0.1	3.57	0	0	0
11	SLU 23	0.01	-0.11	3.57	0	0	0
11	SLU 24	0.01	-0.11	3.65	0	0	0
11	SLU 25	0.01	-0.11	3.65	0	0	0
11	SLU 26	0.01	-0.11	3.62	0	0	0
11	SLU 27	0.01	-0.11	3.69	0	0	0
11	SLU 28	0.01	-0.11	3.69	0	0	0
11	SLU 29	0.01	-0.1	3.66	0	0	0
11	SLU 30	0.01	-0.11	3.66	0	0	0
11	SLU 31	0.01	-0.11	3.98	0	0	0
11	SLU 32	0	-0.11	4.06	0	0	0
11	SLU 33	0	-0.11	4.06	0	0	0
11	SLU 34	0	-0.11	4.03	0	0	0
11	SLU 35	0	-0.11	4.1	0	0	0
11	SLU 36	0	-0.11	4.1	0	0	0
11	SLU 37	0	-0.11	4.07	0	0	0
11	SLU 38	0	-0.11	4.07	0	0	0
11	SLU 39	0	-0.11	4.16	0	0	0
11	SLU 40	0	-0.11	4.16	0	0	0
11	SLU 41	0	-0.11	4.2	0	0	0
11	SLU 42	0	-0.11	4.2	0	0	0
11	SLU 43	0.01	-0.14	4.06	0	0	0
11	SLU 44	0.01	-0.14	4.06	0	0	0
11	SLU 45	0.01	-0.14	4.14	0	0	0
11	SLU 46	0.01	-0.14	4.14	0	0	0
11	SLU 47	0.01	-0.14	4.11	0	0	0
11	SLU 48	0.01	-0.14	4.19	0	0	0
11	SLU 49	0.01	-0.14	4.18	0	0	0
11	SLU 50	0.01	-0.14	4.15	0	0	0
11	SLU 51	0.01	-0.14	4.15	0	0	0
11	SLU 52	0.01	-0.15	4.47	0	0	0
11	SLU 53	0.01	-0.14	4.55	0	0	0
11	SLU 54	0.01	-0.15	4.55	0	0	0
11	SLU 55	0.01	-0.15	4.52	0	0	0
11	SLU 56	0.01	-0.14	4.6	0	0	0
11	SLU 57	0.01	-0.15	4.59	0	0	0
11	SLU 58	0	-0.14	4.56	0	0	0
11	SLU 59	0	-0.14	4.56	0	0	0
11	SLU 60	0.01	-0.15	4.65	0	0	0
11	SLU 61	0.01	-0.15	4.65	0	0	0
11	SLU 62	0	-0.15	4.7	0	0	0
11	SLU 63	0	-0.15	4.7	0	0	0
11	SLU 64	0.01	-0.14	4.42	0	0	0
11	SLU 65	0.01	-0.14	4.42	0	0	0
11	SLU 66	0.01	-0.14	4.49	0	0	0
11	SLU 67	0.01	-0.14	4.49	0	0	0
11	SLU 68	0.01	-0.14	4.46	0	0	0
11	SLU 69	0.01	-0.14	4.54	0	0	0
11	SLU 70	0.01	-0.14	4.54	0	0	0
11	SLU 71	0.01	-0.14	4.51	0	0	0
11	SLU 72	0.01	-0.14	4.51	0	0	0
11	SLU 73	0.01	-0.14	4.83	0	0	0
11	SLU 74	0.01	-0.14	4.9	0	0	0
11	SLU 75	0.01	-0.14	4.9	0	0	0
11	SLU 76	0.01	-0.14	4.87	0	0	0
11	SLU 77	0.01	-0.14	4.95	0	0	0
11	SLU 78	0.01	-0.14	4.95	0	0	0
11	SLU 79	0	-0.14	4.92	0	0	0
11	SLU 80	0	-0.14	4.92	0	0	0
11	SLU 81	0.01	-0.14	5	0	0	0
11	SLU 82	0.01	-0.14	5	0	0	0
11	SLU 83	0	-0.14	5.05	0	0	0
11	SLU 84	0	-0.14	5.05	0	0	0
11	SLE RA 1	0.01	-0.11	3.32	0	0	0
11	SLE RA 2	0.01	-0.11	3.32	0	0	0
11	SLE RA 3	0.01	-0.11	3.37	0	0	0
11	SLE RA 4	0.01	-0.11	3.37	0	0	0
11	SLE RA 5	0.01	-0.11	3.35	0	0	0
11	SLE RA 6	0.01	-0.11	3.4	0	0	0
11	SLE RA 7	0.01	-0.11	3.4	0	0	0
11	SLE RA 8	0.01	-0.11	3.38	0	0	0
11	SLE RA 9	0.01	-0.11	3.38	0	0	0
11	SLE RA 10	0.01	-0.11	3.59	0	0	0
11	SLE RA 11	0.01	-0.11	3.64	0	0	0
11	SLE RA 12	0.01	-0.11	3.64	0	0	0
11	SLE RA 13	0.01	-0.11	3.62	0	0	0
11	SLE RA 14	0	-0.11	3.67	0	0	0
11	SLE RA 15	0.01	-0.11	3.67	0	0	0
11	SLE RA 16	0	-0.11	3.65	0	0	0
11	SLE RA 17	0	-0.11	3.65	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLE RA 18	0.01	-0.11	3.71	0	0	0
11	SLE RA 19	0.01	-0.11	3.71	0	0	0
11	SLE RA 20	0	-0.11	3.74	0	0	0
11	SLE RA 21	0	-0.11	3.74	0	0	0
11	SLE FR 1	0.01	-0.11	3.32	0	0	0
11	SLE FR 2	0.01	-0.11	3.32	0	0	0
11	SLE FR 3	0.01	-0.11	3.33	0	0	0
11	SLE FR 4	0.01	-0.11	3.44	0	0	0
11	SLE FR 5	0.01	-0.11	3.45	0	0	0
11	SLE FR 6	0.01	-0.11	3.52	0	0	0
11	SLE QP 1	0.01	-0.11	3.32	0	0	0
11	SLE QP 2	0.01	-0.11	3.44	0	0	0
11	SLD 1	0.21	-0.07	3.5	0	0	0
11	SLD 2	0.22	-0.07	3.51	0	0	0
11	SLD 3	0.2	-0.13	3.48	0	0	0
11	SLD 4	0.21	-0.13	3.48	0	0	0
11	SLD 5	0.08	-0.01	3.49	0	0	0
11	SLD 6	0.09	-0.01	3.5	0	0	0
11	SLD 7	0.05	-0.2	3.41	0	0	0
11	SLD 8	0.06	-0.2	3.42	0	0	0
11	SLD 9	-0.04	-0.01	3.46	0	0	0
11	SLD 10	-0.03	-0.01	3.46	0	0	0
11	SLD 11	-0.07	-0.21	3.38	0	0	0
11	SLD 12	-0.06	-0.21	3.38	0	0	0
11	SLD 13	-0.19	-0.08	3.39	0	0	0
11	SLD 14	-0.18	-0.08	3.4	0	0	0
11	SLD 15	-0.2	-0.14	3.37	0	0	0
11	SLD 16	-0.19	-0.14	3.37	0	0	0
11	SLV 1	0.47	-0.03	3.59	0	0	0
11	SLV 2	0.49	-0.03	3.6	0	0	0
11	SLV 3	0.45	-0.16	3.53	0	0	0
11	SLV 4	0.47	-0.16	3.54	0	0	0
11	SLV 5	0.17	0.12	3.57	0	0	0
11	SLV 6	0.19	0.12	3.57	0	0	0
11	SLV 7	0.11	-0.33	3.38	0	0	0
11	SLV 8	0.12	-0.32	3.39	0	0	0
11	SLV 9	-0.11	0.11	3.49	0	0	0
11	SLV 10	-0.09	0.11	3.5	0	0	0
11	SLV 11	-0.17	-0.33	3.3	0	0	0
11	SLV 12	-0.15	-0.33	3.31	0	0	0
11	SLV 13	-0.45	-0.05	3.33	0	0	0
11	SLV 14	-0.43	-0.05	3.34	0	0	0
11	SLV 15	-0.47	-0.19	3.28	0	0	0
11	SLV 16	-0.45	-0.18	3.29	0	0	0
12	SLU 1	0.02	-0.2	6.41	0	0	0
12	SLU 2	0.02	-0.21	6.41	0	0	0
12	SLU 3	0.02	-0.21	6.56	0	0	0
12	SLU 4	0.02	-0.21	6.56	0	0	0
12	SLU 5	0.02	-0.21	6.5	0	0	0
12	SLU 6	0.02	-0.21	6.65	0	0	0
12	SLU 7	0.02	-0.21	6.65	0	0	0
12	SLU 8	0.01	-0.2	6.59	0	0	0
12	SLU 9	0.02	-0.21	6.59	0	0	0
12	SLU 10	0.01	-0.22	7.22	0	0	0
12	SLU 11	0.01	-0.21	7.37	0	0	0
12	SLU 12	0.01	-0.22	7.37	0	0	0
12	SLU 13	0.01	-0.22	7.31	0	0	0
12	SLU 14	0	-0.21	7.46	0	0	0
12	SLU 15	0	-0.21	7.46	0	0	0
12	SLU 16	0	-0.21	7.4	0	0	0
12	SLU 17	0	-0.21	7.4	0	0	0
12	SLU 18	0	-0.22	7.57	0	0	0
12	SLU 19	0.01	-0.22	7.57	0	0	0
12	SLU 20	0	-0.22	7.66	0	0	0
12	SLU 21	0	-0.22	7.65	0	0	0
12	SLU 22	0.02	-0.2	7.11	0	0	0
12	SLU 23	0.02	-0.2	7.11	0	0	0
12	SLU 24	0.02	-0.2	7.26	0	0	0
12	SLU 25	0.02	-0.2	7.26	0	0	0
12	SLU 26	0.02	-0.2	7.2	0	0	0
12	SLU 27	0.02	-0.2	7.35	0	0	0
12	SLU 28	0.02	-0.2	7.35	0	0	0
12	SLU 29	0.01	-0.2	7.29	0	0	0
12	SLU 30	0.02	-0.2	7.29	0	0	0
12	SLU 31	0.01	-0.21	7.92	0	0	0
12	SLU 32	0.01	-0.21	8.07	0	0	0
12	SLU 33	0.01	-0.21	8.07	0	0	0
12	SLU 34	0.01	-0.21	8.01	0	0	0
12	SLU 35	0	-0.21	8.16	0	0	0
12	SLU 36	0	-0.21	8.16	0	0	0
12	SLU 37	0	-0.21	8.1	0	0	0
12	SLU 38	0	-0.21	8.1	0	0	0
12	SLU 39	0	-0.21	8.27	0	0	0
12	SLU 40	0.01	-0.21	8.27	0	0	0
12	SLU 41	0	-0.21	8.36	0	0	0
12	SLU 42	0	-0.21	8.36	0	0	0
12	SLU 43	0.03	-0.27	8.1	0	0	0
12	SLU 44	0.03	-0.27	8.1	0	0	0
12	SLU 45	0.03	-0.27	8.25	0	0	0
12	SLU 46	0.03	-0.27	8.25	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLU 47	0.03	-0.27	8.18	0	0	0
12	SLU 48	0.02	-0.27	8.33	0	0	0
12	SLU 49	0.02	-0.27	8.33	0	0	0
12	SLU 50	0.02	-0.27	8.27	0	0	0
12	SLU 51	0.02	-0.27	8.27	0	0	0
12	SLU 52	0.02	-0.28	8.9	0	0	0
12	SLU 53	0.01	-0.28	9.05	0	0	0
12	SLU 54	0.01	-0.28	9.05	0	0	0
12	SLU 55	0.01	-0.28	8.99	0	0	0
12	SLU 56	0.01	-0.28	9.14	0	0	0
12	SLU 57	0.01	-0.28	9.14	0	0	0
12	SLU 58	0.01	-0.27	9.08	0	0	0
12	SLU 59	0.01	-0.28	9.08	0	0	0
12	SLU 60	0.01	-0.28	9.25	0	0	0
12	SLU 61	0.01	-0.28	9.25	0	0	0
12	SLU 62	0.01	-0.28	9.34	0	0	0
12	SLU 63	0.01	-0.28	9.34	0	0	0
12	SLU 64	0.03	-0.26	8.8	0	0	0
12	SLU 65	0.03	-0.27	8.8	0	0	0
12	SLU 66	0.03	-0.26	8.95	0	0	0
12	SLU 67	0.03	-0.27	8.95	0	0	0
12	SLU 68	0.03	-0.27	8.88	0	0	0
12	SLU 69	0.02	-0.26	9.03	0	0	0
12	SLU 70	0.02	-0.27	9.03	0	0	0
12	SLU 71	0.02	-0.26	8.97	0	0	0
12	SLU 72	0.02	-0.26	8.97	0	0	0
12	SLU 73	0.02	-0.27	9.6	0	0	0
12	SLU 74	0.01	-0.27	9.76	0	0	0
12	SLU 75	0.01	-0.27	9.75	0	0	0
12	SLU 76	0.01	-0.27	9.69	0	0	0
12	SLU 77	0.01	-0.27	9.84	0	0	0
12	SLU 78	0.01	-0.27	9.84	0	0	0
12	SLU 79	0.01	-0.27	9.78	0	0	0
12	SLU 80	0.01	-0.27	9.78	0	0	0
12	SLU 81	0.01	-0.27	9.95	0	0	0
12	SLU 82	0.01	-0.28	9.95	0	0	0
12	SLU 83	0.01	-0.27	10.04	0	0	0
12	SLU 84	0.01	-0.28	10.04	0	0	0
12	SLE RA 1	0.02	-0.2	6.61	0	0	0
12	SLE RA 2	0.02	-0.21	6.61	0	0	0
12	SLE RA 3	0.02	-0.2	6.71	0	0	0
12	SLE RA 4	0.02	-0.21	6.71	0	0	0
12	SLE RA 5	0.02	-0.21	6.67	0	0	0
12	SLE RA 6	0.02	-0.2	6.77	0	0	0
12	SLE RA 7	0.02	-0.2	6.77	0	0	0
12	SLE RA 8	0.02	-0.2	6.73	0	0	0
12	SLE RA 9	0.02	-0.2	6.73	0	0	0
12	SLE RA 10	0.01	-0.21	7.15	0	0	0
12	SLE RA 11	0.01	-0.21	7.25	0	0	0
12	SLE RA 12	0.01	-0.21	7.25	0	0	0
12	SLE RA 13	0.01	-0.21	7.21	0	0	0
12	SLE RA 14	0.01	-0.21	7.31	0	0	0
12	SLE RA 15	0.01	-0.21	7.31	0	0	0
12	SLE RA 16	0.01	-0.21	7.27	0	0	0
12	SLE RA 17	0.01	-0.21	7.27	0	0	0
12	SLE RA 18	0.01	-0.21	7.38	0	0	0
12	SLE RA 19	0.01	-0.21	7.38	0	0	0
12	SLE RA 20	0.01	-0.21	7.44	0	0	0
12	SLE RA 21	0.01	-0.21	7.44	0	0	0
12	SLE FR 1	0.02	-0.2	6.61	0	0	0
12	SLE FR 2	0.02	-0.2	6.61	0	0	0
12	SLE FR 3	0.02	-0.2	6.64	0	0	0
12	SLE FR 4	0.02	-0.21	6.84	0	0	0
12	SLE FR 5	0.02	-0.21	6.87	0	0	0
12	SLE FR 6	0.02	-0.21	7	0	0	0
12	SLE QP 1	0.02	-0.2	6.61	0	0	0
12	SLE QP 2	0.02	-0.21	6.84	0	0	0
12	SLD 1	0.41	-0.14	6.93	0	0	0
12	SLD 2	0.43	-0.14	6.94	0	0	0
12	SLD 3	0.39	-0.26	6.88	0	0	0
12	SLD 4	0.41	-0.25	6.89	0	0	0
12	SLD 5	0.16	-0.01	6.95	0	0	0
12	SLD 6	0.17	-0.01	6.95	0	0	0
12	SLD 7	0.1	-0.4	6.78	0	0	0
12	SLD 8	0.12	-0.39	6.78	0	0	0
12	SLD 9	-0.08	-0.02	6.91	0	0	0
12	SLD 10	-0.07	-0.01	6.91	0	0	0
12	SLD 11	-0.13	-0.4	6.74	0	0	0
12	SLD 12	-0.12	-0.4	6.74	0	0	0
12	SLD 13	-0.38	-0.16	6.8	0	0	0
12	SLD 14	-0.36	-0.15	6.81	0	0	0
12	SLD 15	-0.39	-0.28	6.75	0	0	0
12	SLD 16	-0.37	-0.27	6.76	0	0	0
12	SLV 1	0.93	-0.06	7.04	0	0	0
12	SLV 2	0.98	-0.05	7.06	0	0	0
12	SLV 3	0.89	-0.32	6.93	0	0	0
12	SLV 4	0.94	-0.31	6.94	0	0	0
12	SLV 5	0.34	0.23	7.08	0	0	0
12	SLV 6	0.37	0.24	7.09	0	0	0
12	SLV 7	0.22	-0.64	6.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLV 8	0.25	-0.63	6.7	0	0	0
12	SLV 9	-0.21	0.22	6.99	0	0	0
12	SLV 10	-0.18	0.23	7	0	0	0
12	SLV 11	-0.33	-0.65	6.6	0	0	0
12	SLV 12	-0.3	-0.64	6.61	0	0	0
12	SLV 13	-0.9	-0.1	6.75	0	0	0
12	SLV 14	-0.86	-0.09	6.76	0	0	0
12	SLV 15	-0.94	-0.36	6.63	0	0	0
12	SLV 16	-0.89	-0.35	6.65	0	0	0
13	SLU 1	0.02	-0.2	6.39	0	0	0
13	SLU 2	0.02	-0.2	6.39	0	0	0
13	SLU 3	0.02	-0.2	6.53	0	0	0
13	SLU 4	0.02	-0.2	6.53	0	0	0
13	SLU 5	0.02	-0.2	6.47	0	0	0
13	SLU 6	0.02	-0.2	6.62	0	0	0
13	SLU 7	0.02	-0.2	6.62	0	0	0
13	SLU 8	0.01	-0.2	6.56	0	0	0
13	SLU 9	0.01	-0.2	6.55	0	0	0
13	SLU 10	0.01	-0.21	7.18	0	0	0
13	SLU 11	0.01	-0.2	7.33	0	0	0
13	SLU 12	0.01	-0.21	7.33	0	0	0
13	SLU 13	0.01	-0.21	7.27	0	0	0
13	SLU 14	0	-0.2	7.41	0	0	0
13	SLU 15	0	-0.2	7.41	0	0	0
13	SLU 16	0	-0.2	7.35	0	0	0
13	SLU 17	0	-0.2	7.35	0	0	0
13	SLU 18	0	-0.21	7.52	0	0	0
13	SLU 19	0.01	-0.21	7.52	0	0	0
13	SLU 20	0	-0.21	7.61	0	0	0
13	SLU 21	0	-0.21	7.61	0	0	0
13	SLU 22	0.02	-0.19	7.08	0	0	0
13	SLU 23	0.02	-0.19	7.08	0	0	0
13	SLU 24	0.02	-0.19	7.23	0	0	0
13	SLU 25	0.02	-0.19	7.23	0	0	0
13	SLU 26	0.02	-0.19	7.17	0	0	0
13	SLU 27	0.02	-0.19	7.31	0	0	0
13	SLU 28	0.02	-0.19	7.31	0	0	0
13	SLU 29	0.01	-0.19	7.25	0	0	0
13	SLU 30	0.02	-0.19	7.25	0	0	0
13	SLU 31	0.01	-0.2	7.88	0	0	0
13	SLU 32	0.01	-0.2	8.03	0	0	0
13	SLU 33	0.01	-0.2	8.02	0	0	0
13	SLU 34	0.01	-0.2	7.96	0	0	0
13	SLU 35	0	-0.2	8.11	0	0	0
13	SLU 36	0	-0.2	8.11	0	0	0
13	SLU 37	0	-0.2	8.05	0	0	0
13	SLU 38	0	-0.2	8.05	0	0	0
13	SLU 39	0	-0.2	8.22	0	0	0
13	SLU 40	0.01	-0.2	8.22	0	0	0
13	SLU 41	0	-0.2	8.3	0	0	0
13	SLU 42	0	-0.2	8.3	0	0	0
13	SLU 43	0.03	-0.26	8.06	0	0	0
13	SLU 44	0.03	-0.26	8.06	0	0	0
13	SLU 45	0.03	-0.26	8.21	0	0	0
13	SLU 46	0.03	-0.26	8.21	0	0	0
13	SLU 47	0.03	-0.26	8.15	0	0	0
13	SLU 48	0.02	-0.26	8.3	0	0	0
13	SLU 49	0.02	-0.26	8.29	0	0	0
13	SLU 50	0.02	-0.26	8.23	0	0	0
13	SLU 51	0.02	-0.26	8.23	0	0	0
13	SLU 52	0.02	-0.27	8.86	0	0	0
13	SLU 53	0.01	-0.26	9.01	0	0	0
13	SLU 54	0.01	-0.27	9.01	0	0	0
13	SLU 55	0.01	-0.27	8.94	0	0	0
13	SLU 56	0.01	-0.26	9.09	0	0	0
13	SLU 57	0.01	-0.27	9.09	0	0	0
13	SLU 58	0.01	-0.26	9.03	0	0	0
13	SLU 59	0.01	-0.26	9.03	0	0	0
13	SLU 60	0.01	-0.27	9.2	0	0	0
13	SLU 61	0.01	-0.27	9.2	0	0	0
13	SLU 62	0.01	-0.27	9.29	0	0	0
13	SLU 63	0.01	-0.27	9.28	0	0	0
13	SLU 64	0.03	-0.25	8.76	0	0	0
13	SLU 65	0.03	-0.25	8.76	0	0	0
13	SLU 66	0.03	-0.25	8.91	0	0	0
13	SLU 67	0.03	-0.25	8.91	0	0	0
13	SLU 68	0.03	-0.25	8.84	0	0	0
13	SLU 69	0.02	-0.25	8.99	0	0	0
13	SLU 70	0.02	-0.25	8.99	0	0	0
13	SLU 71	0.02	-0.25	8.93	0	0	0
13	SLU 72	0.02	-0.25	8.93	0	0	0
13	SLU 73	0.02	-0.26	9.55	0	0	0
13	SLU 74	0.01	-0.26	9.7	0	0	0
13	SLU 75	0.01	-0.26	9.7	0	0	0
13	SLU 76	0.01	-0.26	9.64	0	0	0
13	SLU 77	0.01	-0.26	9.79	0	0	0
13	SLU 78	0.01	-0.26	9.79	0	0	0
13	SLU 79	0.01	-0.26	9.73	0	0	0
13	SLU 80	0.01	-0.26	9.72	0	0	0
13	SLU 81	0.01	-0.26	9.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLU 82	0.01	-0.26	9.9	0	0	0
13	SLU 83	0.01	-0.26	9.98	0	0	0
13	SLU 84	0.01	-0.26	9.98	0	0	0
13	SLE RA 1	0.02	-0.19	6.59	0	0	0
13	SLE RA 2	0.02	-0.2	6.59	0	0	0
13	SLE RA 3	0.02	-0.19	6.68	0	0	0
13	SLE RA 4	0.02	-0.2	6.68	0	0	0
13	SLE RA 5	0.02	-0.2	6.64	0	0	0
13	SLE RA 6	0.02	-0.19	6.74	0	0	0
13	SLE RA 7	0.02	-0.2	6.74	0	0	0
13	SLE RA 8	0.02	-0.19	6.7	0	0	0
13	SLE RA 9	0.02	-0.2	6.7	0	0	0
13	SLE RA 10	0.01	-0.2	7.12	0	0	0
13	SLE RA 11	0.01	-0.2	7.21	0	0	0
13	SLE RA 12	0.01	-0.2	7.21	0	0	0
13	SLE RA 13	0.01	-0.2	7.17	0	0	0
13	SLE RA 14	0.01	-0.2	7.27	0	0	0
13	SLE RA 15	0.01	-0.2	7.27	0	0	0
13	SLE RA 16	0.01	-0.2	7.23	0	0	0
13	SLE RA 17	0.01	-0.2	7.23	0	0	0
13	SLE RA 18	0.01	-0.2	7.34	0	0	0
13	SLE RA 19	0.01	-0.2	7.34	0	0	0
13	SLE RA 20	0.01	-0.2	7.4	0	0	0
13	SLE RA 21	0.01	-0.2	7.4	0	0	0
13	SLE FR 1	0.02	-0.19	6.59	0	0	0
13	SLE FR 2	0.02	-0.19	6.59	0	0	0
13	SLE FR 3	0.02	-0.19	6.61	0	0	0
13	SLE FR 4	0.02	-0.2	6.81	0	0	0
13	SLE FR 5	0.02	-0.2	6.84	0	0	0
13	SLE FR 6	0.02	-0.2	6.96	0	0	0
13	SLE QP 1	0.02	-0.19	6.59	0	0	0
13	SLE QP 2	0.02	-0.2	6.81	0	0	0
13	SLD 1	0.41	-0.14	6.87	0	0	0
13	SLD 2	0.43	-0.13	6.87	0	0	0
13	SLD 3	0.39	-0.25	6.81	0	0	0
13	SLD 4	0.41	-0.24	6.82	0	0	0
13	SLD 5	0.16	-0.01	6.91	0	0	0
13	SLD 6	0.17	0	6.91	0	0	0
13	SLD 7	0.1	-0.39	6.73	0	0	0
13	SLD 8	0.12	-0.38	6.73	0	0	0
13	SLD 9	-0.08	-0.01	6.89	0	0	0
13	SLD 10	-0.07	-0.01	6.9	0	0	0
13	SLD 11	-0.13	-0.39	6.71	0	0	0
13	SLD 12	-0.12	-0.38	6.72	0	0	0
13	SLD 13	-0.37	-0.15	6.81	0	0	0
13	SLD 14	-0.35	-0.14	6.81	0	0	0
13	SLD 15	-0.39	-0.27	6.75	0	0	0
13	SLD 16	-0.37	-0.26	6.76	0	0	0
13	SLV 1	0.93	-0.06	6.94	0	0	0
13	SLV 2	0.97	-0.04	6.95	0	0	0
13	SLV 3	0.89	-0.32	6.82	0	0	0
13	SLV 4	0.94	-0.29	6.83	0	0	0
13	SLV 5	0.34	0.23	7.04	0	0	0
13	SLV 6	0.37	0.25	7.04	0	0	0
13	SLV 7	0.22	-0.63	6.63	0	0	0
13	SLV 8	0.25	-0.61	6.63	0	0	0
13	SLV 9	-0.21	0.22	6.99	0	0	0
13	SLV 10	-0.18	0.23	7	0	0	0
13	SLV 11	-0.33	-0.64	6.58	0	0	0
13	SLV 12	-0.3	-0.62	6.59	0	0	0
13	SLV 13	-0.9	-0.1	6.8	0	0	0
13	SLV 14	-0.85	-0.08	6.81	0	0	0
13	SLV 15	-0.94	-0.36	6.68	0	0	0
13	SLV 16	-0.89	-0.33	6.69	0	0	0
14	SLU 1	0.02	-0.19	6.38	0	0	0
14	SLU 2	0.02	-0.19	6.38	0	0	0
14	SLU 3	0.02	-0.19	6.53	0	0	0
14	SLU 4	0.02	-0.19	6.52	0	0	0
14	SLU 5	0.02	-0.19	6.46	0	0	0
14	SLU 6	0.02	-0.19	6.61	0	0	0
14	SLU 7	0.02	-0.19	6.61	0	0	0
14	SLU 8	0.01	-0.19	6.54	0	0	0
14	SLU 9	0.01	-0.19	6.54	0	0	0
14	SLU 10	0.01	-0.2	7.16	0	0	0
14	SLU 11	0.01	-0.19	7.31	0	0	0
14	SLU 12	0.01	-0.2	7.31	0	0	0
14	SLU 13	0.01	-0.2	7.25	0	0	0
14	SLU 14	0	-0.19	7.39	0	0	0
14	SLU 15	0	-0.2	7.39	0	0	0
14	SLU 16	0	-0.19	7.33	0	0	0
14	SLU 17	0	-0.19	7.33	0	0	0
14	SLU 18	0	-0.2	7.5	0	0	0
14	SLU 19	0.01	-0.2	7.5	0	0	0
14	SLU 20	0	-0.2	7.58	0	0	0
14	SLU 21	0	-0.2	7.58	0	0	0
14	SLU 22	0.02	-0.18	7.07	0	0	0
14	SLU 23	0.02	-0.18	7.07	0	0	0
14	SLU 24	0.02	-0.18	7.22	0	0	0
14	SLU 25	0.02	-0.18	7.22	0	0	0
14	SLU 26	0.02	-0.18	7.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLU 27	0.02	-0.18	7.3	0	0	0
14	SLU 28	0.02	-0.18	7.3	0	0	0
14	SLU 29	0.01	-0.18	7.24	0	0	0
14	SLU 30	0.01	-0.18	7.24	0	0	0
14	SLU 31	0.01	-0.19	7.86	0	0	0
14	SLU 32	0.01	-0.19	8	0	0	0
14	SLU 33	0.01	-0.19	8	0	0	0
14	SLU 34	0.01	-0.19	7.94	0	0	0
14	SLU 35	0	-0.19	8.09	0	0	0
14	SLU 36	0	-0.19	8.08	0	0	0
14	SLU 37	0	-0.19	8.02	0	0	0
14	SLU 38	0	-0.19	8.02	0	0	0
14	SLU 39	0	-0.19	8.2	0	0	0
14	SLU 40	0.01	-0.19	8.19	0	0	0
14	SLU 41	0	-0.19	8.28	0	0	0
14	SLU 42	0	-0.19	8.28	0	0	0
14	SLU 43	0.03	-0.25	8.06	0	0	0
14	SLU 44	0.03	-0.25	8.06	0	0	0
14	SLU 45	0.03	-0.25	8.2	0	0	0
14	SLU 46	0.03	-0.25	8.2	0	0	0
14	SLU 47	0.03	-0.25	8.14	0	0	0
14	SLU 48	0.02	-0.25	8.28	0	0	0
14	SLU 49	0.02	-0.25	8.28	0	0	0
14	SLU 50	0.02	-0.25	8.22	0	0	0
14	SLU 51	0.02	-0.25	8.22	0	0	0
14	SLU 52	0.02	-0.25	8.84	0	0	0
14	SLU 53	0.01	-0.25	8.99	0	0	0
14	SLU 54	0.01	-0.25	8.99	0	0	0
14	SLU 55	0.01	-0.25	8.92	0	0	0
14	SLU 56	0.01	-0.25	9.07	0	0	0
14	SLU 57	0.01	-0.25	9.07	0	0	0
14	SLU 58	0.01	-0.25	9.01	0	0	0
14	SLU 59	0.01	-0.25	9.01	0	0	0
14	SLU 60	0.01	-0.25	9.18	0	0	0
14	SLU 61	0.01	-0.26	9.18	0	0	0
14	SLU 62	0.01	-0.25	9.26	0	0	0
14	SLU 63	0.01	-0.26	9.26	0	0	0
14	SLU 64	0.03	-0.24	8.75	0	0	0
14	SLU 65	0.03	-0.24	8.75	0	0	0
14	SLU 66	0.03	-0.24	8.9	0	0	0
14	SLU 67	0.03	-0.24	8.89	0	0	0
14	SLU 68	0.03	-0.24	8.83	0	0	0
14	SLU 69	0.02	-0.24	8.98	0	0	0
14	SLU 70	0.02	-0.24	8.98	0	0	0
14	SLU 71	0.02	-0.24	8.91	0	0	0
14	SLU 72	0.02	-0.24	8.91	0	0	0
14	SLU 73	0.02	-0.25	9.53	0	0	0
14	SLU 74	0.01	-0.25	9.68	0	0	0
14	SLU 75	0.01	-0.25	9.68	0	0	0
14	SLU 76	0.01	-0.25	9.62	0	0	0
14	SLU 77	0.01	-0.25	9.76	0	0	0
14	SLU 78	0.01	-0.25	9.76	0	0	0
14	SLU 79	0.01	-0.25	9.7	0	0	0
14	SLU 80	0.01	-0.25	9.7	0	0	0
14	SLU 81	0.01	-0.25	9.87	0	0	0
14	SLU 82	0.01	-0.25	9.87	0	0	0
14	SLU 83	0.01	-0.25	9.95	0	0	0
14	SLU 84	0.01	-0.25	9.95	0	0	0
14	SLE RA 1	0.02	-0.19	6.58	0	0	0
14	SLE RA 2	0.02	-0.19	6.58	0	0	0
14	SLE RA 3	0.02	-0.19	6.68	0	0	0
14	SLE RA 4	0.02	-0.19	6.67	0	0	0
14	SLE RA 5	0.02	-0.19	6.63	0	0	0
14	SLE RA 6	0.02	-0.19	6.73	0	0	0
14	SLE RA 7	0.02	-0.19	6.73	0	0	0
14	SLE RA 8	0.02	-0.19	6.69	0	0	0
14	SLE RA 9	0.02	-0.19	6.69	0	0	0
14	SLE RA 10	0.01	-0.19	7.1	0	0	0
14	SLE RA 11	0.01	-0.19	7.2	0	0	0
14	SLE RA 12	0.01	-0.19	7.2	0	0	0
14	SLE RA 13	0.01	-0.19	7.16	0	0	0
14	SLE RA 14	0.01	-0.19	7.25	0	0	0
14	SLE RA 15	0.01	-0.19	7.25	0	0	0
14	SLE RA 16	0.01	-0.19	7.21	0	0	0
14	SLE RA 17	0.01	-0.19	7.21	0	0	0
14	SLE RA 18	0.01	-0.19	7.33	0	0	0
14	SLE RA 19	0.01	-0.19	7.33	0	0	0
14	SLE RA 20	0.01	-0.19	7.38	0	0	0
14	SLE RA 21	0.01	-0.19	7.38	0	0	0
14	SLE FR 1	0.02	-0.19	6.58	0	0	0
14	SLE FR 2	0.02	-0.19	6.58	0	0	0
14	SLE FR 3	0.02	-0.19	6.6	0	0	0
14	SLE FR 4	0.02	-0.19	6.8	0	0	0
14	SLE FR 5	0.02	-0.19	6.83	0	0	0
14	SLE FR 6	0.02	-0.19	6.95	0	0	0
14	SLE QP 1	0.02	-0.19	6.58	0	0	0
14	SLE QP 2	0.02	-0.19	6.8	0	0	0
14	SLD 1	0.41	-0.15	6.78	0	0	0
14	SLD 2	0.43	-0.13	6.78	0	0	0
14	SLD 3	0.39	-0.26	6.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLD 4	0.41	-0.25	6.72	0	0	0
14	SLD 5	0.16	-0.01	6.88	0	0	0
14	SLD 6	0.17	0	6.88	0	0	0
14	SLD 7	0.1	-0.38	6.69	0	0	0
14	SLD 8	0.12	-0.37	6.69	0	0	0
14	SLD 9	-0.08	0	6.92	0	0	0
14	SLD 10	-0.07	0.01	6.92	0	0	0
14	SLD 11	-0.13	-0.38	6.72	0	0	0
14	SLD 12	-0.12	-0.37	6.72	0	0	0
14	SLD 13	-0.37	-0.13	6.88	0	0	0
14	SLD 14	-0.35	-0.12	6.89	0	0	0
14	SLD 15	-0.39	-0.24	6.83	0	0	0
14	SLD 16	-0.37	-0.23	6.83	0	0	0
14	SLV 1	0.93	-0.1	6.74	0	0	0
14	SLV 2	0.97	-0.07	6.75	0	0	0
14	SLV 3	0.89	-0.35	6.61	0	0	0
14	SLV 4	0.94	-0.32	6.62	0	0	0
14	SLV 5	0.34	0.22	6.98	0	0	0
14	SLV 6	0.37	0.24	6.99	0	0	0
14	SLV 7	0.22	-0.63	6.55	0	0	0
14	SLV 8	0.25	-0.61	6.55	0	0	0
14	SLV 9	-0.21	0.23	7.06	0	0	0
14	SLV 10	-0.18	0.25	7.06	0	0	0
14	SLV 11	-0.33	-0.61	6.62	0	0	0
14	SLV 12	-0.3	-0.59	6.62	0	0	0
14	SLV 13	-0.9	-0.06	6.99	0	0	0
14	SLV 14	-0.85	-0.02	6.99	0	0	0
14	SLV 15	-0.94	-0.31	6.86	0	0	0
14	SLV 16	-0.89	-0.28	6.86	0	0	0
15	SLU 1	0.02	-0.18	6.37	0	0	0
15	SLU 2	0.02	-0.18	6.37	0	0	0
15	SLU 3	0.02	-0.18	6.51	0	0	0
15	SLU 4	0.02	-0.18	6.51	0	0	0
15	SLU 5	0.02	-0.18	6.45	0	0	0
15	SLU 6	0.01	-0.18	6.59	0	0	0
15	SLU 7	0.02	-0.18	6.59	0	0	0
15	SLU 8	0.01	-0.18	6.53	0	0	0
15	SLU 9	0.01	-0.18	6.53	0	0	0
15	SLU 10	0.01	-0.19	7.14	0	0	0
15	SLU 11	0.01	-0.18	7.29	0	0	0
15	SLU 12	0.01	-0.19	7.29	0	0	0
15	SLU 13	0.01	-0.19	7.22	0	0	0
15	SLU 14	0	-0.18	7.37	0	0	0
15	SLU 15	0	-0.19	7.37	0	0	0
15	SLU 16	0	-0.18	7.31	0	0	0
15	SLU 17	0	-0.19	7.3	0	0	0
15	SLU 18	0	-0.19	7.48	0	0	0
15	SLU 19	0.01	-0.19	7.48	0	0	0
15	SLU 20	0	-0.19	7.56	0	0	0
15	SLU 21	0	-0.19	7.56	0	0	0
15	SLU 22	0.02	-0.17	7.06	0	0	0
15	SLU 23	0.02	-0.18	7.06	0	0	0
15	SLU 24	0.02	-0.17	7.2	0	0	0
15	SLU 25	0.02	-0.18	7.2	0	0	0
15	SLU 26	0.02	-0.18	7.14	0	0	0
15	SLU 27	0.01	-0.17	7.28	0	0	0
15	SLU 28	0.02	-0.17	7.28	0	0	0
15	SLU 29	0.01	-0.17	7.22	0	0	0
15	SLU 30	0.01	-0.17	7.22	0	0	0
15	SLU 31	0.01	-0.18	7.83	0	0	0
15	SLU 32	0.01	-0.18	7.98	0	0	0
15	SLU 33	0.01	-0.18	7.98	0	0	0
15	SLU 34	0.01	-0.18	7.91	0	0	0
15	SLU 35	0	-0.18	8.06	0	0	0
15	SLU 36	0	-0.18	8.06	0	0	0
15	SLU 37	0	-0.18	8	0	0	0
15	SLU 38	0	-0.18	7.99	0	0	0
15	SLU 39	0	-0.18	8.17	0	0	0
15	SLU 40	0.01	-0.18	8.17	0	0	0
15	SLU 41	0	-0.18	8.25	0	0	0
15	SLU 42	0	-0.18	8.25	0	0	0
15	SLU 43	0.03	-0.24	8.05	0	0	0
15	SLU 44	0.03	-0.24	8.05	0	0	0
15	SLU 45	0.02	-0.24	8.19	0	0	0
15	SLU 46	0.03	-0.24	8.19	0	0	0
15	SLU 47	0.03	-0.24	8.12	0	0	0
15	SLU 48	0.02	-0.24	8.27	0	0	0
15	SLU 49	0.02	-0.24	8.27	0	0	0
15	SLU 50	0.02	-0.24	8.21	0	0	0
15	SLU 51	0.02	-0.24	8.21	0	0	0
15	SLU 52	0.02	-0.24	8.82	0	0	0
15	SLU 53	0.01	-0.24	8.96	0	0	0
15	SLU 54	0.01	-0.24	8.96	0	0	0
15	SLU 55	0.01	-0.24	8.9	0	0	0
15	SLU 56	0.01	-0.24	9.04	0	0	0
15	SLU 57	0.01	-0.24	9.04	0	0	0
15	SLU 58	0.01	-0.24	8.98	0	0	0
15	SLU 59	0.01	-0.24	8.98	0	0	0
15	SLU 60	0.01	-0.24	9.15	0	0	0
15	SLU 61	0.01	-0.24	9.15	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLU 62	0.01	-0.24	9.23	0	0	0
15	SLU 63	0.01	-0.24	9.23	0	0	0
15	SLU 64	0.03	-0.23	8.74	0	0	0
15	SLU 65	0.03	-0.23	8.74	0	0	0
15	SLU 66	0.03	-0.23	8.88	0	0	0
15	SLU 67	0.03	-0.23	8.88	0	0	0
15	SLU 68	0.03	-0.23	8.82	0	0	0
15	SLU 69	0.02	-0.23	8.96	0	0	0
15	SLU 70	0.02	-0.23	8.96	0	0	0
15	SLU 71	0.02	-0.23	8.9	0	0	0
15	SLU 72	0.02	-0.23	8.9	0	0	0
15	SLU 73	0.02	-0.24	9.51	0	0	0
15	SLU 74	0.01	-0.23	9.65	0	0	0
15	SLU 75	0.01	-0.24	9.65	0	0	0
15	SLU 76	0.01	-0.24	9.59	0	0	0
15	SLU 77	0.01	-0.23	9.73	0	0	0
15	SLU 78	0.01	-0.24	9.73	0	0	0
15	SLU 79	0.01	-0.23	9.67	0	0	0
15	SLU 80	0.01	-0.23	9.67	0	0	0
15	SLU 81	0.01	-0.24	9.84	0	0	0
15	SLU 82	0.01	-0.24	9.84	0	0	0
15	SLU 83	0.01	-0.24	9.92	0	0	0
15	SLU 84	0.01	-0.24	9.92	0	0	0
15	SLE RA 1	0.02	-0.18	6.57	0	0	0
15	SLE RA 2	0.02	-0.18	6.57	0	0	0
15	SLE RA 3	0.02	-0.18	6.66	0	0	0
15	SLE RA 4	0.02	-0.18	6.66	0	0	0
15	SLE RA 5	0.02	-0.18	6.62	0	0	0
15	SLE RA 6	0.02	-0.18	6.72	0	0	0
15	SLE RA 7	0.02	-0.18	6.72	0	0	0
15	SLE RA 8	0.02	-0.18	6.68	0	0	0
15	SLE RA 9	0.02	-0.18	6.67	0	0	0
15	SLE RA 10	0.01	-0.18	7.08	0	0	0
15	SLE RA 11	0.01	-0.18	7.18	0	0	0
15	SLE RA 12	0.01	-0.18	7.18	0	0	0
15	SLE RA 13	0.01	-0.18	7.14	0	0	0
15	SLE RA 14	0.01	-0.18	7.23	0	0	0
15	SLE RA 15	0.01	-0.18	7.23	0	0	0
15	SLE RA 16	0.01	-0.18	7.19	0	0	0
15	SLE RA 17	0.01	-0.18	7.19	0	0	0
15	SLE RA 18	0.01	-0.18	7.31	0	0	0
15	SLE RA 19	0.01	-0.18	7.31	0	0	0
15	SLE RA 20	0.01	-0.18	7.36	0	0	0
15	SLE RA 21	0.01	-0.18	7.36	0	0	0
15	SLE FR 1	0.02	-0.18	6.57	0	0	0
15	SLE FR 2	0.02	-0.18	6.57	0	0	0
15	SLE FR 3	0.02	-0.18	6.59	0	0	0
15	SLE FR 4	0.02	-0.18	6.79	0	0	0
15	SLE FR 5	0.02	-0.18	6.81	0	0	0
15	SLE FR 6	0.02	-0.18	6.94	0	0	0
15	SLE QP 1	0.02	-0.18	6.57	0	0	0
15	SLE QP 2	0.02	-0.18	6.79	0	0	0
15	SLD 1	0.41	-0.14	6.73	0	0	0
15	SLD 2	0.43	-0.13	6.72	0	0	0
15	SLD 3	0.39	-0.25	6.66	0	0	0
15	SLD 4	0.41	-0.24	6.66	0	0	0
15	SLD 5	0.16	0	6.87	0	0	0
15	SLD 6	0.17	0.01	6.86	0	0	0
15	SLD 7	0.1	-0.37	6.66	0	0	0
15	SLD 8	0.11	-0.36	6.66	0	0	0
15	SLD 9	-0.08	0	6.92	0	0	0
15	SLD 10	-0.07	0.01	6.92	0	0	0
15	SLD 11	-0.13	-0.37	6.72	0	0	0
15	SLD 12	-0.12	-0.35	6.72	0	0	0
15	SLD 13	-0.37	-0.12	6.92	0	0	0
15	SLD 14	-0.36	-0.11	6.92	0	0	0
15	SLD 15	-0.39	-0.23	6.86	0	0	0
15	SLD 16	-0.37	-0.22	6.86	0	0	0
15	SLV 1	0.93	-0.1	6.64	0	0	0
15	SLV 2	0.97	-0.06	6.63	0	0	0
15	SLV 3	0.89	-0.35	6.49	0	0	0
15	SLV 4	0.94	-0.31	6.49	0	0	0
15	SLV 5	0.34	0.22	6.96	0	0	0
15	SLV 6	0.37	0.24	6.96	0	0	0
15	SLV 7	0.22	-0.61	6.49	0	0	0
15	SLV 8	0.25	-0.59	6.49	0	0	0
15	SLV 9	-0.21	0.23	7.09	0	0	0
15	SLV 10	-0.18	0.26	7.09	0	0	0
15	SLV 11	-0.33	-0.6	6.63	0	0	0
15	SLV 12	-0.3	-0.57	6.62	0	0	0
15	SLV 13	-0.9	-0.05	7.09	0	0	0
15	SLV 14	-0.85	-0.01	7.09	0	0	0
15	SLV 15	-0.94	-0.3	6.95	0	0	0
15	SLV 16	-0.89	-0.26	6.95	0	0	0
16	SLU 1	0.02	-0.17	6.37	0	0	0
16	SLU 2	0.02	-0.17	6.37	0	0	0
16	SLU 3	0.02	-0.17	6.51	0	0	0
16	SLU 4	0.02	-0.17	6.51	0	0	0
16	SLU 5	0.02	-0.17	6.45	0	0	0
16	SLU 6	0.01	-0.17	6.59	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLU 7	0.02	-0.17	6.59	0	0	0
16	SLU 8	0.01	-0.17	6.53	0	0	0
16	SLU 9	0.01	-0.17	6.53	0	0	0
16	SLU 10	0.01	-0.18	7.14	0	0	0
16	SLU 11	0.01	-0.18	7.28	0	0	0
16	SLU 12	0.01	-0.18	7.28	0	0	0
16	SLU 13	0.01	-0.18	7.21	0	0	0
16	SLU 14	0	-0.18	7.36	0	0	0
16	SLU 15	0	-0.18	7.35	0	0	0
16	SLU 16	0	-0.18	7.29	0	0	0
16	SLU 17	0	-0.18	7.29	0	0	0
16	SLU 18	0	-0.18	7.47	0	0	0
16	SLU 19	0	-0.18	7.47	0	0	0
16	SLU 20	0	-0.18	7.54	0	0	0
16	SLU 21	0	-0.18	7.54	0	0	0
16	SLU 22	0.02	-0.17	7.06	0	0	0
16	SLU 23	0.02	-0.17	7.06	0	0	0
16	SLU 24	0.02	-0.17	7.2	0	0	0
16	SLU 25	0.02	-0.17	7.2	0	0	0
16	SLU 26	0.02	-0.17	7.14	0	0	0
16	SLU 27	0.01	-0.16	7.28	0	0	0
16	SLU 28	0.02	-0.17	7.28	0	0	0
16	SLU 29	0.01	-0.16	7.22	0	0	0
16	SLU 30	0.01	-0.17	7.22	0	0	0
16	SLU 31	0.01	-0.17	7.83	0	0	0
16	SLU 32	0.01	-0.17	7.97	0	0	0
16	SLU 33	0.01	-0.17	7.97	0	0	0
16	SLU 34	0.01	-0.17	7.9	0	0	0
16	SLU 35	0	-0.17	8.04	0	0	0
16	SLU 36	0	-0.17	8.04	0	0	0
16	SLU 37	0	-0.17	7.98	0	0	0
16	SLU 38	0	-0.17	7.98	0	0	0
16	SLU 39	0	-0.17	8.16	0	0	0
16	SLU 40	0	-0.17	8.15	0	0	0
16	SLU 41	0	-0.17	8.23	0	0	0
16	SLU 42	0	-0.17	8.23	0	0	0
16	SLU 43	0.03	-0.23	8.05	0	0	0
16	SLU 44	0.03	-0.23	8.05	0	0	0
16	SLU 45	0.02	-0.23	8.19	0	0	0
16	SLU 46	0.03	-0.23	8.19	0	0	0
16	SLU 47	0.02	-0.23	8.13	0	0	0
16	SLU 48	0.02	-0.23	8.27	0	0	0
16	SLU 49	0.02	-0.23	8.27	0	0	0
16	SLU 50	0.02	-0.23	8.21	0	0	0
16	SLU 51	0.02	-0.23	8.2	0	0	0
16	SLU 52	0.02	-0.23	8.81	0	0	0
16	SLU 53	0.01	-0.23	8.96	0	0	0
16	SLU 54	0.01	-0.23	8.95	0	0	0
16	SLU 55	0.01	-0.23	8.89	0	0	0
16	SLU 56	0.01	-0.23	9.03	0	0	0
16	SLU 57	0.01	-0.23	9.03	0	0	0
16	SLU 58	0.01	-0.23	8.97	0	0	0
16	SLU 59	0.01	-0.23	8.97	0	0	0
16	SLU 60	0.01	-0.23	9.14	0	0	0
16	SLU 61	0.01	-0.23	9.14	0	0	0
16	SLU 62	0.01	-0.23	9.22	0	0	0
16	SLU 63	0.01	-0.23	9.22	0	0	0
16	SLU 64	0.03	-0.22	8.74	0	0	0
16	SLU 65	0.03	-0.22	8.74	0	0	0
16	SLU 66	0.02	-0.22	8.88	0	0	0
16	SLU 67	0.03	-0.22	8.88	0	0	0
16	SLU 68	0.02	-0.22	8.81	0	0	0
16	SLU 69	0.02	-0.22	8.96	0	0	0
16	SLU 70	0.02	-0.22	8.96	0	0	0
16	SLU 71	0.02	-0.22	8.89	0	0	0
16	SLU 72	0.02	-0.22	8.89	0	0	0
16	SLU 73	0.02	-0.23	9.5	0	0	0
16	SLU 74	0.01	-0.22	9.64	0	0	0
16	SLU 75	0.01	-0.22	9.64	0	0	0
16	SLU 76	0.01	-0.22	9.58	0	0	0
16	SLU 77	0.01	-0.22	9.72	0	0	0
16	SLU 78	0.01	-0.22	9.72	0	0	0
16	SLU 79	0.01	-0.22	9.66	0	0	0
16	SLU 80	0.01	-0.22	9.66	0	0	0
16	SLU 81	0.01	-0.22	9.83	0	0	0
16	SLU 82	0.01	-0.23	9.83	0	0	0
16	SLU 83	0.01	-0.22	9.91	0	0	0
16	SLU 84	0.01	-0.23	9.91	0	0	0
16	SLE RA 1	0.02	-0.17	6.57	0	0	0
16	SLE RA 2	0.02	-0.17	6.57	0	0	0
16	SLE RA 3	0.02	-0.17	6.66	0	0	0
16	SLE RA 4	0.02	-0.17	6.66	0	0	0
16	SLE RA 5	0.02	-0.17	6.62	0	0	0
16	SLE RA 6	0.02	-0.17	6.72	0	0	0
16	SLE RA 7	0.02	-0.17	6.72	0	0	0
16	SLE RA 8	0.02	-0.17	6.67	0	0	0
16	SLE RA 9	0.02	-0.17	6.67	0	0	0
16	SLE RA 10	0.01	-0.17	7.08	0	0	0
16	SLE RA 11	0.01	-0.17	7.17	0	0	0
16	SLE RA 12	0.01	-0.17	7.17	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLE RA 13	0.01	-0.17	7.13	0	0	0
16	SLE RA 14	0.01	-0.17	7.23	0	0	0
16	SLE RA 15	0.01	-0.17	7.22	0	0	0
16	SLE RA 16	0.01	-0.17	7.18	0	0	0
16	SLE RA 17	0.01	-0.17	7.18	0	0	0
16	SLE RA 18	0.01	-0.17	7.3	0	0	0
16	SLE RA 19	0.01	-0.17	7.3	0	0	0
16	SLE RA 20	0.01	-0.17	7.35	0	0	0
16	SLE RA 21	0.01	-0.17	7.35	0	0	0
16	SLE FR 1	0.02	-0.17	6.57	0	0	0
16	SLE FR 2	0.02	-0.17	6.57	0	0	0
16	SLE FR 3	0.02	-0.17	6.59	0	0	0
16	SLE FR 4	0.02	-0.17	6.79	0	0	0
16	SLE FR 5	0.02	-0.17	6.81	0	0	0
16	SLE FR 6	0.02	-0.17	6.94	0	0	0
16	SLE QP 1	0.02	-0.17	6.57	0	0	0
16	SLE QP 2	0.02	-0.17	6.79	0	0	0
16	SLD 1	0.41	-0.14	6.68	0	0	0
16	SLD 2	0.43	-0.12	6.68	0	0	0
16	SLD 3	0.39	-0.25	6.61	0	0	0
16	SLD 4	0.41	-0.23	6.61	0	0	0
16	SLD 5	0.16	0	6.86	0	0	0
16	SLD 6	0.17	0.01	6.86	0	0	0
16	SLD 7	0.1	-0.36	6.64	0	0	0
16	SLD 8	0.11	-0.35	6.63	0	0	0
16	SLD 9	-0.08	0.01	6.95	0	0	0
16	SLD 10	-0.07	0.02	6.94	0	0	0
16	SLD 11	-0.13	-0.36	6.72	0	0	0
16	SLD 12	-0.12	-0.34	6.72	0	0	0
16	SLD 13	-0.38	-0.12	6.97	0	0	0
16	SLD 14	-0.36	-0.1	6.97	0	0	0
16	SLD 15	-0.39	-0.23	6.9	0	0	0
16	SLD 16	-0.37	-0.21	6.9	0	0	0
16	SLV 1	0.93	-0.1	6.53	0	0	0
16	SLV 2	0.98	-0.05	6.52	0	0	0
16	SLV 3	0.89	-0.34	6.38	0	0	0
16	SLV 4	0.94	-0.3	6.37	0	0	0
16	SLV 5	0.34	0.22	6.95	0	0	0
16	SLV 6	0.37	0.25	6.94	0	0	0
16	SLV 7	0.22	-0.6	6.44	0	0	0
16	SLV 8	0.25	-0.57	6.43	0	0	0
16	SLV 9	-0.21	0.23	7.15	0	0	0
16	SLV 10	-0.18	0.26	7.14	0	0	0
16	SLV 11	-0.33	-0.59	6.64	0	0	0
16	SLV 12	-0.3	-0.56	6.63	0	0	0
16	SLV 13	-0.9	-0.05	7.21	0	0	0
16	SLV 14	-0.86	0	7.2	0	0	0
16	SLV 15	-0.94	-0.29	7.05	0	0	0
16	SLV 16	-0.9	-0.25	7.05	0	0	0
17	SLU 1	0.01	-0.08	3.18	0	0	0
17	SLU 2	0.01	-0.08	3.18	0	0	0
17	SLU 3	0.01	-0.08	3.25	0	0	0
17	SLU 4	0.01	-0.08	3.25	0	0	0
17	SLU 5	0.01	-0.08	3.22	0	0	0
17	SLU 6	0.01	-0.08	3.29	0	0	0
17	SLU 7	0.01	-0.08	3.29	0	0	0
17	SLU 8	0.01	-0.08	3.26	0	0	0
17	SLU 9	0.01	-0.08	3.26	0	0	0
17	SLU 10	0.01	-0.08	3.56	0	0	0
17	SLU 11	0	-0.08	3.63	0	0	0
17	SLU 12	0	-0.08	3.63	0	0	0
17	SLU 13	0	-0.08	3.6	0	0	0
17	SLU 14	0	-0.08	3.67	0	0	0
17	SLU 15	0	-0.08	3.67	0	0	0
17	SLU 16	0	-0.08	3.63	0	0	0
17	SLU 17	0	-0.08	3.63	0	0	0
17	SLU 18	0	-0.08	3.72	0	0	0
17	SLU 19	0	-0.08	3.72	0	0	0
17	SLU 20	0	-0.08	3.76	0	0	0
17	SLU 21	0	-0.08	3.76	0	0	0
17	SLU 22	0.01	-0.08	3.53	0	0	0
17	SLU 23	0.01	-0.08	3.52	0	0	0
17	SLU 24	0.01	-0.08	3.59	0	0	0
17	SLU 25	0.01	-0.08	3.59	0	0	0
17	SLU 26	0.01	-0.08	3.56	0	0	0
17	SLU 27	0.01	-0.08	3.63	0	0	0
17	SLU 28	0.01	-0.08	3.63	0	0	0
17	SLU 29	0.01	-0.08	3.6	0	0	0
17	SLU 30	0.01	-0.08	3.6	0	0	0
17	SLU 31	0.01	-0.08	3.9	0	0	0
17	SLU 32	0	-0.08	3.97	0	0	0
17	SLU 33	0	-0.08	3.97	0	0	0
17	SLU 34	0	-0.08	3.94	0	0	0
17	SLU 35	0	-0.08	4.01	0	0	0
17	SLU 36	0	-0.08	4.01	0	0	0
17	SLU 37	0	-0.08	3.98	0	0	0
17	SLU 38	0	-0.08	3.98	0	0	0
17	SLU 39	0	-0.08	4.06	0	0	0
17	SLU 40	0	-0.08	4.06	0	0	0
17	SLU 41	0	-0.08	4.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLU 42	0	-0.08	4.1	0	0	0
17	SLU 43	0.01	-0.11	4.02	0	0	0
17	SLU 44	0.01	-0.11	4.02	0	0	0
17	SLU 45	0.01	-0.11	4.09	0	0	0
17	SLU 46	0.01	-0.11	4.09	0	0	0
17	SLU 47	0.01	-0.11	4.06	0	0	0
17	SLU 48	0.01	-0.11	4.13	0	0	0
17	SLU 49	0.01	-0.11	4.13	0	0	0
17	SLU 50	0.01	-0.11	4.09	0	0	0
17	SLU 51	0.01	-0.11	4.09	0	0	0
17	SLU 52	0.01	-0.11	4.4	0	0	0
17	SLU 53	0.01	-0.11	4.47	0	0	0
17	SLU 54	0.01	-0.11	4.47	0	0	0
17	SLU 55	0.01	-0.11	4.43	0	0	0
17	SLU 56	0	-0.11	4.5	0	0	0
17	SLU 57	0	-0.11	4.5	0	0	0
17	SLU 58	0	-0.11	4.47	0	0	0
17	SLU 59	0	-0.11	4.47	0	0	0
17	SLU 60	0.01	-0.11	4.56	0	0	0
17	SLU 61	0.01	-0.11	4.56	0	0	0
17	SLU 62	0	-0.11	4.6	0	0	0
17	SLU 63	0	-0.11	4.6	0	0	0
17	SLU 64	0.01	-0.1	4.36	0	0	0
17	SLU 65	0.01	-0.11	4.36	0	0	0
17	SLU 66	0.01	-0.1	4.43	0	0	0
17	SLU 67	0.01	-0.11	4.43	0	0	0
17	SLU 68	0.01	-0.11	4.4	0	0	0
17	SLU 69	0.01	-0.1	4.47	0	0	0
17	SLU 70	0.01	-0.1	4.47	0	0	0
17	SLU 71	0.01	-0.1	4.44	0	0	0
17	SLU 72	0.01	-0.1	4.44	0	0	0
17	SLU 73	0.01	-0.11	4.74	0	0	0
17	SLU 74	0.01	-0.11	4.81	0	0	0
17	SLU 75	0.01	-0.11	4.81	0	0	0
17	SLU 76	0.01	-0.11	4.78	0	0	0
17	SLU 77	0	-0.11	4.85	0	0	0
17	SLU 78	0	-0.11	4.85	0	0	0
17	SLU 79	0	-0.11	4.81	0	0	0
17	SLU 80	0	-0.11	4.81	0	0	0
17	SLU 81	0.01	-0.11	4.9	0	0	0
17	SLU 82	0.01	-0.11	4.9	0	0	0
17	SLU 83	0	-0.11	4.94	0	0	0
17	SLU 84	0	-0.11	4.94	0	0	0
17	SLE RA 1	0.01	-0.08	3.28	0	0	0
17	SLE RA 2	0.01	-0.08	3.28	0	0	0
17	SLE RA 3	0.01	-0.08	3.33	0	0	0
17	SLE RA 4	0.01	-0.08	3.33	0	0	0
17	SLE RA 5	0.01	-0.08	3.3	0	0	0
17	SLE RA 6	0.01	-0.08	3.35	0	0	0
17	SLE RA 7	0.01	-0.08	3.35	0	0	0
17	SLE RA 8	0.01	-0.08	3.33	0	0	0
17	SLE RA 9	0.01	-0.08	3.33	0	0	0
17	SLE RA 10	0.01	-0.08	3.53	0	0	0
17	SLE RA 11	0.01	-0.08	3.58	0	0	0
17	SLE RA 12	0.01	-0.08	3.58	0	0	0
17	SLE RA 13	0.01	-0.08	3.56	0	0	0
17	SLE RA 14	0	-0.08	3.6	0	0	0
17	SLE RA 15	0	-0.08	3.6	0	0	0
17	SLE RA 16	0	-0.08	3.58	0	0	0
17	SLE RA 17	0	-0.08	3.58	0	0	0
17	SLE RA 18	0	-0.08	3.64	0	0	0
17	SLE RA 19	0.01	-0.08	3.64	0	0	0
17	SLE RA 20	0	-0.08	3.66	0	0	0
17	SLE RA 21	0	-0.08	3.66	0	0	0
17	SLE FR 1	0.01	-0.08	3.28	0	0	0
17	SLE FR 2	0.01	-0.08	3.28	0	0	0
17	SLE FR 3	0.01	-0.08	3.29	0	0	0
17	SLE FR 4	0.01	-0.08	3.39	0	0	0
17	SLE FR 5	0.01	-0.08	3.4	0	0	0
17	SLE FR 6	0.01	-0.08	3.46	0	0	0
17	SLE QP 1	0.01	-0.08	3.28	0	0	0
17	SLE QP 2	0.01	-0.08	3.39	0	0	0
17	SLD 1	0.2	-0.07	3.31	0	0	0
17	SLD 2	0.21	-0.05	3.31	0	0	0
17	SLD 3	0.2	-0.12	3.28	0	0	0
17	SLD 4	0.21	-0.11	3.27	0	0	0
17	SLD 5	0.08	0	3.42	0	0	0
17	SLD 6	0.08	0.01	3.42	0	0	0
17	SLD 7	0.05	-0.18	3.3	0	0	0
17	SLD 8	0.06	-0.17	3.3	0	0	0
17	SLD 9	-0.04	0.01	3.48	0	0	0
17	SLD 10	-0.03	0.01	3.48	0	0	0
17	SLD 11	-0.07	-0.17	3.36	0	0	0
17	SLD 12	-0.06	-0.17	3.35	0	0	0
17	SLD 13	-0.19	-0.06	3.5	0	0	0
17	SLD 14	-0.18	-0.04	3.5	0	0	0
17	SLD 15	-0.2	-0.11	3.47	0	0	0
17	SLD 16	-0.19	-0.1	3.46	0	0	0
17	SLV 1	0.47	-0.05	3.21	0	0	0
17	SLV 2	0.49	-0.02	3.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLV 3	0.45	-0.17	3.13	0	0	0
17	SLV 4	0.47	-0.14	3.12	0	0	0
17	SLV 5	0.17	0.11	3.46	0	0	0
17	SLV 6	0.19	0.13	3.46	0	0	0
17	SLV 7	0.11	-0.3	3.18	0	0	0
17	SLV 8	0.12	-0.28	3.18	0	0	0
17	SLV 9	-0.11	0.12	3.6	0	0	0
17	SLV 10	-0.09	0.13	3.59	0	0	0
17	SLV 11	-0.17	-0.29	3.32	0	0	0
17	SLV 12	-0.15	-0.27	3.31	0	0	0
17	SLV 13	-0.45	-0.02	3.66	0	0	0
17	SLV 14	-0.43	0.01	3.65	0	0	0
17	SLV 15	-0.47	-0.14	3.57	0	0	0
17	SLV 16	-0.45	-0.12	3.57	0	0	0
18	SLU 1	0.01	-0.21	6.32	0	0	0
18	SLU 2	0.01	-0.22	6.32	0	0	0
18	SLU 3	0.01	-0.21	6.47	0	0	0
18	SLU 4	0.01	-0.22	6.47	0	0	0
18	SLU 5	0.01	-0.22	6.41	0	0	0
18	SLU 6	0.01	-0.21	6.56	0	0	0
18	SLU 7	0.01	-0.22	6.56	0	0	0
18	SLU 8	0.01	-0.21	6.5	0	0	0
18	SLU 9	0.01	-0.21	6.5	0	0	0
18	SLU 10	0	-0.23	7.13	0	0	0
18	SLU 11	0	-0.22	7.28	0	0	0
18	SLU 12	0	-0.22	7.28	0	0	0
18	SLU 13	0	-0.23	7.22	0	0	0
18	SLU 14	-0.01	-0.22	7.37	0	0	0
18	SLU 15	-0.01	-0.22	7.37	0	0	0
18	SLU 16	-0.01	-0.22	7.31	0	0	0
18	SLU 17	-0.01	-0.22	7.31	0	0	0
18	SLU 18	-0.01	-0.23	7.48	0	0	0
18	SLU 19	-0.01	-0.23	7.48	0	0	0
18	SLU 20	-0.01	-0.23	7.57	0	0	0
18	SLU 21	-0.01	-0.23	7.57	0	0	0
18	SLU 22	0.01	-0.21	7.02	0	0	0
18	SLU 23	0.01	-0.21	7.02	0	0	0
18	SLU 24	0.01	-0.21	7.17	0	0	0
18	SLU 25	0.01	-0.21	7.17	0	0	0
18	SLU 26	0.01	-0.21	7.11	0	0	0
18	SLU 27	0.01	-0.21	7.26	0	0	0
18	SLU 28	0.01	-0.21	7.26	0	0	0
18	SLU 29	0	-0.21	7.2	0	0	0
18	SLU 30	0.01	-0.21	7.2	0	0	0
18	SLU 31	0	-0.22	7.83	0	0	0
18	SLU 32	0	-0.22	7.98	0	0	0
18	SLU 33	0	-0.22	7.98	0	0	0
18	SLU 34	0	-0.22	7.92	0	0	0
18	SLU 35	-0.01	-0.22	8.07	0	0	0
18	SLU 36	-0.01	-0.22	8.07	0	0	0
18	SLU 37	-0.01	-0.22	8.01	0	0	0
18	SLU 38	-0.01	-0.22	8.01	0	0	0
18	SLU 39	-0.01	-0.22	8.18	0	0	0
18	SLU 40	-0.01	-0.22	8.18	0	0	0
18	SLU 41	-0.01	-0.22	8.27	0	0	0
18	SLU 42	-0.01	-0.22	8.27	0	0	0
18	SLU 43	0.02	-0.28	7.98	0	0	0
18	SLU 44	0.02	-0.28	7.98	0	0	0
18	SLU 45	0.01	-0.28	8.13	0	0	0
18	SLU 46	0.01	-0.28	8.13	0	0	0
18	SLU 47	0.01	-0.28	8.07	0	0	0
18	SLU 48	0.01	-0.28	8.22	0	0	0
18	SLU 49	0.01	-0.28	8.22	0	0	0
18	SLU 50	0.01	-0.28	8.16	0	0	0
18	SLU 51	0.01	-0.28	8.16	0	0	0
18	SLU 52	0	-0.29	8.79	0	0	0
18	SLU 53	0	-0.29	8.94	0	0	0
18	SLU 54	0	-0.29	8.94	0	0	0
18	SLU 55	0	-0.29	8.88	0	0	0
18	SLU 56	0	-0.29	9.03	0	0	0
18	SLU 57	0	-0.29	9.03	0	0	0
18	SLU 58	0	-0.29	8.97	0	0	0
18	SLU 59	0	-0.29	8.97	0	0	0
18	SLU 60	0	-0.29	9.14	0	0	0
18	SLU 61	0	-0.29	9.14	0	0	0
18	SLU 62	-0.01	-0.29	9.23	0	0	0
18	SLU 63	-0.01	-0.29	9.23	0	0	0
18	SLU 64	0.02	-0.27	8.68	0	0	0
18	SLU 65	0.02	-0.28	8.68	0	0	0
18	SLU 66	0.01	-0.27	8.83	0	0	0
18	SLU 67	0.01	-0.28	8.83	0	0	0
18	SLU 68	0.01	-0.28	8.77	0	0	0
18	SLU 69	0.01	-0.27	8.92	0	0	0
18	SLU 70	0.01	-0.28	8.92	0	0	0
18	SLU 71	0.01	-0.27	8.86	0	0	0
18	SLU 72	0.01	-0.28	8.86	0	0	0
18	SLU 73	0	-0.29	9.49	0	0	0
18	SLU 74	0	-0.28	9.64	0	0	0
18	SLU 75	0	-0.29	9.64	0	0	0
18	SLU 76	0	-0.29	9.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLU 77	0	-0.28	9.73	0	0	0
18	SLU 78	0	-0.29	9.73	0	0	0
18	SLU 79	0	-0.28	9.67	0	0	0
18	SLU 80	0	-0.28	9.67	0	0	0
18	SLU 81	0	-0.29	9.84	0	0	0
18	SLU 82	0	-0.29	9.84	0	0	0
18	SLU 83	-0.01	-0.29	9.93	0	0	0
18	SLU 84	-0.01	-0.29	9.93	0	0	0
18	SLE RA 1	0.01	-0.21	6.52	0	0	0
18	SLE RA 2	0.01	-0.21	6.52	0	0	0
18	SLE RA 3	0.01	-0.21	6.62	0	0	0
18	SLE RA 4	0.01	-0.21	6.62	0	0	0
18	SLE RA 5	0.01	-0.21	6.58	0	0	0
18	SLE RA 6	0.01	-0.21	6.68	0	0	0
18	SLE RA 7	0.01	-0.21	6.68	0	0	0
18	SLE RA 8	0.01	-0.21	6.64	0	0	0
18	SLE RA 9	0.01	-0.21	6.64	0	0	0
18	SLE RA 10	0	-0.22	7.06	0	0	0
18	SLE RA 11	0	-0.22	7.16	0	0	0
18	SLE RA 12	0	-0.22	7.16	0	0	0
18	SLE RA 13	0	-0.22	7.12	0	0	0
18	SLE RA 14	0	-0.22	7.22	0	0	0
18	SLE RA 15	0	-0.22	7.22	0	0	0
18	SLE RA 16	0	-0.22	7.18	0	0	0
18	SLE RA 17	0	-0.22	7.18	0	0	0
18	SLE RA 18	0	-0.22	7.3	0	0	0
18	SLE RA 19	0	-0.22	7.3	0	0	0
18	SLE RA 20	0	-0.22	7.36	0	0	0
18	SLE RA 21	0	-0.22	7.36	0	0	0
18	SLE FR 1	0.01	-0.21	6.52	0	0	0
18	SLE FR 2	0.01	-0.21	6.52	0	0	0
18	SLE FR 3	0.01	-0.21	6.55	0	0	0
18	SLE FR 4	0.01	-0.21	6.75	0	0	0
18	SLE FR 5	0.01	-0.21	6.78	0	0	0
18	SLE FR 6	0.01	-0.22	6.91	0	0	0
18	SLE QP 1	0.01	-0.21	6.52	0	0	0
18	SLE QP 2	0.01	-0.21	6.76	0	0	0
18	SLD 1	0.4	-0.15	6.87	0	0	0
18	SLD 2	0.42	-0.14	6.87	0	0	0
18	SLD 3	0.39	-0.26	6.84	0	0	0
18	SLD 4	0.4	-0.26	6.85	0	0	0
18	SLD 5	0.15	-0.02	6.82	0	0	0
18	SLD 6	0.16	-0.02	6.83	0	0	0
18	SLD 7	0.09	-0.41	6.74	0	0	0
18	SLD 8	0.1	-0.4	6.75	0	0	0
18	SLD 9	-0.09	-0.02	6.76	0	0	0
18	SLD 10	-0.07	-0.02	6.77	0	0	0
18	SLD 11	-0.14	-0.41	6.68	0	0	0
18	SLD 12	-0.13	-0.41	6.69	0	0	0
18	SLD 13	-0.38	-0.17	6.66	0	0	0
18	SLD 14	-0.37	-0.16	6.67	0	0	0
18	SLD 15	-0.4	-0.28	6.64	0	0	0
18	SLD 16	-0.39	-0.28	6.64	0	0	0
18	SLV 1	0.93	-0.06	7.01	0	0	0
18	SLV 2	0.97	-0.06	7.03	0	0	0
18	SLV 3	0.89	-0.33	6.96	0	0	0
18	SLV 4	0.93	-0.32	6.98	0	0	0
18	SLV 5	0.34	0.23	6.92	0	0	0
18	SLV 6	0.36	0.24	6.93	0	0	0
18	SLV 7	0.21	-0.65	6.73	0	0	0
18	SLV 8	0.23	-0.65	6.74	0	0	0
18	SLV 9	-0.21	0.22	6.77	0	0	0
18	SLV 10	-0.19	0.22	6.78	0	0	0
18	SLV 11	-0.35	-0.66	6.58	0	0	0
18	SLV 12	-0.32	-0.66	6.59	0	0	0
18	SLV 13	-0.91	-0.11	6.53	0	0	0
18	SLV 14	-0.87	-0.1	6.55	0	0	0
18	SLV 15	-0.95	-0.37	6.48	0	0	0
18	SLV 16	-0.91	-0.36	6.5	0	0	0
20	SLU 1	0.03	-0.41	12.64	0	0	0
20	SLU 2	0.03	-0.42	12.64	0	0	0
20	SLU 3	0.02	-0.41	12.93	0	0	0
20	SLU 4	0.02	-0.41	12.93	0	0	0
20	SLU 5	0.02	-0.42	12.81	0	0	0
20	SLU 6	0.01	-0.41	13.11	0	0	0
20	SLU 7	0.01	-0.41	13.11	0	0	0
20	SLU 8	0.01	-0.41	12.99	0	0	0
20	SLU 9	0.01	-0.41	12.99	0	0	0
20	SLU 10	0	-0.43	14.24	0	0	0
20	SLU 11	-0.01	-0.43	14.54	0	0	0
20	SLU 12	-0.01	-0.43	14.54	0	0	0
20	SLU 13	-0.01	-0.43	14.41	0	0	0
20	SLU 14	-0.01	-0.43	14.71	0	0	0
20	SLU 15	-0.01	-0.43	14.71	0	0	0
20	SLU 16	-0.02	-0.42	14.59	0	0	0
20	SLU 17	-0.01	-0.43	14.59	0	0	0
20	SLU 18	-0.01	-0.43	14.93	0	0	0
20	SLU 19	-0.01	-0.44	14.93	0	0	0
20	SLU 20	-0.02	-0.43	15.1	0	0	0
20	SLU 21	-0.02	-0.44	15.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLU 22	0.02	-0.4	14.03	0	0	0
20	SLU 23	0.03	-0.41	14.03	0	0	0
20	SLU 24	0.02	-0.4	14.33	0	0	0
20	SLU 25	0.02	-0.41	14.33	0	0	0
20	SLU 26	0.02	-0.41	14.2	0	0	0
20	SLU 27	0.01	-0.4	14.5	0	0	0
20	SLU 28	0.01	-0.41	14.5	0	0	0
20	SLU 29	0.01	-0.4	14.38	0	0	0
20	SLU 30	0.01	-0.4	14.38	0	0	0
20	SLU 31	0	-0.42	15.63	0	0	0
20	SLU 32	-0.01	-0.42	15.93	0	0	0
20	SLU 33	-0.01	-0.42	15.93	0	0	0
20	SLU 34	-0.01	-0.42	15.81	0	0	0
20	SLU 35	-0.02	-0.42	16.1	0	0	0
20	SLU 36	-0.01	-0.42	16.1	0	0	0
20	SLU 37	-0.02	-0.41	15.98	0	0	0
20	SLU 38	-0.02	-0.42	15.98	0	0	0
20	SLU 39	-0.01	-0.42	16.32	0	0	0
20	SLU 40	-0.01	-0.43	16.32	0	0	0
20	SLU 41	-0.02	-0.42	16.5	0	0	0
20	SLU 42	-0.02	-0.43	16.5	0	0	0
20	SLU 43	0.03	-0.54	15.95	0	0	0
20	SLU 44	0.04	-0.54	15.95	0	0	0
20	SLU 45	0.03	-0.54	16.25	0	0	0
20	SLU 46	0.03	-0.54	16.24	0	0	0
20	SLU 47	0.03	-0.54	16.12	0	0	0
20	SLU 48	0.02	-0.54	16.42	0	0	0
20	SLU 49	0.02	-0.54	16.42	0	0	0
20	SLU 50	0.02	-0.53	16.3	0	0	0
20	SLU 51	0.02	-0.54	16.3	0	0	0
20	SLU 52	0.01	-0.56	17.55	0	0	0
20	SLU 53	0	-0.55	17.85	0	0	0
20	SLU 54	0	-0.56	17.85	0	0	0
20	SLU 55	0	-0.56	17.73	0	0	0
20	SLU 56	-0.01	-0.55	18.02	0	0	0
20	SLU 57	0	-0.56	18.02	0	0	0
20	SLU 58	-0.01	-0.55	17.9	0	0	0
20	SLU 59	-0.01	-0.55	17.9	0	0	0
20	SLU 60	0	-0.56	18.24	0	0	0
20	SLU 61	0	-0.56	18.24	0	0	0
20	SLU 62	-0.01	-0.56	18.41	0	0	0
20	SLU 63	-0.01	-0.56	18.41	0	0	0
20	SLU 64	0.03	-0.53	17.34	0	0	0
20	SLU 65	0.03	-0.53	17.34	0	0	0
20	SLU 66	0.03	-0.53	17.64	0	0	0
20	SLU 67	0.03	-0.53	17.64	0	0	0
20	SLU 68	0.03	-0.53	17.52	0	0	0
20	SLU 69	0.02	-0.53	17.81	0	0	0
20	SLU 70	0.02	-0.53	17.81	0	0	0
20	SLU 71	0.02	-0.53	17.69	0	0	0
20	SLU 72	0.02	-0.53	17.69	0	0	0
20	SLU 73	0.01	-0.55	18.95	0	0	0
20	SLU 74	0	-0.54	19.24	0	0	0
20	SLU 75	0	-0.55	19.24	0	0	0
20	SLU 76	0	-0.55	19.12	0	0	0
20	SLU 77	-0.01	-0.54	19.42	0	0	0
20	SLU 78	-0.01	-0.55	19.42	0	0	0
20	SLU 79	-0.01	-0.54	19.3	0	0	0
20	SLU 80	-0.01	-0.54	19.3	0	0	0
20	SLU 81	0	-0.55	19.63	0	0	0
20	SLU 82	0	-0.55	19.63	0	0	0
20	SLU 83	-0.01	-0.55	19.81	0	0	0
20	SLU 84	-0.01	-0.55	19.81	0	0	0
20	SLE RA 1	0.03	-0.41	13.03	0	0	0
20	SLE RA 2	0.03	-0.41	13.03	0	0	0
20	SLE RA 3	0.02	-0.41	13.23	0	0	0
20	SLE RA 4	0.02	-0.41	13.23	0	0	0
20	SLE RA 5	0.02	-0.41	13.15	0	0	0
20	SLE RA 6	0.02	-0.41	13.35	0	0	0
20	SLE RA 7	0.02	-0.41	13.35	0	0	0
20	SLE RA 8	0.02	-0.41	13.27	0	0	0
20	SLE RA 9	0.02	-0.41	13.27	0	0	0
20	SLE RA 10	0.01	-0.42	14.1	0	0	0
20	SLE RA 11	0	-0.42	14.3	0	0	0
20	SLE RA 12	0	-0.42	14.3	0	0	0
20	SLE RA 13	0	-0.42	14.22	0	0	0
20	SLE RA 14	0	-0.42	14.42	0	0	0
20	SLE RA 15	0	-0.42	14.42	0	0	0
20	SLE RA 16	0	-0.42	14.34	0	0	0
20	SLE RA 17	0	-0.42	14.34	0	0	0
20	SLE RA 18	0	-0.42	14.56	0	0	0
20	SLE RA 19	0	-0.42	14.56	0	0	0
20	SLE RA 20	0	-0.42	14.68	0	0	0
20	SLE RA 21	0	-0.42	14.68	0	0	0
20	SLE FR 1	0.03	-0.41	13.03	0	0	0
20	SLE FR 2	0.03	-0.41	13.03	0	0	0
20	SLE FR 3	0.02	-0.41	13.08	0	0	0
20	SLE FR 4	0.02	-0.41	13.49	0	0	0
20	SLE FR 5	0.02	-0.41	13.54	0	0	0
20	SLE FR 6	0.01	-0.41	13.8	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLE QP 1	0.03	-0.41	13.03	0	0	0
20	SLE QP 2	0.02	-0.41	13.49	0	0	0
20	SLD 1	0.81	-0.28	13.63	0	0	0
20	SLD 2	0.84	-0.27	13.64	0	0	0
20	SLD 3	0.77	-0.52	13.58	0	0	0
20	SLD 4	0.8	-0.5	13.59	0	0	0
20	SLD 5	0.3	-0.03	13.61	0	0	0
20	SLD 6	0.32	-0.02	13.61	0	0	0
20	SLD 7	0.19	-0.79	13.44	0	0	0
20	SLD 8	0.21	-0.79	13.45	0	0	0
20	SLD 9	-0.17	-0.04	13.54	0	0	0
20	SLD 10	-0.15	-0.03	13.55	0	0	0
20	SLD 11	-0.29	-0.81	13.37	0	0	0
20	SLD 12	-0.27	-0.8	13.38	0	0	0
20	SLD 13	-0.77	-0.32	13.4	0	0	0
20	SLD 14	-0.74	-0.31	13.41	0	0	0
20	SLD 15	-0.8	-0.55	13.35	0	0	0
20	SLD 16	-0.77	-0.54	13.36	0	0	0
20	SLV 1	1.86	-0.12	13.81	0	0	0
20	SLV 2	1.94	-0.09	13.83	0	0	0
20	SLV 3	1.78	-0.65	13.69	0	0	0
20	SLV 4	1.86	-0.61	13.72	0	0	0
20	SLV 5	0.68	0.46	13.76	0	0	0
20	SLV 6	0.73	0.48	13.77	0	0	0
20	SLV 7	0.41	-1.28	13.37	0	0	0
20	SLV 8	0.46	-1.26	13.39	0	0	0
20	SLV 9	-0.43	0.44	13.6	0	0	0
20	SLV 10	-0.38	0.46	13.61	0	0	0
20	SLV 11	-0.69	-1.3	13.21	0	0	0
20	SLV 12	-0.64	-1.28	13.23	0	0	0
20	SLV 13	-1.82	-0.21	13.27	0	0	0
20	SLV 14	-1.75	-0.18	13.29	0	0	0
20	SLV 15	-1.9	-0.73	13.15	0	0	0
20	SLV 16	-1.83	-0.7	13.18	0	0	0
21	SLU 1	0.03	-0.4	12.97	0	-2.4323	-0.0759
21	SLU 2	0.03	-0.41	12.97	0	-2.432	-0.0771
21	SLU 3	0.02	-0.41	13.27	0	-2.4885	-0.0762
21	SLU 4	0.02	-0.41	13.27	0	-2.4883	-0.0769
21	SLU 5	0.02	-0.41	13.15	0	-2.4647	-0.077
21	SLU 6	0.01	-0.41	13.45	0	-2.5212	-0.0761
21	SLU 7	0.01	-0.41	13.45	0	-2.521	-0.0768
21	SLU 8	0.01	-0.4	13.32	0	-2.4978	-0.0758
21	SLU 9	0.01	-0.41	13.32	0	-2.4976	-0.0765
21	SLU 10	0	-0.43	14.6	0	-2.7371	-0.0797
21	SLU 11	-0.01	-0.42	14.9	0	-2.7936	-0.0788
21	SLU 12	-0.01	-0.42	14.9	0	-2.7934	-0.0795
21	SLU 13	-0.01	-0.42	14.77	0	-2.7699	-0.0796
21	SLU 14	-0.01	-0.42	15.07	0	-2.8264	-0.0787
21	SLU 15	-0.01	-0.42	15.07	0	-2.8262	-0.0794
21	SLU 16	-0.02	-0.42	14.95	0	-2.8029	-0.0784
21	SLU 17	-0.02	-0.42	14.95	0	-2.8027	-0.0791
21	SLU 18	-0.01	-0.42	15.3	0	-2.8682	-0.0796
21	SLU 19	-0.01	-0.43	15.3	0	-2.868	-0.0804
21	SLU 20	-0.02	-0.42	15.47	0	-2.9009	-0.0796
21	SLU 21	-0.02	-0.43	15.47	0	-2.9008	-0.0803
21	SLU 22	0.03	-0.39	14.4	0	-2.6999	-0.0739
21	SLU 23	0.03	-0.4	14.4	0	-2.6996	-0.0751
21	SLU 24	0.02	-0.4	14.7	0	-2.7561	-0.0742
21	SLU 25	0.02	-0.4	14.7	0	-2.7559	-0.0749
21	SLU 26	0.02	-0.4	14.57	0	-2.7324	-0.075
21	SLU 27	0.01	-0.4	14.87	0	-2.7888	-0.0741
21	SLU 28	0.01	-0.4	14.87	0	-2.7887	-0.0748
21	SLU 29	0.01	-0.39	14.75	0	-2.7654	-0.0737
21	SLU 30	0.01	-0.4	14.75	0	-2.7652	-0.0745
21	SLU 31	0	-0.41	16.03	0	-3.0047	-0.0777
21	SLU 32	-0.01	-0.41	16.33	0	-3.0612	-0.0768
21	SLU 33	-0.01	-0.41	16.33	0	-3.0611	-0.0775
21	SLU 34	-0.01	-0.41	16.2	0	-3.0375	-0.0776
21	SLU 35	-0.02	-0.41	16.5	0	-3.094	-0.0767
21	SLU 36	-0.01	-0.41	16.5	0	-3.0938	-0.0774
21	SLU 37	-0.02	-0.41	16.38	0	-3.0705	-0.0764
21	SLU 38	-0.02	-0.41	16.38	0	-3.0704	-0.0771
21	SLU 39	-0.01	-0.41	16.72	0	-3.1358	-0.0776
21	SLU 40	-0.01	-0.42	16.72	0	-3.1356	-0.0783
21	SLU 41	-0.02	-0.41	16.9	0	-3.1686	-0.0775
21	SLU 42	-0.02	-0.42	16.9	0	-3.1684	-0.0783
21	SLU 43	0.03	-0.53	16.37	0	-3.0702	-0.0994
21	SLU 44	0.04	-0.54	16.37	0	-3.0699	-0.1006
21	SLU 45	0.03	-0.53	16.67	0	-3.1264	-0.0996
21	SLU 46	0.03	-0.54	16.67	0	-3.1262	-0.1004
21	SLU 47	0.03	-0.54	16.55	0	-3.1026	-0.1005
21	SLU 48	0.02	-0.53	16.85	0	-3.1591	-0.0996
21	SLU 49	0.02	-0.53	16.85	0	-3.159	-0.1003
21	SLU 50	0.02	-0.53	16.72	0	-3.1357	-0.0992
21	SLU 51	0.02	-0.53	16.72	0	-3.1355	-0.0999
21	SLU 52	0.01	-0.55	18	0	-3.375	-0.1032
21	SLU 53	0	-0.55	18.3	0	-3.4315	-0.1022
21	SLU 54	0	-0.55	18.3	0	-3.4313	-0.103
21	SLU 55	0	-0.55	18.17	0	-3.4078	-0.1031
21	SLU 56	-0.01	-0.54	18.48	0	-3.4643	-0.1022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLU 57	-0.01	-0.55	18.48	0	-3.4641	-0.1029
21	SLU 58	-0.01	-0.54	18.35	0	-3.4408	-0.1018
21	SLU 59	-0.01	-0.55	18.35	0	-3.4406	-0.1026
21	SLU 60	0	-0.55	18.7	0	-3.5061	-0.1031
21	SLU 61	0	-0.55	18.7	0	-3.5059	-0.1038
21	SLU 62	-0.01	-0.55	18.87	0	-3.5388	-0.103
21	SLU 63	-0.01	-0.55	18.87	0	-3.5387	-0.1037
21	SLU 64	0.03	-0.52	17.8	0	-3.3378	-0.0974
21	SLU 65	0.03	-0.53	17.8	0	-3.3375	-0.0986
21	SLU 66	0.03	-0.52	18.1	0	-3.394	-0.0976
21	SLU 67	0.03	-0.52	18.1	0	-3.3938	-0.0983
21	SLU 68	0.03	-0.53	17.97	0	-3.3703	-0.0985
21	SLU 69	0.02	-0.52	18.28	0	-3.4268	-0.0975
21	SLU 70	0.02	-0.52	18.28	0	-3.4266	-0.0983
21	SLU 71	0.02	-0.52	18.15	0	-3.4033	-0.0972
21	SLU 72	0.02	-0.52	18.15	0	-3.4031	-0.0979
21	SLU 73	0.01	-0.54	19.43	0	-3.6427	-0.1012
21	SLU 74	0	-0.53	19.73	0	-3.6992	-0.1002
21	SLU 75	0	-0.54	19.73	0	-3.699	-0.1009
21	SLU 76	0	-0.54	19.6	0	-3.6754	-0.1011
21	SLU 77	-0.01	-0.53	19.9	0	-3.7319	-0.1002
21	SLU 78	-0.01	-0.54	19.9	0	-3.7317	-0.1009
21	SLU 79	-0.01	-0.53	19.78	0	-3.7085	-0.0998
21	SLU 80	-0.01	-0.54	19.78	0	-3.7083	-0.1005
21	SLU 81	0	-0.54	20.13	0	-3.7737	-0.1011
21	SLU 82	0	-0.54	20.13	0	-3.7736	-0.1018
21	SLU 83	-0.01	-0.54	20.3	0	-3.8065	-0.101
21	SLU 84	-0.01	-0.54	20.3	0	-3.8063	-0.1017
21	SLE RA 1	0.03	-0.4	13.38	0	-2.5087	-0.0753
21	SLE RA 2	0.03	-0.41	13.38	0	-2.5085	-0.0761
21	SLE RA 3	0.02	-0.4	13.58	0	-2.5462	-0.0755
21	SLE RA 4	0.02	-0.41	13.58	0	-2.5461	-0.076
21	SLE RA 5	0.02	-0.41	13.5	0	-2.5304	-0.0761
21	SLE RA 6	0.02	-0.4	13.7	0	-2.568	-0.0755
21	SLE RA 7	0.02	-0.41	13.7	0	-2.5679	-0.0759
21	SLE RA 8	0.02	-0.4	13.61	0	-2.5524	-0.0752
21	SLE RA 9	0.02	-0.4	13.61	0	-2.5523	-0.0757
21	SLE RA 10	0.01	-0.42	14.46	0	-2.712	-0.0779
21	SLE RA 11	0	-0.41	14.66	0	-2.7496	-0.0772
21	SLE RA 12	0	-0.41	14.66	0	-2.7495	-0.0777
21	SLE RA 13	0	-0.42	14.58	0	-2.7338	-0.0778
21	SLE RA 14	0	-0.41	14.78	0	-2.7715	-0.0772
21	SLE RA 15	0	-0.41	14.78	0	-2.7713	-0.0777
21	SLE RA 16	0	-0.41	14.7	0	-2.7558	-0.077
21	SLE RA 17	0	-0.41	14.7	0	-2.7557	-0.0775
21	SLE RA 18	0	-0.42	14.93	0	-2.7993	-0.0778
21	SLE RA 19	0	-0.42	14.93	0	-2.7992	-0.0783
21	SLE RA 20	0	-0.41	15.05	0	-2.8212	-0.0778
21	SLE RA 21	0	-0.42	15.05	0	-2.8211	-0.0782
21	SLE FR 1	0.03	-0.4	13.38	0	-2.5087	-0.0753
21	SLE FR 2	0.03	-0.4	13.38	0	-2.5087	-0.0755
21	SLE FR 3	0.02	-0.4	13.43	0	-2.5175	-0.0753
21	SLE FR 4	0.02	-0.41	13.84	0	-2.5959	-0.0762
21	SLE FR 5	0.02	-0.41	13.89	0	-2.6046	-0.0761
21	SLE FR 6	0.01	-0.41	14.15	0	-2.654	-0.0766
21	SLE QP 1	0.03	-0.4	13.38	0	-2.5087	-0.0753
21	SLE QP 2	0.02	-0.41	13.84	0	-2.5959	-0.0761
21	SLD 1	0.83	-0.28	13.82	0	-2.5907	-0.0527
21	SLD 2	0.86	-0.26	13.82	0	-2.5918	-0.0487
21	SLD 3	0.8	-0.51	13.76	0	-2.5801	-0.0965
21	SLD 4	0.83	-0.49	13.77	0	-2.5811	-0.0926
21	SLD 5	0.31	-0.02	13.92	0	-2.6103	-0.0033
21	SLD 6	0.33	0	13.93	0	-2.611	-0.0007
21	SLD 7	0.19	-0.8	13.73	0	-2.5749	-0.1494
21	SLD 8	0.21	-0.78	13.74	0	-2.5756	-0.1468
21	SLD 9	-0.18	-0.03	13.95	0	-2.6163	-0.0054
21	SLD 10	-0.15	-0.01	13.96	0	-2.617	-0.0027
21	SLD 11	-0.3	-0.81	13.76	0	-2.5809	-0.1515
21	SLD 12	-0.27	-0.79	13.77	0	-2.5815	-0.1489
21	SLD 13	-0.79	-0.32	13.92	0	-2.6107	-0.0596
21	SLD 14	-0.76	-0.3	13.93	0	-2.6117	-0.0556
21	SLD 15	-0.83	-0.55	13.87	0	-2.6001	-0.1034
21	SLD 16	-0.79	-0.53	13.87	0	-2.6011	-0.0995
21	SLV 1	1.92	-0.12	13.78	0	-2.5834	-0.023
21	SLV 2	2	-0.07	13.79	0	-2.5858	-0.0137
21	SLV 3	1.84	-0.65	13.65	0	-2.5592	-0.1224
21	SLV 4	1.91	-0.6	13.66	0	-2.5616	-0.1131
21	SLV 5	0.7	0.47	14.02	0	-2.6285	0.0889
21	SLV 6	0.75	0.51	14.03	0	-2.6301	0.095
21	SLV 7	0.43	-1.29	13.59	0	-2.5477	-0.2423
21	SLV 8	0.48	-1.26	13.6	0	-2.5493	-0.2363
21	SLV 9	-0.44	0.45	14.09	0	-2.6425	0.0841
21	SLV 10	-0.39	0.48	14.1	0	-2.6441	0.0901
21	SLV 11	-0.71	-1.32	13.66	0	-2.5618	-0.2471
21	SLV 12	-0.66	-1.29	13.67	0	-2.5633	-0.2411
21	SLV 13	-1.88	-0.21	14.03	0	-2.6302	-0.0391
21	SLV 14	-1.8	-0.16	14.04	0	-2.6327	-0.0298
21	SLV 15	-1.96	-0.74	13.9	0	-2.606	-0.1384
21	SLV 16	-1.88	-0.69	13.91	0	-2.6084	-0.1291
21	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	CRTFP Uy-	0	0	0	0	0	0
23	SLU 1	0.03	-0.4	13.3	0	-1.6631	-0.0499
23	SLU 2	0.03	-0.4	13.3	0	-1.6629	-0.0506
23	SLU 3	0.02	-0.4	13.61	0	-1.701	-0.05
23	SLU 4	0.02	-0.4	13.61	0	-1.7009	-0.0505
23	SLU 5	0.02	-0.4	13.48	0	-1.6846	-0.0506
23	SLU 6	0.01	-0.4	13.78	0	-1.7228	-0.0499
23	SLU 7	0.01	-0.4	13.78	0	-1.7226	-0.0504
23	SLU 8	0.01	-0.4	13.65	0	-1.7067	-0.0497
23	SLU 9	0.01	-0.4	13.65	0	-1.7065	-0.0502
23	SLU 10	0	-0.42	14.95	0	-1.869	-0.0521
23	SLU 11	-0.01	-0.41	15.26	0	-1.9072	-0.0515
23	SLU 12	-0.01	-0.42	15.26	0	-1.907	-0.052
23	SLU 13	-0.01	-0.42	15.13	0	-1.8908	-0.0521
23	SLU 14	-0.02	-0.41	15.43	0	-1.9289	-0.0514
23	SLU 15	-0.01	-0.42	15.43	0	-1.9288	-0.0519
23	SLU 16	-0.02	-0.41	15.3	0	-1.9128	-0.0512
23	SLU 17	-0.02	-0.41	15.3	0	-1.9127	-0.0517
23	SLU 18	-0.01	-0.42	15.66	0	-1.9576	-0.052
23	SLU 19	-0.01	-0.42	15.66	0	-1.9575	-0.0525
23	SLU 20	-0.02	-0.42	15.84	0	-1.9794	-0.052
23	SLU 21	-0.02	-0.42	15.83	0	-1.9793	-0.0524
23	SLU 22	0.03	-0.39	14.77	0	-1.8456	-0.0483
23	SLU 23	0.03	-0.39	14.76	0	-1.8454	-0.0491
23	SLU 24	0.02	-0.39	15.07	0	-1.8835	-0.0485
23	SLU 25	0.02	-0.39	15.07	0	-1.8834	-0.0489
23	SLU 26	0.02	-0.39	14.94	0	-1.8671	-0.049
23	SLU 27	0.01	-0.39	15.24	0	-1.9053	-0.0484
23	SLU 28	0.01	-0.39	15.24	0	-1.9051	-0.0488
23	SLU 29	0.01	-0.39	15.11	0	-1.8892	-0.0482
23	SLU 30	0.01	-0.39	15.11	0	-1.889	-0.0486
23	SLU 31	0	-0.4	16.41	0	-2.0515	-0.0506
23	SLU 32	-0.01	-0.4	16.72	0	-2.0897	-0.05
23	SLU 33	-0.01	-0.4	16.72	0	-2.0895	-0.0504
23	SLU 34	-0.01	-0.4	16.59	0	-2.0733	-0.0505
23	SLU 35	-0.02	-0.4	16.89	0	-2.1115	-0.0499
23	SLU 36	-0.02	-0.4	16.89	0	-2.1113	-0.0503
23	SLU 37	-0.02	-0.4	16.76	0	-2.0953	-0.0497
23	SLU 38	-0.02	-0.4	16.76	0	-2.0952	-0.0501
23	SLU 39	-0.01	-0.4	17.12	0	-2.1402	-0.0505
23	SLU 40	-0.01	-0.41	17.12	0	-2.14	-0.0509
23	SLU 41	-0.02	-0.4	17.3	0	-2.1619	-0.0504
23	SLU 42	-0.02	-0.41	17.29	0	-2.1618	-0.0509
23	SLU 43	0.04	-0.52	16.8	0	-2.0995	-0.0654
23	SLU 44	0.04	-0.53	16.79	0	-2.0992	-0.0661
23	SLU 45	0.03	-0.52	17.1	0	-2.1374	-0.0655
23	SLU 46	0.03	-0.53	17.1	0	-2.1372	-0.066
23	SLU 47	0.03	-0.53	16.97	0	-2.121	-0.066
23	SLU 48	0.02	-0.52	17.27	0	-2.1591	-0.0654
23	SLU 49	0.02	-0.53	17.27	0	-2.159	-0.0659
23	SLU 50	0.02	-0.52	17.14	0	-2.143	-0.0652
23	SLU 51	0.02	-0.53	17.14	0	-2.1429	-0.0657
23	SLU 52	0.01	-0.54	18.44	0	-2.3054	-0.0676
23	SLU 53	0	-0.54	18.75	0	-2.3435	-0.067
23	SLU 54	0	-0.54	18.75	0	-2.3434	-0.0675
23	SLU 55	0	-0.54	18.62	0	-2.3272	-0.0676
23	SLU 56	-0.01	-0.54	18.92	0	-2.3653	-0.0669
23	SLU 57	-0.01	-0.54	18.92	0	-2.3652	-0.0674
23	SLU 58	-0.01	-0.53	18.79	0	-2.3492	-0.0667
23	SLU 59	-0.01	-0.54	18.79	0	-2.349	-0.0672
23	SLU 60	0	-0.54	19.15	0	-2.394	-0.0675
23	SLU 61	0	-0.54	19.15	0	-2.3939	-0.068
23	SLU 62	-0.01	-0.54	19.33	0	-2.4158	-0.0674
23	SLU 63	-0.01	-0.54	19.32	0	-2.4156	-0.0679
23	SLU 64	0.03	-0.51	18.26	0	-2.282	-0.0638
23	SLU 65	0.04	-0.52	18.25	0	-2.2817	-0.0646
23	SLU 66	0.03	-0.51	18.56	0	-2.3199	-0.0639
23	SLU 67	0.03	-0.52	18.56	0	-2.3197	-0.0644
23	SLU 68	0.03	-0.52	18.43	0	-2.3035	-0.0645
23	SLU 69	0.02	-0.51	18.73	0	-2.3417	-0.0639
23	SLU 70	0.02	-0.51	18.73	0	-2.3415	-0.0643
23	SLU 71	0.02	-0.51	18.6	0	-2.3255	-0.0637
23	SLU 72	0.02	-0.51	18.6	0	-2.3254	-0.0641
23	SLU 73	0.01	-0.53	19.9	0	-2.4879	-0.0661
23	SLU 74	0	-0.52	20.21	0	-2.526	-0.0655
23	SLU 75	0	-0.53	20.21	0	-2.5259	-0.0659
23	SLU 76	0	-0.53	20.08	0	-2.5097	-0.066
23	SLU 77	-0.01	-0.52	20.38	0	-2.5478	-0.0654
23	SLU 78	-0.01	-0.53	20.38	0	-2.5477	-0.0658
23	SLU 79	-0.01	-0.52	20.25	0	-2.5317	-0.0652
23	SLU 80	-0.01	-0.53	20.25	0	-2.5315	-0.0656
23	SLU 81	-0.01	-0.53	20.61	0	-2.5765	-0.066
23	SLU 82	0	-0.53	20.61	0	-2.5764	-0.0664
23	SLU 83	-0.01	-0.53	20.79	0	-2.5983	-0.0659
23	SLU 84	-0.01	-0.53	20.79	0	-2.5981	-0.0663
23	SLE RA 1	0.03	-0.4	13.72	0	-1.7153	-0.0494
23	SLE RA 2	0.03	-0.4	13.72	0	-1.7151	-0.0499
23	SLE RA 3	0.02	-0.4	13.92	0	-1.7405	-0.0495
23	SLE RA 4	0.02	-0.4	13.92	0	-1.7404	-0.0498
23	SLE RA 5	0.02	-0.4	13.84	0	-1.7296	-0.0499

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLE RA 6	0.02	-0.4	14.04	0	-1.755	-0.0495
23	SLE RA 7	0.02	-0.4	14.04	0	-1.7549	-0.0498
23	SLE RA 8	0.02	-0.39	13.95	0	-1.7443	-0.0493
23	SLE RA 9	0.02	-0.4	13.95	0	-1.7442	-0.0496
23	SLE RA 10	0.01	-0.41	14.82	0	-1.8525	-0.0509
23	SLE RA 11	0	-0.4	15.02	0	-1.878	-0.0505
23	SLE RA 12	0	-0.41	15.02	0	-1.8779	-0.0508
23	SLE RA 13	0	-0.41	14.94	0	-1.8671	-0.0509
23	SLE RA 14	0	-0.4	15.14	0	-1.8925	-0.0505
23	SLE RA 15	0	-0.41	15.14	0	-1.8924	-0.0508
23	SLE RA 16	0	-0.4	15.05	0	-1.8817	-0.0503
23	SLE RA 17	0	-0.41	15.05	0	-1.8816	-0.0506
23	SLE RA 18	0	-0.41	15.29	0	-1.9116	-0.0509
23	SLE RA 19	0	-0.41	15.29	0	-1.9115	-0.0512
23	SLE RA 20	-0.01	-0.41	15.41	0	-1.9261	-0.0508
23	SLE RA 21	0	-0.41	15.41	0	-1.926	-0.0511
23	SLE FR 1	0.03	-0.4	13.72	0	-1.7153	-0.0494
23	SLE FR 2	0.03	-0.4	13.72	0	-1.7152	-0.0495
23	SLE FR 3	0.02	-0.4	13.77	0	-1.7211	-0.0494
23	SLE FR 4	0.02	-0.4	14.19	0	-1.7741	-0.05
23	SLE FR 5	0.02	-0.4	14.24	0	-1.78	-0.0498
23	SLE FR 6	0.01	-0.4	14.51	0	-1.8134	-0.0501
23	SLE QP 1	0.03	-0.4	13.72	0	-1.7153	-0.0494
23	SLE QP 2	0.02	-0.4	14.19	0	-1.7742	-0.0499
23	SLD 1	0.85	-0.31	14.12	0	-1.7645	-0.0393
23	SLD 2	0.89	-0.29	14.12	0	-1.7646	-0.0357
23	SLD 3	0.82	-0.55	14.05	0	-1.7562	-0.0689
23	SLD 4	0.85	-0.52	14.05	0	-1.7563	-0.0653
23	SLD 5	0.32	-0.02	14.27	0	-1.7839	-0.0024
23	SLD 6	0.34	0	14.27	0	-1.784	0
23	SLD 7	0.2	-0.81	14.05	0	-1.7561	-0.1011
23	SLD 8	0.22	-0.79	14.05	0	-1.7561	-0.0987
23	SLD 9	-0.18	-0.01	14.34	0	-1.7922	-0.001
23	SLD 10	-0.16	0.01	14.34	0	-1.7923	0.0014
23	SLD 11	-0.3	-0.8	14.11	0	-1.7644	-0.0997
23	SLD 12	-0.28	-0.78	14.12	0	-1.7644	-0.0973
23	SLD 13	-0.81	-0.28	14.34	0	-1.7921	-0.0344
23	SLD 14	-0.78	-0.25	14.34	0	-1.7922	-0.0308
23	SLD 15	-0.85	-0.51	14.27	0	-1.7837	-0.064
23	SLD 16	-0.82	-0.48	14.27	0	-1.7838	-0.0604
23	SLV 1	1.97	-0.21	14.01	0	-1.7513	-0.0261
23	SLV 2	2.05	-0.14	14.01	0	-1.7515	-0.0177
23	SLV 3	1.89	-0.75	13.86	0	-1.7323	-0.0932
23	SLV 4	1.97	-0.68	13.86	0	-1.7325	-0.0849
23	SLV 5	0.72	0.46	14.37	0	-1.7961	0.0576
23	SLV 6	0.77	0.5	14.37	0	-1.7962	0.063
23	SLV 7	0.44	-1.33	13.86	0	-1.7328	-0.1661
23	SLV 8	0.49	-1.29	13.86	0	-1.7329	-0.1607
23	SLV 9	-0.45	0.49	14.52	0	-1.8154	0.061
23	SLV 10	-0.4	0.53	14.52	0	-1.8156	0.0664
23	SLV 11	-0.73	-1.3	14.02	0	-1.7521	-0.1627
23	SLV 12	-0.68	-1.26	14.02	0	-1.7523	-0.1573
23	SLV 13	-1.93	-0.12	14.53	0	-1.8158	-0.0149
23	SLV 14	-1.85	-0.05	14.53	0	-1.816	-0.0065
23	SLV 15	-2.01	-0.66	14.37	0	-1.7968	-0.082
23	SLV 16	-1.94	-0.59	14.38	0	-1.797	-0.0736
23	CRTFP Ux+	0	0	0	0	0	0
23	CRTFP Ux-	0	0	0	0	0	0
25	SLU 1	0.02	-0.34	11.79	0	-0.7369	-0.0212
25	SLU 2	0.02	-0.34	11.79	0	-0.7368	-0.0215
25	SLU 3	0.02	-0.34	12.06	0	-0.7535	-0.0212
25	SLU 4	0.02	-0.34	12.05	0	-0.7534	-0.0214
25	SLU 5	0.02	-0.34	11.94	0	-0.7462	-0.0214
25	SLU 6	0.01	-0.34	12.21	0	-0.7629	-0.0212
25	SLU 7	0.01	-0.34	12.2	0	-0.7628	-0.0214
25	SLU 8	0.01	-0.34	12.09	0	-0.7557	-0.0211
25	SLU 9	0.01	-0.34	12.09	0	-0.7556	-0.0213
25	SLU 10	0	-0.35	13.23	0	-0.827	-0.022
25	SLU 11	-0.01	-0.35	13.5	0	-0.8437	-0.0218
25	SLU 12	-0.01	-0.35	13.5	0	-0.8437	-0.022
25	SLU 13	-0.01	-0.35	13.38	0	-0.8364	-0.022
25	SLU 14	-0.01	-0.35	13.65	0	-0.8531	-0.0217
25	SLU 15	-0.01	-0.35	13.65	0	-0.853	-0.0219
25	SLU 16	-0.02	-0.35	13.53	0	-0.8459	-0.0216
25	SLU 17	-0.01	-0.35	13.53	0	-0.8458	-0.0218
25	SLU 18	-0.01	-0.35	13.85	0	-0.8659	-0.022
25	SLU 19	-0.01	-0.35	13.85	0	-0.8658	-0.0221
25	SLU 20	-0.02	-0.35	14	0	-0.8752	-0.0219
25	SLU 21	-0.02	-0.35	14	0	-0.8752	-0.0221
25	SLU 22	0.02	-0.33	13.08	0	-0.8176	-0.0204
25	SLU 23	0.02	-0.33	13.08	0	-0.8175	-0.0207
25	SLU 24	0.02	-0.33	13.35	0	-0.8341	-0.0205
25	SLU 25	0.02	-0.33	13.34	0	-0.8341	-0.0206
25	SLU 26	0.02	-0.33	13.23	0	-0.8268	-0.0207
25	SLU 27	0.01	-0.33	13.5	0	-0.8435	-0.0204
25	SLU 28	0.01	-0.33	13.49	0	-0.8434	-0.0206
25	SLU 29	0.01	-0.33	13.38	0	-0.8363	-0.0203
25	SLU 30	0.01	-0.33	13.38	0	-0.8363	-0.0205
25	SLU 31	0	-0.34	14.52	0	-0.9077	-0.0213
25	SLU 32	-0.01	-0.34	14.79	0	-0.9244	-0.021

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLU 33	-0.01	-0.34	14.79	0	-0.9243	-0.0212
25	SLU 34	-0.01	-0.34	14.67	0	-0.9171	-0.0212
25	SLU 35	-0.02	-0.34	14.94	0	-0.9338	-0.021
25	SLU 36	-0.01	-0.34	14.94	0	-0.9337	-0.0211
25	SLU 37	-0.02	-0.33	14.83	0	-0.9266	-0.0209
25	SLU 38	-0.02	-0.34	14.82	0	-0.9265	-0.0211
25	SLU 39	-0.01	-0.34	15.14	0	-0.9465	-0.0212
25	SLU 40	-0.01	-0.34	15.14	0	-0.9464	-0.0214
25	SLU 41	-0.02	-0.34	15.29	0	-0.9559	-0.0212
25	SLU 42	-0.02	-0.34	15.29	0	-0.9558	-0.0213
25	SLU 43	0.03	-0.44	14.89	0	-0.9304	-0.0278
25	SLU 44	0.03	-0.45	14.88	0	-0.9302	-0.0281
25	SLU 45	0.02	-0.45	15.15	0	-0.9469	-0.0278
25	SLU 46	0.03	-0.45	15.15	0	-0.9468	-0.028
25	SLU 47	0.02	-0.45	15.03	0	-0.9396	-0.0281
25	SLU 48	0.02	-0.44	15.3	0	-0.9563	-0.0278
25	SLU 49	0.02	-0.45	15.3	0	-0.9562	-0.028
25	SLU 50	0.02	-0.44	15.19	0	-0.9491	-0.0277
25	SLU 51	0.02	-0.45	15.18	0	-0.949	-0.0279
25	SLU 52	0.01	-0.46	16.33	0	-1.0205	-0.0286
25	SLU 53	0	-0.45	16.59	0	-1.0372	-0.0284
25	SLU 54	0	-0.46	16.59	0	-1.0371	-0.0286
25	SLU 55	0	-0.46	16.48	0	-1.0298	-0.0286
25	SLU 56	-0.01	-0.45	16.74	0	-1.0465	-0.0283
25	SLU 57	-0.01	-0.46	16.74	0	-1.0465	-0.0285
25	SLU 58	-0.01	-0.45	16.63	0	-1.0394	-0.0283
25	SLU 59	-0.01	-0.46	16.63	0	-1.0393	-0.0284
25	SLU 60	0	-0.46	16.95	0	-1.0593	-0.0286
25	SLU 61	0	-0.46	16.95	0	-1.0592	-0.0288
25	SLU 62	-0.01	-0.46	17.1	0	-1.0687	-0.0285
25	SLU 63	-0.01	-0.46	17.1	0	-1.0686	-0.0287
25	SLU 64	0.03	-0.43	16.18	0	-1.011	-0.027
25	SLU 65	0.03	-0.44	16.17	0	-1.0109	-0.0273
25	SLU 66	0.02	-0.43	16.44	0	-1.0276	-0.0271
25	SLU 67	0.02	-0.44	16.44	0	-1.0275	-0.0273
25	SLU 68	0.02	-0.44	16.32	0	-1.0203	-0.0273
25	SLU 69	0.02	-0.43	16.59	0	-1.0369	-0.027
25	SLU 70	0.02	-0.44	16.59	0	-1.0369	-0.0272
25	SLU 71	0.01	-0.43	16.48	0	-1.0298	-0.0269
25	SLU 72	0.02	-0.43	16.47	0	-1.0297	-0.0271
25	SLU 73	0.01	-0.45	17.62	0	-1.1011	-0.0279
25	SLU 74	0	-0.44	17.89	0	-1.1178	-0.0276
25	SLU 75	0	-0.44	17.88	0	-1.1177	-0.0278
25	SLU 76	0	-0.45	17.77	0	-1.1105	-0.0278
25	SLU 77	-0.01	-0.44	18.04	0	-1.1272	-0.0276
25	SLU 78	-0.01	-0.44	18.03	0	-1.1271	-0.0278
25	SLU 79	-0.01	-0.44	17.92	0	-1.12	-0.0275
25	SLU 80	-0.01	-0.44	17.92	0	-1.1199	-0.0277
25	SLU 81	-0.01	-0.44	18.24	0	-1.1399	-0.0278
25	SLU 82	-0.01	-0.45	18.24	0	-1.1399	-0.028
25	SLU 83	-0.01	-0.44	18.39	0	-1.1493	-0.0278
25	SLU 84	-0.01	-0.45	18.39	0	-1.1492	-0.028
25	SLE RA 1	0.02	-0.34	12.16	0	-0.76	-0.021
25	SLE RA 2	0.02	-0.34	12.16	0	-0.7599	-0.0212
25	SLE RA 3	0.02	-0.34	12.34	0	-0.771	-0.021
25	SLE RA 4	0.02	-0.34	12.34	0	-0.771	-0.0211
25	SLE RA 5	0.02	-0.34	12.26	0	-0.7661	-0.0211
25	SLE RA 6	0.01	-0.34	12.44	0	-0.7773	-0.021
25	SLE RA 7	0.01	-0.34	12.44	0	-0.7772	-0.0211
25	SLE RA 8	0.01	-0.33	12.36	0	-0.7725	-0.0209
25	SLE RA 9	0.01	-0.34	12.36	0	-0.7724	-0.021
25	SLE RA 10	0.01	-0.34	13.12	0	-0.8201	-0.0215
25	SLE RA 11	0	-0.34	13.3	0	-0.8312	-0.0214
25	SLE RA 12	0	-0.34	13.3	0	-0.8311	-0.0215
25	SLE RA 13	0	-0.34	13.22	0	-0.8263	-0.0215
25	SLE RA 14	0	-0.34	13.4	0	-0.8374	-0.0213
25	SLE RA 15	0	-0.34	13.4	0	-0.8374	-0.0214
25	SLE RA 16	0	-0.34	13.32	0	-0.8326	-0.0213
25	SLE RA 17	0	-0.34	13.32	0	-0.8326	-0.0214
25	SLE RA 18	0	-0.34	13.53	0	-0.8459	-0.0215
25	SLE RA 19	0	-0.35	13.53	0	-0.8459	-0.0216
25	SLE RA 20	-0.01	-0.34	13.63	0	-0.8522	-0.0215
25	SLE RA 21	0	-0.35	13.63	0	-0.8521	-0.0216
25	SLE FR 1	0.02	-0.34	12.16	0	-0.76	-0.021
25	SLE FR 2	0.02	-0.34	12.16	0	-0.76	-0.021
25	SLE FR 3	0.02	-0.34	12.2	0	-0.7625	-0.0209
25	SLE FR 4	0.02	-0.34	12.57	0	-0.7857	-0.0212
25	SLE FR 5	0.01	-0.34	12.61	0	-0.7883	-0.0211
25	SLE FR 6	0.01	-0.34	12.85	0	-0.803	-0.0212
25	SLE QP 1	0.02	-0.34	12.16	0	-0.76	-0.021
25	SLE QP 2	0.02	-0.34	12.57	0	-0.7858	-0.0211
25	SLD 1	0.76	-0.27	12.43	0	-0.7767	-0.0168
25	SLD 2	0.79	-0.24	12.42	0	-0.7765	-0.0148
25	SLD 3	0.73	-0.48	12.36	0	-0.7724	-0.0297
25	SLD 4	0.76	-0.44	12.35	0	-0.7722	-0.0277
25	SLD 5	0.28	-0.01	12.63	0	-0.7897	-0.0005
25	SLD 6	0.3	0.01	12.63	0	-0.7895	0.0008
25	SLD 7	0.17	-0.7	12.4	0	-0.7752	-0.0437
25	SLD 8	0.19	-0.68	12.4	0	-0.7751	-0.0424
25	SLD 9	-0.16	0	12.74	0	-0.7965	0.0002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLD 10	-0.14	0.02	12.74	0	-0.7963	0.0015
25	SLD 11	-0.27	-0.69	12.51	0	-0.782	-0.043
25	SLD 12	-0.25	-0.67	12.51	0	-0.7819	-0.0417
25	SLD 13	-0.72	-0.23	12.79	0	-0.7994	-0.0145
25	SLD 14	-0.69	-0.2	12.79	0	-0.7991	-0.0125
25	SLD 15	-0.76	-0.44	12.72	0	-0.7951	-0.0275
25	SLD 16	-0.73	-0.41	12.72	0	-0.7948	-0.0255
25	SLV 1	1.75	-0.18	12.23	0	-0.7644	-0.0114
25	SLV 2	1.82	-0.11	12.22	0	-0.7639	-0.0068
25	SLV 3	1.68	-0.65	12.07	0	-0.7546	-0.0407
25	SLV 4	1.75	-0.58	12.06	0	-0.7541	-0.0361
25	SLV 5	0.64	0.41	12.71	0	-0.7943	0.0255
25	SLV 6	0.68	0.46	12.7	0	-0.794	0.0285
25	SLV 7	0.39	-1.16	12.19	0	-0.7616	-0.0724
25	SLV 8	0.43	-1.11	12.18	0	-0.7613	-0.0694
25	SLV 9	-0.4	0.43	12.96	0	-0.8103	0.0271
25	SLV 10	-0.36	0.48	12.96	0	-0.8099	0.0301
25	SLV 11	-0.65	-1.13	12.44	0	-0.7776	-0.0708
25	SLV 12	-0.61	-1.08	12.44	0	-0.7772	-0.0678
25	SLV 13	-1.71	-0.1	13.08	0	-0.8175	-0.0061
25	SLV 14	-1.64	-0.02	13.07	0	-0.8169	-0.0015
25	SLV 15	-1.79	-0.57	12.92	0	-0.8077	-0.0355
25	SLV 16	-1.72	-0.49	12.91	0	-0.8071	-0.0309
27	SLU 1	0.02	-0.31	11.24	0	0	0
27	SLU 2	0.02	-0.31	11.24	0	0	0
27	SLU 3	0.02	-0.31	11.49	0	0	0
27	SLU 4	0.02	-0.31	11.49	0	0	0
27	SLU 5	0.02	-0.31	11.38	0	0	0
27	SLU 6	0.01	-0.31	11.63	0	0	0
27	SLU 7	0.01	-0.31	11.63	0	0	0
27	SLU 8	0.01	-0.31	11.52	0	0	0
27	SLU 9	0.01	-0.31	11.52	0	0	0
27	SLU 10	0	-0.32	12.6	0	0	0
27	SLU 11	-0.01	-0.32	12.85	0	0	0
27	SLU 12	-0.01	-0.32	12.85	0	0	0
27	SLU 13	-0.01	-0.32	12.74	0	0	0
27	SLU 14	-0.01	-0.32	12.99	0	0	0
27	SLU 15	-0.01	-0.32	12.99	0	0	0
27	SLU 16	-0.02	-0.31	12.88	0	0	0
27	SLU 17	-0.01	-0.32	12.88	0	0	0
27	SLU 18	-0.01	-0.32	13.19	0	0	0
27	SLU 19	-0.01	-0.32	13.19	0	0	0
27	SLU 20	-0.02	-0.32	13.33	0	0	0
27	SLU 21	-0.02	-0.32	13.32	0	0	0
27	SLU 22	0.02	-0.3	12.47	0	0	0
27	SLU 23	0.02	-0.3	12.47	0	0	0
27	SLU 24	0.01	-0.3	12.72	0	0	0
27	SLU 25	0.02	-0.3	12.72	0	0	0
27	SLU 26	0.01	-0.3	12.61	0	0	0
27	SLU 27	0.01	-0.3	12.86	0	0	0
27	SLU 28	0.01	-0.3	12.86	0	0	0
27	SLU 29	0.01	-0.3	12.75	0	0	0
27	SLU 30	0.01	-0.3	12.75	0	0	0
27	SLU 31	0	-0.31	13.83	0	0	0
27	SLU 32	-0.01	-0.3	14.08	0	0	0
27	SLU 33	-0.01	-0.31	14.08	0	0	0
27	SLU 34	-0.01	-0.31	13.97	0	0	0
27	SLU 35	-0.02	-0.3	14.22	0	0	0
27	SLU 36	-0.01	-0.31	14.22	0	0	0
27	SLU 37	-0.02	-0.3	14.11	0	0	0
27	SLU 38	-0.02	-0.3	14.11	0	0	0
27	SLU 39	-0.01	-0.31	14.41	0	0	0
27	SLU 40	-0.01	-0.31	14.41	0	0	0
27	SLU 41	-0.02	-0.31	14.55	0	0	0
27	SLU 42	-0.02	-0.31	14.55	0	0	0
27	SLU 43	0.03	-0.41	14.2	0	0	0
27	SLU 44	0.03	-0.41	14.19	0	0	0
27	SLU 45	0.02	-0.41	14.44	0	0	0
27	SLU 46	0.02	-0.41	14.44	0	0	0
27	SLU 47	0.02	-0.41	14.33	0	0	0
27	SLU 48	0.02	-0.41	14.58	0	0	0
27	SLU 49	0.02	-0.41	14.58	0	0	0
27	SLU 50	0.01	-0.41	14.47	0	0	0
27	SLU 51	0.02	-0.41	14.47	0	0	0
27	SLU 52	0.01	-0.42	15.55	0	0	0
27	SLU 53	0	-0.41	15.81	0	0	0
27	SLU 54	0	-0.42	15.8	0	0	0
27	SLU 55	0	-0.42	15.69	0	0	0
27	SLU 56	-0.01	-0.41	15.94	0	0	0
27	SLU 57	-0.01	-0.42	15.94	0	0	0
27	SLU 58	-0.01	-0.41	15.83	0	0	0
27	SLU 59	-0.01	-0.41	15.83	0	0	0
27	SLU 60	-0.01	-0.42	16.14	0	0	0
27	SLU 61	0	-0.42	16.14	0	0	0
27	SLU 62	-0.01	-0.42	16.28	0	0	0
27	SLU 63	-0.01	-0.42	16.28	0	0	0
27	SLU 64	0.03	-0.39	15.42	0	0	0
27	SLU 65	0.03	-0.4	15.42	0	0	0
27	SLU 66	0.02	-0.39	15.67	0	0	0
27	SLU 67	0.02	-0.4	15.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLU 68	0.02	-0.4	15.56	0	0	0
27	SLU 69	0.01	-0.39	15.81	0	0	0
27	SLU 70	0.02	-0.4	15.81	0	0	0
27	SLU 71	0.01	-0.39	15.7	0	0	0
27	SLU 72	0.01	-0.39	15.7	0	0	0
27	SLU 73	0.01	-0.4	16.78	0	0	0
27	SLU 74	0	-0.4	17.03	0	0	0
27	SLU 75	0	-0.4	17.03	0	0	0
27	SLU 76	0	-0.4	16.92	0	0	0
27	SLU 77	-0.01	-0.4	17.17	0	0	0
27	SLU 78	-0.01	-0.4	17.17	0	0	0
27	SLU 79	-0.01	-0.4	17.06	0	0	0
27	SLU 80	-0.01	-0.4	17.06	0	0	0
27	SLU 81	-0.01	-0.4	17.37	0	0	0
27	SLU 82	-0.01	-0.41	17.37	0	0	0
27	SLU 83	-0.01	-0.4	17.51	0	0	0
27	SLU 84	-0.01	-0.4	17.5	0	0	0
27	SLE RA 1	0.02	-0.31	11.59	0	0	0
27	SLE RA 2	0.02	-0.31	11.59	0	0	0
27	SLE RA 3	0.02	-0.31	11.76	0	0	0
27	SLE RA 4	0.02	-0.31	11.76	0	0	0
27	SLE RA 5	0.02	-0.31	11.69	0	0	0
27	SLE RA 6	0.01	-0.31	11.85	0	0	0
27	SLE RA 7	0.01	-0.31	11.85	0	0	0
27	SLE RA 8	0.01	-0.3	11.78	0	0	0
27	SLE RA 9	0.01	-0.31	11.78	0	0	0
27	SLE RA 10	0.01	-0.31	12.5	0	0	0
27	SLE RA 11	0	-0.31	12.67	0	0	0
27	SLE RA 12	0	-0.31	12.67	0	0	0
27	SLE RA 13	0	-0.31	12.59	0	0	0
27	SLE RA 14	0	-0.31	12.76	0	0	0
27	SLE RA 15	0	-0.31	12.76	0	0	0
27	SLE RA 16	0	-0.31	12.69	0	0	0
27	SLE RA 17	0	-0.31	12.69	0	0	0
27	SLE RA 18	0	-0.31	12.89	0	0	0
27	SLE RA 19	0	-0.31	12.89	0	0	0
27	SLE RA 20	-0.01	-0.31	12.98	0	0	0
27	SLE RA 21	-0.01	-0.31	12.98	0	0	0
27	SLE FR 1	0.02	-0.31	11.59	0	0	0
27	SLE FR 2	0.02	-0.31	11.59	0	0	0
27	SLE FR 3	0.02	-0.31	11.63	0	0	0
27	SLE FR 4	0.01	-0.31	11.98	0	0	0
27	SLE FR 5	0.01	-0.31	12.02	0	0	0
27	SLE FR 6	0.01	-0.31	12.24	0	0	0
27	SLE QP 1	0.02	-0.31	11.59	0	0	0
27	SLE QP 2	0.01	-0.31	11.98	0	0	0
27	SLD 1	0.72	-0.25	11.77	0	0	0
27	SLD 2	0.75	-0.21	11.76	0	0	0
27	SLD 3	0.69	-0.44	11.69	0	0	0
27	SLD 4	0.72	-0.41	11.68	0	0	0
27	SLD 5	0.27	0	12.04	0	0	0
27	SLD 6	0.29	0.02	12.03	0	0	0
27	SLD 7	0.17	-0.65	11.78	0	0	0
27	SLD 8	0.18	-0.63	11.78	0	0	0
27	SLD 9	-0.16	0.01	12.19	0	0	0
27	SLD 10	-0.14	0.04	12.19	0	0	0
27	SLD 11	-0.26	-0.64	11.93	0	0	0
27	SLD 12	-0.24	-0.62	11.93	0	0	0
27	SLD 13	-0.69	-0.21	12.28	0	0	0
27	SLD 14	-0.66	-0.17	12.27	0	0	0
27	SLD 15	-0.72	-0.4	12.2	0	0	0
27	SLD 16	-0.7	-0.37	12.2	0	0	0
27	SLV 1	1.67	-0.17	11.48	0	0	0
27	SLV 2	1.74	-0.09	11.46	0	0	0
27	SLV 3	1.6	-0.61	11.31	0	0	0
27	SLV 4	1.67	-0.53	11.29	0	0	0
27	SLV 5	0.61	0.39	12.1	0	0	0
27	SLV 6	0.65	0.45	12.09	0	0	0
27	SLV 7	0.37	-1.09	11.52	0	0	0
27	SLV 8	0.41	-1.03	11.51	0	0	0
27	SLV 9	-0.38	0.42	12.46	0	0	0
27	SLV 10	-0.34	0.47	12.45	0	0	0
27	SLV 11	-0.62	-1.06	11.88	0	0	0
27	SLV 12	-0.58	-1.01	11.87	0	0	0
27	SLV 13	-1.64	-0.08	12.68	0	0	0
27	SLV 14	-1.57	0	12.66	0	0	0
27	SLV 15	-1.71	-0.53	12.5	0	0	0
27	SLV 16	-1.64	-0.44	12.49	0	0	0
28	SLU 1	0.01	-0.15	5.6	0	0	0
28	SLU 2	0.01	-0.15	5.6	0	0	0
28	SLU 3	0.01	-0.15	5.72	0	0	0
28	SLU 4	0.01	-0.15	5.72	0	0	0
28	SLU 5	0.01	-0.15	5.67	0	0	0
28	SLU 6	0	-0.15	5.79	0	0	0
28	SLU 7	0.01	-0.15	5.79	0	0	0
28	SLU 8	0	-0.15	5.74	0	0	0
28	SLU 9	0	-0.15	5.74	0	0	0
28	SLU 10	0	-0.15	6.27	0	0	0
28	SLU 11	0	-0.15	6.39	0	0	0
28	SLU 12	0	-0.15	6.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLU 13	0	-0.15	6.34	0	0	0
28	SLU 14	-0.01	-0.15	6.46	0	0	0
28	SLU 15	-0.01	-0.15	6.46	0	0	0
28	SLU 16	-0.01	-0.15	6.41	0	0	0
28	SLU 17	-0.01	-0.15	6.4	0	0	0
28	SLU 18	-0.01	-0.15	6.56	0	0	0
28	SLU 19	-0.01	-0.15	6.56	0	0	0
28	SLU 20	-0.01	-0.15	6.63	0	0	0
28	SLU 21	-0.01	-0.15	6.62	0	0	0
28	SLU 22	0.01	-0.14	6.21	0	0	0
28	SLU 23	0.01	-0.14	6.21	0	0	0
28	SLU 24	0.01	-0.14	6.33	0	0	0
28	SLU 25	0.01	-0.14	6.33	0	0	0
28	SLU 26	0.01	-0.14	6.28	0	0	0
28	SLU 27	0	-0.14	6.4	0	0	0
28	SLU 28	0	-0.14	6.4	0	0	0
28	SLU 29	0	-0.14	6.35	0	0	0
28	SLU 30	0	-0.14	6.35	0	0	0
28	SLU 31	0	-0.15	6.88	0	0	0
28	SLU 32	0	-0.14	7	0	0	0
28	SLU 33	0	-0.14	7	0	0	0
28	SLU 34	0	-0.15	6.95	0	0	0
28	SLU 35	-0.01	-0.14	7.07	0	0	0
28	SLU 36	-0.01	-0.14	7.07	0	0	0
28	SLU 37	-0.01	-0.14	7.02	0	0	0
28	SLU 38	-0.01	-0.14	7.02	0	0	0
28	SLU 39	-0.01	-0.14	7.17	0	0	0
28	SLU 40	-0.01	-0.15	7.17	0	0	0
28	SLU 41	-0.01	-0.14	7.24	0	0	0
28	SLU 42	-0.01	-0.15	7.23	0	0	0
28	SLU 43	0.01	-0.2	7.07	0	0	0
28	SLU 44	0.02	-0.2	7.07	0	0	0
28	SLU 45	0.01	-0.2	7.2	0	0	0
28	SLU 46	0.01	-0.2	7.19	0	0	0
28	SLU 47	0.01	-0.2	7.14	0	0	0
28	SLU 48	0.01	-0.19	7.26	0	0	0
28	SLU 49	0.01	-0.2	7.26	0	0	0
28	SLU 50	0.01	-0.19	7.21	0	0	0
28	SLU 51	0.01	-0.2	7.21	0	0	0
28	SLU 52	0	-0.2	7.74	0	0	0
28	SLU 53	0	-0.2	7.87	0	0	0
28	SLU 54	0	-0.2	7.86	0	0	0
28	SLU 55	0	-0.2	7.81	0	0	0
28	SLU 56	0	-0.2	7.93	0	0	0
28	SLU 57	0	-0.2	7.93	0	0	0
28	SLU 58	0	-0.2	7.88	0	0	0
28	SLU 59	0	-0.2	7.88	0	0	0
28	SLU 60	0	-0.2	8.03	0	0	0
28	SLU 61	0	-0.2	8.03	0	0	0
28	SLU 62	-0.01	-0.2	8.1	0	0	0
28	SLU 63	-0.01	-0.2	8.1	0	0	0
28	SLU 64	0.01	-0.19	7.68	0	0	0
28	SLU 65	0.01	-0.19	7.68	0	0	0
28	SLU 66	0.01	-0.19	7.81	0	0	0
28	SLU 67	0.01	-0.19	7.8	0	0	0
28	SLU 68	0.01	-0.19	7.75	0	0	0
28	SLU 69	0.01	-0.19	7.87	0	0	0
28	SLU 70	0.01	-0.19	7.87	0	0	0
28	SLU 71	0.01	-0.19	7.82	0	0	0
28	SLU 72	0.01	-0.19	7.82	0	0	0
28	SLU 73	0	-0.19	8.35	0	0	0
28	SLU 74	0	-0.19	8.48	0	0	0
28	SLU 75	0	-0.19	8.47	0	0	0
28	SLU 76	0	-0.19	8.42	0	0	0
28	SLU 77	0	-0.19	8.54	0	0	0
28	SLU 78	0	-0.19	8.54	0	0	0
28	SLU 79	0	-0.19	8.49	0	0	0
28	SLU 80	0	-0.19	8.49	0	0	0
28	SLU 81	0	-0.19	8.64	0	0	0
28	SLU 82	0	-0.19	8.64	0	0	0
28	SLU 83	-0.01	-0.19	8.71	0	0	0
28	SLU 84	-0.01	-0.19	8.71	0	0	0
28	SLE RA 1	0.01	-0.15	5.78	0	0	0
28	SLE RA 2	0.01	-0.15	5.78	0	0	0
28	SLE RA 3	0.01	-0.15	5.86	0	0	0
28	SLE RA 4	0.01	-0.15	5.86	0	0	0
28	SLE RA 5	0.01	-0.15	5.82	0	0	0
28	SLE RA 6	0.01	-0.15	5.9	0	0	0
28	SLE RA 7	0.01	-0.15	5.9	0	0	0
28	SLE RA 8	0.01	-0.15	5.87	0	0	0
28	SLE RA 9	0.01	-0.15	5.87	0	0	0
28	SLE RA 10	0	-0.15	6.22	0	0	0
28	SLE RA 11	0	-0.15	6.3	0	0	0
28	SLE RA 12	0	-0.15	6.3	0	0	0
28	SLE RA 13	0	-0.15	6.27	0	0	0
28	SLE RA 14	0	-0.15	6.35	0	0	0
28	SLE RA 15	0	-0.15	6.35	0	0	0
28	SLE RA 16	0	-0.15	6.31	0	0	0
28	SLE RA 17	0	-0.15	6.31	0	0	0
28	SLE RA 18	0	-0.15	6.41	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLE RA 19	0	-0.15	6.41	0	0	0
28	SLE RA 20	0	-0.15	6.46	0	0	0
28	SLE RA 21	0	-0.15	6.46	0	0	0
28	SLE FR 1	0.01	-0.15	5.78	0	0	0
28	SLE FR 2	0.01	-0.15	5.78	0	0	0
28	SLE FR 3	0.01	-0.15	5.79	0	0	0
28	SLE FR 4	0.01	-0.15	5.97	0	0	0
28	SLE FR 5	0.01	-0.15	5.99	0	0	0
28	SLE FR 6	0.01	-0.15	6.1	0	0	0
28	SLE QP 1	0.01	-0.15	5.78	0	0	0
28	SLE QP 2	0.01	-0.15	5.97	0	0	0
28	SLD 1	0.36	-0.12	5.82	0	0	0
28	SLD 2	0.38	-0.1	5.82	0	0	0
28	SLD 3	0.35	-0.22	5.78	0	0	0
28	SLD 4	0.36	-0.19	5.77	0	0	0
28	SLD 5	0.14	0	5.99	0	0	0
28	SLD 6	0.14	0.02	5.99	0	0	0
28	SLD 7	0.08	-0.32	5.84	0	0	0
28	SLD 8	0.09	-0.3	5.84	0	0	0
28	SLD 9	-0.08	0.01	6.09	0	0	0
28	SLD 10	-0.07	0.02	6.09	0	0	0
28	SLD 11	-0.13	-0.31	5.95	0	0	0
28	SLD 12	-0.12	-0.3	5.94	0	0	0
28	SLD 13	-0.35	-0.1	6.16	0	0	0
28	SLD 14	-0.33	-0.08	6.16	0	0	0
28	SLD 15	-0.36	-0.2	6.12	0	0	0
28	SLD 16	-0.35	-0.17	6.11	0	0	0
28	SLV 1	0.84	-0.09	5.63	0	0	0
28	SLV 2	0.87	-0.04	5.62	0	0	0
28	SLV 3	0.8	-0.3	5.53	0	0	0
28	SLV 4	0.84	-0.26	5.51	0	0	0
28	SLV 5	0.31	0.19	6.02	0	0	0
28	SLV 6	0.33	0.23	6.01	0	0	0
28	SLV 7	0.19	-0.53	5.68	0	0	0
28	SLV 8	0.21	-0.5	5.68	0	0	0
28	SLV 9	-0.19	0.21	6.26	0	0	0
28	SLV 10	-0.17	0.24	6.25	0	0	0
28	SLV 11	-0.31	-0.52	5.92	0	0	0
28	SLV 12	-0.29	-0.49	5.91	0	0	0
28	SLV 13	-0.82	-0.04	6.42	0	0	0
28	SLV 14	-0.79	0.01	6.41	0	0	0
28	SLV 15	-0.86	-0.26	6.32	0	0	0
28	SLV 16	-0.82	-0.21	6.31	0	0	0
29	SLU 1	0.01	-0.26	9.27	0	0	0
29	SLU 2	0.01	-0.26	9.27	0	0	0
29	SLU 3	0	-0.26	9.48	0	0	0
29	SLU 4	0	-0.26	9.48	0	0	0
29	SLU 5	0	-0.26	9.39	0	0	0
29	SLU 6	0	-0.26	9.6	0	0	0
29	SLU 7	0	-0.26	9.6	0	0	0
29	SLU 8	0	-0.26	9.51	0	0	0
29	SLU 9	0	-0.26	9.51	0	0	0
29	SLU 10	-0.01	-0.27	10.4	0	0	0
29	SLU 11	-0.02	-0.27	10.61	0	0	0
29	SLU 12	-0.02	-0.27	10.61	0	0	0
29	SLU 13	-0.02	-0.27	10.52	0	0	0
29	SLU 14	-0.02	-0.27	10.73	0	0	0
29	SLU 15	-0.02	-0.27	10.73	0	0	0
29	SLU 16	-0.02	-0.26	10.64	0	0	0
29	SLU 17	-0.02	-0.27	10.64	0	0	0
29	SLU 18	-0.02	-0.27	10.89	0	0	0
29	SLU 19	-0.02	-0.27	10.89	0	0	0
29	SLU 20	-0.03	-0.27	11	0	0	0
29	SLU 21	-0.03	-0.27	11	0	0	0
29	SLU 22	0.01	-0.25	10.29	0	0	0
29	SLU 23	0.01	-0.25	10.29	0	0	0
29	SLU 24	0	-0.25	10.5	0	0	0
29	SLU 25	0	-0.25	10.5	0	0	0
29	SLU 26	0	-0.25	10.41	0	0	0
29	SLU 27	0	-0.25	10.62	0	0	0
29	SLU 28	0	-0.25	10.62	0	0	0
29	SLU 29	-0.01	-0.25	10.53	0	0	0
29	SLU 30	-0.01	-0.25	10.53	0	0	0
29	SLU 31	-0.01	-0.26	11.42	0	0	0
29	SLU 32	-0.02	-0.26	11.63	0	0	0
29	SLU 33	-0.02	-0.26	11.63	0	0	0
29	SLU 34	-0.02	-0.26	11.54	0	0	0
29	SLU 35	-0.03	-0.26	11.75	0	0	0
29	SLU 36	-0.02	-0.26	11.75	0	0	0
29	SLU 37	-0.03	-0.25	11.66	0	0	0
29	SLU 38	-0.03	-0.26	11.66	0	0	0
29	SLU 39	-0.02	-0.26	11.91	0	0	0
29	SLU 40	-0.02	-0.26	11.91	0	0	0
29	SLU 41	-0.03	-0.26	12.03	0	0	0
29	SLU 42	-0.03	-0.26	12.02	0	0	0
29	SLU 43	0.01	-0.34	11.7	0	0	0
29	SLU 44	0.01	-0.35	11.7	0	0	0
29	SLU 45	0.01	-0.34	11.91	0	0	0
29	SLU 46	0.01	-0.35	11.91	0	0	0
29	SLU 47	0.01	-0.35	11.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLU 48	0	-0.34	12.03	0	0	0
29	SLU 49	0	-0.34	12.03	0	0	0
29	SLU 50	0	-0.34	11.94	0	0	0
29	SLU 51	0	-0.34	11.94	0	0	0
29	SLU 52	-0.01	-0.35	12.83	0	0	0
29	SLU 53	-0.01	-0.35	13.04	0	0	0
29	SLU 54	-0.01	-0.35	13.04	0	0	0
29	SLU 55	-0.02	-0.35	12.95	0	0	0
29	SLU 56	-0.02	-0.35	13.16	0	0	0
29	SLU 57	-0.02	-0.35	13.16	0	0	0
29	SLU 58	-0.02	-0.35	13.07	0	0	0
29	SLU 59	-0.02	-0.35	13.07	0	0	0
29	SLU 60	-0.02	-0.35	13.32	0	0	0
29	SLU 61	-0.02	-0.35	13.32	0	0	0
29	SLU 62	-0.03	-0.35	13.44	0	0	0
29	SLU 63	-0.02	-0.35	13.43	0	0	0
29	SLU 64	0.01	-0.33	12.73	0	0	0
29	SLU 65	0.01	-0.34	12.72	0	0	0
29	SLU 66	0	-0.33	12.93	0	0	0
29	SLU 67	0	-0.33	12.93	0	0	0
29	SLU 68	0	-0.33	12.84	0	0	0
29	SLU 69	0	-0.33	13.05	0	0	0
29	SLU 70	0	-0.33	13.05	0	0	0
29	SLU 71	0	-0.33	12.96	0	0	0
29	SLU 72	0	-0.33	12.96	0	0	0
29	SLU 73	-0.01	-0.34	13.85	0	0	0
29	SLU 74	-0.02	-0.34	14.06	0	0	0
29	SLU 75	-0.02	-0.34	14.06	0	0	0
29	SLU 76	-0.02	-0.34	13.97	0	0	0
29	SLU 77	-0.02	-0.34	14.18	0	0	0
29	SLU 78	-0.02	-0.34	14.18	0	0	0
29	SLU 79	-0.02	-0.34	14.09	0	0	0
29	SLU 80	-0.02	-0.34	14.09	0	0	0
29	SLU 81	-0.02	-0.34	14.34	0	0	0
29	SLU 82	-0.02	-0.34	14.34	0	0	0
29	SLU 83	-0.03	-0.34	14.46	0	0	0
29	SLU 84	-0.03	-0.34	14.46	0	0	0
29	SLE RA 1	0.01	-0.26	9.56	0	0	0
29	SLE RA 2	0.01	-0.26	9.56	0	0	0
29	SLE RA 3	0	-0.26	9.7	0	0	0
29	SLE RA 4	0	-0.26	9.7	0	0	0
29	SLE RA 5	0	-0.26	9.64	0	0	0
29	SLE RA 6	0	-0.26	9.78	0	0	0
29	SLE RA 7	0	-0.26	9.78	0	0	0
29	SLE RA 8	0	-0.26	9.72	0	0	0
29	SLE RA 9	0	-0.26	9.72	0	0	0
29	SLE RA 10	-0.01	-0.26	10.32	0	0	0
29	SLE RA 11	-0.01	-0.26	10.46	0	0	0
29	SLE RA 12	-0.01	-0.26	10.46	0	0	0
29	SLE RA 13	-0.01	-0.26	10.39	0	0	0
29	SLE RA 14	-0.01	-0.26	10.53	0	0	0
29	SLE RA 15	-0.01	-0.26	10.53	0	0	0
29	SLE RA 16	-0.01	-0.26	10.47	0	0	0
29	SLE RA 17	-0.01	-0.26	10.47	0	0	0
29	SLE RA 18	-0.01	-0.26	10.64	0	0	0
29	SLE RA 19	-0.01	-0.26	10.64	0	0	0
29	SLE RA 20	-0.02	-0.26	10.72	0	0	0
29	SLE RA 21	-0.02	-0.26	10.72	0	0	0
29	SLE FR 1	0.01	-0.26	9.56	0	0	0
29	SLE FR 2	0.01	-0.26	9.56	0	0	0
29	SLE FR 3	0.01	-0.26	9.6	0	0	0
29	SLE FR 4	0	-0.26	9.89	0	0	0
29	SLE FR 5	0	-0.26	9.92	0	0	0
29	SLE FR 6	0	-0.26	10.1	0	0	0
29	SLE QP 1	0.01	-0.26	9.56	0	0	0
29	SLE QP 2	0	-0.26	9.89	0	0	0
29	SLD 1	0.6	-0.21	9.7	0	0	0
29	SLD 2	0.62	-0.18	9.69	0	0	0
29	SLD 3	0.57	-0.37	9.66	0	0	0
29	SLD 4	0.59	-0.34	9.65	0	0	0
29	SLD 5	0.22	0	9.89	0	0	0
29	SLD 6	0.23	0.02	9.89	0	0	0
29	SLD 7	0.13	-0.55	9.76	0	0	0
29	SLD 8	0.14	-0.53	9.76	0	0	0
29	SLD 9	-0.14	0.01	10.02	0	0	0
29	SLD 10	-0.12	0.03	10.01	0	0	0
29	SLD 11	-0.23	-0.54	9.89	0	0	0
29	SLD 12	-0.22	-0.52	9.88	0	0	0
29	SLD 13	-0.59	-0.18	10.12	0	0	0
29	SLD 14	-0.57	-0.15	10.11	0	0	0
29	SLD 15	-0.62	-0.34	10.08	0	0	0
29	SLD 16	-0.6	-0.31	10.08	0	0	0
29	SLV 1	1.41	-0.14	9.45	0	0	0
29	SLV 2	1.45	-0.07	9.43	0	0	0
29	SLV 3	1.34	-0.52	9.36	0	0	0
29	SLV 4	1.39	-0.45	9.34	0	0	0
29	SLV 5	0.51	0.33	9.89	0	0	0
29	SLV 6	0.54	0.37	9.88	0	0	0
29	SLV 7	0.3	-0.91	9.6	0	0	0
29	SLV 8	0.33	-0.87	9.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLV 9	-0.33	0.35	10.19	0	0	0
29	SLV 10	-0.3	0.4	10.18	0	0	0
29	SLV 11	-0.54	-0.89	9.89	0	0	0
29	SLV 12	-0.51	-0.85	9.88	0	0	0
29	SLV 13	-1.39	-0.07	10.43	0	0	0
29	SLV 14	-1.34	0	10.42	0	0	0
29	SLV 15	-1.45	-0.44	10.34	0	0	0
29	SLV 16	-1.4	-0.37	10.33	0	0	0
30	SLU 1	0	-0.13	4.87	0	0	0
30	SLU 2	0	-0.13	4.87	0	0	0
30	SLU 3	0	-0.13	4.98	0	0	0
30	SLU 4	0	-0.13	4.98	0	0	0
30	SLU 5	0	-0.13	4.93	0	0	0
30	SLU 6	0	-0.13	5.04	0	0	0
30	SLU 7	0	-0.13	5.04	0	0	0
30	SLU 8	0	-0.13	4.99	0	0	0
30	SLU 9	0	-0.13	4.99	0	0	0
30	SLU 10	-0.01	-0.14	5.46	0	0	0
30	SLU 11	-0.01	-0.13	5.57	0	0	0
30	SLU 12	-0.01	-0.13	5.56	0	0	0
30	SLU 13	-0.01	-0.14	5.52	0	0	0
30	SLU 14	-0.01	-0.13	5.62	0	0	0
30	SLU 15	-0.01	-0.13	5.62	0	0	0
30	SLU 16	-0.01	-0.13	5.58	0	0	0
30	SLU 17	-0.01	-0.13	5.58	0	0	0
30	SLU 18	-0.01	-0.13	5.71	0	0	0
30	SLU 19	-0.01	-0.14	5.71	0	0	0
30	SLU 20	-0.01	-0.13	5.77	0	0	0
30	SLU 21	-0.01	-0.14	5.77	0	0	0
30	SLU 22	0	-0.13	5.41	0	0	0
30	SLU 23	0	-0.13	5.41	0	0	0
30	SLU 24	0	-0.13	5.51	0	0	0
30	SLU 25	0	-0.13	5.51	0	0	0
30	SLU 26	0	-0.13	5.47	0	0	0
30	SLU 27	0	-0.13	5.57	0	0	0
30	SLU 28	0	-0.13	5.57	0	0	0
30	SLU 29	0	-0.12	5.53	0	0	0
30	SLU 30	0	-0.13	5.53	0	0	0
30	SLU 31	-0.01	-0.13	5.99	0	0	0
30	SLU 32	-0.01	-0.13	6.1	0	0	0
30	SLU 33	-0.01	-0.13	6.1	0	0	0
30	SLU 34	-0.01	-0.13	6.05	0	0	0
30	SLU 35	-0.01	-0.13	6.16	0	0	0
30	SLU 36	-0.01	-0.13	6.16	0	0	0
30	SLU 37	-0.01	-0.13	6.11	0	0	0
30	SLU 38	-0.01	-0.13	6.11	0	0	0
30	SLU 39	-0.01	-0.13	6.25	0	0	0
30	SLU 40	-0.01	-0.13	6.24	0	0	0
30	SLU 41	-0.02	-0.13	6.3	0	0	0
30	SLU 42	-0.02	-0.13	6.3	0	0	0
30	SLU 43	0.01	-0.17	6.15	0	0	0
30	SLU 44	0.01	-0.17	6.15	0	0	0
30	SLU 45	0	-0.17	6.26	0	0	0
30	SLU 46	0	-0.17	6.26	0	0	0
30	SLU 47	0	-0.17	6.21	0	0	0
30	SLU 48	0	-0.17	6.32	0	0	0
30	SLU 49	0	-0.17	6.32	0	0	0
30	SLU 50	0	-0.17	6.27	0	0	0
30	SLU 51	0	-0.17	6.27	0	0	0
30	SLU 52	0	-0.18	6.74	0	0	0
30	SLU 53	-0.01	-0.18	6.84	0	0	0
30	SLU 54	-0.01	-0.18	6.84	0	0	0
30	SLU 55	-0.01	-0.18	6.79	0	0	0
30	SLU 56	-0.01	-0.18	6.9	0	0	0
30	SLU 57	-0.01	-0.18	6.9	0	0	0
30	SLU 58	-0.01	-0.17	6.85	0	0	0
30	SLU 59	-0.01	-0.18	6.85	0	0	0
30	SLU 60	-0.01	-0.18	6.99	0	0	0
30	SLU 61	-0.01	-0.18	6.99	0	0	0
30	SLU 62	-0.01	-0.18	7.05	0	0	0
30	SLU 63	-0.01	-0.18	7.05	0	0	0
30	SLU 64	0	-0.17	6.68	0	0	0
30	SLU 65	0.01	-0.17	6.68	0	0	0
30	SLU 66	0	-0.17	6.79	0	0	0
30	SLU 67	0	-0.17	6.79	0	0	0
30	SLU 68	0	-0.17	6.74	0	0	0
30	SLU 69	0	-0.17	6.85	0	0	0
30	SLU 70	0	-0.17	6.85	0	0	0
30	SLU 71	0	-0.17	6.8	0	0	0
30	SLU 72	0	-0.17	6.8	0	0	0
30	SLU 73	-0.01	-0.17	7.27	0	0	0
30	SLU 74	-0.01	-0.17	7.38	0	0	0
30	SLU 75	-0.01	-0.17	7.38	0	0	0
30	SLU 76	-0.01	-0.17	7.33	0	0	0
30	SLU 77	-0.01	-0.17	7.44	0	0	0
30	SLU 78	-0.01	-0.17	7.44	0	0	0
30	SLU 79	-0.01	-0.17	7.39	0	0	0
30	SLU 80	-0.01	-0.17	7.39	0	0	0
30	SLU 81	-0.01	-0.17	7.52	0	0	0
30	SLU 82	-0.01	-0.17	7.52	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLU 83	-0.01	-0.17	7.58	0	0	0
30	SLU 84	-0.01	-0.17	7.58	0	0	0
30	SLE RA 1	0	-0.13	5.02	0	0	0
30	SLE RA 2	0	-0.13	5.02	0	0	0
30	SLE RA 3	0	-0.13	5.1	0	0	0
30	SLE RA 4	0	-0.13	5.1	0	0	0
30	SLE RA 5	0	-0.13	5.06	0	0	0
30	SLE RA 6	0	-0.13	5.14	0	0	0
30	SLE RA 7	0	-0.13	5.14	0	0	0
30	SLE RA 8	0	-0.13	5.1	0	0	0
30	SLE RA 9	0	-0.13	5.1	0	0	0
30	SLE RA 10	0	-0.13	5.41	0	0	0
30	SLE RA 11	-0.01	-0.13	5.49	0	0	0
30	SLE RA 12	0	-0.13	5.49	0	0	0
30	SLE RA 13	-0.01	-0.13	5.45	0	0	0
30	SLE RA 14	-0.01	-0.13	5.53	0	0	0
30	SLE RA 15	-0.01	-0.13	5.53	0	0	0
30	SLE RA 16	-0.01	-0.13	5.49	0	0	0
30	SLE RA 17	-0.01	-0.13	5.49	0	0	0
30	SLE RA 18	-0.01	-0.13	5.58	0	0	0
30	SLE RA 19	-0.01	-0.13	5.58	0	0	0
30	SLE RA 20	-0.01	-0.13	5.62	0	0	0
30	SLE RA 21	-0.01	-0.13	5.62	0	0	0
30	SLE FR 1	0	-0.13	5.02	0	0	0
30	SLE FR 2	0	-0.13	5.02	0	0	0
30	SLE FR 3	0	-0.13	5.04	0	0	0
30	SLE FR 4	0	-0.13	5.19	0	0	0
30	SLE FR 5	0	-0.13	5.21	0	0	0
30	SLE FR 6	0	-0.13	5.3	0	0	0
30	SLE QP 1	0	-0.13	5.02	0	0	0
30	SLE QP 2	0	-0.13	5.19	0	0	0
30	SLD 1	0.32	-0.11	5.06	0	0	0
30	SLD 2	0.33	-0.09	5.06	0	0	0
30	SLD 3	0.3	-0.19	5.03	0	0	0
30	SLD 4	0.31	-0.17	5.03	0	0	0
30	SLD 5	0.12	0	5.19	0	0	0
30	SLD 6	0.12	0.02	5.19	0	0	0
30	SLD 7	0.07	-0.28	5.11	0	0	0
30	SLD 8	0.07	-0.27	5.1	0	0	0
30	SLD 9	-0.07	0.01	5.28	0	0	0
30	SLD 10	-0.07	0.02	5.28	0	0	0
30	SLD 11	-0.12	-0.28	5.19	0	0	0
30	SLD 12	-0.11	-0.26	5.19	0	0	0
30	SLD 13	-0.31	-0.09	5.36	0	0	0
30	SLD 14	-0.3	-0.07	5.35	0	0	0
30	SLD 15	-0.33	-0.17	5.33	0	0	0
30	SLD 16	-0.32	-0.15	5.32	0	0	0
30	SLV 1	0.74	-0.08	4.88	0	0	0
30	SLV 2	0.77	-0.03	4.87	0	0	0
30	SLV 3	0.71	-0.27	4.82	0	0	0
30	SLV 4	0.73	-0.23	4.81	0	0	0
30	SLV 5	0.27	0.17	5.19	0	0	0
30	SLV 6	0.29	0.2	5.19	0	0	0
30	SLV 7	0.16	-0.47	4.99	0	0	0
30	SLV 8	0.17	-0.45	4.98	0	0	0
30	SLV 9	-0.17	0.18	5.4	0	0	0
30	SLV 10	-0.16	0.21	5.39	0	0	0
30	SLV 11	-0.28	-0.46	5.2	0	0	0
30	SLV 12	-0.27	-0.43	5.19	0	0	0
30	SLV 13	-0.73	-0.03	5.57	0	0	0
30	SLV 14	-0.71	0.01	5.56	0	0	0
30	SLV 15	-0.77	-0.23	5.51	0	0	0
30	SLV 16	-0.74	-0.18	5.5	0	0	0
31	SLU 1	0.01	-0.29	10.01	0	0	0
31	SLU 2	0.01	-0.3	10.01	0	0	0
31	SLU 3	0	-0.29	10.24	0	0	0
31	SLU 4	0	-0.3	10.24	0	0	0
31	SLU 5	0	-0.3	10.14	0	0	0
31	SLU 6	0	-0.29	10.37	0	0	0
31	SLU 7	0	-0.3	10.37	0	0	0
31	SLU 8	-0.01	-0.29	10.27	0	0	0
31	SLU 9	0	-0.29	10.27	0	0	0
31	SLU 10	-0.01	-0.3	11.24	0	0	0
31	SLU 11	-0.02	-0.3	11.47	0	0	0
31	SLU 12	-0.02	-0.3	11.47	0	0	0
31	SLU 13	-0.02	-0.3	11.37	0	0	0
31	SLU 14	-0.03	-0.3	11.6	0	0	0
31	SLU 15	-0.03	-0.3	11.6	0	0	0
31	SLU 16	-0.03	-0.3	11.5	0	0	0
31	SLU 17	-0.03	-0.3	11.5	0	0	0
31	SLU 18	-0.03	-0.3	11.77	0	0	0
31	SLU 19	-0.03	-0.31	11.77	0	0	0
31	SLU 20	-0.03	-0.3	11.9	0	0	0
31	SLU 21	-0.03	-0.31	11.9	0	0	0
31	SLU 22	0.01	-0.28	11.12	0	0	0
31	SLU 23	0.01	-0.29	11.12	0	0	0
31	SLU 24	0	-0.28	11.34	0	0	0
31	SLU 25	0	-0.29	11.34	0	0	0
31	SLU 26	0	-0.29	11.25	0	0	0
31	SLU 27	-0.01	-0.28	11.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
31	SLU 28	-0.01	-0.29	11.47	0	0	0
31	SLU 29	-0.01	-0.28	11.38	0	0	0
31	SLU 30	-0.01	-0.28	11.38	0	0	0
31	SLU 31	-0.02	-0.29	12.35	0	0	0
31	SLU 32	-0.02	-0.29	12.58	0	0	0
31	SLU 33	-0.02	-0.29	12.58	0	0	0
31	SLU 34	-0.02	-0.29	12.48	0	0	0
31	SLU 35	-0.03	-0.29	12.71	0	0	0
31	SLU 36	-0.03	-0.29	12.71	0	0	0
31	SLU 37	-0.03	-0.29	12.61	0	0	0
31	SLU 38	-0.03	-0.29	12.61	0	0	0
31	SLU 39	-0.03	-0.29	12.88	0	0	0
31	SLU 40	-0.03	-0.3	12.88	0	0	0
31	SLU 41	-0.03	-0.29	13.01	0	0	0
31	SLU 42	-0.03	-0.3	13.01	0	0	0
31	SLU 43	0.01	-0.38	12.64	0	0	0
31	SLU 44	0.01	-0.39	12.63	0	0	0
31	SLU 45	0	-0.39	12.86	0	0	0
31	SLU 46	0.01	-0.39	12.86	0	0	0
31	SLU 47	0	-0.39	12.76	0	0	0
31	SLU 48	0	-0.38	12.99	0	0	0
31	SLU 49	0	-0.39	12.99	0	0	0
31	SLU 50	0	-0.38	12.89	0	0	0
31	SLU 51	0	-0.39	12.89	0	0	0
31	SLU 52	-0.01	-0.4	13.87	0	0	0
31	SLU 53	-0.02	-0.39	14.1	0	0	0
31	SLU 54	-0.02	-0.4	14.1	0	0	0
31	SLU 55	-0.02	-0.4	14	0	0	0
31	SLU 56	-0.02	-0.39	14.23	0	0	0
31	SLU 57	-0.02	-0.39	14.22	0	0	0
31	SLU 58	-0.03	-0.39	14.13	0	0	0
31	SLU 59	-0.02	-0.39	14.13	0	0	0
31	SLU 60	-0.02	-0.4	14.4	0	0	0
31	SLU 61	-0.02	-0.4	14.4	0	0	0
31	SLU 62	-0.03	-0.39	14.53	0	0	0
31	SLU 63	-0.03	-0.4	14.53	0	0	0
31	SLU 64	0.01	-0.37	13.74	0	0	0
31	SLU 65	0.01	-0.38	13.74	0	0	0
31	SLU 66	0	-0.37	13.97	0	0	0
31	SLU 67	0	-0.38	13.97	0	0	0
31	SLU 68	0	-0.38	13.87	0	0	0
31	SLU 69	0	-0.37	14.1	0	0	0
31	SLU 70	0	-0.38	14.1	0	0	0
31	SLU 71	0	-0.37	14	0	0	0
31	SLU 72	0	-0.38	14	0	0	0
31	SLU 73	-0.01	-0.39	14.98	0	0	0
31	SLU 74	-0.02	-0.38	15.2	0	0	0
31	SLU 75	-0.02	-0.38	15.2	0	0	0
31	SLU 76	-0.02	-0.39	15.1	0	0	0
31	SLU 77	-0.03	-0.38	15.33	0	0	0
31	SLU 78	-0.03	-0.38	15.33	0	0	0
31	SLU 79	-0.03	-0.38	15.23	0	0	0
31	SLU 80	-0.03	-0.38	15.23	0	0	0
31	SLU 81	-0.02	-0.38	15.5	0	0	0
31	SLU 82	-0.02	-0.39	15.5	0	0	0
31	SLU 83	-0.03	-0.38	15.63	0	0	0
31	SLU 84	-0.03	-0.39	15.63	0	0	0
31	SLE RA 1	0.01	-0.29	10.33	0	0	0
31	SLE RA 2	0.01	-0.29	10.33	0	0	0
31	SLE RA 3	0	-0.29	10.48	0	0	0
31	SLE RA 4	0	-0.29	10.48	0	0	0
31	SLE RA 5	0	-0.29	10.41	0	0	0
31	SLE RA 6	0	-0.29	10.56	0	0	0
31	SLE RA 7	0	-0.29	10.56	0	0	0
31	SLE RA 8	0	-0.29	10.5	0	0	0
31	SLE RA 9	0	-0.29	10.5	0	0	0
31	SLE RA 10	-0.01	-0.3	11.15	0	0	0
31	SLE RA 11	-0.01	-0.3	11.3	0	0	0
31	SLE RA 12	-0.01	-0.3	11.3	0	0	0
31	SLE RA 13	-0.01	-0.3	11.24	0	0	0
31	SLE RA 14	-0.02	-0.3	11.39	0	0	0
31	SLE RA 15	-0.02	-0.3	11.39	0	0	0
31	SLE RA 16	-0.02	-0.29	11.32	0	0	0
31	SLE RA 17	-0.02	-0.3	11.32	0	0	0
31	SLE RA 18	-0.02	-0.3	11.5	0	0	0
31	SLE RA 19	-0.01	-0.3	11.5	0	0	0
31	SLE RA 20	-0.02	-0.3	11.59	0	0	0
31	SLE RA 21	-0.02	-0.3	11.59	0	0	0
31	SLE FR 1	0.01	-0.29	10.33	0	0	0
31	SLE FR 2	0.01	-0.29	10.33	0	0	0
31	SLE FR 3	0	-0.29	10.36	0	0	0
31	SLE FR 4	0	-0.29	10.68	0	0	0
31	SLE FR 5	0	-0.29	10.71	0	0	0
31	SLE FR 6	0	-0.29	10.91	0	0	0
31	SLE QP 1	0.01	-0.29	10.33	0	0	0
31	SLE QP 2	0	-0.29	10.68	0	0	0
31	SLD 1	0.65	-0.23	10.54	0	0	0
31	SLD 2	0.67	-0.2	10.53	0	0	0
31	SLD 3	0.62	-0.41	10.51	0	0	0
31	SLD 4	0.64	-0.38	10.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
31	SLD 5	0.24	-0.01	10.68	0	0	0
31	SLD 6	0.25	0.01	10.68	0	0	0
31	SLD 7	0.14	-0.61	10.58	0	0	0
31	SLD 8	0.15	-0.59	10.58	0	0	0
31	SLD 9	-0.15	0	10.78	0	0	0
31	SLD 10	-0.14	0.02	10.78	0	0	0
31	SLD 11	-0.25	-0.6	10.68	0	0	0
31	SLD 12	-0.24	-0.58	10.68	0	0	0
31	SLD 13	-0.64	-0.2	10.86	0	0	0
31	SLD 14	-0.62	-0.17	10.85	0	0	0
31	SLD 15	-0.67	-0.38	10.83	0	0	0
31	SLD 16	-0.65	-0.35	10.82	0	0	0
31	SLV 1	1.52	-0.16	10.34	0	0	0
31	SLV 2	1.57	-0.09	10.33	0	0	0
31	SLV 3	1.45	-0.57	10.27	0	0	0
31	SLV 4	1.5	-0.5	10.26	0	0	0
31	SLV 5	0.55	0.35	10.68	0	0	0
31	SLV 6	0.58	0.4	10.68	0	0	0
31	SLV 7	0.32	-1	10.46	0	0	0
31	SLV 8	0.35	-0.96	10.45	0	0	0
31	SLV 9	-0.35	0.38	10.91	0	0	0
31	SLV 10	-0.32	0.42	10.9	0	0	0
31	SLV 11	-0.58	-0.98	10.68	0	0	0
31	SLV 12	-0.55	-0.94	10.68	0	0	0
31	SLV 13	-1.5	-0.08	11.1	0	0	0
31	SLV 14	-1.45	-0.02	11.09	0	0	0
31	SLV 15	-1.57	-0.49	11.03	0	0	0
31	SLV 16	-1.52	-0.43	11.02	0	0	0
32	SLU 1	0	-0.21	6.2	0	0	0
32	SLU 2	0	-0.22	6.2	0	0	0
32	SLU 3	0	-0.21	6.34	0	0	0
32	SLU 4	0	-0.22	6.34	0	0	0
32	SLU 5	0	-0.22	6.29	0	0	0
32	SLU 6	0	-0.21	6.43	0	0	0
32	SLU 7	0	-0.22	6.43	0	0	0
32	SLU 8	0	-0.21	6.38	0	0	0
32	SLU 9	0	-0.21	6.38	0	0	0
32	SLU 10	-0.01	-0.22	7	0	0	0
32	SLU 11	-0.01	-0.22	7.14	0	0	0
32	SLU 12	-0.01	-0.22	7.14	0	0	0
32	SLU 13	-0.01	-0.22	7.09	0	0	0
32	SLU 14	-0.02	-0.22	7.23	0	0	0
32	SLU 15	-0.02	-0.22	7.23	0	0	0
32	SLU 16	-0.02	-0.22	7.17	0	0	0
32	SLU 17	-0.02	-0.22	7.17	0	0	0
32	SLU 18	-0.02	-0.22	7.34	0	0	0
32	SLU 19	-0.02	-0.23	7.34	0	0	0
32	SLU 20	-0.02	-0.22	7.43	0	0	0
32	SLU 21	-0.02	-0.23	7.43	0	0	0
32	SLU 22	0	-0.21	6.89	0	0	0
32	SLU 23	0	-0.21	6.89	0	0	0
32	SLU 24	0	-0.21	7.03	0	0	0
32	SLU 25	0	-0.21	7.04	0	0	0
32	SLU 26	0	-0.21	6.98	0	0	0
32	SLU 27	0	-0.21	7.12	0	0	0
32	SLU 28	0	-0.21	7.12	0	0	0
32	SLU 29	-0.01	-0.21	7.07	0	0	0
32	SLU 30	0	-0.21	7.07	0	0	0
32	SLU 31	-0.01	-0.22	7.69	0	0	0
32	SLU 32	-0.01	-0.22	7.83	0	0	0
32	SLU 33	-0.01	-0.22	7.83	0	0	0
32	SLU 34	-0.01	-0.22	7.78	0	0	0
32	SLU 35	-0.02	-0.22	7.92	0	0	0
32	SLU 36	-0.02	-0.22	7.92	0	0	0
32	SLU 37	-0.02	-0.22	7.87	0	0	0
32	SLU 38	-0.02	-0.22	7.87	0	0	0
32	SLU 39	-0.02	-0.22	8.03	0	0	0
32	SLU 40	-0.02	-0.22	8.03	0	0	0
32	SLU 41	-0.02	-0.22	8.12	0	0	0
32	SLU 42	-0.02	-0.22	8.12	0	0	0
32	SLU 43	0.01	-0.28	7.82	0	0	0
32	SLU 44	0.01	-0.28	7.82	0	0	0
32	SLU 45	0	-0.28	7.97	0	0	0
32	SLU 46	0	-0.28	7.97	0	0	0
32	SLU 47	0	-0.28	7.91	0	0	0
32	SLU 48	0	-0.28	8.06	0	0	0
32	SLU 49	0	-0.28	8.06	0	0	0
32	SLU 50	0	-0.28	8	0	0	0
32	SLU 51	0	-0.28	8	0	0	0
32	SLU 52	-0.01	-0.29	8.62	0	0	0
32	SLU 53	-0.01	-0.29	8.77	0	0	0
32	SLU 54	-0.01	-0.29	8.77	0	0	0
32	SLU 55	-0.01	-0.29	8.71	0	0	0
32	SLU 56	-0.02	-0.29	8.86	0	0	0
32	SLU 57	-0.02	-0.29	8.86	0	0	0
32	SLU 58	-0.02	-0.29	8.8	0	0	0
32	SLU 59	-0.02	-0.29	8.8	0	0	0
32	SLU 60	-0.01	-0.29	8.96	0	0	0
32	SLU 61	-0.01	-0.29	8.96	0	0	0
32	SLU 62	-0.02	-0.29	9.05	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLU 63	-0.02	-0.29	9.05	0	0	0
32	SLU 64	0	-0.27	8.51	0	0	0
32	SLU 65	0	-0.28	8.51	0	0	0
32	SLU 66	0	-0.27	8.66	0	0	0
32	SLU 67	0	-0.28	8.66	0	0	0
32	SLU 68	0	-0.28	8.6	0	0	0
32	SLU 69	0	-0.27	8.75	0	0	0
32	SLU 70	0	-0.28	8.75	0	0	0
32	SLU 71	0	-0.27	8.69	0	0	0
32	SLU 72	0	-0.28	8.69	0	0	0
32	SLU 73	-0.01	-0.29	9.31	0	0	0
32	SLU 74	-0.01	-0.28	9.46	0	0	0
32	SLU 75	-0.01	-0.29	9.46	0	0	0
32	SLU 76	-0.01	-0.29	9.4	0	0	0
32	SLU 77	-0.02	-0.28	9.55	0	0	0
32	SLU 78	-0.02	-0.29	9.55	0	0	0
32	SLU 79	-0.02	-0.28	9.49	0	0	0
32	SLU 80	-0.02	-0.28	9.49	0	0	0
32	SLU 81	-0.02	-0.29	9.65	0	0	0
32	SLU 82	-0.02	-0.29	9.65	0	0	0
32	SLU 83	-0.02	-0.29	9.74	0	0	0
32	SLU 84	-0.02	-0.29	9.74	0	0	0
32	SLE RA 1	0	-0.21	6.39	0	0	0
32	SLE RA 2	0	-0.21	6.39	0	0	0
32	SLE RA 3	0	-0.21	6.49	0	0	0
32	SLE RA 4	0	-0.21	6.49	0	0	0
32	SLE RA 5	0	-0.21	6.45	0	0	0
32	SLE RA 6	0	-0.21	6.55	0	0	0
32	SLE RA 7	0	-0.21	6.55	0	0	0
32	SLE RA 8	0	-0.21	6.51	0	0	0
32	SLE RA 9	0	-0.21	6.51	0	0	0
32	SLE RA 10	-0.01	-0.22	6.93	0	0	0
32	SLE RA 11	-0.01	-0.22	7.03	0	0	0
32	SLE RA 12	-0.01	-0.22	7.03	0	0	0
32	SLE RA 13	-0.01	-0.22	6.99	0	0	0
32	SLE RA 14	-0.01	-0.22	7.08	0	0	0
32	SLE RA 15	-0.01	-0.22	7.09	0	0	0
32	SLE RA 16	-0.01	-0.22	7.05	0	0	0
32	SLE RA 17	-0.01	-0.22	7.05	0	0	0
32	SLE RA 18	-0.01	-0.22	7.15	0	0	0
32	SLE RA 19	-0.01	-0.22	7.16	0	0	0
32	SLE RA 20	-0.01	-0.22	7.21	0	0	0
32	SLE RA 21	-0.01	-0.22	7.21	0	0	0
32	SLE FR 1	0	-0.21	6.39	0	0	0
32	SLE FR 2	0	-0.21	6.39	0	0	0
32	SLE FR 3	0	-0.21	6.42	0	0	0
32	SLE FR 4	0	-0.21	6.62	0	0	0
32	SLE FR 5	0	-0.21	6.65	0	0	0
32	SLE FR 6	0	-0.22	6.77	0	0	0
32	SLE QP 1	0	-0.21	6.39	0	0	0
32	SLE QP 2	0	-0.21	6.62	0	0	0
32	SLD 1	0.4	-0.15	6.72	0	0	0
32	SLD 2	0.41	-0.14	6.73	0	0	0
32	SLD 3	0.38	-0.26	6.7	0	0	0
32	SLD 4	0.39	-0.26	6.71	0	0	0
32	SLD 5	0.14	-0.02	6.69	0	0	0
32	SLD 6	0.15	-0.02	6.69	0	0	0
32	SLD 7	0.08	-0.41	6.61	0	0	0
32	SLD 8	0.09	-0.4	6.61	0	0	0
32	SLD 9	-0.09	-0.02	6.63	0	0	0
32	SLD 10	-0.08	-0.02	6.64	0	0	0
32	SLD 11	-0.15	-0.41	6.55	0	0	0
32	SLD 12	-0.15	-0.41	6.56	0	0	0
32	SLD 13	-0.39	-0.17	6.54	0	0	0
32	SLD 14	-0.38	-0.16	6.54	0	0	0
32	SLD 15	-0.41	-0.28	6.51	0	0	0
32	SLD 16	-0.4	-0.28	6.52	0	0	0
32	SLV 1	0.93	-0.06	6.86	0	0	0
32	SLV 2	0.96	-0.06	6.87	0	0	0
32	SLV 3	0.89	-0.33	6.81	0	0	0
32	SLV 4	0.91	-0.32	6.82	0	0	0
32	SLV 5	0.34	0.23	6.78	0	0	0
32	SLV 6	0.36	0.24	6.78	0	0	0
32	SLV 7	0.2	-0.65	6.59	0	0	0
32	SLV 8	0.21	-0.64	6.6	0	0	0
32	SLV 9	-0.22	0.22	6.64	0	0	0
32	SLV 10	-0.2	0.22	6.65	0	0	0
32	SLV 11	-0.36	-0.66	6.46	0	0	0
32	SLV 12	-0.34	-0.66	6.47	0	0	0
32	SLV 13	-0.92	-0.11	6.43	0	0	0
32	SLV 14	-0.89	-0.1	6.44	0	0	0
32	SLV 15	-0.96	-0.37	6.37	0	0	0
32	SLV 16	-0.93	-0.36	6.38	0	0	0
33	SLU 1	0.01	-0.41	12.39	0	0	0
33	SLU 2	0.01	-0.42	12.39	0	0	0
33	SLU 3	0	-0.41	12.69	0	0	0
33	SLU 4	0	-0.42	12.69	0	0	0
33	SLU 5	0	-0.42	12.57	0	0	0
33	SLU 6	-0.01	-0.41	12.86	0	0	0
33	SLU 7	-0.01	-0.42	12.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
33	SLU 8	-0.01	-0.41	12.74	0	0	0
33	SLU 9	-0.01	-0.41	12.74	0	0	0
33	SLU 10	-0.02	-0.43	13.98	0	0	0
33	SLU 11	-0.03	-0.43	14.27	0	0	0
33	SLU 12	-0.03	-0.43	14.27	0	0	0
33	SLU 13	-0.03	-0.43	14.15	0	0	0
33	SLU 14	-0.03	-0.43	14.44	0	0	0
33	SLU 15	-0.03	-0.43	14.44	0	0	0
33	SLU 16	-0.04	-0.43	14.32	0	0	0
33	SLU 17	-0.04	-0.43	14.33	0	0	0
33	SLU 18	-0.03	-0.43	14.65	0	0	0
33	SLU 19	-0.03	-0.44	14.65	0	0	0
33	SLU 20	-0.04	-0.43	14.83	0	0	0
33	SLU 21	-0.04	-0.44	14.83	0	0	0
33	SLU 22	0.01	-0.4	13.77	0	0	0
33	SLU 23	0.01	-0.41	13.77	0	0	0
33	SLU 24	0	-0.4	14.06	0	0	0
33	SLU 25	0	-0.41	14.07	0	0	0
33	SLU 26	0	-0.41	13.95	0	0	0
33	SLU 27	-0.01	-0.4	14.24	0	0	0
33	SLU 28	-0.01	-0.41	14.24	0	0	0
33	SLU 29	-0.01	-0.4	14.12	0	0	0
33	SLU 30	-0.01	-0.4	14.12	0	0	0
33	SLU 31	-0.02	-0.42	15.36	0	0	0
33	SLU 32	-0.03	-0.42	15.65	0	0	0
33	SLU 33	-0.03	-0.42	15.65	0	0	0
33	SLU 34	-0.03	-0.42	15.53	0	0	0
33	SLU 35	-0.04	-0.42	15.82	0	0	0
33	SLU 36	-0.04	-0.42	15.82	0	0	0
33	SLU 37	-0.04	-0.42	15.7	0	0	0
33	SLU 38	-0.04	-0.42	15.7	0	0	0
33	SLU 39	-0.03	-0.42	16.03	0	0	0
33	SLU 40	-0.03	-0.43	16.03	0	0	0
33	SLU 41	-0.04	-0.42	16.21	0	0	0
33	SLU 42	-0.04	-0.43	16.21	0	0	0
33	SLU 43	0.01	-0.54	15.64	0	0	0
33	SLU 44	0.01	-0.54	15.64	0	0	0
33	SLU 45	0	-0.54	15.93	0	0	0
33	SLU 46	0.01	-0.54	15.93	0	0	0
33	SLU 47	0	-0.54	15.81	0	0	0
33	SLU 48	0	-0.54	16.11	0	0	0
33	SLU 49	0	-0.54	16.11	0	0	0
33	SLU 50	0	-0.54	15.99	0	0	0
33	SLU 51	0	-0.54	15.99	0	0	0
33	SLU 52	-0.02	-0.56	17.22	0	0	0
33	SLU 53	-0.02	-0.55	17.51	0	0	0
33	SLU 54	-0.02	-0.56	17.51	0	0	0
33	SLU 55	-0.02	-0.56	17.4	0	0	0
33	SLU 56	-0.03	-0.55	17.69	0	0	0
33	SLU 57	-0.03	-0.56	17.69	0	0	0
33	SLU 58	-0.03	-0.55	17.57	0	0	0
33	SLU 59	-0.03	-0.56	17.57	0	0	0
33	SLU 60	-0.03	-0.56	17.9	0	0	0
33	SLU 61	-0.03	-0.56	17.9	0	0	0
33	SLU 62	-0.04	-0.56	18.07	0	0	0
33	SLU 63	-0.04	-0.56	18.07	0	0	0
33	SLU 64	0.01	-0.53	17.02	0	0	0
33	SLU 65	0.01	-0.53	17.02	0	0	0
33	SLU 66	0	-0.53	17.31	0	0	0
33	SLU 67	0	-0.53	17.31	0	0	0
33	SLU 68	0	-0.53	17.19	0	0	0
33	SLU 69	-0.01	-0.53	17.48	0	0	0
33	SLU 70	0	-0.53	17.48	0	0	0
33	SLU 71	-0.01	-0.53	17.37	0	0	0
33	SLU 72	-0.01	-0.53	17.37	0	0	0
33	SLU 73	-0.02	-0.55	18.6	0	0	0
33	SLU 74	-0.03	-0.54	18.89	0	0	0
33	SLU 75	-0.03	-0.55	18.89	0	0	0
33	SLU 76	-0.03	-0.55	18.78	0	0	0
33	SLU 77	-0.03	-0.54	19.07	0	0	0
33	SLU 78	-0.03	-0.55	19.07	0	0	0
33	SLU 79	-0.04	-0.54	18.95	0	0	0
33	SLU 80	-0.03	-0.55	18.95	0	0	0
33	SLU 81	-0.03	-0.55	19.28	0	0	0
33	SLU 82	-0.03	-0.55	19.28	0	0	0
33	SLU 83	-0.04	-0.55	19.45	0	0	0
33	SLU 84	-0.04	-0.55	19.45	0	0	0
33	SLE RA 1	0.01	-0.41	12.79	0	0	0
33	SLE RA 2	0.01	-0.41	12.79	0	0	0
33	SLE RA 3	0	-0.41	12.98	0	0	0
33	SLE RA 4	0	-0.41	12.98	0	0	0
33	SLE RA 5	0	-0.41	12.9	0	0	0
33	SLE RA 6	0	-0.41	13.1	0	0	0
33	SLE RA 7	0	-0.41	13.1	0	0	0
33	SLE RA 8	0	-0.41	13.02	0	0	0
33	SLE RA 9	0	-0.41	13.02	0	0	0
33	SLE RA 10	-0.01	-0.42	13.84	0	0	0
33	SLE RA 11	-0.02	-0.42	14.04	0	0	0
33	SLE RA 12	-0.02	-0.42	14.04	0	0	0
33	SLE RA 13	-0.02	-0.42	13.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
33	SLE RA 14	-0.02	-0.42	14.15	0	0	0
33	SLE RA 15	-0.02	-0.42	14.15	0	0	0
33	SLE RA 16	-0.02	-0.42	14.07	0	0	0
33	SLE RA 17	-0.02	-0.42	14.08	0	0	0
33	SLE RA 18	-0.02	-0.42	14.29	0	0	0
33	SLE RA 19	-0.02	-0.42	14.29	0	0	0
33	SLE RA 20	-0.02	-0.42	14.41	0	0	0
33	SLE RA 21	-0.02	-0.42	14.41	0	0	0
33	SLE FR 1	0.01	-0.41	12.79	0	0	0
33	SLE FR 2	0.01	-0.41	12.79	0	0	0
33	SLE FR 3	0	-0.41	12.83	0	0	0
33	SLE FR 4	0	-0.41	13.24	0	0	0
33	SLE FR 5	0	-0.41	13.29	0	0	0
33	SLE FR 6	-0.01	-0.41	13.54	0	0	0
33	SLE QP 1	0.01	-0.41	12.79	0	0	0
33	SLE QP 2	0	-0.41	13.24	0	0	0
33	SLD 1	0.8	-0.29	13.35	0	0	0
33	SLD 2	0.82	-0.27	13.36	0	0	0
33	SLD 3	0.76	-0.52	13.32	0	0	0
33	SLD 4	0.78	-0.5	13.32	0	0	0
33	SLD 5	0.29	-0.03	13.33	0	0	0
33	SLD 6	0.31	-0.02	13.33	0	0	0
33	SLD 7	0.17	-0.8	13.21	0	0	0
33	SLD 8	0.18	-0.79	13.21	0	0	0
33	SLD 9	-0.18	-0.04	13.27	0	0	0
33	SLD 10	-0.17	-0.03	13.27	0	0	0
33	SLD 11	-0.31	-0.81	13.15	0	0	0
33	SLD 12	-0.29	-0.8	13.15	0	0	0
33	SLD 13	-0.79	-0.32	13.15	0	0	0
33	SLD 14	-0.76	-0.31	13.16	0	0	0
33	SLD 15	-0.82	-0.55	13.12	0	0	0
33	SLD 16	-0.8	-0.54	13.13	0	0	0
33	SLV 1	1.86	-0.12	13.5	0	0	0
33	SLV 2	1.92	-0.09	13.52	0	0	0
33	SLV 3	1.78	-0.65	13.43	0	0	0
33	SLV 4	1.83	-0.61	13.44	0	0	0
33	SLV 5	0.68	0.46	13.44	0	0	0
33	SLV 6	0.71	0.48	13.45	0	0	0
33	SLV 7	0.39	-1.28	13.17	0	0	0
33	SLV 8	0.43	-1.26	13.18	0	0	0
33	SLV 9	-0.43	0.44	13.3	0	0	0
33	SLV 10	-0.4	0.46	13.31	0	0	0
33	SLV 11	-0.72	-1.31	13.03	0	0	0
33	SLV 12	-0.68	-1.28	13.04	0	0	0
33	SLV 13	-1.84	-0.21	13.04	0	0	0
33	SLV 14	-1.78	-0.18	13.05	0	0	0
33	SLV 15	-1.92	-0.73	12.96	0	0	0
33	SLV 16	-1.86	-0.7	12.97	0	0	0
34	SLU 1	0.01	-0.41	12.7	0	0	0
34	SLU 2	0.01	-0.41	12.7	0	0	0
34	SLU 3	0	-0.41	13	0	0	0
34	SLU 4	0	-0.41	13	0	0	0
34	SLU 5	0	-0.41	12.88	0	0	0
34	SLU 6	-0.01	-0.41	13.17	0	0	0
34	SLU 7	-0.01	-0.41	13.17	0	0	0
34	SLU 8	-0.01	-0.4	13.05	0	0	0
34	SLU 9	-0.01	-0.41	13.05	0	0	0
34	SLU 10	-0.02	-0.43	14.31	0	0	0
34	SLU 11	-0.03	-0.42	14.6	0	0	0
34	SLU 12	-0.03	-0.42	14.6	0	0	0
34	SLU 13	-0.03	-0.43	14.48	0	0	0
34	SLU 14	-0.04	-0.42	14.78	0	0	0
34	SLU 15	-0.04	-0.42	14.78	0	0	0
34	SLU 16	-0.04	-0.42	14.65	0	0	0
34	SLU 17	-0.04	-0.42	14.65	0	0	0
34	SLU 18	-0.03	-0.43	14.99	0	0	0
34	SLU 19	-0.03	-0.43	14.99	0	0	0
34	SLU 20	-0.04	-0.43	15.17	0	0	0
34	SLU 21	-0.04	-0.43	15.17	0	0	0
34	SLU 22	0	-0.39	14.11	0	0	0
34	SLU 23	0.01	-0.4	14.11	0	0	0
34	SLU 24	0	-0.4	14.41	0	0	0
34	SLU 25	0	-0.4	14.41	0	0	0
34	SLU 26	0	-0.4	14.29	0	0	0
34	SLU 27	-0.01	-0.4	14.58	0	0	0
34	SLU 28	-0.01	-0.4	14.58	0	0	0
34	SLU 29	-0.01	-0.39	14.46	0	0	0
34	SLU 30	-0.01	-0.4	14.46	0	0	0
34	SLU 31	-0.02	-0.42	15.72	0	0	0
34	SLU 32	-0.03	-0.41	16.01	0	0	0
34	SLU 33	-0.03	-0.41	16.01	0	0	0
34	SLU 34	-0.03	-0.41	15.89	0	0	0
34	SLU 35	-0.04	-0.41	16.19	0	0	0
34	SLU 36	-0.04	-0.41	16.19	0	0	0
34	SLU 37	-0.04	-0.41	16.07	0	0	0
34	SLU 38	-0.04	-0.41	16.07	0	0	0
34	SLU 39	-0.04	-0.41	16.4	0	0	0
34	SLU 40	-0.04	-0.42	16.4	0	0	0
34	SLU 41	-0.05	-0.41	16.58	0	0	0
34	SLU 42	-0.04	-0.42	16.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLU 43	0.01	-0.53	16.03	0	0	0
34	SLU 44	0.01	-0.54	16.03	0	0	0
34	SLU 45	0	-0.53	16.32	0	0	0
34	SLU 46	0	-0.54	16.32	0	0	0
34	SLU 47	0	-0.54	16.2	0	0	0
34	SLU 48	0	-0.53	16.5	0	0	0
34	SLU 49	0	-0.54	16.5	0	0	0
34	SLU 50	-0.01	-0.53	16.38	0	0	0
34	SLU 51	-0.01	-0.53	16.38	0	0	0
34	SLU 52	-0.02	-0.55	17.63	0	0	0
34	SLU 53	-0.03	-0.55	17.93	0	0	0
34	SLU 54	-0.03	-0.55	17.93	0	0	0
34	SLU 55	-0.03	-0.55	17.81	0	0	0
34	SLU 56	-0.03	-0.55	18.1	0	0	0
34	SLU 57	-0.03	-0.55	18.1	0	0	0
34	SLU 58	-0.03	-0.54	17.98	0	0	0
34	SLU 59	-0.03	-0.55	17.98	0	0	0
34	SLU 60	-0.03	-0.55	18.32	0	0	0
34	SLU 61	-0.03	-0.55	18.32	0	0	0
34	SLU 62	-0.04	-0.55	18.49	0	0	0
34	SLU 63	-0.04	-0.55	18.49	0	0	0
34	SLU 64	0.01	-0.52	17.44	0	0	0
34	SLU 65	0.01	-0.53	17.44	0	0	0
34	SLU 66	0	-0.52	17.73	0	0	0
34	SLU 67	0	-0.53	17.73	0	0	0
34	SLU 68	0	-0.53	17.61	0	0	0
34	SLU 69	-0.01	-0.52	17.91	0	0	0
34	SLU 70	-0.01	-0.53	17.91	0	0	0
34	SLU 71	-0.01	-0.52	17.79	0	0	0
34	SLU 72	-0.01	-0.52	17.79	0	0	0
34	SLU 73	-0.02	-0.54	19.04	0	0	0
34	SLU 74	-0.03	-0.54	19.34	0	0	0
34	SLU 75	-0.03	-0.54	19.34	0	0	0
34	SLU 76	-0.03	-0.54	19.22	0	0	0
34	SLU 77	-0.04	-0.54	19.51	0	0	0
34	SLU 78	-0.04	-0.54	19.51	0	0	0
34	SLU 79	-0.04	-0.53	19.39	0	0	0
34	SLU 80	-0.04	-0.54	19.39	0	0	0
34	SLU 81	-0.03	-0.54	19.73	0	0	0
34	SLU 82	-0.03	-0.54	19.73	0	0	0
34	SLU 83	-0.04	-0.54	19.91	0	0	0
34	SLU 84	-0.04	-0.54	19.91	0	0	0
34	SLE RA 1	0.01	-0.4	13.1	0	0	0
34	SLE RA 2	0.01	-0.41	13.1	0	0	0
34	SLE RA 3	0	-0.4	13.3	0	0	0
34	SLE RA 4	0	-0.41	13.3	0	0	0
34	SLE RA 5	0	-0.41	13.22	0	0	0
34	SLE RA 6	0	-0.4	13.42	0	0	0
34	SLE RA 7	0	-0.41	13.42	0	0	0
34	SLE RA 8	0	-0.4	13.34	0	0	0
34	SLE RA 9	0	-0.4	13.34	0	0	0
34	SLE RA 10	-0.01	-0.42	14.17	0	0	0
34	SLE RA 11	-0.02	-0.41	14.37	0	0	0
34	SLE RA 12	-0.02	-0.42	14.37	0	0	0
34	SLE RA 13	-0.02	-0.42	14.29	0	0	0
34	SLE RA 14	-0.02	-0.41	14.49	0	0	0
34	SLE RA 15	-0.02	-0.42	14.49	0	0	0
34	SLE RA 16	-0.02	-0.41	14.41	0	0	0
34	SLE RA 17	-0.02	-0.41	14.41	0	0	0
34	SLE RA 18	-0.02	-0.42	14.63	0	0	0
34	SLE RA 19	-0.02	-0.42	14.63	0	0	0
34	SLE RA 20	-0.03	-0.42	14.75	0	0	0
34	SLE RA 21	-0.03	-0.42	14.75	0	0	0
34	SLE FR 1	0.01	-0.4	13.1	0	0	0
34	SLE FR 2	0.01	-0.4	13.1	0	0	0
34	SLE FR 3	0	-0.4	13.15	0	0	0
34	SLE FR 4	0	-0.41	13.56	0	0	0
34	SLE FR 5	0	-0.41	13.61	0	0	0
34	SLE FR 6	-0.01	-0.41	13.87	0	0	0
34	SLE QP 1	0.01	-0.4	13.1	0	0	0
34	SLE QP 2	0	-0.41	13.56	0	0	0
34	SLD 1	0.82	-0.28	13.53	0	0	0
34	SLD 2	0.85	-0.26	13.53	0	0	0
34	SLD 3	0.78	-0.52	13.5	0	0	0
34	SLD 4	0.81	-0.49	13.5	0	0	0
34	SLD 5	0.3	-0.02	13.59	0	0	0
34	SLD 6	0.32	0	13.59	0	0	0
34	SLD 7	0.17	-0.8	13.5	0	0	0
34	SLD 8	0.19	-0.78	13.51	0	0	0
34	SLD 9	-0.19	-0.03	13.62	0	0	0
34	SLD 10	-0.17	-0.01	13.62	0	0	0
34	SLD 11	-0.32	-0.81	13.53	0	0	0
34	SLD 12	-0.3	-0.8	13.53	0	0	0
34	SLD 13	-0.81	-0.32	13.62	0	0	0
34	SLD 14	-0.79	-0.3	13.62	0	0	0
34	SLD 15	-0.85	-0.55	13.59	0	0	0
34	SLD 16	-0.82	-0.53	13.6	0	0	0
34	SLV 1	1.92	-0.12	13.48	0	0	0
34	SLV 2	1.98	-0.07	13.49	0	0	0
34	SLV 3	1.83	-0.65	13.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLV 4	1.89	-0.6	13.43	0	0	0
34	SLV 5	0.7	0.48	13.63	0	0	0
34	SLV 6	0.74	0.51	13.63	0	0	0
34	SLV 7	0.4	-1.29	13.43	0	0	0
34	SLV 8	0.44	-1.26	13.43	0	0	0
34	SLV 9	-0.45	0.45	13.69	0	0	0
34	SLV 10	-0.41	0.48	13.7	0	0	0
34	SLV 11	-0.74	-1.32	13.49	0	0	0
34	SLV 12	-0.7	-1.29	13.5	0	0	0
34	SLV 13	-1.89	-0.21	13.7	0	0	0
34	SLV 14	-1.84	-0.16	13.7	0	0	0
34	SLV 15	-1.98	-0.74	13.64	0	0	0
34	SLV 16	-1.92	-0.69	13.64	0	0	0
35	SLU 1	0	-0.39	12.77	0	0	0
35	SLU 2	0.01	-0.4	12.77	0	0	0
35	SLU 3	0	-0.39	13.07	0	0	0
35	SLU 4	0	-0.4	13.07	0	0	0
35	SLU 5	0	-0.4	12.94	0	0	0
35	SLU 6	-0.01	-0.39	13.24	0	0	0
35	SLU 7	-0.01	-0.4	13.24	0	0	0
35	SLU 8	-0.01	-0.39	13.11	0	0	0
35	SLU 9	-0.01	-0.39	13.11	0	0	0
35	SLU 10	-0.02	-0.41	14.37	0	0	0
35	SLU 11	-0.03	-0.41	14.66	0	0	0
35	SLU 12	-0.03	-0.41	14.66	0	0	0
35	SLU 13	-0.03	-0.41	14.54	0	0	0
35	SLU 14	-0.04	-0.4	14.83	0	0	0
35	SLU 15	-0.04	-0.41	14.83	0	0	0
35	SLU 16	-0.04	-0.4	14.71	0	0	0
35	SLU 17	-0.04	-0.41	14.71	0	0	0
35	SLU 18	-0.04	-0.41	15.05	0	0	0
35	SLU 19	-0.04	-0.41	15.05	0	0	0
35	SLU 20	-0.05	-0.41	15.22	0	0	0
35	SLU 21	-0.05	-0.41	15.22	0	0	0
35	SLU 22	0	-0.38	14.19	0	0	0
35	SLU 23	0	-0.39	14.19	0	0	0
35	SLU 24	0	-0.38	14.48	0	0	0
35	SLU 25	0	-0.38	14.48	0	0	0
35	SLU 26	-0.01	-0.39	14.36	0	0	0
35	SLU 27	-0.01	-0.38	14.66	0	0	0
35	SLU 28	-0.01	-0.38	14.66	0	0	0
35	SLU 29	-0.01	-0.38	14.53	0	0	0
35	SLU 30	-0.01	-0.38	14.53	0	0	0
35	SLU 31	-0.03	-0.4	15.79	0	0	0
35	SLU 32	-0.03	-0.39	16.08	0	0	0
35	SLU 33	-0.03	-0.4	16.08	0	0	0
35	SLU 34	-0.04	-0.4	15.96	0	0	0
35	SLU 35	-0.04	-0.39	16.25	0	0	0
35	SLU 36	-0.04	-0.4	16.25	0	0	0
35	SLU 37	-0.04	-0.39	16.13	0	0	0
35	SLU 38	-0.04	-0.39	16.13	0	0	0
35	SLU 39	-0.04	-0.4	16.47	0	0	0
35	SLU 40	-0.04	-0.4	16.47	0	0	0
35	SLU 41	-0.05	-0.4	16.64	0	0	0
35	SLU 42	-0.05	-0.4	16.64	0	0	0
35	SLU 43	0.01	-0.51	16.12	0	0	0
35	SLU 44	0.01	-0.52	16.12	0	0	0
35	SLU 45	0	-0.52	16.41	0	0	0
35	SLU 46	0	-0.52	16.41	0	0	0
35	SLU 47	0	-0.52	16.29	0	0	0
35	SLU 48	-0.01	-0.51	16.58	0	0	0
35	SLU 49	-0.01	-0.52	16.58	0	0	0
35	SLU 50	-0.01	-0.51	16.46	0	0	0
35	SLU 51	-0.01	-0.52	16.46	0	0	0
35	SLU 52	-0.02	-0.53	17.72	0	0	0
35	SLU 53	-0.03	-0.53	18.01	0	0	0
35	SLU 54	-0.03	-0.53	18.01	0	0	0
35	SLU 55	-0.03	-0.53	17.89	0	0	0
35	SLU 56	-0.04	-0.53	18.18	0	0	0
35	SLU 57	-0.04	-0.53	18.18	0	0	0
35	SLU 58	-0.04	-0.52	18.06	0	0	0
35	SLU 59	-0.04	-0.53	18.06	0	0	0
35	SLU 60	-0.04	-0.53	18.4	0	0	0
35	SLU 61	-0.03	-0.53	18.4	0	0	0
35	SLU 62	-0.04	-0.53	18.57	0	0	0
35	SLU 63	-0.04	-0.53	18.57	0	0	0
35	SLU 64	0	-0.5	17.54	0	0	0
35	SLU 65	0.01	-0.51	17.54	0	0	0
35	SLU 66	0	-0.5	17.83	0	0	0
35	SLU 67	0	-0.51	17.83	0	0	0
35	SLU 68	0	-0.51	17.71	0	0	0
35	SLU 69	-0.01	-0.5	18	0	0	0
35	SLU 70	-0.01	-0.51	18	0	0	0
35	SLU 71	-0.01	-0.5	17.88	0	0	0
35	SLU 72	-0.01	-0.5	17.88	0	0	0
35	SLU 73	-0.02	-0.52	19.13	0	0	0
35	SLU 74	-0.03	-0.51	19.43	0	0	0
35	SLU 75	-0.03	-0.52	19.43	0	0	0
35	SLU 76	-0.03	-0.52	19.3	0	0	0
35	SLU 77	-0.04	-0.51	19.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
35	SLU 78	-0.04	-0.52	19.6	0	0	0
35	SLU 79	-0.04	-0.51	19.47	0	0	0
35	SLU 80	-0.04	-0.52	19.47	0	0	0
35	SLU 81	-0.04	-0.52	19.82	0	0	0
35	SLU 82	-0.04	-0.52	19.82	0	0	0
35	SLU 83	-0.05	-0.52	19.99	0	0	0
35	SLU 84	-0.05	-0.52	19.99	0	0	0
35	SLE RA 1	0	-0.39	13.18	0	0	0
35	SLE RA 2	0	-0.39	13.18	0	0	0
35	SLE RA 3	0	-0.39	13.37	0	0	0
35	SLE RA 4	0	-0.39	13.37	0	0	0
35	SLE RA 5	0	-0.39	13.29	0	0	0
35	SLE RA 6	-0.01	-0.39	13.49	0	0	0
35	SLE RA 7	-0.01	-0.39	13.49	0	0	0
35	SLE RA 8	-0.01	-0.39	13.41	0	0	0
35	SLE RA 9	-0.01	-0.39	13.41	0	0	0
35	SLE RA 10	-0.02	-0.4	14.24	0	0	0
35	SLE RA 11	-0.02	-0.4	14.44	0	0	0
35	SLE RA 12	-0.02	-0.4	14.44	0	0	0
35	SLE RA 13	-0.02	-0.4	14.36	0	0	0
35	SLE RA 14	-0.03	-0.4	14.55	0	0	0
35	SLE RA 15	-0.03	-0.4	14.55	0	0	0
35	SLE RA 16	-0.03	-0.4	14.47	0	0	0
35	SLE RA 17	-0.03	-0.4	14.47	0	0	0
35	SLE RA 18	-0.02	-0.4	14.7	0	0	0
35	SLE RA 19	-0.02	-0.4	14.7	0	0	0
35	SLE RA 20	-0.03	-0.4	14.81	0	0	0
35	SLE RA 21	-0.03	-0.4	14.81	0	0	0
35	SLE FR 1	0	-0.39	13.18	0	0	0
35	SLE FR 2	0	-0.39	13.18	0	0	0
35	SLE FR 3	0	-0.39	13.22	0	0	0
35	SLE FR 4	0	-0.39	13.63	0	0	0
35	SLE FR 5	-0.01	-0.39	13.68	0	0	0
35	SLE FR 6	-0.01	-0.39	13.94	0	0	0
35	SLE QP 1	0	-0.39	13.18	0	0	0
35	SLE QP 2	0	-0.39	13.63	0	0	0
35	SLD 1	0.83	-0.31	13.53	0	0	0
35	SLD 2	0.85	-0.28	13.53	0	0	0
35	SLD 3	0.79	-0.54	13.51	0	0	0
35	SLD 4	0.82	-0.51	13.5	0	0	0
35	SLD 5	0.3	-0.02	13.64	0	0	0
35	SLD 6	0.32	0	13.64	0	0	0
35	SLD 7	0.17	-0.8	13.56	0	0	0
35	SLD 8	0.19	-0.78	13.56	0	0	0
35	SLD 9	-0.2	-0.01	13.71	0	0	0
35	SLD 10	-0.18	0.01	13.71	0	0	0
35	SLD 11	-0.33	-0.79	13.63	0	0	0
35	SLD 12	-0.31	-0.77	13.63	0	0	0
35	SLD 13	-0.82	-0.27	13.77	0	0	0
35	SLD 14	-0.8	-0.24	13.76	0	0	0
35	SLD 15	-0.86	-0.5	13.74	0	0	0
35	SLD 16	-0.84	-0.48	13.74	0	0	0
35	SLV 1	1.95	-0.21	13.39	0	0	0
35	SLV 2	2	-0.14	13.38	0	0	0
35	SLV 3	1.86	-0.74	13.33	0	0	0
35	SLV 4	1.91	-0.67	13.33	0	0	0
35	SLV 5	0.71	0.46	13.65	0	0	0
35	SLV 6	0.74	0.5	13.64	0	0	0
35	SLV 7	0.41	-1.31	13.46	0	0	0
35	SLV 8	0.44	-1.27	13.45	0	0	0
35	SLV 9	-0.45	0.48	13.81	0	0	0
35	SLV 10	-0.42	0.53	13.81	0	0	0
35	SLV 11	-0.75	-1.28	13.63	0	0	0
35	SLV 12	-0.72	-1.24	13.62	0	0	0
35	SLV 13	-1.92	-0.12	13.94	0	0	0
35	SLV 14	-1.87	-0.05	13.94	0	0	0
35	SLV 15	-2.01	-0.65	13.89	0	0	0
35	SLV 16	-1.96	-0.58	13.88	0	0	0
36	SLU 1	0	-0.24	8.28	0	0	0
36	SLU 2	0	-0.24	8.28	0	0	0
36	SLU 3	-0.01	-0.24	8.47	0	0	0
36	SLU 4	-0.01	-0.24	8.47	0	0	0
36	SLU 5	-0.01	-0.24	8.39	0	0	0
36	SLU 6	-0.01	-0.24	8.58	0	0	0
36	SLU 7	-0.01	-0.24	8.58	0	0	0
36	SLU 8	-0.01	-0.24	8.5	0	0	0
36	SLU 9	-0.01	-0.24	8.5	0	0	0
36	SLU 10	-0.02	-0.25	9.3	0	0	0
36	SLU 11	-0.03	-0.24	9.49	0	0	0
36	SLU 12	-0.03	-0.25	9.49	0	0	0
36	SLU 13	-0.03	-0.25	9.41	0	0	0
36	SLU 14	-0.03	-0.24	9.59	0	0	0
36	SLU 15	-0.03	-0.25	9.59	0	0	0
36	SLU 16	-0.03	-0.24	9.51	0	0	0
36	SLU 17	-0.03	-0.24	9.51	0	0	0
36	SLU 18	-0.03	-0.25	9.74	0	0	0
36	SLU 19	-0.03	-0.25	9.74	0	0	0
36	SLU 20	-0.04	-0.25	9.84	0	0	0
36	SLU 21	-0.04	-0.25	9.84	0	0	0
36	SLU 22	0	-0.23	9.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
36	SLU 23	0	-0.23	9.2	0	0	0
36	SLU 24	-0.01	-0.23	9.39	0	0	0
36	SLU 25	-0.01	-0.23	9.39	0	0	0
36	SLU 26	-0.01	-0.23	9.31	0	0	0
36	SLU 27	-0.01	-0.23	9.5	0	0	0
36	SLU 28	-0.01	-0.23	9.5	0	0	0
36	SLU 29	-0.02	-0.23	9.42	0	0	0
36	SLU 30	-0.01	-0.23	9.42	0	0	0
36	SLU 31	-0.02	-0.24	10.22	0	0	0
36	SLU 32	-0.03	-0.23	10.41	0	0	0
36	SLU 33	-0.03	-0.24	10.41	0	0	0
36	SLU 34	-0.03	-0.24	10.33	0	0	0
36	SLU 35	-0.03	-0.23	10.52	0	0	0
36	SLU 36	-0.03	-0.24	10.52	0	0	0
36	SLU 37	-0.04	-0.23	10.44	0	0	0
36	SLU 38	-0.04	-0.23	10.44	0	0	0
36	SLU 39	-0.03	-0.24	10.66	0	0	0
36	SLU 40	-0.03	-0.24	10.66	0	0	0
36	SLU 41	-0.04	-0.24	10.77	0	0	0
36	SLU 42	-0.04	-0.24	10.77	0	0	0
36	SLU 43	0	-0.31	10.45	0	0	0
36	SLU 44	0	-0.32	10.45	0	0	0
36	SLU 45	-0.01	-0.31	10.64	0	0	0
36	SLU 46	-0.01	-0.32	10.64	0	0	0
36	SLU 47	-0.01	-0.32	10.56	0	0	0
36	SLU 48	-0.01	-0.31	10.74	0	0	0
36	SLU 49	-0.01	-0.32	10.74	0	0	0
36	SLU 50	-0.01	-0.31	10.66	0	0	0
36	SLU 51	-0.01	-0.31	10.66	0	0	0
36	SLU 52	-0.02	-0.32	11.47	0	0	0
36	SLU 53	-0.03	-0.32	11.66	0	0	0
36	SLU 54	-0.03	-0.32	11.66	0	0	0
36	SLU 55	-0.03	-0.32	11.58	0	0	0
36	SLU 56	-0.03	-0.32	11.76	0	0	0
36	SLU 57	-0.03	-0.32	11.76	0	0	0
36	SLU 58	-0.03	-0.32	11.68	0	0	0
36	SLU 59	-0.03	-0.32	11.68	0	0	0
36	SLU 60	-0.03	-0.32	11.91	0	0	0
36	SLU 61	-0.03	-0.32	11.91	0	0	0
36	SLU 62	-0.04	-0.32	12.01	0	0	0
36	SLU 63	-0.04	-0.32	12.01	0	0	0
36	SLU 64	0	-0.3	11.37	0	0	0
36	SLU 65	0	-0.31	11.37	0	0	0
36	SLU 66	-0.01	-0.3	11.56	0	0	0
36	SLU 67	-0.01	-0.31	11.56	0	0	0
36	SLU 68	-0.01	-0.31	11.48	0	0	0
36	SLU 69	-0.01	-0.3	11.67	0	0	0
36	SLU 70	-0.01	-0.31	11.67	0	0	0
36	SLU 71	-0.02	-0.3	11.59	0	0	0
36	SLU 72	-0.01	-0.3	11.59	0	0	0
36	SLU 73	-0.02	-0.31	12.39	0	0	0
36	SLU 74	-0.03	-0.31	12.58	0	0	0
36	SLU 75	-0.03	-0.31	12.58	0	0	0
36	SLU 76	-0.03	-0.31	12.5	0	0	0
36	SLU 77	-0.03	-0.31	12.68	0	0	0
36	SLU 78	-0.03	-0.31	12.68	0	0	0
36	SLU 79	-0.04	-0.31	12.6	0	0	0
36	SLU 80	-0.04	-0.31	12.6	0	0	0
36	SLU 81	-0.03	-0.31	12.83	0	0	0
36	SLU 82	-0.03	-0.31	12.83	0	0	0
36	SLU 83	-0.04	-0.31	12.93	0	0	0
36	SLU 84	-0.04	-0.31	12.93	0	0	0
36	SLE RA 1	0	-0.24	8.55	0	0	0
36	SLE RA 2	0	-0.24	8.55	0	0	0
36	SLE RA 3	-0.01	-0.24	8.67	0	0	0
36	SLE RA 4	-0.01	-0.24	8.67	0	0	0
36	SLE RA 5	-0.01	-0.24	8.62	0	0	0
36	SLE RA 6	-0.01	-0.24	8.74	0	0	0
36	SLE RA 7	-0.01	-0.24	8.74	0	0	0
36	SLE RA 8	-0.01	-0.23	8.69	0	0	0
36	SLE RA 9	-0.01	-0.24	8.69	0	0	0
36	SLE RA 10	-0.02	-0.24	9.23	0	0	0
36	SLE RA 11	-0.02	-0.24	9.35	0	0	0
36	SLE RA 12	-0.02	-0.24	9.35	0	0	0
36	SLE RA 13	-0.02	-0.24	9.3	0	0	0
36	SLE RA 14	-0.02	-0.24	9.42	0	0	0
36	SLE RA 15	-0.02	-0.24	9.42	0	0	0
36	SLE RA 16	-0.02	-0.24	9.37	0	0	0
36	SLE RA 17	-0.02	-0.24	9.37	0	0	0
36	SLE RA 18	-0.02	-0.24	9.52	0	0	0
36	SLE RA 19	-0.02	-0.24	9.52	0	0	0
36	SLE RA 20	-0.03	-0.24	9.59	0	0	0
36	SLE RA 21	-0.03	-0.24	9.59	0	0	0
36	SLE FR 1	0	-0.24	8.55	0	0	0
36	SLE FR 2	0	-0.24	8.55	0	0	0
36	SLE FR 3	0	-0.24	8.57	0	0	0
36	SLE FR 4	-0.01	-0.24	8.84	0	0	0
36	SLE FR 5	-0.01	-0.24	8.87	0	0	0
36	SLE FR 6	-0.01	-0.24	9.03	0	0	0
36	SLE QP 1	0	-0.24	8.55	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
36	SLE QP 2	-0.01	-0.24	8.84	0	0	0
36	SLD 1	0.54	-0.19	8.67	0	0	0
36	SLD 2	0.56	-0.16	8.66	0	0	0
36	SLD 3	0.52	-0.34	8.64	0	0	0
36	SLD 4	0.53	-0.31	8.63	0	0	0
36	SLD 5	0.2	0	8.83	0	0	0
36	SLD 6	0.2	0.02	8.82	0	0	0
36	SLD 7	0.11	-0.5	8.74	0	0	0
36	SLD 8	0.12	-0.48	8.74	0	0	0
36	SLD 9	-0.13	0.01	8.94	0	0	0
36	SLD 10	-0.12	0.03	8.93	0	0	0
36	SLD 11	-0.22	-0.49	8.85	0	0	0
36	SLD 12	-0.21	-0.47	8.85	0	0	0
36	SLD 13	-0.55	-0.16	9.04	0	0	0
36	SLD 14	-0.53	-0.13	9.03	0	0	0
36	SLD 15	-0.58	-0.31	9.02	0	0	0
36	SLD 16	-0.56	-0.28	9.01	0	0	0
36	SLV 1	1.28	-0.13	8.44	0	0	0
36	SLV 2	1.31	-0.07	8.42	0	0	0
36	SLV 3	1.22	-0.47	8.38	0	0	0
36	SLV 4	1.25	-0.41	8.36	0	0	0
36	SLV 5	0.47	0.3	8.81	0	0	0
36	SLV 6	0.49	0.34	8.8	0	0	0
36	SLV 7	0.26	-0.84	8.61	0	0	0
36	SLV 8	0.28	-0.79	8.6	0	0	0
36	SLV 9	-0.3	0.32	9.07	0	0	0
36	SLV 10	-0.28	0.36	9.06	0	0	0
36	SLV 11	-0.5	-0.82	8.87	0	0	0
36	SLV 12	-0.48	-0.77	8.86	0	0	0
36	SLV 13	-1.27	-0.07	9.32	0	0	0
36	SLV 14	-1.24	0	9.3	0	0	0
36	SLV 15	-1.33	-0.41	9.26	0	0	0
36	SLV 16	-1.3	-0.34	9.24	0	0	0
37	SLU 1	0	-0.13	4.77	0	0	0
37	SLU 2	0	-0.13	4.77	0	0	0
37	SLU 3	0	-0.13	4.87	0	0	0
37	SLU 4	0	-0.13	4.87	0	0	0
37	SLU 5	0	-0.13	4.83	0	0	0
37	SLU 6	-0.01	-0.13	4.93	0	0	0
37	SLU 7	-0.01	-0.13	4.93	0	0	0
37	SLU 8	-0.01	-0.13	4.89	0	0	0
37	SLU 9	-0.01	-0.13	4.89	0	0	0
37	SLU 10	-0.01	-0.14	5.35	0	0	0
37	SLU 11	-0.02	-0.13	5.45	0	0	0
37	SLU 12	-0.02	-0.14	5.45	0	0	0
37	SLU 13	-0.02	-0.14	5.41	0	0	0
37	SLU 14	-0.02	-0.13	5.51	0	0	0
37	SLU 15	-0.02	-0.13	5.51	0	0	0
37	SLU 16	-0.02	-0.13	5.47	0	0	0
37	SLU 17	-0.02	-0.13	5.47	0	0	0
37	SLU 18	-0.02	-0.13	5.6	0	0	0
37	SLU 19	-0.02	-0.14	5.6	0	0	0
37	SLU 20	-0.02	-0.13	5.66	0	0	0
37	SLU 21	-0.02	-0.14	5.66	0	0	0
37	SLU 22	0	-0.13	5.3	0	0	0
37	SLU 23	0	-0.13	5.3	0	0	0
37	SLU 24	-0.01	-0.13	5.4	0	0	0
37	SLU 25	-0.01	-0.13	5.4	0	0	0
37	SLU 26	-0.01	-0.13	5.36	0	0	0
37	SLU 27	-0.01	-0.13	5.46	0	0	0
37	SLU 28	-0.01	-0.13	5.46	0	0	0
37	SLU 29	-0.01	-0.12	5.42	0	0	0
37	SLU 30	-0.01	-0.13	5.42	0	0	0
37	SLU 31	-0.01	-0.13	5.88	0	0	0
37	SLU 32	-0.02	-0.13	5.98	0	0	0
37	SLU 33	-0.02	-0.13	5.98	0	0	0
37	SLU 34	-0.02	-0.13	5.94	0	0	0
37	SLU 35	-0.02	-0.13	6.04	0	0	0
37	SLU 36	-0.02	-0.13	6.04	0	0	0
37	SLU 37	-0.02	-0.13	6	0	0	0
37	SLU 38	-0.02	-0.13	6	0	0	0
37	SLU 39	-0.02	-0.13	6.13	0	0	0
37	SLU 40	-0.02	-0.13	6.13	0	0	0
37	SLU 41	-0.02	-0.13	6.19	0	0	0
37	SLU 42	-0.02	-0.13	6.19	0	0	0
37	SLU 43	0	-0.17	6.02	0	0	0
37	SLU 44	0	-0.17	6.02	0	0	0
37	SLU 45	0	-0.17	6.12	0	0	0
37	SLU 46	0	-0.17	6.12	0	0	0
37	SLU 47	0	-0.17	6.08	0	0	0
37	SLU 48	-0.01	-0.17	6.18	0	0	0
37	SLU 49	-0.01	-0.17	6.18	0	0	0
37	SLU 50	-0.01	-0.17	6.14	0	0	0
37	SLU 51	-0.01	-0.17	6.14	0	0	0
37	SLU 52	-0.01	-0.18	6.6	0	0	0
37	SLU 53	-0.02	-0.18	6.7	0	0	0
37	SLU 54	-0.02	-0.18	6.7	0	0	0
37	SLU 55	-0.02	-0.18	6.66	0	0	0
37	SLU 56	-0.02	-0.18	6.76	0	0	0
37	SLU 57	-0.02	-0.18	6.76	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLU 58	-0.02	-0.17	6.72	0	0	0
37	SLU 59	-0.02	-0.18	6.72	0	0	0
37	SLU 60	-0.02	-0.18	6.85	0	0	0
37	SLU 61	-0.02	-0.18	6.85	0	0	0
37	SLU 62	-0.02	-0.18	6.91	0	0	0
37	SLU 63	-0.02	-0.18	6.91	0	0	0
37	SLU 64	0	-0.17	6.55	0	0	0
37	SLU 65	0	-0.17	6.55	0	0	0
37	SLU 66	-0.01	-0.17	6.65	0	0	0
37	SLU 67	0	-0.17	6.65	0	0	0
37	SLU 68	-0.01	-0.17	6.61	0	0	0
37	SLU 69	-0.01	-0.17	6.71	0	0	0
37	SLU 70	-0.01	-0.17	6.71	0	0	0
37	SLU 71	-0.01	-0.17	6.67	0	0	0
37	SLU 72	-0.01	-0.17	6.67	0	0	0
37	SLU 73	-0.01	-0.17	7.13	0	0	0
37	SLU 74	-0.02	-0.17	7.23	0	0	0
37	SLU 75	-0.02	-0.17	7.23	0	0	0
37	SLU 76	-0.02	-0.17	7.19	0	0	0
37	SLU 77	-0.02	-0.17	7.29	0	0	0
37	SLU 78	-0.02	-0.17	7.29	0	0	0
37	SLU 79	-0.02	-0.17	7.25	0	0	0
37	SLU 80	-0.02	-0.17	7.25	0	0	0
37	SLU 81	-0.02	-0.17	7.38	0	0	0
37	SLU 82	-0.02	-0.17	7.38	0	0	0
37	SLU 83	-0.02	-0.17	7.44	0	0	0
37	SLU 84	-0.02	-0.17	7.43	0	0	0
37	SLE RA 1	0	-0.13	4.92	0	0	0
37	SLE RA 2	0	-0.13	4.92	0	0	0
37	SLE RA 3	0	-0.13	4.99	0	0	0
37	SLE RA 4	0	-0.13	4.99	0	0	0
37	SLE RA 5	0	-0.13	4.96	0	0	0
37	SLE RA 6	-0.01	-0.13	5.03	0	0	0
37	SLE RA 7	-0.01	-0.13	5.03	0	0	0
37	SLE RA 8	-0.01	-0.13	5	0	0	0
37	SLE RA 9	-0.01	-0.13	5	0	0	0
37	SLE RA 10	-0.01	-0.13	5.31	0	0	0
37	SLE RA 11	-0.01	-0.13	5.38	0	0	0
37	SLE RA 12	-0.01	-0.13	5.38	0	0	0
37	SLE RA 13	-0.01	-0.13	5.35	0	0	0
37	SLE RA 14	-0.01	-0.13	5.42	0	0	0
37	SLE RA 15	-0.01	-0.13	5.42	0	0	0
37	SLE RA 16	-0.01	-0.13	5.39	0	0	0
37	SLE RA 17	-0.01	-0.13	5.39	0	0	0
37	SLE RA 18	-0.01	-0.13	5.47	0	0	0
37	SLE RA 19	-0.01	-0.13	5.47	0	0	0
37	SLE RA 20	-0.01	-0.13	5.51	0	0	0
37	SLE RA 21	-0.01	-0.13	5.51	0	0	0
37	SLE FR 1	0	-0.13	4.92	0	0	0
37	SLE FR 2	0	-0.13	4.92	0	0	0
37	SLE FR 3	0	-0.13	4.94	0	0	0
37	SLE FR 4	0	-0.13	5.09	0	0	0
37	SLE FR 5	-0.01	-0.13	5.1	0	0	0
37	SLE FR 6	-0.01	-0.13	5.2	0	0	0
37	SLE QP 1	0	-0.13	4.92	0	0	0
37	SLE QP 2	-0.01	-0.13	5.09	0	0	0
37	SLD 1	0.31	-0.11	4.95	0	0	0
37	SLD 2	0.32	-0.09	4.95	0	0	0
37	SLD 3	0.3	-0.19	4.93	0	0	0
37	SLD 4	0.31	-0.17	4.93	0	0	0
37	SLD 5	0.11	0	5.08	0	0	0
37	SLD 6	0.12	0.02	5.07	0	0	0
37	SLD 7	0.06	-0.28	5.01	0	0	0
37	SLD 8	0.07	-0.27	5.01	0	0	0
37	SLD 9	-0.08	0.01	5.16	0	0	0
37	SLD 10	-0.07	0.02	5.16	0	0	0
37	SLD 11	-0.13	-0.28	5.1	0	0	0
37	SLD 12	-0.12	-0.26	5.1	0	0	0
37	SLD 13	-0.32	-0.09	5.24	0	0	0
37	SLD 14	-0.31	-0.07	5.24	0	0	0
37	SLD 15	-0.33	-0.17	5.22	0	0	0
37	SLD 16	-0.32	-0.15	5.22	0	0	0
37	SLV 1	0.74	-0.08	4.78	0	0	0
37	SLV 2	0.76	-0.03	4.77	0	0	0
37	SLV 3	0.71	-0.27	4.73	0	0	0
37	SLV 4	0.73	-0.23	4.72	0	0	0
37	SLV 5	0.27	0.17	5.06	0	0	0
37	SLV 6	0.28	0.2	5.06	0	0	0
37	SLV 7	0.15	-0.47	4.91	0	0	0
37	SLV 8	0.16	-0.45	4.91	0	0	0
37	SLV 9	-0.17	0.18	5.27	0	0	0
37	SLV 10	-0.16	0.21	5.26	0	0	0
37	SLV 11	-0.29	-0.46	5.12	0	0	0
37	SLV 12	-0.28	-0.43	5.11	0	0	0
37	SLV 13	-0.74	-0.03	5.45	0	0	0
37	SLV 14	-0.72	0.01	5.44	0	0	0
37	SLV 15	-0.77	-0.23	5.41	0	0	0
37	SLV 16	-0.75	-0.18	5.39	0	0	0
38	SLU 1	0	-0.2	6.73	0	0	0
38	SLU 2	0	-0.2	6.73	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
38	SLU 3	-0.01	-0.2	6.89	0	0	0
38	SLU 4	-0.01	-0.2	6.89	0	0	0
38	SLU 5	-0.01	-0.2	6.82	0	0	0
38	SLU 6	-0.01	-0.2	6.97	0	0	0
38	SLU 7	-0.01	-0.2	6.97	0	0	0
38	SLU 8	-0.01	-0.2	6.91	0	0	0
38	SLU 9	-0.01	-0.2	6.91	0	0	0
38	SLU 10	-0.02	-0.21	7.57	0	0	0
38	SLU 11	-0.02	-0.21	7.72	0	0	0
38	SLU 12	-0.02	-0.21	7.72	0	0	0
38	SLU 13	-0.02	-0.21	7.66	0	0	0
38	SLU 14	-0.03	-0.2	7.81	0	0	0
38	SLU 15	-0.03	-0.21	7.81	0	0	0
38	SLU 16	-0.03	-0.2	7.74	0	0	0
38	SLU 17	-0.03	-0.21	7.74	0	0	0
38	SLU 18	-0.03	-0.21	7.92	0	0	0
38	SLU 19	-0.03	-0.21	7.92	0	0	0
38	SLU 20	-0.03	-0.21	8.01	0	0	0
38	SLU 21	-0.03	-0.21	8.01	0	0	0
38	SLU 22	0	-0.19	7.48	0	0	0
38	SLU 23	0	-0.2	7.48	0	0	0
38	SLU 24	-0.01	-0.19	7.64	0	0	0
38	SLU 25	-0.01	-0.19	7.64	0	0	0
38	SLU 26	-0.01	-0.19	7.57	0	0	0
38	SLU 27	-0.01	-0.19	7.72	0	0	0
38	SLU 28	-0.01	-0.19	7.72	0	0	0
38	SLU 29	-0.01	-0.19	7.66	0	0	0
38	SLU 30	-0.01	-0.19	7.66	0	0	0
38	SLU 31	-0.02	-0.2	8.32	0	0	0
38	SLU 32	-0.02	-0.2	8.47	0	0	0
38	SLU 33	-0.02	-0.2	8.47	0	0	0
38	SLU 34	-0.02	-0.2	8.41	0	0	0
38	SLU 35	-0.03	-0.2	8.56	0	0	0
38	SLU 36	-0.03	-0.2	8.56	0	0	0
38	SLU 37	-0.03	-0.2	8.49	0	0	0
38	SLU 38	-0.03	-0.2	8.49	0	0	0
38	SLU 39	-0.03	-0.2	8.67	0	0	0
38	SLU 40	-0.03	-0.2	8.68	0	0	0
38	SLU 41	-0.03	-0.2	8.76	0	0	0
38	SLU 42	-0.03	-0.2	8.76	0	0	0
38	SLU 43	0	-0.26	8.5	0	0	0
38	SLU 44	0	-0.27	8.5	0	0	0
38	SLU 45	-0.01	-0.26	8.65	0	0	0
38	SLU 46	-0.01	-0.26	8.65	0	0	0
38	SLU 47	-0.01	-0.26	8.58	0	0	0
38	SLU 48	-0.01	-0.26	8.74	0	0	0
38	SLU 49	-0.01	-0.26	8.74	0	0	0
38	SLU 50	-0.01	-0.26	8.67	0	0	0
38	SLU 51	-0.01	-0.26	8.67	0	0	0
38	SLU 52	-0.02	-0.27	9.33	0	0	0
38	SLU 53	-0.02	-0.27	9.48	0	0	0
38	SLU 54	-0.02	-0.27	9.48	0	0	0
38	SLU 55	-0.02	-0.27	9.42	0	0	0
38	SLU 56	-0.03	-0.27	9.57	0	0	0
38	SLU 57	-0.03	-0.27	9.57	0	0	0
38	SLU 58	-0.03	-0.27	9.51	0	0	0
38	SLU 59	-0.03	-0.27	9.51	0	0	0
38	SLU 60	-0.03	-0.27	9.69	0	0	0
38	SLU 61	-0.03	-0.27	9.69	0	0	0
38	SLU 62	-0.03	-0.27	9.78	0	0	0
38	SLU 63	-0.03	-0.27	9.78	0	0	0
38	SLU 64	0	-0.25	9.25	0	0	0
38	SLU 65	0	-0.26	9.25	0	0	0
38	SLU 66	-0.01	-0.26	9.4	0	0	0
38	SLU 67	-0.01	-0.26	9.4	0	0	0
38	SLU 68	-0.01	-0.26	9.33	0	0	0
38	SLU 69	-0.01	-0.25	9.49	0	0	0
38	SLU 70	-0.01	-0.26	9.49	0	0	0
38	SLU 71	-0.01	-0.25	9.42	0	0	0
38	SLU 72	-0.01	-0.26	9.42	0	0	0
38	SLU 73	-0.02	-0.26	10.08	0	0	0
38	SLU 74	-0.02	-0.26	10.23	0	0	0
38	SLU 75	-0.02	-0.26	10.23	0	0	0
38	SLU 76	-0.02	-0.26	10.17	0	0	0
38	SLU 77	-0.03	-0.26	10.32	0	0	0
38	SLU 78	-0.03	-0.26	10.32	0	0	0
38	SLU 79	-0.03	-0.26	10.26	0	0	0
38	SLU 80	-0.03	-0.26	10.26	0	0	0
38	SLU 81	-0.03	-0.26	10.44	0	0	0
38	SLU 82	-0.03	-0.26	10.44	0	0	0
38	SLU 83	-0.03	-0.26	10.53	0	0	0
38	SLU 84	-0.03	-0.26	10.53	0	0	0
38	SLE RA 1	0	-0.2	6.95	0	0	0
38	SLE RA 2	0	-0.2	6.95	0	0	0
38	SLE RA 3	-0.01	-0.2	7.05	0	0	0
38	SLE RA 4	-0.01	-0.2	7.05	0	0	0
38	SLE RA 5	-0.01	-0.2	7.01	0	0	0
38	SLE RA 6	-0.01	-0.2	7.11	0	0	0
38	SLE RA 7	-0.01	-0.2	7.11	0	0	0
38	SLE RA 8	-0.01	-0.2	7.06	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
38	SLE RA 9	-0.01	-0.2	7.06	0	0	0
38	SLE RA 10	-0.01	-0.2	7.5	0	0	0
38	SLE RA 11	-0.02	-0.2	7.61	0	0	0
38	SLE RA 12	-0.02	-0.2	7.61	0	0	0
38	SLE RA 13	-0.02	-0.2	7.56	0	0	0
38	SLE RA 14	-0.02	-0.2	7.66	0	0	0
38	SLE RA 15	-0.02	-0.2	7.66	0	0	0
38	SLE RA 16	-0.02	-0.2	7.62	0	0	0
38	SLE RA 17	-0.02	-0.2	7.62	0	0	0
38	SLE RA 18	-0.02	-0.2	7.74	0	0	0
38	SLE RA 19	-0.02	-0.2	7.74	0	0	0
38	SLE RA 20	-0.02	-0.2	7.8	0	0	0
38	SLE RA 21	-0.02	-0.2	7.8	0	0	0
38	SLE FR 1	0	-0.2	6.95	0	0	0
38	SLE FR 2	0	-0.2	6.95	0	0	0
38	SLE FR 3	0	-0.2	6.97	0	0	0
38	SLE FR 4	-0.01	-0.2	7.19	0	0	0
38	SLE FR 5	-0.01	-0.2	7.21	0	0	0
38	SLE FR 6	-0.01	-0.2	7.34	0	0	0
38	SLE QP 1	0	-0.2	6.95	0	0	0
38	SLE QP 2	-0.01	-0.2	7.19	0	0	0
38	SLD 1	0.44	-0.16	7.06	0	0	0
38	SLD 2	0.45	-0.14	7.06	0	0	0
38	SLD 3	0.42	-0.28	7.08	0	0	0
38	SLD 4	0.43	-0.26	7.08	0	0	0
38	SLD 5	0.16	0	7.12	0	0	0
38	SLD 6	0.17	0.01	7.12	0	0	0
38	SLD 7	0.09	-0.41	7.18	0	0	0
38	SLD 8	0.09	-0.4	7.18	0	0	0
38	SLD 9	-0.11	0	7.19	0	0	0
38	SLD 10	-0.1	0.02	7.19	0	0	0
38	SLD 11	-0.18	-0.41	7.25	0	0	0
38	SLD 12	-0.17	-0.39	7.25	0	0	0
38	SLD 13	-0.45	-0.14	7.3	0	0	0
38	SLD 14	-0.44	-0.12	7.29	0	0	0
38	SLD 15	-0.47	-0.26	7.32	0	0	0
38	SLD 16	-0.46	-0.24	7.31	0	0	0
38	SLV 1	1.04	-0.11	6.89	0	0	0
38	SLV 2	1.07	-0.06	6.88	0	0	0
38	SLV 3	0.99	-0.39	6.94	0	0	0
38	SLV 4	1.02	-0.34	6.93	0	0	0
38	SLV 5	0.38	0.24	7.03	0	0	0
38	SLV 6	0.39	0.27	7.03	0	0	0
38	SLV 7	0.21	-0.69	7.18	0	0	0
38	SLV 8	0.23	-0.66	7.17	0	0	0
38	SLV 9	-0.24	0.26	7.2	0	0	0
38	SLV 10	-0.23	0.29	7.19	0	0	0
38	SLV 11	-0.41	-0.67	7.35	0	0	0
38	SLV 12	-0.39	-0.64	7.34	0	0	0
38	SLV 13	-1.03	-0.06	7.44	0	0	0
38	SLV 14	-1.01	-0.01	7.43	0	0	0
38	SLV 15	-1.08	-0.34	7.49	0	0	0
38	SLV 16	-1.06	-0.29	7.48	0	0	0
39	SLU 1	0	-0.15	4.88	0	0	0
39	SLU 2	0	-0.15	4.88	0	0	0
39	SLU 3	0	-0.15	4.99	0	0	0
39	SLU 4	0	-0.15	4.99	0	0	0
39	SLU 5	-0.01	-0.15	4.95	0	0	0
39	SLU 6	-0.01	-0.15	5.06	0	0	0
39	SLU 7	-0.01	-0.15	5.06	0	0	0
39	SLU 8	-0.01	-0.15	5.01	0	0	0
39	SLU 9	-0.01	-0.15	5.01	0	0	0
39	SLU 10	-0.01	-0.16	5.49	0	0	0
39	SLU 11	-0.02	-0.15	5.6	0	0	0
39	SLU 12	-0.02	-0.15	5.6	0	0	0
39	SLU 13	-0.02	-0.15	5.56	0	0	0
39	SLU 14	-0.02	-0.15	5.67	0	0	0
39	SLU 15	-0.02	-0.15	5.67	0	0	0
39	SLU 16	-0.02	-0.15	5.62	0	0	0
39	SLU 17	-0.02	-0.15	5.62	0	0	0
39	SLU 18	-0.02	-0.15	5.75	0	0	0
39	SLU 19	-0.02	-0.16	5.75	0	0	0
39	SLU 20	-0.02	-0.15	5.82	0	0	0
39	SLU 21	-0.02	-0.16	5.82	0	0	0
39	SLU 22	0	-0.14	5.43	0	0	0
39	SLU 23	0	-0.15	5.43	0	0	0
39	SLU 24	-0.01	-0.14	5.54	0	0	0
39	SLU 25	-0.01	-0.15	5.54	0	0	0
39	SLU 26	-0.01	-0.15	5.49	0	0	0
39	SLU 27	-0.01	-0.14	5.6	0	0	0
39	SLU 28	-0.01	-0.15	5.6	0	0	0
39	SLU 29	-0.01	-0.14	5.56	0	0	0
39	SLU 30	-0.01	-0.14	5.56	0	0	0
39	SLU 31	-0.02	-0.15	6.04	0	0	0
39	SLU 32	-0.02	-0.15	6.15	0	0	0
39	SLU 33	-0.02	-0.15	6.15	0	0	0
39	SLU 34	-0.02	-0.15	6.1	0	0	0
39	SLU 35	-0.02	-0.15	6.21	0	0	0
39	SLU 36	-0.02	-0.15	6.21	0	0	0
39	SLU 37	-0.02	-0.15	6.17	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLU 38	-0.02	-0.15	6.17	0	0	0
39	SLU 39	-0.02	-0.15	6.3	0	0	0
39	SLU 40	-0.02	-0.15	6.3	0	0	0
39	SLU 41	-0.02	-0.15	6.36	0	0	0
39	SLU 42	-0.02	-0.15	6.36	0	0	0
39	SLU 43	0	-0.2	6.16	0	0	0
39	SLU 44	0	-0.2	6.16	0	0	0
39	SLU 45	0	-0.2	6.27	0	0	0
39	SLU 46	0	-0.2	6.27	0	0	0
39	SLU 47	-0.01	-0.2	6.23	0	0	0
39	SLU 48	-0.01	-0.2	6.34	0	0	0
39	SLU 49	-0.01	-0.2	6.34	0	0	0
39	SLU 50	-0.01	-0.19	6.29	0	0	0
39	SLU 51	-0.01	-0.2	6.29	0	0	0
39	SLU 52	-0.01	-0.2	6.77	0	0	0
39	SLU 53	-0.02	-0.2	6.88	0	0	0
39	SLU 54	-0.02	-0.2	6.88	0	0	0
39	SLU 55	-0.02	-0.2	6.84	0	0	0
39	SLU 56	-0.02	-0.2	6.95	0	0	0
39	SLU 57	-0.02	-0.2	6.95	0	0	0
39	SLU 58	-0.02	-0.2	6.9	0	0	0
39	SLU 59	-0.02	-0.2	6.9	0	0	0
39	SLU 60	-0.02	-0.2	7.03	0	0	0
39	SLU 61	-0.02	-0.2	7.03	0	0	0
39	SLU 62	-0.02	-0.2	7.1	0	0	0
39	SLU 63	-0.02	-0.2	7.1	0	0	0
39	SLU 64	0	-0.19	6.71	0	0	0
39	SLU 65	0	-0.19	6.71	0	0	0
39	SLU 66	-0.01	-0.19	6.82	0	0	0
39	SLU 67	-0.01	-0.19	6.82	0	0	0
39	SLU 68	-0.01	-0.19	6.77	0	0	0
39	SLU 69	-0.01	-0.19	6.88	0	0	0
39	SLU 70	-0.01	-0.19	6.88	0	0	0
39	SLU 71	-0.01	-0.19	6.84	0	0	0
39	SLU 72	-0.01	-0.19	6.84	0	0	0
39	SLU 73	-0.02	-0.2	7.31	0	0	0
39	SLU 74	-0.02	-0.19	7.43	0	0	0
39	SLU 75	-0.02	-0.2	7.43	0	0	0
39	SLU 76	-0.02	-0.2	7.38	0	0	0
39	SLU 77	-0.02	-0.19	7.49	0	0	0
39	SLU 78	-0.02	-0.2	7.49	0	0	0
39	SLU 79	-0.02	-0.19	7.44	0	0	0
39	SLU 80	-0.02	-0.2	7.44	0	0	0
39	SLU 81	-0.02	-0.2	7.58	0	0	0
39	SLU 82	-0.02	-0.2	7.58	0	0	0
39	SLU 83	-0.02	-0.2	7.64	0	0	0
39	SLU 84	-0.02	-0.2	7.64	0	0	0
39	SLE RA 1	0	-0.15	5.04	0	0	0
39	SLE RA 2	0	-0.15	5.04	0	0	0
39	SLE RA 3	0	-0.15	5.11	0	0	0
39	SLE RA 4	0	-0.15	5.11	0	0	0
39	SLE RA 5	0	-0.15	5.08	0	0	0
39	SLE RA 6	-0.01	-0.15	5.16	0	0	0
39	SLE RA 7	-0.01	-0.15	5.16	0	0	0
39	SLE RA 8	-0.01	-0.15	5.12	0	0	0
39	SLE RA 9	-0.01	-0.15	5.13	0	0	0
39	SLE RA 10	-0.01	-0.15	5.44	0	0	0
39	SLE RA 11	-0.01	-0.15	5.52	0	0	0
39	SLE RA 12	-0.01	-0.15	5.52	0	0	0
39	SLE RA 13	-0.01	-0.15	5.49	0	0	0
39	SLE RA 14	-0.01	-0.15	5.56	0	0	0
39	SLE RA 15	-0.01	-0.15	5.56	0	0	0
39	SLE RA 16	-0.01	-0.15	5.53	0	0	0
39	SLE RA 17	-0.01	-0.15	5.53	0	0	0
39	SLE RA 18	-0.01	-0.15	5.62	0	0	0
39	SLE RA 19	-0.01	-0.15	5.62	0	0	0
39	SLE RA 20	-0.02	-0.15	5.66	0	0	0
39	SLE RA 21	-0.02	-0.15	5.66	0	0	0
39	SLE FR 1	0	-0.15	5.04	0	0	0
39	SLE FR 2	0	-0.15	5.04	0	0	0
39	SLE FR 3	0	-0.15	5.06	0	0	0
39	SLE FR 4	-0.01	-0.15	5.21	0	0	0
39	SLE FR 5	-0.01	-0.15	5.23	0	0	0
39	SLE FR 6	-0.01	-0.15	5.33	0	0	0
39	SLE QP 1	0	-0.15	5.04	0	0	0
39	SLE QP 2	-0.01	-0.15	5.21	0	0	0
39	SLD 1	0.32	-0.12	5.14	0	0	0
39	SLD 2	0.33	-0.1	5.14	0	0	0
39	SLD 3	0.3	-0.21	5.16	0	0	0
39	SLD 4	0.31	-0.19	5.15	0	0	0
39	SLD 5	0.11	-0.01	5.17	0	0	0
39	SLD 6	0.12	0	5.17	0	0	0
39	SLD 7	0.06	-0.31	5.22	0	0	0
39	SLD 8	0.07	-0.3	5.22	0	0	0
39	SLD 9	-0.08	0	5.21	0	0	0
39	SLD 10	-0.07	0.01	5.21	0	0	0
39	SLD 11	-0.13	-0.3	5.26	0	0	0
39	SLD 12	-0.13	-0.29	5.26	0	0	0
39	SLD 13	-0.32	-0.1	5.27	0	0	0
39	SLD 14	-0.32	-0.09	5.27	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLD 15	-0.34	-0.19	5.28	0	0	0
39	SLD 16	-0.33	-0.18	5.28	0	0	0
39	SLV 1	0.76	-0.08	5.05	0	0	0
39	SLV 2	0.77	-0.05	5.04	0	0	0
39	SLV 3	0.72	-0.28	5.08	0	0	0
39	SLV 4	0.74	-0.25	5.08	0	0	0
39	SLV 5	0.27	0.18	5.11	0	0	0
39	SLV 6	0.29	0.2	5.11	0	0	0
39	SLV 7	0.15	-0.5	5.23	0	0	0
39	SLV 8	0.17	-0.48	5.22	0	0	0
39	SLV 9	-0.18	0.19	5.2	0	0	0
39	SLV 10	-0.17	0.21	5.2	0	0	0
39	SLV 11	-0.3	-0.49	5.32	0	0	0
39	SLV 12	-0.29	-0.47	5.31	0	0	0
39	SLV 13	-0.75	-0.04	5.35	0	0	0
39	SLV 14	-0.73	-0.01	5.34	0	0	0
39	SLV 15	-0.79	-0.25	5.38	0	0	0
39	SLV 16	-0.77	-0.22	5.38	0	0	0
41	SLU 1	-0.01	-0.21	6.08	0	0	0
41	SLU 2	0	-0.22	6.08	0	0	0
41	SLU 3	-0.01	-0.21	6.23	0	0	0
41	SLU 4	-0.01	-0.22	6.23	0	0	0
41	SLU 5	-0.01	-0.22	6.17	0	0	0
41	SLU 6	-0.01	-0.21	6.32	0	0	0
41	SLU 7	-0.01	-0.22	6.32	0	0	0
41	SLU 8	-0.01	-0.21	6.26	0	0	0
41	SLU 9	-0.01	-0.21	6.26	0	0	0
41	SLU 10	-0.02	-0.22	6.87	0	0	0
41	SLU 11	-0.02	-0.22	7.01	0	0	0
41	SLU 12	-0.02	-0.22	7.02	0	0	0
41	SLU 13	-0.02	-0.22	6.96	0	0	0
41	SLU 14	-0.03	-0.22	7.1	0	0	0
41	SLU 15	-0.03	-0.22	7.11	0	0	0
41	SLU 16	-0.03	-0.22	7.05	0	0	0
41	SLU 17	-0.03	-0.22	7.05	0	0	0
41	SLU 18	-0.03	-0.22	7.21	0	0	0
41	SLU 19	-0.03	-0.23	7.21	0	0	0
41	SLU 20	-0.03	-0.22	7.3	0	0	0
41	SLU 21	-0.03	-0.23	7.3	0	0	0
41	SLU 22	-0.01	-0.21	6.76	0	0	0
41	SLU 23	-0.01	-0.21	6.77	0	0	0
41	SLU 24	-0.01	-0.21	6.91	0	0	0
41	SLU 25	-0.01	-0.21	6.91	0	0	0
41	SLU 26	-0.01	-0.21	6.85	0	0	0
41	SLU 27	-0.01	-0.21	7	0	0	0
41	SLU 28	-0.01	-0.21	7	0	0	0
41	SLU 29	-0.01	-0.21	6.94	0	0	0
41	SLU 30	-0.01	-0.21	6.94	0	0	0
41	SLU 31	-0.02	-0.22	7.55	0	0	0
41	SLU 32	-0.03	-0.22	7.7	0	0	0
41	SLU 33	-0.03	-0.22	7.7	0	0	0
41	SLU 34	-0.03	-0.22	7.64	0	0	0
41	SLU 35	-0.03	-0.22	7.79	0	0	0
41	SLU 36	-0.03	-0.22	7.79	0	0	0
41	SLU 37	-0.03	-0.22	7.73	0	0	0
41	SLU 38	-0.03	-0.22	7.73	0	0	0
41	SLU 39	-0.03	-0.22	7.89	0	0	0
41	SLU 40	-0.03	-0.22	7.89	0	0	0
41	SLU 41	-0.03	-0.22	7.98	0	0	0
41	SLU 42	-0.03	-0.22	7.98	0	0	0
41	SLU 43	-0.01	-0.28	7.67	0	0	0
41	SLU 44	-0.01	-0.28	7.67	0	0	0
41	SLU 45	-0.01	-0.28	7.82	0	0	0
41	SLU 46	-0.01	-0.28	7.82	0	0	0
41	SLU 47	-0.01	-0.28	7.76	0	0	0
41	SLU 48	-0.01	-0.28	7.91	0	0	0
41	SLU 49	-0.01	-0.28	7.91	0	0	0
41	SLU 50	-0.01	-0.28	7.85	0	0	0
41	SLU 51	-0.01	-0.28	7.85	0	0	0
41	SLU 52	-0.02	-0.29	8.46	0	0	0
41	SLU 53	-0.02	-0.29	8.6	0	0	0
41	SLU 54	-0.02	-0.29	8.61	0	0	0
41	SLU 55	-0.02	-0.29	8.55	0	0	0
41	SLU 56	-0.03	-0.29	8.69	0	0	0
41	SLU 57	-0.03	-0.29	8.69	0	0	0
41	SLU 58	-0.03	-0.29	8.64	0	0	0
41	SLU 59	-0.03	-0.29	8.64	0	0	0
41	SLU 60	-0.03	-0.29	8.8	0	0	0
41	SLU 61	-0.03	-0.29	8.8	0	0	0
41	SLU 62	-0.03	-0.29	8.89	0	0	0
41	SLU 63	-0.03	-0.29	8.89	0	0	0
41	SLU 64	-0.01	-0.27	8.35	0	0	0
41	SLU 65	-0.01	-0.28	8.35	0	0	0
41	SLU 66	-0.01	-0.27	8.5	0	0	0
41	SLU 67	-0.01	-0.28	8.5	0	0	0
41	SLU 68	-0.01	-0.28	8.44	0	0	0
41	SLU 69	-0.01	-0.27	8.59	0	0	0
41	SLU 70	-0.01	-0.28	8.59	0	0	0
41	SLU 71	-0.02	-0.27	8.53	0	0	0
41	SLU 72	-0.02	-0.28	8.53	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
41	SLU 73	-0.02	-0.29	9.14	0	0	0
41	SLU 74	-0.03	-0.28	9.29	0	0	0
41	SLU 75	-0.03	-0.29	9.29	0	0	0
41	SLU 76	-0.03	-0.29	9.23	0	0	0
41	SLU 77	-0.03	-0.28	9.38	0	0	0
41	SLU 78	-0.03	-0.29	9.38	0	0	0
41	SLU 79	-0.03	-0.28	9.32	0	0	0
41	SLU 80	-0.03	-0.28	9.32	0	0	0
41	SLU 81	-0.03	-0.29	9.48	0	0	0
41	SLU 82	-0.03	-0.29	9.48	0	0	0
41	SLU 83	-0.03	-0.29	9.57	0	0	0
41	SLU 84	-0.03	-0.29	9.57	0	0	0
41	SLE RA 1	-0.01	-0.21	6.28	0	0	0
41	SLE RA 2	-0.01	-0.21	6.28	0	0	0
41	SLE RA 3	-0.01	-0.21	6.37	0	0	0
41	SLE RA 4	-0.01	-0.21	6.37	0	0	0
41	SLE RA 5	-0.01	-0.21	6.34	0	0	0
41	SLE RA 6	-0.01	-0.21	6.43	0	0	0
41	SLE RA 7	-0.01	-0.21	6.43	0	0	0
41	SLE RA 8	-0.01	-0.21	6.39	0	0	0
41	SLE RA 9	-0.01	-0.21	6.39	0	0	0
41	SLE RA 10	-0.02	-0.22	6.8	0	0	0
41	SLE RA 11	-0.02	-0.22	6.9	0	0	0
41	SLE RA 12	-0.02	-0.22	6.9	0	0	0
41	SLE RA 13	-0.02	-0.22	6.86	0	0	0
41	SLE RA 14	-0.02	-0.22	6.96	0	0	0
41	SLE RA 15	-0.02	-0.22	6.96	0	0	0
41	SLE RA 16	-0.02	-0.22	6.92	0	0	0
41	SLE RA 17	-0.02	-0.22	6.92	0	0	0
41	SLE RA 18	-0.02	-0.22	7.03	0	0	0
41	SLE RA 19	-0.02	-0.22	7.03	0	0	0
41	SLE RA 20	-0.02	-0.22	7.09	0	0	0
41	SLE RA 21	-0.02	-0.22	7.09	0	0	0
41	SLE FR 1	-0.01	-0.21	6.28	0	0	0
41	SLE FR 2	-0.01	-0.21	6.28	0	0	0
41	SLE FR 3	-0.01	-0.21	6.3	0	0	0
41	SLE FR 4	-0.01	-0.21	6.5	0	0	0
41	SLE FR 5	-0.01	-0.21	6.52	0	0	0
41	SLE FR 6	-0.01	-0.22	6.65	0	0	0
41	SLE QP 1	-0.01	-0.21	6.28	0	0	0
41	SLE QP 2	-0.01	-0.21	6.5	0	0	0
41	SLD 1	0.39	-0.15	6.56	0	0	0
41	SLD 2	0.4	-0.14	6.56	0	0	0
41	SLD 3	0.37	-0.26	6.61	0	0	0
41	SLD 4	0.38	-0.26	6.61	0	0	0
41	SLD 5	0.14	-0.02	6.44	0	0	0
41	SLD 6	0.14	-0.02	6.44	0	0	0
41	SLD 7	0.07	-0.41	6.61	0	0	0
41	SLD 8	0.08	-0.4	6.61	0	0	0
41	SLD 9	-0.1	-0.02	6.39	0	0	0
41	SLD 10	-0.09	-0.02	6.39	0	0	0
41	SLD 11	-0.16	-0.41	6.56	0	0	0
41	SLD 12	-0.16	-0.41	6.56	0	0	0
41	SLD 13	-0.4	-0.17	6.39	0	0	0
41	SLD 14	-0.39	-0.16	6.39	0	0	0
41	SLD 15	-0.42	-0.28	6.44	0	0	0
41	SLD 16	-0.41	-0.28	6.44	0	0	0
41	SLV 1	0.93	-0.06	6.64	0	0	0
41	SLV 2	0.95	-0.06	6.64	0	0	0
41	SLV 3	0.88	-0.33	6.75	0	0	0
41	SLV 4	0.9	-0.32	6.75	0	0	0
41	SLV 5	0.34	0.23	6.37	0	0	0
41	SLV 6	0.35	0.24	6.37	0	0	0
41	SLV 7	0.19	-0.65	6.74	0	0	0
41	SLV 8	0.2	-0.64	6.75	0	0	0
41	SLV 9	-0.22	0.22	6.25	0	0	0
41	SLV 10	-0.21	0.22	6.26	0	0	0
41	SLV 11	-0.37	-0.66	6.63	0	0	0
41	SLV 12	-0.36	-0.66	6.63	0	0	0
41	SLV 13	-0.92	-0.11	6.25	0	0	0
41	SLV 14	-0.9	-0.1	6.25	0	0	0
41	SLV 15	-0.97	-0.37	6.36	0	0	0
41	SLV 16	-0.95	-0.36	6.36	0	0	0
42	SLU 1	-0.01	-0.39	11.56	0	0	0
42	SLU 2	-0.01	-0.4	11.56	0	0	0
42	SLU 3	-0.02	-0.39	11.83	0	0	0
42	SLU 4	-0.02	-0.4	11.83	0	0	0
42	SLU 5	-0.02	-0.4	11.73	0	0	0
42	SLU 6	-0.02	-0.39	12	0	0	0
42	SLU 7	-0.02	-0.4	12	0	0	0
42	SLU 8	-0.02	-0.39	11.89	0	0	0
42	SLU 9	-0.02	-0.39	11.89	0	0	0
42	SLU 10	-0.04	-0.41	13.05	0	0	0
42	SLU 11	-0.04	-0.41	13.32	0	0	0
42	SLU 12	-0.04	-0.41	13.32	0	0	0
42	SLU 13	-0.05	-0.41	13.21	0	0	0
42	SLU 14	-0.05	-0.41	13.48	0	0	0
42	SLU 15	-0.05	-0.41	13.49	0	0	0
42	SLU 16	-0.05	-0.41	13.37	0	0	0
42	SLU 17	-0.05	-0.41	13.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLU 18	-0.05	-0.41	13.68	0	0	0
42	SLU 19	-0.05	-0.42	13.68	0	0	0
42	SLU 20	-0.06	-0.41	13.85	0	0	0
42	SLU 21	-0.06	-0.42	13.85	0	0	0
42	SLU 22	-0.01	-0.38	12.86	0	0	0
42	SLU 23	-0.01	-0.39	12.86	0	0	0
42	SLU 24	-0.02	-0.38	13.13	0	0	0
42	SLU 25	-0.02	-0.39	13.13	0	0	0
42	SLU 26	-0.02	-0.39	13.02	0	0	0
42	SLU 27	-0.03	-0.38	13.3	0	0	0
42	SLU 28	-0.03	-0.39	13.3	0	0	0
42	SLU 29	-0.03	-0.38	13.19	0	0	0
42	SLU 30	-0.03	-0.39	13.19	0	0	0
42	SLU 31	-0.04	-0.4	14.34	0	0	0
42	SLU 32	-0.05	-0.4	14.62	0	0	0
42	SLU 33	-0.05	-0.4	14.62	0	0	0
42	SLU 34	-0.05	-0.4	14.51	0	0	0
42	SLU 35	-0.06	-0.4	14.78	0	0	0
42	SLU 36	-0.06	-0.4	14.78	0	0	0
42	SLU 37	-0.06	-0.4	14.67	0	0	0
42	SLU 38	-0.06	-0.4	14.67	0	0	0
42	SLU 39	-0.05	-0.4	14.98	0	0	0
42	SLU 40	-0.05	-0.41	14.98	0	0	0
42	SLU 41	-0.06	-0.4	15.14	0	0	0
42	SLU 42	-0.06	-0.41	15.15	0	0	0
42	SLU 43	-0.01	-0.51	14.58	0	0	0
42	SLU 44	-0.01	-0.52	14.58	0	0	0
42	SLU 45	-0.02	-0.51	14.86	0	0	0
42	SLU 46	-0.02	-0.52	14.86	0	0	0
42	SLU 47	-0.02	-0.52	14.75	0	0	0
42	SLU 48	-0.02	-0.51	15.02	0	0	0
42	SLU 49	-0.02	-0.52	15.02	0	0	0
42	SLU 50	-0.03	-0.51	14.91	0	0	0
42	SLU 51	-0.03	-0.51	14.91	0	0	0
42	SLU 52	-0.04	-0.53	16.07	0	0	0
42	SLU 53	-0.05	-0.53	16.34	0	0	0
42	SLU 54	-0.05	-0.53	16.34	0	0	0
42	SLU 55	-0.05	-0.53	16.23	0	0	0
42	SLU 56	-0.05	-0.53	16.51	0	0	0
42	SLU 57	-0.05	-0.53	16.51	0	0	0
42	SLU 58	-0.05	-0.53	16.4	0	0	0
42	SLU 59	-0.05	-0.53	16.4	0	0	0
42	SLU 60	-0.05	-0.53	16.7	0	0	0
42	SLU 61	-0.05	-0.54	16.7	0	0	0
42	SLU 62	-0.06	-0.53	16.87	0	0	0
42	SLU 63	-0.06	-0.54	16.87	0	0	0
42	SLU 64	-0.01	-0.5	15.88	0	0	0
42	SLU 65	-0.01	-0.51	15.88	0	0	0
42	SLU 66	-0.02	-0.5	16.15	0	0	0
42	SLU 67	-0.02	-0.51	16.16	0	0	0
42	SLU 68	-0.02	-0.51	16.05	0	0	0
42	SLU 69	-0.03	-0.5	16.32	0	0	0
42	SLU 70	-0.03	-0.51	16.32	0	0	0
42	SLU 71	-0.03	-0.5	16.21	0	0	0
42	SLU 72	-0.03	-0.51	16.21	0	0	0
42	SLU 73	-0.04	-0.52	17.37	0	0	0
42	SLU 74	-0.05	-0.52	17.64	0	0	0
42	SLU 75	-0.05	-0.52	17.64	0	0	0
42	SLU 76	-0.05	-0.52	17.53	0	0	0
42	SLU 77	-0.06	-0.52	17.8	0	0	0
42	SLU 78	-0.06	-0.52	17.81	0	0	0
42	SLU 79	-0.06	-0.52	17.7	0	0	0
42	SLU 80	-0.06	-0.52	17.7	0	0	0
42	SLU 81	-0.06	-0.52	18	0	0	0
42	SLU 82	-0.06	-0.53	18	0	0	0
42	SLU 83	-0.06	-0.52	18.17	0	0	0
42	SLU 84	-0.06	-0.53	18.17	0	0	0
42	SLE RA 1	-0.01	-0.39	11.93	0	0	0
42	SLE RA 2	-0.01	-0.39	11.93	0	0	0
42	SLE RA 3	-0.01	-0.39	12.11	0	0	0
42	SLE RA 4	-0.01	-0.39	12.11	0	0	0
42	SLE RA 5	-0.02	-0.39	12.04	0	0	0
42	SLE RA 6	-0.02	-0.39	12.22	0	0	0
42	SLE RA 7	-0.02	-0.39	12.22	0	0	0
42	SLE RA 8	-0.02	-0.39	12.15	0	0	0
42	SLE RA 9	-0.02	-0.39	12.15	0	0	0
42	SLE RA 10	-0.03	-0.4	12.92	0	0	0
42	SLE RA 11	-0.03	-0.4	13.1	0	0	0
42	SLE RA 12	-0.03	-0.4	13.1	0	0	0
42	SLE RA 13	-0.03	-0.4	13.03	0	0	0
42	SLE RA 14	-0.04	-0.4	13.21	0	0	0
42	SLE RA 15	-0.04	-0.4	13.21	0	0	0
42	SLE RA 16	-0.04	-0.4	13.14	0	0	0
42	SLE RA 17	-0.04	-0.4	13.14	0	0	0
42	SLE RA 18	-0.04	-0.4	13.34	0	0	0
42	SLE RA 19	-0.04	-0.41	13.34	0	0	0
42	SLE RA 20	-0.04	-0.4	13.45	0	0	0
42	SLE RA 21	-0.04	-0.41	13.46	0	0	0
42	SLE FR 1	-0.01	-0.39	11.93	0	0	0
42	SLE FR 2	-0.01	-0.39	11.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLE FR 3	-0.01	-0.39	11.97	0	0	0
42	SLE FR 4	-0.02	-0.39	12.35	0	0	0
42	SLE FR 5	-0.02	-0.39	12.4	0	0	0
42	SLE FR 6	-0.02	-0.4	12.64	0	0	0
42	SLE QP 1	-0.01	-0.39	11.93	0	0	0
42	SLE QP 2	-0.02	-0.39	12.35	0	0	0
42	SLD 1	0.75	-0.27	12.39	0	0	0
42	SLD 2	0.76	-0.26	12.39	0	0	0
42	SLD 3	0.71	-0.49	12.47	0	0	0
42	SLD 4	0.73	-0.48	12.47	0	0	0
42	SLD 5	0.27	-0.03	12.24	0	0	0
42	SLD 6	0.28	-0.02	12.25	0	0	0
42	SLD 7	0.14	-0.76	12.51	0	0	0
42	SLD 8	0.15	-0.75	12.51	0	0	0
42	SLD 9	-0.19	-0.04	12.2	0	0	0
42	SLD 10	-0.18	-0.03	12.2	0	0	0
42	SLD 11	-0.31	-0.77	12.46	0	0	0
42	SLD 12	-0.3	-0.76	12.46	0	0	0
42	SLD 13	-0.76	-0.31	12.23	0	0	0
42	SLD 14	-0.75	-0.29	12.23	0	0	0
42	SLD 15	-0.8	-0.53	12.31	0	0	0
42	SLD 16	-0.79	-0.51	12.31	0	0	0
42	SLV 1	1.77	-0.12	12.45	0	0	0
42	SLV 2	1.81	-0.09	12.45	0	0	0
42	SLV 3	1.69	-0.62	12.63	0	0	0
42	SLV 4	1.72	-0.59	12.63	0	0	0
42	SLV 5	0.64	0.44	12.11	0	0	0
42	SLV 6	0.67	0.46	12.11	0	0	0
42	SLV 7	0.35	-1.22	12.71	0	0	0
42	SLV 8	0.38	-1.2	12.71	0	0	0
42	SLV 9	-0.42	0.41	12	0	0	0
42	SLV 10	-0.39	0.43	12	0	0	0
42	SLV 11	-0.71	-1.24	12.6	0	0	0
42	SLV 12	-0.68	-1.22	12.6	0	0	0
42	SLV 13	-1.76	-0.2	12.07	0	0	0
42	SLV 14	-1.72	-0.17	12.08	0	0	0
42	SLV 15	-1.85	-0.7	12.25	0	0	0
42	SLV 16	-1.81	-0.67	12.26	0	0	0
43	SLU 1	-0.01	-0.35	10.79	0	0	0
43	SLU 2	-0.01	-0.36	10.8	0	0	0
43	SLU 3	-0.02	-0.36	11.05	0	0	0
43	SLU 4	-0.02	-0.36	11.05	0	0	0
43	SLU 5	-0.02	-0.36	10.95	0	0	0
43	SLU 6	-0.02	-0.36	11.2	0	0	0
43	SLU 7	-0.02	-0.36	11.2	0	0	0
43	SLU 8	-0.02	-0.35	11.1	0	0	0
43	SLU 9	-0.02	-0.36	11.1	0	0	0
43	SLU 10	-0.04	-0.37	12.17	0	0	0
43	SLU 11	-0.04	-0.37	12.42	0	0	0
43	SLU 12	-0.04	-0.37	12.42	0	0	0
43	SLU 13	-0.04	-0.37	12.32	0	0	0
43	SLU 14	-0.05	-0.37	12.57	0	0	0
43	SLU 15	-0.05	-0.37	12.57	0	0	0
43	SLU 16	-0.05	-0.37	12.47	0	0	0
43	SLU 17	-0.05	-0.37	12.47	0	0	0
43	SLU 18	-0.05	-0.37	12.76	0	0	0
43	SLU 19	-0.05	-0.38	12.76	0	0	0
43	SLU 20	-0.06	-0.37	12.91	0	0	0
43	SLU 21	-0.06	-0.37	12.91	0	0	0
43	SLU 22	-0.01	-0.34	12	0	0	0
43	SLU 23	-0.01	-0.35	12.01	0	0	0
43	SLU 24	-0.02	-0.35	12.26	0	0	0
43	SLU 25	-0.02	-0.35	12.26	0	0	0
43	SLU 26	-0.02	-0.35	12.16	0	0	0
43	SLU 27	-0.03	-0.35	12.41	0	0	0
43	SLU 28	-0.03	-0.35	12.41	0	0	0
43	SLU 29	-0.03	-0.34	12.31	0	0	0
43	SLU 30	-0.03	-0.35	12.31	0	0	0
43	SLU 31	-0.04	-0.36	13.38	0	0	0
43	SLU 32	-0.05	-0.36	13.63	0	0	0
43	SLU 33	-0.05	-0.36	13.63	0	0	0
43	SLU 34	-0.05	-0.36	13.53	0	0	0
43	SLU 35	-0.05	-0.36	13.78	0	0	0
43	SLU 36	-0.05	-0.36	13.79	0	0	0
43	SLU 37	-0.05	-0.36	13.68	0	0	0
43	SLU 38	-0.05	-0.36	13.68	0	0	0
43	SLU 39	-0.05	-0.36	13.97	0	0	0
43	SLU 40	-0.05	-0.37	13.97	0	0	0
43	SLU 41	-0.06	-0.36	14.12	0	0	0
43	SLU 42	-0.06	-0.37	14.12	0	0	0
43	SLU 43	-0.01	-0.46	13.62	0	0	0
43	SLU 44	-0.01	-0.47	13.62	0	0	0
43	SLU 45	-0.02	-0.46	13.87	0	0	0
43	SLU 46	-0.02	-0.47	13.87	0	0	0
43	SLU 47	-0.02	-0.47	13.77	0	0	0
43	SLU 48	-0.02	-0.46	14.02	0	0	0
43	SLU 49	-0.02	-0.47	14.02	0	0	0
43	SLU 50	-0.03	-0.46	13.92	0	0	0
43	SLU 51	-0.03	-0.47	13.92	0	0	0
43	SLU 52	-0.04	-0.48	14.99	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
43	SLU 53	-0.04	-0.48	15.24	0	0	0
43	SLU 54	-0.04	-0.48	15.25	0	0	0
43	SLU 55	-0.05	-0.48	15.14	0	0	0
43	SLU 56	-0.05	-0.48	15.4	0	0	0
43	SLU 57	-0.05	-0.48	15.4	0	0	0
43	SLU 58	-0.05	-0.48	15.29	0	0	0
43	SLU 59	-0.05	-0.48	15.29	0	0	0
43	SLU 60	-0.05	-0.48	15.58	0	0	0
43	SLU 61	-0.05	-0.48	15.58	0	0	0
43	SLU 62	-0.06	-0.48	15.73	0	0	0
43	SLU 63	-0.06	-0.48	15.73	0	0	0
43	SLU 64	-0.01	-0.45	14.83	0	0	0
43	SLU 65	-0.01	-0.46	14.83	0	0	0
43	SLU 66	-0.02	-0.46	15.08	0	0	0
43	SLU 67	-0.02	-0.46	15.08	0	0	0
43	SLU 68	-0.02	-0.46	14.98	0	0	0
43	SLU 69	-0.03	-0.46	15.23	0	0	0
43	SLU 70	-0.03	-0.46	15.23	0	0	0
43	SLU 71	-0.03	-0.45	15.13	0	0	0
43	SLU 72	-0.03	-0.46	15.13	0	0	0
43	SLU 73	-0.04	-0.47	16.2	0	0	0
43	SLU 74	-0.05	-0.47	16.46	0	0	0
43	SLU 75	-0.05	-0.47	16.46	0	0	0
43	SLU 76	-0.05	-0.47	16.36	0	0	0
43	SLU 77	-0.05	-0.47	16.61	0	0	0
43	SLU 78	-0.05	-0.47	16.61	0	0	0
43	SLU 79	-0.06	-0.47	16.5	0	0	0
43	SLU 80	-0.06	-0.47	16.51	0	0	0
43	SLU 81	-0.05	-0.47	16.79	0	0	0
43	SLU 82	-0.05	-0.48	16.79	0	0	0
43	SLU 83	-0.06	-0.47	16.94	0	0	0
43	SLU 84	-0.06	-0.47	16.94	0	0	0
43	SLE RA 1	-0.01	-0.35	11.14	0	0	0
43	SLE RA 2	-0.01	-0.36	11.14	0	0	0
43	SLE RA 3	-0.01	-0.35	11.31	0	0	0
43	SLE RA 4	-0.01	-0.35	11.31	0	0	0
43	SLE RA 5	-0.02	-0.35	11.24	0	0	0
43	SLE RA 6	-0.02	-0.35	11.41	0	0	0
43	SLE RA 7	-0.02	-0.35	11.41	0	0	0
43	SLE RA 8	-0.02	-0.35	11.34	0	0	0
43	SLE RA 9	-0.02	-0.35	11.34	0	0	0
43	SLE RA 10	-0.03	-0.36	12.06	0	0	0
43	SLE RA 11	-0.03	-0.36	12.22	0	0	0
43	SLE RA 12	-0.03	-0.36	12.23	0	0	0
43	SLE RA 13	-0.03	-0.36	12.16	0	0	0
43	SLE RA 14	-0.04	-0.36	12.33	0	0	0
43	SLE RA 15	-0.04	-0.36	12.33	0	0	0
43	SLE RA 16	-0.04	-0.36	12.26	0	0	0
43	SLE RA 17	-0.04	-0.36	12.26	0	0	0
43	SLE RA 18	-0.04	-0.36	12.45	0	0	0
43	SLE RA 19	-0.04	-0.37	12.45	0	0	0
43	SLE RA 20	-0.04	-0.36	12.55	0	0	0
43	SLE RA 21	-0.04	-0.37	12.55	0	0	0
43	SLE FR 1	-0.01	-0.35	11.14	0	0	0
43	SLE FR 2	-0.01	-0.35	11.14	0	0	0
43	SLE FR 3	-0.01	-0.35	11.18	0	0	0
43	SLE FR 4	-0.02	-0.36	11.53	0	0	0
43	SLE FR 5	-0.02	-0.35	11.57	0	0	0
43	SLE FR 6	-0.02	-0.36	11.79	0	0	0
43	SLE QP 1	-0.01	-0.35	11.14	0	0	0
43	SLE QP 2	-0.02	-0.35	11.53	0	0	0
43	SLD 1	0.7	-0.25	11.47	0	0	0
43	SLD 2	0.72	-0.23	11.46	0	0	0
43	SLD 3	0.67	-0.45	11.53	0	0	0
43	SLD 4	0.68	-0.43	11.53	0	0	0
43	SLD 5	0.25	-0.02	11.41	0	0	0
43	SLD 6	0.26	0	11.41	0	0	0
43	SLD 7	0.13	-0.7	11.63	0	0	0
43	SLD 8	0.14	-0.68	11.63	0	0	0
43	SLD 9	-0.18	-0.03	11.44	0	0	0
43	SLD 10	-0.17	-0.01	11.44	0	0	0
43	SLD 11	-0.3	-0.71	11.65	0	0	0
43	SLD 12	-0.29	-0.69	11.65	0	0	0
43	SLD 13	-0.72	-0.28	11.54	0	0	0
43	SLD 14	-0.7	-0.26	11.53	0	0	0
43	SLD 15	-0.76	-0.48	11.6	0	0	0
43	SLD 16	-0.74	-0.46	11.6	0	0	0
43	SLV 1	1.67	-0.11	11.38	0	0	0
43	SLV 2	1.7	-0.07	11.37	0	0	0
43	SLV 3	1.59	-0.57	11.52	0	0	0
43	SLV 4	1.62	-0.53	11.52	0	0	0
43	SLV 5	0.61	0.41	11.27	0	0	0
43	SLV 6	0.63	0.44	11.26	0	0	0
43	SLV 7	0.33	-1.13	11.75	0	0	0
43	SLV 8	0.36	-1.1	11.75	0	0	0
43	SLV 9	-0.39	0.39	11.32	0	0	0
43	SLV 10	-0.37	0.42	11.31	0	0	0
43	SLV 11	-0.66	-1.15	11.8	0	0	0
43	SLV 12	-0.64	-1.12	11.8	0	0	0
43	SLV 13	-1.66	-0.18	11.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
43	SLV 14	-1.62	-0.14	11.54	0	0	0
43	SLV 15	-1.74	-0.64	11.69	0	0	0
43	SLV 16	-1.7	-0.6	11.69	0	0	0
44	SLU 1	-0.01	-0.3	9.54	0	0	0
44	SLU 2	-0.01	-0.31	9.54	0	0	0
44	SLU 3	-0.02	-0.3	9.76	0	0	0
44	SLU 4	-0.02	-0.31	9.77	0	0	0
44	SLU 5	-0.02	-0.31	9.68	0	0	0
44	SLU 6	-0.02	-0.3	9.9	0	0	0
44	SLU 7	-0.02	-0.31	9.9	0	0	0
44	SLU 8	-0.02	-0.3	9.8	0	0	0
44	SLU 9	-0.02	-0.31	9.81	0	0	0
44	SLU 10	-0.03	-0.32	10.75	0	0	0
44	SLU 11	-0.04	-0.31	10.97	0	0	0
44	SLU 12	-0.04	-0.32	10.97	0	0	0
44	SLU 13	-0.04	-0.32	10.88	0	0	0
44	SLU 14	-0.05	-0.31	11.1	0	0	0
44	SLU 15	-0.05	-0.32	11.1	0	0	0
44	SLU 16	-0.05	-0.31	11.01	0	0	0
44	SLU 17	-0.05	-0.32	11.01	0	0	0
44	SLU 18	-0.05	-0.32	11.27	0	0	0
44	SLU 19	-0.05	-0.32	11.27	0	0	0
44	SLU 20	-0.05	-0.32	11.4	0	0	0
44	SLU 21	-0.05	-0.32	11.4	0	0	0
44	SLU 22	-0.01	-0.29	10.61	0	0	0
44	SLU 23	-0.01	-0.3	10.62	0	0	0
44	SLU 24	-0.02	-0.3	10.84	0	0	0
44	SLU 25	-0.02	-0.3	10.84	0	0	0
44	SLU 26	-0.02	-0.3	10.75	0	0	0
44	SLU 27	-0.02	-0.3	10.97	0	0	0
44	SLU 28	-0.02	-0.3	10.97	0	0	0
44	SLU 29	-0.03	-0.29	10.88	0	0	0
44	SLU 30	-0.03	-0.3	10.88	0	0	0
44	SLU 31	-0.04	-0.31	11.82	0	0	0
44	SLU 32	-0.04	-0.31	12.04	0	0	0
44	SLU 33	-0.04	-0.31	12.04	0	0	0
44	SLU 34	-0.04	-0.31	11.95	0	0	0
44	SLU 35	-0.05	-0.3	12.17	0	0	0
44	SLU 36	-0.05	-0.31	12.17	0	0	0
44	SLU 37	-0.05	-0.3	12.08	0	0	0
44	SLU 38	-0.05	-0.31	12.08	0	0	0
44	SLU 39	-0.05	-0.31	12.34	0	0	0
44	SLU 40	-0.05	-0.31	12.34	0	0	0
44	SLU 41	-0.05	-0.31	12.47	0	0	0
44	SLU 42	-0.05	-0.31	12.47	0	0	0
44	SLU 43	-0.01	-0.4	12.04	0	0	0
44	SLU 44	-0.01	-0.4	12.04	0	0	0
44	SLU 45	-0.02	-0.4	12.26	0	0	0
44	SLU 46	-0.02	-0.4	12.26	0	0	0
44	SLU 47	-0.02	-0.4	12.17	0	0	0
44	SLU 48	-0.02	-0.4	12.39	0	0	0
44	SLU 49	-0.02	-0.4	12.39	0	0	0
44	SLU 50	-0.02	-0.4	12.3	0	0	0
44	SLU 51	-0.02	-0.4	12.3	0	0	0
44	SLU 52	-0.04	-0.41	13.25	0	0	0
44	SLU 53	-0.04	-0.41	13.47	0	0	0
44	SLU 54	-0.04	-0.41	13.47	0	0	0
44	SLU 55	-0.04	-0.41	13.38	0	0	0
44	SLU 56	-0.05	-0.41	13.6	0	0	0
44	SLU 57	-0.05	-0.41	13.6	0	0	0
44	SLU 58	-0.05	-0.41	13.51	0	0	0
44	SLU 59	-0.05	-0.41	13.51	0	0	0
44	SLU 60	-0.05	-0.41	13.76	0	0	0
44	SLU 61	-0.05	-0.41	13.76	0	0	0
44	SLU 62	-0.05	-0.41	13.89	0	0	0
44	SLU 63	-0.05	-0.41	13.89	0	0	0
44	SLU 64	-0.02	-0.39	13.11	0	0	0
44	SLU 65	-0.02	-0.39	13.11	0	0	0
44	SLU 66	-0.02	-0.39	13.33	0	0	0
44	SLU 67	-0.02	-0.39	13.33	0	0	0
44	SLU 68	-0.02	-0.39	13.24	0	0	0
44	SLU 69	-0.03	-0.39	13.46	0	0	0
44	SLU 70	-0.03	-0.39	13.46	0	0	0
44	SLU 71	-0.03	-0.39	13.37	0	0	0
44	SLU 72	-0.03	-0.39	13.37	0	0	0
44	SLU 73	-0.04	-0.4	14.32	0	0	0
44	SLU 74	-0.05	-0.4	14.54	0	0	0
44	SLU 75	-0.04	-0.4	14.54	0	0	0
44	SLU 76	-0.05	-0.4	14.45	0	0	0
44	SLU 77	-0.05	-0.4	14.67	0	0	0
44	SLU 78	-0.05	-0.4	14.67	0	0	0
44	SLU 79	-0.05	-0.4	14.58	0	0	0
44	SLU 80	-0.05	-0.4	14.58	0	0	0
44	SLU 81	-0.05	-0.4	14.83	0	0	0
44	SLU 82	-0.05	-0.41	14.83	0	0	0
44	SLU 83	-0.06	-0.4	14.96	0	0	0
44	SLU 84	-0.06	-0.41	14.96	0	0	0
44	SLE RA 1	-0.01	-0.3	9.85	0	0	0
44	SLE RA 2	-0.01	-0.3	9.85	0	0	0
44	SLE RA 3	-0.01	-0.3	10	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLE RA 4	-0.01	-0.3	10	0	0	0
44	SLE RA 5	-0.02	-0.3	9.94	0	0	0
44	SLE RA 6	-0.02	-0.3	10.08	0	0	0
44	SLE RA 7	-0.02	-0.3	10.08	0	0	0
44	SLE RA 8	-0.02	-0.3	10.02	0	0	0
44	SLE RA 9	-0.02	-0.3	10.02	0	0	0
44	SLE RA 10	-0.03	-0.31	10.65	0	0	0
44	SLE RA 11	-0.03	-0.31	10.8	0	0	0
44	SLE RA 12	-0.03	-0.31	10.8	0	0	0
44	SLE RA 13	-0.03	-0.31	10.74	0	0	0
44	SLE RA 14	-0.04	-0.31	10.89	0	0	0
44	SLE RA 15	-0.03	-0.31	10.89	0	0	0
44	SLE RA 16	-0.04	-0.31	10.83	0	0	0
44	SLE RA 17	-0.04	-0.31	10.83	0	0	0
44	SLE RA 18	-0.03	-0.31	11	0	0	0
44	SLE RA 19	-0.03	-0.31	11	0	0	0
44	SLE RA 20	-0.04	-0.31	11.08	0	0	0
44	SLE RA 21	-0.04	-0.31	11.09	0	0	0
44	SLE FR 1	-0.01	-0.3	9.85	0	0	0
44	SLE FR 2	-0.01	-0.3	9.85	0	0	0
44	SLE FR 3	-0.01	-0.3	9.88	0	0	0
44	SLE FR 4	-0.02	-0.3	10.19	0	0	0
44	SLE FR 5	-0.02	-0.3	10.23	0	0	0
44	SLE FR 6	-0.02	-0.31	10.42	0	0	0
44	SLE QP 1	-0.01	-0.3	9.85	0	0	0
44	SLE QP 2	-0.02	-0.3	10.19	0	0	0
44	SLD 1	0.63	-0.24	10.1	0	0	0
44	SLD 2	0.64	-0.22	10.09	0	0	0
44	SLD 3	0.59	-0.42	10.15	0	0	0
44	SLD 4	0.61	-0.4	10.15	0	0	0
44	SLD 5	0.22	-0.02	10.09	0	0	0
44	SLD 6	0.23	0	10.08	0	0	0
44	SLD 7	0.11	-0.61	10.26	0	0	0
44	SLD 8	0.12	-0.6	10.26	0	0	0
44	SLD 9	-0.16	-0.01	10.13	0	0	0
44	SLD 10	-0.15	0.01	10.13	0	0	0
44	SLD 11	-0.27	-0.61	10.3	0	0	0
44	SLD 12	-0.26	-0.59	10.3	0	0	0
44	SLD 13	-0.64	-0.21	10.24	0	0	0
44	SLD 14	-0.63	-0.19	10.24	0	0	0
44	SLD 15	-0.68	-0.39	10.29	0	0	0
44	SLD 16	-0.66	-0.37	10.29	0	0	0
44	SLV 1	1.49	-0.16	9.97	0	0	0
44	SLV 2	1.52	-0.11	9.96	0	0	0
44	SLV 3	1.42	-0.57	10.09	0	0	0
44	SLV 4	1.44	-0.52	10.08	0	0	0
44	SLV 5	0.54	0.35	9.95	0	0	0
44	SLV 6	0.56	0.38	9.94	0	0	0
44	SLV 7	0.3	-1.01	10.34	0	0	0
44	SLV 8	0.31	-0.98	10.34	0	0	0
44	SLV 9	-0.35	0.37	10.05	0	0	0
44	SLV 10	-0.33	0.4	10.04	0	0	0
44	SLV 11	-0.6	-0.99	10.44	0	0	0
44	SLV 12	-0.58	-0.96	10.44	0	0	0
44	SLV 13	-1.48	-0.09	10.31	0	0	0
44	SLV 14	-1.45	-0.04	10.3	0	0	0
44	SLV 15	-1.55	-0.5	10.42	0	0	0
44	SLV 16	-1.52	-0.45	10.42	0	0	0
45	SLU 1	-0.01	-0.2	6.56	0	0	0
45	SLU 2	-0.01	-0.21	6.56	0	0	0
45	SLU 3	-0.01	-0.2	6.71	0	0	0
45	SLU 4	-0.01	-0.21	6.71	0	0	0
45	SLU 5	-0.01	-0.21	6.65	0	0	0
45	SLU 6	-0.02	-0.2	6.8	0	0	0
45	SLU 7	-0.02	-0.21	6.8	0	0	0
45	SLU 8	-0.02	-0.2	6.74	0	0	0
45	SLU 9	-0.02	-0.21	6.74	0	0	0
45	SLU 10	-0.03	-0.21	7.39	0	0	0
45	SLU 11	-0.03	-0.21	7.54	0	0	0
45	SLU 12	-0.03	-0.21	7.54	0	0	0
45	SLU 13	-0.03	-0.21	7.47	0	0	0
45	SLU 14	-0.03	-0.21	7.62	0	0	0
45	SLU 15	-0.03	-0.21	7.63	0	0	0
45	SLU 16	-0.03	-0.21	7.56	0	0	0
45	SLU 17	-0.03	-0.21	7.56	0	0	0
45	SLU 18	-0.03	-0.21	7.74	0	0	0
45	SLU 19	-0.03	-0.21	7.74	0	0	0
45	SLU 20	-0.04	-0.21	7.83	0	0	0
45	SLU 21	-0.04	-0.21	7.83	0	0	0
45	SLU 22	-0.01	-0.2	7.3	0	0	0
45	SLU 23	-0.01	-0.2	7.3	0	0	0
45	SLU 24	-0.01	-0.2	7.45	0	0	0
45	SLU 25	-0.01	-0.2	7.45	0	0	0
45	SLU 26	-0.02	-0.2	7.39	0	0	0
45	SLU 27	-0.02	-0.2	7.54	0	0	0
45	SLU 28	-0.02	-0.2	7.54	0	0	0
45	SLU 29	-0.02	-0.2	7.48	0	0	0
45	SLU 30	-0.02	-0.2	7.48	0	0	0
45	SLU 31	-0.03	-0.21	8.12	0	0	0
45	SLU 32	-0.03	-0.2	8.27	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
45	SLU 33	-0.03	-0.21	8.27	0	0	0
45	SLU 34	-0.03	-0.21	8.21	0	0	0
45	SLU 35	-0.04	-0.2	8.36	0	0	0
45	SLU 36	-0.04	-0.2	8.36	0	0	0
45	SLU 37	-0.04	-0.2	8.3	0	0	0
45	SLU 38	-0.04	-0.2	8.3	0	0	0
45	SLU 39	-0.04	-0.21	8.47	0	0	0
45	SLU 40	-0.04	-0.21	8.48	0	0	0
45	SLU 41	-0.04	-0.21	8.56	0	0	0
45	SLU 42	-0.04	-0.21	8.56	0	0	0
45	SLU 43	-0.01	-0.27	8.27	0	0	0
45	SLU 44	-0.01	-0.27	8.28	0	0	0
45	SLU 45	-0.01	-0.27	8.43	0	0	0
45	SLU 46	-0.01	-0.27	8.43	0	0	0
45	SLU 47	-0.02	-0.27	8.36	0	0	0
45	SLU 48	-0.02	-0.27	8.52	0	0	0
45	SLU 49	-0.02	-0.27	8.52	0	0	0
45	SLU 50	-0.02	-0.27	8.45	0	0	0
45	SLU 51	-0.02	-0.27	8.45	0	0	0
45	SLU 52	-0.03	-0.28	9.1	0	0	0
45	SLU 53	-0.03	-0.27	9.25	0	0	0
45	SLU 54	-0.03	-0.28	9.25	0	0	0
45	SLU 55	-0.03	-0.28	9.19	0	0	0
45	SLU 56	-0.04	-0.27	9.34	0	0	0
45	SLU 57	-0.04	-0.28	9.34	0	0	0
45	SLU 58	-0.04	-0.27	9.28	0	0	0
45	SLU 59	-0.04	-0.27	9.28	0	0	0
45	SLU 60	-0.04	-0.28	9.45	0	0	0
45	SLU 61	-0.04	-0.28	9.45	0	0	0
45	SLU 62	-0.04	-0.28	9.54	0	0	0
45	SLU 63	-0.04	-0.28	9.54	0	0	0
45	SLU 64	-0.01	-0.26	9.01	0	0	0
45	SLU 65	-0.01	-0.26	9.01	0	0	0
45	SLU 66	-0.02	-0.26	9.16	0	0	0
45	SLU 67	-0.02	-0.26	9.16	0	0	0
45	SLU 68	-0.02	-0.26	9.1	0	0	0
45	SLU 69	-0.02	-0.26	9.25	0	0	0
45	SLU 70	-0.02	-0.26	9.25	0	0	0
45	SLU 71	-0.02	-0.26	9.19	0	0	0
45	SLU 72	-0.02	-0.26	9.19	0	0	0
45	SLU 73	-0.03	-0.27	9.84	0	0	0
45	SLU 74	-0.03	-0.27	9.99	0	0	0
45	SLU 75	-0.03	-0.27	9.99	0	0	0
45	SLU 76	-0.03	-0.27	9.93	0	0	0
45	SLU 77	-0.04	-0.27	10.08	0	0	0
45	SLU 78	-0.04	-0.27	10.08	0	0	0
45	SLU 79	-0.04	-0.27	10.01	0	0	0
45	SLU 80	-0.04	-0.27	10.02	0	0	0
45	SLU 81	-0.04	-0.27	10.19	0	0	0
45	SLU 82	-0.04	-0.27	10.19	0	0	0
45	SLU 83	-0.04	-0.27	10.28	0	0	0
45	SLU 84	-0.04	-0.27	10.28	0	0	0
45	SLE RA 1	-0.01	-0.2	6.77	0	0	0
45	SLE RA 2	-0.01	-0.2	6.77	0	0	0
45	SLE RA 3	-0.01	-0.2	6.87	0	0	0
45	SLE RA 4	-0.01	-0.2	6.87	0	0	0
45	SLE RA 5	-0.01	-0.2	6.83	0	0	0
45	SLE RA 6	-0.01	-0.2	6.93	0	0	0
45	SLE RA 7	-0.01	-0.2	6.93	0	0	0
45	SLE RA 8	-0.02	-0.2	6.89	0	0	0
45	SLE RA 9	-0.02	-0.2	6.89	0	0	0
45	SLE RA 10	-0.02	-0.21	7.32	0	0	0
45	SLE RA 11	-0.02	-0.21	7.42	0	0	0
45	SLE RA 12	-0.02	-0.21	7.42	0	0	0
45	SLE RA 13	-0.02	-0.21	7.38	0	0	0
45	SLE RA 14	-0.03	-0.21	7.48	0	0	0
45	SLE RA 15	-0.03	-0.21	7.48	0	0	0
45	SLE RA 16	-0.03	-0.21	7.44	0	0	0
45	SLE RA 17	-0.03	-0.21	7.44	0	0	0
45	SLE RA 18	-0.03	-0.21	7.56	0	0	0
45	SLE RA 19	-0.03	-0.21	7.56	0	0	0
45	SLE RA 20	-0.03	-0.21	7.61	0	0	0
45	SLE RA 21	-0.03	-0.21	7.62	0	0	0
45	SLE FR 1	-0.01	-0.2	6.77	0	0	0
45	SLE FR 2	-0.01	-0.2	6.77	0	0	0
45	SLE FR 3	-0.01	-0.2	6.79	0	0	0
45	SLE FR 4	-0.01	-0.2	7.01	0	0	0
45	SLE FR 5	-0.02	-0.2	7.03	0	0	0
45	SLE FR 6	-0.02	-0.2	7.16	0	0	0
45	SLE QP 1	-0.01	-0.2	6.77	0	0	0
45	SLE QP 2	-0.01	-0.2	7.01	0	0	0
45	SLD 1	0.43	-0.16	6.91	0	0	0
45	SLD 2	0.44	-0.14	6.9	0	0	0
45	SLD 3	0.41	-0.28	6.94	0	0	0
45	SLD 4	0.42	-0.27	6.94	0	0	0
45	SLD 5	0.15	-0.01	6.92	0	0	0
45	SLD 6	0.16	0	6.92	0	0	0
45	SLD 7	0.08	-0.42	7.04	0	0	0
45	SLD 8	0.08	-0.41	7.04	0	0	0
45	SLD 9	-0.11	0	6.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
45	SLD 10	-0.11	0.01	6.97	0	0	0
45	SLD 11	-0.19	-0.41	7.09	0	0	0
45	SLD 12	-0.18	-0.4	7.09	0	0	0
45	SLD 13	-0.45	-0.14	7.07	0	0	0
45	SLD 14	-0.44	-0.12	7.07	0	0	0
45	SLD 15	-0.47	-0.26	7.11	0	0	0
45	SLD 16	-0.46	-0.25	7.1	0	0	0
45	SLV 1	1.03	-0.11	6.78	0	0	0
45	SLV 2	1.05	-0.07	6.77	0	0	0
45	SLV 3	0.98	-0.39	6.86	0	0	0
45	SLV 4	1	-0.35	6.85	0	0	0
45	SLV 5	0.37	0.24	6.81	0	0	0
45	SLV 6	0.39	0.27	6.81	0	0	0
45	SLV 7	0.2	-0.69	7.09	0	0	0
45	SLV 8	0.21	-0.66	7.09	0	0	0
45	SLV 9	-0.24	0.26	6.93	0	0	0
45	SLV 10	-0.23	0.28	6.92	0	0	0
45	SLV 11	-0.42	-0.67	7.21	0	0	0
45	SLV 12	-0.4	-0.65	7.2	0	0	0
45	SLV 13	-1.03	-0.06	7.16	0	0	0
45	SLV 14	-1.01	-0.02	7.15	0	0	0
45	SLV 15	-1.08	-0.34	7.25	0	0	0
45	SLV 16	-1.06	-0.3	7.24	0	0	0
46	SLU 1	-0.01	-0.24	8.08	0	0	0
46	SLU 2	-0.01	-0.24	8.08	0	0	0
46	SLU 3	-0.02	-0.24	8.27	0	0	0
46	SLU 4	-0.02	-0.24	8.27	0	0	0
46	SLU 5	-0.02	-0.24	8.19	0	0	0
46	SLU 6	-0.02	-0.24	8.37	0	0	0
46	SLU 7	-0.02	-0.24	8.37	0	0	0
46	SLU 8	-0.02	-0.24	8.29	0	0	0
46	SLU 9	-0.02	-0.24	8.3	0	0	0
46	SLU 10	-0.03	-0.25	9.09	0	0	0
46	SLU 11	-0.04	-0.24	9.27	0	0	0
46	SLU 12	-0.04	-0.25	9.27	0	0	0
46	SLU 13	-0.04	-0.25	9.19	0	0	0
46	SLU 14	-0.04	-0.24	9.37	0	0	0
46	SLU 15	-0.04	-0.24	9.38	0	0	0
46	SLU 16	-0.04	-0.24	9.3	0	0	0
46	SLU 17	-0.04	-0.24	9.3	0	0	0
46	SLU 18	-0.04	-0.25	9.51	0	0	0
46	SLU 19	-0.04	-0.25	9.52	0	0	0
46	SLU 20	-0.05	-0.24	9.62	0	0	0
46	SLU 21	-0.05	-0.25	9.62	0	0	0
46	SLU 22	-0.01	-0.23	8.99	0	0	0
46	SLU 23	-0.01	-0.23	8.99	0	0	0
46	SLU 24	-0.02	-0.23	9.18	0	0	0
46	SLU 25	-0.02	-0.23	9.18	0	0	0
46	SLU 26	-0.02	-0.23	9.1	0	0	0
46	SLU 27	-0.02	-0.23	9.28	0	0	0
46	SLU 28	-0.02	-0.23	9.28	0	0	0
46	SLU 29	-0.03	-0.23	9.2	0	0	0
46	SLU 30	-0.03	-0.23	9.2	0	0	0
46	SLU 31	-0.04	-0.24	9.99	0	0	0
46	SLU 32	-0.04	-0.23	10.18	0	0	0
46	SLU 33	-0.04	-0.24	10.18	0	0	0
46	SLU 34	-0.04	-0.24	10.1	0	0	0
46	SLU 35	-0.05	-0.23	10.28	0	0	0
46	SLU 36	-0.05	-0.23	10.28	0	0	0
46	SLU 37	-0.05	-0.23	10.21	0	0	0
46	SLU 38	-0.05	-0.23	10.21	0	0	0
46	SLU 39	-0.04	-0.24	10.42	0	0	0
46	SLU 40	-0.04	-0.24	10.42	0	0	0
46	SLU 41	-0.05	-0.23	10.53	0	0	0
46	SLU 42	-0.05	-0.24	10.53	0	0	0
46	SLU 43	-0.01	-0.31	10.2	0	0	0
46	SLU 44	-0.01	-0.32	10.2	0	0	0
46	SLU 45	-0.02	-0.31	10.38	0	0	0
46	SLU 46	-0.02	-0.31	10.38	0	0	0
46	SLU 47	-0.02	-0.32	10.3	0	0	0
46	SLU 48	-0.02	-0.31	10.49	0	0	0
46	SLU 49	-0.02	-0.31	10.49	0	0	0
46	SLU 50	-0.02	-0.31	10.41	0	0	0
46	SLU 51	-0.02	-0.31	10.41	0	0	0
46	SLU 52	-0.04	-0.32	11.2	0	0	0
46	SLU 53	-0.04	-0.32	11.38	0	0	0
46	SLU 54	-0.04	-0.32	11.38	0	0	0
46	SLU 55	-0.04	-0.32	11.31	0	0	0
46	SLU 56	-0.05	-0.32	11.49	0	0	0
46	SLU 57	-0.05	-0.32	11.49	0	0	0
46	SLU 58	-0.05	-0.32	11.41	0	0	0
46	SLU 59	-0.05	-0.32	11.41	0	0	0
46	SLU 60	-0.04	-0.32	11.63	0	0	0
46	SLU 61	-0.04	-0.32	11.63	0	0	0
46	SLU 62	-0.05	-0.32	11.73	0	0	0
46	SLU 63	-0.05	-0.32	11.73	0	0	0
46	SLU 64	-0.02	-0.3	11.11	0	0	0
46	SLU 65	-0.02	-0.31	11.11	0	0	0
46	SLU 66	-0.02	-0.3	11.29	0	0	0
46	SLU 67	-0.02	-0.31	11.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
46	SLU 68	-0.02	-0.31	11.21	0	0	0
46	SLU 69	-0.03	-0.3	11.39	0	0	0
46	SLU 70	-0.03	-0.3	11.39	0	0	0
46	SLU 71	-0.03	-0.3	11.32	0	0	0
46	SLU 72	-0.03	-0.3	11.32	0	0	0
46	SLU 73	-0.04	-0.31	12.11	0	0	0
46	SLU 74	-0.04	-0.31	12.29	0	0	0
46	SLU 75	-0.04	-0.31	12.29	0	0	0
46	SLU 76	-0.04	-0.31	12.21	0	0	0
46	SLU 77	-0.05	-0.31	12.4	0	0	0
46	SLU 78	-0.05	-0.31	12.4	0	0	0
46	SLU 79	-0.05	-0.31	12.32	0	0	0
46	SLU 80	-0.05	-0.31	12.32	0	0	0
46	SLU 81	-0.05	-0.31	12.54	0	0	0
46	SLU 82	-0.05	-0.31	12.54	0	0	0
46	SLU 83	-0.05	-0.31	12.64	0	0	0
46	SLU 84	-0.05	-0.31	12.64	0	0	0
46	SLE RA 1	-0.01	-0.24	8.34	0	0	0
46	SLE RA 2	-0.01	-0.24	8.34	0	0	0
46	SLE RA 3	-0.02	-0.24	8.47	0	0	0
46	SLE RA 4	-0.02	-0.24	8.47	0	0	0
46	SLE RA 5	-0.02	-0.24	8.41	0	0	0
46	SLE RA 6	-0.02	-0.23	8.54	0	0	0
46	SLE RA 7	-0.02	-0.24	8.54	0	0	0
46	SLE RA 8	-0.02	-0.23	8.48	0	0	0
46	SLE RA 9	-0.02	-0.24	8.48	0	0	0
46	SLE RA 10	-0.03	-0.24	9.01	0	0	0
46	SLE RA 11	-0.03	-0.24	9.13	0	0	0
46	SLE RA 12	-0.03	-0.24	9.13	0	0	0
46	SLE RA 13	-0.03	-0.24	9.08	0	0	0
46	SLE RA 14	-0.03	-0.24	9.2	0	0	0
46	SLE RA 15	-0.03	-0.24	9.2	0	0	0
46	SLE RA 16	-0.03	-0.24	9.15	0	0	0
46	SLE RA 17	-0.03	-0.24	9.15	0	0	0
46	SLE RA 18	-0.03	-0.24	9.3	0	0	0
46	SLE RA 19	-0.03	-0.24	9.3	0	0	0
46	SLE RA 20	-0.04	-0.24	9.37	0	0	0
46	SLE RA 21	-0.04	-0.24	9.37	0	0	0
46	SLE FR 1	-0.01	-0.24	8.34	0	0	0
46	SLE FR 2	-0.01	-0.24	8.34	0	0	0
46	SLE FR 3	-0.01	-0.23	8.37	0	0	0
46	SLE FR 4	-0.02	-0.24	8.63	0	0	0
46	SLE FR 5	-0.02	-0.24	8.66	0	0	0
46	SLE FR 6	-0.02	-0.24	8.82	0	0	0
46	SLE QP 1	-0.01	-0.24	8.34	0	0	0
46	SLE QP 2	-0.02	-0.24	8.63	0	0	0
46	SLD 1	0.54	-0.19	8.43	0	0	0
46	SLD 2	0.55	-0.16	8.42	0	0	0
46	SLD 3	0.51	-0.34	8.47	0	0	0
46	SLD 4	0.52	-0.31	8.46	0	0	0
46	SLD 5	0.19	0	8.51	0	0	0
46	SLD 6	0.2	0.02	8.5	0	0	0
46	SLD 7	0.1	-0.5	8.64	0	0	0
46	SLD 8	0.1	-0.48	8.64	0	0	0
46	SLD 9	-0.14	0.01	8.62	0	0	0
46	SLD 10	-0.13	0.03	8.61	0	0	0
46	SLD 11	-0.23	-0.49	8.75	0	0	0
46	SLD 12	-0.23	-0.47	8.75	0	0	0
46	SLD 13	-0.56	-0.16	8.8	0	0	0
46	SLD 14	-0.55	-0.13	8.79	0	0	0
46	SLD 15	-0.58	-0.31	8.84	0	0	0
46	SLD 16	-0.57	-0.28	8.83	0	0	0
46	SLV 1	1.28	-0.13	8.16	0	0	0
46	SLV 2	1.3	-0.07	8.14	0	0	0
46	SLV 3	1.22	-0.47	8.25	0	0	0
46	SLV 4	1.24	-0.41	8.24	0	0	0
46	SLV 5	0.46	0.3	8.35	0	0	0
46	SLV 6	0.48	0.34	8.34	0	0	0
46	SLV 7	0.25	-0.83	8.66	0	0	0
46	SLV 8	0.27	-0.79	8.65	0	0	0
46	SLV 9	-0.3	0.32	8.61	0	0	0
46	SLV 10	-0.29	0.36	8.6	0	0	0
46	SLV 11	-0.52	-0.81	8.92	0	0	0
46	SLV 12	-0.5	-0.77	8.91	0	0	0
46	SLV 13	-1.28	-0.07	9.02	0	0	0
46	SLV 14	-1.25	0	9	0	0	0
46	SLV 15	-1.34	-0.4	9.11	0	0	0
46	SLV 16	-1.32	-0.34	9.1	0	0	0
47	SLU 1	-0.01	-0.13	4.66	0	0	0
47	SLU 2	-0.01	-0.13	4.66	0	0	0
47	SLU 3	-0.01	-0.13	4.77	0	0	0
47	SLU 4	-0.01	-0.13	4.77	0	0	0
47	SLU 5	-0.01	-0.13	4.72	0	0	0
47	SLU 6	-0.01	-0.13	4.83	0	0	0
47	SLU 7	-0.01	-0.13	4.83	0	0	0
47	SLU 8	-0.01	-0.13	4.78	0	0	0
47	SLU 9	-0.01	-0.13	4.78	0	0	0
47	SLU 10	-0.02	-0.14	5.24	0	0	0
47	SLU 11	-0.02	-0.13	5.34	0	0	0
47	SLU 12	-0.02	-0.14	5.34	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
47	SLU 13	-0.02	-0.14	5.29	0	0	0
47	SLU 14	-0.02	-0.13	5.4	0	0	0
47	SLU 15	-0.02	-0.13	5.4	0	0	0
47	SLU 16	-0.03	-0.13	5.35	0	0	0
47	SLU 17	-0.03	-0.13	5.35	0	0	0
47	SLU 18	-0.02	-0.14	5.48	0	0	0
47	SLU 19	-0.02	-0.14	5.48	0	0	0
47	SLU 20	-0.03	-0.13	5.54	0	0	0
47	SLU 21	-0.03	-0.14	5.54	0	0	0
47	SLU 22	-0.01	-0.13	5.19	0	0	0
47	SLU 23	-0.01	-0.13	5.19	0	0	0
47	SLU 24	-0.01	-0.13	5.29	0	0	0
47	SLU 25	-0.01	-0.13	5.29	0	0	0
47	SLU 26	-0.01	-0.13	5.25	0	0	0
47	SLU 27	-0.01	-0.13	5.35	0	0	0
47	SLU 28	-0.01	-0.13	5.35	0	0	0
47	SLU 29	-0.01	-0.13	5.3	0	0	0
47	SLU 30	-0.01	-0.13	5.31	0	0	0
47	SLU 31	-0.02	-0.13	5.76	0	0	0
47	SLU 32	-0.02	-0.13	5.86	0	0	0
47	SLU 33	-0.02	-0.13	5.86	0	0	0
47	SLU 34	-0.02	-0.13	5.82	0	0	0
47	SLU 35	-0.03	-0.13	5.92	0	0	0
47	SLU 36	-0.03	-0.13	5.92	0	0	0
47	SLU 37	-0.03	-0.13	5.88	0	0	0
47	SLU 38	-0.03	-0.13	5.88	0	0	0
47	SLU 39	-0.03	-0.13	6	0	0	0
47	SLU 40	-0.03	-0.13	6	0	0	0
47	SLU 41	-0.03	-0.13	6.06	0	0	0
47	SLU 42	-0.03	-0.13	6.06	0	0	0
47	SLU 43	-0.01	-0.17	5.88	0	0	0
47	SLU 44	-0.01	-0.18	5.88	0	0	0
47	SLU 45	-0.01	-0.17	5.99	0	0	0
47	SLU 46	-0.01	-0.17	5.99	0	0	0
47	SLU 47	-0.01	-0.17	5.94	0	0	0
47	SLU 48	-0.01	-0.17	6.05	0	0	0
47	SLU 49	-0.01	-0.17	6.05	0	0	0
47	SLU 50	-0.01	-0.17	6	0	0	0
47	SLU 51	-0.01	-0.17	6	0	0	0
47	SLU 52	-0.02	-0.18	6.45	0	0	0
47	SLU 53	-0.02	-0.18	6.56	0	0	0
47	SLU 54	-0.02	-0.18	6.56	0	0	0
47	SLU 55	-0.02	-0.18	6.51	0	0	0
47	SLU 56	-0.03	-0.18	6.62	0	0	0
47	SLU 57	-0.03	-0.18	6.62	0	0	0
47	SLU 58	-0.03	-0.18	6.57	0	0	0
47	SLU 59	-0.03	-0.18	6.57	0	0	0
47	SLU 60	-0.03	-0.18	6.7	0	0	0
47	SLU 61	-0.03	-0.18	6.7	0	0	0
47	SLU 62	-0.03	-0.18	6.76	0	0	0
47	SLU 63	-0.03	-0.18	6.76	0	0	0
47	SLU 64	-0.01	-0.17	6.41	0	0	0
47	SLU 65	-0.01	-0.17	6.41	0	0	0
47	SLU 66	-0.01	-0.17	6.51	0	0	0
47	SLU 67	-0.01	-0.17	6.51	0	0	0
47	SLU 68	-0.01	-0.17	6.47	0	0	0
47	SLU 69	-0.02	-0.17	6.57	0	0	0
47	SLU 70	-0.02	-0.17	6.57	0	0	0
47	SLU 71	-0.02	-0.17	6.52	0	0	0
47	SLU 72	-0.02	-0.17	6.52	0	0	0
47	SLU 73	-0.02	-0.17	6.98	0	0	0
47	SLU 74	-0.02	-0.17	7.08	0	0	0
47	SLU 75	-0.02	-0.17	7.08	0	0	0
47	SLU 76	-0.03	-0.17	7.04	0	0	0
47	SLU 77	-0.03	-0.17	7.14	0	0	0
47	SLU 78	-0.03	-0.17	7.14	0	0	0
47	SLU 79	-0.03	-0.17	7.1	0	0	0
47	SLU 80	-0.03	-0.17	7.1	0	0	0
47	SLU 81	-0.03	-0.17	7.22	0	0	0
47	SLU 82	-0.03	-0.17	7.22	0	0	0
47	SLU 83	-0.03	-0.17	7.28	0	0	0
47	SLU 84	-0.03	-0.17	7.28	0	0	0
47	SLE RA 1	-0.01	-0.13	4.81	0	0	0
47	SLE RA 2	-0.01	-0.13	4.81	0	0	0
47	SLE RA 3	-0.01	-0.13	4.88	0	0	0
47	SLE RA 4	-0.01	-0.13	4.88	0	0	0
47	SLE RA 5	-0.01	-0.13	4.85	0	0	0
47	SLE RA 6	-0.01	-0.13	4.92	0	0	0
47	SLE RA 7	-0.01	-0.13	4.92	0	0	0
47	SLE RA 8	-0.01	-0.13	4.89	0	0	0
47	SLE RA 9	-0.01	-0.13	4.89	0	0	0
47	SLE RA 10	-0.02	-0.13	5.19	0	0	0
47	SLE RA 11	-0.02	-0.13	5.26	0	0	0
47	SLE RA 12	-0.02	-0.13	5.26	0	0	0
47	SLE RA 13	-0.02	-0.13	5.23	0	0	0
47	SLE RA 14	-0.02	-0.13	5.3	0	0	0
47	SLE RA 15	-0.02	-0.13	5.3	0	0	0
47	SLE RA 16	-0.02	-0.13	5.27	0	0	0
47	SLE RA 17	-0.02	-0.13	5.27	0	0	0
47	SLE RA 18	-0.02	-0.13	5.36	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
47	SLE RA 19	-0.02	-0.13	5.36	0	0	0
47	SLE RA 20	-0.02	-0.13	5.4	0	0	0
47	SLE RA 21	-0.02	-0.13	5.4	0	0	0
47	SLE FR 1	-0.01	-0.13	4.81	0	0	0
47	SLE FR 2	-0.01	-0.13	4.81	0	0	0
47	SLE FR 3	-0.01	-0.13	4.83	0	0	0
47	SLE FR 4	-0.01	-0.13	4.98	0	0	0
47	SLE FR 5	-0.01	-0.13	4.99	0	0	0
47	SLE FR 6	-0.01	-0.13	5.08	0	0	0
47	SLE QP 1	-0.01	-0.13	4.81	0	0	0
47	SLE QP 2	-0.01	-0.13	4.98	0	0	0
47	SLD 1	0.31	-0.11	4.83	0	0	0
47	SLD 2	0.32	-0.09	4.82	0	0	0
47	SLD 3	0.3	-0.19	4.85	0	0	0
47	SLD 4	0.3	-0.17	4.84	0	0	0
47	SLD 5	0.11	0	4.9	0	0	0
47	SLD 6	0.11	0.02	4.89	0	0	0
47	SLD 7	0.06	-0.28	4.97	0	0	0
47	SLD 8	0.06	-0.27	4.97	0	0	0
47	SLD 9	-0.08	0.01	4.98	0	0	0
47	SLD 10	-0.08	0.02	4.98	0	0	0
47	SLD 11	-0.14	-0.28	5.06	0	0	0
47	SLD 12	-0.13	-0.26	5.05	0	0	0
47	SLD 13	-0.32	-0.09	5.11	0	0	0
47	SLD 14	-0.32	-0.07	5.1	0	0	0
47	SLD 15	-0.34	-0.17	5.13	0	0	0
47	SLD 16	-0.33	-0.16	5.13	0	0	0
47	SLV 1	0.74	-0.08	4.63	0	0	0
47	SLV 2	0.76	-0.03	4.61	0	0	0
47	SLV 3	0.71	-0.27	4.68	0	0	0
47	SLV 4	0.72	-0.23	4.67	0	0	0
47	SLV 5	0.27	0.17	4.79	0	0	0
47	SLV 6	0.28	0.2	4.78	0	0	0
47	SLV 7	0.15	-0.47	4.97	0	0	0
47	SLV 8	0.15	-0.45	4.96	0	0	0
47	SLV 9	-0.18	0.18	4.99	0	0	0
47	SLV 10	-0.17	0.21	4.98	0	0	0
47	SLV 11	-0.3	-0.46	5.17	0	0	0
47	SLV 12	-0.29	-0.43	5.16	0	0	0
47	SLV 13	-0.74	-0.03	5.28	0	0	0
47	SLV 14	-0.73	0.01	5.27	0	0	0
47	SLV 15	-0.78	-0.23	5.34	0	0	0
47	SLV 16	-0.76	-0.18	5.33	0	0	0
48	SLU 1	-0.01	-0.2	6.52	0	0	0
48	SLU 2	-0.01	-0.2	6.53	0	0	0
48	SLU 3	-0.01	-0.2	6.67	0	0	0
48	SLU 4	-0.01	-0.2	6.67	0	0	0
48	SLU 5	-0.01	-0.2	6.61	0	0	0
48	SLU 6	-0.02	-0.2	6.76	0	0	0
48	SLU 7	-0.02	-0.2	6.76	0	0	0
48	SLU 8	-0.02	-0.2	6.7	0	0	0
48	SLU 9	-0.02	-0.2	6.7	0	0	0
48	SLU 10	-0.03	-0.21	7.34	0	0	0
48	SLU 11	-0.03	-0.2	7.49	0	0	0
48	SLU 12	-0.03	-0.2	7.49	0	0	0
48	SLU 13	-0.03	-0.2	7.43	0	0	0
48	SLU 14	-0.03	-0.2	7.58	0	0	0
48	SLU 15	-0.03	-0.2	7.58	0	0	0
48	SLU 16	-0.04	-0.2	7.51	0	0	0
48	SLU 17	-0.04	-0.2	7.51	0	0	0
48	SLU 18	-0.03	-0.2	7.69	0	0	0
48	SLU 19	-0.03	-0.21	7.69	0	0	0
48	SLU 20	-0.04	-0.2	7.77	0	0	0
48	SLU 21	-0.04	-0.21	7.78	0	0	0
48	SLU 22	-0.01	-0.19	7.26	0	0	0
48	SLU 23	-0.01	-0.19	7.26	0	0	0
48	SLU 24	-0.02	-0.19	7.41	0	0	0
48	SLU 25	-0.02	-0.19	7.41	0	0	0
48	SLU 26	-0.02	-0.19	7.35	0	0	0
48	SLU 27	-0.02	-0.19	7.49	0	0	0
48	SLU 28	-0.02	-0.19	7.49	0	0	0
48	SLU 29	-0.02	-0.19	7.43	0	0	0
48	SLU 30	-0.02	-0.19	7.43	0	0	0
48	SLU 31	-0.03	-0.2	8.07	0	0	0
48	SLU 32	-0.03	-0.2	8.22	0	0	0
48	SLU 33	-0.03	-0.2	8.22	0	0	0
48	SLU 34	-0.03	-0.2	8.16	0	0	0
48	SLU 35	-0.04	-0.2	8.31	0	0	0
48	SLU 36	-0.04	-0.2	8.31	0	0	0
48	SLU 37	-0.04	-0.19	8.25	0	0	0
48	SLU 38	-0.04	-0.2	8.25	0	0	0
48	SLU 39	-0.04	-0.2	8.42	0	0	0
48	SLU 40	-0.04	-0.2	8.42	0	0	0
48	SLU 41	-0.04	-0.2	8.51	0	0	0
48	SLU 42	-0.04	-0.2	8.51	0	0	0
48	SLU 43	-0.01	-0.26	8.23	0	0	0
48	SLU 44	-0.01	-0.26	8.23	0	0	0
48	SLU 45	-0.02	-0.26	8.38	0	0	0
48	SLU 46	-0.02	-0.26	8.38	0	0	0
48	SLU 47	-0.02	-0.26	8.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
48	SLU 48	-0.02	-0.26	8.47	0	0	0
48	SLU 49	-0.02	-0.26	8.47	0	0	0
48	SLU 50	-0.02	-0.26	8.4	0	0	0
48	SLU 51	-0.02	-0.26	8.4	0	0	0
48	SLU 52	-0.03	-0.27	9.05	0	0	0
48	SLU 53	-0.03	-0.26	9.19	0	0	0
48	SLU 54	-0.03	-0.27	9.19	0	0	0
48	SLU 55	-0.03	-0.27	9.13	0	0	0
48	SLU 56	-0.04	-0.26	9.28	0	0	0
48	SLU 57	-0.04	-0.27	9.28	0	0	0
48	SLU 58	-0.04	-0.26	9.22	0	0	0
48	SLU 59	-0.04	-0.27	9.22	0	0	0
48	SLU 60	-0.04	-0.27	9.39	0	0	0
48	SLU 61	-0.04	-0.27	9.39	0	0	0
48	SLU 62	-0.04	-0.27	9.48	0	0	0
48	SLU 63	-0.04	-0.27	9.48	0	0	0
48	SLU 64	-0.01	-0.25	8.96	0	0	0
48	SLU 65	-0.01	-0.25	8.96	0	0	0
48	SLU 66	-0.02	-0.25	9.11	0	0	0
48	SLU 67	-0.02	-0.25	9.11	0	0	0
48	SLU 68	-0.02	-0.25	9.05	0	0	0
48	SLU 69	-0.02	-0.25	9.2	0	0	0
48	SLU 70	-0.02	-0.25	9.2	0	0	0
48	SLU 71	-0.02	-0.25	9.14	0	0	0
48	SLU 72	-0.02	-0.25	9.14	0	0	0
48	SLU 73	-0.03	-0.26	9.78	0	0	0
48	SLU 74	-0.03	-0.26	9.93	0	0	0
48	SLU 75	-0.03	-0.26	9.93	0	0	0
48	SLU 76	-0.04	-0.26	9.87	0	0	0
48	SLU 77	-0.04	-0.26	10.01	0	0	0
48	SLU 78	-0.04	-0.26	10.02	0	0	0
48	SLU 79	-0.04	-0.26	9.95	0	0	0
48	SLU 80	-0.04	-0.26	9.95	0	0	0
48	SLU 81	-0.04	-0.26	10.13	0	0	0
48	SLU 82	-0.04	-0.26	10.13	0	0	0
48	SLU 83	-0.04	-0.26	10.21	0	0	0
48	SLU 84	-0.04	-0.26	10.22	0	0	0
48	SLE RA 1	-0.01	-0.2	6.73	0	0	0
48	SLE RA 2	-0.01	-0.2	6.73	0	0	0
48	SLE RA 3	-0.01	-0.2	6.83	0	0	0
48	SLE RA 4	-0.01	-0.2	6.83	0	0	0
48	SLE RA 5	-0.01	-0.2	6.79	0	0	0
48	SLE RA 6	-0.02	-0.2	6.89	0	0	0
48	SLE RA 7	-0.02	-0.2	6.89	0	0	0
48	SLE RA 8	-0.02	-0.2	6.85	0	0	0
48	SLE RA 9	-0.02	-0.2	6.85	0	0	0
48	SLE RA 10	-0.02	-0.2	7.28	0	0	0
48	SLE RA 11	-0.02	-0.2	7.38	0	0	0
48	SLE RA 12	-0.02	-0.2	7.38	0	0	0
48	SLE RA 13	-0.02	-0.2	7.34	0	0	0
48	SLE RA 14	-0.03	-0.2	7.43	0	0	0
48	SLE RA 15	-0.03	-0.2	7.43	0	0	0
48	SLE RA 16	-0.03	-0.2	7.39	0	0	0
48	SLE RA 17	-0.03	-0.2	7.39	0	0	0
48	SLE RA 18	-0.03	-0.2	7.51	0	0	0
48	SLE RA 19	-0.03	-0.2	7.51	0	0	0
48	SLE RA 20	-0.03	-0.2	7.57	0	0	0
48	SLE RA 21	-0.03	-0.2	7.57	0	0	0
48	SLE FR 1	-0.01	-0.2	6.73	0	0	0
48	SLE FR 2	-0.01	-0.2	6.73	0	0	0
48	SLE FR 3	-0.01	-0.2	6.76	0	0	0
48	SLE FR 4	-0.02	-0.2	6.97	0	0	0
48	SLE FR 5	-0.02	-0.2	6.99	0	0	0
48	SLE FR 6	-0.02	-0.2	7.12	0	0	0
48	SLE QP 1	-0.01	-0.2	6.73	0	0	0
48	SLE QP 2	-0.02	-0.2	6.97	0	0	0
48	SLD 1	0.43	-0.16	6.84	0	0	0
48	SLD 2	0.44	-0.14	6.83	0	0	0
48	SLD 3	0.41	-0.28	6.87	0	0	0
48	SLD 4	0.42	-0.26	6.87	0	0	0
48	SLD 5	0.15	0	6.88	0	0	0
48	SLD 6	0.16	0.01	6.87	0	0	0
48	SLD 7	0.08	-0.41	6.99	0	0	0
48	SLD 8	0.08	-0.4	6.99	0	0	0
48	SLD 9	-0.11	0	6.94	0	0	0
48	SLD 10	-0.11	0.02	6.94	0	0	0
48	SLD 11	-0.19	-0.4	7.06	0	0	0
48	SLD 12	-0.18	-0.39	7.06	0	0	0
48	SLD 13	-0.45	-0.14	7.07	0	0	0
48	SLD 14	-0.44	-0.12	7.06	0	0	0
48	SLD 15	-0.47	-0.26	7.1	0	0	0
48	SLD 16	-0.46	-0.24	7.1	0	0	0
48	SLV 1	1.03	-0.11	6.67	0	0	0
48	SLV 2	1.05	-0.06	6.65	0	0	0
48	SLV 3	0.98	-0.38	6.74	0	0	0
48	SLV 4	1	-0.34	6.73	0	0	0
48	SLV 5	0.37	0.24	6.76	0	0	0
48	SLV 6	0.39	0.27	6.75	0	0	0
48	SLV 7	0.2	-0.68	7.02	0	0	0
48	SLV 8	0.21	-0.65	7.02	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
48	SLV 9	-0.24	0.26	6.92	0	0	0
48	SLV 10	-0.23	0.29	6.91	0	0	0
48	SLV 11	-0.42	-0.66	7.18	0	0	0
48	SLV 12	-0.4	-0.63	7.18	0	0	0
48	SLV 13	-1.03	-0.06	7.2	0	0	0
48	SLV 14	-1.01	-0.01	7.19	0	0	0
48	SLV 15	-1.08	-0.33	7.28	0	0	0
48	SLV 16	-1.06	-0.29	7.27	0	0	0
49	SLU 1	-0.01	-0.21	5.96	0	0	0
49	SLU 2	-0.01	-0.22	5.96	0	0	0
49	SLU 3	-0.02	-0.21	6.11	0	0	0
49	SLU 4	-0.02	-0.22	6.11	0	0	0
49	SLU 5	-0.02	-0.22	6.05	0	0	0
49	SLU 6	-0.02	-0.21	6.19	0	0	0
49	SLU 7	-0.02	-0.22	6.2	0	0	0
49	SLU 8	-0.02	-0.21	6.14	0	0	0
49	SLU 9	-0.02	-0.21	6.14	0	0	0
49	SLU 10	-0.03	-0.23	6.74	0	0	0
49	SLU 11	-0.03	-0.22	6.88	0	0	0
49	SLU 12	-0.03	-0.22	6.88	0	0	0
49	SLU 13	-0.03	-0.23	6.83	0	0	0
49	SLU 14	-0.04	-0.22	6.97	0	0	0
49	SLU 15	-0.04	-0.22	6.97	0	0	0
49	SLU 16	-0.04	-0.22	6.92	0	0	0
49	SLU 17	-0.04	-0.22	6.92	0	0	0
49	SLU 18	-0.04	-0.23	7.07	0	0	0
49	SLU 19	-0.04	-0.23	7.07	0	0	0
49	SLU 20	-0.04	-0.23	7.16	0	0	0
49	SLU 21	-0.04	-0.23	7.16	0	0	0
49	SLU 22	-0.02	-0.21	6.64	0	0	0
49	SLU 23	-0.02	-0.21	6.64	0	0	0
49	SLU 24	-0.02	-0.21	6.78	0	0	0
49	SLU 25	-0.02	-0.21	6.78	0	0	0
49	SLU 26	-0.02	-0.21	6.73	0	0	0
49	SLU 27	-0.02	-0.21	6.87	0	0	0
49	SLU 28	-0.02	-0.21	6.87	0	0	0
49	SLU 29	-0.02	-0.21	6.81	0	0	0
49	SLU 30	-0.02	-0.21	6.82	0	0	0
49	SLU 31	-0.03	-0.22	7.42	0	0	0
49	SLU 32	-0.04	-0.22	7.56	0	0	0
49	SLU 33	-0.04	-0.22	7.56	0	0	0
49	SLU 34	-0.04	-0.22	7.51	0	0	0
49	SLU 35	-0.04	-0.22	7.65	0	0	0
49	SLU 36	-0.04	-0.22	7.65	0	0	0
49	SLU 37	-0.04	-0.22	7.59	0	0	0
49	SLU 38	-0.04	-0.22	7.59	0	0	0
49	SLU 39	-0.04	-0.22	7.75	0	0	0
49	SLU 40	-0.04	-0.22	7.75	0	0	0
49	SLU 41	-0.04	-0.22	7.84	0	0	0
49	SLU 42	-0.04	-0.22	7.84	0	0	0
49	SLU 43	-0.02	-0.28	7.52	0	0	0
49	SLU 44	-0.02	-0.28	7.52	0	0	0
49	SLU 45	-0.02	-0.28	7.66	0	0	0
49	SLU 46	-0.02	-0.28	7.66	0	0	0
49	SLU 47	-0.02	-0.28	7.61	0	0	0
49	SLU 48	-0.02	-0.28	7.75	0	0	0
49	SLU 49	-0.02	-0.28	7.75	0	0	0
49	SLU 50	-0.03	-0.28	7.7	0	0	0
49	SLU 51	-0.03	-0.28	7.7	0	0	0
49	SLU 52	-0.03	-0.29	8.3	0	0	0
49	SLU 53	-0.04	-0.29	8.44	0	0	0
49	SLU 54	-0.04	-0.29	8.44	0	0	0
49	SLU 55	-0.04	-0.29	8.39	0	0	0
49	SLU 56	-0.04	-0.29	8.53	0	0	0
49	SLU 57	-0.04	-0.29	8.53	0	0	0
49	SLU 58	-0.04	-0.29	8.47	0	0	0
49	SLU 59	-0.04	-0.29	8.47	0	0	0
49	SLU 60	-0.04	-0.29	8.63	0	0	0
49	SLU 61	-0.04	-0.29	8.63	0	0	0
49	SLU 62	-0.04	-0.29	8.72	0	0	0
49	SLU 63	-0.04	-0.29	8.72	0	0	0
49	SLU 64	-0.02	-0.27	8.19	0	0	0
49	SLU 65	-0.02	-0.28	8.2	0	0	0
49	SLU 66	-0.02	-0.27	8.34	0	0	0
49	SLU 67	-0.02	-0.28	8.34	0	0	0
49	SLU 68	-0.02	-0.28	8.29	0	0	0
49	SLU 69	-0.03	-0.27	8.43	0	0	0
49	SLU 70	-0.03	-0.28	8.43	0	0	0
49	SLU 71	-0.03	-0.27	8.37	0	0	0
49	SLU 72	-0.03	-0.28	8.37	0	0	0
49	SLU 73	-0.04	-0.29	8.97	0	0	0
49	SLU 74	-0.04	-0.28	9.12	0	0	0
49	SLU 75	-0.04	-0.29	9.12	0	0	0
49	SLU 76	-0.04	-0.29	9.06	0	0	0
49	SLU 77	-0.04	-0.28	9.2	0	0	0
49	SLU 78	-0.04	-0.29	9.21	0	0	0
49	SLU 79	-0.04	-0.28	9.15	0	0	0
49	SLU 80	-0.04	-0.28	9.15	0	0	0
49	SLU 81	-0.04	-0.29	9.3	0	0	0
49	SLU 82	-0.04	-0.29	9.31	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
49	SLU 83	-0.05	-0.29	9.39	0	0	0
49	SLU 84	-0.05	-0.29	9.4	0	0	0
49	SLE RA 1	-0.01	-0.21	6.15	0	0	0
49	SLE RA 2	-0.01	-0.21	6.16	0	0	0
49	SLE RA 3	-0.02	-0.21	6.25	0	0	0
49	SLE RA 4	-0.02	-0.21	6.25	0	0	0
49	SLE RA 5	-0.02	-0.21	6.22	0	0	0
49	SLE RA 6	-0.02	-0.21	6.31	0	0	0
49	SLE RA 7	-0.02	-0.21	6.31	0	0	0
49	SLE RA 8	-0.02	-0.21	6.27	0	0	0
49	SLE RA 9	-0.02	-0.21	6.27	0	0	0
49	SLE RA 10	-0.03	-0.22	6.67	0	0	0
49	SLE RA 11	-0.03	-0.22	6.77	0	0	0
49	SLE RA 12	-0.03	-0.22	6.77	0	0	0
49	SLE RA 13	-0.03	-0.22	6.73	0	0	0
49	SLE RA 14	-0.03	-0.22	6.83	0	0	0
49	SLE RA 15	-0.03	-0.22	6.83	0	0	0
49	SLE RA 16	-0.03	-0.22	6.79	0	0	0
49	SLE RA 17	-0.03	-0.22	6.79	0	0	0
49	SLE RA 18	-0.03	-0.22	6.89	0	0	0
49	SLE RA 19	-0.03	-0.22	6.9	0	0	0
49	SLE RA 20	-0.03	-0.22	6.95	0	0	0
49	SLE RA 21	-0.03	-0.22	6.96	0	0	0
49	SLE FR 1	-0.01	-0.21	6.15	0	0	0
49	SLE FR 2	-0.01	-0.21	6.15	0	0	0
49	SLE FR 3	-0.02	-0.21	6.18	0	0	0
49	SLE FR 4	-0.02	-0.21	6.38	0	0	0
49	SLE FR 5	-0.02	-0.21	6.4	0	0	0
49	SLE FR 6	-0.02	-0.22	6.52	0	0	0
49	SLE QP 1	-0.01	-0.21	6.15	0	0	0
49	SLE QP 2	-0.02	-0.21	6.38	0	0	0
49	SLD 1	0.39	-0.15	6.41	0	0	0
49	SLD 2	0.39	-0.14	6.41	0	0	0
49	SLD 3	0.37	-0.26	6.49	0	0	0
49	SLD 4	0.37	-0.26	6.49	0	0	0
49	SLD 5	0.13	-0.02	6.27	0	0	0
49	SLD 6	0.14	-0.02	6.27	0	0	0
49	SLD 7	0.06	-0.41	6.53	0	0	0
49	SLD 8	0.07	-0.4	6.53	0	0	0
49	SLD 9	-0.1	-0.02	6.22	0	0	0
49	SLD 10	-0.1	-0.02	6.22	0	0	0
49	SLD 11	-0.18	-0.41	6.48	0	0	0
49	SLD 12	-0.17	-0.41	6.48	0	0	0
49	SLD 13	-0.41	-0.17	6.26	0	0	0
49	SLD 14	-0.4	-0.16	6.26	0	0	0
49	SLD 15	-0.43	-0.28	6.34	0	0	0
49	SLD 16	-0.43	-0.28	6.34	0	0	0
49	SLV 1	0.93	-0.06	6.47	0	0	0
49	SLV 2	0.94	-0.05	6.46	0	0	0
49	SLV 3	0.88	-0.33	6.64	0	0	0
49	SLV 4	0.89	-0.32	6.64	0	0	0
49	SLV 5	0.34	0.23	6.14	0	0	0
49	SLV 6	0.34	0.24	6.13	0	0	0
49	SLV 7	0.17	-0.65	6.72	0	0	0
49	SLV 8	0.18	-0.64	6.72	0	0	0
49	SLV 9	-0.22	0.22	6.03	0	0	0
49	SLV 10	-0.21	0.22	6.03	0	0	0
49	SLV 11	-0.38	-0.66	6.62	0	0	0
49	SLV 12	-0.38	-0.66	6.62	0	0	0
49	SLV 13	-0.93	-0.11	6.11	0	0	0
49	SLV 14	-0.92	-0.1	6.11	0	0	0
49	SLV 15	-0.98	-0.37	6.29	0	0	0
49	SLV 16	-0.97	-0.36	6.29	0	0	0
50	SLU 1	-0.03	-0.38	10.92	0	0	0
50	SLU 2	-0.03	-0.38	10.92	0	0	0
50	SLU 3	-0.03	-0.38	11.18	0	0	0
50	SLU 4	-0.03	-0.38	11.18	0	0	0
50	SLU 5	-0.03	-0.38	11.08	0	0	0
50	SLU 6	-0.04	-0.38	11.34	0	0	0
50	SLU 7	-0.04	-0.38	11.34	0	0	0
50	SLU 8	-0.04	-0.38	11.23	0	0	0
50	SLU 9	-0.04	-0.38	11.24	0	0	0
50	SLU 10	-0.06	-0.4	12.33	0	0	0
50	SLU 11	-0.06	-0.39	12.59	0	0	0
50	SLU 12	-0.06	-0.4	12.59	0	0	0
50	SLU 13	-0.06	-0.4	12.49	0	0	0
50	SLU 14	-0.07	-0.39	12.75	0	0	0
50	SLU 15	-0.07	-0.4	12.75	0	0	0
50	SLU 16	-0.07	-0.39	12.65	0	0	0
50	SLU 17	-0.07	-0.4	12.65	0	0	0
50	SLU 18	-0.07	-0.4	12.93	0	0	0
50	SLU 19	-0.07	-0.4	12.94	0	0	0
50	SLU 20	-0.08	-0.4	13.09	0	0	0
50	SLU 21	-0.08	-0.4	13.1	0	0	0
50	SLU 22	-0.03	-0.37	12.15	0	0	0
50	SLU 23	-0.03	-0.38	12.16	0	0	0
50	SLU 24	-0.04	-0.37	12.41	0	0	0
50	SLU 25	-0.04	-0.37	12.42	0	0	0
50	SLU 26	-0.04	-0.37	12.32	0	0	0
50	SLU 27	-0.04	-0.37	12.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
50	SLU 28	-0.04	-0.37	12.58	0	0	0
50	SLU 29	-0.04	-0.37	12.47	0	0	0
50	SLU 30	-0.04	-0.37	12.47	0	0	0
50	SLU 31	-0.06	-0.39	13.57	0	0	0
50	SLU 32	-0.07	-0.38	13.83	0	0	0
50	SLU 33	-0.07	-0.39	13.83	0	0	0
50	SLU 34	-0.07	-0.39	13.73	0	0	0
50	SLU 35	-0.07	-0.38	13.99	0	0	0
50	SLU 36	-0.07	-0.39	13.99	0	0	0
50	SLU 37	-0.07	-0.38	13.88	0	0	0
50	SLU 38	-0.07	-0.39	13.89	0	0	0
50	SLU 39	-0.07	-0.39	14.17	0	0	0
50	SLU 40	-0.07	-0.39	14.17	0	0	0
50	SLU 41	-0.08	-0.39	14.33	0	0	0
50	SLU 42	-0.08	-0.39	14.33	0	0	0
50	SLU 43	-0.03	-0.49	13.77	0	0	0
50	SLU 44	-0.03	-0.5	13.77	0	0	0
50	SLU 45	-0.04	-0.49	14.03	0	0	0
50	SLU 46	-0.04	-0.5	14.03	0	0	0
50	SLU 47	-0.04	-0.5	13.93	0	0	0
50	SLU 48	-0.05	-0.49	14.19	0	0	0
50	SLU 49	-0.05	-0.5	14.19	0	0	0
50	SLU 50	-0.05	-0.49	14.08	0	0	0
50	SLU 51	-0.05	-0.5	14.09	0	0	0
50	SLU 52	-0.06	-0.51	15.18	0	0	0
50	SLU 53	-0.07	-0.51	15.44	0	0	0
50	SLU 54	-0.07	-0.51	15.44	0	0	0
50	SLU 55	-0.07	-0.51	15.34	0	0	0
50	SLU 56	-0.07	-0.51	15.6	0	0	0
50	SLU 57	-0.08	-0.51	15.6	0	0	0
50	SLU 58	-0.08	-0.51	15.5	0	0	0
50	SLU 59	-0.08	-0.51	15.5	0	0	0
50	SLU 60	-0.07	-0.51	15.78	0	0	0
50	SLU 61	-0.07	-0.52	15.79	0	0	0
50	SLU 62	-0.08	-0.51	15.94	0	0	0
50	SLU 63	-0.08	-0.52	15.95	0	0	0
50	SLU 64	-0.04	-0.48	15	0	0	0
50	SLU 65	-0.04	-0.49	15.01	0	0	0
50	SLU 66	-0.04	-0.49	15.27	0	0	0
50	SLU 67	-0.04	-0.49	15.27	0	0	0
50	SLU 68	-0.04	-0.49	15.17	0	0	0
50	SLU 69	-0.05	-0.49	15.42	0	0	0
50	SLU 70	-0.05	-0.49	15.43	0	0	0
50	SLU 71	-0.05	-0.48	15.32	0	0	0
50	SLU 72	-0.05	-0.49	15.32	0	0	0
50	SLU 73	-0.07	-0.51	16.42	0	0	0
50	SLU 74	-0.07	-0.5	16.68	0	0	0
50	SLU 75	-0.07	-0.5	16.68	0	0	0
50	SLU 76	-0.07	-0.51	16.58	0	0	0
50	SLU 77	-0.08	-0.5	16.84	0	0	0
50	SLU 78	-0.08	-0.5	16.84	0	0	0
50	SLU 79	-0.08	-0.5	16.73	0	0	0
50	SLU 80	-0.08	-0.5	16.74	0	0	0
50	SLU 81	-0.08	-0.51	17.02	0	0	0
50	SLU 82	-0.08	-0.51	17.02	0	0	0
50	SLU 83	-0.09	-0.51	17.18	0	0	0
50	SLU 84	-0.09	-0.51	17.18	0	0	0
50	SLE RA 1	-0.03	-0.37	11.27	0	0	0
50	SLE RA 2	-0.03	-0.38	11.27	0	0	0
50	SLE RA 3	-0.03	-0.38	11.44	0	0	0
50	SLE RA 4	-0.03	-0.38	11.45	0	0	0
50	SLE RA 5	-0.03	-0.38	11.38	0	0	0
50	SLE RA 6	-0.04	-0.38	11.55	0	0	0
50	SLE RA 7	-0.04	-0.38	11.55	0	0	0
50	SLE RA 8	-0.04	-0.37	11.48	0	0	0
50	SLE RA 9	-0.04	-0.38	11.48	0	0	0
50	SLE RA 10	-0.05	-0.39	12.21	0	0	0
50	SLE RA 11	-0.05	-0.39	12.38	0	0	0
50	SLE RA 12	-0.05	-0.39	12.39	0	0	0
50	SLE RA 13	-0.05	-0.39	12.32	0	0	0
50	SLE RA 14	-0.06	-0.39	12.49	0	0	0
50	SLE RA 15	-0.06	-0.39	12.49	0	0	0
50	SLE RA 16	-0.06	-0.38	12.42	0	0	0
50	SLE RA 17	-0.06	-0.39	12.42	0	0	0
50	SLE RA 18	-0.06	-0.39	12.61	0	0	0
50	SLE RA 19	-0.06	-0.39	12.62	0	0	0
50	SLE RA 20	-0.06	-0.39	12.72	0	0	0
50	SLE RA 21	-0.06	-0.39	12.72	0	0	0
50	SLE FR 1	-0.03	-0.37	11.27	0	0	0
50	SLE FR 2	-0.03	-0.38	11.27	0	0	0
50	SLE FR 3	-0.03	-0.37	11.31	0	0	0
50	SLE FR 4	-0.04	-0.38	11.67	0	0	0
50	SLE FR 5	-0.04	-0.38	11.72	0	0	0
50	SLE FR 6	-0.04	-0.38	11.94	0	0	0
50	SLE QP 1	-0.03	-0.37	11.27	0	0	0
50	SLE QP 2	-0.04	-0.38	11.67	0	0	0
50	SLD 1	0.71	-0.26	11.68	0	0	0
50	SLD 2	0.72	-0.25	11.67	0	0	0
50	SLD 3	0.67	-0.47	11.81	0	0	0
50	SLD 4	0.68	-0.46	11.8	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
50	SLD 5	0.25	-0.03	11.48	0	0	0
50	SLD 6	0.25	-0.02	11.48	0	0	0
50	SLD 7	0.12	-0.73	11.91	0	0	0
50	SLD 8	0.12	-0.72	11.91	0	0	0
50	SLD 9	-0.19	-0.04	11.44	0	0	0
50	SLD 10	-0.19	-0.03	11.44	0	0	0
50	SLD 11	-0.32	-0.74	11.87	0	0	0
50	SLD 12	-0.32	-0.73	11.87	0	0	0
50	SLD 13	-0.75	-0.3	11.54	0	0	0
50	SLD 14	-0.74	-0.28	11.54	0	0	0
50	SLD 15	-0.79	-0.51	11.67	0	0	0
50	SLD 16	-0.78	-0.5	11.67	0	0	0
50	SLV 1	1.71	-0.11	11.69	0	0	0
50	SLV 2	1.73	-0.08	11.68	0	0	0
50	SLV 3	1.62	-0.59	11.98	0	0	0
50	SLV 4	1.64	-0.56	11.97	0	0	0
50	SLV 5	0.62	0.42	11.24	0	0	0
50	SLV 6	0.63	0.44	11.23	0	0	0
50	SLV 7	0.32	-1.18	12.21	0	0	0
50	SLV 8	0.34	-1.16	12.2	0	0	0
50	SLV 9	-0.41	0.4	11.14	0	0	0
50	SLV 10	-0.39	0.42	11.14	0	0	0
50	SLV 11	-0.7	-1.2	12.11	0	0	0
50	SLV 12	-0.69	-1.18	12.11	0	0	0
50	SLV 13	-1.71	-0.19	11.37	0	0	0
50	SLV 14	-1.69	-0.16	11.37	0	0	0
50	SLV 15	-1.8	-0.67	11.66	0	0	0
50	SLV 16	-1.78	-0.64	11.66	0	0	0
51	SLU 1	-0.02	-0.33	9.67	0	0	0
51	SLU 2	-0.02	-0.33	9.68	0	0	0
51	SLU 3	-0.03	-0.33	9.9	0	0	0
51	SLU 4	-0.03	-0.33	9.91	0	0	0
51	SLU 5	-0.03	-0.33	9.82	0	0	0
51	SLU 6	-0.04	-0.33	10.04	0	0	0
51	SLU 7	-0.04	-0.33	10.05	0	0	0
51	SLU 8	-0.04	-0.32	9.95	0	0	0
51	SLU 9	-0.04	-0.33	9.95	0	0	0
51	SLU 10	-0.05	-0.34	10.92	0	0	0
51	SLU 11	-0.06	-0.34	11.15	0	0	0
51	SLU 12	-0.06	-0.34	11.15	0	0	0
51	SLU 13	-0.06	-0.34	11.06	0	0	0
51	SLU 14	-0.06	-0.34	11.29	0	0	0
51	SLU 15	-0.06	-0.34	11.29	0	0	0
51	SLU 16	-0.06	-0.34	11.19	0	0	0
51	SLU 17	-0.06	-0.34	11.2	0	0	0
51	SLU 18	-0.06	-0.34	11.45	0	0	0
51	SLU 19	-0.06	-0.34	11.45	0	0	0
51	SLU 20	-0.07	-0.34	11.59	0	0	0
51	SLU 21	-0.07	-0.34	11.59	0	0	0
51	SLU 22	-0.03	-0.32	10.77	0	0	0
51	SLU 23	-0.03	-0.32	10.78	0	0	0
51	SLU 24	-0.03	-0.32	11	0	0	0
51	SLU 25	-0.03	-0.32	11	0	0	0
51	SLU 26	-0.03	-0.32	10.91	0	0	0
51	SLU 27	-0.04	-0.32	11.14	0	0	0
51	SLU 28	-0.04	-0.32	11.14	0	0	0
51	SLU 29	-0.04	-0.32	11.05	0	0	0
51	SLU 30	-0.04	-0.32	11.05	0	0	0
51	SLU 31	-0.05	-0.33	12.02	0	0	0
51	SLU 32	-0.06	-0.33	12.24	0	0	0
51	SLU 33	-0.06	-0.33	12.25	0	0	0
51	SLU 34	-0.06	-0.33	12.16	0	0	0
51	SLU 35	-0.07	-0.33	12.38	0	0	0
51	SLU 36	-0.07	-0.33	12.39	0	0	0
51	SLU 37	-0.07	-0.33	12.29	0	0	0
51	SLU 38	-0.07	-0.33	12.29	0	0	0
51	SLU 39	-0.07	-0.33	12.55	0	0	0
51	SLU 40	-0.07	-0.34	12.55	0	0	0
51	SLU 41	-0.07	-0.33	12.69	0	0	0
51	SLU 42	-0.07	-0.34	12.69	0	0	0
51	SLU 43	-0.03	-0.43	12.2	0	0	0
51	SLU 44	-0.03	-0.43	12.2	0	0	0
51	SLU 45	-0.03	-0.43	12.43	0	0	0
51	SLU 46	-0.03	-0.43	12.43	0	0	0
51	SLU 47	-0.04	-0.43	12.34	0	0	0
51	SLU 48	-0.04	-0.43	12.57	0	0	0
51	SLU 49	-0.04	-0.43	12.57	0	0	0
51	SLU 50	-0.04	-0.43	12.48	0	0	0
51	SLU 51	-0.04	-0.43	12.48	0	0	0
51	SLU 52	-0.06	-0.44	13.45	0	0	0
51	SLU 53	-0.06	-0.44	13.67	0	0	0
51	SLU 54	-0.06	-0.44	13.68	0	0	0
51	SLU 55	-0.06	-0.44	13.59	0	0	0
51	SLU 56	-0.07	-0.44	13.81	0	0	0
51	SLU 57	-0.07	-0.44	13.81	0	0	0
51	SLU 58	-0.07	-0.44	13.72	0	0	0
51	SLU 59	-0.07	-0.44	13.72	0	0	0
51	SLU 60	-0.07	-0.44	13.98	0	0	0
51	SLU 61	-0.07	-0.44	13.98	0	0	0
51	SLU 62	-0.07	-0.44	14.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
51	SLU 63	-0.07	-0.44	14.12	0	0	0
51	SLU 64	-0.03	-0.42	13.3	0	0	0
51	SLU 65	-0.03	-0.42	13.3	0	0	0
51	SLU 66	-0.04	-0.42	13.53	0	0	0
51	SLU 67	-0.04	-0.42	13.53	0	0	0
51	SLU 68	-0.04	-0.42	13.44	0	0	0
51	SLU 69	-0.04	-0.42	13.67	0	0	0
51	SLU 70	-0.05	-0.42	13.67	0	0	0
51	SLU 71	-0.05	-0.42	13.58	0	0	0
51	SLU 72	-0.05	-0.42	13.58	0	0	0
51	SLU 73	-0.06	-0.43	14.54	0	0	0
51	SLU 74	-0.07	-0.43	14.77	0	0	0
51	SLU 75	-0.07	-0.43	14.77	0	0	0
51	SLU 76	-0.07	-0.43	14.68	0	0	0
51	SLU 77	-0.07	-0.43	14.91	0	0	0
51	SLU 78	-0.07	-0.43	14.91	0	0	0
51	SLU 79	-0.07	-0.43	14.82	0	0	0
51	SLU 80	-0.07	-0.43	14.82	0	0	0
51	SLU 81	-0.07	-0.43	15.07	0	0	0
51	SLU 82	-0.07	-0.44	15.08	0	0	0
51	SLU 83	-0.08	-0.43	15.21	0	0	0
51	SLU 84	-0.08	-0.44	15.21	0	0	0
51	SLE RA 1	-0.02	-0.32	9.99	0	0	0
51	SLE RA 2	-0.02	-0.33	9.99	0	0	0
51	SLE RA 3	-0.03	-0.32	10.14	0	0	0
51	SLE RA 4	-0.03	-0.33	10.14	0	0	0
51	SLE RA 5	-0.03	-0.33	10.08	0	0	0
51	SLE RA 6	-0.03	-0.32	10.23	0	0	0
51	SLE RA 7	-0.03	-0.33	10.24	0	0	0
51	SLE RA 8	-0.03	-0.32	10.17	0	0	0
51	SLE RA 9	-0.03	-0.32	10.17	0	0	0
51	SLE RA 10	-0.04	-0.33	10.82	0	0	0
51	SLE RA 11	-0.05	-0.33	10.97	0	0	0
51	SLE RA 12	-0.05	-0.33	10.97	0	0	0
51	SLE RA 13	-0.05	-0.33	10.91	0	0	0
51	SLE RA 14	-0.05	-0.33	11.06	0	0	0
51	SLE RA 15	-0.05	-0.33	11.06	0	0	0
51	SLE RA 16	-0.05	-0.33	11	0	0	0
51	SLE RA 17	-0.05	-0.33	11	0	0	0
51	SLE RA 18	-0.05	-0.33	11.17	0	0	0
51	SLE RA 19	-0.05	-0.34	11.17	0	0	0
51	SLE RA 20	-0.05	-0.33	11.26	0	0	0
51	SLE RA 21	-0.05	-0.34	11.27	0	0	0
51	SLE FR 1	-0.02	-0.32	9.99	0	0	0
51	SLE FR 2	-0.02	-0.32	9.99	0	0	0
51	SLE FR 3	-0.03	-0.32	10.03	0	0	0
51	SLE FR 4	-0.03	-0.33	10.34	0	0	0
51	SLE FR 5	-0.03	-0.33	10.38	0	0	0
51	SLE FR 6	-0.04	-0.33	10.58	0	0	0
51	SLE QP 1	-0.02	-0.32	9.99	0	0	0
51	SLE QP 2	-0.03	-0.33	10.34	0	0	0
51	SLD 1	0.64	-0.23	10.26	0	0	0
51	SLD 2	0.64	-0.21	10.26	0	0	0
51	SLD 3	0.6	-0.41	10.37	0	0	0
51	SLD 4	0.61	-0.4	10.36	0	0	0
51	SLD 5	0.22	-0.02	10.16	0	0	0
51	SLD 6	0.23	0	10.16	0	0	0
51	SLD 7	0.1	-0.64	10.51	0	0	0
51	SLD 8	0.11	-0.63	10.51	0	0	0
51	SLD 9	-0.17	-0.02	10.18	0	0	0
51	SLD 10	-0.17	-0.01	10.18	0	0	0
51	SLD 11	-0.29	-0.65	10.53	0	0	0
51	SLD 12	-0.28	-0.64	10.52	0	0	0
51	SLD 13	-0.67	-0.26	10.32	0	0	0
51	SLD 14	-0.66	-0.24	10.32	0	0	0
51	SLD 15	-0.71	-0.44	10.43	0	0	0
51	SLD 16	-0.7	-0.43	10.42	0	0	0
51	SLV 1	1.53	-0.1	10.16	0	0	0
51	SLV 2	1.55	-0.06	10.15	0	0	0
51	SLV 3	1.45	-0.52	10.39	0	0	0
51	SLV 4	1.47	-0.48	10.38	0	0	0
51	SLV 5	0.55	0.38	9.93	0	0	0
51	SLV 6	0.57	0.4	9.93	0	0	0
51	SLV 7	0.29	-1.03	10.72	0	0	0
51	SLV 8	0.3	-1.01	10.71	0	0	0
51	SLV 9	-0.36	0.36	9.98	0	0	0
51	SLV 10	-0.35	0.38	9.97	0	0	0
51	SLV 11	-0.63	-1.05	10.76	0	0	0
51	SLV 12	-0.62	-1.03	10.75	0	0	0
51	SLV 13	-1.53	-0.17	10.3	0	0	0
51	SLV 14	-1.51	-0.13	10.29	0	0	0
51	SLV 15	-1.61	-0.59	10.54	0	0	0
51	SLV 16	-1.59	-0.55	10.53	0	0	0
52	SLU 1	-0.02	-0.28	8.5	0	0	0
52	SLU 2	-0.02	-0.28	8.51	0	0	0
52	SLU 3	-0.03	-0.28	8.7	0	0	0
52	SLU 4	-0.03	-0.28	8.7	0	0	0
52	SLU 5	-0.03	-0.28	8.63	0	0	0
52	SLU 6	-0.03	-0.28	8.82	0	0	0
52	SLU 7	-0.03	-0.28	8.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
52	SLU 8	-0.03	-0.28	8.74	0	0	0
52	SLU 9	-0.03	-0.28	8.74	0	0	0
52	SLU 10	-0.05	-0.29	9.59	0	0	0
52	SLU 11	-0.05	-0.29	9.79	0	0	0
52	SLU 12	-0.05	-0.29	9.79	0	0	0
52	SLU 13	-0.05	-0.29	9.71	0	0	0
52	SLU 14	-0.06	-0.29	9.91	0	0	0
52	SLU 15	-0.06	-0.29	9.91	0	0	0
52	SLU 16	-0.06	-0.29	9.83	0	0	0
52	SLU 17	-0.06	-0.29	9.83	0	0	0
52	SLU 18	-0.06	-0.29	10.05	0	0	0
52	SLU 19	-0.06	-0.29	10.05	0	0	0
52	SLU 20	-0.06	-0.29	10.17	0	0	0
52	SLU 21	-0.06	-0.29	10.17	0	0	0
52	SLU 22	-0.02	-0.27	9.47	0	0	0
52	SLU 23	-0.03	-0.27	9.47	0	0	0
52	SLU 24	-0.03	-0.27	9.67	0	0	0
52	SLU 25	-0.03	-0.27	9.67	0	0	0
52	SLU 26	-0.03	-0.27	9.59	0	0	0
52	SLU 27	-0.04	-0.27	9.79	0	0	0
52	SLU 28	-0.04	-0.27	9.79	0	0	0
52	SLU 29	-0.04	-0.27	9.71	0	0	0
52	SLU 30	-0.04	-0.27	9.71	0	0	0
52	SLU 31	-0.05	-0.28	10.56	0	0	0
52	SLU 32	-0.05	-0.28	10.75	0	0	0
52	SLU 33	-0.05	-0.28	10.75	0	0	0
52	SLU 34	-0.05	-0.28	10.67	0	0	0
52	SLU 35	-0.06	-0.28	10.87	0	0	0
52	SLU 36	-0.06	-0.28	10.87	0	0	0
52	SLU 37	-0.06	-0.28	10.79	0	0	0
52	SLU 38	-0.06	-0.28	10.79	0	0	0
52	SLU 39	-0.06	-0.28	11.02	0	0	0
52	SLU 40	-0.06	-0.29	11.02	0	0	0
52	SLU 41	-0.06	-0.28	11.14	0	0	0
52	SLU 42	-0.06	-0.28	11.14	0	0	0
52	SLU 43	-0.03	-0.36	10.72	0	0	0
52	SLU 44	-0.03	-0.37	10.73	0	0	0
52	SLU 45	-0.03	-0.37	10.92	0	0	0
52	SLU 46	-0.03	-0.37	10.92	0	0	0
52	SLU 47	-0.03	-0.37	10.85	0	0	0
52	SLU 48	-0.04	-0.36	11.04	0	0	0
52	SLU 49	-0.04	-0.37	11.04	0	0	0
52	SLU 50	-0.04	-0.36	10.96	0	0	0
52	SLU 51	-0.04	-0.37	10.96	0	0	0
52	SLU 52	-0.05	-0.38	11.81	0	0	0
52	SLU 53	-0.06	-0.37	12.01	0	0	0
52	SLU 54	-0.06	-0.38	12.01	0	0	0
52	SLU 55	-0.06	-0.38	11.93	0	0	0
52	SLU 56	-0.06	-0.37	12.13	0	0	0
52	SLU 57	-0.06	-0.38	12.13	0	0	0
52	SLU 58	-0.06	-0.37	12.05	0	0	0
52	SLU 59	-0.06	-0.37	12.05	0	0	0
52	SLU 60	-0.06	-0.38	12.27	0	0	0
52	SLU 61	-0.06	-0.38	12.27	0	0	0
52	SLU 62	-0.07	-0.38	12.39	0	0	0
52	SLU 63	-0.07	-0.38	12.39	0	0	0
52	SLU 64	-0.03	-0.36	11.69	0	0	0
52	SLU 65	-0.03	-0.36	11.69	0	0	0
52	SLU 66	-0.03	-0.36	11.89	0	0	0
52	SLU 67	-0.04	-0.36	11.89	0	0	0
52	SLU 68	-0.04	-0.36	11.81	0	0	0
52	SLU 69	-0.04	-0.36	12.01	0	0	0
52	SLU 70	-0.04	-0.36	12.01	0	0	0
52	SLU 71	-0.04	-0.36	11.93	0	0	0
52	SLU 72	-0.04	-0.36	11.93	0	0	0
52	SLU 73	-0.05	-0.37	12.78	0	0	0
52	SLU 74	-0.06	-0.37	12.97	0	0	0
52	SLU 75	-0.06	-0.37	12.97	0	0	0
52	SLU 76	-0.06	-0.37	12.89	0	0	0
52	SLU 77	-0.06	-0.37	13.09	0	0	0
52	SLU 78	-0.06	-0.37	13.09	0	0	0
52	SLU 79	-0.07	-0.36	13.01	0	0	0
52	SLU 80	-0.07	-0.37	13.01	0	0	0
52	SLU 81	-0.06	-0.37	13.24	0	0	0
52	SLU 82	-0.06	-0.37	13.24	0	0	0
52	SLU 83	-0.07	-0.37	13.36	0	0	0
52	SLU 84	-0.07	-0.37	13.36	0	0	0
52	SLE RA 1	-0.02	-0.28	8.78	0	0	0
52	SLE RA 2	-0.02	-0.28	8.78	0	0	0
52	SLE RA 3	-0.03	-0.28	8.91	0	0	0
52	SLE RA 4	-0.03	-0.28	8.91	0	0	0
52	SLE RA 5	-0.03	-0.28	8.86	0	0	0
52	SLE RA 6	-0.03	-0.28	8.99	0	0	0
52	SLE RA 7	-0.03	-0.28	8.99	0	0	0
52	SLE RA 8	-0.03	-0.28	8.94	0	0	0
52	SLE RA 9	-0.03	-0.28	8.94	0	0	0
52	SLE RA 10	-0.04	-0.28	9.5	0	0	0
52	SLE RA 11	-0.04	-0.28	9.63	0	0	0
52	SLE RA 12	-0.04	-0.28	9.64	0	0	0
52	SLE RA 13	-0.04	-0.28	9.58	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
52	SLE RA 14	-0.05	-0.28	9.71	0	0	0
52	SLE RA 15	-0.05	-0.28	9.72	0	0	0
52	SLE RA 16	-0.05	-0.28	9.66	0	0	0
52	SLE RA 17	-0.05	-0.28	9.66	0	0	0
52	SLE RA 18	-0.04	-0.28	9.81	0	0	0
52	SLE RA 19	-0.04	-0.29	9.81	0	0	0
52	SLE RA 20	-0.05	-0.28	9.89	0	0	0
52	SLE RA 21	-0.05	-0.29	9.89	0	0	0
52	SLE FR 1	-0.02	-0.28	8.78	0	0	0
52	SLE FR 2	-0.02	-0.28	8.78	0	0	0
52	SLE FR 3	-0.02	-0.28	8.81	0	0	0
52	SLE FR 4	-0.03	-0.28	9.09	0	0	0
52	SLE FR 5	-0.03	-0.28	9.12	0	0	0
52	SLE FR 6	-0.03	-0.28	9.29	0	0	0
52	SLE QP 1	-0.02	-0.28	8.78	0	0	0
52	SLE QP 2	-0.03	-0.28	9.09	0	0	0
52	SLD 1	0.56	-0.22	8.99	0	0	0
52	SLD 2	0.57	-0.2	8.98	0	0	0
52	SLD 3	0.53	-0.38	9.07	0	0	0
52	SLD 4	0.54	-0.36	9.07	0	0	0
52	SLD 5	0.19	-0.02	8.93	0	0	0
52	SLD 6	0.2	0	8.93	0	0	0
52	SLD 7	0.09	-0.56	9.21	0	0	0
52	SLD 8	0.09	-0.55	9.21	0	0	0
52	SLD 9	-0.15	-0.01	8.97	0	0	0
52	SLD 10	-0.15	0	8.96	0	0	0
52	SLD 11	-0.26	-0.55	9.25	0	0	0
52	SLD 12	-0.25	-0.54	9.25	0	0	0
52	SLD 13	-0.6	-0.19	9.11	0	0	0
52	SLD 14	-0.59	-0.17	9.1	0	0	0
52	SLD 15	-0.63	-0.36	9.19	0	0	0
52	SLD 16	-0.62	-0.34	9.19	0	0	0
52	SLV 1	1.35	-0.14	8.86	0	0	0
52	SLV 2	1.37	-0.1	8.85	0	0	0
52	SLV 3	1.28	-0.52	9.05	0	0	0
52	SLV 4	1.3	-0.47	9.04	0	0	0
52	SLV 5	0.49	0.32	8.73	0	0	0
52	SLV 6	0.5	0.34	8.72	0	0	0
52	SLV 7	0.25	-0.92	9.37	0	0	0
52	SLV 8	0.26	-0.89	9.36	0	0	0
52	SLV 9	-0.32	0.33	8.81	0	0	0
52	SLV 10	-0.31	0.36	8.81	0	0	0
52	SLV 11	-0.56	-0.9	9.45	0	0	0
52	SLV 12	-0.55	-0.87	9.45	0	0	0
52	SLV 13	-1.36	-0.08	9.14	0	0	0
52	SLV 14	-1.34	-0.04	9.13	0	0	0
52	SLV 15	-1.43	-0.45	9.33	0	0	0
52	SLV 16	-1.41	-0.41	9.32	0	0	0
53	SLU 1	-0.02	-0.24	7.43	0	0	0
53	SLU 2	-0.02	-0.24	7.43	0	0	0
53	SLU 3	-0.02	-0.24	7.6	0	0	0
53	SLU 4	-0.02	-0.24	7.6	0	0	0
53	SLU 5	-0.02	-0.24	7.53	0	0	0
53	SLU 6	-0.03	-0.24	7.7	0	0	0
53	SLU 7	-0.03	-0.24	7.7	0	0	0
53	SLU 8	-0.03	-0.24	7.63	0	0	0
53	SLU 9	-0.03	-0.24	7.63	0	0	0
53	SLU 10	-0.04	-0.25	8.37	0	0	0
53	SLU 11	-0.04	-0.24	8.54	0	0	0
53	SLU 12	-0.04	-0.25	8.54	0	0	0
53	SLU 13	-0.05	-0.25	8.47	0	0	0
53	SLU 14	-0.05	-0.24	8.64	0	0	0
53	SLU 15	-0.05	-0.25	8.64	0	0	0
53	SLU 16	-0.05	-0.24	8.57	0	0	0
53	SLU 17	-0.05	-0.24	8.57	0	0	0
53	SLU 18	-0.05	-0.25	8.77	0	0	0
53	SLU 19	-0.05	-0.25	8.77	0	0	0
53	SLU 20	-0.05	-0.25	8.87	0	0	0
53	SLU 21	-0.05	-0.25	8.87	0	0	0
53	SLU 22	-0.02	-0.23	8.27	0	0	0
53	SLU 23	-0.02	-0.23	8.27	0	0	0
53	SLU 24	-0.03	-0.23	8.44	0	0	0
53	SLU 25	-0.03	-0.23	8.44	0	0	0
53	SLU 26	-0.03	-0.23	8.37	0	0	0
53	SLU 27	-0.03	-0.23	8.54	0	0	0
53	SLU 28	-0.03	-0.23	8.55	0	0	0
53	SLU 29	-0.03	-0.23	8.47	0	0	0
53	SLU 30	-0.03	-0.23	8.48	0	0	0
53	SLU 31	-0.04	-0.24	9.21	0	0	0
53	SLU 32	-0.05	-0.24	9.38	0	0	0
53	SLU 33	-0.05	-0.24	9.38	0	0	0
53	SLU 34	-0.05	-0.24	9.32	0	0	0
53	SLU 35	-0.05	-0.24	9.49	0	0	0
53	SLU 36	-0.05	-0.24	9.49	0	0	0
53	SLU 37	-0.05	-0.23	9.42	0	0	0
53	SLU 38	-0.05	-0.24	9.42	0	0	0
53	SLU 39	-0.05	-0.24	9.61	0	0	0
53	SLU 40	-0.05	-0.24	9.61	0	0	0
53	SLU 41	-0.06	-0.24	9.72	0	0	0
53	SLU 42	-0.06	-0.24	9.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
53	SLU 43	-0.02	-0.31	9.36	0	0	0
53	SLU 44	-0.02	-0.31	9.37	0	0	0
53	SLU 45	-0.03	-0.31	9.54	0	0	0
53	SLU 46	-0.03	-0.31	9.54	0	0	0
53	SLU 47	-0.03	-0.31	9.47	0	0	0
53	SLU 48	-0.03	-0.31	9.64	0	0	0
53	SLU 49	-0.03	-0.31	9.64	0	0	0
53	SLU 50	-0.03	-0.31	9.57	0	0	0
53	SLU 51	-0.03	-0.31	9.57	0	0	0
53	SLU 52	-0.05	-0.32	10.31	0	0	0
53	SLU 53	-0.05	-0.32	10.48	0	0	0
53	SLU 54	-0.05	-0.32	10.48	0	0	0
53	SLU 55	-0.05	-0.32	10.41	0	0	0
53	SLU 56	-0.05	-0.32	10.58	0	0	0
53	SLU 57	-0.05	-0.32	10.58	0	0	0
53	SLU 58	-0.06	-0.32	10.51	0	0	0
53	SLU 59	-0.06	-0.32	10.51	0	0	0
53	SLU 60	-0.05	-0.32	10.71	0	0	0
53	SLU 61	-0.05	-0.32	10.71	0	0	0
53	SLU 62	-0.06	-0.32	10.81	0	0	0
53	SLU 63	-0.06	-0.32	10.81	0	0	0
53	SLU 64	-0.03	-0.3	10.21	0	0	0
53	SLU 65	-0.03	-0.31	10.21	0	0	0
53	SLU 66	-0.03	-0.3	10.38	0	0	0
53	SLU 67	-0.03	-0.3	10.38	0	0	0
53	SLU 68	-0.03	-0.31	10.31	0	0	0
53	SLU 69	-0.04	-0.3	10.48	0	0	0
53	SLU 70	-0.04	-0.3	10.48	0	0	0
53	SLU 71	-0.04	-0.3	10.41	0	0	0
53	SLU 72	-0.04	-0.3	10.41	0	0	0
53	SLU 73	-0.05	-0.31	11.15	0	0	0
53	SLU 74	-0.05	-0.31	11.32	0	0	0
53	SLU 75	-0.05	-0.31	11.32	0	0	0
53	SLU 76	-0.05	-0.31	11.25	0	0	0
53	SLU 77	-0.06	-0.31	11.42	0	0	0
53	SLU 78	-0.06	-0.31	11.43	0	0	0
53	SLU 79	-0.06	-0.31	11.35	0	0	0
53	SLU 80	-0.06	-0.31	11.36	0	0	0
53	SLU 81	-0.06	-0.31	11.55	0	0	0
53	SLU 82	-0.06	-0.31	11.55	0	0	0
53	SLU 83	-0.06	-0.31	11.65	0	0	0
53	SLU 84	-0.06	-0.31	11.66	0	0	0
53	SLE RA 1	-0.02	-0.23	7.67	0	0	0
53	SLE RA 2	-0.02	-0.24	7.67	0	0	0
53	SLE RA 3	-0.02	-0.23	7.78	0	0	0
53	SLE RA 4	-0.02	-0.24	7.78	0	0	0
53	SLE RA 5	-0.02	-0.24	7.74	0	0	0
53	SLE RA 6	-0.03	-0.23	7.85	0	0	0
53	SLE RA 7	-0.03	-0.24	7.85	0	0	0
53	SLE RA 8	-0.03	-0.23	7.8	0	0	0
53	SLE RA 9	-0.03	-0.24	7.8	0	0	0
53	SLE RA 10	-0.03	-0.24	8.3	0	0	0
53	SLE RA 11	-0.04	-0.24	8.41	0	0	0
53	SLE RA 12	-0.04	-0.24	8.41	0	0	0
53	SLE RA 13	-0.04	-0.24	8.36	0	0	0
53	SLE RA 14	-0.04	-0.24	8.48	0	0	0
53	SLE RA 15	-0.04	-0.24	8.48	0	0	0
53	SLE RA 16	-0.04	-0.24	8.43	0	0	0
53	SLE RA 17	-0.04	-0.24	8.43	0	0	0
53	SLE RA 18	-0.04	-0.24	8.56	0	0	0
53	SLE RA 19	-0.04	-0.24	8.56	0	0	0
53	SLE RA 20	-0.04	-0.24	8.63	0	0	0
53	SLE RA 21	-0.04	-0.24	8.63	0	0	0
53	SLE FR 1	-0.02	-0.23	7.67	0	0	0
53	SLE FR 2	-0.02	-0.23	7.67	0	0	0
53	SLE FR 3	-0.02	-0.23	7.69	0	0	0
53	SLE FR 4	-0.03	-0.24	7.94	0	0	0
53	SLE FR 5	-0.03	-0.24	7.96	0	0	0
53	SLE FR 6	-0.03	-0.24	8.11	0	0	0
53	SLE QP 1	-0.02	-0.23	7.67	0	0	0
53	SLE QP 2	-0.03	-0.24	7.94	0	0	0
53	SLD 1	0.49	-0.19	7.81	0	0	0
53	SLD 2	0.5	-0.17	7.81	0	0	0
53	SLD 3	0.47	-0.33	7.88	0	0	0
53	SLD 4	0.47	-0.31	7.88	0	0	0
53	SLD 5	0.17	-0.01	7.79	0	0	0
53	SLD 6	0.17	0	7.79	0	0	0
53	SLD 7	0.08	-0.48	8.03	0	0	0
53	SLD 8	0.08	-0.47	8.02	0	0	0
53	SLD 9	-0.14	0	7.85	0	0	0
53	SLD 10	-0.13	0.01	7.84	0	0	0
53	SLD 11	-0.23	-0.48	8.08	0	0	0
53	SLD 12	-0.22	-0.46	8.08	0	0	0
53	SLD 13	-0.53	-0.16	7.99	0	0	0
53	SLD 14	-0.52	-0.14	7.99	0	0	0
53	SLD 15	-0.55	-0.3	8.06	0	0	0
53	SLD 16	-0.55	-0.29	8.06	0	0	0
53	SLV 1	1.19	-0.13	7.65	0	0	0
53	SLV 2	1.2	-0.08	7.64	0	0	0
53	SLV 3	1.13	-0.45	7.81	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
53	SLV 4	1.14	-0.4	7.8	0	0	0
53	SLV 5	0.43	0.28	7.61	0	0	0
53	SLV 6	0.44	0.31	7.6	0	0	0
53	SLV 7	0.22	-0.8	8.14	0	0	0
53	SLV 8	0.23	-0.77	8.13	0	0	0
53	SLV 9	-0.28	0.29	7.74	0	0	0
53	SLV 10	-0.28	0.32	7.73	0	0	0
53	SLV 11	-0.49	-0.78	8.27	0	0	0
53	SLV 12	-0.48	-0.75	8.26	0	0	0
53	SLV 13	-1.19	-0.07	8.07	0	0	0
53	SLV 14	-1.18	-0.02	8.06	0	0	0
53	SLV 15	-1.26	-0.39	8.23	0	0	0
53	SLV 16	-1.24	-0.35	8.22	0	0	0
54	SLU 1	-0.02	-0.22	7.04	0	0	0
54	SLU 2	-0.02	-0.22	7.04	0	0	0
54	SLU 3	-0.02	-0.22	7.2	0	0	0
54	SLU 4	-0.02	-0.22	7.21	0	0	0
54	SLU 5	-0.02	-0.22	7.14	0	0	0
54	SLU 6	-0.03	-0.22	7.3	0	0	0
54	SLU 7	-0.03	-0.22	7.3	0	0	0
54	SLU 8	-0.03	-0.22	7.23	0	0	0
54	SLU 9	-0.03	-0.22	7.23	0	0	0
54	SLU 10	-0.04	-0.23	7.93	0	0	0
54	SLU 11	-0.04	-0.22	8.09	0	0	0
54	SLU 12	-0.04	-0.23	8.09	0	0	0
54	SLU 13	-0.04	-0.23	8.03	0	0	0
54	SLU 14	-0.05	-0.22	8.19	0	0	0
54	SLU 15	-0.05	-0.23	8.19	0	0	0
54	SLU 16	-0.05	-0.22	8.12	0	0	0
54	SLU 17	-0.05	-0.22	8.12	0	0	0
54	SLU 18	-0.05	-0.23	8.31	0	0	0
54	SLU 19	-0.05	-0.23	8.31	0	0	0
54	SLU 20	-0.05	-0.23	8.41	0	0	0
54	SLU 21	-0.05	-0.23	8.41	0	0	0
54	SLU 22	-0.02	-0.21	7.84	0	0	0
54	SLU 23	-0.02	-0.21	7.84	0	0	0
54	SLU 24	-0.03	-0.21	8	0	0	0
54	SLU 25	-0.03	-0.21	8.01	0	0	0
54	SLU 26	-0.03	-0.21	7.94	0	0	0
54	SLU 27	-0.03	-0.21	8.1	0	0	0
54	SLU 28	-0.03	-0.21	8.1	0	0	0
54	SLU 29	-0.03	-0.21	8.03	0	0	0
54	SLU 30	-0.03	-0.21	8.03	0	0	0
54	SLU 31	-0.04	-0.22	8.73	0	0	0
54	SLU 32	-0.05	-0.22	8.89	0	0	0
54	SLU 33	-0.05	-0.22	8.89	0	0	0
54	SLU 34	-0.05	-0.22	8.83	0	0	0
54	SLU 35	-0.05	-0.22	8.99	0	0	0
54	SLU 36	-0.05	-0.22	8.99	0	0	0
54	SLU 37	-0.05	-0.21	8.92	0	0	0
54	SLU 38	-0.05	-0.22	8.92	0	0	0
54	SLU 39	-0.05	-0.22	9.11	0	0	0
54	SLU 40	-0.05	-0.22	9.11	0	0	0
54	SLU 41	-0.06	-0.22	9.21	0	0	0
54	SLU 42	-0.06	-0.22	9.21	0	0	0
54	SLU 43	-0.02	-0.29	8.88	0	0	0
54	SLU 44	-0.02	-0.29	8.88	0	0	0
54	SLU 45	-0.03	-0.29	9.04	0	0	0
54	SLU 46	-0.03	-0.29	9.04	0	0	0
54	SLU 47	-0.03	-0.29	8.98	0	0	0
54	SLU 48	-0.03	-0.29	9.14	0	0	0
54	SLU 49	-0.03	-0.29	9.14	0	0	0
54	SLU 50	-0.03	-0.29	9.07	0	0	0
54	SLU 51	-0.03	-0.29	9.07	0	0	0
54	SLU 52	-0.04	-0.29	9.77	0	0	0
54	SLU 53	-0.05	-0.29	9.93	0	0	0
54	SLU 54	-0.05	-0.29	9.93	0	0	0
54	SLU 55	-0.05	-0.29	9.87	0	0	0
54	SLU 56	-0.05	-0.29	10.03	0	0	0
54	SLU 57	-0.05	-0.29	10.03	0	0	0
54	SLU 58	-0.05	-0.29	9.96	0	0	0
54	SLU 59	-0.05	-0.29	9.96	0	0	0
54	SLU 60	-0.05	-0.29	10.15	0	0	0
54	SLU 61	-0.05	-0.3	10.15	0	0	0
54	SLU 62	-0.06	-0.29	10.24	0	0	0
54	SLU 63	-0.06	-0.3	10.24	0	0	0
54	SLU 64	-0.03	-0.28	9.68	0	0	0
54	SLU 65	-0.03	-0.28	9.68	0	0	0
54	SLU 66	-0.03	-0.28	9.84	0	0	0
54	SLU 67	-0.03	-0.28	9.84	0	0	0
54	SLU 68	-0.03	-0.28	9.78	0	0	0
54	SLU 69	-0.04	-0.28	9.94	0	0	0
54	SLU 70	-0.04	-0.28	9.94	0	0	0
54	SLU 71	-0.04	-0.28	9.87	0	0	0
54	SLU 72	-0.04	-0.28	9.87	0	0	0
54	SLU 73	-0.05	-0.29	10.57	0	0	0
54	SLU 74	-0.05	-0.28	10.73	0	0	0
54	SLU 75	-0.05	-0.29	10.73	0	0	0
54	SLU 76	-0.05	-0.29	10.67	0	0	0
54	SLU 77	-0.06	-0.28	10.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
54	SLU 78	-0.06	-0.29	10.83	0	0	0
54	SLU 79	-0.06	-0.28	10.76	0	0	0
54	SLU 80	-0.06	-0.28	10.76	0	0	0
54	SLU 81	-0.05	-0.29	10.95	0	0	0
54	SLU 82	-0.06	-0.29	10.95	0	0	0
54	SLU 83	-0.06	-0.29	11.04	0	0	0
54	SLU 84	-0.06	-0.29	11.04	0	0	0
54	SLE RA 1	-0.02	-0.22	7.27	0	0	0
54	SLE RA 2	-0.02	-0.22	7.27	0	0	0
54	SLE RA 3	-0.02	-0.22	7.38	0	0	0
54	SLE RA 4	-0.02	-0.22	7.38	0	0	0
54	SLE RA 5	-0.02	-0.22	7.34	0	0	0
54	SLE RA 6	-0.03	-0.22	7.44	0	0	0
54	SLE RA 7	-0.03	-0.22	7.44	0	0	0
54	SLE RA 8	-0.03	-0.22	7.4	0	0	0
54	SLE RA 9	-0.03	-0.22	7.4	0	0	0
54	SLE RA 10	-0.03	-0.22	7.86	0	0	0
54	SLE RA 11	-0.04	-0.22	7.97	0	0	0
54	SLE RA 12	-0.04	-0.22	7.97	0	0	0
54	SLE RA 13	-0.04	-0.22	7.93	0	0	0
54	SLE RA 14	-0.04	-0.22	8.03	0	0	0
54	SLE RA 15	-0.04	-0.22	8.04	0	0	0
54	SLE RA 16	-0.04	-0.22	7.99	0	0	0
54	SLE RA 17	-0.04	-0.22	7.99	0	0	0
54	SLE RA 18	-0.04	-0.22	8.12	0	0	0
54	SLE RA 19	-0.04	-0.22	8.12	0	0	0
54	SLE RA 20	-0.04	-0.22	8.18	0	0	0
54	SLE RA 21	-0.04	-0.22	8.18	0	0	0
54	SLE FR 1	-0.02	-0.22	7.27	0	0	0
54	SLE FR 2	-0.02	-0.22	7.27	0	0	0
54	SLE FR 3	-0.02	-0.22	7.3	0	0	0
54	SLE FR 4	-0.03	-0.22	7.52	0	0	0
54	SLE FR 5	-0.03	-0.22	7.55	0	0	0
54	SLE FR 6	-0.03	-0.22	7.69	0	0	0
54	SLE QP 1	-0.02	-0.22	7.27	0	0	0
54	SLE QP 2	-0.03	-0.22	7.52	0	0	0
54	SLD 1	0.47	-0.17	7.37	0	0	0
54	SLD 2	0.48	-0.15	7.37	0	0	0
54	SLD 3	0.45	-0.31	7.44	0	0	0
54	SLD 4	0.45	-0.29	7.43	0	0	0
54	SLD 5	0.16	0	7.39	0	0	0
54	SLD 6	0.17	0.01	7.38	0	0	0
54	SLD 7	0.07	-0.45	7.59	0	0	0
54	SLD 8	0.08	-0.44	7.59	0	0	0
54	SLD 9	-0.13	0	7.46	0	0	0
54	SLD 10	-0.13	0.02	7.46	0	0	0
54	SLD 11	-0.22	-0.44	7.67	0	0	0
54	SLD 12	-0.21	-0.43	7.66	0	0	0
54	SLD 13	-0.5	-0.15	7.62	0	0	0
54	SLD 14	-0.5	-0.13	7.61	0	0	0
54	SLD 15	-0.53	-0.28	7.68	0	0	0
54	SLD 16	-0.52	-0.26	7.67	0	0	0
54	SLV 1	1.14	-0.12	7.17	0	0	0
54	SLV 2	1.15	-0.07	7.16	0	0	0
54	SLV 3	1.08	-0.42	7.31	0	0	0
54	SLV 4	1.09	-0.37	7.3	0	0	0
54	SLV 5	0.41	0.26	7.21	0	0	0
54	SLV 6	0.42	0.3	7.2	0	0	0
54	SLV 7	0.21	-0.75	7.68	0	0	0
54	SLV 8	0.22	-0.72	7.67	0	0	0
54	SLV 9	-0.27	0.28	7.38	0	0	0
54	SLV 10	-0.26	0.31	7.37	0	0	0
54	SLV 11	-0.47	-0.73	7.85	0	0	0
54	SLV 12	-0.46	-0.7	7.84	0	0	0
54	SLV 13	-1.14	-0.06	7.75	0	0	0
54	SLV 14	-1.13	-0.01	7.73	0	0	0
54	SLV 15	-1.2	-0.37	7.89	0	0	0
54	SLV 16	-1.19	-0.32	7.87	0	0	0
55	SLU 1	-0.02	-0.24	8.1	0	0	0
55	SLU 2	-0.02	-0.25	8.1	0	0	0
55	SLU 3	-0.03	-0.24	8.29	0	0	0
55	SLU 4	-0.03	-0.25	8.29	0	0	0
55	SLU 5	-0.03	-0.25	8.21	0	0	0
55	SLU 6	-0.03	-0.24	8.4	0	0	0
55	SLU 7	-0.03	-0.25	8.4	0	0	0
55	SLU 8	-0.03	-0.24	8.32	0	0	0
55	SLU 9	-0.03	-0.24	8.32	0	0	0
55	SLU 10	-0.04	-0.25	9.12	0	0	0
55	SLU 11	-0.05	-0.25	9.3	0	0	0
55	SLU 12	-0.05	-0.25	9.3	0	0	0
55	SLU 13	-0.05	-0.25	9.23	0	0	0
55	SLU 14	-0.05	-0.25	9.41	0	0	0
55	SLU 15	-0.06	-0.25	9.41	0	0	0
55	SLU 16	-0.06	-0.25	9.33	0	0	0
55	SLU 17	-0.06	-0.25	9.33	0	0	0
55	SLU 18	-0.05	-0.25	9.55	0	0	0
55	SLU 19	-0.05	-0.25	9.55	0	0	0
55	SLU 20	-0.06	-0.25	9.66	0	0	0
55	SLU 21	-0.06	-0.25	9.66	0	0	0
55	SLU 22	-0.03	-0.23	9.02	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
55	SLU 23	-0.03	-0.24	9.03	0	0	0
55	SLU 24	-0.03	-0.23	9.21	0	0	0
55	SLU 25	-0.03	-0.24	9.21	0	0	0
55	SLU 26	-0.03	-0.24	9.13	0	0	0
55	SLU 27	-0.04	-0.23	9.32	0	0	0
55	SLU 28	-0.04	-0.24	9.32	0	0	0
55	SLU 29	-0.04	-0.23	9.24	0	0	0
55	SLU 30	-0.04	-0.23	9.24	0	0	0
55	SLU 31	-0.05	-0.24	10.04	0	0	0
55	SLU 32	-0.05	-0.24	10.22	0	0	0
55	SLU 33	-0.05	-0.24	10.22	0	0	0
55	SLU 34	-0.05	-0.24	10.15	0	0	0
55	SLU 35	-0.06	-0.24	10.33	0	0	0
55	SLU 36	-0.06	-0.24	10.33	0	0	0
55	SLU 37	-0.06	-0.24	10.25	0	0	0
55	SLU 38	-0.06	-0.24	10.25	0	0	0
55	SLU 39	-0.06	-0.24	10.47	0	0	0
55	SLU 40	-0.06	-0.24	10.47	0	0	0
55	SLU 41	-0.06	-0.24	10.58	0	0	0
55	SLU 42	-0.06	-0.24	10.58	0	0	0
55	SLU 43	-0.03	-0.32	10.22	0	0	0
55	SLU 44	-0.03	-0.32	10.22	0	0	0
55	SLU 45	-0.03	-0.32	10.4	0	0	0
55	SLU 46	-0.03	-0.32	10.4	0	0	0
55	SLU 47	-0.03	-0.32	10.33	0	0	0
55	SLU 48	-0.04	-0.32	10.51	0	0	0
55	SLU 49	-0.04	-0.32	10.51	0	0	0
55	SLU 50	-0.04	-0.32	10.43	0	0	0
55	SLU 51	-0.04	-0.32	10.43	0	0	0
55	SLU 52	-0.05	-0.33	11.23	0	0	0
55	SLU 53	-0.05	-0.33	11.42	0	0	0
55	SLU 54	-0.05	-0.33	11.42	0	0	0
55	SLU 55	-0.06	-0.33	11.34	0	0	0
55	SLU 56	-0.06	-0.33	11.53	0	0	0
55	SLU 57	-0.06	-0.33	11.53	0	0	0
55	SLU 58	-0.06	-0.32	11.45	0	0	0
55	SLU 59	-0.06	-0.33	11.45	0	0	0
55	SLU 60	-0.06	-0.33	11.67	0	0	0
55	SLU 61	-0.06	-0.33	11.67	0	0	0
55	SLU 62	-0.07	-0.33	11.77	0	0	0
55	SLU 63	-0.07	-0.33	11.78	0	0	0
55	SLU 64	-0.03	-0.31	11.14	0	0	0
55	SLU 65	-0.03	-0.31	11.14	0	0	0
55	SLU 66	-0.04	-0.31	11.32	0	0	0
55	SLU 67	-0.04	-0.31	11.33	0	0	0
55	SLU 68	-0.04	-0.31	11.25	0	0	0
55	SLU 69	-0.04	-0.31	11.43	0	0	0
55	SLU 70	-0.04	-0.31	11.43	0	0	0
55	SLU 71	-0.04	-0.31	11.35	0	0	0
55	SLU 72	-0.04	-0.31	11.36	0	0	0
55	SLU 73	-0.05	-0.32	12.15	0	0	0
55	SLU 74	-0.06	-0.32	12.34	0	0	0
55	SLU 75	-0.06	-0.32	12.34	0	0	0
55	SLU 76	-0.06	-0.32	12.26	0	0	0
55	SLU 77	-0.06	-0.32	12.45	0	0	0
55	SLU 78	-0.06	-0.32	12.45	0	0	0
55	SLU 79	-0.06	-0.31	12.37	0	0	0
55	SLU 80	-0.06	-0.32	12.37	0	0	0
55	SLU 81	-0.06	-0.32	12.59	0	0	0
55	SLU 82	-0.06	-0.32	12.59	0	0	0
55	SLU 83	-0.07	-0.32	12.69	0	0	0
55	SLU 84	-0.07	-0.32	12.7	0	0	0
55	SLE RA 1	-0.02	-0.24	8.37	0	0	0
55	SLE RA 2	-0.02	-0.24	8.37	0	0	0
55	SLE RA 3	-0.03	-0.24	8.49	0	0	0
55	SLE RA 4	-0.03	-0.24	8.49	0	0	0
55	SLE RA 5	-0.03	-0.24	8.44	0	0	0
55	SLE RA 6	-0.03	-0.24	8.56	0	0	0
55	SLE RA 7	-0.03	-0.24	8.56	0	0	0
55	SLE RA 8	-0.03	-0.24	8.51	0	0	0
55	SLE RA 9	-0.03	-0.24	8.51	0	0	0
55	SLE RA 10	-0.04	-0.25	9.04	0	0	0
55	SLE RA 11	-0.04	-0.24	9.17	0	0	0
55	SLE RA 12	-0.04	-0.25	9.17	0	0	0
55	SLE RA 13	-0.04	-0.25	9.11	0	0	0
55	SLE RA 14	-0.04	-0.24	9.24	0	0	0
55	SLE RA 15	-0.04	-0.25	9.24	0	0	0
55	SLE RA 16	-0.05	-0.24	9.19	0	0	0
55	SLE RA 17	-0.05	-0.25	9.19	0	0	0
55	SLE RA 18	-0.04	-0.25	9.33	0	0	0
55	SLE RA 19	-0.04	-0.25	9.33	0	0	0
55	SLE RA 20	-0.05	-0.25	9.4	0	0	0
55	SLE RA 21	-0.05	-0.25	9.4	0	0	0
55	SLE FR 1	-0.02	-0.24	8.37	0	0	0
55	SLE FR 2	-0.02	-0.24	8.37	0	0	0
55	SLE FR 3	-0.02	-0.24	8.39	0	0	0
55	SLE FR 4	-0.03	-0.24	8.66	0	0	0
55	SLE FR 5	-0.03	-0.24	8.68	0	0	0
55	SLE FR 6	-0.03	-0.24	8.85	0	0	0
55	SLE QP 1	-0.02	-0.24	8.37	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
55	SLE QP 2	-0.03	-0.24	8.66	0	0	0
55	SLD 1	0.54	-0.19	8.44	0	0	0
55	SLD 2	0.55	-0.17	8.43	0	0	0
55	SLD 3	0.51	-0.35	8.51	0	0	0
55	SLD 4	0.52	-0.32	8.5	0	0	0
55	SLD 5	0.19	0	8.49	0	0	0
55	SLD 6	0.19	0.02	8.49	0	0	0
55	SLD 7	0.09	-0.51	8.71	0	0	0
55	SLD 8	0.09	-0.49	8.71	0	0	0
55	SLD 9	-0.15	0.01	8.6	0	0	0
55	SLD 10	-0.15	0.03	8.6	0	0	0
55	SLD 11	-0.25	-0.5	8.82	0	0	0
55	SLD 12	-0.25	-0.48	8.82	0	0	0
55	SLD 13	-0.58	-0.17	8.81	0	0	0
55	SLD 14	-0.57	-0.14	8.8	0	0	0
55	SLD 15	-0.61	-0.32	8.88	0	0	0
55	SLD 16	-0.6	-0.29	8.87	0	0	0
55	SLV 1	1.31	-0.14	8.16	0	0	0
55	SLV 2	1.33	-0.07	8.14	0	0	0
55	SLV 3	1.24	-0.48	8.31	0	0	0
55	SLV 4	1.26	-0.42	8.29	0	0	0
55	SLV 5	0.48	0.3	8.28	0	0	0
55	SLV 6	0.48	0.35	8.27	0	0	0
55	SLV 7	0.25	-0.85	8.78	0	0	0
55	SLV 8	0.25	-0.81	8.77	0	0	0
55	SLV 9	-0.31	0.33	8.54	0	0	0
55	SLV 10	-0.3	0.37	8.53	0	0	0
55	SLV 11	-0.54	-0.83	9.04	0	0	0
55	SLV 12	-0.53	-0.79	9.03	0	0	0
55	SLV 13	-1.31	-0.07	9.02	0	0	0
55	SLV 14	-1.3	0	9	0	0	0
55	SLV 15	-1.38	-0.42	9.17	0	0	0
55	SLV 16	-1.37	-0.35	9.16	0	0	0
56	SLU 1	-0.01	-0.13	4.56	0	0	0
56	SLU 2	-0.01	-0.13	4.56	0	0	0
56	SLU 3	-0.01	-0.13	4.66	0	0	0
56	SLU 4	-0.02	-0.13	4.66	0	0	0
56	SLU 5	-0.02	-0.13	4.62	0	0	0
56	SLU 6	-0.02	-0.13	4.72	0	0	0
56	SLU 7	-0.02	-0.13	4.72	0	0	0
56	SLU 8	-0.02	-0.13	4.68	0	0	0
56	SLU 9	-0.02	-0.13	4.68	0	0	0
56	SLU 10	-0.03	-0.14	5.12	0	0	0
56	SLU 11	-0.03	-0.13	5.22	0	0	0
56	SLU 12	-0.03	-0.14	5.23	0	0	0
56	SLU 13	-0.03	-0.14	5.18	0	0	0
56	SLU 14	-0.03	-0.13	5.28	0	0	0
56	SLU 15	-0.03	-0.13	5.28	0	0	0
56	SLU 16	-0.03	-0.13	5.24	0	0	0
56	SLU 17	-0.03	-0.13	5.24	0	0	0
56	SLU 18	-0.03	-0.13	5.36	0	0	0
56	SLU 19	-0.03	-0.14	5.36	0	0	0
56	SLU 20	-0.03	-0.13	5.42	0	0	0
56	SLU 21	-0.03	-0.14	5.42	0	0	0
56	SLU 22	-0.01	-0.13	5.07	0	0	0
56	SLU 23	-0.01	-0.13	5.08	0	0	0
56	SLU 24	-0.02	-0.13	5.18	0	0	0
56	SLU 25	-0.02	-0.13	5.18	0	0	0
56	SLU 26	-0.02	-0.13	5.13	0	0	0
56	SLU 27	-0.02	-0.13	5.24	0	0	0
56	SLU 28	-0.02	-0.13	5.24	0	0	0
56	SLU 29	-0.02	-0.13	5.19	0	0	0
56	SLU 30	-0.02	-0.13	5.19	0	0	0
56	SLU 31	-0.03	-0.13	5.64	0	0	0
56	SLU 32	-0.03	-0.13	5.74	0	0	0
56	SLU 33	-0.03	-0.13	5.74	0	0	0
56	SLU 34	-0.03	-0.13	5.7	0	0	0
56	SLU 35	-0.03	-0.13	5.8	0	0	0
56	SLU 36	-0.03	-0.13	5.8	0	0	0
56	SLU 37	-0.03	-0.13	5.76	0	0	0
56	SLU 38	-0.03	-0.13	5.76	0	0	0
56	SLU 39	-0.03	-0.13	5.88	0	0	0
56	SLU 40	-0.03	-0.13	5.88	0	0	0
56	SLU 41	-0.04	-0.13	5.94	0	0	0
56	SLU 42	-0.04	-0.13	5.94	0	0	0
56	SLU 43	-0.02	-0.17	5.75	0	0	0
56	SLU 44	-0.02	-0.18	5.75	0	0	0
56	SLU 45	-0.02	-0.17	5.85	0	0	0
56	SLU 46	-0.02	-0.17	5.85	0	0	0
56	SLU 47	-0.02	-0.17	5.81	0	0	0
56	SLU 48	-0.02	-0.17	5.91	0	0	0
56	SLU 49	-0.02	-0.17	5.91	0	0	0
56	SLU 50	-0.02	-0.17	5.87	0	0	0
56	SLU 51	-0.02	-0.17	5.87	0	0	0
56	SLU 52	-0.03	-0.18	6.31	0	0	0
56	SLU 53	-0.03	-0.18	6.41	0	0	0
56	SLU 54	-0.03	-0.18	6.41	0	0	0
56	SLU 55	-0.03	-0.18	6.37	0	0	0
56	SLU 56	-0.03	-0.18	6.47	0	0	0
56	SLU 57	-0.03	-0.18	6.47	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
56	SLU 58	-0.03	-0.17	6.43	0	0	0
56	SLU 59	-0.03	-0.18	6.43	0	0	0
56	SLU 60	-0.03	-0.18	6.55	0	0	0
56	SLU 61	-0.03	-0.18	6.55	0	0	0
56	SLU 62	-0.04	-0.18	6.61	0	0	0
56	SLU 63	-0.04	-0.18	6.61	0	0	0
56	SLU 64	-0.02	-0.17	6.26	0	0	0
56	SLU 65	-0.02	-0.17	6.27	0	0	0
56	SLU 66	-0.02	-0.17	6.37	0	0	0
56	SLU 67	-0.02	-0.17	6.37	0	0	0
56	SLU 68	-0.02	-0.17	6.32	0	0	0
56	SLU 69	-0.02	-0.17	6.43	0	0	0
56	SLU 70	-0.02	-0.17	6.43	0	0	0
56	SLU 71	-0.02	-0.17	6.38	0	0	0
56	SLU 72	-0.02	-0.17	6.38	0	0	0
56	SLU 73	-0.03	-0.17	6.83	0	0	0
56	SLU 74	-0.03	-0.17	6.93	0	0	0
56	SLU 75	-0.03	-0.17	6.93	0	0	0
56	SLU 76	-0.03	-0.17	6.89	0	0	0
56	SLU 77	-0.04	-0.17	6.99	0	0	0
56	SLU 78	-0.04	-0.17	6.99	0	0	0
56	SLU 79	-0.04	-0.17	6.95	0	0	0
56	SLU 80	-0.04	-0.17	6.95	0	0	0
56	SLU 81	-0.04	-0.17	7.07	0	0	0
56	SLU 82	-0.04	-0.17	7.07	0	0	0
56	SLU 83	-0.04	-0.17	7.13	0	0	0
56	SLU 84	-0.04	-0.17	7.13	0	0	0
56	SLE RA 1	-0.01	-0.13	4.7	0	0	0
56	SLE RA 2	-0.01	-0.13	4.71	0	0	0
56	SLE RA 3	-0.01	-0.13	4.77	0	0	0
56	SLE RA 4	-0.01	-0.13	4.77	0	0	0
56	SLE RA 5	-0.02	-0.13	4.74	0	0	0
56	SLE RA 6	-0.02	-0.13	4.81	0	0	0
56	SLE RA 7	-0.02	-0.13	4.81	0	0	0
56	SLE RA 8	-0.02	-0.13	4.78	0	0	0
56	SLE RA 9	-0.02	-0.13	4.78	0	0	0
56	SLE RA 10	-0.02	-0.13	5.08	0	0	0
56	SLE RA 11	-0.02	-0.13	5.15	0	0	0
56	SLE RA 12	-0.02	-0.13	5.15	0	0	0
56	SLE RA 13	-0.02	-0.13	5.12	0	0	0
56	SLE RA 14	-0.03	-0.13	5.19	0	0	0
56	SLE RA 15	-0.03	-0.13	5.19	0	0	0
56	SLE RA 16	-0.03	-0.13	5.16	0	0	0
56	SLE RA 17	-0.03	-0.13	5.16	0	0	0
56	SLE RA 18	-0.03	-0.13	5.24	0	0	0
56	SLE RA 19	-0.03	-0.13	5.24	0	0	0
56	SLE RA 20	-0.03	-0.13	5.28	0	0	0
56	SLE RA 21	-0.03	-0.13	5.28	0	0	0
56	SLE FR 1	-0.01	-0.13	4.7	0	0	0
56	SLE FR 2	-0.01	-0.13	4.71	0	0	0
56	SLE FR 3	-0.01	-0.13	4.72	0	0	0
56	SLE FR 4	-0.02	-0.13	4.87	0	0	0
56	SLE FR 5	-0.02	-0.13	4.88	0	0	0
56	SLE FR 6	-0.02	-0.13	4.97	0	0	0
56	SLE QP 1	-0.01	-0.13	4.7	0	0	0
56	SLE QP 2	-0.02	-0.13	4.87	0	0	0
56	SLD 1	0.31	-0.11	4.71	0	0	0
56	SLD 2	0.31	-0.09	4.71	0	0	0
56	SLD 3	0.29	-0.19	4.75	0	0	0
56	SLD 4	0.29	-0.17	4.74	0	0	0
56	SLD 5	0.11	0	4.77	0	0	0
56	SLD 6	0.11	0.02	4.77	0	0	0
56	SLD 7	0.05	-0.28	4.88	0	0	0
56	SLD 8	0.05	-0.27	4.88	0	0	0
56	SLD 9	-0.08	0.01	4.85	0	0	0
56	SLD 10	-0.08	0.02	4.85	0	0	0
56	SLD 11	-0.14	-0.28	4.97	0	0	0
56	SLD 12	-0.14	-0.26	4.96	0	0	0
56	SLD 13	-0.33	-0.09	4.99	0	0	0
56	SLD 14	-0.32	-0.07	4.98	0	0	0
56	SLD 15	-0.35	-0.17	5.02	0	0	0
56	SLD 16	-0.34	-0.16	5.02	0	0	0
56	SLV 1	0.74	-0.08	4.51	0	0	0
56	SLV 2	0.75	-0.03	4.5	0	0	0
56	SLV 3	0.7	-0.27	4.59	0	0	0
56	SLV 4	0.71	-0.23	4.58	0	0	0
56	SLV 5	0.27	0.17	4.64	0	0	0
56	SLV 6	0.27	0.2	4.63	0	0	0
56	SLV 7	0.14	-0.47	4.9	0	0	0
56	SLV 8	0.14	-0.45	4.9	0	0	0
56	SLV 9	-0.18	0.18	4.84	0	0	0
56	SLV 10	-0.17	0.21	4.83	0	0	0
56	SLV 11	-0.31	-0.46	5.1	0	0	0
56	SLV 12	-0.3	-0.43	5.09	0	0	0
56	SLV 13	-0.75	-0.03	5.16	0	0	0
56	SLV 14	-0.74	0.01	5.14	0	0	0
56	SLV 15	-0.78	-0.23	5.24	0	0	0
56	SLV 16	-0.78	-0.18	5.22	0	0	0
57	SLU 1	-0.02	-0.16	4.5	0	0	0
57	SLU 2	-0.02	-0.17	4.51	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
57	SLU 3	-0.02	-0.17	4.61	0	0	0
57	SLU 4	-0.02	-0.17	4.62	0	0	0
57	SLU 5	-0.02	-0.17	4.58	0	0	0
57	SLU 6	-0.02	-0.16	4.68	0	0	0
57	SLU 7	-0.02	-0.17	4.68	0	0	0
57	SLU 8	-0.02	-0.16	4.64	0	0	0
57	SLU 9	-0.02	-0.17	4.64	0	0	0
57	SLU 10	-0.03	-0.17	5.1	0	0	0
57	SLU 11	-0.03	-0.17	5.21	0	0	0
57	SLU 12	-0.03	-0.17	5.21	0	0	0
57	SLU 13	-0.03	-0.17	5.17	0	0	0
57	SLU 14	-0.04	-0.17	5.27	0	0	0
57	SLU 15	-0.04	-0.17	5.28	0	0	0
57	SLU 16	-0.04	-0.17	5.23	0	0	0
57	SLU 17	-0.04	-0.17	5.23	0	0	0
57	SLU 18	-0.04	-0.17	5.35	0	0	0
57	SLU 19	-0.04	-0.18	5.35	0	0	0
57	SLU 20	-0.04	-0.17	5.42	0	0	0
57	SLU 21	-0.04	-0.18	5.42	0	0	0
57	SLU 22	-0.02	-0.16	5.02	0	0	0
57	SLU 23	-0.02	-0.16	5.02	0	0	0
57	SLU 24	-0.02	-0.16	5.13	0	0	0
57	SLU 25	-0.02	-0.16	5.13	0	0	0
57	SLU 26	-0.02	-0.16	5.09	0	0	0
57	SLU 27	-0.03	-0.16	5.2	0	0	0
57	SLU 28	-0.03	-0.16	5.2	0	0	0
57	SLU 29	-0.03	-0.16	5.16	0	0	0
57	SLU 30	-0.03	-0.16	5.16	0	0	0
57	SLU 31	-0.03	-0.17	5.61	0	0	0
57	SLU 32	-0.04	-0.17	5.72	0	0	0
57	SLU 33	-0.04	-0.17	5.72	0	0	0
57	SLU 34	-0.04	-0.17	5.68	0	0	0
57	SLU 35	-0.04	-0.17	5.79	0	0	0
57	SLU 36	-0.04	-0.17	5.79	0	0	0
57	SLU 37	-0.04	-0.17	5.75	0	0	0
57	SLU 38	-0.04	-0.17	5.75	0	0	0
57	SLU 39	-0.04	-0.17	5.87	0	0	0
57	SLU 40	-0.04	-0.17	5.87	0	0	0
57	SLU 41	-0.04	-0.17	5.93	0	0	0
57	SLU 42	-0.04	-0.17	5.94	0	0	0
57	SLU 43	-0.02	-0.21	5.68	0	0	0
57	SLU 44	-0.02	-0.22	5.68	0	0	0
57	SLU 45	-0.02	-0.22	5.79	0	0	0
57	SLU 46	-0.03	-0.22	5.79	0	0	0
57	SLU 47	-0.03	-0.22	5.75	0	0	0
57	SLU 48	-0.03	-0.22	5.86	0	0	0
57	SLU 49	-0.03	-0.22	5.86	0	0	0
57	SLU 50	-0.03	-0.21	5.82	0	0	0
57	SLU 51	-0.03	-0.22	5.82	0	0	0
57	SLU 52	-0.04	-0.22	6.27	0	0	0
57	SLU 53	-0.04	-0.22	6.38	0	0	0
57	SLU 54	-0.04	-0.22	6.38	0	0	0
57	SLU 55	-0.04	-0.22	6.34	0	0	0
57	SLU 56	-0.04	-0.22	6.45	0	0	0
57	SLU 57	-0.04	-0.22	6.45	0	0	0
57	SLU 58	-0.04	-0.22	6.41	0	0	0
57	SLU 59	-0.04	-0.22	6.41	0	0	0
57	SLU 60	-0.04	-0.22	6.52	0	0	0
57	SLU 61	-0.04	-0.23	6.53	0	0	0
57	SLU 62	-0.04	-0.22	6.59	0	0	0
57	SLU 63	-0.04	-0.23	6.59	0	0	0
57	SLU 64	-0.02	-0.21	6.19	0	0	0
57	SLU 65	-0.03	-0.21	6.2	0	0	0
57	SLU 66	-0.03	-0.21	6.3	0	0	0
57	SLU 67	-0.03	-0.21	6.31	0	0	0
57	SLU 68	-0.03	-0.21	6.27	0	0	0
57	SLU 69	-0.03	-0.21	6.37	0	0	0
57	SLU 70	-0.03	-0.21	6.38	0	0	0
57	SLU 71	-0.03	-0.21	6.33	0	0	0
57	SLU 72	-0.03	-0.21	6.33	0	0	0
57	SLU 73	-0.04	-0.22	6.79	0	0	0
57	SLU 74	-0.04	-0.22	6.9	0	0	0
57	SLU 75	-0.04	-0.22	6.9	0	0	0
57	SLU 76	-0.04	-0.22	6.86	0	0	0
57	SLU 77	-0.04	-0.22	6.97	0	0	0
57	SLU 78	-0.04	-0.22	6.97	0	0	0
57	SLU 79	-0.04	-0.22	6.92	0	0	0
57	SLU 80	-0.04	-0.22	6.93	0	0	0
57	SLU 81	-0.04	-0.22	7.04	0	0	0
57	SLU 82	-0.04	-0.22	7.04	0	0	0
57	SLU 83	-0.05	-0.22	7.11	0	0	0
57	SLU 84	-0.05	-0.22	7.11	0	0	0
57	SLE RA 1	-0.02	-0.16	4.65	0	0	0
57	SLE RA 2	-0.02	-0.17	4.65	0	0	0
57	SLE RA 3	-0.02	-0.16	4.73	0	0	0
57	SLE RA 4	-0.02	-0.17	4.73	0	0	0
57	SLE RA 5	-0.02	-0.17	4.7	0	0	0
57	SLE RA 6	-0.02	-0.16	4.77	0	0	0
57	SLE RA 7	-0.02	-0.16	4.77	0	0	0
57	SLE RA 8	-0.02	-0.16	4.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
57	SLE RA 9	-0.02	-0.16	4.74	0	0	0
57	SLE RA 10	-0.03	-0.17	5.05	0	0	0
57	SLE RA 11	-0.03	-0.17	5.12	0	0	0
57	SLE RA 12	-0.03	-0.17	5.12	0	0	0
57	SLE RA 13	-0.03	-0.17	5.09	0	0	0
57	SLE RA 14	-0.03	-0.17	5.17	0	0	0
57	SLE RA 15	-0.03	-0.17	5.17	0	0	0
57	SLE RA 16	-0.03	-0.17	5.14	0	0	0
57	SLE RA 17	-0.03	-0.17	5.14	0	0	0
57	SLE RA 18	-0.03	-0.17	5.22	0	0	0
57	SLE RA 19	-0.03	-0.17	5.22	0	0	0
57	SLE RA 20	-0.03	-0.17	5.26	0	0	0
57	SLE RA 21	-0.03	-0.17	5.26	0	0	0
57	SLE FR 1	-0.02	-0.16	4.65	0	0	0
57	SLE FR 2	-0.02	-0.16	4.65	0	0	0
57	SLE FR 3	-0.02	-0.16	4.67	0	0	0
57	SLE FR 4	-0.02	-0.17	4.82	0	0	0
57	SLE FR 5	-0.02	-0.17	4.84	0	0	0
57	SLE FR 6	-0.02	-0.17	4.93	0	0	0
57	SLE QP 1	-0.02	-0.16	4.65	0	0	0
57	SLE QP 2	-0.02	-0.17	4.82	0	0	0
57	SLD 1	0.29	-0.11	4.83	0	0	0
57	SLD 2	0.3	-0.11	4.83	0	0	0
57	SLD 3	0.28	-0.2	4.92	0	0	0
57	SLD 4	0.28	-0.2	4.92	0	0	0
57	SLD 5	0.1	-0.01	4.7	0	0	0
57	SLD 6	0.1	-0.01	4.7	0	0	0
57	SLD 7	0.04	-0.31	4.98	0	0	0
57	SLD 8	0.04	-0.31	4.97	0	0	0
57	SLD 9	-0.09	-0.02	4.67	0	0	0
57	SLD 10	-0.09	-0.02	4.67	0	0	0
57	SLD 11	-0.14	-0.32	4.94	0	0	0
57	SLD 12	-0.14	-0.32	4.94	0	0	0
57	SLD 13	-0.32	-0.13	4.73	0	0	0
57	SLD 14	-0.32	-0.13	4.72	0	0	0
57	SLD 15	-0.34	-0.22	4.81	0	0	0
57	SLD 16	-0.34	-0.22	4.81	0	0	0
57	SLV 1	0.72	-0.05	4.86	0	0	0
57	SLV 2	0.72	-0.04	4.85	0	0	0
57	SLV 3	0.68	-0.25	5.04	0	0	0
57	SLV 4	0.68	-0.25	5.04	0	0	0
57	SLV 5	0.26	0.18	4.55	0	0	0
57	SLV 6	0.26	0.18	4.55	0	0	0
57	SLV 7	0.13	-0.5	5.17	0	0	0
57	SLV 8	0.13	-0.5	5.17	0	0	0
57	SLV 9	-0.17	0.17	4.47	0	0	0
57	SLV 10	-0.17	0.17	4.47	0	0	0
57	SLV 11	-0.31	-0.51	5.1	0	0	0
57	SLV 12	-0.3	-0.51	5.09	0	0	0
57	SLV 13	-0.72	-0.08	4.6	0	0	0
57	SLV 14	-0.72	-0.08	4.6	0	0	0
57	SLV 15	-0.76	-0.29	4.79	0	0	0
57	SLV 16	-0.76	-0.28	4.78	0	0	0
58	SLU 1	-0.03	-0.28	8.06	0	0	0
58	SLU 2	-0.03	-0.29	8.06	0	0	0
58	SLU 3	-0.04	-0.29	8.25	0	0	0
58	SLU 4	-0.04	-0.29	8.25	0	0	0
58	SLU 5	-0.04	-0.29	8.18	0	0	0
58	SLU 6	-0.04	-0.29	8.37	0	0	0
58	SLU 7	-0.04	-0.29	8.37	0	0	0
58	SLU 8	-0.04	-0.28	8.3	0	0	0
58	SLU 9	-0.04	-0.29	8.3	0	0	0
58	SLU 10	-0.06	-0.3	9.11	0	0	0
58	SLU 11	-0.06	-0.3	9.3	0	0	0
58	SLU 12	-0.06	-0.3	9.31	0	0	0
58	SLU 13	-0.06	-0.3	9.23	0	0	0
58	SLU 14	-0.07	-0.3	9.42	0	0	0
58	SLU 15	-0.07	-0.3	9.43	0	0	0
58	SLU 16	-0.07	-0.3	9.35	0	0	0
58	SLU 17	-0.07	-0.3	9.35	0	0	0
58	SLU 18	-0.07	-0.3	9.56	0	0	0
58	SLU 19	-0.07	-0.3	9.56	0	0	0
58	SLU 20	-0.07	-0.3	9.68	0	0	0
58	SLU 21	-0.07	-0.3	9.68	0	0	0
58	SLU 22	-0.04	-0.28	8.98	0	0	0
58	SLU 23	-0.04	-0.28	8.99	0	0	0
58	SLU 24	-0.04	-0.28	9.18	0	0	0
58	SLU 25	-0.04	-0.28	9.18	0	0	0
58	SLU 26	-0.04	-0.28	9.11	0	0	0
58	SLU 27	-0.05	-0.28	9.3	0	0	0
58	SLU 28	-0.05	-0.28	9.3	0	0	0
58	SLU 29	-0.05	-0.28	9.22	0	0	0
58	SLU 30	-0.05	-0.28	9.22	0	0	0
58	SLU 31	-0.06	-0.29	10.04	0	0	0
58	SLU 32	-0.07	-0.29	10.23	0	0	0
58	SLU 33	-0.07	-0.29	10.23	0	0	0
58	SLU 34	-0.07	-0.29	10.16	0	0	0
58	SLU 35	-0.07	-0.29	10.35	0	0	0
58	SLU 36	-0.07	-0.29	10.35	0	0	0
58	SLU 37	-0.07	-0.29	10.27	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLU 38	-0.07	-0.29	10.27	0	0	0
58	SLU 39	-0.07	-0.29	10.48	0	0	0
58	SLU 40	-0.07	-0.3	10.48	0	0	0
58	SLU 41	-0.08	-0.29	10.6	0	0	0
58	SLU 42	-0.08	-0.3	10.6	0	0	0
58	SLU 43	-0.04	-0.37	10.16	0	0	0
58	SLU 44	-0.04	-0.38	10.16	0	0	0
58	SLU 45	-0.04	-0.37	10.35	0	0	0
58	SLU 46	-0.05	-0.38	10.36	0	0	0
58	SLU 47	-0.05	-0.38	10.28	0	0	0
58	SLU 48	-0.05	-0.37	10.47	0	0	0
58	SLU 49	-0.05	-0.38	10.48	0	0	0
58	SLU 50	-0.05	-0.37	10.4	0	0	0
58	SLU 51	-0.05	-0.37	10.4	0	0	0
58	SLU 52	-0.06	-0.39	11.21	0	0	0
58	SLU 53	-0.07	-0.38	11.4	0	0	0
58	SLU 54	-0.07	-0.39	11.41	0	0	0
58	SLU 55	-0.07	-0.39	11.33	0	0	0
58	SLU 56	-0.07	-0.38	11.52	0	0	0
58	SLU 57	-0.07	-0.39	11.53	0	0	0
58	SLU 58	-0.08	-0.38	11.45	0	0	0
58	SLU 59	-0.08	-0.39	11.45	0	0	0
58	SLU 60	-0.07	-0.39	11.66	0	0	0
58	SLU 61	-0.07	-0.39	11.66	0	0	0
58	SLU 62	-0.08	-0.39	11.78	0	0	0
58	SLU 63	-0.08	-0.39	11.78	0	0	0
58	SLU 64	-0.04	-0.37	11.08	0	0	0
58	SLU 65	-0.04	-0.37	11.09	0	0	0
58	SLU 66	-0.05	-0.37	11.28	0	0	0
58	SLU 67	-0.05	-0.37	11.28	0	0	0
58	SLU 68	-0.05	-0.37	11.21	0	0	0
58	SLU 69	-0.05	-0.37	11.4	0	0	0
58	SLU 70	-0.06	-0.37	11.4	0	0	0
58	SLU 71	-0.06	-0.37	11.32	0	0	0
58	SLU 72	-0.06	-0.37	11.32	0	0	0
58	SLU 73	-0.07	-0.38	12.14	0	0	0
58	SLU 74	-0.07	-0.38	12.33	0	0	0
58	SLU 75	-0.07	-0.38	12.33	0	0	0
58	SLU 76	-0.07	-0.38	12.26	0	0	0
58	SLU 77	-0.08	-0.38	12.45	0	0	0
58	SLU 78	-0.08	-0.38	12.45	0	0	0
58	SLU 79	-0.08	-0.38	12.37	0	0	0
58	SLU 80	-0.08	-0.38	12.37	0	0	0
58	SLU 81	-0.08	-0.38	12.58	0	0	0
58	SLU 82	-0.08	-0.38	12.58	0	0	0
58	SLU 83	-0.08	-0.38	12.7	0	0	0
58	SLU 84	-0.08	-0.38	12.7	0	0	0
58	SLE RA 1	-0.03	-0.28	8.32	0	0	0
58	SLE RA 2	-0.03	-0.29	8.32	0	0	0
58	SLE RA 3	-0.04	-0.28	8.45	0	0	0
58	SLE RA 4	-0.04	-0.29	8.45	0	0	0
58	SLE RA 5	-0.04	-0.29	8.4	0	0	0
58	SLE RA 6	-0.04	-0.28	8.53	0	0	0
58	SLE RA 7	-0.04	-0.29	8.53	0	0	0
58	SLE RA 8	-0.04	-0.28	8.48	0	0	0
58	SLE RA 9	-0.04	-0.28	8.48	0	0	0
58	SLE RA 10	-0.05	-0.29	9.02	0	0	0
58	SLE RA 11	-0.05	-0.29	9.15	0	0	0
58	SLE RA 12	-0.05	-0.29	9.15	0	0	0
58	SLE RA 13	-0.05	-0.29	9.1	0	0	0
58	SLE RA 14	-0.06	-0.29	9.23	0	0	0
58	SLE RA 15	-0.06	-0.29	9.23	0	0	0
58	SLE RA 16	-0.06	-0.29	9.18	0	0	0
58	SLE RA 17	-0.06	-0.29	9.18	0	0	0
58	SLE RA 18	-0.06	-0.29	9.32	0	0	0
58	SLE RA 19	-0.06	-0.29	9.32	0	0	0
58	SLE RA 20	-0.06	-0.29	9.4	0	0	0
58	SLE RA 21	-0.06	-0.29	9.4	0	0	0
58	SLE FR 1	-0.03	-0.28	8.32	0	0	0
58	SLE FR 2	-0.03	-0.28	8.32	0	0	0
58	SLE FR 3	-0.03	-0.28	8.35	0	0	0
58	SLE FR 4	-0.04	-0.29	8.62	0	0	0
58	SLE FR 5	-0.04	-0.29	8.65	0	0	0
58	SLE FR 6	-0.04	-0.29	8.82	0	0	0
58	SLE QP 1	-0.03	-0.28	8.32	0	0	0
58	SLE QP 2	-0.04	-0.29	8.62	0	0	0
58	SLD 1	0.53	-0.2	8.6	0	0	0
58	SLD 2	0.53	-0.19	8.6	0	0	0
58	SLD 3	0.5	-0.36	8.74	0	0	0
58	SLD 4	0.5	-0.35	8.73	0	0	0
58	SLD 5	0.18	-0.02	8.41	0	0	0
58	SLD 6	0.18	-0.01	8.41	0	0	0
58	SLD 7	0.07	-0.55	8.86	0	0	0
58	SLD 8	0.07	-0.54	8.86	0	0	0
58	SLD 9	-0.15	-0.03	8.38	0	0	0
58	SLD 10	-0.15	-0.02	8.38	0	0	0
58	SLD 11	-0.26	-0.56	8.84	0	0	0
58	SLD 12	-0.26	-0.55	8.83	0	0	0
58	SLD 13	-0.58	-0.22	8.51	0	0	0
58	SLD 14	-0.58	-0.21	8.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLD 15	-0.61	-0.38	8.65	0	0	0
58	SLD 16	-0.61	-0.37	8.64	0	0	0
58	SLV 1	1.29	-0.09	8.58	0	0	0
58	SLV 2	1.29	-0.06	8.57	0	0	0
58	SLV 3	1.22	-0.45	8.89	0	0	0
58	SLV 4	1.22	-0.43	8.88	0	0	0
58	SLV 5	0.47	0.32	8.14	0	0	0
58	SLV 6	0.47	0.33	8.13	0	0	0
58	SLV 7	0.23	-0.89	9.17	0	0	0
58	SLV 8	0.23	-0.87	9.16	0	0	0
58	SLV 9	-0.31	0.3	8.08	0	0	0
58	SLV 10	-0.31	0.32	8.07	0	0	0
58	SLV 11	-0.55	-0.91	9.11	0	0	0
58	SLV 12	-0.55	-0.89	9.1	0	0	0
58	SLV 13	-1.3	-0.15	8.37	0	0	0
58	SLV 14	-1.3	-0.12	8.35	0	0	0
58	SLV 15	-1.37	-0.51	8.68	0	0	0
58	SLV 16	-1.37	-0.49	8.66	0	0	0
59	SLU 1	-0.03	-0.24	7.05	0	0	0
59	SLU 2	-0.03	-0.25	7.05	0	0	0
59	SLU 3	-0.03	-0.24	7.22	0	0	0
59	SLU 4	-0.03	-0.25	7.22	0	0	0
59	SLU 5	-0.03	-0.25	7.16	0	0	0
59	SLU 6	-0.04	-0.24	7.32	0	0	0
59	SLU 7	-0.04	-0.25	7.32	0	0	0
59	SLU 8	-0.04	-0.24	7.26	0	0	0
59	SLU 9	-0.04	-0.24	7.26	0	0	0
59	SLU 10	-0.05	-0.25	7.97	0	0	0
59	SLU 11	-0.05	-0.25	8.13	0	0	0
59	SLU 12	-0.05	-0.25	8.13	0	0	0
59	SLU 13	-0.05	-0.25	8.07	0	0	0
59	SLU 14	-0.06	-0.25	8.23	0	0	0
59	SLU 15	-0.06	-0.25	8.24	0	0	0
59	SLU 16	-0.06	-0.25	8.17	0	0	0
59	SLU 17	-0.06	-0.25	8.17	0	0	0
59	SLU 18	-0.06	-0.25	8.35	0	0	0
59	SLU 19	-0.06	-0.26	8.36	0	0	0
59	SLU 20	-0.06	-0.25	8.46	0	0	0
59	SLU 21	-0.06	-0.26	8.46	0	0	0
59	SLU 22	-0.03	-0.24	7.86	0	0	0
59	SLU 23	-0.03	-0.24	7.86	0	0	0
59	SLU 24	-0.04	-0.24	8.03	0	0	0
59	SLU 25	-0.04	-0.24	8.03	0	0	0
59	SLU 26	-0.04	-0.24	7.96	0	0	0
59	SLU 27	-0.04	-0.24	8.13	0	0	0
59	SLU 28	-0.04	-0.24	8.13	0	0	0
59	SLU 29	-0.04	-0.24	8.06	0	0	0
59	SLU 30	-0.04	-0.24	8.07	0	0	0
59	SLU 31	-0.05	-0.25	8.77	0	0	0
59	SLU 32	-0.06	-0.25	8.94	0	0	0
59	SLU 33	-0.06	-0.25	8.94	0	0	0
59	SLU 34	-0.06	-0.25	8.88	0	0	0
59	SLU 35	-0.06	-0.25	9.04	0	0	0
59	SLU 36	-0.06	-0.25	9.05	0	0	0
59	SLU 37	-0.06	-0.24	8.98	0	0	0
59	SLU 38	-0.06	-0.25	8.98	0	0	0
59	SLU 39	-0.06	-0.25	9.16	0	0	0
59	SLU 40	-0.06	-0.25	9.16	0	0	0
59	SLU 41	-0.07	-0.25	9.27	0	0	0
59	SLU 42	-0.07	-0.25	9.27	0	0	0
59	SLU 43	-0.04	-0.32	8.89	0	0	0
59	SLU 44	-0.04	-0.32	8.89	0	0	0
59	SLU 45	-0.04	-0.32	9.06	0	0	0
59	SLU 46	-0.04	-0.32	9.06	0	0	0
59	SLU 47	-0.04	-0.32	8.99	0	0	0
59	SLU 48	-0.04	-0.32	9.16	0	0	0
59	SLU 49	-0.04	-0.32	9.16	0	0	0
59	SLU 50	-0.05	-0.32	9.09	0	0	0
59	SLU 51	-0.05	-0.32	9.1	0	0	0
59	SLU 52	-0.06	-0.33	9.8	0	0	0
59	SLU 53	-0.06	-0.33	9.97	0	0	0
59	SLU 54	-0.06	-0.33	9.97	0	0	0
59	SLU 55	-0.06	-0.33	9.91	0	0	0
59	SLU 56	-0.07	-0.33	10.07	0	0	0
59	SLU 57	-0.07	-0.33	10.08	0	0	0
59	SLU 58	-0.07	-0.33	10.01	0	0	0
59	SLU 59	-0.07	-0.33	10.01	0	0	0
59	SLU 60	-0.07	-0.33	10.19	0	0	0
59	SLU 61	-0.07	-0.33	10.19	0	0	0
59	SLU 62	-0.07	-0.33	10.3	0	0	0
59	SLU 63	-0.07	-0.33	10.3	0	0	0
59	SLU 64	-0.04	-0.31	9.7	0	0	0
59	SLU 65	-0.04	-0.31	9.7	0	0	0
59	SLU 66	-0.04	-0.31	9.86	0	0	0
59	SLU 67	-0.04	-0.31	9.87	0	0	0
59	SLU 68	-0.04	-0.31	9.8	0	0	0
59	SLU 69	-0.05	-0.31	9.97	0	0	0
59	SLU 70	-0.05	-0.31	9.97	0	0	0
59	SLU 71	-0.05	-0.31	9.9	0	0	0
59	SLU 72	-0.05	-0.31	9.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
59	SLU 73	-0.06	-0.32	10.61	0	0	0
59	SLU 74	-0.06	-0.32	10.78	0	0	0
59	SLU 75	-0.06	-0.32	10.78	0	0	0
59	SLU 76	-0.07	-0.32	10.72	0	0	0
59	SLU 77	-0.07	-0.32	10.88	0	0	0
59	SLU 78	-0.07	-0.32	10.88	0	0	0
59	SLU 79	-0.07	-0.32	10.82	0	0	0
59	SLU 80	-0.07	-0.32	10.82	0	0	0
59	SLU 81	-0.07	-0.32	11	0	0	0
59	SLU 82	-0.07	-0.33	11	0	0	0
59	SLU 83	-0.07	-0.32	11.1	0	0	0
59	SLU 84	-0.07	-0.33	11.11	0	0	0
59	SLE RA 1	-0.03	-0.24	7.28	0	0	0
59	SLE RA 2	-0.03	-0.24	7.28	0	0	0
59	SLE RA 3	-0.03	-0.24	7.39	0	0	0
59	SLE RA 4	-0.03	-0.24	7.39	0	0	0
59	SLE RA 5	-0.03	-0.24	7.35	0	0	0
59	SLE RA 6	-0.04	-0.24	7.46	0	0	0
59	SLE RA 7	-0.04	-0.24	7.46	0	0	0
59	SLE RA 8	-0.04	-0.24	7.42	0	0	0
59	SLE RA 9	-0.04	-0.24	7.42	0	0	0
59	SLE RA 10	-0.04	-0.25	7.89	0	0	0
59	SLE RA 11	-0.05	-0.25	8	0	0	0
59	SLE RA 12	-0.05	-0.25	8	0	0	0
59	SLE RA 13	-0.05	-0.25	7.96	0	0	0
59	SLE RA 14	-0.05	-0.25	8.07	0	0	0
59	SLE RA 15	-0.05	-0.25	8.07	0	0	0
59	SLE RA 16	-0.05	-0.25	8.03	0	0	0
59	SLE RA 17	-0.05	-0.25	8.03	0	0	0
59	SLE RA 18	-0.05	-0.25	8.15	0	0	0
59	SLE RA 19	-0.05	-0.25	8.15	0	0	0
59	SLE RA 20	-0.05	-0.25	8.22	0	0	0
59	SLE RA 21	-0.05	-0.25	8.22	0	0	0
59	SLE FR 1	-0.03	-0.24	7.28	0	0	0
59	SLE FR 2	-0.03	-0.24	7.28	0	0	0
59	SLE FR 3	-0.03	-0.24	7.31	0	0	0
59	SLE FR 4	-0.04	-0.24	7.54	0	0	0
59	SLE FR 5	-0.04	-0.24	7.57	0	0	0
59	SLE FR 6	-0.04	-0.24	7.72	0	0	0
59	SLE QP 1	-0.03	-0.24	7.28	0	0	0
59	SLE QP 2	-0.04	-0.24	7.54	0	0	0
59	SLD 1	0.47	-0.17	7.47	0	0	0
59	SLD 2	0.47	-0.16	7.46	0	0	0
59	SLD 3	0.44	-0.31	7.58	0	0	0
59	SLD 4	0.44	-0.3	7.57	0	0	0
59	SLD 5	0.16	-0.01	7.35	0	0	0
59	SLD 6	0.16	0	7.35	0	0	0
59	SLD 7	0.06	-0.48	7.72	0	0	0
59	SLD 8	0.07	-0.47	7.72	0	0	0
59	SLD 9	-0.14	-0.02	7.36	0	0	0
59	SLD 10	-0.13	-0.01	7.36	0	0	0
59	SLD 11	-0.23	-0.48	7.74	0	0	0
59	SLD 12	-0.23	-0.47	7.73	0	0	0
59	SLD 13	-0.51	-0.19	7.51	0	0	0
59	SLD 14	-0.51	-0.18	7.51	0	0	0
59	SLD 15	-0.54	-0.33	7.62	0	0	0
59	SLD 16	-0.54	-0.32	7.62	0	0	0
59	SLV 1	1.14	-0.07	7.37	0	0	0
59	SLV 2	1.14	-0.05	7.36	0	0	0
59	SLV 3	1.07	-0.39	7.62	0	0	0
59	SLV 4	1.08	-0.36	7.61	0	0	0
59	SLV 5	0.41	0.28	7.11	0	0	0
59	SLV 6	0.41	0.3	7.1	0	0	0
59	SLV 7	0.2	-0.77	7.95	0	0	0
59	SLV 8	0.2	-0.75	7.94	0	0	0
59	SLV 9	-0.27	0.27	7.14	0	0	0
59	SLV 10	-0.27	0.28	7.13	0	0	0
59	SLV 11	-0.49	-0.78	7.98	0	0	0
59	SLV 12	-0.48	-0.77	7.97	0	0	0
59	SLV 13	-1.15	-0.12	7.48	0	0	0
59	SLV 14	-1.14	-0.1	7.46	0	0	0
59	SLV 15	-1.21	-0.44	7.73	0	0	0
59	SLV 16	-1.21	-0.41	7.72	0	0	0
60	SLU 1	-0.03	-0.22	6.65	0	0	0
60	SLU 2	-0.03	-0.23	6.65	0	0	0
60	SLU 3	-0.03	-0.22	6.8	0	0	0
60	SLU 4	-0.03	-0.23	6.81	0	0	0
60	SLU 5	-0.03	-0.23	6.74	0	0	0
60	SLU 6	-0.04	-0.22	6.9	0	0	0
60	SLU 7	-0.04	-0.22	6.9	0	0	0
60	SLU 8	-0.04	-0.22	6.84	0	0	0
60	SLU 9	-0.04	-0.22	6.84	0	0	0
60	SLU 10	-0.05	-0.23	7.5	0	0	0
60	SLU 11	-0.05	-0.23	7.66	0	0	0
60	SLU 12	-0.05	-0.23	7.66	0	0	0
60	SLU 13	-0.05	-0.23	7.6	0	0	0
60	SLU 14	-0.06	-0.23	7.75	0	0	0
60	SLU 15	-0.06	-0.23	7.76	0	0	0
60	SLU 16	-0.06	-0.23	7.69	0	0	0
60	SLU 17	-0.06	-0.23	7.69	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
60	SLU 18	-0.06	-0.23	7.87	0	0	0
60	SLU 19	-0.06	-0.23	7.87	0	0	0
60	SLU 20	-0.06	-0.23	7.96	0	0	0
60	SLU 21	-0.06	-0.23	7.97	0	0	0
60	SLU 22	-0.03	-0.22	7.41	0	0	0
60	SLU 23	-0.03	-0.22	7.41	0	0	0
60	SLU 24	-0.03	-0.22	7.57	0	0	0
60	SLU 25	-0.03	-0.22	7.57	0	0	0
60	SLU 26	-0.04	-0.22	7.51	0	0	0
60	SLU 27	-0.04	-0.22	7.66	0	0	0
60	SLU 28	-0.04	-0.22	7.66	0	0	0
60	SLU 29	-0.04	-0.22	7.6	0	0	0
60	SLU 30	-0.04	-0.22	7.6	0	0	0
60	SLU 31	-0.05	-0.23	8.27	0	0	0
60	SLU 32	-0.05	-0.22	8.42	0	0	0
60	SLU 33	-0.05	-0.23	8.42	0	0	0
60	SLU 34	-0.06	-0.23	8.36	0	0	0
60	SLU 35	-0.06	-0.22	8.52	0	0	0
60	SLU 36	-0.06	-0.23	8.52	0	0	0
60	SLU 37	-0.06	-0.22	8.45	0	0	0
60	SLU 38	-0.06	-0.22	8.46	0	0	0
60	SLU 39	-0.06	-0.23	8.63	0	0	0
60	SLU 40	-0.06	-0.23	8.63	0	0	0
60	SLU 41	-0.06	-0.23	8.73	0	0	0
60	SLU 42	-0.06	-0.23	8.73	0	0	0
60	SLU 43	-0.03	-0.29	8.38	0	0	0
60	SLU 44	-0.03	-0.29	8.38	0	0	0
60	SLU 45	-0.04	-0.29	8.54	0	0	0
60	SLU 46	-0.04	-0.29	8.54	0	0	0
60	SLU 47	-0.04	-0.29	8.48	0	0	0
60	SLU 48	-0.04	-0.29	8.63	0	0	0
60	SLU 49	-0.04	-0.29	8.63	0	0	0
60	SLU 50	-0.04	-0.29	8.57	0	0	0
60	SLU 51	-0.04	-0.29	8.57	0	0	0
60	SLU 52	-0.05	-0.3	9.24	0	0	0
60	SLU 53	-0.06	-0.3	9.39	0	0	0
60	SLU 54	-0.06	-0.3	9.39	0	0	0
60	SLU 55	-0.06	-0.3	9.33	0	0	0
60	SLU 56	-0.06	-0.3	9.49	0	0	0
60	SLU 57	-0.06	-0.3	9.49	0	0	0
60	SLU 58	-0.06	-0.3	9.42	0	0	0
60	SLU 59	-0.06	-0.3	9.43	0	0	0
60	SLU 60	-0.06	-0.3	9.6	0	0	0
60	SLU 61	-0.06	-0.3	9.6	0	0	0
60	SLU 62	-0.07	-0.3	9.7	0	0	0
60	SLU 63	-0.07	-0.3	9.7	0	0	0
60	SLU 64	-0.04	-0.28	9.14	0	0	0
60	SLU 65	-0.04	-0.29	9.14	0	0	0
60	SLU 66	-0.04	-0.29	9.3	0	0	0
60	SLU 67	-0.04	-0.29	9.3	0	0	0
60	SLU 68	-0.04	-0.29	9.24	0	0	0
60	SLU 69	-0.05	-0.29	9.39	0	0	0
60	SLU 70	-0.05	-0.29	9.4	0	0	0
60	SLU 71	-0.05	-0.28	9.33	0	0	0
60	SLU 72	-0.05	-0.29	9.33	0	0	0
60	SLU 73	-0.06	-0.3	10	0	0	0
60	SLU 74	-0.06	-0.29	10.15	0	0	0
60	SLU 75	-0.06	-0.29	10.16	0	0	0
60	SLU 76	-0.06	-0.29	10.09	0	0	0
60	SLU 77	-0.07	-0.29	10.25	0	0	0
60	SLU 78	-0.07	-0.29	10.25	0	0	0
60	SLU 79	-0.07	-0.29	10.19	0	0	0
60	SLU 80	-0.07	-0.29	10.19	0	0	0
60	SLU 81	-0.07	-0.29	10.36	0	0	0
60	SLU 82	-0.07	-0.3	10.36	0	0	0
60	SLU 83	-0.07	-0.29	10.46	0	0	0
60	SLU 84	-0.07	-0.3	10.46	0	0	0
60	SLE RA 1	-0.03	-0.22	6.86	0	0	0
60	SLE RA 2	-0.03	-0.22	6.87	0	0	0
60	SLE RA 3	-0.03	-0.22	6.97	0	0	0
60	SLE RA 4	-0.03	-0.22	6.97	0	0	0
60	SLE RA 5	-0.03	-0.22	6.93	0	0	0
60	SLE RA 6	-0.03	-0.22	7.03	0	0	0
60	SLE RA 7	-0.03	-0.22	7.03	0	0	0
60	SLE RA 8	-0.03	-0.22	6.99	0	0	0
60	SLE RA 9	-0.03	-0.22	6.99	0	0	0
60	SLE RA 10	-0.04	-0.23	7.44	0	0	0
60	SLE RA 11	-0.04	-0.23	7.54	0	0	0
60	SLE RA 12	-0.04	-0.23	7.54	0	0	0
60	SLE RA 13	-0.04	-0.23	7.5	0	0	0
60	SLE RA 14	-0.05	-0.23	7.6	0	0	0
60	SLE RA 15	-0.05	-0.23	7.6	0	0	0
60	SLE RA 16	-0.05	-0.22	7.56	0	0	0
60	SLE RA 17	-0.05	-0.23	7.56	0	0	0
60	SLE RA 18	-0.05	-0.23	7.68	0	0	0
60	SLE RA 19	-0.05	-0.23	7.68	0	0	0
60	SLE RA 20	-0.05	-0.23	7.74	0	0	0
60	SLE RA 21	-0.05	-0.23	7.74	0	0	0
60	SLE FR 1	-0.03	-0.22	6.86	0	0	0
60	SLE FR 2	-0.03	-0.22	6.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
60	SLE FR 3	-0.03	-0.22	6.89	0	0	0
60	SLE FR 4	-0.03	-0.22	7.11	0	0	0
60	SLE FR 5	-0.03	-0.22	7.13	0	0	0
60	SLE FR 6	-0.04	-0.22	7.27	0	0	0
60	SLE QP 1	-0.03	-0.22	6.86	0	0	0
60	SLE QP 2	-0.03	-0.22	7.11	0	0	0
60	SLD 1	0.44	-0.17	7.02	0	0	0
60	SLD 2	0.44	-0.16	7.01	0	0	0
60	SLD 3	0.42	-0.31	7.11	0	0	0
60	SLD 4	0.42	-0.29	7.11	0	0	0
60	SLD 5	0.15	-0.01	6.93	0	0	0
60	SLD 6	0.15	0	6.93	0	0	0
60	SLD 7	0.06	-0.45	7.26	0	0	0
60	SLD 8	0.06	-0.44	7.25	0	0	0
60	SLD 9	-0.13	-0.01	6.96	0	0	0
60	SLD 10	-0.13	0	6.96	0	0	0
60	SLD 11	-0.22	-0.44	7.29	0	0	0
60	SLD 12	-0.22	-0.43	7.28	0	0	0
60	SLD 13	-0.48	-0.15	7.11	0	0	0
60	SLD 14	-0.48	-0.14	7.1	0	0	0
60	SLD 15	-0.51	-0.28	7.2	0	0	0
60	SLD 16	-0.51	-0.27	7.2	0	0	0
60	SLV 1	1.08	-0.12	6.9	0	0	0
60	SLV 2	1.08	-0.08	6.88	0	0	0
60	SLV 3	1.02	-0.41	7.12	0	0	0
60	SLV 4	1.02	-0.38	7.1	0	0	0
60	SLV 5	0.39	0.25	6.71	0	0	0
60	SLV 6	0.39	0.27	6.7	0	0	0
60	SLV 7	0.19	-0.73	7.45	0	0	0
60	SLV 8	0.19	-0.71	7.44	0	0	0
60	SLV 9	-0.26	0.27	6.78	0	0	0
60	SLV 10	-0.26	0.29	6.77	0	0	0
60	SLV 11	-0.46	-0.72	7.51	0	0	0
60	SLV 12	-0.46	-0.7	7.5	0	0	0
60	SLV 13	-1.09	-0.07	7.11	0	0	0
60	SLV 14	-1.09	-0.03	7.1	0	0	0
60	SLV 15	-1.15	-0.36	7.33	0	0	0
60	SLV 16	-1.15	-0.33	7.32	0	0	0
61	SLU 1	-0.02	-0.2	6.24	0	0	0
61	SLU 2	-0.03	-0.21	6.25	0	0	0
61	SLU 3	-0.03	-0.2	6.39	0	0	0
61	SLU 4	-0.03	-0.21	6.39	0	0	0
61	SLU 5	-0.03	-0.21	6.34	0	0	0
61	SLU 6	-0.03	-0.2	6.48	0	0	0
61	SLU 7	-0.03	-0.21	6.48	0	0	0
61	SLU 8	-0.03	-0.2	6.42	0	0	0
61	SLU 9	-0.03	-0.2	6.42	0	0	0
61	SLU 10	-0.04	-0.21	7.05	0	0	0
61	SLU 11	-0.05	-0.21	7.19	0	0	0
61	SLU 12	-0.05	-0.21	7.19	0	0	0
61	SLU 13	-0.05	-0.21	7.13	0	0	0
61	SLU 14	-0.05	-0.21	7.28	0	0	0
61	SLU 15	-0.05	-0.21	7.28	0	0	0
61	SLU 16	-0.05	-0.21	7.22	0	0	0
61	SLU 17	-0.05	-0.21	7.22	0	0	0
61	SLU 18	-0.05	-0.21	7.39	0	0	0
61	SLU 19	-0.05	-0.21	7.39	0	0	0
61	SLU 20	-0.06	-0.21	7.47	0	0	0
61	SLU 21	-0.06	-0.21	7.48	0	0	0
61	SLU 22	-0.03	-0.2	6.96	0	0	0
61	SLU 23	-0.03	-0.2	6.96	0	0	0
61	SLU 24	-0.03	-0.2	7.11	0	0	0
61	SLU 25	-0.03	-0.2	7.11	0	0	0
61	SLU 26	-0.03	-0.2	7.05	0	0	0
61	SLU 27	-0.04	-0.2	7.2	0	0	0
61	SLU 28	-0.04	-0.2	7.2	0	0	0
61	SLU 29	-0.04	-0.2	7.14	0	0	0
61	SLU 30	-0.04	-0.2	7.14	0	0	0
61	SLU 31	-0.05	-0.21	7.76	0	0	0
61	SLU 32	-0.05	-0.2	7.91	0	0	0
61	SLU 33	-0.05	-0.2	7.91	0	0	0
61	SLU 34	-0.05	-0.2	7.85	0	0	0
61	SLU 35	-0.06	-0.2	8	0	0	0
61	SLU 36	-0.06	-0.2	8	0	0	0
61	SLU 37	-0.06	-0.2	7.94	0	0	0
61	SLU 38	-0.06	-0.2	7.94	0	0	0
61	SLU 39	-0.06	-0.2	8.1	0	0	0
61	SLU 40	-0.06	-0.21	8.1	0	0	0
61	SLU 41	-0.06	-0.2	8.19	0	0	0
61	SLU 42	-0.06	-0.21	8.19	0	0	0
61	SLU 43	-0.03	-0.27	7.87	0	0	0
61	SLU 44	-0.03	-0.27	7.88	0	0	0
61	SLU 45	-0.03	-0.27	8.02	0	0	0
61	SLU 46	-0.04	-0.27	8.02	0	0	0
61	SLU 47	-0.04	-0.27	7.96	0	0	0
61	SLU 48	-0.04	-0.27	8.11	0	0	0
61	SLU 49	-0.04	-0.27	8.11	0	0	0
61	SLU 50	-0.04	-0.27	8.05	0	0	0
61	SLU 51	-0.04	-0.27	8.05	0	0	0
61	SLU 52	-0.05	-0.28	8.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLU 53	-0.05	-0.27	8.82	0	0	0
61	SLU 54	-0.05	-0.27	8.82	0	0	0
61	SLU 55	-0.05	-0.27	8.76	0	0	0
61	SLU 56	-0.06	-0.27	8.91	0	0	0
61	SLU 57	-0.06	-0.27	8.91	0	0	0
61	SLU 58	-0.06	-0.27	8.85	0	0	0
61	SLU 59	-0.06	-0.27	8.85	0	0	0
61	SLU 60	-0.06	-0.27	9.01	0	0	0
61	SLU 61	-0.06	-0.28	9.02	0	0	0
61	SLU 62	-0.06	-0.27	9.1	0	0	0
61	SLU 63	-0.06	-0.28	9.1	0	0	0
61	SLU 64	-0.03	-0.26	8.59	0	0	0
61	SLU 65	-0.03	-0.26	8.59	0	0	0
61	SLU 66	-0.04	-0.26	8.74	0	0	0
61	SLU 67	-0.04	-0.26	8.74	0	0	0
61	SLU 68	-0.04	-0.26	8.68	0	0	0
61	SLU 69	-0.04	-0.26	8.82	0	0	0
61	SLU 70	-0.04	-0.26	8.83	0	0	0
61	SLU 71	-0.04	-0.26	8.77	0	0	0
61	SLU 72	-0.04	-0.26	8.77	0	0	0
61	SLU 73	-0.05	-0.27	9.39	0	0	0
61	SLU 74	-0.06	-0.27	9.53	0	0	0
61	SLU 75	-0.06	-0.27	9.54	0	0	0
61	SLU 76	-0.06	-0.27	9.48	0	0	0
61	SLU 77	-0.06	-0.27	9.62	0	0	0
61	SLU 78	-0.06	-0.27	9.62	0	0	0
61	SLU 79	-0.06	-0.26	9.56	0	0	0
61	SLU 80	-0.06	-0.27	9.57	0	0	0
61	SLU 81	-0.06	-0.27	9.73	0	0	0
61	SLU 82	-0.06	-0.27	9.73	0	0	0
61	SLU 83	-0.07	-0.27	9.82	0	0	0
61	SLU 84	-0.07	-0.27	9.82	0	0	0
61	SLE RA 1	-0.03	-0.2	6.45	0	0	0
61	SLE RA 2	-0.03	-0.2	6.45	0	0	0
61	SLE RA 3	-0.03	-0.2	6.55	0	0	0
61	SLE RA 4	-0.03	-0.2	6.55	0	0	0
61	SLE RA 5	-0.03	-0.2	6.51	0	0	0
61	SLE RA 6	-0.03	-0.2	6.61	0	0	0
61	SLE RA 7	-0.03	-0.2	6.61	0	0	0
61	SLE RA 8	-0.03	-0.2	6.57	0	0	0
61	SLE RA 9	-0.03	-0.2	6.57	0	0	0
61	SLE RA 10	-0.04	-0.21	6.98	0	0	0
61	SLE RA 11	-0.04	-0.21	7.08	0	0	0
61	SLE RA 12	-0.04	-0.21	7.08	0	0	0
61	SLE RA 13	-0.04	-0.21	7.04	0	0	0
61	SLE RA 14	-0.04	-0.21	7.14	0	0	0
61	SLE RA 15	-0.04	-0.21	7.14	0	0	0
61	SLE RA 16	-0.04	-0.2	7.1	0	0	0
61	SLE RA 17	-0.04	-0.21	7.1	0	0	0
61	SLE RA 18	-0.04	-0.21	7.21	0	0	0
61	SLE RA 19	-0.04	-0.21	7.21	0	0	0
61	SLE RA 20	-0.05	-0.21	7.27	0	0	0
61	SLE RA 21	-0.05	-0.21	7.27	0	0	0
61	SLE FR 1	-0.03	-0.2	6.45	0	0	0
61	SLE FR 2	-0.03	-0.2	6.45	0	0	0
61	SLE FR 3	-0.03	-0.2	6.47	0	0	0
61	SLE FR 4	-0.03	-0.2	6.68	0	0	0
61	SLE FR 5	-0.03	-0.2	6.7	0	0	0
61	SLE FR 6	-0.03	-0.2	6.83	0	0	0
61	SLE QP 1	-0.03	-0.2	6.45	0	0	0
61	SLE QP 2	-0.03	-0.2	6.68	0	0	0
61	SLD 1	0.42	-0.16	6.56	0	0	0
61	SLD 2	0.42	-0.14	6.56	0	0	0
61	SLD 3	0.39	-0.28	6.65	0	0	0
61	SLD 4	0.4	-0.27	6.64	0	0	0
61	SLD 5	0.14	-0.01	6.52	0	0	0
61	SLD 6	0.14	0	6.51	0	0	0
61	SLD 7	0.06	-0.41	6.8	0	0	0
61	SLD 8	0.06	-0.4	6.79	0	0	0
61	SLD 9	-0.12	0	6.56	0	0	0
61	SLD 10	-0.12	0.01	6.56	0	0	0
61	SLD 11	-0.2	-0.41	6.84	0	0	0
61	SLD 12	-0.2	-0.4	6.84	0	0	0
61	SLD 13	-0.46	-0.14	6.71	0	0	0
61	SLD 14	-0.46	-0.12	6.71	0	0	0
61	SLD 15	-0.48	-0.26	6.8	0	0	0
61	SLD 16	-0.48	-0.25	6.79	0	0	0
61	SLV 1	1.02	-0.11	6.41	0	0	0
61	SLV 2	1.02	-0.07	6.4	0	0	0
61	SLV 3	0.97	-0.38	6.6	0	0	0
61	SLV 4	0.97	-0.35	6.59	0	0	0
61	SLV 5	0.37	0.24	6.31	0	0	0
61	SLV 6	0.37	0.26	6.3	0	0	0
61	SLV 7	0.18	-0.68	6.95	0	0	0
61	SLV 8	0.18	-0.66	6.94	0	0	0
61	SLV 9	-0.25	0.25	6.41	0	0	0
61	SLV 10	-0.24	0.28	6.41	0	0	0
61	SLV 11	-0.43	-0.67	7.05	0	0	0
61	SLV 12	-0.43	-0.64	7.05	0	0	0
61	SLV 13	-1.03	-0.06	6.76	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLV 14	-1.03	-0.02	6.75	0	0	0
61	SLV 15	-1.09	-0.34	6.96	0	0	0
61	SLV 16	-1.08	-0.3	6.94	0	0	0
62	SLU 1	-0.02	-0.19	6.05	0	0	0
62	SLU 2	-0.02	-0.19	6.05	0	0	0
62	SLU 3	-0.03	-0.19	6.19	0	0	0
62	SLU 4	-0.03	-0.19	6.19	0	0	0
62	SLU 5	-0.03	-0.19	6.14	0	0	0
62	SLU 6	-0.03	-0.19	6.28	0	0	0
62	SLU 7	-0.03	-0.19	6.28	0	0	0
62	SLU 8	-0.03	-0.19	6.22	0	0	0
62	SLU 9	-0.03	-0.19	6.22	0	0	0
62	SLU 10	-0.04	-0.2	6.82	0	0	0
62	SLU 11	-0.05	-0.2	6.96	0	0	0
62	SLU 12	-0.05	-0.2	6.96	0	0	0
62	SLU 13	-0.05	-0.2	6.91	0	0	0
62	SLU 14	-0.05	-0.2	7.05	0	0	0
62	SLU 15	-0.05	-0.2	7.05	0	0	0
62	SLU 16	-0.05	-0.2	6.99	0	0	0
62	SLU 17	-0.05	-0.2	6.99	0	0	0
62	SLU 18	-0.05	-0.2	7.15	0	0	0
62	SLU 19	-0.05	-0.2	7.15	0	0	0
62	SLU 20	-0.05	-0.2	7.23	0	0	0
62	SLU 21	-0.05	-0.2	7.24	0	0	0
62	SLU 22	-0.03	-0.18	6.75	0	0	0
62	SLU 23	-0.03	-0.19	6.75	0	0	0
62	SLU 24	-0.03	-0.18	6.89	0	0	0
62	SLU 25	-0.03	-0.19	6.89	0	0	0
62	SLU 26	-0.03	-0.19	6.83	0	0	0
62	SLU 27	-0.04	-0.18	6.97	0	0	0
62	SLU 28	-0.04	-0.19	6.97	0	0	0
62	SLU 29	-0.04	-0.18	6.91	0	0	0
62	SLU 30	-0.04	-0.19	6.92	0	0	0
62	SLU 31	-0.05	-0.19	7.52	0	0	0
62	SLU 32	-0.05	-0.19	7.66	0	0	0
62	SLU 33	-0.05	-0.19	7.66	0	0	0
62	SLU 34	-0.05	-0.19	7.6	0	0	0
62	SLU 35	-0.05	-0.19	7.74	0	0	0
62	SLU 36	-0.05	-0.19	7.74	0	0	0
62	SLU 37	-0.05	-0.19	7.68	0	0	0
62	SLU 38	-0.05	-0.19	7.69	0	0	0
62	SLU 39	-0.05	-0.19	7.85	0	0	0
62	SLU 40	-0.05	-0.19	7.85	0	0	0
62	SLU 41	-0.06	-0.19	7.93	0	0	0
62	SLU 42	-0.06	-0.19	7.93	0	0	0
62	SLU 43	-0.03	-0.25	7.63	0	0	0
62	SLU 44	-0.03	-0.25	7.63	0	0	0
62	SLU 45	-0.03	-0.25	7.77	0	0	0
62	SLU 46	-0.03	-0.25	7.77	0	0	0
62	SLU 47	-0.03	-0.25	7.72	0	0	0
62	SLU 48	-0.04	-0.25	7.85	0	0	0
62	SLU 49	-0.04	-0.25	7.86	0	0	0
62	SLU 50	-0.04	-0.25	7.8	0	0	0
62	SLU 51	-0.04	-0.25	7.8	0	0	0
62	SLU 52	-0.05	-0.26	8.4	0	0	0
62	SLU 53	-0.05	-0.26	8.54	0	0	0
62	SLU 54	-0.05	-0.26	8.54	0	0	0
62	SLU 55	-0.05	-0.26	8.48	0	0	0
62	SLU 56	-0.06	-0.26	8.62	0	0	0
62	SLU 57	-0.06	-0.26	8.62	0	0	0
62	SLU 58	-0.06	-0.26	8.57	0	0	0
62	SLU 59	-0.06	-0.26	8.57	0	0	0
62	SLU 60	-0.06	-0.26	8.73	0	0	0
62	SLU 61	-0.06	-0.26	8.73	0	0	0
62	SLU 62	-0.06	-0.26	8.81	0	0	0
62	SLU 63	-0.06	-0.26	8.81	0	0	0
62	SLU 64	-0.03	-0.24	8.32	0	0	0
62	SLU 65	-0.03	-0.25	8.33	0	0	0
62	SLU 66	-0.04	-0.24	8.46	0	0	0
62	SLU 67	-0.04	-0.25	8.47	0	0	0
62	SLU 68	-0.04	-0.25	8.41	0	0	0
62	SLU 69	-0.04	-0.24	8.55	0	0	0
62	SLU 70	-0.04	-0.25	8.55	0	0	0
62	SLU 71	-0.04	-0.24	8.49	0	0	0
62	SLU 72	-0.04	-0.24	8.49	0	0	0
62	SLU 73	-0.05	-0.25	9.1	0	0	0
62	SLU 74	-0.06	-0.25	9.23	0	0	0
62	SLU 75	-0.06	-0.25	9.24	0	0	0
62	SLU 76	-0.06	-0.25	9.18	0	0	0
62	SLU 77	-0.06	-0.25	9.32	0	0	0
62	SLU 78	-0.06	-0.25	9.32	0	0	0
62	SLU 79	-0.06	-0.25	9.26	0	0	0
62	SLU 80	-0.06	-0.25	9.26	0	0	0
62	SLU 81	-0.06	-0.25	9.42	0	0	0
62	SLU 82	-0.06	-0.25	9.42	0	0	0
62	SLU 83	-0.06	-0.25	9.51	0	0	0
62	SLU 84	-0.06	-0.25	9.51	0	0	0
62	SLE RA 1	-0.02	-0.19	6.25	0	0	0
62	SLE RA 2	-0.03	-0.19	6.25	0	0	0
62	SLE RA 3	-0.03	-0.19	6.34	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
62	SLE RA 4	-0.03	-0.19	6.35	0	0	0
62	SLE RA 5	-0.03	-0.19	6.31	0	0	0
62	SLE RA 6	-0.03	-0.19	6.4	0	0	0
62	SLE RA 7	-0.03	-0.19	6.4	0	0	0
62	SLE RA 8	-0.03	-0.19	6.36	0	0	0
62	SLE RA 9	-0.03	-0.19	6.36	0	0	0
62	SLE RA 10	-0.04	-0.19	6.76	0	0	0
62	SLE RA 11	-0.04	-0.19	6.86	0	0	0
62	SLE RA 12	-0.04	-0.19	6.86	0	0	0
62	SLE RA 13	-0.04	-0.19	6.82	0	0	0
62	SLE RA 14	-0.04	-0.19	6.91	0	0	0
62	SLE RA 15	-0.04	-0.19	6.91	0	0	0
62	SLE RA 16	-0.04	-0.19	6.87	0	0	0
62	SLE RA 17	-0.04	-0.19	6.88	0	0	0
62	SLE RA 18	-0.04	-0.19	6.98	0	0	0
62	SLE RA 19	-0.04	-0.19	6.98	0	0	0
62	SLE RA 20	-0.05	-0.19	7.04	0	0	0
62	SLE RA 21	-0.05	-0.19	7.04	0	0	0
62	SLE FR 1	-0.02	-0.19	6.25	0	0	0
62	SLE FR 2	-0.02	-0.19	6.25	0	0	0
62	SLE FR 3	-0.03	-0.19	6.27	0	0	0
62	SLE FR 4	-0.03	-0.19	6.47	0	0	0
62	SLE FR 5	-0.03	-0.19	6.49	0	0	0
62	SLE FR 6	-0.03	-0.19	6.62	0	0	0
62	SLE QP 1	-0.02	-0.19	6.25	0	0	0
62	SLE QP 2	-0.03	-0.19	6.47	0	0	0
62	SLD 1	0.41	-0.15	6.33	0	0	0
62	SLD 2	0.41	-0.13	6.32	0	0	0
62	SLD 3	0.39	-0.27	6.41	0	0	0
62	SLD 4	0.39	-0.25	6.4	0	0	0
62	SLD 5	0.14	0	6.31	0	0	0
62	SLD 6	0.14	0.01	6.31	0	0	0
62	SLD 7	0.06	-0.4	6.57	0	0	0
62	SLD 8	0.06	-0.38	6.56	0	0	0
62	SLD 9	-0.12	0	6.38	0	0	0
62	SLD 10	-0.12	0.01	6.37	0	0	0
62	SLD 11	-0.2	-0.39	6.63	0	0	0
62	SLD 12	-0.2	-0.38	6.63	0	0	0
62	SLD 13	-0.45	-0.13	6.54	0	0	0
62	SLD 14	-0.45	-0.11	6.53	0	0	0
62	SLD 15	-0.47	-0.25	6.62	0	0	0
62	SLD 16	-0.47	-0.23	6.61	0	0	0
62	SLV 1	1	-0.1	6.14	0	0	0
62	SLV 2	1	-0.06	6.13	0	0	0
62	SLV 3	0.94	-0.37	6.32	0	0	0
62	SLV 4	0.94	-0.33	6.3	0	0	0
62	SLV 5	0.36	0.23	6.11	0	0	0
62	SLV 6	0.36	0.26	6.1	0	0	0
62	SLV 7	0.18	-0.66	6.69	0	0	0
62	SLV 8	0.18	-0.63	6.68	0	0	0
62	SLV 9	-0.24	0.25	6.26	0	0	0
62	SLV 10	-0.24	0.27	6.25	0	0	0
62	SLV 11	-0.42	-0.64	6.84	0	0	0
62	SLV 12	-0.42	-0.61	6.83	0	0	0
62	SLV 13	-1	-0.05	6.64	0	0	0
62	SLV 14	-1	-0.01	6.62	0	0	0
62	SLV 15	-1.06	-0.32	6.81	0	0	0
62	SLV 16	-1.06	-0.28	6.8	0	0	0
63	SLU 1	-0.03	-0.21	6.76	0	0	0
63	SLU 2	-0.03	-0.21	6.76	0	0	0
63	SLU 3	-0.03	-0.21	6.92	0	0	0
63	SLU 4	-0.03	-0.21	6.92	0	0	0
63	SLU 5	-0.03	-0.21	6.85	0	0	0
63	SLU 6	-0.04	-0.21	7.01	0	0	0
63	SLU 7	-0.04	-0.21	7.01	0	0	0
63	SLU 8	-0.04	-0.21	6.94	0	0	0
63	SLU 9	-0.04	-0.21	6.94	0	0	0
63	SLU 10	-0.05	-0.21	7.62	0	0	0
63	SLU 11	-0.05	-0.21	7.77	0	0	0
63	SLU 12	-0.05	-0.21	7.77	0	0	0
63	SLU 13	-0.05	-0.21	7.71	0	0	0
63	SLU 14	-0.06	-0.21	7.86	0	0	0
63	SLU 15	-0.06	-0.21	7.86	0	0	0
63	SLU 16	-0.06	-0.21	7.8	0	0	0
63	SLU 17	-0.06	-0.21	7.8	0	0	0
63	SLU 18	-0.06	-0.21	7.98	0	0	0
63	SLU 19	-0.06	-0.22	7.98	0	0	0
63	SLU 20	-0.06	-0.21	8.07	0	0	0
63	SLU 21	-0.06	-0.22	8.07	0	0	0
63	SLU 22	-0.03	-0.2	7.54	0	0	0
63	SLU 23	-0.03	-0.2	7.54	0	0	0
63	SLU 24	-0.03	-0.2	7.69	0	0	0
63	SLU 25	-0.03	-0.2	7.69	0	0	0
63	SLU 26	-0.04	-0.2	7.63	0	0	0
63	SLU 27	-0.04	-0.2	7.78	0	0	0
63	SLU 28	-0.04	-0.2	7.78	0	0	0
63	SLU 29	-0.04	-0.2	7.72	0	0	0
63	SLU 30	-0.04	-0.2	7.72	0	0	0
63	SLU 31	-0.05	-0.21	8.39	0	0	0
63	SLU 32	-0.06	-0.2	8.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLU 33	-0.06	-0.21	8.55	0	0	0
63	SLU 34	-0.06	-0.21	8.48	0	0	0
63	SLU 35	-0.06	-0.2	8.64	0	0	0
63	SLU 36	-0.06	-0.21	8.64	0	0	0
63	SLU 37	-0.06	-0.2	8.57	0	0	0
63	SLU 38	-0.06	-0.2	8.57	0	0	0
63	SLU 39	-0.06	-0.21	8.75	0	0	0
63	SLU 40	-0.06	-0.21	8.76	0	0	0
63	SLU 41	-0.06	-0.21	8.85	0	0	0
63	SLU 42	-0.07	-0.21	8.85	0	0	0
63	SLU 43	-0.03	-0.27	8.52	0	0	0
63	SLU 44	-0.03	-0.28	8.52	0	0	0
63	SLU 45	-0.04	-0.27	8.68	0	0	0
63	SLU 46	-0.04	-0.27	8.68	0	0	0
63	SLU 47	-0.04	-0.28	8.62	0	0	0
63	SLU 48	-0.04	-0.27	8.77	0	0	0
63	SLU 49	-0.04	-0.27	8.77	0	0	0
63	SLU 50	-0.04	-0.27	8.7	0	0	0
63	SLU 51	-0.04	-0.27	8.71	0	0	0
63	SLU 52	-0.05	-0.28	9.38	0	0	0
63	SLU 53	-0.06	-0.28	9.53	0	0	0
63	SLU 54	-0.06	-0.28	9.53	0	0	0
63	SLU 55	-0.06	-0.28	9.47	0	0	0
63	SLU 56	-0.06	-0.28	9.62	0	0	0
63	SLU 57	-0.06	-0.28	9.62	0	0	0
63	SLU 58	-0.06	-0.28	9.56	0	0	0
63	SLU 59	-0.06	-0.28	9.56	0	0	0
63	SLU 60	-0.06	-0.28	9.74	0	0	0
63	SLU 61	-0.06	-0.28	9.74	0	0	0
63	SLU 62	-0.07	-0.28	9.83	0	0	0
63	SLU 63	-0.07	-0.28	9.83	0	0	0
63	SLU 64	-0.04	-0.26	9.3	0	0	0
63	SLU 65	-0.04	-0.27	9.3	0	0	0
63	SLU 66	-0.04	-0.26	9.45	0	0	0
63	SLU 67	-0.04	-0.27	9.45	0	0	0
63	SLU 68	-0.04	-0.27	9.39	0	0	0
63	SLU 69	-0.05	-0.26	9.54	0	0	0
63	SLU 70	-0.05	-0.27	9.55	0	0	0
63	SLU 71	-0.05	-0.26	9.48	0	0	0
63	SLU 72	-0.05	-0.27	9.48	0	0	0
63	SLU 73	-0.06	-0.27	10.15	0	0	0
63	SLU 74	-0.06	-0.27	10.31	0	0	0
63	SLU 75	-0.06	-0.27	10.31	0	0	0
63	SLU 76	-0.06	-0.27	10.24	0	0	0
63	SLU 77	-0.07	-0.27	10.4	0	0	0
63	SLU 78	-0.07	-0.27	10.4	0	0	0
63	SLU 79	-0.07	-0.27	10.33	0	0	0
63	SLU 80	-0.07	-0.27	10.34	0	0	0
63	SLU 81	-0.07	-0.27	10.52	0	0	0
63	SLU 82	-0.07	-0.27	10.52	0	0	0
63	SLU 83	-0.07	-0.27	10.61	0	0	0
63	SLU 84	-0.07	-0.27	10.61	0	0	0
63	SLE RA 1	-0.03	-0.21	6.98	0	0	0
63	SLE RA 2	-0.03	-0.21	6.98	0	0	0
63	SLE RA 3	-0.03	-0.21	7.09	0	0	0
63	SLE RA 4	-0.03	-0.21	7.09	0	0	0
63	SLE RA 5	-0.03	-0.21	7.04	0	0	0
63	SLE RA 6	-0.03	-0.21	7.15	0	0	0
63	SLE RA 7	-0.03	-0.21	7.15	0	0	0
63	SLE RA 8	-0.03	-0.2	7.1	0	0	0
63	SLE RA 9	-0.03	-0.21	7.1	0	0	0
63	SLE RA 10	-0.04	-0.21	7.55	0	0	0
63	SLE RA 11	-0.04	-0.21	7.65	0	0	0
63	SLE RA 12	-0.04	-0.21	7.65	0	0	0
63	SLE RA 13	-0.05	-0.21	7.61	0	0	0
63	SLE RA 14	-0.05	-0.21	7.72	0	0	0
63	SLE RA 15	-0.05	-0.21	7.72	0	0	0
63	SLE RA 16	-0.05	-0.21	7.67	0	0	0
63	SLE RA 17	-0.05	-0.21	7.67	0	0	0
63	SLE RA 18	-0.05	-0.21	7.79	0	0	0
63	SLE RA 19	-0.05	-0.21	7.79	0	0	0
63	SLE RA 20	-0.05	-0.21	7.85	0	0	0
63	SLE RA 21	-0.05	-0.21	7.86	0	0	0
63	SLE FR 1	-0.03	-0.21	6.98	0	0	0
63	SLE FR 2	-0.03	-0.21	6.98	0	0	0
63	SLE FR 3	-0.03	-0.21	7.01	0	0	0
63	SLE FR 4	-0.03	-0.21	7.23	0	0	0
63	SLE FR 5	-0.03	-0.21	7.25	0	0	0
63	SLE FR 6	-0.04	-0.21	7.39	0	0	0
63	SLE QP 1	-0.03	-0.21	6.98	0	0	0
63	SLE QP 2	-0.03	-0.21	7.22	0	0	0
63	SLD 1	0.46	-0.17	7.03	0	0	0
63	SLD 2	0.46	-0.14	7.02	0	0	0
63	SLD 3	0.43	-0.3	7.11	0	0	0
63	SLD 4	0.43	-0.27	7.1	0	0	0
63	SLD 5	0.16	0	7.05	0	0	0
63	SLD 6	0.16	0.02	7.04	0	0	0
63	SLD 7	0.06	-0.44	7.31	0	0	0
63	SLD 8	0.07	-0.42	7.31	0	0	0
63	SLD 9	-0.13	0.01	7.14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLD 10	-0.13	0.02	7.14	0	0	0
63	SLD 11	-0.22	-0.43	7.41	0	0	0
63	SLD 12	-0.22	-0.41	7.4	0	0	0
63	SLD 13	-0.5	-0.14	7.35	0	0	0
63	SLD 14	-0.5	-0.12	7.34	0	0	0
63	SLD 15	-0.53	-0.27	7.42	0	0	0
63	SLD 16	-0.53	-0.25	7.42	0	0	0
63	SLV 1	1.12	-0.12	6.78	0	0	0
63	SLV 2	1.12	-0.06	6.76	0	0	0
63	SLV 3	1.06	-0.41	6.96	0	0	0
63	SLV 4	1.06	-0.36	6.94	0	0	0
63	SLV 5	0.41	0.26	6.82	0	0	0
63	SLV 6	0.41	0.3	6.81	0	0	0
63	SLV 7	0.2	-0.73	7.42	0	0	0
63	SLV 8	0.2	-0.69	7.41	0	0	0
63	SLV 9	-0.27	0.28	7.04	0	0	0
63	SLV 10	-0.27	0.31	7.03	0	0	0
63	SLV 11	-0.48	-0.71	7.64	0	0	0
63	SLV 12	-0.47	-0.67	7.63	0	0	0
63	SLV 13	-1.13	-0.06	7.51	0	0	0
63	SLV 14	-1.13	0	7.49	0	0	0
63	SLV 15	-1.19	-0.35	7.69	0	0	0
63	SLV 16	-1.19	-0.3	7.67	0	0	0
64	SLU 1	-0.01	-0.11	3.74	0	0	0
64	SLU 2	-0.02	-0.11	3.74	0	0	0
64	SLU 3	-0.02	-0.11	3.82	0	0	0
64	SLU 4	-0.02	-0.11	3.82	0	0	0
64	SLU 5	-0.02	-0.11	3.79	0	0	0
64	SLU 6	-0.02	-0.11	3.87	0	0	0
64	SLU 7	-0.02	-0.11	3.87	0	0	0
64	SLU 8	-0.02	-0.11	3.84	0	0	0
64	SLU 9	-0.02	-0.11	3.84	0	0	0
64	SLU 10	-0.03	-0.11	4.21	0	0	0
64	SLU 11	-0.03	-0.11	4.29	0	0	0
64	SLU 12	-0.03	-0.11	4.29	0	0	0
64	SLU 13	-0.03	-0.11	4.26	0	0	0
64	SLU 14	-0.03	-0.11	4.34	0	0	0
64	SLU 15	-0.03	-0.11	4.34	0	0	0
64	SLU 16	-0.03	-0.11	4.31	0	0	0
64	SLU 17	-0.03	-0.11	4.31	0	0	0
64	SLU 18	-0.03	-0.11	4.41	0	0	0
64	SLU 19	-0.03	-0.11	4.41	0	0	0
64	SLU 20	-0.03	-0.11	4.46	0	0	0
64	SLU 21	-0.03	-0.11	4.46	0	0	0
64	SLU 22	-0.02	-0.11	4.17	0	0	0
64	SLU 23	-0.02	-0.11	4.17	0	0	0
64	SLU 24	-0.02	-0.11	4.25	0	0	0
64	SLU 25	-0.02	-0.11	4.25	0	0	0
64	SLU 26	-0.02	-0.11	4.22	0	0	0
64	SLU 27	-0.02	-0.11	4.3	0	0	0
64	SLU 28	-0.02	-0.11	4.3	0	0	0
64	SLU 29	-0.02	-0.11	4.27	0	0	0
64	SLU 30	-0.02	-0.11	4.27	0	0	0
64	SLU 31	-0.03	-0.11	4.64	0	0	0
64	SLU 32	-0.03	-0.11	4.72	0	0	0
64	SLU 33	-0.03	-0.11	4.72	0	0	0
64	SLU 34	-0.03	-0.11	4.69	0	0	0
64	SLU 35	-0.03	-0.11	4.77	0	0	0
64	SLU 36	-0.03	-0.11	4.77	0	0	0
64	SLU 37	-0.03	-0.11	4.73	0	0	0
64	SLU 38	-0.03	-0.11	4.74	0	0	0
64	SLU 39	-0.03	-0.11	4.84	0	0	0
64	SLU 40	-0.03	-0.11	4.84	0	0	0
64	SLU 41	-0.04	-0.11	4.89	0	0	0
64	SLU 42	-0.04	-0.11	4.89	0	0	0
64	SLU 43	-0.02	-0.15	4.71	0	0	0
64	SLU 44	-0.02	-0.15	4.71	0	0	0
64	SLU 45	-0.02	-0.15	4.8	0	0	0
64	SLU 46	-0.02	-0.15	4.8	0	0	0
64	SLU 47	-0.02	-0.15	4.76	0	0	0
64	SLU 48	-0.02	-0.15	4.85	0	0	0
64	SLU 49	-0.02	-0.15	4.85	0	0	0
64	SLU 50	-0.02	-0.15	4.81	0	0	0
64	SLU 51	-0.02	-0.15	4.81	0	0	0
64	SLU 52	-0.03	-0.15	5.18	0	0	0
64	SLU 53	-0.03	-0.15	5.27	0	0	0
64	SLU 54	-0.03	-0.15	5.27	0	0	0
64	SLU 55	-0.03	-0.15	5.23	0	0	0
64	SLU 56	-0.04	-0.15	5.32	0	0	0
64	SLU 57	-0.04	-0.15	5.32	0	0	0
64	SLU 58	-0.04	-0.15	5.28	0	0	0
64	SLU 59	-0.04	-0.15	5.28	0	0	0
64	SLU 60	-0.04	-0.15	5.38	0	0	0
64	SLU 61	-0.04	-0.15	5.38	0	0	0
64	SLU 62	-0.04	-0.15	5.43	0	0	0
64	SLU 63	-0.04	-0.15	5.43	0	0	0
64	SLU 64	-0.02	-0.14	5.14	0	0	0
64	SLU 65	-0.02	-0.14	5.14	0	0	0
64	SLU 66	-0.02	-0.14	5.23	0	0	0
64	SLU 67	-0.02	-0.14	5.23	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
64	SLU 68	-0.02	-0.14	5.19	0	0	0
64	SLU 69	-0.03	-0.14	5.28	0	0	0
64	SLU 70	-0.03	-0.14	5.28	0	0	0
64	SLU 71	-0.03	-0.14	5.24	0	0	0
64	SLU 72	-0.03	-0.14	5.24	0	0	0
64	SLU 73	-0.03	-0.14	5.61	0	0	0
64	SLU 74	-0.03	-0.14	5.7	0	0	0
64	SLU 75	-0.03	-0.14	5.7	0	0	0
64	SLU 76	-0.04	-0.14	5.66	0	0	0
64	SLU 77	-0.04	-0.14	5.74	0	0	0
64	SLU 78	-0.04	-0.14	5.75	0	0	0
64	SLU 79	-0.04	-0.14	5.71	0	0	0
64	SLU 80	-0.04	-0.14	5.71	0	0	0
64	SLU 81	-0.04	-0.14	5.81	0	0	0
64	SLU 82	-0.04	-0.14	5.81	0	0	0
64	SLU 83	-0.04	-0.14	5.86	0	0	0
64	SLU 84	-0.04	-0.14	5.86	0	0	0
64	SLE RA 1	-0.02	-0.11	3.86	0	0	0
64	SLE RA 2	-0.02	-0.11	3.86	0	0	0
64	SLE RA 3	-0.02	-0.11	3.92	0	0	0
64	SLE RA 4	-0.02	-0.11	3.92	0	0	0
64	SLE RA 5	-0.02	-0.11	3.9	0	0	0
64	SLE RA 6	-0.02	-0.11	3.95	0	0	0
64	SLE RA 7	-0.02	-0.11	3.95	0	0	0
64	SLE RA 8	-0.02	-0.11	3.93	0	0	0
64	SLE RA 9	-0.02	-0.11	3.93	0	0	0
64	SLE RA 10	-0.02	-0.11	4.17	0	0	0
64	SLE RA 11	-0.02	-0.11	4.23	0	0	0
64	SLE RA 12	-0.02	-0.11	4.23	0	0	0
64	SLE RA 13	-0.03	-0.11	4.21	0	0	0
64	SLE RA 14	-0.03	-0.11	4.26	0	0	0
64	SLE RA 15	-0.03	-0.11	4.26	0	0	0
64	SLE RA 16	-0.03	-0.11	4.24	0	0	0
64	SLE RA 17	-0.03	-0.11	4.24	0	0	0
64	SLE RA 18	-0.03	-0.11	4.31	0	0	0
64	SLE RA 19	-0.03	-0.11	4.31	0	0	0
64	SLE RA 20	-0.03	-0.11	4.34	0	0	0
64	SLE RA 21	-0.03	-0.11	4.34	0	0	0
64	SLE FR 1	-0.02	-0.11	3.86	0	0	0
64	SLE FR 2	-0.02	-0.11	3.86	0	0	0
64	SLE FR 3	-0.02	-0.11	3.87	0	0	0
64	SLE FR 4	-0.02	-0.11	4	0	0	0
64	SLE FR 5	-0.02	-0.11	4.01	0	0	0
64	SLE FR 6	-0.02	-0.11	4.08	0	0	0
64	SLE QP 1	-0.02	-0.11	3.86	0	0	0
64	SLE QP 2	-0.02	-0.11	4	0	0	0
64	SLD 1	0.26	-0.09	3.86	0	0	0
64	SLD 2	0.26	-0.07	3.86	0	0	0
64	SLD 3	0.24	-0.16	3.9	0	0	0
64	SLD 4	0.24	-0.15	3.9	0	0	0
64	SLD 5	0.09	0	3.89	0	0	0
64	SLD 6	0.09	0.01	3.89	0	0	0
64	SLD 7	0.04	-0.24	4.03	0	0	0
64	SLD 8	0.04	-0.23	4.03	0	0	0
64	SLD 9	-0.07	0.01	3.96	0	0	0
64	SLD 10	-0.07	0.02	3.96	0	0	0
64	SLD 11	-0.13	-0.23	4.1	0	0	0
64	SLD 12	-0.12	-0.22	4.1	0	0	0
64	SLD 13	-0.28	-0.07	4.09	0	0	0
64	SLD 14	-0.28	-0.06	4.09	0	0	0
64	SLD 15	-0.3	-0.15	4.13	0	0	0
64	SLD 16	-0.29	-0.13	4.13	0	0	0
64	SLV 1	0.63	-0.06	3.69	0	0	0
64	SLV 2	0.63	-0.03	3.68	0	0	0
64	SLV 3	0.59	-0.23	3.78	0	0	0
64	SLV 4	0.59	-0.19	3.77	0	0	0
64	SLV 5	0.23	0.14	3.76	0	0	0
64	SLV 6	0.23	0.17	3.76	0	0	0
64	SLV 7	0.11	-0.4	4.07	0	0	0
64	SLV 8	0.11	-0.37	4.07	0	0	0
64	SLV 9	-0.15	0.16	3.92	0	0	0
64	SLV 10	-0.15	0.18	3.92	0	0	0
64	SLV 11	-0.27	-0.39	4.23	0	0	0
64	SLV 12	-0.26	-0.36	4.23	0	0	0
64	SLV 13	-0.63	-0.03	4.22	0	0	0
64	SLV 14	-0.63	0.01	4.21	0	0	0
64	SLV 15	-0.66	-0.19	4.32	0	0	0
64	SLV 16	-0.66	-0.15	4.3	0	0	0
65	SLU 1	-0.01	-0.06	1.57	0	0	0
65	SLU 2	-0.01	-0.06	1.57	0	0	0
65	SLU 3	-0.01	-0.06	1.61	0	0	0
65	SLU 4	-0.01	-0.06	1.61	0	0	0
65	SLU 5	-0.01	-0.06	1.59	0	0	0
65	SLU 6	-0.01	-0.06	1.63	0	0	0
65	SLU 7	-0.01	-0.06	1.63	0	0	0
65	SLU 8	-0.01	-0.06	1.62	0	0	0
65	SLU 9	-0.01	-0.06	1.62	0	0	0
65	SLU 10	-0.01	-0.06	1.77	0	0	0
65	SLU 11	-0.01	-0.06	1.81	0	0	0
65	SLU 12	-0.01	-0.06	1.81	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
65	SLU 13	-0.01	-0.06	1.8	0	0	0
65	SLU 14	-0.01	-0.06	1.84	0	0	0
65	SLU 15	-0.01	-0.06	1.84	0	0	0
65	SLU 16	-0.01	-0.06	1.82	0	0	0
65	SLU 17	-0.01	-0.06	1.82	0	0	0
65	SLU 18	-0.01	-0.06	1.86	0	0	0
65	SLU 19	-0.01	-0.06	1.86	0	0	0
65	SLU 20	-0.02	-0.06	1.89	0	0	0
65	SLU 21	-0.02	-0.06	1.89	0	0	0
65	SLU 22	-0.01	-0.06	1.75	0	0	0
65	SLU 23	-0.01	-0.06	1.75	0	0	0
65	SLU 24	-0.01	-0.06	1.79	0	0	0
65	SLU 25	-0.01	-0.06	1.79	0	0	0
65	SLU 26	-0.01	-0.06	1.77	0	0	0
65	SLU 27	-0.01	-0.06	1.81	0	0	0
65	SLU 28	-0.01	-0.06	1.81	0	0	0
65	SLU 29	-0.01	-0.06	1.8	0	0	0
65	SLU 30	-0.01	-0.06	1.8	0	0	0
65	SLU 31	-0.01	-0.06	1.96	0	0	0
65	SLU 32	-0.01	-0.06	1.99	0	0	0
65	SLU 33	-0.01	-0.06	1.99	0	0	0
65	SLU 34	-0.01	-0.06	1.98	0	0	0
65	SLU 35	-0.02	-0.06	2.02	0	0	0
65	SLU 36	-0.02	-0.06	2.02	0	0	0
65	SLU 37	-0.02	-0.06	2	0	0	0
65	SLU 38	-0.02	-0.06	2	0	0	0
65	SLU 39	-0.02	-0.06	2.04	0	0	0
65	SLU 40	-0.02	-0.06	2.04	0	0	0
65	SLU 41	-0.02	-0.06	2.07	0	0	0
65	SLU 42	-0.02	-0.06	2.07	0	0	0
65	SLU 43	-0.01	-0.08	1.98	0	0	0
65	SLU 44	-0.01	-0.08	1.98	0	0	0
65	SLU 45	-0.01	-0.08	2.01	0	0	0
65	SLU 46	-0.01	-0.08	2.01	0	0	0
65	SLU 47	-0.01	-0.08	2	0	0	0
65	SLU 48	-0.01	-0.08	2.04	0	0	0
65	SLU 49	-0.01	-0.08	2.04	0	0	0
65	SLU 50	-0.01	-0.08	2.02	0	0	0
65	SLU 51	-0.01	-0.08	2.02	0	0	0
65	SLU 52	-0.01	-0.08	2.18	0	0	0
65	SLU 53	-0.02	-0.08	2.22	0	0	0
65	SLU 54	-0.02	-0.08	2.22	0	0	0
65	SLU 55	-0.02	-0.08	2.21	0	0	0
65	SLU 56	-0.02	-0.08	2.24	0	0	0
65	SLU 57	-0.02	-0.08	2.25	0	0	0
65	SLU 58	-0.02	-0.08	2.23	0	0	0
65	SLU 59	-0.02	-0.08	2.23	0	0	0
65	SLU 60	-0.02	-0.08	2.27	0	0	0
65	SLU 61	-0.02	-0.08	2.27	0	0	0
65	SLU 62	-0.02	-0.08	2.29	0	0	0
65	SLU 63	-0.02	-0.08	2.3	0	0	0
65	SLU 64	-0.01	-0.07	2.16	0	0	0
65	SLU 65	-0.01	-0.08	2.16	0	0	0
65	SLU 66	-0.01	-0.07	2.19	0	0	0
65	SLU 67	-0.01	-0.08	2.19	0	0	0
65	SLU 68	-0.01	-0.08	2.18	0	0	0
65	SLU 69	-0.01	-0.07	2.22	0	0	0
65	SLU 70	-0.01	-0.08	2.22	0	0	0
65	SLU 71	-0.01	-0.07	2.2	0	0	0
65	SLU 72	-0.01	-0.08	2.2	0	0	0
65	SLU 73	-0.02	-0.08	2.36	0	0	0
65	SLU 74	-0.02	-0.08	2.4	0	0	0
65	SLU 75	-0.02	-0.08	2.4	0	0	0
65	SLU 76	-0.02	-0.08	2.39	0	0	0
65	SLU 77	-0.02	-0.08	2.43	0	0	0
65	SLU 78	-0.02	-0.08	2.43	0	0	0
65	SLU 79	-0.02	-0.08	2.41	0	0	0
65	SLU 80	-0.02	-0.08	2.41	0	0	0
65	SLU 81	-0.02	-0.08	2.45	0	0	0
65	SLU 82	-0.02	-0.08	2.45	0	0	0
65	SLU 83	-0.02	-0.08	2.48	0	0	0
65	SLU 84	-0.02	-0.08	2.48	0	0	0
65	SLE RA 1	-0.01	-0.06	1.62	0	0	0
65	SLE RA 2	-0.01	-0.06	1.62	0	0	0
65	SLE RA 3	-0.01	-0.06	1.64	0	0	0
65	SLE RA 4	-0.01	-0.06	1.64	0	0	0
65	SLE RA 5	-0.01	-0.06	1.64	0	0	0
65	SLE RA 6	-0.01	-0.06	1.66	0	0	0
65	SLE RA 7	-0.01	-0.06	1.66	0	0	0
65	SLE RA 8	-0.01	-0.06	1.65	0	0	0
65	SLE RA 9	-0.01	-0.06	1.65	0	0	0
65	SLE RA 10	-0.01	-0.06	1.76	0	0	0
65	SLE RA 11	-0.01	-0.06	1.78	0	0	0
65	SLE RA 12	-0.01	-0.06	1.78	0	0	0
65	SLE RA 13	-0.01	-0.06	1.77	0	0	0
65	SLE RA 14	-0.01	-0.06	1.8	0	0	0
65	SLE RA 15	-0.01	-0.06	1.8	0	0	0
65	SLE RA 16	-0.01	-0.06	1.79	0	0	0
65	SLE RA 17	-0.01	-0.06	1.79	0	0	0
65	SLE RA 18	-0.01	-0.06	1.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
65	SLE RA 19	-0.01	-0.06	1.82	0	0	0
65	SLE RA 20	-0.01	-0.06	1.83	0	0	0
65	SLE RA 21	-0.01	-0.06	1.83	0	0	0
65	SLE FR 1	-0.01	-0.06	1.62	0	0	0
65	SLE FR 2	-0.01	-0.06	1.62	0	0	0
65	SLE FR 3	-0.01	-0.06	1.63	0	0	0
65	SLE FR 4	-0.01	-0.06	1.68	0	0	0
65	SLE FR 5	-0.01	-0.06	1.68	0	0	0
65	SLE FR 6	-0.01	-0.06	1.72	0	0	0
65	SLE QP 1	-0.01	-0.06	1.62	0	0	0
65	SLE QP 2	-0.01	-0.06	1.68	0	0	0
65	SLD 1	0.1	-0.04	1.68	0	0	0
65	SLD 2	0.1	-0.04	1.68	0	0	0
65	SLD 3	0.1	-0.07	1.71	0	0	0
65	SLD 4	0.1	-0.07	1.71	0	0	0
65	SLD 5	0.03	0	1.63	0	0	0
65	SLD 6	0.03	0	1.63	0	0	0
65	SLD 7	0.01	-0.11	1.74	0	0	0
65	SLD 8	0.01	-0.11	1.74	0	0	0
65	SLD 9	-0.03	-0.01	1.62	0	0	0
65	SLD 10	-0.03	-0.01	1.62	0	0	0
65	SLD 11	-0.05	-0.11	1.73	0	0	0
65	SLD 12	-0.05	-0.11	1.73	0	0	0
65	SLD 13	-0.11	-0.05	1.64	0	0	0
65	SLD 14	-0.11	-0.04	1.64	0	0	0
65	SLD 15	-0.12	-0.08	1.68	0	0	0
65	SLD 16	-0.12	-0.08	1.68	0	0	0
65	SLV 1	0.25	-0.02	1.68	0	0	0
65	SLV 2	0.25	-0.01	1.68	0	0	0
65	SLV 3	0.24	-0.09	1.76	0	0	0
65	SLV 4	0.24	-0.09	1.76	0	0	0
65	SLV 5	0.09	0.06	1.57	0	0	0
65	SLV 6	0.09	0.06	1.56	0	0	0
65	SLV 7	0.04	-0.18	1.82	0	0	0
65	SLV 8	0.04	-0.18	1.82	0	0	0
65	SLV 9	-0.06	0.06	1.54	0	0	0
65	SLV 10	-0.06	0.06	1.54	0	0	0
65	SLV 11	-0.11	-0.18	1.79	0	0	0
65	SLV 12	-0.11	-0.18	1.79	0	0	0
65	SLV 13	-0.26	-0.03	1.6	0	0	0
65	SLV 14	-0.26	-0.03	1.6	0	0	0
65	SLV 15	-0.27	-0.1	1.67	0	0	0
65	SLV 16	-0.27	-0.1	1.67	0	0	0
66	SLU 1	-0.01	-0.1	2.8	0	0	0
66	SLU 2	-0.01	-0.1	2.8	0	0	0
66	SLU 3	-0.02	-0.1	2.86	0	0	0
66	SLU 4	-0.02	-0.1	2.87	0	0	0
66	SLU 5	-0.02	-0.1	2.84	0	0	0
66	SLU 6	-0.02	-0.1	2.91	0	0	0
66	SLU 7	-0.02	-0.1	2.91	0	0	0
66	SLU 8	-0.02	-0.1	2.88	0	0	0
66	SLU 9	-0.02	-0.1	2.88	0	0	0
66	SLU 10	-0.02	-0.11	3.16	0	0	0
66	SLU 11	-0.02	-0.1	3.23	0	0	0
66	SLU 12	-0.02	-0.11	3.23	0	0	0
66	SLU 13	-0.02	-0.11	3.21	0	0	0
66	SLU 14	-0.03	-0.1	3.27	0	0	0
66	SLU 15	-0.03	-0.11	3.27	0	0	0
66	SLU 16	-0.03	-0.1	3.25	0	0	0
66	SLU 17	-0.03	-0.1	3.25	0	0	0
66	SLU 18	-0.03	-0.11	3.32	0	0	0
66	SLU 19	-0.03	-0.11	3.32	0	0	0
66	SLU 20	-0.03	-0.11	3.36	0	0	0
66	SLU 21	-0.03	-0.11	3.36	0	0	0
66	SLU 22	-0.02	-0.1	3.12	0	0	0
66	SLU 23	-0.02	-0.1	3.12	0	0	0
66	SLU 24	-0.02	-0.1	3.19	0	0	0
66	SLU 25	-0.02	-0.1	3.19	0	0	0
66	SLU 26	-0.02	-0.1	3.16	0	0	0
66	SLU 27	-0.02	-0.1	3.23	0	0	0
66	SLU 28	-0.02	-0.1	3.23	0	0	0
66	SLU 29	-0.02	-0.1	3.2	0	0	0
66	SLU 30	-0.02	-0.1	3.2	0	0	0
66	SLU 31	-0.02	-0.1	3.49	0	0	0
66	SLU 32	-0.03	-0.1	3.55	0	0	0
66	SLU 33	-0.03	-0.1	3.55	0	0	0
66	SLU 34	-0.03	-0.1	3.53	0	0	0
66	SLU 35	-0.03	-0.1	3.6	0	0	0
66	SLU 36	-0.03	-0.1	3.6	0	0	0
66	SLU 37	-0.03	-0.1	3.57	0	0	0
66	SLU 38	-0.03	-0.1	3.57	0	0	0
66	SLU 39	-0.03	-0.1	3.64	0	0	0
66	SLU 40	-0.03	-0.1	3.64	0	0	0
66	SLU 41	-0.03	-0.1	3.68	0	0	0
66	SLU 42	-0.03	-0.1	3.69	0	0	0
66	SLU 43	-0.02	-0.13	3.52	0	0	0
66	SLU 44	-0.02	-0.13	3.53	0	0	0
66	SLU 45	-0.02	-0.13	3.59	0	0	0
66	SLU 46	-0.02	-0.13	3.59	0	0	0
66	SLU 47	-0.02	-0.13	3.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLU 48	-0.02	-0.13	3.64	0	0	0
66	SLU 49	-0.02	-0.13	3.64	0	0	0
66	SLU 50	-0.02	-0.13	3.61	0	0	0
66	SLU 51	-0.02	-0.13	3.61	0	0	0
66	SLU 52	-0.03	-0.14	3.89	0	0	0
66	SLU 53	-0.03	-0.13	3.96	0	0	0
66	SLU 54	-0.03	-0.14	3.96	0	0	0
66	SLU 55	-0.03	-0.14	3.94	0	0	0
66	SLU 56	-0.03	-0.13	4	0	0	0
66	SLU 57	-0.03	-0.14	4	0	0	0
66	SLU 58	-0.03	-0.13	3.98	0	0	0
66	SLU 59	-0.03	-0.14	3.98	0	0	0
66	SLU 60	-0.03	-0.14	4.05	0	0	0
66	SLU 61	-0.03	-0.14	4.05	0	0	0
66	SLU 62	-0.03	-0.14	4.09	0	0	0
66	SLU 63	-0.03	-0.14	4.09	0	0	0
66	SLU 64	-0.02	-0.13	3.85	0	0	0
66	SLU 65	-0.02	-0.13	3.85	0	0	0
66	SLU 66	-0.02	-0.13	3.92	0	0	0
66	SLU 67	-0.02	-0.13	3.92	0	0	0
66	SLU 68	-0.02	-0.13	3.89	0	0	0
66	SLU 69	-0.02	-0.13	3.96	0	0	0
66	SLU 70	-0.02	-0.13	3.96	0	0	0
66	SLU 71	-0.02	-0.13	3.93	0	0	0
66	SLU 72	-0.02	-0.13	3.93	0	0	0
66	SLU 73	-0.03	-0.13	4.22	0	0	0
66	SLU 74	-0.03	-0.13	4.28	0	0	0
66	SLU 75	-0.03	-0.13	4.28	0	0	0
66	SLU 76	-0.03	-0.13	4.26	0	0	0
66	SLU 77	-0.03	-0.13	4.32	0	0	0
66	SLU 78	-0.03	-0.13	4.32	0	0	0
66	SLU 79	-0.03	-0.13	4.3	0	0	0
66	SLU 80	-0.03	-0.13	4.3	0	0	0
66	SLU 81	-0.03	-0.13	4.37	0	0	0
66	SLU 82	-0.03	-0.13	4.37	0	0	0
66	SLU 83	-0.03	-0.13	4.41	0	0	0
66	SLU 84	-0.03	-0.13	4.41	0	0	0
66	SLE RA 1	-0.01	-0.1	2.89	0	0	0
66	SLE RA 2	-0.01	-0.1	2.89	0	0	0
66	SLE RA 3	-0.02	-0.1	2.93	0	0	0
66	SLE RA 4	-0.02	-0.1	2.93	0	0	0
66	SLE RA 5	-0.02	-0.1	2.92	0	0	0
66	SLE RA 6	-0.02	-0.1	2.96	0	0	0
66	SLE RA 7	-0.02	-0.1	2.96	0	0	0
66	SLE RA 8	-0.02	-0.1	2.94	0	0	0
66	SLE RA 9	-0.02	-0.1	2.95	0	0	0
66	SLE RA 10	-0.02	-0.1	3.13	0	0	0
66	SLE RA 11	-0.02	-0.1	3.18	0	0	0
66	SLE RA 12	-0.02	-0.1	3.18	0	0	0
66	SLE RA 13	-0.02	-0.1	3.16	0	0	0
66	SLE RA 14	-0.02	-0.1	3.21	0	0	0
66	SLE RA 15	-0.02	-0.1	3.21	0	0	0
66	SLE RA 16	-0.02	-0.1	3.19	0	0	0
66	SLE RA 17	-0.02	-0.1	3.19	0	0	0
66	SLE RA 18	-0.02	-0.1	3.24	0	0	0
66	SLE RA 19	-0.02	-0.1	3.24	0	0	0
66	SLE RA 20	-0.02	-0.1	3.27	0	0	0
66	SLE RA 21	-0.02	-0.1	3.27	0	0	0
66	SLE FR 1	-0.01	-0.1	2.89	0	0	0
66	SLE FR 2	-0.01	-0.1	2.89	0	0	0
66	SLE FR 3	-0.01	-0.1	2.9	0	0	0
66	SLE FR 4	-0.02	-0.1	2.99	0	0	0
66	SLE FR 5	-0.02	-0.1	3	0	0	0
66	SLE FR 6	-0.02	-0.1	3.06	0	0	0
66	SLE QP 1	-0.01	-0.1	2.89	0	0	0
66	SLE QP 2	-0.02	-0.1	2.99	0	0	0
66	SLD 1	0.18	-0.07	2.98	0	0	0
66	SLD 2	0.18	-0.07	2.98	0	0	0
66	SLD 3	0.17	-0.13	3.04	0	0	0
66	SLD 4	0.17	-0.12	3.04	0	0	0
66	SLD 5	0.06	-0.01	2.91	0	0	0
66	SLD 6	0.06	0	2.9	0	0	0
66	SLD 7	0.02	-0.19	3.09	0	0	0
66	SLD 8	0.02	-0.19	3.09	0	0	0
66	SLD 9	-0.06	-0.01	2.9	0	0	0
66	SLD 10	-0.06	-0.01	2.9	0	0	0
66	SLD 11	-0.09	-0.2	3.08	0	0	0
66	SLD 12	-0.09	-0.19	3.08	0	0	0
66	SLD 13	-0.21	-0.08	2.95	0	0	0
66	SLD 14	-0.21	-0.08	2.95	0	0	0
66	SLD 15	-0.22	-0.13	3.01	0	0	0
66	SLD 16	-0.22	-0.13	3	0	0	0
66	SLV 1	0.45	-0.03	2.97	0	0	0
66	SLV 2	0.45	-0.02	2.96	0	0	0
66	SLV 3	0.43	-0.16	3.09	0	0	0
66	SLV 4	0.43	-0.15	3.09	0	0	0
66	SLV 5	0.16	0.11	2.8	0	0	0
66	SLV 6	0.16	0.12	2.79	0	0	0
66	SLV 7	0.08	-0.31	3.22	0	0	0
66	SLV 8	0.08	-0.31	3.21	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
66	SLV 9	-0.11	0.11	2.77	0	0	0
66	SLV 10	-0.11	0.11	2.77	0	0	0
66	SLV 11	-0.2	-0.32	3.19	0	0	0
66	SLV 12	-0.2	-0.31	3.19	0	0	0
66	SLV 13	-0.46	-0.05	2.9	0	0	0
66	SLV 14	-0.46	-0.04	2.89	0	0	0
66	SLV 15	-0.49	-0.18	3.02	0	0	0
66	SLV 16	-0.49	-0.17	3.02	0	0	0
67	SLU 1	-0.01	-0.09	2.46	0	0	0
67	SLU 2	-0.01	-0.09	2.46	0	0	0
67	SLU 3	-0.01	-0.09	2.52	0	0	0
67	SLU 4	-0.01	-0.09	2.52	0	0	0
67	SLU 5	-0.01	-0.09	2.5	0	0	0
67	SLU 6	-0.02	-0.09	2.56	0	0	0
67	SLU 7	-0.02	-0.09	2.56	0	0	0
67	SLU 8	-0.02	-0.09	2.53	0	0	0
67	SLU 9	-0.02	-0.09	2.54	0	0	0
67	SLU 10	-0.02	-0.09	2.78	0	0	0
67	SLU 11	-0.02	-0.09	2.84	0	0	0
67	SLU 12	-0.02	-0.09	2.84	0	0	0
67	SLU 13	-0.02	-0.09	2.82	0	0	0
67	SLU 14	-0.02	-0.09	2.88	0	0	0
67	SLU 15	-0.02	-0.09	2.88	0	0	0
67	SLU 16	-0.02	-0.09	2.85	0	0	0
67	SLU 17	-0.02	-0.09	2.86	0	0	0
67	SLU 18	-0.02	-0.09	2.92	0	0	0
67	SLU 19	-0.02	-0.09	2.92	0	0	0
67	SLU 20	-0.02	-0.09	2.96	0	0	0
67	SLU 21	-0.03	-0.09	2.96	0	0	0
67	SLU 22	-0.01	-0.08	2.75	0	0	0
67	SLU 23	-0.01	-0.08	2.75	0	0	0
67	SLU 24	-0.02	-0.08	2.8	0	0	0
67	SLU 25	-0.02	-0.08	2.81	0	0	0
67	SLU 26	-0.02	-0.08	2.78	0	0	0
67	SLU 27	-0.02	-0.08	2.84	0	0	0
67	SLU 28	-0.02	-0.08	2.84	0	0	0
67	SLU 29	-0.02	-0.08	2.82	0	0	0
67	SLU 30	-0.02	-0.08	2.82	0	0	0
67	SLU 31	-0.02	-0.09	3.07	0	0	0
67	SLU 32	-0.02	-0.09	3.12	0	0	0
67	SLU 33	-0.02	-0.09	3.13	0	0	0
67	SLU 34	-0.02	-0.09	3.1	0	0	0
67	SLU 35	-0.02	-0.09	3.16	0	0	0
67	SLU 36	-0.02	-0.09	3.16	0	0	0
67	SLU 37	-0.02	-0.09	3.14	0	0	0
67	SLU 38	-0.02	-0.09	3.14	0	0	0
67	SLU 39	-0.02	-0.09	3.2	0	0	0
67	SLU 40	-0.02	-0.09	3.2	0	0	0
67	SLU 41	-0.03	-0.09	3.24	0	0	0
67	SLU 42	-0.03	-0.09	3.24	0	0	0
67	SLU 43	-0.02	-0.11	3.1	0	0	0
67	SLU 44	-0.02	-0.11	3.1	0	0	0
67	SLU 45	-0.02	-0.11	3.16	0	0	0
67	SLU 46	-0.02	-0.11	3.16	0	0	0
67	SLU 47	-0.02	-0.11	3.14	0	0	0
67	SLU 48	-0.02	-0.11	3.2	0	0	0
67	SLU 49	-0.02	-0.11	3.2	0	0	0
67	SLU 50	-0.02	-0.11	3.18	0	0	0
67	SLU 51	-0.02	-0.11	3.18	0	0	0
67	SLU 52	-0.02	-0.12	3.42	0	0	0
67	SLU 53	-0.02	-0.12	3.48	0	0	0
67	SLU 54	-0.02	-0.12	3.48	0	0	0
67	SLU 55	-0.02	-0.12	3.46	0	0	0
67	SLU 56	-0.03	-0.12	3.52	0	0	0
67	SLU 57	-0.03	-0.12	3.52	0	0	0
67	SLU 58	-0.03	-0.11	3.5	0	0	0
67	SLU 59	-0.03	-0.12	3.5	0	0	0
67	SLU 60	-0.03	-0.12	3.56	0	0	0
67	SLU 61	-0.03	-0.12	3.56	0	0	0
67	SLU 62	-0.03	-0.12	3.6	0	0	0
67	SLU 63	-0.03	-0.12	3.6	0	0	0
67	SLU 64	-0.02	-0.11	3.39	0	0	0
67	SLU 65	-0.02	-0.11	3.39	0	0	0
67	SLU 66	-0.02	-0.11	3.45	0	0	0
67	SLU 67	-0.02	-0.11	3.45	0	0	0
67	SLU 68	-0.02	-0.11	3.42	0	0	0
67	SLU 69	-0.02	-0.11	3.48	0	0	0
67	SLU 70	-0.02	-0.11	3.48	0	0	0
67	SLU 71	-0.02	-0.11	3.46	0	0	0
67	SLU 72	-0.02	-0.11	3.46	0	0	0
67	SLU 73	-0.02	-0.11	3.71	0	0	0
67	SLU 74	-0.03	-0.11	3.77	0	0	0
67	SLU 75	-0.03	-0.11	3.77	0	0	0
67	SLU 76	-0.03	-0.11	3.74	0	0	0
67	SLU 77	-0.03	-0.11	3.8	0	0	0
67	SLU 78	-0.03	-0.11	3.8	0	0	0
67	SLU 79	-0.03	-0.11	3.78	0	0	0
67	SLU 80	-0.03	-0.11	3.78	0	0	0
67	SLU 81	-0.03	-0.11	3.84	0	0	0
67	SLU 82	-0.03	-0.11	3.84	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
67	SLU 83	-0.03	-0.11	3.88	0	0	0
67	SLU 84	-0.03	-0.11	3.88	0	0	0
67	SLE RA 1	-0.01	-0.08	2.54	0	0	0
67	SLE RA 2	-0.01	-0.09	2.54	0	0	0
67	SLE RA 3	-0.01	-0.09	2.58	0	0	0
67	SLE RA 4	-0.01	-0.09	2.58	0	0	0
67	SLE RA 5	-0.01	-0.09	2.57	0	0	0
67	SLE RA 6	-0.01	-0.09	2.61	0	0	0
67	SLE RA 7	-0.01	-0.09	2.61	0	0	0
67	SLE RA 8	-0.01	-0.08	2.59	0	0	0
67	SLE RA 9	-0.01	-0.09	2.59	0	0	0
67	SLE RA 10	-0.02	-0.09	2.76	0	0	0
67	SLE RA 11	-0.02	-0.09	2.8	0	0	0
67	SLE RA 12	-0.02	-0.09	2.8	0	0	0
67	SLE RA 13	-0.02	-0.09	2.78	0	0	0
67	SLE RA 14	-0.02	-0.09	2.82	0	0	0
67	SLE RA 15	-0.02	-0.09	2.82	0	0	0
67	SLE RA 16	-0.02	-0.09	2.8	0	0	0
67	SLE RA 17	-0.02	-0.09	2.81	0	0	0
67	SLE RA 18	-0.02	-0.09	2.85	0	0	0
67	SLE RA 19	-0.02	-0.09	2.85	0	0	0
67	SLE RA 20	-0.02	-0.09	2.87	0	0	0
67	SLE RA 21	-0.02	-0.09	2.87	0	0	0
67	SLE FR 1	-0.01	-0.08	2.54	0	0	0
67	SLE FR 2	-0.01	-0.09	2.54	0	0	0
67	SLE FR 3	-0.01	-0.08	2.55	0	0	0
67	SLE FR 4	-0.01	-0.09	2.63	0	0	0
67	SLE FR 5	-0.02	-0.09	2.64	0	0	0
67	SLE FR 6	-0.02	-0.09	2.69	0	0	0
67	SLE QP 1	-0.01	-0.08	2.54	0	0	0
67	SLE QP 2	-0.01	-0.09	2.63	0	0	0
67	SLD 1	0.16	-0.06	2.6	0	0	0
67	SLD 2	0.16	-0.06	2.6	0	0	0
67	SLD 3	0.15	-0.11	2.65	0	0	0
67	SLD 4	0.15	-0.1	2.65	0	0	0
67	SLD 5	0.05	0	2.56	0	0	0
67	SLD 6	0.05	0	2.55	0	0	0
67	SLD 7	0.02	-0.17	2.71	0	0	0
67	SLD 8	0.02	-0.17	2.71	0	0	0
67	SLD 9	-0.05	-0.01	2.56	0	0	0
67	SLD 10	-0.05	0	2.56	0	0	0
67	SLD 11	-0.08	-0.17	2.71	0	0	0
67	SLD 12	-0.08	-0.17	2.71	0	0	0
67	SLD 13	-0.18	-0.07	2.62	0	0	0
67	SLD 14	-0.18	-0.06	2.62	0	0	0
67	SLD 15	-0.19	-0.12	2.67	0	0	0
67	SLD 16	-0.19	-0.11	2.66	0	0	0
67	SLV 1	0.4	-0.03	2.56	0	0	0
67	SLV 2	0.4	-0.02	2.56	0	0	0
67	SLV 3	0.38	-0.14	2.67	0	0	0
67	SLV 4	0.38	-0.13	2.66	0	0	0
67	SLV 5	0.15	0.1	2.46	0	0	0
67	SLV 6	0.15	0.11	2.45	0	0	0
67	SLV 7	0.07	-0.27	2.8	0	0	0
67	SLV 8	0.07	-0.27	2.8	0	0	0
67	SLV 9	-0.1	0.09	2.47	0	0	0
67	SLV 10	-0.1	0.1	2.46	0	0	0
67	SLV 11	-0.17	-0.28	2.82	0	0	0
67	SLV 12	-0.18	-0.27	2.81	0	0	0
67	SLV 13	-0.41	-0.04	2.6	0	0	0
67	SLV 14	-0.41	-0.03	2.6	0	0	0
67	SLV 15	-0.43	-0.16	2.71	0	0	0
67	SLV 16	-0.43	-0.15	2.7	0	0	0
68	SLU 1	-0.01	-0.08	2.44	0	0	0
68	SLU 2	-0.01	-0.08	2.44	0	0	0
68	SLU 3	-0.01	-0.08	2.5	0	0	0
68	SLU 4	-0.01	-0.08	2.5	0	0	0
68	SLU 5	-0.01	-0.08	2.48	0	0	0
68	SLU 6	-0.02	-0.08	2.54	0	0	0
68	SLU 7	-0.02	-0.08	2.54	0	0	0
68	SLU 8	-0.02	-0.08	2.51	0	0	0
68	SLU 9	-0.02	-0.08	2.52	0	0	0
68	SLU 10	-0.02	-0.09	2.76	0	0	0
68	SLU 11	-0.02	-0.09	2.82	0	0	0
68	SLU 12	-0.02	-0.09	2.82	0	0	0
68	SLU 13	-0.02	-0.09	2.8	0	0	0
68	SLU 14	-0.02	-0.09	2.85	0	0	0
68	SLU 15	-0.02	-0.09	2.85	0	0	0
68	SLU 16	-0.02	-0.09	2.83	0	0	0
68	SLU 17	-0.02	-0.09	2.83	0	0	0
68	SLU 18	-0.02	-0.09	2.9	0	0	0
68	SLU 19	-0.02	-0.09	2.9	0	0	0
68	SLU 20	-0.02	-0.09	2.93	0	0	0
68	SLU 21	-0.02	-0.09	2.93	0	0	0
68	SLU 22	-0.01	-0.08	2.73	0	0	0
68	SLU 23	-0.01	-0.08	2.73	0	0	0
68	SLU 24	-0.02	-0.08	2.78	0	0	0
68	SLU 25	-0.02	-0.08	2.78	0	0	0
68	SLU 26	-0.02	-0.08	2.76	0	0	0
68	SLU 27	-0.02	-0.08	2.82	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLU 28	-0.02	-0.08	2.82	0	0	0
68	SLU 29	-0.02	-0.08	2.8	0	0	0
68	SLU 30	-0.02	-0.08	2.8	0	0	0
68	SLU 31	-0.02	-0.08	3.04	0	0	0
68	SLU 32	-0.02	-0.08	3.1	0	0	0
68	SLU 33	-0.02	-0.08	3.1	0	0	0
68	SLU 34	-0.02	-0.08	3.08	0	0	0
68	SLU 35	-0.02	-0.08	3.14	0	0	0
68	SLU 36	-0.02	-0.08	3.14	0	0	0
68	SLU 37	-0.02	-0.08	3.11	0	0	0
68	SLU 38	-0.02	-0.08	3.11	0	0	0
68	SLU 39	-0.02	-0.08	3.18	0	0	0
68	SLU 40	-0.02	-0.08	3.18	0	0	0
68	SLU 41	-0.03	-0.08	3.21	0	0	0
68	SLU 42	-0.03	-0.08	3.21	0	0	0
68	SLU 43	-0.02	-0.11	3.08	0	0	0
68	SLU 44	-0.02	-0.11	3.08	0	0	0
68	SLU 45	-0.02	-0.11	3.14	0	0	0
68	SLU 46	-0.02	-0.11	3.14	0	0	0
68	SLU 47	-0.02	-0.11	3.12	0	0	0
68	SLU 48	-0.02	-0.11	3.17	0	0	0
68	SLU 49	-0.02	-0.11	3.17	0	0	0
68	SLU 50	-0.02	-0.11	3.15	0	0	0
68	SLU 51	-0.02	-0.11	3.15	0	0	0
68	SLU 52	-0.02	-0.11	3.4	0	0	0
68	SLU 53	-0.02	-0.11	3.45	0	0	0
68	SLU 54	-0.02	-0.11	3.46	0	0	0
68	SLU 55	-0.02	-0.11	3.43	0	0	0
68	SLU 56	-0.03	-0.11	3.49	0	0	0
68	SLU 57	-0.03	-0.11	3.49	0	0	0
68	SLU 58	-0.03	-0.11	3.47	0	0	0
68	SLU 59	-0.03	-0.11	3.47	0	0	0
68	SLU 60	-0.03	-0.11	3.53	0	0	0
68	SLU 61	-0.03	-0.11	3.53	0	0	0
68	SLU 62	-0.03	-0.11	3.57	0	0	0
68	SLU 63	-0.03	-0.11	3.57	0	0	0
68	SLU 64	-0.02	-0.11	3.36	0	0	0
68	SLU 65	-0.02	-0.11	3.36	0	0	0
68	SLU 66	-0.02	-0.11	3.42	0	0	0
68	SLU 67	-0.02	-0.11	3.42	0	0	0
68	SLU 68	-0.02	-0.11	3.4	0	0	0
68	SLU 69	-0.02	-0.11	3.46	0	0	0
68	SLU 70	-0.02	-0.11	3.46	0	0	0
68	SLU 71	-0.02	-0.11	3.43	0	0	0
68	SLU 72	-0.02	-0.11	3.43	0	0	0
68	SLU 73	-0.02	-0.11	3.68	0	0	0
68	SLU 74	-0.03	-0.11	3.74	0	0	0
68	SLU 75	-0.03	-0.11	3.74	0	0	0
68	SLU 76	-0.03	-0.11	3.71	0	0	0
68	SLU 77	-0.03	-0.11	3.77	0	0	0
68	SLU 78	-0.03	-0.11	3.77	0	0	0
68	SLU 79	-0.03	-0.11	3.75	0	0	0
68	SLU 80	-0.03	-0.11	3.75	0	0	0
68	SLU 81	-0.03	-0.11	3.81	0	0	0
68	SLU 82	-0.03	-0.11	3.81	0	0	0
68	SLU 83	-0.03	-0.11	3.85	0	0	0
68	SLU 84	-0.03	-0.11	3.85	0	0	0
68	SLE RA 1	-0.01	-0.08	2.52	0	0	0
68	SLE RA 2	-0.01	-0.08	2.52	0	0	0
68	SLE RA 3	-0.01	-0.08	2.56	0	0	0
68	SLE RA 4	-0.01	-0.08	2.56	0	0	0
68	SLE RA 5	-0.01	-0.08	2.55	0	0	0
68	SLE RA 6	-0.01	-0.08	2.59	0	0	0
68	SLE RA 7	-0.01	-0.08	2.59	0	0	0
68	SLE RA 8	-0.01	-0.08	2.57	0	0	0
68	SLE RA 9	-0.01	-0.08	2.57	0	0	0
68	SLE RA 10	-0.02	-0.08	2.74	0	0	0
68	SLE RA 11	-0.02	-0.08	2.77	0	0	0
68	SLE RA 12	-0.02	-0.08	2.77	0	0	0
68	SLE RA 13	-0.02	-0.08	2.76	0	0	0
68	SLE RA 14	-0.02	-0.08	2.8	0	0	0
68	SLE RA 15	-0.02	-0.08	2.8	0	0	0
68	SLE RA 16	-0.02	-0.08	2.78	0	0	0
68	SLE RA 17	-0.02	-0.08	2.78	0	0	0
68	SLE RA 18	-0.02	-0.08	2.83	0	0	0
68	SLE RA 19	-0.02	-0.09	2.83	0	0	0
68	SLE RA 20	-0.02	-0.08	2.85	0	0	0
68	SLE RA 21	-0.02	-0.09	2.85	0	0	0
68	SLE FR 1	-0.01	-0.08	2.52	0	0	0
68	SLE FR 2	-0.01	-0.08	2.52	0	0	0
68	SLE FR 3	-0.01	-0.08	2.53	0	0	0
68	SLE FR 4	-0.01	-0.08	2.61	0	0	0
68	SLE FR 5	-0.02	-0.08	2.62	0	0	0
68	SLE FR 6	-0.02	-0.08	2.67	0	0	0
68	SLE QP 1	-0.01	-0.08	2.52	0	0	0
68	SLE QP 2	-0.01	-0.08	2.61	0	0	0
68	SLD 1	0.16	-0.07	2.58	0	0	0
68	SLD 2	0.16	-0.06	2.57	0	0	0
68	SLD 3	0.15	-0.11	2.62	0	0	0
68	SLD 4	0.15	-0.11	2.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLD 5	0.05	0	2.54	0	0	0
68	SLD 6	0.05	0	2.54	0	0	0
68	SLD 7	0.02	-0.17	2.68	0	0	0
68	SLD 8	0.02	-0.16	2.68	0	0	0
68	SLD 9	-0.05	0	2.55	0	0	0
68	SLD 10	-0.05	0	2.55	0	0	0
68	SLD 11	-0.08	-0.16	2.69	0	0	0
68	SLD 12	-0.08	-0.16	2.69	0	0	0
68	SLD 13	-0.18	-0.06	2.61	0	0	0
68	SLD 14	-0.18	-0.05	2.61	0	0	0
68	SLD 15	-0.19	-0.11	2.65	0	0	0
68	SLD 16	-0.19	-0.1	2.65	0	0	0
68	SLV 1	0.4	-0.04	2.53	0	0	0
68	SLV 2	0.4	-0.03	2.52	0	0	0
68	SLV 3	0.38	-0.15	2.62	0	0	0
68	SLV 4	0.38	-0.14	2.62	0	0	0
68	SLV 5	0.15	0.09	2.44	0	0	0
68	SLV 6	0.15	0.1	2.44	0	0	0
68	SLV 7	0.07	-0.27	2.76	0	0	0
68	SLV 8	0.07	-0.26	2.76	0	0	0
68	SLV 9	-0.1	0.1	2.47	0	0	0
68	SLV 10	-0.1	0.11	2.46	0	0	0
68	SLV 11	-0.17	-0.27	2.79	0	0	0
68	SLV 12	-0.18	-0.26	2.79	0	0	0
68	SLV 13	-0.41	-0.02	2.61	0	0	0
68	SLV 14	-0.41	-0.01	2.6	0	0	0
68	SLV 15	-0.43	-0.13	2.71	0	0	0
68	SLV 16	-0.43	-0.12	2.7	0	0	0
69	SLU 1	-0.01	-0.08	2.43	0	0	0
69	SLU 2	-0.01	-0.08	2.43	0	0	0
69	SLU 3	-0.01	-0.08	2.48	0	0	0
69	SLU 4	-0.01	-0.08	2.48	0	0	0
69	SLU 5	-0.01	-0.08	2.46	0	0	0
69	SLU 6	-0.02	-0.08	2.52	0	0	0
69	SLU 7	-0.02	-0.08	2.52	0	0	0
69	SLU 8	-0.02	-0.08	2.49	0	0	0
69	SLU 9	-0.02	-0.08	2.5	0	0	0
69	SLU 10	-0.02	-0.08	2.74	0	0	0
69	SLU 11	-0.02	-0.08	2.79	0	0	0
69	SLU 12	-0.02	-0.08	2.8	0	0	0
69	SLU 13	-0.02	-0.08	2.77	0	0	0
69	SLU 14	-0.02	-0.08	2.83	0	0	0
69	SLU 15	-0.02	-0.08	2.83	0	0	0
69	SLU 16	-0.02	-0.08	2.81	0	0	0
69	SLU 17	-0.02	-0.08	2.81	0	0	0
69	SLU 18	-0.02	-0.08	2.87	0	0	0
69	SLU 19	-0.02	-0.08	2.87	0	0	0
69	SLU 20	-0.02	-0.08	2.91	0	0	0
69	SLU 21	-0.02	-0.08	2.91	0	0	0
69	SLU 22	-0.01	-0.08	2.71	0	0	0
69	SLU 23	-0.01	-0.08	2.71	0	0	0
69	SLU 24	-0.01	-0.08	2.76	0	0	0
69	SLU 25	-0.02	-0.08	2.76	0	0	0
69	SLU 26	-0.02	-0.08	2.74	0	0	0
69	SLU 27	-0.02	-0.08	2.8	0	0	0
69	SLU 28	-0.02	-0.08	2.8	0	0	0
69	SLU 29	-0.02	-0.08	2.77	0	0	0
69	SLU 30	-0.02	-0.08	2.78	0	0	0
69	SLU 31	-0.02	-0.08	3.02	0	0	0
69	SLU 32	-0.02	-0.08	3.07	0	0	0
69	SLU 33	-0.02	-0.08	3.08	0	0	0
69	SLU 34	-0.02	-0.08	3.05	0	0	0
69	SLU 35	-0.02	-0.08	3.11	0	0	0
69	SLU 36	-0.02	-0.08	3.11	0	0	0
69	SLU 37	-0.02	-0.08	3.09	0	0	0
69	SLU 38	-0.02	-0.08	3.09	0	0	0
69	SLU 39	-0.02	-0.08	3.15	0	0	0
69	SLU 40	-0.02	-0.08	3.15	0	0	0
69	SLU 41	-0.03	-0.08	3.19	0	0	0
69	SLU 42	-0.03	-0.08	3.19	0	0	0
69	SLU 43	-0.01	-0.1	3.06	0	0	0
69	SLU 44	-0.02	-0.11	3.06	0	0	0
69	SLU 45	-0.02	-0.11	3.11	0	0	0
69	SLU 46	-0.02	-0.11	3.11	0	0	0
69	SLU 47	-0.02	-0.11	3.09	0	0	0
69	SLU 48	-0.02	-0.1	3.15	0	0	0
69	SLU 49	-0.02	-0.11	3.15	0	0	0
69	SLU 50	-0.02	-0.1	3.13	0	0	0
69	SLU 51	-0.02	-0.11	3.13	0	0	0
69	SLU 52	-0.02	-0.11	3.37	0	0	0
69	SLU 53	-0.02	-0.11	3.43	0	0	0
69	SLU 54	-0.02	-0.11	3.43	0	0	0
69	SLU 55	-0.02	-0.11	3.4	0	0	0
69	SLU 56	-0.03	-0.11	3.46	0	0	0
69	SLU 57	-0.03	-0.11	3.46	0	0	0
69	SLU 58	-0.03	-0.11	3.44	0	0	0
69	SLU 59	-0.03	-0.11	3.44	0	0	0
69	SLU 60	-0.03	-0.11	3.5	0	0	0
69	SLU 61	-0.03	-0.11	3.5	0	0	0
69	SLU 62	-0.03	-0.11	3.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
69	SLU 63	-0.03	-0.11	3.54	0	0	0
69	SLU 64	-0.02	-0.1	3.34	0	0	0
69	SLU 65	-0.02	-0.1	3.34	0	0	0
69	SLU 66	-0.02	-0.1	3.39	0	0	0
69	SLU 67	-0.02	-0.1	3.4	0	0	0
69	SLU 68	-0.02	-0.1	3.37	0	0	0
69	SLU 69	-0.02	-0.1	3.43	0	0	0
69	SLU 70	-0.02	-0.1	3.43	0	0	0
69	SLU 71	-0.02	-0.1	3.41	0	0	0
69	SLU 72	-0.02	-0.1	3.41	0	0	0
69	SLU 73	-0.02	-0.11	3.65	0	0	0
69	SLU 74	-0.03	-0.1	3.71	0	0	0
69	SLU 75	-0.03	-0.11	3.71	0	0	0
69	SLU 76	-0.03	-0.11	3.68	0	0	0
69	SLU 77	-0.03	-0.1	3.74	0	0	0
69	SLU 78	-0.03	-0.11	3.74	0	0	0
69	SLU 79	-0.03	-0.1	3.72	0	0	0
69	SLU 80	-0.03	-0.1	3.72	0	0	0
69	SLU 81	-0.03	-0.11	3.78	0	0	0
69	SLU 82	-0.03	-0.11	3.78	0	0	0
69	SLU 83	-0.03	-0.11	3.82	0	0	0
69	SLU 84	-0.03	-0.11	3.82	0	0	0
69	SLE RA 1	-0.01	-0.08	2.51	0	0	0
69	SLE RA 2	-0.01	-0.08	2.51	0	0	0
69	SLE RA 3	-0.01	-0.08	2.54	0	0	0
69	SLE RA 4	-0.01	-0.08	2.54	0	0	0
69	SLE RA 5	-0.01	-0.08	2.53	0	0	0
69	SLE RA 6	-0.01	-0.08	2.57	0	0	0
69	SLE RA 7	-0.01	-0.08	2.57	0	0	0
69	SLE RA 8	-0.01	-0.08	2.55	0	0	0
69	SLE RA 9	-0.01	-0.08	2.55	0	0	0
69	SLE RA 10	-0.02	-0.08	2.71	0	0	0
69	SLE RA 11	-0.02	-0.08	2.75	0	0	0
69	SLE RA 12	-0.02	-0.08	2.75	0	0	0
69	SLE RA 13	-0.02	-0.08	2.74	0	0	0
69	SLE RA 14	-0.02	-0.08	2.77	0	0	0
69	SLE RA 15	-0.02	-0.08	2.78	0	0	0
69	SLE RA 16	-0.02	-0.08	2.76	0	0	0
69	SLE RA 17	-0.02	-0.08	2.76	0	0	0
69	SLE RA 18	-0.02	-0.08	2.8	0	0	0
69	SLE RA 19	-0.02	-0.08	2.8	0	0	0
69	SLE RA 20	-0.02	-0.08	2.83	0	0	0
69	SLE RA 21	-0.02	-0.08	2.83	0	0	0
69	SLE FR 1	-0.01	-0.08	2.51	0	0	0
69	SLE FR 2	-0.01	-0.08	2.51	0	0	0
69	SLE FR 3	-0.01	-0.08	2.51	0	0	0
69	SLE FR 4	-0.01	-0.08	2.59	0	0	0
69	SLE FR 5	-0.02	-0.08	2.6	0	0	0
69	SLE FR 6	-0.02	-0.08	2.65	0	0	0
69	SLE QP 1	-0.01	-0.08	2.51	0	0	0
69	SLE QP 2	-0.01	-0.08	2.59	0	0	0
69	SLD 1	0.16	-0.06	2.55	0	0	0
69	SLD 2	0.16	-0.06	2.54	0	0	0
69	SLD 3	0.15	-0.11	2.59	0	0	0
69	SLD 4	0.15	-0.1	2.58	0	0	0
69	SLD 5	0.05	0	2.52	0	0	0
69	SLD 6	0.05	0	2.52	0	0	0
69	SLD 7	0.02	-0.16	2.65	0	0	0
69	SLD 8	0.02	-0.16	2.65	0	0	0
69	SLD 9	-0.05	0	2.54	0	0	0
69	SLD 10	-0.05	0	2.54	0	0	0
69	SLD 11	-0.08	-0.16	2.67	0	0	0
69	SLD 12	-0.08	-0.16	2.67	0	0	0
69	SLD 13	-0.18	-0.06	2.61	0	0	0
69	SLD 14	-0.18	-0.05	2.6	0	0	0
69	SLD 15	-0.19	-0.1	2.65	0	0	0
69	SLD 16	-0.19	-0.1	2.64	0	0	0
69	SLV 1	0.4	-0.04	2.48	0	0	0
69	SLV 2	0.4	-0.03	2.48	0	0	0
69	SLV 3	0.38	-0.15	2.57	0	0	0
69	SLV 4	0.38	-0.14	2.57	0	0	0
69	SLV 5	0.15	0.09	2.43	0	0	0
69	SLV 6	0.15	0.1	2.42	0	0	0
69	SLV 7	0.07	-0.27	2.72	0	0	0
69	SLV 8	0.07	-0.26	2.72	0	0	0
69	SLV 9	-0.1	0.1	2.47	0	0	0
69	SLV 10	-0.1	0.11	2.46	0	0	0
69	SLV 11	-0.17	-0.26	2.77	0	0	0
69	SLV 12	-0.17	-0.25	2.76	0	0	0
69	SLV 13	-0.41	-0.02	2.62	0	0	0
69	SLV 14	-0.41	-0.01	2.62	0	0	0
69	SLV 15	-0.43	-0.13	2.71	0	0	0
69	SLV 16	-0.43	-0.12	2.71	0	0	0
70	SLU 1	-0.01	-0.08	2.41	0	0	0
70	SLU 2	-0.01	-0.08	2.41	0	0	0
70	SLU 3	-0.01	-0.08	2.46	0	0	0
70	SLU 4	-0.01	-0.08	2.46	0	0	0
70	SLU 5	-0.01	-0.08	2.44	0	0	0
70	SLU 6	-0.02	-0.08	2.5	0	0	0
70	SLU 7	-0.02	-0.08	2.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
70	SLU 8	-0.02	-0.08	2.48	0	0	0
70	SLU 9	-0.02	-0.08	2.48	0	0	0
70	SLU 10	-0.02	-0.08	2.72	0	0	0
70	SLU 11	-0.02	-0.08	2.77	0	0	0
70	SLU 12	-0.02	-0.08	2.77	0	0	0
70	SLU 13	-0.02	-0.08	2.75	0	0	0
70	SLU 14	-0.02	-0.08	2.81	0	0	0
70	SLU 15	-0.02	-0.08	2.81	0	0	0
70	SLU 16	-0.02	-0.08	2.78	0	0	0
70	SLU 17	-0.02	-0.08	2.78	0	0	0
70	SLU 18	-0.02	-0.08	2.85	0	0	0
70	SLU 19	-0.02	-0.08	2.85	0	0	0
70	SLU 20	-0.02	-0.08	2.88	0	0	0
70	SLU 21	-0.02	-0.08	2.88	0	0	0
70	SLU 22	-0.01	-0.07	2.69	0	0	0
70	SLU 23	-0.01	-0.08	2.69	0	0	0
70	SLU 24	-0.01	-0.07	2.74	0	0	0
70	SLU 25	-0.01	-0.08	2.74	0	0	0
70	SLU 26	-0.02	-0.08	2.72	0	0	0
70	SLU 27	-0.02	-0.07	2.78	0	0	0
70	SLU 28	-0.02	-0.08	2.78	0	0	0
70	SLU 29	-0.02	-0.07	2.75	0	0	0
70	SLU 30	-0.02	-0.07	2.75	0	0	0
70	SLU 31	-0.02	-0.08	3	0	0	0
70	SLU 32	-0.02	-0.08	3.05	0	0	0
70	SLU 33	-0.02	-0.08	3.05	0	0	0
70	SLU 34	-0.02	-0.08	3.03	0	0	0
70	SLU 35	-0.02	-0.08	3.08	0	0	0
70	SLU 36	-0.02	-0.08	3.08	0	0	0
70	SLU 37	-0.02	-0.08	3.06	0	0	0
70	SLU 38	-0.02	-0.08	3.06	0	0	0
70	SLU 39	-0.02	-0.08	3.13	0	0	0
70	SLU 40	-0.02	-0.08	3.13	0	0	0
70	SLU 41	-0.03	-0.08	3.16	0	0	0
70	SLU 42	-0.03	-0.08	3.16	0	0	0
70	SLU 43	-0.01	-0.1	3.03	0	0	0
70	SLU 44	-0.02	-0.1	3.04	0	0	0
70	SLU 45	-0.02	-0.1	3.09	0	0	0
70	SLU 46	-0.02	-0.1	3.09	0	0	0
70	SLU 47	-0.02	-0.1	3.07	0	0	0
70	SLU 48	-0.02	-0.1	3.12	0	0	0
70	SLU 49	-0.02	-0.1	3.13	0	0	0
70	SLU 50	-0.02	-0.1	3.1	0	0	0
70	SLU 51	-0.02	-0.1	3.1	0	0	0
70	SLU 52	-0.02	-0.1	3.34	0	0	0
70	SLU 53	-0.02	-0.1	3.4	0	0	0
70	SLU 54	-0.02	-0.1	3.4	0	0	0
70	SLU 55	-0.02	-0.1	3.38	0	0	0
70	SLU 56	-0.03	-0.1	3.43	0	0	0
70	SLU 57	-0.03	-0.1	3.43	0	0	0
70	SLU 58	-0.03	-0.1	3.41	0	0	0
70	SLU 59	-0.03	-0.1	3.41	0	0	0
70	SLU 60	-0.03	-0.1	3.47	0	0	0
70	SLU 61	-0.03	-0.1	3.47	0	0	0
70	SLU 62	-0.03	-0.1	3.51	0	0	0
70	SLU 63	-0.03	-0.1	3.51	0	0	0
70	SLU 64	-0.02	-0.1	3.31	0	0	0
70	SLU 65	-0.02	-0.1	3.31	0	0	0
70	SLU 66	-0.02	-0.1	3.37	0	0	0
70	SLU 67	-0.02	-0.1	3.37	0	0	0
70	SLU 68	-0.02	-0.1	3.35	0	0	0
70	SLU 69	-0.02	-0.1	3.4	0	0	0
70	SLU 70	-0.02	-0.1	3.4	0	0	0
70	SLU 71	-0.02	-0.1	3.38	0	0	0
70	SLU 72	-0.02	-0.1	3.38	0	0	0
70	SLU 73	-0.02	-0.1	3.62	0	0	0
70	SLU 74	-0.03	-0.1	3.68	0	0	0
70	SLU 75	-0.03	-0.1	3.68	0	0	0
70	SLU 76	-0.03	-0.1	3.66	0	0	0
70	SLU 77	-0.03	-0.1	3.71	0	0	0
70	SLU 78	-0.03	-0.1	3.71	0	0	0
70	SLU 79	-0.03	-0.1	3.69	0	0	0
70	SLU 80	-0.03	-0.1	3.69	0	0	0
70	SLU 81	-0.03	-0.1	3.75	0	0	0
70	SLU 82	-0.03	-0.1	3.75	0	0	0
70	SLU 83	-0.03	-0.1	3.79	0	0	0
70	SLU 84	-0.03	-0.1	3.79	0	0	0
70	SLE RA 1	-0.01	-0.08	2.49	0	0	0
70	SLE RA 2	-0.01	-0.08	2.49	0	0	0
70	SLE RA 3	-0.01	-0.08	2.52	0	0	0
70	SLE RA 4	-0.01	-0.08	2.53	0	0	0
70	SLE RA 5	-0.01	-0.08	2.51	0	0	0
70	SLE RA 6	-0.01	-0.08	2.55	0	0	0
70	SLE RA 7	-0.01	-0.08	2.55	0	0	0
70	SLE RA 8	-0.01	-0.08	2.53	0	0	0
70	SLE RA 9	-0.01	-0.08	2.53	0	0	0
70	SLE RA 10	-0.02	-0.08	2.69	0	0	0
70	SLE RA 11	-0.02	-0.08	2.73	0	0	0
70	SLE RA 12	-0.02	-0.08	2.73	0	0	0
70	SLE RA 13	-0.02	-0.08	2.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
70	SLE RA 14	-0.02	-0.08	2.75	0	0	0
70	SLE RA 15	-0.02	-0.08	2.75	0	0	0
70	SLE RA 16	-0.02	-0.08	2.74	0	0	0
70	SLE RA 17	-0.02	-0.08	2.74	0	0	0
70	SLE RA 18	-0.02	-0.08	2.78	0	0	0
70	SLE RA 19	-0.02	-0.08	2.78	0	0	0
70	SLE RA 20	-0.02	-0.08	2.8	0	0	0
70	SLE RA 21	-0.02	-0.08	2.8	0	0	0
70	SLE FR 1	-0.01	-0.08	2.49	0	0	0
70	SLE FR 2	-0.01	-0.08	2.49	0	0	0
70	SLE FR 3	-0.01	-0.08	2.5	0	0	0
70	SLE FR 4	-0.01	-0.08	2.58	0	0	0
70	SLE FR 5	-0.01	-0.08	2.58	0	0	0
70	SLE FR 6	-0.02	-0.08	2.63	0	0	0
70	SLE QP 1	-0.01	-0.08	2.49	0	0	0
70	SLE QP 2	-0.01	-0.08	2.58	0	0	0
70	SLD 1	0.16	-0.06	2.52	0	0	0
70	SLD 2	0.16	-0.05	2.51	0	0	0
70	SLD 3	0.15	-0.11	2.55	0	0	0
70	SLD 4	0.15	-0.1	2.55	0	0	0
70	SLD 5	0.05	0	2.5	0	0	0
70	SLD 6	0.05	0	2.5	0	0	0
70	SLD 7	0.02	-0.16	2.62	0	0	0
70	SLD 8	0.02	-0.15	2.62	0	0	0
70	SLD 9	-0.05	0	2.53	0	0	0
70	SLD 10	-0.05	0.01	2.53	0	0	0
70	SLD 11	-0.08	-0.16	2.65	0	0	0
70	SLD 12	-0.08	-0.15	2.65	0	0	0
70	SLD 13	-0.18	-0.05	2.6	0	0	0
70	SLD 14	-0.18	-0.05	2.6	0	0	0
70	SLD 15	-0.19	-0.1	2.64	0	0	0
70	SLD 16	-0.19	-0.09	2.63	0	0	0
70	SLV 1	0.4	-0.04	2.44	0	0	0
70	SLV 2	0.4	-0.02	2.43	0	0	0
70	SLV 3	0.38	-0.15	2.52	0	0	0
70	SLV 4	0.38	-0.13	2.51	0	0	0
70	SLV 5	0.15	0.09	2.41	0	0	0
70	SLV 6	0.15	0.1	2.4	0	0	0
70	SLV 7	0.07	-0.26	2.69	0	0	0
70	SLV 8	0.07	-0.25	2.68	0	0	0
70	SLV 9	-0.1	0.1	2.47	0	0	0
70	SLV 10	-0.1	0.11	2.46	0	0	0
70	SLV 11	-0.17	-0.26	2.75	0	0	0
70	SLV 12	-0.17	-0.25	2.74	0	0	0
70	SLV 13	-0.41	-0.02	2.64	0	0	0
70	SLV 14	-0.41	0	2.63	0	0	0
70	SLV 15	-0.43	-0.13	2.72	0	0	0
70	SLV 16	-0.43	-0.11	2.71	0	0	0
71	SLU 1	-0.01	-0.08	2.7	0	0	0
71	SLU 2	-0.01	-0.09	2.7	0	0	0
71	SLU 3	-0.01	-0.08	2.76	0	0	0
71	SLU 4	-0.02	-0.08	2.76	0	0	0
71	SLU 5	-0.02	-0.09	2.74	0	0	0
71	SLU 6	-0.02	-0.08	2.8	0	0	0
71	SLU 7	-0.02	-0.08	2.8	0	0	0
71	SLU 8	-0.02	-0.08	2.77	0	0	0
71	SLU 9	-0.02	-0.08	2.77	0	0	0
71	SLU 10	-0.02	-0.09	3.04	0	0	0
71	SLU 11	-0.02	-0.09	3.1	0	0	0
71	SLU 12	-0.02	-0.09	3.1	0	0	0
71	SLU 13	-0.02	-0.09	3.08	0	0	0
71	SLU 14	-0.03	-0.09	3.14	0	0	0
71	SLU 15	-0.03	-0.09	3.14	0	0	0
71	SLU 16	-0.03	-0.09	3.12	0	0	0
71	SLU 17	-0.03	-0.09	3.12	0	0	0
71	SLU 18	-0.03	-0.09	3.19	0	0	0
71	SLU 19	-0.03	-0.09	3.19	0	0	0
71	SLU 20	-0.03	-0.09	3.23	0	0	0
71	SLU 21	-0.03	-0.09	3.23	0	0	0
71	SLU 22	-0.01	-0.08	3.01	0	0	0
71	SLU 23	-0.02	-0.08	3.01	0	0	0
71	SLU 24	-0.02	-0.08	3.07	0	0	0
71	SLU 25	-0.02	-0.08	3.07	0	0	0
71	SLU 26	-0.02	-0.08	3.05	0	0	0
71	SLU 27	-0.02	-0.08	3.11	0	0	0
71	SLU 28	-0.02	-0.08	3.11	0	0	0
71	SLU 29	-0.02	-0.08	3.08	0	0	0
71	SLU 30	-0.02	-0.08	3.09	0	0	0
71	SLU 31	-0.02	-0.08	3.35	0	0	0
71	SLU 32	-0.03	-0.08	3.42	0	0	0
71	SLU 33	-0.03	-0.08	3.42	0	0	0
71	SLU 34	-0.03	-0.08	3.39	0	0	0
71	SLU 35	-0.03	-0.08	3.45	0	0	0
71	SLU 36	-0.03	-0.08	3.45	0	0	0
71	SLU 37	-0.03	-0.08	3.43	0	0	0
71	SLU 38	-0.03	-0.08	3.43	0	0	0
71	SLU 39	-0.03	-0.08	3.5	0	0	0
71	SLU 40	-0.03	-0.08	3.5	0	0	0
71	SLU 41	-0.03	-0.08	3.54	0	0	0
71	SLU 42	-0.03	-0.08	3.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
71	SLU 43	-0.02	-0.11	3.4	0	0	0
71	SLU 44	-0.02	-0.11	3.4	0	0	0
71	SLU 45	-0.02	-0.11	3.46	0	0	0
71	SLU 46	-0.02	-0.11	3.46	0	0	0
71	SLU 47	-0.02	-0.11	3.44	0	0	0
71	SLU 48	-0.02	-0.11	3.5	0	0	0
71	SLU 49	-0.02	-0.11	3.5	0	0	0
71	SLU 50	-0.02	-0.11	3.48	0	0	0
71	SLU 51	-0.02	-0.11	3.48	0	0	0
71	SLU 52	-0.03	-0.11	3.74	0	0	0
71	SLU 53	-0.03	-0.11	3.81	0	0	0
71	SLU 54	-0.03	-0.11	3.81	0	0	0
71	SLU 55	-0.03	-0.11	3.78	0	0	0
71	SLU 56	-0.03	-0.11	3.84	0	0	0
71	SLU 57	-0.03	-0.11	3.84	0	0	0
71	SLU 58	-0.03	-0.11	3.82	0	0	0
71	SLU 59	-0.03	-0.11	3.82	0	0	0
71	SLU 60	-0.03	-0.11	3.89	0	0	0
71	SLU 61	-0.03	-0.11	3.89	0	0	0
71	SLU 62	-0.03	-0.11	3.93	0	0	0
71	SLU 63	-0.03	-0.11	3.93	0	0	0
71	SLU 64	-0.02	-0.11	3.71	0	0	0
71	SLU 65	-0.02	-0.11	3.71	0	0	0
71	SLU 66	-0.02	-0.11	3.78	0	0	0
71	SLU 67	-0.02	-0.11	3.78	0	0	0
71	SLU 68	-0.02	-0.11	3.75	0	0	0
71	SLU 69	-0.02	-0.11	3.81	0	0	0
71	SLU 70	-0.02	-0.11	3.81	0	0	0
71	SLU 71	-0.02	-0.11	3.79	0	0	0
71	SLU 72	-0.02	-0.11	3.79	0	0	0
71	SLU 73	-0.03	-0.11	4.06	0	0	0
71	SLU 74	-0.03	-0.11	4.12	0	0	0
71	SLU 75	-0.03	-0.11	4.12	0	0	0
71	SLU 76	-0.03	-0.11	4.09	0	0	0
71	SLU 77	-0.03	-0.11	4.16	0	0	0
71	SLU 78	-0.03	-0.11	4.16	0	0	0
71	SLU 79	-0.03	-0.11	4.13	0	0	0
71	SLU 80	-0.03	-0.11	4.13	0	0	0
71	SLU 81	-0.03	-0.11	4.2	0	0	0
71	SLU 82	-0.03	-0.11	4.2	0	0	0
71	SLU 83	-0.03	-0.11	4.24	0	0	0
71	SLU 84	-0.03	-0.11	4.24	0	0	0
71	SLE RA 1	-0.01	-0.08	2.79	0	0	0
71	SLE RA 2	-0.01	-0.08	2.79	0	0	0
71	SLE RA 3	-0.01	-0.08	2.83	0	0	0
71	SLE RA 4	-0.01	-0.08	2.83	0	0	0
71	SLE RA 5	-0.02	-0.08	2.81	0	0	0
71	SLE RA 6	-0.02	-0.08	2.85	0	0	0
71	SLE RA 7	-0.02	-0.08	2.85	0	0	0
71	SLE RA 8	-0.02	-0.08	2.84	0	0	0
71	SLE RA 9	-0.02	-0.08	2.84	0	0	0
71	SLE RA 10	-0.02	-0.09	3.02	0	0	0
71	SLE RA 11	-0.02	-0.08	3.06	0	0	0
71	SLE RA 12	-0.02	-0.08	3.06	0	0	0
71	SLE RA 13	-0.02	-0.08	3.04	0	0	0
71	SLE RA 14	-0.02	-0.08	3.08	0	0	0
71	SLE RA 15	-0.02	-0.08	3.08	0	0	0
71	SLE RA 16	-0.02	-0.08	3.07	0	0	0
71	SLE RA 17	-0.02	-0.08	3.07	0	0	0
71	SLE RA 18	-0.02	-0.08	3.11	0	0	0
71	SLE RA 19	-0.02	-0.09	3.11	0	0	0
71	SLE RA 20	-0.02	-0.08	3.14	0	0	0
71	SLE RA 21	-0.02	-0.09	3.14	0	0	0
71	SLE FR 1	-0.01	-0.08	2.79	0	0	0
71	SLE FR 2	-0.01	-0.08	2.79	0	0	0
71	SLE FR 3	-0.01	-0.08	2.8	0	0	0
71	SLE FR 4	-0.02	-0.08	2.89	0	0	0
71	SLE FR 5	-0.02	-0.08	2.9	0	0	0
71	SLE FR 6	-0.02	-0.08	2.95	0	0	0
71	SLE QP 1	-0.01	-0.08	2.79	0	0	0
71	SLE QP 2	-0.02	-0.08	2.89	0	0	0
71	SLD 1	0.19	-0.07	2.8	0	0	0
71	SLD 2	0.18	-0.06	2.8	0	0	0
71	SLD 3	0.17	-0.12	2.84	0	0	0
71	SLD 4	0.17	-0.11	2.84	0	0	0
71	SLD 5	0.06	0	2.8	0	0	0
71	SLD 6	0.06	0.01	2.8	0	0	0
71	SLD 7	0.02	-0.18	2.93	0	0	0
71	SLD 8	0.02	-0.17	2.93	0	0	0
71	SLD 9	-0.06	0	2.84	0	0	0
71	SLD 10	-0.06	0.01	2.84	0	0	0
71	SLD 11	-0.09	-0.17	2.97	0	0	0
71	SLD 12	-0.09	-0.17	2.97	0	0	0
71	SLD 13	-0.21	-0.06	2.93	0	0	0
71	SLD 14	-0.21	-0.05	2.93	0	0	0
71	SLD 15	-0.22	-0.11	2.97	0	0	0
71	SLD 16	-0.22	-0.1	2.97	0	0	0
71	SLV 1	0.45	-0.05	2.7	0	0	0
71	SLV 2	0.45	-0.02	2.69	0	0	0
71	SLV 3	0.43	-0.17	2.79	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
71	SLV 4	0.43	-0.14	2.78	0	0	0
71	SLV 5	0.16	0.11	2.7	0	0	0
71	SLV 6	0.16	0.12	2.69	0	0	0
71	SLV 7	0.08	-0.29	2.99	0	0	0
71	SLV 8	0.08	-0.28	2.99	0	0	0
71	SLV 9	-0.11	0.11	2.78	0	0	0
71	SLV 10	-0.11	0.13	2.78	0	0	0
71	SLV 11	-0.2	-0.29	3.08	0	0	0
71	SLV 12	-0.2	-0.27	3.07	0	0	0
71	SLV 13	-0.46	-0.02	2.99	0	0	0
71	SLV 14	-0.46	0	2.99	0	0	0
71	SLV 15	-0.49	-0.14	3.08	0	0	0
71	SLV 16	-0.49	-0.12	3.07	0	0	0
72	SLU 1	-0.01	-0.04	1.49	0	0	0
72	SLU 2	-0.01	-0.05	1.49	0	0	0
72	SLU 3	-0.01	-0.04	1.52	0	0	0
72	SLU 4	-0.01	-0.05	1.52	0	0	0
72	SLU 5	-0.01	-0.05	1.51	0	0	0
72	SLU 6	-0.01	-0.04	1.54	0	0	0
72	SLU 7	-0.01	-0.05	1.54	0	0	0
72	SLU 8	-0.01	-0.04	1.53	0	0	0
72	SLU 9	-0.01	-0.04	1.53	0	0	0
72	SLU 10	-0.01	-0.05	1.68	0	0	0
72	SLU 11	-0.01	-0.05	1.71	0	0	0
72	SLU 12	-0.01	-0.05	1.71	0	0	0
72	SLU 13	-0.01	-0.05	1.7	0	0	0
72	SLU 14	-0.01	-0.05	1.73	0	0	0
72	SLU 15	-0.01	-0.05	1.73	0	0	0
72	SLU 16	-0.01	-0.05	1.72	0	0	0
72	SLU 17	-0.01	-0.05	1.72	0	0	0
72	SLU 18	-0.01	-0.05	1.76	0	0	0
72	SLU 19	-0.01	-0.05	1.76	0	0	0
72	SLU 20	-0.02	-0.05	1.78	0	0	0
72	SLU 21	-0.02	-0.05	1.78	0	0	0
72	SLU 22	-0.01	-0.04	1.66	0	0	0
72	SLU 23	-0.01	-0.04	1.66	0	0	0
72	SLU 24	-0.01	-0.04	1.7	0	0	0
72	SLU 25	-0.01	-0.04	1.7	0	0	0
72	SLU 26	-0.01	-0.04	1.68	0	0	0
72	SLU 27	-0.01	-0.04	1.72	0	0	0
72	SLU 28	-0.01	-0.04	1.72	0	0	0
72	SLU 29	-0.01	-0.04	1.7	0	0	0
72	SLU 30	-0.01	-0.04	1.7	0	0	0
72	SLU 31	-0.01	-0.04	1.85	0	0	0
72	SLU 32	-0.01	-0.04	1.88	0	0	0
72	SLU 33	-0.01	-0.04	1.88	0	0	0
72	SLU 34	-0.01	-0.04	1.87	0	0	0
72	SLU 35	-0.02	-0.04	1.9	0	0	0
72	SLU 36	-0.02	-0.04	1.9	0	0	0
72	SLU 37	-0.02	-0.04	1.89	0	0	0
72	SLU 38	-0.02	-0.04	1.89	0	0	0
72	SLU 39	-0.02	-0.04	1.93	0	0	0
72	SLU 40	-0.02	-0.04	1.93	0	0	0
72	SLU 41	-0.02	-0.04	1.95	0	0	0
72	SLU 42	-0.02	-0.04	1.95	0	0	0
72	SLU 43	-0.01	-0.06	1.88	0	0	0
72	SLU 44	-0.01	-0.06	1.88	0	0	0
72	SLU 45	-0.01	-0.06	1.91	0	0	0
72	SLU 46	-0.01	-0.06	1.91	0	0	0
72	SLU 47	-0.01	-0.06	1.9	0	0	0
72	SLU 48	-0.01	-0.06	1.93	0	0	0
72	SLU 49	-0.01	-0.06	1.93	0	0	0
72	SLU 50	-0.01	-0.06	1.92	0	0	0
72	SLU 51	-0.01	-0.06	1.92	0	0	0
72	SLU 52	-0.01	-0.06	2.06	0	0	0
72	SLU 53	-0.02	-0.06	2.1	0	0	0
72	SLU 54	-0.02	-0.06	2.1	0	0	0
72	SLU 55	-0.02	-0.06	2.08	0	0	0
72	SLU 56	-0.02	-0.06	2.12	0	0	0
72	SLU 57	-0.02	-0.06	2.12	0	0	0
72	SLU 58	-0.02	-0.06	2.1	0	0	0
72	SLU 59	-0.02	-0.06	2.1	0	0	0
72	SLU 60	-0.02	-0.06	2.14	0	0	0
72	SLU 61	-0.02	-0.06	2.14	0	0	0
72	SLU 62	-0.02	-0.06	2.16	0	0	0
72	SLU 63	-0.02	-0.06	2.16	0	0	0
72	SLU 64	-0.01	-0.06	2.05	0	0	0
72	SLU 65	-0.01	-0.06	2.05	0	0	0
72	SLU 66	-0.01	-0.06	2.08	0	0	0
72	SLU 67	-0.01	-0.06	2.08	0	0	0
72	SLU 68	-0.01	-0.06	2.07	0	0	0
72	SLU 69	-0.01	-0.06	2.1	0	0	0
72	SLU 70	-0.01	-0.06	2.1	0	0	0
72	SLU 71	-0.01	-0.06	2.09	0	0	0
72	SLU 72	-0.01	-0.06	2.09	0	0	0
72	SLU 73	-0.02	-0.06	2.24	0	0	0
72	SLU 74	-0.02	-0.06	2.27	0	0	0
72	SLU 75	-0.02	-0.06	2.27	0	0	0
72	SLU 76	-0.02	-0.06	2.26	0	0	0
72	SLU 77	-0.02	-0.06	2.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
72	SLU 78	-0.02	-0.06	2.29	0	0	0
72	SLU 79	-0.02	-0.06	2.28	0	0	0
72	SLU 80	-0.02	-0.06	2.28	0	0	0
72	SLU 81	-0.02	-0.06	2.32	0	0	0
72	SLU 82	-0.02	-0.06	2.32	0	0	0
72	SLU 83	-0.02	-0.06	2.34	0	0	0
72	SLU 84	-0.02	-0.06	2.34	0	0	0
72	SLE RA 1	-0.01	-0.04	1.54	0	0	0
72	SLE RA 2	-0.01	-0.04	1.54	0	0	0
72	SLE RA 3	-0.01	-0.04	1.56	0	0	0
72	SLE RA 4	-0.01	-0.04	1.56	0	0	0
72	SLE RA 5	-0.01	-0.04	1.55	0	0	0
72	SLE RA 6	-0.01	-0.04	1.57	0	0	0
72	SLE RA 7	-0.01	-0.04	1.57	0	0	0
72	SLE RA 8	-0.01	-0.04	1.56	0	0	0
72	SLE RA 9	-0.01	-0.04	1.56	0	0	0
72	SLE RA 10	-0.01	-0.05	1.66	0	0	0
72	SLE RA 11	-0.01	-0.04	1.69	0	0	0
72	SLE RA 12	-0.01	-0.04	1.69	0	0	0
72	SLE RA 13	-0.01	-0.04	1.68	0	0	0
72	SLE RA 14	-0.01	-0.04	1.7	0	0	0
72	SLE RA 15	-0.01	-0.04	1.7	0	0	0
72	SLE RA 16	-0.01	-0.04	1.69	0	0	0
72	SLE RA 17	-0.01	-0.04	1.69	0	0	0
72	SLE RA 18	-0.01	-0.04	1.72	0	0	0
72	SLE RA 19	-0.01	-0.05	1.72	0	0	0
72	SLE RA 20	-0.01	-0.04	1.73	0	0	0
72	SLE RA 21	-0.01	-0.05	1.73	0	0	0
72	SLE FR 1	-0.01	-0.04	1.54	0	0	0
72	SLE FR 2	-0.01	-0.04	1.54	0	0	0
72	SLE FR 3	-0.01	-0.04	1.54	0	0	0
72	SLE FR 4	-0.01	-0.04	1.59	0	0	0
72	SLE FR 5	-0.01	-0.04	1.6	0	0	0
72	SLE FR 6	-0.01	-0.04	1.63	0	0	0
72	SLE QP 1	-0.01	-0.04	1.54	0	0	0
72	SLE QP 2	-0.01	-0.04	1.59	0	0	0
72	SLD 1	0.1	-0.04	1.54	0	0	0
72	SLD 2	0.1	-0.03	1.53	0	0	0
72	SLD 3	0.1	-0.07	1.56	0	0	0
72	SLD 4	0.1	-0.06	1.55	0	0	0
72	SLD 5	0.03	0	1.54	0	0	0
72	SLD 6	0.03	0.01	1.54	0	0	0
72	SLD 7	0.01	-0.1	1.61	0	0	0
72	SLD 8	0.01	-0.09	1.61	0	0	0
72	SLD 9	-0.03	0	1.57	0	0	0
72	SLD 10	-0.03	0.01	1.57	0	0	0
72	SLD 11	-0.05	-0.09	1.64	0	0	0
72	SLD 12	-0.05	-0.09	1.64	0	0	0
72	SLD 13	-0.11	-0.03	1.63	0	0	0
72	SLD 14	-0.11	-0.02	1.63	0	0	0
72	SLD 15	-0.12	-0.06	1.65	0	0	0
72	SLD 16	-0.12	-0.05	1.65	0	0	0
72	SLV 1	0.25	-0.03	1.46	0	0	0
72	SLV 2	0.25	-0.01	1.46	0	0	0
72	SLV 3	0.24	-0.09	1.51	0	0	0
72	SLV 4	0.24	-0.08	1.5	0	0	0
72	SLV 5	0.09	0.06	1.48	0	0	0
72	SLV 6	0.09	0.07	1.48	0	0	0
72	SLV 7	0.04	-0.16	1.64	0	0	0
72	SLV 8	0.04	-0.15	1.63	0	0	0
72	SLV 9	-0.06	0.06	1.55	0	0	0
72	SLV 10	-0.06	0.07	1.55	0	0	0
72	SLV 11	-0.11	-0.16	1.7	0	0	0
72	SLV 12	-0.11	-0.15	1.7	0	0	0
72	SLV 13	-0.26	-0.01	1.68	0	0	0
72	SLV 14	-0.26	0	1.67	0	0	0
72	SLV 15	-0.27	-0.08	1.72	0	0	0
72	SLV 16	-0.27	-0.06	1.72	0	0	0
136	SLU 1	-0.01	-0.08	3.54	0	0	0
136	SLU 2	-0.01	-0.09	3.54	0	0	0
136	SLU 3	-0.01	-0.08	3.63	0	0	0
136	SLU 4	-0.01	-0.09	3.62	0	0	0
136	SLU 5	-0.01	-0.09	3.59	0	0	0
136	SLU 6	-0.01	-0.09	3.68	0	0	0
136	SLU 7	-0.01	-0.09	3.68	0	0	0
136	SLU 8	-0.01	-0.09	3.65	0	0	0
136	SLU 9	-0.01	-0.09	3.65	0	0	0
136	SLU 10	-0.01	-0.09	3.95	0	0	0
136	SLU 11	-0.01	-0.09	4.05	0	0	0
136	SLU 12	-0.01	-0.09	4.04	0	0	0
136	SLU 13	-0.01	-0.09	4.01	0	0	0
136	SLU 14	-0.01	-0.09	4.1	0	0	0
136	SLU 15	-0.01	-0.09	4.1	0	0	0
136	SLU 16	-0.01	-0.09	4.07	0	0	0
136	SLU 17	-0.01	-0.09	4.07	0	0	0
136	SLU 18	-0.01	-0.09	4.14	0	0	0
136	SLU 19	-0.01	-0.09	4.14	0	0	0
136	SLU 20	-0.01	-0.09	4.2	0	0	0
136	SLU 21	-0.01	-0.09	4.19	0	0	0
136	SLU 22	-0.01	-0.09	3.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
136	SLU 23	-0.01	-0.09	3.91	0	0	0
136	SLU 24	-0.01	-0.09	4.01	0	0	0
136	SLU 25	-0.01	-0.09	4	0	0	0
136	SLU 26	-0.01	-0.09	3.97	0	0	0
136	SLU 27	-0.02	-0.09	4.06	0	0	0
136	SLU 28	-0.01	-0.09	4.06	0	0	0
136	SLU 29	-0.02	-0.09	4.03	0	0	0
136	SLU 30	-0.01	-0.09	4.03	0	0	0
136	SLU 31	-0.01	-0.09	4.33	0	0	0
136	SLU 32	-0.01	-0.09	4.43	0	0	0
136	SLU 33	-0.01	-0.09	4.42	0	0	0
136	SLU 34	-0.01	-0.1	4.39	0	0	0
136	SLU 35	-0.01	-0.09	4.48	0	0	0
136	SLU 36	-0.01	-0.1	4.48	0	0	0
136	SLU 37	-0.01	-0.09	4.45	0	0	0
136	SLU 38	-0.01	-0.1	4.45	0	0	0
136	SLU 39	-0.01	-0.09	4.52	0	0	0
136	SLU 40	-0.01	-0.1	4.52	0	0	0
136	SLU 41	-0.01	-0.09	4.58	0	0	0
136	SLU 42	-0.01	-0.1	4.57	0	0	0
136	SLU 43	-0.02	-0.11	4.47	0	0	0
136	SLU 44	-0.01	-0.11	4.47	0	0	0
136	SLU 45	-0.02	-0.11	4.56	0	0	0
136	SLU 46	-0.02	-0.11	4.56	0	0	0
136	SLU 47	-0.02	-0.11	4.52	0	0	0
136	SLU 48	-0.02	-0.11	4.61	0	0	0
136	SLU 49	-0.02	-0.11	4.61	0	0	0
136	SLU 50	-0.02	-0.11	4.58	0	0	0
136	SLU 51	-0.02	-0.11	4.58	0	0	0
136	SLU 52	-0.01	-0.12	4.89	0	0	0
136	SLU 53	-0.02	-0.11	4.98	0	0	0
136	SLU 54	-0.01	-0.12	4.98	0	0	0
136	SLU 55	-0.01	-0.12	4.94	0	0	0
136	SLU 56	-0.02	-0.12	5.03	0	0	0
136	SLU 57	-0.02	-0.12	5.03	0	0	0
136	SLU 58	-0.02	-0.12	5	0	0	0
136	SLU 59	-0.02	-0.12	5	0	0	0
136	SLU 60	-0.02	-0.12	5.07	0	0	0
136	SLU 61	-0.01	-0.12	5.07	0	0	0
136	SLU 62	-0.02	-0.12	5.13	0	0	0
136	SLU 63	-0.01	-0.12	5.12	0	0	0
136	SLU 64	-0.02	-0.11	4.85	0	0	0
136	SLU 65	-0.02	-0.11	4.85	0	0	0
136	SLU 66	-0.02	-0.11	4.94	0	0	0
136	SLU 67	-0.02	-0.11	4.94	0	0	0
136	SLU 68	-0.02	-0.11	4.9	0	0	0
136	SLU 69	-0.02	-0.11	4.99	0	0	0
136	SLU 70	-0.02	-0.11	4.99	0	0	0
136	SLU 71	-0.02	-0.11	4.96	0	0	0
136	SLU 72	-0.02	-0.11	4.96	0	0	0
136	SLU 73	-0.02	-0.12	5.27	0	0	0
136	SLU 74	-0.02	-0.12	5.36	0	0	0
136	SLU 75	-0.02	-0.12	5.35	0	0	0
136	SLU 76	-0.02	-0.12	5.32	0	0	0
136	SLU 77	-0.02	-0.12	5.41	0	0	0
136	SLU 78	-0.02	-0.12	5.41	0	0	0
136	SLU 79	-0.02	-0.12	5.38	0	0	0
136	SLU 80	-0.02	-0.12	5.38	0	0	0
136	SLU 81	-0.02	-0.12	5.45	0	0	0
136	SLU 82	-0.02	-0.12	5.45	0	0	0
136	SLU 83	-0.02	-0.12	5.51	0	0	0
136	SLU 84	-0.02	-0.12	5.5	0	0	0
136	SLE RA 1	-0.01	-0.08	3.65	0	0	0
136	SLE RA 2	-0.01	-0.09	3.65	0	0	0
136	SLE RA 3	-0.01	-0.08	3.71	0	0	0
136	SLE RA 4	-0.01	-0.09	3.7	0	0	0
136	SLE RA 5	-0.01	-0.09	3.68	0	0	0
136	SLE RA 6	-0.01	-0.09	3.74	0	0	0
136	SLE RA 7	-0.01	-0.09	3.74	0	0	0
136	SLE RA 8	-0.01	-0.09	3.72	0	0	0
136	SLE RA 9	-0.01	-0.09	3.72	0	0	0
136	SLE RA 10	-0.01	-0.09	3.93	0	0	0
136	SLE RA 11	-0.01	-0.09	3.99	0	0	0
136	SLE RA 12	-0.01	-0.09	3.98	0	0	0
136	SLE RA 13	-0.01	-0.09	3.96	0	0	0
136	SLE RA 14	-0.01	-0.09	4.02	0	0	0
136	SLE RA 15	-0.01	-0.09	4.02	0	0	0
136	SLE RA 16	-0.01	-0.09	4	0	0	0
136	SLE RA 17	-0.01	-0.09	4	0	0	0
136	SLE RA 18	-0.01	-0.09	4.05	0	0	0
136	SLE RA 19	-0.01	-0.09	4.05	0	0	0
136	SLE RA 20	-0.01	-0.09	4.09	0	0	0
136	SLE RA 21	-0.01	-0.09	4.08	0	0	0
136	SLE FR 1	-0.01	-0.08	3.65	0	0	0
136	SLE FR 2	-0.01	-0.08	3.65	0	0	0
136	SLE FR 3	-0.01	-0.08	3.67	0	0	0
136	SLE FR 4	-0.01	-0.09	3.77	0	0	0
136	SLE FR 5	-0.01	-0.09	3.79	0	0	0
136	SLE FR 6	-0.01	-0.09	3.85	0	0	0
136	SLE QP 1	-0.01	-0.08	3.65	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
136	SLE QP 2	-0.01	-0.09	3.77	0	0	0
136	SLD 1	0.27	-0.09	4.16	0	0	0
136	SLD 2	0.3	-0.1	4.13	0	0	0
136	SLD 3	0.27	-0.16	4.03	0	0	0
136	SLD 4	0.31	-0.17	4.01	0	0	0
136	SLD 5	0.06	0.03	4.08	0	0	0
136	SLD 6	0.08	0.02	4.06	0	0	0
136	SLD 7	0.08	-0.21	3.67	0	0	0
136	SLD 8	0.1	-0.22	3.65	0	0	0
136	SLD 9	-0.12	0.05	3.89	0	0	0
136	SLD 10	-0.1	0.04	3.88	0	0	0
136	SLD 11	-0.11	-0.19	3.48	0	0	0
136	SLD 12	-0.08	-0.2	3.46	0	0	0
136	SLD 13	-0.33	0	3.53	0	0	0
136	SLD 14	-0.3	-0.01	3.51	0	0	0
136	SLD 15	-0.33	-0.07	3.41	0	0	0
136	SLD 16	-0.3	-0.09	3.38	0	0	0
136	SLV 1	0.65	-0.09	4.67	0	0	0
136	SLV 2	0.72	-0.13	4.62	0	0	0
136	SLV 3	0.66	-0.25	4.39	0	0	0
136	SLV 4	0.74	-0.29	4.34	0	0	0
136	SLV 5	0.15	0.17	4.47	0	0	0
136	SLV 6	0.2	0.14	4.44	0	0	0
136	SLV 7	0.2	-0.38	3.54	0	0	0
136	SLV 8	0.25	-0.4	3.51	0	0	0
136	SLV 9	-0.27	0.23	4.03	0	0	0
136	SLV 10	-0.22	0.2	4	0	0	0
136	SLV 11	-0.23	-0.31	3.1	0	0	0
136	SLV 12	-0.18	-0.34	3.07	0	0	0
136	SLV 13	-0.76	0.12	3.2	0	0	0
136	SLV 14	-0.69	0.08	3.15	0	0	0
136	SLV 15	-0.75	-0.05	2.92	0	0	0
136	SLV 16	-0.67	-0.08	2.87	0	0	0
137	SLU 1	-0.03	-0.14	6.98	0	0	0
137	SLU 2	-0.02	-0.15	6.97	0	0	0
137	SLU 3	-0.03	-0.14	7.15	0	0	0
137	SLU 4	-0.02	-0.15	7.14	0	0	0
137	SLU 5	-0.02	-0.15	7.08	0	0	0
137	SLU 6	-0.03	-0.15	7.26	0	0	0
137	SLU 7	-0.03	-0.15	7.25	0	0	0
137	SLU 8	-0.03	-0.15	7.2	0	0	0
137	SLU 9	-0.03	-0.15	7.19	0	0	0
137	SLU 10	-0.02	-0.16	7.8	0	0	0
137	SLU 11	-0.03	-0.15	7.98	0	0	0
137	SLU 12	-0.02	-0.16	7.97	0	0	0
137	SLU 13	-0.02	-0.16	7.91	0	0	0
137	SLU 14	-0.03	-0.16	8.09	0	0	0
137	SLU 15	-0.02	-0.16	8.08	0	0	0
137	SLU 16	-0.03	-0.15	8.03	0	0	0
137	SLU 17	-0.02	-0.16	8.02	0	0	0
137	SLU 18	-0.02	-0.15	8.17	0	0	0
137	SLU 19	-0.02	-0.16	8.16	0	0	0
137	SLU 20	-0.02	-0.16	8.28	0	0	0
137	SLU 21	-0.02	-0.16	8.27	0	0	0
137	SLU 22	-0.03	-0.14	7.73	0	0	0
137	SLU 23	-0.03	-0.15	7.72	0	0	0
137	SLU 24	-0.03	-0.15	7.9	0	0	0
137	SLU 25	-0.03	-0.15	7.89	0	0	0
137	SLU 26	-0.03	-0.15	7.83	0	0	0
137	SLU 27	-0.03	-0.15	8.01	0	0	0
137	SLU 28	-0.03	-0.15	8	0	0	0
137	SLU 29	-0.03	-0.15	7.95	0	0	0
137	SLU 30	-0.03	-0.15	7.94	0	0	0
137	SLU 31	-0.02	-0.16	8.55	0	0	0
137	SLU 32	-0.03	-0.16	8.73	0	0	0
137	SLU 33	-0.03	-0.16	8.72	0	0	0
137	SLU 34	-0.02	-0.16	8.65	0	0	0
137	SLU 35	-0.03	-0.16	8.84	0	0	0
137	SLU 36	-0.03	-0.16	8.83	0	0	0
137	SLU 37	-0.03	-0.16	8.78	0	0	0
137	SLU 38	-0.03	-0.16	8.77	0	0	0
137	SLU 39	-0.03	-0.16	8.91	0	0	0
137	SLU 40	-0.02	-0.16	8.91	0	0	0
137	SLU 41	-0.03	-0.16	9.02	0	0	0
137	SLU 42	-0.02	-0.16	9.01	0	0	0
137	SLU 43	-0.03	-0.18	8.82	0	0	0
137	SLU 44	-0.03	-0.19	8.81	0	0	0
137	SLU 45	-0.03	-0.19	8.99	0	0	0
137	SLU 46	-0.03	-0.19	8.98	0	0	0
137	SLU 47	-0.03	-0.19	8.92	0	0	0
137	SLU 48	-0.03	-0.19	9.1	0	0	0
137	SLU 49	-0.03	-0.19	9.09	0	0	0
137	SLU 50	-0.03	-0.19	9.04	0	0	0
137	SLU 51	-0.03	-0.19	9.03	0	0	0
137	SLU 52	-0.03	-0.2	9.64	0	0	0
137	SLU 53	-0.03	-0.19	9.82	0	0	0
137	SLU 54	-0.03	-0.2	9.81	0	0	0
137	SLU 55	-0.03	-0.2	9.75	0	0	0
137	SLU 56	-0.03	-0.2	9.93	0	0	0
137	SLU 57	-0.03	-0.2	9.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
137	SLU 58	-0.03	-0.2	9.87	0	0	0
137	SLU 59	-0.03	-0.2	9.86	0	0	0
137	SLU 60	-0.03	-0.2	10.01	0	0	0
137	SLU 61	-0.03	-0.2	10	0	0	0
137	SLU 62	-0.03	-0.2	10.12	0	0	0
137	SLU 63	-0.03	-0.2	10.11	0	0	0
137	SLU 64	-0.04	-0.19	9.57	0	0	0
137	SLU 65	-0.03	-0.19	9.56	0	0	0
137	SLU 66	-0.04	-0.19	9.74	0	0	0
137	SLU 67	-0.03	-0.19	9.73	0	0	0
137	SLU 68	-0.03	-0.2	9.66	0	0	0
137	SLU 69	-0.04	-0.19	9.85	0	0	0
137	SLU 70	-0.03	-0.2	9.84	0	0	0
137	SLU 71	-0.04	-0.19	9.79	0	0	0
137	SLU 72	-0.04	-0.19	9.78	0	0	0
137	SLU 73	-0.03	-0.2	10.38	0	0	0
137	SLU 74	-0.03	-0.2	10.57	0	0	0
137	SLU 75	-0.03	-0.2	10.56	0	0	0
137	SLU 76	-0.03	-0.2	10.49	0	0	0
137	SLU 77	-0.04	-0.2	10.67	0	0	0
137	SLU 78	-0.03	-0.2	10.67	0	0	0
137	SLU 79	-0.04	-0.2	10.61	0	0	0
137	SLU 80	-0.03	-0.2	10.61	0	0	0
137	SLU 81	-0.03	-0.2	10.75	0	0	0
137	SLU 82	-0.03	-0.2	10.75	0	0	0
137	SLU 83	-0.03	-0.2	10.86	0	0	0
137	SLU 84	-0.03	-0.2	10.85	0	0	0
137	SLE RA 1	-0.03	-0.14	7.2	0	0	0
137	SLE RA 2	-0.02	-0.15	7.19	0	0	0
137	SLE RA 3	-0.03	-0.14	7.31	0	0	0
137	SLE RA 4	-0.03	-0.15	7.3	0	0	0
137	SLE RA 5	-0.03	-0.15	7.26	0	0	0
137	SLE RA 6	-0.03	-0.15	7.38	0	0	0
137	SLE RA 7	-0.03	-0.15	7.38	0	0	0
137	SLE RA 8	-0.03	-0.15	7.34	0	0	0
137	SLE RA 9	-0.03	-0.15	7.34	0	0	0
137	SLE RA 10	-0.02	-0.15	7.74	0	0	0
137	SLE RA 11	-0.03	-0.15	7.86	0	0	0
137	SLE RA 12	-0.02	-0.15	7.86	0	0	0
137	SLE RA 13	-0.02	-0.15	7.81	0	0	0
137	SLE RA 14	-0.03	-0.15	7.93	0	0	0
137	SLE RA 15	-0.03	-0.15	7.93	0	0	0
137	SLE RA 16	-0.03	-0.15	7.89	0	0	0
137	SLE RA 17	-0.03	-0.15	7.89	0	0	0
137	SLE RA 18	-0.03	-0.15	7.99	0	0	0
137	SLE RA 19	-0.02	-0.15	7.98	0	0	0
137	SLE RA 20	-0.03	-0.15	8.06	0	0	0
137	SLE RA 21	-0.02	-0.16	8.05	0	0	0
137	SLE FR 1	-0.03	-0.14	7.2	0	0	0
137	SLE FR 2	-0.03	-0.14	7.2	0	0	0
137	SLE FR 3	-0.03	-0.14	7.23	0	0	0
137	SLE FR 4	-0.03	-0.15	7.43	0	0	0
137	SLE FR 5	-0.03	-0.15	7.46	0	0	0
137	SLE FR 6	-0.03	-0.15	7.59	0	0	0
137	SLE QP 1	-0.03	-0.14	7.2	0	0	0
137	SLE QP 2	-0.03	-0.15	7.43	0	0	0
137	SLD 1	0.54	-0.13	8.12	0	0	0
137	SLD 2	0.6	-0.16	8.07	0	0	0
137	SLD 3	0.55	-0.28	7.88	0	0	0
137	SLD 4	0.61	-0.3	7.83	0	0	0
137	SLD 5	0.11	0.08	8.01	0	0	0
137	SLD 6	0.16	0.06	7.98	0	0	0
137	SLD 7	0.15	-0.4	7.21	0	0	0
137	SLD 8	0.19	-0.42	7.18	0	0	0
137	SLD 9	-0.25	0.13	7.69	0	0	0
137	SLD 10	-0.2	0.11	7.66	0	0	0
137	SLD 11	-0.21	-0.36	6.88	0	0	0
137	SLD 12	-0.17	-0.37	6.86	0	0	0
137	SLD 13	-0.67	0.01	7.03	0	0	0
137	SLD 14	-0.6	-0.02	6.99	0	0	0
137	SLD 15	-0.65	-0.13	6.79	0	0	0
137	SLD 16	-0.59	-0.16	6.75	0	0	0
137	SLV 1	1.29	-0.12	9.02	0	0	0
137	SLV 2	1.44	-0.18	8.92	0	0	0
137	SLV 3	1.32	-0.44	8.48	0	0	0
137	SLV 4	1.47	-0.51	8.38	0	0	0
137	SLV 5	0.3	0.37	8.76	0	0	0
137	SLV 6	0.4	0.33	8.69	0	0	0
137	SLV 7	0.39	-0.72	6.93	0	0	0
137	SLV 8	0.49	-0.76	6.87	0	0	0
137	SLV 9	-0.54	0.47	8	0	0	0
137	SLV 10	-0.44	0.43	7.93	0	0	0
137	SLV 11	-0.45	-0.62	6.18	0	0	0
137	SLV 12	-0.35	-0.66	6.11	0	0	0
137	SLV 13	-1.52	0.22	6.49	0	0	0
137	SLV 14	-1.37	0.15	6.39	0	0	0
137	SLV 15	-1.5	-0.11	5.94	0	0	0
137	SLV 16	-1.34	-0.17	5.85	0	0	0
138	SLU 1	-0.03	-0.12	6.76	0	0	0
138	SLU 2	-0.02	-0.12	6.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLU 3	-0.03	-0.12	6.92	0	0	0
138	SLU 4	-0.02	-0.12	6.91	0	0	0
138	SLU 5	-0.02	-0.13	6.85	0	0	0
138	SLU 6	-0.03	-0.12	7.03	0	0	0
138	SLU 7	-0.03	-0.13	7.02	0	0	0
138	SLU 8	-0.03	-0.12	6.97	0	0	0
138	SLU 9	-0.03	-0.13	6.96	0	0	0
138	SLU 10	-0.02	-0.13	7.55	0	0	0
138	SLU 11	-0.02	-0.13	7.72	0	0	0
138	SLU 12	-0.02	-0.13	7.72	0	0	0
138	SLU 13	-0.02	-0.13	7.65	0	0	0
138	SLU 14	-0.03	-0.13	7.83	0	0	0
138	SLU 15	-0.02	-0.13	7.82	0	0	0
138	SLU 16	-0.03	-0.13	7.77	0	0	0
138	SLU 17	-0.02	-0.13	7.76	0	0	0
138	SLU 18	-0.02	-0.13	7.91	0	0	0
138	SLU 19	-0.02	-0.13	7.9	0	0	0
138	SLU 20	-0.02	-0.13	8.01	0	0	0
138	SLU 21	-0.02	-0.13	8	0	0	0
138	SLU 22	-0.03	-0.12	7.48	0	0	0
138	SLU 23	-0.02	-0.12	7.47	0	0	0
138	SLU 24	-0.03	-0.12	7.64	0	0	0
138	SLU 25	-0.03	-0.12	7.63	0	0	0
138	SLU 26	-0.03	-0.13	7.57	0	0	0
138	SLU 27	-0.03	-0.12	7.75	0	0	0
138	SLU 28	-0.03	-0.13	7.74	0	0	0
138	SLU 29	-0.03	-0.12	7.69	0	0	0
138	SLU 30	-0.03	-0.13	7.68	0	0	0
138	SLU 31	-0.02	-0.13	8.27	0	0	0
138	SLU 32	-0.03	-0.13	8.44	0	0	0
138	SLU 33	-0.03	-0.13	8.44	0	0	0
138	SLU 34	-0.02	-0.13	8.37	0	0	0
138	SLU 35	-0.03	-0.13	8.55	0	0	0
138	SLU 36	-0.03	-0.13	8.54	0	0	0
138	SLU 37	-0.03	-0.13	8.49	0	0	0
138	SLU 38	-0.03	-0.13	8.48	0	0	0
138	SLU 39	-0.03	-0.13	8.63	0	0	0
138	SLU 40	-0.02	-0.13	8.62	0	0	0
138	SLU 41	-0.03	-0.13	8.73	0	0	0
138	SLU 42	-0.02	-0.13	8.72	0	0	0
138	SLU 43	-0.03	-0.15	8.54	0	0	0
138	SLU 44	-0.03	-0.16	8.53	0	0	0
138	SLU 45	-0.03	-0.16	8.7	0	0	0
138	SLU 46	-0.03	-0.16	8.69	0	0	0
138	SLU 47	-0.03	-0.16	8.63	0	0	0
138	SLU 48	-0.03	-0.16	8.81	0	0	0
138	SLU 49	-0.03	-0.16	8.8	0	0	0
138	SLU 50	-0.03	-0.16	8.75	0	0	0
138	SLU 51	-0.03	-0.16	8.74	0	0	0
138	SLU 52	-0.03	-0.17	9.33	0	0	0
138	SLU 53	-0.03	-0.16	9.51	0	0	0
138	SLU 54	-0.03	-0.17	9.5	0	0	0
138	SLU 55	-0.03	-0.17	9.43	0	0	0
138	SLU 56	-0.03	-0.16	9.61	0	0	0
138	SLU 57	-0.03	-0.17	9.6	0	0	0
138	SLU 58	-0.03	-0.16	9.55	0	0	0
138	SLU 59	-0.03	-0.17	9.54	0	0	0
138	SLU 60	-0.03	-0.16	9.69	0	0	0
138	SLU 61	-0.03	-0.17	9.68	0	0	0
138	SLU 62	-0.03	-0.16	9.79	0	0	0
138	SLU 63	-0.03	-0.17	9.78	0	0	0
138	SLU 64	-0.04	-0.15	9.26	0	0	0
138	SLU 65	-0.03	-0.16	9.25	0	0	0
138	SLU 66	-0.04	-0.15	9.42	0	0	0
138	SLU 67	-0.03	-0.16	9.41	0	0	0
138	SLU 68	-0.03	-0.16	9.35	0	0	0
138	SLU 69	-0.04	-0.16	9.53	0	0	0
138	SLU 70	-0.03	-0.16	9.52	0	0	0
138	SLU 71	-0.04	-0.16	9.47	0	0	0
138	SLU 72	-0.03	-0.16	9.46	0	0	0
138	SLU 73	-0.03	-0.17	10.05	0	0	0
138	SLU 74	-0.03	-0.16	10.23	0	0	0
138	SLU 75	-0.03	-0.16	10.22	0	0	0
138	SLU 76	-0.03	-0.17	10.15	0	0	0
138	SLU 77	-0.04	-0.16	10.33	0	0	0
138	SLU 78	-0.03	-0.17	10.32	0	0	0
138	SLU 79	-0.04	-0.16	10.27	0	0	0
138	SLU 80	-0.03	-0.17	10.26	0	0	0
138	SLU 81	-0.03	-0.16	10.41	0	0	0
138	SLU 82	-0.03	-0.17	10.4	0	0	0
138	SLU 83	-0.03	-0.16	10.51	0	0	0
138	SLU 84	-0.03	-0.17	10.5	0	0	0
138	SLE RA 1	-0.03	-0.12	6.96	0	0	0
138	SLE RA 2	-0.02	-0.12	6.96	0	0	0
138	SLE RA 3	-0.03	-0.12	7.07	0	0	0
138	SLE RA 4	-0.03	-0.12	7.07	0	0	0
138	SLE RA 5	-0.02	-0.12	7.03	0	0	0
138	SLE RA 6	-0.03	-0.12	7.14	0	0	0
138	SLE RA 7	-0.03	-0.12	7.14	0	0	0
138	SLE RA 8	-0.03	-0.12	7.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLE RA 9	-0.03	-0.12	7.1	0	0	0
138	SLE RA 10	-0.02	-0.13	7.49	0	0	0
138	SLE RA 11	-0.03	-0.12	7.61	0	0	0
138	SLE RA 12	-0.02	-0.13	7.6	0	0	0
138	SLE RA 13	-0.02	-0.13	7.56	0	0	0
138	SLE RA 14	-0.03	-0.12	7.68	0	0	0
138	SLE RA 15	-0.03	-0.13	7.67	0	0	0
138	SLE RA 16	-0.03	-0.12	7.64	0	0	0
138	SLE RA 17	-0.03	-0.13	7.63	0	0	0
138	SLE RA 18	-0.03	-0.12	7.73	0	0	0
138	SLE RA 19	-0.02	-0.13	7.72	0	0	0
138	SLE RA 20	-0.03	-0.12	7.8	0	0	0
138	SLE RA 21	-0.02	-0.13	7.79	0	0	0
138	SLE FR 1	-0.03	-0.12	6.96	0	0	0
138	SLE FR 2	-0.03	-0.12	6.96	0	0	0
138	SLE FR 3	-0.03	-0.12	6.99	0	0	0
138	SLE FR 4	-0.03	-0.12	7.19	0	0	0
138	SLE FR 5	-0.03	-0.12	7.22	0	0	0
138	SLE FR 6	-0.03	-0.12	7.35	0	0	0
138	SLE QP 1	-0.03	-0.12	6.96	0	0	0
138	SLE QP 2	-0.03	-0.12	7.19	0	0	0
138	SLD 1	0.52	-0.09	7.77	0	0	0
138	SLD 2	0.59	-0.12	7.74	0	0	0
138	SLD 3	0.53	-0.24	7.54	0	0	0
138	SLD 4	0.6	-0.26	7.51	0	0	0
138	SLD 5	0.11	0.11	7.72	0	0	0
138	SLD 6	0.15	0.09	7.7	0	0	0
138	SLD 7	0.15	-0.37	6.96	0	0	0
138	SLD 8	0.19	-0.38	6.93	0	0	0
138	SLD 9	-0.24	0.14	7.46	0	0	0
138	SLD 10	-0.2	0.13	7.43	0	0	0
138	SLD 11	-0.2	-0.33	6.69	0	0	0
138	SLD 12	-0.16	-0.35	6.66	0	0	0
138	SLD 13	-0.65	0.02	6.88	0	0	0
138	SLD 14	-0.59	0	6.84	0	0	0
138	SLD 15	-0.64	-0.12	6.65	0	0	0
138	SLD 16	-0.57	-0.15	6.61	0	0	0
138	SLV 1	1.26	-0.06	8.54	0	0	0
138	SLV 2	1.41	-0.12	8.46	0	0	0
138	SLV 3	1.28	-0.39	8.02	0	0	0
138	SLV 4	1.43	-0.45	7.93	0	0	0
138	SLV 5	0.29	0.4	8.41	0	0	0
138	SLV 6	0.39	0.36	8.35	0	0	0
138	SLV 7	0.38	-0.68	6.66	0	0	0
138	SLV 8	0.48	-0.72	6.61	0	0	0
138	SLV 9	-0.53	0.48	7.78	0	0	0
138	SLV 10	-0.43	0.44	7.72	0	0	0
138	SLV 11	-0.44	-0.6	6.04	0	0	0
138	SLV 12	-0.35	-0.64	5.98	0	0	0
138	SLV 13	-1.48	0.21	6.45	0	0	0
138	SLV 14	-1.33	0.15	6.37	0	0	0
138	SLV 15	-1.46	-0.12	5.93	0	0	0
138	SLV 16	-1.31	-0.18	5.84	0	0	0
139	SLU 1	-0.02	-0.1	6.42	0	0.3615	0.0054
139	SLU 2	-0.02	-0.1	6.4	0	0.3608	0.0058
139	SLU 3	-0.03	-0.1	6.57	0	0.3702	0.0055
139	SLU 4	-0.02	-0.1	6.56	0	0.3698	0.0057
139	SLU 5	-0.02	-0.1	6.5	0	0.3664	0.0059
139	SLU 6	-0.03	-0.1	6.67	0	0.3758	0.0056
139	SLU 7	-0.02	-0.1	6.66	0	0.3754	0.0058
139	SLU 8	-0.03	-0.1	6.62	0	0.3727	0.0056
139	SLU 9	-0.02	-0.1	6.61	0	0.3723	0.0058
139	SLU 10	-0.02	-0.11	7.17	0	0.4039	0.006
139	SLU 11	-0.02	-0.1	7.34	0	0.4133	0.0057
139	SLU 12	-0.02	-0.11	7.33	0	0.4129	0.0059
139	SLU 13	-0.02	-0.11	7.27	0	0.4095	0.0061
139	SLU 14	-0.02	-0.1	7.44	0	0.4189	0.0058
139	SLU 15	-0.02	-0.11	7.43	0	0.4185	0.006
139	SLU 16	-0.02	-0.1	7.38	0	0.4158	0.0058
139	SLU 17	-0.02	-0.11	7.37	0	0.4154	0.006
139	SLU 18	-0.02	-0.1	7.51	0	0.4231	0.0058
139	SLU 19	-0.02	-0.11	7.5	0	0.4227	0.006
139	SLU 20	-0.02	-0.1	7.61	0	0.4287	0.0058
139	SLU 21	-0.02	-0.11	7.6	0	0.4283	0.006
139	SLU 22	-0.03	-0.09	7.1	0	0.3999	0.0053
139	SLU 23	-0.02	-0.1	7.09	0	0.3993	0.0057
139	SLU 24	-0.03	-0.1	7.25	0	0.4087	0.0054
139	SLU 25	-0.03	-0.1	7.25	0	0.4083	0.0056
139	SLU 26	-0.02	-0.1	7.19	0	0.4049	0.0057
139	SLU 27	-0.03	-0.1	7.35	0	0.4143	0.0054
139	SLU 28	-0.03	-0.1	7.35	0	0.4139	0.0056
139	SLU 29	-0.03	-0.1	7.3	0	0.4112	0.0055
139	SLU 30	-0.03	-0.1	7.29	0	0.4108	0.0057
139	SLU 31	-0.02	-0.1	7.85	0	0.4424	0.0059
139	SLU 32	-0.03	-0.1	8.02	0	0.4518	0.0056
139	SLU 33	-0.02	-0.1	8.01	0	0.4514	0.0058
139	SLU 34	-0.02	-0.11	7.95	0	0.448	0.006
139	SLU 35	-0.03	-0.1	8.12	0	0.4574	0.0057
139	SLU 36	-0.02	-0.1	8.11	0	0.457	0.0059
139	SLU 37	-0.03	-0.1	8.06	0	0.4543	0.0057

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
139	SLU 38	-0.02	-0.1	8.06	0	0.4539	0.0059
139	SLU 39	-0.03	-0.1	8.19	0	0.4616	0.0056
139	SLU 40	-0.02	-0.1	8.19	0	0.4612	0.0058
139	SLU 41	-0.03	-0.1	8.29	0	0.4672	0.0057
139	SLU 42	-0.02	-0.1	8.29	0	0.4668	0.0059
139	SLU 43	-0.03	-0.13	8.11	0	0.4567	0.0071
139	SLU 44	-0.03	-0.13	8.1	0	0.456	0.0075
139	SLU 45	-0.03	-0.13	8.26	0	0.4654	0.0072
139	SLU 46	-0.03	-0.13	8.26	0	0.465	0.0074
139	SLU 47	-0.03	-0.13	8.2	0	0.4617	0.0075
139	SLU 48	-0.03	-0.13	8.36	0	0.471	0.0072
139	SLU 49	-0.03	-0.13	8.35	0	0.4706	0.0074
139	SLU 50	-0.03	-0.13	8.31	0	0.4679	0.0073
139	SLU 51	-0.03	-0.13	8.3	0	0.4675	0.0075
139	SLU 52	-0.03	-0.14	8.86	0	0.4992	0.0077
139	SLU 53	-0.03	-0.13	9.03	0	0.5086	0.0074
139	SLU 54	-0.03	-0.13	9.02	0	0.5082	0.0076
139	SLU 55	-0.03	-0.14	8.96	0	0.5048	0.0078
139	SLU 56	-0.03	-0.13	9.13	-0.0001	0.5142	0.0075
139	SLU 57	-0.03	-0.14	9.12	-0.0001	0.5138	0.0077
139	SLU 58	-0.03	-0.13	9.07	-0.0001	0.5111	0.0075
139	SLU 59	-0.03	-0.14	9.07	-0.0001	0.5107	0.0077
139	SLU 60	-0.03	-0.13	9.2	-0.0001	0.5183	0.0074
139	SLU 61	-0.03	-0.14	9.19	-0.0001	0.5179	0.0076
139	SLU 62	-0.03	-0.13	9.3	-0.0001	0.5239	0.0075
139	SLU 63	-0.03	-0.14	9.29	-0.0001	0.5235	0.0077
139	SLU 64	-0.03	-0.12	8.79	0	0.4952	0.007
139	SLU 65	-0.03	-0.13	8.78	0	0.4945	0.0073
139	SLU 66	-0.03	-0.12	8.95	0	0.5039	0.007
139	SLU 67	-0.03	-0.13	8.94	0	0.5035	0.0072
139	SLU 68	-0.03	-0.13	8.88	0	0.5001	0.0074
139	SLU 69	-0.04	-0.13	9.04	-0.0001	0.5095	0.0071
139	SLU 70	-0.03	-0.13	9.04	0	0.5091	0.0073
139	SLU 71	-0.04	-0.13	8.99	0	0.5064	0.0071
139	SLU 72	-0.03	-0.13	8.98	0	0.506	0.0073
139	SLU 73	-0.03	-0.13	9.54	-0.0001	0.5377	0.0076
139	SLU 74	-0.03	-0.13	9.71	-0.0001	0.547	0.0073
139	SLU 75	-0.03	-0.13	9.7	-0.0001	0.5466	0.0075
139	SLU 76	-0.03	-0.14	9.64	-0.0001	0.5433	0.0076
139	SLU 77	-0.03	-0.13	9.81	-0.0001	0.5527	0.0073
139	SLU 78	-0.03	-0.13	9.8	-0.0001	0.5523	0.0075
139	SLU 79	-0.03	-0.13	9.76	-0.0001	0.5495	0.0074
139	SLU 80	-0.03	-0.13	9.75	-0.0001	0.5491	0.0076
139	SLU 81	-0.03	-0.13	9.88	-0.0001	0.5568	0.0073
139	SLU 82	-0.03	-0.13	9.88	-0.0001	0.5564	0.0075
139	SLU 83	-0.03	-0.13	9.98	-0.0001	0.5624	0.0074
139	SLU 84	-0.03	-0.13	9.98	-0.0001	0.562	0.0076
139	SLE RA 1	-0.03	-0.1	6.61	0	0.3725	0.0054
139	SLE RA 2	-0.02	-0.1	6.6	0	0.372	0.0056
139	SLE RA 3	-0.03	-0.1	6.72	0	0.3783	0.0054
139	SLE RA 4	-0.02	-0.1	6.71	0	0.378	0.0056
139	SLE RA 5	-0.02	-0.1	6.67	0	0.3758	0.0057
139	SLE RA 6	-0.03	-0.1	6.78	0	0.382	0.0055
139	SLE RA 7	-0.02	-0.1	6.78	0	0.3817	0.0056
139	SLE RA 8	-0.03	-0.1	6.74	0	0.3799	0.0055
139	SLE RA 9	-0.03	-0.1	6.74	0	0.3797	0.0056
139	SLE RA 10	-0.02	-0.1	7.11	0	0.4008	0.0058
139	SLE RA 11	-0.02	-0.1	7.23	0	0.407	0.0056
139	SLE RA 12	-0.02	-0.1	7.22	0	0.4068	0.0057
139	SLE RA 13	-0.02	-0.1	7.18	0	0.4045	0.0058
139	SLE RA 14	-0.03	-0.1	7.29	0	0.4108	0.0056
139	SLE RA 15	-0.02	-0.1	7.29	0	0.4105	0.0058
139	SLE RA 16	-0.03	-0.1	7.26	0	0.4087	0.0056
139	SLE RA 17	-0.02	-0.1	7.25	0	0.4084	0.0058
139	SLE RA 18	-0.02	-0.1	7.34	0	0.4135	0.0056
139	SLE RA 19	-0.02	-0.1	7.34	0	0.4133	0.0058
139	SLE RA 20	-0.02	-0.1	7.41	0	0.4173	0.0057
139	SLE RA 21	-0.02	-0.1	7.4	0	0.417	0.0058
139	SLE FR 1	-0.03	-0.1	6.61	0	0.3725	0.0054
139	SLE FR 2	-0.03	-0.1	6.61	0	0.3724	0.0054
139	SLE FR 3	-0.03	-0.1	6.64	0	0.374	0.0054
139	SLE FR 4	-0.02	-0.1	6.83	0	0.3847	0.0055
139	SLE FR 5	-0.03	-0.1	6.86	0	0.3863	0.0055
139	SLE FR 6	-0.02	-0.1	6.98	0	0.393	0.0055
139	SLE QP 1	-0.03	-0.1	6.61	0	0.3725	0.0054
139	SLE QP 2	-0.03	-0.1	6.83	0	0.3848	0.0055
139	SLD 1	0.5	-0.06	7.32	0	0.4121	0.0035
139	SLD 2	0.56	-0.09	7.28	0	0.4102	0.0048
139	SLD 3	0.51	-0.2	7.1	0	0.3999	0.0112
139	SLD 4	0.57	-0.22	7.06	0	0.398	0.0125
139	SLD 5	0.1	0.12	7.31	0	0.4119	-0.007
139	SLD 6	0.15	0.11	7.29	0	0.4106	-0.0062
139	SLD 7	0.14	-0.33	6.59	0	0.3711	0.0187
139	SLD 8	0.18	-0.35	6.57	0	0.3698	0.0195
139	SLD 9	-0.23	0.15	7.1	0	0.3997	-0.0086
139	SLD 10	-0.19	0.14	7.07	0	0.3985	-0.0077
139	SLD 11	-0.2	-0.3	6.37	0	0.3589	0.0171
139	SLD 12	-0.15	-0.32	6.35	0	0.3577	0.018
139	SLD 13	-0.62	0.03	6.6	0	0.3716	-0.0016
139	SLD 14	-0.56	0.01	6.56	0	0.3697	-0.0003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
139	SLD 15	-0.61	-0.11	6.38	0	0.3593	0.0061
139	SLD 16	-0.55	-0.13	6.34	0	0.3574	0.0074
139	SLV 1	1.2	-0.02	7.96	0	0.4483	0.0013
139	SLV 2	1.34	-0.07	7.88	0	0.4438	0.0042
139	SLV 3	1.22	-0.33	7.47	0	0.4206	0.0187
139	SLV 4	1.37	-0.38	7.39	0	0.4161	0.0216
139	SLV 5	0.28	0.4	7.93	0	0.4467	-0.0228
139	SLV 6	0.37	0.37	7.88	0	0.4437	-0.0209
139	SLV 7	0.36	-0.63	6.29	0	0.3543	0.0354
139	SLV 8	0.45	-0.66	6.24	0	0.3514	0.0373
139	SLV 9	-0.5	0.47	7.42	0	0.4182	-0.0264
139	SLV 10	-0.41	0.43	7.37	0	0.4153	-0.0245
139	SLV 11	-0.42	-0.56	5.78	0	0.3258	0.0318
139	SLV 12	-0.33	-0.6	5.73	0	0.3229	0.0337
139	SLV 13	-1.42	0.19	6.27	0	0.3534	-0.0107
139	SLV 14	-1.27	0.14	6.19	0	0.3489	-0.0078
139	SLV 15	-1.39	-0.12	5.78	0	0.3257	0.0067
139	SLV 16	-1.25	-0.17	5.7	0	0.3212	0.0097
139	CRTFP Ux+	0	0	0	0	0	0
139	CRTFP Ux-	0	0	0	0	0	0
139	CRTFP Uy+	0	0	0	0	0	0
139	CRTFP Uy-	0	0	0	0	0	0
140	SLU 1	-0.03	-0.08	6.62	0	0.4976	0.0061
140	SLU 2	-0.02	-0.09	6.61	0	0.4967	0.0066
140	SLU 3	-0.03	-0.08	6.79	0	0.5096	0.0062
140	SLU 4	-0.02	-0.09	6.78	0	0.5091	0.0065
140	SLU 5	-0.02	-0.09	6.72	0	0.5044	0.0067
140	SLU 6	-0.03	-0.08	6.89	0	0.5174	0.0063
140	SLU 7	-0.02	-0.09	6.88	0	0.5168	0.0065
140	SLU 8	-0.03	-0.08	6.83	0	0.5131	0.0063
140	SLU 9	-0.02	-0.09	6.82	0	0.5125	0.0066
140	SLU 10	-0.02	-0.09	7.41	0	0.5564	0.0068
140	SLU 11	-0.02	-0.08	7.58	0	0.5693	0.0063
140	SLU 12	-0.02	-0.09	7.57	0	0.5688	0.0066
140	SLU 13	-0.02	-0.09	7.51	0	0.5641	0.0068
140	SLU 14	-0.03	-0.09	7.68	0	0.577	0.0064
140	SLU 15	-0.02	-0.09	7.68	0	0.5765	0.0067
140	SLU 16	-0.03	-0.09	7.63	0	0.5727	0.0065
140	SLU 17	-0.02	-0.09	7.62	0	0.5722	0.0067
140	SLU 18	-0.02	-0.08	7.76	0	0.5828	0.0064
140	SLU 19	-0.02	-0.09	7.75	0	0.5823	0.0067
140	SLU 20	-0.02	-0.09	7.86	0	0.5906	0.0065
140	SLU 21	-0.02	-0.09	7.86	0	0.59	0.0067
140	SLU 22	-0.03	-0.08	7.33	0	0.5506	0.0058
140	SLU 23	-0.02	-0.08	7.32	0	0.5497	0.0063
140	SLU 24	-0.03	-0.08	7.49	0	0.5626	0.0058
140	SLU 25	-0.03	-0.08	7.48	0	0.5621	0.0061
140	SLU 26	-0.03	-0.08	7.42	0	0.5574	0.0063
140	SLU 27	-0.03	-0.08	7.59	0	0.5703	0.0059
140	SLU 28	-0.03	-0.08	7.59	0	0.5698	0.0062
140	SLU 29	-0.03	-0.08	7.54	0	0.566	0.006
140	SLU 30	-0.03	-0.08	7.53	0	0.5655	0.0062
140	SLU 31	-0.02	-0.09	8.11	0	0.6093	0.0064
140	SLU 32	-0.03	-0.08	8.28	0	0.6223	0.006
140	SLU 33	-0.02	-0.08	8.28	0	0.6217	0.0063
140	SLU 34	-0.02	-0.09	8.22	0	0.6171	0.0065
140	SLU 35	-0.03	-0.08	8.39	0	0.63	0.0061
140	SLU 36	-0.03	-0.08	8.38	0	0.6295	0.0064
140	SLU 37	-0.03	-0.08	8.33	0	0.6257	0.0061
140	SLU 38	-0.03	-0.09	8.32	0	0.6251	0.0064
140	SLU 39	-0.03	-0.08	8.46	0	0.6358	0.006
140	SLU 40	-0.02	-0.08	8.46	0	0.6352	0.0063
140	SLU 41	-0.03	-0.08	8.57	0	0.6435	0.0061
140	SLU 42	-0.02	-0.09	8.56	0	0.643	0.0064
140	SLU 43	-0.03	-0.11	8.37	0	0.6287	0.0081
140	SLU 44	-0.03	-0.11	8.36	0	0.6278	0.0086
140	SLU 45	-0.03	-0.11	8.53	0	0.6408	0.0081
140	SLU 46	-0.03	-0.11	8.52	0	0.6402	0.0084
140	SLU 47	-0.03	-0.12	8.46	0	0.6356	0.0086
140	SLU 48	-0.03	-0.11	8.63	0	0.6485	0.0082
140	SLU 49	-0.03	-0.11	8.63	0	0.648	0.0085
140	SLU 50	-0.03	-0.11	8.58	0	0.6442	0.0083
140	SLU 51	-0.03	-0.11	8.57	0	0.6436	0.0085
140	SLU 52	-0.03	-0.12	9.15	-0.0001	0.6875	0.0087
140	SLU 53	-0.03	-0.11	9.33	-0.0001	0.7004	0.0083
140	SLU 54	-0.03	-0.11	9.32	-0.0001	0.6999	0.0086
140	SLU 55	-0.03	-0.12	9.26	-0.0001	0.6952	0.0088
140	SLU 56	-0.03	-0.11	9.43	-0.0001	0.7082	0.0084
140	SLU 57	-0.03	-0.12	9.42	-0.0001	0.7076	0.0087
140	SLU 58	-0.03	-0.11	9.37	-0.0001	0.7039	0.0084
140	SLU 59	-0.03	-0.12	9.36	-0.0001	0.7033	0.0087
140	SLU 60	-0.03	-0.11	9.51	-0.0001	0.7139	0.0083
140	SLU 61	-0.03	-0.11	9.5	-0.0001	0.7134	0.0086
140	SLU 62	-0.03	-0.11	9.61	-0.0001	0.7217	0.0084
140	SLU 63	-0.03	-0.12	9.6	-0.0001	0.7211	0.0087
140	SLU 64	-0.04	-0.1	9.08	-0.0001	0.6817	0.0078
140	SLU 65	-0.03	-0.11	9.06	-0.0001	0.6808	0.0082
140	SLU 66	-0.04	-0.1	9.24	-0.0001	0.6937	0.0078
140	SLU 67	-0.03	-0.11	9.23	-0.0001	0.6932	0.0081
140	SLU 68	-0.03	-0.11	9.17	-0.0001	0.6885	0.0083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
140	SLU 69	-0.04	-0.1	9.34	-0.0001	0.7015	0.0079
140	SLU 70	-0.03	-0.11	9.33	-0.0001	0.7009	0.0082
140	SLU 71	-0.04	-0.11	9.28	-0.0001	0.6972	0.0079
140	SLU 72	-0.03	-0.11	9.27	-0.0001	0.6966	0.0082
140	SLU 73	-0.03	-0.11	9.86	-0.0001	0.7404	0.0084
140	SLU 74	-0.03	-0.11	10.03	-0.0001	0.7534	0.008
140	SLU 75	-0.03	-0.11	10.02	-0.0001	0.7528	0.0082
140	SLU 76	-0.03	-0.11	9.96	-0.0001	0.7482	0.0085
140	SLU 77	-0.03	-0.11	10.13	-0.0001	0.7611	0.008
140	SLU 78	-0.03	-0.11	10.13	-0.0001	0.7606	0.0083
140	SLU 79	-0.03	-0.11	10.08	-0.0001	0.7568	0.0081
140	SLU 80	-0.03	-0.11	10.07	-0.0001	0.7563	0.0084
140	SLU 81	-0.03	-0.11	10.21	-0.0001	0.7669	0.008
140	SLU 82	-0.03	-0.11	10.2	-0.0001	0.7664	0.0083
140	SLU 83	-0.03	-0.11	10.31	-0.0001	0.7746	0.0081
140	SLU 84	-0.03	-0.11	10.31	-0.0001	0.7741	0.0083
140	SLE RA 1	-0.03	-0.08	6.83	0	0.5127	0.006
140	SLE RA 2	-0.02	-0.08	6.82	0	0.5121	0.0064
140	SLE RA 3	-0.03	-0.08	6.93	0	0.5208	0.0061
140	SLE RA 4	-0.03	-0.08	6.93	0	0.5204	0.0063
140	SLE RA 5	-0.02	-0.09	6.89	0	0.5173	0.0064
140	SLE RA 6	-0.03	-0.08	7	0	0.5259	0.0061
140	SLE RA 7	-0.03	-0.08	7	0	0.5256	0.0063
140	SLE RA 8	-0.03	-0.08	6.96	0	0.523	0.0061
140	SLE RA 9	-0.03	-0.08	6.96	0	0.5227	0.0063
140	SLE RA 10	-0.02	-0.09	7.35	0	0.5519	0.0065
140	SLE RA 11	-0.03	-0.08	7.46	0	0.5605	0.0062
140	SLE RA 12	-0.02	-0.08	7.46	0	0.5602	0.0064
140	SLE RA 13	-0.02	-0.09	7.42	0	0.5571	0.0065
140	SLE RA 14	-0.03	-0.08	7.53	0	0.5657	0.0062
140	SLE RA 15	-0.02	-0.09	7.53	0	0.5653	0.0064
140	SLE RA 16	-0.03	-0.08	7.49	0	0.5628	0.0063
140	SLE RA 17	-0.02	-0.09	7.49	0	0.5625	0.0064
140	SLE RA 18	-0.02	-0.08	7.58	0	0.5696	0.0062
140	SLE RA 19	-0.02	-0.08	7.58	0	0.5692	0.0064
140	SLE RA 20	-0.03	-0.08	7.65	0	0.5747	0.0063
140	SLE RA 21	-0.02	-0.09	7.65	0	0.5743	0.0064
140	SLE FR 1	-0.03	-0.08	6.83	0	0.5127	0.006
140	SLE FR 2	-0.03	-0.08	6.82	0	0.5126	0.0061
140	SLE FR 3	-0.03	-0.08	6.85	0	0.5148	0.0061
140	SLE FR 4	-0.03	-0.08	7.05	0	0.5297	0.0062
140	SLE FR 5	-0.03	-0.08	7.08	0	0.5318	0.0061
140	SLE FR 6	-0.03	-0.08	7.2	0	0.5411	0.0061
140	SLE QP 1	-0.03	-0.08	6.83	0	0.5127	0.006
140	SLE QP 2	-0.03	-0.08	7.05	0	0.5298	0.0061
140	SLD 1	0.52	-0.04	7.48	0	0.5619	0.0027
140	SLD 2	0.58	-0.06	7.45	0	0.5594	0.0042
140	SLD 3	0.53	-0.18	7.26	0	0.5451	0.0134
140	SLD 4	0.59	-0.2	7.22	0	0.5427	0.0149
140	SLD 5	0.11	0.15	7.52	0	0.5652	-0.0115
140	SLD 6	0.15	0.14	7.5	0	0.5635	-0.0105
140	SLD 7	0.14	-0.32	6.78	0	0.5095	0.0243
140	SLD 8	0.19	-0.34	6.76	0	0.5079	0.0253
140	SLD 9	-0.24	0.17	7.35	0	0.5517	-0.0131
140	SLD 10	-0.2	0.16	7.32	0	0.5501	-0.0121
140	SLD 11	-0.2	-0.3	6.6	0	0.496	0.0227
140	SLD 12	-0.16	-0.32	6.58	0	0.4944	0.0237
140	SLD 13	-0.64	0.04	6.88	0	0.5169	-0.0028
140	SLD 14	-0.58	0.02	6.85	0	0.5144	-0.0012
140	SLD 15	-0.63	-0.11	6.66	0	0.5002	0.008
140	SLD 16	-0.57	-0.13	6.63	0	0.4977	0.0095
140	SLV 1	1.24	0.02	8.04	0	0.6042	-0.0015
140	SLV 2	1.39	-0.03	7.97	0	0.5984	0.0021
140	SLV 3	1.27	-0.3	7.54	0	0.5663	0.0228
140	SLV 4	1.41	-0.35	7.46	0	0.5606	0.0264
140	SLV 5	0.29	0.45	8.13	0	0.6105	-0.0337
140	SLV 6	0.39	0.42	8.08	0	0.6067	-0.0313
140	SLV 7	0.37	-0.63	6.45	0	0.4844	0.0473
140	SLV 8	0.47	-0.66	6.4	0	0.4806	0.0497
140	SLV 9	-0.52	0.5	7.71	0	0.5789	-0.0375
140	SLV 10	-0.43	0.47	7.66	0	0.5752	-0.0351
140	SLV 11	-0.44	-0.58	6.03	0	0.4528	0.0435
140	SLV 12	-0.34	-0.61	5.98	0	0.4491	0.0459
140	SLV 13	-1.47	0.19	6.64	0	0.499	-0.0142
140	SLV 14	-1.32	0.14	6.57	0	0.4932	-0.0106
140	SLV 15	-1.44	-0.13	6.14	0	0.4612	0.0101
140	SLV 16	-1.29	-0.18	6.06	0	0.4554	0.0137
140	CRTFP Ux+	0	0	0	0	0	0
140	CRTFP Ux-	0	0	0	0	0	0
140	CRTFP Uy+	0	0	0	0	0	0
140	CRTFP Uy-	0	0	0	0	0	0
141	SLU 1	-0.03	-0.06	6.62	0	0.6218	0.006
141	SLU 2	-0.02	-0.07	6.61	0	0.6207	0.0066
141	SLU 3	-0.03	-0.06	6.78	0	0.6369	0.006
141	SLU 4	-0.02	-0.07	6.78	0	0.6362	0.0063
141	SLU 5	-0.02	-0.07	6.71	0	0.6304	0.0066
141	SLU 6	-0.03	-0.06	6.89	0	0.6466	0.0061
141	SLU 7	-0.02	-0.07	6.88	0	0.6459	0.0064
141	SLU 8	-0.03	-0.07	6.83	0	0.6412	0.0061
141	SLU 9	-0.02	-0.07	6.82	0	0.6405	0.0065

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
141	SLU 10	-0.02	-0.07	7.41	0	0.6957	0.0066
141	SLU 11	-0.02	-0.06	7.58	0	0.7119	0.006
141	SLU 12	-0.02	-0.07	7.58	0	0.7112	0.0064
141	SLU 13	-0.02	-0.07	7.51	0	0.7053	0.0067
141	SLU 14	-0.03	-0.06	7.69	0	0.7216	0.0061
141	SLU 15	-0.02	-0.07	7.68	0	0.7209	0.0064
141	SLU 16	-0.03	-0.07	7.63	0	0.7162	0.0062
141	SLU 17	-0.02	-0.07	7.62	0	0.7155	0.0065
141	SLU 18	-0.02	-0.06	7.76	0	0.7289	0.006
141	SLU 19	-0.02	-0.07	7.76	0	0.7282	0.0064
141	SLU 20	-0.02	-0.07	7.87	0	0.7386	0.0061
141	SLU 21	-0.02	-0.07	7.86	0	0.7379	0.0064
141	SLU 22	-0.03	-0.06	7.33	0	0.688	0.0054
141	SLU 23	-0.02	-0.06	7.32	0	0.6869	0.0059
141	SLU 24	-0.03	-0.06	7.49	0	0.7031	0.0054
141	SLU 25	-0.03	-0.06	7.48	0	0.7024	0.0057
141	SLU 26	-0.02	-0.06	7.42	0	0.6966	0.006
141	SLU 27	-0.03	-0.06	7.59	0	0.7128	0.0054
141	SLU 28	-0.03	-0.06	7.59	0	0.7121	0.0058
141	SLU 29	-0.03	-0.06	7.53	0	0.7074	0.0055
141	SLU 30	-0.03	-0.06	7.53	0	0.7067	0.0058
141	SLU 31	-0.02	-0.06	8.12	0	0.7619	0.0059
141	SLU 32	-0.03	-0.06	8.29	0	0.7781	0.0054
141	SLU 33	-0.02	-0.06	8.28	0	0.7774	0.0057
141	SLU 34	-0.02	-0.06	8.22	0	0.7716	0.006
141	SLU 35	-0.03	-0.06	8.39	0	0.7878	0.0054
141	SLU 36	-0.03	-0.06	8.38	0	0.7871	0.0058
141	SLU 37	-0.03	-0.06	8.33	0	0.7824	0.0055
141	SLU 38	-0.03	-0.06	8.33	0	0.7817	0.0059
141	SLU 39	-0.03	-0.06	8.47	0	0.7952	0.0054
141	SLU 40	-0.02	-0.06	8.46	0	0.7945	0.0057
141	SLU 41	-0.03	-0.06	8.57	0	0.8048	0.0055
141	SLU 42	-0.02	-0.06	8.57	0	0.8042	0.0058
141	SLU 43	-0.03	-0.09	8.37	0	0.7856	0.008
141	SLU 44	-0.03	-0.09	8.36	0	0.7845	0.0086
141	SLU 45	-0.03	-0.09	8.53	0	0.8007	0.008
141	SLU 46	-0.03	-0.09	8.52	0	0.8	0.0084
141	SLU 47	-0.03	-0.09	8.46	0	0.7942	0.0087
141	SLU 48	-0.03	-0.09	8.63	0	0.8104	0.0081
141	SLU 49	-0.03	-0.09	8.62	0	0.8097	0.0084
141	SLU 50	-0.03	-0.09	8.57	0	0.805	0.0082
141	SLU 51	-0.03	-0.09	8.57	0	0.8043	0.0085
141	SLU 52	-0.03	-0.09	9.15	-0.0001	0.8595	0.0086
141	SLU 53	-0.03	-0.09	9.33	-0.0001	0.8757	0.008
141	SLU 54	-0.03	-0.09	9.32	-0.0001	0.875	0.0084
141	SLU 55	-0.03	-0.09	9.26	-0.0001	0.8692	0.0087
141	SLU 56	-0.03	-0.09	9.43	-0.0001	0.8854	0.0081
141	SLU 57	-0.03	-0.09	9.42	-0.0001	0.8847	0.0085
141	SLU 58	-0.03	-0.09	9.37	-0.0001	0.88	0.0082
141	SLU 59	-0.03	-0.09	9.37	-0.0001	0.8793	0.0085
141	SLU 60	-0.03	-0.09	9.51	-0.0001	0.8927	0.0081
141	SLU 61	-0.03	-0.09	9.5	-0.0001	0.8921	0.0084
141	SLU 62	-0.03	-0.09	9.61	-0.0001	0.9024	0.0081
141	SLU 63	-0.03	-0.09	9.6	-0.0001	0.9018	0.0085
141	SLU 64	-0.03	-0.08	9.07	-0.0001	0.8518	0.0074
141	SLU 65	-0.03	-0.08	9.06	-0.0001	0.8507	0.0079
141	SLU 66	-0.04	-0.08	9.23	-0.0001	0.8669	0.0074
141	SLU 67	-0.03	-0.08	9.23	-0.0001	0.8663	0.0077
141	SLU 68	-0.03	-0.09	9.16	-0.0001	0.8604	0.008
141	SLU 69	-0.04	-0.08	9.34	-0.0001	0.8766	0.0074
141	SLU 70	-0.03	-0.08	9.33	-0.0001	0.876	0.0078
141	SLU 71	-0.04	-0.08	9.28	-0.0001	0.8712	0.0075
141	SLU 72	-0.03	-0.08	9.27	-0.0001	0.8706	0.0079
141	SLU 73	-0.03	-0.08	9.86	-0.0001	0.9257	0.008
141	SLU 74	-0.03	-0.08	10.03	-0.0001	0.9419	0.0074
141	SLU 75	-0.03	-0.08	10.03	-0.0001	0.9413	0.0077
141	SLU 76	-0.03	-0.09	9.96	-0.0001	0.9354	0.008
141	SLU 77	-0.03	-0.08	10.14	-0.0001	0.9516	0.0075
141	SLU 78	-0.03	-0.08	10.13	-0.0001	0.951	0.0078
141	SLU 79	-0.03	-0.08	10.08	-0.0001	0.9462	0.0075
141	SLU 80	-0.03	-0.08	10.07	-0.0001	0.9455	0.0079
141	SLU 81	-0.03	-0.08	10.21	-0.0001	0.959	0.0074
141	SLU 82	-0.03	-0.08	10.21	-0.0001	0.9583	0.0078
141	SLU 83	-0.03	-0.08	10.32	-0.0001	0.9687	0.0075
141	SLU 84	-0.03	-0.08	10.31	-0.0001	0.968	0.0078
141	SLE RA 1	-0.03	-0.06	6.82	0	0.6407	0.0058
141	SLE RA 2	-0.02	-0.07	6.82	0	0.64	0.0062
141	SLE RA 3	-0.03	-0.06	6.93	0	0.6508	0.0058
141	SLE RA 4	-0.02	-0.06	6.93	0	0.6503	0.006
141	SLE RA 5	-0.02	-0.07	6.89	0	0.6464	0.0062
141	SLE RA 6	-0.03	-0.06	7	0	0.6572	0.0059
141	SLE RA 7	-0.03	-0.06	7	0	0.6568	0.0061
141	SLE RA 8	-0.03	-0.06	6.96	0	0.6536	0.0059
141	SLE RA 9	-0.03	-0.07	6.96	0	0.6532	0.0061
141	SLE RA 10	-0.02	-0.07	7.35	0	0.69	0.0062
141	SLE RA 11	-0.03	-0.06	7.46	0	0.7008	0.0058
141	SLE RA 12	-0.02	-0.06	7.46	0	0.7003	0.0061
141	SLE RA 13	-0.02	-0.07	7.42	0	0.6964	0.0063
141	SLE RA 14	-0.03	-0.06	7.53	0	0.7072	0.0059
141	SLE RA 15	-0.02	-0.07	7.53	0	0.7068	0.0061

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
141	SLE RA 16	-0.03	-0.06	7.49	0	0.7036	0.0059
141	SLE RA 17	-0.02	-0.07	7.49	0	0.7032	0.0062
141	SLE RA 18	-0.02	-0.06	7.58	0	0.7121	0.0058
141	SLE RA 19	-0.02	-0.06	7.58	0	0.7117	0.0061
141	SLE RA 20	-0.03	-0.06	7.65	0	0.7186	0.0059
141	SLE RA 21	-0.02	-0.07	7.65	0	0.7181	0.0061
141	SLE FR 1	-0.03	-0.06	6.82	0	0.6407	0.0058
141	SLE FR 2	-0.03	-0.06	6.82	0	0.6406	0.0059
141	SLE FR 3	-0.03	-0.06	6.85	0	0.6433	0.0058
141	SLE FR 4	-0.03	-0.06	7.05	0	0.662	0.0059
141	SLE FR 5	-0.03	-0.06	7.08	0	0.6647	0.0058
141	SLE FR 6	-0.03	-0.06	7.2	0	0.6764	0.0058
141	SLE QP 1	-0.03	-0.06	6.82	0	0.6407	0.0058
141	SLE QP 2	-0.03	-0.06	7.05	0	0.6621	0.0058
141	SLD 1	0.52	-0.01	7.41	0	0.6954	0.0005
141	SLD 2	0.58	-0.02	7.38	0	0.6926	0.0022
141	SLD 3	0.53	-0.15	7.19	0	0.6747	0.0141
141	SLD 4	0.59	-0.17	7.16	0	0.6718	0.0158
141	SLD 5	0.11	0.18	7.5	0	0.7041	-0.0166
141	SLD 6	0.15	0.16	7.48	0	0.7022	-0.0155
141	SLD 7	0.14	-0.3	6.76	0	0.6349	0.0285
141	SLD 8	0.19	-0.32	6.74	0	0.633	0.0296
141	SLD 9	-0.24	0.19	7.36	0	0.6912	-0.018
141	SLD 10	-0.2	0.18	7.34	0	0.6893	-0.0169
141	SLD 11	-0.2	-0.29	6.63	0	0.622	0.0271
141	SLD 12	-0.16	-0.3	6.61	0	0.6201	0.0282
141	SLD 13	-0.64	0.04	6.95	0	0.6525	-0.0041
141	SLD 14	-0.58	0.03	6.92	0	0.6496	-0.0024
141	SLD 15	-0.63	-0.1	6.73	0	0.6317	0.0094
141	SLD 16	-0.57	-0.12	6.7	0	0.6288	0.0111
141	SLV 1	1.24	0.06	7.87	0	0.7392	-0.006
141	SLV 2	1.39	0.02	7.8	0	0.7326	-0.0021
141	SLV 3	1.26	-0.26	7.37	0	0.6922	0.0246
141	SLV 4	1.41	-0.3	7.3	0	0.6855	0.0285
141	SLV 5	0.29	0.48	8.07	0	0.7577	-0.0449
141	SLV 6	0.39	0.45	8.02	0	0.7534	-0.0423
141	SLV 7	0.37	-0.61	6.4	0	0.601	0.0572
141	SLV 8	0.47	-0.64	6.36	0	0.5967	0.0598
141	SLV 9	-0.52	0.51	7.75	0	0.7276	-0.0482
141	SLV 10	-0.42	0.49	7.7	0	0.7232	-0.0456
141	SLV 11	-0.44	-0.58	6.08	0	0.5709	0.054
141	SLV 12	-0.34	-0.6	6.03	0	0.5665	0.0565
141	SLV 13	-1.46	0.18	6.8	0	0.6387	-0.0169
141	SLV 14	-1.32	0.14	6.73	0	0.632	-0.013
141	SLV 15	-1.44	-0.15	6.3	0	0.5917	0.0138
141	SLV 16	-1.29	-0.19	6.23	0	0.585	0.0177
141	CRTFP Ux+	0	0	0	0	0	0
141	CRTFP Ux-	0	0	0	0	0	0
141	CRTFP Uy+	0	0	0	0	0	0
141	CRTFP Uy-	0	0	0	0	0	0
142	SLU 1	-0.03	-0.05	6.64	0	0.7478	0.0052
142	SLU 2	-0.02	-0.05	6.63	0	0.7465	0.0059
142	SLU 3	-0.03	-0.05	6.8	0	0.766	0.0052
142	SLU 4	-0.02	-0.05	6.79	0	0.7652	0.0056
142	SLU 5	-0.02	-0.05	6.73	0	0.7581	0.006
142	SLU 6	-0.03	-0.05	6.9	0	0.7777	0.0052
142	SLU 7	-0.02	-0.05	6.9	0	0.7769	0.0056
142	SLU 8	-0.03	-0.05	6.84	0	0.7712	0.0054
142	SLU 9	-0.02	-0.05	6.84	0	0.7704	0.0058
142	SLU 10	-0.02	-0.05	7.43	0	0.8373	0.0057
142	SLU 11	-0.02	-0.04	7.61	0	0.8568	0.005
142	SLU 12	-0.02	-0.05	7.6	0	0.856	0.0054
142	SLU 13	-0.02	-0.05	7.54	0	0.849	0.0058
142	SLU 14	-0.03	-0.04	7.71	0	0.8685	0.005
142	SLU 15	-0.02	-0.05	7.7	0	0.8677	0.0054
142	SLU 16	-0.03	-0.05	7.65	0	0.862	0.0052
142	SLU 17	-0.02	-0.05	7.64	0	0.8612	0.0056
142	SLU 18	-0.02	-0.04	7.79	0	0.8775	0.005
142	SLU 19	-0.02	-0.05	7.78	0	0.8767	0.0054
142	SLU 20	-0.02	-0.04	7.89	0	0.8892	0.005
142	SLU 21	-0.02	-0.05	7.89	0	0.8884	0.0054
142	SLU 22	-0.03	-0.04	7.35	0	0.8276	0.0042
142	SLU 23	-0.02	-0.04	7.33	0	0.8262	0.0049
142	SLU 24	-0.03	-0.04	7.51	0	0.8458	0.0042
142	SLU 25	-0.03	-0.04	7.5	0	0.845	0.0046
142	SLU 26	-0.02	-0.04	7.44	0	0.8379	0.0049
142	SLU 27	-0.03	-0.04	7.61	0	0.8575	0.0042
142	SLU 28	-0.03	-0.04	7.6	0	0.8567	0.0046
142	SLU 29	-0.03	-0.04	7.55	0	0.851	0.0043
142	SLU 30	-0.03	-0.04	7.55	0	0.8502	0.0047
142	SLU 31	-0.02	-0.04	8.14	0	0.9171	0.0047
142	SLU 32	-0.03	-0.04	8.31	0	0.9366	0.004
142	SLU 33	-0.02	-0.04	8.31	0	0.9358	0.0044
142	SLU 34	-0.02	-0.04	8.24	0	0.9288	0.0048
142	SLU 35	-0.03	-0.04	8.42	0	0.9483	0.004
142	SLU 36	-0.03	-0.04	8.41	0	0.9475	0.0044
142	SLU 37	-0.03	-0.04	8.36	0	0.9418	0.0041
142	SLU 38	-0.03	-0.04	8.35	0	0.941	0.0045
142	SLU 39	-0.03	-0.03	8.5	0	0.9573	0.0039
142	SLU 40	-0.02	-0.04	8.49	0	0.9565	0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLU 41	-0.03	-0.04	8.6	0	0.969	0.004
142	SLU 42	-0.02	-0.04	8.59	0	0.9682	0.0044
142	SLU 43	-0.03	-0.06	8.39	0	0.9448	0.0072
142	SLU 44	-0.03	-0.07	8.37	0	0.9434	0.0078
142	SLU 45	-0.03	-0.06	8.55	0	0.963	0.0071
142	SLU 46	-0.03	-0.07	8.54	0	0.9622	0.0075
142	SLU 47	-0.03	-0.07	8.48	0	0.9551	0.0079
142	SLU 48	-0.03	-0.06	8.65	0	0.9747	0.0072
142	SLU 49	-0.03	-0.07	8.64	0	0.9739	0.0076
142	SLU 50	-0.03	-0.06	8.59	0	0.9681	0.0073
142	SLU 51	-0.03	-0.07	8.59	0	0.9673	0.0077
142	SLU 52	-0.03	-0.07	9.18	-0.0001	1.0342	0.0076
142	SLU 53	-0.03	-0.06	9.35	-0.0001	1.0538	0.0069
142	SLU 54	-0.03	-0.06	9.35	-0.0001	1.053	0.0073
142	SLU 55	-0.03	-0.07	9.28	-0.0001	1.0459	0.0077
142	SLU 56	-0.03	-0.06	9.46	-0.0001	1.0655	0.007
142	SLU 57	-0.03	-0.07	9.45	-0.0001	1.0647	0.0074
142	SLU 58	-0.03	-0.06	9.4	-0.0001	1.0589	0.0071
142	SLU 59	-0.03	-0.07	9.39	-0.0001	1.0581	0.0075
142	SLU 60	-0.03	-0.06	9.54	-0.0001	1.0745	0.0069
142	SLU 61	-0.03	-0.06	9.53	-0.0001	1.0737	0.0073
142	SLU 62	-0.03	-0.06	9.64	-0.0001	1.0862	0.0069
142	SLU 63	-0.03	-0.07	9.63	-0.0001	1.0854	0.0073
142	SLU 64	-0.03	-0.05	9.09	-0.0001	1.0246	0.0061
142	SLU 65	-0.03	-0.06	9.08	-0.0001	1.0232	0.0068
142	SLU 66	-0.04	-0.05	9.26	-0.0001	1.0428	0.0061
142	SLU 67	-0.03	-0.06	9.25	-0.0001	1.042	0.0065
142	SLU 68	-0.03	-0.06	9.19	-0.0001	1.0349	0.0069
142	SLU 69	-0.04	-0.05	9.36	-0.0001	1.0545	0.0061
142	SLU 70	-0.03	-0.06	9.35	-0.0001	1.0537	0.0065
142	SLU 71	-0.04	-0.06	9.3	-0.0001	1.0479	0.0063
142	SLU 72	-0.03	-0.06	9.29	-0.0001	1.0471	0.0067
142	SLU 73	-0.03	-0.06	9.89	-0.0001	1.114	0.0066
142	SLU 74	-0.03	-0.05	10.06	-0.0001	1.1336	0.0059
142	SLU 75	-0.03	-0.06	10.05	-0.0001	1.1328	0.0063
142	SLU 76	-0.03	-0.06	9.99	-0.0001	1.1257	0.0067
142	SLU 77	-0.03	-0.05	10.17	-0.0001	1.1453	0.0059
142	SLU 78	-0.03	-0.06	10.16	-0.0001	1.1445	0.0063
142	SLU 79	-0.04	-0.05	10.11	-0.0001	1.1387	0.0061
142	SLU 80	-0.03	-0.06	10.1	-0.0001	1.1379	0.0065
142	SLU 81	-0.03	-0.05	10.25	-0.0001	1.1543	0.0059
142	SLU 82	-0.03	-0.06	10.24	-0.0001	1.1535	0.0063
142	SLU 83	-0.03	-0.05	10.35	-0.0001	1.166	0.0059
142	SLU 84	-0.03	-0.06	10.34	-0.0001	1.1652	0.0063
142	SLE RA 1	-0.03	-0.04	6.84	0	0.7706	0.0049
142	SLE RA 2	-0.02	-0.05	6.83	0	0.7697	0.0054
142	SLE RA 3	-0.03	-0.04	6.95	0	0.7827	0.0049
142	SLE RA 4	-0.03	-0.05	6.94	0	0.7822	0.0052
142	SLE RA 5	-0.02	-0.05	6.9	0	0.7775	0.0054
142	SLE RA 6	-0.03	-0.04	7.02	0	0.7905	0.0049
142	SLE RA 7	-0.03	-0.05	7.01	0	0.79	0.0052
142	SLE RA 8	-0.03	-0.04	6.98	0	0.7862	0.005
142	SLE RA 9	-0.03	-0.05	6.97	0	0.7856	0.0053
142	SLE RA 10	-0.02	-0.05	7.37	0	0.8302	0.0053
142	SLE RA 11	-0.03	-0.04	7.48	0	0.8433	0.0048
142	SLE RA 12	-0.02	-0.04	7.48	0	0.8428	0.005
142	SLE RA 13	-0.02	-0.05	7.44	0	0.838	0.0053
142	SLE RA 14	-0.03	-0.04	7.55	0	0.8511	0.0048
142	SLE RA 15	-0.02	-0.05	7.55	0	0.8505	0.0051
142	SLE RA 16	-0.03	-0.04	7.52	0	0.8467	0.0049
142	SLE RA 17	-0.02	-0.05	7.51	0	0.8462	0.0052
142	SLE RA 18	-0.03	-0.04	7.61	0	0.8571	0.0048
142	SLE RA 19	-0.02	-0.04	7.6	0	0.8565	0.005
142	SLE RA 20	-0.03	-0.04	7.68	0	0.8649	0.0048
142	SLE RA 21	-0.02	-0.05	7.67	0	0.8643	0.0051
142	SLE FR 1	-0.03	-0.04	6.84	0	0.7706	0.0049
142	SLE FR 2	-0.03	-0.04	6.84	0	0.7704	0.005
142	SLE FR 3	-0.03	-0.04	6.87	0	0.7737	0.005
142	SLE FR 4	-0.03	-0.04	7.07	0	0.7963	0.005
142	SLE FR 5	-0.03	-0.04	7.1	0	0.7996	0.0049
142	SLE FR 6	-0.03	-0.04	7.22	0	0.8138	0.0049
142	SLE QP 1	-0.03	-0.04	6.84	0	0.7706	0.0049
142	SLE QP 2	-0.03	-0.04	7.07	0	0.7965	0.0049
142	SLD 1	0.51	0.02	7.36	0	0.8289	-0.0026
142	SLD 2	0.58	0.01	7.33	0	0.8257	-0.0009
142	SLD 3	0.53	-0.12	7.14	0	0.804	0.0138
142	SLD 4	0.59	-0.14	7.11	0	0.8008	0.0155
142	SLD 5	0.11	0.2	7.5	0	0.8446	-0.0225
142	SLD 6	0.15	0.19	7.48	0	0.8425	-0.0214
142	SLD 7	0.14	-0.28	6.76	0	0.7616	0.0321
142	SLD 8	0.19	-0.29	6.74	0	0.7595	0.0332
142	SLD 9	-0.24	0.21	7.4	0	0.8336	-0.0234
142	SLD 10	-0.2	0.2	7.38	0	0.8315	-0.0223
142	SLD 11	-0.2	-0.28	6.66	0	0.7506	0.0311
142	SLD 12	-0.16	-0.29	6.64	0	0.7485	0.0323
142	SLD 13	-0.64	0.05	7.03	0	0.7923	-0.0057
142	SLD 14	-0.58	0.04	7	0	0.7891	-0.004
142	SLD 15	-0.63	-0.09	6.81	0	0.7674	0.0106
142	SLD 16	-0.57	-0.11	6.78	0	0.7642	0.0124
142	SLV 1	1.24	0.11	7.73	0	0.8712	-0.012

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLV 2	1.39	0.07	7.67	0	0.8638	-0.008
142	SLV 3	1.26	-0.22	7.23	0	0.8148	0.0251
142	SLV 4	1.41	-0.26	7.17	0	0.8075	0.0291
142	SLV 5	0.29	0.51	8.04	0	0.9057	-0.0571
142	SLV 6	0.39	0.48	8	0	0.9009	-0.0545
142	SLV 7	0.37	-0.59	6.37	0	0.7178	0.0665
142	SLV 8	0.47	-0.61	6.33	0	0.713	0.0691
142	SLV 9	-0.52	0.53	7.81	0	0.88	-0.0593
142	SLV 10	-0.42	0.5	7.77	0	0.8752	-0.0567
142	SLV 11	-0.44	-0.57	6.14	0	0.6921	0.0643
142	SLV 12	-0.34	-0.59	6.1	0	0.6873	0.0669
142	SLV 13	-1.46	0.17	6.97	0	0.7856	-0.0193
142	SLV 14	-1.31	0.14	6.91	0	0.7782	-0.0153
142	SLV 15	-1.44	-0.16	6.47	0	0.7292	0.0177
142	SLV 16	-1.29	-0.19	6.41	0	0.7218	0.0218
142	CRTFP Ux+	0	0	0	0	0	0
142	CRTFP Ux-	0	0	0	0	0	0
142	CRTFP Uy+	0	0	0	0	0	0
142	CRTFP Uy-	0	0	0	0	0	0
143	SLU 1	-0.03	-0.03	6.66	0	0.8758	0.0038
143	SLU 2	-0.02	-0.03	6.65	0	0.8743	0.0046
143	SLU 3	-0.03	-0.03	6.83	0	0.8973	0.0037
143	SLU 4	-0.02	-0.03	6.82	0	0.8964	0.0041
143	SLU 5	-0.02	-0.04	6.76	0	0.888	0.0046
143	SLU 6	-0.03	-0.03	6.93	0	0.911	0.0037
143	SLU 7	-0.03	-0.03	6.92	0	0.9101	0.0042
143	SLU 8	-0.03	-0.03	6.87	0	0.9033	0.0039
143	SLU 9	-0.03	-0.03	6.87	0	0.9024	0.0043
143	SLU 10	-0.02	-0.03	7.47	0	0.9814	0.0041
143	SLU 11	-0.03	-0.02	7.64	0	1.0044	0.0032
143	SLU 12	-0.02	-0.03	7.63	0	1.0035	0.0037
143	SLU 13	-0.02	-0.03	7.57	0	0.9952	0.0042
143	SLU 14	-0.03	-0.02	7.75	0	1.0182	0.0033
143	SLU 15	-0.02	-0.03	7.74	0	1.0172	0.0037
143	SLU 16	-0.03	-0.03	7.69	0	1.0104	0.0034
143	SLU 17	-0.02	-0.03	7.68	0	1.0095	0.0039
143	SLU 18	-0.03	-0.02	7.83	0	1.0289	0.0032
143	SLU 19	-0.02	-0.03	7.82	0	1.028	0.0036
143	SLU 20	-0.03	-0.02	7.93	0	1.0426	0.0032
143	SLU 21	-0.02	-0.03	7.93	0	1.0417	0.0037
143	SLU 22	-0.03	-0.02	7.38	0	0.9695	0.0023
143	SLU 23	-0.02	-0.02	7.36	0	0.968	0.0031
143	SLU 24	-0.03	-0.02	7.54	0	0.991	0.0022
143	SLU 25	-0.03	-0.02	7.53	0	0.99	0.0026
143	SLU 26	-0.03	-0.02	7.47	0	0.9817	0.0031
143	SLU 27	-0.03	-0.02	7.64	0	1.0047	0.0022
143	SLU 28	-0.03	-0.02	7.64	0	1.0038	0.0027
143	SLU 29	-0.03	-0.02	7.58	0	0.997	0.0024
143	SLU 30	-0.03	-0.02	7.58	0	0.996	0.0028
143	SLU 31	-0.02	-0.02	8.18	0	1.0751	0.0026
143	SLU 32	-0.03	-0.01	8.35	0	1.0981	0.0017
143	SLU 33	-0.03	-0.02	8.35	0	1.0972	0.0022
143	SLU 34	-0.03	-0.02	8.28	0	1.0888	0.0027
143	SLU 35	-0.03	-0.01	8.46	0	1.1118	0.0018
143	SLU 36	-0.03	-0.02	8.45	0	1.1109	0.0022
143	SLU 37	-0.03	-0.01	8.4	0	1.1041	0.0019
143	SLU 38	-0.03	-0.02	8.39	0	1.1032	0.0024
143	SLU 39	-0.03	-0.01	8.54	0	1.1226	0.0017
143	SLU 40	-0.03	-0.02	8.53	0	1.1216	0.0021
143	SLU 41	-0.03	-0.01	8.64	0	1.1363	0.0017
143	SLU 42	-0.03	-0.02	8.64	0	1.1354	0.0022
143	SLU 43	-0.03	-0.04	8.42	0	1.1064	0.0055
143	SLU 44	-0.03	-0.05	8.41	0	1.1049	0.0062
143	SLU 45	-0.03	-0.04	8.58	0	1.1279	0.0053
143	SLU 46	-0.03	-0.04	8.57	0	1.127	0.0058
143	SLU 47	-0.03	-0.05	8.51	0	1.1186	0.0063
143	SLU 48	-0.03	-0.04	8.69	0	1.1416	0.0054
143	SLU 49	-0.03	-0.04	8.68	0	1.1407	0.0058
143	SLU 50	-0.03	-0.04	8.63	0	1.1339	0.0055
143	SLU 51	-0.03	-0.05	8.62	0	1.133	0.006
143	SLU 52	-0.03	-0.04	9.22	-0.0001	1.2121	0.0058
143	SLU 53	-0.03	-0.04	9.4	-0.0001	1.2351	0.0049
143	SLU 54	-0.03	-0.04	9.39	-0.0001	1.2341	0.0053
143	SLU 55	-0.03	-0.04	9.33	-0.0001	1.2258	0.0058
143	SLU 56	-0.03	-0.04	9.5	-0.0001	1.2488	0.0049
143	SLU 57	-0.03	-0.04	9.49	-0.0001	1.2479	0.0054
143	SLU 58	-0.03	-0.04	9.44	-0.0001	1.2411	0.0051
143	SLU 59	-0.03	-0.04	9.43	-0.0001	1.2401	0.0055
143	SLU 60	-0.03	-0.04	9.58	-0.0001	1.2595	0.0048
143	SLU 61	-0.03	-0.04	9.58	-0.0001	1.2586	0.0053
143	SLU 62	-0.03	-0.04	9.69	-0.0001	1.2733	0.0049
143	SLU 63	-0.03	-0.04	9.68	-0.0001	1.2723	0.0053
143	SLU 64	-0.04	-0.03	9.13	-0.0001	1.2001	0.004
143	SLU 65	-0.03	-0.04	9.12	-0.0001	1.1986	0.0047
143	SLU 66	-0.04	-0.03	9.29	-0.0001	1.2216	0.0038
143	SLU 67	-0.03	-0.03	9.29	-0.0001	1.2207	0.0043
143	SLU 68	-0.03	-0.04	9.22	-0.0001	1.2123	0.0048
143	SLU 69	-0.04	-0.03	9.4	-0.0001	1.2353	0.0039
143	SLU 70	-0.03	-0.03	9.39	-0.0001	1.2344	0.0043
143	SLU 71	-0.04	-0.03	9.34	-0.0001	1.2276	0.004

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
143	SLU 72	-0.03	-0.03	9.33	-0.0001	1.2267	0.0045
143	SLU 73	-0.03	-0.03	9.93	-0.0001	1.3057	0.0043
143	SLU 74	-0.04	-0.03	10.11	-0.0001	1.3287	0.0034
143	SLU 75	-0.03	-0.03	10.1	-0.0001	1.3278	0.0038
143	SLU 76	-0.03	-0.03	10.04	-0.0001	1.3195	0.0043
143	SLU 77	-0.04	-0.03	10.21	-0.0001	1.3425	0.0034
143	SLU 78	-0.03	-0.03	10.21	-0.0001	1.3415	0.0039
143	SLU 79	-0.04	-0.03	10.15	-0.0001	1.3347	0.0036
143	SLU 80	-0.03	-0.03	10.15	-0.0001	1.3338	0.004
143	SLU 81	-0.03	-0.03	10.3	-0.0001	1.3532	0.0033
143	SLU 82	-0.03	-0.03	10.29	-0.0001	1.3523	0.0038
143	SLU 83	-0.04	-0.03	10.4	-0.0001	1.3669	0.0034
143	SLU 84	-0.03	-0.03	10.39	-0.0001	1.366	0.0038
143	SLE RA 1	-0.03	-0.03	6.87	0	0.9026	0.0034
143	SLE RA 2	-0.02	-0.03	6.86	0	0.9016	0.0039
143	SLE RA 3	-0.03	-0.03	6.98	0	0.9169	0.0033
143	SLE RA 4	-0.03	-0.03	6.97	0	0.9163	0.0036
143	SLE RA 5	-0.02	-0.03	6.93	0	0.9107	0.0039
143	SLE RA 6	-0.03	-0.03	7.05	0	0.926	0.0033
143	SLE RA 7	-0.03	-0.03	7.04	0	0.9254	0.0036
143	SLE RA 8	-0.03	-0.03	7.01	0	0.9209	0.0034
143	SLE RA 9	-0.03	-0.03	7	0	0.9203	0.0037
143	SLE RA 10	-0.02	-0.03	7.4	0	0.973	0.0036
143	SLE RA 11	-0.03	-0.02	7.52	0	0.9883	0.003
143	SLE RA 12	-0.03	-0.03	7.51	0	0.9877	0.0033
143	SLE RA 13	-0.02	-0.03	7.47	0	0.9821	0.0036
143	SLE RA 14	-0.03	-0.02	7.59	0	0.9975	0.003
143	SLE RA 15	-0.03	-0.03	7.58	0	0.9969	0.0033
143	SLE RA 16	-0.03	-0.02	7.55	0	0.9923	0.0031
143	SLE RA 17	-0.03	-0.03	7.54	0	0.9917	0.0034
143	SLE RA 18	-0.03	-0.02	7.64	0	1.0046	0.003
143	SLE RA 19	-0.02	-0.02	7.64	0	1.004	0.0033
143	SLE RA 20	-0.03	-0.02	7.71	0	1.0138	0.003
143	SLE RA 21	-0.03	-0.02	7.71	0	1.0132	0.0033
143	SLE FR 1	-0.03	-0.03	6.87	0	0.9026	0.0034
143	SLE FR 2	-0.03	-0.03	6.87	0	0.9024	0.0035
143	SLE FR 3	-0.03	-0.03	6.89	0	0.9062	0.0034
143	SLE FR 4	-0.03	-0.03	7.1	0	0.933	0.0034
143	SLE FR 5	-0.03	-0.02	7.13	0	0.9369	0.0033
143	SLE FR 6	-0.03	-0.02	7.26	0	0.9536	0.0032
143	SLE QP 1	-0.03	-0.03	6.87	0	0.9026	0.0034
143	SLE QP 2	-0.03	-0.02	7.1	0	0.9332	0.0033
143	SLD 1	0.51	0.06	7.32	0	0.9628	-0.0082
143	SLD 2	0.58	0.05	7.3	0	0.9594	-0.0066
143	SLD 3	0.52	-0.08	7.1	0	0.9336	0.0111
143	SLD 4	0.59	-0.1	7.08	0	0.9303	0.0127
143	SLD 5	0.11	0.23	7.51	0	0.9869	-0.0298
143	SLD 6	0.15	0.22	7.49	0	0.9847	-0.0287
143	SLD 7	0.14	-0.26	6.77	0	0.8897	0.0346
143	SLD 8	0.18	-0.27	6.75	0	0.8875	0.0357
143	SLD 9	-0.24	0.22	7.45	0	0.9789	-0.0292
143	SLD 10	-0.2	0.21	7.43	0	0.9767	-0.0281
143	SLD 11	-0.2	-0.27	6.71	0	0.8817	0.0352
143	SLD 12	-0.16	-0.28	6.69	0	0.8795	0.0363
143	SLD 13	-0.64	0.05	7.12	0	0.9361	-0.0062
143	SLD 14	-0.58	0.03	7.1	0	0.9328	-0.0046
143	SLD 15	-0.63	-0.1	6.9	0	0.907	0.0131
143	SLD 16	-0.57	-0.11	6.87	0	0.9036	0.0147
143	SLV 1	1.24	0.17	7.62	0	1.0013	-0.0229
143	SLV 2	1.38	0.14	7.56	0	0.9935	-0.019
143	SLV 3	1.26	-0.16	7.12	0	0.9353	0.0209
143	SLV 4	1.41	-0.19	7.06	0	0.9275	0.0247
143	SLV 5	0.29	0.54	8.03	0	1.0552	-0.0716
143	SLV 6	0.39	0.53	7.99	0	1.0501	-0.0691
143	SLV 7	0.37	-0.56	6.35	0	0.835	0.0742
143	SLV 8	0.47	-0.58	6.31	0	0.8299	0.0767
143	SLV 9	-0.52	0.53	7.89	0	1.0365	-0.0702
143	SLV 10	-0.42	0.51	7.85	0	1.0314	-0.0677
143	SLV 11	-0.44	-0.58	6.21	0	0.8163	0.0756
143	SLV 12	-0.34	-0.59	6.17	0	0.8112	0.0781
143	SLV 13	-1.46	0.14	7.14	0	0.9389	-0.0182
143	SLV 14	-1.31	0.11	7.08	0	0.9311	-0.0144
143	SLV 15	-1.44	-0.19	6.64	0	0.8729	0.0255
143	SLV 16	-1.29	-0.22	6.58	0	0.8651	0.0294
143	CRTFP Ux+	0	0	0	0	0	0
143	CRTFP Ux-	0	0	0	0	0	0
143	CRTFP Uy+	0	0	0	0	0	0
143	CRTFP Uy-	0	0	0	0	0	0
144	SLU 1	-0.13	-0.05	29.37	8.4692	-2.5215	0.0379
144	SLU 2	-0.12	-0.08	29.32	8.4577	-2.5176	0.0301
144	SLU 3	-0.14	-0.04	30.09	8.6768	-2.5833	0.0399
144	SLU 4	-0.13	-0.06	30.06	8.6698	-2.581	0.0352
144	SLU 5	-0.12	-0.07	29.78	8.5895	-2.557	0.0315
144	SLU 6	-0.14	-0.04	30.55	8.8086	-2.6227	0.0413
144	SLU 7	-0.13	-0.06	30.52	8.8016	-2.6204	0.0366
144	SLU 8	-0.14	-0.05	30.29	8.7328	-2.6003	0.0406
144	SLU 9	-0.13	-0.06	30.26	8.7259	-2.598	0.0359
144	SLU 10	-0.13	-0.05	32.94	9.5039	-2.829	0.0374
144	SLU 11	-0.15	-0.01	33.71	9.723	-2.8947	0.0472
144	SLU 12	-0.14	-0.03	33.68	9.716	-2.8924	0.0426

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
144	SLU 13	-0.13	-0.05	33.4	9.6357	-2.8684	0.0388
144	SLU 14	-0.15	-0.01	34.17	9.8548	-2.9341	0.0486
144	SLU 15	-0.14	-0.03	34.14	9.8478	-2.9318	0.0439
144	SLU 16	-0.15	-0.02	33.91	9.779	-2.9117	0.0479
144	SLU 17	-0.14	-0.04	33.88	9.7721	-2.9093	0.0433
144	SLU 18	-0.15	-0.01	34.54	9.9638	-2.9663	0.0483
144	SLU 19	-0.14	-0.02	34.51	9.9569	-2.964	0.0437
144	SLU 20	-0.16	-0.01	35	10.0956	-3.0057	0.0497
144	SLU 21	-0.15	-0.02	34.97	10.0887	-3.0034	0.045
144	SLU 22	-0.15	0.02	32.51	9.3787	-2.7917	0.0475
144	SLU 23	-0.13	-0.01	32.47	9.3671	-2.7878	0.0397
144	SLU 24	-0.15	0.02	33.23	9.5862	-2.8535	0.0495
144	SLU 25	-0.14	0.01	33.21	9.5793	-2.8512	0.0448
144	SLU 26	-0.13	-0.01	32.93	9.4989	-2.8272	0.041
144	SLU 27	-0.15	0.02	33.69	9.718	-2.8929	0.0508
144	SLU 28	-0.14	0.01	33.67	9.7111	-2.8906	0.0462
144	SLU 29	-0.15	0.02	33.43	9.6423	-2.8705	0.0502
144	SLU 30	-0.14	0	33.4	9.6354	-2.8682	0.0455
144	SLU 31	-0.14	0.02	36.09	10.4133	-3.0992	0.047
144	SLU 32	-0.16	0.05	36.86	10.6324	-3.1649	0.0568
144	SLU 33	-0.15	0.04	36.83	10.6255	-3.1626	0.0521
144	SLU 34	-0.14	0.02	36.55	10.5451	-3.1386	0.0484
144	SLU 35	-0.17	0.05	37.32	10.7642	-3.2043	0.0581
144	SLU 36	-0.16	0.04	37.29	10.7573	-3.202	0.0535
144	SLU 37	-0.17	0.05	37.06	10.6885	-3.1819	0.0575
144	SLU 38	-0.16	0.03	37.03	10.6816	-3.1796	0.0528
144	SLU 39	-0.16	0.06	37.69	10.8733	-3.2365	0.0579
144	SLU 40	-0.15	0.04	37.66	10.8663	-3.2342	0.0533
144	SLU 41	-0.17	0.06	38.15	11.0051	-3.2759	0.0593
144	SLU 42	-0.16	0.04	38.12	10.9981	-3.2736	0.0546
144	SLU 43	-0.17	-0.09	37.1	10.6982	-3.1852	0.046
144	SLU 44	-0.15	-0.11	37.05	10.6866	-3.1814	0.0382
144	SLU 45	-0.17	-0.08	37.82	10.9057	-3.2471	0.048
144	SLU 46	-0.16	-0.09	37.79	10.8988	-3.2448	0.0433
144	SLU 47	-0.16	-0.11	37.51	10.8184	-3.2208	0.0396
144	SLU 48	-0.18	-0.08	38.28	11.0375	-3.2865	0.0493
144	SLU 49	-0.17	-0.09	38.25	11.0306	-3.2842	0.0447
144	SLU 50	-0.18	-0.08	38.02	10.9618	-3.2641	0.0487
144	SLU 51	-0.17	-0.1	37.99	10.9549	-3.2618	0.044
144	SLU 52	-0.16	-0.08	40.67	11.7328	-3.4928	0.0455
144	SLU 53	-0.19	-0.05	41.44	11.9519	-3.5585	0.0553
144	SLU 54	-0.18	-0.07	41.41	11.945	-3.5562	0.0506
144	SLU 55	-0.17	-0.08	41.13	11.8646	-3.5322	0.0469
144	SLU 56	-0.19	-0.05	41.9	12.0837	-3.5979	0.0567
144	SLU 57	-0.18	-0.06	41.87	12.0768	-3.5956	0.052
144	SLU 58	-0.19	-0.06	41.64	12.008	-3.5754	0.056
144	SLU 59	-0.18	-0.07	41.61	12.0011	-3.5731	0.0513
144	SLU 60	-0.19	-0.04	42.27	12.1928	-3.6301	0.0564
144	SLU 61	-0.18	-0.06	42.24	12.1858	-3.6278	0.0518
144	SLU 62	-0.19	-0.04	42.73	12.3246	-3.6695	0.0578
144	SLU 63	-0.18	-0.06	42.7	12.3176	-3.6672	0.0531
144	SLU 64	-0.18	-0.02	40.24	11.6077	-3.4555	0.0555
144	SLU 65	-0.16	-0.05	40.2	11.5961	-3.4516	0.0478
144	SLU 66	-0.18	-0.01	40.96	11.8152	-3.5173	0.0576
144	SLU 67	-0.17	-0.03	40.94	11.8083	-3.515	0.0529
144	SLU 68	-0.17	-0.05	40.66	11.7279	-3.491	0.0491
144	SLU 69	-0.19	-0.01	41.42	11.947	-3.5567	0.0589
144	SLU 70	-0.18	-0.03	41.4	11.94	-3.5544	0.0542
144	SLU 71	-0.19	-0.02	41.16	11.8713	-3.5343	0.0583
144	SLU 72	-0.18	-0.04	41.14	11.8643	-3.532	0.0536
144	SLU 73	-0.18	-0.02	43.82	12.6423	-3.763	0.0551
144	SLU 74	-0.2	0.02	44.59	12.8614	-3.8287	0.0649
144	SLU 75	-0.19	0	44.56	12.8545	-3.8264	0.0602
144	SLU 76	-0.18	-0.02	44.28	12.7741	-3.8024	0.0564
144	SLU 77	-0.2	0.02	45.05	12.9932	-3.8681	0.0662
144	SLU 78	-0.19	0	45.02	12.9862	-3.8658	0.0616
144	SLU 79	-0.2	0.01	44.79	12.9175	-3.8457	0.0656
144	SLU 80	-0.19	-0.01	44.76	12.9105	-3.8433	0.0609
144	SLU 81	-0.2	0.02	45.42	13.1022	-3.9003	0.066
144	SLU 82	-0.19	0	45.39	13.0953	-3.898	0.0613
144	SLU 83	-0.2	0.02	45.88	13.234	-3.9397	0.0674
144	SLU 84	-0.19	0	45.85	13.2271	-3.9374	0.0627
144	SLE RA 1	-0.14	-0.03	30.27	8.7291	-2.5987	0.0406
144	SLE RA 2	-0.12	-0.05	30.23	8.7214	-2.5961	0.0354
144	SLE RA 3	-0.14	-0.02	30.75	8.8674	-2.6399	0.042
144	SLE RA 4	-0.13	-0.04	30.73	8.8628	-2.6384	0.0389
144	SLE RA 5	-0.13	-0.05	30.54	8.8092	-2.6224	0.0363
144	SLE RA 6	-0.14	-0.02	31.05	8.9553	-2.6662	0.0429
144	SLE RA 7	-0.13	-0.04	31.03	8.9507	-2.6646	0.0398
144	SLE RA 8	-0.14	-0.03	30.88	8.9048	-2.6512	0.0424
144	SLE RA 9	-0.13	-0.04	30.86	8.9002	-2.6497	0.0393
144	SLE RA 10	-0.13	-0.03	32.65	9.4188	-2.8037	0.0403
144	SLE RA 11	-0.15	-0.01	33.16	9.5649	-2.8475	0.0468
144	SLE RA 12	-0.14	-0.02	33.14	9.5603	-2.8459	0.0437
144	SLE RA 13	-0.14	-0.03	32.96	9.5067	-2.8299	0.0412
144	SLE RA 14	-0.15	-0.01	33.47	9.6528	-2.8738	0.0478
144	SLE RA 15	-0.14	-0.02	33.45	9.6481	-2.8722	0.0446
144	SLE RA 16	-0.15	-0.01	33.29	9.6023	-2.8588	0.0473
144	SLE RA 17	-0.14	-0.02	33.27	9.5977	-2.8573	0.0442
144	SLE RA 18	-0.15	0	33.72	9.7255	-2.8952	0.0476

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
144	SLE RA 19	-0.14	-0.01	33.7	9.7208	-2.8937	0.0445
144	SLE RA 20	-0.15	0	34.02	9.8133	-2.9215	0.0485
144	SLE RA 21	-0.14	-0.01	34	9.8087	-2.9199	0.0454
144	SLE FR 1	-0.14	-0.03	30.27	8.7291	-2.5987	0.0406
144	SLE FR 2	-0.13	-0.03	30.26	8.7275	-2.5981	0.0396
144	SLE FR 3	-0.14	-0.03	30.39	8.7642	-2.6092	0.041
144	SLE FR 4	-0.14	-0.03	31.29	9.0265	-2.6871	0.0417
144	SLE FR 5	-0.14	-0.02	31.42	9.0632	-2.6981	0.0431
144	SLE FR 6	-0.14	-0.02	31.99	9.2273	-2.7469	0.0441
144	SLE QP 1	-0.14	-0.03	30.27	8.7291	-2.5987	0.0406
144	SLE QP 2	-0.14	-0.02	31.3	9.028	-2.6876	0.0427
144	SLD 1	2.49	0.39	31.93	9.1742	-2.7365	-0.7376
144	SLD 2	2.78	0.35	31.85	9.1548	-2.7305	-0.8326
144	SLD 3	2.44	-0.3	31.03	8.952	-2.6613	-0.7993
144	SLD 4	2.73	-0.34	30.95	8.9325	-2.6553	-0.8943
144	SLD 5	0.67	1.16	32.87	9.4124	-2.8174	-0.0805
144	SLD 6	0.86	1.13	32.82	9.3995	-2.8134	-0.1436
144	SLD 7	0.51	-1.15	29.86	8.6717	-2.5668	-0.2862
144	SLD 8	0.7	-1.18	29.81	8.6588	-2.5628	-0.3492
144	SLD 9	-0.98	1.13	32.79	9.3972	-2.8124	0.4347
144	SLD 10	-0.79	1.11	32.74	9.3843	-2.8084	0.3716
144	SLD 11	-1.14	-1.18	29.78	8.6565	-2.5618	0.229
144	SLD 12	-0.95	-1.2	29.73	8.6436	-2.5579	0.166
144	SLD 13	-3.01	0.3	31.65	9.1235	-2.7199	0.9798
144	SLD 14	-2.72	0.26	31.57	9.1041	-2.7139	0.8847
144	SLD 15	-3.06	-0.39	30.75	8.9013	-2.6447	0.9181
144	SLD 16	-2.77	-0.44	30.67	8.8818	-2.6387	0.823
144	SLV 1	6	0.92	32.74	9.3628	-2.7994	-1.7846
144	SLV 2	6.69	0.82	32.56	9.3175	-2.7854	-2.0059
144	SLV 3	5.89	-0.65	30.7	8.8592	-2.6291	-1.9244
144	SLV 4	6.57	-0.75	30.52	8.814	-2.6151	-2.1457
144	SLV 5	1.75	2.66	34.87	9.9001	-2.9819	-0.2545
144	SLV 6	2.2	2.59	34.75	9.8707	-2.9728	-0.3987
144	SLV 7	1.38	-2.57	28.05	8.2216	-2.4142	-0.7206
144	SLV 8	1.82	-2.64	27.93	8.1921	-2.4051	-0.8648
144	SLV 9	-2.1	2.59	34.67	9.8639	-2.9701	0.9502
144	SLV 10	-1.66	2.53	34.55	9.8345	-2.961	0.806
144	SLV 11	-2.48	-2.64	27.85	8.1853	-2.4025	0.4841
144	SLV 12	-2.03	-2.7	27.73	8.1559	-2.3934	0.34
144	SLV 13	-6.85	0.7	32.08	9.242	-2.7601	2.2312
144	SLV 14	-6.17	0.61	31.9	9.1968	-2.7462	2.0099
144	SLV 15	-6.97	-0.86	30.04	8.7385	-2.5898	2.0913
144	SLV 16	-6.28	-0.96	29.86	8.6933	-2.5759	1.8701
144	CRTFP Ux+	0	0	0	0	0	0
144	CRTFP Ux-	0	0	0	0	0	0
144	CRTFP Uy+	0	0	0	0	0	0
144	CRTFP Uy-	0	0	0	0	0	0
145	SLU 1	-0.18	-0.05	38.81	12.283	-0.6977	0.0621
145	SLU 2	-0.16	-0.09	38.75	12.2664	-0.6966	0.0531
145	SLU 3	-0.18	-0.04	39.76	12.5834	-0.7148	0.0643
145	SLU 4	-0.17	-0.06	39.73	12.5735	-0.7141	0.0589
145	SLU 5	-0.16	-0.09	39.36	12.4572	-0.7075	0.0551
145	SLU 6	-0.19	-0.04	40.37	12.7742	-0.7256	0.0663
145	SLU 7	-0.18	-0.06	40.33	12.7642	-0.725	0.061
145	SLU 8	-0.19	-0.05	40.02	12.6645	-0.7195	0.0661
145	SLU 9	-0.18	-0.07	39.99	12.6545	-0.7188	0.0607
145	SLU 10	-0.18	-0.04	43.54	13.7839	-0.783	0.0617
145	SLU 11	-0.21	0.01	44.56	14.101	-0.8011	0.0729
145	SLU 12	-0.19	-0.01	44.52	14.091	-0.8005	0.0675
145	SLU 13	-0.18	-0.04	44.15	13.9747	-0.7939	0.0637
145	SLU 14	-0.21	0.01	45.16	14.2917	-0.812	0.0749
145	SLU 15	-0.2	-0.01	45.13	14.2817	-0.8114	0.0695
145	SLU 16	-0.21	0	44.82	14.182	-0.8058	0.0747
145	SLU 17	-0.2	-0.02	44.78	14.1721	-0.8052	0.0693
145	SLU 18	-0.21	0.02	45.66	14.4509	-0.821	0.0743
145	SLU 19	-0.19	0	45.62	14.441	-0.8204	0.0689
145	SLU 20	-0.21	0.02	46.27	14.6417	-0.8319	0.0763
145	SLU 21	-0.2	0	46.23	14.6317	-0.8313	0.0709
145	SLU 22	-0.2	0.04	42.96	13.598	-0.7721	0.0695
145	SLU 23	-0.17	0	42.9	13.5814	-0.771	0.0605
145	SLU 24	-0.2	0.05	43.91	13.8984	-0.7891	0.0717
145	SLU 25	-0.19	0.03	43.88	13.8884	-0.7885	0.0664
145	SLU 26	-0.18	0	43.51	13.7721	-0.7819	0.0626
145	SLU 27	-0.21	0.05	44.52	14.0891	-0.8	0.0737
145	SLU 28	-0.19	0.03	44.48	14.0792	-0.7994	0.0684
145	SLU 29	-0.21	0.04	44.18	13.9795	-0.7938	0.0735
145	SLU 30	-0.19	0.02	44.14	13.9695	-0.7932	0.0682
145	SLU 31	-0.19	0.05	47.7	15.0989	-0.8574	0.0691
145	SLU 32	-0.22	0.1	48.71	15.4159	-0.8755	0.0803
145	SLU 33	-0.21	0.08	48.67	15.406	-0.8749	0.0749
145	SLU 34	-0.2	0.05	48.3	15.2896	-0.8683	0.0711
145	SLU 35	-0.23	0.1	49.32	15.6067	-0.8864	0.0823
145	SLU 36	-0.21	0.08	49.28	15.5967	-0.8858	0.0769
145	SLU 37	-0.23	0.09	48.97	15.497	-0.8802	0.0821
145	SLU 38	-0.21	0.07	48.93	15.487	-0.8796	0.0767
145	SLU 39	-0.23	0.11	49.81	15.7659	-0.8954	0.0817
145	SLU 40	-0.21	0.09	49.78	15.7559	-0.8948	0.0763
145	SLU 41	-0.23	0.11	50.42	15.9566	-0.9063	0.0837
145	SLU 42	-0.22	0.09	50.38	15.9467	-0.9057	0.0784
145	SLU 43	-0.23	-0.1	49.03	15.5171	-0.8815	0.0781

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLU 44	-0.2	-0.14	48.97	15.5005	-0.8804	0.0692
145	SLU 45	-0.23	-0.09	49.98	15.8175	-0.8985	0.0804
145	SLU 46	-0.22	-0.11	49.94	15.8075	-0.8979	0.075
145	SLU 47	-0.21	-0.13	49.58	15.6912	-0.8913	0.0712
145	SLU 48	-0.24	-0.09	50.59	16.0082	-0.9094	0.0824
145	SLU 49	-0.22	-0.11	50.55	15.9983	-0.9088	0.077
145	SLU 50	-0.24	-0.1	50.24	15.8986	-0.9033	0.0822
145	SLU 51	-0.22	-0.12	50.21	15.8886	-0.9026	0.0768
145	SLU 52	-0.22	-0.09	53.76	17.018	-0.9668	0.0777
145	SLU 53	-0.25	-0.04	54.77	17.335	-0.9849	0.0889
145	SLU 54	-0.24	-0.06	54.74	17.3251	-0.9843	0.0836
145	SLU 55	-0.23	-0.08	54.37	17.2088	-0.9777	0.0798
145	SLU 56	-0.26	-0.04	55.38	17.5258	-0.9958	0.091
145	SLU 57	-0.25	-0.06	55.35	17.5158	-0.9952	0.0856
145	SLU 58	-0.26	-0.05	55.04	17.4161	-0.9896	0.0907
145	SLU 59	-0.25	-0.07	55	17.4061	-0.989	0.0854
145	SLU 60	-0.26	-0.03	55.88	17.685	-1.0048	0.0904
145	SLU 61	-0.24	-0.05	55.84	17.675	-1.0042	0.085
145	SLU 62	-0.26	-0.03	56.48	17.8757	-1.0157	0.0924
145	SLU 63	-0.25	-0.05	56.45	17.8658	-1.0151	0.087
145	SLU 64	-0.24	-0.01	53.18	16.8321	-0.9559	0.0856
145	SLU 65	-0.22	-0.05	53.12	16.8154	-0.9548	0.0766
145	SLU 66	-0.25	0	54.13	17.1325	-0.9729	0.0878
145	SLU 67	-0.24	-0.02	54.1	17.1225	-0.9723	0.0824
145	SLU 68	-0.23	-0.05	53.73	17.0062	-0.9657	0.0786
145	SLU 69	-0.26	0	54.74	17.3232	-0.9838	0.0898
145	SLU 70	-0.24	-0.02	54.7	17.3132	-0.9832	0.0844
145	SLU 71	-0.26	-0.01	54.39	17.2135	-0.9776	0.0896
145	SLU 72	-0.24	-0.03	54.36	17.2036	-0.977	0.0842
145	SLU 73	-0.24	0	57.92	18.333	-1.0412	0.0852
145	SLU 74	-0.27	0.05	58.93	18.65	-1.0593	0.0964
145	SLU 75	-0.26	0.03	58.89	18.64	-1.0587	0.091
145	SLU 76	-0.25	0	58.52	18.5237	-1.0521	0.0872
145	SLU 77	-0.28	0.05	59.53	18.8407	-1.0702	0.0984
145	SLU 78	-0.26	0.03	59.5	18.8308	-1.0696	0.093
145	SLU 79	-0.28	0.04	59.19	18.7311	-1.064	0.0982
145	SLU 80	-0.26	0.02	59.15	18.7211	-1.0634	0.0928
145	SLU 81	-0.27	0.06	60.03	19	-1.0792	0.0978
145	SLU 82	-0.26	0.04	59.99	18.99	-1.0786	0.0924
145	SLU 83	-0.28	0.06	60.64	19.1907	-1.0901	0.0998
145	SLU 84	-0.27	0.04	60.6	19.1807	-1.0895	0.0944
145	SLE RA 1	-0.18	-0.03	40	12.6587	-0.7189	0.0642
145	SLE RA 2	-0.17	-0.05	39.96	12.6477	-0.7182	0.0582
145	SLE RA 3	-0.19	-0.02	40.63	12.859	-0.7303	0.0657
145	SLE RA 4	-0.18	-0.04	40.61	12.8524	-0.7299	0.0621
145	SLE RA 5	-0.17	-0.05	40.36	12.7748	-0.7255	0.0596
145	SLE RA 6	-0.19	-0.02	41.03	12.9862	-0.7376	0.067
145	SLE RA 7	-0.18	-0.03	41.01	12.9795	-0.7372	0.0634
145	SLE RA 8	-0.19	-0.03	40.8	12.9131	-0.7335	0.0669
145	SLE RA 9	-0.18	-0.04	40.78	12.9064	-0.733	0.0633
145	SLE RA 10	-0.18	-0.02	43.15	13.6593	-0.7758	0.0639
145	SLE RA 11	-0.2	0.01	43.83	13.8707	-0.7879	0.0714
145	SLE RA 12	-0.19	0	43.8	13.864	-0.7875	0.0678
145	SLE RA 13	-0.19	-0.02	43.56	13.7865	-0.7831	0.0653
145	SLE RA 14	-0.21	0.01	44.23	13.9979	-0.7951	0.0727
145	SLE RA 15	-0.2	0	44.21	13.9912	-0.7947	0.0691
145	SLE RA 16	-0.21	0.01	44	13.9247	-0.791	0.0726
145	SLE RA 17	-0.2	-0.01	43.98	13.9181	-0.7906	0.069
145	SLE RA 18	-0.2	0.02	44.56	14.104	-0.8012	0.0723
145	SLE RA 19	-0.19	0.01	44.54	14.0974	-0.8007	0.0688
145	SLE RA 20	-0.21	0.02	44.97	14.2312	-0.8084	0.0737
145	SLE RA 21	-0.2	0.01	44.94	14.2245	-0.808	0.0701
145	SLE FR 1	-0.18	-0.03	40	12.6587	-0.7189	0.0642
145	SLE FR 2	-0.18	-0.03	39.99	12.6565	-0.7188	0.063
145	SLE FR 3	-0.19	-0.03	40.16	12.7096	-0.7218	0.0647
145	SLE FR 4	-0.19	-0.02	41.36	13.0901	-0.7435	0.0654
145	SLE FR 5	-0.19	-0.01	41.53	13.1432	-0.7465	0.0672
145	SLE FR 6	-0.19	0	42.28	13.3814	-0.76	0.0683
145	SLE QP 1	-0.18	-0.03	40	12.6587	-0.7189	0.0642
145	SLE QP 2	-0.19	-0.01	41.37	13.0923	-0.7436	0.0666
145	SLD 1	3.38	0.52	42.1	13.3033	-0.753	-1.1581
145	SLD 2	3.78	0.48	42.02	13.2822	-0.7525	-1.2979
145	SLD 3	3.31	-0.41	40.91	12.9733	-0.7313	-1.1857
145	SLD 4	3.71	-0.46	40.83	12.9522	-0.7308	-1.3255
145	SLD 5	0.91	1.57	43.4	13.66	-0.7795	-0.2336
145	SLD 6	1.17	1.54	43.35	13.646	-0.7791	-0.3264
145	SLD 7	0.69	-1.54	39.44	12.5599	-0.7071	-0.3254
145	SLD 8	0.95	-1.57	39.39	12.5459	-0.7067	-0.4182
145	SLD 9	-1.33	1.54	43.34	13.6387	-0.7805	0.5514
145	SLD 10	-1.07	1.51	43.29	13.6247	-0.7801	0.4587
145	SLD 11	-1.55	-1.57	39.38	12.5387	-0.7081	0.4596
145	SLD 12	-1.29	-1.6	39.33	12.5247	-0.7077	0.3669
145	SLD 13	-4.09	0.43	41.9	13.2325	-0.7564	1.4587
145	SLD 14	-3.69	0.38	41.82	13.2113	-0.7559	1.3189
145	SLD 15	-4.16	-0.5	40.71	12.9024	-0.7347	1.4312
145	SLD 16	-3.76	-0.55	40.64	12.8813	-0.7342	1.2914
145	SLV 1	8.16	1.21	43.03	13.575	-0.7648	-2.7984
145	SLV 2	9.08	1.1	42.85	13.5258	-0.7635	-3.1239
145	SLV 3	8.01	-0.9	40.34	12.8272	-0.7156	-2.8621
145	SLV 4	8.93	-1.01	40.16	12.778	-0.7143	-3.1876

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLV 5	2.38	3.57	45.98	14.3799	-0.8248	-0.6392
145	SLV 6	2.99	3.5	45.86	14.3479	-0.8239	-0.8512
145	SLV 7	1.88	-3.46	37.01	11.8873	-0.6608	-0.8513
145	SLV 8	2.48	-3.54	36.89	11.8553	-0.66	-1.0634
145	SLV 9	-2.86	3.51	45.84	14.3294	-0.8272	1.1966
145	SLV 10	-2.26	3.43	45.73	14.2973	-0.8264	0.9845
145	SLV 11	-3.37	-3.53	36.87	11.8368	-0.6633	0.9845
145	SLV 12	-2.76	-3.6	36.75	11.8047	-0.6624	0.7724
145	SLV 13	-9.31	0.99	42.57	13.4066	-0.7729	3.3208
145	SLV 14	-8.39	0.87	42.39	13.3574	-0.7716	2.9953
145	SLV 15	-9.46	-1.12	39.88	12.6588	-0.7237	3.2572
145	SLV 16	-8.54	-1.24	39.7	12.6096	-0.7224	2.9317
145	CRTFP Ux+	0	0	0	0	0	0
145	CRTFP Ux-	0	0	0	0	0	0
145	CRTFP Uy+	0	0	0	0	0	0
145	CRTFP Uy-	0	0	0	0	0	0
146	SLU 1	-0.19	-0.05	42.02	12.9665	0.0254	0.0679
146	SLU 2	-0.17	-0.09	41.95	12.9493	0.0253	0.0587
146	SLU 3	-0.2	-0.04	43.05	13.2829	0.0261	0.0702
146	SLU 4	-0.18	-0.06	43.01	13.2726	0.0261	0.0647
146	SLU 5	-0.17	-0.09	42.61	13.1502	0.0258	0.0609
146	SLU 6	-0.21	-0.03	43.7	13.4838	0.0265	0.0724
146	SLU 7	-0.19	-0.06	43.67	13.4734	0.0265	0.0669
146	SLU 8	-0.21	-0.05	43.33	13.3683	0.0263	0.0723
146	SLU 9	-0.19	-0.07	43.29	13.358	0.0262	0.0668
146	SLU 10	-0.19	-0.02	47.15	14.5515	0.0284	0.0678
146	SLU 11	-0.22	0.03	48.24	14.8851	0.0292	0.0792
146	SLU 12	-0.21	0.01	48.2	14.8748	0.0291	0.0737
146	SLU 13	-0.2	-0.02	47.81	14.7524	0.0288	0.07
146	SLU 14	-0.23	0.03	48.9	15.086	0.0296	0.0814
146	SLU 15	-0.22	0.01	48.86	15.0757	0.0296	0.0759
146	SLU 16	-0.23	0.02	48.53	14.9705	0.0294	0.0813
146	SLU 17	-0.22	0	48.49	14.9602	0.0293	0.0758
146	SLU 18	-0.23	0.05	49.44	15.2554	0.0298	0.0808
146	SLU 19	-0.21	0.02	49.4	15.2451	0.0298	0.0753
146	SLU 20	-0.24	0.05	50.1	15.4563	0.0303	0.083
146	SLU 21	-0.22	0.02	50.06	15.446	0.0302	0.0775
146	SLU 22	-0.21	0.05	46.5	14.3495	0.0285	0.0741
146	SLU 23	-0.18	0.01	46.44	14.3323	0.0284	0.0649
146	SLU 24	-0.22	0.06	47.53	14.6659	0.0292	0.0763
146	SLU 25	-0.2	0.04	47.49	14.6556	0.0291	0.0708
146	SLU 26	-0.19	0.01	47.1	14.5332	0.0288	0.0671
146	SLU 27	-0.22	0.07	48.19	14.8668	0.0296	0.0785
146	SLU 28	-0.21	0.04	48.15	14.8565	0.0296	0.073
146	SLU 29	-0.22	0.05	47.82	14.7513	0.0294	0.0785
146	SLU 30	-0.21	0.03	47.78	14.741	0.0293	0.073
146	SLU 31	-0.21	0.08	51.64	15.9346	0.0315	0.0739
146	SLU 32	-0.24	0.13	52.73	16.2681	0.0323	0.0853
146	SLU 33	-0.23	0.11	52.69	16.2578	0.0322	0.0798
146	SLU 34	-0.22	0.08	52.29	16.1355	0.0319	0.0761
146	SLU 35	-0.25	0.13	53.38	16.469	0.0327	0.0875
146	SLU 36	-0.23	0.11	53.35	16.4587	0.0326	0.082
146	SLU 37	-0.25	0.12	53.01	16.3536	0.0324	0.0875
146	SLU 38	-0.23	0.1	52.97	16.3432	0.0324	0.082
146	SLU 39	-0.25	0.14	53.92	16.6384	0.0329	0.087
146	SLU 40	-0.23	0.12	53.89	16.6281	0.0328	0.0815
146	SLU 41	-0.25	0.15	54.58	16.8393	0.0333	0.0892
146	SLU 42	-0.24	0.12	54.54	16.829	0.0333	0.0837
146	SLU 43	-0.25	-0.1	53.09	16.3823	0.032	0.0862
146	SLU 44	-0.22	-0.14	53.02	16.3651	0.0319	0.077
146	SLU 45	-0.25	-0.08	54.11	16.6986	0.0327	0.0884
146	SLU 46	-0.24	-0.11	54.08	16.6883	0.0326	0.0829
146	SLU 47	-0.23	-0.13	53.68	16.566	0.0323	0.0792
146	SLU 48	-0.26	-0.08	54.77	16.8995	0.0331	0.0906
146	SLU 49	-0.24	-0.11	54.73	16.8892	0.0331	0.0851
146	SLU 50	-0.26	-0.09	54.4	16.784	0.0329	0.0906
146	SLU 51	-0.24	-0.12	54.36	16.7737	0.0328	0.0851
146	SLU 52	-0.24	-0.07	58.22	17.9673	0.035	0.086
146	SLU 53	-0.28	-0.02	59.31	18.3009	0.0358	0.0974
146	SLU 54	-0.26	-0.04	59.27	18.2906	0.0357	0.0919
146	SLU 55	-0.25	-0.07	58.87	18.1682	0.0354	0.0882
146	SLU 56	-0.28	-0.02	59.97	18.5018	0.0362	0.0996
146	SLU 57	-0.27	-0.04	59.93	18.4914	0.0361	0.0941
146	SLU 58	-0.28	-0.03	59.59	18.3863	0.0359	0.0996
146	SLU 59	-0.27	-0.05	59.56	18.376	0.0359	0.0941
146	SLU 60	-0.28	0	60.51	18.6712	0.0364	0.099
146	SLU 61	-0.27	-0.03	60.47	18.6609	0.0363	0.0935
146	SLU 62	-0.29	0	61.16	18.8721	0.0368	0.1012
146	SLU 63	-0.27	-0.02	61.13	18.8618	0.0368	0.0957
146	SLU 64	-0.26	0	57.57	17.7653	0.0351	0.0923
146	SLU 65	-0.24	-0.04	57.51	17.7481	0.035	0.0832
146	SLU 66	-0.27	0.02	58.6	18.0817	0.0358	0.0946
146	SLU 67	-0.25	-0.01	58.56	18.0714	0.0357	0.0891
146	SLU 68	-0.24	-0.03	58.16	17.949	0.0354	0.0854
146	SLU 69	-0.28	0.02	59.26	18.2826	0.0362	0.0968
146	SLU 70	-0.26	-0.01	59.22	18.2722	0.0361	0.0913
146	SLU 71	-0.28	0.01	58.88	18.1671	0.0359	0.0967
146	SLU 72	-0.26	-0.02	58.85	18.1568	0.0359	0.0912
146	SLU 73	-0.26	0.03	62.7	19.3503	0.0381	0.0922
146	SLU 74	-0.29	0.08	63.79	19.6839	0.0388	0.1036

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
146	SLU 75	-0.28	0.06	63.76	19.6736	0.0388	0.0981
146	SLU 76	-0.27	0.03	63.36	19.5512	0.0385	0.0944
146	SLU 77	-0.3	0.08	64.45	19.8848	0.0393	0.1058
146	SLU 78	-0.28	0.06	64.41	19.8745	0.0392	0.1003
146	SLU 79	-0.3	0.07	64.08	19.7693	0.039	0.1057
146	SLU 80	-0.28	0.05	64.04	19.759	0.039	0.1002
146	SLU 81	-0.3	0.1	64.99	20.0542	0.0395	0.1052
146	SLU 82	-0.28	0.07	64.95	20.0439	0.0394	0.0997
146	SLU 83	-0.3	0.1	65.65	20.2551	0.0399	0.1074
146	SLU 84	-0.29	0.07	65.61	20.2448	0.0398	0.1019
146	SLE RA 1	-0.2	-0.02	43.3	13.3617	0.0263	0.0697
146	SLE RA 2	-0.18	-0.05	43.26	13.3502	0.0263	0.0636
146	SLE RA 3	-0.2	-0.01	43.99	13.5726	0.0268	0.0712
146	SLE RA 4	-0.19	-0.03	43.96	13.5657	0.0267	0.0675
146	SLE RA 5	-0.18	-0.04	43.69	13.4841	0.0265	0.065
146	SLE RA 6	-0.21	-0.01	44.42	13.7065	0.0271	0.0726
146	SLE RA 7	-0.2	-0.03	44.4	13.6996	0.027	0.069
146	SLE RA 8	-0.21	-0.02	44.17	13.6295	0.0269	0.0726
146	SLE RA 9	-0.2	-0.03	44.15	13.6226	0.0268	0.0689
146	SLE RA 10	-0.2	0	46.72	14.4183	0.0283	0.0696
146	SLE RA 11	-0.22	0.03	47.45	14.6407	0.0288	0.0772
146	SLE RA 12	-0.21	0.02	47.42	14.6338	0.0288	0.0735
146	SLE RA 13	-0.2	0	47.16	14.5523	0.0286	0.071
146	SLE RA 14	-0.22	0.03	47.89	14.7747	0.0291	0.0786
146	SLE RA 15	-0.21	0.02	47.86	14.7678	0.0291	0.075
146	SLE RA 16	-0.22	0.03	47.64	14.6977	0.0289	0.0786
146	SLE RA 17	-0.21	0.01	47.61	14.6908	0.0289	0.0749
146	SLE RA 18	-0.22	0.04	48.25	14.8876	0.0292	0.0783
146	SLE RA 19	-0.21	0.03	48.22	14.8807	0.0292	0.0746
146	SLE RA 20	-0.23	0.04	48.68	15.0215	0.0295	0.0797
146	SLE RA 21	-0.22	0.03	48.66	15.0146	0.0295	0.0761
146	SLE FR 1	-0.2	-0.02	43.3	13.3617	0.0263	0.0697
146	SLE FR 2	-0.19	-0.03	43.29	13.3594	0.0263	0.0684
146	SLE FR 3	-0.2	-0.02	43.47	13.4152	0.0264	0.0703
146	SLE FR 4	-0.2	-0.01	44.78	13.8171	0.0272	0.071
146	SLE FR 5	-0.21	0	44.96	13.873	0.0273	0.0728
146	SLE FR 6	-0.21	0.01	45.77	14.1246	0.0278	0.074
146	SLE QP 1	-0.2	-0.02	43.3	13.3617	0.0263	0.0697
146	SLE QP 2	-0.21	0	44.78	13.8194	0.0272	0.0722
146	SLD 1	3.74	0.47	45.53	14.0338	0.03	-1.31
146	SLD 2	4.18	0.43	45.48	14.0224	0.0287	-1.4634
146	SLD 3	3.67	-0.55	44.23	13.6762	0.0296	-1.2848
146	SLD 4	4.11	-0.6	44.18	13.6649	0.0284	-1.4383
146	SLD 5	1.01	1.7	46.99	14.4281	0.0288	-0.3526
146	SLD 6	1.3	1.67	46.96	14.4206	0.028	-0.4545
146	SLD 7	0.77	-1.71	42.65	13.2362	0.0276	-0.2688
146	SLD 8	1.06	-1.74	42.62	13.2287	0.0268	-0.3707
146	SLD 9	-1.47	1.74	46.95	14.4102	0.0276	0.5152
146	SLD 10	-1.18	1.71	46.92	14.4026	0.0268	0.4133
146	SLD 11	-1.71	-1.67	42.61	13.2183	0.0264	0.599
146	SLD 12	-1.42	-1.7	42.58	13.2108	0.0256	0.4971
146	SLD 13	-4.52	0.59	45.39	13.974	0.026	1.5828
146	SLD 14	-4.08	0.55	45.34	13.9626	0.0248	1.4293
146	SLD 15	-4.59	-0.43	44.09	13.6164	0.0257	1.6079
146	SLD 16	-4.15	-0.47	44.04	13.6051	0.0244	1.4544
146	SLV 1	9.03	1.06	46.48	14.309	0.0337	-3.1607
146	SLV 2	10.05	0.96	46.37	14.2826	0.0308	-3.518
146	SLV 3	8.86	-1.25	43.53	13.4989	0.0329	-3.1018
146	SLV 4	9.88	-1.35	43.42	13.4725	0.0299	-3.4592
146	SLV 5	2.64	3.85	49.78	15.1996	0.031	-0.924
146	SLV 6	3.31	3.79	49.71	15.1824	0.029	-1.1568
146	SLV 7	2.08	-3.87	39.96	12.4993	0.0281	-0.728
146	SLV 8	2.75	-3.94	39.88	12.482	0.0262	-0.9608
146	SLV 9	-3.16	3.94	49.68	15.1569	0.0282	1.1053
146	SLV 10	-2.49	3.87	49.61	15.1396	0.0262	0.8725
146	SLV 11	-3.72	-3.79	39.86	12.4565	0.0254	1.3013
146	SLV 12	-3.05	-3.85	39.78	12.4392	0.0234	1.0685
146	SLV 13	-10.29	1.35	46.15	14.1664	0.0245	3.6036
146	SLV 14	-9.27	1.25	46.03	14.14	0.0215	3.2463
146	SLV 15	-10.46	-0.97	43.2	13.3563	0.0236	3.6625
146	SLV 16	-9.44	-1.07	43.09	13.3298	0.0207	3.3051
146	CRTFP Ux+	0	0	0	0	0	0
146	CRTFP Ux-	0	0	0	0	0	0
146	CRTFP Uy+	0	0	0	0	0	0
146	CRTFP Uy-	0	0	0	0	0	0
147	SLU 1	-0.19	-0.05	41.44	12.6139	0.0112	0.0651
147	SLU 2	-0.16	-0.08	41.38	12.5977	0.0111	0.0559
147	SLU 3	-0.19	-0.03	42.45	12.921	0.0115	0.0673
147	SLU 4	-0.18	-0.05	42.41	12.9112	0.0115	0.0618
147	SLU 5	-0.17	-0.08	42.02	12.7927	0.0113	0.0581
147	SLU 6	-0.2	-0.03	43.1	13.116	0.0117	0.0695
147	SLU 7	-0.18	-0.05	43.06	13.1063	0.0117	0.064
147	SLU 8	-0.2	-0.04	42.73	13.0041	0.0116	0.0694
147	SLU 9	-0.18	-0.06	42.69	12.9943	0.0115	0.0639
147	SLU 10	-0.19	-0.01	46.5	14.1563	0.0125	0.0655
147	SLU 11	-0.22	0.04	47.57	14.4796	0.0129	0.0768
147	SLU 12	-0.2	0.02	47.54	14.4698	0.0129	0.0713
147	SLU 13	-0.19	-0.01	47.15	14.3514	0.0127	0.0676
147	SLU 14	-0.23	0.04	48.22	14.6747	0.0131	0.079
147	SLU 15	-0.21	0.02	48.18	14.6649	0.0131	0.0735

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
147	SLU 16	-0.23	0.03	47.85	14.5627	0.013	0.0789
147	SLU 17	-0.21	0.01	47.82	14.5529	0.0129	0.0735
147	SLU 18	-0.22	0.06	48.76	14.8405	0.0132	0.0787
147	SLU 19	-0.21	0.03	48.72	14.8307	0.0131	0.0732
147	SLU 20	-0.23	0.06	49.4	15.0356	0.0134	0.0809
147	SLU 21	-0.22	0.03	49.37	15.0258	0.0133	0.0754
147	SLU 22	-0.2	0.05	45.85	13.955	0.0127	0.0709
147	SLU 23	-0.18	0.02	45.79	13.9388	0.0126	0.0618
147	SLU 24	-0.21	0.07	46.86	14.2621	0.013	0.0732
147	SLU 25	-0.19	0.04	46.83	14.2524	0.013	0.0677
147	SLU 26	-0.18	0.02	46.44	14.1339	0.0128	0.0639
147	SLU 27	-0.22	0.07	47.51	14.4572	0.0132	0.0753
147	SLU 28	-0.2	0.05	47.47	14.4475	0.0132	0.0698
147	SLU 29	-0.22	0.06	47.14	14.3452	0.0131	0.0753
147	SLU 30	-0.2	0.03	47.11	14.3355	0.013	0.0698
147	SLU 31	-0.2	0.09	50.91	15.4974	0.014	0.0713
147	SLU 32	-0.24	0.14	51.99	15.8207	0.0144	0.0827
147	SLU 33	-0.22	0.11	51.95	15.811	0.0143	0.0772
147	SLU 34	-0.21	0.09	51.56	15.6925	0.0142	0.0735
147	SLU 35	-0.24	0.14	52.63	16.0158	0.0146	0.0848
147	SLU 36	-0.23	0.12	52.6	16.0061	0.0145	0.0793
147	SLU 37	-0.24	0.13	52.27	15.9038	0.0144	0.0848
147	SLU 38	-0.23	0.11	52.23	15.8941	0.0144	0.0793
147	SLU 39	-0.24	0.15	53.17	16.1816	0.0147	0.0845
147	SLU 40	-0.23	0.13	53.13	16.1719	0.0146	0.079
147	SLU 41	-0.25	0.16	53.82	16.3767	0.0148	0.0867
147	SLU 42	-0.23	0.13	53.78	16.367	0.0148	0.0812
147	SLU 43	-0.24	-0.09	52.35	15.9382	0.0141	0.0826
147	SLU 44	-0.21	-0.13	52.29	15.922	0.014	0.0735
147	SLU 45	-0.24	-0.08	53.37	16.2453	0.0144	0.0849
147	SLU 46	-0.23	-0.1	53.33	16.2356	0.0143	0.0794
147	SLU 47	-0.22	-0.13	52.94	16.1171	0.0142	0.0756
147	SLU 48	-0.25	-0.08	54.01	16.4404	0.0146	0.087
147	SLU 49	-0.23	-0.1	53.98	16.4307	0.0145	0.0815
147	SLU 50	-0.25	-0.09	53.65	16.3284	0.0144	0.087
147	SLU 51	-0.23	-0.11	53.61	16.3187	0.0144	0.0815
147	SLU 52	-0.24	-0.06	57.42	17.4806	0.0154	0.083
147	SLU 53	-0.27	-0.01	58.49	17.8039	0.0158	0.0944
147	SLU 54	-0.25	-0.03	58.46	17.7942	0.0157	0.0889
147	SLU 55	-0.24	-0.06	58.07	17.6757	0.0156	0.0852
147	SLU 56	-0.28	-0.01	59.14	17.999	0.016	0.0965
147	SLU 57	-0.26	-0.03	59.1	17.9893	0.0159	0.091
147	SLU 58	-0.28	-0.02	58.77	17.887	0.0158	0.0965
147	SLU 59	-0.26	-0.04	58.74	17.8773	0.0158	0.091
147	SLU 60	-0.27	0.01	59.68	18.1648	0.016	0.0962
147	SLU 61	-0.26	-0.01	59.64	18.1551	0.016	0.0907
147	SLU 62	-0.28	0.01	60.32	18.3599	0.0162	0.0984
147	SLU 63	-0.27	-0.01	60.29	18.3502	0.0162	0.0929
147	SLU 64	-0.25	0.01	56.77	17.2794	0.0155	0.0885
147	SLU 65	-0.23	-0.03	56.71	17.2631	0.0154	0.0793
147	SLU 66	-0.26	0.02	57.78	17.5864	0.0159	0.0907
147	SLU 67	-0.24	0	57.74	17.5767	0.0158	0.0852
147	SLU 68	-0.23	-0.03	57.35	17.4582	0.0156	0.0815
147	SLU 69	-0.27	0.02	58.43	17.7815	0.0161	0.0928
147	SLU 70	-0.25	0	58.39	17.7718	0.016	0.0874
147	SLU 71	-0.27	0.01	58.06	17.6696	0.0159	0.0928
147	SLU 72	-0.25	-0.01	58.02	17.6598	0.0159	0.0873
147	SLU 73	-0.25	0.04	61.83	18.8218	0.0168	0.0888
147	SLU 74	-0.29	0.09	62.91	19.1451	0.0172	0.1002
147	SLU 75	-0.27	0.07	62.87	19.1353	0.0172	0.0947
147	SLU 76	-0.26	0.04	62.48	19.0169	0.017	0.091
147	SLU 77	-0.29	0.09	63.55	19.3402	0.0174	0.1024
147	SLU 78	-0.28	0.07	63.52	19.3304	0.0174	0.0969
147	SLU 79	-0.29	0.08	63.19	19.2282	0.0173	0.1023
147	SLU 80	-0.28	0.06	63.15	19.2184	0.0173	0.0968
147	SLU 81	-0.29	0.11	64.09	19.506	0.0175	0.102
147	SLU 82	-0.28	0.08	64.05	19.4962	0.0175	0.0966
147	SLU 83	-0.3	0.11	64.73	19.701	0.0177	0.1042
147	SLU 84	-0.28	0.09	64.7	19.6913	0.0177	0.0987
147	SLE RA 1	-0.19	-0.02	42.7	12.9971	0.0116	0.0668
147	SLE RA 2	-0.17	-0.04	42.66	12.9862	0.0116	0.0607
147	SLE RA 3	-0.2	-0.01	43.37	13.2018	0.0118	0.0682
147	SLE RA 4	-0.18	-0.02	43.35	13.1953	0.0118	0.0646
147	SLE RA 5	-0.18	-0.04	43.09	13.1163	0.0117	0.0621
147	SLE RA 6	-0.2	-0.01	43.8	13.3318	0.012	0.0697
147	SLE RA 7	-0.19	-0.02	43.78	13.3254	0.0119	0.066
147	SLE RA 8	-0.2	-0.01	43.56	13.2572	0.0119	0.0697
147	SLE RA 9	-0.19	-0.03	43.54	13.2507	0.0118	0.066
147	SLE RA 10	-0.19	0	46.07	14.0253	0.0125	0.067
147	SLE RA 11	-0.21	0.04	46.79	14.2409	0.0128	0.0746
147	SLE RA 12	-0.2	0.02	46.77	14.2344	0.0127	0.0709
147	SLE RA 13	-0.2	0.01	46.5	14.1554	0.0126	0.0684
147	SLE RA 14	-0.22	0.04	47.22	14.3709	0.0129	0.076
147	SLE RA 15	-0.21	0.02	47.2	14.3644	0.0129	0.0724
147	SLE RA 16	-0.22	0.03	46.98	14.2963	0.0128	0.076
147	SLE RA 17	-0.21	0.02	46.95	14.2898	0.0128	0.0723
147	SLE RA 18	-0.22	0.05	47.58	14.4815	0.0129	0.0758
147	SLE RA 19	-0.21	0.04	47.55	14.475	0.0129	0.0722
147	SLE RA 20	-0.22	0.05	48.01	14.6115	0.0131	0.0773
147	SLE RA 21	-0.21	0.04	47.98	14.605	0.013	0.0736

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
147	SLE FR 1	-0.19	-0.02	42.7	12.9971	0.0116	0.0668
147	SLE FR 2	-0.19	-0.02	42.69	12.9949	0.0116	0.0655
147	SLE FR 3	-0.19	-0.02	42.87	13.0491	0.0117	0.0673
147	SLE FR 4	-0.2	0	44.15	13.4402	0.012	0.0683
147	SLE FR 5	-0.2	0	44.33	13.4944	0.0121	0.0701
147	SLE FR 6	-0.2	0.02	45.14	13.7393	0.0123	0.0713
147	SLE QP 1	-0.19	-0.02	42.7	12.9971	0.0116	0.0668
147	SLE QP 2	-0.2	0	44.16	13.4424	0.012	0.0695
147	SLD 1	3.74	0.46	44.74	13.6463	0.0141	-1.3109
147	SLD 2	4.18	0.43	44.73	13.6476	0.0128	-1.4643
147	SLD 3	3.67	-0.56	43.44	13.291	0.0139	-1.2858
147	SLD 4	4.11	-0.59	43.43	13.2923	0.0126	-1.4392
147	SLD 5	1.01	1.69	46.31	14.0421	0.0133	-0.3549
147	SLD 6	1.31	1.67	46.3	14.043	0.0124	-0.4566
147	SLD 7	0.77	-1.71	41.98	12.8579	0.0124	-0.2711
147	SLD 8	1.07	-1.73	41.97	12.8588	0.0116	-0.3729
147	SLD 9	-1.46	1.73	46.35	14.026	0.0124	0.5119
147	SLD 10	-1.17	1.71	46.35	14.0268	0.0116	0.4101
147	SLD 11	-1.7	-1.67	42.02	12.8418	0.0116	0.5956
147	SLD 12	-1.41	-1.69	42.02	12.8426	0.0108	0.4938
147	SLD 13	-4.51	0.59	44.89	13.5924	0.0114	1.5781
147	SLD 14	-4.07	0.57	44.89	13.5937	0.0101	1.4248
147	SLD 15	-4.58	-0.42	43.6	13.2372	0.0112	1.6033
147	SLD 16	-4.14	-0.45	43.59	13.2384	0.0099	1.4499
147	SLV 1	9.02	1.03	45.45	13.9073	0.017	-3.1593
147	SLV 2	10.05	0.97	45.43	13.9103	0.014	-3.5163
147	SLV 3	8.86	-1.28	42.51	13.1025	0.0164	-3.1005
147	SLV 4	9.88	-1.34	42.49	13.1055	0.0134	-3.4576
147	SLV 5	2.64	3.83	49.01	14.802	0.0149	-0.9255
147	SLV 6	3.31	3.78	49	14.8039	0.0129	-1.1582
147	SLV 7	2.08	-3.87	39.21	12.1192	0.013	-0.7296
147	SLV 8	2.75	-3.92	39.2	12.1212	0.0111	-0.9623
147	SLV 9	-3.15	3.92	49.13	14.7636	0.013	1.1012
147	SLV 10	-2.48	3.88	49.11	14.7655	0.011	0.8686
147	SLV 11	-3.71	-3.78	39.32	12.0808	0.0111	1.2971
147	SLV 12	-3.04	-3.82	39.31	12.0828	0.0091	1.0645
147	SLV 13	-10.28	1.35	45.83	13.7793	0.0106	3.5965
147	SLV 14	-9.25	1.28	45.81	13.7823	0.0076	3.2395
147	SLV 15	-10.45	-0.96	42.89	12.9745	0.0101	3.6553
147	SLV 16	-9.42	-1.03	42.87	12.9775	0.007	3.2982
147	CRTFP Ux+	0	0	0	0	0	0
147	CRTFP Ux-	0	0	0	0	0	0
147	CRTFP Uy+	0	0	0	0	0	0
147	CRTFP Uy-	0	0	0	0	0	0
148	SLU 1	-0.18	-0.05	41.33	12.6294	-0.0045	0.0614
148	SLU 2	-0.15	-0.09	41.28	12.6138	-0.0046	0.0522
148	SLU 3	-0.18	-0.04	42.34	12.9364	-0.0046	0.0636
148	SLU 4	-0.17	-0.06	42.31	12.9271	-0.0046	0.0581
148	SLU 5	-0.16	-0.09	41.92	12.809	-0.0046	0.0543
148	SLU 6	-0.19	-0.04	42.99	13.1317	-0.0046	0.0657
148	SLU 7	-0.17	-0.06	42.95	13.1223	-0.0047	0.0602
148	SLU 8	-0.19	-0.05	42.62	13.0199	-0.0046	0.0656
148	SLU 9	-0.17	-0.07	42.59	13.0105	-0.0047	0.0601
148	SLU 10	-0.18	-0.02	46.39	14.1747	-0.0051	0.0622
148	SLU 11	-0.21	0.03	47.45	14.4974	-0.0051	0.0735
148	SLU 12	-0.2	0.01	47.42	14.488	-0.0051	0.068
148	SLU 13	-0.19	-0.02	47.03	14.37	-0.0051	0.0643
148	SLU 14	-0.22	0.03	48.1	14.6926	-0.0051	0.0756
148	SLU 15	-0.2	0.01	48.06	14.6833	-0.0052	0.0701
148	SLU 16	-0.22	0.02	47.73	14.5808	-0.0051	0.0756
148	SLU 17	-0.2	0	47.7	14.5715	-0.0052	0.0701
148	SLU 18	-0.22	0.05	48.64	14.8594	-0.0052	0.0756
148	SLU 19	-0.2	0.03	48.6	14.85	-0.0053	0.0701
148	SLU 20	-0.22	0.05	49.28	15.0546	-0.0053	0.0777
148	SLU 21	-0.21	0.03	49.24	15.0452	-0.0053	0.0722
148	SLU 22	-0.19	0.04	45.73	13.9701	-0.0048	0.0667
148	SLU 23	-0.17	0.01	45.67	13.9544	-0.0049	0.0576
148	SLU 24	-0.2	0.06	46.74	14.2771	-0.0049	0.0689
148	SLU 25	-0.18	0.03	46.7	14.2677	-0.0049	0.0634
148	SLU 26	-0.17	0.01	46.32	14.1496	-0.005	0.0597
148	SLU 27	-0.2	0.06	47.38	14.4723	-0.005	0.071
148	SLU 28	-0.19	0.04	47.35	14.4629	-0.005	0.0656
148	SLU 29	-0.2	0.05	47.02	14.3605	-0.005	0.071
148	SLU 30	-0.19	0.02	46.98	14.3511	-0.005	0.0655
148	SLU 31	-0.19	0.08	50.78	15.5154	-0.0054	0.0676
148	SLU 32	-0.23	0.13	51.85	15.8381	-0.0054	0.0789
148	SLU 33	-0.21	0.1	51.81	15.8287	-0.0054	0.0734
148	SLU 34	-0.2	0.08	51.43	15.7106	-0.0055	0.0697
148	SLU 35	-0.23	0.13	52.49	16.0333	-0.0055	0.081
148	SLU 36	-0.22	0.11	52.46	16.0239	-0.0055	0.0755
148	SLU 37	-0.23	0.12	52.13	15.9215	-0.0054	0.0809
148	SLU 38	-0.22	0.1	52.09	15.9121	-0.0055	0.0755
148	SLU 39	-0.23	0.14	53.03	16.2	-0.0055	0.081
148	SLU 40	-0.22	0.12	53	16.1906	-0.0056	0.0755
148	SLU 41	-0.24	0.15	53.67	16.3952	-0.0056	0.0831
148	SLU 42	-0.22	0.12	53.64	16.3859	-0.0056	0.0776
148	SLU 43	-0.22	-0.1	52.23	15.9586	-0.0058	0.0779
148	SLU 44	-0.2	-0.14	52.17	15.9429	-0.0058	0.0688
148	SLU 45	-0.23	-0.09	53.24	16.2656	-0.0058	0.0801
148	SLU 46	-0.22	-0.11	53.2	16.2562	-0.0059	0.0746

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
148	SLU 47	-0.2	-0.14	52.81	16.1382	-0.0059	0.0709
148	SLU 48	-0.24	-0.09	53.88	16.4608	-0.0059	0.0822
148	SLU 49	-0.22	-0.11	53.85	16.4515	-0.0059	0.0768
148	SLU 50	-0.24	-0.1	53.52	16.3491	-0.0059	0.0822
148	SLU 51	-0.22	-0.12	53.48	16.3397	-0.0059	0.0767
148	SLU 52	-0.23	-0.07	57.28	17.5039	-0.0063	0.0788
148	SLU 53	-0.26	-0.02	58.35	17.8266	-0.0063	0.0901
148	SLU 54	-0.24	-0.04	58.31	17.8172	-0.0064	0.0846
148	SLU 55	-0.23	-0.07	57.92	17.6991	-0.0064	0.0809
148	SLU 56	-0.27	-0.02	58.99	18.0218	-0.0064	0.0922
148	SLU 57	-0.25	-0.04	58.96	18.0124	-0.0064	0.0867
148	SLU 58	-0.27	-0.03	58.63	17.91	-0.0064	0.0921
148	SLU 59	-0.25	-0.05	58.59	17.9006	-0.0064	0.0867
148	SLU 60	-0.27	0	59.53	18.1885	-0.0065	0.0922
148	SLU 61	-0.25	-0.02	59.49	18.1792	-0.0065	0.0867
148	SLU 62	-0.27	0	60.17	18.3838	-0.0065	0.0943
148	SLU 63	-0.26	-0.02	60.14	18.3744	-0.0066	0.0888
148	SLU 64	-0.24	-0.01	56.62	17.2992	-0.0061	0.0833
148	SLU 65	-0.21	-0.04	56.57	17.2836	-0.0062	0.0742
148	SLU 66	-0.25	0.01	57.63	17.6063	-0.0062	0.0855
148	SLU 67	-0.23	-0.02	57.6	17.5969	-0.0062	0.08
148	SLU 68	-0.22	-0.04	57.21	17.4788	-0.0062	0.0763
148	SLU 69	-0.25	0.01	58.28	17.8015	-0.0062	0.0876
148	SLU 70	-0.24	-0.01	58.24	17.7921	-0.0062	0.0821
148	SLU 71	-0.25	0	57.91	17.6897	-0.0062	0.0876
148	SLU 72	-0.24	-0.03	57.88	17.6803	-0.0062	0.0821
148	SLU 73	-0.24	0.03	61.68	18.8446	-0.0066	0.0841
148	SLU 74	-0.28	0.08	62.74	19.1672	-0.0066	0.0955
148	SLU 75	-0.26	0.06	62.71	19.1578	-0.0067	0.09
148	SLU 76	-0.25	0.03	62.32	19.0398	-0.0067	0.0862
148	SLU 77	-0.28	0.08	63.39	19.3625	-0.0067	0.0976
148	SLU 78	-0.27	0.06	63.35	19.3531	-0.0067	0.0921
148	SLU 79	-0.28	0.07	63.02	19.2507	-0.0067	0.0975
148	SLU 80	-0.27	0.05	62.99	19.2413	-0.0067	0.092
148	SLU 81	-0.28	0.09	63.92	19.5292	-0.0068	0.0975
148	SLU 82	-0.27	0.07	63.89	19.5198	-0.0068	0.0921
148	SLU 83	-0.29	0.1	64.57	19.7244	-0.0069	0.0997
148	SLU 84	-0.27	0.07	64.53	19.715	-0.0069	0.0942
148	SLE RA 1	-0.18	-0.03	42.59	13.0125	-0.0046	0.0629
148	SLE RA 2	-0.16	-0.05	42.55	13.002	-0.0047	0.0568
148	SLE RA 3	-0.19	-0.02	43.26	13.2171	-0.0047	0.0644
148	SLE RA 4	-0.18	-0.03	43.24	13.2109	-0.0047	0.0607
148	SLE RA 5	-0.17	-0.05	42.98	13.1322	-0.0047	0.0582
148	SLE RA 6	-0.19	-0.02	43.69	13.3473	-0.0047	0.0658
148	SLE RA 7	-0.18	-0.03	43.67	13.341	-0.0047	0.0621
148	SLE RA 8	-0.19	-0.02	43.45	13.2728	-0.0047	0.0657
148	SLE RA 9	-0.18	-0.04	43.43	13.2665	-0.0047	0.0621
148	SLE RA 10	-0.18	0	45.96	14.0427	-0.005	0.0635
148	SLE RA 11	-0.2	0.03	46.67	14.2578	-0.005	0.071
148	SLE RA 12	-0.19	0.01	46.65	14.2515	-0.005	0.0673
148	SLE RA 13	-0.19	0	46.39	14.1728	-0.005	0.0649
148	SLE RA 14	-0.21	0.03	47.1	14.3879	-0.005	0.0724
148	SLE RA 15	-0.2	0.02	47.08	14.3817	-0.0051	0.0688
148	SLE RA 16	-0.21	0.02	46.86	14.3134	-0.005	0.0724
148	SLE RA 17	-0.2	0.01	46.83	14.3072	-0.005	0.0687
148	SLE RA 18	-0.21	0.04	47.46	14.4991	-0.0051	0.0724
148	SLE RA 19	-0.2	0.03	47.43	14.4928	-0.0051	0.0687
148	SLE RA 20	-0.21	0.04	47.89	14.6292	-0.0051	0.0738
148	SLE RA 21	-0.2	0.03	47.86	14.623	-0.0052	0.0701
148	SLE FR 1	-0.18	-0.03	42.59	13.0125	-0.0046	0.0629
148	SLE FR 2	-0.18	-0.03	42.58	13.0104	-0.0046	0.0617
148	SLE FR 3	-0.18	-0.03	42.76	13.0645	-0.0046	0.0635
148	SLE FR 4	-0.19	-0.01	44.04	13.4564	-0.0048	0.0645
148	SLE FR 5	-0.19	-0.01	44.22	13.5105	-0.0048	0.0663
148	SLE FR 6	-0.19	0.01	45.02	13.7558	-0.0049	0.0676
148	SLE QP 1	-0.18	-0.03	42.59	13.0125	-0.0046	0.0629
148	SLE QP 2	-0.19	-0.01	44.05	13.4584	-0.0048	0.0658
148	SLD 1	3.75	0.45	44.58	13.6578	-0.0028	-1.3115
148	SLD 2	4.19	0.43	44.61	13.6713	-0.0041	-1.4646
148	SLD 3	3.67	-0.57	43.27	13.2969	-0.0022	-1.2864
148	SLD 4	4.11	-0.59	43.3	13.3104	-0.0035	-1.4395
148	SLD 5	1.02	1.68	46.19	14.0631	-0.0049	-0.3576
148	SLD 6	1.31	1.67	46.21	14.0721	-0.0057	-0.4593
148	SLD 7	0.78	-1.72	41.83	12.8602	-0.0029	-0.274
148	SLD 8	1.07	-1.73	41.85	12.8691	-0.0037	-0.3756
148	SLD 9	-1.45	1.72	46.26	14.0477	-0.0058	0.5071
148	SLD 10	-1.16	1.71	46.28	14.0567	-0.0067	0.4055
148	SLD 11	-1.69	-1.68	41.89	12.8448	-0.0038	0.5908
148	SLD 12	-1.4	-1.69	41.91	12.8538	-0.0047	0.4891
148	SLD 13	-4.49	0.57	44.8	13.6065	-0.006	1.571
148	SLD 14	-4.05	0.56	44.83	13.62	-0.0073	1.4179
148	SLD 15	-4.56	-0.45	43.49	13.2456	-0.0054	1.5961
148	SLD 16	-4.13	-0.46	43.52	13.2591	-0.0067	1.443
148	SLV 1	9.02	1.01	45.24	13.9121	-0.0002	-3.1555
148	SLV 2	10.04	0.98	45.31	13.9435	-0.0032	-3.512
148	SLV 3	8.85	-1.3	42.28	13.0947	0.0011	-3.0968
148	SLV 4	9.87	-1.33	42.35	13.126	-0.0018	-3.4533
148	SLV 5	2.65	3.81	48.89	14.8288	-0.0049	-0.927
148	SLV 6	3.31	3.79	48.94	14.8492	-0.0069	-1.1593
148	SLV 7	2.09	-3.89	39.01	12.104	-0.0004	-0.7313

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
148	SLV 8	2.75	-3.91	39.05	12.1245	-0.0023	-0.9636
148	SLV 9	-3.13	3.9	49.05	14.7924	-0.0072	1.0951
148	SLV 10	-2.47	3.88	49.09	14.8128	-0.0091	0.8628
148	SLV 11	-3.69	-3.8	39.16	12.0677	-0.0027	1.2908
148	SLV 12	-3.03	-3.82	39.21	12.0881	-0.0046	1.0585
148	SLV 13	-10.25	1.32	45.75	13.7908	-0.0077	3.5848
148	SLV 14	-9.23	1.28	45.82	13.8222	-0.0106	3.2283
148	SLV 15	-10.42	-0.99	42.79	12.9734	-0.0064	3.6435
148	SLV 16	-9.4	-1.02	42.86	13.0048	-0.0093	3.287
148	CRTFP Ux+	0	0	0	0	0	0
148	CRTFP Ux-	0	0	0	0	0	0
148	CRTFP Uy+	0	0	0	0	0	0
148	CRTFP Uy-	0	0	0	0	0	0
149	SLU 1	-0.17	-0.08	41.68	12.9973	-0.017	0.0567
149	SLU 2	-0.14	-0.12	41.63	12.9818	-0.017	0.0476
149	SLU 3	-0.17	-0.07	42.7	13.313	-0.0173	0.0588
149	SLU 4	-0.16	-0.09	42.66	13.3038	-0.0174	0.0534
149	SLU 5	-0.14	-0.11	42.28	13.1828	-0.0173	0.0497
149	SLU 6	-0.18	-0.07	43.35	13.514	-0.0176	0.0609
149	SLU 7	-0.16	-0.09	43.31	13.5048	-0.0176	0.0554
149	SLU 8	-0.18	-0.08	42.98	13.3993	-0.0175	0.0608
149	SLU 9	-0.16	-0.1	42.95	13.39	-0.0175	0.0554
149	SLU 10	-0.17	-0.05	46.78	14.5887	-0.0189	0.0579
149	SLU 11	-0.2	0	47.85	14.92	-0.0193	0.0692
149	SLU 12	-0.19	-0.02	47.81	14.9107	-0.0193	0.0637
149	SLU 13	-0.18	-0.05	47.43	14.7898	-0.0192	0.06
149	SLU 14	-0.21	0	48.5	15.121	-0.0195	0.0712
149	SLU 15	-0.19	-0.02	48.46	15.1117	-0.0195	0.0658
149	SLU 16	-0.21	-0.01	48.13	15.0062	-0.0194	0.0712
149	SLU 17	-0.19	-0.03	48.1	14.997	-0.0194	0.0657
149	SLU 18	-0.21	0.02	49.04	15.2929	-0.0197	0.0715
149	SLU 19	-0.19	0	49.01	15.2836	-0.0197	0.066
149	SLU 20	-0.21	0.02	49.69	15.4939	-0.02	0.0736
149	SLU 21	-0.2	0	49.66	15.4846	-0.02	0.0681
149	SLU 22	-0.18	0.01	46.11	14.377	-0.0187	0.0615
149	SLU 23	-0.15	-0.02	46.05	14.3616	-0.0187	0.0524
149	SLU 24	-0.19	0.03	47.13	14.6928	-0.0191	0.0636
149	SLU 25	-0.17	0.01	47.09	14.6835	-0.0191	0.0581
149	SLU 26	-0.16	-0.02	46.7	14.5626	-0.019	0.0544
149	SLU 27	-0.19	0.03	47.78	14.8938	-0.0193	0.0657
149	SLU 28	-0.18	0.01	47.74	14.8845	-0.0193	0.0602
149	SLU 29	-0.19	0.02	47.41	14.7791	-0.0192	0.0656
149	SLU 30	-0.18	0	47.38	14.7698	-0.0192	0.0601
149	SLU 31	-0.18	0.05	51.2	15.9685	-0.0207	0.0627
149	SLU 32	-0.22	0.09	52.28	16.2997	-0.021	0.0739
149	SLU 33	-0.2	0.07	52.24	16.2905	-0.021	0.0685
149	SLU 34	-0.19	0.05	51.85	16.1695	-0.0209	0.0648
149	SLU 35	-0.22	0.1	52.93	16.5008	-0.0212	0.076
149	SLU 36	-0.21	0.07	52.89	16.4915	-0.0213	0.0705
149	SLU 37	-0.22	0.08	52.56	16.386	-0.0211	0.076
149	SLU 38	-0.21	0.06	52.53	16.3767	-0.0211	0.0705
149	SLU 39	-0.22	0.11	53.47	16.6727	-0.0214	0.0763
149	SLU 40	-0.21	0.09	53.43	16.6634	-0.0215	0.0708
149	SLU 41	-0.23	0.11	54.12	16.8737	-0.0217	0.0783
149	SLU 42	-0.21	0.09	54.08	16.8644	-0.0217	0.0729
149	SLU 43	-0.21	-0.14	52.67	16.4234	-0.0215	0.0721
149	SLU 44	-0.18	-0.17	52.61	16.4079	-0.0215	0.063
149	SLU 45	-0.22	-0.12	53.69	16.7392	-0.0219	0.0742
149	SLU 46	-0.2	-0.15	53.65	16.7299	-0.0219	0.0687
149	SLU 47	-0.19	-0.17	53.26	16.6089	-0.0218	0.065
149	SLU 48	-0.22	-0.12	54.33	16.9402	-0.0221	0.0763
149	SLU 49	-0.21	-0.14	54.3	16.9309	-0.0221	0.0708
149	SLU 50	-0.22	-0.13	53.97	16.8254	-0.022	0.0762
149	SLU 51	-0.21	-0.16	53.93	16.8161	-0.022	0.0707
149	SLU 52	-0.21	-0.1	57.76	18.0149	-0.0234	0.0733
149	SLU 53	-0.25	-0.06	58.84	18.3461	-0.0238	0.0846
149	SLU 54	-0.23	-0.08	58.8	18.3368	-0.0238	0.0791
149	SLU 55	-0.22	-0.1	58.41	18.2159	-0.0237	0.0754
149	SLU 56	-0.25	-0.06	59.48	18.5471	-0.024	0.0866
149	SLU 57	-0.24	-0.08	59.45	18.5378	-0.024	0.0811
149	SLU 58	-0.25	-0.07	59.12	18.4324	-0.0239	0.0866
149	SLU 59	-0.24	-0.09	59.08	18.4231	-0.0239	0.0811
149	SLU 60	-0.25	-0.04	60.03	18.719	-0.0242	0.0869
149	SLU 61	-0.24	-0.06	59.99	18.7097	-0.0242	0.0814
149	SLU 62	-0.26	-0.04	60.68	18.92	-0.0245	0.0889
149	SLU 63	-0.24	-0.06	60.64	18.9108	-0.0245	0.0835
149	SLU 64	-0.22	-0.04	57.1	17.8031	-0.0232	0.0769
149	SLU 65	-0.2	-0.08	57.04	17.7877	-0.0233	0.0678
149	SLU 66	-0.23	-0.03	58.11	18.1189	-0.0236	0.079
149	SLU 67	-0.21	-0.05	58.08	18.1096	-0.0236	0.0735
149	SLU 68	-0.2	-0.08	57.69	17.9887	-0.0235	0.0698
149	SLU 69	-0.24	-0.03	58.76	18.3199	-0.0238	0.081
149	SLU 70	-0.22	-0.05	58.73	18.3106	-0.0239	0.0756
149	SLU 71	-0.24	-0.04	58.4	18.2052	-0.0237	0.081
149	SLU 72	-0.22	-0.06	58.36	18.1959	-0.0237	0.0755
149	SLU 73	-0.23	-0.01	62.19	19.3946	-0.0252	0.0781
149	SLU 74	-0.26	0.04	63.26	19.7259	-0.0255	0.0893
149	SLU 75	-0.24	0.02	63.23	19.7166	-0.0255	0.0839
149	SLU 76	-0.23	-0.01	62.84	19.5956	-0.0254	0.0802
149	SLU 77	-0.27	0.04	63.91	19.9269	-0.0257	0.0914

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
149	SLU 78	-0.25	0.02	63.88	19.9176	-0.0258	0.0859
149	SLU 79	-0.27	0.03	63.55	19.8121	-0.0256	0.0913
149	SLU 80	-0.25	0.01	63.51	19.8028	-0.0256	0.0859
149	SLU 81	-0.27	0.06	64.45	20.0988	-0.0259	0.0917
149	SLU 82	-0.25	0.03	64.42	20.0895	-0.026	0.0862
149	SLU 83	-0.27	0.06	65.1	20.2998	-0.0262	0.0937
149	SLU 84	-0.26	0.03	65.07	20.2905	-0.0262	0.0882
149	SLE RA 1	-0.17	-0.05	42.95	13.3915	-0.0175	0.0581
149	SLE RA 2	-0.15	-0.08	42.91	13.3812	-0.0175	0.052
149	SLE RA 3	-0.17	-0.04	43.63	13.602	-0.0177	0.0595
149	SLE RA 4	-0.16	-0.06	43.6	13.5958	-0.0177	0.0558
149	SLE RA 5	-0.16	-0.08	43.34	13.5152	-0.0177	0.0534
149	SLE RA 6	-0.18	-0.04	44.06	13.736	-0.0179	0.0609
149	SLE RA 7	-0.17	-0.06	44.04	13.7298	-0.0179	0.0572
149	SLE RA 8	-0.18	-0.05	43.81	13.6595	-0.0178	0.0608
149	SLE RA 9	-0.17	-0.07	43.79	13.6533	-0.0178	0.0572
149	SLE RA 10	-0.17	-0.03	46.34	14.4525	-0.0188	0.0589
149	SLE RA 11	-0.19	0	47.06	14.6733	-0.019	0.0664
149	SLE RA 12	-0.18	-0.01	47.04	14.6671	-0.019	0.0627
149	SLE RA 13	-0.18	-0.03	46.78	14.5865	-0.0189	0.0603
149	SLE RA 14	-0.2	0	47.49	14.8073	-0.0192	0.0678
149	SLE RA 15	-0.19	-0.01	47.47	14.8011	-0.0192	0.0641
149	SLE RA 16	-0.2	-0.01	47.25	14.7308	-0.0191	0.0677
149	SLE RA 17	-0.19	-0.02	47.22	14.7246	-0.0191	0.0641
149	SLE RA 18	-0.2	0.01	47.85	14.9219	-0.0193	0.0679
149	SLE RA 19	-0.19	0	47.83	14.9157	-0.0193	0.0643
149	SLE RA 20	-0.2	0.01	48.29	15.0559	-0.0195	0.0693
149	SLE RA 21	-0.19	0	48.26	15.0497	-0.0195	0.0657
149	SLE FR 1	-0.17	-0.05	42.95	13.3915	-0.0175	0.0581
149	SLE FR 2	-0.17	-0.06	42.94	13.3894	-0.0175	0.0569
149	SLE FR 3	-0.17	-0.05	43.12	13.4451	-0.0175	0.0586
149	SLE FR 4	-0.17	-0.04	44.41	13.8486	-0.018	0.0598
149	SLE FR 5	-0.18	-0.03	44.59	13.9042	-0.0181	0.0616
149	SLE FR 6	-0.18	-0.02	45.4	14.1567	-0.0184	0.063
149	SLE QP 1	-0.17	-0.05	42.95	13.3915	-0.0175	0.0581
149	SLE QP 2	-0.18	-0.03	44.42	13.8506	-0.018	0.061
149	SLD 1	3.75	0.54	44.88	14.0473	-0.0151	-1.3115
149	SLD 2	4.18	0.54	44.95	14.072	-0.0163	-1.4643
149	SLD 3	3.67	-0.49	43.55	13.6739	-0.0142	-1.2865
149	SLD 4	4.11	-0.48	43.62	13.6986	-0.0154	-1.4393
149	SLD 5	1.03	1.69	46.57	14.4714	-0.0182	-0.361
149	SLD 6	1.32	1.69	46.61	14.4878	-0.019	-0.4624
149	SLD 7	0.79	-1.72	42.13	13.2268	-0.0153	-0.2774
149	SLD 8	1.08	-1.72	42.17	13.2432	-0.0161	-0.3788
149	SLD 9	-1.44	1.65	46.67	14.458	-0.0199	0.5009
149	SLD 10	-1.14	1.65	46.71	14.4744	-0.0207	0.3995
149	SLD 11	-1.68	-1.75	42.23	13.2134	-0.017	0.5845
149	SLD 12	-1.38	-1.75	42.27	13.2298	-0.0178	0.483
149	SLD 13	-4.47	0.41	45.22	14.0026	-0.0207	1.5614
149	SLD 14	-4.03	0.42	45.29	14.0273	-0.0218	1.4086
149	SLD 15	-4.54	-0.61	43.89	13.6292	-0.0198	1.5864
149	SLD 16	-4.1	-0.6	43.95	13.6539	-0.021	1.4336
149	SLV 1	9	1.26	45.46	14.2975	-0.0111	-3.1494
149	SLV 2	10.02	1.27	45.62	14.3551	-0.0138	-3.5051
149	SLV 3	8.83	-1.05	42.44	13.4518	-0.0091	-3.0907
149	SLV 4	9.85	-1.04	42.6	13.5094	-0.0119	-3.4465
149	SLV 5	2.65	3.86	49.28	15.2572	-0.0185	-0.9285
149	SLV 6	3.32	3.87	49.38	15.2947	-0.0202	-1.1603
149	SLV 7	2.09	-3.85	39.22	12.4382	-0.0119	-0.733
149	SLV 8	2.76	-3.84	39.33	12.4757	-0.0137	-0.9648
149	SLV 9	-3.11	3.78	49.51	15.2255	-0.0224	1.0869
149	SLV 10	-2.45	3.78	49.62	15.263	-0.0242	0.8551
149	SLV 11	-3.67	-3.93	39.46	12.4065	-0.0158	1.2824
149	SLV 12	-3.01	-3.93	39.56	12.444	-0.0176	1.0506
149	SLV 13	-10.21	0.98	46.24	14.1918	-0.0242	3.5686
149	SLV 14	-9.19	0.99	46.4	14.2494	-0.0269	3.2128
149	SLV 15	-10.38	-1.34	43.22	13.3461	-0.0222	3.6272
149	SLV 16	-9.36	-1.33	43.38	13.4037	-0.0249	3.2715
149	CRTFP Ux+	0	0	0	0	0	0
149	CRTFP Ux-	0	0	0	0	0	0
149	CRTFP Uy+	0	0	0	0	0	0
149	CRTFP Uy-	0	0	0	0	0	0
150	SLU 1	-0.14	-0.11	38.24	12.2957	0.6958	0.0488
150	SLU 2	-0.11	-0.14	38.19	12.2816	0.6948	0.0411
150	SLU 3	-0.14	-0.1	39.17	12.5943	0.7128	0.0504
150	SLU 4	-0.13	-0.12	39.14	12.5858	0.7122	0.0458
150	SLU 5	-0.12	-0.14	38.78	12.4719	0.7057	0.0429
150	SLU 6	-0.15	-0.1	39.76	12.7846	0.7236	0.0522
150	SLU 7	-0.13	-0.12	39.73	12.7761	0.7231	0.0476
150	SLU 8	-0.15	-0.11	39.43	12.6763	0.7175	0.0523
150	SLU 9	-0.13	-0.13	39.4	12.6679	0.7169	0.0478
150	SLU 10	-0.14	-0.08	42.9	13.8011	0.781	0.0497
150	SLU 11	-0.17	-0.04	43.88	14.1137	0.7989	0.059
150	SLU 12	-0.16	-0.06	43.85	14.1053	0.7983	0.0544
150	SLU 13	-0.15	-0.08	43.5	13.9914	0.7918	0.0515
150	SLU 14	-0.18	-0.04	44.48	14.304	0.8098	0.0608
150	SLU 15	-0.16	-0.06	44.45	14.2956	0.8092	0.0562
150	SLU 16	-0.18	-0.05	44.14	14.1958	0.8036	0.061
150	SLU 17	-0.16	-0.07	44.11	14.1873	0.8031	0.0564
150	SLU 18	-0.18	-0.03	44.97	14.4663	0.8188	0.0611

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
150	SLU 19	-0.16	-0.05	44.94	14.4579	0.8183	0.0565
150	SLU 20	-0.18	-0.03	45.57	14.6566	0.8297	0.0629
150	SLU 21	-0.17	-0.05	45.54	14.6482	0.8291	0.0583
150	SLU 22	-0.15	-0.03	42.3	13.6024	0.7697	0.051
150	SLU 23	-0.12	-0.06	42.25	13.5884	0.7688	0.0433
150	SLU 24	-0.15	-0.02	43.23	13.901	0.7867	0.0526
150	SLU 25	-0.14	-0.04	43.2	13.8926	0.7861	0.048
150	SLU 26	-0.13	-0.06	42.84	13.7786	0.7796	0.0451
150	SLU 27	-0.16	-0.02	43.82	14.0913	0.7976	0.0544
150	SLU 28	-0.14	-0.04	43.79	14.0829	0.797	0.0498
150	SLU 29	-0.16	-0.03	43.49	13.983	0.7914	0.0546
150	SLU 30	-0.14	-0.05	43.46	13.9746	0.7909	0.05
150	SLU 31	-0.15	0	46.96	15.1078	0.8549	0.0519
150	SLU 32	-0.18	0.04	47.94	15.4205	0.8728	0.0612
150	SLU 33	-0.17	0.02	47.91	15.412	0.8723	0.0566
150	SLU 34	-0.16	0	47.56	15.2981	0.8658	0.0537
150	SLU 35	-0.19	0.04	48.54	15.6108	0.8837	0.063
150	SLU 36	-0.17	0.02	48.51	15.6023	0.8831	0.0584
150	SLU 37	-0.19	0.03	48.2	15.5025	0.8776	0.0632
150	SLU 38	-0.17	0.01	48.17	15.494	0.877	0.0586
150	SLU 39	-0.19	0.05	49.03	15.7731	0.8928	0.0633
150	SLU 40	-0.17	0.03	49	15.7646	0.8922	0.0587
150	SLU 41	-0.19	0.05	49.63	15.9634	0.9036	0.0651
150	SLU 42	-0.18	0.03	49.6	15.9549	0.9031	0.0605
150	SLU 43	-0.17	-0.17	48.31	15.5364	0.8792	0.0626
150	SLU 44	-0.15	-0.2	48.26	15.5223	0.8782	0.055
150	SLU 45	-0.18	-0.16	49.25	15.835	0.8962	0.0643
150	SLU 46	-0.17	-0.18	49.22	15.8265	0.8956	0.0597
150	SLU 47	-0.16	-0.2	48.86	15.7126	0.8891	0.0568
150	SLU 48	-0.18	-0.16	49.84	16.0253	0.907	0.0661
150	SLU 49	-0.17	-0.18	49.81	16.0168	0.9064	0.0615
150	SLU 50	-0.18	-0.17	49.51	15.917	0.9009	0.0662
150	SLU 51	-0.17	-0.19	49.48	15.9086	0.9003	0.0616
150	SLU 52	-0.18	-0.15	52.98	17.0418	0.9644	0.0636
150	SLU 53	-0.21	-0.1	53.96	17.3544	0.9823	0.0729
150	SLU 54	-0.19	-0.12	53.93	17.346	0.9817	0.0683
150	SLU 55	-0.18	-0.15	53.58	17.2321	0.9752	0.0654
150	SLU 56	-0.21	-0.1	54.56	17.5447	0.9932	0.0747
150	SLU 57	-0.2	-0.12	54.53	17.5363	0.9926	0.0701
150	SLU 58	-0.21	-0.11	54.22	17.4364	0.987	0.0748
150	SLU 59	-0.2	-0.13	54.19	17.428	0.9864	0.0703
150	SLU 60	-0.21	-0.09	55.05	17.707	1.0022	0.0749
150	SLU 61	-0.2	-0.11	55.02	17.6986	1.0017	0.0703
150	SLU 62	-0.22	-0.09	55.65	17.8973	1.0131	0.0767
150	SLU 63	-0.21	-0.11	55.62	17.8889	1.0125	0.0721
150	SLU 64	-0.19	-0.09	52.38	16.8431	0.9531	0.0648
150	SLU 65	-0.16	-0.12	52.33	16.829	0.9522	0.0572
150	SLU 66	-0.19	-0.08	53.31	17.1417	0.9701	0.0665
150	SLU 67	-0.18	-0.1	53.28	17.1333	0.9695	0.0619
150	SLU 68	-0.17	-0.12	52.92	17.0193	0.963	0.059
150	SLU 69	-0.2	-0.08	53.9	17.332	0.981	0.0683
150	SLU 70	-0.18	-0.1	53.87	17.3236	0.9804	0.0637
150	SLU 71	-0.2	-0.09	53.57	17.2237	0.9748	0.0684
150	SLU 72	-0.18	-0.11	53.54	17.2153	0.9743	0.0638
150	SLU 73	-0.19	-0.06	57.04	18.3485	1.0383	0.0658
150	SLU 74	-0.22	-0.02	58.02	18.6612	1.0562	0.0751
150	SLU 75	-0.2	-0.04	57.99	18.6527	1.0557	0.0705
150	SLU 76	-0.2	-0.06	57.64	18.5388	1.0492	0.0676
150	SLU 77	-0.22	-0.02	58.62	18.8515	1.0671	0.0769
150	SLU 78	-0.21	-0.04	58.59	18.843	1.0665	0.0723
150	SLU 79	-0.22	-0.03	58.28	18.7432	1.061	0.077
150	SLU 80	-0.21	-0.05	58.25	18.7347	1.0604	0.0725
150	SLU 81	-0.23	-0.01	59.11	19.0138	1.0762	0.0771
150	SLU 82	-0.21	-0.03	59.08	19.0053	1.0756	0.0726
150	SLU 83	-0.23	-0.01	59.71	19.2041	1.087	0.0789
150	SLU 84	-0.22	-0.03	59.68	19.1956	1.0864	0.0744
150	SLE RA 1	-0.14	-0.09	39.4	12.6691	0.7169	0.0494
150	SLE RA 2	-0.12	-0.11	39.36	12.6597	0.7163	0.0443
150	SLE RA 3	-0.14	-0.08	40.02	12.8681	0.7282	0.0505
150	SLE RA 4	-0.13	-0.09	40	12.8625	0.7279	0.0474
150	SLE RA 5	-0.13	-0.11	39.76	12.7865	0.7235	0.0455
150	SLE RA 6	-0.15	-0.08	40.41	12.995	0.7355	0.0517
150	SLE RA 7	-0.14	-0.09	40.39	12.9894	0.7351	0.0486
150	SLE RA 8	-0.15	-0.09	40.19	12.9228	0.7314	0.0518
150	SLE RA 9	-0.14	-0.1	40.17	12.9172	0.731	0.0487
150	SLE RA 10	-0.14	-0.07	42.51	13.6726	0.7737	0.05
150	SLE RA 11	-0.16	-0.04	43.16	13.8811	0.7857	0.0562
150	SLE RA 12	-0.15	-0.06	43.14	13.8754	0.7853	0.0532
150	SLE RA 13	-0.15	-0.07	42.9	13.7995	0.7809	0.0512
150	SLE RA 14	-0.17	-0.04	43.56	14.0079	0.7929	0.0574
150	SLE RA 15	-0.16	-0.06	43.54	14.0023	0.7925	0.0544
150	SLE RA 16	-0.17	-0.05	43.33	13.9358	0.7888	0.0575
150	SLE RA 17	-0.16	-0.06	43.31	13.9301	0.7884	0.0545
150	SLE RA 18	-0.17	-0.03	43.89	14.1161	0.799	0.0576
150	SLE RA 19	-0.16	-0.05	43.87	14.1105	0.7986	0.0545
150	SLE RA 20	-0.17	-0.03	44.28	14.243	0.8062	0.0588
150	SLE RA 21	-0.16	-0.05	44.26	14.2374	0.8058	0.0557
150	SLE FR 1	-0.14	-0.09	39.4	12.6691	0.7169	0.0494
150	SLE FR 2	-0.14	-0.09	39.39	12.6672	0.7168	0.0484
150	SLE FR 3	-0.14	-0.09	39.56	12.7198	0.7198	0.0499

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
150	SLE FR 4	-0.15	-0.07	40.74	13.1013	0.7414	0.0508
150	SLE FR 5	-0.15	-0.07	40.9	13.1539	0.7444	0.0523
150	SLE FR 6	-0.15	-0.06	41.64	13.3926	0.7579	0.0535
150	SLE QP 1	-0.14	-0.09	39.4	12.6691	0.7169	0.0494
150	SLE QP 2	-0.15	-0.07	40.74	13.1032	0.7415	0.0518
150	SLD 1	3.39	0.45	41.06	13.2278	0.7508	-1.1893
150	SLD 2	3.78	0.47	41.16	13.2584	0.7518	-1.3276
150	SLD 3	3.32	-0.47	39.84	12.8766	0.7286	-1.1589
150	SLD 4	3.72	-0.45	39.93	12.9072	0.7295	-1.2972
150	SLD 5	0.94	1.48	42.69	13.6676	0.7779	-0.3414
150	SLD 6	1.2	1.5	42.75	13.6879	0.7785	-0.4332
150	SLD 7	0.72	-1.6	38.59	12.497	0.7038	-0.2402
150	SLD 8	0.99	-1.58	38.65	12.5173	0.7044	-0.332
150	SLD 9	-1.28	1.44	42.83	13.689	0.7787	0.4356
150	SLD 10	-1.02	1.46	42.9	13.7093	0.7793	0.3439
150	SLD 11	-1.5	-1.64	38.74	12.5185	0.7046	0.5369
150	SLD 12	-1.24	-1.62	38.8	12.5388	0.7052	0.4451
150	SLD 13	-4.02	0.31	41.56	13.2992	0.7535	1.4009
150	SLD 14	-3.62	0.33	41.65	13.3298	0.7545	1.2626
150	SLD 15	-4.08	-0.61	40.33	12.948	0.7313	1.4313
150	SLD 16	-3.68	-0.59	40.42	12.9786	0.7322	1.293
150	SLV 1	8.12	1.12	41.45	13.3814	0.7624	-2.8506
150	SLV 2	9.04	1.16	41.66	13.4526	0.7646	-3.1726
150	SLV 3	7.97	-0.98	38.66	12.586	0.712	-2.7804
150	SLV 4	8.89	-0.93	38.88	12.6573	0.7143	-3.1024
150	SLV 5	2.4	3.45	45.14	14.3804	0.8238	-0.8687
150	SLV 6	3	3.48	45.28	14.4268	0.8252	-1.0785
150	SLV 7	1.9	-3.53	35.86	11.7293	0.6559	-0.6348
150	SLV 8	2.5	-3.5	36	11.7757	0.6574	-0.8446
150	SLV 9	-2.79	3.36	45.48	14.4307	0.8257	0.9483
150	SLV 10	-2.19	3.39	45.62	14.4771	0.8272	0.7385
150	SLV 11	-3.3	-3.62	36.21	11.7796	0.6578	1.1822
150	SLV 12	-2.7	-3.59	36.35	11.826	0.6593	0.9724
150	SLV 13	-9.19	0.79	42.61	13.5491	0.7688	3.2061
150	SLV 14	-8.27	0.84	42.82	13.6203	0.771	2.8841
150	SLV 15	-9.34	-1.3	39.83	12.7538	0.7184	3.2763
150	SLV 16	-8.42	-1.26	40.04	12.825	0.7207	2.9543
150	CRTFP Ux+	0	0	0	0	0	0
150	CRTFP Ux-	0	0	0	0	0	0
150	CRTFP Uy+	0	0	0	0	0	0
150	CRTFP Uy-	0	0	0	0	0	0
152	SLU 1	-0.2	-0.19	55.28	11.7472	11.8726	0.0773
152	SLU 2	-0.17	-0.23	55.21	11.7332	11.856	0.0795
152	SLU 3	-0.21	-0.18	56.62	12.0326	12.1621	0.0762
152	SLU 4	-0.19	-0.2	56.58	12.0242	12.1522	0.0775
152	SLU 5	-0.18	-0.23	56.07	11.9155	12.0415	0.0812
152	SLU 6	-0.22	-0.18	57.49	12.2148	12.3476	0.0779
152	SLU 7	-0.2	-0.2	57.44	12.2065	12.3377	0.0792
152	SLU 8	-0.22	-0.19	57	12.1118	12.2435	0.0807
152	SLU 9	-0.2	-0.22	56.96	12.1034	12.2336	0.082
152	SLU 10	-0.21	-0.16	62.01	13.1825	13.3234	0.0722
152	SLU 11	-0.26	-0.1	63.43	13.4818	13.6295	0.0689
152	SLU 12	-0.24	-0.13	63.38	13.4734	13.6196	0.0703
152	SLU 13	-0.22	-0.16	62.87	13.3648	13.5089	0.0739
152	SLU 14	-0.26	-0.1	64.29	13.6641	13.815	0.0706
152	SLU 15	-0.24	-0.13	64.24	13.6557	13.805	0.0719
152	SLU 16	-0.26	-0.12	63.8	13.561	13.7109	0.0734
152	SLU 17	-0.24	-0.14	63.76	13.5526	13.701	0.0747
152	SLU 18	-0.27	-0.08	65	13.8176	13.9688	0.0669
152	SLU 19	-0.25	-0.11	64.95	13.8092	13.9589	0.0682
152	SLU 20	-0.28	-0.08	65.86	13.9998	14.1543	0.0686
152	SLU 21	-0.25	-0.11	65.81	13.9915	14.1444	0.0699
152	SLU 22	-0.22	-0.08	61.14	12.9964	13.1328	0.056
152	SLU 23	-0.19	-0.12	61.07	12.9824	13.1163	0.0582
152	SLU 24	-0.23	-0.07	62.49	13.2817	13.4224	0.0549
152	SLU 25	-0.21	-0.09	62.44	13.2734	13.4124	0.0562
152	SLU 26	-0.19	-0.12	61.93	13.1647	13.3017	0.0599
152	SLU 27	-0.24	-0.07	63.35	13.464	13.6078	0.0566
152	SLU 28	-0.22	-0.09	63.3	13.4556	13.5979	0.0579
152	SLU 29	-0.24	-0.08	62.87	13.3609	13.5037	0.0594
152	SLU 30	-0.22	-0.1	62.82	13.3525	13.4938	0.0607
152	SLU 31	-0.23	-0.05	67.87	14.4317	14.5836	0.0509
152	SLU 32	-0.27	0.01	69.29	14.731	14.8897	0.0477
152	SLU 33	-0.25	-0.02	69.25	14.7226	14.8798	0.049
152	SLU 34	-0.24	-0.05	68.73	14.6139	14.7691	0.0526
152	SLU 35	-0.28	0.01	70.15	14.9133	15.0752	0.0493
152	SLU 36	-0.26	-0.02	70.11	14.9049	15.0653	0.0506
152	SLU 37	-0.28	-0.01	69.67	14.8102	14.9711	0.0521
152	SLU 38	-0.26	-0.03	69.62	14.8018	14.9612	0.0534
152	SLU 39	-0.28	0.03	70.86	15.0667	15.2291	0.0456
152	SLU 40	-0.26	0	70.82	15.0584	15.2191	0.0469
152	SLU 41	-0.29	0.03	71.72	15.249	15.4145	0.0473
152	SLU 42	-0.27	0	71.68	15.2406	15.4046	0.0486
152	SLU 43	-0.26	-0.28	69.85	14.8431	15.0023	0.1078
152	SLU 44	-0.23	-0.33	69.78	14.8291	14.9857	0.11
152	SLU 45	-0.27	-0.27	71.2	15.1284	15.2918	0.1067
152	SLU 46	-0.25	-0.3	71.15	15.12	15.2819	0.108
152	SLU 47	-0.23	-0.33	70.64	15.0114	15.1712	0.1117
152	SLU 48	-0.28	-0.27	72.06	15.3107	15.4773	0.1084
152	SLU 49	-0.26	-0.3	72.01	15.3023	15.4674	0.1097

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
152	SLU 50	-0.27	-0.28	71.58	15.2076	15.3732	0.1112
152	SLU 51	-0.25	-0.31	71.53	15.1992	15.3633	0.1125
152	SLU 52	-0.27	-0.25	76.58	16.2784	16.4531	0.1027
152	SLU 53	-0.31	-0.2	78	16.5777	16.7592	0.0994
152	SLU 54	-0.29	-0.22	77.96	16.5693	16.7493	0.1008
152	SLU 55	-0.28	-0.25	77.44	16.4606	16.6386	0.1044
152	SLU 56	-0.32	-0.2	78.86	16.76	16.9447	0.1011
152	SLU 57	-0.3	-0.22	78.82	16.7516	16.9347	0.1024
152	SLU 58	-0.32	-0.21	78.38	16.6569	16.8406	0.1039
152	SLU 59	-0.3	-0.24	78.33	16.6485	16.8307	0.1052
152	SLU 60	-0.32	-0.18	79.57	16.9134	17.0985	0.0974
152	SLU 61	-0.3	-0.2	79.53	16.905	17.0886	0.0987
152	SLU 62	-0.33	-0.18	80.43	17.0957	17.284	0.0991
152	SLU 63	-0.31	-0.2	80.39	17.0873	17.2741	0.1004
152	SLU 64	-0.28	-0.17	75.72	16.0923	16.2625	0.0865
152	SLU 65	-0.24	-0.22	75.64	16.0783	16.246	0.0887
152	SLU 66	-0.28	-0.16	77.06	16.3776	16.5521	0.0854
152	SLU 67	-0.26	-0.19	77.02	16.3692	16.5421	0.0867
152	SLU 68	-0.25	-0.22	76.51	16.2606	16.4314	0.0904
152	SLU 69	-0.29	-0.16	77.92	16.5599	16.7375	0.0871
152	SLU 70	-0.27	-0.19	77.88	16.5515	16.7276	0.0884
152	SLU 71	-0.29	-0.17	77.44	16.4568	16.6334	0.0899
152	SLU 72	-0.27	-0.2	77.4	16.4484	16.6235	0.0912
152	SLU 73	-0.29	-0.14	82.45	17.5275	17.7133	0.0814
152	SLU 74	-0.33	-0.09	83.86	17.8269	18.0194	0.0782
152	SLU 75	-0.31	-0.11	83.82	17.8185	18.0095	0.0795
152	SLU 76	-0.29	-0.14	83.31	17.7098	17.8988	0.0831
152	SLU 77	-0.34	-0.09	84.72	18.0091	18.2049	0.0798
152	SLU 78	-0.32	-0.11	84.68	18.0008	18.195	0.0811
152	SLU 79	-0.34	-0.1	84.24	17.9061	18.1008	0.0826
152	SLU 80	-0.32	-0.13	84.2	17.8977	18.0909	0.0839
152	SLU 81	-0.34	-0.07	85.43	18.1626	18.3588	0.0761
152	SLU 82	-0.32	-0.09	85.39	18.1542	18.3488	0.0774
152	SLU 83	-0.35	-0.07	86.3	18.3449	18.5442	0.0778
152	SLU 84	-0.33	-0.09	86.25	18.3365	18.5343	0.0791
152	SLE RA 1	-0.21	-0.16	56.96	12.1041	12.2327	0.0712
152	SLE RA 2	-0.19	-0.19	56.91	12.0948	12.2216	0.0727
152	SLE RA 3	-0.21	-0.15	57.85	12.2943	12.4257	0.0705
152	SLE RA 4	-0.2	-0.17	57.82	12.2888	12.4191	0.0714
152	SLE RA 5	-0.19	-0.19	57.48	12.2163	12.3453	0.0738
152	SLE RA 6	-0.22	-0.15	58.43	12.4159	12.5493	0.0716
152	SLE RA 7	-0.21	-0.17	58.4	12.4103	12.5427	0.0725
152	SLE RA 8	-0.22	-0.16	58.1	12.3471	12.4799	0.0735
152	SLE RA 9	-0.21	-0.17	58.07	12.3416	12.4733	0.0744
152	SLE RA 10	-0.22	-0.14	61.44	13.061	13.1999	0.0678
152	SLE RA 11	-0.24	-0.1	62.39	13.2605	13.4039	0.0657
152	SLE RA 12	-0.23	-0.12	62.36	13.2549	13.3973	0.0665
152	SLE RA 13	-0.22	-0.14	62.02	13.1825	13.3235	0.069
152	SLE RA 14	-0.25	-0.1	62.96	13.382	13.5276	0.0668
152	SLE RA 15	-0.24	-0.12	62.93	13.3764	13.521	0.0677
152	SLE RA 16	-0.25	-0.11	62.64	13.3133	13.4582	0.0686
152	SLE RA 17	-0.24	-0.13	62.61	13.3077	13.4516	0.0695
152	SLE RA 18	-0.25	-0.09	63.43	13.4843	13.6301	0.0643
152	SLE RA 19	-0.24	-0.1	63.4	13.4788	13.6235	0.0652
152	SLE RA 20	-0.26	-0.09	64.01	13.6059	13.7538	0.0654
152	SLE RA 21	-0.24	-0.1	63.98	13.6003	13.7472	0.0663
152	SLE FR 1	-0.21	-0.16	56.96	12.1041	12.2327	0.0712
152	SLE FR 2	-0.2	-0.16	56.95	12.1022	12.2304	0.0715
152	SLE FR 3	-0.21	-0.16	57.19	12.1527	12.2821	0.0717
152	SLE FR 4	-0.22	-0.14	58.89	12.5163	12.6497	0.0695
152	SLE FR 5	-0.22	-0.14	59.13	12.5668	12.7014	0.0696
152	SLE FR 6	-0.23	-0.12	60.19	12.7942	12.9314	0.0678
152	SLE QP 1	-0.21	-0.16	56.96	12.1041	12.2327	0.0712
152	SLE QP 2	-0.22	-0.14	58.9	12.5182	12.6519	0.0692
152	SLD 1	4.79	0.62	59.21	12.6051	12.7865	-1.1828
152	SLD 2	5.36	0.66	59.37	12.6371	12.8132	-1.3145
152	SLD 3	4.7	-0.69	57.37	12.2543	12.3852	-0.8958
152	SLD 4	5.26	-0.65	57.52	12.2863	12.412	-1.0275
152	SLD 5	1.32	2.07	61.76	13.0704	13.296	-0.7179
152	SLD 6	1.69	2.09	61.87	13.0916	13.3137	-0.8053
152	SLD 7	1.01	-2.29	55.61	11.9013	11.9585	0.239
152	SLD 8	1.39	-2.26	55.71	11.9225	11.9762	0.1516
152	SLD 9	-1.83	1.99	62.08	13.1138	13.3276	-0.0133
152	SLD 10	-1.45	2.02	62.19	13.1351	13.3454	-0.1007
152	SLD 11	-2.14	-2.36	55.93	11.9448	11.9901	0.9436
152	SLD 12	-1.76	-2.34	56.03	11.966	12.0078	0.8562
152	SLD 13	-5.71	0.38	60.28	12.75	12.8918	1.1658
152	SLD 14	-5.14	0.42	60.43	12.782	12.9186	1.0341
152	SLD 15	-5.8	-0.93	58.43	12.3993	12.4906	1.4529
152	SLD 16	-5.23	-0.89	58.59	12.4313	12.5173	1.3212
152	SLV 1	11.5	1.58	59.56	12.7083	12.9514	-2.8488
152	SLV 2	12.82	1.68	59.92	12.7828	13.0138	-3.1554
152	SLV 3	11.28	-1.38	55.38	11.914	12.0429	-2.1983
152	SLV 4	12.6	-1.29	55.74	11.9885	12.1053	-2.5049
152	SLV 5	3.39	4.85	65.37	13.7667	14.1087	-1.739
152	SLV 6	4.25	4.92	65.61	13.8153	14.1494	-1.9387
152	SLV 7	2.67	-5.02	51.44	11.1192	11.0803	0.4295
152	SLV 8	3.53	-4.96	51.68	11.1678	11.1209	0.2297
152	SLV 9	-3.97	4.69	66.12	13.8686	14.1829	-0.0914
152	SLV 10	-3.11	4.75	66.36	13.9171	14.2235	-0.2911

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
152	SLV 11	-4.69	-5.19	52.19	11.2211	11.1544	2.0771
152	SLV 12	-3.83	-5.13	52.43	11.2697	11.1951	1.8773
152	SLV 13	-13.05	1.02	62.05	13.0478	13.1985	2.6432
152	SLV 14	-11.73	1.11	62.42	13.1223	13.2609	2.3366
152	SLV 15	-13.26	-1.95	57.87	12.2536	12.29	3.2937
152	SLV 16	-11.94	-1.85	58.24	12.3281	12.3524	2.9871
152	CRTFP Ux+	0	0	0	0	0	0
152	CRTFP Ux-	0	0	0	0	0	0
152	CRTFP Uy+	0	0	0	0	0	0
152	CRTFP Uy-	0	0	0	0	0	0
154	SLU 1	-0.02	-0.04	5.77	0	-0.77	-0.0048
154	SLU 2	-0.02	-0.04	5.77	0	-0.7689	-0.0054
154	SLU 3	-0.02	-0.04	5.91	0	-0.7886	-0.0047
154	SLU 4	-0.02	-0.04	5.91	0	-0.788	-0.0051
154	SLU 5	-0.02	-0.04	5.86	0	-0.7809	-0.0054
154	SLU 6	-0.03	-0.04	6	0	-0.8006	-0.0048
154	SLU 7	-0.02	-0.04	6	0	-0.7999	-0.0051
154	SLU 8	-0.03	-0.04	5.95	0	-0.7939	-0.005
154	SLU 9	-0.02	-0.04	5.95	0	-0.7933	-0.0053
154	SLU 10	-0.02	-0.04	6.47	0	-0.8627	-0.0047
154	SLU 11	-0.03	-0.03	6.62	0	-0.8823	-0.0041
154	SLU 12	-0.03	-0.03	6.61	0	-0.8817	-0.0044
154	SLU 13	-0.03	-0.04	6.56	0	-0.8747	-0.0047
154	SLU 14	-0.03	-0.03	6.71	0	-0.8943	-0.0041
154	SLU 15	-0.03	-0.03	6.7	0	-0.8937	-0.0044
154	SLU 16	-0.03	-0.03	6.66	0	-0.8877	-0.0043
154	SLU 17	-0.03	-0.03	6.65	0	-0.887	-0.0046
154	SLU 18	-0.03	-0.03	6.78	0	-0.9039	-0.0038
154	SLU 19	-0.03	-0.03	6.77	0	-0.9033	-0.0042
154	SLU 20	-0.03	-0.03	6.87	0	-0.9159	-0.0039
154	SLU 21	-0.03	-0.03	6.86	0	-0.9153	-0.0042
154	SLU 22	-0.03	-0.03	6.39	0	-0.8514	-0.0036
154	SLU 23	-0.02	-0.03	6.38	0	-0.8503	-0.0042
154	SLU 24	-0.03	-0.03	6.52	0	-0.87	-0.0036
154	SLU 25	-0.02	-0.03	6.52	0	-0.8694	-0.0039
154	SLU 26	-0.02	-0.03	6.47	0	-0.8623	-0.0042
154	SLU 27	-0.03	-0.03	6.61	0	-0.882	-0.0036
154	SLU 28	-0.03	-0.03	6.61	0	-0.8813	-0.0039
154	SLU 29	-0.03	-0.03	6.56	0	-0.8753	-0.0038
154	SLU 30	-0.03	-0.03	6.56	0	-0.8747	-0.0041
154	SLU 31	-0.03	-0.03	7.08	0	-0.9441	-0.0035
154	SLU 32	-0.03	-0.02	7.23	0	-0.9637	-0.0029
154	SLU 33	-0.03	-0.02	7.22	0	-0.9631	-0.0032
154	SLU 34	-0.03	-0.03	7.17	0	-0.9561	-0.0035
154	SLU 35	-0.03	-0.02	7.32	0	-0.9757	-0.0029
154	SLU 36	-0.03	-0.02	7.31	0	-0.9751	-0.0032
154	SLU 37	-0.03	-0.02	7.27	0	-0.9691	-0.0031
154	SLU 38	-0.03	-0.03	7.26	0	-0.9684	-0.0034
154	SLU 39	-0.03	-0.02	7.39	0	-0.9853	-0.0026
154	SLU 40	-0.03	-0.02	7.39	0	-0.9847	-0.003
154	SLU 41	-0.03	-0.02	7.48	0	-0.9973	-0.0027
154	SLU 42	-0.03	-0.02	7.47	0	-0.9967	-0.003
154	SLU 43	-0.03	-0.05	7.3	0	-0.973	-0.0067
154	SLU 44	-0.03	-0.05	7.29	0	-0.972	-0.0072
154	SLU 45	-0.03	-0.05	7.44	0	-0.9917	-0.0066
154	SLU 46	-0.03	-0.05	7.43	0	-0.991	-0.0069
154	SLU 47	-0.03	-0.05	7.38	0	-0.984	-0.0073
154	SLU 48	-0.03	-0.05	7.53	0	-1.0036	-0.0067
154	SLU 49	-0.03	-0.05	7.52	0	-1.003	-0.007
154	SLU 50	-0.03	-0.05	7.48	0	-0.997	-0.0068
154	SLU 51	-0.03	-0.05	7.47	0	-0.9964	-0.0071
154	SLU 52	-0.03	-0.05	7.99	0	-1.0658	-0.0065
154	SLU 53	-0.04	-0.04	8.14	0	-1.0854	-0.0059
154	SLU 54	-0.03	-0.05	8.14	0	-1.0848	-0.0062
154	SLU 55	-0.03	-0.05	8.08	0	-1.0777	-0.0066
154	SLU 56	-0.04	-0.04	8.23	0	-1.0974	-0.006
154	SLU 57	-0.03	-0.05	8.23	0	-1.0968	-0.0063
154	SLU 58	-0.04	-0.05	8.18	0	-1.0907	-0.0061
154	SLU 59	-0.03	-0.05	8.18	0	-1.0901	-0.0064
154	SLU 60	-0.04	-0.04	8.3	0	-1.107	-0.0057
154	SLU 61	-0.03	-0.05	8.3	0	-1.1064	-0.006
154	SLU 62	-0.04	-0.04	8.39	0	-1.119	-0.0058
154	SLU 63	-0.04	-0.05	8.39	0	-1.1183	-0.0061
154	SLU 64	-0.03	-0.04	7.91	0	-1.0545	-0.0055
154	SLU 65	-0.03	-0.05	7.9	0	-1.0534	-0.006
154	SLU 66	-0.03	-0.04	8.05	0	-1.0731	-0.0054
154	SLU 67	-0.03	-0.04	8.04	0	-1.0724	-0.0057
154	SLU 68	-0.03	-0.05	7.99	0	-1.0654	-0.0061
154	SLU 69	-0.03	-0.04	8.14	0	-1.085	-0.0055
154	SLU 70	-0.03	-0.04	8.13	0	-1.0844	-0.0058
154	SLU 71	-0.03	-0.04	8.09	0	-1.0784	-0.0056
154	SLU 72	-0.03	-0.04	8.08	0	-1.0778	-0.0059
154	SLU 73	-0.03	-0.04	8.6	0	-1.1472	-0.0053
154	SLU 74	-0.04	-0.04	8.75	0	-1.1668	-0.0047
154	SLU 75	-0.04	-0.04	8.75	0	-1.1662	-0.005
154	SLU 76	-0.03	-0.04	8.69	0	-1.1591	-0.0054
154	SLU 77	-0.04	-0.04	8.84	0	-1.1788	-0.0048
154	SLU 78	-0.04	-0.04	8.84	0	-1.1782	-0.0051
154	SLU 79	-0.04	-0.04	8.79	0	-1.1721	-0.0049
154	SLU 80	-0.04	-0.04	8.79	0	-1.1715	-0.0053

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
154	SLU 81	-0.04	-0.03	8.91	0	-1.1884	-0.0045
154	SLU 82	-0.04	-0.04	8.91	0	-1.1878	-0.0048
154	SLU 83	-0.04	-0.03	9	0	-1.2004	-0.0046
154	SLU 84	-0.04	-0.04	9	0	-1.1997	-0.0049
154	SLE RA 1	-0.02	-0.03	5.95	0	-0.7932	-0.0045
154	SLE RA 2	-0.02	-0.04	5.94	0	-0.7925	-0.0049
154	SLE RA 3	-0.02	-0.03	6.04	0	-0.8056	-0.0044
154	SLE RA 4	-0.02	-0.03	6.04	0	-0.8052	-0.0047
154	SLE RA 5	-0.02	-0.04	6	0	-0.8005	-0.0049
154	SLE RA 6	-0.03	-0.03	6.1	0	-0.8136	-0.0045
154	SLE RA 7	-0.02	-0.04	6.1	0	-0.8132	-0.0047
154	SLE RA 8	-0.03	-0.03	6.07	0	-0.8092	-0.0046
154	SLE RA 9	-0.02	-0.04	6.07	0	-0.8088	-0.0048
154	SLE RA 10	-0.03	-0.03	6.41	0	-0.855	-0.0044
154	SLE RA 11	-0.03	-0.03	6.51	0	-0.8681	-0.004
154	SLE RA 12	-0.03	-0.03	6.51	0	-0.8677	-0.0042
154	SLE RA 13	-0.03	-0.03	6.47	0	-0.863	-0.0044
154	SLE RA 14	-0.03	-0.03	6.57	0	-0.8761	-0.004
154	SLE RA 15	-0.03	-0.03	6.57	0	-0.8757	-0.0042
154	SLE RA 16	-0.03	-0.03	6.54	0	-0.8717	-0.0041
154	SLE RA 17	-0.03	-0.03	6.53	0	-0.8713	-0.0043
154	SLE RA 18	-0.03	-0.03	6.62	0	-0.8825	-0.0038
154	SLE RA 19	-0.03	-0.03	6.62	0	-0.8821	-0.004
154	SLE RA 20	-0.03	-0.03	6.68	0	-0.8905	-0.0039
154	SLE RA 21	-0.03	-0.03	6.68	0	-0.8901	-0.0041
154	SLE FR 1	-0.02	-0.03	5.95	0	-0.7932	-0.0045
154	SLE FR 2	-0.02	-0.03	5.95	0	-0.7931	-0.0046
154	SLE FR 3	-0.02	-0.03	5.97	0	-0.7964	-0.0045
154	SLE FR 4	-0.02	-0.03	6.15	0	-0.8199	-0.0044
154	SLE FR 5	-0.03	-0.03	6.17	0	-0.8232	-0.0043
154	SLE FR 6	-0.03	-0.03	6.28	0	-0.8379	-0.0042
154	SLE QP 1	-0.02	-0.03	5.95	0	-0.7932	-0.0045
154	SLE QP 2	-0.03	-0.03	6.15	0	-0.82	-0.0043
154	SLD 1	0.47	0.06	6.11	0	-0.8148	0.0075
154	SLD 2	0.53	0.06	6.13	0	-0.8178	0.0087
154	SLD 3	0.48	-0.07	5.91	0	-0.7875	-0.0097
154	SLD 4	0.54	-0.06	5.93	0	-0.7905	-0.0085
154	SLD 5	0.1	0.19	6.44	0	-0.8592	0.0251
154	SLD 6	0.14	0.19	6.46	0	-0.8612	0.0259
154	SLD 7	0.13	-0.24	5.76	0	-0.7684	-0.0322
154	SLD 8	0.17	-0.24	5.78	0	-0.7704	-0.0314
154	SLD 9	-0.22	0.17	6.52	0	-0.8696	0.0228
154	SLD 10	-0.18	0.18	6.54	0	-0.8716	0.0236
154	SLD 11	-0.19	-0.26	5.84	0	-0.7789	-0.0345
154	SLD 12	-0.15	-0.25	5.86	0	-0.7808	-0.0337
154	SLD 13	-0.59	0	6.37	0	-0.8495	0
154	SLD 14	-0.53	0.01	6.39	0	-0.8525	0.0012
154	SLD 15	-0.58	-0.13	6.17	0	-0.8223	-0.0172
154	SLD 16	-0.52	-0.12	6.19	0	-0.8253	-0.016
154	SLV 1	1.14	0.17	6.05	0	-0.8067	0.0226
154	SLV 2	1.27	0.19	6.1	0	-0.8137	0.0254
154	SLV 3	1.16	-0.12	5.59	0	-0.7451	-0.0164
154	SLV 4	1.29	-0.1	5.64	0	-0.7521	-0.0136
154	SLV 5	0.27	0.47	6.81	0	-0.9082	0.0624
154	SLV 6	0.35	0.48	6.85	0	-0.9128	0.0642
154	SLV 7	0.34	-0.51	5.27	0	-0.7029	-0.0675
154	SLV 8	0.43	-0.49	5.31	0	-0.7074	-0.0657
154	SLV 9	-0.48	0.43	6.99	0	-0.9326	0.0571
154	SLV 10	-0.39	0.44	7.03	0	-0.9372	0.0589
154	SLV 11	-0.41	-0.55	5.45	0	-0.7272	-0.0728
154	SLV 12	-0.32	-0.53	5.49	0	-0.7318	-0.0709
154	SLV 13	-1.35	0.04	6.66	0	-0.888	0.005
154	SLV 14	-1.21	0.06	6.71	0	-0.8949	0.0078
154	SLV 15	-1.32	-0.25	6.2	0	-0.8264	-0.034
154	SLV 16	-1.19	-0.23	6.25	0	-0.8333	-0.0311
154	CRTFP Ux+	0	0	0	0	0	0
154	CRTFP Ux-	0	0	0	0	0	0
154	CRTFP Uy+	0	0	0	0	0	0
154	CRTFP Uy-	0	0	0	0	0	0
156	SLU 1	-0.02	-0.04	5.81	0	-0.6783	-0.0052
156	SLU 2	-0.02	-0.05	5.81	0	-0.6774	-0.0056
156	SLU 3	-0.02	-0.04	5.95	0	-0.6946	-0.0051
156	SLU 4	-0.02	-0.05	5.95	0	-0.6941	-0.0054
156	SLU 5	-0.02	-0.05	5.9	0	-0.6879	-0.0057
156	SLU 6	-0.02	-0.04	6.04	0	-0.7051	-0.0052
156	SLU 7	-0.02	-0.05	6.04	0	-0.7046	-0.0055
156	SLU 8	-0.02	-0.05	5.99	0	-0.6993	-0.0053
156	SLU 9	-0.02	-0.05	5.99	0	-0.6988	-0.0056
156	SLU 10	-0.02	-0.04	6.51	0	-0.7596	-0.0051
156	SLU 11	-0.03	-0.04	6.66	0	-0.7768	-0.0046
156	SLU 12	-0.03	-0.04	6.65	0	-0.7762	-0.0049
156	SLU 13	-0.03	-0.04	6.6	0	-0.7701	-0.0052
156	SLU 14	-0.03	-0.04	6.75	0	-0.7873	-0.0047
156	SLU 15	-0.03	-0.04	6.74	0	-0.7868	-0.005
156	SLU 16	-0.03	-0.04	6.7	0	-0.7815	-0.0048
156	SLU 17	-0.03	-0.04	6.69	0	-0.7809	-0.0051
156	SLU 18	-0.03	-0.04	6.82	0	-0.7957	-0.0045
156	SLU 19	-0.03	-0.04	6.82	0	-0.7951	-0.0047
156	SLU 20	-0.03	-0.04	6.91	0	-0.8062	-0.0045
156	SLU 21	-0.03	-0.04	6.91	0	-0.8056	-0.0048

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
156	SLU 22	-0.02	-0.04	6.43	0	-0.7499	-0.0042
156	SLU 23	-0.02	-0.04	6.42	0	-0.749	-0.0047
156	SLU 24	-0.03	-0.04	6.57	0	-0.7663	-0.0042
156	SLU 25	-0.02	-0.04	6.56	0	-0.7657	-0.0045
156	SLU 26	-0.02	-0.04	6.51	0	-0.7595	-0.0048
156	SLU 27	-0.03	-0.04	6.66	0	-0.7768	-0.0043
156	SLU 28	-0.02	-0.04	6.65	0	-0.7762	-0.0045
156	SLU 29	-0.03	-0.04	6.61	0	-0.7709	-0.0044
156	SLU 30	-0.02	-0.04	6.6	0	-0.7704	-0.0047
156	SLU 31	-0.03	-0.04	7.12	0	-0.8312	-0.0042
156	SLU 32	-0.03	-0.03	7.27	0	-0.8484	-0.0037
156	SLU 33	-0.03	-0.03	7.27	0	-0.8479	-0.004
156	SLU 34	-0.03	-0.04	7.21	0	-0.8417	-0.0043
156	SLU 35	-0.03	-0.03	7.36	0	-0.8589	-0.0038
156	SLU 36	-0.03	-0.03	7.36	0	-0.8584	-0.004
156	SLU 37	-0.03	-0.03	7.31	0	-0.8531	-0.0039
156	SLU 38	-0.03	-0.04	7.31	0	-0.8526	-0.0042
156	SLU 39	-0.03	-0.03	7.43	0	-0.8673	-0.0035
156	SLU 40	-0.03	-0.03	7.43	0	-0.8668	-0.0038
156	SLU 41	-0.03	-0.03	7.52	0	-0.8778	-0.0036
156	SLU 42	-0.03	-0.03	7.52	0	-0.8773	-0.0039
156	SLU 43	-0.03	-0.06	7.35	0	-0.8572	-0.007
156	SLU 44	-0.02	-0.06	7.34	0	-0.8563	-0.0075
156	SLU 45	-0.03	-0.06	7.49	0	-0.8735	-0.007
156	SLU 46	-0.03	-0.06	7.48	0	-0.873	-0.0073
156	SLU 47	-0.03	-0.06	7.43	0	-0.8668	-0.0076
156	SLU 48	-0.03	-0.06	7.58	0	-0.8841	-0.0071
156	SLU 49	-0.03	-0.06	7.57	0	-0.8835	-0.0073
156	SLU 50	-0.03	-0.06	7.53	0	-0.8782	-0.0072
156	SLU 51	-0.03	-0.06	7.52	0	-0.8777	-0.0074
156	SLU 52	-0.03	-0.06	8.04	0	-0.9385	-0.007
156	SLU 53	-0.03	-0.06	8.19	0	-0.9557	-0.0065
156	SLU 54	-0.03	-0.06	8.19	0	-0.9552	-0.0068
156	SLU 55	-0.03	-0.06	8.13	0	-0.949	-0.0071
156	SLU 56	-0.04	-0.06	8.28	0	-0.9662	-0.0066
156	SLU 57	-0.03	-0.06	8.28	0	-0.9657	-0.0068
156	SLU 58	-0.04	-0.06	8.23	0	-0.9604	-0.0067
156	SLU 59	-0.03	-0.06	8.23	0	-0.9599	-0.007
156	SLU 60	-0.04	-0.05	8.35	0	-0.9746	-0.0063
156	SLU 61	-0.03	-0.06	8.35	0	-0.974	-0.0066
156	SLU 62	-0.04	-0.05	8.44	0	-0.9851	-0.0064
156	SLU 63	-0.03	-0.06	8.44	0	-0.9846	-0.0067
156	SLU 64	-0.03	-0.05	7.96	0	-0.9288	-0.0061
156	SLU 65	-0.03	-0.06	7.95	0	-0.9279	-0.0066
156	SLU 66	-0.03	-0.05	8.1	0	-0.9452	-0.0061
156	SLU 67	-0.03	-0.05	8.1	0	-0.9446	-0.0063
156	SLU 68	-0.03	-0.06	8.04	0	-0.9385	-0.0066
156	SLU 69	-0.03	-0.05	8.19	0	-0.9557	-0.0061
156	SLU 70	-0.03	-0.05	8.19	0	-0.9552	-0.0064
156	SLU 71	-0.03	-0.05	8.14	0	-0.9499	-0.0062
156	SLU 72	-0.03	-0.06	8.14	0	-0.9493	-0.0065
156	SLU 73	-0.03	-0.05	8.66	0	-1.0101	-0.0061
156	SLU 74	-0.04	-0.05	8.81	0	-1.0273	-0.0056
156	SLU 75	-0.03	-0.05	8.8	0	-1.0268	-0.0058
156	SLU 76	-0.03	-0.05	8.75	0	-1.0206	-0.0061
156	SLU 77	-0.04	-0.05	8.9	0	-1.0379	-0.0056
156	SLU 78	-0.04	-0.05	8.89	0	-1.0373	-0.0059
156	SLU 79	-0.04	-0.05	8.85	0	-1.032	-0.0058
156	SLU 80	-0.04	-0.05	8.84	0	-1.0315	-0.006
156	SLU 81	-0.04	-0.05	8.97	0	-1.0462	-0.0054
156	SLU 82	-0.04	-0.05	8.96	0	-1.0457	-0.0057
156	SLU 83	-0.04	-0.05	9.06	0	-1.0567	-0.0055
156	SLU 84	-0.04	-0.05	9.05	0	-1.0562	-0.0057
156	SLE RA 1	-0.02	-0.04	5.99	0	-0.6987	-0.0049
156	SLE RA 2	-0.02	-0.04	5.98	0	-0.6981	-0.0052
156	SLE RA 3	-0.02	-0.04	6.08	0	-0.7096	-0.0049
156	SLE RA 4	-0.02	-0.04	6.08	0	-0.7093	-0.005
156	SLE RA 5	-0.02	-0.04	6.04	0	-0.7052	-0.0052
156	SLE RA 6	-0.02	-0.04	6.14	0	-0.7166	-0.0049
156	SLE RA 7	-0.02	-0.04	6.14	0	-0.7163	-0.0051
156	SLE RA 8	-0.02	-0.04	6.11	0	-0.7128	-0.005
156	SLE RA 9	-0.02	-0.04	6.11	0	-0.7124	-0.0052
156	SLE RA 10	-0.02	-0.04	6.45	0	-0.7529	-0.0049
156	SLE RA 11	-0.03	-0.04	6.55	0	-0.7644	-0.0045
156	SLE RA 12	-0.03	-0.04	6.55	0	-0.7641	-0.0047
156	SLE RA 13	-0.02	-0.04	6.51	0	-0.7599	-0.0049
156	SLE RA 14	-0.03	-0.04	6.61	0	-0.7714	-0.0046
156	SLE RA 15	-0.03	-0.04	6.61	0	-0.7711	-0.0048
156	SLE RA 16	-0.03	-0.04	6.58	0	-0.7675	-0.0047
156	SLE RA 17	-0.03	-0.04	6.58	0	-0.7672	-0.0048
156	SLE RA 18	-0.03	-0.04	6.66	0	-0.777	-0.0044
156	SLE RA 19	-0.03	-0.04	6.66	0	-0.7766	-0.0046
156	SLE RA 20	-0.03	-0.04	6.72	0	-0.784	-0.0045
156	SLE RA 21	-0.03	-0.04	6.72	0	-0.7836	-0.0047
156	SLE FR 1	-0.02	-0.04	5.99	0	-0.6987	-0.0049
156	SLE FR 2	-0.02	-0.04	5.99	0	-0.6986	-0.005
156	SLE FR 3	-0.02	-0.04	6.01	0	-0.7015	-0.0049
156	SLE FR 4	-0.02	-0.04	6.19	0	-0.7221	-0.0048
156	SLE FR 5	-0.02	-0.04	6.21	0	-0.725	-0.0048
156	SLE FR 6	-0.03	-0.04	6.32	0	-0.7379	-0.0047

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
156	SLE QP 1	-0.02	-0.04	5.99	0	-0.6987	-0.0049
156	SLE QP 2	-0.02	-0.04	6.19	0	-0.7222	-0.0048
156	SLD 1	0.47	0.05	6.11	0	-0.7126	0.0063
156	SLD 2	0.53	0.07	6.13	0	-0.7155	0.0076
156	SLD 3	0.48	-0.07	5.9	0	-0.6886	-0.0087
156	SLD 4	0.54	-0.06	5.93	0	-0.6915	-0.0074
156	SLD 5	0.1	0.18	6.47	0	-0.7552	0.021
156	SLD 6	0.14	0.19	6.49	0	-0.7571	0.0219
156	SLD 7	0.13	-0.25	5.79	0	-0.6752	-0.0288
156	SLD 8	0.17	-0.24	5.8	0	-0.6772	-0.028
156	SLD 9	-0.22	0.16	6.58	0	-0.7673	0.0185
156	SLD 10	-0.18	0.17	6.59	0	-0.7692	0.0193
156	SLD 11	-0.19	-0.27	5.89	0	-0.6873	-0.0314
156	SLD 12	-0.15	-0.26	5.91	0	-0.6893	-0.0305
156	SLD 13	-0.59	-0.02	6.45	0	-0.7529	-0.0021
156	SLD 14	-0.53	-0.01	6.48	0	-0.7558	-0.0008
156	SLD 15	-0.58	-0.15	6.25	0	-0.7289	-0.0171
156	SLD 16	-0.52	-0.14	6.27	0	-0.7318	-0.0158
156	SLV 1	1.14	0.18	5.99	0	-0.6988	0.0204
156	SLV 2	1.27	0.2	6.05	0	-0.7056	0.0236
156	SLV 3	1.16	-0.11	5.52	0	-0.6445	-0.0134
156	SLV 4	1.3	-0.09	5.58	0	-0.6513	-0.0103
156	SLV 5	0.27	0.46	6.83	0	-0.7963	0.0536
156	SLV 6	0.36	0.48	6.86	0	-0.8007	0.0556
156	SLV 7	0.34	-0.51	5.27	0	-0.6154	-0.0592
156	SLV 8	0.43	-0.49	5.31	0	-0.6198	-0.0572
156	SLV 9	-0.48	0.41	7.07	0	-0.8246	0.0477
156	SLV 10	-0.39	0.43	7.11	0	-0.829	0.0497
156	SLV 11	-0.4	-0.56	5.52	0	-0.6437	-0.0651
156	SLV 12	-0.32	-0.54	5.56	0	-0.6481	-0.0631
156	SLV 13	-1.34	0.01	6.8	0	-0.7931	0.0008
156	SLV 14	-1.21	0.03	6.86	0	-0.7999	0.0039
156	SLV 15	-1.32	-0.28	6.33	0	-0.7389	-0.0331
156	SLV 16	-1.19	-0.26	6.39	0	-0.7456	-0.03
156	CRTFP Ux+	0	0	0	0	0	0
156	CRTFP Ux-	0	0	0	0	0	0
156	CRTFP Uy+	0	0	0	0	0	0
156	CRTFP Uy-	0	0	0	0	0	0
158	SLU 1	-0.02	-0.05	5.83	0	-0.5834	-0.0052
158	SLU 2	-0.02	-0.06	5.83	0	-0.5827	-0.0056
158	SLU 3	-0.02	-0.05	5.97	0	-0.5974	-0.0052
158	SLU 4	-0.02	-0.05	5.97	0	-0.597	-0.0055
158	SLU 5	-0.02	-0.06	5.92	0	-0.5917	-0.0057
158	SLU 6	-0.02	-0.05	6.06	0	-0.6064	-0.0053
158	SLU 7	-0.02	-0.06	6.06	0	-0.606	-0.0055
158	SLU 8	-0.02	-0.05	6.01	0	-0.6014	-0.0054
158	SLU 9	-0.02	-0.06	6.01	0	-0.601	-0.0056
158	SLU 10	-0.02	-0.05	6.53	0	-0.653	-0.0053
158	SLU 11	-0.03	-0.05	6.68	0	-0.6677	-0.0049
158	SLU 12	-0.03	-0.05	6.67	0	-0.6673	-0.0051
158	SLU 13	-0.02	-0.05	6.62	0	-0.662	-0.0054
158	SLU 14	-0.03	-0.05	6.77	0	-0.6767	-0.005
158	SLU 15	-0.03	-0.05	6.76	0	-0.6763	-0.0052
158	SLU 16	-0.03	-0.05	6.72	0	-0.6717	-0.0051
158	SLU 17	-0.03	-0.05	6.71	0	-0.6713	-0.0053
158	SLU 18	-0.03	-0.05	6.84	0	-0.6838	-0.0048
158	SLU 19	-0.03	-0.05	6.83	0	-0.6834	-0.005
158	SLU 20	-0.03	-0.05	6.93	0	-0.6929	-0.0049
158	SLU 21	-0.03	-0.05	6.92	0	-0.6924	-0.0051
158	SLU 22	-0.02	-0.05	6.45	0	-0.645	-0.0045
158	SLU 23	-0.02	-0.05	6.44	0	-0.6442	-0.0049
158	SLU 24	-0.02	-0.05	6.59	0	-0.659	-0.0045
158	SLU 25	-0.02	-0.05	6.59	0	-0.6585	-0.0048
158	SLU 26	-0.02	-0.05	6.53	0	-0.6532	-0.005
158	SLU 27	-0.03	-0.05	6.68	0	-0.668	-0.0046
158	SLU 28	-0.02	-0.05	6.68	0	-0.6675	-0.0048
158	SLU 29	-0.03	-0.05	6.63	0	-0.663	-0.0047
158	SLU 30	-0.02	-0.05	6.63	0	-0.6626	-0.0049
158	SLU 31	-0.03	-0.05	7.15	0	-0.7145	-0.0046
158	SLU 32	-0.03	-0.04	7.29	0	-0.7293	-0.0042
158	SLU 33	-0.03	-0.04	7.29	0	-0.7288	-0.0044
158	SLU 34	-0.03	-0.05	7.24	0	-0.7235	-0.0047
158	SLU 35	-0.03	-0.04	7.38	0	-0.7383	-0.0043
158	SLU 36	-0.03	-0.05	7.38	0	-0.7379	-0.0045
158	SLU 37	-0.03	-0.04	7.33	0	-0.7333	-0.0044
158	SLU 38	-0.03	-0.05	7.33	0	-0.7329	-0.0046
158	SLU 39	-0.03	-0.04	7.45	0	-0.7454	-0.0041
158	SLU 40	-0.03	-0.04	7.45	0	-0.745	-0.0043
158	SLU 41	-0.03	-0.04	7.54	0	-0.7544	-0.0042
158	SLU 42	-0.03	-0.04	7.54	0	-0.754	-0.0044
158	SLU 43	-0.03	-0.07	7.37	0	-0.7373	-0.007
158	SLU 44	-0.02	-0.07	7.37	0	-0.7366	-0.0074
158	SLU 45	-0.03	-0.07	7.51	0	-0.7513	-0.007
158	SLU 46	-0.03	-0.07	7.51	0	-0.7509	-0.0073
158	SLU 47	-0.03	-0.08	7.46	0	-0.7456	-0.0075
158	SLU 48	-0.03	-0.07	7.6	0	-0.7603	-0.0071
158	SLU 49	-0.03	-0.07	7.6	0	-0.7599	-0.0073
158	SLU 50	-0.03	-0.07	7.55	0	-0.7554	-0.0072
158	SLU 51	-0.03	-0.07	7.55	0	-0.7549	-0.0074
158	SLU 52	-0.03	-0.07	8.07	0	-0.8069	-0.0071

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLU 53	-0.03	-0.07	8.22	0	-0.8216	-0.0067
158	SLU 54	-0.03	-0.07	8.21	0	-0.8212	-0.0069
158	SLU 55	-0.03	-0.07	8.16	0	-0.8159	-0.0072
158	SLU 56	-0.04	-0.07	8.31	0	-0.8307	-0.0068
158	SLU 57	-0.03	-0.07	8.3	0	-0.8302	-0.007
158	SLU 58	-0.04	-0.07	8.26	0	-0.8257	-0.0069
158	SLU 59	-0.03	-0.07	8.25	0	-0.8252	-0.0071
158	SLU 60	-0.04	-0.07	8.38	0	-0.8378	-0.0066
158	SLU 61	-0.03	-0.07	8.37	0	-0.8373	-0.0068
158	SLU 62	-0.04	-0.07	8.47	0	-0.8468	-0.0067
158	SLU 63	-0.03	-0.07	8.46	0	-0.8463	-0.0069
158	SLU 64	-0.03	-0.06	7.99	0	-0.7989	-0.0064
158	SLU 65	-0.03	-0.07	7.98	0	-0.7981	-0.0067
158	SLU 66	-0.03	-0.06	8.13	0	-0.8129	-0.0063
158	SLU 67	-0.03	-0.07	8.12	0	-0.8124	-0.0066
158	SLU 68	-0.03	-0.07	8.07	0	-0.8071	-0.0068
158	SLU 69	-0.03	-0.06	8.22	0	-0.8219	-0.0064
158	SLU 70	-0.03	-0.07	8.21	0	-0.8215	-0.0067
158	SLU 71	-0.03	-0.07	8.17	0	-0.8169	-0.0065
158	SLU 72	-0.03	-0.07	8.16	0	-0.8165	-0.0067
158	SLU 73	-0.03	-0.06	8.68	0	-0.8684	-0.0064
158	SLU 74	-0.04	-0.06	8.83	0	-0.8832	-0.006
158	SLU 75	-0.03	-0.06	8.83	0	-0.8827	-0.0063
158	SLU 76	-0.03	-0.06	8.77	0	-0.8775	-0.0065
158	SLU 77	-0.04	-0.06	8.92	0	-0.8922	-0.0061
158	SLU 78	-0.03	-0.06	8.92	0	-0.8918	-0.0063
158	SLU 79	-0.04	-0.06	8.87	0	-0.8872	-0.0062
158	SLU 80	-0.03	-0.06	8.87	0	-0.8868	-0.0064
158	SLU 81	-0.04	-0.06	8.99	0	-0.8993	-0.0059
158	SLU 82	-0.04	-0.06	8.99	0	-0.8989	-0.0061
158	SLU 83	-0.04	-0.06	9.08	0	-0.9083	-0.006
158	SLU 84	-0.04	-0.06	9.08	0	-0.9079	-0.0062
158	SLE RA 1	-0.02	-0.05	6.01	0	-0.601	-0.005
158	SLE RA 2	-0.02	-0.05	6	0	-0.6005	-0.0053
158	SLE RA 3	-0.02	-0.05	6.1	0	-0.6103	-0.005
158	SLE RA 4	-0.02	-0.05	6.1	0	-0.61	-0.0052
158	SLE RA 5	-0.02	-0.05	6.07	0	-0.6065	-0.0053
158	SLE RA 6	-0.02	-0.05	6.16	0	-0.6163	-0.0051
158	SLE RA 7	-0.02	-0.05	6.16	0	-0.616	-0.0052
158	SLE RA 8	-0.02	-0.05	6.13	0	-0.613	-0.0052
158	SLE RA 9	-0.02	-0.05	6.13	0	-0.6127	-0.0053
158	SLE RA 10	-0.02	-0.05	6.47	0	-0.6474	-0.0051
158	SLE RA 11	-0.03	-0.05	6.57	0	-0.6572	-0.0048
158	SLE RA 12	-0.03	-0.05	6.57	0	-0.6569	-0.005
158	SLE RA 13	-0.02	-0.05	6.53	0	-0.6534	-0.0051
158	SLE RA 14	-0.03	-0.05	6.63	0	-0.6632	-0.0049
158	SLE RA 15	-0.03	-0.05	6.63	0	-0.6629	-0.005
158	SLE RA 16	-0.03	-0.05	6.6	0	-0.6599	-0.0049
158	SLE RA 17	-0.03	-0.05	6.6	0	-0.6596	-0.0051
158	SLE RA 18	-0.03	-0.05	6.68	0	-0.668	-0.0047
158	SLE RA 19	-0.03	-0.05	6.68	0	-0.6677	-0.0049
158	SLE RA 20	-0.03	-0.05	6.74	0	-0.674	-0.0048
158	SLE RA 21	-0.03	-0.05	6.74	0	-0.6737	-0.0049
158	SLE FR 1	-0.02	-0.05	6.01	0	-0.601	-0.005
158	SLE FR 2	-0.02	-0.05	6.01	0	-0.6009	-0.0051
158	SLE FR 3	-0.02	-0.05	6.03	0	-0.6034	-0.0051
158	SLE FR 4	-0.02	-0.05	6.21	0	-0.621	-0.005
158	SLE FR 5	-0.02	-0.05	6.23	0	-0.6235	-0.005
158	SLE FR 6	-0.03	-0.05	6.34	0	-0.6345	-0.0049
158	SLE QP 1	-0.02	-0.05	6.01	0	-0.601	-0.005
158	SLE QP 2	-0.02	-0.05	6.21	0	-0.6211	-0.005
158	SLD 1	0.47	0.05	6.08	0	-0.608	0.005
158	SLD 2	0.53	0.06	6.11	0	-0.6107	0.0064
158	SLD 3	0.48	-0.08	5.87	0	-0.5873	-0.0077
158	SLD 4	0.54	-0.06	5.9	0	-0.5901	-0.0063
158	SLD 5	0.1	0.17	6.48	0	-0.648	0.0171
158	SLD 6	0.14	0.18	6.5	0	-0.6498	0.018
158	SLD 7	0.13	-0.25	5.79	0	-0.5791	-0.0253
158	SLD 8	0.17	-0.24	5.81	0	-0.5809	-0.0244
158	SLD 9	-0.22	0.14	6.61	0	-0.6612	0.0145
158	SLD 10	-0.18	0.15	6.63	0	-0.663	0.0154
158	SLD 11	-0.19	-0.28	5.92	0	-0.5924	-0.0279
158	SLD 12	-0.15	-0.27	5.94	0	-0.5942	-0.027
158	SLD 13	-0.59	-0.04	6.52	0	-0.6521	-0.0036
158	SLD 14	-0.53	-0.02	6.55	0	-0.6548	-0.0022
158	SLD 15	-0.58	-0.16	6.31	0	-0.6314	-0.0163
158	SLD 16	-0.52	-0.15	6.34	0	-0.6342	-0.0149
158	SLV 1	1.14	0.18	5.9	0	-0.5897	0.018
158	SLV 2	1.27	0.21	5.96	0	-0.5961	0.0212
158	SLV 3	1.16	-0.11	5.43	0	-0.5429	-0.0108
158	SLV 4	1.29	-0.08	5.49	0	-0.5493	-0.0076
158	SLV 5	0.27	0.45	6.81	0	-0.6815	0.045
158	SLV 6	0.36	0.47	6.86	0	-0.6856	0.0471
158	SLV 7	0.34	-0.51	5.26	0	-0.5256	-0.0509
158	SLV 8	0.43	-0.49	5.3	0	-0.5297	-0.0488
158	SLV 9	-0.48	0.39	7.12	0	-0.7124	0.0389
158	SLV 10	-0.39	0.41	7.17	0	-0.7166	0.041
158	SLV 11	-0.4	-0.57	5.57	0	-0.5565	-0.057
158	SLV 12	-0.31	-0.55	5.61	0	-0.5607	-0.0549
158	SLV 13	-1.34	-0.02	6.93	0	-0.6929	-0.0023

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLV 14	-1.21	0.01	6.99	0	-0.6992	0.0009
158	SLV 15	-1.32	-0.31	6.46	0	-0.6461	-0.0311
158	SLV 16	-1.18	-0.28	6.52	0	-0.6524	-0.0279
158	CRTFP Ux+	0	0	0	0	0	0
158	CRTFP Ux-	0	0	0	0	0	0
158	CRTFP Uy+	0	0	0	0	0	0
158	CRTFP Uy-	0	0	0	0	0	0
160	SLU 1	-0.02	-0.06	5.84	0	-0.4866	-0.0051
160	SLU 2	-0.02	-0.06	5.83	0	-0.486	-0.0054
160	SLU 3	-0.02	-0.06	5.98	0	-0.4983	-0.0051
160	SLU 4	-0.02	-0.06	5.97	0	-0.4979	-0.0053
160	SLU 5	-0.02	-0.07	5.92	0	-0.4935	-0.0054
160	SLU 6	-0.02	-0.06	6.07	0	-0.5058	-0.0052
160	SLU 7	-0.02	-0.06	6.06	0	-0.5054	-0.0053
160	SLU 8	-0.02	-0.06	6.02	0	-0.5016	-0.0052
160	SLU 9	-0.02	-0.06	6.02	0	-0.5013	-0.0054
160	SLU 10	-0.02	-0.06	6.53	0	-0.5444	-0.0052
160	SLU 11	-0.03	-0.06	6.68	0	-0.5566	-0.0049
160	SLU 12	-0.03	-0.06	6.68	0	-0.5563	-0.0051
160	SLU 13	-0.02	-0.06	6.62	0	-0.5519	-0.0053
160	SLU 14	-0.03	-0.06	6.77	0	-0.5641	-0.005
160	SLU 15	-0.03	-0.06	6.77	0	-0.5638	-0.0052
160	SLU 16	-0.03	-0.06	6.72	0	-0.56	-0.0051
160	SLU 17	-0.03	-0.06	6.72	0	-0.5596	-0.0052
160	SLU 18	-0.03	-0.06	6.84	0	-0.57	-0.0048
160	SLU 19	-0.03	-0.06	6.84	0	-0.5696	-0.005
160	SLU 20	-0.03	-0.06	6.93	0	-0.5775	-0.0049
160	SLU 21	-0.03	-0.06	6.93	0	-0.5771	-0.0051
160	SLU 22	-0.02	-0.05	6.46	0	-0.538	-0.0046
160	SLU 23	-0.02	-0.06	6.45	0	-0.5374	-0.0049
160	SLU 24	-0.02	-0.06	6.6	0	-0.5496	-0.0046
160	SLU 25	-0.02	-0.06	6.59	0	-0.5493	-0.0048
160	SLU 26	-0.02	-0.06	6.54	0	-0.5449	-0.005
160	SLU 27	-0.02	-0.06	6.69	0	-0.5571	-0.0047
160	SLU 28	-0.02	-0.06	6.68	0	-0.5568	-0.0049
160	SLU 29	-0.02	-0.06	6.64	0	-0.553	-0.0047
160	SLU 30	-0.02	-0.06	6.63	0	-0.5526	-0.0049
160	SLU 31	-0.03	-0.06	7.15	0	-0.5957	-0.0047
160	SLU 32	-0.03	-0.05	7.3	0	-0.608	-0.0044
160	SLU 33	-0.03	-0.06	7.29	0	-0.6076	-0.0046
160	SLU 34	-0.03	-0.06	7.24	0	-0.6032	-0.0048
160	SLU 35	-0.03	-0.05	7.39	0	-0.6155	-0.0045
160	SLU 36	-0.03	-0.06	7.38	0	-0.6151	-0.0047
160	SLU 37	-0.03	-0.05	7.34	0	-0.6113	-0.0046
160	SLU 38	-0.03	-0.06	7.33	0	-0.611	-0.0047
160	SLU 39	-0.03	-0.05	7.46	0	-0.6213	-0.0043
160	SLU 40	-0.03	-0.05	7.45	0	-0.621	-0.0045
160	SLU 41	-0.03	-0.05	7.55	0	-0.6288	-0.0044
160	SLU 42	-0.03	-0.06	7.54	0	-0.6285	-0.0046
160	SLU 43	-0.03	-0.08	7.38	0	-0.615	-0.0067
160	SLU 44	-0.02	-0.08	7.37	0	-0.6144	-0.007
160	SLU 45	-0.03	-0.08	7.52	0	-0.6267	-0.0068
160	SLU 46	-0.03	-0.08	7.52	0	-0.6263	-0.0069
160	SLU 47	-0.02	-0.09	7.46	0	-0.6219	-0.0071
160	SLU 48	-0.03	-0.08	7.61	0	-0.6342	-0.0069
160	SLU 49	-0.03	-0.08	7.61	0	-0.6338	-0.007
160	SLU 50	-0.03	-0.08	7.56	0	-0.63	-0.0069
160	SLU 51	-0.03	-0.09	7.56	0	-0.6297	-0.0071
160	SLU 52	-0.03	-0.08	8.07	0	-0.6728	-0.0069
160	SLU 53	-0.03	-0.08	8.22	0	-0.685	-0.0066
160	SLU 54	-0.03	-0.08	8.22	0	-0.6847	-0.0068
160	SLU 55	-0.03	-0.08	8.16	0	-0.6803	-0.007
160	SLU 56	-0.03	-0.08	8.31	0	-0.6925	-0.0067
160	SLU 57	-0.03	-0.08	8.31	0	-0.6922	-0.0069
160	SLU 58	-0.03	-0.08	8.26	0	-0.6884	-0.0067
160	SLU 59	-0.03	-0.08	8.26	0	-0.688	-0.0069
160	SLU 60	-0.03	-0.08	8.38	0	-0.6984	-0.0065
160	SLU 61	-0.03	-0.08	8.38	0	-0.698	-0.0067
160	SLU 62	-0.04	-0.08	8.47	0	-0.7059	-0.0066
160	SLU 63	-0.03	-0.08	8.47	0	-0.7055	-0.0068
160	SLU 64	-0.03	-0.08	8	0	-0.6664	-0.0063
160	SLU 65	-0.03	-0.08	7.99	0	-0.6657	-0.0066
160	SLU 66	-0.03	-0.08	8.14	0	-0.678	-0.0063
160	SLU 67	-0.03	-0.08	8.13	0	-0.6776	-0.0065
160	SLU 68	-0.03	-0.08	8.08	0	-0.6732	-0.0066
160	SLU 69	-0.03	-0.08	8.23	0	-0.6855	-0.0064
160	SLU 70	-0.03	-0.08	8.22	0	-0.6851	-0.0065
160	SLU 71	-0.03	-0.08	8.18	0	-0.6814	-0.0064
160	SLU 72	-0.03	-0.08	8.17	0	-0.681	-0.0066
160	SLU 73	-0.03	-0.08	8.69	0	-0.7241	-0.0064
160	SLU 74	-0.04	-0.07	8.84	0	-0.7364	-0.0061
160	SLU 75	-0.03	-0.08	8.83	0	-0.736	-0.0063
160	SLU 76	-0.03	-0.08	8.78	0	-0.7316	-0.0065
160	SLU 77	-0.04	-0.07	8.93	0	-0.7439	-0.0062
160	SLU 78	-0.03	-0.08	8.92	0	-0.7435	-0.0064
160	SLU 79	-0.04	-0.08	8.88	0	-0.7397	-0.0063
160	SLU 80	-0.03	-0.08	8.87	0	-0.7394	-0.0064
160	SLU 81	-0.04	-0.07	9	0	-0.7497	-0.006
160	SLU 82	-0.03	-0.07	8.99	0	-0.7494	-0.0062
160	SLU 83	-0.04	-0.07	9.09	0	-0.7572	-0.0061

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
160	SLU 84	-0.04	-0.08	9.08	0	-0.7569	-0.0063
160	SLE RA 1	-0.02	-0.06	6.02	0	-0.5013	-0.0049
160	SLE RA 2	-0.02	-0.06	6.01	0	-0.5009	-0.0051
160	SLE RA 3	-0.02	-0.06	6.11	0	-0.5091	-0.0049
160	SLE RA 4	-0.02	-0.06	6.11	0	-0.5088	-0.0051
160	SLE RA 5	-0.02	-0.06	6.07	0	-0.5059	-0.0052
160	SLE RA 6	-0.02	-0.06	6.17	0	-0.5141	-0.005
160	SLE RA 7	-0.02	-0.06	6.17	0	-0.5138	-0.0051
160	SLE RA 8	-0.02	-0.06	6.14	0	-0.5113	-0.005
160	SLE RA 9	-0.02	-0.06	6.13	0	-0.5111	-0.0052
160	SLE RA 10	-0.02	-0.06	6.48	0	-0.5398	-0.005
160	SLE RA 11	-0.03	-0.06	6.58	0	-0.548	-0.0048
160	SLE RA 12	-0.02	-0.06	6.57	0	-0.5477	-0.0049
160	SLE RA 13	-0.02	-0.06	6.54	0	-0.5448	-0.0051
160	SLE RA 14	-0.03	-0.06	6.64	0	-0.553	-0.0049
160	SLE RA 15	-0.03	-0.06	6.63	0	-0.5527	-0.005
160	SLE RA 16	-0.03	-0.06	6.6	0	-0.5502	-0.0049
160	SLE RA 17	-0.03	-0.06	6.6	0	-0.55	-0.005
160	SLE RA 18	-0.03	-0.06	6.68	0	-0.5569	-0.0048
160	SLE RA 19	-0.03	-0.06	6.68	0	-0.5566	-0.0049
160	SLE RA 20	-0.03	-0.06	6.74	0	-0.5619	-0.0048
160	SLE RA 21	-0.03	-0.06	6.74	0	-0.5616	-0.0049
160	SLE FR 1	-0.02	-0.06	6.02	0	-0.5013	-0.0049
160	SLE FR 2	-0.02	-0.06	6.01	0	-0.5012	-0.005
160	SLE FR 3	-0.02	-0.06	6.04	0	-0.5033	-0.0049
160	SLE FR 4	-0.02	-0.06	6.21	0	-0.5179	-0.0049
160	SLE FR 5	-0.02	-0.06	6.24	0	-0.52	-0.0049
160	SLE FR 6	-0.02	-0.06	6.35	0	-0.5291	-0.0048
160	SLE QP 1	-0.02	-0.06	6.02	0	-0.5013	-0.0049
160	SLE QP 2	-0.02	-0.06	6.22	0	-0.518	-0.0049
160	SLD 1	0.47	0.05	6.03	0	-0.5028	0.0039
160	SLD 2	0.53	0.06	6.06	0	-0.5052	0.0052
160	SLD 3	0.48	-0.08	5.83	0	-0.4855	-0.0066
160	SLD 4	0.54	-0.06	5.86	0	-0.4879	-0.0053
160	SLD 5	0.1	0.16	6.47	0	-0.5392	0.0134
160	SLD 6	0.14	0.17	6.49	0	-0.5408	0.0143
160	SLD 7	0.13	-0.26	5.78	0	-0.4816	-0.0215
160	SLD 8	0.17	-0.25	5.8	0	-0.4832	-0.0207
160	SLD 9	-0.22	0.13	6.63	0	-0.5528	0.0109
160	SLD 10	-0.18	0.14	6.65	0	-0.5544	0.0118
160	SLD 11	-0.19	-0.29	5.94	0	-0.4951	-0.024
160	SLD 12	-0.15	-0.28	5.96	0	-0.4967	-0.0232
160	SLD 13	-0.59	-0.05	6.58	0	-0.548	-0.0045
160	SLD 14	-0.53	-0.04	6.61	0	-0.5505	-0.0031
160	SLD 15	-0.58	-0.18	6.37	0	-0.5307	-0.0149
160	SLD 16	-0.52	-0.16	6.4	0	-0.5332	-0.0136
160	SLV 1	1.13	0.18	5.78	0	-0.4818	0.0152
160	SLV 2	1.27	0.22	5.85	0	-0.4875	0.0183
160	SLV 3	1.15	-0.1	5.31	0	-0.4426	-0.0086
160	SLV 4	1.29	-0.07	5.38	0	-0.4483	-0.0054
160	SLV 5	0.27	0.44	6.79	0	-0.5655	0.0366
160	SLV 6	0.35	0.46	6.83	0	-0.5692	0.0387
160	SLV 7	0.34	-0.51	5.22	0	-0.435	-0.0425
160	SLV 8	0.43	-0.49	5.26	0	-0.4387	-0.0405
160	SLV 9	-0.47	0.37	7.17	0	-0.5973	0.0308
160	SLV 10	-0.39	0.39	7.21	0	-0.601	0.0328
160	SLV 11	-0.4	-0.58	5.6	0	-0.4667	-0.0484
160	SLV 12	-0.31	-0.56	5.65	0	-0.4704	-0.0464
160	SLV 13	-1.34	-0.05	7.05	0	-0.5876	-0.0043
160	SLV 14	-1.2	-0.01	7.12	0	-0.5933	-0.0012
160	SLV 15	-1.31	-0.34	6.58	0	-0.5485	-0.028
160	SLV 16	-1.18	-0.3	6.65	0	-0.5542	-0.0249
160	CRTFP Ux+	0	0	0	0	0	0
160	CRTFP Ux-	0	0	0	0	0	0
160	CRTFP Uy+	0	0	0	0	0	0
160	CRTFP Uy-	0	0	0	0	0	0
162	SLU 1	-0.02	-0.07	5.83	0	-0.3889	-0.0046
162	SLU 2	-0.02	-0.07	5.83	0	-0.3884	-0.0048
162	SLU 3	-0.02	-0.07	5.97	0	-0.3982	-0.0046
162	SLU 4	-0.02	-0.07	5.97	0	-0.3979	-0.0048
162	SLU 5	-0.02	-0.07	5.92	0	-0.3944	-0.0049
162	SLU 6	-0.02	-0.07	6.06	0	-0.4042	-0.0047
162	SLU 7	-0.02	-0.07	6.06	0	-0.4039	-0.0048
162	SLU 8	-0.02	-0.07	6.01	0	-0.4009	-0.0047
162	SLU 9	-0.02	-0.07	6.01	0	-0.4006	-0.0049
162	SLU 10	-0.02	-0.07	6.52	0	-0.4349	-0.0047
162	SLU 11	-0.03	-0.07	6.67	0	-0.4446	-0.0046
162	SLU 12	-0.03	-0.07	6.66	0	-0.4443	-0.0047
162	SLU 13	-0.02	-0.07	6.61	0	-0.4408	-0.0048
162	SLU 14	-0.03	-0.07	6.76	0	-0.4506	-0.0046
162	SLU 15	-0.03	-0.07	6.75	0	-0.4503	-0.0048
162	SLU 16	-0.03	-0.07	6.71	0	-0.4473	-0.0047
162	SLU 17	-0.03	-0.07	6.71	0	-0.447	-0.0048
162	SLU 18	-0.03	-0.07	6.83	0	-0.4552	-0.0045
162	SLU 19	-0.03	-0.07	6.82	0	-0.4549	-0.0046
162	SLU 20	-0.03	-0.07	6.92	0	-0.4612	-0.0046
162	SLU 21	-0.03	-0.07	6.91	0	-0.4609	-0.0047
162	SLU 22	-0.02	-0.06	6.45	0	-0.4299	-0.0043
162	SLU 23	-0.02	-0.07	6.44	0	-0.4295	-0.0045
162	SLU 24	-0.02	-0.06	6.59	0	-0.4392	-0.0043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLU 25	-0.02	-0.07	6.58	0	-0.4389	-0.0044
162	SLU 26	-0.02	-0.07	6.53	0	-0.4354	-0.0046
162	SLU 27	-0.02	-0.07	6.68	0	-0.4452	-0.0044
162	SLU 28	-0.02	-0.07	6.67	0	-0.4449	-0.0045
162	SLU 29	-0.02	-0.07	6.63	0	-0.4419	-0.0044
162	SLU 30	-0.02	-0.07	6.62	0	-0.4416	-0.0046
162	SLU 31	-0.02	-0.07	7.14	0	-0.4759	-0.0044
162	SLU 32	-0.03	-0.06	7.28	0	-0.4857	-0.0042
162	SLU 33	-0.03	-0.07	7.28	0	-0.4854	-0.0044
162	SLU 34	-0.03	-0.07	7.23	0	-0.4819	-0.0045
162	SLU 35	-0.03	-0.06	7.37	0	-0.4916	-0.0043
162	SLU 36	-0.03	-0.07	7.37	0	-0.4914	-0.0044
162	SLU 37	-0.03	-0.07	7.33	0	-0.4883	-0.0044
162	SLU 38	-0.03	-0.07	7.32	0	-0.488	-0.0045
162	SLU 39	-0.03	-0.06	7.44	0	-0.4963	-0.0042
162	SLU 40	-0.03	-0.06	7.44	0	-0.496	-0.0043
162	SLU 41	-0.03	-0.06	7.53	0	-0.5023	-0.0042
162	SLU 42	-0.03	-0.07	7.53	0	-0.502	-0.0044
162	SLU 43	-0.03	-0.09	7.37	0	-0.4915	-0.0061
162	SLU 44	-0.02	-0.09	7.37	0	-0.491	-0.0063
162	SLU 45	-0.03	-0.09	7.51	0	-0.5008	-0.0061
162	SLU 46	-0.03	-0.09	7.51	0	-0.5005	-0.0062
162	SLU 47	-0.02	-0.1	7.45	0	-0.497	-0.0064
162	SLU 48	-0.03	-0.09	7.6	0	-0.5068	-0.0062
162	SLU 49	-0.03	-0.09	7.6	0	-0.5065	-0.0063
162	SLU 50	-0.03	-0.09	7.55	0	-0.5034	-0.0062
162	SLU 51	-0.03	-0.1	7.55	0	-0.5032	-0.0064
162	SLU 52	-0.03	-0.09	8.06	0	-0.5374	-0.0062
162	SLU 53	-0.03	-0.09	8.21	0	-0.5472	-0.006
162	SLU 54	-0.03	-0.09	8.2	0	-0.5469	-0.0062
162	SLU 55	-0.03	-0.09	8.15	0	-0.5434	-0.0063
162	SLU 56	-0.03	-0.09	8.3	0	-0.5532	-0.0061
162	SLU 57	-0.03	-0.09	8.29	0	-0.5529	-0.0063
162	SLU 58	-0.03	-0.09	8.25	0	-0.5499	-0.0062
162	SLU 59	-0.03	-0.09	8.24	0	-0.5496	-0.0063
162	SLU 60	-0.03	-0.09	8.37	0	-0.5578	-0.006
162	SLU 61	-0.03	-0.09	8.36	0	-0.5575	-0.0061
162	SLU 62	-0.04	-0.09	8.46	0	-0.5638	-0.0061
162	SLU 63	-0.03	-0.09	8.45	0	-0.5635	-0.0062
162	SLU 64	-0.03	-0.09	7.99	0	-0.5325	-0.0058
162	SLU 65	-0.02	-0.09	7.98	0	-0.532	-0.006
162	SLU 66	-0.03	-0.09	8.13	0	-0.5418	-0.0058
162	SLU 67	-0.03	-0.09	8.12	0	-0.5415	-0.0059
162	SLU 68	-0.03	-0.09	8.07	0	-0.538	-0.0061
162	SLU 69	-0.03	-0.09	8.22	0	-0.5478	-0.0059
162	SLU 70	-0.03	-0.09	8.21	0	-0.5475	-0.006
162	SLU 71	-0.03	-0.09	8.17	0	-0.5445	-0.0059
162	SLU 72	-0.03	-0.09	8.16	0	-0.5442	-0.006
162	SLU 73	-0.03	-0.09	8.68	0	-0.5785	-0.0059
162	SLU 74	-0.03	-0.09	8.82	0	-0.5883	-0.0057
162	SLU 75	-0.03	-0.09	8.82	0	-0.588	-0.0059
162	SLU 76	-0.03	-0.09	8.77	0	-0.5845	-0.006
162	SLU 77	-0.04	-0.09	8.91	0	-0.5942	-0.0058
162	SLU 78	-0.03	-0.09	8.91	0	-0.5939	-0.0059
162	SLU 79	-0.04	-0.09	8.86	0	-0.5909	-0.0058
162	SLU 80	-0.03	-0.09	8.86	0	-0.5906	-0.006
162	SLU 81	-0.04	-0.08	8.98	0	-0.5989	-0.0057
162	SLU 82	-0.03	-0.09	8.98	0	-0.5986	-0.0058
162	SLU 83	-0.04	-0.09	9.07	0	-0.6049	-0.0057
162	SLU 84	-0.03	-0.09	9.07	0	-0.6046	-0.0059
162	SLE RA 1	-0.02	-0.07	6.01	0	-0.4006	-0.0045
162	SLE RA 2	-0.02	-0.07	6	0	-0.4003	-0.0046
162	SLE RA 3	-0.02	-0.07	6.1	0	-0.4068	-0.0045
162	SLE RA 4	-0.02	-0.07	6.1	0	-0.4066	-0.0046
162	SLE RA 5	-0.02	-0.07	6.06	0	-0.4043	-0.0047
162	SLE RA 6	-0.02	-0.07	6.16	0	-0.4108	-0.0046
162	SLE RA 7	-0.02	-0.07	6.16	0	-0.4106	-0.0047
162	SLE RA 8	-0.02	-0.07	6.13	0	-0.4086	-0.0046
162	SLE RA 9	-0.02	-0.07	6.13	0	-0.4084	-0.0047
162	SLE RA 10	-0.02	-0.07	6.47	0	-0.4313	-0.0046
162	SLE RA 11	-0.03	-0.07	6.57	0	-0.4378	-0.0045
162	SLE RA 12	-0.02	-0.07	6.56	0	-0.4376	-0.0046
162	SLE RA 13	-0.02	-0.07	6.53	0	-0.4352	-0.0047
162	SLE RA 14	-0.03	-0.07	6.63	0	-0.4418	-0.0045
162	SLE RA 15	-0.02	-0.07	6.62	0	-0.4416	-0.0046
162	SLE RA 16	-0.03	-0.07	6.59	0	-0.4396	-0.0046
162	SLE RA 17	-0.02	-0.07	6.59	0	-0.4394	-0.0046
162	SLE RA 18	-0.03	-0.07	6.67	0	-0.4449	-0.0044
162	SLE RA 19	-0.03	-0.07	6.67	0	-0.4447	-0.0045
162	SLE RA 20	-0.03	-0.07	6.73	0	-0.4488	-0.0045
162	SLE RA 21	-0.03	-0.07	6.73	0	-0.4486	-0.0046
162	SLE FR 1	-0.02	-0.07	6.01	0	-0.4006	-0.0045
162	SLE FR 2	-0.02	-0.07	6.01	0	-0.4006	-0.0045
162	SLE FR 3	-0.02	-0.07	6.03	0	-0.4022	-0.0045
162	SLE FR 4	-0.02	-0.07	6.21	0	-0.4138	-0.0045
162	SLE FR 5	-0.02	-0.07	6.23	0	-0.4155	-0.0045
162	SLE FR 6	-0.02	-0.07	6.34	0	-0.4227	-0.0045
162	SLE QP 1	-0.02	-0.07	6.01	0	-0.4006	-0.0045
162	SLE QP 2	-0.02	-0.07	6.21	0	-0.4139	-0.0045
162	SLD 1	0.47	0.04	5.97	0	-0.3982	0.0028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLD 2	0.53	0.06	6	0	-0.4003	0.004
162	SLD 3	0.48	-0.08	5.76	0	-0.3843	-0.0055
162	SLD 4	0.54	-0.06	5.8	0	-0.3864	-0.0043
162	SLD 5	0.1	0.15	6.45	0	-0.4299	0.01
162	SLD 6	0.14	0.16	6.47	0	-0.4313	0.0109
162	SLD 7	0.13	-0.26	5.75	0	-0.3836	-0.0176
162	SLD 8	0.17	-0.25	5.77	0	-0.3849	-0.0168
162	SLD 9	-0.22	0.12	6.64	0	-0.4428	0.0078
162	SLD 10	-0.18	0.13	6.66	0	-0.4442	0.0086
162	SLD 11	-0.18	-0.3	5.95	0	-0.3965	-0.0198
162	SLD 12	-0.15	-0.28	5.97	0	-0.3979	-0.019
162	SLD 13	-0.58	-0.07	6.62	0	-0.4414	-0.0047
162	SLD 14	-0.52	-0.05	6.65	0	-0.4435	-0.0035
162	SLD 15	-0.57	-0.19	6.41	0	-0.4275	-0.013
162	SLD 16	-0.51	-0.18	6.44	0	-0.4296	-0.0117
162	SLV 1	1.13	0.18	5.65	0	-0.3766	0.0122
162	SLV 2	1.26	0.23	5.72	0	-0.3815	0.015
162	SLV 3	1.15	-0.1	5.18	0	-0.3452	-0.0065
162	SLV 4	1.28	-0.06	5.25	0	-0.35	-0.0037
162	SLV 5	0.27	0.43	6.74	0	-0.4496	0.0285
162	SLV 6	0.35	0.46	6.79	0	-0.4527	0.0303
162	SLV 7	0.34	-0.51	5.17	0	-0.3447	-0.0341
162	SLV 8	0.43	-0.48	5.22	0	-0.3479	-0.0322
162	SLV 9	-0.47	0.35	7.2	0	-0.4799	0.0233
162	SLV 10	-0.38	0.38	7.25	0	-0.4831	0.0251
162	SLV 11	-0.4	-0.59	5.63	0	-0.3751	-0.0393
162	SLV 12	-0.31	-0.56	5.67	0	-0.3782	-0.0374
162	SLV 13	-1.33	-0.08	7.17	0	-0.4777	-0.0052
162	SLV 14	-1.19	-0.04	7.24	0	-0.4826	-0.0024
162	SLV 15	-1.31	-0.36	6.69	0	-0.4463	-0.024
162	SLV 16	-1.17	-0.32	6.77	0	-0.4512	-0.0212
162	CRTFP Ux+	0	0	0	0	0	0
162	CRTFP Ux-	0	0	0	0	0	0
162	CRTFP Uy+	0	0	0	0	0	0
162	CRTFP Uy-	0	0	0	0	0	0
164	SLU 1	-0.02	-0.08	5.75	0	-0.2873	-0.0038
164	SLU 2	-0.02	-0.08	5.74	0	-0.287	-0.0039
164	SLU 3	-0.02	-0.08	5.88	0	-0.2942	-0.0038
164	SLU 4	-0.02	-0.08	5.88	0	-0.294	-0.0039
164	SLU 5	-0.02	-0.08	5.83	0	-0.2914	-0.004
164	SLU 6	-0.02	-0.08	5.97	0	-0.2986	-0.0039
164	SLU 7	-0.02	-0.08	5.97	0	-0.2984	-0.004
164	SLU 8	-0.02	-0.08	5.92	0	-0.2961	-0.0039
164	SLU 9	-0.02	-0.08	5.92	0	-0.2959	-0.004
164	SLU 10	-0.02	-0.08	6.42	0	-0.3212	-0.004
164	SLU 11	-0.03	-0.08	6.57	0	-0.3284	-0.0038
164	SLU 12	-0.02	-0.08	6.56	0	-0.3281	-0.0039
164	SLU 13	-0.02	-0.08	6.51	0	-0.3256	-0.004
164	SLU 14	-0.03	-0.08	6.66	0	-0.3328	-0.0039
164	SLU 15	-0.03	-0.08	6.65	0	-0.3326	-0.004
164	SLU 16	-0.03	-0.08	6.61	0	-0.3303	-0.0039
164	SLU 17	-0.03	-0.08	6.6	0	-0.3301	-0.004
164	SLU 18	-0.03	-0.08	6.72	0	-0.3362	-0.0038
164	SLU 19	-0.03	-0.08	6.72	0	-0.336	-0.0039
164	SLU 20	-0.03	-0.08	6.81	0	-0.3406	-0.0039
164	SLU 21	-0.03	-0.08	6.81	0	-0.3404	-0.004
164	SLU 22	-0.02	-0.07	6.35	0	-0.3177	-0.0036
164	SLU 23	-0.02	-0.08	6.35	0	-0.3173	-0.0038
164	SLU 24	-0.02	-0.07	6.49	0	-0.3245	-0.0036
164	SLU 25	-0.02	-0.07	6.49	0	-0.3243	-0.0037
164	SLU 26	-0.02	-0.08	6.43	0	-0.3217	-0.0038
164	SLU 27	-0.02	-0.07	6.58	0	-0.3289	-0.0037
164	SLU 28	-0.02	-0.08	6.57	0	-0.3287	-0.0038
164	SLU 29	-0.02	-0.07	6.53	0	-0.3265	-0.0037
164	SLU 30	-0.02	-0.08	6.53	0	-0.3263	-0.0038
164	SLU 31	-0.02	-0.08	7.03	0	-0.3515	-0.0038
164	SLU 32	-0.03	-0.07	7.17	0	-0.3587	-0.0036
164	SLU 33	-0.03	-0.07	7.17	0	-0.3585	-0.0037
164	SLU 34	-0.02	-0.08	7.12	0	-0.3559	-0.0038
164	SLU 35	-0.03	-0.07	7.26	0	-0.3631	-0.0037
164	SLU 36	-0.03	-0.08	7.26	0	-0.3629	-0.0038
164	SLU 37	-0.03	-0.07	7.21	0	-0.3607	-0.0037
164	SLU 38	-0.03	-0.08	7.21	0	-0.3605	-0.0038
164	SLU 39	-0.03	-0.07	7.33	0	-0.3665	-0.0036
164	SLU 40	-0.03	-0.07	7.33	0	-0.3663	-0.0037
164	SLU 41	-0.03	-0.07	7.42	0	-0.3709	-0.0037
164	SLU 42	-0.03	-0.08	7.41	0	-0.3707	-0.0038
164	SLU 43	-0.03	-0.1	7.26	0	-0.3631	-0.005
164	SLU 44	-0.02	-0.1	7.25	0	-0.3627	-0.0052
164	SLU 45	-0.03	-0.1	7.4	0	-0.3699	-0.005
164	SLU 46	-0.02	-0.1	7.39	0	-0.3697	-0.0051
164	SLU 47	-0.02	-0.1	7.34	0	-0.3672	-0.0052
164	SLU 48	-0.03	-0.1	7.49	0	-0.3744	-0.0051
164	SLU 49	-0.03	-0.1	7.48	0	-0.3741	-0.0052
164	SLU 50	-0.03	-0.1	7.44	0	-0.3719	-0.0051
164	SLU 51	-0.03	-0.1	7.43	0	-0.3717	-0.0052
164	SLU 52	-0.03	-0.1	7.94	0	-0.3969	-0.0052
164	SLU 53	-0.03	-0.1	8.08	0	-0.4041	-0.005
164	SLU 54	-0.03	-0.1	8.08	0	-0.4039	-0.0051
164	SLU 55	-0.03	-0.1	8.03	0	-0.4013	-0.0052

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
164	SLU 56	-0.03	-0.1	8.17	0	-0.4086	-0.0051
164	SLU 57	-0.03	-0.1	8.17	0	-0.4083	-0.0052
164	SLU 58	-0.03	-0.1	8.12	0	-0.4061	-0.0051
164	SLU 59	-0.03	-0.1	8.12	0	-0.4059	-0.0052
164	SLU 60	-0.03	-0.1	8.24	0	-0.4119	-0.005
164	SLU 61	-0.03	-0.1	8.23	0	-0.4117	-0.0051
164	SLU 62	-0.03	-0.1	8.33	0	-0.4164	-0.0051
164	SLU 63	-0.03	-0.1	8.32	0	-0.4161	-0.0052
164	SLU 64	-0.03	-0.1	7.87	0	-0.3935	-0.0048
164	SLU 65	-0.02	-0.1	7.86	0	-0.3931	-0.005
164	SLU 66	-0.03	-0.1	8.01	0	-0.4003	-0.0048
164	SLU 67	-0.03	-0.1	8	0	-0.4001	-0.0049
164	SLU 68	-0.02	-0.1	7.95	0	-0.3975	-0.005
164	SLU 69	-0.03	-0.1	8.09	0	-0.4047	-0.0049
164	SLU 70	-0.03	-0.1	8.09	0	-0.4045	-0.005
164	SLU 71	-0.03	-0.1	8.05	0	-0.4023	-0.0049
164	SLU 72	-0.03	-0.1	8.04	0	-0.4021	-0.005
164	SLU 73	-0.03	-0.1	8.55	0	-0.4273	-0.005
164	SLU 74	-0.03	-0.1	8.69	0	-0.4345	-0.0048
164	SLU 75	-0.03	-0.1	8.69	0	-0.4343	-0.0049
164	SLU 76	-0.03	-0.1	8.63	0	-0.4317	-0.005
164	SLU 77	-0.03	-0.1	8.78	0	-0.4389	-0.0049
164	SLU 78	-0.03	-0.1	8.77	0	-0.4387	-0.005
164	SLU 79	-0.03	-0.1	8.73	0	-0.4365	-0.0049
164	SLU 80	-0.03	-0.1	8.73	0	-0.4363	-0.005
164	SLU 81	-0.03	-0.1	8.85	0	-0.4423	-0.0048
164	SLU 82	-0.03	-0.1	8.84	0	-0.4421	-0.0049
164	SLU 83	-0.04	-0.1	8.93	0	-0.4467	-0.0049
164	SLU 84	-0.03	-0.1	8.93	0	-0.4465	-0.005
164	SLE RA 1	-0.02	-0.07	5.92	0	-0.296	-0.0037
164	SLE RA 2	-0.02	-0.08	5.92	0	-0.2958	-0.0038
164	SLE RA 3	-0.02	-0.08	6.01	0	-0.3006	-0.0038
164	SLE RA 4	-0.02	-0.08	6.01	0	-0.3004	-0.0038
164	SLE RA 5	-0.02	-0.08	5.97	0	-0.2987	-0.0039
164	SLE RA 6	-0.02	-0.08	6.07	0	-0.3035	-0.0038
164	SLE RA 7	-0.02	-0.08	6.07	0	-0.3034	-0.0039
164	SLE RA 8	-0.02	-0.08	6.04	0	-0.3019	-0.0038
164	SLE RA 9	-0.02	-0.08	6.03	0	-0.3017	-0.0039
164	SLE RA 10	-0.02	-0.08	6.37	0	-0.3186	-0.0038
164	SLE RA 11	-0.02	-0.08	6.47	0	-0.3234	-0.0038
164	SLE RA 12	-0.02	-0.08	6.46	0	-0.3232	-0.0038
164	SLE RA 13	-0.02	-0.08	6.43	0	-0.3215	-0.0039
164	SLE RA 14	-0.03	-0.08	6.53	0	-0.3263	-0.0038
164	SLE RA 15	-0.02	-0.08	6.52	0	-0.3261	-0.0039
164	SLE RA 16	-0.03	-0.08	6.49	0	-0.3247	-0.0038
164	SLE RA 17	-0.02	-0.08	6.49	0	-0.3245	-0.0039
164	SLE RA 18	-0.03	-0.07	6.57	0	-0.3286	-0.0037
164	SLE RA 19	-0.02	-0.08	6.57	0	-0.3284	-0.0038
164	SLE RA 20	-0.03	-0.08	6.63	0	-0.3315	-0.0038
164	SLE RA 21	-0.02	-0.08	6.63	0	-0.3314	-0.0038
164	SLE FR 1	-0.02	-0.07	5.92	0	-0.296	-0.0037
164	SLE FR 2	-0.02	-0.08	5.92	0	-0.2959	-0.0038
164	SLE FR 3	-0.02	-0.08	5.94	0	-0.2972	-0.0038
164	SLE FR 4	-0.02	-0.08	6.11	0	-0.3057	-0.0038
164	SLE FR 5	-0.02	-0.08	6.14	0	-0.3069	-0.0038
164	SLE FR 6	-0.02	-0.07	6.25	0	-0.3123	-0.0037
164	SLE QP 1	-0.02	-0.07	5.92	0	-0.296	-0.0037
164	SLE QP 2	-0.02	-0.07	6.12	0	-0.3058	-0.0037
164	SLD 1	0.47	0.04	5.83	0	-0.2915	0.0018
164	SLD 2	0.53	0.06	5.86	0	-0.2931	0.0028
164	SLD 3	0.46	-0.08	5.62	0	-0.2811	-0.0042
164	SLD 4	0.52	-0.06	5.66	0	-0.2828	-0.0032
164	SLD 5	0.13	0.14	6.34	0	-0.3168	0.0069
164	SLD 6	0.17	0.15	6.36	0	-0.3179	0.0076
164	SLD 7	0.1	-0.26	5.65	0	-0.2824	-0.0132
164	SLD 8	0.14	-0.25	5.67	0	-0.2835	-0.0126
164	SLD 9	-0.18	0.1	6.56	0	-0.328	0.0051
164	SLD 10	-0.14	0.12	6.58	0	-0.3291	0.0058
164	SLD 11	-0.21	-0.3	5.87	0	-0.2936	-0.0151
164	SLD 12	-0.17	-0.29	5.89	0	-0.2947	-0.0144
164	SLD 13	-0.56	-0.09	6.57	0	-0.3287	-0.0043
164	SLD 14	-0.5	-0.07	6.61	0	-0.3304	-0.0033
164	SLD 15	-0.57	-0.21	6.37	0	-0.3184	-0.0103
164	SLD 16	-0.51	-0.19	6.4	0	-0.3201	-0.0093
164	SLV 1	1.13	0.18	5.44	0	-0.2719	0.0091
164	SLV 2	1.26	0.23	5.51	0	-0.2757	0.0114
164	SLV 3	1.1	-0.09	4.97	0	-0.2485	-0.0046
164	SLV 4	1.24	-0.05	5.05	0	-0.2524	-0.0023
164	SLV 5	0.33	0.41	6.61	0	-0.3304	0.0205
164	SLV 6	0.42	0.44	6.66	0	-0.3329	0.022
164	SLV 7	0.26	-0.5	5.05	0	-0.2525	-0.0252
164	SLV 8	0.35	-0.47	5.1	0	-0.2549	-0.0237
164	SLV 9	-0.39	0.32	7.13	0	-0.3566	0.0162
164	SLV 10	-0.3	0.35	7.18	0	-0.3591	0.0177
164	SLV 11	-0.46	-0.59	5.57	0	-0.2786	-0.0294
164	SLV 12	-0.38	-0.56	5.62	0	-0.2811	-0.0279
164	SLV 13	-1.28	-0.1	7.18	0	-0.3592	-0.0052
164	SLV 14	-1.15	-0.06	7.26	0	-0.363	-0.0028
164	SLV 15	-1.3	-0.38	6.72	0	-0.3358	-0.0189
164	SLV 16	-1.17	-0.33	6.79	0	-0.3396	-0.0165

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
164	CRTFP Ux+	0	0	0	0	0	0
164	CRTFP Ux-	0	0	0	0	0	0
166	SLU 1	-0.02	-0.08	5.62	0	0	0
166	SLU 2	-0.02	-0.08	5.61	0	0	0
166	SLU 3	-0.02	-0.08	5.75	0	0	0
166	SLU 4	-0.02	-0.08	5.74	0	0	0
166	SLU 5	-0.02	-0.09	5.69	0	0	0
166	SLU 6	-0.02	-0.08	5.83	0	0	0
166	SLU 7	-0.02	-0.09	5.83	0	0	0
166	SLU 8	-0.02	-0.08	5.79	0	0	0
166	SLU 9	-0.02	-0.09	5.78	0	0	0
166	SLU 10	-0.02	-0.09	6.27	0	0	0
166	SLU 11	-0.03	-0.08	6.42	0	0	0
166	SLU 12	-0.02	-0.09	6.41	0	0	0
166	SLU 13	-0.02	-0.09	6.36	0	0	0
166	SLU 14	-0.03	-0.08	6.5	0	0	0
166	SLU 15	-0.02	-0.09	6.5	0	0	0
166	SLU 16	-0.03	-0.09	6.45	0	0	0
166	SLU 17	-0.02	-0.09	6.45	0	0	0
166	SLU 18	-0.03	-0.08	6.57	0	0	0
166	SLU 19	-0.02	-0.08	6.56	0	0	0
166	SLU 20	-0.03	-0.08	6.65	0	0	0
166	SLU 21	-0.03	-0.09	6.65	0	0	0
166	SLU 22	-0.02	-0.08	6.21	0	0	0
166	SLU 23	-0.02	-0.08	6.2	0	0	0
166	SLU 24	-0.02	-0.08	6.34	0	0	0
166	SLU 25	-0.02	-0.08	6.34	0	0	0
166	SLU 26	-0.02	-0.08	6.29	0	0	0
166	SLU 27	-0.02	-0.08	6.43	0	0	0
166	SLU 28	-0.02	-0.08	6.43	0	0	0
166	SLU 29	-0.02	-0.08	6.38	0	0	0
166	SLU 30	-0.02	-0.08	6.38	0	0	0
166	SLU 31	-0.02	-0.08	6.87	0	0	0
166	SLU 32	-0.03	-0.08	7.01	0	0	0
166	SLU 33	-0.02	-0.08	7.01	0	0	0
166	SLU 34	-0.02	-0.08	6.96	0	0	0
166	SLU 35	-0.03	-0.08	7.1	0	0	0
166	SLU 36	-0.03	-0.08	7.09	0	0	0
166	SLU 37	-0.03	-0.08	7.05	0	0	0
166	SLU 38	-0.03	-0.08	7.04	0	0	0
166	SLU 39	-0.03	-0.08	7.16	0	0	0
166	SLU 40	-0.03	-0.08	7.16	0	0	0
166	SLU 41	-0.03	-0.08	7.25	0	0	0
166	SLU 42	-0.03	-0.08	7.24	0	0	0
166	SLU 43	-0.03	-0.11	7.1	0	0	0
166	SLU 44	-0.02	-0.11	7.09	0	0	0
166	SLU 45	-0.03	-0.11	7.23	0	0	0
166	SLU 46	-0.02	-0.11	7.23	0	0	0
166	SLU 47	-0.02	-0.11	7.17	0	0	0
166	SLU 48	-0.03	-0.11	7.32	0	0	0
166	SLU 49	-0.02	-0.11	7.31	0	0	0
166	SLU 50	-0.03	-0.11	7.27	0	0	0
166	SLU 51	-0.02	-0.11	7.26	0	0	0
166	SLU 52	-0.03	-0.11	7.76	0	0	0
166	SLU 53	-0.03	-0.11	7.9	0	0	0
166	SLU 54	-0.03	-0.11	7.89	0	0	0
166	SLU 55	-0.03	-0.11	7.84	0	0	0
166	SLU 56	-0.03	-0.11	7.98	0	0	0
166	SLU 57	-0.03	-0.11	7.98	0	0	0
166	SLU 58	-0.03	-0.11	7.93	0	0	0
166	SLU 59	-0.03	-0.11	7.93	0	0	0
166	SLU 60	-0.03	-0.11	8.05	0	0	0
166	SLU 61	-0.03	-0.11	8.04	0	0	0
166	SLU 62	-0.03	-0.11	8.13	0	0	0
166	SLU 63	-0.03	-0.11	8.13	0	0	0
166	SLU 64	-0.03	-0.1	7.69	0	0	0
166	SLU 65	-0.02	-0.11	7.68	0	0	0
166	SLU 66	-0.03	-0.11	7.82	0	0	0
166	SLU 67	-0.03	-0.11	7.82	0	0	0
166	SLU 68	-0.02	-0.11	7.77	0	0	0
166	SLU 69	-0.03	-0.11	7.91	0	0	0
166	SLU 70	-0.03	-0.11	7.91	0	0	0
166	SLU 71	-0.03	-0.11	7.86	0	0	0
166	SLU 72	-0.03	-0.11	7.86	0	0	0
166	SLU 73	-0.03	-0.11	8.35	0	0	0
166	SLU 74	-0.03	-0.11	8.49	0	0	0
166	SLU 75	-0.03	-0.11	8.49	0	0	0
166	SLU 76	-0.03	-0.11	8.44	0	0	0
166	SLU 77	-0.03	-0.11	8.58	0	0	0
166	SLU 78	-0.03	-0.11	8.57	0	0	0
166	SLU 79	-0.03	-0.11	8.53	0	0	0
166	SLU 80	-0.03	-0.11	8.53	0	0	0
166	SLU 81	-0.03	-0.11	8.64	0	0	0
166	SLU 82	-0.03	-0.11	8.64	0	0	0
166	SLU 83	-0.03	-0.11	8.73	0	0	0
166	SLU 84	-0.03	-0.11	8.72	0	0	0
166	SLE RA 1	-0.02	-0.08	5.78	0	0	0
166	SLE RA 2	-0.02	-0.08	5.78	0	0	0
166	SLE RA 3	-0.02	-0.08	5.87	0	0	0
166	SLE RA 4	-0.02	-0.08	5.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
166	SLE RA 5	-0.02	-0.08	5.84	0	0	0
166	SLE RA 6	-0.02	-0.08	5.93	0	0	0
166	SLE RA 7	-0.02	-0.08	5.93	0	0	0
166	SLE RA 8	-0.02	-0.08	5.9	0	0	0
166	SLE RA 9	-0.02	-0.08	5.9	0	0	0
166	SLE RA 10	-0.02	-0.08	6.22	0	0	0
166	SLE RA 11	-0.02	-0.08	6.32	0	0	0
166	SLE RA 12	-0.02	-0.08	6.32	0	0	0
166	SLE RA 13	-0.02	-0.08	6.28	0	0	0
166	SLE RA 14	-0.02	-0.08	6.38	0	0	0
166	SLE RA 15	-0.02	-0.08	6.37	0	0	0
166	SLE RA 16	-0.02	-0.08	6.34	0	0	0
166	SLE RA 17	-0.02	-0.08	6.34	0	0	0
166	SLE RA 18	-0.02	-0.08	6.42	0	0	0
166	SLE RA 19	-0.02	-0.08	6.42	0	0	0
166	SLE RA 20	-0.03	-0.08	6.48	0	0	0
166	SLE RA 21	-0.02	-0.08	6.47	0	0	0
166	SLE FR 1	-0.02	-0.08	5.78	0	0	0
166	SLE FR 2	-0.02	-0.08	5.78	0	0	0
166	SLE FR 3	-0.02	-0.08	5.81	0	0	0
166	SLE FR 4	-0.02	-0.08	5.97	0	0	0
166	SLE FR 5	-0.02	-0.08	6	0	0	0
166	SLE FR 6	-0.02	-0.08	6.1	0	0	0
166	SLE QP 1	-0.02	-0.08	5.78	0	0	0
166	SLE QP 2	-0.02	-0.08	5.98	0	0	0
166	SLD 1	0.46	0.03	5.65	0	0	0
166	SLD 2	0.51	0.05	5.68	0	0	0
166	SLD 3	0.45	-0.09	5.44	0	0	0
166	SLD 4	0.5	-0.06	5.48	0	0	0
166	SLD 5	0.13	0.13	6.18	0	0	0
166	SLD 6	0.16	0.14	6.2	0	0	0
166	SLD 7	0.1	-0.26	5.5	0	0	0
166	SLD 8	0.13	-0.25	5.52	0	0	0
166	SLD 9	-0.17	0.09	6.43	0	0	0
166	SLD 10	-0.14	0.1	6.45	0	0	0
166	SLD 11	-0.2	-0.3	5.75	0	0	0
166	SLD 12	-0.17	-0.29	5.77	0	0	0
166	SLD 13	-0.54	-0.1	6.47	0	0	0
166	SLD 14	-0.49	-0.08	6.51	0	0	0
166	SLD 15	-0.55	-0.21	6.27	0	0	0
166	SLD 16	-0.5	-0.19	6.3	0	0	0
166	SLV 1	1.09	0.18	5.2	0	0	0
166	SLV 2	1.22	0.23	5.28	0	0	0
166	SLV 3	1.07	-0.09	4.74	0	0	0
166	SLV 4	1.2	-0.04	4.82	0	0	0
166	SLV 5	0.32	0.39	6.43	0	0	0
166	SLV 6	0.41	0.42	6.48	0	0	0
166	SLV 7	0.25	-0.49	4.89	0	0	0
166	SLV 8	0.34	-0.46	4.94	0	0	0
166	SLV 9	-0.38	0.3	7.01	0	0	0
166	SLV 10	-0.3	0.33	7.06	0	0	0
166	SLV 11	-0.45	-0.58	5.47	0	0	0
166	SLV 12	-0.37	-0.55	5.52	0	0	0
166	SLV 13	-1.24	-0.12	7.13	0	0	0
166	SLV 14	-1.12	-0.07	7.21	0	0	0
166	SLV 15	-1.27	-0.39	6.67	0	0	0
166	SLV 16	-1.14	-0.34	6.75	0	0	0
167	SLU 1	-0.02	-0.1	5.94	0	0	0
167	SLU 2	-0.02	-0.1	5.93	0	0	0
167	SLU 3	-0.02	-0.1	6.08	0	0	0
167	SLU 4	-0.02	-0.1	6.07	0	0	0
167	SLU 5	-0.02	-0.1	6.02	0	0	0
167	SLU 6	-0.02	-0.1	6.17	0	0	0
167	SLU 7	-0.02	-0.1	6.16	0	0	0
167	SLU 8	-0.02	-0.1	6.12	0	0	0
167	SLU 9	-0.02	-0.1	6.11	0	0	0
167	SLU 10	-0.02	-0.1	6.63	0	0	0
167	SLU 11	-0.03	-0.1	6.78	0	0	0
167	SLU 12	-0.03	-0.1	6.78	0	0	0
167	SLU 13	-0.02	-0.1	6.72	0	0	0
167	SLU 14	-0.03	-0.1	6.87	0	0	0
167	SLU 15	-0.03	-0.1	6.87	0	0	0
167	SLU 16	-0.03	-0.1	6.82	0	0	0
167	SLU 17	-0.03	-0.1	6.82	0	0	0
167	SLU 18	-0.03	-0.1	6.94	0	0	0
167	SLU 19	-0.03	-0.1	6.94	0	0	0
167	SLU 20	-0.03	-0.1	7.03	0	0	0
167	SLU 21	-0.03	-0.1	7.03	0	0	0
167	SLU 22	-0.02	-0.09	6.57	0	0	0
167	SLU 23	-0.02	-0.1	6.56	0	0	0
167	SLU 24	-0.02	-0.1	6.71	0	0	0
167	SLU 25	-0.02	-0.1	6.7	0	0	0
167	SLU 26	-0.02	-0.1	6.65	0	0	0
167	SLU 27	-0.02	-0.1	6.8	0	0	0
167	SLU 28	-0.02	-0.1	6.79	0	0	0
167	SLU 29	-0.02	-0.1	6.75	0	0	0
167	SLU 30	-0.02	-0.1	6.74	0	0	0
167	SLU 31	-0.02	-0.1	7.26	0	0	0
167	SLU 32	-0.03	-0.1	7.41	0	0	0
167	SLU 33	-0.03	-0.1	7.41	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLU 34	-0.02	-0.1	7.35	0	0	0
167	SLU 35	-0.03	-0.1	7.5	0	0	0
167	SLU 36	-0.03	-0.1	7.5	0	0	0
167	SLU 37	-0.03	-0.1	7.45	0	0	0
167	SLU 38	-0.03	-0.1	7.45	0	0	0
167	SLU 39	-0.03	-0.1	7.57	0	0	0
167	SLU 40	-0.03	-0.1	7.57	0	0	0
167	SLU 41	-0.03	-0.1	7.66	0	0	0
167	SLU 42	-0.03	-0.1	7.66	0	0	0
167	SLU 43	-0.03	-0.12	7.5	0	0	0
167	SLU 44	-0.02	-0.13	7.49	0	0	0
167	SLU 45	-0.03	-0.13	7.64	0	0	0
167	SLU 46	-0.03	-0.13	7.64	0	0	0
167	SLU 47	-0.02	-0.13	7.58	0	0	0
167	SLU 48	-0.03	-0.13	7.73	0	0	0
167	SLU 49	-0.03	-0.13	7.73	0	0	0
167	SLU 50	-0.03	-0.13	7.68	0	0	0
167	SLU 51	-0.03	-0.13	7.68	0	0	0
167	SLU 52	-0.03	-0.13	8.2	0	0	0
167	SLU 53	-0.03	-0.13	8.35	0	0	0
167	SLU 54	-0.03	-0.13	8.34	0	0	0
167	SLU 55	-0.03	-0.13	8.29	0	0	0
167	SLU 56	-0.03	-0.13	8.44	0	0	0
167	SLU 57	-0.03	-0.13	8.43	0	0	0
167	SLU 58	-0.03	-0.13	8.39	0	0	0
167	SLU 59	-0.03	-0.13	8.38	0	0	0
167	SLU 60	-0.03	-0.13	8.51	0	0	0
167	SLU 61	-0.03	-0.13	8.5	0	0	0
167	SLU 62	-0.04	-0.13	8.6	0	0	0
167	SLU 63	-0.03	-0.13	8.59	0	0	0
167	SLU 64	-0.03	-0.12	8.13	0	0	0
167	SLU 65	-0.02	-0.13	8.12	0	0	0
167	SLU 66	-0.03	-0.12	8.27	0	0	0
167	SLU 67	-0.03	-0.13	8.27	0	0	0
167	SLU 68	-0.03	-0.13	8.22	0	0	0
167	SLU 69	-0.03	-0.13	8.36	0	0	0
167	SLU 70	-0.03	-0.13	8.36	0	0	0
167	SLU 71	-0.03	-0.13	8.31	0	0	0
167	SLU 72	-0.03	-0.13	8.31	0	0	0
167	SLU 73	-0.03	-0.13	8.83	0	0	0
167	SLU 74	-0.03	-0.13	8.98	0	0	0
167	SLU 75	-0.03	-0.13	8.97	0	0	0
167	SLU 76	-0.03	-0.13	8.92	0	0	0
167	SLU 77	-0.04	-0.13	9.07	0	0	0
167	SLU 78	-0.03	-0.13	9.06	0	0	0
167	SLU 79	-0.04	-0.13	9.02	0	0	0
167	SLU 80	-0.03	-0.13	9.01	0	0	0
167	SLU 81	-0.04	-0.13	9.14	0	0	0
167	SLU 82	-0.03	-0.13	9.13	0	0	0
167	SLU 83	-0.04	-0.13	9.23	0	0	0
167	SLU 84	-0.03	-0.13	9.22	0	0	0
167	SLE RA 1	-0.02	-0.09	6.12	0	0	0
167	SLE RA 2	-0.02	-0.1	6.11	0	0	0
167	SLE RA 3	-0.02	-0.1	6.21	0	0	0
167	SLE RA 4	-0.02	-0.1	6.21	0	0	0
167	SLE RA 5	-0.02	-0.1	6.17	0	0	0
167	SLE RA 6	-0.02	-0.1	6.27	0	0	0
167	SLE RA 7	-0.02	-0.1	6.27	0	0	0
167	SLE RA 8	-0.02	-0.1	6.24	0	0	0
167	SLE RA 9	-0.02	-0.1	6.23	0	0	0
167	SLE RA 10	-0.02	-0.1	6.58	0	0	0
167	SLE RA 11	-0.03	-0.1	6.68	0	0	0
167	SLE RA 12	-0.02	-0.1	6.68	0	0	0
167	SLE RA 13	-0.02	-0.1	6.64	0	0	0
167	SLE RA 14	-0.03	-0.1	6.74	0	0	0
167	SLE RA 15	-0.02	-0.1	6.74	0	0	0
167	SLE RA 16	-0.03	-0.1	6.71	0	0	0
167	SLE RA 17	-0.02	-0.1	6.7	0	0	0
167	SLE RA 18	-0.03	-0.1	6.79	0	0	0
167	SLE RA 19	-0.02	-0.1	6.78	0	0	0
167	SLE RA 20	-0.03	-0.1	6.85	0	0	0
167	SLE RA 21	-0.03	-0.1	6.84	0	0	0
167	SLE FR 1	-0.02	-0.09	6.12	0	0	0
167	SLE FR 2	-0.02	-0.1	6.12	0	0	0
167	SLE FR 3	-0.02	-0.1	6.14	0	0	0
167	SLE FR 4	-0.02	-0.1	6.32	0	0	0
167	SLE FR 5	-0.02	-0.1	6.34	0	0	0
167	SLE FR 6	-0.02	-0.1	6.45	0	0	0
167	SLE QP 1	-0.02	-0.09	6.12	0	0	0
167	SLE QP 2	-0.02	-0.1	6.32	0	0	0
167	SLD 1	0.48	0.03	5.91	0	0	0
167	SLD 2	0.54	0.05	5.95	0	0	0
167	SLD 3	0.47	-0.09	5.7	0	0	0
167	SLD 4	0.53	-0.07	5.73	0	0	0
167	SLD 5	0.13	0.12	6.52	0	0	0
167	SLD 6	0.17	0.14	6.54	0	0	0
167	SLD 7	0.1	-0.28	5.8	0	0	0
167	SLD 8	0.14	-0.27	5.82	0	0	0
167	SLD 9	-0.18	0.08	6.81	0	0	0
167	SLD 10	-0.15	0.09	6.84	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLD 11	-0.22	-0.33	6.09	0	0	0
167	SLD 12	-0.18	-0.31	6.12	0	0	0
167	SLD 13	-0.57	-0.12	6.9	0	0	0
167	SLD 14	-0.51	-0.1	6.94	0	0	0
167	SLD 15	-0.58	-0.24	6.68	0	0	0
167	SLD 16	-0.52	-0.22	6.72	0	0	0
167	SLV 1	1.15	0.19	5.36	0	0	0
167	SLV 2	1.28	0.25	5.45	0	0	0
167	SLV 3	1.13	-0.09	4.87	0	0	0
167	SLV 4	1.26	-0.03	4.96	0	0	0
167	SLV 5	0.34	0.4	6.76	0	0	0
167	SLV 6	0.43	0.43	6.82	0	0	0
167	SLV 7	0.26	-0.52	5.12	0	0	0
167	SLV 8	0.35	-0.48	5.18	0	0	0
167	SLV 9	-0.4	0.29	7.45	0	0	0
167	SLV 10	-0.31	0.33	7.51	0	0	0
167	SLV 11	-0.47	-0.63	5.82	0	0	0
167	SLV 12	-0.38	-0.59	5.87	0	0	0
167	SLV 13	-1.31	-0.16	7.67	0	0	0
167	SLV 14	-1.17	-0.11	7.76	0	0	0
167	SLV 15	-1.33	-0.44	7.18	0	0	0
167	SLV 16	-1.19	-0.38	7.27	0	0	0
168	SLU 1	-0.01	-0.05	3.06	0	0	0
168	SLU 2	-0.01	-0.06	3.06	0	0	0
168	SLU 3	-0.01	-0.06	3.13	0	0	0
168	SLU 4	-0.01	-0.06	3.13	0	0	0
168	SLU 5	-0.01	-0.06	3.1	0	0	0
168	SLU 6	-0.01	-0.06	3.18	0	0	0
168	SLU 7	-0.01	-0.06	3.18	0	0	0
168	SLU 8	-0.01	-0.06	3.15	0	0	0
168	SLU 9	-0.01	-0.06	3.15	0	0	0
168	SLU 10	-0.01	-0.06	3.42	0	0	0
168	SLU 11	-0.01	-0.06	3.49	0	0	0
168	SLU 12	-0.01	-0.06	3.49	0	0	0
168	SLU 13	-0.01	-0.06	3.46	0	0	0
168	SLU 14	-0.01	-0.06	3.54	0	0	0
168	SLU 15	-0.01	-0.06	3.54	0	0	0
168	SLU 16	-0.01	-0.06	3.51	0	0	0
168	SLU 17	-0.01	-0.06	3.51	0	0	0
168	SLU 18	-0.01	-0.06	3.58	0	0	0
168	SLU 19	-0.01	-0.06	3.57	0	0	0
168	SLU 20	-0.01	-0.06	3.62	0	0	0
168	SLU 21	-0.01	-0.06	3.62	0	0	0
168	SLU 22	-0.01	-0.05	3.38	0	0	0
168	SLU 23	-0.01	-0.06	3.38	0	0	0
168	SLU 24	-0.01	-0.06	3.46	0	0	0
168	SLU 25	-0.01	-0.06	3.46	0	0	0
168	SLU 26	-0.01	-0.06	3.43	0	0	0
168	SLU 27	-0.01	-0.06	3.5	0	0	0
168	SLU 28	-0.01	-0.06	3.5	0	0	0
168	SLU 29	-0.01	-0.06	3.48	0	0	0
168	SLU 30	-0.01	-0.06	3.48	0	0	0
168	SLU 31	-0.01	-0.06	3.74	0	0	0
168	SLU 32	-0.01	-0.06	3.82	0	0	0
168	SLU 33	-0.01	-0.06	3.82	0	0	0
168	SLU 34	-0.01	-0.06	3.79	0	0	0
168	SLU 35	-0.01	-0.06	3.87	0	0	0
168	SLU 36	-0.01	-0.06	3.86	0	0	0
168	SLU 37	-0.01	-0.06	3.84	0	0	0
168	SLU 38	-0.01	-0.06	3.84	0	0	0
168	SLU 39	-0.02	-0.06	3.9	0	0	0
168	SLU 40	-0.01	-0.06	3.9	0	0	0
168	SLU 41	-0.02	-0.06	3.95	0	0	0
168	SLU 42	-0.01	-0.06	3.95	0	0	0
168	SLU 43	-0.01	-0.07	3.86	0	0	0
168	SLU 44	-0.01	-0.07	3.86	0	0	0
168	SLU 45	-0.01	-0.07	3.94	0	0	0
168	SLU 46	-0.01	-0.07	3.94	0	0	0
168	SLU 47	-0.01	-0.07	3.91	0	0	0
168	SLU 48	-0.01	-0.07	3.98	0	0	0
168	SLU 49	-0.01	-0.07	3.98	0	0	0
168	SLU 50	-0.01	-0.07	3.96	0	0	0
168	SLU 51	-0.01	-0.07	3.96	0	0	0
168	SLU 52	-0.01	-0.07	4.22	0	0	0
168	SLU 53	-0.02	-0.07	4.3	0	0	0
168	SLU 54	-0.02	-0.07	4.3	0	0	0
168	SLU 55	-0.02	-0.08	4.27	0	0	0
168	SLU 56	-0.02	-0.07	4.35	0	0	0
168	SLU 57	-0.02	-0.08	4.34	0	0	0
168	SLU 58	-0.02	-0.07	4.32	0	0	0
168	SLU 59	-0.02	-0.08	4.32	0	0	0
168	SLU 60	-0.02	-0.07	4.38	0	0	0
168	SLU 61	-0.02	-0.07	4.38	0	0	0
168	SLU 62	-0.02	-0.07	4.43	0	0	0
168	SLU 63	-0.02	-0.08	4.43	0	0	0
168	SLU 64	-0.01	-0.07	4.19	0	0	0
168	SLU 65	-0.01	-0.07	4.19	0	0	0
168	SLU 66	-0.01	-0.07	4.26	0	0	0
168	SLU 67	-0.01	-0.07	4.26	0	0	0
168	SLU 68	-0.01	-0.07	4.23	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
168	SLU 69	-0.02	-0.07	4.31	0	0	0
168	SLU 70	-0.01	-0.07	4.31	0	0	0
168	SLU 71	-0.02	-0.07	4.28	0	0	0
168	SLU 72	-0.01	-0.07	4.28	0	0	0
168	SLU 73	-0.02	-0.07	4.55	0	0	0
168	SLU 74	-0.02	-0.07	4.63	0	0	0
168	SLU 75	-0.02	-0.07	4.62	0	0	0
168	SLU 76	-0.02	-0.08	4.6	0	0	0
168	SLU 77	-0.02	-0.07	4.67	0	0	0
168	SLU 78	-0.02	-0.08	4.67	0	0	0
168	SLU 79	-0.02	-0.07	4.65	0	0	0
168	SLU 80	-0.02	-0.08	4.64	0	0	0
168	SLU 81	-0.02	-0.07	4.71	0	0	0
168	SLU 82	-0.02	-0.07	4.71	0	0	0
168	SLU 83	-0.02	-0.07	4.75	0	0	0
168	SLU 84	-0.02	-0.08	4.75	0	0	0
168	SLE RA 1	-0.01	-0.05	3.15	0	0	0
168	SLE RA 2	-0.01	-0.06	3.15	0	0	0
168	SLE RA 3	-0.01	-0.06	3.2	0	0	0
168	SLE RA 4	-0.01	-0.06	3.2	0	0	0
168	SLE RA 5	-0.01	-0.06	3.18	0	0	0
168	SLE RA 6	-0.01	-0.06	3.23	0	0	0
168	SLE RA 7	-0.01	-0.06	3.23	0	0	0
168	SLE RA 8	-0.01	-0.06	3.21	0	0	0
168	SLE RA 9	-0.01	-0.06	3.21	0	0	0
168	SLE RA 10	-0.01	-0.06	3.39	0	0	0
168	SLE RA 11	-0.01	-0.06	3.44	0	0	0
168	SLE RA 12	-0.01	-0.06	3.44	0	0	0
168	SLE RA 13	-0.01	-0.06	3.42	0	0	0
168	SLE RA 14	-0.01	-0.06	3.47	0	0	0
168	SLE RA 15	-0.01	-0.06	3.47	0	0	0
168	SLE RA 16	-0.01	-0.06	3.46	0	0	0
168	SLE RA 17	-0.01	-0.06	3.45	0	0	0
168	SLE RA 18	-0.01	-0.06	3.5	0	0	0
168	SLE RA 19	-0.01	-0.06	3.5	0	0	0
168	SLE RA 20	-0.01	-0.06	3.53	0	0	0
168	SLE RA 21	-0.01	-0.06	3.53	0	0	0
168	SLE FR 1	-0.01	-0.05	3.15	0	0	0
168	SLE FR 2	-0.01	-0.05	3.15	0	0	0
168	SLE FR 3	-0.01	-0.05	3.16	0	0	0
168	SLE FR 4	-0.01	-0.06	3.25	0	0	0
168	SLE FR 5	-0.01	-0.06	3.27	0	0	0
168	SLE FR 6	-0.01	-0.06	3.32	0	0	0
168	SLE QP 1	-0.01	-0.05	3.15	0	0	0
168	SLE QP 2	-0.01	-0.05	3.26	0	0	0
168	SLD 1	0.24	0.01	3.02	0	0	0
168	SLD 2	0.27	0.03	3.04	0	0	0
168	SLD 3	0.24	-0.05	2.91	0	0	0
168	SLD 4	0.27	-0.04	2.93	0	0	0
168	SLD 5	0.07	0.06	3.35	0	0	0
168	SLD 6	0.09	0.07	3.37	0	0	0
168	SLD 7	0.05	-0.15	2.98	0	0	0
168	SLD 8	0.07	-0.14	2.99	0	0	0
168	SLD 9	-0.09	0.03	3.52	0	0	0
168	SLD 10	-0.07	0.04	3.53	0	0	0
168	SLD 11	-0.11	-0.18	3.15	0	0	0
168	SLD 12	-0.09	-0.17	3.16	0	0	0
168	SLD 13	-0.29	-0.07	3.58	0	0	0
168	SLD 14	-0.26	-0.06	3.61	0	0	0
168	SLD 15	-0.3	-0.14	3.47	0	0	0
168	SLD 16	-0.27	-0.12	3.49	0	0	0
168	SLV 1	0.59	0.1	2.7	0	0	0
168	SLV 2	0.66	0.13	2.74	0	0	0
168	SLV 3	0.58	-0.04	2.44	0	0	0
168	SLV 4	0.64	-0.01	2.49	0	0	0
168	SLV 5	0.17	0.2	3.47	0	0	0
168	SLV 6	0.22	0.22	3.5	0	0	0
168	SLV 7	0.14	-0.27	2.62	0	0	0
168	SLV 8	0.18	-0.25	2.65	0	0	0
168	SLV 9	-0.2	0.14	3.86	0	0	0
168	SLV 10	-0.16	0.16	3.89	0	0	0
168	SLV 11	-0.24	-0.33	3.01	0	0	0
168	SLV 12	-0.2	-0.31	3.04	0	0	0
168	SLV 13	-0.67	-0.1	4.02	0	0	0
168	SLV 14	-0.6	-0.07	4.07	0	0	0
168	SLV 15	-0.68	-0.24	3.77	0	0	0
168	SLV 16	-0.61	-0.21	3.81	0	0	0
177	SLU 1	-0.09	-0.29	13.51	0	0	0
177	SLU 2	-0.09	-0.3	13.48	0	0	0
177	SLU 3	-0.1	-0.29	13.83	0	0	0
177	SLU 4	-0.09	-0.3	13.82	0	0	0
177	SLU 5	-0.09	-0.3	13.69	0	0	0
177	SLU 6	-0.1	-0.3	14.04	0	0	0
177	SLU 7	-0.09	-0.3	14.02	0	0	0
177	SLU 8	-0.1	-0.29	13.92	0	0	0
177	SLU 9	-0.09	-0.3	13.91	0	0	0
177	SLU 10	-0.09	-0.32	15.08	0	0	0
177	SLU 11	-0.1	-0.31	15.43	0	0	0
177	SLU 12	-0.09	-0.32	15.42	0	0	0
177	SLU 13	-0.09	-0.32	15.29	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
177	SLU 14	-0.1	-0.31	15.64	0	0	0
177	SLU 15	-0.09	-0.32	15.62	0	0	0
177	SLU 16	-0.1	-0.31	15.52	0	0	0
177	SLU 17	-0.09	-0.32	15.51	0	0	0
177	SLU 18	-0.1	-0.31	15.79	0	0	0
177	SLU 19	-0.09	-0.32	15.78	0	0	0
177	SLU 20	-0.1	-0.31	16	0	0	0
177	SLU 21	-0.09	-0.32	15.99	0	0	0
177	SLU 22	-0.1	-0.29	14.95	0	0	0
177	SLU 23	-0.1	-0.31	14.93	0	0	0
177	SLU 24	-0.11	-0.3	15.28	0	0	0
177	SLU 25	-0.1	-0.3	15.26	0	0	0
177	SLU 26	-0.1	-0.31	15.14	0	0	0
177	SLU 27	-0.11	-0.3	15.49	0	0	0
177	SLU 28	-0.1	-0.31	15.47	0	0	0
177	SLU 29	-0.11	-0.3	15.37	0	0	0
177	SLU 30	-0.1	-0.31	15.36	0	0	0
177	SLU 31	-0.1	-0.32	16.53	0	0	0
177	SLU 32	-0.11	-0.31	16.88	0	0	0
177	SLU 33	-0.1	-0.32	16.86	0	0	0
177	SLU 34	-0.1	-0.33	16.74	0	0	0
177	SLU 35	-0.11	-0.32	17.09	0	0	0
177	SLU 36	-0.11	-0.33	17.07	0	0	0
177	SLU 37	-0.11	-0.32	16.97	0	0	0
177	SLU 38	-0.11	-0.32	16.96	0	0	0
177	SLU 39	-0.11	-0.32	17.24	0	0	0
177	SLU 40	-0.1	-0.32	17.22	0	0	0
177	SLU 41	-0.11	-0.32	17.45	0	0	0
177	SLU 42	-0.1	-0.33	17.43	0	0	0
177	SLU 43	-0.12	-0.37	17.06	0	0	0
177	SLU 44	-0.11	-0.38	17.04	0	0	0
177	SLU 45	-0.12	-0.38	17.39	0	0	0
177	SLU 46	-0.12	-0.38	17.37	0	0	0
177	SLU 47	-0.11	-0.39	17.25	0	0	0
177	SLU 48	-0.12	-0.38	17.59	0	0	0
177	SLU 49	-0.12	-0.39	17.58	0	0	0
177	SLU 50	-0.12	-0.38	17.48	0	0	0
177	SLU 51	-0.12	-0.39	17.46	0	0	0
177	SLU 52	-0.11	-0.4	18.64	0	0	0
177	SLU 53	-0.12	-0.39	18.99	0	0	0
177	SLU 54	-0.12	-0.4	18.97	0	0	0
177	SLU 55	-0.11	-0.41	18.85	0	0	0
177	SLU 56	-0.12	-0.4	19.19	0	0	0
177	SLU 57	-0.12	-0.4	19.18	0	0	0
177	SLU 58	-0.12	-0.4	19.08	0	0	0
177	SLU 59	-0.12	-0.4	19.06	0	0	0
177	SLU 60	-0.12	-0.4	19.35	0	0	0
177	SLU 61	-0.12	-0.4	19.33	0	0	0
177	SLU 62	-0.12	-0.4	19.56	0	0	0
177	SLU 63	-0.12	-0.41	19.54	0	0	0
177	SLU 64	-0.13	-0.38	18.51	0	0	0
177	SLU 65	-0.12	-0.39	18.49	0	0	0
177	SLU 66	-0.13	-0.38	18.83	0	0	0
177	SLU 67	-0.13	-0.39	18.82	0	0	0
177	SLU 68	-0.12	-0.39	18.69	0	0	0
177	SLU 69	-0.13	-0.38	19.04	0	0	0
177	SLU 70	-0.13	-0.39	19.03	0	0	0
177	SLU 71	-0.13	-0.38	18.93	0	0	0
177	SLU 72	-0.13	-0.39	18.91	0	0	0
177	SLU 73	-0.12	-0.41	20.09	0	0	0
177	SLU 74	-0.13	-0.4	20.43	0	0	0
177	SLU 75	-0.13	-0.41	20.42	0	0	0
177	SLU 76	-0.12	-0.41	20.29	0	0	0
177	SLU 77	-0.13	-0.4	20.64	0	0	0
177	SLU 78	-0.13	-0.41	20.63	0	0	0
177	SLU 79	-0.13	-0.4	20.53	0	0	0
177	SLU 80	-0.13	-0.41	20.51	0	0	0
177	SLU 81	-0.13	-0.4	20.79	0	0	0
177	SLU 82	-0.13	-0.41	20.78	0	0	0
177	SLU 83	-0.13	-0.4	21	0	0	0
177	SLU 84	-0.13	-0.41	20.99	0	0	0
177	SLE RA 1	-0.1	-0.29	13.92	0	0	0
177	SLE RA 2	-0.09	-0.3	13.9	0	0	0
177	SLE RA 3	-0.1	-0.29	14.14	0	0	0
177	SLE RA 4	-0.1	-0.3	14.13	0	0	0
177	SLE RA 5	-0.09	-0.3	14.04	0	0	0
177	SLE RA 6	-0.1	-0.29	14.27	0	0	0
177	SLE RA 7	-0.1	-0.3	14.27	0	0	0
177	SLE RA 8	-0.1	-0.29	14.2	0	0	0
177	SLE RA 9	-0.1	-0.3	14.19	0	0	0
177	SLE RA 10	-0.09	-0.31	14.97	0	0	0
177	SLE RA 11	-0.1	-0.3	15.2	0	0	0
177	SLE RA 12	-0.1	-0.31	15.19	0	0	0
177	SLE RA 13	-0.09	-0.31	15.11	0	0	0
177	SLE RA 14	-0.1	-0.31	15.34	0	0	0
177	SLE RA 15	-0.1	-0.31	15.33	0	0	0
177	SLE RA 16	-0.1	-0.3	15.26	0	0	0
177	SLE RA 17	-0.1	-0.31	15.25	0	0	0
177	SLE RA 18	-0.1	-0.3	15.44	0	0	0
177	SLE RA 19	-0.09	-0.31	15.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
177	SLE RA 20	-0.1	-0.31	15.58	0	0	0
177	SLE RA 21	-0.1	-0.31	15.57	0	0	0
177	SLE FR 1	-0.1	-0.29	13.92	0	0	0
177	SLE FR 2	-0.1	-0.29	13.92	0	0	0
177	SLE FR 3	-0.1	-0.29	13.98	0	0	0
177	SLE FR 4	-0.1	-0.29	14.37	0	0	0
177	SLE FR 5	-0.1	-0.29	14.43	0	0	0
177	SLE FR 6	-0.1	-0.3	14.68	0	0	0
177	SLE QP 1	-0.1	-0.29	13.92	0	0	0
177	SLE QP 2	-0.1	-0.29	14.38	0	0	0
177	SLD 1	1.01	-0.26	15.62	0	0	0
177	SLD 2	1.14	-0.32	15.54	0	0	0
177	SLD 3	1.03	-0.55	15.2	0	0	0
177	SLD 4	1.16	-0.61	15.13	0	0	0
177	SLD 5	0.18	0.17	15.39	0	0	0
177	SLD 6	0.26	0.13	15.33	0	0	0
177	SLD 7	0.25	-0.8	14.02	0	0	0
177	SLD 8	0.34	-0.84	13.96	0	0	0
177	SLD 9	-0.53	0.25	14.79	0	0	0
177	SLD 10	-0.45	0.22	14.74	0	0	0
177	SLD 11	-0.46	-0.71	13.42	0	0	0
177	SLD 12	-0.37	-0.75	13.37	0	0	0
177	SLD 13	-1.35	0.03	13.63	0	0	0
177	SLD 14	-1.23	-0.03	13.55	0	0	0
177	SLD 15	-1.33	-0.26	13.22	0	0	0
177	SLD 16	-1.2	-0.32	13.14	0	0	0
177	SLV 1	2.49	-0.23	17.26	0	0	0
177	SLV 2	2.79	-0.37	17.08	0	0	0
177	SLV 3	2.54	-0.89	16.33	0	0	0
177	SLV 4	2.84	-1.03	16.15	0	0	0
177	SLV 5	0.55	0.75	16.69	0	0	0
177	SLV 6	0.74	0.66	16.57	0	0	0
177	SLV 7	0.73	-1.45	13.58	0	0	0
177	SLV 8	0.92	-1.54	13.46	0	0	0
177	SLV 9	-1.11	0.95	15.29	0	0	0
177	SLV 10	-0.92	0.86	15.17	0	0	0
177	SLV 11	-0.93	-1.24	12.19	0	0	0
177	SLV 12	-0.74	-1.33	12.07	0	0	0
177	SLV 13	-3.03	0.44	12.61	0	0	0
177	SLV 14	-2.74	0.31	12.42	0	0	0
177	SLV 15	-2.98	-0.21	11.68	0	0	0
177	SLV 16	-2.69	-0.35	11.49	0	0	0
177	CRTFP Ux+	0	0	0	0	0	0
177	CRTFP Ux-	0	0	0	0	0	0
178	SLU 1	-0.09	-0.23	12.67	0	0	0
178	SLU 2	-0.08	-0.25	12.65	0	0	0
178	SLU 3	-0.09	-0.24	12.98	0	0	0
178	SLU 4	-0.09	-0.24	12.96	0	0	0
178	SLU 5	-0.08	-0.25	12.85	0	0	0
178	SLU 6	-0.09	-0.24	13.17	0	0	0
178	SLU 7	-0.09	-0.25	13.16	0	0	0
178	SLU 8	-0.09	-0.24	13.06	0	0	0
178	SLU 9	-0.09	-0.25	13.05	0	0	0
178	SLU 10	-0.08	-0.26	14.16	0	0	0
178	SLU 11	-0.09	-0.25	14.48	0	0	0
178	SLU 12	-0.09	-0.26	14.47	0	0	0
178	SLU 13	-0.08	-0.26	14.35	0	0	0
178	SLU 14	-0.09	-0.25	14.68	0	0	0
178	SLU 15	-0.09	-0.26	14.66	0	0	0
178	SLU 16	-0.09	-0.25	14.57	0	0	0
178	SLU 17	-0.09	-0.26	14.56	0	0	0
178	SLU 18	-0.09	-0.25	14.82	0	0	0
178	SLU 19	-0.09	-0.26	14.81	0	0	0
178	SLU 20	-0.09	-0.25	15.02	0	0	0
178	SLU 21	-0.09	-0.26	15.01	0	0	0
178	SLU 22	-0.1	-0.23	14.03	0	0	0
178	SLU 23	-0.09	-0.25	14.01	0	0	0
178	SLU 24	-0.1	-0.24	14.33	0	0	0
178	SLU 25	-0.1	-0.24	14.32	0	0	0
178	SLU 26	-0.09	-0.25	14.2	0	0	0
178	SLU 27	-0.1	-0.24	14.53	0	0	0
178	SLU 28	-0.1	-0.25	14.51	0	0	0
178	SLU 29	-0.1	-0.24	14.42	0	0	0
178	SLU 30	-0.1	-0.25	14.4	0	0	0
178	SLU 31	-0.09	-0.26	15.51	0	0	0
178	SLU 32	-0.1	-0.25	15.84	0	0	0
178	SLU 33	-0.1	-0.26	15.82	0	0	0
178	SLU 34	-0.09	-0.26	15.71	0	0	0
178	SLU 35	-0.1	-0.25	16.03	0	0	0
178	SLU 36	-0.1	-0.26	16.02	0	0	0
178	SLU 37	-0.1	-0.25	15.92	0	0	0
178	SLU 38	-0.1	-0.26	15.91	0	0	0
178	SLU 39	-0.1	-0.25	16.18	0	0	0
178	SLU 40	-0.1	-0.26	16.16	0	0	0
178	SLU 41	-0.1	-0.25	16.37	0	0	0
178	SLU 42	-0.1	-0.26	16.36	0	0	0
178	SLU 43	-0.11	-0.3	16.01	0	0	0
178	SLU 44	-0.1	-0.32	15.99	0	0	0
178	SLU 45	-0.11	-0.31	16.32	0	0	0
178	SLU 46	-0.11	-0.31	16.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
178	SLU 47	-0.11	-0.32	16.18	0	0	0
178	SLU 48	-0.12	-0.31	16.51	0	0	0
178	SLU 49	-0.11	-0.32	16.5	0	0	0
178	SLU 50	-0.12	-0.31	16.4	0	0	0
178	SLU 51	-0.11	-0.32	16.39	0	0	0
178	SLU 52	-0.11	-0.33	17.49	0	0	0
178	SLU 53	-0.12	-0.32	17.82	0	0	0
178	SLU 54	-0.11	-0.33	17.81	0	0	0
178	SLU 55	-0.11	-0.33	17.69	0	0	0
178	SLU 56	-0.12	-0.32	18.02	0	0	0
178	SLU 57	-0.11	-0.33	18	0	0	0
178	SLU 58	-0.12	-0.32	17.91	0	0	0
178	SLU 59	-0.11	-0.33	17.89	0	0	0
178	SLU 60	-0.11	-0.32	18.16	0	0	0
178	SLU 61	-0.11	-0.33	18.15	0	0	0
178	SLU 62	-0.12	-0.32	18.36	0	0	0
178	SLU 63	-0.11	-0.33	18.34	0	0	0
178	SLU 64	-0.12	-0.3	17.36	0	0	0
178	SLU 65	-0.11	-0.32	17.34	0	0	0
178	SLU 66	-0.12	-0.31	17.67	0	0	0
178	SLU 67	-0.12	-0.31	17.66	0	0	0
178	SLU 68	-0.12	-0.32	17.54	0	0	0
178	SLU 69	-0.13	-0.31	17.86	0	0	0
178	SLU 70	-0.12	-0.32	17.85	0	0	0
178	SLU 71	-0.13	-0.31	17.76	0	0	0
178	SLU 72	-0.12	-0.32	17.74	0	0	0
178	SLU 73	-0.12	-0.33	18.85	0	0	0
178	SLU 74	-0.13	-0.32	19.17	0	0	0
178	SLU 75	-0.12	-0.33	19.16	0	0	0
178	SLU 76	-0.12	-0.33	19.04	0	0	0
178	SLU 77	-0.13	-0.32	19.37	0	0	0
178	SLU 78	-0.12	-0.33	19.36	0	0	0
178	SLU 79	-0.13	-0.32	19.26	0	0	0
178	SLU 80	-0.12	-0.33	19.25	0	0	0
178	SLU 81	-0.12	-0.32	19.51	0	0	0
178	SLU 82	-0.12	-0.33	19.5	0	0	0
178	SLU 83	-0.13	-0.32	19.71	0	0	0
178	SLU 84	-0.12	-0.33	19.7	0	0	0
178	SLE RA 1	-0.09	-0.23	13.06	0	0	0
178	SLE RA 2	-0.09	-0.24	13.05	0	0	0
178	SLE RA 3	-0.09	-0.24	13.26	0	0	0
178	SLE RA 4	-0.09	-0.24	13.25	0	0	0
178	SLE RA 5	-0.09	-0.24	13.18	0	0	0
178	SLE RA 6	-0.09	-0.24	13.39	0	0	0
178	SLE RA 7	-0.09	-0.24	13.38	0	0	0
178	SLE RA 8	-0.09	-0.24	13.32	0	0	0
178	SLE RA 9	-0.09	-0.24	13.31	0	0	0
178	SLE RA 10	-0.09	-0.25	14.05	0	0	0
178	SLE RA 11	-0.09	-0.24	14.27	0	0	0
178	SLE RA 12	-0.09	-0.25	14.26	0	0	0
178	SLE RA 13	-0.09	-0.25	14.18	0	0	0
178	SLE RA 14	-0.1	-0.25	14.4	0	0	0
178	SLE RA 15	-0.09	-0.25	14.39	0	0	0
178	SLE RA 16	-0.1	-0.25	14.32	0	0	0
178	SLE RA 17	-0.09	-0.25	14.32	0	0	0
178	SLE RA 18	-0.09	-0.24	14.49	0	0	0
178	SLE RA 19	-0.09	-0.25	14.48	0	0	0
178	SLE RA 20	-0.09	-0.25	14.62	0	0	0
178	SLE RA 21	-0.09	-0.25	14.61	0	0	0
178	SLE FR 1	-0.09	-0.23	13.06	0	0	0
178	SLE FR 2	-0.09	-0.23	13.06	0	0	0
178	SLE FR 3	-0.09	-0.23	13.11	0	0	0
178	SLE FR 4	-0.09	-0.24	13.49	0	0	0
178	SLE FR 5	-0.09	-0.24	13.54	0	0	0
178	SLE FR 6	-0.09	-0.24	13.78	0	0	0
178	SLE QP 1	-0.09	-0.23	13.06	0	0	0
178	SLE QP 2	-0.09	-0.24	13.49	0	0	0
178	SLD 1	0.96	-0.19	14.51	0	0	0
178	SLD 2	1.08	-0.24	14.44	0	0	0
178	SLD 3	0.98	-0.46	14.13	0	0	0
178	SLD 4	1.1	-0.52	14.06	0	0	0
178	SLD 5	0.17	0.21	14.39	0	0	0
178	SLD 6	0.25	0.18	14.34	0	0	0
178	SLD 7	0.24	-0.72	13.11	0	0	0
178	SLD 8	0.32	-0.75	13.07	0	0	0
178	SLD 9	-0.51	0.28	13.91	0	0	0
178	SLD 10	-0.43	0.25	13.87	0	0	0
178	SLD 11	-0.43	-0.65	12.64	0	0	0
178	SLD 12	-0.35	-0.68	12.59	0	0	0
178	SLD 13	-1.29	0.04	12.92	0	0	0
178	SLD 14	-1.17	-0.01	12.85	0	0	0
178	SLD 15	-1.27	-0.24	12.54	0	0	0
178	SLD 16	-1.15	-0.29	12.47	0	0	0
178	SLV 1	2.37	-0.13	15.86	0	0	0
178	SLV 2	2.65	-0.25	15.7	0	0	0
178	SLV 3	2.42	-0.76	15	0	0	0
178	SLV 4	2.71	-0.88	14.83	0	0	0
178	SLV 5	0.52	0.78	15.54	0	0	0
178	SLV 6	0.7	0.7	15.44	0	0	0
178	SLV 7	0.69	-1.33	12.66	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
178	SLV 8	0.87	-1.41	12.55	0	0	0
178	SLV 9	-1.06	0.94	14.43	0	0	0
178	SLV 10	-0.88	0.86	14.32	0	0	0
178	SLV 11	-0.89	-1.17	11.54	0	0	0
178	SLV 12	-0.7	-1.25	11.43	0	0	0
178	SLV 13	-2.89	0.41	12.14	0	0	0
178	SLV 14	-2.61	0.29	11.98	0	0	0
178	SLV 15	-2.84	-0.23	11.28	0	0	0
178	SLV 16	-2.56	-0.34	11.12	0	0	0
178	CRTFP Ux+	0	0	0	0	0	0
178	CRTFP Ux-	0	0	0	0	0	0
179	SLU 1	-0.09	-0.2	12.61	0	0	0
179	SLU 2	-0.08	-0.21	12.59	0	0	0
179	SLU 3	-0.09	-0.2	12.91	0	0	0
179	SLU 4	-0.09	-0.21	12.9	0	0	0
179	SLU 5	-0.08	-0.21	12.78	0	0	0
179	SLU 6	-0.09	-0.2	13.11	0	0	0
179	SLU 7	-0.09	-0.21	13.09	0	0	0
179	SLU 8	-0.09	-0.2	13	0	0	0
179	SLU 9	-0.09	-0.21	12.98	0	0	0
179	SLU 10	-0.08	-0.22	14.09	0	0	0
179	SLU 11	-0.09	-0.21	14.41	0	0	0
179	SLU 12	-0.09	-0.21	14.4	0	0	0
179	SLU 13	-0.08	-0.22	14.28	0	0	0
179	SLU 14	-0.09	-0.21	14.61	0	0	0
179	SLU 15	-0.09	-0.22	14.59	0	0	0
179	SLU 16	-0.09	-0.21	14.5	0	0	0
179	SLU 17	-0.09	-0.22	14.49	0	0	0
179	SLU 18	-0.09	-0.21	14.75	0	0	0
179	SLU 19	-0.09	-0.22	14.74	0	0	0
179	SLU 20	-0.09	-0.21	14.95	0	0	0
179	SLU 21	-0.09	-0.22	14.94	0	0	0
179	SLU 22	-0.1	-0.19	13.95	0	0	0
179	SLU 23	-0.09	-0.2	13.93	0	0	0
179	SLU 24	-0.1	-0.19	14.25	0	0	0
179	SLU 25	-0.1	-0.2	14.24	0	0	0
179	SLU 26	-0.09	-0.21	14.12	0	0	0
179	SLU 27	-0.1	-0.2	14.45	0	0	0
179	SLU 28	-0.1	-0.2	14.44	0	0	0
179	SLU 29	-0.1	-0.2	14.34	0	0	0
179	SLU 30	-0.1	-0.2	14.33	0	0	0
179	SLU 31	-0.09	-0.21	15.43	0	0	0
179	SLU 32	-0.1	-0.2	15.76	0	0	0
179	SLU 33	-0.1	-0.21	15.74	0	0	0
179	SLU 34	-0.09	-0.22	15.63	0	0	0
179	SLU 35	-0.1	-0.2	15.95	0	0	0
179	SLU 36	-0.1	-0.21	15.94	0	0	0
179	SLU 37	-0.1	-0.21	15.84	0	0	0
179	SLU 38	-0.1	-0.21	15.83	0	0	0
179	SLU 39	-0.1	-0.2	16.1	0	0	0
179	SLU 40	-0.1	-0.21	16.09	0	0	0
179	SLU 41	-0.1	-0.21	16.29	0	0	0
179	SLU 42	-0.1	-0.21	16.28	0	0	0
179	SLU 43	-0.11	-0.26	15.93	0	0	0
179	SLU 44	-0.1	-0.27	15.91	0	0	0
179	SLU 45	-0.11	-0.26	16.23	0	0	0
179	SLU 46	-0.11	-0.27	16.22	0	0	0
179	SLU 47	-0.11	-0.27	16.1	0	0	0
179	SLU 48	-0.12	-0.26	16.43	0	0	0
179	SLU 49	-0.11	-0.27	16.41	0	0	0
179	SLU 50	-0.12	-0.26	16.32	0	0	0
179	SLU 51	-0.11	-0.27	16.31	0	0	0
179	SLU 52	-0.11	-0.28	17.41	0	0	0
179	SLU 53	-0.11	-0.27	17.73	0	0	0
179	SLU 54	-0.11	-0.28	17.72	0	0	0
179	SLU 55	-0.11	-0.28	17.6	0	0	0
179	SLU 56	-0.12	-0.27	17.93	0	0	0
179	SLU 57	-0.11	-0.28	17.92	0	0	0
179	SLU 58	-0.12	-0.27	17.82	0	0	0
179	SLU 59	-0.11	-0.28	17.81	0	0	0
179	SLU 60	-0.11	-0.27	18.07	0	0	0
179	SLU 61	-0.11	-0.28	18.06	0	0	0
179	SLU 62	-0.11	-0.27	18.27	0	0	0
179	SLU 63	-0.11	-0.28	18.26	0	0	0
179	SLU 64	-0.12	-0.25	17.27	0	0	0
179	SLU 65	-0.11	-0.27	17.25	0	0	0
179	SLU 66	-0.12	-0.25	17.58	0	0	0
179	SLU 67	-0.12	-0.26	17.56	0	0	0
179	SLU 68	-0.12	-0.27	17.45	0	0	0
179	SLU 69	-0.13	-0.26	17.77	0	0	0
179	SLU 70	-0.12	-0.26	17.76	0	0	0
179	SLU 71	-0.13	-0.26	17.66	0	0	0
179	SLU 72	-0.12	-0.27	17.65	0	0	0
179	SLU 73	-0.11	-0.27	18.75	0	0	0
179	SLU 74	-0.12	-0.26	19.08	0	0	0
179	SLU 75	-0.12	-0.27	19.07	0	0	0
179	SLU 76	-0.12	-0.28	18.95	0	0	0
179	SLU 77	-0.13	-0.27	19.27	0	0	0
179	SLU 78	-0.12	-0.27	19.26	0	0	0
179	SLU 79	-0.13	-0.27	19.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
179	SLU 80	-0.12	-0.27	19.15	0	0	0
179	SLU 81	-0.12	-0.26	19.42	0	0	0
179	SLU 82	-0.12	-0.27	19.41	0	0	0
179	SLU 83	-0.12	-0.27	19.61	0	0	0
179	SLU 84	-0.12	-0.27	19.6	0	0	0
179	SLE RA 1	-0.09	-0.2	12.99	0	0	0
179	SLE RA 2	-0.09	-0.2	12.98	0	0	0
179	SLE RA 3	-0.09	-0.2	13.19	0	0	0
179	SLE RA 4	-0.09	-0.2	13.18	0	0	0
179	SLE RA 5	-0.09	-0.21	13.11	0	0	0
179	SLE RA 6	-0.09	-0.2	13.32	0	0	0
179	SLE RA 7	-0.09	-0.2	13.31	0	0	0
179	SLE RA 8	-0.09	-0.2	13.25	0	0	0
179	SLE RA 9	-0.09	-0.2	13.24	0	0	0
179	SLE RA 10	-0.09	-0.21	13.98	0	0	0
179	SLE RA 11	-0.09	-0.2	14.19	0	0	0
179	SLE RA 12	-0.09	-0.21	14.19	0	0	0
179	SLE RA 13	-0.09	-0.21	14.11	0	0	0
179	SLE RA 14	-0.09	-0.2	14.32	0	0	0
179	SLE RA 15	-0.09	-0.21	14.32	0	0	0
179	SLE RA 16	-0.09	-0.2	14.25	0	0	0
179	SLE RA 17	-0.09	-0.21	14.24	0	0	0
179	SLE RA 18	-0.09	-0.2	14.42	0	0	0
179	SLE RA 19	-0.09	-0.21	14.41	0	0	0
179	SLE RA 20	-0.09	-0.2	14.55	0	0	0
179	SLE RA 21	-0.09	-0.21	14.54	0	0	0
179	SLE FR 1	-0.09	-0.2	12.99	0	0	0
179	SLE FR 2	-0.09	-0.2	12.99	0	0	0
179	SLE FR 3	-0.09	-0.2	13.04	0	0	0
179	SLE FR 4	-0.09	-0.2	13.42	0	0	0
179	SLE FR 5	-0.09	-0.2	13.47	0	0	0
179	SLE FR 6	-0.09	-0.2	13.71	0	0	0
179	SLE QP 1	-0.09	-0.2	12.99	0	0	0
179	SLE QP 2	-0.09	-0.2	13.42	0	0	0
179	SLD 1	0.97	-0.13	14.3	0	0	0
179	SLD 2	1.09	-0.17	14.23	0	0	0
179	SLD 3	0.99	-0.41	13.92	0	0	0
179	SLD 4	1.11	-0.45	13.85	0	0	0
179	SLD 5	0.17	0.26	14.27	0	0	0
179	SLD 6	0.25	0.23	14.23	0	0	0
179	SLD 7	0.24	-0.68	13.01	0	0	0
179	SLD 8	0.32	-0.71	12.96	0	0	0
179	SLD 9	-0.51	0.32	13.88	0	0	0
179	SLD 10	-0.43	0.29	13.83	0	0	0
179	SLD 11	-0.43	-0.63	12.61	0	0	0
179	SLD 12	-0.35	-0.66	12.57	0	0	0
179	SLD 13	-1.29	0.06	12.99	0	0	0
179	SLD 14	-1.17	0.01	12.92	0	0	0
179	SLD 15	-1.27	-0.22	12.61	0	0	0
179	SLD 16	-1.15	-0.27	12.55	0	0	0
179	SLV 1	2.39	-0.04	15.45	0	0	0
179	SLV 2	2.67	-0.15	15.3	0	0	0
179	SLV 3	2.44	-0.68	14.6	0	0	0
179	SLV 4	2.72	-0.79	14.45	0	0	0
179	SLV 5	0.52	0.84	15.36	0	0	0
179	SLV 6	0.71	0.77	15.26	0	0	0
179	SLV 7	0.69	-1.3	12.5	0	0	0
179	SLV 8	0.88	-1.37	12.4	0	0	0
179	SLV 9	-1.06	0.97	14.44	0	0	0
179	SLV 10	-0.88	0.9	14.34	0	0	0
179	SLV 11	-0.89	-1.17	11.58	0	0	0
179	SLV 12	-0.71	-1.24	11.48	0	0	0
179	SLV 13	-2.9	0.39	12.39	0	0	0
179	SLV 14	-2.62	0.29	12.24	0	0	0
179	SLV 15	-2.85	-0.25	11.54	0	0	0
179	SLV 16	-2.57	-0.36	11.39	0	0	0
180	SLU 1	-0.09	-0.16	12.56	0	0	0
180	SLU 2	-0.08	-0.17	12.53	0	0	0
180	SLU 3	-0.09	-0.16	12.86	0	0	0
180	SLU 4	-0.08	-0.17	12.85	0	0	0
180	SLU 5	-0.08	-0.18	12.73	0	0	0
180	SLU 6	-0.09	-0.16	13.05	0	0	0
180	SLU 7	-0.09	-0.17	13.04	0	0	0
180	SLU 8	-0.09	-0.17	12.94	0	0	0
180	SLU 9	-0.09	-0.17	12.93	0	0	0
180	SLU 10	-0.08	-0.18	14.04	0	0	0
180	SLU 11	-0.09	-0.17	14.36	0	0	0
180	SLU 12	-0.09	-0.17	14.35	0	0	0
180	SLU 13	-0.08	-0.18	14.23	0	0	0
180	SLU 14	-0.09	-0.17	14.56	0	0	0
180	SLU 15	-0.09	-0.18	14.54	0	0	0
180	SLU 16	-0.09	-0.17	14.45	0	0	0
180	SLU 17	-0.09	-0.18	14.44	0	0	0
180	SLU 18	-0.09	-0.17	14.7	0	0	0
180	SLU 19	-0.08	-0.17	14.69	0	0	0
180	SLU 20	-0.09	-0.17	14.9	0	0	0
180	SLU 21	-0.09	-0.18	14.89	0	0	0
180	SLU 22	-0.1	-0.15	13.89	0	0	0
180	SLU 23	-0.09	-0.16	13.87	0	0	0
180	SLU 24	-0.1	-0.15	14.2	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
180	SLU 25	-0.09	-0.16	14.18	0	0	0
180	SLU 26	-0.09	-0.17	14.07	0	0	0
180	SLU 27	-0.1	-0.15	14.39	0	0	0
180	SLU 28	-0.1	-0.16	14.38	0	0	0
180	SLU 29	-0.1	-0.16	14.28	0	0	0
180	SLU 30	-0.1	-0.16	14.27	0	0	0
180	SLU 31	-0.09	-0.17	15.38	0	0	0
180	SLU 32	-0.1	-0.16	15.7	0	0	0
180	SLU 33	-0.1	-0.16	15.69	0	0	0
180	SLU 34	-0.09	-0.17	15.57	0	0	0
180	SLU 35	-0.1	-0.16	15.9	0	0	0
180	SLU 36	-0.1	-0.17	15.88	0	0	0
180	SLU 37	-0.1	-0.16	15.79	0	0	0
180	SLU 38	-0.1	-0.17	15.77	0	0	0
180	SLU 39	-0.1	-0.16	16.04	0	0	0
180	SLU 40	-0.09	-0.17	16.03	0	0	0
180	SLU 41	-0.1	-0.16	16.24	0	0	0
180	SLU 42	-0.1	-0.17	16.22	0	0	0
180	SLU 43	-0.11	-0.21	15.86	0	0	0
180	SLU 44	-0.1	-0.23	15.84	0	0	0
180	SLU 45	-0.11	-0.21	16.17	0	0	0
180	SLU 46	-0.11	-0.22	16.15	0	0	0
180	SLU 47	-0.1	-0.23	16.04	0	0	0
180	SLU 48	-0.11	-0.22	16.36	0	0	0
180	SLU 49	-0.11	-0.22	16.35	0	0	0
180	SLU 50	-0.11	-0.22	16.25	0	0	0
180	SLU 51	-0.11	-0.22	16.24	0	0	0
180	SLU 52	-0.1	-0.23	17.35	0	0	0
180	SLU 53	-0.11	-0.22	17.67	0	0	0
180	SLU 54	-0.11	-0.23	17.66	0	0	0
180	SLU 55	-0.11	-0.23	17.54	0	0	0
180	SLU 56	-0.12	-0.22	17.86	0	0	0
180	SLU 57	-0.11	-0.23	17.85	0	0	0
180	SLU 58	-0.12	-0.22	17.76	0	0	0
180	SLU 59	-0.11	-0.23	17.74	0	0	0
180	SLU 60	-0.11	-0.22	18.01	0	0	0
180	SLU 61	-0.11	-0.23	18	0	0	0
180	SLU 62	-0.11	-0.22	18.21	0	0	0
180	SLU 63	-0.11	-0.23	18.19	0	0	0
180	SLU 64	-0.12	-0.2	17.2	0	0	0
180	SLU 65	-0.11	-0.22	17.18	0	0	0
180	SLU 66	-0.12	-0.2	17.5	0	0	0
180	SLU 67	-0.12	-0.21	17.49	0	0	0
180	SLU 68	-0.11	-0.22	17.38	0	0	0
180	SLU 69	-0.12	-0.21	17.7	0	0	0
180	SLU 70	-0.12	-0.21	17.69	0	0	0
180	SLU 71	-0.12	-0.21	17.59	0	0	0
180	SLU 72	-0.12	-0.22	17.58	0	0	0
180	SLU 73	-0.11	-0.22	18.69	0	0	0
180	SLU 74	-0.12	-0.21	19.01	0	0	0
180	SLU 75	-0.12	-0.22	19	0	0	0
180	SLU 76	-0.12	-0.22	18.88	0	0	0
180	SLU 77	-0.12	-0.21	19.2	0	0	0
180	SLU 78	-0.12	-0.22	19.19	0	0	0
180	SLU 79	-0.12	-0.21	19.09	0	0	0
180	SLU 80	-0.12	-0.22	19.08	0	0	0
180	SLU 81	-0.12	-0.21	19.35	0	0	0
180	SLU 82	-0.12	-0.22	19.34	0	0	0
180	SLU 83	-0.12	-0.21	19.54	0	0	0
180	SLU 84	-0.12	-0.22	19.53	0	0	0
180	SLE RA 1	-0.09	-0.16	12.94	0	0	0
180	SLE RA 2	-0.09	-0.17	12.92	0	0	0
180	SLE RA 3	-0.09	-0.16	13.14	0	0	0
180	SLE RA 4	-0.09	-0.16	13.13	0	0	0
180	SLE RA 5	-0.09	-0.17	13.05	0	0	0
180	SLE RA 6	-0.09	-0.16	13.27	0	0	0
180	SLE RA 7	-0.09	-0.17	13.26	0	0	0
180	SLE RA 8	-0.09	-0.16	13.2	0	0	0
180	SLE RA 9	-0.09	-0.17	13.19	0	0	0
180	SLE RA 10	-0.09	-0.17	13.93	0	0	0
180	SLE RA 11	-0.09	-0.16	14.14	0	0	0
180	SLE RA 12	-0.09	-0.17	14.13	0	0	0
180	SLE RA 13	-0.09	-0.17	14.06	0	0	0
180	SLE RA 14	-0.09	-0.16	14.27	0	0	0
180	SLE RA 15	-0.09	-0.17	14.26	0	0	0
180	SLE RA 16	-0.09	-0.16	14.2	0	0	0
180	SLE RA 17	-0.09	-0.17	14.19	0	0	0
180	SLE RA 18	-0.09	-0.16	14.37	0	0	0
180	SLE RA 19	-0.09	-0.17	14.36	0	0	0
180	SLE RA 20	-0.09	-0.16	14.5	0	0	0
180	SLE RA 21	-0.09	-0.17	14.49	0	0	0
180	SLE FR 1	-0.09	-0.16	12.94	0	0	0
180	SLE FR 2	-0.09	-0.16	12.94	0	0	0
180	SLE FR 3	-0.09	-0.16	12.99	0	0	0
180	SLE FR 4	-0.09	-0.16	13.36	0	0	0
180	SLE FR 5	-0.09	-0.16	13.42	0	0	0
180	SLE FR 6	-0.09	-0.16	13.65	0	0	0
180	SLE QP 1	-0.09	-0.16	12.94	0	0	0
180	SLE QP 2	-0.09	-0.16	13.37	0	0	0
180	SLD 1	0.97	-0.07	14.1	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
180	SLD 2	1.09	-0.11	14.04	0	0	0
180	SLD 3	0.99	-0.35	13.73	0	0	0
180	SLD 4	1.11	-0.39	13.67	0	0	0
180	SLD 5	0.17	0.31	14.17	0	0	0
180	SLD 6	0.25	0.28	14.13	0	0	0
180	SLD 7	0.25	-0.64	12.92	0	0	0
180	SLD 8	0.33	-0.67	12.88	0	0	0
180	SLD 9	-0.51	0.35	13.86	0	0	0
180	SLD 10	-0.43	0.32	13.82	0	0	0
180	SLD 11	-0.43	-0.6	12.61	0	0	0
180	SLD 12	-0.35	-0.63	12.57	0	0	0
180	SLD 13	-1.29	0.07	13.07	0	0	0
180	SLD 14	-1.17	0.03	13.01	0	0	0
180	SLD 15	-1.27	-0.21	12.69	0	0	0
180	SLD 16	-1.15	-0.25	12.63	0	0	0
180	SLV 1	2.39	0.05	15.07	0	0	0
180	SLV 2	2.67	-0.05	14.93	0	0	0
180	SLV 3	2.44	-0.6	14.22	0	0	0
180	SLV 4	2.72	-0.7	14.08	0	0	0
180	SLV 5	0.53	0.9	15.19	0	0	0
180	SLV 6	0.71	0.84	15.1	0	0	0
180	SLV 7	0.7	-1.26	12.36	0	0	0
180	SLV 8	0.88	-1.32	12.27	0	0	0
180	SLV 9	-1.06	1	14.47	0	0	0
180	SLV 10	-0.88	0.94	14.38	0	0	0
180	SLV 11	-0.89	-1.16	11.63	0	0	0
180	SLV 12	-0.71	-1.22	11.54	0	0	0
180	SLV 13	-2.9	0.38	12.65	0	0	0
180	SLV 14	-2.62	0.28	12.51	0	0	0
180	SLV 15	-2.85	-0.27	11.8	0	0	0
180	SLV 16	-2.57	-0.37	11.66	0	0	0
181	SLU 1	-0.09	-0.13	12.53	0	0	0
181	SLU 2	-0.08	-0.14	12.51	0	0	0
181	SLU 3	-0.09	-0.13	12.84	0	0	0
181	SLU 4	-0.08	-0.13	12.82	0	0	0
181	SLU 5	-0.08	-0.14	12.71	0	0	0
181	SLU 6	-0.09	-0.13	13.03	0	0	0
181	SLU 7	-0.09	-0.13	13.02	0	0	0
181	SLU 8	-0.09	-0.13	12.92	0	0	0
181	SLU 9	-0.09	-0.14	12.91	0	0	0
181	SLU 10	-0.08	-0.14	14.02	0	0	0
181	SLU 11	-0.09	-0.13	14.35	0	0	0
181	SLU 12	-0.09	-0.13	14.33	0	0	0
181	SLU 13	-0.08	-0.14	14.22	0	0	0
181	SLU 14	-0.09	-0.13	14.54	0	0	0
181	SLU 15	-0.09	-0.13	14.53	0	0	0
181	SLU 16	-0.09	-0.13	14.43	0	0	0
181	SLU 17	-0.09	-0.14	14.42	0	0	0
181	SLU 18	-0.09	-0.13	14.69	0	0	0
181	SLU 19	-0.08	-0.13	14.68	0	0	0
181	SLU 20	-0.09	-0.13	14.89	0	0	0
181	SLU 21	-0.09	-0.13	14.87	0	0	0
181	SLU 22	-0.1	-0.11	13.87	0	0	0
181	SLU 23	-0.09	-0.12	13.85	0	0	0
181	SLU 24	-0.1	-0.11	14.17	0	0	0
181	SLU 25	-0.09	-0.12	14.16	0	0	0
181	SLU 26	-0.09	-0.13	14.04	0	0	0
181	SLU 27	-0.1	-0.11	14.37	0	0	0
181	SLU 28	-0.1	-0.12	14.35	0	0	0
181	SLU 29	-0.1	-0.11	14.26	0	0	0
181	SLU 30	-0.1	-0.12	14.25	0	0	0
181	SLU 31	-0.09	-0.12	15.36	0	0	0
181	SLU 32	-0.1	-0.11	15.68	0	0	0
181	SLU 33	-0.09	-0.12	15.67	0	0	0
181	SLU 34	-0.09	-0.13	15.55	0	0	0
181	SLU 35	-0.1	-0.11	15.88	0	0	0
181	SLU 36	-0.1	-0.12	15.87	0	0	0
181	SLU 37	-0.1	-0.11	15.77	0	0	0
181	SLU 38	-0.1	-0.12	15.76	0	0	0
181	SLU 39	-0.1	-0.11	16.03	0	0	0
181	SLU 40	-0.09	-0.12	16.02	0	0	0
181	SLU 41	-0.1	-0.11	16.22	0	0	0
181	SLU 42	-0.09	-0.12	16.21	0	0	0
181	SLU 43	-0.11	-0.17	15.83	0	0	0
181	SLU 44	-0.1	-0.18	15.81	0	0	0
181	SLU 45	-0.11	-0.17	16.14	0	0	0
181	SLU 46	-0.11	-0.17	16.12	0	0	0
181	SLU 47	-0.1	-0.18	16.01	0	0	0
181	SLU 48	-0.11	-0.17	16.33	0	0	0
181	SLU 49	-0.11	-0.18	16.32	0	0	0
181	SLU 50	-0.11	-0.17	16.22	0	0	0
181	SLU 51	-0.11	-0.18	16.21	0	0	0
181	SLU 52	-0.1	-0.18	17.32	0	0	0
181	SLU 53	-0.11	-0.17	17.65	0	0	0
181	SLU 54	-0.11	-0.18	17.64	0	0	0
181	SLU 55	-0.1	-0.18	17.52	0	0	0
181	SLU 56	-0.11	-0.17	17.84	0	0	0
181	SLU 57	-0.11	-0.18	17.83	0	0	0
181	SLU 58	-0.11	-0.17	17.73	0	0	0
181	SLU 59	-0.11	-0.18	17.72	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
181	SLU 60	-0.11	-0.17	17.99	0	0	0
181	SLU 61	-0.11	-0.18	17.98	0	0	0
181	SLU 62	-0.11	-0.17	18.19	0	0	0
181	SLU 63	-0.11	-0.18	18.17	0	0	0
181	SLU 64	-0.12	-0.15	17.17	0	0	0
181	SLU 65	-0.11	-0.17	17.15	0	0	0
181	SLU 66	-0.12	-0.15	17.47	0	0	0
181	SLU 67	-0.12	-0.16	17.46	0	0	0
181	SLU 68	-0.11	-0.17	17.34	0	0	0
181	SLU 69	-0.12	-0.16	17.67	0	0	0
181	SLU 70	-0.12	-0.16	17.66	0	0	0
181	SLU 71	-0.12	-0.16	17.56	0	0	0
181	SLU 72	-0.12	-0.16	17.55	0	0	0
181	SLU 73	-0.11	-0.17	18.66	0	0	0
181	SLU 74	-0.12	-0.15	18.99	0	0	0
181	SLU 75	-0.12	-0.16	18.97	0	0	0
181	SLU 76	-0.11	-0.17	18.86	0	0	0
181	SLU 77	-0.12	-0.16	19.18	0	0	0
181	SLU 78	-0.12	-0.16	19.17	0	0	0
181	SLU 79	-0.12	-0.16	19.07	0	0	0
181	SLU 80	-0.12	-0.16	19.06	0	0	0
181	SLU 81	-0.12	-0.15	19.33	0	0	0
181	SLU 82	-0.12	-0.16	19.32	0	0	0
181	SLU 83	-0.12	-0.16	19.52	0	0	0
181	SLU 84	-0.12	-0.16	19.51	0	0	0
181	SLE RA 1	-0.09	-0.12	12.91	0	0	0
181	SLE RA 2	-0.08	-0.13	12.9	0	0	0
181	SLE RA 3	-0.09	-0.12	13.12	0	0	0
181	SLE RA 4	-0.09	-0.13	13.11	0	0	0
181	SLE RA 5	-0.09	-0.13	13.03	0	0	0
181	SLE RA 6	-0.09	-0.12	13.25	0	0	0
181	SLE RA 7	-0.09	-0.13	13.24	0	0	0
181	SLE RA 8	-0.09	-0.12	13.17	0	0	0
181	SLE RA 9	-0.09	-0.13	13.16	0	0	0
181	SLE RA 10	-0.08	-0.13	13.91	0	0	0
181	SLE RA 11	-0.09	-0.12	14.12	0	0	0
181	SLE RA 12	-0.09	-0.13	14.12	0	0	0
181	SLE RA 13	-0.09	-0.13	14.04	0	0	0
181	SLE RA 14	-0.09	-0.12	14.25	0	0	0
181	SLE RA 15	-0.09	-0.13	14.25	0	0	0
181	SLE RA 16	-0.09	-0.12	14.18	0	0	0
181	SLE RA 17	-0.09	-0.13	14.17	0	0	0
181	SLE RA 18	-0.09	-0.12	14.35	0	0	0
181	SLE RA 19	-0.09	-0.13	14.35	0	0	0
181	SLE RA 20	-0.09	-0.12	14.48	0	0	0
181	SLE RA 21	-0.09	-0.13	14.47	0	0	0
181	SLE FR 1	-0.09	-0.12	12.91	0	0	0
181	SLE FR 2	-0.09	-0.12	12.91	0	0	0
181	SLE FR 3	-0.09	-0.12	12.97	0	0	0
181	SLE FR 4	-0.09	-0.12	13.34	0	0	0
181	SLE FR 5	-0.09	-0.12	13.4	0	0	0
181	SLE FR 6	-0.09	-0.12	13.63	0	0	0
181	SLE QP 1	-0.09	-0.12	12.91	0	0	0
181	SLE QP 2	-0.09	-0.12	13.35	0	0	0
181	SLD 1	0.97	-0.01	13.95	0	0	0
181	SLD 2	1.09	-0.04	13.89	0	0	0
181	SLD 3	0.99	-0.3	13.57	0	0	0
181	SLD 4	1.11	-0.33	13.52	0	0	0
181	SLD 5	0.17	0.36	14.1	0	0	0
181	SLD 6	0.25	0.33	14.07	0	0	0
181	SLD 7	0.24	-0.6	12.86	0	0	0
181	SLD 8	0.33	-0.63	12.82	0	0	0
181	SLD 9	-0.5	0.38	13.87	0	0	0
181	SLD 10	-0.42	0.36	13.83	0	0	0
181	SLD 11	-0.43	-0.57	12.62	0	0	0
181	SLD 12	-0.35	-0.6	12.59	0	0	0
181	SLD 13	-1.29	0.09	13.17	0	0	0
181	SLD 14	-1.17	0.05	13.12	0	0	0
181	SLD 15	-1.27	-0.2	12.8	0	0	0
181	SLD 16	-1.15	-0.23	12.75	0	0	0
181	SLV 1	2.38	0.13	14.74	0	0	0
181	SLV 2	2.66	0.05	14.61	0	0	0
181	SLV 3	2.43	-0.52	13.89	0	0	0
181	SLV 4	2.71	-0.6	13.76	0	0	0
181	SLV 5	0.53	0.96	15.07	0	0	0
181	SLV 6	0.71	0.9	14.99	0	0	0
181	SLV 7	0.69	-1.21	12.25	0	0	0
181	SLV 8	0.88	-1.27	12.16	0	0	0
181	SLV 9	-1.06	1.02	14.53	0	0	0
181	SLV 10	-0.87	0.97	14.44	0	0	0
181	SLV 11	-0.89	-1.15	11.7	0	0	0
181	SLV 12	-0.71	-1.2	11.62	0	0	0
181	SLV 13	-2.89	0.36	12.93	0	0	0
181	SLV 14	-2.61	0.28	12.8	0	0	0
181	SLV 15	-2.84	-0.29	12.08	0	0	0
181	SLV 16	-2.56	-0.38	11.95	0	0	0
182	SLU 1	-0.09	-0.09	12.57	0	0	0
182	SLU 2	-0.08	-0.1	12.55	0	0	0
182	SLU 3	-0.09	-0.09	12.87	0	0	0
182	SLU 4	-0.08	-0.1	12.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
182	SLU 5	-0.08	-0.1	12.74	0	0	0
182	SLU 6	-0.09	-0.09	13.07	0	0	0
182	SLU 7	-0.09	-0.1	13.06	0	0	0
182	SLU 8	-0.09	-0.09	12.96	0	0	0
182	SLU 9	-0.09	-0.1	12.95	0	0	0
182	SLU 10	-0.08	-0.1	14.07	0	0	0
182	SLU 11	-0.09	-0.09	14.4	0	0	0
182	SLU 12	-0.08	-0.09	14.39	0	0	0
182	SLU 13	-0.08	-0.1	14.27	0	0	0
182	SLU 14	-0.09	-0.09	14.6	0	0	0
182	SLU 15	-0.09	-0.09	14.58	0	0	0
182	SLU 16	-0.09	-0.09	14.49	0	0	0
182	SLU 17	-0.09	-0.1	14.47	0	0	0
182	SLU 18	-0.09	-0.09	14.75	0	0	0
182	SLU 19	-0.08	-0.09	14.74	0	0	0
182	SLU 20	-0.09	-0.09	14.95	0	0	0
182	SLU 21	-0.09	-0.09	14.93	0	0	0
182	SLU 22	-0.1	-0.07	13.91	0	0	0
182	SLU 23	-0.09	-0.08	13.89	0	0	0
182	SLU 24	-0.1	-0.07	14.22	0	0	0
182	SLU 25	-0.09	-0.08	14.21	0	0	0
182	SLU 26	-0.09	-0.09	14.09	0	0	0
182	SLU 27	-0.1	-0.07	14.41	0	0	0
182	SLU 28	-0.09	-0.08	14.4	0	0	0
182	SLU 29	-0.1	-0.07	14.3	0	0	0
182	SLU 30	-0.09	-0.08	14.29	0	0	0
182	SLU 31	-0.09	-0.08	15.42	0	0	0
182	SLU 32	-0.1	-0.07	15.75	0	0	0
182	SLU 33	-0.09	-0.07	15.73	0	0	0
182	SLU 34	-0.09	-0.08	15.61	0	0	0
182	SLU 35	-0.1	-0.07	15.94	0	0	0
182	SLU 36	-0.1	-0.08	15.93	0	0	0
182	SLU 37	-0.1	-0.07	15.83	0	0	0
182	SLU 38	-0.1	-0.08	15.82	0	0	0
182	SLU 39	-0.1	-0.07	16.09	0	0	0
182	SLU 40	-0.09	-0.07	16.08	0	0	0
182	SLU 41	-0.1	-0.07	16.29	0	0	0
182	SLU 42	-0.09	-0.08	16.28	0	0	0
182	SLU 43	-0.11	-0.12	15.88	0	0	0
182	SLU 44	-0.1	-0.14	15.86	0	0	0
182	SLU 45	-0.11	-0.12	16.18	0	0	0
182	SLU 46	-0.11	-0.13	16.17	0	0	0
182	SLU 47	-0.1	-0.14	16.05	0	0	0
182	SLU 48	-0.11	-0.12	16.38	0	0	0
182	SLU 49	-0.11	-0.13	16.37	0	0	0
182	SLU 50	-0.11	-0.13	16.27	0	0	0
182	SLU 51	-0.11	-0.13	16.26	0	0	0
182	SLU 52	-0.1	-0.13	17.38	0	0	0
182	SLU 53	-0.11	-0.12	17.71	0	0	0
182	SLU 54	-0.11	-0.13	17.7	0	0	0
182	SLU 55	-0.1	-0.13	17.58	0	0	0
182	SLU 56	-0.11	-0.12	17.91	0	0	0
182	SLU 57	-0.11	-0.13	17.89	0	0	0
182	SLU 58	-0.11	-0.12	17.8	0	0	0
182	SLU 59	-0.11	-0.13	17.78	0	0	0
182	SLU 60	-0.11	-0.12	18.06	0	0	0
182	SLU 61	-0.11	-0.13	18.05	0	0	0
182	SLU 62	-0.11	-0.12	18.25	0	0	0
182	SLU 63	-0.11	-0.13	18.24	0	0	0
182	SLU 64	-0.12	-0.11	17.22	0	0	0
182	SLU 65	-0.11	-0.12	17.2	0	0	0
182	SLU 66	-0.12	-0.1	17.53	0	0	0
182	SLU 67	-0.12	-0.11	17.51	0	0	0
182	SLU 68	-0.11	-0.12	17.4	0	0	0
182	SLU 69	-0.12	-0.11	17.72	0	0	0
182	SLU 70	-0.12	-0.11	17.71	0	0	0
182	SLU 71	-0.12	-0.11	17.61	0	0	0
182	SLU 72	-0.12	-0.11	17.6	0	0	0
182	SLU 73	-0.11	-0.11	18.73	0	0	0
182	SLU 74	-0.12	-0.1	19.05	0	0	0
182	SLU 75	-0.12	-0.11	19.04	0	0	0
182	SLU 76	-0.11	-0.12	18.92	0	0	0
182	SLU 77	-0.12	-0.1	19.25	0	0	0
182	SLU 78	-0.12	-0.11	19.24	0	0	0
182	SLU 79	-0.12	-0.1	19.14	0	0	0
182	SLU 80	-0.12	-0.11	19.13	0	0	0
182	SLU 81	-0.12	-0.1	19.4	0	0	0
182	SLU 82	-0.12	-0.11	19.39	0	0	0
182	SLU 83	-0.12	-0.1	19.6	0	0	0
182	SLU 84	-0.12	-0.11	19.59	0	0	0
182	SLE RA 1	-0.09	-0.09	12.95	0	0	0
182	SLE RA 2	-0.08	-0.09	12.94	0	0	0
182	SLE RA 3	-0.09	-0.08	13.16	0	0	0
182	SLE RA 4	-0.09	-0.09	13.15	0	0	0
182	SLE RA 5	-0.08	-0.09	13.07	0	0	0
182	SLE RA 6	-0.09	-0.09	13.29	0	0	0
182	SLE RA 7	-0.09	-0.09	13.28	0	0	0
182	SLE RA 8	-0.09	-0.09	13.21	0	0	0
182	SLE RA 9	-0.09	-0.09	13.2	0	0	0
182	SLE RA 10	-0.08	-0.09	13.96	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
182	SLE RA 11	-0.09	-0.08	14.17	0	0	0
182	SLE RA 12	-0.09	-0.09	14.17	0	0	0
182	SLE RA 13	-0.09	-0.09	14.09	0	0	0
182	SLE RA 14	-0.09	-0.08	14.3	0	0	0
182	SLE RA 15	-0.09	-0.09	14.3	0	0	0
182	SLE RA 16	-0.09	-0.08	14.23	0	0	0
182	SLE RA 17	-0.09	-0.09	14.22	0	0	0
182	SLE RA 18	-0.09	-0.08	14.41	0	0	0
182	SLE RA 19	-0.09	-0.09	14.4	0	0	0
182	SLE RA 20	-0.09	-0.08	14.54	0	0	0
182	SLE RA 21	-0.09	-0.09	14.53	0	0	0
182	SLE FR 1	-0.09	-0.09	12.95	0	0	0
182	SLE FR 2	-0.09	-0.09	12.95	0	0	0
182	SLE FR 3	-0.09	-0.09	13	0	0	0
182	SLE FR 4	-0.09	-0.09	13.39	0	0	0
182	SLE FR 5	-0.09	-0.08	13.44	0	0	0
182	SLE FR 6	-0.09	-0.08	13.68	0	0	0
182	SLE QP 1	-0.09	-0.09	12.95	0	0	0
182	SLE QP 2	-0.09	-0.08	13.39	0	0	0
182	SLD 1	0.96	0.05	13.87	0	0	0
182	SLD 2	1.08	0.02	13.82	0	0	0
182	SLD 3	0.98	-0.24	13.49	0	0	0
182	SLD 4	1.11	-0.27	13.44	0	0	0
182	SLD 5	0.17	0.4	14.11	0	0	0
182	SLD 6	0.25	0.38	14.08	0	0	0
182	SLD 7	0.24	-0.56	12.86	0	0	0
182	SLD 8	0.32	-0.58	12.83	0	0	0
182	SLD 9	-0.5	0.42	13.95	0	0	0
182	SLD 10	-0.42	0.4	13.92	0	0	0
182	SLD 11	-0.43	-0.55	12.7	0	0	0
182	SLD 12	-0.35	-0.57	12.67	0	0	0
182	SLD 13	-1.28	0.1	13.33	0	0	0
182	SLD 14	-1.16	0.07	13.28	0	0	0
182	SLD 15	-1.26	-0.19	12.96	0	0	0
182	SLD 16	-1.14	-0.22	12.91	0	0	0
182	SLV 1	2.37	0.22	14.49	0	0	0
182	SLV 2	2.65	0.15	14.38	0	0	0
182	SLV 3	2.42	-0.44	13.64	0	0	0
182	SLV 4	2.7	-0.51	13.53	0	0	0
182	SLV 5	0.53	1.01	15.03	0	0	0
182	SLV 6	0.71	0.97	14.95	0	0	0
182	SLV 7	0.69	-1.17	12.2	0	0	0
182	SLV 8	0.87	-1.22	12.12	0	0	0
182	SLV 9	-1.05	1.05	14.65	0	0	0
182	SLV 10	-0.87	1	14.58	0	0	0
182	SLV 11	-0.89	-1.13	11.83	0	0	0
182	SLV 12	-0.7	-1.18	11.75	0	0	0
182	SLV 13	-2.88	0.34	13.25	0	0	0
182	SLV 14	-2.6	0.27	13.13	0	0	0
182	SLV 15	-2.83	-0.31	12.4	0	0	0
182	SLV 16	-2.55	-0.39	12.28	0	0	0
183	SLU 1	-0.09	-0.06	12.61	0	0	0
183	SLU 2	-0.08	-0.07	12.59	0	0	0
183	SLU 3	-0.09	-0.05	12.92	0	0	0
183	SLU 4	-0.08	-0.06	12.9	0	0	0
183	SLU 5	-0.08	-0.07	12.78	0	0	0
183	SLU 6	-0.09	-0.06	13.11	0	0	0
183	SLU 7	-0.09	-0.06	13.1	0	0	0
183	SLU 8	-0.09	-0.06	13	0	0	0
183	SLU 9	-0.09	-0.06	12.99	0	0	0
183	SLU 10	-0.08	-0.06	14.13	0	0	0
183	SLU 11	-0.09	-0.05	14.46	0	0	0
183	SLU 12	-0.09	-0.05	14.45	0	0	0
183	SLU 13	-0.08	-0.06	14.33	0	0	0
183	SLU 14	-0.09	-0.05	14.66	0	0	0
183	SLU 15	-0.09	-0.06	14.65	0	0	0
183	SLU 16	-0.09	-0.05	14.55	0	0	0
183	SLU 17	-0.09	-0.06	14.53	0	0	0
183	SLU 18	-0.09	-0.05	14.81	0	0	0
183	SLU 19	-0.08	-0.05	14.8	0	0	0
183	SLU 20	-0.09	-0.05	15.01	0	0	0
183	SLU 21	-0.09	-0.05	15	0	0	0
183	SLU 22	-0.09	-0.03	13.96	0	0	0
183	SLU 23	-0.09	-0.05	13.94	0	0	0
183	SLU 24	-0.1	-0.03	14.27	0	0	0
183	SLU 25	-0.09	-0.04	14.26	0	0	0
183	SLU 26	-0.09	-0.05	14.14	0	0	0
183	SLU 27	-0.1	-0.03	14.47	0	0	0
183	SLU 28	-0.09	-0.04	14.45	0	0	0
183	SLU 29	-0.1	-0.04	14.35	0	0	0
183	SLU 30	-0.09	-0.04	14.34	0	0	0
183	SLU 31	-0.09	-0.04	15.48	0	0	0
183	SLU 32	-0.1	-0.03	15.81	0	0	0
183	SLU 33	-0.09	-0.03	15.8	0	0	0
183	SLU 34	-0.09	-0.04	15.68	0	0	0
183	SLU 35	-0.1	-0.03	16.01	0	0	0
183	SLU 36	-0.1	-0.03	16	0	0	0
183	SLU 37	-0.1	-0.03	15.9	0	0	0
183	SLU 38	-0.1	-0.04	15.89	0	0	0
183	SLU 39	-0.1	-0.02	16.17	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
183	SLU 40	-0.09	-0.03	16.15	0	0	0
183	SLU 41	-0.1	-0.03	16.36	0	0	0
183	SLU 42	-0.1	-0.03	16.35	0	0	0
183	SLU 43	-0.11	-0.08	15.93	0	0	0
183	SLU 44	-0.1	-0.09	15.91	0	0	0
183	SLU 45	-0.11	-0.08	16.24	0	0	0
183	SLU 46	-0.11	-0.09	16.22	0	0	0
183	SLU 47	-0.1	-0.09	16.1	0	0	0
183	SLU 48	-0.11	-0.08	16.43	0	0	0
183	SLU 49	-0.11	-0.09	16.42	0	0	0
183	SLU 50	-0.11	-0.08	16.32	0	0	0
183	SLU 51	-0.11	-0.09	16.31	0	0	0
183	SLU 52	-0.1	-0.09	17.45	0	0	0
183	SLU 53	-0.11	-0.07	17.78	0	0	0
183	SLU 54	-0.11	-0.08	17.77	0	0	0
183	SLU 55	-0.1	-0.09	17.65	0	0	0
183	SLU 56	-0.11	-0.07	17.98	0	0	0
183	SLU 57	-0.11	-0.08	17.97	0	0	0
183	SLU 58	-0.11	-0.08	17.87	0	0	0
183	SLU 59	-0.11	-0.08	17.85	0	0	0
183	SLU 60	-0.11	-0.07	18.13	0	0	0
183	SLU 61	-0.11	-0.08	18.12	0	0	0
183	SLU 62	-0.11	-0.07	18.33	0	0	0
183	SLU 63	-0.11	-0.08	18.32	0	0	0
183	SLU 64	-0.12	-0.06	17.28	0	0	0
183	SLU 65	-0.11	-0.07	17.26	0	0	0
183	SLU 66	-0.12	-0.06	17.59	0	0	0
183	SLU 67	-0.12	-0.06	17.58	0	0	0
183	SLU 68	-0.11	-0.07	17.46	0	0	0
183	SLU 69	-0.12	-0.06	17.78	0	0	0
183	SLU 70	-0.12	-0.06	17.77	0	0	0
183	SLU 71	-0.12	-0.06	17.67	0	0	0
183	SLU 72	-0.12	-0.07	17.66	0	0	0
183	SLU 73	-0.11	-0.06	18.8	0	0	0
183	SLU 74	-0.12	-0.05	19.13	0	0	0
183	SLU 75	-0.12	-0.06	19.12	0	0	0
183	SLU 76	-0.11	-0.06	19	0	0	0
183	SLU 77	-0.12	-0.05	19.33	0	0	0
183	SLU 78	-0.12	-0.06	19.32	0	0	0
183	SLU 79	-0.12	-0.05	19.22	0	0	0
183	SLU 80	-0.12	-0.06	19.21	0	0	0
183	SLU 81	-0.12	-0.05	19.49	0	0	0
183	SLU 82	-0.12	-0.06	19.47	0	0	0
183	SLU 83	-0.12	-0.05	19.68	0	0	0
183	SLU 84	-0.12	-0.06	19.67	0	0	0
183	SLE RA 1	-0.09	-0.05	12.99	0	0	0
183	SLE RA 2	-0.08	-0.06	12.98	0	0	0
183	SLE RA 3	-0.09	-0.05	13.2	0	0	0
183	SLE RA 4	-0.09	-0.05	13.19	0	0	0
183	SLE RA 5	-0.08	-0.06	13.11	0	0	0
183	SLE RA 6	-0.09	-0.05	13.33	0	0	0
183	SLE RA 7	-0.09	-0.05	13.32	0	0	0
183	SLE RA 8	-0.09	-0.05	13.26	0	0	0
183	SLE RA 9	-0.09	-0.06	13.25	0	0	0
183	SLE RA 10	-0.08	-0.05	14.01	0	0	0
183	SLE RA 11	-0.09	-0.04	14.23	0	0	0
183	SLE RA 12	-0.09	-0.05	14.22	0	0	0
183	SLE RA 13	-0.09	-0.05	14.14	0	0	0
183	SLE RA 14	-0.09	-0.04	14.36	0	0	0
183	SLE RA 15	-0.09	-0.05	14.35	0	0	0
183	SLE RA 16	-0.09	-0.05	14.29	0	0	0
183	SLE RA 17	-0.09	-0.05	14.28	0	0	0
183	SLE RA 18	-0.09	-0.04	14.47	0	0	0
183	SLE RA 19	-0.09	-0.05	14.46	0	0	0
183	SLE RA 20	-0.09	-0.04	14.6	0	0	0
183	SLE RA 21	-0.09	-0.05	14.59	0	0	0
183	SLE FR 1	-0.09	-0.05	12.99	0	0	0
183	SLE FR 2	-0.09	-0.05	12.99	0	0	0
183	SLE FR 3	-0.09	-0.05	13.05	0	0	0
183	SLE FR 4	-0.09	-0.05	13.43	0	0	0
183	SLE FR 5	-0.09	-0.05	13.49	0	0	0
183	SLE FR 6	-0.09	-0.05	13.73	0	0	0
183	SLE QP 1	-0.09	-0.05	12.99	0	0	0
183	SLE QP 2	-0.09	-0.05	13.44	0	0	0
183	SLD 1	0.96	0.12	13.8	0	0	0
183	SLD 2	1.08	0.1	13.76	0	0	0
183	SLD 3	0.98	-0.17	13.43	0	0	0
183	SLD 4	1.1	-0.19	13.38	0	0	0
183	SLD 5	0.17	0.45	14.12	0	0	0
183	SLD 6	0.25	0.43	14.09	0	0	0
183	SLD 7	0.24	-0.52	12.87	0	0	0
183	SLD 8	0.32	-0.54	12.84	0	0	0
183	SLD 9	-0.5	0.44	14.03	0	0	0
183	SLD 10	-0.42	0.42	14	0	0	0
183	SLD 11	-0.43	-0.53	12.78	0	0	0
183	SLD 12	-0.35	-0.55	12.75	0	0	0
183	SLD 13	-1.28	0.09	13.49	0	0	0
183	SLD 14	-1.16	0.07	13.44	0	0	0
183	SLD 15	-1.25	-0.2	13.11	0	0	0
183	SLD 16	-1.13	-0.22	13.07	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
183	SLV 1	2.36	0.34	14.28	0	0	0
183	SLV 2	2.64	0.29	14.18	0	0	0
183	SLV 3	2.41	-0.31	13.43	0	0	0
183	SLV 4	2.69	-0.37	13.32	0	0	0
183	SLV 5	0.52	1.08	15	0	0	0
183	SLV 6	0.7	1.04	14.93	0	0	0
183	SLV 7	0.68	-1.12	12.16	0	0	0
183	SLV 8	0.87	-1.15	12.09	0	0	0
183	SLV 9	-1.04	1.06	14.78	0	0	0
183	SLV 10	-0.86	1.02	14.71	0	0	0
183	SLV 11	-0.88	-1.14	11.94	0	0	0
183	SLV 12	-0.7	-1.17	11.87	0	0	0
183	SLV 13	-2.86	0.27	13.55	0	0	0
183	SLV 14	-2.58	0.22	13.44	0	0	0
183	SLV 15	-2.81	-0.38	12.69	0	0	0
183	SLV 16	-2.53	-0.44	12.59	0	0	0
185	SLU 1	-0.05	-0.17	6.98	0	0	0
185	SLU 2	-0.04	-0.18	6.97	0	0	0
185	SLU 3	-0.05	-0.17	7.15	0	0	0
185	SLU 4	-0.05	-0.18	7.14	0	0	0
185	SLU 5	-0.05	-0.18	7.07	0	0	0
185	SLU 6	-0.05	-0.17	7.25	0	0	0
185	SLU 7	-0.05	-0.18	7.25	0	0	0
185	SLU 8	-0.05	-0.17	7.19	0	0	0
185	SLU 9	-0.05	-0.18	7.19	0	0	0
185	SLU 10	-0.04	-0.19	7.79	0	0	0
185	SLU 11	-0.05	-0.18	7.97	0	0	0
185	SLU 12	-0.05	-0.19	7.96	0	0	0
185	SLU 13	-0.05	-0.19	7.9	0	0	0
185	SLU 14	-0.05	-0.18	8.08	0	0	0
185	SLU 15	-0.05	-0.19	8.07	0	0	0
185	SLU 16	-0.05	-0.18	8.02	0	0	0
185	SLU 17	-0.05	-0.19	8.01	0	0	0
185	SLU 18	-0.05	-0.18	8.16	0	0	0
185	SLU 19	-0.05	-0.19	8.15	0	0	0
185	SLU 20	-0.05	-0.19	8.26	0	0	0
185	SLU 21	-0.05	-0.19	8.26	0	0	0
185	SLU 22	-0.05	-0.17	7.73	0	0	0
185	SLU 23	-0.05	-0.18	7.72	0	0	0
185	SLU 24	-0.05	-0.18	7.9	0	0	0
185	SLU 25	-0.05	-0.18	7.89	0	0	0
185	SLU 26	-0.05	-0.18	7.82	0	0	0
185	SLU 27	-0.06	-0.18	8	0	0	0
185	SLU 28	-0.05	-0.18	8	0	0	0
185	SLU 29	-0.06	-0.18	7.94	0	0	0
185	SLU 30	-0.05	-0.18	7.94	0	0	0
185	SLU 31	-0.05	-0.19	8.54	0	0	0
185	SLU 32	-0.05	-0.19	8.72	0	0	0
185	SLU 33	-0.05	-0.19	8.71	0	0	0
185	SLU 34	-0.05	-0.19	8.65	0	0	0
185	SLU 35	-0.06	-0.19	8.83	0	0	0
185	SLU 36	-0.05	-0.19	8.82	0	0	0
185	SLU 37	-0.06	-0.19	8.77	0	0	0
185	SLU 38	-0.05	-0.19	8.76	0	0	0
185	SLU 39	-0.05	-0.19	8.91	0	0	0
185	SLU 40	-0.05	-0.19	8.9	0	0	0
185	SLU 41	-0.05	-0.19	9.01	0	0	0
185	SLU 42	-0.05	-0.2	9.01	0	0	0
185	SLU 43	-0.06	-0.22	8.81	0	0	0
185	SLU 44	-0.06	-0.22	8.8	0	0	0
185	SLU 45	-0.06	-0.22	8.98	0	0	0
185	SLU 46	-0.06	-0.22	8.97	0	0	0
185	SLU 47	-0.06	-0.23	8.91	0	0	0
185	SLU 48	-0.06	-0.22	9.09	0	0	0
185	SLU 49	-0.06	-0.23	9.08	0	0	0
185	SLU 50	-0.06	-0.22	9.03	0	0	0
185	SLU 51	-0.06	-0.23	9.02	0	0	0
185	SLU 52	-0.06	-0.24	9.63	0	0	0
185	SLU 53	-0.06	-0.23	9.81	0	0	0
185	SLU 54	-0.06	-0.24	9.8	0	0	0
185	SLU 55	-0.06	-0.24	9.73	0	0	0
185	SLU 56	-0.06	-0.23	9.91	0	0	0
185	SLU 57	-0.06	-0.24	9.91	0	0	0
185	SLU 58	-0.06	-0.23	9.85	0	0	0
185	SLU 59	-0.06	-0.24	9.85	0	0	0
185	SLU 60	-0.06	-0.23	9.99	0	0	0
185	SLU 61	-0.06	-0.24	9.99	0	0	0
185	SLU 62	-0.06	-0.24	10.1	0	0	0
185	SLU 63	-0.06	-0.24	10.09	0	0	0
185	SLU 64	-0.07	-0.22	9.56	0	0	0
185	SLU 65	-0.06	-0.23	9.55	0	0	0
185	SLU 66	-0.07	-0.23	9.73	0	0	0
185	SLU 67	-0.06	-0.23	9.72	0	0	0
185	SLU 68	-0.06	-0.23	9.66	0	0	0
185	SLU 69	-0.07	-0.23	9.84	0	0	0
185	SLU 70	-0.07	-0.23	9.83	0	0	0
185	SLU 71	-0.07	-0.23	9.78	0	0	0
185	SLU 72	-0.07	-0.23	9.77	0	0	0
185	SLU 73	-0.06	-0.24	10.38	0	0	0
185	SLU 74	-0.07	-0.24	10.56	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
185	SLU 75	-0.06	-0.24	10.55	0	0	0
185	SLU 76	-0.06	-0.24	10.49	0	0	0
185	SLU 77	-0.07	-0.24	10.66	0	0	0
185	SLU 78	-0.07	-0.24	10.66	0	0	0
185	SLU 79	-0.07	-0.24	10.61	0	0	0
185	SLU 80	-0.07	-0.24	10.6	0	0	0
185	SLU 81	-0.07	-0.24	10.74	0	0	0
185	SLU 82	-0.06	-0.24	10.74	0	0	0
185	SLU 83	-0.07	-0.24	10.85	0	0	0
185	SLU 84	-0.07	-0.25	10.84	0	0	0
185	SLE RA 1	-0.05	-0.17	7.19	0	0	0
185	SLE RA 2	-0.05	-0.17	7.18	0	0	0
185	SLE RA 3	-0.05	-0.17	7.3	0	0	0
185	SLE RA 4	-0.05	-0.17	7.3	0	0	0
185	SLE RA 5	-0.05	-0.18	7.26	0	0	0
185	SLE RA 6	-0.05	-0.17	7.38	0	0	0
185	SLE RA 7	-0.05	-0.18	7.37	0	0	0
185	SLE RA 8	-0.05	-0.17	7.34	0	0	0
185	SLE RA 9	-0.05	-0.18	7.33	0	0	0
185	SLE RA 10	-0.05	-0.18	7.73	0	0	0
185	SLE RA 11	-0.05	-0.18	7.85	0	0	0
185	SLE RA 12	-0.05	-0.18	7.85	0	0	0
185	SLE RA 13	-0.05	-0.18	7.81	0	0	0
185	SLE RA 14	-0.05	-0.18	7.93	0	0	0
185	SLE RA 15	-0.05	-0.18	7.92	0	0	0
185	SLE RA 16	-0.05	-0.18	7.89	0	0	0
185	SLE RA 17	-0.05	-0.18	7.88	0	0	0
185	SLE RA 18	-0.05	-0.18	7.98	0	0	0
185	SLE RA 19	-0.05	-0.18	7.97	0	0	0
185	SLE RA 20	-0.05	-0.18	8.05	0	0	0
185	SLE RA 21	-0.05	-0.19	8.05	0	0	0
185	SLE FR 1	-0.05	-0.17	7.19	0	0	0
185	SLE FR 2	-0.05	-0.17	7.19	0	0	0
185	SLE FR 3	-0.05	-0.17	7.22	0	0	0
185	SLE FR 4	-0.05	-0.17	7.43	0	0	0
185	SLE FR 5	-0.05	-0.17	7.46	0	0	0
185	SLE FR 6	-0.05	-0.18	7.59	0	0	0
185	SLE QP 1	-0.05	-0.17	7.19	0	0	0
185	SLE QP 2	-0.05	-0.17	7.43	0	0	0
185	SLD 1	0.51	-0.17	8.15	0	0	0
185	SLD 2	0.58	-0.21	8.1	0	0	0
185	SLD 3	0.52	-0.32	7.93	0	0	0
185	SLD 4	0.59	-0.35	7.89	0	0	0
185	SLD 5	0.09	0.06	7.98	0	0	0
185	SLD 6	0.13	0.03	7.95	0	0	0
185	SLD 7	0.13	-0.43	7.26	0	0	0
185	SLD 8	0.17	-0.46	7.23	0	0	0
185	SLD 9	-0.27	0.11	7.62	0	0	0
185	SLD 10	-0.23	0.09	7.59	0	0	0
185	SLD 11	-0.23	-0.38	6.91	0	0	0
185	SLD 12	-0.19	-0.4	6.88	0	0	0
185	SLD 13	-0.69	0.01	6.97	0	0	0
185	SLD 14	-0.62	-0.03	6.92	0	0	0
185	SLD 15	-0.68	-0.14	6.75	0	0	0
185	SLD 16	-0.61	-0.17	6.71	0	0	0
185	SLV 1	1.26	-0.18	9.1	0	0	0
185	SLV 2	1.41	-0.25	9	0	0	0
185	SLV 3	1.29	-0.51	8.61	0	0	0
185	SLV 4	1.44	-0.59	8.51	0	0	0
185	SLV 5	0.28	0.34	8.68	0	0	0
185	SLV 6	0.37	0.29	8.62	0	0	0
185	SLV 7	0.37	-0.76	7.07	0	0	0
185	SLV 8	0.47	-0.81	7	0	0	0
185	SLV 9	-0.57	0.47	7.86	0	0	0
185	SLV 10	-0.47	0.42	7.79	0	0	0
185	SLV 11	-0.47	-0.64	6.24	0	0	0
185	SLV 12	-0.38	-0.69	6.17	0	0	0
185	SLV 13	-1.54	0.24	6.34	0	0	0
185	SLV 14	-1.39	0.16	6.24	0	0	0
185	SLV 15	-1.51	-0.09	5.86	0	0	0
185	SLV 16	-1.36	-0.17	5.76	0	0	0
186	SLU 1	-0.04	-0.01	6.33	0	0.9508	0.0019
186	SLU 2	-0.04	-0.02	6.32	0	0.9493	0.0028
186	SLU 3	-0.04	-0.01	6.48	0	0.9741	0.0017
186	SLU 4	-0.04	-0.01	6.48	0	0.9732	0.0022
186	SLU 5	-0.04	-0.02	6.42	0	0.9642	0.0028
186	SLU 6	-0.04	-0.01	6.58	0	0.989	0.0017
186	SLU 7	-0.04	-0.01	6.58	0	0.9881	0.0022
186	SLU 8	-0.04	-0.01	6.53	0	0.9806	0.0019
186	SLU 9	-0.04	-0.02	6.52	0	0.9797	0.0024
186	SLU 10	-0.04	-0.01	7.1	0	1.0666	0.0021
186	SLU 11	-0.04	-0.01	7.27	0	1.0915	0.001
186	SLU 12	-0.04	-0.01	7.26	0	1.0906	0.0015
186	SLU 13	-0.04	-0.01	7.2	0	1.0815	0.0021
186	SLU 14	-0.05	-0.01	7.37	0	1.1064	0.001
186	SLU 15	-0.04	-0.01	7.36	0	1.1055	0.0015
186	SLU 16	-0.05	-0.01	7.31	0	1.0979	0.0012
186	SLU 17	-0.04	-0.01	7.3	0	1.097	0.0017
186	SLU 18	-0.04	-0.01	7.45	0	1.1184	0.0009
186	SLU 19	-0.04	-0.01	7.44	0	1.1175	0.0014

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
186	SLU 20	-0.04	-0.01	7.54	0	1.1333	0.0009
186	SLU 21	-0.04	-0.01	7.54	0	1.1324	0.0014
186	SLU 22	-0.05	0	7.01	0	1.053	-0.0001
186	SLU 23	-0.04	-0.01	7	0	1.0515	0.0008
186	SLU 24	-0.05	0	7.17	0	1.0764	-0.0003
186	SLU 25	-0.05	0	7.16	0	1.0755	0.0002
186	SLU 26	-0.04	-0.01	7.1	0	1.0664	0.0008
186	SLU 27	-0.05	0	7.26	0	1.0913	-0.0003
186	SLU 28	-0.05	0	7.26	0	1.0904	0.0002
186	SLU 29	-0.05	0	7.21	0	1.0828	-0.0001
186	SLU 30	-0.05	0	7.2	0	1.0819	0.0004
186	SLU 31	-0.04	0	7.78	0	1.1689	0.0001
186	SLU 32	-0.05	0.01	7.95	0	1.1938	-0.001
186	SLU 33	-0.05	0	7.94	0	1.1929	-0.0005
186	SLU 34	-0.04	0	7.88	0	1.1838	0.0001
186	SLU 35	-0.05	0.01	8.05	0	1.2087	-0.001
186	SLU 36	-0.05	0	8.04	0	1.2078	-0.0005
186	SLU 37	-0.05	0.01	7.99	0	1.2002	-0.0008
186	SLU 38	-0.05	0	7.98	0	1.1993	-0.0003
186	SLU 39	-0.05	0.01	8.13	0	1.2207	-0.0011
186	SLU 40	-0.05	0	8.12	0	1.2198	-0.0006
186	SLU 41	-0.05	0.01	8.23	0	1.2356	-0.0011
186	SLU 42	-0.05	0	8.22	0	1.2347	-0.0006
186	SLU 43	-0.05	-0.02	7.99	0	1.2009	0.0032
186	SLU 44	-0.05	-0.03	7.98	0	1.1994	0.004
186	SLU 45	-0.05	-0.02	8.15	0	1.2243	0.003
186	SLU 46	-0.05	-0.02	8.14	0	1.2234	0.0035
186	SLU 47	-0.05	-0.03	8.08	0	1.2143	0.004
186	SLU 48	-0.06	-0.02	8.25	0	1.2392	0.003
186	SLU 49	-0.05	-0.02	8.24	0	1.2383	0.0035
186	SLU 50	-0.06	-0.02	8.19	0	1.2307	0.0032
186	SLU 51	-0.05	-0.02	8.19	0	1.2298	0.0037
186	SLU 52	-0.05	-0.02	8.77	0	1.3168	0.0034
186	SLU 53	-0.06	-0.02	8.93	0	1.3417	0.0023
186	SLU 54	-0.05	-0.02	8.93	0	1.3408	0.0028
186	SLU 55	-0.05	-0.02	8.87	0	1.3317	0.0034
186	SLU 56	-0.06	-0.02	9.03	0	1.3566	0.0023
186	SLU 57	-0.05	-0.02	9.02	0	1.3557	0.0028
186	SLU 58	-0.06	-0.02	8.97	0	1.3481	0.0025
186	SLU 59	-0.05	-0.02	8.97	0	1.3472	0.003
186	SLU 60	-0.05	-0.01	9.11	0	1.3686	0.0022
186	SLU 61	-0.05	-0.02	9.1	0	1.3677	0.0027
186	SLU 62	-0.06	-0.01	9.21	0	1.3835	0.0022
186	SLU 63	-0.05	-0.02	9.2	0	1.3826	0.0027
186	SLU 64	-0.06	-0.01	8.68	0	1.3032	0.0012
186	SLU 65	-0.05	-0.01	8.67	0	1.3017	0.002
186	SLU 66	-0.06	-0.01	8.83	0	1.3266	0.001
186	SLU 67	-0.06	-0.01	8.82	0	1.3257	0.0015
186	SLU 68	-0.06	-0.01	8.76	0	1.3166	0.002
186	SLU 69	-0.06	-0.01	8.93	0	1.3415	0.001
186	SLU 70	-0.06	-0.01	8.92	0	1.3406	0.0015
186	SLU 71	-0.06	-0.01	8.87	0	1.333	0.0012
186	SLU 72	-0.06	-0.01	8.87	0	1.3321	0.0017
186	SLU 73	-0.06	-0.01	9.45	0	1.419	0.0013
186	SLU 74	-0.06	0	9.61	0	1.4439	0.0003
186	SLU 75	-0.06	-0.01	9.61	0	1.443	0.0008
186	SLU 76	-0.06	-0.01	9.55	0	1.434	0.0013
186	SLU 77	-0.06	0	9.71	0	1.4588	0.0003
186	SLU 78	-0.06	-0.01	9.71	0	1.4579	0.0008
186	SLU 79	-0.06	0	9.65	0	1.4504	0.0005
186	SLU 80	-0.06	-0.01	9.65	0	1.4495	0.001
186	SLU 81	-0.06	0	9.79	0	1.4709	0.0002
186	SLU 82	-0.06	0	9.79	0	1.47	0.0007
186	SLU 83	-0.06	0	9.89	0	1.4858	0.0002
186	SLU 84	-0.06	0	9.88	0	1.4849	0.0007
186	SLE RA 1	-0.04	-0.01	6.52	0	0.98	0.0014
186	SLE RA 2	-0.04	-0.01	6.52	0	0.979	0.0019
186	SLE RA 3	-0.04	-0.01	6.63	0	0.9956	0.0012
186	SLE RA 4	-0.04	-0.01	6.62	0	0.995	0.0016
186	SLE RA 5	-0.04	-0.01	6.58	0	0.9889	0.0019
186	SLE RA 6	-0.04	-0.01	6.69	0	1.0055	0.0012
186	SLE RA 7	-0.04	-0.01	6.69	0	1.0049	0.0016
186	SLE RA 8	-0.04	-0.01	6.66	0	0.9998	0.0014
186	SLE RA 9	-0.04	-0.01	6.65	0	0.9992	0.0017
186	SLE RA 10	-0.04	-0.01	7.04	0	1.0572	0.0015
186	SLE RA 11	-0.04	0	7.15	0	1.0738	0.0008
186	SLE RA 12	-0.04	-0.01	7.14	0	1.0732	0.0011
186	SLE RA 13	-0.04	-0.01	7.1	0	1.0672	0.0015
186	SLE RA 14	-0.05	0	7.21	0	1.0837	0.0007
186	SLE RA 15	-0.04	-0.01	7.21	0	1.0831	0.0011
186	SLE RA 16	-0.05	-0.01	7.18	0	1.0781	0.0009
186	SLE RA 17	-0.04	-0.01	7.17	0	1.0775	0.0012
186	SLE RA 18	-0.04	0	7.27	0	1.0918	0.0007
186	SLE RA 19	-0.04	-0.01	7.26	0	1.0912	0.001
186	SLE RA 20	-0.04	0	7.33	0	1.1017	0.0007
186	SLE RA 21	-0.04	-0.01	7.33	0	1.1011	0.001
186	SLE FR 1	-0.04	-0.01	6.52	0	0.98	0.0014
186	SLE FR 2	-0.04	-0.01	6.52	0	0.9798	0.0015
186	SLE FR 3	-0.04	-0.01	6.55	0	0.9839	0.0014
186	SLE FR 4	-0.04	-0.01	6.75	0	1.0133	0.0013

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
186	SLE FR 5	-0.04	-0.01	6.77	0	1.0175	0.0012
186	SLE FR 6	-0.04	-0.01	6.9	0	1.0359	0.001
186	SLE QP 1	-0.04	-0.01	6.52	0	0.98	0.0014
186	SLE QP 2	-0.04	-0.01	6.75	0	1.0135	0.0012
186	SLD 1	0.48	0.09	6.88	0	1.0341	-0.0128
186	SLD 2	0.54	0.08	6.86	0	1.0311	-0.0114
186	SLD 3	0.49	-0.06	6.69	0	1.0056	0.0092
186	SLD 4	0.55	-0.07	6.67	0	1.0026	0.0106
186	SLD 5	0.09	0.24	7.08	0	1.0633	-0.0367
186	SLD 6	0.13	0.24	7.07	0	1.0614	-0.0358
186	SLD 7	0.12	-0.24	6.45	0	0.9685	0.0367
186	SLD 8	0.16	-0.25	6.43	0	0.9666	0.0377
186	SLD 9	-0.25	0.24	7.06	0	1.0604	-0.0354
186	SLD 10	-0.21	0.23	7.05	0	1.0585	-0.0344
186	SLD 11	-0.21	-0.25	6.43	0	0.9656	0.0381
186	SLD 12	-0.17	-0.26	6.42	0	0.9637	0.0391
186	SLD 13	-0.63	0.06	6.82	0	1.0244	-0.0083
186	SLD 14	-0.57	0.05	6.8	0	1.0214	-0.0069
186	SLD 15	-0.62	-0.09	6.63	0	0.9959	0.0137
186	SLD 16	-0.56	-0.1	6.61	0	0.9929	0.0152
186	SLV 1	1.17	0.2	7.06	0	1.0606	-0.0308
186	SLV 2	1.31	0.18	7.01	0	1.0536	-0.0274
186	SLV 3	1.2	-0.13	6.63	0	0.9961	0.0192
186	SLV 4	1.34	-0.15	6.59	0	0.9892	0.0225
186	SLV 5	0.26	0.56	7.5	0	1.1266	-0.0847
186	SLV 6	0.35	0.55	7.47	0	1.122	-0.0825
186	SLV 7	0.34	-0.54	6.07	0	0.9118	0.0817
186	SLV 8	0.43	-0.56	6.04	0	0.9073	0.0838
186	SLV 9	-0.52	0.54	7.45	0	1.1197	-0.0815
186	SLV 10	-0.43	0.53	7.42	0	1.1152	-0.0794
186	SLV 11	-0.44	-0.56	6.02	0	0.905	0.0849
186	SLV 12	-0.35	-0.58	5.99	0	0.9005	0.087
186	SLV 13	-1.43	0.13	6.91	0	1.0378	-0.0202
186	SLV 14	-1.29	0.11	6.86	0	1.0309	-0.0168
186	SLV 15	-1.4	-0.2	6.48	0	0.9734	0.0297
186	SLV 16	-1.26	-0.22	6.43	0	0.9664	0.0331
186	CRTFP Uy+	0	0	0	0	0	0
186	CRTFP Uy-	0	0	0	0	0	0
188	SLU 1	-0.11	-0.13	39.86	0.9342	11.096	0.0308
188	SLU 2	-0.09	-0.16	39.8	0.9331	11.0813	0.0395
188	SLU 3	-0.12	-0.12	40.82	0.957	11.3671	0.028
188	SLU 4	-0.1	-0.14	40.79	0.9563	11.3583	0.0333
188	SLU 5	-0.09	-0.16	40.42	0.9476	11.2545	0.0395
188	SLU 6	-0.12	-0.12	41.44	0.9715	11.5404	0.0281
188	SLU 7	-0.11	-0.14	41.41	0.9708	11.5315	0.0333
188	SLU 8	-0.12	-0.13	41.1	0.9632	11.4425	0.0308
188	SLU 9	-0.11	-0.15	41.07	0.9626	11.4336	0.0361
188	SLU 10	-0.12	-0.1	44.72	1.0488	12.4597	0.0237
188	SLU 11	-0.15	-0.06	45.74	1.0727	12.7456	0.0122
188	SLU 12	-0.13	-0.08	45.71	1.072	12.7368	0.0175
188	SLU 13	-0.12	-0.1	45.34	1.0634	12.633	0.0237
188	SLU 14	-0.15	-0.06	46.36	1.0872	12.9188	0.0122
188	SLU 15	-0.14	-0.08	46.33	1.0865	12.91	0.0175
188	SLU 16	-0.15	-0.07	46.01	1.0789	12.821	0.015
188	SLU 17	-0.14	-0.09	45.98	1.0783	12.8121	0.0203
188	SLU 18	-0.15	-0.05	46.88	1.0995	13.0653	0.0082
188	SLU 19	-0.14	-0.07	46.85	1.0989	13.0564	0.0134
188	SLU 20	-0.16	-0.05	47.5	1.114	13.2385	0.0082
188	SLU 21	-0.14	-0.07	47.47	1.1134	13.2296	0.0135
188	SLU 22	-0.12	-0.04	44.09	1.0338	12.2768	0.0067
188	SLU 23	-0.1	-0.07	44.04	1.0327	12.2621	0.0154
188	SLU 24	-0.13	-0.03	45.06	1.0565	12.548	0.0039
188	SLU 25	-0.11	-0.05	45.03	1.0559	12.5391	0.0092
188	SLU 26	-0.1	-0.08	44.66	1.0472	12.4353	0.0154
188	SLU 27	-0.13	-0.03	45.68	1.071	12.7212	0.004
188	SLU 28	-0.12	-0.05	45.65	1.0704	12.7124	0.0092
188	SLU 29	-0.13	-0.04	45.33	1.0628	12.6233	0.0067
188	SLU 30	-0.12	-0.06	45.3	1.0621	12.6145	0.012
188	SLU 31	-0.13	-0.02	48.96	1.1484	13.6406	-0.0004
188	SLU 32	-0.15	0.02	49.98	1.1722	13.9264	-0.0119
188	SLU 33	-0.14	0	49.95	1.1716	13.9176	-0.0066
188	SLU 34	-0.13	-0.02	49.58	1.1629	13.8138	-0.0004
188	SLU 35	-0.16	0.02	50.6	1.1867	14.0997	-0.0118
188	SLU 36	-0.14	0	50.57	1.1861	14.0908	-0.0066
188	SLU 37	-0.16	0.01	50.25	1.1785	14.0018	-0.0091
188	SLU 38	-0.14	-0.01	50.22	1.1779	13.9929	-0.0038
188	SLU 39	-0.16	0.04	51.11	1.1991	14.2461	-0.0159
188	SLU 40	-0.15	0.02	51.08	1.1984	14.2372	-0.0107
188	SLU 41	-0.17	0.04	51.73	1.2136	14.4193	-0.0159
188	SLU 42	-0.15	0.02	51.7	1.213	14.4105	-0.0106
188	SLU 43	-0.14	-0.19	50.36	1.1803	14.02	0.0483
188	SLU 44	-0.12	-0.22	50.31	1.1793	14.0052	0.057
188	SLU 45	-0.15	-0.18	51.33	1.2031	14.2911	0.0455
188	SLU 46	-0.13	-0.2	51.3	1.2024	14.2822	0.0507
188	SLU 47	-0.12	-0.22	50.93	1.1938	14.1784	0.057
188	SLU 48	-0.15	-0.18	51.95	1.2176	14.4643	0.0455
188	SLU 49	-0.14	-0.2	51.92	1.2169	14.4555	0.0508
188	SLU 50	-0.15	-0.19	51.6	1.2094	14.3664	0.0483
188	SLU 51	-0.14	-0.21	51.57	1.2087	14.3576	0.0535
188	SLU 52	-0.15	-0.17	55.23	1.295	15.3837	0.0412

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
188	SLU 53	-0.18	-0.13	56.25	1.3188	15.6696	0.0297
188	SLU 54	-0.16	-0.15	56.22	1.3182	15.6607	0.0349
188	SLU 55	-0.15	-0.17	55.85	1.3095	15.5569	0.0412
188	SLU 56	-0.18	-0.13	56.87	1.3333	15.8428	0.0297
188	SLU 57	-0.17	-0.15	56.84	1.3327	15.8339	0.035
188	SLU 58	-0.18	-0.14	56.52	1.3251	15.7449	0.0325
188	SLU 59	-0.17	-0.16	56.49	1.3244	15.7361	0.0377
188	SLU 60	-0.19	-0.11	57.38	1.3457	15.9892	0.0257
188	SLU 61	-0.17	-0.13	57.35	1.345	15.9803	0.0309
188	SLU 62	-0.19	-0.11	58	1.3602	16.1624	0.0257
188	SLU 63	-0.18	-0.13	57.97	1.3595	16.1536	0.0309
188	SLU 64	-0.15	-0.11	54.59	1.2799	15.2008	0.0242
188	SLU 65	-0.13	-0.14	54.54	1.2788	15.186	0.0329
188	SLU 66	-0.16	-0.1	55.56	1.3026	15.4719	0.0214
188	SLU 67	-0.14	-0.12	55.53	1.302	15.4631	0.0267
188	SLU 68	-0.13	-0.14	55.16	1.2933	15.3593	0.0329
188	SLU 69	-0.16	-0.1	56.18	1.3172	15.6452	0.0215
188	SLU 70	-0.15	-0.12	56.15	1.3165	15.6363	0.0267
188	SLU 71	-0.16	-0.11	55.84	1.3089	15.5473	0.0242
188	SLU 72	-0.15	-0.13	55.8	1.3083	15.5384	0.0295
188	SLU 73	-0.16	-0.09	59.46	1.3945	16.5645	0.0171
188	SLU 74	-0.19	-0.04	60.48	1.4184	16.8504	0.0056
188	SLU 75	-0.17	-0.06	60.45	1.4177	16.8415	0.0109
188	SLU 76	-0.16	-0.09	60.08	1.409	16.7377	0.0171
188	SLU 77	-0.19	-0.04	61.1	1.4329	17.0236	0.0057
188	SLU 78	-0.18	-0.06	61.07	1.4322	17.0148	0.0109
188	SLU 79	-0.19	-0.05	60.75	1.4246	16.9257	0.0084
188	SLU 80	-0.18	-0.07	60.72	1.424	16.9169	0.0137
188	SLU 81	-0.19	-0.03	61.62	1.4452	17.17	0.0016
188	SLU 82	-0.18	-0.05	61.59	1.4446	17.1612	0.0068
188	SLU 83	-0.2	-0.03	62.24	1.4597	17.3433	0.0016
188	SLU 84	-0.18	-0.05	62.21	1.4591	17.3344	0.0069
188	SLE RA 1	-0.12	-0.1	41.07	0.9627	11.4334	0.0239
188	SLE RA 2	-0.1	-0.12	41.03	0.9619	11.4236	0.0297
188	SLE RA 3	-0.12	-0.1	41.71	0.9778	11.6141	0.0221
188	SLE RA 4	-0.11	-0.11	41.69	0.9774	11.6082	0.0255
188	SLE RA 5	-0.1	-0.12	41.44	0.9716	11.5391	0.0297
188	SLE RA 6	-0.12	-0.1	42.13	0.9875	11.7296	0.0221
188	SLE RA 7	-0.11	-0.11	42.1	0.9871	11.7237	0.0256
188	SLE RA 8	-0.12	-0.1	41.89	0.982	11.6644	0.0239
188	SLE RA 9	-0.11	-0.11	41.87	0.9816	11.6585	0.0274
188	SLE RA 10	-0.12	-0.09	44.31	1.0391	12.3425	0.0192
188	SLE RA 11	-0.14	-0.06	44.99	1.055	12.5331	0.0115
188	SLE RA 12	-0.13	-0.07	44.97	1.0545	12.5272	0.015
188	SLE RA 13	-0.12	-0.09	44.72	1.0488	12.458	0.0192
188	SLE RA 14	-0.14	-0.06	45.4	1.0646	12.6486	0.0115
188	SLE RA 15	-0.13	-0.07	45.38	1.0642	12.6427	0.015
188	SLE RA 16	-0.14	-0.06	45.17	1.0592	12.5834	0.0134
188	SLE RA 17	-0.13	-0.08	45.15	1.0587	12.5775	0.0169
188	SLE RA 18	-0.14	-0.05	45.75	1.0729	12.7462	0.0088
188	SLE RA 19	-0.13	-0.06	45.73	1.0724	12.7403	0.0123
188	SLE RA 20	-0.15	-0.05	46.16	1.0825	12.8617	0.0089
188	SLE RA 21	-0.14	-0.06	46.14	1.0821	12.8558	0.0123
188	SLE FR 1	-0.12	-0.1	41.07	0.9627	11.4334	0.0239
188	SLE FR 2	-0.11	-0.11	41.06	0.9625	11.4314	0.0251
188	SLE FR 3	-0.12	-0.1	41.23	0.9665	11.4796	0.0239
188	SLE FR 4	-0.12	-0.09	42.46	0.9956	11.8253	0.0205
188	SLE FR 5	-0.12	-0.09	42.64	0.9996	11.8734	0.0194
188	SLE FR 6	-0.13	-0.08	43.41	1.0178	12.0898	0.0164
188	SLE QP 1	-0.12	-0.1	41.07	0.9627	11.4334	0.0239
188	SLE QP 2	-0.12	-0.09	42.47	0.9957	11.8272	0.0194
188	SLD 1	3.52	0.46	42.78	1.0057	12.0179	-0.2098
188	SLD 2	3.93	0.49	42.89	1.0079	12.0392	-0.2249
188	SLD 3	3.45	-0.5	41.52	0.9788	11.6653	0.0625
188	SLD 4	3.86	-0.47	41.62	0.9811	11.6867	0.0473
188	SLD 5	1	1.53	44.46	1.0391	12.4152	-0.4595
188	SLD 6	1.27	1.55	44.53	1.0406	12.4294	-0.4696
188	SLD 7	0.77	-1.67	40.25	0.9495	11.2401	0.4479
188	SLD 8	1.04	-1.66	40.32	0.951	11.2543	0.4379
188	SLD 9	-1.29	1.48	44.62	1.0405	12.4001	-0.3991
188	SLD 10	-1.02	1.5	44.69	1.042	12.4143	-0.4092
188	SLD 11	-1.51	-1.72	40.41	0.9509	11.2251	0.5083
188	SLD 12	-1.24	-1.7	40.48	0.9524	11.2393	0.4982
188	SLD 13	-4.11	0.3	43.32	1.0104	11.9678	-0.0085
188	SLD 14	-3.7	0.33	43.42	1.0126	11.9891	-0.0237
188	SLD 15	-4.17	-0.66	42.05	0.9835	11.6152	0.2637
188	SLD 16	-3.77	-0.63	42.16	0.9857	11.6366	0.2485
188	SLV 1	8.4	1.16	43.15	1.0181	12.2603	-0.5065
188	SLV 2	9.35	1.22	43.4	1.0233	12.3101	-0.5419
188	SLV 3	8.24	-1.02	40.29	0.9572	11.462	0.1101
188	SLV 4	9.19	-0.96	40.54	0.9624	11.5118	0.0748
188	SLV 5	2.51	3.58	46.97	1.0938	13.1592	-1.0674
188	SLV 6	3.12	3.62	47.13	1.0972	13.1916	-1.0904
188	SLV 7	1.98	-3.68	37.43	0.8909	10.4982	0.988
188	SLV 8	2.6	-3.64	37.59	0.8943	10.5306	0.965
188	SLV 9	-2.84	3.47	47.35	1.0971	13.1239	-0.9262
188	SLV 10	-2.23	3.51	47.51	1.1005	13.1563	-0.9492
188	SLV 11	-3.37	-3.79	37.81	0.8942	10.4629	1.1292
188	SLV 12	-2.75	-3.75	37.97	0.8976	10.4953	1.1061
188	SLV 13	-9.44	0.79	44.4	1.0291	12.1427	-0.036

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
188	SLV 14	-8.49	0.85	44.65	1.0342	12.1924	-0.0713
188	SLV 15	-9.59	-1.39	41.54	0.9682	11.3444	0.5806
188	SLV 16	-8.65	-1.33	41.79	0.9734	11.3941	0.5453
188	CRTFP Ux+	0	0	0	0	0	0
188	CRTFP Ux-	0	0	0	0	0	0
188	CRTFP Uy+	0	0	0	0	0	0
188	CRTFP Uy-	0	0	0	0	0	0
190	SLU 1	-0.03	-0.07	11.11	0	0	0
190	SLU 2	-0.02	-0.08	11.09	0	0	0
190	SLU 3	-0.03	-0.07	11.37	0	0	0
190	SLU 4	-0.03	-0.08	11.37	0	0	0
190	SLU 5	-0.02	-0.08	11.27	0	0	0
190	SLU 6	-0.03	-0.07	11.55	0	0	0
190	SLU 7	-0.03	-0.08	11.54	0	0	0
190	SLU 8	-0.03	-0.07	11.45	0	0	0
190	SLU 9	-0.03	-0.08	11.44	0	0	0
190	SLU 10	-0.03	-0.07	12.45	0	0	0
190	SLU 11	-0.04	-0.06	12.73	0	0	0
190	SLU 12	-0.03	-0.07	12.72	0	0	0
190	SLU 13	-0.03	-0.07	12.62	0	0	0
190	SLU 14	-0.04	-0.06	12.9	0	0	0
190	SLU 15	-0.04	-0.07	12.89	0	0	0
190	SLU 16	-0.04	-0.06	12.81	0	0	0
190	SLU 17	-0.04	-0.07	12.8	0	0	0
190	SLU 18	-0.04	-0.06	13.04	0	0	0
190	SLU 19	-0.04	-0.06	13.03	0	0	0
190	SLU 20	-0.04	-0.06	13.21	0	0	0
190	SLU 21	-0.04	-0.06	13.21	0	0	0
190	SLU 22	-0.03	-0.05	12.28	0	0	0
190	SLU 23	-0.02	-0.06	12.27	0	0	0
190	SLU 24	-0.03	-0.05	12.55	0	0	0
190	SLU 25	-0.03	-0.06	12.54	0	0	0
190	SLU 26	-0.03	-0.06	12.44	0	0	0
190	SLU 27	-0.03	-0.05	12.72	0	0	0
190	SLU 28	-0.03	-0.06	12.72	0	0	0
190	SLU 29	-0.03	-0.06	12.63	0	0	0
190	SLU 30	-0.03	-0.06	12.62	0	0	0
190	SLU 31	-0.03	-0.05	13.63	0	0	0
190	SLU 32	-0.04	-0.04	13.91	0	0	0
190	SLU 33	-0.04	-0.05	13.9	0	0	0
190	SLU 34	-0.03	-0.05	13.8	0	0	0
190	SLU 35	-0.04	-0.04	14.08	0	0	0
190	SLU 36	-0.04	-0.05	14.07	0	0	0
190	SLU 37	-0.04	-0.05	13.98	0	0	0
190	SLU 38	-0.04	-0.05	13.97	0	0	0
190	SLU 39	-0.04	-0.04	14.22	0	0	0
190	SLU 40	-0.04	-0.04	14.21	0	0	0
190	SLU 41	-0.04	-0.04	14.39	0	0	0
190	SLU 42	-0.04	-0.05	14.38	0	0	0
190	SLU 43	-0.04	-0.1	14.03	0	0	0
190	SLU 44	-0.03	-0.11	14.02	0	0	0
190	SLU 45	-0.04	-0.1	14.3	0	0	0
190	SLU 46	-0.03	-0.1	14.3	0	0	0
190	SLU 47	-0.03	-0.11	14.19	0	0	0
190	SLU 48	-0.04	-0.1	14.48	0	0	0
190	SLU 49	-0.04	-0.1	14.47	0	0	0
190	SLU 50	-0.04	-0.1	14.38	0	0	0
190	SLU 51	-0.04	-0.11	14.37	0	0	0
190	SLU 52	-0.04	-0.1	15.38	0	0	0
190	SLU 53	-0.05	-0.09	15.66	0	0	0
190	SLU 54	-0.04	-0.09	15.65	0	0	0
190	SLU 55	-0.04	-0.1	15.55	0	0	0
190	SLU 56	-0.05	-0.09	15.83	0	0	0
190	SLU 57	-0.04	-0.09	15.82	0	0	0
190	SLU 58	-0.05	-0.09	15.73	0	0	0
190	SLU 59	-0.04	-0.1	15.73	0	0	0
190	SLU 60	-0.05	-0.09	15.97	0	0	0
190	SLU 61	-0.04	-0.09	15.96	0	0	0
190	SLU 62	-0.05	-0.09	16.14	0	0	0
190	SLU 63	-0.05	-0.09	16.13	0	0	0
190	SLU 64	-0.04	-0.08	15.21	0	0	0
190	SLU 65	-0.03	-0.09	15.2	0	0	0
190	SLU 66	-0.04	-0.08	15.48	0	0	0
190	SLU 67	-0.04	-0.09	15.47	0	0	0
190	SLU 68	-0.03	-0.09	15.37	0	0	0
190	SLU 69	-0.04	-0.08	15.65	0	0	0
190	SLU 70	-0.04	-0.09	15.64	0	0	0
190	SLU 71	-0.04	-0.08	15.56	0	0	0
190	SLU 72	-0.04	-0.09	15.55	0	0	0
190	SLU 73	-0.04	-0.08	16.55	0	0	0
190	SLU 74	-0.05	-0.07	16.84	0	0	0
190	SLU 75	-0.04	-0.08	16.83	0	0	0
190	SLU 76	-0.04	-0.08	16.73	0	0	0
190	SLU 77	-0.05	-0.07	17.01	0	0	0
190	SLU 78	-0.05	-0.08	17	0	0	0
190	SLU 79	-0.05	-0.07	16.91	0	0	0
190	SLU 80	-0.05	-0.08	16.9	0	0	0
190	SLU 81	-0.05	-0.07	17.15	0	0	0
190	SLU 82	-0.05	-0.07	17.14	0	0	0
190	SLU 83	-0.05	-0.07	17.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
190	SLU 84	-0.05	-0.07	17.31	0	0	0
190	SLE RA 1	-0.03	-0.07	11.44	0	0	0
190	SLE RA 2	-0.03	-0.07	11.43	0	0	0
190	SLE RA 3	-0.03	-0.07	11.62	0	0	0
190	SLE RA 4	-0.03	-0.07	11.62	0	0	0
190	SLE RA 5	-0.03	-0.07	11.55	0	0	0
190	SLE RA 6	-0.03	-0.07	11.74	0	0	0
190	SLE RA 7	-0.03	-0.07	11.73	0	0	0
190	SLE RA 8	-0.03	-0.07	11.67	0	0	0
190	SLE RA 9	-0.03	-0.07	11.67	0	0	0
190	SLE RA 10	-0.03	-0.07	12.34	0	0	0
190	SLE RA 11	-0.04	-0.06	12.53	0	0	0
190	SLE RA 12	-0.03	-0.06	12.52	0	0	0
190	SLE RA 13	-0.03	-0.07	12.45	0	0	0
190	SLE RA 14	-0.04	-0.06	12.64	0	0	0
190	SLE RA 15	-0.03	-0.06	12.63	0	0	0
190	SLE RA 16	-0.04	-0.06	12.58	0	0	0
190	SLE RA 17	-0.03	-0.06	12.57	0	0	0
190	SLE RA 18	-0.04	-0.06	12.73	0	0	0
190	SLE RA 19	-0.03	-0.06	12.73	0	0	0
190	SLE RA 20	-0.04	-0.06	12.85	0	0	0
190	SLE RA 21	-0.04	-0.06	12.84	0	0	0
190	SLE FR 1	-0.03	-0.07	11.44	0	0	0
190	SLE FR 2	-0.03	-0.07	11.44	0	0	0
190	SLE FR 3	-0.03	-0.07	11.49	0	0	0
190	SLE FR 4	-0.03	-0.07	11.83	0	0	0
190	SLE FR 5	-0.03	-0.06	11.88	0	0	0
190	SLE FR 6	-0.03	-0.06	12.09	0	0	0
190	SLE QP 1	-0.03	-0.07	11.44	0	0	0
190	SLE QP 2	-0.03	-0.06	11.83	0	0	0
190	SLD 1	0.96	0.11	11.78	0	0	0
190	SLD 2	1.07	0.13	11.82	0	0	0
190	SLD 3	0.95	-0.15	11.42	0	0	0
190	SLD 4	1.06	-0.13	11.46	0	0	0
190	SLD 5	0.27	0.38	12.34	0	0	0
190	SLD 6	0.35	0.39	12.37	0	0	0
190	SLD 7	0.21	-0.48	11.17	0	0	0
190	SLD 8	0.29	-0.47	11.19	0	0	0
190	SLD 9	-0.35	0.34	12.47	0	0	0
190	SLD 10	-0.28	0.36	12.49	0	0	0
190	SLD 11	-0.41	-0.52	11.29	0	0	0
190	SLD 12	-0.34	-0.51	11.32	0	0	0
190	SLD 13	-1.12	0	12.2	0	0	0
190	SLD 14	-1.01	0.02	12.24	0	0	0
190	SLD 15	-1.14	-0.26	11.84	0	0	0
190	SLD 16	-1.03	-0.24	11.88	0	0	0
190	SLV 1	2.3	0.34	11.69	0	0	0
190	SLV 2	2.56	0.38	11.79	0	0	0
190	SLV 3	2.25	-0.25	10.89	0	0	0
190	SLV 4	2.51	-0.2	10.99	0	0	0
190	SLV 5	0.69	0.94	12.98	0	0	0
190	SLV 6	0.86	0.96	13.05	0	0	0
190	SLV 7	0.54	-1.01	10.32	0	0	0
190	SLV 8	0.71	-0.99	10.38	0	0	0
190	SLV 9	-0.78	0.86	13.28	0	0	0
190	SLV 10	-0.61	0.88	13.34	0	0	0
190	SLV 11	-0.92	-1.09	10.61	0	0	0
190	SLV 12	-0.75	-1.07	10.68	0	0	0
190	SLV 13	-2.58	0.07	12.67	0	0	0
190	SLV 14	-2.32	0.12	12.77	0	0	0
190	SLV 15	-2.62	-0.51	11.87	0	0	0
190	SLV 16	-2.36	-0.47	11.97	0	0	0
191	SLU 1	-0.03	-0.09	11.21	0	0	0
191	SLU 2	-0.02	-0.1	11.19	0	0	0
191	SLU 3	-0.03	-0.09	11.48	0	0	0
191	SLU 4	-0.02	-0.09	11.47	0	0	0
191	SLU 5	-0.02	-0.1	11.37	0	0	0
191	SLU 6	-0.03	-0.09	11.65	0	0	0
191	SLU 7	-0.03	-0.09	11.64	0	0	0
191	SLU 8	-0.03	-0.09	11.55	0	0	0
191	SLU 9	-0.03	-0.1	11.55	0	0	0
191	SLU 10	-0.03	-0.09	12.55	0	0	0
191	SLU 11	-0.04	-0.08	12.84	0	0	0
191	SLU 12	-0.03	-0.08	12.83	0	0	0
191	SLU 13	-0.03	-0.09	12.73	0	0	0
191	SLU 14	-0.04	-0.08	13.01	0	0	0
191	SLU 15	-0.03	-0.09	13	0	0	0
191	SLU 16	-0.04	-0.08	12.91	0	0	0
191	SLU 17	-0.03	-0.09	12.91	0	0	0
191	SLU 18	-0.04	-0.08	13.15	0	0	0
191	SLU 19	-0.03	-0.08	13.14	0	0	0
191	SLU 20	-0.04	-0.08	13.32	0	0	0
191	SLU 21	-0.04	-0.08	13.32	0	0	0
191	SLU 22	-0.03	-0.07	12.39	0	0	0
191	SLU 23	-0.02	-0.08	12.38	0	0	0
191	SLU 24	-0.03	-0.07	12.66	0	0	0
191	SLU 25	-0.03	-0.08	12.66	0	0	0
191	SLU 26	-0.02	-0.08	12.55	0	0	0
191	SLU 27	-0.03	-0.07	12.84	0	0	0
191	SLU 28	-0.03	-0.08	12.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
191	SLU 29	-0.03	-0.08	12.74	0	0	0
191	SLU 30	-0.03	-0.08	12.73	0	0	0
191	SLU 31	-0.03	-0.07	13.74	0	0	0
191	SLU 32	-0.04	-0.06	14.02	0	0	0
191	SLU 33	-0.03	-0.07	14.02	0	0	0
191	SLU 34	-0.03	-0.07	13.91	0	0	0
191	SLU 35	-0.04	-0.07	14.2	0	0	0
191	SLU 36	-0.04	-0.07	14.19	0	0	0
191	SLU 37	-0.04	-0.07	14.1	0	0	0
191	SLU 38	-0.04	-0.07	14.09	0	0	0
191	SLU 39	-0.04	-0.06	14.34	0	0	0
191	SLU 40	-0.04	-0.07	14.33	0	0	0
191	SLU 41	-0.04	-0.06	14.51	0	0	0
191	SLU 42	-0.04	-0.07	14.5	0	0	0
191	SLU 43	-0.03	-0.12	14.16	0	0	0
191	SLU 44	-0.03	-0.13	14.15	0	0	0
191	SLU 45	-0.04	-0.12	14.43	0	0	0
191	SLU 46	-0.03	-0.13	14.43	0	0	0
191	SLU 47	-0.03	-0.13	14.32	0	0	0
191	SLU 48	-0.04	-0.12	14.61	0	0	0
191	SLU 49	-0.03	-0.13	14.6	0	0	0
191	SLU 50	-0.04	-0.12	14.51	0	0	0
191	SLU 51	-0.03	-0.13	14.5	0	0	0
191	SLU 52	-0.04	-0.12	15.51	0	0	0
191	SLU 53	-0.04	-0.11	15.79	0	0	0
191	SLU 54	-0.04	-0.12	15.78	0	0	0
191	SLU 55	-0.04	-0.12	15.68	0	0	0
191	SLU 56	-0.05	-0.11	15.97	0	0	0
191	SLU 57	-0.04	-0.12	15.96	0	0	0
191	SLU 58	-0.05	-0.12	15.87	0	0	0
191	SLU 59	-0.04	-0.12	15.86	0	0	0
191	SLU 60	-0.05	-0.11	16.11	0	0	0
191	SLU 61	-0.04	-0.11	16.1	0	0	0
191	SLU 62	-0.05	-0.11	16.28	0	0	0
191	SLU 63	-0.04	-0.12	16.27	0	0	0
191	SLU 64	-0.04	-0.11	15.35	0	0	0
191	SLU 65	-0.03	-0.11	15.34	0	0	0
191	SLU 66	-0.04	-0.1	15.62	0	0	0
191	SLU 67	-0.03	-0.11	15.61	0	0	0
191	SLU 68	-0.03	-0.11	15.51	0	0	0
191	SLU 69	-0.04	-0.11	15.79	0	0	0
191	SLU 70	-0.04	-0.11	15.78	0	0	0
191	SLU 71	-0.04	-0.11	15.7	0	0	0
191	SLU 72	-0.04	-0.11	15.69	0	0	0
191	SLU 73	-0.04	-0.1	16.7	0	0	0
191	SLU 74	-0.05	-0.1	16.98	0	0	0
191	SLU 75	-0.04	-0.1	16.97	0	0	0
191	SLU 76	-0.04	-0.11	16.87	0	0	0
191	SLU 77	-0.05	-0.1	17.15	0	0	0
191	SLU 78	-0.04	-0.1	17.14	0	0	0
191	SLU 79	-0.05	-0.1	17.06	0	0	0
191	SLU 80	-0.04	-0.1	17.05	0	0	0
191	SLU 81	-0.05	-0.09	17.29	0	0	0
191	SLU 82	-0.04	-0.1	17.28	0	0	0
191	SLU 83	-0.05	-0.09	17.47	0	0	0
191	SLU 84	-0.05	-0.1	17.46	0	0	0
191	SLE RA 1	-0.03	-0.08	11.55	0	0	0
191	SLE RA 2	-0.02	-0.09	11.54	0	0	0
191	SLE RA 3	-0.03	-0.08	11.73	0	0	0
191	SLE RA 4	-0.03	-0.09	11.72	0	0	0
191	SLE RA 5	-0.02	-0.09	11.65	0	0	0
191	SLE RA 6	-0.03	-0.09	11.84	0	0	0
191	SLE RA 7	-0.03	-0.09	11.84	0	0	0
191	SLE RA 8	-0.03	-0.09	11.78	0	0	0
191	SLE RA 9	-0.03	-0.09	11.77	0	0	0
191	SLE RA 10	-0.03	-0.08	12.44	0	0	0
191	SLE RA 11	-0.03	-0.08	12.63	0	0	0
191	SLE RA 12	-0.03	-0.08	12.63	0	0	0
191	SLE RA 13	-0.03	-0.09	12.56	0	0	0
191	SLE RA 14	-0.03	-0.08	12.75	0	0	0
191	SLE RA 15	-0.03	-0.08	12.74	0	0	0
191	SLE RA 16	-0.03	-0.08	12.68	0	0	0
191	SLE RA 17	-0.03	-0.08	12.68	0	0	0
191	SLE RA 18	-0.04	-0.08	12.84	0	0	0
191	SLE RA 19	-0.03	-0.08	12.84	0	0	0
191	SLE RA 20	-0.04	-0.08	12.96	0	0	0
191	SLE RA 21	-0.03	-0.08	12.95	0	0	0
191	SLE FR 1	-0.03	-0.08	11.55	0	0	0
191	SLE FR 2	-0.03	-0.09	11.55	0	0	0
191	SLE FR 3	-0.03	-0.08	11.59	0	0	0
191	SLE FR 4	-0.03	-0.08	11.93	0	0	0
191	SLE FR 5	-0.03	-0.08	11.98	0	0	0
191	SLE FR 6	-0.03	-0.08	12.19	0	0	0
191	SLE QP 1	-0.03	-0.08	11.55	0	0	0
191	SLE QP 2	-0.03	-0.08	11.94	0	0	0
191	SLD 1	0.97	0.11	11.8	0	0	0
191	SLD 2	1.08	0.13	11.85	0	0	0
191	SLD 3	0.95	-0.15	11.45	0	0	0
191	SLD 4	1.06	-0.13	11.49	0	0	0
191	SLD 5	0.28	0.36	12.43	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
191	SLD 6	0.35	0.38	12.46	0	0	0
191	SLD 7	0.22	-0.5	11.24	0	0	0
191	SLD 8	0.29	-0.48	11.27	0	0	0
191	SLD 9	-0.35	0.32	12.6	0	0	0
191	SLD 10	-0.28	0.33	12.63	0	0	0
191	SLD 11	-0.41	-0.54	11.41	0	0	0
191	SLD 12	-0.34	-0.53	11.44	0	0	0
191	SLD 13	-1.12	-0.04	12.38	0	0	0
191	SLD 14	-1.01	-0.01	12.42	0	0	0
191	SLD 15	-1.14	-0.3	12.02	0	0	0
191	SLD 16	-1.03	-0.27	12.07	0	0	0
191	SLV 1	2.31	0.35	11.61	0	0	0
191	SLV 2	2.57	0.41	11.72	0	0	0
191	SLV 3	2.27	-0.23	10.8	0	0	0
191	SLV 4	2.53	-0.18	10.91	0	0	0
191	SLV 5	0.69	0.92	13.04	0	0	0
191	SLV 6	0.86	0.96	13.11	0	0	0
191	SLV 7	0.55	-1.02	10.36	0	0	0
191	SLV 8	0.72	-0.99	10.43	0	0	0
191	SLV 9	-0.78	0.82	13.45	0	0	0
191	SLV 10	-0.61	0.86	13.51	0	0	0
191	SLV 11	-0.92	-1.12	10.76	0	0	0
191	SLV 12	-0.75	-1.09	10.83	0	0	0
191	SLV 13	-2.59	0.01	12.96	0	0	0
191	SLV 14	-2.33	0.07	13.07	0	0	0
191	SLV 15	-2.63	-0.57	12.16	0	0	0
191	SLV 16	-2.37	-0.52	12.26	0	0	0
192	SLU 1	-0.03	-0.11	11.26	0	0	0
192	SLU 2	-0.02	-0.11	11.25	0	0	0
192	SLU 3	-0.03	-0.11	11.53	0	0	0
192	SLU 4	-0.02	-0.11	11.53	0	0	0
192	SLU 5	-0.02	-0.12	11.43	0	0	0
192	SLU 6	-0.03	-0.11	11.71	0	0	0
192	SLU 7	-0.02	-0.11	11.7	0	0	0
192	SLU 8	-0.03	-0.11	11.61	0	0	0
192	SLU 9	-0.02	-0.11	11.6	0	0	0
192	SLU 10	-0.03	-0.11	12.61	0	0	0
192	SLU 11	-0.04	-0.1	12.89	0	0	0
192	SLU 12	-0.03	-0.1	12.89	0	0	0
192	SLU 13	-0.03	-0.11	12.78	0	0	0
192	SLU 14	-0.04	-0.1	13.07	0	0	0
192	SLU 15	-0.03	-0.11	13.06	0	0	0
192	SLU 16	-0.04	-0.1	12.97	0	0	0
192	SLU 17	-0.03	-0.11	12.96	0	0	0
192	SLU 18	-0.04	-0.1	13.21	0	0	0
192	SLU 19	-0.03	-0.1	13.2	0	0	0
192	SLU 20	-0.04	-0.1	13.38	0	0	0
192	SLU 21	-0.03	-0.1	13.37	0	0	0
192	SLU 22	-0.03	-0.09	12.46	0	0	0
192	SLU 23	-0.02	-0.1	12.44	0	0	0
192	SLU 24	-0.03	-0.09	12.73	0	0	0
192	SLU 25	-0.02	-0.1	12.72	0	0	0
192	SLU 26	-0.02	-0.1	12.62	0	0	0
192	SLU 27	-0.03	-0.09	12.9	0	0	0
192	SLU 28	-0.03	-0.1	12.89	0	0	0
192	SLU 29	-0.03	-0.1	12.8	0	0	0
192	SLU 30	-0.03	-0.1	12.8	0	0	0
192	SLU 31	-0.03	-0.09	13.8	0	0	0
192	SLU 32	-0.04	-0.09	14.08	0	0	0
192	SLU 33	-0.03	-0.09	14.08	0	0	0
192	SLU 34	-0.03	-0.1	13.98	0	0	0
192	SLU 35	-0.04	-0.09	14.26	0	0	0
192	SLU 36	-0.03	-0.09	14.25	0	0	0
192	SLU 37	-0.04	-0.09	14.16	0	0	0
192	SLU 38	-0.03	-0.09	14.15	0	0	0
192	SLU 39	-0.04	-0.08	14.4	0	0	0
192	SLU 40	-0.03	-0.09	14.39	0	0	0
192	SLU 41	-0.04	-0.09	14.57	0	0	0
192	SLU 42	-0.04	-0.09	14.56	0	0	0
192	SLU 43	-0.03	-0.14	14.24	0	0	0
192	SLU 44	-0.03	-0.15	14.22	0	0	0
192	SLU 45	-0.03	-0.14	14.51	0	0	0
192	SLU 46	-0.03	-0.15	14.5	0	0	0
192	SLU 47	-0.03	-0.15	14.4	0	0	0
192	SLU 48	-0.04	-0.14	14.68	0	0	0
192	SLU 49	-0.03	-0.15	14.67	0	0	0
192	SLU 50	-0.04	-0.15	14.58	0	0	0
192	SLU 51	-0.03	-0.15	14.57	0	0	0
192	SLU 52	-0.03	-0.14	15.58	0	0	0
192	SLU 53	-0.04	-0.14	15.86	0	0	0
192	SLU 54	-0.04	-0.14	15.86	0	0	0
192	SLU 55	-0.04	-0.15	15.75	0	0	0
192	SLU 56	-0.04	-0.14	16.04	0	0	0
192	SLU 57	-0.04	-0.14	16.03	0	0	0
192	SLU 58	-0.04	-0.14	15.94	0	0	0
192	SLU 59	-0.04	-0.14	15.93	0	0	0
192	SLU 60	-0.04	-0.13	16.18	0	0	0
192	SLU 61	-0.04	-0.14	16.17	0	0	0
192	SLU 62	-0.05	-0.14	16.35	0	0	0
192	SLU 63	-0.04	-0.14	16.34	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
192	SLU 64	-0.03	-0.13	15.43	0	0	0
192	SLU 65	-0.03	-0.14	15.41	0	0	0
192	SLU 66	-0.04	-0.13	15.7	0	0	0
192	SLU 67	-0.03	-0.13	15.69	0	0	0
192	SLU 68	-0.03	-0.14	15.59	0	0	0
192	SLU 69	-0.04	-0.13	15.87	0	0	0
192	SLU 70	-0.03	-0.14	15.86	0	0	0
192	SLU 71	-0.04	-0.13	15.77	0	0	0
192	SLU 72	-0.03	-0.14	15.77	0	0	0
192	SLU 73	-0.04	-0.13	16.77	0	0	0
192	SLU 74	-0.04	-0.12	17.06	0	0	0
192	SLU 75	-0.04	-0.13	17.05	0	0	0
192	SLU 76	-0.04	-0.13	16.95	0	0	0
192	SLU 77	-0.04	-0.12	17.23	0	0	0
192	SLU 78	-0.04	-0.13	17.22	0	0	0
192	SLU 79	-0.04	-0.13	17.13	0	0	0
192	SLU 80	-0.04	-0.13	17.12	0	0	0
192	SLU 81	-0.05	-0.12	17.37	0	0	0
192	SLU 82	-0.04	-0.12	17.36	0	0	0
192	SLU 83	-0.05	-0.12	17.54	0	0	0
192	SLU 84	-0.04	-0.13	17.53	0	0	0
192	SLE RA 1	-0.03	-0.1	11.61	0	0	0
192	SLE RA 2	-0.02	-0.11	11.6	0	0	0
192	SLE RA 3	-0.03	-0.1	11.79	0	0	0
192	SLE RA 4	-0.02	-0.11	11.78	0	0	0
192	SLE RA 5	-0.02	-0.11	11.71	0	0	0
192	SLE RA 6	-0.03	-0.1	11.9	0	0	0
192	SLE RA 7	-0.02	-0.11	11.9	0	0	0
192	SLE RA 8	-0.03	-0.1	11.84	0	0	0
192	SLE RA 9	-0.03	-0.11	11.83	0	0	0
192	SLE RA 10	-0.03	-0.1	12.5	0	0	0
192	SLE RA 11	-0.03	-0.1	12.69	0	0	0
192	SLE RA 12	-0.03	-0.1	12.69	0	0	0
192	SLE RA 13	-0.03	-0.1	12.62	0	0	0
192	SLE RA 14	-0.03	-0.1	12.81	0	0	0
192	SLE RA 15	-0.03	-0.1	12.8	0	0	0
192	SLE RA 16	-0.03	-0.1	12.74	0	0	0
192	SLE RA 17	-0.03	-0.1	12.74	0	0	0
192	SLE RA 18	-0.03	-0.1	12.9	0	0	0
192	SLE RA 19	-0.03	-0.1	12.89	0	0	0
192	SLE RA 20	-0.03	-0.1	13.01	0	0	0
192	SLE RA 21	-0.03	-0.1	13.01	0	0	0
192	SLE FR 1	-0.03	-0.1	11.61	0	0	0
192	SLE FR 2	-0.03	-0.1	11.6	0	0	0
192	SLE FR 3	-0.03	-0.1	11.65	0	0	0
192	SLE FR 4	-0.03	-0.1	11.99	0	0	0
192	SLE FR 5	-0.03	-0.1	12.04	0	0	0
192	SLE FR 6	-0.03	-0.1	12.25	0	0	0
192	SLE QP 1	-0.03	-0.1	11.61	0	0	0
192	SLE QP 2	-0.03	-0.1	11.99	0	0	0
192	SLD 1	0.97	0.1	11.77	0	0	0
192	SLD 2	1.09	0.13	11.82	0	0	0
192	SLD 3	0.96	-0.15	11.41	0	0	0
192	SLD 4	1.07	-0.13	11.46	0	0	0
192	SLD 5	0.28	0.34	12.46	0	0	0
192	SLD 6	0.36	0.36	12.49	0	0	0
192	SLD 7	0.22	-0.51	11.27	0	0	0
192	SLD 8	0.29	-0.49	11.3	0	0	0
192	SLD 9	-0.35	0.29	12.69	0	0	0
192	SLD 10	-0.27	0.31	12.72	0	0	0
192	SLD 11	-0.41	-0.56	11.5	0	0	0
192	SLD 12	-0.34	-0.54	11.53	0	0	0
192	SLD 13	-1.13	-0.07	12.53	0	0	0
192	SLD 14	-1.01	-0.05	12.58	0	0	0
192	SLD 15	-1.14	-0.33	12.17	0	0	0
192	SLD 16	-1.03	-0.3	12.22	0	0	0
192	SLV 1	2.32	0.36	11.45	0	0	0
192	SLV 2	2.58	0.43	11.57	0	0	0
192	SLV 3	2.27	-0.22	10.64	0	0	0
192	SLV 4	2.54	-0.15	10.76	0	0	0
192	SLV 5	0.7	0.91	13.04	0	0	0
192	SLV 6	0.87	0.95	13.11	0	0	0
192	SLV 7	0.55	-1.03	10.34	0	0	0
192	SLV 8	0.72	-0.98	10.42	0	0	0
192	SLV 9	-0.78	0.78	13.57	0	0	0
192	SLV 10	-0.61	0.83	13.65	0	0	0
192	SLV 11	-0.92	-1.15	10.87	0	0	0
192	SLV 12	-0.75	-1.11	10.95	0	0	0
192	SLV 13	-2.59	-0.05	13.23	0	0	0
192	SLV 14	-2.33	0.02	13.34	0	0	0
192	SLV 15	-2.64	-0.63	12.42	0	0	0
192	SLV 16	-2.37	-0.56	12.54	0	0	0
193	SLU 1	-0.02	-0.12	11.29	0	0	0
193	SLU 2	-0.02	-0.13	11.28	0	0	0
193	SLU 3	-0.03	-0.12	11.56	0	0	0
193	SLU 4	-0.02	-0.13	11.55	0	0	0
193	SLU 5	-0.02	-0.13	11.45	0	0	0
193	SLU 6	-0.03	-0.13	11.73	0	0	0
193	SLU 7	-0.02	-0.13	11.72	0	0	0
193	SLU 8	-0.03	-0.13	11.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
193	SLU 9	-0.02	-0.13	11.63	0	0	0
193	SLU 10	-0.03	-0.13	12.63	0	0	0
193	SLU 11	-0.03	-0.12	12.91	0	0	0
193	SLU 12	-0.03	-0.12	12.9	0	0	0
193	SLU 13	-0.03	-0.13	12.8	0	0	0
193	SLU 14	-0.03	-0.12	13.09	0	0	0
193	SLU 15	-0.03	-0.13	13.08	0	0	0
193	SLU 16	-0.03	-0.12	12.99	0	0	0
193	SLU 17	-0.03	-0.13	12.98	0	0	0
193	SLU 18	-0.04	-0.12	13.22	0	0	0
193	SLU 19	-0.03	-0.12	13.22	0	0	0
193	SLU 20	-0.04	-0.12	13.4	0	0	0
193	SLU 21	-0.03	-0.12	13.39	0	0	0
193	SLU 22	-0.03	-0.11	12.48	0	0	0
193	SLU 23	-0.02	-0.12	12.47	0	0	0
193	SLU 24	-0.03	-0.11	12.75	0	0	0
193	SLU 25	-0.02	-0.12	12.74	0	0	0
193	SLU 26	-0.02	-0.12	12.64	0	0	0
193	SLU 27	-0.03	-0.11	12.93	0	0	0
193	SLU 28	-0.02	-0.12	12.92	0	0	0
193	SLU 29	-0.03	-0.12	12.83	0	0	0
193	SLU 30	-0.02	-0.12	12.82	0	0	0
193	SLU 31	-0.03	-0.11	13.82	0	0	0
193	SLU 32	-0.03	-0.11	14.11	0	0	0
193	SLU 33	-0.03	-0.11	14.1	0	0	0
193	SLU 34	-0.03	-0.12	14	0	0	0
193	SLU 35	-0.04	-0.11	14.28	0	0	0
193	SLU 36	-0.03	-0.11	14.27	0	0	0
193	SLU 37	-0.04	-0.11	14.18	0	0	0
193	SLU 38	-0.03	-0.12	14.17	0	0	0
193	SLU 39	-0.04	-0.11	14.42	0	0	0
193	SLU 40	-0.03	-0.11	14.41	0	0	0
193	SLU 41	-0.04	-0.11	14.59	0	0	0
193	SLU 42	-0.03	-0.11	14.58	0	0	0
193	SLU 43	-0.03	-0.16	14.27	0	0	0
193	SLU 44	-0.02	-0.17	14.25	0	0	0
193	SLU 45	-0.03	-0.17	14.54	0	0	0
193	SLU 46	-0.03	-0.17	14.53	0	0	0
193	SLU 47	-0.03	-0.17	14.43	0	0	0
193	SLU 48	-0.03	-0.17	14.71	0	0	0
193	SLU 49	-0.03	-0.17	14.7	0	0	0
193	SLU 50	-0.03	-0.17	14.61	0	0	0
193	SLU 51	-0.03	-0.17	14.6	0	0	0
193	SLU 52	-0.03	-0.17	15.61	0	0	0
193	SLU 53	-0.04	-0.16	15.89	0	0	0
193	SLU 54	-0.04	-0.17	15.88	0	0	0
193	SLU 55	-0.03	-0.17	15.78	0	0	0
193	SLU 56	-0.04	-0.16	16.06	0	0	0
193	SLU 57	-0.04	-0.17	16.06	0	0	0
193	SLU 58	-0.04	-0.16	15.97	0	0	0
193	SLU 59	-0.04	-0.17	15.96	0	0	0
193	SLU 60	-0.04	-0.16	16.2	0	0	0
193	SLU 61	-0.04	-0.16	16.19	0	0	0
193	SLU 62	-0.04	-0.16	16.37	0	0	0
193	SLU 63	-0.04	-0.17	16.37	0	0	0
193	SLU 64	-0.03	-0.15	15.46	0	0	0
193	SLU 65	-0.03	-0.16	15.45	0	0	0
193	SLU 66	-0.03	-0.15	15.73	0	0	0
193	SLU 67	-0.03	-0.16	15.72	0	0	0
193	SLU 68	-0.03	-0.16	15.62	0	0	0
193	SLU 69	-0.03	-0.16	15.9	0	0	0
193	SLU 70	-0.03	-0.16	15.89	0	0	0
193	SLU 71	-0.03	-0.16	15.81	0	0	0
193	SLU 72	-0.03	-0.16	15.8	0	0	0
193	SLU 73	-0.03	-0.16	16.8	0	0	0
193	SLU 74	-0.04	-0.15	17.08	0	0	0
193	SLU 75	-0.04	-0.15	17.08	0	0	0
193	SLU 76	-0.03	-0.16	16.97	0	0	0
193	SLU 77	-0.04	-0.15	17.26	0	0	0
193	SLU 78	-0.04	-0.16	17.25	0	0	0
193	SLU 79	-0.04	-0.15	17.16	0	0	0
193	SLU 80	-0.04	-0.16	17.15	0	0	0
193	SLU 81	-0.04	-0.15	17.39	0	0	0
193	SLU 82	-0.04	-0.15	17.39	0	0	0
193	SLU 83	-0.04	-0.15	17.57	0	0	0
193	SLU 84	-0.04	-0.15	17.56	0	0	0
193	SLE RA 1	-0.02	-0.12	11.63	0	0	0
193	SLE RA 2	-0.02	-0.12	11.62	0	0	0
193	SLE RA 3	-0.03	-0.12	11.81	0	0	0
193	SLE RA 4	-0.02	-0.12	11.8	0	0	0
193	SLE RA 5	-0.02	-0.13	11.74	0	0	0
193	SLE RA 6	-0.03	-0.12	11.92	0	0	0
193	SLE RA 7	-0.02	-0.12	11.92	0	0	0
193	SLE RA 8	-0.03	-0.12	11.86	0	0	0
193	SLE RA 9	-0.02	-0.13	11.86	0	0	0
193	SLE RA 10	-0.03	-0.12	12.52	0	0	0
193	SLE RA 11	-0.03	-0.12	12.71	0	0	0
193	SLE RA 12	-0.03	-0.12	12.71	0	0	0
193	SLE RA 13	-0.03	-0.12	12.64	0	0	0
193	SLE RA 14	-0.03	-0.12	12.83	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
193	SLE RA 15	-0.03	-0.12	12.82	0	0	0
193	SLE RA 16	-0.03	-0.12	12.76	0	0	0
193	SLE RA 17	-0.03	-0.12	12.76	0	0	0
193	SLE RA 18	-0.03	-0.12	12.92	0	0	0
193	SLE RA 19	-0.03	-0.12	12.91	0	0	0
193	SLE RA 20	-0.03	-0.12	13.03	0	0	0
193	SLE RA 21	-0.03	-0.12	13.03	0	0	0
193	SLE FR 1	-0.02	-0.12	11.63	0	0	0
193	SLE FR 2	-0.02	-0.12	11.63	0	0	0
193	SLE FR 3	-0.02	-0.12	11.68	0	0	0
193	SLE FR 4	-0.03	-0.12	12.01	0	0	0
193	SLE FR 5	-0.03	-0.12	12.06	0	0	0
193	SLE FR 6	-0.03	-0.12	12.27	0	0	0
193	SLE QP 1	-0.02	-0.12	11.63	0	0	0
193	SLE QP 2	-0.03	-0.12	12.02	0	0	0
193	SLD 1	0.98	0.09	11.69	0	0	0
193	SLD 2	1.09	0.13	11.75	0	0	0
193	SLD 3	0.96	-0.16	11.33	0	0	0
193	SLD 4	1.07	-0.13	11.39	0	0	0
193	SLD 5	0.28	0.32	12.45	0	0	0
193	SLD 6	0.36	0.35	12.49	0	0	0
193	SLD 7	0.22	-0.52	11.26	0	0	0
193	SLD 8	0.29	-0.5	11.29	0	0	0
193	SLD 9	-0.35	0.26	12.74	0	0	0
193	SLD 10	-0.27	0.28	12.77	0	0	0
193	SLD 11	-0.41	-0.58	11.54	0	0	0
193	SLD 12	-0.34	-0.56	11.58	0	0	0
193	SLD 13	-1.12	-0.11	12.65	0	0	0
193	SLD 14	-1.01	-0.08	12.7	0	0	0
193	SLD 15	-1.14	-0.36	12.29	0	0	0
193	SLD 16	-1.03	-0.33	12.34	0	0	0
193	SLV 1	2.32	0.37	11.24	0	0	0
193	SLV 2	2.58	0.44	11.37	0	0	0
193	SLV 3	2.27	-0.21	10.43	0	0	0
193	SLV 4	2.53	-0.13	10.56	0	0	0
193	SLV 5	0.7	0.89	12.99	0	0	0
193	SLV 6	0.87	0.94	13.07	0	0	0
193	SLV 7	0.55	-1.03	10.29	0	0	0
193	SLV 8	0.72	-0.98	10.37	0	0	0
193	SLV 9	-0.77	0.74	13.66	0	0	0
193	SLV 10	-0.6	0.79	13.74	0	0	0
193	SLV 11	-0.92	-1.17	10.96	0	0	0
193	SLV 12	-0.75	-1.12	11.04	0	0	0
193	SLV 13	-2.59	-0.11	13.47	0	0	0
193	SLV 14	-2.33	-0.03	13.6	0	0	0
193	SLV 15	-2.63	-0.68	12.66	0	0	0
193	SLV 16	-2.37	-0.61	12.79	0	0	0
194	SLU 1	-0.02	-0.14	11.28	0	0	0
194	SLU 2	-0.02	-0.15	11.27	0	0	0
194	SLU 3	-0.02	-0.14	11.55	0	0	0
194	SLU 4	-0.02	-0.15	11.55	0	0	0
194	SLU 5	-0.02	-0.15	11.45	0	0	0
194	SLU 6	-0.02	-0.14	11.73	0	0	0
194	SLU 7	-0.02	-0.15	11.72	0	0	0
194	SLU 8	-0.02	-0.15	11.63	0	0	0
194	SLU 9	-0.02	-0.15	11.62	0	0	0
194	SLU 10	-0.02	-0.14	12.62	0	0	0
194	SLU 11	-0.03	-0.14	12.9	0	0	0
194	SLU 12	-0.03	-0.14	12.89	0	0	0
194	SLU 13	-0.03	-0.15	12.79	0	0	0
194	SLU 14	-0.03	-0.14	13.07	0	0	0
194	SLU 15	-0.03	-0.15	13.07	0	0	0
194	SLU 16	-0.03	-0.14	12.98	0	0	0
194	SLU 17	-0.03	-0.15	12.97	0	0	0
194	SLU 18	-0.03	-0.14	13.21	0	0	0
194	SLU 19	-0.03	-0.14	13.2	0	0	0
194	SLU 20	-0.04	-0.14	13.38	0	0	0
194	SLU 21	-0.03	-0.14	13.37	0	0	0
194	SLU 22	-0.02	-0.13	12.48	0	0	0
194	SLU 23	-0.02	-0.14	12.47	0	0	0
194	SLU 24	-0.02	-0.13	12.75	0	0	0
194	SLU 25	-0.02	-0.14	12.74	0	0	0
194	SLU 26	-0.02	-0.14	12.64	0	0	0
194	SLU 27	-0.03	-0.13	12.92	0	0	0
194	SLU 28	-0.02	-0.14	12.91	0	0	0
194	SLU 29	-0.03	-0.14	12.82	0	0	0
194	SLU 30	-0.02	-0.14	12.82	0	0	0
194	SLU 31	-0.02	-0.14	13.81	0	0	0
194	SLU 32	-0.03	-0.13	14.1	0	0	0
194	SLU 33	-0.03	-0.13	14.09	0	0	0
194	SLU 34	-0.03	-0.14	13.99	0	0	0
194	SLU 35	-0.03	-0.13	14.27	0	0	0
194	SLU 36	-0.03	-0.14	14.26	0	0	0
194	SLU 37	-0.03	-0.13	14.17	0	0	0
194	SLU 38	-0.03	-0.14	14.16	0	0	0
194	SLU 39	-0.03	-0.13	14.4	0	0	0
194	SLU 40	-0.03	-0.13	14.4	0	0	0
194	SLU 41	-0.04	-0.13	14.58	0	0	0
194	SLU 42	-0.03	-0.13	14.57	0	0	0
194	SLU 43	-0.03	-0.19	14.26	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
194	SLU 44	-0.02	-0.19	14.25	0	0	0
194	SLU 45	-0.03	-0.19	14.53	0	0	0
194	SLU 46	-0.03	-0.19	14.52	0	0	0
194	SLU 47	-0.02	-0.19	14.42	0	0	0
194	SLU 48	-0.03	-0.19	14.7	0	0	0
194	SLU 49	-0.03	-0.19	14.7	0	0	0
194	SLU 50	-0.03	-0.19	14.61	0	0	0
194	SLU 51	-0.03	-0.19	14.6	0	0	0
194	SLU 52	-0.03	-0.19	15.6	0	0	0
194	SLU 53	-0.04	-0.18	15.88	0	0	0
194	SLU 54	-0.03	-0.19	15.87	0	0	0
194	SLU 55	-0.03	-0.19	15.77	0	0	0
194	SLU 56	-0.04	-0.19	16.05	0	0	0
194	SLU 57	-0.04	-0.19	16.04	0	0	0
194	SLU 58	-0.04	-0.19	15.95	0	0	0
194	SLU 59	-0.04	-0.19	15.95	0	0	0
194	SLU 60	-0.04	-0.18	16.19	0	0	0
194	SLU 61	-0.04	-0.19	16.18	0	0	0
194	SLU 62	-0.04	-0.19	16.36	0	0	0
194	SLU 63	-0.04	-0.19	16.35	0	0	0
194	SLU 64	-0.03	-0.18	15.46	0	0	0
194	SLU 65	-0.02	-0.18	15.44	0	0	0
194	SLU 66	-0.03	-0.18	15.72	0	0	0
194	SLU 67	-0.03	-0.18	15.72	0	0	0
194	SLU 68	-0.02	-0.19	15.62	0	0	0
194	SLU 69	-0.03	-0.18	15.9	0	0	0
194	SLU 70	-0.03	-0.18	15.89	0	0	0
194	SLU 71	-0.03	-0.18	15.8	0	0	0
194	SLU 72	-0.03	-0.18	15.79	0	0	0
194	SLU 73	-0.03	-0.18	16.79	0	0	0
194	SLU 74	-0.04	-0.17	17.07	0	0	0
194	SLU 75	-0.03	-0.18	17.06	0	0	0
194	SLU 76	-0.03	-0.18	16.96	0	0	0
194	SLU 77	-0.04	-0.18	17.24	0	0	0
194	SLU 78	-0.04	-0.18	17.24	0	0	0
194	SLU 79	-0.04	-0.18	17.15	0	0	0
194	SLU 80	-0.04	-0.18	17.14	0	0	0
194	SLU 81	-0.04	-0.17	17.38	0	0	0
194	SLU 82	-0.04	-0.18	17.37	0	0	0
194	SLU 83	-0.04	-0.18	17.55	0	0	0
194	SLU 84	-0.04	-0.18	17.55	0	0	0
194	SLE RA 1	-0.02	-0.14	11.63	0	0	0
194	SLE RA 2	-0.02	-0.14	11.62	0	0	0
194	SLE RA 3	-0.02	-0.14	11.81	0	0	0
194	SLE RA 4	-0.02	-0.14	11.8	0	0	0
194	SLE RA 5	-0.02	-0.14	11.73	0	0	0
194	SLE RA 6	-0.02	-0.14	11.92	0	0	0
194	SLE RA 7	-0.02	-0.14	11.92	0	0	0
194	SLE RA 8	-0.02	-0.14	11.86	0	0	0
194	SLE RA 9	-0.02	-0.14	11.85	0	0	0
194	SLE RA 10	-0.02	-0.14	12.52	0	0	0
194	SLE RA 11	-0.03	-0.14	12.7	0	0	0
194	SLE RA 12	-0.03	-0.14	12.7	0	0	0
194	SLE RA 13	-0.02	-0.14	12.63	0	0	0
194	SLE RA 14	-0.03	-0.14	12.82	0	0	0
194	SLE RA 15	-0.03	-0.14	12.81	0	0	0
194	SLE RA 16	-0.03	-0.14	12.75	0	0	0
194	SLE RA 17	-0.03	-0.14	12.75	0	0	0
194	SLE RA 18	-0.03	-0.14	12.91	0	0	0
194	SLE RA 19	-0.03	-0.14	12.9	0	0	0
194	SLE RA 20	-0.03	-0.14	13.02	0	0	0
194	SLE RA 21	-0.03	-0.14	13.02	0	0	0
194	SLE FR 1	-0.02	-0.14	11.63	0	0	0
194	SLE FR 2	-0.02	-0.14	11.62	0	0	0
194	SLE FR 3	-0.02	-0.14	11.67	0	0	0
194	SLE FR 4	-0.02	-0.14	12.01	0	0	0
194	SLE FR 5	-0.03	-0.14	12.06	0	0	0
194	SLE FR 6	-0.03	-0.14	12.27	0	0	0
194	SLE QP 1	-0.02	-0.14	11.63	0	0	0
194	SLE QP 2	-0.02	-0.14	12.01	0	0	0
194	SLD 1	0.97	0.08	11.58	0	0	0
194	SLD 2	1.08	0.12	11.64	0	0	0
194	SLD 3	0.95	-0.17	11.22	0	0	0
194	SLD 4	1.06	-0.13	11.28	0	0	0
194	SLD 5	0.28	0.3	12.42	0	0	0
194	SLD 6	0.36	0.33	12.45	0	0	0
194	SLD 7	0.22	-0.53	11.22	0	0	0
194	SLD 8	0.29	-0.51	11.26	0	0	0
194	SLD 9	-0.34	0.23	12.76	0	0	0
194	SLD 10	-0.27	0.26	12.8	0	0	0
194	SLD 11	-0.41	-0.6	11.57	0	0	0
194	SLD 12	-0.33	-0.58	11.61	0	0	0
194	SLD 13	-1.11	-0.14	12.74	0	0	0
194	SLD 14	-1	-0.11	12.8	0	0	0
194	SLD 15	-1.13	-0.39	12.38	0	0	0
194	SLD 16	-1.02	-0.36	12.44	0	0	0
194	SLV 1	2.3	0.37	11	0	0	0
194	SLV 2	2.56	0.46	11.13	0	0	0
194	SLV 3	2.26	-0.2	10.18	0	0	0
194	SLV 4	2.52	-0.11	10.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
194	SLV 5	0.69	0.86	12.91	0	0	0
194	SLV 6	0.86	0.92	13	0	0	0
194	SLV 7	0.55	-1.03	10.21	0	0	0
194	SLV 8	0.72	-0.97	10.3	0	0	0
194	SLV 9	-0.77	0.7	13.73	0	0	0
194	SLV 10	-0.6	0.76	13.81	0	0	0
194	SLV 11	-0.91	-1.19	11.02	0	0	0
194	SLV 12	-0.74	-1.13	11.11	0	0	0
194	SLV 13	-2.57	-0.16	13.7	0	0	0
194	SLV 14	-2.31	-0.08	13.84	0	0	0
194	SLV 15	-2.61	-0.73	12.89	0	0	0
194	SLV 16	-2.35	-0.64	13.03	0	0	0
195	SLU 1	-0.02	-0.15	10.97	0	0	0
195	SLU 2	-0.01	-0.16	10.96	0	0	0
195	SLU 3	-0.02	-0.15	11.23	0	0	0
195	SLU 4	-0.02	-0.16	11.23	0	0	0
195	SLU 5	-0.02	-0.16	11.13	0	0	0
195	SLU 6	-0.02	-0.16	11.4	0	0	0
195	SLU 7	-0.02	-0.16	11.4	0	0	0
195	SLU 8	-0.02	-0.16	11.31	0	0	0
195	SLU 9	-0.02	-0.16	11.3	0	0	0
195	SLU 10	-0.02	-0.16	12.27	0	0	0
195	SLU 11	-0.03	-0.15	12.54	0	0	0
195	SLU 12	-0.03	-0.16	12.53	0	0	0
195	SLU 13	-0.02	-0.16	12.43	0	0	0
195	SLU 14	-0.03	-0.16	12.71	0	0	0
195	SLU 15	-0.03	-0.16	12.7	0	0	0
195	SLU 16	-0.03	-0.16	12.61	0	0	0
195	SLU 17	-0.03	-0.16	12.61	0	0	0
195	SLU 18	-0.03	-0.15	12.84	0	0	0
195	SLU 19	-0.03	-0.16	12.83	0	0	0
195	SLU 20	-0.03	-0.15	13.01	0	0	0
195	SLU 21	-0.03	-0.16	13	0	0	0
195	SLU 22	-0.02	-0.14	12.14	0	0	0
195	SLU 23	-0.01	-0.15	12.13	0	0	0
195	SLU 24	-0.02	-0.15	12.4	0	0	0
195	SLU 25	-0.02	-0.15	12.39	0	0	0
195	SLU 26	-0.02	-0.15	12.29	0	0	0
195	SLU 27	-0.02	-0.15	12.57	0	0	0
195	SLU 28	-0.02	-0.15	12.56	0	0	0
195	SLU 29	-0.02	-0.15	12.47	0	0	0
195	SLU 30	-0.02	-0.15	12.47	0	0	0
195	SLU 31	-0.02	-0.15	13.43	0	0	0
195	SLU 32	-0.03	-0.15	13.7	0	0	0
195	SLU 33	-0.03	-0.15	13.7	0	0	0
195	SLU 34	-0.02	-0.15	13.6	0	0	0
195	SLU 35	-0.03	-0.15	13.87	0	0	0
195	SLU 36	-0.03	-0.15	13.86	0	0	0
195	SLU 37	-0.03	-0.15	13.78	0	0	0
195	SLU 38	-0.03	-0.15	13.77	0	0	0
195	SLU 39	-0.03	-0.14	14	0	0	0
195	SLU 40	-0.03	-0.15	13.99	0	0	0
195	SLU 41	-0.03	-0.15	14.17	0	0	0
195	SLU 42	-0.03	-0.15	14.16	0	0	0
195	SLU 43	-0.03	-0.2	13.87	0	0	0
195	SLU 44	-0.02	-0.21	13.86	0	0	0
195	SLU 45	-0.03	-0.2	14.13	0	0	0
195	SLU 46	-0.02	-0.2	14.12	0	0	0
195	SLU 47	-0.02	-0.21	14.02	0	0	0
195	SLU 48	-0.03	-0.2	14.3	0	0	0
195	SLU 49	-0.02	-0.21	14.29	0	0	0
195	SLU 50	-0.03	-0.21	14.2	0	0	0
195	SLU 51	-0.02	-0.21	14.2	0	0	0
195	SLU 52	-0.03	-0.21	15.16	0	0	0
195	SLU 53	-0.04	-0.2	15.43	0	0	0
195	SLU 54	-0.03	-0.21	15.43	0	0	0
195	SLU 55	-0.03	-0.21	15.33	0	0	0
195	SLU 56	-0.04	-0.2	15.6	0	0	0
195	SLU 57	-0.03	-0.21	15.59	0	0	0
195	SLU 58	-0.04	-0.21	15.51	0	0	0
195	SLU 59	-0.03	-0.21	15.5	0	0	0
195	SLU 60	-0.04	-0.2	15.73	0	0	0
195	SLU 61	-0.03	-0.2	15.72	0	0	0
195	SLU 62	-0.04	-0.2	15.9	0	0	0
195	SLU 63	-0.03	-0.21	15.89	0	0	0
195	SLU 64	-0.03	-0.19	15.03	0	0	0
195	SLU 65	-0.02	-0.2	15.02	0	0	0
195	SLU 66	-0.03	-0.19	15.29	0	0	0
195	SLU 67	-0.02	-0.2	15.28	0	0	0
195	SLU 68	-0.02	-0.2	15.19	0	0	0
195	SLU 69	-0.03	-0.2	15.46	0	0	0
195	SLU 70	-0.03	-0.2	15.45	0	0	0
195	SLU 71	-0.03	-0.2	15.37	0	0	0
195	SLU 72	-0.03	-0.2	15.36	0	0	0
195	SLU 73	-0.03	-0.2	16.32	0	0	0
195	SLU 74	-0.04	-0.19	16.6	0	0	0
195	SLU 75	-0.03	-0.2	16.59	0	0	0
195	SLU 76	-0.03	-0.2	16.49	0	0	0
195	SLU 77	-0.04	-0.2	16.76	0	0	0
195	SLU 78	-0.03	-0.2	16.76	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
195	SLU 79	-0.04	-0.2	16.67	0	0	0
195	SLU 80	-0.03	-0.2	16.66	0	0	0
195	SLU 81	-0.04	-0.19	16.9	0	0	0
195	SLU 82	-0.03	-0.2	16.89	0	0	0
195	SLU 83	-0.04	-0.2	17.06	0	0	0
195	SLU 84	-0.04	-0.2	17.06	0	0	0
195	SLE RA 1	-0.02	-0.15	11.31	0	0	0
195	SLE RA 2	-0.02	-0.15	11.3	0	0	0
195	SLE RA 3	-0.02	-0.15	11.48	0	0	0
195	SLE RA 4	-0.02	-0.15	11.48	0	0	0
195	SLE RA 5	-0.02	-0.16	11.41	0	0	0
195	SLE RA 6	-0.02	-0.15	11.59	0	0	0
195	SLE RA 7	-0.02	-0.16	11.59	0	0	0
195	SLE RA 8	-0.02	-0.15	11.53	0	0	0
195	SLE RA 9	-0.02	-0.16	11.52	0	0	0
195	SLE RA 10	-0.02	-0.15	12.17	0	0	0
195	SLE RA 11	-0.03	-0.15	12.35	0	0	0
195	SLE RA 12	-0.02	-0.15	12.35	0	0	0
195	SLE RA 13	-0.02	-0.16	12.28	0	0	0
195	SLE RA 14	-0.03	-0.15	12.46	0	0	0
195	SLE RA 15	-0.02	-0.16	12.46	0	0	0
195	SLE RA 16	-0.03	-0.15	12.4	0	0	0
195	SLE RA 17	-0.02	-0.16	12.4	0	0	0
195	SLE RA 18	-0.03	-0.15	12.55	0	0	0
195	SLE RA 19	-0.03	-0.15	12.54	0	0	0
195	SLE RA 20	-0.03	-0.15	12.66	0	0	0
195	SLE RA 21	-0.03	-0.15	12.66	0	0	0
195	SLE FR 1	-0.02	-0.15	11.31	0	0	0
195	SLE FR 2	-0.02	-0.15	11.3	0	0	0
195	SLE FR 3	-0.02	-0.15	11.35	0	0	0
195	SLE FR 4	-0.02	-0.15	11.68	0	0	0
195	SLE FR 5	-0.02	-0.15	11.72	0	0	0
195	SLE FR 6	-0.02	-0.15	11.93	0	0	0
195	SLE QP 1	-0.02	-0.15	11.31	0	0	0
195	SLE QP 2	-0.02	-0.15	11.68	0	0	0
195	SLD 1	0.94	0.07	11.16	0	0	0
195	SLD 2	1.05	0.11	11.22	0	0	0
195	SLD 3	0.92	-0.17	10.81	0	0	0
195	SLD 4	1.03	-0.13	10.87	0	0	0
195	SLD 5	0.27	0.27	12.04	0	0	0
195	SLD 6	0.34	0.3	12.08	0	0	0
195	SLD 7	0.21	-0.53	10.88	0	0	0
195	SLD 8	0.28	-0.5	10.92	0	0	0
195	SLD 9	-0.33	0.2	12.44	0	0	0
195	SLD 10	-0.26	0.23	12.48	0	0	0
195	SLD 11	-0.39	-0.6	11.28	0	0	0
195	SLD 12	-0.32	-0.57	11.32	0	0	0
195	SLD 13	-1.07	-0.17	12.49	0	0	0
195	SLD 14	-0.96	-0.13	12.55	0	0	0
195	SLD 15	-1.09	-0.41	12.14	0	0	0
195	SLD 16	-0.98	-0.37	12.2	0	0	0
195	SLV 1	2.22	0.36	10.45	0	0	0
195	SLV 2	2.47	0.45	10.59	0	0	0
195	SLV 3	2.18	-0.18	9.66	0	0	0
195	SLV 4	2.43	-0.09	9.8	0	0	0
195	SLV 5	0.67	0.81	12.49	0	0	0
195	SLV 6	0.83	0.87	12.58	0	0	0
195	SLV 7	0.53	-1	9.85	0	0	0
195	SLV 8	0.69	-0.94	9.94	0	0	0
195	SLV 9	-0.74	0.64	13.42	0	0	0
195	SLV 10	-0.58	0.7	13.51	0	0	0
195	SLV 11	-0.88	-1.17	10.78	0	0	0
195	SLV 12	-0.72	-1.11	10.87	0	0	0
195	SLV 13	-2.48	-0.21	13.56	0	0	0
195	SLV 14	-2.23	-0.12	13.7	0	0	0
195	SLV 15	-2.52	-0.75	12.76	0	0	0
195	SLV 16	-2.27	-0.66	12.9	0	0	0
196	SLU 1	-0.02	-0.17	11.21	0	0	0
196	SLU 2	-0.01	-0.18	11.2	0	0	0
196	SLU 3	-0.02	-0.17	11.48	0	0	0
196	SLU 4	-0.02	-0.18	11.47	0	0	0
196	SLU 5	-0.01	-0.18	11.37	0	0	0
196	SLU 6	-0.02	-0.18	11.65	0	0	0
196	SLU 7	-0.02	-0.18	11.64	0	0	0
196	SLU 8	-0.02	-0.18	11.55	0	0	0
196	SLU 9	-0.02	-0.18	11.55	0	0	0
196	SLU 10	-0.02	-0.18	12.53	0	0	0
196	SLU 11	-0.03	-0.18	12.81	0	0	0
196	SLU 12	-0.02	-0.18	12.8	0	0	0
196	SLU 13	-0.02	-0.18	12.7	0	0	0
196	SLU 14	-0.03	-0.18	12.98	0	0	0
196	SLU 15	-0.03	-0.18	12.97	0	0	0
196	SLU 16	-0.03	-0.18	12.88	0	0	0
196	SLU 17	-0.03	-0.18	12.88	0	0	0
196	SLU 18	-0.03	-0.17	13.11	0	0	0
196	SLU 19	-0.03	-0.18	13.1	0	0	0
196	SLU 20	-0.03	-0.18	13.28	0	0	0
196	SLU 21	-0.03	-0.18	13.27	0	0	0
196	SLU 22	-0.02	-0.17	12.4	0	0	0
196	SLU 23	-0.01	-0.17	12.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
196	SLU 24	-0.02	-0.17	12.67	0	0	0
196	SLU 25	-0.02	-0.17	12.66	0	0	0
196	SLU 26	-0.01	-0.17	12.56	0	0	0
196	SLU 27	-0.02	-0.17	12.84	0	0	0
196	SLU 28	-0.02	-0.17	12.83	0	0	0
196	SLU 29	-0.02	-0.17	12.74	0	0	0
196	SLU 30	-0.02	-0.18	12.74	0	0	0
196	SLU 31	-0.02	-0.17	13.72	0	0	0
196	SLU 32	-0.03	-0.17	14	0	0	0
196	SLU 33	-0.03	-0.17	13.99	0	0	0
196	SLU 34	-0.02	-0.18	13.89	0	0	0
196	SLU 35	-0.03	-0.17	14.17	0	0	0
196	SLU 36	-0.03	-0.18	14.16	0	0	0
196	SLU 37	-0.03	-0.17	14.07	0	0	0
196	SLU 38	-0.03	-0.18	14.07	0	0	0
196	SLU 39	-0.03	-0.17	14.3	0	0	0
196	SLU 40	-0.03	-0.17	14.29	0	0	0
196	SLU 41	-0.03	-0.17	14.47	0	0	0
196	SLU 42	-0.03	-0.18	14.47	0	0	0
196	SLU 43	-0.03	-0.22	14.16	0	0	0
196	SLU 44	-0.02	-0.23	14.15	0	0	0
196	SLU 45	-0.03	-0.23	14.43	0	0	0
196	SLU 46	-0.02	-0.23	14.42	0	0	0
196	SLU 47	-0.02	-0.23	14.32	0	0	0
196	SLU 48	-0.03	-0.23	14.6	0	0	0
196	SLU 49	-0.02	-0.23	14.59	0	0	0
196	SLU 50	-0.03	-0.23	14.51	0	0	0
196	SLU 51	-0.02	-0.23	14.5	0	0	0
196	SLU 52	-0.03	-0.23	15.48	0	0	0
196	SLU 53	-0.03	-0.23	15.76	0	0	0
196	SLU 54	-0.03	-0.23	15.75	0	0	0
196	SLU 55	-0.03	-0.24	15.65	0	0	0
196	SLU 56	-0.04	-0.23	15.93	0	0	0
196	SLU 57	-0.03	-0.24	15.93	0	0	0
196	SLU 58	-0.04	-0.23	15.84	0	0	0
196	SLU 59	-0.03	-0.24	15.83	0	0	0
196	SLU 60	-0.04	-0.23	16.06	0	0	0
196	SLU 61	-0.03	-0.23	16.06	0	0	0
196	SLU 62	-0.04	-0.23	16.24	0	0	0
196	SLU 63	-0.03	-0.23	16.23	0	0	0
196	SLU 64	-0.03	-0.22	15.36	0	0	0
196	SLU 65	-0.02	-0.22	15.34	0	0	0
196	SLU 66	-0.03	-0.22	15.62	0	0	0
196	SLU 67	-0.02	-0.22	15.62	0	0	0
196	SLU 68	-0.02	-0.23	15.52	0	0	0
196	SLU 69	-0.03	-0.22	15.79	0	0	0
196	SLU 70	-0.02	-0.23	15.79	0	0	0
196	SLU 71	-0.03	-0.22	15.7	0	0	0
196	SLU 72	-0.02	-0.23	15.69	0	0	0
196	SLU 73	-0.03	-0.23	16.67	0	0	0
196	SLU 74	-0.03	-0.22	16.95	0	0	0
196	SLU 75	-0.03	-0.23	16.95	0	0	0
196	SLU 76	-0.03	-0.23	16.85	0	0	0
196	SLU 77	-0.04	-0.23	17.12	0	0	0
196	SLU 78	-0.03	-0.23	17.12	0	0	0
196	SLU 79	-0.04	-0.23	17.03	0	0	0
196	SLU 80	-0.03	-0.23	17.02	0	0	0
196	SLU 81	-0.04	-0.22	17.26	0	0	0
196	SLU 82	-0.03	-0.23	17.25	0	0	0
196	SLU 83	-0.04	-0.22	17.43	0	0	0
196	SLU 84	-0.03	-0.23	17.42	0	0	0
196	SLE RA 1	-0.02	-0.17	11.55	0	0	0
196	SLE RA 2	-0.02	-0.17	11.54	0	0	0
196	SLE RA 3	-0.02	-0.17	11.73	0	0	0
196	SLE RA 4	-0.02	-0.17	11.72	0	0	0
196	SLE RA 5	-0.02	-0.18	11.66	0	0	0
196	SLE RA 6	-0.02	-0.17	11.84	0	0	0
196	SLE RA 7	-0.02	-0.18	11.84	0	0	0
196	SLE RA 8	-0.02	-0.17	11.78	0	0	0
196	SLE RA 9	-0.02	-0.18	11.77	0	0	0
196	SLE RA 10	-0.02	-0.17	12.43	0	0	0
196	SLE RA 11	-0.03	-0.17	12.61	0	0	0
196	SLE RA 12	-0.02	-0.17	12.61	0	0	0
196	SLE RA 13	-0.02	-0.18	12.54	0	0	0
196	SLE RA 14	-0.03	-0.17	12.73	0	0	0
196	SLE RA 15	-0.02	-0.18	12.72	0	0	0
196	SLE RA 16	-0.03	-0.18	12.67	0	0	0
196	SLE RA 17	-0.02	-0.18	12.66	0	0	0
196	SLE RA 18	-0.03	-0.17	12.82	0	0	0
196	SLE RA 19	-0.02	-0.17	12.81	0	0	0
196	SLE RA 20	-0.03	-0.17	12.93	0	0	0
196	SLE RA 21	-0.03	-0.18	12.93	0	0	0
196	SLE FR 1	-0.02	-0.17	11.55	0	0	0
196	SLE FR 2	-0.02	-0.17	11.55	0	0	0
196	SLE FR 3	-0.02	-0.17	11.6	0	0	0
196	SLE FR 4	-0.02	-0.17	11.93	0	0	0
196	SLE FR 5	-0.02	-0.17	11.98	0	0	0
196	SLE FR 6	-0.02	-0.17	12.18	0	0	0
196	SLE QP 1	-0.02	-0.17	11.55	0	0	0
196	SLE QP 2	-0.02	-0.17	11.93	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
196	SLD 1	0.95	0.06	11.3	0	0	0
196	SLD 2	1.06	0.11	11.36	0	0	0
196	SLD 3	0.93	-0.18	10.94	0	0	0
196	SLD 4	1.04	-0.13	11	0	0	0
196	SLD 5	0.28	0.26	12.27	0	0	0
196	SLD 6	0.35	0.29	12.32	0	0	0
196	SLD 7	0.22	-0.55	11.08	0	0	0
196	SLD 8	0.29	-0.52	11.12	0	0	0
196	SLD 9	-0.33	0.18	12.74	0	0	0
196	SLD 10	-0.26	0.21	12.78	0	0	0
196	SLD 11	-0.39	-0.63	11.54	0	0	0
196	SLD 12	-0.32	-0.6	11.59	0	0	0
196	SLD 13	-1.08	-0.21	12.86	0	0	0
196	SLD 14	-0.97	-0.16	12.92	0	0	0
196	SLD 15	-1.1	-0.45	12.5	0	0	0
196	SLD 16	-0.99	-0.4	12.56	0	0	0
196	SLV 1	2.25	0.37	10.44	0	0	0
196	SLV 2	2.5	0.47	10.59	0	0	0
196	SLV 3	2.2	-0.18	9.63	0	0	0
196	SLV 4	2.46	-0.07	9.78	0	0	0
196	SLV 5	0.68	0.8	12.69	0	0	0
196	SLV 6	0.84	0.87	12.79	0	0	0
196	SLV 7	0.54	-1.02	9.98	0	0	0
196	SLV 8	0.7	-0.95	10.08	0	0	0
196	SLV 9	-0.75	0.61	13.78	0	0	0
196	SLV 10	-0.58	0.68	13.88	0	0	0
196	SLV 11	-0.89	-1.21	11.07	0	0	0
196	SLV 12	-0.72	-1.14	11.17	0	0	0
196	SLV 13	-2.5	-0.27	14.08	0	0	0
196	SLV 14	-2.25	-0.16	14.24	0	0	0
196	SLV 15	-2.55	-0.81	13.27	0	0	0
196	SLV 16	-2.29	-0.71	13.42	0	0	0
197	SLU 1	-0.02	-0.19	11.26	0	0	0
197	SLU 2	-0.01	-0.19	11.25	0	0	0
197	SLU 3	-0.02	-0.19	11.53	0	0	0
197	SLU 4	-0.02	-0.19	11.52	0	0	0
197	SLU 5	-0.01	-0.2	11.42	0	0	0
197	SLU 6	-0.02	-0.19	11.7	0	0	0
197	SLU 7	-0.02	-0.2	11.69	0	0	0
197	SLU 8	-0.02	-0.2	11.6	0	0	0
197	SLU 9	-0.02	-0.2	11.59	0	0	0
197	SLU 10	-0.02	-0.2	12.58	0	0	0
197	SLU 11	-0.03	-0.2	12.86	0	0	0
197	SLU 12	-0.02	-0.2	12.85	0	0	0
197	SLU 13	-0.02	-0.2	12.75	0	0	0
197	SLU 14	-0.03	-0.2	13.03	0	0	0
197	SLU 15	-0.03	-0.2	13.02	0	0	0
197	SLU 16	-0.03	-0.2	12.94	0	0	0
197	SLU 17	-0.03	-0.2	12.93	0	0	0
197	SLU 18	-0.03	-0.19	13.16	0	0	0
197	SLU 19	-0.03	-0.2	13.16	0	0	0
197	SLU 20	-0.03	-0.2	13.34	0	0	0
197	SLU 21	-0.03	-0.2	13.33	0	0	0
197	SLU 22	-0.02	-0.18	12.46	0	0	0
197	SLU 23	-0.01	-0.19	12.45	0	0	0
197	SLU 24	-0.02	-0.19	12.73	0	0	0
197	SLU 25	-0.02	-0.19	12.72	0	0	0
197	SLU 26	-0.01	-0.19	12.62	0	0	0
197	SLU 27	-0.02	-0.19	12.9	0	0	0
197	SLU 28	-0.02	-0.19	12.89	0	0	0
197	SLU 29	-0.02	-0.19	12.8	0	0	0
197	SLU 30	-0.02	-0.2	12.8	0	0	0
197	SLU 31	-0.02	-0.2	13.78	0	0	0
197	SLU 32	-0.03	-0.19	14.06	0	0	0
197	SLU 33	-0.02	-0.2	14.05	0	0	0
197	SLU 34	-0.02	-0.2	13.95	0	0	0
197	SLU 35	-0.03	-0.2	14.23	0	0	0
197	SLU 36	-0.03	-0.2	14.23	0	0	0
197	SLU 37	-0.03	-0.2	14.14	0	0	0
197	SLU 38	-0.03	-0.2	14.13	0	0	0
197	SLU 39	-0.03	-0.19	14.36	0	0	0
197	SLU 40	-0.03	-0.19	14.36	0	0	0
197	SLU 41	-0.03	-0.19	14.54	0	0	0
197	SLU 42	-0.03	-0.2	14.53	0	0	0
197	SLU 43	-0.02	-0.25	14.22	0	0	0
197	SLU 44	-0.02	-0.25	14.21	0	0	0
197	SLU 45	-0.03	-0.25	14.49	0	0	0
197	SLU 46	-0.02	-0.25	14.48	0	0	0
197	SLU 47	-0.02	-0.25	14.38	0	0	0
197	SLU 48	-0.03	-0.25	14.66	0	0	0
197	SLU 49	-0.02	-0.26	14.66	0	0	0
197	SLU 50	-0.03	-0.25	14.57	0	0	0
197	SLU 51	-0.02	-0.26	14.56	0	0	0
197	SLU 52	-0.03	-0.26	15.55	0	0	0
197	SLU 53	-0.03	-0.25	15.83	0	0	0
197	SLU 54	-0.03	-0.26	15.82	0	0	0
197	SLU 55	-0.03	-0.26	15.72	0	0	0
197	SLU 56	-0.03	-0.26	16	0	0	0
197	SLU 57	-0.03	-0.26	15.99	0	0	0
197	SLU 58	-0.03	-0.26	15.9	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
197	SLU 59	-0.03	-0.26	15.89	0	0	0
197	SLU 60	-0.04	-0.25	16.13	0	0	0
197	SLU 61	-0.03	-0.26	16.12	0	0	0
197	SLU 62	-0.04	-0.26	16.3	0	0	0
197	SLU 63	-0.03	-0.26	16.29	0	0	0
197	SLU 64	-0.03	-0.24	15.42	0	0	0
197	SLU 65	-0.02	-0.25	15.41	0	0	0
197	SLU 66	-0.03	-0.25	15.69	0	0	0
197	SLU 67	-0.02	-0.25	15.69	0	0	0
197	SLU 68	-0.02	-0.25	15.58	0	0	0
197	SLU 69	-0.03	-0.25	15.86	0	0	0
197	SLU 70	-0.02	-0.25	15.86	0	0	0
197	SLU 71	-0.03	-0.25	15.77	0	0	0
197	SLU 72	-0.02	-0.25	15.76	0	0	0
197	SLU 73	-0.03	-0.25	16.75	0	0	0
197	SLU 74	-0.03	-0.25	17.03	0	0	0
197	SLU 75	-0.03	-0.25	17.02	0	0	0
197	SLU 76	-0.03	-0.26	16.92	0	0	0
197	SLU 77	-0.04	-0.25	17.2	0	0	0
197	SLU 78	-0.03	-0.26	17.19	0	0	0
197	SLU 79	-0.04	-0.25	17.1	0	0	0
197	SLU 80	-0.03	-0.26	17.1	0	0	0
197	SLU 81	-0.04	-0.25	17.33	0	0	0
197	SLU 82	-0.03	-0.25	17.32	0	0	0
197	SLU 83	-0.04	-0.25	17.5	0	0	0
197	SLU 84	-0.03	-0.26	17.49	0	0	0
197	SLE RA 1	-0.02	-0.19	11.6	0	0	0
197	SLE RA 2	-0.01	-0.19	11.59	0	0	0
197	SLE RA 3	-0.02	-0.19	11.78	0	0	0
197	SLE RA 4	-0.02	-0.19	11.78	0	0	0
197	SLE RA 5	-0.02	-0.19	11.71	0	0	0
197	SLE RA 6	-0.02	-0.19	11.89	0	0	0
197	SLE RA 7	-0.02	-0.19	11.89	0	0	0
197	SLE RA 8	-0.02	-0.19	11.83	0	0	0
197	SLE RA 9	-0.02	-0.19	11.83	0	0	0
197	SLE RA 10	-0.02	-0.19	12.48	0	0	0
197	SLE RA 11	-0.03	-0.19	12.67	0	0	0
197	SLE RA 12	-0.02	-0.19	12.66	0	0	0
197	SLE RA 13	-0.02	-0.2	12.6	0	0	0
197	SLE RA 14	-0.03	-0.19	12.78	0	0	0
197	SLE RA 15	-0.02	-0.2	12.78	0	0	0
197	SLE RA 16	-0.03	-0.19	12.72	0	0	0
197	SLE RA 17	-0.02	-0.2	12.71	0	0	0
197	SLE RA 18	-0.03	-0.19	12.87	0	0	0
197	SLE RA 19	-0.02	-0.19	12.87	0	0	0
197	SLE RA 20	-0.03	-0.19	12.99	0	0	0
197	SLE RA 21	-0.02	-0.2	12.98	0	0	0
197	SLE FR 1	-0.02	-0.19	11.6	0	0	0
197	SLE FR 2	-0.02	-0.19	11.6	0	0	0
197	SLE FR 3	-0.02	-0.19	11.65	0	0	0
197	SLE FR 4	-0.02	-0.19	11.98	0	0	0
197	SLE FR 5	-0.02	-0.19	12.03	0	0	0
197	SLE FR 6	-0.02	-0.19	12.24	0	0	0
197	SLE QP 1	-0.02	-0.19	11.6	0	0	0
197	SLE QP 2	-0.02	-0.19	11.98	0	0	0
197	SLD 1	0.94	0.05	11.25	0	0	0
197	SLD 2	1.05	0.1	11.32	0	0	0
197	SLD 3	0.92	-0.18	10.88	0	0	0
197	SLD 4	1.03	-0.13	10.95	0	0	0
197	SLD 5	0.28	0.24	12.3	0	0	0
197	SLD 6	0.35	0.27	12.34	0	0	0
197	SLD 7	0.21	-0.56	11.09	0	0	0
197	SLD 8	0.29	-0.52	11.14	0	0	0
197	SLD 9	-0.33	0.15	12.83	0	0	0
197	SLD 10	-0.26	0.18	12.87	0	0	0
197	SLD 11	-0.39	-0.64	11.62	0	0	0
197	SLD 12	-0.32	-0.61	11.67	0	0	0
197	SLD 13	-1.07	-0.24	13.01	0	0	0
197	SLD 14	-0.97	-0.19	13.08	0	0	0
197	SLD 15	-1.09	-0.48	12.65	0	0	0
197	SLD 16	-0.98	-0.43	12.72	0	0	0
197	SLV 1	2.23	0.37	10.25	0	0	0
197	SLV 2	2.48	0.48	10.41	0	0	0
197	SLV 3	2.19	-0.17	9.43	0	0	0
197	SLV 4	2.44	-0.05	9.59	0	0	0
197	SLV 5	0.67	0.77	12.68	0	0	0
197	SLV 6	0.84	0.85	12.78	0	0	0
197	SLV 7	0.53	-1.02	9.94	0	0	0
197	SLV 8	0.7	-0.94	10.05	0	0	0
197	SLV 9	-0.74	0.57	13.91	0	0	0
197	SLV 10	-0.57	0.64	14.02	0	0	0
197	SLV 11	-0.88	-1.22	11.18	0	0	0
197	SLV 12	-0.72	-1.15	11.29	0	0	0
197	SLV 13	-2.48	-0.32	14.37	0	0	0
197	SLV 14	-2.23	-0.21	14.54	0	0	0
197	SLV 15	-2.52	-0.86	13.55	0	0	0
197	SLV 16	-2.27	-0.75	13.72	0	0	0
197	CRTFP Ux+	0	0	0	0	0	0
197	CRTFP Ux-	0	0	0	0	0	0
198	SLU 1	-0.01	-0.1	5.6	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
198	SLU 2	-0.01	-0.1	5.6	0	0	0
198	SLU 3	-0.01	-0.1	5.74	0	0	0
198	SLU 4	-0.01	-0.11	5.73	0	0	0
198	SLU 5	-0.01	-0.11	5.68	0	0	0
198	SLU 6	-0.01	-0.11	5.82	0	0	0
198	SLU 7	-0.01	-0.11	5.82	0	0	0
198	SLU 8	-0.01	-0.11	5.78	0	0	0
198	SLU 9	-0.01	-0.11	5.77	0	0	0
198	SLU 10	-0.01	-0.11	6.26	0	0	0
198	SLU 11	-0.01	-0.11	6.4	0	0	0
198	SLU 12	-0.01	-0.11	6.4	0	0	0
198	SLU 13	-0.01	-0.11	6.35	0	0	0
198	SLU 14	-0.01	-0.11	6.49	0	0	0
198	SLU 15	-0.01	-0.11	6.48	0	0	0
198	SLU 16	-0.01	-0.11	6.44	0	0	0
198	SLU 17	-0.01	-0.11	6.43	0	0	0
198	SLU 18	-0.01	-0.11	6.55	0	0	0
198	SLU 19	-0.01	-0.11	6.55	0	0	0
198	SLU 20	-0.02	-0.11	6.64	0	0	0
198	SLU 21	-0.01	-0.11	6.63	0	0	0
198	SLU 22	-0.01	-0.1	6.2	0	0	0
198	SLU 23	-0.01	-0.1	6.2	0	0	0
198	SLU 24	-0.01	-0.1	6.34	0	0	0
198	SLU 25	-0.01	-0.1	6.33	0	0	0
198	SLU 26	-0.01	-0.11	6.28	0	0	0
198	SLU 27	-0.01	-0.11	6.42	0	0	0
198	SLU 28	-0.01	-0.11	6.42	0	0	0
198	SLU 29	-0.01	-0.11	6.38	0	0	0
198	SLU 30	-0.01	-0.11	6.37	0	0	0
198	SLU 31	-0.01	-0.11	6.86	0	0	0
198	SLU 32	-0.01	-0.11	7	0	0	0
198	SLU 33	-0.01	-0.11	7	0	0	0
198	SLU 34	-0.01	-0.11	6.95	0	0	0
198	SLU 35	-0.01	-0.11	7.09	0	0	0
198	SLU 36	-0.01	-0.11	7.08	0	0	0
198	SLU 37	-0.01	-0.11	7.04	0	0	0
198	SLU 38	-0.01	-0.11	7.03	0	0	0
198	SLU 39	-0.01	-0.11	7.15	0	0	0
198	SLU 40	-0.01	-0.11	7.15	0	0	0
198	SLU 41	-0.02	-0.11	7.24	0	0	0
198	SLU 42	-0.01	-0.11	7.23	0	0	0
198	SLU 43	-0.01	-0.13	7.08	0	0	0
198	SLU 44	-0.01	-0.14	7.07	0	0	0
198	SLU 45	-0.01	-0.13	7.21	0	0	0
198	SLU 46	-0.01	-0.14	7.21	0	0	0
198	SLU 47	-0.01	-0.14	7.16	0	0	0
198	SLU 48	-0.01	-0.14	7.3	0	0	0
198	SLU 49	-0.01	-0.14	7.3	0	0	0
198	SLU 50	-0.01	-0.14	7.25	0	0	0
198	SLU 51	-0.01	-0.14	7.25	0	0	0
198	SLU 52	-0.01	-0.14	7.74	0	0	0
198	SLU 53	-0.02	-0.14	7.88	0	0	0
198	SLU 54	-0.01	-0.14	7.87	0	0	0
198	SLU 55	-0.01	-0.14	7.82	0	0	0
198	SLU 56	-0.02	-0.14	7.96	0	0	0
198	SLU 57	-0.02	-0.14	7.96	0	0	0
198	SLU 58	-0.02	-0.14	7.91	0	0	0
198	SLU 59	-0.02	-0.14	7.91	0	0	0
198	SLU 60	-0.02	-0.14	8.03	0	0	0
198	SLU 61	-0.02	-0.14	8.02	0	0	0
198	SLU 62	-0.02	-0.14	8.11	0	0	0
198	SLU 63	-0.02	-0.14	8.11	0	0	0
198	SLU 64	-0.01	-0.13	7.68	0	0	0
198	SLU 65	-0.01	-0.13	7.67	0	0	0
198	SLU 66	-0.01	-0.13	7.81	0	0	0
198	SLU 67	-0.01	-0.14	7.81	0	0	0
198	SLU 68	-0.01	-0.14	7.76	0	0	0
198	SLU 69	-0.01	-0.14	7.9	0	0	0
198	SLU 70	-0.01	-0.14	7.9	0	0	0
198	SLU 71	-0.01	-0.14	7.85	0	0	0
198	SLU 72	-0.01	-0.14	7.85	0	0	0
198	SLU 73	-0.01	-0.14	8.34	0	0	0
198	SLU 74	-0.02	-0.14	8.48	0	0	0
198	SLU 75	-0.01	-0.14	8.47	0	0	0
198	SLU 76	-0.01	-0.14	8.42	0	0	0
198	SLU 77	-0.02	-0.14	8.56	0	0	0
198	SLU 78	-0.02	-0.14	8.56	0	0	0
198	SLU 79	-0.02	-0.14	8.51	0	0	0
198	SLU 80	-0.02	-0.14	8.51	0	0	0
198	SLU 81	-0.02	-0.14	8.63	0	0	0
198	SLU 82	-0.02	-0.14	8.62	0	0	0
198	SLU 83	-0.02	-0.14	8.71	0	0	0
198	SLU 84	-0.02	-0.14	8.71	0	0	0
198	SLE RA 1	-0.01	-0.1	5.78	0	0	0
198	SLE RA 2	-0.01	-0.1	5.77	0	0	0
198	SLE RA 3	-0.01	-0.1	5.86	0	0	0
198	SLE RA 4	-0.01	-0.1	5.86	0	0	0
198	SLE RA 5	-0.01	-0.1	5.83	0	0	0
198	SLE RA 6	-0.01	-0.1	5.92	0	0	0
198	SLE RA 7	-0.01	-0.11	5.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
198	SLE RA 8	-0.01	-0.1	5.89	0	0	0
198	SLE RA 9	-0.01	-0.11	5.89	0	0	0
198	SLE RA 10	-0.01	-0.11	6.21	0	0	0
198	SLE RA 11	-0.01	-0.11	6.31	0	0	0
198	SLE RA 12	-0.01	-0.11	6.3	0	0	0
198	SLE RA 13	-0.01	-0.11	6.27	0	0	0
198	SLE RA 14	-0.01	-0.11	6.36	0	0	0
198	SLE RA 15	-0.01	-0.11	6.36	0	0	0
198	SLE RA 16	-0.01	-0.11	6.33	0	0	0
198	SLE RA 17	-0.01	-0.11	6.33	0	0	0
198	SLE RA 18	-0.01	-0.11	6.41	0	0	0
198	SLE RA 19	-0.01	-0.11	6.4	0	0	0
198	SLE RA 20	-0.01	-0.11	6.46	0	0	0
198	SLE RA 21	-0.01	-0.11	6.46	0	0	0
198	SLE FR 1	-0.01	-0.1	5.78	0	0	0
198	SLE FR 2	-0.01	-0.1	5.77	0	0	0
198	SLE FR 3	-0.01	-0.1	5.8	0	0	0
198	SLE FR 4	-0.01	-0.1	5.96	0	0	0
198	SLE FR 5	-0.01	-0.1	5.99	0	0	0
198	SLE FR 6	-0.01	-0.1	6.09	0	0	0
198	SLE QP 1	-0.01	-0.1	5.78	0	0	0
198	SLE QP 2	-0.01	-0.1	5.96	0	0	0
198	SLD 1	0.46	0.02	5.55	0	0	0
198	SLD 2	0.52	0.05	5.59	0	0	0
198	SLD 3	0.45	-0.09	5.37	0	0	0
198	SLD 4	0.51	-0.07	5.41	0	0	0
198	SLD 5	0.14	0.11	6.11	0	0	0
198	SLD 6	0.17	0.12	6.13	0	0	0
198	SLD 7	0.11	-0.28	5.5	0	0	0
198	SLD 8	0.14	-0.26	5.53	0	0	0
198	SLD 9	-0.16	0.06	6.4	0	0	0
198	SLD 10	-0.13	0.07	6.43	0	0	0
198	SLD 11	-0.19	-0.33	5.8	0	0	0
198	SLD 12	-0.16	-0.31	5.82	0	0	0
198	SLD 13	-0.53	-0.14	6.52	0	0	0
198	SLD 14	-0.47	-0.11	6.56	0	0	0
198	SLD 15	-0.54	-0.25	6.34	0	0	0
198	SLD 16	-0.48	-0.23	6.38	0	0	0
198	SLV 1	1.1	0.19	4.99	0	0	0
198	SLV 2	1.22	0.25	5.07	0	0	0
198	SLV 3	1.07	-0.08	4.58	0	0	0
198	SLV 4	1.2	-0.01	4.66	0	0	0
198	SLV 5	0.33	0.37	6.28	0	0	0
198	SLV 6	0.41	0.41	6.33	0	0	0
198	SLV 7	0.26	-0.5	4.91	0	0	0
198	SLV 8	0.34	-0.46	4.97	0	0	0
198	SLV 9	-0.36	0.26	6.96	0	0	0
198	SLV 10	-0.28	0.3	7.02	0	0	0
198	SLV 11	-0.43	-0.62	5.6	0	0	0
198	SLV 12	-0.35	-0.58	5.65	0	0	0
198	SLV 13	-1.22	-0.19	7.27	0	0	0
198	SLV 14	-1.1	-0.13	7.35	0	0	0
198	SLV 15	-1.24	-0.45	6.86	0	0	0
198	SLV 16	-1.12	-0.39	6.94	0	0	0
199	SLU 1	-0.14	-0.29	13.16	0	0	0
199	SLU 2	-0.13	-0.3	13.14	0	0	0
199	SLU 3	-0.14	-0.29	13.47	0	0	0
199	SLU 4	-0.14	-0.3	13.46	0	0	0
199	SLU 5	-0.13	-0.31	13.34	0	0	0
199	SLU 6	-0.14	-0.3	13.67	0	0	0
199	SLU 7	-0.14	-0.3	13.66	0	0	0
199	SLU 8	-0.14	-0.3	13.56	0	0	0
199	SLU 9	-0.14	-0.3	13.55	0	0	0
199	SLU 10	-0.14	-0.32	14.69	0	0	0
199	SLU 11	-0.15	-0.31	15.03	0	0	0
199	SLU 12	-0.14	-0.32	15.01	0	0	0
199	SLU 13	-0.14	-0.32	14.89	0	0	0
199	SLU 14	-0.15	-0.31	15.23	0	0	0
199	SLU 15	-0.14	-0.32	15.22	0	0	0
199	SLU 16	-0.15	-0.31	15.12	0	0	0
199	SLU 17	-0.14	-0.32	15.1	0	0	0
199	SLU 18	-0.15	-0.31	15.38	0	0	0
199	SLU 19	-0.14	-0.32	15.37	0	0	0
199	SLU 20	-0.15	-0.32	15.58	0	0	0
199	SLU 21	-0.14	-0.32	15.57	0	0	0
199	SLU 22	-0.15	-0.29	14.57	0	0	0
199	SLU 23	-0.15	-0.31	14.55	0	0	0
199	SLU 24	-0.16	-0.3	14.88	0	0	0
199	SLU 25	-0.15	-0.3	14.87	0	0	0
199	SLU 26	-0.15	-0.31	14.75	0	0	0
199	SLU 27	-0.16	-0.3	15.09	0	0	0
199	SLU 28	-0.16	-0.31	15.07	0	0	0
199	SLU 29	-0.16	-0.3	14.97	0	0	0
199	SLU 30	-0.15	-0.31	14.96	0	0	0
199	SLU 31	-0.15	-0.32	16.1	0	0	0
199	SLU 32	-0.16	-0.31	16.44	0	0	0
199	SLU 33	-0.16	-0.32	16.43	0	0	0
199	SLU 34	-0.15	-0.33	16.31	0	0	0
199	SLU 35	-0.17	-0.32	16.64	0	0	0
199	SLU 36	-0.16	-0.33	16.63	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
199	SLU 37	-0.16	-0.32	16.53	0	0	0
199	SLU 38	-0.16	-0.33	16.52	0	0	0
199	SLU 39	-0.16	-0.32	16.79	0	0	0
199	SLU 40	-0.16	-0.32	16.78	0	0	0
199	SLU 41	-0.16	-0.32	16.99	0	0	0
199	SLU 42	-0.16	-0.33	16.98	0	0	0
199	SLU 43	-0.17	-0.37	16.62	0	0	0
199	SLU 44	-0.17	-0.39	16.6	0	0	0
199	SLU 45	-0.18	-0.38	16.93	0	0	0
199	SLU 46	-0.17	-0.38	16.92	0	0	0
199	SLU 47	-0.17	-0.39	16.8	0	0	0
199	SLU 48	-0.18	-0.38	17.13	0	0	0
199	SLU 49	-0.18	-0.39	17.12	0	0	0
199	SLU 50	-0.18	-0.38	17.02	0	0	0
199	SLU 51	-0.17	-0.39	17.01	0	0	0
199	SLU 52	-0.17	-0.4	18.15	0	0	0
199	SLU 53	-0.18	-0.39	18.49	0	0	0
199	SLU 54	-0.18	-0.4	18.48	0	0	0
199	SLU 55	-0.17	-0.41	18.36	0	0	0
199	SLU 56	-0.19	-0.4	18.69	0	0	0
199	SLU 57	-0.18	-0.41	18.68	0	0	0
199	SLU 58	-0.18	-0.4	18.58	0	0	0
199	SLU 59	-0.18	-0.41	18.57	0	0	0
199	SLU 60	-0.18	-0.4	18.84	0	0	0
199	SLU 61	-0.18	-0.4	18.83	0	0	0
199	SLU 62	-0.18	-0.4	19.04	0	0	0
199	SLU 63	-0.18	-0.41	19.03	0	0	0
199	SLU 64	-0.19	-0.38	18.03	0	0	0
199	SLU 65	-0.18	-0.39	18.01	0	0	0
199	SLU 66	-0.19	-0.38	18.35	0	0	0
199	SLU 67	-0.19	-0.39	18.33	0	0	0
199	SLU 68	-0.18	-0.39	18.21	0	0	0
199	SLU 69	-0.2	-0.39	18.55	0	0	0
199	SLU 70	-0.19	-0.39	18.54	0	0	0
199	SLU 71	-0.2	-0.38	18.44	0	0	0
199	SLU 72	-0.19	-0.39	18.42	0	0	0
199	SLU 73	-0.19	-0.41	19.57	0	0	0
199	SLU 74	-0.2	-0.4	19.9	0	0	0
199	SLU 75	-0.19	-0.41	19.89	0	0	0
199	SLU 76	-0.19	-0.41	19.77	0	0	0
199	SLU 77	-0.2	-0.4	20.1	0	0	0
199	SLU 78	-0.2	-0.41	20.09	0	0	0
199	SLU 79	-0.2	-0.4	19.99	0	0	0
199	SLU 80	-0.2	-0.41	19.98	0	0	0
199	SLU 81	-0.2	-0.4	20.25	0	0	0
199	SLU 82	-0.19	-0.41	20.24	0	0	0
199	SLU 83	-0.2	-0.4	20.46	0	0	0
199	SLU 84	-0.2	-0.41	20.44	0	0	0
199	SLE RA 1	-0.14	-0.29	13.56	0	0	0
199	SLE RA 2	-0.14	-0.3	13.55	0	0	0
199	SLE RA 3	-0.14	-0.29	13.77	0	0	0
199	SLE RA 4	-0.14	-0.3	13.76	0	0	0
199	SLE RA 5	-0.14	-0.3	13.68	0	0	0
199	SLE RA 6	-0.15	-0.29	13.9	0	0	0
199	SLE RA 7	-0.14	-0.3	13.9	0	0	0
199	SLE RA 8	-0.15	-0.29	13.83	0	0	0
199	SLE RA 9	-0.14	-0.3	13.82	0	0	0
199	SLE RA 10	-0.14	-0.31	14.58	0	0	0
199	SLE RA 11	-0.15	-0.3	14.81	0	0	0
199	SLE RA 12	-0.15	-0.31	14.8	0	0	0
199	SLE RA 13	-0.14	-0.31	14.72	0	0	0
199	SLE RA 14	-0.15	-0.31	14.94	0	0	0
199	SLE RA 15	-0.15	-0.31	14.93	0	0	0
199	SLE RA 16	-0.15	-0.31	14.87	0	0	0
199	SLE RA 17	-0.15	-0.31	14.86	0	0	0
199	SLE RA 18	-0.15	-0.3	15.04	0	0	0
199	SLE RA 19	-0.14	-0.31	15.03	0	0	0
199	SLE RA 20	-0.15	-0.31	15.18	0	0	0
199	SLE RA 21	-0.15	-0.31	15.17	0	0	0
199	SLE FR 1	-0.14	-0.29	13.56	0	0	0
199	SLE FR 2	-0.14	-0.29	13.56	0	0	0
199	SLE FR 3	-0.14	-0.29	13.61	0	0	0
199	SLE FR 4	-0.14	-0.3	14	0	0	0
199	SLE FR 5	-0.14	-0.29	14.06	0	0	0
199	SLE FR 6	-0.14	-0.3	14.3	0	0	0
199	SLE QP 1	-0.14	-0.29	13.56	0	0	0
199	SLE QP 2	-0.14	-0.29	14	0	0	0
199	SLD 1	0.96	-0.26	15.12	0	0	0
199	SLD 2	1.08	-0.32	15.04	0	0	0
199	SLD 3	0.98	-0.56	14.78	0	0	0
199	SLD 4	1.1	-0.62	14.7	0	0	0
199	SLD 5	0.13	0.18	14.87	0	0	0
199	SLD 6	0.21	0.14	14.82	0	0	0
199	SLD 7	0.21	-0.81	13.73	0	0	0
199	SLD 8	0.29	-0.85	13.68	0	0	0
199	SLD 9	-0.58	0.26	14.33	0	0	0
199	SLD 10	-0.5	0.22	14.28	0	0	0
199	SLD 11	-0.5	-0.72	13.19	0	0	0
199	SLD 12	-0.41	-0.76	13.14	0	0	0
199	SLD 13	-1.39	0.03	13.31	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
199	SLD 14	-1.27	-0.03	13.23	0	0	0
199	SLD 15	-1.37	-0.27	12.96	0	0	0
199	SLD 16	-1.24	-0.33	12.89	0	0	0
199	SLV 1	2.43	-0.23	16.6	0	0	0
199	SLV 2	2.72	-0.37	16.43	0	0	0
199	SLV 3	2.48	-0.9	15.82	0	0	0
199	SLV 4	2.77	-1.04	15.65	0	0	0
199	SLV 5	0.49	0.77	15.99	0	0	0
199	SLV 6	0.68	0.68	15.88	0	0	0
199	SLV 7	0.68	-1.47	13.4	0	0	0
199	SLV 8	0.87	-1.56	13.29	0	0	0
199	SLV 9	-1.15	0.97	14.72	0	0	0
199	SLV 10	-0.97	0.88	14.61	0	0	0
199	SLV 11	-0.97	-1.26	12.13	0	0	0
199	SLV 12	-0.78	-1.35	12.02	0	0	0
199	SLV 13	-3.06	0.45	12.36	0	0	0
199	SLV 14	-2.77	0.31	12.19	0	0	0
199	SLV 15	-3	-0.22	11.58	0	0	0
199	SLV 16	-2.72	-0.36	11.41	0	0	0
199	CRTFP Ux+	0	0	0	0	0	0
199	CRTFP Ux-	0	0	0	0	0	0
200	SLU 1	-0.13	-0.24	12.44	0	0	0
200	SLU 2	-0.12	-0.25	12.42	0	0	0
200	SLU 3	-0.14	-0.24	12.74	0	0	0
200	SLU 4	-0.13	-0.25	12.73	0	0	0
200	SLU 5	-0.13	-0.25	12.61	0	0	0
200	SLU 6	-0.14	-0.24	12.93	0	0	0
200	SLU 7	-0.13	-0.25	12.92	0	0	0
200	SLU 8	-0.14	-0.24	12.82	0	0	0
200	SLU 9	-0.13	-0.25	12.81	0	0	0
200	SLU 10	-0.13	-0.26	13.9	0	0	0
200	SLU 11	-0.14	-0.25	14.21	0	0	0
200	SLU 12	-0.14	-0.26	14.2	0	0	0
200	SLU 13	-0.13	-0.27	14.09	0	0	0
200	SLU 14	-0.14	-0.26	14.4	0	0	0
200	SLU 15	-0.14	-0.26	14.39	0	0	0
200	SLU 16	-0.14	-0.26	14.3	0	0	0
200	SLU 17	-0.14	-0.26	14.29	0	0	0
200	SLU 18	-0.14	-0.25	14.55	0	0	0
200	SLU 19	-0.13	-0.26	14.54	0	0	0
200	SLU 20	-0.14	-0.26	14.74	0	0	0
200	SLU 21	-0.14	-0.27	14.73	0	0	0
200	SLU 22	-0.15	-0.24	13.77	0	0	0
200	SLU 23	-0.14	-0.25	13.75	0	0	0
200	SLU 24	-0.15	-0.24	14.07	0	0	0
200	SLU 25	-0.15	-0.25	14.06	0	0	0
200	SLU 26	-0.14	-0.25	13.94	0	0	0
200	SLU 27	-0.15	-0.24	14.26	0	0	0
200	SLU 28	-0.15	-0.25	14.25	0	0	0
200	SLU 29	-0.15	-0.24	14.15	0	0	0
200	SLU 30	-0.15	-0.25	14.14	0	0	0
200	SLU 31	-0.14	-0.26	15.23	0	0	0
200	SLU 32	-0.16	-0.25	15.54	0	0	0
200	SLU 33	-0.15	-0.26	15.53	0	0	0
200	SLU 34	-0.15	-0.27	15.42	0	0	0
200	SLU 35	-0.16	-0.26	15.73	0	0	0
200	SLU 36	-0.15	-0.26	15.72	0	0	0
200	SLU 37	-0.16	-0.26	15.63	0	0	0
200	SLU 38	-0.15	-0.26	15.62	0	0	0
200	SLU 39	-0.15	-0.25	15.88	0	0	0
200	SLU 40	-0.15	-0.26	15.87	0	0	0
200	SLU 41	-0.16	-0.26	16.07	0	0	0
200	SLU 42	-0.15	-0.27	16.06	0	0	0
200	SLU 43	-0.17	-0.31	15.71	0	0	0
200	SLU 44	-0.16	-0.32	15.7	0	0	0
200	SLU 45	-0.17	-0.31	16.01	0	0	0
200	SLU 46	-0.16	-0.32	16	0	0	0
200	SLU 47	-0.16	-0.33	15.89	0	0	0
200	SLU 48	-0.17	-0.32	16.2	0	0	0
200	SLU 49	-0.17	-0.32	16.19	0	0	0
200	SLU 50	-0.17	-0.32	16.1	0	0	0
200	SLU 51	-0.17	-0.32	16.09	0	0	0
200	SLU 52	-0.16	-0.33	17.17	0	0	0
200	SLU 53	-0.17	-0.32	17.49	0	0	0
200	SLU 54	-0.17	-0.33	17.48	0	0	0
200	SLU 55	-0.17	-0.34	17.36	0	0	0
200	SLU 56	-0.18	-0.33	17.68	0	0	0
200	SLU 57	-0.17	-0.33	17.67	0	0	0
200	SLU 58	-0.18	-0.33	17.57	0	0	0
200	SLU 59	-0.17	-0.34	17.56	0	0	0
200	SLU 60	-0.17	-0.33	17.82	0	0	0
200	SLU 61	-0.17	-0.33	17.81	0	0	0
200	SLU 62	-0.18	-0.33	18.01	0	0	0
200	SLU 63	-0.17	-0.34	18	0	0	0
200	SLU 64	-0.18	-0.31	17.05	0	0	0
200	SLU 65	-0.17	-0.32	17.03	0	0	0
200	SLU 66	-0.18	-0.31	17.34	0	0	0
200	SLU 67	-0.18	-0.32	17.33	0	0	0
200	SLU 68	-0.18	-0.32	17.22	0	0	0
200	SLU 69	-0.19	-0.31	17.54	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
200	SLU 70	-0.18	-0.32	17.52	0	0	0
200	SLU 71	-0.19	-0.31	17.43	0	0	0
200	SLU 72	-0.18	-0.32	17.42	0	0	0
200	SLU 73	-0.18	-0.33	18.5	0	0	0
200	SLU 74	-0.19	-0.32	18.82	0	0	0
200	SLU 75	-0.19	-0.33	18.81	0	0	0
200	SLU 76	-0.18	-0.34	18.69	0	0	0
200	SLU 77	-0.19	-0.33	19.01	0	0	0
200	SLU 78	-0.19	-0.33	19	0	0	0
200	SLU 79	-0.19	-0.33	18.9	0	0	0
200	SLU 80	-0.19	-0.33	18.89	0	0	0
200	SLU 81	-0.19	-0.33	19.15	0	0	0
200	SLU 82	-0.18	-0.33	19.14	0	0	0
200	SLU 83	-0.19	-0.33	19.34	0	0	0
200	SLU 84	-0.19	-0.34	19.33	0	0	0
200	SLE RA 1	-0.14	-0.24	12.82	0	0	0
200	SLE RA 2	-0.13	-0.25	12.81	0	0	0
200	SLE RA 3	-0.14	-0.24	13.02	0	0	0
200	SLE RA 4	-0.14	-0.24	13.01	0	0	0
200	SLE RA 5	-0.13	-0.25	12.93	0	0	0
200	SLE RA 6	-0.14	-0.24	13.15	0	0	0
200	SLE RA 7	-0.14	-0.25	13.14	0	0	0
200	SLE RA 8	-0.14	-0.24	13.07	0	0	0
200	SLE RA 9	-0.14	-0.25	13.07	0	0	0
200	SLE RA 10	-0.13	-0.25	13.79	0	0	0
200	SLE RA 11	-0.14	-0.25	14	0	0	0
200	SLE RA 12	-0.14	-0.25	13.99	0	0	0
200	SLE RA 13	-0.14	-0.26	13.92	0	0	0
200	SLE RA 14	-0.14	-0.25	14.13	0	0	0
200	SLE RA 15	-0.14	-0.25	14.12	0	0	0
200	SLE RA 16	-0.14	-0.25	14.06	0	0	0
200	SLE RA 17	-0.14	-0.25	14.05	0	0	0
200	SLE RA 18	-0.14	-0.25	14.22	0	0	0
200	SLE RA 19	-0.14	-0.25	14.22	0	0	0
200	SLE RA 20	-0.14	-0.25	14.35	0	0	0
200	SLE RA 21	-0.14	-0.26	14.34	0	0	0
200	SLE FR 1	-0.14	-0.24	12.82	0	0	0
200	SLE FR 2	-0.14	-0.24	12.82	0	0	0
200	SLE FR 3	-0.14	-0.24	12.87	0	0	0
200	SLE FR 4	-0.14	-0.24	13.24	0	0	0
200	SLE FR 5	-0.14	-0.24	13.29	0	0	0
200	SLE FR 6	-0.14	-0.24	13.52	0	0	0
200	SLE QP 1	-0.14	-0.24	12.82	0	0	0
200	SLE QP 2	-0.14	-0.24	13.24	0	0	0
200	SLD 1	0.93	-0.19	14.16	0	0	0
200	SLD 2	1.05	-0.24	14.09	0	0	0
200	SLD 3	0.95	-0.47	13.83	0	0	0
200	SLD 4	1.07	-0.53	13.77	0	0	0
200	SLD 5	0.12	0.22	14.02	0	0	0
200	SLD 6	0.2	0.19	13.97	0	0	0
200	SLD 7	0.2	-0.74	12.94	0	0	0
200	SLD 8	0.28	-0.77	12.9	0	0	0
200	SLD 9	-0.56	0.29	13.58	0	0	0
200	SLD 10	-0.48	0.26	13.54	0	0	0
200	SLD 11	-0.48	-0.67	12.51	0	0	0
200	SLD 12	-0.4	-0.7	12.47	0	0	0
200	SLD 13	-1.34	0.05	12.71	0	0	0
200	SLD 14	-1.22	-0.01	12.65	0	0	0
200	SLD 15	-1.32	-0.24	12.39	0	0	0
200	SLD 16	-1.2	-0.29	12.33	0	0	0
200	SLV 1	2.35	-0.13	15.37	0	0	0
200	SLV 2	2.63	-0.25	15.22	0	0	0
200	SLV 3	2.4	-0.78	14.64	0	0	0
200	SLV 4	2.68	-0.9	14.49	0	0	0
200	SLV 5	0.48	0.8	15.02	0	0	0
200	SLV 6	0.66	0.73	14.92	0	0	0
200	SLV 7	0.66	-1.37	12.58	0	0	0
200	SLV 8	0.84	-1.45	12.48	0	0	0
200	SLV 9	-1.11	0.97	14	0	0	0
200	SLV 10	-0.93	0.89	13.9	0	0	0
200	SLV 11	-0.93	-1.21	11.57	0	0	0
200	SLV 12	-0.75	-1.29	11.47	0	0	0
200	SLV 13	-2.96	0.42	12	0	0	0
200	SLV 14	-2.68	0.3	11.84	0	0	0
200	SLV 15	-2.9	-0.24	11.26	0	0	0
200	SLV 16	-2.62	-0.36	11.11	0	0	0
201	SLU 1	-0.13	-0.2	12.01	0	0	0
201	SLU 2	-0.12	-0.21	12	0	0	0
201	SLU 3	-0.13	-0.2	12.3	0	0	0
201	SLU 4	-0.12	-0.21	12.29	0	0	0
201	SLU 5	-0.12	-0.21	12.18	0	0	0
201	SLU 6	-0.13	-0.2	12.49	0	0	0
201	SLU 7	-0.13	-0.21	12.48	0	0	0
201	SLU 8	-0.13	-0.2	12.38	0	0	0
201	SLU 9	-0.13	-0.21	12.37	0	0	0
201	SLU 10	-0.12	-0.22	13.43	0	0	0
201	SLU 11	-0.13	-0.21	13.73	0	0	0
201	SLU 12	-0.13	-0.21	13.72	0	0	0
201	SLU 13	-0.13	-0.22	13.61	0	0	0
201	SLU 14	-0.14	-0.21	13.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLU 15	-0.13	-0.22	13.91	0	0	0
201	SLU 16	-0.14	-0.21	13.81	0	0	0
201	SLU 17	-0.13	-0.22	13.8	0	0	0
201	SLU 18	-0.13	-0.21	14.06	0	0	0
201	SLU 19	-0.13	-0.22	14.05	0	0	0
201	SLU 20	-0.13	-0.21	14.24	0	0	0
201	SLU 21	-0.13	-0.22	14.23	0	0	0
201	SLU 22	-0.14	-0.19	13.3	0	0	0
201	SLU 23	-0.13	-0.2	13.28	0	0	0
201	SLU 24	-0.14	-0.19	13.59	0	0	0
201	SLU 25	-0.14	-0.2	13.58	0	0	0
201	SLU 26	-0.14	-0.21	13.46	0	0	0
201	SLU 27	-0.15	-0.2	13.77	0	0	0
201	SLU 28	-0.14	-0.2	13.76	0	0	0
201	SLU 29	-0.15	-0.2	13.67	0	0	0
201	SLU 30	-0.14	-0.2	13.66	0	0	0
201	SLU 31	-0.14	-0.21	14.71	0	0	0
201	SLU 32	-0.15	-0.2	15.02	0	0	0
201	SLU 33	-0.14	-0.21	15.01	0	0	0
201	SLU 34	-0.14	-0.21	14.89	0	0	0
201	SLU 35	-0.15	-0.2	15.2	0	0	0
201	SLU 36	-0.15	-0.21	15.19	0	0	0
201	SLU 37	-0.15	-0.2	15.1	0	0	0
201	SLU 38	-0.15	-0.21	15.09	0	0	0
201	SLU 39	-0.15	-0.2	15.34	0	0	0
201	SLU 40	-0.14	-0.21	15.33	0	0	0
201	SLU 41	-0.15	-0.21	15.53	0	0	0
201	SLU 42	-0.15	-0.21	15.51	0	0	0
201	SLU 43	-0.16	-0.26	15.18	0	0	0
201	SLU 44	-0.15	-0.27	15.16	0	0	0
201	SLU 45	-0.16	-0.26	15.47	0	0	0
201	SLU 46	-0.16	-0.27	15.46	0	0	0
201	SLU 47	-0.15	-0.27	15.35	0	0	0
201	SLU 48	-0.16	-0.26	15.65	0	0	0
201	SLU 49	-0.16	-0.27	15.64	0	0	0
201	SLU 50	-0.16	-0.26	15.55	0	0	0
201	SLU 51	-0.16	-0.27	15.54	0	0	0
201	SLU 52	-0.16	-0.28	16.59	0	0	0
201	SLU 53	-0.17	-0.27	16.9	0	0	0
201	SLU 54	-0.16	-0.27	16.89	0	0	0
201	SLU 55	-0.16	-0.28	16.78	0	0	0
201	SLU 56	-0.17	-0.27	17.08	0	0	0
201	SLU 57	-0.16	-0.28	17.07	0	0	0
201	SLU 58	-0.17	-0.27	16.98	0	0	0
201	SLU 59	-0.16	-0.28	16.97	0	0	0
201	SLU 60	-0.16	-0.27	17.22	0	0	0
201	SLU 61	-0.16	-0.28	17.21	0	0	0
201	SLU 62	-0.17	-0.27	17.41	0	0	0
201	SLU 63	-0.16	-0.28	17.4	0	0	0
201	SLU 64	-0.17	-0.25	16.46	0	0	0
201	SLU 65	-0.17	-0.26	16.44	0	0	0
201	SLU 66	-0.18	-0.25	16.75	0	0	0
201	SLU 67	-0.17	-0.26	16.74	0	0	0
201	SLU 68	-0.17	-0.27	16.63	0	0	0
201	SLU 69	-0.18	-0.26	16.93	0	0	0
201	SLU 70	-0.17	-0.26	16.92	0	0	0
201	SLU 71	-0.18	-0.26	16.83	0	0	0
201	SLU 72	-0.17	-0.27	16.82	0	0	0
201	SLU 73	-0.17	-0.27	17.87	0	0	0
201	SLU 74	-0.18	-0.26	18.18	0	0	0
201	SLU 75	-0.18	-0.27	18.17	0	0	0
201	SLU 76	-0.17	-0.28	18.06	0	0	0
201	SLU 77	-0.18	-0.26	18.36	0	0	0
201	SLU 78	-0.18	-0.27	18.35	0	0	0
201	SLU 79	-0.18	-0.27	18.26	0	0	0
201	SLU 80	-0.18	-0.27	18.25	0	0	0
201	SLU 81	-0.18	-0.26	18.5	0	0	0
201	SLU 82	-0.18	-0.27	18.49	0	0	0
201	SLU 83	-0.18	-0.27	18.69	0	0	0
201	SLU 84	-0.18	-0.27	18.68	0	0	0
201	SLE RA 1	-0.13	-0.2	12.38	0	0	0
201	SLE RA 2	-0.12	-0.2	12.37	0	0	0
201	SLE RA 3	-0.13	-0.2	12.57	0	0	0
201	SLE RA 4	-0.13	-0.2	12.57	0	0	0
201	SLE RA 5	-0.13	-0.21	12.49	0	0	0
201	SLE RA 6	-0.13	-0.2	12.7	0	0	0
201	SLE RA 7	-0.13	-0.2	12.69	0	0	0
201	SLE RA 8	-0.13	-0.2	12.63	0	0	0
201	SLE RA 9	-0.13	-0.2	12.62	0	0	0
201	SLE RA 10	-0.13	-0.21	13.32	0	0	0
201	SLE RA 11	-0.13	-0.2	13.53	0	0	0
201	SLE RA 12	-0.13	-0.21	13.52	0	0	0
201	SLE RA 13	-0.13	-0.21	13.45	0	0	0
201	SLE RA 14	-0.14	-0.2	13.65	0	0	0
201	SLE RA 15	-0.13	-0.21	13.64	0	0	0
201	SLE RA 16	-0.14	-0.2	13.58	0	0	0
201	SLE RA 17	-0.13	-0.21	13.57	0	0	0
201	SLE RA 18	-0.13	-0.2	13.74	0	0	0
201	SLE RA 19	-0.13	-0.21	13.74	0	0	0
201	SLE RA 20	-0.14	-0.2	13.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLE RA 21	-0.13	-0.21	13.86	0	0	0
201	SLE FR 1	-0.13	-0.2	12.38	0	0	0
201	SLE FR 2	-0.13	-0.2	12.38	0	0	0
201	SLE FR 3	-0.13	-0.2	12.43	0	0	0
201	SLE FR 4	-0.13	-0.2	12.79	0	0	0
201	SLE FR 5	-0.13	-0.2	12.84	0	0	0
201	SLE FR 6	-0.13	-0.2	13.06	0	0	0
201	SLE QP 1	-0.13	-0.2	12.38	0	0	0
201	SLE QP 2	-0.13	-0.2	12.79	0	0	0
201	SLD 1	0.91	-0.12	13.54	0	0	0
201	SLD 2	1.03	-0.17	13.48	0	0	0
201	SLD 3	0.94	-0.41	13.23	0	0	0
201	SLD 4	1.05	-0.46	13.17	0	0	0
201	SLD 5	0.13	0.27	13.5	0	0	0
201	SLD 6	0.2	0.23	13.46	0	0	0
201	SLD 7	0.2	-0.68	12.46	0	0	0
201	SLD 8	0.28	-0.72	12.42	0	0	0
201	SLD 9	-0.54	0.32	13.16	0	0	0
201	SLD 10	-0.46	0.29	13.12	0	0	0
201	SLD 11	-0.47	-0.63	12.12	0	0	0
201	SLD 12	-0.39	-0.66	12.08	0	0	0
201	SLD 13	-1.31	0.06	12.41	0	0	0
201	SLD 14	-1.2	0.01	12.35	0	0	0
201	SLD 15	-1.29	-0.22	12.09	0	0	0
201	SLD 16	-1.18	-0.27	12.04	0	0	0
201	SLV 1	2.31	-0.04	14.54	0	0	0
201	SLV 2	2.58	-0.14	14.4	0	0	0
201	SLV 3	2.36	-0.68	13.84	0	0	0
201	SLV 4	2.64	-0.79	13.7	0	0	0
201	SLV 5	0.47	0.85	14.41	0	0	0
201	SLV 6	0.65	0.78	14.32	0	0	0
201	SLV 7	0.65	-1.3	12.06	0	0	0
201	SLV 8	0.83	-1.37	11.97	0	0	0
201	SLV 9	-1.09	0.98	13.61	0	0	0
201	SLV 10	-0.91	0.91	13.52	0	0	0
201	SLV 11	-0.91	-1.17	11.26	0	0	0
201	SLV 12	-0.74	-1.24	11.17	0	0	0
201	SLV 13	-2.9	0.39	11.88	0	0	0
201	SLV 14	-2.63	0.29	11.74	0	0	0
201	SLV 15	-2.85	-0.25	11.17	0	0	0
201	SLV 16	-2.57	-0.36	11.04	0	0	0
202	SLU 1	-0.12	-0.16	11.81	0	0	0
202	SLU 2	-0.12	-0.17	11.8	0	0	0
202	SLU 3	-0.13	-0.16	12.1	0	0	0
202	SLU 4	-0.12	-0.17	12.09	0	0	0
202	SLU 5	-0.12	-0.17	11.98	0	0	0
202	SLU 6	-0.13	-0.16	12.28	0	0	0
202	SLU 7	-0.12	-0.17	12.27	0	0	0
202	SLU 8	-0.13	-0.16	12.18	0	0	0
202	SLU 9	-0.12	-0.17	12.17	0	0	0
202	SLU 10	-0.12	-0.17	13.21	0	0	0
202	SLU 11	-0.13	-0.16	13.51	0	0	0
202	SLU 12	-0.13	-0.17	13.5	0	0	0
202	SLU 13	-0.12	-0.18	13.39	0	0	0
202	SLU 14	-0.13	-0.16	13.69	0	0	0
202	SLU 15	-0.13	-0.17	13.68	0	0	0
202	SLU 16	-0.13	-0.17	13.59	0	0	0
202	SLU 17	-0.13	-0.17	13.58	0	0	0
202	SLU 18	-0.13	-0.16	13.83	0	0	0
202	SLU 19	-0.12	-0.17	13.82	0	0	0
202	SLU 20	-0.13	-0.17	14.02	0	0	0
202	SLU 21	-0.13	-0.17	14.01	0	0	0
202	SLU 22	-0.14	-0.15	13.07	0	0	0
202	SLU 23	-0.13	-0.16	13.06	0	0	0
202	SLU 24	-0.14	-0.15	13.36	0	0	0
202	SLU 25	-0.14	-0.16	13.35	0	0	0
202	SLU 26	-0.13	-0.16	13.24	0	0	0
202	SLU 27	-0.14	-0.15	13.54	0	0	0
202	SLU 28	-0.14	-0.16	13.53	0	0	0
202	SLU 29	-0.14	-0.15	13.44	0	0	0
202	SLU 30	-0.14	-0.16	13.43	0	0	0
202	SLU 31	-0.13	-0.16	14.47	0	0	0
202	SLU 32	-0.14	-0.15	14.77	0	0	0
202	SLU 33	-0.14	-0.16	14.76	0	0	0
202	SLU 34	-0.14	-0.17	14.65	0	0	0
202	SLU 35	-0.15	-0.16	14.96	0	0	0
202	SLU 36	-0.14	-0.16	14.94	0	0	0
202	SLU 37	-0.15	-0.16	14.85	0	0	0
202	SLU 38	-0.14	-0.16	14.84	0	0	0
202	SLU 39	-0.14	-0.15	15.1	0	0	0
202	SLU 40	-0.14	-0.16	15.08	0	0	0
202	SLU 41	-0.15	-0.16	15.28	0	0	0
202	SLU 42	-0.14	-0.16	15.27	0	0	0
202	SLU 43	-0.15	-0.21	14.93	0	0	0
202	SLU 44	-0.15	-0.22	14.91	0	0	0
202	SLU 45	-0.16	-0.21	15.21	0	0	0
202	SLU 46	-0.15	-0.22	15.2	0	0	0
202	SLU 47	-0.15	-0.22	15.09	0	0	0
202	SLU 48	-0.16	-0.21	15.39	0	0	0
202	SLU 49	-0.16	-0.22	15.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
202	SLU 50	-0.16	-0.21	15.29	0	0	0
202	SLU 51	-0.15	-0.22	15.28	0	0	0
202	SLU 52	-0.15	-0.23	16.32	0	0	0
202	SLU 53	-0.16	-0.21	16.62	0	0	0
202	SLU 54	-0.16	-0.22	16.61	0	0	0
202	SLU 55	-0.15	-0.23	16.5	0	0	0
202	SLU 56	-0.16	-0.22	16.81	0	0	0
202	SLU 57	-0.16	-0.22	16.8	0	0	0
202	SLU 58	-0.16	-0.22	16.7	0	0	0
202	SLU 59	-0.16	-0.22	16.69	0	0	0
202	SLU 60	-0.16	-0.21	16.95	0	0	0
202	SLU 61	-0.16	-0.22	16.94	0	0	0
202	SLU 62	-0.16	-0.22	17.13	0	0	0
202	SLU 63	-0.16	-0.22	17.12	0	0	0
202	SLU 64	-0.17	-0.2	16.19	0	0	0
202	SLU 65	-0.16	-0.21	16.17	0	0	0
202	SLU 66	-0.17	-0.2	16.47	0	0	0
202	SLU 67	-0.17	-0.21	16.46	0	0	0
202	SLU 68	-0.16	-0.21	16.35	0	0	0
202	SLU 69	-0.17	-0.2	16.65	0	0	0
202	SLU 70	-0.17	-0.21	16.64	0	0	0
202	SLU 71	-0.17	-0.2	16.55	0	0	0
202	SLU 72	-0.17	-0.21	16.54	0	0	0
202	SLU 73	-0.17	-0.22	17.58	0	0	0
202	SLU 74	-0.18	-0.2	17.89	0	0	0
202	SLU 75	-0.17	-0.21	17.87	0	0	0
202	SLU 76	-0.17	-0.22	17.77	0	0	0
202	SLU 77	-0.18	-0.21	18.07	0	0	0
202	SLU 78	-0.17	-0.21	18.06	0	0	0
202	SLU 79	-0.18	-0.21	17.96	0	0	0
202	SLU 80	-0.17	-0.21	17.95	0	0	0
202	SLU 81	-0.17	-0.2	18.21	0	0	0
202	SLU 82	-0.17	-0.21	18.2	0	0	0
202	SLU 83	-0.18	-0.21	18.39	0	0	0
202	SLU 84	-0.17	-0.21	18.38	0	0	0
202	SLE RA 1	-0.13	-0.16	12.17	0	0	0
202	SLE RA 2	-0.12	-0.16	12.16	0	0	0
202	SLE RA 3	-0.13	-0.16	12.36	0	0	0
202	SLE RA 4	-0.13	-0.16	12.36	0	0	0
202	SLE RA 5	-0.12	-0.17	12.28	0	0	0
202	SLE RA 6	-0.13	-0.16	12.48	0	0	0
202	SLE RA 7	-0.13	-0.16	12.48	0	0	0
202	SLE RA 8	-0.13	-0.16	12.42	0	0	0
202	SLE RA 9	-0.13	-0.16	12.41	0	0	0
202	SLE RA 10	-0.12	-0.17	13.11	0	0	0
202	SLE RA 11	-0.13	-0.16	13.31	0	0	0
202	SLE RA 12	-0.13	-0.16	13.3	0	0	0
202	SLE RA 13	-0.13	-0.17	13.23	0	0	0
202	SLE RA 14	-0.13	-0.16	13.43	0	0	0
202	SLE RA 15	-0.13	-0.16	13.42	0	0	0
202	SLE RA 16	-0.13	-0.16	13.36	0	0	0
202	SLE RA 17	-0.13	-0.17	13.35	0	0	0
202	SLE RA 18	-0.13	-0.16	13.52	0	0	0
202	SLE RA 19	-0.13	-0.16	13.51	0	0	0
202	SLE RA 20	-0.13	-0.16	13.64	0	0	0
202	SLE RA 21	-0.13	-0.17	13.64	0	0	0
202	SLE FR 1	-0.13	-0.16	12.17	0	0	0
202	SLE FR 2	-0.13	-0.16	12.17	0	0	0
202	SLE FR 3	-0.13	-0.16	12.22	0	0	0
202	SLE FR 4	-0.13	-0.16	12.58	0	0	0
202	SLE FR 5	-0.13	-0.16	12.63	0	0	0
202	SLE FR 6	-0.13	-0.16	12.85	0	0	0
202	SLE QP 1	-0.13	-0.16	12.17	0	0	0
202	SLE QP 2	-0.13	-0.16	12.58	0	0	0
202	SLD 1	0.91	-0.06	13.19	0	0	0
202	SLD 2	1.02	-0.1	13.14	0	0	0
202	SLD 3	0.93	-0.35	12.89	0	0	0
202	SLD 4	1.04	-0.39	12.83	0	0	0
202	SLD 5	0.13	0.31	13.24	0	0	0
202	SLD 6	0.2	0.28	13.2	0	0	0
202	SLD 7	0.2	-0.64	12.22	0	0	0
202	SLD 8	0.28	-0.67	12.18	0	0	0
202	SLD 9	-0.53	0.35	12.98	0	0	0
202	SLD 10	-0.46	0.33	12.94	0	0	0
202	SLD 11	-0.46	-0.6	11.95	0	0	0
202	SLD 12	-0.38	-0.62	11.92	0	0	0
202	SLD 13	-1.3	0.08	12.32	0	0	0
202	SLD 14	-1.18	0.04	12.27	0	0	0
202	SLD 15	-1.28	-0.21	12.02	0	0	0
202	SLD 16	-1.16	-0.25	11.96	0	0	0
202	SLV 1	2.29	0.05	14.01	0	0	0
202	SLV 2	2.56	-0.04	13.88	0	0	0
202	SLV 3	2.34	-0.59	13.31	0	0	0
202	SLV 4	2.61	-0.69	13.19	0	0	0
202	SLV 5	0.47	0.9	14.08	0	0	0
202	SLV 6	0.65	0.84	14	0	0	0
202	SLV 7	0.64	-1.25	11.77	0	0	0
202	SLV 8	0.82	-1.31	11.69	0	0	0
202	SLV 9	-1.07	1	13.47	0	0	0
202	SLV 10	-0.9	0.94	13.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
202	SLV 11	-0.9	-1.15	11.16	0	0	0
202	SLV 12	-0.73	-1.21	11.08	0	0	0
202	SLV 13	-2.87	0.38	11.97	0	0	0
202	SLV 14	-2.6	0.28	11.84	0	0	0
202	SLV 15	-2.81	-0.27	11.27	0	0	0
202	SLV 16	-2.54	-0.36	11.15	0	0	0
203	SLU 1	-0.12	-0.12	11.77	0	0	0
203	SLU 2	-0.11	-0.13	11.75	0	0	0
203	SLU 3	-0.12	-0.12	12.05	0	0	0
203	SLU 4	-0.12	-0.13	12.04	0	0	0
203	SLU 5	-0.12	-0.14	11.93	0	0	0
203	SLU 6	-0.13	-0.12	12.23	0	0	0
203	SLU 7	-0.12	-0.13	12.22	0	0	0
203	SLU 8	-0.12	-0.13	12.13	0	0	0
203	SLU 9	-0.12	-0.13	12.12	0	0	0
203	SLU 10	-0.12	-0.13	13.17	0	0	0
203	SLU 11	-0.13	-0.12	13.47	0	0	0
203	SLU 12	-0.12	-0.13	13.46	0	0	0
203	SLU 13	-0.12	-0.14	13.35	0	0	0
203	SLU 14	-0.13	-0.12	13.65	0	0	0
203	SLU 15	-0.13	-0.13	13.64	0	0	0
203	SLU 16	-0.13	-0.13	13.55	0	0	0
203	SLU 17	-0.13	-0.13	13.54	0	0	0
203	SLU 18	-0.13	-0.12	13.79	0	0	0
203	SLU 19	-0.12	-0.13	13.78	0	0	0
203	SLU 20	-0.13	-0.12	13.97	0	0	0
203	SLU 21	-0.12	-0.13	13.96	0	0	0
203	SLU 22	-0.13	-0.11	13.02	0	0	0
203	SLU 23	-0.13	-0.12	13.01	0	0	0
203	SLU 24	-0.14	-0.11	13.31	0	0	0
203	SLU 25	-0.13	-0.12	13.3	0	0	0
203	SLU 26	-0.13	-0.12	13.19	0	0	0
203	SLU 27	-0.14	-0.11	13.49	0	0	0
203	SLU 28	-0.14	-0.12	13.48	0	0	0
203	SLU 29	-0.14	-0.11	13.39	0	0	0
203	SLU 30	-0.13	-0.12	13.38	0	0	0
203	SLU 31	-0.13	-0.12	14.43	0	0	0
203	SLU 32	-0.14	-0.11	14.73	0	0	0
203	SLU 33	-0.14	-0.12	14.72	0	0	0
203	SLU 34	-0.13	-0.12	14.61	0	0	0
203	SLU 35	-0.14	-0.11	14.91	0	0	0
203	SLU 36	-0.14	-0.12	14.9	0	0	0
203	SLU 37	-0.14	-0.11	14.81	0	0	0
203	SLU 38	-0.14	-0.12	14.8	0	0	0
203	SLU 39	-0.14	-0.11	15.05	0	0	0
203	SLU 40	-0.14	-0.12	15.04	0	0	0
203	SLU 41	-0.14	-0.11	15.23	0	0	0
203	SLU 42	-0.14	-0.12	15.22	0	0	0
203	SLU 43	-0.15	-0.16	14.86	0	0	0
203	SLU 44	-0.14	-0.18	14.85	0	0	0
203	SLU 45	-0.15	-0.16	15.15	0	0	0
203	SLU 46	-0.15	-0.17	15.14	0	0	0
203	SLU 47	-0.15	-0.18	15.03	0	0	0
203	SLU 48	-0.16	-0.16	15.33	0	0	0
203	SLU 49	-0.15	-0.17	15.32	0	0	0
203	SLU 50	-0.16	-0.17	15.23	0	0	0
203	SLU 51	-0.15	-0.17	15.22	0	0	0
203	SLU 52	-0.15	-0.18	16.27	0	0	0
203	SLU 53	-0.16	-0.16	16.57	0	0	0
203	SLU 54	-0.15	-0.17	16.56	0	0	0
203	SLU 55	-0.15	-0.18	16.45	0	0	0
203	SLU 56	-0.16	-0.16	16.75	0	0	0
203	SLU 57	-0.16	-0.17	16.74	0	0	0
203	SLU 58	-0.16	-0.17	16.65	0	0	0
203	SLU 59	-0.16	-0.17	16.64	0	0	0
203	SLU 60	-0.16	-0.16	16.89	0	0	0
203	SLU 61	-0.15	-0.17	16.88	0	0	0
203	SLU 62	-0.16	-0.17	17.07	0	0	0
203	SLU 63	-0.16	-0.17	17.06	0	0	0
203	SLU 64	-0.16	-0.15	16.12	0	0	0
203	SLU 65	-0.16	-0.16	16.1	0	0	0
203	SLU 66	-0.17	-0.15	16.41	0	0	0
203	SLU 67	-0.16	-0.16	16.4	0	0	0
203	SLU 68	-0.16	-0.16	16.29	0	0	0
203	SLU 69	-0.17	-0.15	16.59	0	0	0
203	SLU 70	-0.17	-0.16	16.58	0	0	0
203	SLU 71	-0.17	-0.15	16.48	0	0	0
203	SLU 72	-0.17	-0.16	16.47	0	0	0
203	SLU 73	-0.16	-0.16	17.52	0	0	0
203	SLU 74	-0.17	-0.15	17.83	0	0	0
203	SLU 75	-0.17	-0.16	17.82	0	0	0
203	SLU 76	-0.16	-0.16	17.71	0	0	0
203	SLU 77	-0.18	-0.15	18.01	0	0	0
203	SLU 78	-0.17	-0.16	18	0	0	0
203	SLU 79	-0.17	-0.15	17.9	0	0	0
203	SLU 80	-0.17	-0.16	17.89	0	0	0
203	SLU 81	-0.17	-0.15	18.15	0	0	0
203	SLU 82	-0.17	-0.16	18.14	0	0	0
203	SLU 83	-0.17	-0.15	18.33	0	0	0
203	SLU 84	-0.17	-0.16	18.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
203	SLE RA 1	-0.12	-0.12	12.12	0	0	0
203	SLE RA 2	-0.12	-0.13	12.11	0	0	0
203	SLE RA 3	-0.13	-0.12	12.31	0	0	0
203	SLE RA 4	-0.12	-0.12	12.31	0	0	0
203	SLE RA 5	-0.12	-0.13	12.23	0	0	0
203	SLE RA 6	-0.13	-0.12	12.44	0	0	0
203	SLE RA 7	-0.12	-0.12	12.43	0	0	0
203	SLE RA 8	-0.13	-0.12	12.37	0	0	0
203	SLE RA 9	-0.12	-0.12	12.36	0	0	0
203	SLE RA 10	-0.12	-0.13	13.06	0	0	0
203	SLE RA 11	-0.13	-0.12	13.26	0	0	0
203	SLE RA 12	-0.13	-0.12	13.25	0	0	0
203	SLE RA 13	-0.12	-0.13	13.18	0	0	0
203	SLE RA 14	-0.13	-0.12	13.38	0	0	0
203	SLE RA 15	-0.13	-0.12	13.37	0	0	0
203	SLE RA 16	-0.13	-0.12	13.31	0	0	0
203	SLE RA 17	-0.13	-0.12	13.31	0	0	0
203	SLE RA 18	-0.13	-0.12	13.48	0	0	0
203	SLE RA 19	-0.13	-0.12	13.47	0	0	0
203	SLE RA 20	-0.13	-0.12	13.6	0	0	0
203	SLE RA 21	-0.13	-0.12	13.59	0	0	0
203	SLE FR 1	-0.12	-0.12	12.12	0	0	0
203	SLE FR 2	-0.12	-0.12	12.12	0	0	0
203	SLE FR 3	-0.12	-0.12	12.17	0	0	0
203	SLE FR 4	-0.12	-0.12	12.53	0	0	0
203	SLE FR 5	-0.13	-0.12	12.58	0	0	0
203	SLE FR 6	-0.13	-0.12	12.8	0	0	0
203	SLE QP 1	-0.12	-0.12	12.12	0	0	0
203	SLE QP 2	-0.13	-0.12	12.53	0	0	0
203	SLD 1	0.9	0	13.02	0	0	0
203	SLD 2	1.02	-0.04	12.98	0	0	0
203	SLD 3	0.92	-0.29	12.72	0	0	0
203	SLD 4	1.04	-0.33	12.67	0	0	0
203	SLD 5	0.13	0.36	13.15	0	0	0
203	SLD 6	0.2	0.33	13.12	0	0	0
203	SLD 7	0.2	-0.6	12.13	0	0	0
203	SLD 8	0.28	-0.62	12.1	0	0	0
203	SLD 9	-0.53	0.38	12.96	0	0	0
203	SLD 10	-0.45	0.36	12.93	0	0	0
203	SLD 11	-0.46	-0.57	11.94	0	0	0
203	SLD 12	-0.38	-0.59	11.91	0	0	0
203	SLD 13	-1.29	0.09	12.39	0	0	0
203	SLD 14	-1.17	0.05	12.34	0	0	0
203	SLD 15	-1.27	-0.2	12.09	0	0	0
203	SLD 16	-1.15	-0.23	12.04	0	0	0
203	SLV 1	2.27	0.14	13.67	0	0	0
203	SLV 2	2.54	0.05	13.56	0	0	0
203	SLV 3	2.33	-0.51	12.98	0	0	0
203	SLV 4	2.59	-0.59	12.87	0	0	0
203	SLV 5	0.47	0.95	13.94	0	0	0
203	SLV 6	0.65	0.9	13.87	0	0	0
203	SLV 7	0.64	-1.2	11.63	0	0	0
203	SLV 8	0.81	-1.25	11.56	0	0	0
203	SLV 9	-1.06	1.02	13.5	0	0	0
203	SLV 10	-0.89	0.97	13.43	0	0	0
203	SLV 11	-0.9	-1.14	11.19	0	0	0
203	SLV 12	-0.72	-1.19	11.12	0	0	0
203	SLV 13	-2.84	0.36	12.19	0	0	0
203	SLV 14	-2.58	0.27	12.08	0	0	0
203	SLV 15	-2.79	-0.29	11.5	0	0	0
203	SLV 16	-2.52	-0.37	11.39	0	0	0
204	SLU 1	-0.12	-0.09	11.79	0	0	0
204	SLU 2	-0.11	-0.1	11.77	0	0	0
204	SLU 3	-0.12	-0.09	12.07	0	0	0
204	SLU 4	-0.12	-0.09	12.06	0	0	0
204	SLU 5	-0.11	-0.1	11.95	0	0	0
204	SLU 6	-0.12	-0.09	12.26	0	0	0
204	SLU 7	-0.12	-0.09	12.25	0	0	0
204	SLU 8	-0.12	-0.09	12.15	0	0	0
204	SLU 9	-0.12	-0.1	12.14	0	0	0
204	SLU 10	-0.12	-0.1	13.2	0	0	0
204	SLU 11	-0.13	-0.08	13.51	0	0	0
204	SLU 12	-0.12	-0.09	13.5	0	0	0
204	SLU 13	-0.12	-0.1	13.39	0	0	0
204	SLU 14	-0.13	-0.08	13.69	0	0	0
204	SLU 15	-0.12	-0.09	13.68	0	0	0
204	SLU 16	-0.13	-0.09	13.59	0	0	0
204	SLU 17	-0.12	-0.09	13.58	0	0	0
204	SLU 18	-0.12	-0.08	13.84	0	0	0
204	SLU 19	-0.12	-0.09	13.83	0	0	0
204	SLU 20	-0.13	-0.08	14.02	0	0	0
204	SLU 21	-0.12	-0.09	14.01	0	0	0
204	SLU 22	-0.13	-0.07	13.05	0	0	0
204	SLU 23	-0.12	-0.08	13.03	0	0	0
204	SLU 24	-0.13	-0.07	13.34	0	0	0
204	SLU 25	-0.13	-0.08	13.33	0	0	0
204	SLU 26	-0.13	-0.08	13.22	0	0	0
204	SLU 27	-0.14	-0.07	13.52	0	0	0
204	SLU 28	-0.13	-0.08	13.51	0	0	0
204	SLU 29	-0.14	-0.07	13.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
204	SLU 30	-0.13	-0.08	13.41	0	0	0
204	SLU 31	-0.13	-0.08	14.47	0	0	0
204	SLU 32	-0.14	-0.06	14.77	0	0	0
204	SLU 33	-0.14	-0.07	14.76	0	0	0
204	SLU 34	-0.13	-0.08	14.65	0	0	0
204	SLU 35	-0.14	-0.07	14.95	0	0	0
204	SLU 36	-0.14	-0.07	14.94	0	0	0
204	SLU 37	-0.14	-0.07	14.85	0	0	0
204	SLU 38	-0.14	-0.07	14.84	0	0	0
204	SLU 39	-0.14	-0.06	15.1	0	0	0
204	SLU 40	-0.13	-0.07	15.09	0	0	0
204	SLU 41	-0.14	-0.07	15.28	0	0	0
204	SLU 42	-0.14	-0.07	15.27	0	0	0
204	SLU 43	-0.15	-0.12	14.89	0	0	0
204	SLU 44	-0.14	-0.13	14.87	0	0	0
204	SLU 45	-0.15	-0.12	15.18	0	0	0
204	SLU 46	-0.15	-0.13	15.17	0	0	0
204	SLU 47	-0.14	-0.13	15.06	0	0	0
204	SLU 48	-0.15	-0.12	15.36	0	0	0
204	SLU 49	-0.15	-0.13	15.35	0	0	0
204	SLU 50	-0.15	-0.12	15.26	0	0	0
204	SLU 51	-0.15	-0.13	15.25	0	0	0
204	SLU 52	-0.15	-0.13	16.31	0	0	0
204	SLU 53	-0.16	-0.12	16.61	0	0	0
204	SLU 54	-0.15	-0.12	16.6	0	0	0
204	SLU 55	-0.15	-0.13	16.49	0	0	0
204	SLU 56	-0.16	-0.12	16.79	0	0	0
204	SLU 57	-0.15	-0.12	16.78	0	0	0
204	SLU 58	-0.16	-0.12	16.69	0	0	0
204	SLU 59	-0.15	-0.13	16.68	0	0	0
204	SLU 60	-0.16	-0.12	16.94	0	0	0
204	SLU 61	-0.15	-0.12	16.93	0	0	0
204	SLU 62	-0.16	-0.12	17.12	0	0	0
204	SLU 63	-0.15	-0.12	17.11	0	0	0
204	SLU 64	-0.16	-0.1	16.15	0	0	0
204	SLU 65	-0.16	-0.11	16.14	0	0	0
204	SLU 66	-0.17	-0.1	16.44	0	0	0
204	SLU 67	-0.16	-0.11	16.43	0	0	0
204	SLU 68	-0.16	-0.11	16.32	0	0	0
204	SLU 69	-0.17	-0.1	16.62	0	0	0
204	SLU 70	-0.16	-0.11	16.61	0	0	0
204	SLU 71	-0.17	-0.1	16.52	0	0	0
204	SLU 72	-0.16	-0.11	16.51	0	0	0
204	SLU 73	-0.16	-0.11	17.57	0	0	0
204	SLU 74	-0.17	-0.1	17.87	0	0	0
204	SLU 75	-0.17	-0.1	17.86	0	0	0
204	SLU 76	-0.16	-0.11	17.75	0	0	0
204	SLU 77	-0.17	-0.1	18.06	0	0	0
204	SLU 78	-0.17	-0.1	18.05	0	0	0
204	SLU 79	-0.17	-0.1	17.95	0	0	0
204	SLU 80	-0.17	-0.11	17.94	0	0	0
204	SLU 81	-0.17	-0.1	18.2	0	0	0
204	SLU 82	-0.16	-0.1	18.19	0	0	0
204	SLU 83	-0.17	-0.1	18.39	0	0	0
204	SLU 84	-0.17	-0.1	18.38	0	0	0
204	SLE RA 1	-0.12	-0.08	12.15	0	0	0
204	SLE RA 2	-0.12	-0.09	12.14	0	0	0
204	SLE RA 3	-0.12	-0.08	12.34	0	0	0
204	SLE RA 4	-0.12	-0.09	12.33	0	0	0
204	SLE RA 5	-0.12	-0.09	12.26	0	0	0
204	SLE RA 6	-0.13	-0.08	12.46	0	0	0
204	SLE RA 7	-0.12	-0.09	12.45	0	0	0
204	SLE RA 8	-0.13	-0.08	12.39	0	0	0
204	SLE RA 9	-0.12	-0.09	12.38	0	0	0
204	SLE RA 10	-0.12	-0.09	13.09	0	0	0
204	SLE RA 11	-0.13	-0.08	13.3	0	0	0
204	SLE RA 12	-0.12	-0.08	13.29	0	0	0
204	SLE RA 13	-0.12	-0.09	13.22	0	0	0
204	SLE RA 14	-0.13	-0.08	13.42	0	0	0
204	SLE RA 15	-0.13	-0.08	13.41	0	0	0
204	SLE RA 16	-0.13	-0.08	13.35	0	0	0
204	SLE RA 17	-0.13	-0.09	13.34	0	0	0
204	SLE RA 18	-0.13	-0.08	13.51	0	0	0
204	SLE RA 19	-0.12	-0.08	13.51	0	0	0
204	SLE RA 20	-0.13	-0.08	13.64	0	0	0
204	SLE RA 21	-0.13	-0.08	13.63	0	0	0
204	SLE FR 1	-0.12	-0.08	12.15	0	0	0
204	SLE FR 2	-0.12	-0.08	12.15	0	0	0
204	SLE FR 3	-0.12	-0.08	12.2	0	0	0
204	SLE FR 4	-0.12	-0.08	12.56	0	0	0
204	SLE FR 5	-0.12	-0.08	12.61	0	0	0
204	SLE FR 6	-0.12	-0.08	12.83	0	0	0
204	SLE QP 1	-0.12	-0.08	12.15	0	0	0
204	SLE QP 2	-0.12	-0.08	12.56	0	0	0
204	SLD 1	0.89	0.05	12.94	0	0	0
204	SLD 2	1.01	0.02	12.9	0	0	0
204	SLD 3	0.91	-0.23	12.63	0	0	0
204	SLD 4	1.03	-0.26	12.59	0	0	0
204	SLD 5	0.13	0.4	13.15	0	0	0
204	SLD 6	0.2	0.38	13.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
204	SLD 7	0.2	-0.55	12.12	0	0	0
204	SLD 8	0.28	-0.57	12.09	0	0	0
204	SLD 9	-0.52	0.41	13.02	0	0	0
204	SLD 10	-0.45	0.39	12.99	0	0	0
204	SLD 11	-0.45	-0.54	12	0	0	0
204	SLD 12	-0.37	-0.56	11.97	0	0	0
204	SLD 13	-1.27	0.1	12.53	0	0	0
204	SLD 14	-1.16	0.07	12.48	0	0	0
204	SLD 15	-1.25	-0.18	12.22	0	0	0
204	SLD 16	-1.14	-0.21	12.18	0	0	0
204	SLV 1	2.25	0.22	13.44	0	0	0
204	SLV 2	2.52	0.15	13.34	0	0	0
204	SLV 3	2.3	-0.43	12.74	0	0	0
204	SLV 4	2.57	-0.5	12.64	0	0	0
204	SLV 5	0.47	1	13.9	0	0	0
204	SLV 6	0.64	0.96	13.83	0	0	0
204	SLV 7	0.63	-1.15	11.58	0	0	0
204	SLV 8	0.81	-1.2	11.51	0	0	0
204	SLV 9	-1.05	1.04	13.61	0	0	0
204	SLV 10	-0.88	0.99	13.54	0	0	0
204	SLV 11	-0.89	-1.12	11.29	0	0	0
204	SLV 12	-0.71	-1.16	11.22	0	0	0
204	SLV 13	-2.81	0.34	12.47	0	0	0
204	SLV 14	-2.55	0.27	12.37	0	0	0
204	SLV 15	-2.76	-0.31	11.78	0	0	0
204	SLV 16	-2.5	-0.38	11.68	0	0	0
205	SLU 1	-0.12	-0.05	11.76	0	0	0
205	SLU 2	-0.11	-0.07	11.74	0	0	0
205	SLU 3	-0.12	-0.05	12.05	0	0	0
205	SLU 4	-0.11	-0.06	12.04	0	0	0
205	SLU 5	-0.11	-0.07	11.92	0	0	0
205	SLU 6	-0.12	-0.05	12.23	0	0	0
205	SLU 7	-0.12	-0.06	12.22	0	0	0
205	SLU 8	-0.12	-0.06	12.12	0	0	0
205	SLU 9	-0.12	-0.06	12.11	0	0	0
205	SLU 10	-0.11	-0.06	13.19	0	0	0
205	SLU 11	-0.12	-0.05	13.49	0	0	0
205	SLU 12	-0.12	-0.05	13.48	0	0	0
205	SLU 13	-0.12	-0.06	13.37	0	0	0
205	SLU 14	-0.13	-0.05	13.67	0	0	0
205	SLU 15	-0.12	-0.05	13.66	0	0	0
205	SLU 16	-0.12	-0.05	13.57	0	0	0
205	SLU 17	-0.12	-0.06	13.56	0	0	0
205	SLU 18	-0.12	-0.05	13.82	0	0	0
205	SLU 19	-0.12	-0.05	13.81	0	0	0
205	SLU 20	-0.12	-0.05	14	0	0	0
205	SLU 21	-0.12	-0.05	13.99	0	0	0
205	SLU 22	-0.13	-0.03	13.02	0	0	0
205	SLU 23	-0.12	-0.04	13.01	0	0	0
205	SLU 24	-0.13	-0.03	13.31	0	0	0
205	SLU 25	-0.13	-0.04	13.3	0	0	0
205	SLU 26	-0.12	-0.04	13.19	0	0	0
205	SLU 27	-0.13	-0.03	13.49	0	0	0
205	SLU 28	-0.13	-0.04	13.48	0	0	0
205	SLU 29	-0.13	-0.03	13.39	0	0	0
205	SLU 30	-0.13	-0.04	13.38	0	0	0
205	SLU 31	-0.13	-0.04	14.45	0	0	0
205	SLU 32	-0.14	-0.02	14.76	0	0	0
205	SLU 33	-0.13	-0.03	14.75	0	0	0
205	SLU 34	-0.13	-0.04	14.63	0	0	0
205	SLU 35	-0.14	-0.02	14.94	0	0	0
205	SLU 36	-0.13	-0.03	14.93	0	0	0
205	SLU 37	-0.14	-0.03	14.83	0	0	0
205	SLU 38	-0.13	-0.03	14.82	0	0	0
205	SLU 39	-0.13	-0.02	15.09	0	0	0
205	SLU 40	-0.13	-0.03	15.08	0	0	0
205	SLU 41	-0.14	-0.02	15.27	0	0	0
205	SLU 42	-0.13	-0.03	15.26	0	0	0
205	SLU 43	-0.15	-0.08	14.85	0	0	0
205	SLU 44	-0.14	-0.09	14.84	0	0	0
205	SLU 45	-0.15	-0.08	15.14	0	0	0
205	SLU 46	-0.14	-0.08	15.13	0	0	0
205	SLU 47	-0.14	-0.09	15.02	0	0	0
205	SLU 48	-0.15	-0.08	15.32	0	0	0
205	SLU 49	-0.15	-0.08	15.31	0	0	0
205	SLU 50	-0.15	-0.08	15.22	0	0	0
205	SLU 51	-0.15	-0.09	15.21	0	0	0
205	SLU 52	-0.14	-0.08	16.28	0	0	0
205	SLU 53	-0.15	-0.07	16.58	0	0	0
205	SLU 54	-0.15	-0.08	16.57	0	0	0
205	SLU 55	-0.15	-0.08	16.46	0	0	0
205	SLU 56	-0.16	-0.07	16.77	0	0	0
205	SLU 57	-0.15	-0.08	16.76	0	0	0
205	SLU 58	-0.15	-0.07	16.66	0	0	0
205	SLU 59	-0.15	-0.08	16.65	0	0	0
205	SLU 60	-0.15	-0.07	16.92	0	0	0
205	SLU 61	-0.15	-0.08	16.91	0	0	0
205	SLU 62	-0.15	-0.07	17.1	0	0	0
205	SLU 63	-0.15	-0.08	17.09	0	0	0
205	SLU 64	-0.16	-0.06	16.12	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
205	SLU 65	-0.15	-0.07	16.1	0	0	0
205	SLU 66	-0.16	-0.05	16.41	0	0	0
205	SLU 67	-0.16	-0.06	16.4	0	0	0
205	SLU 68	-0.15	-0.07	16.28	0	0	0
205	SLU 69	-0.16	-0.06	16.59	0	0	0
205	SLU 70	-0.16	-0.06	16.58	0	0	0
205	SLU 71	-0.16	-0.06	16.48	0	0	0
205	SLU 72	-0.16	-0.06	16.47	0	0	0
205	SLU 73	-0.16	-0.06	17.54	0	0	0
205	SLU 74	-0.17	-0.05	17.85	0	0	0
205	SLU 75	-0.16	-0.06	17.84	0	0	0
205	SLU 76	-0.16	-0.06	17.73	0	0	0
205	SLU 77	-0.17	-0.05	18.03	0	0	0
205	SLU 78	-0.16	-0.06	18.02	0	0	0
205	SLU 79	-0.17	-0.05	17.93	0	0	0
205	SLU 80	-0.16	-0.06	17.92	0	0	0
205	SLU 81	-0.16	-0.05	18.18	0	0	0
205	SLU 82	-0.16	-0.05	18.17	0	0	0
205	SLU 83	-0.17	-0.05	18.36	0	0	0
205	SLU 84	-0.16	-0.05	18.35	0	0	0
205	SLE RA 1	-0.12	-0.05	12.12	0	0	0
205	SLE RA 2	-0.11	-0.06	12.11	0	0	0
205	SLE RA 3	-0.12	-0.05	12.31	0	0	0
205	SLE RA 4	-0.12	-0.05	12.3	0	0	0
205	SLE RA 5	-0.12	-0.06	12.23	0	0	0
205	SLE RA 6	-0.12	-0.05	12.43	0	0	0
205	SLE RA 7	-0.12	-0.05	12.43	0	0	0
205	SLE RA 8	-0.12	-0.05	12.36	0	0	0
205	SLE RA 9	-0.12	-0.05	12.36	0	0	0
205	SLE RA 10	-0.12	-0.05	13.07	0	0	0
205	SLE RA 11	-0.12	-0.04	13.27	0	0	0
205	SLE RA 12	-0.12	-0.05	13.27	0	0	0
205	SLE RA 13	-0.12	-0.05	13.19	0	0	0
205	SLE RA 14	-0.13	-0.04	13.4	0	0	0
205	SLE RA 15	-0.12	-0.05	13.39	0	0	0
205	SLE RA 16	-0.13	-0.04	13.33	0	0	0
205	SLE RA 17	-0.12	-0.05	13.32	0	0	0
205	SLE RA 18	-0.12	-0.04	13.5	0	0	0
205	SLE RA 19	-0.12	-0.05	13.49	0	0	0
205	SLE RA 20	-0.12	-0.04	13.62	0	0	0
205	SLE RA 21	-0.12	-0.05	13.61	0	0	0
205	SLE FR 1	-0.12	-0.05	12.12	0	0	0
205	SLE FR 2	-0.12	-0.05	12.12	0	0	0
205	SLE FR 3	-0.12	-0.05	12.17	0	0	0
205	SLE FR 4	-0.12	-0.05	12.53	0	0	0
205	SLE FR 5	-0.12	-0.05	12.58	0	0	0
205	SLE FR 6	-0.12	-0.05	12.81	0	0	0
205	SLE QP 1	-0.12	-0.05	12.12	0	0	0
205	SLE QP 2	-0.12	-0.05	12.53	0	0	0
205	SLD 1	0.87	0.12	12.81	0	0	0
205	SLD 2	0.98	0.1	12.77	0	0	0
205	SLD 3	0.89	-0.16	12.5	0	0	0
205	SLD 4	1.01	-0.19	12.47	0	0	0
205	SLD 5	0.13	0.44	13.09	0	0	0
205	SLD 6	0.2	0.42	13.06	0	0	0
205	SLD 7	0.2	-0.51	12.06	0	0	0
205	SLD 8	0.27	-0.52	12.04	0	0	0
205	SLD 9	-0.51	0.43	13.03	0	0	0
205	SLD 10	-0.44	0.41	13	0	0	0
205	SLD 11	-0.44	-0.51	12	0	0	0
205	SLD 12	-0.37	-0.53	11.98	0	0	0
205	SLD 13	-1.25	0.09	12.6	0	0	0
205	SLD 14	-1.14	0.07	12.56	0	0	0
205	SLD 15	-1.23	-0.19	12.29	0	0	0
205	SLD 16	-1.11	-0.21	12.25	0	0	0
205	SLV 1	2.2	0.34	13.17	0	0	0
205	SLV 2	2.46	0.28	13.08	0	0	0
205	SLV 3	2.25	-0.3	12.48	0	0	0
205	SLV 4	2.51	-0.36	12.39	0	0	0
205	SLV 5	0.46	1.05	13.8	0	0	0
205	SLV 6	0.63	1.01	13.74	0	0	0
205	SLV 7	0.62	-1.09	11.48	0	0	0
205	SLV 8	0.79	-1.12	11.42	0	0	0
205	SLV 9	-1.03	1.03	13.65	0	0	0
205	SLV 10	-0.86	0.99	13.59	0	0	0
205	SLV 11	-0.87	-1.11	11.33	0	0	0
205	SLV 12	-0.7	-1.14	11.27	0	0	0
205	SLV 13	-2.75	0.27	12.68	0	0	0
205	SLV 14	-2.49	0.21	12.59	0	0	0
205	SLV 15	-2.7	-0.37	11.98	0	0	0
205	SLV 16	-2.44	-0.43	11.89	0	0	0
207	SLU 1	-0.07	-0.17	6.93	0	0	0
207	SLU 2	-0.07	-0.18	6.92	0	0	0
207	SLU 3	-0.07	-0.18	7.1	0	0	0
207	SLU 4	-0.07	-0.18	7.09	0	0	0
207	SLU 5	-0.07	-0.18	7.03	0	0	0
207	SLU 6	-0.07	-0.18	7.2	0	0	0
207	SLU 7	-0.07	-0.18	7.2	0	0	0
207	SLU 8	-0.07	-0.18	7.14	0	0	0
207	SLU 9	-0.07	-0.18	7.14	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
207	SLU 10	-0.07	-0.19	7.74	0	0	0
207	SLU 11	-0.08	-0.19	7.91	0	0	0
207	SLU 12	-0.07	-0.19	7.91	0	0	0
207	SLU 13	-0.07	-0.19	7.84	0	0	0
207	SLU 14	-0.08	-0.19	8.02	0	0	0
207	SLU 15	-0.07	-0.19	8.01	0	0	0
207	SLU 16	-0.08	-0.19	7.96	0	0	0
207	SLU 17	-0.07	-0.19	7.96	0	0	0
207	SLU 18	-0.07	-0.19	8.1	0	0	0
207	SLU 19	-0.07	-0.19	8.09	0	0	0
207	SLU 20	-0.08	-0.19	8.21	0	0	0
207	SLU 21	-0.07	-0.2	8.2	0	0	0
207	SLU 22	-0.08	-0.18	7.68	0	0	0
207	SLU 23	-0.07	-0.19	7.67	0	0	0
207	SLU 24	-0.08	-0.18	7.84	0	0	0
207	SLU 25	-0.08	-0.19	7.84	0	0	0
207	SLU 26	-0.08	-0.19	7.77	0	0	0
207	SLU 27	-0.08	-0.18	7.95	0	0	0
207	SLU 28	-0.08	-0.19	7.94	0	0	0
207	SLU 29	-0.08	-0.18	7.89	0	0	0
207	SLU 30	-0.08	-0.19	7.88	0	0	0
207	SLU 31	-0.08	-0.2	8.49	0	0	0
207	SLU 32	-0.08	-0.19	8.66	0	0	0
207	SLU 33	-0.08	-0.2	8.66	0	0	0
207	SLU 34	-0.08	-0.2	8.59	0	0	0
207	SLU 35	-0.08	-0.19	8.77	0	0	0
207	SLU 36	-0.08	-0.2	8.76	0	0	0
207	SLU 37	-0.08	-0.19	8.71	0	0	0
207	SLU 38	-0.08	-0.2	8.7	0	0	0
207	SLU 39	-0.08	-0.19	8.85	0	0	0
207	SLU 40	-0.08	-0.2	8.84	0	0	0
207	SLU 41	-0.08	-0.2	8.95	0	0	0
207	SLU 42	-0.08	-0.2	8.95	0	0	0
207	SLU 43	-0.09	-0.22	8.75	0	0	0
207	SLU 44	-0.09	-0.23	8.74	0	0	0
207	SLU 45	-0.09	-0.23	8.92	0	0	0
207	SLU 46	-0.09	-0.23	8.91	0	0	0
207	SLU 47	-0.09	-0.23	8.85	0	0	0
207	SLU 48	-0.09	-0.23	9.02	0	0	0
207	SLU 49	-0.09	-0.23	9.02	0	0	0
207	SLU 50	-0.09	-0.23	8.97	0	0	0
207	SLU 51	-0.09	-0.23	8.96	0	0	0
207	SLU 52	-0.09	-0.24	9.56	0	0	0
207	SLU 53	-0.09	-0.24	9.74	0	0	0
207	SLU 54	-0.09	-0.24	9.73	0	0	0
207	SLU 55	-0.09	-0.24	9.67	0	0	0
207	SLU 56	-0.1	-0.24	9.84	0	0	0
207	SLU 57	-0.09	-0.24	9.84	0	0	0
207	SLU 58	-0.09	-0.24	9.78	0	0	0
207	SLU 59	-0.09	-0.24	9.78	0	0	0
207	SLU 60	-0.09	-0.24	9.92	0	0	0
207	SLU 61	-0.09	-0.24	9.92	0	0	0
207	SLU 62	-0.09	-0.24	10.03	0	0	0
207	SLU 63	-0.09	-0.25	10.02	0	0	0
207	SLU 64	-0.1	-0.23	9.5	0	0	0
207	SLU 65	-0.09	-0.24	9.49	0	0	0
207	SLU 66	-0.1	-0.23	9.67	0	0	0
207	SLU 67	-0.1	-0.24	9.66	0	0	0
207	SLU 68	-0.09	-0.24	9.6	0	0	0
207	SLU 69	-0.1	-0.23	9.77	0	0	0
207	SLU 70	-0.1	-0.24	9.77	0	0	0
207	SLU 71	-0.1	-0.23	9.71	0	0	0
207	SLU 72	-0.1	-0.24	9.71	0	0	0
207	SLU 73	-0.1	-0.25	10.31	0	0	0
207	SLU 74	-0.1	-0.24	10.48	0	0	0
207	SLU 75	-0.1	-0.25	10.48	0	0	0
207	SLU 76	-0.1	-0.25	10.41	0	0	0
207	SLU 77	-0.1	-0.24	10.59	0	0	0
207	SLU 78	-0.1	-0.25	10.58	0	0	0
207	SLU 79	-0.1	-0.24	10.53	0	0	0
207	SLU 80	-0.1	-0.25	10.53	0	0	0
207	SLU 81	-0.1	-0.24	10.67	0	0	0
207	SLU 82	-0.1	-0.25	10.66	0	0	0
207	SLU 83	-0.1	-0.25	10.78	0	0	0
207	SLU 84	-0.1	-0.25	10.77	0	0	0
207	SLE RA 1	-0.07	-0.17	7.14	0	0	0
207	SLE RA 2	-0.07	-0.18	7.14	0	0	0
207	SLE RA 3	-0.07	-0.18	7.25	0	0	0
207	SLE RA 4	-0.07	-0.18	7.25	0	0	0
207	SLE RA 5	-0.07	-0.18	7.21	0	0	0
207	SLE RA 6	-0.08	-0.18	7.33	0	0	0
207	SLE RA 7	-0.07	-0.18	7.32	0	0	0
207	SLE RA 8	-0.08	-0.18	7.29	0	0	0
207	SLE RA 9	-0.07	-0.18	7.28	0	0	0
207	SLE RA 10	-0.07	-0.19	7.68	0	0	0
207	SLE RA 11	-0.08	-0.18	7.8	0	0	0
207	SLE RA 12	-0.07	-0.19	7.8	0	0	0
207	SLE RA 13	-0.07	-0.19	7.75	0	0	0
207	SLE RA 14	-0.08	-0.19	7.87	0	0	0
207	SLE RA 15	-0.08	-0.19	7.87	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
207	SLE RA 16	-0.08	-0.19	7.83	0	0	0
207	SLE RA 17	-0.08	-0.19	7.83	0	0	0
207	SLE RA 18	-0.08	-0.18	7.92	0	0	0
207	SLE RA 19	-0.07	-0.19	7.92	0	0	0
207	SLE RA 20	-0.08	-0.19	7.99	0	0	0
207	SLE RA 21	-0.08	-0.19	7.99	0	0	0
207	SLE FR 1	-0.07	-0.17	7.14	0	0	0
207	SLE FR 2	-0.07	-0.18	7.14	0	0	0
207	SLE FR 3	-0.07	-0.17	7.17	0	0	0
207	SLE FR 4	-0.07	-0.18	7.38	0	0	0
207	SLE FR 5	-0.07	-0.18	7.41	0	0	0
207	SLE FR 6	-0.07	-0.18	7.53	0	0	0
207	SLE QP 1	-0.07	-0.17	7.14	0	0	0
207	SLE QP 2	-0.07	-0.18	7.38	0	0	0
207	SLD 1	0.49	-0.17	8.04	0	0	0
207	SLD 2	0.55	-0.21	8	0	0	0
207	SLD 3	0.5	-0.33	7.86	0	0	0
207	SLD 4	0.57	-0.36	7.82	0	0	0
207	SLD 5	0.07	0.06	7.86	0	0	0
207	SLD 6	0.11	0.04	7.83	0	0	0
207	SLD 7	0.11	-0.44	7.25	0	0	0
207	SLD 8	0.15	-0.47	7.23	0	0	0
207	SLD 9	-0.3	0.11	7.53	0	0	0
207	SLD 10	-0.25	0.09	7.5	0	0	0
207	SLD 11	-0.25	-0.39	6.92	0	0	0
207	SLD 12	-0.21	-0.41	6.89	0	0	0
207	SLD 13	-0.71	0	6.93	0	0	0
207	SLD 14	-0.65	-0.03	6.89	0	0	0
207	SLD 15	-0.7	-0.15	6.75	0	0	0
207	SLD 16	-0.64	-0.18	6.71	0	0	0
207	SLV 1	1.25	-0.18	8.93	0	0	0
207	SLV 2	1.39	-0.26	8.83	0	0	0
207	SLV 3	1.28	-0.52	8.51	0	0	0
207	SLV 4	1.42	-0.6	8.42	0	0	0
207	SLV 5	0.25	0.35	8.48	0	0	0
207	SLV 6	0.35	0.3	8.42	0	0	0
207	SLV 7	0.35	-0.78	7.11	0	0	0
207	SLV 8	0.44	-0.83	7.05	0	0	0
207	SLV 9	-0.59	0.48	7.71	0	0	0
207	SLV 10	-0.5	0.43	7.64	0	0	0
207	SLV 11	-0.5	-0.66	6.33	0	0	0
207	SLV 12	-0.4	-0.71	6.27	0	0	0
207	SLV 13	-1.57	0.24	6.34	0	0	0
207	SLV 14	-1.42	0.16	6.24	0	0	0
207	SLV 15	-1.54	-0.1	5.92	0	0	0
207	SLV 16	-1.39	-0.18	5.83	0	0	0
208	SLU 1	-0.06	-0.01	5.94	0	0.8929	0.002
208	SLU 2	-0.05	-0.02	5.94	0	0.8916	0.0028
208	SLU 3	-0.06	-0.01	6.09	0	0.9149	0.0017
208	SLU 4	-0.06	-0.01	6.09	0	0.9141	0.0022
208	SLU 5	-0.06	-0.02	6.03	0	0.9056	0.0028
208	SLU 6	-0.06	-0.01	6.18	0	0.9289	0.0017
208	SLU 7	-0.06	-0.01	6.18	0	0.9281	0.0022
208	SLU 8	-0.06	-0.01	6.13	0	0.9208	0.002
208	SLU 9	-0.06	-0.02	6.12	0	0.9201	0.0024
208	SLU 10	-0.06	-0.01	6.67	0	1.0023	0.0021
208	SLU 11	-0.06	-0.01	6.83	0	1.0256	0.001
208	SLU 12	-0.06	-0.01	6.82	0	1.0248	0.0015
208	SLU 13	-0.06	-0.01	6.77	0	1.0163	0.0021
208	SLU 14	-0.06	-0.01	6.92	0	1.0396	0.001
208	SLU 15	-0.06	-0.01	6.92	0	1.0388	0.0015
208	SLU 16	-0.06	-0.01	6.87	0	1.0315	0.0013
208	SLU 17	-0.06	-0.01	6.86	0	1.0308	0.0017
208	SLU 18	-0.06	-0.01	7	0	1.051	0.001
208	SLU 19	-0.06	-0.01	6.99	0	1.0503	0.0014
208	SLU 20	-0.06	-0.01	7.09	0	1.065	0.001
208	SLU 21	-0.06	-0.01	7.08	0	1.0643	0.0014
208	SLU 22	-0.06	0	6.59	0	0.9894	0
208	SLU 23	-0.06	-0.01	6.58	0	0.9882	0.0008
208	SLU 24	-0.07	0	6.73	0	1.0114	-0.0002
208	SLU 25	-0.06	0	6.73	0	1.0107	0.0003
208	SLU 26	-0.06	-0.01	6.67	0	1.0021	0.0008
208	SLU 27	-0.07	0	6.83	0	1.0254	-0.0002
208	SLU 28	-0.06	0	6.82	0	1.0246	0.0003
208	SLU 29	-0.07	0	6.77	0	1.0173	0
208	SLU 30	-0.06	0	6.77	0	1.0166	0.0005
208	SLU 31	-0.06	0	7.32	0	1.0989	0.0002
208	SLU 32	-0.07	0.01	7.47	0	1.1221	-0.0009
208	SLU 33	-0.07	0	7.46	0	1.1214	-0.0004
208	SLU 34	-0.06	0	7.41	0	1.1128	0.0002
208	SLU 35	-0.07	0.01	7.56	0	1.1361	-0.0009
208	SLU 36	-0.07	0	7.56	0	1.1353	-0.0004
208	SLU 37	-0.07	0	7.51	0	1.128	-0.0007
208	SLU 38	-0.07	0	7.5	0	1.1273	-0.0002
208	SLU 39	-0.07	0.01	7.64	0	1.1476	-0.001
208	SLU 40	-0.06	0	7.63	0	1.1468	-0.0005
208	SLU 41	-0.07	0.01	7.73	0	1.1615	-0.001
208	SLU 42	-0.07	0	7.73	0	1.1608	-0.0005
208	SLU 43	-0.07	-0.02	7.51	0	1.1277	0.0032
208	SLU 44	-0.07	-0.03	7.5	0	1.1264	0.004

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLU 45	-0.07	-0.02	7.65	0	1.1497	0.003
208	SLU 46	-0.07	-0.02	7.65	0	1.1489	0.0035
208	SLU 47	-0.07	-0.03	7.59	0	1.1404	0.004
208	SLU 48	-0.07	-0.02	7.75	0	1.1636	0.003
208	SLU 49	-0.07	-0.02	7.74	0	1.1629	0.0035
208	SLU 50	-0.07	-0.02	7.69	0	1.1556	0.0032
208	SLU 51	-0.07	-0.02	7.69	0	1.1549	0.0037
208	SLU 52	-0.07	-0.02	8.24	0	1.2371	0.0033
208	SLU 53	-0.08	-0.02	8.39	0	1.2604	0.0023
208	SLU 54	-0.07	-0.02	8.39	0	1.2596	0.0028
208	SLU 55	-0.07	-0.02	8.33	0	1.2511	0.0033
208	SLU 56	-0.08	-0.02	8.48	0	1.2743	0.0023
208	SLU 57	-0.08	-0.02	8.48	0	1.2736	0.0028
208	SLU 58	-0.08	-0.02	8.43	0	1.2663	0.0025
208	SLU 59	-0.07	-0.02	8.42	0	1.2656	0.003
208	SLU 60	-0.08	-0.01	8.56	0	1.2858	0.0022
208	SLU 61	-0.07	-0.02	8.55	0	1.2851	0.0027
208	SLU 62	-0.08	-0.01	8.65	0	1.2998	0.0022
208	SLU 63	-0.07	-0.02	8.65	0	1.299	0.0027
208	SLU 64	-0.08	-0.01	8.15	0	1.2242	0.0013
208	SLU 65	-0.08	-0.01	8.14	0	1.2229	0.0021
208	SLU 66	-0.08	-0.01	8.3	0	1.2462	0.0011
208	SLU 67	-0.08	-0.01	8.29	0	1.2454	0.0016
208	SLU 68	-0.08	-0.01	8.23	0	1.2369	0.0021
208	SLU 69	-0.08	-0.01	8.39	0	1.2602	0.0011
208	SLU 70	-0.08	-0.01	8.38	0	1.2594	0.0016
208	SLU 71	-0.08	-0.01	8.34	0	1.2521	0.0013
208	SLU 72	-0.08	-0.01	8.33	0	1.2514	0.0018
208	SLU 73	-0.08	-0.01	8.88	0	1.3336	0.0014
208	SLU 74	-0.08	0	9.03	0	1.3569	0.0004
208	SLU 75	-0.08	-0.01	9.03	0	1.3561	0.0009
208	SLU 76	-0.08	-0.01	8.97	0	1.3476	0.0014
208	SLU 77	-0.08	0	9.13	0	1.3709	0.0004
208	SLU 78	-0.08	-0.01	9.12	0	1.3701	0.0009
208	SLU 79	-0.08	0	9.07	0	1.3628	0.0006
208	SLU 80	-0.08	-0.01	9.07	0	1.3621	0.0011
208	SLU 81	-0.08	0	9.2	0	1.3823	0.0003
208	SLU 82	-0.08	-0.01	9.2	0	1.3816	0.0008
208	SLU 83	-0.08	0	9.3	0	1.3963	0.0003
208	SLU 84	-0.08	-0.01	9.29	0	1.3955	0.0008
208	SLE RA 1	-0.06	-0.01	6.13	0	0.9205	0.0014
208	SLE RA 2	-0.06	-0.01	6.12	0	0.9196	0.0019
208	SLE RA 3	-0.06	-0.01	6.23	0	0.9351	0.0013
208	SLE RA 4	-0.06	-0.01	6.22	0	0.9346	0.0016
208	SLE RA 5	-0.06	-0.01	6.18	0	0.9289	0.0019
208	SLE RA 6	-0.06	-0.01	6.29	0	0.9444	0.0013
208	SLE RA 7	-0.06	-0.01	6.28	0	0.9439	0.0016
208	SLE RA 8	-0.06	-0.01	6.25	0	0.9391	0.0014
208	SLE RA 9	-0.06	-0.01	6.25	0	0.9386	0.0017
208	SLE RA 10	-0.06	-0.01	6.61	0	0.9934	0.0015
208	SLE RA 11	-0.06	-0.01	6.72	0	1.0089	0.0008
208	SLE RA 12	-0.06	-0.01	6.71	0	1.0084	0.0011
208	SLE RA 13	-0.06	-0.01	6.68	0	1.0027	0.0015
208	SLE RA 14	-0.06	-0.01	6.78	0	1.0182	0.0008
208	SLE RA 15	-0.06	-0.01	6.78	0	1.0177	0.0011
208	SLE RA 16	-0.06	-0.01	6.74	0	1.0129	0.0009
208	SLE RA 17	-0.06	-0.01	6.74	0	1.0124	0.0013
208	SLE RA 18	-0.06	0	6.83	0	1.0259	0.0007
208	SLE RA 19	-0.06	-0.01	6.83	0	1.0254	0.0011
208	SLE RA 20	-0.06	0	6.89	0	1.0352	0.0007
208	SLE RA 21	-0.06	-0.01	6.89	0	1.0347	0.0011
208	SLE FR 1	-0.06	-0.01	6.13	0	0.9205	0.0014
208	SLE FR 2	-0.06	-0.01	6.13	0	0.9203	0.0015
208	SLE FR 3	-0.06	-0.01	6.15	0	0.9242	0.0014
208	SLE FR 4	-0.06	-0.01	6.34	0	0.9519	0.0013
208	SLE FR 5	-0.06	-0.01	6.36	0	0.9558	0.0012
208	SLE FR 6	-0.06	-0.01	6.48	0	0.9732	0.0011
208	SLE QP 1	-0.06	-0.01	6.13	0	0.9205	0.0014
208	SLE QP 2	-0.06	-0.01	6.34	0	0.9521	0.0012
208	SLD 1	0.43	0.08	6.44	0	0.9673	-0.0124
208	SLD 2	0.49	0.07	6.42	0	0.9647	-0.011
208	SLD 3	0.44	-0.06	6.28	0	0.9439	0.0089
208	SLD 4	0.5	-0.07	6.27	0	0.9413	0.0102
208	SLD 5	0.06	0.24	6.61	0	0.9926	-0.0354
208	SLD 6	0.1	0.23	6.6	0	0.9909	-0.0345
208	SLD 7	0.1	-0.24	6.09	0	0.9146	0.0355
208	SLD 8	0.13	-0.24	6.08	0	0.9129	0.0365
208	SLD 9	-0.25	0.23	6.6	0	0.9913	-0.0341
208	SLD 10	-0.22	0.22	6.59	0	0.9896	-0.0331
208	SLD 11	-0.22	-0.25	6.08	0	0.9133	0.0369
208	SLD 12	-0.18	-0.25	6.07	0	0.9116	0.0378
208	SLD 13	-0.62	0.05	6.41	0	0.9629	-0.0078
208	SLD 14	-0.56	0.04	6.39	0	0.9603	-0.0065
208	SLD 15	-0.61	-0.09	6.25	0	0.9395	0.0135
208	SLD 16	-0.55	-0.1	6.24	0	0.9369	0.0148
208	SLV 1	1.09	0.2	6.57	0	0.987	-0.0299
208	SLV 2	1.22	0.18	6.53	0	0.9809	-0.0267
208	SLV 3	1.11	-0.12	6.22	0	0.9339	0.0183
208	SLV 4	1.24	-0.14	6.18	0	0.9279	0.0216
208	SLV 5	0.23	0.54	6.95	0	1.0441	-0.0818

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLV 6	0.31	0.53	6.92	0	1.0401	-0.0797
208	SLV 7	0.31	-0.53	5.77	0	0.8673	0.0789
208	SLV 8	0.39	-0.54	5.75	0	0.8633	0.081
208	SLV 9	-0.51	0.52	6.93	0	1.0409	-0.0786
208	SLV 10	-0.43	0.51	6.9	0	1.0369	-0.0765
208	SLV 11	-0.43	-0.55	5.75	0	0.864	0.0821
208	SLV 12	-0.34	-0.56	5.73	0	0.8601	0.0842
208	SLV 13	-1.36	0.13	6.5	0	0.9763	-0.0191
208	SLV 14	-1.23	0.11	6.46	0	0.9703	-0.0159
208	SLV 15	-1.34	-0.19	6.15	0	0.9233	0.0291
208	SLV 16	-1.21	-0.21	6.11	0	0.9172	0.0323
208	CRTFP Uy+	0	0	0	0	0	0
208	CRTFP Uy-	0	0	0	0	0	0
211	SLU 1	-0.05	-0.14	44.54	-0.036	12.8817	0.0316
211	SLU 2	-0.02	-0.17	44.49	-0.0358	12.8663	0.0427
211	SLU 3	-0.05	-0.13	45.62	-0.0369	13.1966	0.0281
211	SLU 4	-0.03	-0.15	45.59	-0.0368	13.1874	0.0348
211	SLU 5	-0.03	-0.17	45.18	-0.0364	13.0669	0.0425
211	SLU 6	-0.05	-0.13	46.31	-0.0375	13.3972	0.028
211	SLU 7	-0.04	-0.15	46.28	-0.0374	13.388	0.0346
211	SLU 8	-0.06	-0.14	45.92	-0.0373	13.2828	0.0313
211	SLU 9	-0.04	-0.16	45.89	-0.0371	13.2736	0.0379
211	SLU 10	-0.05	-0.11	50	-0.0396	14.474	0.0229
211	SLU 11	-0.07	-0.06	51.14	-0.0407	14.8044	0.0084
211	SLU 12	-0.06	-0.08	51.11	-0.0406	14.7952	0.015
211	SLU 13	-0.05	-0.11	50.69	-0.0402	14.6746	0.0228
211	SLU 14	-0.08	-0.06	51.83	-0.0413	15.005	0.0082
211	SLU 15	-0.06	-0.08	51.8	-0.0412	14.9957	0.0149
211	SLU 16	-0.08	-0.07	51.44	-0.0411	14.8906	0.0115
211	SLU 17	-0.06	-0.1	51.4	-0.0409	14.8814	0.0182
211	SLU 18	-0.08	-0.05	52.42	-0.0414	15.1785	0.0034
211	SLU 19	-0.07	-0.07	52.39	-0.0413	15.1692	0.01
211	SLU 20	-0.09	-0.05	53.11	-0.0421	15.3791	0.0032
211	SLU 21	-0.07	-0.07	53.08	-0.0419	15.3698	0.0099
211	SLU 22	-0.05	-0.04	49.29	-0.0394	14.2575	0.0024
211	SLU 23	-0.02	-0.08	49.23	-0.0392	14.2421	0.0135
211	SLU 24	-0.05	-0.03	50.37	-0.0403	14.5725	-0.001
211	SLU 25	-0.03	-0.05	50.34	-0.0401	14.5632	0.0057
211	SLU 26	-0.02	-0.08	49.93	-0.0398	14.4427	0.0134
211	SLU 27	-0.05	-0.03	51.06	-0.0409	14.7731	-0.0011
211	SLU 28	-0.04	-0.05	51.03	-0.0407	14.7638	0.0055
211	SLU 29	-0.05	-0.04	50.67	-0.0406	14.6587	0.0022
211	SLU 30	-0.04	-0.06	50.64	-0.0405	14.6494	0.0088
211	SLU 31	-0.04	-0.01	54.75	-0.043	15.8499	-0.0062
211	SLU 32	-0.07	0.03	55.89	-0.044	16.1803	-0.0207
211	SLU 33	-0.06	0.01	55.86	-0.0439	16.171	-0.0141
211	SLU 34	-0.05	-0.01	55.44	-0.0436	16.0505	-0.0063
211	SLU 35	-0.08	0.03	56.58	-0.0447	16.3808	-0.0209
211	SLU 36	-0.06	0.01	56.55	-0.0445	16.3716	-0.0142
211	SLU 37	-0.08	0.02	56.18	-0.0444	16.2664	-0.0176
211	SLU 38	-0.06	0	56.15	-0.0443	16.2572	-0.0109
211	SLU 39	-0.08	0.05	57.17	-0.0448	16.5543	-0.0257
211	SLU 40	-0.06	0.03	57.14	-0.0447	16.5451	-0.0191
211	SLU 41	-0.08	0.05	57.86	-0.0454	16.7549	-0.0259
211	SLU 42	-0.07	0.03	57.83	-0.0453	16.7457	-0.0192
211	SLU 43	-0.06	-0.21	56.27	-0.0457	16.2745	0.051
211	SLU 44	-0.04	-0.25	56.22	-0.0455	16.2591	0.0621
211	SLU 45	-0.07	-0.2	57.35	-0.0466	16.5894	0.0475
211	SLU 46	-0.05	-0.22	57.32	-0.0464	16.5802	0.0542
211	SLU 47	-0.04	-0.25	56.91	-0.0461	16.4596	0.062
211	SLU 48	-0.07	-0.2	58.04	-0.0472	16.79	0.0474
211	SLU 49	-0.05	-0.22	58.01	-0.047	16.7808	0.0541
211	SLU 50	-0.07	-0.21	57.65	-0.0469	16.6756	0.0507
211	SLU 51	-0.05	-0.23	57.62	-0.0468	16.6664	0.0574
211	SLU 52	-0.06	-0.18	61.74	-0.0493	17.8668	0.0424
211	SLU 53	-0.09	-0.14	62.87	-0.0503	18.1972	0.0278
211	SLU 54	-0.07	-0.16	62.84	-0.0502	18.1879	0.0345
211	SLU 55	-0.06	-0.18	62.43	-0.0499	18.0674	0.0422
211	SLU 56	-0.09	-0.14	63.56	-0.051	18.3978	0.0277
211	SLU 57	-0.08	-0.16	63.53	-0.0508	18.3885	0.0343
211	SLU 58	-0.09	-0.15	63.17	-0.0507	18.2834	0.031
211	SLU 59	-0.08	-0.17	63.14	-0.0506	18.2741	0.0376
211	SLU 60	-0.1	-0.12	64.15	-0.0511	18.5713	0.0228
211	SLU 61	-0.08	-0.14	64.12	-0.051	18.562	0.0295
211	SLU 62	-0.1	-0.12	64.84	-0.0517	18.7718	0.0227
211	SLU 63	-0.08	-0.14	64.81	-0.0516	18.7626	0.0293
211	SLU 64	-0.06	-0.12	61.02	-0.049	17.6503	0.0219
211	SLU 65	-0.03	-0.15	60.97	-0.0488	17.6349	0.033
211	SLU 66	-0.06	-0.1	62.1	-0.0499	17.9653	0.0184
211	SLU 67	-0.05	-0.13	62.07	-0.0498	17.956	0.0251
211	SLU 68	-0.04	-0.15	61.66	-0.0494	17.8355	0.0328
211	SLU 69	-0.07	-0.1	62.79	-0.0505	18.1658	0.0183
211	SLU 70	-0.05	-0.13	62.76	-0.0504	18.1566	0.025
211	SLU 71	-0.07	-0.12	62.4	-0.0503	18.0515	0.0216
211	SLU 72	-0.05	-0.14	62.37	-0.0502	18.0422	0.0283
211	SLU 73	-0.06	-0.09	66.48	-0.0526	19.2427	0.0133
211	SLU 74	-0.09	-0.04	67.62	-0.0537	19.573	-0.0013
211	SLU 75	-0.07	-0.06	67.59	-0.0536	19.5638	0.0054
211	SLU 76	-0.06	-0.09	67.18	-0.0532	19.4432	0.0131
211	SLU 77	-0.09	-0.04	68.31	-0.0543	19.7736	-0.0014

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
211	SLU 78	-0.08	-0.06	68.28	-0.0542	19.7644	0.0052
211	SLU 79	-0.09	-0.05	67.92	-0.0541	19.6592	0.0019
211	SLU 80	-0.08	-0.07	67.89	-0.0539	19.65	0.0085
211	SLU 81	-0.09	-0.02	68.9	-0.0545	19.9471	-0.0063
211	SLU 82	-0.08	-0.05	68.87	-0.0543	19.9379	0.0004
211	SLU 83	-0.1	-0.02	69.59	-0.0551	20.1477	-0.0064
211	SLU 84	-0.08	-0.05	69.56	-0.0549	20.1385	0.0002
211	SLE RA 1	-0.05	-0.11	45.89	-0.037	13.2748	0.0232
211	SLE RA 2	-0.03	-0.13	45.86	-0.0368	13.2645	0.0306
211	SLE RA 3	-0.05	-0.1	46.62	-0.0376	13.4847	0.0209
211	SLE RA 4	-0.04	-0.12	46.6	-0.0375	13.4786	0.0254
211	SLE RA 5	-0.03	-0.13	46.32	-0.0373	13.3982	0.0305
211	SLE RA 6	-0.05	-0.1	47.08	-0.038	13.6185	0.0208
211	SLE RA 7	-0.04	-0.12	47.06	-0.0379	13.6123	0.0253
211	SLE RA 8	-0.05	-0.11	46.82	-0.0378	13.5422	0.023
211	SLE RA 9	-0.04	-0.12	46.79	-0.0377	13.536	0.0275
211	SLE RA 10	-0.05	-0.09	49.54	-0.0394	14.3363	0.0175
211	SLE RA 11	-0.06	-0.06	50.29	-0.0401	14.5566	0.0078
211	SLE RA 12	-0.05	-0.07	50.27	-0.04	14.5504	0.0122
211	SLE RA 13	-0.05	-0.09	50	-0.0398	14.4701	0.0174
211	SLE RA 14	-0.07	-0.06	50.75	-0.0405	14.6903	0.0077
211	SLE RA 15	-0.06	-0.07	50.73	-0.0404	14.6842	0.0121
211	SLE RA 16	-0.07	-0.07	50.49	-0.0403	14.6141	0.0099
211	SLE RA 17	-0.06	-0.08	50.47	-0.0403	14.6079	0.0143
211	SLE RA 18	-0.07	-0.05	51.15	-0.0406	14.806	0.0044
211	SLE RA 19	-0.06	-0.06	51.13	-0.0405	14.7998	0.0089
211	SLE RA 20	-0.07	-0.05	51.61	-0.041	14.9397	0.0044
211	SLE RA 21	-0.06	-0.06	51.59	-0.0409	14.9335	0.0088
211	SLE FR 1	-0.05	-0.11	45.89	-0.037	13.2748	0.0232
211	SLE FR 2	-0.04	-0.11	45.89	-0.037	13.2727	0.0247
211	SLE FR 3	-0.05	-0.11	46.08	-0.0372	13.3283	0.0232
211	SLE FR 4	-0.05	-0.1	47.46	-0.038	13.7321	0.0191
211	SLE FR 5	-0.05	-0.09	47.65	-0.0382	13.7876	0.0176
211	SLE FR 6	-0.06	-0.08	48.52	-0.0388	14.0404	0.0138
211	SLE QP 1	-0.05	-0.11	45.89	-0.037	13.2748	0.0232
211	SLE QP 2	-0.05	-0.09	47.47	-0.0381	13.7341	0.0176
211	SLD 1	4.07	0.54	47.92	-0.035	13.9848	-0.1629
211	SLD 2	4.51	0.57	48.03	-0.0353	14.008	-0.1691
211	SLD 3	3.99	-0.57	46.66	-0.0295	13.6178	0.1613
211	SLD 4	4.44	-0.54	46.77	-0.0299	13.641	0.1551
211	SLD 5	1.22	1.77	49.5	-0.0453	14.3618	-0.5271
211	SLD 6	1.52	1.79	49.57	-0.0455	14.3772	-0.5312
211	SLD 7	0.96	-1.92	45.3	-0.0272	13.1383	0.5535
211	SLD 8	1.26	-1.9	45.37	-0.0274	13.1537	0.5494
211	SLD 9	-1.36	1.72	49.57	-0.0487	14.3146	-0.5142
211	SLD 10	-1.07	1.74	49.64	-0.0489	14.3299	-0.5183
211	SLD 11	-1.62	-1.98	45.37	-0.0306	13.0911	0.5664
211	SLD 12	-1.33	-1.96	45.44	-0.0308	13.1064	0.5623
211	SLD 13	-4.54	0.36	48.17	-0.0463	13.8273	-0.1199
211	SLD 14	-4.1	0.39	48.28	-0.0466	13.8505	-0.1261
211	SLD 15	-4.62	-0.75	46.91	-0.0408	13.4602	0.2043
211	SLD 16	-4.18	-0.72	47.02	-0.0412	13.4834	0.1981
211	SLV 1	9.59	1.34	48.48	-0.0306	14.3071	-0.3925
211	SLV 2	10.63	1.4	48.74	-0.0314	14.3611	-0.407
211	SLV 3	9.4	-1.17	45.63	-0.0183	13.4757	0.3417
211	SLV 4	10.44	-1.11	45.88	-0.0191	13.5297	0.3272
211	SLV 5	2.93	4.13	52.06	-0.0544	15.1575	-1.2165
211	SLV 6	3.61	4.18	52.23	-0.0548	15.1927	-1.2259
211	SLV 7	2.33	-4.24	42.54	-0.0134	12.3861	1.231
211	SLV 8	3	-4.19	42.71	-0.0138	12.4213	1.2215
211	SLV 9	-3.11	4.01	52.23	-0.0623	15.047	-1.1863
211	SLV 10	-2.43	4.05	52.4	-0.0628	15.0821	-1.1958
211	SLV 11	-3.72	-4.36	42.71	-0.0213	12.2756	1.2611
211	SLV 12	-3.04	-4.32	42.88	-0.0218	12.3107	1.2517
211	SLV 13	-10.55	0.92	49.06	-0.0571	13.9386	-0.292
211	SLV 14	-9.51	0.99	49.31	-0.0578	13.9926	-0.3065
211	SLV 15	-10.73	-1.59	46.2	-0.0448	13.1072	0.4422
211	SLV 16	-9.69	-1.52	46.46	-0.0455	13.1612	0.4277
211	CRTFP Ux+	0	0	0	0	0	0
211	CRTFP Ux-	0	0	0	0	0	0
211	CRTFP Uy+	0	0	0	0	0	0
211	CRTFP Uy-	0	0	0	0	0	0
213	SLU 1	-0.01	-0.07	10.72	0	0	0
213	SLU 2	0	-0.08	10.71	0	0	0
213	SLU 3	-0.01	-0.07	10.98	0	0	0
213	SLU 4	-0.01	-0.08	10.97	0	0	0
213	SLU 5	0	-0.08	10.87	0	0	0
213	SLU 6	-0.01	-0.07	11.14	0	0	0
213	SLU 7	-0.01	-0.08	11.14	0	0	0
213	SLU 8	-0.01	-0.07	11.05	0	0	0
213	SLU 9	-0.01	-0.08	11.04	0	0	0
213	SLU 10	-0.01	-0.07	12.02	0	0	0
213	SLU 11	-0.02	-0.06	12.29	0	0	0
213	SLU 12	-0.01	-0.07	12.28	0	0	0
213	SLU 13	-0.01	-0.07	12.19	0	0	0
213	SLU 14	-0.02	-0.06	12.46	0	0	0
213	SLU 15	-0.01	-0.07	12.45	0	0	0
213	SLU 16	-0.02	-0.06	12.36	0	0	0
213	SLU 17	-0.01	-0.07	12.36	0	0	0
213	SLU 18	-0.02	-0.06	12.59	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
213	SLU 19	-0.01	-0.06	12.59	0	0	0
213	SLU 20	-0.02	-0.06	12.76	0	0	0
213	SLU 21	-0.02	-0.06	12.75	0	0	0
213	SLU 22	-0.01	-0.05	11.86	0	0	0
213	SLU 23	0	-0.06	11.85	0	0	0
213	SLU 24	-0.01	-0.05	12.12	0	0	0
213	SLU 25	-0.01	-0.06	12.11	0	0	0
213	SLU 26	0	-0.06	12.01	0	0	0
213	SLU 27	-0.01	-0.05	12.28	0	0	0
213	SLU 28	-0.01	-0.06	12.28	0	0	0
213	SLU 29	-0.01	-0.06	12.19	0	0	0
213	SLU 30	-0.01	-0.06	12.18	0	0	0
213	SLU 31	-0.01	-0.05	13.16	0	0	0
213	SLU 32	-0.02	-0.04	13.43	0	0	0
213	SLU 33	-0.01	-0.05	13.42	0	0	0
213	SLU 34	-0.01	-0.05	13.33	0	0	0
213	SLU 35	-0.02	-0.04	13.6	0	0	0
213	SLU 36	-0.01	-0.05	13.59	0	0	0
213	SLU 37	-0.02	-0.05	13.5	0	0	0
213	SLU 38	-0.01	-0.05	13.5	0	0	0
213	SLU 39	-0.02	-0.04	13.73	0	0	0
213	SLU 40	-0.01	-0.04	13.73	0	0	0
213	SLU 41	-0.02	-0.04	13.9	0	0	0
213	SLU 42	-0.01	-0.05	13.89	0	0	0
213	SLU 43	-0.01	-0.1	13.55	0	0	0
213	SLU 44	-0.01	-0.11	13.53	0	0	0
213	SLU 45	-0.01	-0.1	13.8	0	0	0
213	SLU 46	-0.01	-0.1	13.8	0	0	0
213	SLU 47	-0.01	-0.11	13.7	0	0	0
213	SLU 48	-0.01	-0.1	13.97	0	0	0
213	SLU 49	-0.01	-0.11	13.96	0	0	0
213	SLU 50	-0.02	-0.1	13.88	0	0	0
213	SLU 51	-0.01	-0.11	13.87	0	0	0
213	SLU 52	-0.01	-0.1	14.85	0	0	0
213	SLU 53	-0.02	-0.09	15.12	0	0	0
213	SLU 54	-0.02	-0.09	15.11	0	0	0
213	SLU 55	-0.01	-0.1	15.01	0	0	0
213	SLU 56	-0.02	-0.09	15.28	0	0	0
213	SLU 57	-0.02	-0.09	15.27	0	0	0
213	SLU 58	-0.02	-0.09	15.19	0	0	0
213	SLU 59	-0.02	-0.1	15.18	0	0	0
213	SLU 60	-0.02	-0.09	15.42	0	0	0
213	SLU 61	-0.02	-0.09	15.41	0	0	0
213	SLU 62	-0.02	-0.09	15.58	0	0	0
213	SLU 63	-0.02	-0.09	15.58	0	0	0
213	SLU 64	-0.01	-0.08	14.69	0	0	0
213	SLU 65	-0.01	-0.09	14.67	0	0	0
213	SLU 66	-0.01	-0.08	14.94	0	0	0
213	SLU 67	-0.01	-0.09	14.94	0	0	0
213	SLU 68	-0.01	-0.09	14.84	0	0	0
213	SLU 69	-0.01	-0.08	15.11	0	0	0
213	SLU 70	-0.01	-0.09	15.1	0	0	0
213	SLU 71	-0.01	-0.08	15.02	0	0	0
213	SLU 72	-0.01	-0.09	15.01	0	0	0
213	SLU 73	-0.01	-0.08	15.99	0	0	0
213	SLU 74	-0.02	-0.07	16.26	0	0	0
213	SLU 75	-0.02	-0.08	16.25	0	0	0
213	SLU 76	-0.01	-0.08	16.15	0	0	0
213	SLU 77	-0.02	-0.07	16.42	0	0	0
213	SLU 78	-0.02	-0.08	16.41	0	0	0
213	SLU 79	-0.02	-0.07	16.33	0	0	0
213	SLU 80	-0.02	-0.08	16.32	0	0	0
213	SLU 81	-0.02	-0.07	16.56	0	0	0
213	SLU 82	-0.02	-0.07	16.55	0	0	0
213	SLU 83	-0.02	-0.07	16.72	0	0	0
213	SLU 84	-0.02	-0.07	16.72	0	0	0
213	SLE RA 1	-0.01	-0.07	11.05	0	0	0
213	SLE RA 2	-0.01	-0.07	11.04	0	0	0
213	SLE RA 3	-0.01	-0.07	11.22	0	0	0
213	SLE RA 4	-0.01	-0.07	11.21	0	0	0
213	SLE RA 5	-0.01	-0.07	11.15	0	0	0
213	SLE RA 6	-0.01	-0.07	11.33	0	0	0
213	SLE RA 7	-0.01	-0.07	11.32	0	0	0
213	SLE RA 8	-0.01	-0.07	11.27	0	0	0
213	SLE RA 9	-0.01	-0.07	11.26	0	0	0
213	SLE RA 10	-0.01	-0.07	11.91	0	0	0
213	SLE RA 11	-0.01	-0.06	12.09	0	0	0
213	SLE RA 12	-0.01	-0.06	12.09	0	0	0
213	SLE RA 13	-0.01	-0.07	12.02	0	0	0
213	SLE RA 14	-0.01	-0.06	12.2	0	0	0
213	SLE RA 15	-0.01	-0.06	12.2	0	0	0
213	SLE RA 16	-0.01	-0.06	12.14	0	0	0
213	SLE RA 17	-0.01	-0.06	12.14	0	0	0
213	SLE RA 18	-0.02	-0.06	12.3	0	0	0
213	SLE RA 19	-0.01	-0.06	12.29	0	0	0
213	SLE RA 20	-0.02	-0.06	12.41	0	0	0
213	SLE RA 21	-0.01	-0.06	12.4	0	0	0
213	SLE FR 1	-0.01	-0.07	11.05	0	0	0
213	SLE FR 2	-0.01	-0.07	11.04	0	0	0
213	SLE FR 3	-0.01	-0.07	11.09	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
213	SLE FR 4	-0.01	-0.07	11.42	0	0	0
213	SLE FR 5	-0.01	-0.06	11.46	0	0	0
213	SLE FR 6	-0.01	-0.06	11.67	0	0	0
213	SLE QP 1	-0.01	-0.07	11.05	0	0	0
213	SLE QP 2	-0.01	-0.06	11.42	0	0	0
213	SLD 1	0.97	0.11	11.4	0	0	0
213	SLD 2	1.08	0.13	11.43	0	0	0
213	SLD 3	0.95	-0.15	11.1	0	0	0
213	SLD 4	1.06	-0.13	11.13	0	0	0
213	SLD 5	0.29	0.38	11.86	0	0	0
213	SLD 6	0.36	0.39	11.89	0	0	0
213	SLD 7	0.23	-0.48	10.86	0	0	0
213	SLD 8	0.3	-0.47	10.89	0	0	0
213	SLD 9	-0.32	0.34	11.96	0	0	0
213	SLD 10	-0.25	0.36	11.98	0	0	0
213	SLD 11	-0.39	-0.52	10.96	0	0	0
213	SLD 12	-0.32	-0.51	10.98	0	0	0
213	SLD 13	-1.08	0	11.71	0	0	0
213	SLD 14	-0.97	0.02	11.75	0	0	0
213	SLD 15	-1.1	-0.26	11.41	0	0	0
213	SLD 16	-0.99	-0.24	11.45	0	0	0
213	SLV 1	2.28	0.34	11.35	0	0	0
213	SLV 2	2.53	0.38	11.44	0	0	0
213	SLV 3	2.24	-0.24	10.67	0	0	0
213	SLV 4	2.49	-0.2	10.76	0	0	0
213	SLV 5	0.7	0.94	12.42	0	0	0
213	SLV 6	0.86	0.97	12.47	0	0	0
213	SLV 7	0.55	-1.02	10.15	0	0	0
213	SLV 8	0.72	-0.99	10.2	0	0	0
213	SLV 9	-0.74	0.86	12.64	0	0	0
213	SLV 10	-0.58	0.89	12.69	0	0	0
213	SLV 11	-0.88	-1.1	10.37	0	0	0
213	SLV 12	-0.72	-1.07	10.43	0	0	0
213	SLV 13	-2.51	0.07	12.09	0	0	0
213	SLV 14	-2.26	0.12	12.17	0	0	0
213	SLV 15	-2.56	-0.51	11.41	0	0	0
213	SLV 16	-2.31	-0.47	11.49	0	0	0
214	SLU 1	-0.01	-0.09	10.92	0	0	0
214	SLU 2	0	-0.1	10.9	0	0	0
214	SLU 3	-0.01	-0.09	11.18	0	0	0
214	SLU 4	-0.01	-0.09	11.17	0	0	0
214	SLU 5	0	-0.1	11.07	0	0	0
214	SLU 6	-0.01	-0.09	11.35	0	0	0
214	SLU 7	-0.01	-0.1	11.34	0	0	0
214	SLU 8	-0.01	-0.09	11.25	0	0	0
214	SLU 9	-0.01	-0.1	11.24	0	0	0
214	SLU 10	-0.01	-0.09	12.23	0	0	0
214	SLU 11	-0.02	-0.08	12.5	0	0	0
214	SLU 12	-0.01	-0.09	12.5	0	0	0
214	SLU 13	-0.01	-0.09	12.4	0	0	0
214	SLU 14	-0.02	-0.08	12.67	0	0	0
214	SLU 15	-0.01	-0.09	12.67	0	0	0
214	SLU 16	-0.02	-0.08	12.58	0	0	0
214	SLU 17	-0.01	-0.09	12.57	0	0	0
214	SLU 18	-0.02	-0.08	12.81	0	0	0
214	SLU 19	-0.01	-0.08	12.8	0	0	0
214	SLU 20	-0.02	-0.08	12.98	0	0	0
214	SLU 21	-0.01	-0.08	12.97	0	0	0
214	SLU 22	-0.01	-0.07	12.07	0	0	0
214	SLU 23	0	-0.08	12.06	0	0	0
214	SLU 24	-0.01	-0.07	12.34	0	0	0
214	SLU 25	0	-0.08	12.33	0	0	0
214	SLU 26	0	-0.08	12.23	0	0	0
214	SLU 27	-0.01	-0.08	12.5	0	0	0
214	SLU 28	-0.01	-0.08	12.5	0	0	0
214	SLU 29	-0.01	-0.08	12.41	0	0	0
214	SLU 30	-0.01	-0.08	12.4	0	0	0
214	SLU 31	-0.01	-0.07	13.39	0	0	0
214	SLU 32	-0.01	-0.07	13.66	0	0	0
214	SLU 33	-0.01	-0.07	13.66	0	0	0
214	SLU 34	-0.01	-0.08	13.56	0	0	0
214	SLU 35	-0.02	-0.07	13.83	0	0	0
214	SLU 36	-0.01	-0.07	13.82	0	0	0
214	SLU 37	-0.02	-0.07	13.74	0	0	0
214	SLU 38	-0.01	-0.07	13.73	0	0	0
214	SLU 39	-0.02	-0.06	13.97	0	0	0
214	SLU 40	-0.01	-0.07	13.96	0	0	0
214	SLU 41	-0.02	-0.06	14.14	0	0	0
214	SLU 42	-0.01	-0.07	14.13	0	0	0
214	SLU 43	-0.01	-0.12	13.79	0	0	0
214	SLU 44	-0.01	-0.13	13.78	0	0	0
214	SLU 45	-0.01	-0.12	14.06	0	0	0
214	SLU 46	-0.01	-0.13	14.05	0	0	0
214	SLU 47	-0.01	-0.13	13.95	0	0	0
214	SLU 48	-0.01	-0.12	14.22	0	0	0
214	SLU 49	-0.01	-0.13	14.22	0	0	0
214	SLU 50	-0.01	-0.13	14.13	0	0	0
214	SLU 51	-0.01	-0.13	14.12	0	0	0
214	SLU 52	-0.01	-0.12	15.11	0	0	0
214	SLU 53	-0.02	-0.11	15.38	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
214	SLU 54	-0.01	-0.12	15.38	0	0	0
214	SLU 55	-0.01	-0.12	15.28	0	0	0
214	SLU 56	-0.02	-0.12	15.55	0	0	0
214	SLU 57	-0.02	-0.12	15.54	0	0	0
214	SLU 58	-0.02	-0.12	15.46	0	0	0
214	SLU 59	-0.02	-0.12	15.45	0	0	0
214	SLU 60	-0.02	-0.11	15.69	0	0	0
214	SLU 61	-0.02	-0.12	15.68	0	0	0
214	SLU 62	-0.02	-0.11	15.86	0	0	0
214	SLU 63	-0.02	-0.12	15.85	0	0	0
214	SLU 64	-0.01	-0.11	14.95	0	0	0
214	SLU 65	0	-0.12	14.94	0	0	0
214	SLU 66	-0.01	-0.11	15.21	0	0	0
214	SLU 67	-0.01	-0.11	15.21	0	0	0
214	SLU 68	-0.01	-0.12	15.11	0	0	0
214	SLU 69	-0.01	-0.11	15.38	0	0	0
214	SLU 70	-0.01	-0.11	15.38	0	0	0
214	SLU 71	-0.01	-0.11	15.29	0	0	0
214	SLU 72	-0.01	-0.11	15.28	0	0	0
214	SLU 73	-0.01	-0.11	16.27	0	0	0
214	SLU 74	-0.02	-0.1	16.54	0	0	0
214	SLU 75	-0.01	-0.1	16.53	0	0	0
214	SLU 76	-0.01	-0.11	16.44	0	0	0
214	SLU 77	-0.02	-0.1	16.71	0	0	0
214	SLU 78	-0.01	-0.1	16.7	0	0	0
214	SLU 79	-0.02	-0.1	16.61	0	0	0
214	SLU 80	-0.01	-0.11	16.61	0	0	0
214	SLU 81	-0.02	-0.09	16.85	0	0	0
214	SLU 82	-0.02	-0.1	16.84	0	0	0
214	SLU 83	-0.02	-0.1	17.01	0	0	0
214	SLU 84	-0.02	-0.1	17.01	0	0	0
214	SLE RA 1	-0.01	-0.09	11.25	0	0	0
214	SLE RA 2	0	-0.09	11.24	0	0	0
214	SLE RA 3	-0.01	-0.09	11.42	0	0	0
214	SLE RA 4	-0.01	-0.09	11.42	0	0	0
214	SLE RA 5	0	-0.09	11.35	0	0	0
214	SLE RA 6	-0.01	-0.09	11.53	0	0	0
214	SLE RA 7	-0.01	-0.09	11.53	0	0	0
214	SLE RA 8	-0.01	-0.09	11.47	0	0	0
214	SLE RA 9	-0.01	-0.09	11.47	0	0	0
214	SLE RA 10	-0.01	-0.09	12.12	0	0	0
214	SLE RA 11	-0.01	-0.08	12.31	0	0	0
214	SLE RA 12	-0.01	-0.08	12.3	0	0	0
214	SLE RA 13	-0.01	-0.09	12.24	0	0	0
214	SLE RA 14	-0.01	-0.08	12.42	0	0	0
214	SLE RA 15	-0.01	-0.08	12.41	0	0	0
214	SLE RA 16	-0.01	-0.08	12.35	0	0	0
214	SLE RA 17	-0.01	-0.09	12.35	0	0	0
214	SLE RA 18	-0.01	-0.08	12.51	0	0	0
214	SLE RA 19	-0.01	-0.08	12.51	0	0	0
214	SLE RA 20	-0.01	-0.08	12.62	0	0	0
214	SLE RA 21	-0.01	-0.08	12.62	0	0	0
214	SLE FR 1	-0.01	-0.09	11.25	0	0	0
214	SLE FR 2	-0.01	-0.09	11.25	0	0	0
214	SLE FR 3	-0.01	-0.09	11.29	0	0	0
214	SLE FR 4	-0.01	-0.08	11.62	0	0	0
214	SLE FR 5	-0.01	-0.08	11.67	0	0	0
214	SLE FR 6	-0.01	-0.08	11.88	0	0	0
214	SLE QP 1	-0.01	-0.09	11.25	0	0	0
214	SLE QP 2	-0.01	-0.08	11.63	0	0	0
214	SLD 1	0.99	0.11	11.52	0	0	0
214	SLD 2	1.1	0.13	11.56	0	0	0
214	SLD 3	0.97	-0.15	11.22	0	0	0
214	SLD 4	1.08	-0.13	11.26	0	0	0
214	SLD 5	0.3	0.37	12.05	0	0	0
214	SLD 6	0.37	0.38	12.08	0	0	0
214	SLD 7	0.24	-0.5	11.03	0	0	0
214	SLD 8	0.31	-0.49	11.06	0	0	0
214	SLD 9	-0.33	0.32	12.19	0	0	0
214	SLD 10	-0.26	0.34	12.22	0	0	0
214	SLD 11	-0.39	-0.55	11.17	0	0	0
214	SLD 12	-0.32	-0.53	11.2	0	0	0
214	SLD 13	-1.1	-0.04	11.99	0	0	0
214	SLD 14	-0.99	-0.02	12.03	0	0	0
214	SLD 15	-1.12	-0.3	11.69	0	0	0
214	SLD 16	-1.01	-0.28	11.73	0	0	0
214	SLV 1	2.33	0.36	11.37	0	0	0
214	SLV 2	2.58	0.41	11.47	0	0	0
214	SLV 3	2.28	-0.23	10.68	0	0	0
214	SLV 4	2.54	-0.18	10.78	0	0	0
214	SLV 5	0.71	0.94	12.58	0	0	0
214	SLV 6	0.88	0.97	12.64	0	0	0
214	SLV 7	0.57	-1.04	10.28	0	0	0
214	SLV 8	0.73	-1	10.34	0	0	0
214	SLV 9	-0.75	0.83	12.91	0	0	0
214	SLV 10	-0.59	0.87	12.97	0	0	0
214	SLV 11	-0.9	-1.14	10.61	0	0	0
214	SLV 12	-0.73	-1.1	10.67	0	0	0
214	SLV 13	-2.56	0.01	12.47	0	0	0
214	SLV 14	-2.3	0.07	12.57	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
214	SLV 15	-2.6	-0.58	11.78	0	0	0
214	SLV 16	-2.35	-0.53	11.88	0	0	0
215	SLU 1	-0.01	-0.11	11	0	0	0
215	SLU 2	0	-0.12	10.99	0	0	0
215	SLU 3	-0.01	-0.11	11.27	0	0	0
215	SLU 4	0	-0.11	11.26	0	0	0
215	SLU 5	0	-0.12	11.16	0	0	0
215	SLU 6	-0.01	-0.11	11.43	0	0	0
215	SLU 7	0	-0.12	11.43	0	0	0
215	SLU 8	-0.01	-0.11	11.34	0	0	0
215	SLU 9	0	-0.12	11.33	0	0	0
215	SLU 10	-0.01	-0.11	12.32	0	0	0
215	SLU 11	-0.01	-0.1	12.59	0	0	0
215	SLU 12	-0.01	-0.11	12.59	0	0	0
215	SLU 13	-0.01	-0.11	12.49	0	0	0
215	SLU 14	-0.01	-0.1	12.76	0	0	0
215	SLU 15	-0.01	-0.11	12.76	0	0	0
215	SLU 16	-0.01	-0.11	12.67	0	0	0
215	SLU 17	-0.01	-0.11	12.66	0	0	0
215	SLU 18	-0.02	-0.1	12.9	0	0	0
215	SLU 19	-0.01	-0.1	12.89	0	0	0
215	SLU 20	-0.02	-0.1	13.07	0	0	0
215	SLU 21	-0.01	-0.11	13.06	0	0	0
215	SLU 22	-0.01	-0.1	12.17	0	0	0
215	SLU 23	0	-0.1	12.16	0	0	0
215	SLU 24	-0.01	-0.1	12.43	0	0	0
215	SLU 25	0	-0.1	12.43	0	0	0
215	SLU 26	0	-0.1	12.33	0	0	0
215	SLU 27	-0.01	-0.1	12.6	0	0	0
215	SLU 28	0	-0.1	12.59	0	0	0
215	SLU 29	-0.01	-0.1	12.51	0	0	0
215	SLU 30	0	-0.1	12.5	0	0	0
215	SLU 31	-0.01	-0.1	13.49	0	0	0
215	SLU 32	-0.01	-0.09	13.76	0	0	0
215	SLU 33	-0.01	-0.09	13.75	0	0	0
215	SLU 34	-0.01	-0.1	13.65	0	0	0
215	SLU 35	-0.01	-0.09	13.93	0	0	0
215	SLU 36	-0.01	-0.1	13.92	0	0	0
215	SLU 37	-0.01	-0.09	13.83	0	0	0
215	SLU 38	-0.01	-0.1	13.83	0	0	0
215	SLU 39	-0.01	-0.09	14.07	0	0	0
215	SLU 40	-0.01	-0.09	14.06	0	0	0
215	SLU 41	-0.02	-0.09	14.23	0	0	0
215	SLU 42	-0.01	-0.09	14.23	0	0	0
215	SLU 43	-0.01	-0.15	13.9	0	0	0
215	SLU 44	0	-0.15	13.89	0	0	0
215	SLU 45	-0.01	-0.15	14.17	0	0	0
215	SLU 46	-0.01	-0.15	14.16	0	0	0
215	SLU 47	0	-0.16	14.06	0	0	0
215	SLU 48	-0.01	-0.15	14.33	0	0	0
215	SLU 49	-0.01	-0.15	14.33	0	0	0
215	SLU 50	-0.01	-0.15	14.24	0	0	0
215	SLU 51	-0.01	-0.15	14.23	0	0	0
215	SLU 52	-0.01	-0.15	15.22	0	0	0
215	SLU 53	-0.02	-0.14	15.49	0	0	0
215	SLU 54	-0.01	-0.14	15.49	0	0	0
215	SLU 55	-0.01	-0.15	15.39	0	0	0
215	SLU 56	-0.02	-0.14	15.66	0	0	0
215	SLU 57	-0.01	-0.15	15.66	0	0	0
215	SLU 58	-0.02	-0.14	15.57	0	0	0
215	SLU 59	-0.01	-0.15	15.56	0	0	0
215	SLU 60	-0.02	-0.14	15.8	0	0	0
215	SLU 61	-0.01	-0.14	15.79	0	0	0
215	SLU 62	-0.02	-0.14	15.97	0	0	0
215	SLU 63	-0.01	-0.14	15.96	0	0	0
215	SLU 64	-0.01	-0.13	15.07	0	0	0
215	SLU 65	0	-0.14	15.06	0	0	0
215	SLU 66	-0.01	-0.13	15.33	0	0	0
215	SLU 67	0	-0.14	15.33	0	0	0
215	SLU 68	0	-0.14	15.23	0	0	0
215	SLU 69	-0.01	-0.13	15.5	0	0	0
215	SLU 70	-0.01	-0.14	15.49	0	0	0
215	SLU 71	-0.01	-0.14	15.41	0	0	0
215	SLU 72	-0.01	-0.14	15.4	0	0	0
215	SLU 73	-0.01	-0.13	16.39	0	0	0
215	SLU 74	-0.01	-0.13	16.66	0	0	0
215	SLU 75	-0.01	-0.13	16.65	0	0	0
215	SLU 76	-0.01	-0.14	16.55	0	0	0
215	SLU 77	-0.02	-0.13	16.83	0	0	0
215	SLU 78	-0.01	-0.13	16.82	0	0	0
215	SLU 79	-0.02	-0.13	16.73	0	0	0
215	SLU 80	-0.01	-0.13	16.73	0	0	0
215	SLU 81	-0.02	-0.12	16.97	0	0	0
215	SLU 82	-0.01	-0.13	16.96	0	0	0
215	SLU 83	-0.02	-0.13	17.13	0	0	0
215	SLU 84	-0.01	-0.13	17.13	0	0	0
215	SLE RA 1	-0.01	-0.11	11.34	0	0	0
215	SLE RA 2	0	-0.11	11.33	0	0	0
215	SLE RA 3	-0.01	-0.11	11.51	0	0	0
215	SLE RA 4	0	-0.11	11.51	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
215	SLE RA 5	0	-0.11	11.44	0	0	0
215	SLE RA 6	-0.01	-0.11	11.62	0	0	0
215	SLE RA 7	0	-0.11	11.62	0	0	0
215	SLE RA 8	-0.01	-0.11	11.56	0	0	0
215	SLE RA 9	-0.01	-0.11	11.56	0	0	0
215	SLE RA 10	-0.01	-0.11	12.21	0	0	0
215	SLE RA 11	-0.01	-0.1	12.4	0	0	0
215	SLE RA 12	-0.01	-0.1	12.39	0	0	0
215	SLE RA 13	-0.01	-0.11	12.33	0	0	0
215	SLE RA 14	-0.01	-0.1	12.51	0	0	0
215	SLE RA 15	-0.01	-0.11	12.5	0	0	0
215	SLE RA 16	-0.01	-0.1	12.45	0	0	0
215	SLE RA 17	-0.01	-0.11	12.44	0	0	0
215	SLE RA 18	-0.01	-0.1	12.6	0	0	0
215	SLE RA 19	-0.01	-0.1	12.6	0	0	0
215	SLE RA 20	-0.01	-0.1	12.71	0	0	0
215	SLE RA 21	-0.01	-0.1	12.71	0	0	0
215	SLE FR 1	-0.01	-0.11	11.34	0	0	0
215	SLE FR 2	-0.01	-0.11	11.33	0	0	0
215	SLE FR 3	-0.01	-0.11	11.38	0	0	0
215	SLE FR 4	-0.01	-0.1	11.71	0	0	0
215	SLE FR 5	-0.01	-0.1	11.76	0	0	0
215	SLE FR 6	-0.01	-0.1	11.97	0	0	0
215	SLE QP 1	-0.01	-0.11	11.34	0	0	0
215	SLE QP 2	-0.01	-0.1	11.71	0	0	0
215	SLD 1	1	0.1	11.52	0	0	0
215	SLD 2	1.11	0.13	11.57	0	0	0
215	SLD 3	0.98	-0.16	11.22	0	0	0
215	SLD 4	1.09	-0.13	11.26	0	0	0
215	SLD 5	0.3	0.35	12.11	0	0	0
215	SLD 6	0.38	0.37	12.14	0	0	0
215	SLD 7	0.24	-0.52	11.09	0	0	0
215	SLD 8	0.31	-0.5	11.12	0	0	0
215	SLD 9	-0.33	0.3	12.31	0	0	0
215	SLD 10	-0.26	0.31	12.34	0	0	0
215	SLD 11	-0.39	-0.58	11.29	0	0	0
215	SLD 12	-0.32	-0.56	11.32	0	0	0
215	SLD 13	-1.11	-0.08	12.17	0	0	0
215	SLD 14	-1	-0.05	12.21	0	0	0
215	SLD 15	-1.13	-0.34	11.86	0	0	0
215	SLD 16	-1.02	-0.31	11.91	0	0	0
215	SLV 1	2.35	0.37	11.25	0	0	0
215	SLV 2	2.6	0.44	11.36	0	0	0
215	SLV 3	2.3	-0.22	10.56	0	0	0
215	SLV 4	2.56	-0.15	10.67	0	0	0
215	SLV 5	0.72	0.92	12.61	0	0	0
215	SLV 6	0.89	0.97	12.68	0	0	0
215	SLV 7	0.57	-1.05	10.3	0	0	0
215	SLV 8	0.74	-1	10.37	0	0	0
215	SLV 9	-0.75	0.8	13.06	0	0	0
215	SLV 10	-0.59	0.84	13.13	0	0	0
215	SLV 11	-0.9	-1.17	10.75	0	0	0
215	SLV 12	-0.74	-1.13	10.82	0	0	0
215	SLV 13	-2.57	-0.05	12.76	0	0	0
215	SLV 14	-2.32	0.01	12.87	0	0	0
215	SLV 15	-2.62	-0.64	12.07	0	0	0
215	SLV 16	-2.36	-0.58	12.18	0	0	0
216	SLU 1	0	-0.13	11.03	0	0	0
216	SLU 2	0	-0.13	11.02	0	0	0
216	SLU 3	-0.01	-0.13	11.29	0	0	0
216	SLU 4	0	-0.13	11.29	0	0	0
216	SLU 5	0	-0.14	11.19	0	0	0
216	SLU 6	-0.01	-0.13	11.46	0	0	0
216	SLU 7	0	-0.13	11.45	0	0	0
216	SLU 8	-0.01	-0.13	11.37	0	0	0
216	SLU 9	0	-0.14	11.36	0	0	0
216	SLU 10	0	-0.13	12.34	0	0	0
216	SLU 11	-0.01	-0.12	12.62	0	0	0
216	SLU 12	-0.01	-0.13	12.61	0	0	0
216	SLU 13	-0.01	-0.13	12.51	0	0	0
216	SLU 14	-0.01	-0.13	12.78	0	0	0
216	SLU 15	-0.01	-0.13	12.78	0	0	0
216	SLU 16	-0.01	-0.13	12.69	0	0	0
216	SLU 17	-0.01	-0.13	12.68	0	0	0
216	SLU 18	-0.01	-0.12	12.92	0	0	0
216	SLU 19	-0.01	-0.13	12.91	0	0	0
216	SLU 20	-0.01	-0.12	13.09	0	0	0
216	SLU 21	-0.01	-0.13	13.08	0	0	0
216	SLU 22	0	-0.12	12.2	0	0	0
216	SLU 23	0	-0.12	12.19	0	0	0
216	SLU 24	0	-0.12	12.46	0	0	0
216	SLU 25	0	-0.12	12.45	0	0	0
216	SLU 26	0	-0.13	12.36	0	0	0
216	SLU 27	0	-0.12	12.63	0	0	0
216	SLU 28	0	-0.12	12.62	0	0	0
216	SLU 29	0	-0.12	12.53	0	0	0
216	SLU 30	0	-0.12	12.53	0	0	0
216	SLU 31	0	-0.12	13.51	0	0	0
216	SLU 32	-0.01	-0.11	13.78	0	0	0
216	SLU 33	-0.01	-0.12	13.78	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
216	SLU 34	0	-0.12	13.68	0	0	0
216	SLU 35	-0.01	-0.11	13.95	0	0	0
216	SLU 36	-0.01	-0.12	13.95	0	0	0
216	SLU 37	-0.01	-0.12	13.86	0	0	0
216	SLU 38	-0.01	-0.12	13.85	0	0	0
216	SLU 39	-0.01	-0.11	14.09	0	0	0
216	SLU 40	-0.01	-0.11	14.08	0	0	0
216	SLU 41	-0.01	-0.11	14.26	0	0	0
216	SLU 42	-0.01	-0.12	14.25	0	0	0
216	SLU 43	-0.01	-0.17	13.94	0	0	0
216	SLU 44	0	-0.18	13.93	0	0	0
216	SLU 45	-0.01	-0.17	14.2	0	0	0
216	SLU 46	0	-0.17	14.19	0	0	0
216	SLU 47	0	-0.18	14.09	0	0	0
216	SLU 48	-0.01	-0.17	14.37	0	0	0
216	SLU 49	0	-0.18	14.36	0	0	0
216	SLU 50	-0.01	-0.17	14.27	0	0	0
216	SLU 51	0	-0.18	14.27	0	0	0
216	SLU 52	-0.01	-0.17	15.25	0	0	0
216	SLU 53	-0.01	-0.17	15.52	0	0	0
216	SLU 54	-0.01	-0.17	15.52	0	0	0
216	SLU 55	-0.01	-0.18	15.42	0	0	0
216	SLU 56	-0.01	-0.17	15.69	0	0	0
216	SLU 57	-0.01	-0.17	15.68	0	0	0
216	SLU 58	-0.01	-0.17	15.6	0	0	0
216	SLU 59	-0.01	-0.17	15.59	0	0	0
216	SLU 60	-0.02	-0.16	15.83	0	0	0
216	SLU 61	-0.01	-0.17	15.82	0	0	0
216	SLU 62	-0.02	-0.17	16	0	0	0
216	SLU 63	-0.01	-0.17	15.99	0	0	0
216	SLU 64	-0.01	-0.16	15.11	0	0	0
216	SLU 65	0	-0.17	15.1	0	0	0
216	SLU 66	-0.01	-0.16	15.37	0	0	0
216	SLU 67	0	-0.16	15.36	0	0	0
216	SLU 68	0	-0.17	15.26	0	0	0
216	SLU 69	-0.01	-0.16	15.54	0	0	0
216	SLU 70	0	-0.17	15.53	0	0	0
216	SLU 71	-0.01	-0.16	15.44	0	0	0
216	SLU 72	0	-0.17	15.44	0	0	0
216	SLU 73	0	-0.16	16.42	0	0	0
216	SLU 74	-0.01	-0.15	16.69	0	0	0
216	SLU 75	-0.01	-0.16	16.69	0	0	0
216	SLU 76	-0.01	-0.16	16.59	0	0	0
216	SLU 77	-0.01	-0.16	16.86	0	0	0
216	SLU 78	-0.01	-0.16	16.85	0	0	0
216	SLU 79	-0.01	-0.16	16.77	0	0	0
216	SLU 80	-0.01	-0.16	16.76	0	0	0
216	SLU 81	-0.01	-0.15	17	0	0	0
216	SLU 82	-0.01	-0.16	16.99	0	0	0
216	SLU 83	-0.01	-0.15	17.16	0	0	0
216	SLU 84	-0.01	-0.16	17.16	0	0	0
216	SLE RA 1	0	-0.12	11.36	0	0	0
216	SLE RA 2	0	-0.13	11.36	0	0	0
216	SLE RA 3	0	-0.12	11.54	0	0	0
216	SLE RA 4	0	-0.13	11.53	0	0	0
216	SLE RA 5	0	-0.13	11.47	0	0	0
216	SLE RA 6	-0.01	-0.13	11.65	0	0	0
216	SLE RA 7	0	-0.13	11.65	0	0	0
216	SLE RA 8	-0.01	-0.13	11.59	0	0	0
216	SLE RA 9	0	-0.13	11.58	0	0	0
216	SLE RA 10	0	-0.13	12.24	0	0	0
216	SLE RA 11	-0.01	-0.12	12.42	0	0	0
216	SLE RA 12	-0.01	-0.12	12.42	0	0	0
216	SLE RA 13	0	-0.13	12.35	0	0	0
216	SLE RA 14	-0.01	-0.12	12.53	0	0	0
216	SLE RA 15	-0.01	-0.13	12.53	0	0	0
216	SLE RA 16	-0.01	-0.12	12.47	0	0	0
216	SLE RA 17	-0.01	-0.13	12.47	0	0	0
216	SLE RA 18	-0.01	-0.12	12.62	0	0	0
216	SLE RA 19	-0.01	-0.12	12.62	0	0	0
216	SLE RA 20	-0.01	-0.12	12.74	0	0	0
216	SLE RA 21	-0.01	-0.12	12.73	0	0	0
216	SLE FR 1	0	-0.12	11.36	0	0	0
216	SLE FR 2	0	-0.13	11.36	0	0	0
216	SLE FR 3	0	-0.12	11.41	0	0	0
216	SLE FR 4	-0.01	-0.12	11.74	0	0	0
216	SLE FR 5	-0.01	-0.12	11.79	0	0	0
216	SLE FR 6	-0.01	-0.12	11.99	0	0	0
216	SLE QP 1	0	-0.12	11.36	0	0	0
216	SLE QP 2	-0.01	-0.12	11.74	0	0	0
216	SLD 1	1	0.09	11.45	0	0	0
216	SLD 2	1.11	0.13	11.5	0	0	0
216	SLD 3	0.98	-0.16	11.15	0	0	0
216	SLD 4	1.09	-0.13	11.2	0	0	0
216	SLD 5	0.31	0.33	12.11	0	0	0
216	SLD 6	0.38	0.35	12.14	0	0	0
216	SLD 7	0.24	-0.53	11.09	0	0	0
216	SLD 8	0.31	-0.51	11.12	0	0	0
216	SLD 9	-0.33	0.27	12.36	0	0	0
216	SLD 10	-0.25	0.29	12.39	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
216	SLD 11	-0.39	-0.6	11.34	0	0	0
216	SLD 12	-0.32	-0.57	11.37	0	0	0
216	SLD 13	-1.1	-0.12	12.28	0	0	0
216	SLD 14	-0.99	-0.08	12.34	0	0	0
216	SLD 15	-1.12	-0.37	11.98	0	0	0
216	SLD 16	-1.01	-0.34	12.03	0	0	0
216	SLV 1	2.35	0.38	11.05	0	0	0
216	SLV 2	2.61	0.46	11.17	0	0	0
216	SLV 3	2.31	-0.21	10.36	0	0	0
216	SLV 4	2.56	-0.13	10.48	0	0	0
216	SLV 5	0.72	0.9	12.56	0	0	0
216	SLV 6	0.89	0.95	12.64	0	0	0
216	SLV 7	0.57	-1.05	10.26	0	0	0
216	SLV 8	0.74	-1	10.34	0	0	0
216	SLV 9	-0.75	0.76	13.15	0	0	0
216	SLV 10	-0.59	0.81	13.22	0	0	0
216	SLV 11	-0.9	-1.2	10.84	0	0	0
216	SLV 12	-0.74	-1.15	10.92	0	0	0
216	SLV 13	-2.57	-0.11	13	0	0	0
216	SLV 14	-2.32	-0.04	13.12	0	0	0
216	SLV 15	-2.62	-0.7	12.31	0	0	0
216	SLV 16	-2.36	-0.62	12.43	0	0	0
217	SLU 1	0	-0.14	11.01	0	0	0
217	SLU 2	0	-0.15	11	0	0	0
217	SLU 3	0	-0.15	11.27	0	0	0
217	SLU 4	0	-0.15	11.27	0	0	0
217	SLU 5	0	-0.15	11.17	0	0	0
217	SLU 6	0	-0.15	11.44	0	0	0
217	SLU 7	0	-0.15	11.43	0	0	0
217	SLU 8	0	-0.15	11.35	0	0	0
217	SLU 9	0	-0.15	11.34	0	0	0
217	SLU 10	0	-0.15	12.32	0	0	0
217	SLU 11	-0.01	-0.14	12.59	0	0	0
217	SLU 12	0	-0.15	12.58	0	0	0
217	SLU 13	0	-0.15	12.48	0	0	0
217	SLU 14	-0.01	-0.15	12.76	0	0	0
217	SLU 15	-0.01	-0.15	12.75	0	0	0
217	SLU 16	-0.01	-0.15	12.66	0	0	0
217	SLU 17	-0.01	-0.15	12.65	0	0	0
217	SLU 18	-0.01	-0.14	12.89	0	0	0
217	SLU 19	-0.01	-0.15	12.88	0	0	0
217	SLU 20	-0.01	-0.14	13.06	0	0	0
217	SLU 21	-0.01	-0.15	13.05	0	0	0
217	SLU 22	0	-0.13	12.18	0	0	0
217	SLU 23	0.01	-0.14	12.17	0	0	0
217	SLU 24	0	-0.14	12.44	0	0	0
217	SLU 25	0	-0.14	12.44	0	0	0
217	SLU 26	0	-0.14	12.34	0	0	0
217	SLU 27	0	-0.14	12.61	0	0	0
217	SLU 28	0	-0.14	12.6	0	0	0
217	SLU 29	0	-0.14	12.52	0	0	0
217	SLU 30	0	-0.14	12.51	0	0	0
217	SLU 31	0	-0.14	13.48	0	0	0
217	SLU 32	-0.01	-0.13	13.76	0	0	0
217	SLU 33	0	-0.14	13.75	0	0	0
217	SLU 34	0	-0.14	13.65	0	0	0
217	SLU 35	-0.01	-0.14	13.92	0	0	0
217	SLU 36	0	-0.14	13.92	0	0	0
217	SLU 37	-0.01	-0.14	13.83	0	0	0
217	SLU 38	0	-0.14	13.82	0	0	0
217	SLU 39	-0.01	-0.13	14.06	0	0	0
217	SLU 40	0	-0.14	14.05	0	0	0
217	SLU 41	-0.01	-0.13	14.23	0	0	0
217	SLU 42	-0.01	-0.14	14.22	0	0	0
217	SLU 43	0	-0.19	13.91	0	0	0
217	SLU 44	0	-0.2	13.9	0	0	0
217	SLU 45	0	-0.19	14.18	0	0	0
217	SLU 46	0	-0.2	14.17	0	0	0
217	SLU 47	0	-0.2	14.07	0	0	0
217	SLU 48	0	-0.19	14.34	0	0	0
217	SLU 49	0	-0.2	14.34	0	0	0
217	SLU 50	-0.01	-0.2	14.25	0	0	0
217	SLU 51	0	-0.2	14.24	0	0	0
217	SLU 52	0	-0.2	15.22	0	0	0
217	SLU 53	-0.01	-0.19	15.49	0	0	0
217	SLU 54	-0.01	-0.19	15.48	0	0	0
217	SLU 55	0	-0.2	15.39	0	0	0
217	SLU 56	-0.01	-0.19	15.66	0	0	0
217	SLU 57	-0.01	-0.2	15.65	0	0	0
217	SLU 58	-0.01	-0.19	15.56	0	0	0
217	SLU 59	-0.01	-0.2	15.56	0	0	0
217	SLU 60	-0.01	-0.19	15.79	0	0	0
217	SLU 61	-0.01	-0.19	15.79	0	0	0
217	SLU 62	-0.01	-0.19	15.96	0	0	0
217	SLU 63	-0.01	-0.2	15.95	0	0	0
217	SLU 64	0	-0.18	15.08	0	0	0
217	SLU 65	0	-0.19	15.07	0	0	0
217	SLU 66	0	-0.18	15.34	0	0	0
217	SLU 67	0	-0.19	15.34	0	0	0
217	SLU 68	0	-0.19	15.24	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
217	SLU 69	0	-0.19	15.51	0	0	0
217	SLU 70	0	-0.19	15.51	0	0	0
217	SLU 71	0	-0.19	15.42	0	0	0
217	SLU 72	0	-0.19	15.41	0	0	0
217	SLU 73	0	-0.19	16.39	0	0	0
217	SLU 74	-0.01	-0.18	16.66	0	0	0
217	SLU 75	0	-0.19	16.65	0	0	0
217	SLU 76	0	-0.19	16.55	0	0	0
217	SLU 77	-0.01	-0.18	16.83	0	0	0
217	SLU 78	-0.01	-0.19	16.82	0	0	0
217	SLU 79	-0.01	-0.18	16.73	0	0	0
217	SLU 80	-0.01	-0.19	16.73	0	0	0
217	SLU 81	-0.01	-0.18	16.96	0	0	0
217	SLU 82	-0.01	-0.18	16.95	0	0	0
217	SLU 83	-0.01	-0.18	17.13	0	0	0
217	SLU 84	-0.01	-0.19	17.12	0	0	0
217	SLE RA 1	0	-0.14	11.35	0	0	0
217	SLE RA 2	0	-0.15	11.34	0	0	0
217	SLE RA 3	0	-0.14	11.52	0	0	0
217	SLE RA 4	0	-0.15	11.52	0	0	0
217	SLE RA 5	0	-0.15	11.45	0	0	0
217	SLE RA 6	0	-0.14	11.63	0	0	0
217	SLE RA 7	0	-0.15	11.63	0	0	0
217	SLE RA 8	0	-0.15	11.57	0	0	0
217	SLE RA 9	0	-0.15	11.56	0	0	0
217	SLE RA 10	0	-0.15	12.21	0	0	0
217	SLE RA 11	-0.01	-0.14	12.4	0	0	0
217	SLE RA 12	0	-0.14	12.39	0	0	0
217	SLE RA 13	0	-0.15	12.33	0	0	0
217	SLE RA 14	-0.01	-0.14	12.51	0	0	0
217	SLE RA 15	0	-0.15	12.5	0	0	0
217	SLE RA 16	-0.01	-0.14	12.44	0	0	0
217	SLE RA 17	0	-0.15	12.44	0	0	0
217	SLE RA 18	-0.01	-0.14	12.6	0	0	0
217	SLE RA 19	0	-0.14	12.59	0	0	0
217	SLE RA 20	-0.01	-0.14	12.71	0	0	0
217	SLE RA 21	-0.01	-0.14	12.7	0	0	0
217	SLE FR 1	0	-0.14	11.35	0	0	0
217	SLE FR 2	0	-0.14	11.34	0	0	0
217	SLE FR 3	0	-0.14	11.39	0	0	0
217	SLE FR 4	0	-0.14	11.72	0	0	0
217	SLE FR 5	0	-0.14	11.77	0	0	0
217	SLE FR 6	0	-0.14	11.97	0	0	0
217	SLE QP 1	0	-0.14	11.35	0	0	0
217	SLE QP 2	0	-0.14	11.72	0	0	0
217	SLD 1	1	0.08	11.33	0	0	0
217	SLD 2	1.1	0.12	11.39	0	0	0
217	SLD 3	0.98	-0.17	11.03	0	0	0
217	SLD 4	1.08	-0.13	11.08	0	0	0
217	SLD 5	0.31	0.31	12.05	0	0	0
217	SLD 6	0.38	0.33	12.09	0	0	0
217	SLD 7	0.24	-0.54	11.04	0	0	0
217	SLD 8	0.31	-0.52	11.08	0	0	0
217	SLD 9	-0.32	0.24	12.36	0	0	0
217	SLD 10	-0.25	0.26	12.4	0	0	0
217	SLD 11	-0.38	-0.61	11.35	0	0	0
217	SLD 12	-0.31	-0.59	11.39	0	0	0
217	SLD 13	-1.09	-0.15	12.36	0	0	0
217	SLD 14	-0.98	-0.11	12.41	0	0	0
217	SLD 15	-1.11	-0.41	12.06	0	0	0
217	SLD 16	-1	-0.37	12.11	0	0	0
217	SLV 1	2.33	0.38	10.8	0	0	0
217	SLV 2	2.59	0.47	10.93	0	0	0
217	SLV 3	2.29	-0.2	10.11	0	0	0
217	SLV 4	2.54	-0.11	10.24	0	0	0
217	SLV 5	0.72	0.87	12.46	0	0	0
217	SLV 6	0.89	0.93	12.55	0	0	0
217	SLV 7	0.57	-1.05	10.17	0	0	0
217	SLV 8	0.74	-0.99	10.26	0	0	0
217	SLV 9	-0.74	0.71	13.19	0	0	0
217	SLV 10	-0.58	0.77	13.27	0	0	0
217	SLV 11	-0.89	-1.21	10.89	0	0	0
217	SLV 12	-0.73	-1.16	10.98	0	0	0
217	SLV 13	-2.55	-0.17	13.2	0	0	0
217	SLV 14	-2.3	-0.08	13.33	0	0	0
217	SLV 15	-2.59	-0.75	12.51	0	0	0
217	SLV 16	-2.34	-0.66	12.64	0	0	0
218	SLU 1	0	-0.16	10.9	0	0	0
218	SLU 2	0.01	-0.16	10.89	0	0	0
218	SLU 3	0	-0.16	11.16	0	0	0
218	SLU 4	0	-0.16	11.16	0	0	0
218	SLU 5	0.01	-0.17	11.06	0	0	0
218	SLU 6	0	-0.16	11.33	0	0	0
218	SLU 7	0	-0.17	11.32	0	0	0
218	SLU 8	0	-0.16	11.23	0	0	0
218	SLU 9	0	-0.17	11.23	0	0	0
218	SLU 10	0	-0.17	12.19	0	0	0
218	SLU 11	-0.01	-0.16	12.46	0	0	0
218	SLU 12	0	-0.16	12.45	0	0	0
218	SLU 13	0	-0.17	12.35	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLU 14	-0.01	-0.16	12.62	0	0	0
218	SLU 15	0	-0.17	12.62	0	0	0
218	SLU 16	-0.01	-0.16	12.53	0	0	0
218	SLU 17	0	-0.17	12.52	0	0	0
218	SLU 18	-0.01	-0.16	12.75	0	0	0
218	SLU 19	0	-0.16	12.75	0	0	0
218	SLU 20	-0.01	-0.16	12.92	0	0	0
218	SLU 21	0	-0.17	12.91	0	0	0
218	SLU 22	0	-0.15	12.06	0	0	0
218	SLU 23	0.01	-0.16	12.05	0	0	0
218	SLU 24	0	-0.15	12.32	0	0	0
218	SLU 25	0.01	-0.16	12.32	0	0	0
218	SLU 26	0.01	-0.16	12.22	0	0	0
218	SLU 27	0	-0.16	12.49	0	0	0
218	SLU 28	0	-0.16	12.48	0	0	0
218	SLU 29	0	-0.16	12.39	0	0	0
218	SLU 30	0	-0.16	12.39	0	0	0
218	SLU 31	0	-0.16	13.35	0	0	0
218	SLU 32	0	-0.15	13.62	0	0	0
218	SLU 33	0	-0.16	13.61	0	0	0
218	SLU 34	0	-0.16	13.51	0	0	0
218	SLU 35	0	-0.16	13.78	0	0	0
218	SLU 36	0	-0.16	13.78	0	0	0
218	SLU 37	0	-0.16	13.69	0	0	0
218	SLU 38	0	-0.16	13.68	0	0	0
218	SLU 39	-0.01	-0.15	13.91	0	0	0
218	SLU 40	0	-0.16	13.91	0	0	0
218	SLU 41	-0.01	-0.15	14.08	0	0	0
218	SLU 42	0	-0.16	14.07	0	0	0
218	SLU 43	0	-0.21	13.78	0	0	0
218	SLU 44	0.01	-0.21	13.77	0	0	0
218	SLU 45	0	-0.21	14.03	0	0	0
218	SLU 46	0	-0.21	14.03	0	0	0
218	SLU 47	0.01	-0.22	13.93	0	0	0
218	SLU 48	0	-0.21	14.2	0	0	0
218	SLU 49	0	-0.22	14.19	0	0	0
218	SLU 50	0	-0.21	14.11	0	0	0
218	SLU 51	0	-0.22	14.1	0	0	0
218	SLU 52	0	-0.22	15.06	0	0	0
218	SLU 53	-0.01	-0.21	15.33	0	0	0
218	SLU 54	0	-0.21	15.32	0	0	0
218	SLU 55	0	-0.22	15.23	0	0	0
218	SLU 56	-0.01	-0.21	15.5	0	0	0
218	SLU 57	0	-0.22	15.49	0	0	0
218	SLU 58	-0.01	-0.21	15.4	0	0	0
218	SLU 59	0	-0.22	15.4	0	0	0
218	SLU 60	-0.01	-0.21	15.63	0	0	0
218	SLU 61	0	-0.21	15.62	0	0	0
218	SLU 62	-0.01	-0.21	15.79	0	0	0
218	SLU 63	-0.01	-0.22	15.79	0	0	0
218	SLU 64	0	-0.2	14.94	0	0	0
218	SLU 65	0.01	-0.21	14.93	0	0	0
218	SLU 66	0	-0.2	15.19	0	0	0
218	SLU 67	0	-0.21	15.19	0	0	0
218	SLU 68	0.01	-0.21	15.09	0	0	0
218	SLU 69	0	-0.21	15.36	0	0	0
218	SLU 70	0	-0.21	15.35	0	0	0
218	SLU 71	0	-0.21	15.27	0	0	0
218	SLU 72	0	-0.21	15.26	0	0	0
218	SLU 73	0	-0.21	16.22	0	0	0
218	SLU 74	0	-0.2	16.49	0	0	0
218	SLU 75	0	-0.21	16.48	0	0	0
218	SLU 76	0	-0.21	16.39	0	0	0
218	SLU 77	-0.01	-0.21	16.66	0	0	0
218	SLU 78	0	-0.21	16.65	0	0	0
218	SLU 79	-0.01	-0.21	16.56	0	0	0
218	SLU 80	0	-0.21	16.56	0	0	0
218	SLU 81	-0.01	-0.2	16.79	0	0	0
218	SLU 82	0	-0.21	16.78	0	0	0
218	SLU 83	-0.01	-0.2	16.95	0	0	0
218	SLU 84	0	-0.21	16.95	0	0	0
218	SLE RA 1	0	-0.16	11.23	0	0	0
218	SLE RA 2	0	-0.16	11.23	0	0	0
218	SLE RA 3	0	-0.16	11.41	0	0	0
218	SLE RA 4	0	-0.16	11.4	0	0	0
218	SLE RA 5	0	-0.16	11.34	0	0	0
218	SLE RA 6	0	-0.16	11.52	0	0	0
218	SLE RA 7	0	-0.16	11.51	0	0	0
218	SLE RA 8	0	-0.16	11.45	0	0	0
218	SLE RA 9	0	-0.16	11.45	0	0	0
218	SLE RA 10	0	-0.16	12.09	0	0	0
218	SLE RA 11	0	-0.16	12.27	0	0	0
218	SLE RA 12	0	-0.16	12.27	0	0	0
218	SLE RA 13	0	-0.16	12.2	0	0	0
218	SLE RA 14	0	-0.16	12.38	0	0	0
218	SLE RA 15	0	-0.16	12.38	0	0	0
218	SLE RA 16	0	-0.16	12.32	0	0	0
218	SLE RA 17	0	-0.16	12.32	0	0	0
218	SLE RA 18	0	-0.16	12.47	0	0	0
218	SLE RA 19	0	-0.16	12.46	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
218	SLE RA 20	0	-0.16	12.58	0	0	0
218	SLE RA 21	0	-0.16	12.58	0	0	0
218	SLE FR 1	0	-0.16	11.23	0	0	0
218	SLE FR 2	0	-0.16	11.23	0	0	0
218	SLE FR 3	0	-0.16	11.28	0	0	0
218	SLE FR 4	0	-0.16	11.6	0	0	0
218	SLE FR 5	0	-0.16	11.65	0	0	0
218	SLE FR 6	0	-0.16	11.85	0	0	0
218	SLE QP 1	0	-0.16	11.23	0	0	0
218	SLE QP 2	0	-0.16	11.6	0	0	0
218	SLD 1	0.98	0.07	11.12	0	0	0
218	SLD 2	1.08	0.11	11.18	0	0	0
218	SLD 3	0.96	-0.17	10.82	0	0	0
218	SLD 4	1.06	-0.13	10.88	0	0	0
218	SLD 5	0.3	0.28	11.9	0	0	0
218	SLD 6	0.37	0.31	11.94	0	0	0
218	SLD 7	0.24	-0.54	10.9	0	0	0
218	SLD 8	0.31	-0.52	10.94	0	0	0
218	SLD 9	-0.31	0.2	12.27	0	0	0
218	SLD 10	-0.24	0.23	12.31	0	0	0
218	SLD 11	-0.37	-0.62	11.27	0	0	0
218	SLD 12	-0.3	-0.59	11.31	0	0	0
218	SLD 13	-1.07	-0.18	12.33	0	0	0
218	SLD 14	-0.96	-0.14	12.39	0	0	0
218	SLD 15	-1.08	-0.43	12.03	0	0	0
218	SLD 16	-0.98	-0.39	12.09	0	0	0
218	SLV 1	2.28	0.37	10.46	0	0	0
218	SLV 2	2.53	0.47	10.59	0	0	0
218	SLV 3	2.24	-0.19	9.78	0	0	0
218	SLV 4	2.49	-0.09	9.91	0	0	0
218	SLV 5	0.71	0.84	12.27	0	0	0
218	SLV 6	0.87	0.9	12.35	0	0	0
218	SLV 7	0.56	-1.03	10	0	0	0
218	SLV 8	0.72	-0.97	10.09	0	0	0
218	SLV 9	-0.72	0.66	13.12	0	0	0
218	SLV 10	-0.56	0.72	13.21	0	0	0
218	SLV 11	-0.87	-1.21	10.85	0	0	0
218	SLV 12	-0.71	-1.15	10.94	0	0	0
218	SLV 13	-2.49	-0.22	13.3	0	0	0
218	SLV 14	-2.24	-0.12	13.43	0	0	0
218	SLV 15	-2.53	-0.78	12.62	0	0	0
218	SLV 16	-2.29	-0.69	12.75	0	0	0
219	SLU 1	0	-0.17	10.56	0	0	0
219	SLU 2	0.01	-0.17	10.55	0	0	0
219	SLU 3	0	-0.17	10.81	0	0	0
219	SLU 4	0.01	-0.17	10.8	0	0	0
219	SLU 5	0.01	-0.18	10.71	0	0	0
219	SLU 6	0	-0.17	10.97	0	0	0
219	SLU 7	0	-0.18	10.96	0	0	0
219	SLU 8	0	-0.17	10.88	0	0	0
219	SLU 9	0	-0.18	10.87	0	0	0
219	SLU 10	0	-0.18	11.8	0	0	0
219	SLU 11	0	-0.17	12.06	0	0	0
219	SLU 12	0	-0.18	12.05	0	0	0
219	SLU 13	0	-0.18	11.96	0	0	0
219	SLU 14	0	-0.17	12.22	0	0	0
219	SLU 15	0	-0.18	12.21	0	0	0
219	SLU 16	0	-0.18	12.13	0	0	0
219	SLU 17	0	-0.18	12.12	0	0	0
219	SLU 18	0	-0.17	12.35	0	0	0
219	SLU 19	0	-0.17	12.34	0	0	0
219	SLU 20	-0.01	-0.17	12.51	0	0	0
219	SLU 21	0	-0.18	12.5	0	0	0
219	SLU 22	0	-0.16	11.68	0	0	0
219	SLU 23	0.01	-0.17	11.67	0	0	0
219	SLU 24	0	-0.16	11.93	0	0	0
219	SLU 25	0.01	-0.17	11.93	0	0	0
219	SLU 26	0.01	-0.17	11.83	0	0	0
219	SLU 27	0	-0.17	12.09	0	0	0
219	SLU 28	0.01	-0.17	12.09	0	0	0
219	SLU 29	0	-0.17	12	0	0	0
219	SLU 30	0.01	-0.17	12	0	0	0
219	SLU 31	0.01	-0.17	12.93	0	0	0
219	SLU 32	0	-0.17	13.19	0	0	0
219	SLU 33	0	-0.17	13.18	0	0	0
219	SLU 34	0	-0.17	13.09	0	0	0
219	SLU 35	0	-0.17	13.35	0	0	0
219	SLU 36	0	-0.17	13.34	0	0	0
219	SLU 37	0	-0.17	13.26	0	0	0
219	SLU 38	0	-0.17	13.25	0	0	0
219	SLU 39	0	-0.17	13.47	0	0	0
219	SLU 40	0	-0.17	13.47	0	0	0
219	SLU 41	0	-0.17	13.63	0	0	0
219	SLU 42	0	-0.17	13.63	0	0	0
219	SLU 43	0	-0.22	13.34	0	0	0
219	SLU 44	0.01	-0.22	13.33	0	0	0
219	SLU 45	0	-0.22	13.59	0	0	0
219	SLU 46	0.01	-0.22	13.58	0	0	0
219	SLU 47	0.01	-0.23	13.49	0	0	0
219	SLU 48	0	-0.22	13.75	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLU 49	0	-0.23	13.74	0	0	0
219	SLU 50	0	-0.23	13.66	0	0	0
219	SLU 51	0	-0.23	13.65	0	0	0
219	SLU 52	0	-0.23	14.58	0	0	0
219	SLU 53	0	-0.22	14.84	0	0	0
219	SLU 54	0	-0.23	14.83	0	0	0
219	SLU 55	0	-0.23	14.74	0	0	0
219	SLU 56	0	-0.23	15	0	0	0
219	SLU 57	0	-0.23	14.99	0	0	0
219	SLU 58	0	-0.23	14.91	0	0	0
219	SLU 59	0	-0.23	14.9	0	0	0
219	SLU 60	0	-0.22	15.13	0	0	0
219	SLU 61	0	-0.23	15.12	0	0	0
219	SLU 62	-0.01	-0.23	15.29	0	0	0
219	SLU 63	0	-0.23	15.28	0	0	0
219	SLU 64	0	-0.21	14.46	0	0	0
219	SLU 65	0.01	-0.22	14.45	0	0	0
219	SLU 66	0	-0.22	14.71	0	0	0
219	SLU 67	0.01	-0.22	14.71	0	0	0
219	SLU 68	0.01	-0.22	14.61	0	0	0
219	SLU 69	0	-0.22	14.87	0	0	0
219	SLU 70	0.01	-0.22	14.87	0	0	0
219	SLU 71	0	-0.22	14.78	0	0	0
219	SLU 72	0.01	-0.22	14.78	0	0	0
219	SLU 73	0.01	-0.22	15.71	0	0	0
219	SLU 74	0	-0.22	15.97	0	0	0
219	SLU 75	0	-0.22	15.96	0	0	0
219	SLU 76	0	-0.23	15.87	0	0	0
219	SLU 77	0	-0.22	16.13	0	0	0
219	SLU 78	0	-0.22	16.12	0	0	0
219	SLU 79	0	-0.22	16.04	0	0	0
219	SLU 80	0	-0.23	16.03	0	0	0
219	SLU 81	0	-0.22	16.25	0	0	0
219	SLU 82	0	-0.22	16.25	0	0	0
219	SLU 83	0	-0.22	16.41	0	0	0
219	SLU 84	0	-0.22	16.41	0	0	0
219	SLE RA 1	0	-0.17	10.88	0	0	0
219	SLE RA 2	0.01	-0.17	10.87	0	0	0
219	SLE RA 3	0	-0.17	11.05	0	0	0
219	SLE RA 4	0.01	-0.17	11.04	0	0	0
219	SLE RA 5	0.01	-0.17	10.98	0	0	0
219	SLE RA 6	0	-0.17	11.15	0	0	0
219	SLE RA 7	0	-0.17	11.15	0	0	0
219	SLE RA 8	0	-0.17	11.09	0	0	0
219	SLE RA 9	0	-0.17	11.09	0	0	0
219	SLE RA 10	0	-0.17	11.71	0	0	0
219	SLE RA 11	0	-0.17	11.88	0	0	0
219	SLE RA 12	0	-0.17	11.88	0	0	0
219	SLE RA 13	0	-0.17	11.81	0	0	0
219	SLE RA 14	0	-0.17	11.99	0	0	0
219	SLE RA 15	0	-0.17	11.98	0	0	0
219	SLE RA 16	0	-0.17	11.93	0	0	0
219	SLE RA 17	0	-0.17	11.92	0	0	0
219	SLE RA 18	0	-0.17	12.07	0	0	0
219	SLE RA 19	0	-0.17	12.07	0	0	0
219	SLE RA 20	0	-0.17	12.18	0	0	0
219	SLE RA 21	0	-0.17	12.17	0	0	0
219	SLE FR 1	0	-0.17	10.88	0	0	0
219	SLE FR 2	0	-0.17	10.88	0	0	0
219	SLE FR 3	0	-0.17	10.92	0	0	0
219	SLE FR 4	0	-0.17	11.23	0	0	0
219	SLE FR 5	0	-0.17	11.28	0	0	0
219	SLE FR 6	0	-0.17	11.47	0	0	0
219	SLE QP 1	0	-0.17	10.88	0	0	0
219	SLE QP 2	0	-0.17	11.24	0	0	0
219	SLD 1	0.93	0.06	10.67	0	0	0
219	SLD 2	1.03	0.1	10.73	0	0	0
219	SLD 3	0.91	-0.17	10.38	0	0	0
219	SLD 4	1.02	-0.13	10.44	0	0	0
219	SLD 5	0.29	0.25	11.5	0	0	0
219	SLD 6	0.36	0.28	11.54	0	0	0
219	SLD 7	0.23	-0.53	10.53	0	0	0
219	SLD 8	0.3	-0.5	10.57	0	0	0
219	SLD 9	-0.29	0.17	11.9	0	0	0
219	SLD 10	-0.23	0.2	11.94	0	0	0
219	SLD 11	-0.35	-0.61	10.94	0	0	0
219	SLD 12	-0.29	-0.58	10.98	0	0	0
219	SLD 13	-1.01	-0.2	12.03	0	0	0
219	SLD 14	-0.91	-0.16	12.09	0	0	0
219	SLD 15	-1.03	-0.44	11.74	0	0	0
219	SLD 16	-0.93	-0.39	11.8	0	0	0
219	SLV 1	2.18	0.36	9.9	0	0	0
219	SLV 2	2.42	0.46	10.04	0	0	0
219	SLV 3	2.14	-0.17	9.24	0	0	0
219	SLV 4	2.37	-0.07	9.38	0	0	0
219	SLV 5	0.68	0.78	11.81	0	0	0
219	SLV 6	0.83	0.84	11.9	0	0	0
219	SLV 7	0.54	-0.99	9.62	0	0	0
219	SLV 8	0.69	-0.93	9.71	0	0	0
219	SLV 9	-0.69	0.59	12.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLV 10	-0.53	0.66	12.86	0	0	0
219	SLV 11	-0.83	-1.18	10.57	0	0	0
219	SLV 12	-0.67	-1.11	10.66	0	0	0
219	SLV 13	-2.37	-0.26	13.09	0	0	0
219	SLV 14	-2.13	-0.16	13.23	0	0	0
219	SLV 15	-2.41	-0.79	12.43	0	0	0
219	SLV 16	-2.18	-0.69	12.57	0	0	0
220	SLU 1	0	-0.18	10.29	0	0	0
220	SLU 2	0.01	-0.18	10.28	0	0	0
220	SLU 3	0	-0.18	10.53	0	0	0
220	SLU 4	0.01	-0.18	10.53	0	0	0
220	SLU 5	0.01	-0.19	10.44	0	0	0
220	SLU 6	0	-0.18	10.69	0	0	0
220	SLU 7	0.01	-0.19	10.69	0	0	0
220	SLU 8	0	-0.18	10.6	0	0	0
220	SLU 9	0	-0.19	10.6	0	0	0
220	SLU 10	0	-0.19	11.5	0	0	0
220	SLU 11	0	-0.18	11.75	0	0	0
220	SLU 12	0	-0.19	11.75	0	0	0
220	SLU 13	0	-0.19	11.66	0	0	0
220	SLU 14	0	-0.19	11.91	0	0	0
220	SLU 15	0	-0.19	11.9	0	0	0
220	SLU 16	0	-0.19	11.82	0	0	0
220	SLU 17	0	-0.19	11.82	0	0	0
220	SLU 18	0	-0.18	12.03	0	0	0
220	SLU 19	0	-0.19	12.03	0	0	0
220	SLU 20	0	-0.19	12.19	0	0	0
220	SLU 21	0	-0.19	12.18	0	0	0
220	SLU 22	0	-0.17	11.39	0	0	0
220	SLU 23	0.01	-0.18	11.38	0	0	0
220	SLU 24	0	-0.18	11.64	0	0	0
220	SLU 25	0.01	-0.18	11.63	0	0	0
220	SLU 26	0.01	-0.18	11.54	0	0	0
220	SLU 27	0	-0.18	11.79	0	0	0
220	SLU 28	0.01	-0.18	11.79	0	0	0
220	SLU 29	0	-0.18	11.71	0	0	0
220	SLU 30	0.01	-0.18	11.7	0	0	0
220	SLU 31	0.01	-0.18	12.6	0	0	0
220	SLU 32	0	-0.18	12.86	0	0	0
220	SLU 33	0	-0.18	12.85	0	0	0
220	SLU 34	0.01	-0.19	12.76	0	0	0
220	SLU 35	0	-0.18	13.01	0	0	0
220	SLU 36	0	-0.19	13.01	0	0	0
220	SLU 37	0	-0.18	12.92	0	0	0
220	SLU 38	0	-0.19	12.92	0	0	0
220	SLU 39	0	-0.18	13.13	0	0	0
220	SLU 40	0	-0.18	13.13	0	0	0
220	SLU 41	0	-0.18	13.29	0	0	0
220	SLU 42	0	-0.19	13.28	0	0	0
220	SLU 43	0	-0.23	13	0	0	0
220	SLU 44	0.01	-0.24	12.99	0	0	0
220	SLU 45	0	-0.23	13.24	0	0	0
220	SLU 46	0.01	-0.24	13.24	0	0	0
220	SLU 47	0.01	-0.24	13.15	0	0	0
220	SLU 48	0	-0.24	13.4	0	0	0
220	SLU 49	0.01	-0.24	13.39	0	0	0
220	SLU 50	0	-0.24	13.31	0	0	0
220	SLU 51	0.01	-0.24	13.31	0	0	0
220	SLU 52	0	-0.24	14.21	0	0	0
220	SLU 53	0	-0.24	14.46	0	0	0
220	SLU 54	0	-0.24	14.46	0	0	0
220	SLU 55	0	-0.24	14.37	0	0	0
220	SLU 56	0	-0.24	14.62	0	0	0
220	SLU 57	0	-0.24	14.61	0	0	0
220	SLU 58	0	-0.24	14.53	0	0	0
220	SLU 59	0	-0.24	14.53	0	0	0
220	SLU 60	0	-0.24	14.74	0	0	0
220	SLU 61	0	-0.24	14.73	0	0	0
220	SLU 62	0	-0.24	14.9	0	0	0
220	SLU 63	0	-0.24	14.89	0	0	0
220	SLU 64	0	-0.23	14.1	0	0	0
220	SLU 65	0.01	-0.23	14.09	0	0	0
220	SLU 66	0	-0.23	14.35	0	0	0
220	SLU 67	0.01	-0.23	14.34	0	0	0
220	SLU 68	0.01	-0.24	14.25	0	0	0
220	SLU 69	0	-0.23	14.5	0	0	0
220	SLU 70	0.01	-0.24	14.5	0	0	0
220	SLU 71	0	-0.23	14.41	0	0	0
220	SLU 72	0.01	-0.24	14.41	0	0	0
220	SLU 73	0.01	-0.24	15.31	0	0	0
220	SLU 74	0	-0.23	15.56	0	0	0
220	SLU 75	0	-0.24	15.56	0	0	0
220	SLU 76	0.01	-0.24	15.47	0	0	0
220	SLU 77	0	-0.24	15.72	0	0	0
220	SLU 78	0	-0.24	15.72	0	0	0
220	SLU 79	0	-0.24	15.63	0	0	0
220	SLU 80	0	-0.24	15.63	0	0	0
220	SLU 81	0	-0.23	15.84	0	0	0
220	SLU 82	0	-0.24	15.84	0	0	0
220	SLU 83	0	-0.24	16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
220	SLU 84	0	-0.24	15.99	0	0	0
220	SLE RA 1	0	-0.18	10.61	0	0	0
220	SLE RA 2	0.01	-0.18	10.6	0	0	0
220	SLE RA 3	0	-0.18	10.77	0	0	0
220	SLE RA 4	0.01	-0.18	10.76	0	0	0
220	SLE RA 5	0.01	-0.18	10.7	0	0	0
220	SLE RA 6	0	-0.18	10.87	0	0	0
220	SLE RA 7	0.01	-0.18	10.87	0	0	0
220	SLE RA 8	0	-0.18	10.81	0	0	0
220	SLE RA 9	0	-0.18	10.81	0	0	0
220	SLE RA 10	0	-0.18	11.41	0	0	0
220	SLE RA 11	0	-0.18	11.58	0	0	0
220	SLE RA 12	0	-0.18	11.58	0	0	0
220	SLE RA 13	0	-0.18	11.52	0	0	0
220	SLE RA 14	0	-0.18	11.68	0	0	0
220	SLE RA 15	0	-0.18	11.68	0	0	0
220	SLE RA 16	0	-0.18	11.63	0	0	0
220	SLE RA 17	0	-0.19	11.62	0	0	0
220	SLE RA 18	0	-0.18	11.77	0	0	0
220	SLE RA 19	0	-0.18	11.76	0	0	0
220	SLE RA 20	0	-0.18	11.87	0	0	0
220	SLE RA 21	0	-0.18	11.87	0	0	0
220	SLE FR 1	0	-0.18	10.61	0	0	0
220	SLE FR 2	0	-0.18	10.6	0	0	0
220	SLE FR 3	0	-0.18	10.65	0	0	0
220	SLE FR 4	0	-0.18	10.95	0	0	0
220	SLE FR 5	0	-0.18	10.99	0	0	0
220	SLE FR 6	0	-0.18	11.19	0	0	0
220	SLE QP 1	0	-0.18	10.61	0	0	0
220	SLE QP 2	0	-0.18	10.95	0	0	0
220	SLD 1	0.89	0.05	10.31	0	0	0
220	SLD 2	0.99	0.1	10.38	0	0	0
220	SLD 3	0.88	-0.17	10.03	0	0	0
220	SLD 4	0.97	-0.13	10.09	0	0	0
220	SLD 5	0.28	0.22	11.18	0	0	0
220	SLD 6	0.34	0.25	11.22	0	0	0
220	SLD 7	0.22	-0.52	10.23	0	0	0
220	SLD 8	0.29	-0.49	10.27	0	0	0
220	SLD 9	-0.28	0.14	11.63	0	0	0
220	SLD 10	-0.22	0.17	11.67	0	0	0
220	SLD 11	-0.34	-0.61	10.68	0	0	0
220	SLD 12	-0.27	-0.58	10.73	0	0	0
220	SLD 13	-0.97	-0.23	11.81	0	0	0
220	SLD 14	-0.87	-0.18	11.88	0	0	0
220	SLD 15	-0.99	-0.45	11.53	0	0	0
220	SLD 16	-0.89	-0.4	11.59	0	0	0
220	SLV 1	2.09	0.35	9.45	0	0	0
220	SLV 2	2.32	0.45	9.59	0	0	0
220	SLV 3	2.05	-0.16	8.8	0	0	0
220	SLV 4	2.28	-0.05	8.95	0	0	0
220	SLV 5	0.65	0.73	11.45	0	0	0
220	SLV 6	0.8	0.8	11.55	0	0	0
220	SLV 7	0.52	-0.96	9.31	0	0	0
220	SLV 8	0.66	-0.89	9.4	0	0	0
220	SLV 9	-0.66	0.54	12.51	0	0	0
220	SLV 10	-0.51	0.6	12.6	0	0	0
220	SLV 11	-0.79	-1.15	10.36	0	0	0
220	SLV 12	-0.65	-1.08	10.45	0	0	0
220	SLV 13	-2.27	-0.3	12.96	0	0	0
220	SLV 14	-2.05	-0.19	13.1	0	0	0
220	SLV 15	-2.31	-0.81	12.32	0	0	0
220	SLV 16	-2.09	-0.7	12.46	0	0	0
221	SLU 1	0	-0.1	5.15	0	0	0
221	SLU 2	0	-0.1	5.15	0	0	0
221	SLU 3	0	-0.1	5.28	0	0	0
221	SLU 4	0	-0.1	5.27	0	0	0
221	SLU 5	0	-0.1	5.23	0	0	0
221	SLU 6	0	-0.1	5.35	0	0	0
221	SLU 7	0	-0.1	5.35	0	0	0
221	SLU 8	0	-0.1	5.31	0	0	0
221	SLU 9	0	-0.1	5.31	0	0	0
221	SLU 10	0	-0.1	5.76	0	0	0
221	SLU 11	0	-0.1	5.89	0	0	0
221	SLU 12	0	-0.1	5.88	0	0	0
221	SLU 13	0	-0.1	5.84	0	0	0
221	SLU 14	0	-0.1	5.96	0	0	0
221	SLU 15	0	-0.1	5.96	0	0	0
221	SLU 16	0	-0.1	5.92	0	0	0
221	SLU 17	0	-0.1	5.92	0	0	0
221	SLU 18	0	-0.1	6.02	0	0	0
221	SLU 19	0	-0.1	6.02	0	0	0
221	SLU 20	0	-0.1	6.1	0	0	0
221	SLU 21	0	-0.1	6.1	0	0	0
221	SLU 22	0	-0.1	5.71	0	0	0
221	SLU 23	0.01	-0.1	5.7	0	0	0
221	SLU 24	0	-0.1	5.83	0	0	0
221	SLU 25	0	-0.1	5.83	0	0	0
221	SLU 26	0	-0.1	5.78	0	0	0
221	SLU 27	0	-0.1	5.91	0	0	0
221	SLU 28	0	-0.1	5.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
221	SLU 29	0	-0.1	5.86	0	0	0
221	SLU 30	0	-0.1	5.86	0	0	0
221	SLU 31	0	-0.1	6.31	0	0	0
221	SLU 32	0	-0.1	6.44	0	0	0
221	SLU 33	0	-0.1	6.44	0	0	0
221	SLU 34	0	-0.1	6.39	0	0	0
221	SLU 35	0	-0.1	6.52	0	0	0
221	SLU 36	0	-0.1	6.52	0	0	0
221	SLU 37	0	-0.1	6.47	0	0	0
221	SLU 38	0	-0.1	6.47	0	0	0
221	SLU 39	0	-0.1	6.58	0	0	0
221	SLU 40	0	-0.1	6.58	0	0	0
221	SLU 41	0	-0.1	6.66	0	0	0
221	SLU 42	0	-0.1	6.65	0	0	0
221	SLU 43	0	-0.13	6.51	0	0	0
221	SLU 44	0	-0.13	6.51	0	0	0
221	SLU 45	0	-0.13	6.63	0	0	0
221	SLU 46	0	-0.13	6.63	0	0	0
221	SLU 47	0	-0.13	6.58	0	0	0
221	SLU 48	0	-0.13	6.71	0	0	0
221	SLU 49	0	-0.13	6.71	0	0	0
221	SLU 50	0	-0.13	6.67	0	0	0
221	SLU 51	0	-0.13	6.66	0	0	0
221	SLU 52	0	-0.13	7.11	0	0	0
221	SLU 53	0	-0.13	7.24	0	0	0
221	SLU 54	0	-0.13	7.24	0	0	0
221	SLU 55	0	-0.13	7.19	0	0	0
221	SLU 56	0	-0.13	7.32	0	0	0
221	SLU 57	0	-0.13	7.32	0	0	0
221	SLU 58	0	-0.13	7.28	0	0	0
221	SLU 59	0	-0.13	7.27	0	0	0
221	SLU 60	0	-0.13	7.38	0	0	0
221	SLU 61	0	-0.13	7.38	0	0	0
221	SLU 62	0	-0.13	7.46	0	0	0
221	SLU 63	0	-0.13	7.46	0	0	0
221	SLU 64	0	-0.12	7.06	0	0	0
221	SLU 65	0.01	-0.13	7.06	0	0	0
221	SLU 66	0	-0.13	7.19	0	0	0
221	SLU 67	0	-0.13	7.18	0	0	0
221	SLU 68	0	-0.13	7.14	0	0	0
221	SLU 69	0	-0.13	7.26	0	0	0
221	SLU 70	0	-0.13	7.26	0	0	0
221	SLU 71	0	-0.13	7.22	0	0	0
221	SLU 72	0	-0.13	7.22	0	0	0
221	SLU 73	0	-0.13	7.67	0	0	0
221	SLU 74	0	-0.13	7.8	0	0	0
221	SLU 75	0	-0.13	7.79	0	0	0
221	SLU 76	0	-0.13	7.75	0	0	0
221	SLU 77	0	-0.13	7.87	0	0	0
221	SLU 78	0	-0.13	7.87	0	0	0
221	SLU 79	0	-0.13	7.83	0	0	0
221	SLU 80	0	-0.13	7.83	0	0	0
221	SLU 81	0	-0.13	7.93	0	0	0
221	SLU 82	0	-0.13	7.93	0	0	0
221	SLU 83	0	-0.13	8.01	0	0	0
221	SLU 84	0	-0.13	8.01	0	0	0
221	SLE RA 1	0	-0.1	5.31	0	0	0
221	SLE RA 2	0	-0.1	5.31	0	0	0
221	SLE RA 3	0	-0.1	5.39	0	0	0
221	SLE RA 4	0	-0.1	5.39	0	0	0
221	SLE RA 5	0	-0.1	5.36	0	0	0
221	SLE RA 6	0	-0.1	5.45	0	0	0
221	SLE RA 7	0	-0.1	5.44	0	0	0
221	SLE RA 8	0	-0.1	5.42	0	0	0
221	SLE RA 9	0	-0.1	5.41	0	0	0
221	SLE RA 10	0	-0.1	5.72	0	0	0
221	SLE RA 11	0	-0.1	5.8	0	0	0
221	SLE RA 12	0	-0.1	5.8	0	0	0
221	SLE RA 13	0	-0.1	5.77	0	0	0
221	SLE RA 14	0	-0.1	5.85	0	0	0
221	SLE RA 15	0	-0.1	5.85	0	0	0
221	SLE RA 16	0	-0.1	5.82	0	0	0
221	SLE RA 17	0	-0.1	5.82	0	0	0
221	SLE RA 18	0	-0.1	5.89	0	0	0
221	SLE RA 19	0	-0.1	5.89	0	0	0
221	SLE RA 20	0	-0.1	5.94	0	0	0
221	SLE RA 21	0	-0.1	5.94	0	0	0
221	SLE FR 1	0	-0.1	5.31	0	0	0
221	SLE FR 2	0	-0.1	5.31	0	0	0
221	SLE FR 3	0	-0.1	5.33	0	0	0
221	SLE FR 4	0	-0.1	5.49	0	0	0
221	SLE FR 5	0	-0.1	5.51	0	0	0
221	SLE FR 6	0	-0.1	5.6	0	0	0
221	SLE QP 1	0	-0.1	5.31	0	0	0
221	SLE QP 2	0	-0.1	5.49	0	0	0
221	SLD 1	0.44	0.02	5.12	0	0	0
221	SLD 2	0.49	0.04	5.16	0	0	0
221	SLD 3	0.43	-0.09	4.98	0	0	0
221	SLD 4	0.48	-0.06	5.01	0	0	0
221	SLD 5	0.14	0.1	5.59	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
221	SLD 6	0.17	0.12	5.61	0	0	0
221	SLD 7	0.11	-0.27	5.11	0	0	0
221	SLD 8	0.14	-0.25	5.13	0	0	0
221	SLD 9	-0.14	0.05	5.84	0	0	0
221	SLD 10	-0.11	0.07	5.86	0	0	0
221	SLD 11	-0.17	-0.31	5.36	0	0	0
221	SLD 12	-0.14	-0.29	5.38	0	0	0
221	SLD 13	-0.48	-0.13	5.96	0	0	0
221	SLD 14	-0.43	-0.1	5.99	0	0	0
221	SLD 15	-0.49	-0.24	5.82	0	0	0
221	SLD 16	-0.44	-0.21	5.85	0	0	0
221	SLV 1	1.03	0.17	4.63	0	0	0
221	SLV 2	1.14	0.23	4.71	0	0	0
221	SLV 3	1.01	-0.07	4.31	0	0	0
221	SLV 4	1.12	-0.02	4.39	0	0	0
221	SLV 5	0.32	0.35	5.71	0	0	0
221	SLV 6	0.39	0.39	5.76	0	0	0
221	SLV 7	0.25	-0.48	4.63	0	0	0
221	SLV 8	0.33	-0.44	4.68	0	0	0
221	SLV 9	-0.32	0.25	6.29	0	0	0
221	SLV 10	-0.25	0.28	6.34	0	0	0
221	SLV 11	-0.39	-0.58	5.21	0	0	0
221	SLV 12	-0.32	-0.54	5.26	0	0	0
221	SLV 13	-1.12	-0.18	6.59	0	0	0
221	SLV 14	-1.01	-0.12	6.66	0	0	0
221	SLV 15	-1.14	-0.42	6.26	0	0	0
221	SLV 16	-1.03	-0.37	6.34	0	0	0
222	SLU 1	-0.19	-0.29	12.96	0	0	0
222	SLU 2	-0.18	-0.3	12.94	0	0	0
222	SLU 3	-0.19	-0.29	13.27	0	0	0
222	SLU 4	-0.19	-0.3	13.26	0	0	0
222	SLU 5	-0.18	-0.31	13.14	0	0	0
222	SLU 6	-0.2	-0.3	13.47	0	0	0
222	SLU 7	-0.19	-0.31	13.46	0	0	0
222	SLU 8	-0.2	-0.3	13.36	0	0	0
222	SLU 9	-0.19	-0.31	13.35	0	0	0
222	SLU 10	-0.19	-0.32	14.47	0	0	0
222	SLU 11	-0.2	-0.31	14.8	0	0	0
222	SLU 12	-0.2	-0.32	14.79	0	0	0
222	SLU 13	-0.2	-0.32	14.67	0	0	0
222	SLU 14	-0.21	-0.31	15	0	0	0
222	SLU 15	-0.2	-0.32	14.99	0	0	0
222	SLU 16	-0.21	-0.31	14.89	0	0	0
222	SLU 17	-0.2	-0.32	14.88	0	0	0
222	SLU 18	-0.2	-0.31	15.15	0	0	0
222	SLU 19	-0.2	-0.32	15.14	0	0	0
222	SLU 20	-0.21	-0.32	15.34	0	0	0
222	SLU 21	-0.2	-0.33	15.33	0	0	0
222	SLU 22	-0.21	-0.29	14.36	0	0	0
222	SLU 23	-0.2	-0.31	14.34	0	0	0
222	SLU 24	-0.22	-0.3	14.67	0	0	0
222	SLU 25	-0.21	-0.31	14.66	0	0	0
222	SLU 26	-0.21	-0.31	14.54	0	0	0
222	SLU 27	-0.22	-0.3	14.86	0	0	0
222	SLU 28	-0.21	-0.31	14.85	0	0	0
222	SLU 29	-0.22	-0.3	14.75	0	0	0
222	SLU 30	-0.21	-0.31	14.74	0	0	0
222	SLU 31	-0.21	-0.32	15.87	0	0	0
222	SLU 32	-0.23	-0.31	16.2	0	0	0
222	SLU 33	-0.22	-0.32	16.19	0	0	0
222	SLU 34	-0.22	-0.33	16.07	0	0	0
222	SLU 35	-0.23	-0.32	16.39	0	0	0
222	SLU 36	-0.23	-0.33	16.38	0	0	0
222	SLU 37	-0.23	-0.32	16.28	0	0	0
222	SLU 38	-0.22	-0.33	16.27	0	0	0
222	SLU 39	-0.23	-0.32	16.54	0	0	0
222	SLU 40	-0.22	-0.33	16.53	0	0	0
222	SLU 41	-0.23	-0.32	16.74	0	0	0
222	SLU 42	-0.22	-0.33	16.73	0	0	0
222	SLU 43	-0.24	-0.38	16.37	0	0	0
222	SLU 44	-0.23	-0.39	16.35	0	0	0
222	SLU 45	-0.24	-0.38	16.68	0	0	0
222	SLU 46	-0.24	-0.39	16.67	0	0	0
222	SLU 47	-0.23	-0.39	16.55	0	0	0
222	SLU 48	-0.25	-0.38	16.88	0	0	0
222	SLU 49	-0.24	-0.39	16.87	0	0	0
222	SLU 50	-0.25	-0.38	16.77	0	0	0
222	SLU 51	-0.24	-0.39	16.76	0	0	0
222	SLU 52	-0.24	-0.41	17.88	0	0	0
222	SLU 53	-0.25	-0.4	18.21	0	0	0
222	SLU 54	-0.25	-0.41	18.2	0	0	0
222	SLU 55	-0.24	-0.41	18.08	0	0	0
222	SLU 56	-0.26	-0.4	18.41	0	0	0
222	SLU 57	-0.25	-0.41	18.4	0	0	0
222	SLU 58	-0.26	-0.4	18.3	0	0	0
222	SLU 59	-0.25	-0.41	18.29	0	0	0
222	SLU 60	-0.25	-0.4	18.56	0	0	0
222	SLU 61	-0.25	-0.41	18.55	0	0	0
222	SLU 62	-0.26	-0.4	18.75	0	0	0
222	SLU 63	-0.25	-0.41	18.74	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
222	SLU 64	-0.26	-0.38	17.76	0	0	0
222	SLU 65	-0.25	-0.39	17.75	0	0	0
222	SLU 66	-0.26	-0.38	18.07	0	0	0
222	SLU 67	-0.26	-0.39	18.06	0	0	0
222	SLU 68	-0.26	-0.4	17.95	0	0	0
222	SLU 69	-0.27	-0.39	18.27	0	0	0
222	SLU 70	-0.26	-0.4	18.26	0	0	0
222	SLU 71	-0.27	-0.39	18.16	0	0	0
222	SLU 72	-0.26	-0.4	18.15	0	0	0
222	SLU 73	-0.26	-0.41	19.28	0	0	0
222	SLU 74	-0.28	-0.4	19.61	0	0	0
222	SLU 75	-0.27	-0.41	19.6	0	0	0
222	SLU 76	-0.27	-0.41	19.48	0	0	0
222	SLU 77	-0.28	-0.4	19.8	0	0	0
222	SLU 78	-0.27	-0.41	19.79	0	0	0
222	SLU 79	-0.28	-0.4	19.69	0	0	0
222	SLU 80	-0.27	-0.41	19.68	0	0	0
222	SLU 81	-0.27	-0.4	19.95	0	0	0
222	SLU 82	-0.27	-0.41	19.94	0	0	0
222	SLU 83	-0.28	-0.41	20.15	0	0	0
222	SLU 84	-0.27	-0.42	20.14	0	0	0
222	SLE RA 1	-0.19	-0.29	13.36	0	0	0
222	SLE RA 2	-0.19	-0.3	13.35	0	0	0
222	SLE RA 3	-0.2	-0.29	13.56	0	0	0
222	SLE RA 4	-0.2	-0.3	13.56	0	0	0
222	SLE RA 5	-0.19	-0.3	13.48	0	0	0
222	SLE RA 6	-0.2	-0.3	13.7	0	0	0
222	SLE RA 7	-0.2	-0.3	13.69	0	0	0
222	SLE RA 8	-0.2	-0.3	13.62	0	0	0
222	SLE RA 9	-0.2	-0.3	13.62	0	0	0
222	SLE RA 10	-0.2	-0.31	14.37	0	0	0
222	SLE RA 11	-0.21	-0.3	14.59	0	0	0
222	SLE RA 12	-0.2	-0.31	14.58	0	0	0
222	SLE RA 13	-0.2	-0.31	14.5	0	0	0
222	SLE RA 14	-0.21	-0.31	14.72	0	0	0
222	SLE RA 15	-0.2	-0.31	14.71	0	0	0
222	SLE RA 16	-0.21	-0.31	14.64	0	0	0
222	SLE RA 17	-0.2	-0.31	14.64	0	0	0
222	SLE RA 18	-0.2	-0.31	14.82	0	0	0
222	SLE RA 19	-0.2	-0.31	14.81	0	0	0
222	SLE RA 20	-0.21	-0.31	14.95	0	0	0
222	SLE RA 21	-0.2	-0.32	14.94	0	0	0
222	SLE FR 1	-0.19	-0.29	13.36	0	0	0
222	SLE FR 2	-0.19	-0.29	13.36	0	0	0
222	SLE FR 3	-0.2	-0.29	13.41	0	0	0
222	SLE FR 4	-0.2	-0.3	13.79	0	0	0
222	SLE FR 5	-0.2	-0.3	13.85	0	0	0
222	SLE FR 6	-0.2	-0.3	14.09	0	0	0
222	SLE QP 1	-0.19	-0.29	13.36	0	0	0
222	SLE QP 2	-0.2	-0.3	13.8	0	0	0
222	SLD 1	0.91	-0.26	14.8	0	0	0
222	SLD 2	1.04	-0.32	14.73	0	0	0
222	SLD 3	0.94	-0.56	14.52	0	0	0
222	SLD 4	1.06	-0.62	14.45	0	0	0
222	SLD 5	0.07	0.19	14.53	0	0	0
222	SLD 6	0.15	0.15	14.49	0	0	0
222	SLD 7	0.16	-0.83	13.6	0	0	0
222	SLD 8	0.24	-0.87	13.55	0	0	0
222	SLD 9	-0.64	0.28	14.04	0	0	0
222	SLD 10	-0.56	0.24	13.99	0	0	0
222	SLD 11	-0.55	-0.74	13.11	0	0	0
222	SLD 12	-0.47	-0.78	13.06	0	0	0
222	SLD 13	-1.46	0.03	13.14	0	0	0
222	SLD 14	-1.34	-0.03	13.07	0	0	0
222	SLD 15	-1.43	-0.27	12.87	0	0	0
222	SLD 16	-1.31	-0.33	12.8	0	0	0
222	SLV 1	2.4	-0.22	16.13	0	0	0
222	SLV 2	2.69	-0.36	15.96	0	0	0
222	SLV 3	2.46	-0.91	15.49	0	0	0
222	SLV 4	2.75	-1.05	15.33	0	0	0
222	SLV 5	0.44	0.8	15.48	0	0	0
222	SLV 6	0.62	0.71	15.38	0	0	0
222	SLV 7	0.64	-1.51	13.37	0	0	0
222	SLV 8	0.83	-1.6	13.27	0	0	0
222	SLV 9	-1.22	1.01	14.32	0	0	0
222	SLV 10	-1.04	0.91	14.22	0	0	0
222	SLV 11	-1.02	-1.3	12.21	0	0	0
222	SLV 12	-0.84	-1.39	12.11	0	0	0
222	SLV 13	-3.14	0.46	12.26	0	0	0
222	SLV 14	-2.86	0.32	12.1	0	0	0
222	SLV 15	-3.08	-0.23	11.63	0	0	0
222	SLV 16	-2.8	-0.37	11.47	0	0	0
222	CRTFP Ux+	0	0	0	0	0	0
222	CRTFP Ux-	0	0	0	0	0	0
223	SLU 1	-0.17	-0.24	11.7	0	0	0
223	SLU 2	-0.16	-0.25	11.69	0	0	0
223	SLU 3	-0.17	-0.24	11.98	0	0	0
223	SLU 4	-0.17	-0.25	11.97	0	0	0
223	SLU 5	-0.16	-0.25	11.87	0	0	0
223	SLU 6	-0.18	-0.24	12.16	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLU 7	-0.17	-0.25	12.15	0	0	0
223	SLU 8	-0.17	-0.24	12.06	0	0	0
223	SLU 9	-0.17	-0.25	12.05	0	0	0
223	SLU 10	-0.17	-0.26	13.07	0	0	0
223	SLU 11	-0.18	-0.25	13.37	0	0	0
223	SLU 12	-0.18	-0.26	13.36	0	0	0
223	SLU 13	-0.17	-0.26	13.25	0	0	0
223	SLU 14	-0.18	-0.25	13.55	0	0	0
223	SLU 15	-0.18	-0.26	13.54	0	0	0
223	SLU 16	-0.18	-0.25	13.45	0	0	0
223	SLU 17	-0.18	-0.26	13.44	0	0	0
223	SLU 18	-0.18	-0.25	13.68	0	0	0
223	SLU 19	-0.18	-0.26	13.67	0	0	0
223	SLU 20	-0.18	-0.26	13.86	0	0	0
223	SLU 21	-0.18	-0.26	13.85	0	0	0
223	SLU 22	-0.19	-0.23	12.96	0	0	0
223	SLU 23	-0.18	-0.25	12.94	0	0	0
223	SLU 24	-0.19	-0.24	13.24	0	0	0
223	SLU 25	-0.19	-0.25	13.23	0	0	0
223	SLU 26	-0.18	-0.25	13.12	0	0	0
223	SLU 27	-0.19	-0.24	13.42	0	0	0
223	SLU 28	-0.19	-0.25	13.41	0	0	0
223	SLU 29	-0.19	-0.24	13.32	0	0	0
223	SLU 30	-0.19	-0.25	13.31	0	0	0
223	SLU 31	-0.19	-0.26	14.33	0	0	0
223	SLU 32	-0.2	-0.25	14.62	0	0	0
223	SLU 33	-0.2	-0.26	14.62	0	0	0
223	SLU 34	-0.19	-0.26	14.51	0	0	0
223	SLU 35	-0.2	-0.25	14.8	0	0	0
223	SLU 36	-0.2	-0.26	14.79	0	0	0
223	SLU 37	-0.2	-0.25	14.7	0	0	0
223	SLU 38	-0.2	-0.26	14.69	0	0	0
223	SLU 39	-0.2	-0.25	14.94	0	0	0
223	SLU 40	-0.2	-0.26	14.93	0	0	0
223	SLU 41	-0.2	-0.25	15.12	0	0	0
223	SLU 42	-0.2	-0.26	15.11	0	0	0
223	SLU 43	-0.21	-0.31	14.78	0	0	0
223	SLU 44	-0.2	-0.32	14.77	0	0	0
223	SLU 45	-0.22	-0.31	15.06	0	0	0
223	SLU 46	-0.21	-0.32	15.06	0	0	0
223	SLU 47	-0.21	-0.32	14.95	0	0	0
223	SLU 48	-0.22	-0.31	15.24	0	0	0
223	SLU 49	-0.21	-0.32	15.23	0	0	0
223	SLU 50	-0.22	-0.31	15.14	0	0	0
223	SLU 51	-0.21	-0.32	15.13	0	0	0
223	SLU 52	-0.21	-0.33	16.16	0	0	0
223	SLU 53	-0.22	-0.32	16.45	0	0	0
223	SLU 54	-0.22	-0.33	16.44	0	0	0
223	SLU 55	-0.22	-0.33	16.33	0	0	0
223	SLU 56	-0.23	-0.32	16.63	0	0	0
223	SLU 57	-0.22	-0.33	16.62	0	0	0
223	SLU 58	-0.23	-0.32	16.53	0	0	0
223	SLU 59	-0.22	-0.33	16.52	0	0	0
223	SLU 60	-0.22	-0.32	16.76	0	0	0
223	SLU 61	-0.22	-0.33	16.75	0	0	0
223	SLU 62	-0.23	-0.33	16.94	0	0	0
223	SLU 63	-0.22	-0.33	16.93	0	0	0
223	SLU 64	-0.23	-0.31	16.04	0	0	0
223	SLU 65	-0.22	-0.32	16.03	0	0	0
223	SLU 66	-0.23	-0.31	16.32	0	0	0
223	SLU 67	-0.23	-0.32	16.31	0	0	0
223	SLU 68	-0.23	-0.32	16.2	0	0	0
223	SLU 69	-0.24	-0.31	16.5	0	0	0
223	SLU 70	-0.23	-0.32	16.49	0	0	0
223	SLU 71	-0.24	-0.31	16.4	0	0	0
223	SLU 72	-0.23	-0.32	16.39	0	0	0
223	SLU 73	-0.23	-0.33	17.41	0	0	0
223	SLU 74	-0.24	-0.32	17.71	0	0	0
223	SLU 75	-0.24	-0.33	17.7	0	0	0
223	SLU 76	-0.24	-0.33	17.59	0	0	0
223	SLU 77	-0.25	-0.32	17.88	0	0	0
223	SLU 78	-0.24	-0.33	17.88	0	0	0
223	SLU 79	-0.25	-0.32	17.78	0	0	0
223	SLU 80	-0.24	-0.33	17.77	0	0	0
223	SLU 81	-0.24	-0.32	18.02	0	0	0
223	SLU 82	-0.24	-0.33	18.01	0	0	0
223	SLU 83	-0.25	-0.33	18.2	0	0	0
223	SLU 84	-0.24	-0.33	18.19	0	0	0
223	SLE RA 1	-0.17	-0.24	12.06	0	0	0
223	SLE RA 2	-0.17	-0.24	12.05	0	0	0
223	SLE RA 3	-0.18	-0.24	12.25	0	0	0
223	SLE RA 4	-0.17	-0.24	12.24	0	0	0
223	SLE RA 5	-0.17	-0.25	12.17	0	0	0
223	SLE RA 6	-0.18	-0.24	12.37	0	0	0
223	SLE RA 7	-0.18	-0.24	12.36	0	0	0
223	SLE RA 8	-0.18	-0.24	12.3	0	0	0
223	SLE RA 9	-0.17	-0.24	12.3	0	0	0
223	SLE RA 10	-0.17	-0.25	12.98	0	0	0
223	SLE RA 11	-0.18	-0.25	13.17	0	0	0
223	SLE RA 12	-0.18	-0.25	13.17	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLE RA 13	-0.18	-0.25	13.1	0	0	0
223	SLE RA 14	-0.18	-0.25	13.29	0	0	0
223	SLE RA 15	-0.18	-0.25	13.29	0	0	0
223	SLE RA 16	-0.18	-0.25	13.22	0	0	0
223	SLE RA 17	-0.18	-0.25	13.22	0	0	0
223	SLE RA 18	-0.18	-0.25	13.38	0	0	0
223	SLE RA 19	-0.18	-0.25	13.38	0	0	0
223	SLE RA 20	-0.18	-0.25	13.5	0	0	0
223	SLE RA 21	-0.18	-0.25	13.5	0	0	0
223	SLE FR 1	-0.17	-0.24	12.06	0	0	0
223	SLE FR 2	-0.17	-0.24	12.06	0	0	0
223	SLE FR 3	-0.17	-0.24	12.11	0	0	0
223	SLE FR 4	-0.17	-0.24	12.46	0	0	0
223	SLE FR 5	-0.18	-0.24	12.51	0	0	0
223	SLE FR 6	-0.18	-0.24	12.72	0	0	0
223	SLE QP 1	-0.17	-0.24	12.06	0	0	0
223	SLE QP 2	-0.18	-0.24	12.46	0	0	0
223	SLD 1	0.86	-0.18	13.23	0	0	0
223	SLD 2	0.97	-0.24	13.17	0	0	0
223	SLD 3	0.88	-0.47	12.98	0	0	0
223	SLD 4	1	-0.52	12.92	0	0	0
223	SLD 5	0.08	0.22	13.08	0	0	0
223	SLD 6	0.15	0.19	13.04	0	0	0
223	SLD 7	0.16	-0.73	12.25	0	0	0
223	SLD 8	0.23	-0.77	12.21	0	0	0
223	SLD 9	-0.58	0.29	12.71	0	0	0
223	SLD 10	-0.51	0.26	12.67	0	0	0
223	SLD 11	-0.5	-0.66	11.87	0	0	0
223	SLD 12	-0.43	-0.7	11.83	0	0	0
223	SLD 13	-1.35	0.05	11.99	0	0	0
223	SLD 14	-1.24	-0.01	11.94	0	0	0
223	SLD 15	-1.32	-0.24	11.74	0	0	0
223	SLD 16	-1.21	-0.29	11.68	0	0	0
223	SLV 1	2.25	-0.12	14.26	0	0	0
223	SLV 2	2.51	-0.24	14.12	0	0	0
223	SLV 3	2.3	-0.77	13.69	0	0	0
223	SLV 4	2.57	-0.89	13.55	0	0	0
223	SLV 5	0.42	0.8	13.89	0	0	0
223	SLV 6	0.59	0.72	13.8	0	0	0
223	SLV 7	0.61	-1.36	11.99	0	0	0
223	SLV 8	0.78	-1.44	11.9	0	0	0
223	SLV 9	-1.13	0.96	13.02	0	0	0
223	SLV 10	-0.96	0.88	12.93	0	0	0
223	SLV 11	-0.94	-1.2	11.12	0	0	0
223	SLV 12	-0.77	-1.28	11.03	0	0	0
223	SLV 13	-2.92	0.41	11.36	0	0	0
223	SLV 14	-2.65	0.3	11.23	0	0	0
223	SLV 15	-2.86	-0.23	10.79	0	0	0
223	SLV 16	-2.6	-0.35	10.66	0	0	0
224	SLU 1	-0.16	-0.19	11.24	0	0	0
224	SLU 2	-0.15	-0.21	11.23	0	0	0
224	SLU 3	-0.16	-0.2	11.51	0	0	0
224	SLU 4	-0.16	-0.2	11.5	0	0	0
224	SLU 5	-0.16	-0.21	11.4	0	0	0
224	SLU 6	-0.17	-0.2	11.68	0	0	0
224	SLU 7	-0.16	-0.21	11.67	0	0	0
224	SLU 8	-0.17	-0.2	11.58	0	0	0
224	SLU 9	-0.16	-0.21	11.58	0	0	0
224	SLU 10	-0.16	-0.21	12.56	0	0	0
224	SLU 11	-0.17	-0.2	12.85	0	0	0
224	SLU 12	-0.17	-0.21	12.84	0	0	0
224	SLU 13	-0.16	-0.22	12.73	0	0	0
224	SLU 14	-0.18	-0.21	13.02	0	0	0
224	SLU 15	-0.17	-0.21	13.01	0	0	0
224	SLU 16	-0.17	-0.21	12.92	0	0	0
224	SLU 17	-0.17	-0.21	12.91	0	0	0
224	SLU 18	-0.17	-0.2	13.15	0	0	0
224	SLU 19	-0.17	-0.21	13.14	0	0	0
224	SLU 20	-0.17	-0.21	13.32	0	0	0
224	SLU 21	-0.17	-0.21	13.31	0	0	0
224	SLU 22	-0.18	-0.19	12.44	0	0	0
224	SLU 23	-0.17	-0.2	12.43	0	0	0
224	SLU 24	-0.18	-0.19	12.71	0	0	0
224	SLU 25	-0.18	-0.2	12.7	0	0	0
224	SLU 26	-0.17	-0.2	12.6	0	0	0
224	SLU 27	-0.19	-0.19	12.88	0	0	0
224	SLU 28	-0.18	-0.2	12.87	0	0	0
224	SLU 29	-0.18	-0.19	12.79	0	0	0
224	SLU 30	-0.18	-0.2	12.78	0	0	0
224	SLU 31	-0.18	-0.21	13.76	0	0	0
224	SLU 32	-0.19	-0.2	14.05	0	0	0
224	SLU 33	-0.19	-0.2	14.04	0	0	0
224	SLU 34	-0.18	-0.21	13.94	0	0	0
224	SLU 35	-0.19	-0.2	14.22	0	0	0
224	SLU 36	-0.19	-0.21	14.21	0	0	0
224	SLU 37	-0.19	-0.2	14.12	0	0	0
224	SLU 38	-0.19	-0.21	14.11	0	0	0
224	SLU 39	-0.19	-0.2	14.35	0	0	0
224	SLU 40	-0.19	-0.21	14.34	0	0	0
224	SLU 41	-0.19	-0.2	14.52	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLU 42	-0.19	-0.21	14.51	0	0	0
224	SLU 43	-0.2	-0.25	14.2	0	0	0
224	SLU 44	-0.19	-0.27	14.19	0	0	0
224	SLU 45	-0.2	-0.26	14.47	0	0	0
224	SLU 46	-0.2	-0.26	14.46	0	0	0
224	SLU 47	-0.2	-0.27	14.36	0	0	0
224	SLU 48	-0.21	-0.26	14.64	0	0	0
224	SLU 49	-0.2	-0.27	14.63	0	0	0
224	SLU 50	-0.21	-0.26	14.54	0	0	0
224	SLU 51	-0.2	-0.27	14.53	0	0	0
224	SLU 52	-0.2	-0.27	15.52	0	0	0
224	SLU 53	-0.21	-0.26	15.81	0	0	0
224	SLU 54	-0.21	-0.27	15.8	0	0	0
224	SLU 55	-0.21	-0.28	15.69	0	0	0
224	SLU 56	-0.22	-0.27	15.98	0	0	0
224	SLU 57	-0.21	-0.27	15.97	0	0	0
224	SLU 58	-0.22	-0.27	15.88	0	0	0
224	SLU 59	-0.21	-0.27	15.87	0	0	0
224	SLU 60	-0.21	-0.26	16.11	0	0	0
224	SLU 61	-0.21	-0.27	16.1	0	0	0
224	SLU 62	-0.22	-0.27	16.28	0	0	0
224	SLU 63	-0.21	-0.27	16.27	0	0	0
224	SLU 64	-0.22	-0.25	15.4	0	0	0
224	SLU 65	-0.21	-0.26	15.39	0	0	0
224	SLU 66	-0.22	-0.25	15.67	0	0	0
224	SLU 67	-0.22	-0.26	15.66	0	0	0
224	SLU 68	-0.22	-0.26	15.56	0	0	0
224	SLU 69	-0.23	-0.25	15.84	0	0	0
224	SLU 70	-0.22	-0.26	15.83	0	0	0
224	SLU 71	-0.23	-0.25	15.75	0	0	0
224	SLU 72	-0.22	-0.26	15.74	0	0	0
224	SLU 73	-0.22	-0.27	16.72	0	0	0
224	SLU 74	-0.23	-0.26	17.01	0	0	0
224	SLU 75	-0.23	-0.26	17	0	0	0
224	SLU 76	-0.22	-0.27	16.9	0	0	0
224	SLU 77	-0.24	-0.26	17.18	0	0	0
224	SLU 78	-0.23	-0.27	17.17	0	0	0
224	SLU 79	-0.23	-0.26	17.08	0	0	0
224	SLU 80	-0.23	-0.27	17.07	0	0	0
224	SLU 81	-0.23	-0.26	17.31	0	0	0
224	SLU 82	-0.23	-0.27	17.3	0	0	0
224	SLU 83	-0.23	-0.26	17.48	0	0	0
224	SLU 84	-0.23	-0.27	17.47	0	0	0
224	SLE RA 1	-0.16	-0.19	11.58	0	0	0
224	SLE RA 2	-0.16	-0.2	11.57	0	0	0
224	SLE RA 3	-0.17	-0.19	11.76	0	0	0
224	SLE RA 4	-0.16	-0.2	11.76	0	0	0
224	SLE RA 5	-0.16	-0.2	11.69	0	0	0
224	SLE RA 6	-0.17	-0.19	11.88	0	0	0
224	SLE RA 7	-0.17	-0.2	11.87	0	0	0
224	SLE RA 8	-0.17	-0.2	11.81	0	0	0
224	SLE RA 9	-0.17	-0.2	11.81	0	0	0
224	SLE RA 10	-0.17	-0.21	12.47	0	0	0
224	SLE RA 11	-0.17	-0.2	12.65	0	0	0
224	SLE RA 12	-0.17	-0.2	12.65	0	0	0
224	SLE RA 13	-0.17	-0.21	12.58	0	0	0
224	SLE RA 14	-0.18	-0.2	12.77	0	0	0
224	SLE RA 15	-0.17	-0.2	12.76	0	0	0
224	SLE RA 16	-0.17	-0.2	12.7	0	0	0
224	SLE RA 17	-0.17	-0.21	12.7	0	0	0
224	SLE RA 18	-0.17	-0.2	12.86	0	0	0
224	SLE RA 19	-0.17	-0.2	12.85	0	0	0
224	SLE RA 20	-0.17	-0.2	12.97	0	0	0
224	SLE RA 21	-0.17	-0.21	12.97	0	0	0
224	SLE FR 1	-0.16	-0.19	11.58	0	0	0
224	SLE FR 2	-0.16	-0.19	11.58	0	0	0
224	SLE FR 3	-0.17	-0.19	11.63	0	0	0
224	SLE FR 4	-0.17	-0.2	11.96	0	0	0
224	SLE FR 5	-0.17	-0.19	12.01	0	0	0
224	SLE FR 6	-0.17	-0.2	12.22	0	0	0
224	SLE QP 1	-0.16	-0.19	11.58	0	0	0
224	SLE QP 2	-0.17	-0.19	11.97	0	0	0
224	SLD 1	0.85	-0.12	12.59	0	0	0
224	SLD 2	0.96	-0.17	12.54	0	0	0
224	SLD 3	0.87	-0.4	12.35	0	0	0
224	SLD 4	0.98	-0.45	12.3	0	0	0
224	SLD 5	0.08	0.27	12.53	0	0	0
224	SLD 6	0.16	0.24	12.49	0	0	0
224	SLD 7	0.16	-0.68	11.72	0	0	0
224	SLD 8	0.23	-0.71	11.69	0	0	0
224	SLD 9	-0.57	0.32	12.24	0	0	0
224	SLD 10	-0.49	0.29	12.21	0	0	0
224	SLD 11	-0.49	-0.62	11.44	0	0	0
224	SLD 12	-0.42	-0.65	11.4	0	0	0
224	SLD 13	-1.32	0.06	11.63	0	0	0
224	SLD 14	-1.21	0.02	11.58	0	0	0
224	SLD 15	-1.29	-0.22	11.39	0	0	0
224	SLD 16	-1.18	-0.27	11.34	0	0	0
224	SLV 1	2.21	-0.03	13.42	0	0	0
224	SLV 2	2.47	-0.14	13.3	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLV 3	2.26	-0.67	12.87	0	0	0
224	SLV 4	2.52	-0.78	12.75	0	0	0
224	SLV 5	0.42	0.84	13.25	0	0	0
224	SLV 6	0.59	0.78	13.18	0	0	0
224	SLV 7	0.6	-1.29	11.43	0	0	0
224	SLV 8	0.77	-1.36	11.35	0	0	0
224	SLV 9	-1.1	0.97	12.58	0	0	0
224	SLV 10	-0.93	0.9	12.5	0	0	0
224	SLV 11	-0.92	-1.16	10.76	0	0	0
224	SLV 12	-0.75	-1.23	10.68	0	0	0
224	SLV 13	-2.85	0.39	11.18	0	0	0
224	SLV 14	-2.6	0.29	11.06	0	0	0
224	SLV 15	-2.8	-0.25	10.63	0	0	0
224	SLV 16	-2.54	-0.35	10.51	0	0	0
225	SLU 1	-0.15	-0.16	11.05	0	0	0
225	SLU 2	-0.15	-0.17	11.04	0	0	0
225	SLU 3	-0.16	-0.16	11.32	0	0	0
225	SLU 4	-0.15	-0.16	11.31	0	0	0
225	SLU 5	-0.15	-0.17	11.21	0	0	0
225	SLU 6	-0.16	-0.16	11.49	0	0	0
225	SLU 7	-0.16	-0.17	11.48	0	0	0
225	SLU 8	-0.16	-0.16	11.39	0	0	0
225	SLU 9	-0.16	-0.17	11.38	0	0	0
225	SLU 10	-0.16	-0.17	12.36	0	0	0
225	SLU 11	-0.17	-0.16	12.64	0	0	0
225	SLU 12	-0.16	-0.17	12.63	0	0	0
225	SLU 13	-0.16	-0.17	12.53	0	0	0
225	SLU 14	-0.17	-0.16	12.81	0	0	0
225	SLU 15	-0.17	-0.17	12.8	0	0	0
225	SLU 16	-0.17	-0.16	12.71	0	0	0
225	SLU 17	-0.17	-0.17	12.7	0	0	0
225	SLU 18	-0.17	-0.16	12.94	0	0	0
225	SLU 19	-0.16	-0.17	12.93	0	0	0
225	SLU 20	-0.17	-0.16	13.11	0	0	0
225	SLU 21	-0.17	-0.17	13.1	0	0	0
225	SLU 22	-0.17	-0.15	12.23	0	0	0
225	SLU 23	-0.17	-0.16	12.22	0	0	0
225	SLU 24	-0.18	-0.15	12.5	0	0	0
225	SLU 25	-0.17	-0.15	12.49	0	0	0
225	SLU 26	-0.17	-0.16	12.39	0	0	0
225	SLU 27	-0.18	-0.15	12.67	0	0	0
225	SLU 28	-0.18	-0.16	12.66	0	0	0
225	SLU 29	-0.18	-0.15	12.57	0	0	0
225	SLU 30	-0.18	-0.16	12.56	0	0	0
225	SLU 31	-0.17	-0.16	13.54	0	0	0
225	SLU 32	-0.19	-0.15	13.82	0	0	0
225	SLU 33	-0.18	-0.16	13.81	0	0	0
225	SLU 34	-0.18	-0.16	13.71	0	0	0
225	SLU 35	-0.19	-0.15	13.99	0	0	0
225	SLU 36	-0.18	-0.16	13.98	0	0	0
225	SLU 37	-0.19	-0.15	13.89	0	0	0
225	SLU 38	-0.18	-0.16	13.89	0	0	0
225	SLU 39	-0.18	-0.15	14.12	0	0	0
225	SLU 40	-0.18	-0.16	14.11	0	0	0
225	SLU 41	-0.19	-0.15	14.29	0	0	0
225	SLU 42	-0.18	-0.16	14.28	0	0	0
225	SLU 43	-0.2	-0.21	13.96	0	0	0
225	SLU 44	-0.19	-0.22	13.95	0	0	0
225	SLU 45	-0.2	-0.21	14.23	0	0	0
225	SLU 46	-0.2	-0.21	14.22	0	0	0
225	SLU 47	-0.19	-0.22	14.12	0	0	0
225	SLU 48	-0.2	-0.21	14.4	0	0	0
225	SLU 49	-0.2	-0.22	14.39	0	0	0
225	SLU 50	-0.2	-0.21	14.3	0	0	0
225	SLU 51	-0.2	-0.22	14.29	0	0	0
225	SLU 52	-0.2	-0.22	15.27	0	0	0
225	SLU 53	-0.21	-0.21	15.55	0	0	0
225	SLU 54	-0.2	-0.22	15.54	0	0	0
225	SLU 55	-0.2	-0.22	15.44	0	0	0
225	SLU 56	-0.21	-0.21	15.72	0	0	0
225	SLU 57	-0.21	-0.22	15.71	0	0	0
225	SLU 58	-0.21	-0.21	15.62	0	0	0
225	SLU 59	-0.21	-0.22	15.61	0	0	0
225	SLU 60	-0.21	-0.21	15.85	0	0	0
225	SLU 61	-0.2	-0.22	15.84	0	0	0
225	SLU 62	-0.21	-0.21	16.02	0	0	0
225	SLU 63	-0.21	-0.22	16.01	0	0	0
225	SLU 64	-0.21	-0.2	15.14	0	0	0
225	SLU 65	-0.21	-0.21	15.13	0	0	0
225	SLU 66	-0.22	-0.2	15.41	0	0	0
225	SLU 67	-0.21	-0.2	15.4	0	0	0
225	SLU 68	-0.21	-0.21	15.3	0	0	0
225	SLU 69	-0.22	-0.2	15.58	0	0	0
225	SLU 70	-0.22	-0.21	15.57	0	0	0
225	SLU 71	-0.22	-0.2	15.48	0	0	0
225	SLU 72	-0.22	-0.21	15.47	0	0	0
225	SLU 73	-0.21	-0.21	16.45	0	0	0
225	SLU 74	-0.23	-0.2	16.73	0	0	0
225	SLU 75	-0.22	-0.21	16.72	0	0	0
225	SLU 76	-0.22	-0.21	16.62	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
225	SLU 77	-0.23	-0.2	16.9	0	0	0
225	SLU 78	-0.22	-0.21	16.89	0	0	0
225	SLU 79	-0.23	-0.2	16.8	0	0	0
225	SLU 80	-0.22	-0.21	16.8	0	0	0
225	SLU 81	-0.22	-0.2	17.03	0	0	0
225	SLU 82	-0.22	-0.21	17.02	0	0	0
225	SLU 83	-0.23	-0.2	17.2	0	0	0
225	SLU 84	-0.22	-0.21	17.19	0	0	0
225	SLE RA 1	-0.16	-0.15	11.39	0	0	0
225	SLE RA 2	-0.16	-0.16	11.38	0	0	0
225	SLE RA 3	-0.16	-0.15	11.57	0	0	0
225	SLE RA 4	-0.16	-0.16	11.56	0	0	0
225	SLE RA 5	-0.16	-0.16	11.49	0	0	0
225	SLE RA 6	-0.16	-0.15	11.68	0	0	0
225	SLE RA 7	-0.16	-0.16	11.67	0	0	0
225	SLE RA 8	-0.16	-0.16	11.61	0	0	0
225	SLE RA 9	-0.16	-0.16	11.61	0	0	0
225	SLE RA 10	-0.16	-0.16	12.26	0	0	0
225	SLE RA 11	-0.17	-0.16	12.45	0	0	0
225	SLE RA 12	-0.17	-0.16	12.44	0	0	0
225	SLE RA 13	-0.16	-0.16	12.37	0	0	0
225	SLE RA 14	-0.17	-0.16	12.56	0	0	0
225	SLE RA 15	-0.17	-0.16	12.55	0	0	0
225	SLE RA 16	-0.17	-0.16	12.5	0	0	0
225	SLE RA 17	-0.17	-0.16	12.49	0	0	0
225	SLE RA 18	-0.17	-0.16	12.65	0	0	0
225	SLE RA 19	-0.17	-0.16	12.64	0	0	0
225	SLE RA 20	-0.17	-0.16	12.76	0	0	0
225	SLE RA 21	-0.17	-0.16	12.76	0	0	0
225	SLE FR 1	-0.16	-0.15	11.39	0	0	0
225	SLE FR 2	-0.16	-0.15	11.39	0	0	0
225	SLE FR 3	-0.16	-0.15	11.43	0	0	0
225	SLE FR 4	-0.16	-0.16	11.77	0	0	0
225	SLE FR 5	-0.16	-0.15	11.81	0	0	0
225	SLE FR 6	-0.16	-0.15	12.02	0	0	0
225	SLE QP 1	-0.16	-0.15	11.39	0	0	0
225	SLE QP 2	-0.16	-0.15	11.77	0	0	0
225	SLD 1	0.84	-0.06	12.27	0	0	0
225	SLD 2	0.95	-0.1	12.22	0	0	0
225	SLD 3	0.87	-0.34	12.03	0	0	0
225	SLD 4	0.98	-0.38	11.98	0	0	0
225	SLD 5	0.08	0.31	12.29	0	0	0
225	SLD 6	0.16	0.28	12.26	0	0	0
225	SLD 7	0.16	-0.63	11.49	0	0	0
225	SLD 8	0.23	-0.66	11.46	0	0	0
225	SLD 9	-0.56	0.35	12.07	0	0	0
225	SLD 10	-0.49	0.33	12.04	0	0	0
225	SLD 11	-0.48	-0.59	11.28	0	0	0
225	SLD 12	-0.41	-0.62	11.25	0	0	0
225	SLD 13	-1.3	0.08	11.55	0	0	0
225	SLD 14	-1.19	0.04	11.51	0	0	0
225	SLD 15	-1.28	-0.21	11.31	0	0	0
225	SLD 16	-1.17	-0.25	11.27	0	0	0
225	SLV 1	2.19	0.05	12.93	0	0	0
225	SLV 2	2.45	-0.04	12.82	0	0	0
225	SLV 3	2.24	-0.59	12.39	0	0	0
225	SLV 4	2.5	-0.68	12.28	0	0	0
225	SLV 5	0.42	0.9	12.96	0	0	0
225	SLV 6	0.58	0.84	12.89	0	0	0
225	SLV 7	0.6	-1.24	11.15	0	0	0
225	SLV 8	0.76	-1.3	11.08	0	0	0
225	SLV 9	-1.09	0.99	12.46	0	0	0
225	SLV 10	-0.92	0.93	12.39	0	0	0
225	SLV 11	-0.91	-1.14	10.65	0	0	0
225	SLV 12	-0.74	-1.2	10.58	0	0	0
225	SLV 13	-2.82	0.37	11.26	0	0	0
225	SLV 14	-2.57	0.28	11.15	0	0	0
225	SLV 15	-2.77	-0.27	10.71	0	0	0
225	SLV 16	-2.51	-0.36	10.6	0	0	0
226	SLU 1	-0.15	-0.12	11.04	0	0	0
226	SLU 2	-0.15	-0.13	11.03	0	0	0
226	SLU 3	-0.16	-0.12	11.31	0	0	0
226	SLU 4	-0.15	-0.13	11.3	0	0	0
226	SLU 5	-0.15	-0.13	11.2	0	0	0
226	SLU 6	-0.16	-0.12	11.48	0	0	0
226	SLU 7	-0.16	-0.13	11.47	0	0	0
226	SLU 8	-0.16	-0.12	11.38	0	0	0
226	SLU 9	-0.15	-0.13	11.38	0	0	0
226	SLU 10	-0.15	-0.13	12.36	0	0	0
226	SLU 11	-0.16	-0.12	12.64	0	0	0
226	SLU 12	-0.16	-0.13	12.64	0	0	0
226	SLU 13	-0.16	-0.13	12.53	0	0	0
226	SLU 14	-0.17	-0.12	12.81	0	0	0
226	SLU 15	-0.16	-0.13	12.8	0	0	0
226	SLU 16	-0.17	-0.12	12.72	0	0	0
226	SLU 17	-0.16	-0.13	12.71	0	0	0
226	SLU 18	-0.16	-0.12	12.95	0	0	0
226	SLU 19	-0.16	-0.13	12.94	0	0	0
226	SLU 20	-0.17	-0.12	13.12	0	0	0
226	SLU 21	-0.16	-0.13	13.11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLU 22	-0.17	-0.1	12.23	0	0	0
226	SLU 23	-0.16	-0.12	12.21	0	0	0
226	SLU 24	-0.17	-0.1	12.49	0	0	0
226	SLU 25	-0.17	-0.11	12.49	0	0	0
226	SLU 26	-0.17	-0.12	12.38	0	0	0
226	SLU 27	-0.18	-0.11	12.66	0	0	0
226	SLU 28	-0.17	-0.11	12.66	0	0	0
226	SLU 29	-0.18	-0.11	12.57	0	0	0
226	SLU 30	-0.17	-0.11	12.56	0	0	0
226	SLU 31	-0.17	-0.12	13.55	0	0	0
226	SLU 32	-0.18	-0.1	13.83	0	0	0
226	SLU 33	-0.18	-0.11	13.82	0	0	0
226	SLU 34	-0.17	-0.12	13.72	0	0	0
226	SLU 35	-0.19	-0.11	14	0	0	0
226	SLU 36	-0.18	-0.11	13.99	0	0	0
226	SLU 37	-0.18	-0.11	13.9	0	0	0
226	SLU 38	-0.18	-0.11	13.89	0	0	0
226	SLU 39	-0.18	-0.1	14.13	0	0	0
226	SLU 40	-0.18	-0.11	14.12	0	0	0
226	SLU 41	-0.18	-0.11	14.3	0	0	0
226	SLU 42	-0.18	-0.11	14.29	0	0	0
226	SLU 43	-0.19	-0.16	13.95	0	0	0
226	SLU 44	-0.19	-0.17	13.94	0	0	0
226	SLU 45	-0.2	-0.16	14.22	0	0	0
226	SLU 46	-0.19	-0.17	14.21	0	0	0
226	SLU 47	-0.19	-0.17	14.11	0	0	0
226	SLU 48	-0.2	-0.16	14.39	0	0	0
226	SLU 49	-0.19	-0.17	14.38	0	0	0
226	SLU 50	-0.2	-0.16	14.29	0	0	0
226	SLU 51	-0.19	-0.17	14.28	0	0	0
226	SLU 52	-0.19	-0.17	15.27	0	0	0
226	SLU 53	-0.2	-0.16	15.55	0	0	0
226	SLU 54	-0.2	-0.17	15.54	0	0	0
226	SLU 55	-0.2	-0.17	15.44	0	0	0
226	SLU 56	-0.21	-0.16	15.72	0	0	0
226	SLU 57	-0.2	-0.17	15.71	0	0	0
226	SLU 58	-0.21	-0.16	15.62	0	0	0
226	SLU 59	-0.2	-0.17	15.62	0	0	0
226	SLU 60	-0.2	-0.16	15.86	0	0	0
226	SLU 61	-0.2	-0.17	15.85	0	0	0
226	SLU 62	-0.21	-0.16	16.03	0	0	0
226	SLU 63	-0.2	-0.17	16.02	0	0	0
226	SLU 64	-0.21	-0.15	15.14	0	0	0
226	SLU 65	-0.2	-0.16	15.12	0	0	0
226	SLU 66	-0.21	-0.14	15.4	0	0	0
226	SLU 67	-0.21	-0.15	15.39	0	0	0
226	SLU 68	-0.21	-0.16	15.29	0	0	0
226	SLU 69	-0.22	-0.15	15.57	0	0	0
226	SLU 70	-0.21	-0.15	15.56	0	0	0
226	SLU 71	-0.22	-0.15	15.47	0	0	0
226	SLU 72	-0.21	-0.16	15.47	0	0	0
226	SLU 73	-0.21	-0.16	16.45	0	0	0
226	SLU 74	-0.22	-0.14	16.73	0	0	0
226	SLU 75	-0.22	-0.15	16.73	0	0	0
226	SLU 76	-0.21	-0.16	16.62	0	0	0
226	SLU 77	-0.22	-0.15	16.9	0	0	0
226	SLU 78	-0.22	-0.15	16.9	0	0	0
226	SLU 79	-0.22	-0.15	16.81	0	0	0
226	SLU 80	-0.22	-0.15	16.8	0	0	0
226	SLU 81	-0.22	-0.14	17.04	0	0	0
226	SLU 82	-0.22	-0.15	17.03	0	0	0
226	SLU 83	-0.22	-0.15	17.21	0	0	0
226	SLU 84	-0.22	-0.15	17.2	0	0	0
226	SLE RA 1	-0.16	-0.11	11.38	0	0	0
226	SLE RA 2	-0.15	-0.12	11.37	0	0	0
226	SLE RA 3	-0.16	-0.11	11.56	0	0	0
226	SLE RA 4	-0.16	-0.12	11.55	0	0	0
226	SLE RA 5	-0.16	-0.12	11.49	0	0	0
226	SLE RA 6	-0.16	-0.12	11.67	0	0	0
226	SLE RA 7	-0.16	-0.12	11.67	0	0	0
226	SLE RA 8	-0.16	-0.12	11.61	0	0	0
226	SLE RA 9	-0.16	-0.12	11.6	0	0	0
226	SLE RA 10	-0.16	-0.12	12.26	0	0	0
226	SLE RA 11	-0.17	-0.11	12.45	0	0	0
226	SLE RA 12	-0.16	-0.12	12.44	0	0	0
226	SLE RA 13	-0.16	-0.12	12.37	0	0	0
226	SLE RA 14	-0.17	-0.12	12.56	0	0	0
226	SLE RA 15	-0.16	-0.12	12.56	0	0	0
226	SLE RA 16	-0.17	-0.12	12.5	0	0	0
226	SLE RA 17	-0.16	-0.12	12.49	0	0	0
226	SLE RA 18	-0.17	-0.11	12.65	0	0	0
226	SLE RA 19	-0.16	-0.12	12.65	0	0	0
226	SLE RA 20	-0.17	-0.12	12.76	0	0	0
226	SLE RA 21	-0.16	-0.12	12.76	0	0	0
226	SLE FR 1	-0.16	-0.11	11.38	0	0	0
226	SLE FR 2	-0.16	-0.12	11.38	0	0	0
226	SLE FR 3	-0.16	-0.12	11.43	0	0	0
226	SLE FR 4	-0.16	-0.12	11.76	0	0	0
226	SLE FR 5	-0.16	-0.12	11.81	0	0	0
226	SLE FR 6	-0.16	-0.11	12.02	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLE QP 1	-0.16	-0.11	11.38	0	0	0
226	SLE QP 2	-0.16	-0.11	11.76	0	0	0
226	SLD 1	0.84	0	12.16	0	0	0
226	SLD 2	0.95	-0.04	12.11	0	0	0
226	SLD 3	0.86	-0.29	11.91	0	0	0
226	SLD 4	0.97	-0.32	11.87	0	0	0
226	SLD 5	0.09	0.36	12.25	0	0	0
226	SLD 6	0.16	0.33	12.23	0	0	0
226	SLD 7	0.16	-0.59	11.45	0	0	0
226	SLD 8	0.23	-0.61	11.42	0	0	0
226	SLD 9	-0.55	0.38	12.1	0	0	0
226	SLD 10	-0.48	0.36	12.08	0	0	0
226	SLD 11	-0.48	-0.56	11.3	0	0	0
226	SLD 12	-0.4	-0.59	11.27	0	0	0
226	SLD 13	-1.29	0.09	11.66	0	0	0
226	SLD 14	-1.18	0.06	11.61	0	0	0
226	SLD 15	-1.27	-0.19	11.41	0	0	0
226	SLD 16	-1.16	-0.23	11.37	0	0	0
226	SLV 1	2.18	0.14	12.67	0	0	0
226	SLV 2	2.43	0.06	12.57	0	0	0
226	SLV 3	2.23	-0.5	12.12	0	0	0
226	SLV 4	2.48	-0.58	12.03	0	0	0
226	SLV 5	0.42	0.95	12.88	0	0	0
226	SLV 6	0.58	0.9	12.82	0	0	0
226	SLV 7	0.59	-1.19	11.06	0	0	0
226	SLV 8	0.76	-1.25	10.99	0	0	0
226	SLV 9	-1.08	1.02	12.53	0	0	0
226	SLV 10	-0.91	0.96	12.47	0	0	0
226	SLV 11	-0.9	-1.13	10.71	0	0	0
226	SLV 12	-0.74	-1.18	10.64	0	0	0
226	SLV 13	-2.8	0.35	11.5	0	0	0
226	SLV 14	-2.55	0.27	11.4	0	0	0
226	SLV 15	-2.75	-0.29	10.95	0	0	0
226	SLV 16	-2.5	-0.37	10.86	0	0	0
227	SLU 1	-0.15	-0.09	11.15	0	0	0
227	SLU 2	-0.14	-0.1	11.14	0	0	0
227	SLU 3	-0.15	-0.08	11.42	0	0	0
227	SLU 4	-0.15	-0.09	11.41	0	0	0
227	SLU 5	-0.15	-0.1	11.31	0	0	0
227	SLU 6	-0.16	-0.08	11.59	0	0	0
227	SLU 7	-0.15	-0.09	11.58	0	0	0
227	SLU 8	-0.16	-0.09	11.49	0	0	0
227	SLU 9	-0.15	-0.09	11.49	0	0	0
227	SLU 10	-0.15	-0.09	12.5	0	0	0
227	SLU 11	-0.16	-0.08	12.78	0	0	0
227	SLU 12	-0.16	-0.09	12.77	0	0	0
227	SLU 13	-0.15	-0.09	12.67	0	0	0
227	SLU 14	-0.16	-0.08	12.95	0	0	0
227	SLU 15	-0.16	-0.09	12.94	0	0	0
227	SLU 16	-0.16	-0.08	12.85	0	0	0
227	SLU 17	-0.16	-0.09	12.84	0	0	0
227	SLU 18	-0.16	-0.08	13.09	0	0	0
227	SLU 19	-0.16	-0.09	13.08	0	0	0
227	SLU 20	-0.16	-0.08	13.26	0	0	0
227	SLU 21	-0.16	-0.09	13.26	0	0	0
227	SLU 22	-0.17	-0.07	12.35	0	0	0
227	SLU 23	-0.16	-0.08	12.33	0	0	0
227	SLU 24	-0.17	-0.07	12.62	0	0	0
227	SLU 25	-0.17	-0.07	12.61	0	0	0
227	SLU 26	-0.16	-0.08	12.51	0	0	0
227	SLU 27	-0.17	-0.07	12.79	0	0	0
227	SLU 28	-0.17	-0.07	12.78	0	0	0
227	SLU 29	-0.17	-0.07	12.69	0	0	0
227	SLU 30	-0.17	-0.08	12.68	0	0	0
227	SLU 31	-0.17	-0.07	13.69	0	0	0
227	SLU 32	-0.18	-0.06	13.98	0	0	0
227	SLU 33	-0.18	-0.07	13.97	0	0	0
227	SLU 34	-0.17	-0.08	13.87	0	0	0
227	SLU 35	-0.18	-0.06	14.15	0	0	0
227	SLU 36	-0.18	-0.07	14.14	0	0	0
227	SLU 37	-0.18	-0.06	14.05	0	0	0
227	SLU 38	-0.18	-0.07	14.04	0	0	0
227	SLU 39	-0.18	-0.06	14.29	0	0	0
227	SLU 40	-0.17	-0.07	14.28	0	0	0
227	SLU 41	-0.18	-0.06	14.46	0	0	0
227	SLU 42	-0.18	-0.07	14.45	0	0	0
227	SLU 43	-0.19	-0.12	14.08	0	0	0
227	SLU 44	-0.18	-0.13	14.07	0	0	0
227	SLU 45	-0.19	-0.12	14.35	0	0	0
227	SLU 46	-0.19	-0.12	14.35	0	0	0
227	SLU 47	-0.19	-0.13	14.24	0	0	0
227	SLU 48	-0.2	-0.12	14.53	0	0	0
227	SLU 49	-0.19	-0.12	14.52	0	0	0
227	SLU 50	-0.19	-0.12	14.43	0	0	0
227	SLU 51	-0.19	-0.13	14.42	0	0	0
227	SLU 52	-0.19	-0.13	15.43	0	0	0
227	SLU 53	-0.2	-0.11	15.71	0	0	0
227	SLU 54	-0.2	-0.12	15.71	0	0	0
227	SLU 55	-0.19	-0.13	15.6	0	0	0
227	SLU 56	-0.2	-0.11	15.89	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
227	SLU 57	-0.2	-0.12	15.88	0	0	0
227	SLU 58	-0.2	-0.12	15.79	0	0	0
227	SLU 59	-0.2	-0.12	15.78	0	0	0
227	SLU 60	-0.2	-0.11	16.03	0	0	0
227	SLU 61	-0.2	-0.12	16.02	0	0	0
227	SLU 62	-0.2	-0.11	16.2	0	0	0
227	SLU 63	-0.2	-0.12	16.19	0	0	0
227	SLU 64	-0.21	-0.1	15.28	0	0	0
227	SLU 65	-0.2	-0.11	15.27	0	0	0
227	SLU 66	-0.21	-0.1	15.55	0	0	0
227	SLU 67	-0.21	-0.1	15.55	0	0	0
227	SLU 68	-0.2	-0.11	15.44	0	0	0
227	SLU 69	-0.21	-0.1	15.73	0	0	0
227	SLU 70	-0.21	-0.11	15.72	0	0	0
227	SLU 71	-0.21	-0.1	15.63	0	0	0
227	SLU 72	-0.21	-0.11	15.62	0	0	0
227	SLU 73	-0.21	-0.11	16.63	0	0	0
227	SLU 74	-0.22	-0.09	16.91	0	0	0
227	SLU 75	-0.21	-0.1	16.9	0	0	0
227	SLU 76	-0.21	-0.11	16.8	0	0	0
227	SLU 77	-0.22	-0.09	17.08	0	0	0
227	SLU 78	-0.22	-0.1	17.08	0	0	0
227	SLU 79	-0.22	-0.1	16.99	0	0	0
227	SLU 80	-0.22	-0.1	16.98	0	0	0
227	SLU 81	-0.22	-0.09	17.22	0	0	0
227	SLU 82	-0.21	-0.1	17.22	0	0	0
227	SLU 83	-0.22	-0.09	17.4	0	0	0
227	SLU 84	-0.22	-0.1	17.39	0	0	0
227	SLE RA 1	-0.16	-0.08	11.49	0	0	0
227	SLE RA 2	-0.15	-0.09	11.48	0	0	0
227	SLE RA 3	-0.16	-0.08	11.67	0	0	0
227	SLE RA 4	-0.16	-0.08	11.67	0	0	0
227	SLE RA 5	-0.15	-0.09	11.6	0	0	0
227	SLE RA 6	-0.16	-0.08	11.79	0	0	0
227	SLE RA 7	-0.16	-0.08	11.78	0	0	0
227	SLE RA 8	-0.16	-0.08	11.72	0	0	0
227	SLE RA 9	-0.16	-0.09	11.72	0	0	0
227	SLE RA 10	-0.16	-0.09	12.39	0	0	0
227	SLE RA 11	-0.16	-0.08	12.58	0	0	0
227	SLE RA 12	-0.16	-0.08	12.57	0	0	0
227	SLE RA 13	-0.16	-0.09	12.5	0	0	0
227	SLE RA 14	-0.16	-0.08	12.69	0	0	0
227	SLE RA 15	-0.16	-0.08	12.69	0	0	0
227	SLE RA 16	-0.16	-0.08	12.63	0	0	0
227	SLE RA 17	-0.16	-0.08	12.62	0	0	0
227	SLE RA 18	-0.16	-0.08	12.79	0	0	0
227	SLE RA 19	-0.16	-0.08	12.78	0	0	0
227	SLE RA 20	-0.16	-0.08	12.9	0	0	0
227	SLE RA 21	-0.16	-0.08	12.9	0	0	0
227	SLE FR 1	-0.16	-0.08	11.49	0	0	0
227	SLE FR 2	-0.15	-0.08	11.49	0	0	0
227	SLE FR 3	-0.16	-0.08	11.54	0	0	0
227	SLE FR 4	-0.16	-0.08	11.88	0	0	0
227	SLE FR 5	-0.16	-0.08	11.93	0	0	0
227	SLE FR 6	-0.16	-0.08	12.14	0	0	0
227	SLE QP 1	-0.16	-0.08	11.49	0	0	0
227	SLE QP 2	-0.16	-0.08	11.88	0	0	0
227	SLD 1	0.83	0.05	12.17	0	0	0
227	SLD 2	0.94	0.03	12.14	0	0	0
227	SLD 3	0.85	-0.23	11.93	0	0	0
227	SLD 4	0.96	-0.26	11.89	0	0	0
227	SLD 5	0.09	0.4	12.35	0	0	0
227	SLD 6	0.16	0.38	12.32	0	0	0
227	SLD 7	0.16	-0.55	11.53	0	0	0
227	SLD 8	0.23	-0.57	11.5	0	0	0
227	SLD 9	-0.55	0.41	12.26	0	0	0
227	SLD 10	-0.48	0.39	12.23	0	0	0
227	SLD 11	-0.47	-0.54	11.44	0	0	0
227	SLD 12	-0.4	-0.56	11.41	0	0	0
227	SLD 13	-1.28	0.1	11.87	0	0	0
227	SLD 14	-1.17	0.07	11.83	0	0	0
227	SLD 15	-1.26	-0.18	11.63	0	0	0
227	SLD 16	-1.15	-0.21	11.59	0	0	0
227	SLV 1	2.16	0.22	12.56	0	0	0
227	SLV 2	2.41	0.15	12.47	0	0	0
227	SLV 3	2.21	-0.42	12	0	0	0
227	SLV 4	2.46	-0.49	11.91	0	0	0
227	SLV 5	0.41	1	12.95	0	0	0
227	SLV 6	0.58	0.96	12.89	0	0	0
227	SLV 7	0.59	-1.15	11.08	0	0	0
227	SLV 8	0.75	-1.19	11.03	0	0	0
227	SLV 9	-1.07	1.04	12.73	0	0	0
227	SLV 10	-0.9	0.99	12.68	0	0	0
227	SLV 11	-0.89	-1.12	10.87	0	0	0
227	SLV 12	-0.73	-1.16	10.82	0	0	0
227	SLV 13	-2.78	0.33	11.85	0	0	0
227	SLV 14	-2.52	0.27	11.76	0	0	0
227	SLV 15	-2.72	-0.31	11.29	0	0	0
227	SLV 16	-2.47	-0.38	11.2	0	0	0
228	SLU 1	-0.14	-0.05	10.86	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
228	SLU 2	-0.14	-0.06	10.85	0	0	0
228	SLU 3	-0.15	-0.05	11.12	0	0	0
228	SLU 4	-0.14	-0.06	11.12	0	0	0
228	SLU 5	-0.14	-0.06	11.01	0	0	0
228	SLU 6	-0.15	-0.05	11.29	0	0	0
228	SLU 7	-0.14	-0.06	11.29	0	0	0
228	SLU 8	-0.15	-0.05	11.2	0	0	0
228	SLU 9	-0.14	-0.06	11.19	0	0	0
228	SLU 10	-0.14	-0.06	12.18	0	0	0
228	SLU 11	-0.15	-0.04	12.46	0	0	0
228	SLU 12	-0.15	-0.05	12.45	0	0	0
228	SLU 13	-0.15	-0.06	12.35	0	0	0
228	SLU 14	-0.16	-0.04	12.63	0	0	0
228	SLU 15	-0.15	-0.05	12.62	0	0	0
228	SLU 16	-0.15	-0.05	12.53	0	0	0
228	SLU 17	-0.15	-0.05	12.53	0	0	0
228	SLU 18	-0.15	-0.04	12.77	0	0	0
228	SLU 19	-0.15	-0.05	12.76	0	0	0
228	SLU 20	-0.15	-0.04	12.94	0	0	0
228	SLU 21	-0.15	-0.05	12.93	0	0	0
228	SLU 22	-0.16	-0.03	12.03	0	0	0
228	SLU 23	-0.15	-0.04	12.02	0	0	0
228	SLU 24	-0.16	-0.03	12.3	0	0	0
228	SLU 25	-0.16	-0.03	12.29	0	0	0
228	SLU 26	-0.15	-0.04	12.19	0	0	0
228	SLU 27	-0.17	-0.03	12.47	0	0	0
228	SLU 28	-0.16	-0.03	12.46	0	0	0
228	SLU 29	-0.16	-0.03	12.37	0	0	0
228	SLU 30	-0.16	-0.04	12.36	0	0	0
228	SLU 31	-0.16	-0.03	13.36	0	0	0
228	SLU 32	-0.17	-0.02	13.64	0	0	0
228	SLU 33	-0.17	-0.03	13.63	0	0	0
228	SLU 34	-0.16	-0.03	13.53	0	0	0
228	SLU 35	-0.17	-0.02	13.8	0	0	0
228	SLU 36	-0.17	-0.03	13.8	0	0	0
228	SLU 37	-0.17	-0.02	13.71	0	0	0
228	SLU 38	-0.17	-0.03	13.7	0	0	0
228	SLU 39	-0.17	-0.02	13.94	0	0	0
228	SLU 40	-0.16	-0.03	13.94	0	0	0
228	SLU 41	-0.17	-0.02	14.11	0	0	0
228	SLU 42	-0.17	-0.03	14.1	0	0	0
228	SLU 43	-0.18	-0.07	13.71	0	0	0
228	SLU 44	-0.17	-0.08	13.7	0	0	0
228	SLU 45	-0.18	-0.07	13.98	0	0	0
228	SLU 46	-0.18	-0.08	13.97	0	0	0
228	SLU 47	-0.17	-0.08	13.87	0	0	0
228	SLU 48	-0.18	-0.07	14.15	0	0	0
228	SLU 49	-0.18	-0.08	14.14	0	0	0
228	SLU 50	-0.18	-0.07	14.05	0	0	0
228	SLU 51	-0.18	-0.08	14.04	0	0	0
228	SLU 52	-0.18	-0.08	15.04	0	0	0
228	SLU 53	-0.19	-0.07	15.32	0	0	0
228	SLU 54	-0.19	-0.07	15.31	0	0	0
228	SLU 55	-0.18	-0.08	15.21	0	0	0
228	SLU 56	-0.19	-0.07	15.49	0	0	0
228	SLU 57	-0.19	-0.07	15.48	0	0	0
228	SLU 58	-0.19	-0.07	15.39	0	0	0
228	SLU 59	-0.19	-0.07	15.38	0	0	0
228	SLU 60	-0.19	-0.06	15.63	0	0	0
228	SLU 61	-0.18	-0.07	15.62	0	0	0
228	SLU 62	-0.19	-0.06	15.79	0	0	0
228	SLU 63	-0.19	-0.07	15.79	0	0	0
228	SLU 64	-0.2	-0.05	14.89	0	0	0
228	SLU 65	-0.19	-0.06	14.87	0	0	0
228	SLU 66	-0.2	-0.05	15.15	0	0	0
228	SLU 67	-0.2	-0.06	15.15	0	0	0
228	SLU 68	-0.19	-0.06	15.04	0	0	0
228	SLU 69	-0.2	-0.05	15.32	0	0	0
228	SLU 70	-0.2	-0.06	15.31	0	0	0
228	SLU 71	-0.2	-0.05	15.22	0	0	0
228	SLU 72	-0.2	-0.06	15.22	0	0	0
228	SLU 73	-0.2	-0.06	16.21	0	0	0
228	SLU 74	-0.21	-0.04	16.49	0	0	0
228	SLU 75	-0.2	-0.05	16.48	0	0	0
228	SLU 76	-0.2	-0.06	16.38	0	0	0
228	SLU 77	-0.21	-0.04	16.66	0	0	0
228	SLU 78	-0.21	-0.05	16.65	0	0	0
228	SLU 79	-0.21	-0.05	16.56	0	0	0
228	SLU 80	-0.2	-0.05	16.55	0	0	0
228	SLU 81	-0.21	-0.04	16.8	0	0	0
228	SLU 82	-0.2	-0.05	16.79	0	0	0
228	SLU 83	-0.21	-0.04	16.97	0	0	0
228	SLU 84	-0.2	-0.05	16.96	0	0	0
228	SLE RA 1	-0.15	-0.04	11.19	0	0	0
228	SLE RA 2	-0.14	-0.05	11.19	0	0	0
228	SLE RA 3	-0.15	-0.04	11.37	0	0	0
228	SLE RA 4	-0.15	-0.05	11.37	0	0	0
228	SLE RA 5	-0.14	-0.05	11.3	0	0	0
228	SLE RA 6	-0.15	-0.04	11.48	0	0	0
228	SLE RA 7	-0.15	-0.05	11.48	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
228	SLE RA 8	-0.15	-0.05	11.42	0	0	0
228	SLE RA 9	-0.15	-0.05	11.41	0	0	0
228	SLE RA 10	-0.15	-0.05	12.08	0	0	0
228	SLE RA 11	-0.15	-0.04	12.26	0	0	0
228	SLE RA 12	-0.15	-0.04	12.26	0	0	0
228	SLE RA 13	-0.15	-0.05	12.19	0	0	0
228	SLE RA 14	-0.16	-0.04	12.38	0	0	0
228	SLE RA 15	-0.15	-0.04	12.37	0	0	0
228	SLE RA 16	-0.16	-0.04	12.31	0	0	0
228	SLE RA 17	-0.15	-0.05	12.31	0	0	0
228	SLE RA 18	-0.15	-0.04	12.47	0	0	0
228	SLE RA 19	-0.15	-0.04	12.46	0	0	0
228	SLE RA 20	-0.16	-0.04	12.58	0	0	0
228	SLE RA 21	-0.15	-0.04	12.58	0	0	0
228	SLE FR 1	-0.15	-0.04	11.19	0	0	0
228	SLE FR 2	-0.15	-0.05	11.19	0	0	0
228	SLE FR 3	-0.15	-0.04	11.24	0	0	0
228	SLE FR 4	-0.15	-0.04	11.57	0	0	0
228	SLE FR 5	-0.15	-0.04	11.62	0	0	0
228	SLE FR 6	-0.15	-0.04	11.83	0	0	0
228	SLE QP 1	-0.15	-0.04	11.19	0	0	0
228	SLE QP 2	-0.15	-0.04	11.58	0	0	0
228	SLD 1	0.79	0.12	11.77	0	0	0
228	SLD 2	0.89	0.1	11.74	0	0	0
228	SLD 3	0.81	-0.15	11.53	0	0	0
228	SLD 4	0.91	-0.18	11.5	0	0	0
228	SLD 5	0.08	0.42	12.01	0	0	0
228	SLD 6	0.15	0.41	11.99	0	0	0
228	SLD 7	0.15	-0.49	11.2	0	0	0
228	SLD 8	0.22	-0.5	11.18	0	0	0
228	SLD 9	-0.52	0.41	11.97	0	0	0
228	SLD 10	-0.45	0.4	11.95	0	0	0
228	SLD 11	-0.45	-0.49	11.17	0	0	0
228	SLD 12	-0.38	-0.51	11.14	0	0	0
228	SLD 13	-1.21	0.09	11.65	0	0	0
228	SLD 14	-1.11	0.07	11.62	0	0	0
228	SLD 15	-1.19	-0.18	11.41	0	0	0
228	SLD 16	-1.08	-0.21	11.38	0	0	0
228	SLV 1	2.04	0.33	12.03	0	0	0
228	SLV 2	2.28	0.27	11.95	0	0	0
228	SLV 3	2.09	-0.29	11.48	0	0	0
228	SLV 4	2.33	-0.34	11.4	0	0	0
228	SLV 5	0.39	1.01	12.56	0	0	0
228	SLV 6	0.55	0.98	12.51	0	0	0
228	SLV 7	0.56	-1.04	10.73	0	0	0
228	SLV 8	0.71	-1.08	10.68	0	0	0
228	SLV 9	-1.01	0.99	12.47	0	0	0
228	SLV 10	-0.85	0.96	12.42	0	0	0
228	SLV 11	-0.84	-1.07	10.64	0	0	0
228	SLV 12	-0.69	-1.1	10.59	0	0	0
228	SLV 13	-2.63	0.26	11.75	0	0	0
228	SLV 14	-2.39	0.2	11.67	0	0	0
228	SLV 15	-2.58	-0.36	11.2	0	0	0
228	SLV 16	-2.34	-0.41	11.12	0	0	0
230	SLU 1	-0.1	-0.19	7.3	0	0	0
230	SLU 2	-0.1	-0.19	7.29	0	0	0
230	SLU 3	-0.11	-0.19	7.47	0	0	0
230	SLU 4	-0.1	-0.19	7.47	0	0	0
230	SLU 5	-0.1	-0.2	7.4	0	0	0
230	SLU 6	-0.11	-0.19	7.58	0	0	0
230	SLU 7	-0.11	-0.2	7.58	0	0	0
230	SLU 8	-0.11	-0.19	7.52	0	0	0
230	SLU 9	-0.1	-0.2	7.51	0	0	0
230	SLU 10	-0.1	-0.21	8.15	0	0	0
230	SLU 11	-0.11	-0.2	8.33	0	0	0
230	SLU 12	-0.11	-0.21	8.33	0	0	0
230	SLU 13	-0.11	-0.21	8.26	0	0	0
230	SLU 14	-0.11	-0.2	8.44	0	0	0
230	SLU 15	-0.11	-0.21	8.44	0	0	0
230	SLU 16	-0.11	-0.2	8.38	0	0	0
230	SLU 17	-0.11	-0.21	8.38	0	0	0
230	SLU 18	-0.11	-0.2	8.53	0	0	0
230	SLU 19	-0.11	-0.21	8.52	0	0	0
230	SLU 20	-0.11	-0.21	8.64	0	0	0
230	SLU 21	-0.11	-0.21	8.63	0	0	0
230	SLU 22	-0.12	-0.19	8.09	0	0	0
230	SLU 23	-0.11	-0.2	8.08	0	0	0
230	SLU 24	-0.12	-0.2	8.26	0	0	0
230	SLU 25	-0.12	-0.2	8.26	0	0	0
230	SLU 26	-0.11	-0.2	8.19	0	0	0
230	SLU 27	-0.12	-0.2	8.37	0	0	0
230	SLU 28	-0.12	-0.2	8.37	0	0	0
230	SLU 29	-0.12	-0.2	8.31	0	0	0
230	SLU 30	-0.12	-0.2	8.3	0	0	0
230	SLU 31	-0.12	-0.21	8.94	0	0	0
230	SLU 32	-0.12	-0.21	9.12	0	0	0
230	SLU 33	-0.12	-0.21	9.12	0	0	0
230	SLU 34	-0.12	-0.21	9.05	0	0	0
230	SLU 35	-0.13	-0.21	9.23	0	0	0
230	SLU 36	-0.12	-0.21	9.23	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
230	SLU 37	-0.12	-0.21	9.17	0	0	0
230	SLU 38	-0.12	-0.21	9.17	0	0	0
230	SLU 39	-0.12	-0.21	9.32	0	0	0
230	SLU 40	-0.12	-0.21	9.31	0	0	0
230	SLU 41	-0.13	-0.21	9.43	0	0	0
230	SLU 42	-0.12	-0.22	9.42	0	0	0
230	SLU 43	-0.13	-0.24	9.21	0	0	0
230	SLU 44	-0.13	-0.25	9.2	0	0	0
230	SLU 45	-0.13	-0.24	9.39	0	0	0
230	SLU 46	-0.13	-0.25	9.38	0	0	0
230	SLU 47	-0.13	-0.25	9.32	0	0	0
230	SLU 48	-0.13	-0.25	9.5	0	0	0
230	SLU 49	-0.13	-0.25	9.5	0	0	0
230	SLU 50	-0.13	-0.25	9.44	0	0	0
230	SLU 51	-0.13	-0.25	9.43	0	0	0
230	SLU 52	-0.13	-0.26	10.07	0	0	0
230	SLU 53	-0.14	-0.26	10.25	0	0	0
230	SLU 54	-0.14	-0.26	10.24	0	0	0
230	SLU 55	-0.13	-0.26	10.18	0	0	0
230	SLU 56	-0.14	-0.26	10.36	0	0	0
230	SLU 57	-0.14	-0.26	10.36	0	0	0
230	SLU 58	-0.14	-0.26	10.3	0	0	0
230	SLU 59	-0.14	-0.26	10.29	0	0	0
230	SLU 60	-0.14	-0.26	10.44	0	0	0
230	SLU 61	-0.14	-0.26	10.44	0	0	0
230	SLU 62	-0.14	-0.26	10.56	0	0	0
230	SLU 63	-0.14	-0.26	10.55	0	0	0
230	SLU 64	-0.14	-0.25	10	0	0	0
230	SLU 65	-0.14	-0.25	10	0	0	0
230	SLU 66	-0.14	-0.25	10.18	0	0	0
230	SLU 67	-0.14	-0.25	10.17	0	0	0
230	SLU 68	-0.14	-0.26	10.11	0	0	0
230	SLU 69	-0.15	-0.25	10.29	0	0	0
230	SLU 70	-0.14	-0.26	10.29	0	0	0
230	SLU 71	-0.15	-0.25	10.23	0	0	0
230	SLU 72	-0.14	-0.26	10.22	0	0	0
230	SLU 73	-0.14	-0.27	10.86	0	0	0
230	SLU 74	-0.15	-0.26	11.04	0	0	0
230	SLU 75	-0.15	-0.27	11.03	0	0	0
230	SLU 76	-0.15	-0.27	10.97	0	0	0
230	SLU 77	-0.15	-0.26	11.15	0	0	0
230	SLU 78	-0.15	-0.27	11.15	0	0	0
230	SLU 79	-0.15	-0.26	11.09	0	0	0
230	SLU 80	-0.15	-0.27	11.08	0	0	0
230	SLU 81	-0.15	-0.26	11.23	0	0	0
230	SLU 82	-0.15	-0.27	11.23	0	0	0
230	SLU 83	-0.15	-0.27	11.35	0	0	0
230	SLU 84	-0.15	-0.27	11.34	0	0	0
230	SLE RA 1	-0.11	-0.19	7.52	0	0	0
230	SLE RA 2	-0.1	-0.19	7.52	0	0	0
230	SLE RA 3	-0.11	-0.19	7.64	0	0	0
230	SLE RA 4	-0.11	-0.19	7.63	0	0	0
230	SLE RA 5	-0.11	-0.19	7.59	0	0	0
230	SLE RA 6	-0.11	-0.19	7.71	0	0	0
230	SLE RA 7	-0.11	-0.19	7.71	0	0	0
230	SLE RA 8	-0.11	-0.19	7.67	0	0	0
230	SLE RA 9	-0.11	-0.19	7.67	0	0	0
230	SLE RA 10	-0.11	-0.2	8.09	0	0	0
230	SLE RA 11	-0.11	-0.2	8.21	0	0	0
230	SLE RA 12	-0.11	-0.2	8.21	0	0	0
230	SLE RA 13	-0.11	-0.2	8.16	0	0	0
230	SLE RA 14	-0.11	-0.2	8.29	0	0	0
230	SLE RA 15	-0.11	-0.2	8.28	0	0	0
230	SLE RA 16	-0.11	-0.2	8.25	0	0	0
230	SLE RA 17	-0.11	-0.2	8.24	0	0	0
230	SLE RA 18	-0.11	-0.2	8.34	0	0	0
230	SLE RA 19	-0.11	-0.2	8.34	0	0	0
230	SLE RA 20	-0.11	-0.2	8.42	0	0	0
230	SLE RA 21	-0.11	-0.2	8.41	0	0	0
230	SLE FR 1	-0.11	-0.19	7.52	0	0	0
230	SLE FR 2	-0.11	-0.19	7.52	0	0	0
230	SLE FR 3	-0.11	-0.19	7.55	0	0	0
230	SLE FR 4	-0.11	-0.19	7.77	0	0	0
230	SLE FR 5	-0.11	-0.19	7.8	0	0	0
230	SLE FR 6	-0.11	-0.19	7.93	0	0	0
230	SLE QP 1	-0.11	-0.19	7.52	0	0	0
230	SLE QP 2	-0.11	-0.19	7.77	0	0	0
230	SLD 1	0.5	-0.19	8.42	0	0	0
230	SLD 2	0.56	-0.22	8.38	0	0	0
230	SLD 3	0.51	-0.35	8.26	0	0	0
230	SLD 4	0.58	-0.39	8.22	0	0	0
230	SLD 5	0.04	0.07	8.21	0	0	0
230	SLD 6	0.08	0.04	8.18	0	0	0
230	SLD 7	0.09	-0.48	7.68	0	0	0
230	SLD 8	0.13	-0.51	7.66	0	0	0
230	SLD 9	-0.35	0.12	7.88	0	0	0
230	SLD 10	-0.3	0.1	7.85	0	0	0
230	SLD 11	-0.3	-0.43	7.35	0	0	0
230	SLD 12	-0.26	-0.45	7.32	0	0	0
230	SLD 13	-0.79	0	7.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
230	SLD 14	-0.73	-0.03	7.28	0	0	0
230	SLD 15	-0.78	-0.16	7.16	0	0	0
230	SLD 16	-0.71	-0.2	7.12	0	0	0
230	SLV 1	1.31	-0.18	9.29	0	0	0
230	SLV 2	1.46	-0.27	9.19	0	0	0
230	SLV 3	1.34	-0.56	8.93	0	0	0
230	SLV 4	1.49	-0.64	8.83	0	0	0
230	SLV 5	0.24	0.39	8.79	0	0	0
230	SLV 6	0.34	0.34	8.72	0	0	0
230	SLV 7	0.35	-0.85	7.59	0	0	0
230	SLV 8	0.45	-0.91	7.52	0	0	0
230	SLV 9	-0.67	0.52	8.01	0	0	0
230	SLV 10	-0.57	0.47	7.95	0	0	0
230	SLV 11	-0.56	-0.72	6.81	0	0	0
230	SLV 12	-0.46	-0.77	6.75	0	0	0
230	SLV 13	-1.71	0.26	6.71	0	0	0
230	SLV 14	-1.55	0.17	6.61	0	0	0
230	SLV 15	-1.68	-0.11	6.35	0	0	0
230	SLV 16	-1.52	-0.2	6.25	0	0	0
231	SLU 1	-0.07	-0.01	5.43	0	0.8158	0.002
231	SLU 2	-0.07	-0.02	5.42	0	0.8148	0.0027
231	SLU 3	-0.07	-0.01	5.56	0	0.8359	0.0018
231	SLU 4	-0.07	-0.01	5.56	0	0.8353	0.0022
231	SLU 5	-0.07	-0.02	5.51	0	0.8275	0.0027
231	SLU 6	-0.07	-0.01	5.65	0	0.8486	0.0018
231	SLU 7	-0.07	-0.01	5.65	0	0.848	0.0022
231	SLU 8	-0.07	-0.01	5.6	0	0.8412	0.002
231	SLU 9	-0.07	-0.02	5.6	0	0.8406	0.0024
231	SLU 10	-0.07	-0.01	6.1	0	0.9163	0.0021
231	SLU 11	-0.07	-0.01	6.24	0	0.9375	0.0011
231	SLU 12	-0.07	-0.01	6.24	0	0.9369	0.0016
231	SLU 13	-0.07	-0.01	6.18	0	0.9291	0.0021
231	SLU 14	-0.08	-0.01	6.33	0	0.9502	0.0011
231	SLU 15	-0.07	-0.01	6.32	0	0.9496	0.0016
231	SLU 16	-0.07	-0.01	6.28	0	0.9428	0.0013
231	SLU 17	-0.07	-0.01	6.27	0	0.9422	0.0018
231	SLU 18	-0.07	-0.01	6.4	0	0.9609	0.001
231	SLU 19	-0.07	-0.01	6.39	0	0.9603	0.0015
231	SLU 20	-0.07	-0.01	6.48	0	0.9736	0.001
231	SLU 21	-0.07	-0.01	6.48	0	0.973	0.0015
231	SLU 22	-0.08	0	6.02	0	0.9044	0.0002
231	SLU 23	-0.07	-0.01	6.01	0	0.9034	0.001
231	SLU 24	-0.08	0	6.15	0	0.9245	0
231	SLU 25	-0.08	0	6.15	0	0.9239	0.0004
231	SLU 26	-0.07	-0.01	6.1	0	0.9161	0.001
231	SLU 27	-0.08	0	6.24	0	0.9372	0
231	SLU 28	-0.08	0	6.24	0	0.9366	0.0005
231	SLU 29	-0.08	0	6.19	0	0.9298	0.0002
231	SLU 30	-0.08	0	6.19	0	0.9292	0.0007
231	SLU 31	-0.08	0	6.69	0	1.0049	0.0003
231	SLU 32	-0.08	0	6.83	0	1.0261	-0.0007
231	SLU 33	-0.08	0	6.83	0	1.0255	-0.0002
231	SLU 34	-0.08	0	6.77	0	1.0177	0.0003
231	SLU 35	-0.08	0	6.92	0	1.0388	-0.0007
231	SLU 36	-0.08	0	6.91	0	1.0382	-0.0002
231	SLU 37	-0.08	0	6.87	0	1.0314	-0.0005
231	SLU 38	-0.08	0	6.86	0	1.0308	0
231	SLU 39	-0.08	0.01	6.99	0	1.0495	-0.0008
231	SLU 40	-0.08	0	6.98	0	1.0489	-0.0003
231	SLU 41	-0.08	0.01	7.07	0	1.0622	-0.0008
231	SLU 42	-0.08	0	7.07	0	1.0616	-0.0003
231	SLU 43	-0.09	-0.02	6.86	0	1.0301	0.0032
231	SLU 44	-0.08	-0.03	6.85	0	1.0291	0.0039
231	SLU 45	-0.09	-0.02	6.99	0	1.0502	0.003
231	SLU 46	-0.09	-0.02	6.99	0	1.0496	0.0034
231	SLU 47	-0.08	-0.03	6.94	0	1.0418	0.0039
231	SLU 48	-0.09	-0.02	7.08	0	1.063	0.003
231	SLU 49	-0.09	-0.02	7.07	0	1.0624	0.0034
231	SLU 50	-0.09	-0.02	7.03	0	1.0556	0.0032
231	SLU 51	-0.09	-0.02	7.02	0	1.055	0.0036
231	SLU 52	-0.09	-0.02	7.53	0	1.1307	0.0033
231	SLU 53	-0.09	-0.02	7.67	0	1.1518	0.0023
231	SLU 54	-0.09	-0.02	7.66	0	1.1512	0.0028
231	SLU 55	-0.09	-0.02	7.61	0	1.1434	0.0033
231	SLU 56	-0.09	-0.02	7.75	0	1.1645	0.0023
231	SLU 57	-0.09	-0.02	7.75	0	1.1639	0.0028
231	SLU 58	-0.09	-0.02	7.7	0	1.1572	0.0025
231	SLU 59	-0.09	-0.02	7.7	0	1.1565	0.003
231	SLU 60	-0.09	-0.01	7.82	0	1.1752	0.0022
231	SLU 61	-0.09	-0.02	7.82	0	1.1746	0.0027
231	SLU 62	-0.09	-0.01	7.91	0	1.188	0.0022
231	SLU 63	-0.09	-0.02	7.9	0	1.1873	0.0027
231	SLU 64	-0.09	-0.01	7.45	0	1.1187	0.0014
231	SLU 65	-0.09	-0.01	7.44	0	1.1177	0.0022
231	SLU 66	-0.1	-0.01	7.58	0	1.1389	0.0012
231	SLU 67	-0.09	-0.01	7.58	0	1.1383	0.0017
231	SLU 68	-0.09	-0.01	7.53	0	1.1305	0.0022
231	SLU 69	-0.1	-0.01	7.67	0	1.1516	0.0012
231	SLU 70	-0.1	-0.01	7.66	0	1.151	0.0017
231	SLU 71	-0.1	-0.01	7.62	0	1.1442	0.0014

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLU 72	-0.1	-0.01	7.61	0	1.1436	0.0019
231	SLU 73	-0.09	-0.01	8.12	0	1.2193	0.0015
231	SLU 74	-0.1	0	8.26	0	1.2404	0.0005
231	SLU 75	-0.1	-0.01	8.25	0	1.2398	0.001
231	SLU 76	-0.1	-0.01	8.2	0	1.232	0.0015
231	SLU 77	-0.1	0	8.34	0	1.2532	0.0005
231	SLU 78	-0.1	-0.01	8.34	0	1.2526	0.001
231	SLU 79	-0.1	0	8.29	0	1.2458	0.0007
231	SLU 80	-0.1	-0.01	8.29	0	1.2452	0.0012
231	SLU 81	-0.1	0	8.41	0	1.2638	0.0004
231	SLU 82	-0.1	-0.01	8.41	0	1.2632	0.0009
231	SLU 83	-0.1	0	8.5	0	1.2766	0.0004
231	SLU 84	-0.1	-0.01	8.49	0	1.276	0.0009
231	SLE RA 1	-0.07	-0.01	5.6	0	0.8411	0.0015
231	SLE RA 2	-0.07	-0.01	5.59	0	0.8404	0.002
231	SLE RA 3	-0.07	-0.01	5.69	0	0.8545	0.0013
231	SLE RA 4	-0.07	-0.01	5.69	0	0.8541	0.0016
231	SLE RA 5	-0.07	-0.01	5.65	0	0.8489	0.002
231	SLE RA 6	-0.07	-0.01	5.74	0	0.863	0.0013
231	SLE RA 7	-0.07	-0.01	5.74	0	0.8626	0.0016
231	SLE RA 8	-0.07	-0.01	5.71	0	0.8581	0.0015
231	SLE RA 9	-0.07	-0.01	5.71	0	0.8577	0.0018
231	SLE RA 10	-0.07	-0.01	6.05	0	0.9081	0.0015
231	SLE RA 11	-0.07	-0.01	6.14	0	0.9222	0.0009
231	SLE RA 12	-0.07	-0.01	6.14	0	0.9218	0.0012
231	SLE RA 13	-0.07	-0.01	6.1	0	0.9166	0.0015
231	SLE RA 14	-0.08	-0.01	6.2	0	0.9307	0.0009
231	SLE RA 15	-0.07	-0.01	6.19	0	0.9303	0.0012
231	SLE RA 16	-0.07	-0.01	6.16	0	0.9258	0.001
231	SLE RA 17	-0.07	-0.01	6.16	0	0.9254	0.0013
231	SLE RA 18	-0.07	-0.01	6.24	0	0.9378	0.0008
231	SLE RA 19	-0.07	-0.01	6.24	0	0.9374	0.0011
231	SLE RA 20	-0.07	-0.01	6.3	0	0.9463	0.0008
231	SLE RA 21	-0.07	-0.01	6.3	0	0.9459	0.0011
231	SLE FR 1	-0.07	-0.01	5.6	0	0.8411	0.0015
231	SLE FR 2	-0.07	-0.01	5.6	0	0.841	0.0016
231	SLE FR 3	-0.07	-0.01	5.62	0	0.8445	0.0015
231	SLE FR 4	-0.07	-0.01	5.79	0	0.87	0.0014
231	SLE FR 5	-0.07	-0.01	5.81	0	0.8735	0.0013
231	SLE FR 6	-0.07	-0.01	5.92	0	0.8895	0.0011
231	SLE QP 1	-0.07	-0.01	5.6	0	0.8411	0.0015
231	SLE QP 2	-0.07	-0.01	5.79	0	0.8701	0.0013
231	SLD 1	0.38	0.08	5.84	0	0.8774	-0.0116
231	SLD 2	0.43	0.07	5.83	0	0.8752	-0.0103
231	SLD 3	0.39	-0.06	5.72	0	0.859	0.0084
231	SLD 4	0.44	-0.06	5.7	0	0.8569	0.0097
231	SLD 5	0.04	0.22	5.99	0	0.9005	-0.0333
231	SLD 6	0.07	0.22	5.98	0	0.8991	-0.0324
231	SLD 7	0.07	-0.22	5.59	0	0.8394	0.0336
231	SLD 8	0.11	-0.23	5.58	0	0.8379	0.0345
231	SLD 9	-0.25	0.21	6.01	0	0.9023	-0.0319
231	SLD 10	-0.22	0.21	6	0	0.9008	-0.0311
231	SLD 11	-0.22	-0.23	5.6	0	0.8412	0.0349
231	SLD 12	-0.18	-0.24	5.59	0	0.8397	0.0358
231	SLD 13	-0.58	0.05	5.88	0	0.8834	-0.0072
231	SLD 14	-0.53	0.04	5.87	0	0.8812	-0.0059
231	SLD 15	-0.57	-0.09	5.76	0	0.865	0.0129
231	SLD 16	-0.52	-0.09	5.74	0	0.8628	0.0142
231	SLV 1	0.99	0.19	5.9	0	0.8863	-0.0281
231	SLV 2	1.1	0.17	5.87	0	0.8812	-0.0251
231	SLV 3	1.01	-0.12	5.62	0	0.8447	0.0173
231	SLV 4	1.13	-0.14	5.59	0	0.8396	0.0203
231	SLV 5	0.19	0.51	6.25	0	0.9389	-0.077
231	SLV 6	0.26	0.5	6.23	0	0.9356	-0.075
231	SLV 7	0.27	-0.5	5.33	0	0.8003	0.0744
231	SLV 8	0.34	-0.51	5.31	0	0.797	0.0764
231	SLV 9	-0.49	0.49	6.28	0	0.9432	-0.0739
231	SLV 10	-0.41	0.48	6.26	0	0.9399	-0.0719
231	SLV 11	-0.41	-0.52	5.36	0	0.8046	0.0775
231	SLV 12	-0.33	-0.53	5.33	0	0.8013	0.0795
231	SLV 13	-1.27	0.12	6	0	0.9006	-0.0178
231	SLV 14	-1.15	0.1	5.96	0	0.8955	-0.0148
231	SLV 15	-1.25	-0.18	5.72	0	0.859	0.0276
231	SLV 16	-1.13	-0.2	5.68	0	0.8539	0.0307
231	CRTFP Uy+	0	0	0	0	0	0
231	CRTFP Uy-	0	0	0	0	0	0
233	SLU 1	0.03	-0.12	37.36	-0.9287	10.5987	0.0267
233	SLU 2	0.05	-0.15	37.32	-0.9276	10.5875	0.0366
233	SLU 3	0.03	-0.11	38.27	-0.9513	10.858	0.0238
233	SLU 4	0.04	-0.13	38.25	-0.9507	10.8512	0.0297
233	SLU 5	0.05	-0.15	37.9	-0.942	10.752	0.0364
233	SLU 6	0.03	-0.11	38.85	-0.9657	11.0225	0.0236
233	SLU 7	0.04	-0.13	38.82	-0.9651	11.0157	0.0296
233	SLU 8	0.03	-0.12	38.51	-0.9575	10.9277	0.0264
233	SLU 9	0.04	-0.14	38.49	-0.9569	10.921	0.0323
233	SLU 10	0.04	-0.09	41.97	-1.0428	11.917	0.0196
233	SLU 11	0.02	-0.05	42.91	-1.0665	12.1875	0.0068
233	SLU 12	0.03	-0.07	42.89	-1.0659	12.1808	0.0127
233	SLU 13	0.04	-0.09	42.54	-1.0572	12.0815	0.0195
233	SLU 14	0.01	-0.05	43.49	-1.0809	12.352	0.0066

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLU 15	0.03	-0.07	43.47	-1.0803	12.3453	0.0126
233	SLU 16	0.01	-0.06	43.16	-1.0727	12.2573	0.0094
233	SLU 17	0.03	-0.08	43.14	-1.0721	12.2505	0.0153
233	SLU 18	0.01	-0.04	44	-1.0933	12.498	0.0025
233	SLU 19	0.02	-0.06	43.97	-1.0926	12.4913	0.0084
233	SLU 20	0.01	-0.04	44.57	-1.1077	12.6626	0.0023
233	SLU 21	0.02	-0.06	44.55	-1.107	12.6558	0.0082
233	SLU 22	0.04	-0.03	41.36	-1.0278	11.735	0.0024
233	SLU 23	0.06	-0.06	41.32	-1.0267	11.7237	0.0122
233	SLU 24	0.04	-0.02	42.26	-1.0504	11.9943	-0.0006
233	SLU 25	0.05	-0.04	42.24	-1.0498	11.9875	0.0054
233	SLU 26	0.06	-0.06	41.9	-1.0411	11.8882	0.0121
233	SLU 27	0.04	-0.02	42.84	-1.0648	12.1588	-0.0007
233	SLU 28	0.05	-0.04	42.82	-1.0642	12.152	0.0052
233	SLU 29	0.04	-0.03	42.51	-1.0566	12.064	0.002
233	SLU 30	0.05	-0.05	42.49	-1.056	12.0572	0.008
233	SLU 31	0.05	-0.01	45.96	-1.1419	13.0532	-0.0047
233	SLU 32	0.03	0.03	46.91	-1.1656	13.3238	-0.0175
233	SLU 33	0.04	0.01	46.89	-1.165	13.317	-0.0116
233	SLU 34	0.05	-0.01	46.54	-1.1563	13.2177	-0.0049
233	SLU 35	0.03	0.03	47.49	-1.18	13.4883	-0.0177
233	SLU 36	0.04	0.01	47.47	-1.1794	13.4815	-0.0118
233	SLU 37	0.02	0.02	47.16	-1.1718	13.3935	-0.015
233	SLU 38	0.04	0	47.13	-1.1712	13.3868	-0.009
233	SLU 39	0.02	0.05	47.99	-1.1924	13.6343	-0.0219
233	SLU 40	0.03	0.03	47.97	-1.1917	13.6275	-0.016
233	SLU 41	0.02	0.05	48.57	-1.2068	13.7988	-0.0221
233	SLU 42	0.03	0.03	48.55	-1.2061	13.792	-0.0161
233	SLU 43	0.03	-0.18	47.2	-1.1733	13.3888	0.0431
233	SLU 44	0.06	-0.21	47.16	-1.1723	13.3775	0.053
233	SLU 45	0.03	-0.17	48.1	-1.1959	13.6481	0.0402
233	SLU 46	0.05	-0.19	48.08	-1.1953	13.6413	0.0461
233	SLU 47	0.05	-0.21	47.74	-1.1867	13.542	0.0528
233	SLU 48	0.03	-0.17	48.68	-1.2103	13.8126	0.04
233	SLU 49	0.05	-0.19	48.66	-1.2097	13.8058	0.0459
233	SLU 50	0.03	-0.18	48.35	-1.2021	13.7178	0.0427
233	SLU 51	0.04	-0.2	48.33	-1.2015	13.711	0.0487
233	SLU 52	0.04	-0.16	51.8	-1.2875	14.707	0.036
233	SLU 53	0.02	-0.11	52.75	-1.3111	14.9776	0.0232
233	SLU 54	0.03	-0.13	52.73	-1.3105	14.9708	0.0291
233	SLU 55	0.04	-0.16	52.38	-1.3019	14.8715	0.0358
233	SLU 56	0.02	-0.11	53.33	-1.3255	15.1421	0.023
233	SLU 57	0.03	-0.13	53.31	-1.3249	15.1353	0.0289
233	SLU 58	0.02	-0.12	53	-1.3173	15.0473	0.0258
233	SLU 59	0.03	-0.14	52.97	-1.3167	15.0405	0.0317
233	SLU 60	0.02	-0.1	53.83	-1.3379	15.2881	0.0188
233	SLU 61	0.03	-0.12	53.81	-1.3373	15.2813	0.0247
233	SLU 62	0.01	-0.1	54.41	-1.3523	15.4526	0.0186
233	SLU 63	0.03	-0.12	54.39	-1.3517	15.4458	0.0246
233	SLU 64	0.04	-0.1	51.19	-1.2724	14.525	0.0187
233	SLU 65	0.07	-0.13	51.16	-1.2713	14.5138	0.0286
233	SLU 66	0.04	-0.09	52.1	-1.295	14.7843	0.0158
233	SLU 67	0.06	-0.11	52.08	-1.2944	14.7775	0.0217
233	SLU 68	0.06	-0.13	51.73	-1.2858	14.6783	0.0284
233	SLU 69	0.04	-0.09	52.68	-1.3094	14.9488	0.0156
233	SLU 70	0.06	-0.11	52.66	-1.3088	14.942	0.0216
233	SLU 71	0.04	-0.1	52.35	-1.3012	14.854	0.0184
233	SLU 72	0.05	-0.12	52.33	-1.3006	14.8473	0.0243
233	SLU 73	0.05	-0.07	55.8	-1.3866	15.8433	0.0116
233	SLU 74	0.03	-0.03	56.75	-1.4102	16.1138	-0.0012
233	SLU 75	0.04	-0.05	56.73	-1.4096	16.1071	0.0048
233	SLU 76	0.05	-0.07	56.38	-1.401	16.0078	0.0115
233	SLU 77	0.03	-0.03	57.33	-1.4246	16.2783	-0.0013
233	SLU 78	0.04	-0.05	57.3	-1.424	16.2716	0.0046
233	SLU 79	0.03	-0.04	56.99	-1.4164	16.1836	0.0014
233	SLU 80	0.04	-0.06	56.97	-1.4158	16.1768	0.0073
233	SLU 81	0.03	-0.02	57.83	-1.437	16.4244	-0.0055
233	SLU 82	0.04	-0.04	57.81	-1.4364	16.4176	0.0004
233	SLU 83	0.03	-0.02	58.41	-1.4514	16.5889	-0.0057
233	SLU 84	0.04	-0.04	58.39	-1.4508	16.5821	0.0002
233	SLE RA 1	0.03	-0.09	38.5	-0.957	10.9234	0.0198
233	SLE RA 2	0.05	-0.11	38.48	-0.9563	10.9159	0.0263
233	SLE RA 3	0.03	-0.09	39.11	-0.9721	11.0962	0.0178
233	SLE RA 4	0.04	-0.1	39.09	-0.9716	11.0917	0.0218
233	SLE RA 5	0.05	-0.11	38.86	-0.9659	11.0255	0.0262
233	SLE RA 6	0.03	-0.09	39.49	-0.9817	11.2059	0.0177
233	SLE RA 7	0.04	-0.1	39.48	-0.9813	11.2014	0.0216
233	SLE RA 8	0.03	-0.09	39.27	-0.9762	11.1427	0.0195
233	SLE RA 9	0.04	-0.1	39.26	-0.9758	11.1382	0.0235
233	SLE RA 10	0.04	-0.08	41.57	-1.0331	11.8022	0.015
233	SLE RA 11	0.02	-0.05	42.2	-1.0489	11.9826	0.0065
233	SLE RA 12	0.03	-0.06	42.19	-1.0485	11.9781	0.0104
233	SLE RA 13	0.04	-0.08	41.96	-1.0427	11.9119	0.0149
233	SLE RA 14	0.02	-0.05	42.59	-1.0585	12.0922	0.0064
233	SLE RA 15	0.03	-0.06	42.57	-1.0581	12.0877	0.0103
233	SLE RA 16	0.02	-0.05	42.37	-1.053	12.0291	0.0082
233	SLE RA 17	0.03	-0.07	42.35	-1.0526	12.0245	0.0122
233	SLE RA 18	0.02	-0.04	42.93	-1.0667	12.1896	0.0036
233	SLE RA 19	0.03	-0.05	42.91	-1.0663	12.1851	0.0075
233	SLE RA 20	0.02	-0.04	43.31	-1.0763	12.2993	0.0035

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLE RA 21	0.03	-0.05	43.3	-1.0759	12.2947	0.0074
233	SLE FR 1	0.03	-0.09	38.5	-0.957	10.9234	0.0198
233	SLE FR 2	0.03	-0.1	38.5	-0.9568	10.9219	0.0211
233	SLE FR 3	0.03	-0.09	38.65	-0.9608	10.9672	0.0197
233	SLE FR 4	0.03	-0.08	39.82	-0.9898	11.3017	0.0162
233	SLE FR 5	0.03	-0.08	39.98	-0.9937	11.3471	0.0149
233	SLE FR 6	0.03	-0.07	40.71	-1.0118	11.5565	0.0117
233	SLE QP 1	0.03	-0.09	38.5	-0.957	10.9234	0.0198
233	SLE QP 2	0.03	-0.08	39.83	-0.9899	11.3032	0.0149
233	SLD 1	3.52	0.47	40.36	-1.0035	11.5397	-0.0392
233	SLD 2	3.89	0.49	40.45	-1.0057	11.5569	-0.0355
233	SLD 3	3.45	-0.49	39.43	-0.9777	11.2722	0.2338
233	SLD 4	3.82	-0.47	39.52	-0.9799	11.2895	0.2375
233	SLD 5	1.11	1.54	41.38	-1.0327	11.7767	-0.416
233	SLD 6	1.36	1.55	41.44	-1.0341	11.7881	-0.4135
233	SLD 7	0.89	-1.66	38.29	-0.9467	10.8852	0.4939
233	SLD 8	1.13	-1.64	38.34	-0.9482	10.8966	0.4963
233	SLD 9	-1.07	1.49	41.31	-1.0316	11.7099	-0.4665
233	SLD 10	-0.83	1.51	41.37	-1.0331	11.7213	-0.4641
233	SLD 11	-1.3	-1.7	38.22	-0.9457	10.8184	0.4433
233	SLD 12	-1.06	-1.69	38.27	-0.9471	10.8298	0.4458
233	SLD 13	-3.76	0.31	40.14	-0.9999	11.317	-0.2077
233	SLD 14	-3.4	0.34	40.22	-1.0021	11.3343	-0.204
233	SLD 15	-3.83	-0.64	39.21	-0.9741	11.0495	0.0653
233	SLD 16	-3.47	-0.62	39.29	-0.9763	11.0668	0.069
233	SLV 1	8.2	1.16	41.05	-1.0208	11.8466	-0.1015
233	SLV 2	9.06	1.22	41.24	-1.0259	11.8867	-0.0929
233	SLV 3	8.04	-1.01	38.94	-0.9624	11.2405	0.5168
233	SLV 4	8.9	-0.95	39.14	-0.9675	11.2807	0.5253
233	SLV 5	2.57	3.58	43.35	-1.0869	12.3783	-0.9592
233	SLV 6	3.13	3.61	43.48	-1.0902	12.4045	-0.9536
233	SLV 7	2.04	-3.66	36.34	-0.8922	10.3583	1.1016
233	SLV 8	2.6	-3.62	36.47	-0.8955	10.3844	1.1072
233	SLV 9	-2.54	3.47	43.19	-1.0843	12.222	-1.0774
233	SLV 10	-1.98	3.51	43.32	-1.0876	12.2482	-1.0718
233	SLV 11	-3.07	-3.77	36.18	-0.8896	10.202	0.9834
233	SLV 12	-2.52	-3.73	36.31	-0.8929	10.2282	0.989
233	SLV 13	-8.84	0.8	40.52	-1.0123	11.3258	-0.4955
233	SLV 14	-7.99	0.86	40.71	-1.0174	11.3659	-0.487
233	SLV 15	-9	-1.37	38.41	-0.9539	10.7197	0.1227
233	SLV 16	-8.15	-1.31	38.61	-0.959	10.7599	0.1313
233	CRTFP Ux+	0	0	0	0	0	0
233	CRTFP Ux-	0	0	0	0	0	0
233	CRTFP Uy+	0	0	0	0	0	0
233	CRTFP Uy-	0	0	0	0	0	0
235	SLU 1	0.01	-0.07	10.34	0	0	0
235	SLU 2	0.02	-0.08	10.33	0	0	0
235	SLU 3	0.01	-0.07	10.59	0	0	0
235	SLU 4	0.01	-0.07	10.58	0	0	0
235	SLU 5	0.01	-0.08	10.48	0	0	0
235	SLU 6	0.01	-0.07	10.74	0	0	0
235	SLU 7	0.01	-0.08	10.74	0	0	0
235	SLU 8	0.01	-0.07	10.65	0	0	0
235	SLU 9	0.01	-0.08	10.65	0	0	0
235	SLU 10	0.01	-0.07	11.59	0	0	0
235	SLU 11	0.01	-0.06	11.85	0	0	0
235	SLU 12	0.01	-0.06	11.85	0	0	0
235	SLU 13	0.01	-0.07	11.75	0	0	0
235	SLU 14	0.01	-0.06	12.01	0	0	0
235	SLU 15	0.01	-0.06	12.01	0	0	0
235	SLU 16	0.01	-0.06	11.92	0	0	0
235	SLU 17	0.01	-0.07	11.92	0	0	0
235	SLU 18	0	-0.06	12.15	0	0	0
235	SLU 19	0.01	-0.06	12.14	0	0	0
235	SLU 20	0	-0.06	12.31	0	0	0
235	SLU 21	0.01	-0.06	12.3	0	0	0
235	SLU 22	0.01	-0.05	11.44	0	0	0
235	SLU 23	0.02	-0.06	11.43	0	0	0
235	SLU 24	0.01	-0.05	11.69	0	0	0
235	SLU 25	0.02	-0.06	11.68	0	0	0
235	SLU 26	0.02	-0.06	11.59	0	0	0
235	SLU 27	0.01	-0.05	11.85	0	0	0
235	SLU 28	0.02	-0.06	11.84	0	0	0
235	SLU 29	0.01	-0.05	11.76	0	0	0
235	SLU 30	0.02	-0.06	11.75	0	0	0
235	SLU 31	0.01	-0.05	12.7	0	0	0
235	SLU 32	0.01	-0.04	12.96	0	0	0
235	SLU 33	0.01	-0.05	12.95	0	0	0
235	SLU 34	0.01	-0.05	12.86	0	0	0
235	SLU 35	0.01	-0.04	13.11	0	0	0
235	SLU 36	0.01	-0.05	13.11	0	0	0
235	SLU 37	0.01	-0.04	13.02	0	0	0
235	SLU 38	0.01	-0.05	13.02	0	0	0
235	SLU 39	0.01	-0.04	13.25	0	0	0
235	SLU 40	0.01	-0.04	13.24	0	0	0
235	SLU 41	0.01	-0.04	13.41	0	0	0
235	SLU 42	0.01	-0.04	13.4	0	0	0
235	SLU 43	0.01	-0.1	13.06	0	0	0
235	SLU 44	0.02	-0.11	13.05	0	0	0
235	SLU 45	0.01	-0.1	13.31	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLU 46	0.01	-0.1	13.3	0	0	0
235	SLU 47	0.02	-0.11	13.21	0	0	0
235	SLU 48	0.01	-0.1	13.47	0	0	0
235	SLU 49	0.01	-0.1	13.46	0	0	0
235	SLU 50	0.01	-0.1	13.38	0	0	0
235	SLU 51	0.01	-0.11	13.37	0	0	0
235	SLU 52	0.01	-0.1	14.32	0	0	0
235	SLU 53	0.01	-0.09	14.58	0	0	0
235	SLU 54	0.01	-0.09	14.57	0	0	0
235	SLU 55	0.01	-0.1	14.48	0	0	0
235	SLU 56	0.01	-0.09	14.73	0	0	0
235	SLU 57	0.01	-0.09	14.73	0	0	0
235	SLU 58	0.01	-0.09	14.64	0	0	0
235	SLU 59	0.01	-0.09	14.64	0	0	0
235	SLU 60	0.01	-0.08	14.87	0	0	0
235	SLU 61	0.01	-0.09	14.86	0	0	0
235	SLU 62	0.01	-0.08	15.03	0	0	0
235	SLU 63	0.01	-0.09	15.02	0	0	0
235	SLU 64	0.01	-0.08	14.16	0	0	0
235	SLU 65	0.02	-0.09	14.15	0	0	0
235	SLU 66	0.01	-0.08	14.41	0	0	0
235	SLU 67	0.02	-0.08	14.4	0	0	0
235	SLU 68	0.02	-0.09	14.31	0	0	0
235	SLU 69	0.01	-0.08	14.57	0	0	0
235	SLU 70	0.02	-0.08	14.56	0	0	0
235	SLU 71	0.01	-0.08	14.48	0	0	0
235	SLU 72	0.02	-0.09	14.47	0	0	0
235	SLU 73	0.02	-0.08	15.42	0	0	0
235	SLU 74	0.01	-0.07	15.68	0	0	0
235	SLU 75	0.01	-0.07	15.67	0	0	0
235	SLU 76	0.02	-0.08	15.58	0	0	0
235	SLU 77	0.01	-0.07	15.84	0	0	0
235	SLU 78	0.01	-0.07	15.83	0	0	0
235	SLU 79	0.01	-0.07	15.75	0	0	0
235	SLU 80	0.01	-0.08	15.74	0	0	0
235	SLU 81	0.01	-0.07	15.97	0	0	0
235	SLU 82	0.01	-0.07	15.97	0	0	0
235	SLU 83	0.01	-0.07	16.13	0	0	0
235	SLU 84	0.01	-0.07	16.13	0	0	0
235	SLE RA 1	0.01	-0.07	10.65	0	0	0
235	SLE RA 2	0.01	-0.07	10.64	0	0	0
235	SLE RA 3	0.01	-0.06	10.82	0	0	0
235	SLE RA 4	0.01	-0.07	10.81	0	0	0
235	SLE RA 5	0.01	-0.07	10.75	0	0	0
235	SLE RA 6	0.01	-0.07	10.92	0	0	0
235	SLE RA 7	0.01	-0.07	10.92	0	0	0
235	SLE RA 8	0.01	-0.07	10.86	0	0	0
235	SLE RA 9	0.01	-0.07	10.86	0	0	0
235	SLE RA 10	0.01	-0.06	11.49	0	0	0
235	SLE RA 11	0.01	-0.06	11.66	0	0	0
235	SLE RA 12	0.01	-0.06	11.66	0	0	0
235	SLE RA 13	0.01	-0.06	11.6	0	0	0
235	SLE RA 14	0.01	-0.06	11.77	0	0	0
235	SLE RA 15	0.01	-0.06	11.76	0	0	0
235	SLE RA 16	0.01	-0.06	11.71	0	0	0
235	SLE RA 17	0.01	-0.06	11.7	0	0	0
235	SLE RA 18	0.01	-0.06	11.86	0	0	0
235	SLE RA 19	0.01	-0.06	11.85	0	0	0
235	SLE RA 20	0.01	-0.06	11.96	0	0	0
235	SLE RA 21	0.01	-0.06	11.96	0	0	0
235	SLE FR 1	0.01	-0.07	10.65	0	0	0
235	SLE FR 2	0.01	-0.07	10.65	0	0	0
235	SLE FR 3	0.01	-0.07	10.69	0	0	0
235	SLE FR 4	0.01	-0.06	11.01	0	0	0
235	SLE FR 5	0.01	-0.06	11.06	0	0	0
235	SLE FR 6	0.01	-0.06	11.25	0	0	0
235	SLE QP 1	0.01	-0.07	10.65	0	0	0
235	SLE QP 2	0.01	-0.06	11.01	0	0	0
235	SLD 1	0.97	0.12	11.02	0	0	0
235	SLD 2	1.08	0.13	11.05	0	0	0
235	SLD 3	0.96	-0.14	10.77	0	0	0
235	SLD 4	1.06	-0.13	10.8	0	0	0
235	SLD 5	0.31	0.38	11.39	0	0	0
235	SLD 6	0.38	0.39	11.41	0	0	0
235	SLD 7	0.25	-0.48	10.55	0	0	0
235	SLD 8	0.31	-0.47	10.58	0	0	0
235	SLD 9	-0.29	0.35	11.45	0	0	0
235	SLD 10	-0.23	0.36	11.47	0	0	0
235	SLD 11	-0.36	-0.52	10.62	0	0	0
235	SLD 12	-0.29	-0.51	10.64	0	0	0
235	SLD 13	-1.04	0	11.23	0	0	0
235	SLD 14	-0.94	0.02	11.26	0	0	0
235	SLD 15	-1.06	-0.26	10.98	0	0	0
235	SLD 16	-0.96	-0.24	11.01	0	0	0
235	SLV 1	2.27	0.34	11.01	0	0	0
235	SLV 2	2.5	0.39	11.09	0	0	0
235	SLV 3	2.22	-0.24	10.44	0	0	0
235	SLV 4	2.46	-0.2	10.52	0	0	0
235	SLV 5	0.71	0.94	11.86	0	0	0
235	SLV 6	0.87	0.97	11.91	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLV 7	0.56	-1.02	9.97	0	0	0
235	SLV 8	0.72	-0.99	10.02	0	0	0
235	SLV 9	-0.7	0.86	12	0	0	0
235	SLV 10	-0.55	0.89	12.05	0	0	0
235	SLV 11	-0.85	-1.1	10.12	0	0	0
235	SLV 12	-0.69	-1.07	10.17	0	0	0
235	SLV 13	-2.44	0.08	11.51	0	0	0
235	SLV 14	-2.2	0.12	11.58	0	0	0
235	SLV 15	-2.48	-0.51	10.94	0	0	0
235	SLV 16	-2.25	-0.47	11.02	0	0	0
236	SLU 1	0.01	-0.09	10.73	0	0	0
236	SLU 2	0.02	-0.1	10.72	0	0	0
236	SLU 3	0.01	-0.09	10.98	0	0	0
236	SLU 4	0.01	-0.1	10.98	0	0	0
236	SLU 5	0.02	-0.1	10.88	0	0	0
236	SLU 6	0.01	-0.09	11.15	0	0	0
236	SLU 7	0.01	-0.1	11.14	0	0	0
236	SLU 8	0.01	-0.1	11.05	0	0	0
236	SLU 9	0.01	-0.1	11.05	0	0	0
236	SLU 10	0.01	-0.09	12.02	0	0	0
236	SLU 11	0.01	-0.08	12.29	0	0	0
236	SLU 12	0.01	-0.09	12.29	0	0	0
236	SLU 13	0.01	-0.09	12.19	0	0	0
236	SLU 14	0.01	-0.08	12.45	0	0	0
236	SLU 15	0.01	-0.09	12.45	0	0	0
236	SLU 16	0.01	-0.09	12.36	0	0	0
236	SLU 17	0.01	-0.09	12.36	0	0	0
236	SLU 18	0.01	-0.08	12.59	0	0	0
236	SLU 19	0.01	-0.08	12.59	0	0	0
236	SLU 20	0.01	-0.08	12.76	0	0	0
236	SLU 21	0.01	-0.09	12.75	0	0	0
236	SLU 22	0.01	-0.08	11.87	0	0	0
236	SLU 23	0.02	-0.08	11.86	0	0	0
236	SLU 24	0.01	-0.08	12.13	0	0	0
236	SLU 25	0.02	-0.08	12.12	0	0	0
236	SLU 26	0.02	-0.09	12.02	0	0	0
236	SLU 27	0.01	-0.08	12.29	0	0	0
236	SLU 28	0.02	-0.08	12.28	0	0	0
236	SLU 29	0.01	-0.08	12.2	0	0	0
236	SLU 30	0.02	-0.08	12.19	0	0	0
236	SLU 31	0.02	-0.08	13.17	0	0	0
236	SLU 32	0.01	-0.07	13.43	0	0	0
236	SLU 33	0.01	-0.07	13.43	0	0	0
236	SLU 34	0.02	-0.08	13.33	0	0	0
236	SLU 35	0.01	-0.07	13.6	0	0	0
236	SLU 36	0.01	-0.07	13.59	0	0	0
236	SLU 37	0.01	-0.07	13.5	0	0	0
236	SLU 38	0.01	-0.07	13.5	0	0	0
236	SLU 39	0.01	-0.06	13.74	0	0	0
236	SLU 40	0.01	-0.07	13.73	0	0	0
236	SLU 41	0.01	-0.06	13.9	0	0	0
236	SLU 42	0.01	-0.07	13.89	0	0	0
236	SLU 43	0.01	-0.13	13.55	0	0	0
236	SLU 44	0.02	-0.13	13.54	0	0	0
236	SLU 45	0.01	-0.12	13.81	0	0	0
236	SLU 46	0.02	-0.13	13.81	0	0	0
236	SLU 47	0.02	-0.14	13.71	0	0	0
236	SLU 48	0.01	-0.13	13.97	0	0	0
236	SLU 49	0.02	-0.13	13.97	0	0	0
236	SLU 50	0.01	-0.13	13.88	0	0	0
236	SLU 51	0.02	-0.13	13.88	0	0	0
236	SLU 52	0.02	-0.13	14.85	0	0	0
236	SLU 53	0.01	-0.12	15.12	0	0	0
236	SLU 54	0.01	-0.12	15.11	0	0	0
236	SLU 55	0.02	-0.13	15.01	0	0	0
236	SLU 56	0.01	-0.12	15.28	0	0	0
236	SLU 57	0.01	-0.12	15.28	0	0	0
236	SLU 58	0.01	-0.12	15.19	0	0	0
236	SLU 59	0.01	-0.12	15.18	0	0	0
236	SLU 60	0.01	-0.11	15.42	0	0	0
236	SLU 61	0.01	-0.12	15.41	0	0	0
236	SLU 62	0.01	-0.11	15.58	0	0	0
236	SLU 63	0.01	-0.12	15.58	0	0	0
236	SLU 64	0.02	-0.11	14.7	0	0	0
236	SLU 65	0.02	-0.12	14.69	0	0	0
236	SLU 66	0.02	-0.11	14.95	0	0	0
236	SLU 67	0.02	-0.11	14.95	0	0	0
236	SLU 68	0.02	-0.12	14.85	0	0	0
236	SLU 69	0.02	-0.11	15.12	0	0	0
236	SLU 70	0.02	-0.11	15.11	0	0	0
236	SLU 71	0.02	-0.11	15.02	0	0	0
236	SLU 72	0.02	-0.12	15.02	0	0	0
236	SLU 73	0.02	-0.11	15.99	0	0	0
236	SLU 74	0.01	-0.1	16.26	0	0	0
236	SLU 75	0.02	-0.1	16.25	0	0	0
236	SLU 76	0.02	-0.11	16.16	0	0	0
236	SLU 77	0.01	-0.1	16.42	0	0	0
236	SLU 78	0.02	-0.11	16.42	0	0	0
236	SLU 79	0.01	-0.1	16.33	0	0	0
236	SLU 80	0.02	-0.11	16.32	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLU 81	0.01	-0.1	16.56	0	0	0
236	SLU 82	0.01	-0.1	16.56	0	0	0
236	SLU 83	0.01	-0.1	16.73	0	0	0
236	SLU 84	0.01	-0.1	16.72	0	0	0
236	SLE RA 1	0.01	-0.09	11.05	0	0	0
236	SLE RA 2	0.02	-0.09	11.05	0	0	0
236	SLE RA 3	0.01	-0.09	11.22	0	0	0
236	SLE RA 4	0.01	-0.09	11.22	0	0	0
236	SLE RA 5	0.02	-0.09	11.16	0	0	0
236	SLE RA 6	0.01	-0.09	11.33	0	0	0
236	SLE RA 7	0.01	-0.09	11.33	0	0	0
236	SLE RA 8	0.01	-0.09	11.27	0	0	0
236	SLE RA 9	0.01	-0.09	11.27	0	0	0
236	SLE RA 10	0.01	-0.09	11.92	0	0	0
236	SLE RA 11	0.01	-0.08	12.1	0	0	0
236	SLE RA 12	0.01	-0.08	12.09	0	0	0
236	SLE RA 13	0.01	-0.09	12.03	0	0	0
236	SLE RA 14	0.01	-0.08	12.21	0	0	0
236	SLE RA 15	0.01	-0.09	12.2	0	0	0
236	SLE RA 16	0.01	-0.08	12.14	0	0	0
236	SLE RA 17	0.01	-0.09	12.14	0	0	0
236	SLE RA 18	0.01	-0.08	12.3	0	0	0
236	SLE RA 19	0.01	-0.08	12.29	0	0	0
236	SLE RA 20	0.01	-0.08	12.41	0	0	0
236	SLE RA 21	0.01	-0.08	12.4	0	0	0
236	SLE FR 1	0.01	-0.09	11.05	0	0	0
236	SLE FR 2	0.01	-0.09	11.05	0	0	0
236	SLE FR 3	0.01	-0.09	11.1	0	0	0
236	SLE FR 4	0.01	-0.09	11.43	0	0	0
236	SLE FR 5	0.01	-0.09	11.47	0	0	0
236	SLE FR 6	0.01	-0.08	11.68	0	0	0
236	SLE QP 1	0.01	-0.09	11.05	0	0	0
236	SLE QP 2	0.01	-0.09	11.43	0	0	0
236	SLD 1	1.02	0.11	11.35	0	0	0
236	SLD 2	1.12	0.14	11.39	0	0	0
236	SLD 3	1	-0.15	11.1	0	0	0
236	SLD 4	1.1	-0.13	11.14	0	0	0
236	SLD 5	0.32	0.38	11.79	0	0	0
236	SLD 6	0.39	0.39	11.81	0	0	0
236	SLD 7	0.26	-0.52	10.93	0	0	0
236	SLD 8	0.33	-0.5	10.96	0	0	0
236	SLD 9	-0.31	0.33	11.9	0	0	0
236	SLD 10	-0.24	0.35	11.92	0	0	0
236	SLD 11	-0.37	-0.56	11.04	0	0	0
236	SLD 12	-0.3	-0.55	11.07	0	0	0
236	SLD 13	-1.08	-0.04	11.72	0	0	0
236	SLD 14	-0.98	-0.02	11.76	0	0	0
236	SLD 15	-1.1	-0.31	11.46	0	0	0
236	SLD 16	-1	-0.28	11.5	0	0	0
236	SLV 1	2.37	0.37	11.25	0	0	0
236	SLV 2	2.61	0.43	11.34	0	0	0
236	SLV 3	2.32	-0.24	10.67	0	0	0
236	SLV 4	2.56	-0.18	10.76	0	0	0
236	SLV 5	0.74	0.96	12.24	0	0	0
236	SLV 6	0.9	1	12.3	0	0	0
236	SLV 7	0.59	-1.06	10.3	0	0	0
236	SLV 8	0.75	-1.02	10.36	0	0	0
236	SLV 9	-0.73	0.85	12.49	0	0	0
236	SLV 10	-0.57	0.89	12.55	0	0	0
236	SLV 11	-0.88	-1.17	10.56	0	0	0
236	SLV 12	-0.72	-1.13	10.61	0	0	0
236	SLV 13	-2.54	0.01	12.1	0	0	0
236	SLV 14	-2.3	0.07	12.19	0	0	0
236	SLV 15	-2.59	-0.6	11.52	0	0	0
236	SLV 16	-2.34	-0.54	11.61	0	0	0
237	SLU 1	0.01	-0.11	10.79	0	0	0
237	SLU 2	0.02	-0.12	10.78	0	0	0
237	SLU 3	0.01	-0.11	11.04	0	0	0
237	SLU 4	0.02	-0.12	11.04	0	0	0
237	SLU 5	0.02	-0.12	10.94	0	0	0
237	SLU 6	0.01	-0.11	11.21	0	0	0
237	SLU 7	0.02	-0.12	11.2	0	0	0
237	SLU 8	0.01	-0.12	11.12	0	0	0
237	SLU 9	0.02	-0.12	11.11	0	0	0
237	SLU 10	0.02	-0.11	12.08	0	0	0
237	SLU 11	0.01	-0.11	12.35	0	0	0
237	SLU 12	0.01	-0.11	12.34	0	0	0
237	SLU 13	0.02	-0.12	12.25	0	0	0
237	SLU 14	0.01	-0.11	12.51	0	0	0
237	SLU 15	0.01	-0.11	12.51	0	0	0
237	SLU 16	0.01	-0.11	12.42	0	0	0
237	SLU 17	0.01	-0.11	12.41	0	0	0
237	SLU 18	0.01	-0.1	12.65	0	0	0
237	SLU 19	0.01	-0.11	12.64	0	0	0
237	SLU 20	0.01	-0.11	12.81	0	0	0
237	SLU 21	0.01	-0.11	12.81	0	0	0
237	SLU 22	0.02	-0.1	11.93	0	0	0
237	SLU 23	0.02	-0.11	11.92	0	0	0
237	SLU 24	0.02	-0.1	12.19	0	0	0
237	SLU 25	0.02	-0.1	12.19	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
237	SLU 26	0.02	-0.11	12.09	0	0	0
237	SLU 27	0.02	-0.1	12.36	0	0	0
237	SLU 28	0.02	-0.1	12.35	0	0	0
237	SLU 29	0.02	-0.1	12.26	0	0	0
237	SLU 30	0.02	-0.11	12.26	0	0	0
237	SLU 31	0.02	-0.1	13.23	0	0	0
237	SLU 32	0.01	-0.09	13.5	0	0	0
237	SLU 33	0.02	-0.1	13.49	0	0	0
237	SLU 34	0.02	-0.1	13.39	0	0	0
237	SLU 35	0.01	-0.09	13.66	0	0	0
237	SLU 36	0.02	-0.1	13.65	0	0	0
237	SLU 37	0.01	-0.1	13.57	0	0	0
237	SLU 38	0.02	-0.1	13.56	0	0	0
237	SLU 39	0.01	-0.09	13.8	0	0	0
237	SLU 40	0.02	-0.09	13.79	0	0	0
237	SLU 41	0.01	-0.09	13.96	0	0	0
237	SLU 42	0.01	-0.1	13.96	0	0	0
237	SLU 43	0.02	-0.15	13.63	0	0	0
237	SLU 44	0.02	-0.16	13.62	0	0	0
237	SLU 45	0.02	-0.15	13.89	0	0	0
237	SLU 46	0.02	-0.16	13.88	0	0	0
237	SLU 47	0.02	-0.16	13.78	0	0	0
237	SLU 48	0.02	-0.15	14.05	0	0	0
237	SLU 49	0.02	-0.16	14.05	0	0	0
237	SLU 50	0.01	-0.16	13.96	0	0	0
237	SLU 51	0.02	-0.16	13.95	0	0	0
237	SLU 52	0.02	-0.15	14.92	0	0	0
237	SLU 53	0.01	-0.14	15.19	0	0	0
237	SLU 54	0.02	-0.15	15.19	0	0	0
237	SLU 55	0.02	-0.15	15.09	0	0	0
237	SLU 56	0.01	-0.15	15.36	0	0	0
237	SLU 57	0.02	-0.15	15.35	0	0	0
237	SLU 58	0.01	-0.15	15.26	0	0	0
237	SLU 59	0.02	-0.15	15.26	0	0	0
237	SLU 60	0.01	-0.14	15.49	0	0	0
237	SLU 61	0.01	-0.15	15.49	0	0	0
237	SLU 62	0.01	-0.14	15.66	0	0	0
237	SLU 63	0.01	-0.15	15.65	0	0	0
237	SLU 64	0.02	-0.14	14.78	0	0	0
237	SLU 65	0.03	-0.14	14.77	0	0	0
237	SLU 66	0.02	-0.14	15.03	0	0	0
237	SLU 67	0.02	-0.14	15.03	0	0	0
237	SLU 68	0.03	-0.15	14.93	0	0	0
237	SLU 69	0.02	-0.14	15.2	0	0	0
237	SLU 70	0.02	-0.14	15.19	0	0	0
237	SLU 71	0.02	-0.14	15.11	0	0	0
237	SLU 72	0.02	-0.15	15.1	0	0	0
237	SLU 73	0.02	-0.14	16.07	0	0	0
237	SLU 74	0.02	-0.13	16.34	0	0	0
237	SLU 75	0.02	-0.14	16.33	0	0	0
237	SLU 76	0.02	-0.14	16.24	0	0	0
237	SLU 77	0.02	-0.13	16.5	0	0	0
237	SLU 78	0.02	-0.14	16.5	0	0	0
237	SLU 79	0.01	-0.13	16.41	0	0	0
237	SLU 80	0.02	-0.14	16.4	0	0	0
237	SLU 81	0.01	-0.13	16.64	0	0	0
237	SLU 82	0.02	-0.13	16.63	0	0	0
237	SLU 83	0.01	-0.13	16.8	0	0	0
237	SLU 84	0.02	-0.13	16.8	0	0	0
237	SLE RA 1	0.01	-0.11	11.11	0	0	0
237	SLE RA 2	0.02	-0.11	11.11	0	0	0
237	SLE RA 3	0.01	-0.11	11.29	0	0	0
237	SLE RA 4	0.02	-0.11	11.28	0	0	0
237	SLE RA 5	0.02	-0.12	11.22	0	0	0
237	SLE RA 6	0.01	-0.11	11.4	0	0	0
237	SLE RA 7	0.02	-0.11	11.39	0	0	0
237	SLE RA 8	0.01	-0.11	11.33	0	0	0
237	SLE RA 9	0.02	-0.11	11.33	0	0	0
237	SLE RA 10	0.02	-0.11	11.98	0	0	0
237	SLE RA 11	0.01	-0.1	12.16	0	0	0
237	SLE RA 12	0.01	-0.11	12.15	0	0	0
237	SLE RA 13	0.02	-0.11	12.09	0	0	0
237	SLE RA 14	0.01	-0.11	12.27	0	0	0
237	SLE RA 15	0.01	-0.11	12.26	0	0	0
237	SLE RA 16	0.01	-0.11	12.2	0	0	0
237	SLE RA 17	0.01	-0.11	12.2	0	0	0
237	SLE RA 18	0.01	-0.1	12.36	0	0	0
237	SLE RA 19	0.01	-0.11	12.35	0	0	0
237	SLE RA 20	0.01	-0.1	12.47	0	0	0
237	SLE RA 21	0.01	-0.11	12.46	0	0	0
237	SLE FR 1	0.01	-0.11	11.11	0	0	0
237	SLE FR 2	0.01	-0.11	11.11	0	0	0
237	SLE FR 3	0.01	-0.11	11.16	0	0	0
237	SLE FR 4	0.01	-0.11	11.49	0	0	0
237	SLE FR 5	0.01	-0.11	11.53	0	0	0
237	SLE FR 6	0.01	-0.11	11.74	0	0	0
237	SLE QP 1	0.01	-0.11	11.11	0	0	0
237	SLE QP 2	0.01	-0.11	11.49	0	0	0
237	SLD 1	1.03	0.11	11.33	0	0	0
237	SLD 2	1.14	0.14	11.37	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
237	SLD 3	1.01	-0.16	11.07	0	0	0
237	SLD 4	1.12	-0.13	11.12	0	0	0
237	SLD 5	0.33	0.36	11.82	0	0	0
237	SLD 6	0.4	0.38	11.85	0	0	0
237	SLD 7	0.26	-0.53	10.97	0	0	0
237	SLD 8	0.33	-0.51	11	0	0	0
237	SLD 9	-0.31	0.3	11.98	0	0	0
237	SLD 10	-0.24	0.32	12.01	0	0	0
237	SLD 11	-0.37	-0.59	11.13	0	0	0
237	SLD 12	-0.3	-0.57	11.16	0	0	0
237	SLD 13	-1.09	-0.08	11.86	0	0	0
237	SLD 14	-0.98	-0.05	11.9	0	0	0
237	SLD 15	-1.11	-0.35	11.6	0	0	0
237	SLD 16	-1	-0.32	11.65	0	0	0
237	SLV 1	2.39	0.38	11.11	0	0	0
237	SLV 2	2.64	0.45	11.21	0	0	0
237	SLV 3	2.34	-0.22	10.53	0	0	0
237	SLV 4	2.59	-0.16	10.63	0	0	0
237	SLV 5	0.75	0.95	12.23	0	0	0
237	SLV 6	0.92	0.99	12.3	0	0	0
237	SLV 7	0.6	-1.07	10.31	0	0	0
237	SLV 8	0.76	-1.03	10.37	0	0	0
237	SLV 9	-0.73	0.81	12.6	0	0	0
237	SLV 10	-0.57	0.86	12.67	0	0	0
237	SLV 11	-0.89	-1.21	10.68	0	0	0
237	SLV 12	-0.73	-1.16	10.74	0	0	0
237	SLV 13	-2.57	-0.06	12.35	0	0	0
237	SLV 14	-2.32	0.01	12.45	0	0	0
237	SLV 15	-2.61	-0.66	11.77	0	0	0
237	SLV 16	-2.36	-0.59	11.87	0	0	0
238	SLU 1	0.02	-0.13	10.8	0	0	0
238	SLU 2	0.02	-0.14	10.79	0	0	0
238	SLU 3	0.02	-0.13	11.06	0	0	0
238	SLU 4	0.02	-0.14	11.06	0	0	0
238	SLU 5	0.02	-0.14	10.96	0	0	0
238	SLU 6	0.02	-0.14	11.22	0	0	0
238	SLU 7	0.02	-0.14	11.22	0	0	0
238	SLU 8	0.01	-0.14	11.13	0	0	0
238	SLU 9	0.02	-0.14	11.13	0	0	0
238	SLU 10	0.02	-0.14	12.09	0	0	0
238	SLU 11	0.01	-0.13	12.36	0	0	0
238	SLU 12	0.02	-0.13	12.35	0	0	0
238	SLU 13	0.02	-0.14	12.26	0	0	0
238	SLU 14	0.01	-0.13	12.52	0	0	0
238	SLU 15	0.02	-0.14	12.52	0	0	0
238	SLU 16	0.01	-0.13	12.43	0	0	0
238	SLU 17	0.01	-0.14	12.42	0	0	0
238	SLU 18	0.01	-0.13	12.66	0	0	0
238	SLU 19	0.01	-0.13	12.65	0	0	0
238	SLU 20	0.01	-0.13	12.82	0	0	0
238	SLU 21	0.01	-0.13	12.81	0	0	0
238	SLU 22	0.02	-0.12	11.95	0	0	0
238	SLU 23	0.03	-0.13	11.94	0	0	0
238	SLU 24	0.02	-0.12	12.21	0	0	0
238	SLU 25	0.02	-0.13	12.2	0	0	0
238	SLU 26	0.03	-0.13	12.11	0	0	0
238	SLU 27	0.02	-0.12	12.37	0	0	0
238	SLU 28	0.02	-0.13	12.37	0	0	0
238	SLU 29	0.02	-0.13	12.28	0	0	0
238	SLU 30	0.02	-0.13	12.27	0	0	0
238	SLU 31	0.02	-0.12	13.24	0	0	0
238	SLU 32	0.02	-0.12	13.51	0	0	0
238	SLU 33	0.02	-0.12	13.5	0	0	0
238	SLU 34	0.02	-0.13	13.4	0	0	0
238	SLU 35	0.02	-0.12	13.67	0	0	0
238	SLU 36	0.02	-0.12	13.66	0	0	0
238	SLU 37	0.02	-0.12	13.58	0	0	0
238	SLU 38	0.02	-0.13	13.57	0	0	0
238	SLU 39	0.01	-0.11	13.8	0	0	0
238	SLU 40	0.02	-0.12	13.8	0	0	0
238	SLU 41	0.01	-0.12	13.97	0	0	0
238	SLU 42	0.02	-0.12	13.96	0	0	0
238	SLU 43	0.02	-0.18	13.65	0	0	0
238	SLU 44	0.02	-0.18	13.64	0	0	0
238	SLU 45	0.02	-0.18	13.91	0	0	0
238	SLU 46	0.02	-0.18	13.9	0	0	0
238	SLU 47	0.02	-0.19	13.81	0	0	0
238	SLU 48	0.02	-0.18	14.07	0	0	0
238	SLU 49	0.02	-0.18	14.07	0	0	0
238	SLU 50	0.02	-0.18	13.98	0	0	0
238	SLU 51	0.02	-0.19	13.97	0	0	0
238	SLU 52	0.02	-0.18	14.94	0	0	0
238	SLU 53	0.02	-0.17	15.2	0	0	0
238	SLU 54	0.02	-0.18	15.2	0	0	0
238	SLU 55	0.02	-0.18	15.1	0	0	0
238	SLU 56	0.01	-0.18	15.37	0	0	0
238	SLU 57	0.02	-0.18	15.36	0	0	0
238	SLU 58	0.01	-0.18	15.28	0	0	0
238	SLU 59	0.02	-0.18	15.27	0	0	0
238	SLU 60	0.01	-0.17	15.5	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLU 61	0.02	-0.18	15.5	0	0	0
238	SLU 62	0.01	-0.17	15.67	0	0	0
238	SLU 63	0.02	-0.18	15.66	0	0	0
238	SLU 64	0.02	-0.16	14.8	0	0	0
238	SLU 65	0.03	-0.17	14.79	0	0	0
238	SLU 66	0.02	-0.17	15.06	0	0	0
238	SLU 67	0.03	-0.17	15.05	0	0	0
238	SLU 68	0.03	-0.17	14.95	0	0	0
238	SLU 69	0.02	-0.17	15.22	0	0	0
238	SLU 70	0.03	-0.17	15.22	0	0	0
238	SLU 71	0.02	-0.17	15.13	0	0	0
238	SLU 72	0.03	-0.17	15.12	0	0	0
238	SLU 73	0.03	-0.17	16.09	0	0	0
238	SLU 74	0.02	-0.16	16.35	0	0	0
238	SLU 75	0.02	-0.17	16.35	0	0	0
238	SLU 76	0.02	-0.17	16.25	0	0	0
238	SLU 77	0.02	-0.16	16.52	0	0	0
238	SLU 78	0.02	-0.17	16.51	0	0	0
238	SLU 79	0.02	-0.16	16.42	0	0	0
238	SLU 80	0.02	-0.17	16.42	0	0	0
238	SLU 81	0.02	-0.16	16.65	0	0	0
238	SLU 82	0.02	-0.16	16.65	0	0	0
238	SLU 83	0.02	-0.16	16.82	0	0	0
238	SLU 84	0.02	-0.17	16.81	0	0	0
238	SLE RA 1	0.02	-0.13	11.13	0	0	0
238	SLE RA 2	0.02	-0.13	11.13	0	0	0
238	SLE RA 3	0.02	-0.13	11.3	0	0	0
238	SLE RA 4	0.02	-0.13	11.3	0	0	0
238	SLE RA 5	0.02	-0.14	11.24	0	0	0
238	SLE RA 6	0.02	-0.13	11.41	0	0	0
238	SLE RA 7	0.02	-0.13	11.41	0	0	0
238	SLE RA 8	0.02	-0.13	11.35	0	0	0
238	SLE RA 9	0.02	-0.14	11.35	0	0	0
238	SLE RA 10	0.02	-0.13	11.99	0	0	0
238	SLE RA 11	0.01	-0.13	12.17	0	0	0
238	SLE RA 12	0.02	-0.13	12.16	0	0	0
238	SLE RA 13	0.02	-0.13	12.1	0	0	0
238	SLE RA 14	0.01	-0.13	12.28	0	0	0
238	SLE RA 15	0.02	-0.13	12.27	0	0	0
238	SLE RA 16	0.01	-0.13	12.21	0	0	0
238	SLE RA 17	0.02	-0.13	12.21	0	0	0
238	SLE RA 18	0.01	-0.13	12.37	0	0	0
238	SLE RA 19	0.02	-0.13	12.36	0	0	0
238	SLE RA 20	0.01	-0.13	12.48	0	0	0
238	SLE RA 21	0.02	-0.13	12.47	0	0	0
238	SLE FR 1	0.02	-0.13	11.13	0	0	0
238	SLE FR 2	0.02	-0.13	11.13	0	0	0
238	SLE FR 3	0.02	-0.13	11.18	0	0	0
238	SLE FR 4	0.02	-0.13	11.5	0	0	0
238	SLE FR 5	0.02	-0.13	11.55	0	0	0
238	SLE FR 6	0.01	-0.13	11.75	0	0	0
238	SLE QP 1	0.02	-0.13	11.13	0	0	0
238	SLE QP 2	0.02	-0.13	11.5	0	0	0
238	SLD 1	1.03	0.1	11.25	0	0	0
238	SLD 2	1.14	0.13	11.3	0	0	0
238	SLD 3	1.01	-0.17	11	0	0	0
238	SLD 4	1.12	-0.13	11.04	0	0	0
238	SLD 5	0.33	0.34	11.8	0	0	0
238	SLD 6	0.4	0.36	11.83	0	0	0
238	SLD 7	0.26	-0.55	10.96	0	0	0
238	SLD 8	0.34	-0.53	10.99	0	0	0
238	SLD 9	-0.3	0.27	12.01	0	0	0
238	SLD 10	-0.23	0.29	12.05	0	0	0
238	SLD 11	-0.37	-0.61	11.17	0	0	0
238	SLD 12	-0.3	-0.59	11.2	0	0	0
238	SLD 13	-1.09	-0.12	11.96	0	0	0
238	SLD 14	-0.98	-0.09	12.01	0	0	0
238	SLD 15	-1.11	-0.39	11.71	0	0	0
238	SLD 16	-1	-0.35	11.76	0	0	0
238	SLV 1	2.4	0.39	10.9	0	0	0
238	SLV 2	2.65	0.47	11.01	0	0	0
238	SLV 3	2.35	-0.21	10.33	0	0	0
238	SLV 4	2.6	-0.13	10.44	0	0	0
238	SLV 5	0.76	0.92	12.17	0	0	0
238	SLV 6	0.92	0.98	12.24	0	0	0
238	SLV 7	0.6	-1.08	10.26	0	0	0
238	SLV 8	0.76	-1.03	10.34	0	0	0
238	SLV 9	-0.73	0.77	12.67	0	0	0
238	SLV 10	-0.57	0.82	12.74	0	0	0
238	SLV 11	-0.89	-1.23	10.76	0	0	0
238	SLV 12	-0.73	-1.18	10.83	0	0	0
238	SLV 13	-2.57	-0.12	12.57	0	0	0
238	SLV 14	-2.32	-0.04	12.68	0	0	0
238	SLV 15	-2.61	-0.72	11.99	0	0	0
238	SLV 16	-2.37	-0.64	12.1	0	0	0
239	SLU 1	0.02	-0.15	10.82	0	0	0
239	SLU 2	0.02	-0.16	10.81	0	0	0
239	SLU 3	0.02	-0.15	11.07	0	0	0
239	SLU 4	0.02	-0.16	11.07	0	0	0
239	SLU 5	0.02	-0.16	10.97	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLU 6	0.02	-0.15	11.24	0	0	0
239	SLU 7	0.02	-0.16	11.23	0	0	0
239	SLU 8	0.02	-0.16	11.14	0	0	0
239	SLU 9	0.02	-0.16	11.14	0	0	0
239	SLU 10	0.02	-0.16	12.1	0	0	0
239	SLU 11	0.01	-0.15	12.36	0	0	0
239	SLU 12	0.02	-0.15	12.36	0	0	0
239	SLU 13	0.02	-0.16	12.26	0	0	0
239	SLU 14	0.01	-0.15	12.53	0	0	0
239	SLU 15	0.02	-0.16	12.52	0	0	0
239	SLU 16	0.01	-0.15	12.43	0	0	0
239	SLU 17	0.02	-0.16	12.43	0	0	0
239	SLU 18	0.01	-0.15	12.66	0	0	0
239	SLU 19	0.02	-0.15	12.66	0	0	0
239	SLU 20	0.01	-0.15	12.82	0	0	0
239	SLU 21	0.02	-0.16	12.82	0	0	0
239	SLU 22	0.02	-0.14	11.97	0	0	0
239	SLU 23	0.03	-0.15	11.96	0	0	0
239	SLU 24	0.02	-0.14	12.22	0	0	0
239	SLU 25	0.03	-0.15	12.22	0	0	0
239	SLU 26	0.03	-0.15	12.12	0	0	0
239	SLU 27	0.02	-0.15	12.39	0	0	0
239	SLU 28	0.03	-0.15	12.38	0	0	0
239	SLU 29	0.02	-0.15	12.3	0	0	0
239	SLU 30	0.03	-0.15	12.29	0	0	0
239	SLU 31	0.03	-0.15	13.25	0	0	0
239	SLU 32	0.02	-0.14	13.52	0	0	0
239	SLU 33	0.02	-0.15	13.51	0	0	0
239	SLU 34	0.02	-0.15	13.41	0	0	0
239	SLU 35	0.02	-0.14	13.68	0	0	0
239	SLU 36	0.02	-0.15	13.67	0	0	0
239	SLU 37	0.02	-0.15	13.59	0	0	0
239	SLU 38	0.02	-0.15	13.58	0	0	0
239	SLU 39	0.02	-0.14	13.81	0	0	0
239	SLU 40	0.02	-0.14	13.81	0	0	0
239	SLU 41	0.02	-0.14	13.98	0	0	0
239	SLU 42	0.02	-0.15	13.97	0	0	0
239	SLU 43	0.02	-0.2	13.67	0	0	0
239	SLU 44	0.03	-0.21	13.66	0	0	0
239	SLU 45	0.02	-0.2	13.92	0	0	0
239	SLU 46	0.03	-0.21	13.92	0	0	0
239	SLU 47	0.03	-0.21	13.82	0	0	0
239	SLU 48	0.02	-0.2	14.09	0	0	0
239	SLU 49	0.03	-0.21	14.08	0	0	0
239	SLU 50	0.02	-0.2	13.99	0	0	0
239	SLU 51	0.02	-0.21	13.99	0	0	0
239	SLU 52	0.02	-0.21	14.95	0	0	0
239	SLU 53	0.02	-0.2	15.21	0	0	0
239	SLU 54	0.02	-0.2	15.21	0	0	0
239	SLU 55	0.02	-0.21	15.11	0	0	0
239	SLU 56	0.02	-0.2	15.38	0	0	0
239	SLU 57	0.02	-0.21	15.37	0	0	0
239	SLU 58	0.02	-0.2	15.28	0	0	0
239	SLU 59	0.02	-0.21	15.28	0	0	0
239	SLU 60	0.02	-0.2	15.51	0	0	0
239	SLU 61	0.02	-0.2	15.51	0	0	0
239	SLU 62	0.02	-0.2	15.67	0	0	0
239	SLU 63	0.02	-0.2	15.67	0	0	0
239	SLU 64	0.03	-0.19	14.82	0	0	0
239	SLU 65	0.03	-0.2	14.81	0	0	0
239	SLU 66	0.03	-0.19	15.07	0	0	0
239	SLU 67	0.03	-0.2	15.07	0	0	0
239	SLU 68	0.03	-0.2	14.97	0	0	0
239	SLU 69	0.03	-0.19	15.24	0	0	0
239	SLU 70	0.03	-0.2	15.23	0	0	0
239	SLU 71	0.03	-0.2	15.15	0	0	0
239	SLU 72	0.03	-0.2	15.14	0	0	0
239	SLU 73	0.03	-0.2	16.1	0	0	0
239	SLU 74	0.02	-0.19	16.37	0	0	0
239	SLU 75	0.03	-0.19	16.36	0	0	0
239	SLU 76	0.03	-0.2	16.26	0	0	0
239	SLU 77	0.02	-0.19	16.53	0	0	0
239	SLU 78	0.03	-0.2	16.52	0	0	0
239	SLU 79	0.02	-0.19	16.44	0	0	0
239	SLU 80	0.03	-0.2	16.43	0	0	0
239	SLU 81	0.02	-0.19	16.66	0	0	0
239	SLU 82	0.03	-0.19	16.66	0	0	0
239	SLU 83	0.02	-0.19	16.83	0	0	0
239	SLU 84	0.02	-0.19	16.82	0	0	0
239	SLE RA 1	0.02	-0.15	11.15	0	0	0
239	SLE RA 2	0.02	-0.15	11.14	0	0	0
239	SLE RA 3	0.02	-0.15	11.32	0	0	0
239	SLE RA 4	0.02	-0.15	11.31	0	0	0
239	SLE RA 5	0.02	-0.15	11.25	0	0	0
239	SLE RA 6	0.02	-0.15	11.43	0	0	0
239	SLE RA 7	0.02	-0.15	11.42	0	0	0
239	SLE RA 8	0.02	-0.15	11.36	0	0	0
239	SLE RA 9	0.02	-0.15	11.36	0	0	0
239	SLE RA 10	0.02	-0.15	12	0	0	0
239	SLE RA 11	0.02	-0.15	12.18	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLE RA 12	0.02	-0.15	12.17	0	0	0
239	SLE RA 13	0.02	-0.15	12.11	0	0	0
239	SLE RA 14	0.02	-0.15	12.29	0	0	0
239	SLE RA 15	0.02	-0.15	12.28	0	0	0
239	SLE RA 16	0.02	-0.15	12.22	0	0	0
239	SLE RA 17	0.02	-0.15	12.22	0	0	0
239	SLE RA 18	0.02	-0.15	12.37	0	0	0
239	SLE RA 19	0.02	-0.15	12.37	0	0	0
239	SLE RA 20	0.02	-0.15	12.48	0	0	0
239	SLE RA 21	0.02	-0.15	12.48	0	0	0
239	SLE FR 1	0.02	-0.15	11.15	0	0	0
239	SLE FR 2	0.02	-0.15	11.14	0	0	0
239	SLE FR 3	0.02	-0.15	11.19	0	0	0
239	SLE FR 4	0.02	-0.15	11.51	0	0	0
239	SLE FR 5	0.02	-0.15	11.56	0	0	0
239	SLE FR 6	0.02	-0.15	11.76	0	0	0
239	SLE QP 1	0.02	-0.15	11.15	0	0	0
239	SLE QP 2	0.02	-0.15	11.51	0	0	0
239	SLD 1	1.03	0.09	11.16	0	0	0
239	SLD 2	1.14	0.13	11.21	0	0	0
239	SLD 3	1.01	-0.18	10.91	0	0	0
239	SLD 4	1.12	-0.14	10.96	0	0	0
239	SLD 5	0.33	0.31	11.78	0	0	0
239	SLD 6	0.4	0.34	11.81	0	0	0
239	SLD 7	0.27	-0.56	10.94	0	0	0
239	SLD 8	0.34	-0.53	10.98	0	0	0
239	SLD 9	-0.3	0.24	12.05	0	0	0
239	SLD 10	-0.23	0.26	12.08	0	0	0
239	SLD 11	-0.37	-0.63	11.22	0	0	0
239	SLD 12	-0.3	-0.61	11.25	0	0	0
239	SLD 13	-1.08	-0.16	12.07	0	0	0
239	SLD 14	-0.97	-0.12	12.12	0	0	0
239	SLD 15	-1.1	-0.42	11.82	0	0	0
239	SLD 16	-0.99	-0.38	11.87	0	0	0
239	SLV 1	2.38	0.39	10.68	0	0	0
239	SLV 2	2.63	0.48	10.8	0	0	0
239	SLV 3	2.34	-0.2	10.11	0	0	0
239	SLV 4	2.58	-0.11	10.23	0	0	0
239	SLV 5	0.76	0.89	12.1	0	0	0
239	SLV 6	0.92	0.95	12.18	0	0	0
239	SLV 7	0.6	-1.08	10.21	0	0	0
239	SLV 8	0.76	-1.02	10.29	0	0	0
239	SLV 9	-0.72	0.72	12.74	0	0	0
239	SLV 10	-0.56	0.78	12.82	0	0	0
239	SLV 11	-0.88	-1.25	10.85	0	0	0
239	SLV 12	-0.72	-1.19	10.93	0	0	0
239	SLV 13	-2.55	-0.18	12.8	0	0	0
239	SLV 14	-2.3	-0.09	12.92	0	0	0
239	SLV 15	-2.59	-0.78	12.23	0	0	0
239	SLV 16	-2.35	-0.68	12.35	0	0	0
240	SLU 1	0.02	-0.17	10.79	0	0	0
240	SLU 2	0.03	-0.17	10.78	0	0	0
240	SLU 3	0.02	-0.17	11.05	0	0	0
240	SLU 4	0.03	-0.17	11.04	0	0	0
240	SLU 5	0.03	-0.18	10.95	0	0	0
240	SLU 6	0.02	-0.17	11.21	0	0	0
240	SLU 7	0.03	-0.18	11.2	0	0	0
240	SLU 8	0.02	-0.17	11.12	0	0	0
240	SLU 9	0.02	-0.18	11.11	0	0	0
240	SLU 10	0.02	-0.17	12.07	0	0	0
240	SLU 11	0.02	-0.17	12.33	0	0	0
240	SLU 12	0.02	-0.17	12.32	0	0	0
240	SLU 13	0.02	-0.18	12.23	0	0	0
240	SLU 14	0.02	-0.17	12.49	0	0	0
240	SLU 15	0.02	-0.18	12.49	0	0	0
240	SLU 16	0.02	-0.17	12.4	0	0	0
240	SLU 17	0.02	-0.18	12.39	0	0	0
240	SLU 18	0.02	-0.17	12.62	0	0	0
240	SLU 19	0.02	-0.17	12.62	0	0	0
240	SLU 20	0.02	-0.17	12.79	0	0	0
240	SLU 21	0.02	-0.17	12.78	0	0	0
240	SLU 22	0.03	-0.16	11.94	0	0	0
240	SLU 23	0.03	-0.17	11.94	0	0	0
240	SLU 24	0.03	-0.16	12.2	0	0	0
240	SLU 25	0.03	-0.17	12.19	0	0	0
240	SLU 26	0.03	-0.17	12.1	0	0	0
240	SLU 27	0.03	-0.16	12.36	0	0	0
240	SLU 28	0.03	-0.17	12.36	0	0	0
240	SLU 29	0.03	-0.17	12.27	0	0	0
240	SLU 30	0.03	-0.17	12.26	0	0	0
240	SLU 31	0.03	-0.17	13.22	0	0	0
240	SLU 32	0.02	-0.16	13.48	0	0	0
240	SLU 33	0.03	-0.17	13.48	0	0	0
240	SLU 34	0.03	-0.17	13.38	0	0	0
240	SLU 35	0.02	-0.17	13.64	0	0	0
240	SLU 36	0.03	-0.17	13.64	0	0	0
240	SLU 37	0.02	-0.17	13.55	0	0	0
240	SLU 38	0.03	-0.17	13.55	0	0	0
240	SLU 39	0.02	-0.16	13.78	0	0	0
240	SLU 40	0.03	-0.16	13.77	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLU 41	0.02	-0.16	13.94	0	0	0
240	SLU 42	0.02	-0.17	13.93	0	0	0
240	SLU 43	0.03	-0.22	13.63	0	0	0
240	SLU 44	0.03	-0.23	13.62	0	0	0
240	SLU 45	0.03	-0.22	13.89	0	0	0
240	SLU 46	0.03	-0.22	13.88	0	0	0
240	SLU 47	0.03	-0.23	13.79	0	0	0
240	SLU 48	0.03	-0.22	14.05	0	0	0
240	SLU 49	0.03	-0.23	14.05	0	0	0
240	SLU 50	0.03	-0.23	13.96	0	0	0
240	SLU 51	0.03	-0.23	13.95	0	0	0
240	SLU 52	0.03	-0.23	14.91	0	0	0
240	SLU 53	0.02	-0.22	15.17	0	0	0
240	SLU 54	0.03	-0.23	15.17	0	0	0
240	SLU 55	0.03	-0.23	15.07	0	0	0
240	SLU 56	0.02	-0.22	15.33	0	0	0
240	SLU 57	0.03	-0.23	15.33	0	0	0
240	SLU 58	0.02	-0.23	15.24	0	0	0
240	SLU 59	0.03	-0.23	15.24	0	0	0
240	SLU 60	0.02	-0.22	15.46	0	0	0
240	SLU 61	0.03	-0.22	15.46	0	0	0
240	SLU 62	0.02	-0.22	15.63	0	0	0
240	SLU 63	0.03	-0.23	15.62	0	0	0
240	SLU 64	0.03	-0.21	14.79	0	0	0
240	SLU 65	0.04	-0.22	14.78	0	0	0
240	SLU 66	0.03	-0.21	15.04	0	0	0
240	SLU 67	0.03	-0.22	15.04	0	0	0
240	SLU 68	0.04	-0.22	14.94	0	0	0
240	SLU 69	0.03	-0.22	15.2	0	0	0
240	SLU 70	0.03	-0.22	15.2	0	0	0
240	SLU 71	0.03	-0.22	15.11	0	0	0
240	SLU 72	0.03	-0.22	15.11	0	0	0
240	SLU 73	0.03	-0.22	16.06	0	0	0
240	SLU 74	0.03	-0.21	16.32	0	0	0
240	SLU 75	0.03	-0.22	16.32	0	0	0
240	SLU 76	0.03	-0.22	16.22	0	0	0
240	SLU 77	0.03	-0.22	16.49	0	0	0
240	SLU 78	0.03	-0.22	16.48	0	0	0
240	SLU 79	0.03	-0.22	16.39	0	0	0
240	SLU 80	0.03	-0.22	16.39	0	0	0
240	SLU 81	0.03	-0.21	16.62	0	0	0
240	SLU 82	0.03	-0.22	16.61	0	0	0
240	SLU 83	0.03	-0.22	16.78	0	0	0
240	SLU 84	0.03	-0.22	16.78	0	0	0
240	SLE RA 1	0.02	-0.16	11.12	0	0	0
240	SLE RA 2	0.03	-0.17	11.11	0	0	0
240	SLE RA 3	0.02	-0.17	11.29	0	0	0
240	SLE RA 4	0.03	-0.17	11.29	0	0	0
240	SLE RA 5	0.03	-0.17	11.22	0	0	0
240	SLE RA 6	0.02	-0.17	11.4	0	0	0
240	SLE RA 7	0.03	-0.17	11.4	0	0	0
240	SLE RA 8	0.02	-0.17	11.34	0	0	0
240	SLE RA 9	0.02	-0.17	11.33	0	0	0
240	SLE RA 10	0.02	-0.17	11.97	0	0	0
240	SLE RA 11	0.02	-0.17	12.15	0	0	0
240	SLE RA 12	0.02	-0.17	12.14	0	0	0
240	SLE RA 13	0.02	-0.17	12.08	0	0	0
240	SLE RA 14	0.02	-0.17	12.25	0	0	0
240	SLE RA 15	0.02	-0.17	12.25	0	0	0
240	SLE RA 16	0.02	-0.17	12.19	0	0	0
240	SLE RA 17	0.02	-0.17	12.19	0	0	0
240	SLE RA 18	0.02	-0.17	12.34	0	0	0
240	SLE RA 19	0.02	-0.17	12.34	0	0	0
240	SLE RA 20	0.02	-0.17	12.45	0	0	0
240	SLE RA 21	0.02	-0.17	12.45	0	0	0
240	SLE FR 1	0.02	-0.16	11.12	0	0	0
240	SLE FR 2	0.02	-0.17	11.12	0	0	0
240	SLE FR 3	0.02	-0.17	11.16	0	0	0
240	SLE FR 4	0.02	-0.17	11.49	0	0	0
240	SLE FR 5	0.02	-0.17	11.53	0	0	0
240	SLE FR 6	0.02	-0.16	11.73	0	0	0
240	SLE QP 1	0.02	-0.16	11.12	0	0	0
240	SLE QP 2	0.02	-0.16	11.49	0	0	0
240	SLD 1	1.02	0.07	11.03	0	0	0
240	SLD 2	1.12	0.12	11.09	0	0	0
240	SLD 3	1	-0.18	10.79	0	0	0
240	SLD 4	1.1	-0.14	10.84	0	0	0
240	SLD 5	0.33	0.29	11.72	0	0	0
240	SLD 6	0.4	0.31	11.75	0	0	0
240	SLD 7	0.26	-0.56	10.89	0	0	0
240	SLD 8	0.33	-0.54	10.93	0	0	0
240	SLD 9	-0.29	0.21	12.05	0	0	0
240	SLD 10	-0.22	0.23	12.08	0	0	0
240	SLD 11	-0.36	-0.64	11.22	0	0	0
240	SLD 12	-0.29	-0.61	11.26	0	0	0
240	SLD 13	-1.06	-0.19	12.13	0	0	0
240	SLD 14	-0.95	-0.15	12.19	0	0	0
240	SLD 15	-1.08	-0.45	11.88	0	0	0
240	SLD 16	-0.97	-0.4	11.94	0	0	0
240	SLV 1	2.35	0.38	10.42	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLV 2	2.59	0.49	10.55	0	0	0
240	SLV 3	2.3	-0.19	9.86	0	0	0
240	SLV 4	2.54	-0.09	9.98	0	0	0
240	SLV 5	0.75	0.86	12	0	0	0
240	SLV 6	0.91	0.92	12.08	0	0	0
240	SLV 7	0.59	-1.07	10.12	0	0	0
240	SLV 8	0.75	-1	10.21	0	0	0
240	SLV 9	-0.71	0.67	12.77	0	0	0
240	SLV 10	-0.55	0.74	12.85	0	0	0
240	SLV 11	-0.86	-1.25	10.89	0	0	0
240	SLV 12	-0.7	-1.19	10.98	0	0	0
240	SLV 13	-2.5	-0.24	12.99	0	0	0
240	SLV 14	-2.25	-0.14	13.12	0	0	0
240	SLV 15	-2.54	-0.81	12.43	0	0	0
240	SLV 16	-2.3	-0.71	12.55	0	0	0
241	SLU 1	0.02	-0.16	9.93	0	0	0
241	SLU 2	0.03	-0.17	9.92	0	0	0
241	SLU 3	0.02	-0.17	10.16	0	0	0
241	SLU 4	0.03	-0.17	10.16	0	0	0
241	SLU 5	0.03	-0.17	10.07	0	0	0
241	SLU 6	0.02	-0.17	10.31	0	0	0
241	SLU 7	0.03	-0.17	10.31	0	0	0
241	SLU 8	0.02	-0.17	10.23	0	0	0
241	SLU 9	0.03	-0.17	10.22	0	0	0
241	SLU 10	0.03	-0.17	11.1	0	0	0
241	SLU 11	0.02	-0.17	11.34	0	0	0
241	SLU 12	0.02	-0.17	11.34	0	0	0
241	SLU 13	0.03	-0.18	11.25	0	0	0
241	SLU 14	0.02	-0.17	11.49	0	0	0
241	SLU 15	0.02	-0.18	11.49	0	0	0
241	SLU 16	0.02	-0.17	11.41	0	0	0
241	SLU 17	0.02	-0.18	11.4	0	0	0
241	SLU 18	0.02	-0.17	11.61	0	0	0
241	SLU 19	0.02	-0.17	11.61	0	0	0
241	SLU 20	0.02	-0.17	11.76	0	0	0
241	SLU 21	0.02	-0.17	11.76	0	0	0
241	SLU 22	0.03	-0.16	10.99	0	0	0
241	SLU 23	0.03	-0.17	10.99	0	0	0
241	SLU 24	0.03	-0.16	11.23	0	0	0
241	SLU 25	0.03	-0.17	11.22	0	0	0
241	SLU 26	0.03	-0.17	11.14	0	0	0
241	SLU 27	0.03	-0.17	11.38	0	0	0
241	SLU 28	0.03	-0.17	11.37	0	0	0
241	SLU 29	0.03	-0.17	11.29	0	0	0
241	SLU 30	0.03	-0.17	11.29	0	0	0
241	SLU 31	0.03	-0.17	12.16	0	0	0
241	SLU 32	0.03	-0.16	12.41	0	0	0
241	SLU 33	0.03	-0.17	12.4	0	0	0
241	SLU 34	0.03	-0.17	12.31	0	0	0
241	SLU 35	0.03	-0.17	12.56	0	0	0
241	SLU 36	0.03	-0.17	12.55	0	0	0
241	SLU 37	0.03	-0.17	12.47	0	0	0
241	SLU 38	0.03	-0.17	12.47	0	0	0
241	SLU 39	0.02	-0.16	12.67	0	0	0
241	SLU 40	0.03	-0.17	12.67	0	0	0
241	SLU 41	0.02	-0.17	12.82	0	0	0
241	SLU 42	0.03	-0.17	12.82	0	0	0
241	SLU 43	0.03	-0.22	12.54	0	0	0
241	SLU 44	0.03	-0.22	12.53	0	0	0
241	SLU 45	0.03	-0.22	12.78	0	0	0
241	SLU 46	0.03	-0.22	12.77	0	0	0
241	SLU 47	0.03	-0.22	12.68	0	0	0
241	SLU 48	0.03	-0.22	12.93	0	0	0
241	SLU 49	0.03	-0.22	12.92	0	0	0
241	SLU 50	0.03	-0.22	12.84	0	0	0
241	SLU 51	0.03	-0.23	12.84	0	0	0
241	SLU 52	0.03	-0.22	13.71	0	0	0
241	SLU 53	0.03	-0.22	13.95	0	0	0
241	SLU 54	0.03	-0.22	13.95	0	0	0
241	SLU 55	0.03	-0.23	13.86	0	0	0
241	SLU 56	0.03	-0.22	14.1	0	0	0
241	SLU 57	0.03	-0.23	14.1	0	0	0
241	SLU 58	0.03	-0.22	14.02	0	0	0
241	SLU 59	0.03	-0.23	14.02	0	0	0
241	SLU 60	0.03	-0.22	14.22	0	0	0
241	SLU 61	0.03	-0.22	14.22	0	0	0
241	SLU 62	0.03	-0.22	14.37	0	0	0
241	SLU 63	0.03	-0.23	14.37	0	0	0
241	SLU 64	0.03	-0.21	13.61	0	0	0
241	SLU 65	0.04	-0.22	13.6	0	0	0
241	SLU 66	0.03	-0.21	13.84	0	0	0
241	SLU 67	0.04	-0.22	13.84	0	0	0
241	SLU 68	0.04	-0.22	13.75	0	0	0
241	SLU 69	0.03	-0.22	13.99	0	0	0
241	SLU 70	0.04	-0.22	13.99	0	0	0
241	SLU 71	0.03	-0.22	13.91	0	0	0
241	SLU 72	0.04	-0.22	13.9	0	0	0
241	SLU 73	0.04	-0.22	14.78	0	0	0
241	SLU 74	0.03	-0.22	15.02	0	0	0
241	SLU 75	0.03	-0.22	15.01	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
241	SLU 76	0.04	-0.22	14.93	0	0	0
241	SLU 77	0.03	-0.22	15.17	0	0	0
241	SLU 78	0.03	-0.22	15.17	0	0	0
241	SLU 79	0.03	-0.22	15.08	0	0	0
241	SLU 80	0.03	-0.22	15.08	0	0	0
241	SLU 81	0.03	-0.21	15.29	0	0	0
241	SLU 82	0.03	-0.22	15.28	0	0	0
241	SLU 83	0.03	-0.22	15.44	0	0	0
241	SLU 84	0.03	-0.22	15.43	0	0	0
241	SLE RA 1	0.02	-0.16	10.23	0	0	0
241	SLE RA 2	0.03	-0.17	10.23	0	0	0
241	SLE RA 3	0.02	-0.16	10.39	0	0	0
241	SLE RA 4	0.03	-0.17	10.39	0	0	0
241	SLE RA 5	0.03	-0.17	10.33	0	0	0
241	SLE RA 6	0.02	-0.17	10.49	0	0	0
241	SLE RA 7	0.03	-0.17	10.49	0	0	0
241	SLE RA 8	0.02	-0.17	10.43	0	0	0
241	SLE RA 9	0.03	-0.17	10.43	0	0	0
241	SLE RA 10	0.03	-0.17	11.01	0	0	0
241	SLE RA 11	0.02	-0.17	11.17	0	0	0
241	SLE RA 12	0.03	-0.17	11.17	0	0	0
241	SLE RA 13	0.03	-0.17	11.11	0	0	0
241	SLE RA 14	0.02	-0.17	11.27	0	0	0
241	SLE RA 15	0.03	-0.17	11.27	0	0	0
241	SLE RA 16	0.02	-0.17	11.22	0	0	0
241	SLE RA 17	0.03	-0.17	11.21	0	0	0
241	SLE RA 18	0.02	-0.17	11.35	0	0	0
241	SLE RA 19	0.02	-0.17	11.35	0	0	0
241	SLE RA 20	0.02	-0.17	11.45	0	0	0
241	SLE RA 21	0.02	-0.17	11.45	0	0	0
241	SLE FR 1	0.02	-0.16	10.23	0	0	0
241	SLE FR 2	0.03	-0.16	10.23	0	0	0
241	SLE FR 3	0.02	-0.16	10.27	0	0	0
241	SLE FR 4	0.02	-0.16	10.57	0	0	0
241	SLE FR 5	0.02	-0.16	10.61	0	0	0
241	SLE FR 6	0.02	-0.16	10.79	0	0	0
241	SLE QP 1	0.02	-0.16	10.23	0	0	0
241	SLE QP 2	0.02	-0.16	10.57	0	0	0
241	SLD 1	0.92	0.06	10.06	0	0	0
241	SLD 2	1.01	0.1	10.12	0	0	0
241	SLD 3	0.9	-0.17	9.83	0	0	0
241	SLD 4	0.99	-0.13	9.89	0	0	0
241	SLD 5	0.3	0.24	10.75	0	0	0
241	SLD 6	0.37	0.27	10.79	0	0	0
241	SLD 7	0.24	-0.52	9.99	0	0	0
241	SLD 8	0.3	-0.49	10.03	0	0	0
241	SLD 9	-0.26	0.16	11.11	0	0	0
241	SLD 10	-0.19	0.19	11.14	0	0	0
241	SLD 11	-0.32	-0.6	10.35	0	0	0
241	SLD 12	-0.25	-0.57	10.39	0	0	0
241	SLD 13	-0.95	-0.2	11.25	0	0	0
241	SLD 14	-0.85	-0.16	11.3	0	0	0
241	SLD 15	-0.96	-0.43	11.02	0	0	0
241	SLD 16	-0.87	-0.39	11.08	0	0	0
241	SLV 1	2.12	0.35	9.38	0	0	0
241	SLV 2	2.33	0.45	9.5	0	0	0
241	SLV 3	2.07	-0.17	8.86	0	0	0
241	SLV 4	2.29	-0.07	8.99	0	0	0
241	SLV 5	0.68	0.76	10.97	0	0	0
241	SLV 6	0.82	0.82	11.05	0	0	0
241	SLV 7	0.54	-0.97	9.25	0	0	0
241	SLV 8	0.68	-0.9	9.33	0	0	0
241	SLV 9	-0.63	0.57	11.8	0	0	0
241	SLV 10	-0.49	0.64	11.89	0	0	0
241	SLV 11	-0.77	-1.15	10.08	0	0	0
241	SLV 12	-0.63	-1.08	10.17	0	0	0
241	SLV 13	-2.24	-0.26	12.15	0	0	0
241	SLV 14	-2.03	-0.16	12.28	0	0	0
241	SLV 15	-2.29	-0.78	11.63	0	0	0
241	SLV 16	-2.07	-0.68	11.76	0	0	0
242	SLU 1	0.02	-0.16	9.28	0	0	0
242	SLU 2	0.03	-0.17	9.28	0	0	0
242	SLU 3	0.03	-0.16	9.5	0	0	0
242	SLU 4	0.03	-0.17	9.5	0	0	0
242	SLU 5	0.03	-0.17	9.42	0	0	0
242	SLU 6	0.03	-0.17	9.65	0	0	0
242	SLU 7	0.03	-0.17	9.64	0	0	0
242	SLU 8	0.02	-0.17	9.57	0	0	0
242	SLU 9	0.03	-0.17	9.56	0	0	0
242	SLU 10	0.03	-0.17	10.38	0	0	0
242	SLU 11	0.02	-0.17	10.6	0	0	0
242	SLU 12	0.03	-0.17	10.6	0	0	0
242	SLU 13	0.03	-0.17	10.52	0	0	0
242	SLU 14	0.02	-0.17	10.74	0	0	0
242	SLU 15	0.03	-0.17	10.74	0	0	0
242	SLU 16	0.02	-0.17	10.67	0	0	0
242	SLU 17	0.03	-0.17	10.66	0	0	0
242	SLU 18	0.02	-0.17	10.86	0	0	0
242	SLU 19	0.03	-0.17	10.85	0	0	0
242	SLU 20	0.02	-0.17	11	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLU 21	0.03	-0.17	10.99	0	0	0
242	SLU 22	0.03	-0.16	10.28	0	0	0
242	SLU 23	0.03	-0.16	10.28	0	0	0
242	SLU 24	0.03	-0.16	10.5	0	0	0
242	SLU 25	0.03	-0.16	10.5	0	0	0
242	SLU 26	0.03	-0.17	10.42	0	0	0
242	SLU 27	0.03	-0.16	10.65	0	0	0
242	SLU 28	0.03	-0.17	10.64	0	0	0
242	SLU 29	0.03	-0.17	10.57	0	0	0
242	SLU 30	0.03	-0.17	10.56	0	0	0
242	SLU 31	0.03	-0.17	11.38	0	0	0
242	SLU 32	0.03	-0.16	11.6	0	0	0
242	SLU 33	0.03	-0.17	11.6	0	0	0
242	SLU 34	0.03	-0.17	11.52	0	0	0
242	SLU 35	0.03	-0.17	11.74	0	0	0
242	SLU 36	0.03	-0.17	11.74	0	0	0
242	SLU 37	0.03	-0.17	11.66	0	0	0
242	SLU 38	0.03	-0.17	11.66	0	0	0
242	SLU 39	0.03	-0.16	11.85	0	0	0
242	SLU 40	0.03	-0.17	11.85	0	0	0
242	SLU 41	0.03	-0.17	12	0	0	0
242	SLU 42	0.03	-0.17	11.99	0	0	0
242	SLU 43	0.03	-0.21	11.73	0	0	0
242	SLU 44	0.04	-0.22	11.72	0	0	0
242	SLU 45	0.03	-0.21	11.95	0	0	0
242	SLU 46	0.03	-0.22	11.94	0	0	0
242	SLU 47	0.04	-0.22	11.86	0	0	0
242	SLU 48	0.03	-0.22	12.09	0	0	0
242	SLU 49	0.03	-0.22	12.08	0	0	0
242	SLU 50	0.03	-0.22	12.01	0	0	0
242	SLU 51	0.03	-0.22	12	0	0	0
242	SLU 52	0.03	-0.22	12.82	0	0	0
242	SLU 53	0.03	-0.22	13.05	0	0	0
242	SLU 54	0.03	-0.22	13.04	0	0	0
242	SLU 55	0.03	-0.22	12.96	0	0	0
242	SLU 56	0.03	-0.22	13.19	0	0	0
242	SLU 57	0.03	-0.22	13.18	0	0	0
242	SLU 58	0.03	-0.22	13.11	0	0	0
242	SLU 59	0.03	-0.22	13.1	0	0	0
242	SLU 60	0.03	-0.22	13.3	0	0	0
242	SLU 61	0.03	-0.22	13.29	0	0	0
242	SLU 62	0.03	-0.22	13.44	0	0	0
242	SLU 63	0.03	-0.22	13.43	0	0	0
242	SLU 64	0.04	-0.21	12.73	0	0	0
242	SLU 65	0.04	-0.21	12.72	0	0	0
242	SLU 66	0.04	-0.21	12.95	0	0	0
242	SLU 67	0.04	-0.21	12.94	0	0	0
242	SLU 68	0.04	-0.22	12.86	0	0	0
242	SLU 69	0.04	-0.21	13.09	0	0	0
242	SLU 70	0.04	-0.22	13.08	0	0	0
242	SLU 71	0.04	-0.21	13.01	0	0	0
242	SLU 72	0.04	-0.22	13	0	0	0
242	SLU 73	0.04	-0.22	13.82	0	0	0
242	SLU 74	0.03	-0.21	14.05	0	0	0
242	SLU 75	0.04	-0.22	14.04	0	0	0
242	SLU 76	0.04	-0.22	13.96	0	0	0
242	SLU 77	0.03	-0.22	14.19	0	0	0
242	SLU 78	0.04	-0.22	14.18	0	0	0
242	SLU 79	0.03	-0.22	14.11	0	0	0
242	SLU 80	0.04	-0.22	14.1	0	0	0
242	SLU 81	0.03	-0.21	14.3	0	0	0
242	SLU 82	0.04	-0.22	14.29	0	0	0
242	SLU 83	0.03	-0.22	14.44	0	0	0
242	SLU 84	0.04	-0.22	14.43	0	0	0
242	SLE RA 1	0.03	-0.16	9.57	0	0	0
242	SLE RA 2	0.03	-0.16	9.57	0	0	0
242	SLE RA 3	0.03	-0.16	9.72	0	0	0
242	SLE RA 4	0.03	-0.16	9.71	0	0	0
242	SLE RA 5	0.03	-0.17	9.66	0	0	0
242	SLE RA 6	0.03	-0.16	9.81	0	0	0
242	SLE RA 7	0.03	-0.17	9.81	0	0	0
242	SLE RA 8	0.03	-0.17	9.76	0	0	0
242	SLE RA 9	0.03	-0.17	9.75	0	0	0
242	SLE RA 10	0.03	-0.17	10.3	0	0	0
242	SLE RA 11	0.03	-0.16	10.45	0	0	0
242	SLE RA 12	0.03	-0.17	10.45	0	0	0
242	SLE RA 13	0.03	-0.17	10.39	0	0	0
242	SLE RA 14	0.03	-0.17	10.54	0	0	0
242	SLE RA 15	0.03	-0.17	10.54	0	0	0
242	SLE RA 16	0.02	-0.17	10.49	0	0	0
242	SLE RA 17	0.03	-0.17	10.49	0	0	0
242	SLE RA 18	0.02	-0.16	10.62	0	0	0
242	SLE RA 19	0.03	-0.17	10.61	0	0	0
242	SLE RA 20	0.02	-0.17	10.71	0	0	0
242	SLE RA 21	0.03	-0.17	10.71	0	0	0
242	SLE FR 1	0.03	-0.16	9.57	0	0	0
242	SLE FR 2	0.03	-0.16	9.57	0	0	0
242	SLE FR 3	0.03	-0.16	9.61	0	0	0
242	SLE FR 4	0.03	-0.16	9.88	0	0	0
242	SLE FR 5	0.03	-0.16	9.92	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLE FR 6	0.03	-0.16	10.09	0	0	0
242	SLE QP 1	0.03	-0.16	9.57	0	0	0
242	SLE QP 2	0.03	-0.16	9.88	0	0	0
242	SLD 1	0.84	0.05	9.34	0	0	0
242	SLD 2	0.93	0.09	9.39	0	0	0
242	SLD 3	0.83	-0.16	9.12	0	0	0
242	SLD 4	0.91	-0.12	9.18	0	0	0
242	SLD 5	0.28	0.21	10.03	0	0	0
242	SLD 6	0.34	0.24	10.07	0	0	0
242	SLD 7	0.23	-0.49	9.32	0	0	0
242	SLD 8	0.28	-0.46	9.36	0	0	0
242	SLD 9	-0.23	0.13	10.41	0	0	0
242	SLD 10	-0.17	0.16	10.45	0	0	0
242	SLD 11	-0.29	-0.56	9.7	0	0	0
242	SLD 12	-0.23	-0.53	9.73	0	0	0
242	SLD 13	-0.86	-0.2	10.59	0	0	0
242	SLD 14	-0.78	-0.16	10.65	0	0	0
242	SLD 15	-0.88	-0.41	10.38	0	0	0
242	SLD 16	-0.79	-0.37	10.43	0	0	0
242	SLV 1	1.94	0.32	8.59	0	0	0
242	SLV 2	2.14	0.42	8.72	0	0	0
242	SLV 3	1.9	-0.15	8.11	0	0	0
242	SLV 4	2.1	-0.06	8.24	0	0	0
242	SLV 5	0.62	0.68	10.21	0	0	0
242	SLV 6	0.75	0.75	10.29	0	0	0
242	SLV 7	0.49	-0.89	8.6	0	0	0
242	SLV 8	0.62	-0.83	8.68	0	0	0
242	SLV 9	-0.57	0.5	11.09	0	0	0
242	SLV 10	-0.44	0.57	11.17	0	0	0
242	SLV 11	-0.7	-1.07	9.48	0	0	0
242	SLV 12	-0.57	-1	9.56	0	0	0
242	SLV 13	-2.05	-0.27	11.53	0	0	0
242	SLV 14	-1.85	-0.17	11.66	0	0	0
242	SLV 15	-2.09	-0.74	11.05	0	0	0
242	SLV 16	-1.89	-0.64	11.17	0	0	0
243	SLU 1	0.01	-0.09	4.64	0	0	0
243	SLU 2	0.01	-0.09	4.64	0	0	0
243	SLU 3	0.01	-0.09	4.75	0	0	0
243	SLU 4	0.01	-0.09	4.75	0	0	0
243	SLU 5	0.01	-0.09	4.71	0	0	0
243	SLU 6	0.01	-0.09	4.82	0	0	0
243	SLU 7	0.01	-0.09	4.82	0	0	0
243	SLU 8	0.01	-0.09	4.78	0	0	0
243	SLU 9	0.01	-0.09	4.78	0	0	0
243	SLU 10	0.01	-0.09	5.19	0	0	0
243	SLU 11	0.01	-0.09	5.3	0	0	0
243	SLU 12	0.01	-0.09	5.3	0	0	0
243	SLU 13	0.01	-0.09	5.26	0	0	0
243	SLU 14	0.01	-0.09	5.37	0	0	0
243	SLU 15	0.01	-0.1	5.37	0	0	0
243	SLU 16	0.01	-0.09	5.33	0	0	0
243	SLU 17	0.01	-0.1	5.33	0	0	0
243	SLU 18	0.01	-0.09	5.43	0	0	0
243	SLU 19	0.01	-0.09	5.43	0	0	0
243	SLU 20	0.01	-0.09	5.5	0	0	0
243	SLU 21	0.01	-0.1	5.5	0	0	0
243	SLU 22	0.01	-0.09	5.14	0	0	0
243	SLU 23	0.02	-0.09	5.14	0	0	0
243	SLU 24	0.01	-0.09	5.26	0	0	0
243	SLU 25	0.02	-0.09	5.25	0	0	0
243	SLU 26	0.02	-0.09	5.21	0	0	0
243	SLU 27	0.01	-0.09	5.33	0	0	0
243	SLU 28	0.02	-0.09	5.32	0	0	0
243	SLU 29	0.01	-0.09	5.29	0	0	0
243	SLU 30	0.02	-0.09	5.28	0	0	0
243	SLU 31	0.02	-0.09	5.69	0	0	0
243	SLU 32	0.01	-0.09	5.8	0	0	0
243	SLU 33	0.02	-0.09	5.8	0	0	0
243	SLU 34	0.02	-0.09	5.76	0	0	0
243	SLU 35	0.01	-0.09	5.88	0	0	0
243	SLU 36	0.02	-0.09	5.87	0	0	0
243	SLU 37	0.01	-0.09	5.84	0	0	0
243	SLU 38	0.01	-0.1	5.83	0	0	0
243	SLU 39	0.01	-0.09	5.93	0	0	0
243	SLU 40	0.01	-0.09	5.93	0	0	0
243	SLU 41	0.01	-0.09	6	0	0	0
243	SLU 42	0.01	-0.09	6	0	0	0
243	SLU 43	0.02	-0.11	5.86	0	0	0
243	SLU 44	0.02	-0.12	5.86	0	0	0
243	SLU 45	0.02	-0.12	5.97	0	0	0
243	SLU 46	0.02	-0.12	5.97	0	0	0
243	SLU 47	0.02	-0.12	5.93	0	0	0
243	SLU 48	0.02	-0.12	6.04	0	0	0
243	SLU 49	0.02	-0.12	6.04	0	0	0
243	SLU 50	0.02	-0.12	6	0	0	0
243	SLU 51	0.02	-0.12	6	0	0	0
243	SLU 52	0.02	-0.12	6.41	0	0	0
243	SLU 53	0.01	-0.12	6.52	0	0	0
243	SLU 54	0.02	-0.12	6.52	0	0	0
243	SLU 55	0.02	-0.12	6.48	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
243	SLU 56	0.01	-0.12	6.59	0	0	0
243	SLU 57	0.02	-0.12	6.59	0	0	0
243	SLU 58	0.01	-0.12	6.55	0	0	0
243	SLU 59	0.02	-0.12	6.55	0	0	0
243	SLU 60	0.01	-0.12	6.65	0	0	0
243	SLU 61	0.02	-0.12	6.65	0	0	0
243	SLU 62	0.01	-0.12	6.72	0	0	0
243	SLU 63	0.02	-0.12	6.72	0	0	0
243	SLU 64	0.02	-0.11	6.37	0	0	0
243	SLU 65	0.02	-0.12	6.36	0	0	0
243	SLU 66	0.02	-0.12	6.48	0	0	0
243	SLU 67	0.02	-0.12	6.47	0	0	0
243	SLU 68	0.02	-0.12	6.43	0	0	0
243	SLU 69	0.02	-0.12	6.55	0	0	0
243	SLU 70	0.02	-0.12	6.54	0	0	0
243	SLU 71	0.02	-0.12	6.51	0	0	0
243	SLU 72	0.02	-0.12	6.5	0	0	0
243	SLU 73	0.02	-0.12	6.91	0	0	0
243	SLU 74	0.02	-0.12	7.03	0	0	0
243	SLU 75	0.02	-0.12	7.02	0	0	0
243	SLU 76	0.02	-0.12	6.98	0	0	0
243	SLU 77	0.02	-0.12	7.1	0	0	0
243	SLU 78	0.02	-0.12	7.09	0	0	0
243	SLU 79	0.02	-0.12	7.06	0	0	0
243	SLU 80	0.02	-0.12	7.05	0	0	0
243	SLU 81	0.02	-0.12	7.15	0	0	0
243	SLU 82	0.02	-0.12	7.15	0	0	0
243	SLU 83	0.02	-0.12	7.22	0	0	0
243	SLU 84	0.02	-0.12	7.22	0	0	0
243	SLE RA 1	0.01	-0.09	4.79	0	0	0
243	SLE RA 2	0.01	-0.09	4.78	0	0	0
243	SLE RA 3	0.01	-0.09	4.86	0	0	0
243	SLE RA 4	0.01	-0.09	4.86	0	0	0
243	SLE RA 5	0.01	-0.09	4.83	0	0	0
243	SLE RA 6	0.01	-0.09	4.91	0	0	0
243	SLE RA 7	0.01	-0.09	4.91	0	0	0
243	SLE RA 8	0.01	-0.09	4.88	0	0	0
243	SLE RA 9	0.01	-0.09	4.88	0	0	0
243	SLE RA 10	0.01	-0.09	5.15	0	0	0
243	SLE RA 11	0.01	-0.09	5.23	0	0	0
243	SLE RA 12	0.01	-0.09	5.23	0	0	0
243	SLE RA 13	0.01	-0.09	5.2	0	0	0
243	SLE RA 14	0.01	-0.09	5.27	0	0	0
243	SLE RA 15	0.01	-0.09	5.27	0	0	0
243	SLE RA 16	0.01	-0.09	5.25	0	0	0
243	SLE RA 17	0.01	-0.09	5.25	0	0	0
243	SLE RA 18	0.01	-0.09	5.31	0	0	0
243	SLE RA 19	0.01	-0.09	5.31	0	0	0
243	SLE RA 20	0.01	-0.09	5.36	0	0	0
243	SLE RA 21	0.01	-0.09	5.36	0	0	0
243	SLE FR 1	0.01	-0.09	4.79	0	0	0
243	SLE FR 2	0.01	-0.09	4.79	0	0	0
243	SLE FR 3	0.01	-0.09	4.81	0	0	0
243	SLE FR 4	0.01	-0.09	4.94	0	0	0
243	SLE FR 5	0.01	-0.09	4.96	0	0	0
243	SLE FR 6	0.01	-0.09	5.05	0	0	0
243	SLE QP 1	0.01	-0.09	4.79	0	0	0
243	SLE QP 2	0.01	-0.09	4.94	0	0	0
243	SLD 1	0.41	0.02	4.63	0	0	0
243	SLD 2	0.46	0.04	4.66	0	0	0
243	SLD 3	0.41	-0.08	4.53	0	0	0
243	SLD 4	0.45	-0.06	4.56	0	0	0
243	SLD 5	0.14	0.09	5.01	0	0	0
243	SLD 6	0.17	0.11	5.03	0	0	0
243	SLD 7	0.11	-0.25	4.65	0	0	0
243	SLD 8	0.14	-0.23	4.67	0	0	0
243	SLD 9	-0.11	0.05	5.22	0	0	0
243	SLD 10	-0.09	0.07	5.24	0	0	0
243	SLD 11	-0.14	-0.29	4.86	0	0	0
243	SLD 12	-0.11	-0.27	4.88	0	0	0
243	SLD 13	-0.42	-0.12	5.33	0	0	0
243	SLD 14	-0.38	-0.09	5.36	0	0	0
243	SLD 15	-0.43	-0.22	5.22	0	0	0
243	SLD 16	-0.39	-0.2	5.25	0	0	0
243	SLV 1	0.95	0.16	4.22	0	0	0
243	SLV 2	1.05	0.21	4.28	0	0	0
243	SLV 3	0.93	-0.07	3.97	0	0	0
243	SLV 4	1.03	-0.02	4.04	0	0	0
243	SLV 5	0.31	0.33	5.08	0	0	0
243	SLV 6	0.37	0.36	5.13	0	0	0
243	SLV 7	0.24	-0.44	4.27	0	0	0
243	SLV 8	0.31	-0.41	4.31	0	0	0
243	SLV 9	-0.28	0.23	5.57	0	0	0
243	SLV 10	-0.22	0.27	5.62	0	0	0
243	SLV 11	-0.35	-0.54	4.76	0	0	0
243	SLV 12	-0.28	-0.5	4.8	0	0	0
243	SLV 13	-1.01	-0.16	5.85	0	0	0
243	SLV 14	-0.91	-0.1	5.91	0	0	0
243	SLV 15	-1.03	-0.39	5.6	0	0	0
243	SLV 16	-0.93	-0.33	5.67	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLU 1	-1.09	0.08	53.45	12.1052	-9.1061	0.2817
245	SLU 2	-1.06	-0.03	53.36	12.0864	-9.0906	0.2538
245	SLU 3	-1.12	0.09	54.76	12.4005	-9.3282	0.2915
245	SLU 4	-1.1	0.03	54.7	12.3893	-9.3189	0.2748
245	SLU 5	-1.08	-0.02	54.19	12.2739	-9.2318	0.2607
245	SLU 6	-1.14	0.1	55.59	12.588	-9.4694	0.2984
245	SLU 7	-1.13	0.03	55.54	12.5768	-9.4601	0.2816
245	SLU 8	-1.13	0.1	55.11	12.4802	-9.3885	0.2955
245	SLU 9	-1.12	0.03	55.06	12.4689	-9.3792	0.2787
245	SLU 10	-1.13	0.05	59.34	13.4363	-10.1051	0.2859
245	SLU 11	-1.19	0.18	60.74	13.7504	-10.3427	0.3236
245	SLU 12	-1.18	0.11	60.69	13.7392	-10.3334	0.3068
245	SLU 13	-1.15	0.06	60.17	13.6238	-10.2463	0.2928
245	SLU 14	-1.21	0.19	61.58	13.9379	-10.4839	0.3305
245	SLU 15	-1.2	0.12	61.52	13.9267	-10.4746	0.3137
245	SLU 16	-1.2	0.18	61.1	13.83	-10.403	0.3275
245	SLU 17	-1.19	0.12	61.04	13.8188	-10.3937	0.3108
245	SLU 18	-1.19	0.2	62	14.0336	-10.5554	0.3276
245	SLU 19	-1.17	0.13	61.94	14.0223	-10.5461	0.3108
245	SLU 20	-1.21	0.21	62.83	14.2211	-10.6966	0.3344
245	SLU 21	-1.19	0.14	62.77	14.2098	-10.6873	0.3177
245	SLU 22	-1.22	0.18	59.45	13.4619	-10.1226	0.3319
245	SLU 23	-1.19	0.07	59.36	13.4431	-10.1071	0.304
245	SLU 24	-1.26	0.19	60.77	13.7572	-10.3447	0.3417
245	SLU 25	-1.24	0.12	60.71	13.746	-10.3354	0.3249
245	SLU 26	-1.21	0.08	60.2	13.6306	-10.2483	0.3109
245	SLU 27	-1.28	0.2	61.6	13.9447	-10.4859	0.3486
245	SLU 28	-1.26	0.13	61.54	13.9335	-10.4766	0.3318
245	SLU 29	-1.27	0.2	61.12	13.8369	-10.405	0.3456
245	SLU 30	-1.25	0.13	61.07	13.8256	-10.3957	0.3289
245	SLU 31	-1.26	0.15	65.35	14.793	-11.1216	0.3361
245	SLU 32	-1.33	0.27	66.75	15.1071	-11.3593	0.3738
245	SLU 33	-1.31	0.21	66.69	15.0958	-11.3499	0.357
245	SLU 34	-1.29	0.16	66.18	14.9805	-11.2628	0.343
245	SLU 35	-1.35	0.28	67.58	15.2946	-11.5005	0.3806
245	SLU 36	-1.33	0.21	67.53	15.2833	-11.4911	0.3639
245	SLU 37	-1.34	0.28	67.1	15.1867	-11.4195	0.3777
245	SLU 38	-1.32	0.21	67.05	15.1755	-11.4102	0.361
245	SLU 39	-1.32	0.3	68	15.3902	-11.5719	0.3777
245	SLU 40	-1.31	0.23	67.95	15.379	-11.5626	0.361
245	SLU 41	-1.35	0.31	68.83	15.5777	-11.7131	0.3846
245	SLU 42	-1.33	0.24	68.78	15.5665	-11.7038	0.3679
245	SLU 43	-1.37	0.07	67.42	15.2716	-11.4895	0.349
245	SLU 44	-1.34	-0.04	67.33	15.2529	-11.4739	0.3212
245	SLU 45	-1.4	0.09	68.73	15.5669	-11.7116	0.3588
245	SLU 46	-1.39	0.02	68.68	15.5557	-11.7022	0.3421
245	SLU 47	-1.36	-0.03	68.17	15.4404	-11.6151	0.328
245	SLU 48	-1.43	0.1	69.57	15.7544	-11.8527	0.3657
245	SLU 49	-1.41	0.03	69.51	15.7432	-11.8434	0.3489
245	SLU 50	-1.42	0.09	69.09	15.6466	-11.7718	0.3628
245	SLU 51	-1.4	0.02	69.04	15.6354	-11.7625	0.346
245	SLU 52	-1.41	0.04	73.31	16.6027	-12.4884	0.3532
245	SLU 53	-1.47	0.17	74.72	16.9168	-12.7261	0.3909
245	SLU 54	-1.46	0.1	74.66	16.9056	-12.7167	0.3742
245	SLU 55	-1.43	0.05	74.15	16.7902	-12.6296	0.3601
245	SLU 56	-1.5	0.18	75.55	17.1043	-12.8673	0.3978
245	SLU 57	-1.48	0.11	75.5	17.0931	-12.8579	0.381
245	SLU 58	-1.49	0.18	75.07	16.9965	-12.7864	0.3949
245	SLU 59	-1.47	0.11	75.02	16.9852	-12.777	0.3781
245	SLU 60	-1.47	0.19	75.97	17.2	-12.9388	0.3949
245	SLU 61	-1.46	0.12	75.92	17.1887	-12.9294	0.3781
245	SLU 62	-1.49	0.2	76.8	17.3875	-13.0799	0.4017
245	SLU 63	-1.48	0.13	76.75	17.3762	-13.0706	0.385
245	SLU 64	-1.5	0.17	73.43	16.6283	-12.506	0.3992
245	SLU 65	-1.48	0.06	73.34	16.6095	-12.4904	0.3713
245	SLU 66	-1.54	0.18	74.74	16.9236	-12.7281	0.409
245	SLU 67	-1.52	0.12	74.69	16.9124	-12.7187	0.3923
245	SLU 68	-1.5	0.07	74.17	16.797	-12.6316	0.3782
245	SLU 69	-1.56	0.19	75.57	17.1111	-12.8693	0.4159
245	SLU 70	-1.54	0.12	75.52	17.0999	-12.8599	0.3991
245	SLU 71	-1.55	0.19	75.1	17.0033	-12.7884	0.413
245	SLU 72	-1.53	0.12	75.04	16.992	-12.779	0.3962
245	SLU 73	-1.55	0.14	79.32	17.9594	-13.5049	0.4034
245	SLU 74	-1.61	0.27	80.72	18.2735	-13.7426	0.4411
245	SLU 75	-1.59	0.2	80.67	18.2622	-13.7332	0.4243
245	SLU 76	-1.57	0.15	80.15	18.1469	-13.6461	0.4103
245	SLU 77	-1.63	0.28	81.56	18.461	-13.8838	0.4479
245	SLU 78	-1.61	0.21	81.5	18.4497	-13.8744	0.4312
245	SLU 79	-1.62	0.27	81.08	18.3531	-13.8029	0.445
245	SLU 80	-1.6	0.2	81.02	18.3419	-13.7935	0.4283
245	SLU 81	-1.61	0.29	81.98	18.5567	-13.9553	0.4451
245	SLU 82	-1.59	0.22	81.92	18.5454	-13.9459	0.4283
245	SLU 83	-1.63	0.3	82.81	18.7442	-14.0965	0.4519
245	SLU 84	-1.61	0.23	82.75	18.7329	-14.0871	0.4352
245	SLE RA 1	-1.13	0.11	55.16	12.4928	-9.3966	0.2961
245	SLE RA 2	-1.11	0.04	55.1	12.4803	-9.3862	0.2775
245	SLE RA 3	-1.15	0.12	56.04	12.6897	-9.5446	0.3026
245	SLE RA 4	-1.14	0.07	56	12.6822	-9.5384	0.2914
245	SLE RA 5	-1.12	0.04	55.66	12.6053	-9.4803	0.282
245	SLE RA 6	-1.16	0.12	56.59	12.8147	-9.6388	0.3072

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLE RA 7	-1.15	0.08	56.56	12.8072	-9.6325	0.296
245	SLE RA 8	-1.16	0.12	56.28	12.7428	-9.5848	0.3052
245	SLE RA 9	-1.15	0.08	56.24	12.7353	-9.5786	0.2941
245	SLE RA 10	-1.16	0.09	59.09	13.3802	-10.0625	0.2989
245	SLE RA 11	-1.2	0.17	60.03	13.5896	-10.221	0.324
245	SLE RA 12	-1.18	0.13	59.99	13.5821	-10.2147	0.3128
245	SLE RA 13	-1.17	0.1	59.65	13.5052	-10.1567	0.3034
245	SLE RA 14	-1.21	0.18	60.58	13.7146	-10.3151	0.3286
245	SLE RA 15	-1.2	0.13	60.55	13.7071	-10.3089	0.3174
245	SLE RA 16	-1.2	0.18	60.26	13.6427	-10.2612	0.3266
245	SLE RA 17	-1.19	0.13	60.23	13.6352	-10.2549	0.3155
245	SLE RA 18	-1.2	0.19	60.86	13.7784	-10.3628	0.3266
245	SLE RA 19	-1.18	0.14	60.83	13.7709	-10.3565	0.3155
245	SLE RA 20	-1.21	0.2	61.42	13.9034	-10.4569	0.3312
245	SLE RA 21	-1.2	0.15	61.38	13.8959	-10.4507	0.32
245	SLE FR 1	-1.13	0.11	55.16	12.4928	-9.3966	0.2961
245	SLE FR 2	-1.12	0.1	55.15	12.4903	-9.3945	0.2924
245	SLE FR 3	-1.13	0.11	55.39	12.5428	-9.4342	0.2979
245	SLE FR 4	-1.14	0.12	56.86	12.876	-9.6843	0.3015
245	SLE FR 5	-1.15	0.14	57.1	12.9285	-9.7241	0.3071
245	SLE FR 6	-1.16	0.15	58.01	13.1356	-9.8797	0.3113
245	SLE QP 1	-1.13	0.11	55.16	12.4928	-9.3966	0.2961
245	SLE QP 2	-1.15	0.13	56.87	12.8785	-9.6864	0.3052
245	SLD 1	2.84	0.88	74.87	16.9372	-12.6704	-0.5371
245	SLD 2	3.29	0.13	74.07	16.7716	-12.5348	-0.7835
245	SLD 3	2.99	-0.82	73.49	16.6518	-12.4392	-0.8758
245	SLD 4	3.44	-1.57	72.69	16.4862	-12.3035	-1.1222
245	SLD 5	-0.26	3.07	64.51	14.5591	-10.957	0.6109
245	SLD 6	0.04	2.57	63.98	14.4492	-10.867	0.4474
245	SLD 7	0.24	-2.59	59.91	13.6077	-10.1862	-0.5179
245	SLD 8	0.54	-3.09	59.38	13.4978	-10.0962	-0.6814
245	SLD 9	-2.84	3.36	54.37	12.2592	-9.2767	1.2919
245	SLD 10	-2.54	2.86	53.84	12.1493	-9.1867	1.1284
245	SLD 11	-2.34	-2.3	49.76	11.3078	-8.5059	0.163
245	SLD 12	-2.04	-2.8	49.23	11.1978	-8.4159	-0.0005
245	SLD 13	-5.74	1.84	41.06	9.2708	-7.0693	1.7326
245	SLD 14	-5.29	1.09	40.26	9.1052	-6.9337	1.4862
245	SLD 15	-5.59	0.14	39.68	8.9854	-6.8381	1.394
245	SLD 16	-5.14	-0.61	38.88	8.8197	-6.7025	1.1476
245	SLV 1	8.19	1.81	98.93	22.3647	-16.6597	-1.6782
245	SLV 2	9.24	0.05	97.07	21.9791	-16.3439	-2.2519
245	SLV 3	8.54	-2.03	95.79	21.7164	-16.1345	-2.4443
245	SLV 4	9.58	-3.79	93.93	21.3308	-15.8188	-3.018
245	SLV 5	0.95	6.78	74.57	16.7754	-12.6304	0.973
245	SLV 6	1.63	5.63	73.36	16.5241	-12.4246	0.5992
245	SLV 7	2.09	-6.04	64.12	14.6144	-10.8799	-1.5807
245	SLV 8	2.78	-7.18	62.91	14.3631	-10.6741	-1.9545
245	SLV 9	-5.07	7.45	50.84	11.3938	-8.6987	2.565
245	SLV 10	-4.39	6.31	49.63	11.1426	-8.493	2.1912
245	SLV 11	-3.93	-5.36	40.39	9.2328	-6.9482	0.0113
245	SLV 12	-3.24	-6.51	39.17	8.9816	-6.7425	-0.3625
245	SLV 13	-11.88	4.06	19.82	4.4262	-3.5541	3.6285
245	SLV 14	-10.83	2.3	17.96	4.0406	-3.2383	3.0548
245	SLV 15	-11.54	0.22	16.68	3.7779	-3.0289	2.8624
245	SLV 16	-10.49	-1.54	14.82	3.3922	-2.7132	2.2887
245	CRTFP Ux+	0	0	0	0	0	0
245	CRTFP Ux-	0	0	0	0	0	0
245	CRTFP Uy+	0	0	0	0	0	0
245	CRTFP Uy-	0	0	0	0	0	0
247	SLU 1	-0.75	0.04	34.6	9.5445	-0.8983	0.2644
247	SLU 2	-0.73	-0.03	34.54	9.5306	-0.8969	0.2557
247	SLU 3	-0.78	0.05	35.45	9.7731	-0.9201	0.2722
247	SLU 4	-0.76	0	35.41	9.7648	-0.9193	0.267
247	SLU 5	-0.75	-0.03	35.08	9.6757	-0.9107	0.2609
247	SLU 6	-0.79	0.05	35.98	9.9182	-0.934	0.2775
247	SLU 7	-0.78	0.01	35.95	9.9098	-0.9331	0.2722
247	SLU 8	-0.78	0.05	35.67	9.8347	-0.926	0.2749
247	SLU 9	-0.77	0.01	35.64	9.8263	-0.9252	0.2697
247	SLU 10	-0.78	0.02	38.4	10.574	-0.9966	0.2739
247	SLU 11	-0.82	0.1	39.3	10.8165	-1.0198	0.2904
247	SLU 12	-0.81	0.06	39.27	10.8081	-1.019	0.2852
247	SLU 13	-0.8	0.03	38.94	10.719	-1.0105	0.2792
247	SLU 14	-0.84	0.11	39.84	10.9615	-1.0337	0.2957
247	SLU 15	-0.83	0.06	39.81	10.9532	-1.0328	0.2905
247	SLU 16	-0.83	0.11	39.53	10.878	-1.0257	0.2931
247	SLU 17	-0.82	0.06	39.5	10.8697	-1.0249	0.2879
247	SLU 18	-0.82	0.12	40.11	11.035	-1.0408	0.2904
247	SLU 19	-0.81	0.07	40.08	11.0267	-1.0399	0.2852
247	SLU 20	-0.84	0.13	40.65	11.1801	-1.0546	0.2957
247	SLU 21	-0.83	0.08	40.62	11.1717	-1.0538	0.2905
247	SLU 22	-0.84	0.11	38.47	10.5945	-0.9981	0.298
247	SLU 23	-0.83	0.03	38.41	10.5806	-0.9967	0.2892
247	SLU 24	-0.87	0.11	39.31	10.8231	-1.0199	0.3058
247	SLU 25	-0.86	0.07	39.28	10.8148	-1.019	0.3005
247	SLU 26	-0.84	0.04	38.95	10.7257	-1.0105	0.2945
247	SLU 27	-0.88	0.12	39.85	10.9682	-1.0338	0.311
247	SLU 28	-0.87	0.07	39.82	10.9598	-1.0329	0.3058
247	SLU 29	-0.87	0.12	39.54	10.8847	-1.0258	0.3085
247	SLU 30	-0.86	0.07	39.51	10.8763	-1.025	0.3032
247	SLU 31	-0.87	0.08	42.27	11.624	-1.0964	0.3075

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLU 32	-0.91	0.17	43.17	11.8665	-1.1196	0.324
247	SLU 33	-0.9	0.12	43.14	11.8581	-1.1188	0.3188
247	SLU 34	-0.89	0.09	42.81	11.769	-1.1102	0.3127
247	SLU 35	-0.93	0.17	43.71	12.0115	-1.1335	0.3292
247	SLU 36	-0.92	0.13	43.67	12.0032	-1.1326	0.324
247	SLU 37	-0.92	0.17	43.4	11.928	-1.1255	0.3267
247	SLU 38	-0.91	0.13	43.37	11.9197	-1.1247	0.3215
247	SLU 39	-0.91	0.18	43.98	12.085	-1.1406	0.324
247	SLU 40	-0.9	0.14	43.95	12.0767	-1.1397	0.3188
247	SLU 41	-0.93	0.19	44.52	12.2301	-1.1544	0.3292
247	SLU 42	-0.92	0.14	44.48	12.2217	-1.1536	0.324
247	SLU 43	-0.95	0.03	43.65	12.0479	-1.1336	0.3322
247	SLU 44	-0.93	-0.04	43.6	12.034	-1.1322	0.3235
247	SLU 45	-0.97	0.04	44.5	12.2765	-1.1554	0.34
247	SLU 46	-0.96	-0.01	44.46	12.2681	-1.1545	0.3348
247	SLU 47	-0.94	-0.04	44.13	12.179	-1.146	0.3288
247	SLU 48	-0.99	0.04	45.04	12.4215	-1.1692	0.3453
247	SLU 49	-0.97	0	45	12.4132	-1.1684	0.3401
247	SLU 50	-0.98	0.04	44.73	12.338	-1.1613	0.3427
247	SLU 51	-0.97	0	44.69	12.3297	-1.1604	0.3375
247	SLU 52	-0.98	0.01	47.46	13.0773	-1.2319	0.3417
247	SLU 53	-1.02	0.09	48.36	13.3198	-1.2551	0.3583
247	SLU 54	-1.01	0.05	48.32	13.3115	-1.2543	0.353
247	SLU 55	-0.99	0.02	47.99	13.2224	-1.2457	0.347
247	SLU 56	-1.03	0.1	48.89	13.4649	-1.269	0.3635
247	SLU 57	-1.02	0.05	48.86	13.4565	-1.2681	0.3583
247	SLU 58	-1.03	0.1	48.59	13.3814	-1.261	0.361
247	SLU 59	-1.01	0.05	48.55	13.373	-1.2602	0.3557
247	SLU 60	-1.02	0.11	49.17	13.5384	-1.2761	0.3583
247	SLU 61	-1.01	0.06	49.13	13.53	-1.2752	0.353
247	SLU 62	-1.03	0.12	49.7	13.6834	-1.2899	0.3635
247	SLU 63	-1.02	0.07	49.67	13.6751	-1.2891	0.3583
247	SLU 64	-1.04	0.1	47.52	13.0979	-1.2334	0.3658
247	SLU 65	-1.02	0.02	47.47	13.084	-1.232	0.3571
247	SLU 66	-1.06	0.1	48.37	13.3265	-1.2552	0.3736
247	SLU 67	-1.05	0.06	48.33	13.3181	-1.2543	0.3684
247	SLU 68	-1.04	0.03	48	13.2291	-1.2458	0.3623
247	SLU 69	-1.08	0.11	48.9	13.4715	-1.269	0.3788
247	SLU 70	-1.06	0.06	48.87	13.4632	-1.2682	0.3736
247	SLU 71	-1.07	0.11	48.6	13.388	-1.2611	0.3763
247	SLU 72	-1.06	0.06	48.56	13.3797	-1.2602	0.3711
247	SLU 73	-1.07	0.07	51.33	14.1273	-1.3317	0.3753
247	SLU 74	-1.11	0.16	52.23	14.3698	-1.3549	0.3918
247	SLU 75	-1.1	0.11	52.19	14.3615	-1.354	0.3866
247	SLU 76	-1.08	0.08	51.86	14.2724	-1.3455	0.3805
247	SLU 77	-1.12	0.16	52.76	14.5149	-1.3688	0.3971
247	SLU 78	-1.11	0.12	52.73	14.5065	-1.3679	0.3918
247	SLU 79	-1.12	0.16	52.45	14.4314	-1.3608	0.3945
247	SLU 80	-1.11	0.12	52.42	14.423	-1.36	0.3893
247	SLU 81	-1.11	0.17	53.04	14.5884	-1.3759	0.3918
247	SLU 82	-1.1	0.13	53	14.58	-1.375	0.3866
247	SLU 83	-1.12	0.18	53.57	14.7334	-1.3897	0.3971
247	SLU 84	-1.11	0.13	53.54	14.7251	-1.3888	0.3918
247	SLE RA 1	-0.78	0.06	35.71	9.8445	-0.9269	0.274
247	SLE RA 2	-0.77	0.01	35.67	9.8353	-0.9259	0.2682
247	SLE RA 3	-0.79	0.06	36.27	9.9969	-0.9414	0.2792
247	SLE RA 4	-0.79	0.03	36.25	9.9914	-0.9408	0.2757
247	SLE RA 5	-0.78	0.01	36.03	9.932	-0.9351	0.2717
247	SLE RA 6	-0.8	0.07	36.63	10.0936	-0.9506	0.2827
247	SLE RA 7	-0.8	0.04	36.6	10.0881	-0.95	0.2792
247	SLE RA 8	-0.8	0.07	36.42	10.038	-0.9453	0.281
247	SLE RA 9	-0.79	0.04	36.4	10.0324	-0.9447	0.2775
247	SLE RA 10	-0.8	0.05	38.24	10.5308	-0.9924	0.2803
247	SLE RA 11	-0.83	0.1	38.84	10.6925	-1.0078	0.2914
247	SLE RA 12	-0.82	0.07	38.82	10.6869	-1.0073	0.2879
247	SLE RA 13	-0.81	0.05	38.6	10.6275	-1.0016	0.2838
247	SLE RA 14	-0.84	0.1	39.2	10.7892	-1.0171	0.2949
247	SLE RA 15	-0.83	0.07	39.18	10.7836	-1.0165	0.2914
247	SLE RA 16	-0.83	0.1	38.99	10.7335	-1.0118	0.2932
247	SLE RA 17	-0.82	0.07	38.97	10.7279	-1.0112	0.2897
247	SLE RA 18	-0.83	0.11	39.38	10.8382	-1.0218	0.2914
247	SLE RA 19	-0.82	0.08	39.36	10.8326	-1.0212	0.2879
247	SLE RA 20	-0.84	0.12	39.74	10.9349	-1.0311	0.2949
247	SLE RA 21	-0.83	0.09	39.72	10.9293	-1.0305	0.2914
247	SLE FR 1	-0.78	0.06	35.71	9.8445	-0.9269	0.274
247	SLE FR 2	-0.78	0.05	35.7	9.8427	-0.9267	0.2728
247	SLE FR 3	-0.78	0.06	35.85	9.8832	-0.9305	0.2754
247	SLE FR 4	-0.79	0.07	36.8	10.1408	-0.9552	0.278
247	SLE FR 5	-0.8	0.08	36.95	10.1813	-0.959	0.2806
247	SLE FR 6	-0.8	0.09	37.54	10.3414	-0.9743	0.2827
247	SLE QP 1	-0.78	0.06	35.71	9.8445	-0.9269	0.274
247	SLE QP 2	-0.79	0.08	36.81	10.1426	-0.9553	0.2792
247	SLD 1	1.99	0.59	48.18	13.2893	-1.2406	-0.6825
247	SLD 2	2.29	0.09	47.68	13.1654	-1.228	-0.8013
247	SLD 3	2.08	-0.56	47.33	13.0842	-1.2194	-0.7407
247	SLD 4	2.38	-1.06	46.84	12.9603	-1.2069	-0.8595
247	SLD 5	-0.15	2.06	41.6	11.4202	-1.0752	0.1006
247	SLD 6	0.05	1.73	41.27	11.338	-1.0669	0.0218
247	SLD 7	0.15	-1.76	38.77	10.7365	-1.0048	-0.0935
247	SLD 8	0.35	-2.09	38.44	10.6543	-0.9965	-0.1723

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLD 9	-1.94	2.24	35.18	9.6309	-0.9142	0.7307
247	SLD 10	-1.74	1.91	34.85	9.5487	-0.9059	0.6519
247	SLD 11	-1.64	-1.57	32.35	8.9472	-0.8438	0.5366
247	SLD 12	-1.44	-1.91	32.02	8.865	-0.8354	0.4578
247	SLD 13	-3.97	1.21	26.78	7.3249	-0.7038	1.4179
247	SLD 14	-3.67	0.71	26.28	7.2011	-0.6913	1.2991
247	SLD 15	-3.88	0.06	25.93	7.1198	-0.6827	1.3597
247	SLD 16	-3.58	-0.44	25.44	6.996	-0.6701	1.2409
247	SLV 1	5.72	1.23	63.39	17.498	-1.6219	-1.9716
247	SLV 2	6.42	0.06	62.23	17.2096	-1.5926	-2.248
247	SLV 3	5.93	-1.36	61.46	17.0316	-1.5739	-2.1039
247	SLV 4	6.63	-2.53	60.3	16.7433	-1.5446	-2.3803
247	SLV 5	0.72	4.56	47.91	13.1072	-1.2333	-0.1468
247	SLV 6	1.18	3.8	47.16	12.9193	-1.2142	-0.3269
247	SLV 7	1.41	-4.08	41.48	11.5527	-1.0732	-0.5878
247	SLV 8	1.87	-4.84	40.73	11.3648	-1.0542	-0.7679
247	SLV 9	-3.46	4.99	32.89	8.9204	-0.8565	1.3263
247	SLV 10	-3	4.23	32.13	8.7325	-0.8374	1.1462
247	SLV 11	-2.77	-3.64	26.46	7.3659	-0.6965	0.8853
247	SLV 12	-2.31	-4.4	25.71	7.178	-0.6774	0.7052
247	SLV 13	-8.22	2.68	13.31	3.542	-0.3661	2.9388
247	SLV 14	-7.51	1.51	12.16	3.2536	-0.3368	2.6623
247	SLV 15	-8.01	0.09	11.39	3.0756	-0.3181	2.8065
247	SLV 16	-7.31	-1.08	10.23	2.7873	-0.2888	2.53
247	CRTFP Ux+	0	0	0	0	0	0
247	CRTFP Ux-	0	0	0	0	0	0
247	CRTFP Uy+	0	0	0	0	0	0
247	CRTFP Uy-	0	0	0	0	0	0
248	SLU 1	-0.89	0.02	37.52	8.9417	0.0945	0.3097
248	SLU 2	-0.86	-0.06	37.46	8.929	0.0943	0.3021
248	SLU 3	-0.91	0.03	38.43	9.1509	0.097	0.3187
248	SLU 4	-0.9	-0.02	38.39	9.1433	0.0969	0.3141
248	SLU 5	-0.88	-0.06	38.04	9.0618	0.0959	0.308
248	SLU 6	-0.93	0.03	39.01	9.2836	0.0986	0.3246
248	SLU 7	-0.92	-0.02	38.97	9.276	0.0985	0.32
248	SLU 8	-0.92	0.03	38.68	9.2073	0.0977	0.3217
248	SLU 9	-0.91	-0.02	38.64	9.1996	0.0976	0.3171
248	SLU 10	-0.92	0	41.62	9.8811	0.1054	0.3217
248	SLU 11	-0.97	0.09	42.59	10.103	0.1082	0.3383
248	SLU 12	-0.96	0.04	42.56	10.0953	0.108	0.3337
248	SLU 13	-0.94	0	42.2	10.0139	0.107	0.3277
248	SLU 14	-0.99	0.09	43.17	10.2357	0.1097	0.3443
248	SLU 15	-0.97	0.04	43.13	10.2281	0.1096	0.3397
248	SLU 16	-0.98	0.09	42.84	10.1593	0.1088	0.3414
248	SLU 17	-0.96	0.04	42.8	10.1517	0.1087	0.3368
248	SLU 18	-0.97	0.11	43.47	10.3019	0.1104	0.3378
248	SLU 19	-0.95	0.06	43.43	10.2942	0.1103	0.3332
248	SLU 20	-0.99	0.11	44.05	10.4346	0.112	0.3438
248	SLU 21	-0.97	0.06	44.01	10.427	0.1119	0.3392
248	SLU 22	-0.99	0.09	41.69	9.9003	0.106	0.347
248	SLU 23	-0.97	0.01	41.63	9.8876	0.1058	0.3394
248	SLU 24	-1.02	0.1	42.6	10.1095	0.1085	0.356
248	SLU 25	-1.01	0.05	42.56	10.1018	0.1084	0.3514
248	SLU 26	-0.99	0.02	42.2	10.0204	0.1074	0.3454
248	SLU 27	-1.04	0.1	43.17	10.2422	0.1101	0.3619
248	SLU 28	-1.02	0.05	43.14	10.2346	0.11	0.3574
248	SLU 29	-1.03	0.1	42.84	10.1658	0.1092	0.359
248	SLU 30	-1.02	0.05	42.81	10.1582	0.109	0.3544
248	SLU 31	-1.03	0.07	45.79	10.8397	0.1169	0.3591
248	SLU 32	-1.08	0.16	46.76	11.0615	0.1196	0.3757
248	SLU 33	-1.06	0.11	46.72	11.0539	0.1195	0.3711
248	SLU 34	-1.05	0.07	46.37	10.9725	0.1185	0.365
248	SLU 35	-1.09	0.16	47.34	11.1943	0.1212	0.3816
248	SLU 36	-1.08	0.11	47.3	11.1867	0.1211	0.377
248	SLU 37	-1.09	0.16	47.01	11.1179	0.1203	0.3787
248	SLU 38	-1.07	0.11	46.97	11.1103	0.1202	0.3741
248	SLU 39	-1.08	0.18	47.63	11.2604	0.1219	0.3751
248	SLU 40	-1.06	0.13	47.6	11.2528	0.1218	0.3706
248	SLU 41	-1.09	0.18	48.21	11.3932	0.1235	0.3811
248	SLU 42	-1.08	0.13	48.18	11.3856	0.1234	0.3765
248	SLU 43	-1.12	0.01	47.35	11.2956	0.1189	0.3898
248	SLU 44	-1.09	-0.08	47.29	11.2829	0.1187	0.3822
248	SLU 45	-1.14	0.01	48.26	11.5047	0.1214	0.3988
248	SLU 46	-1.13	-0.04	48.22	11.4971	0.1213	0.3942
248	SLU 47	-1.11	-0.07	47.87	11.4157	0.1203	0.3882
248	SLU 48	-1.16	0.02	48.83	11.6375	0.123	0.4048
248	SLU 49	-1.15	-0.03	48.8	11.6299	0.1229	0.4002
248	SLU 50	-1.15	0.02	48.5	11.5611	0.1221	0.4018
248	SLU 51	-1.14	-0.03	48.47	11.5535	0.122	0.3972
248	SLU 52	-1.15	-0.02	51.45	12.235	0.1299	0.4019
248	SLU 53	-1.2	0.07	52.42	12.4568	0.1326	0.4185
248	SLU 54	-1.19	0.02	52.38	12.4492	0.1324	0.4139
248	SLU 55	-1.17	-0.01	52.03	12.3677	0.1314	0.4078
248	SLU 56	-1.22	0.08	53	12.5896	0.1342	0.4244
248	SLU 57	-1.2	0.03	52.96	12.582	0.134	0.4198
248	SLU 58	-1.21	0.07	52.67	12.5132	0.1332	0.4215
248	SLU 59	-1.19	0.02	52.63	12.5056	0.1331	0.4169
248	SLU 60	-1.2	0.09	53.3	12.6557	0.1348	0.418
248	SLU 61	-1.18	0.04	53.26	12.6481	0.1347	0.4134
248	SLU 62	-1.21	0.09	53.87	12.7885	0.1364	0.4239

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
248	SLU 63	-1.2	0.04	53.84	12.7809	0.1363	0.4193
248	SLU 64	-1.22	0.08	51.51	12.2542	0.1304	0.4271
248	SLU 65	-1.2	-0.01	51.45	12.2415	0.1302	0.4195
248	SLU 66	-1.25	0.08	52.42	12.4633	0.1329	0.4361
248	SLU 67	-1.24	0.03	52.39	12.4557	0.1328	0.4315
248	SLU 68	-1.22	0	52.03	12.3742	0.1318	0.4255
248	SLU 69	-1.27	0.09	53	12.5961	0.1345	0.4421
248	SLU 70	-1.25	0.04	52.96	12.5885	0.1344	0.4375
248	SLU 71	-1.26	0.09	52.67	12.5197	0.1336	0.4391
248	SLU 72	-1.24	0.04	52.63	12.5121	0.1335	0.4345
248	SLU 73	-1.26	0.05	55.62	13.1936	0.1413	0.4392
248	SLU 74	-1.31	0.14	56.59	13.4154	0.1441	0.4558
248	SLU 75	-1.29	0.09	56.55	13.4078	0.1439	0.4512
248	SLU 76	-1.28	0.06	56.2	13.3263	0.1429	0.4452
248	SLU 77	-1.32	0.15	57.16	13.5482	0.1456	0.4617
248	SLU 78	-1.31	0.1	57.13	13.5406	0.1455	0.4572
248	SLU 79	-1.31	0.15	56.83	13.4718	0.1447	0.4588
248	SLU 80	-1.3	0.1	56.8	13.4642	0.1446	0.4542
248	SLU 81	-1.3	0.16	57.46	13.6143	0.1463	0.4553
248	SLU 82	-1.29	0.11	57.43	13.6067	0.1462	0.4507
248	SLU 83	-1.32	0.16	58.04	13.7471	0.1479	0.4612
248	SLU 84	-1.31	0.11	58	13.7394	0.1478	0.4567
248	SLE RA 1	-0.92	0.04	38.71	9.2156	0.0978	0.3204
248	SLE RA 2	-0.9	-0.01	38.67	9.2071	0.0977	0.3153
248	SLE RA 3	-0.94	0.05	39.32	9.355	0.0995	0.3263
248	SLE RA 4	-0.93	0.01	39.29	9.35	0.0994	0.3233
248	SLE RA 5	-0.91	-0.01	39.06	9.2957	0.0987	0.3193
248	SLE RA 6	-0.95	0.05	39.7	9.4435	0.1005	0.3303
248	SLE RA 7	-0.94	0.02	39.68	9.4385	0.1004	0.3273
248	SLE RA 8	-0.94	0.05	39.48	9.3926	0.0999	0.3283
248	SLE RA 9	-0.93	0.02	39.46	9.3875	0.0998	0.3253
248	SLE RA 10	-0.94	0.03	41.45	9.8419	0.1051	0.3284
248	SLE RA 11	-0.97	0.09	42.09	9.9898	0.1069	0.3395
248	SLE RA 12	-0.96	0.05	42.07	9.9847	0.1068	0.3364
248	SLE RA 13	-0.95	0.03	41.83	9.9304	0.1061	0.3324
248	SLE RA 14	-0.98	0.09	42.48	10.0783	0.1079	0.3434
248	SLE RA 15	-0.98	0.06	42.45	10.0732	0.1079	0.3404
248	SLE RA 16	-0.98	0.09	42.26	10.0274	0.1073	0.3415
248	SLE RA 17	-0.97	0.06	42.23	10.0223	0.1072	0.3384
248	SLE RA 18	-0.97	0.1	42.68	10.1224	0.1084	0.3391
248	SLE RA 19	-0.96	0.07	42.65	10.1173	0.1083	0.3361
248	SLE RA 20	-0.98	0.1	43.06	10.2109	0.1095	0.3431
248	SLE RA 21	-0.97	0.07	43.04	10.2058	0.1094	0.34
248	SLE FR 1	-0.92	0.04	38.71	9.2156	0.0978	0.3204
248	SLE FR 2	-0.91	0.03	38.7	9.2139	0.0978	0.3194
248	SLE FR 3	-0.92	0.04	38.86	9.251	0.0982	0.322
248	SLE FR 4	-0.93	0.05	39.89	9.4859	0.1009	0.325
248	SLE FR 5	-0.94	0.06	40.05	9.523	0.1014	0.3276
248	SLE FR 6	-0.94	0.07	40.69	9.669	0.1031	0.3297
248	SLE QP 1	-0.92	0.04	38.71	9.2156	0.0978	0.3204
248	SLE QP 2	-0.93	0.06	39.9	9.4876	0.101	0.326
248	SLD 1	2.33	0.64	51.76	12.3487	0.1479	-0.8183
248	SLD 2	2.69	0.09	51.24	12.2359	0.146	-0.9407
248	SLD 3	2.44	-0.63	50.88	12.1701	0.144	-0.8527
248	SLD 4	2.79	-1.17	50.36	12.0573	0.1421	-0.975
248	SLD 5	-0.18	2.25	44.88	10.6374	0.1212	0.0571
248	SLD 6	0.06	1.89	44.54	10.5625	0.12	-0.0241
248	SLD 7	0.17	-1.97	41.96	10.042	0.1084	-0.0575
248	SLD 8	0.41	-2.33	41.61	9.9671	0.1071	-0.1387
248	SLD 9	-2.27	2.45	38.19	9.0082	0.0948	0.7907
248	SLD 10	-2.04	2.09	37.84	8.9333	0.0936	0.7095
248	SLD 11	-1.93	-1.77	35.26	8.4128	0.0819	0.6761
248	SLD 12	-1.69	-2.13	34.92	8.3379	0.0807	0.5949
248	SLD 13	-4.66	1.29	29.44	6.918	0.0598	1.627
248	SLD 14	-4.31	0.75	28.92	6.8052	0.0579	1.5047
248	SLD 15	-4.55	0.02	28.56	6.7394	0.0559	1.5926
248	SLD 16	-4.2	-0.52	28.04	6.6266	0.0541	1.4703
248	SLV 1	6.71	1.35	67.62	16.1761	0.2106	-2.3503
248	SLV 2	7.53	0.09	66.4	15.9134	0.2062	-2.6352
248	SLV 3	6.95	-1.51	65.62	15.769	0.2018	-2.4295
248	SLV 4	7.77	-2.77	64.4	15.5063	0.1975	-2.7143
248	SLV 5	0.85	5.02	51.45	12.1578	0.1479	-0.3068
248	SLV 6	1.39	4.2	50.66	11.9867	0.1451	-0.4924
248	SLV 7	1.65	-4.54	44.81	10.8008	0.1187	-0.5706
248	SLV 8	2.18	-5.36	44.01	10.6296	0.1159	-0.7562
248	SLV 9	-4.05	5.48	35.79	8.3456	0.0861	1.4082
248	SLV 10	-3.52	4.66	34.99	8.1745	0.0832	1.2226
248	SLV 11	-3.26	-4.08	29.14	6.9886	0.0569	1.1444
248	SLV 12	-2.72	-4.9	28.35	6.8175	0.054	0.9588
248	SLV 13	-9.64	2.89	15.4	3.4689	0.0045	3.3663
248	SLV 14	-8.81	1.63	14.18	3.2063	0.0001	3.0815
248	SLV 15	-9.4	0.02	13.4	3.0618	-0.0043	3.2872
248	SLV 16	-8.58	-1.24	12.18	2.7992	-0.0087	3.0023
248	CRTFP Ux+	0	0	0	0	0	0
248	CRTFP Ux-	0	0	0	0	0	0
248	CRTFP Uy+	0	0	0	0	0	0
248	CRTFP Uy-	0	0	0	0	0	0
249	SLU 1	-0.89	0	34.77	6.9984	0.0773	0.3113
249	SLU 2	-0.87	-0.08	34.72	6.9889	0.0772	0.3036
249	SLU 3	-0.92	0	35.61	7.1567	0.0794	0.3202

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLU 4	-0.9	-0.04	35.58	7.151	0.0793	0.3157
249	SLU 5	-0.89	-0.08	35.25	7.0894	0.0785	0.3096
249	SLU 6	-0.93	0.01	36.14	7.2572	0.0807	0.3262
249	SLU 7	-0.92	-0.04	36.11	7.2515	0.0806	0.3217
249	SLU 8	-0.93	0.01	35.84	7.1995	0.0799	0.3233
249	SLU 9	-0.91	-0.04	35.8	7.1938	0.0798	0.3187
249	SLU 10	-0.93	-0.03	38.56	7.7068	0.0862	0.3235
249	SLU 11	-0.97	0.05	39.45	7.8746	0.0885	0.3401
249	SLU 12	-0.96	0.01	39.42	7.8689	0.0884	0.3355
249	SLU 13	-0.94	-0.02	39.09	7.8073	0.0875	0.3295
249	SLU 14	-0.99	0.06	39.98	7.9751	0.0898	0.3461
249	SLU 15	-0.98	0.01	39.95	7.9694	0.0897	0.3415
249	SLU 16	-0.98	0.06	39.68	7.9173	0.089	0.3431
249	SLU 17	-0.97	0.01	39.65	7.9116	0.0889	0.3385
249	SLU 18	-0.97	0.07	40.26	8.0239	0.0903	0.3396
249	SLU 19	-0.96	0.03	40.23	8.0182	0.0902	0.3351
249	SLU 20	-0.99	0.08	40.79	8.1245	0.0916	0.3456
249	SLU 21	-0.98	0.03	40.76	8.1188	0.0915	0.341
249	SLU 22	-1	0.06	38.61	7.7214	0.0867	0.3488
249	SLU 23	-0.98	-0.02	38.55	7.7119	0.0866	0.3411
249	SLU 24	-1.03	0.07	39.44	7.8797	0.0888	0.3578
249	SLU 25	-1.01	0.02	39.41	7.874	0.0887	0.3532
249	SLU 26	-0.99	-0.01	39.08	7.8124	0.0879	0.3471
249	SLU 27	-1.04	0.07	39.97	7.9802	0.0901	0.3638
249	SLU 28	-1.03	0.02	39.94	7.9745	0.09	0.3592
249	SLU 29	-1.03	0.07	39.67	7.9225	0.0893	0.3608
249	SLU 30	-1.02	0.02	39.64	7.9168	0.0892	0.3562
249	SLU 31	-1.03	0.04	42.39	8.4298	0.0956	0.361
249	SLU 32	-1.08	0.12	43.28	8.5975	0.0979	0.3776
249	SLU 33	-1.07	0.07	43.25	8.5918	0.0978	0.373
249	SLU 34	-1.05	0.04	42.92	8.5303	0.0969	0.367
249	SLU 35	-1.1	0.12	43.81	8.6981	0.0992	0.3836
249	SLU 36	-1.09	0.08	43.78	8.6924	0.0991	0.379
249	SLU 37	-1.09	0.12	43.51	8.6403	0.0984	0.3806
249	SLU 38	-1.08	0.08	43.48	8.6346	0.0983	0.3761
249	SLU 39	-1.08	0.14	44.09	8.7469	0.0997	0.3772
249	SLU 40	-1.07	0.09	44.06	8.7412	0.0996	0.3726
249	SLU 41	-1.1	0.14	44.62	8.8475	0.101	0.3832
249	SLU 42	-1.08	0.09	44.59	8.8418	0.1009	0.3786
249	SLU 43	-1.12	-0.03	43.89	8.8501	0.0973	0.3918
249	SLU 44	-1.1	-0.1	43.84	8.8406	0.0971	0.3841
249	SLU 45	-1.15	-0.02	44.73	9.0083	0.0994	0.4008
249	SLU 46	-1.13	-0.07	44.69	9.0026	0.0993	0.3962
249	SLU 47	-1.12	-0.1	44.37	8.9411	0.0984	0.3901
249	SLU 48	-1.17	-0.02	45.26	9.1089	0.1007	0.4068
249	SLU 49	-1.15	-0.06	45.23	9.1032	0.1006	0.4022
249	SLU 50	-1.16	-0.02	44.96	9.0511	0.0999	0.4038
249	SLU 51	-1.14	-0.06	44.92	9.0454	0.0998	0.3992
249	SLU 52	-1.16	-0.05	47.68	9.5584	0.1062	0.404
249	SLU 53	-1.21	0.03	48.57	9.7262	0.1084	0.4206
249	SLU 54	-1.19	-0.01	48.54	9.7205	0.1083	0.416
249	SLU 55	-1.17	-0.05	48.21	9.6589	0.1075	0.41
249	SLU 56	-1.22	0.04	49.1	9.8267	0.1097	0.4266
249	SLU 57	-1.21	-0.01	49.07	9.821	0.1096	0.422
249	SLU 58	-1.21	0.04	48.8	9.769	0.109	0.4236
249	SLU 59	-1.2	-0.01	48.76	9.7633	0.1089	0.4191
249	SLU 60	-1.2	0.05	49.38	9.8756	0.1103	0.4202
249	SLU 61	-1.19	0	49.35	9.8699	0.1102	0.4156
249	SLU 62	-1.22	0.05	49.91	9.9761	0.1116	0.4262
249	SLU 63	-1.21	0.01	49.88	9.9704	0.1115	0.4216
249	SLU 64	-1.23	0.04	47.72	9.5731	0.1067	0.4293
249	SLU 65	-1.21	-0.04	47.67	9.5636	0.1066	0.4217
249	SLU 66	-1.26	0.04	48.56	9.7313	0.1088	0.4383
249	SLU 67	-1.24	0	48.53	9.7256	0.1087	0.4337
249	SLU 68	-1.22	-0.03	48.2	9.6641	0.1079	0.4277
249	SLU 69	-1.27	0.05	49.09	9.8319	0.1101	0.4443
249	SLU 70	-1.26	0	49.06	9.8261	0.11	0.4397
249	SLU 71	-1.26	0.05	48.79	9.7741	0.1093	0.4413
249	SLU 72	-1.25	0	48.75	9.7684	0.1092	0.4367
249	SLU 73	-1.26	0.01	51.51	10.2814	0.1156	0.4415
249	SLU 74	-1.31	0.1	52.4	10.4492	0.1178	0.4581
249	SLU 75	-1.3	0.05	52.37	10.4435	0.1177	0.4535
249	SLU 76	-1.28	0.02	52.04	10.3819	0.1169	0.4475
249	SLU 77	-1.33	0.1	52.93	10.5497	0.1191	0.4641
249	SLU 78	-1.32	0.05	52.9	10.544	0.119	0.4595
249	SLU 79	-1.32	0.1	52.63	10.492	0.1184	0.4612
249	SLU 80	-1.31	0.05	52.6	10.4863	0.1183	0.4566
249	SLU 81	-1.31	0.11	53.21	10.5986	0.1197	0.4577
249	SLU 82	-1.3	0.07	53.18	10.5929	0.1196	0.4531
249	SLU 83	-1.33	0.12	53.74	10.6991	0.121	0.4637
249	SLU 84	-1.32	0.07	53.71	10.6934	0.1209	0.4591
249	SLE RA 1	-0.92	0.02	35.87	7.205	0.08	0.322
249	SLE RA 2	-0.91	-0.04	35.83	7.1987	0.0799	0.3169
249	SLE RA 3	-0.94	0.02	36.43	7.3105	0.0814	0.328
249	SLE RA 4	-0.93	-0.01	36.4	7.3067	0.0813	0.3249
249	SLE RA 5	-0.92	-0.03	36.19	7.2657	0.0808	0.3209
249	SLE RA 6	-0.95	0.02	36.78	7.3775	0.0823	0.332
249	SLE RA 7	-0.94	-0.01	36.76	7.3737	0.0822	0.3289
249	SLE RA 8	-0.95	0.02	36.58	7.339	0.0818	0.33
249	SLE RA 9	-0.94	-0.01	36.56	7.3352	0.0817	0.3269

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLE RA 10	-0.95	0	38.39	7.6772	0.086	0.3301
249	SLE RA 11	-0.98	0.05	38.99	7.7891	0.0874	0.3412
249	SLE RA 12	-0.97	0.02	38.96	7.7853	0.0874	0.3382
249	SLE RA 13	-0.96	0	38.75	7.7442	0.0868	0.3341
249	SLE RA 14	-0.99	0.06	39.34	7.8561	0.0883	0.3452
249	SLE RA 15	-0.98	0.03	39.32	7.8523	0.0882	0.3421
249	SLE RA 16	-0.98	0.06	39.14	7.8176	0.0878	0.3432
249	SLE RA 17	-0.97	0.03	39.12	7.8138	0.0877	0.3402
249	SLE RA 18	-0.98	0.07	39.53	7.8887	0.0887	0.3409
249	SLE RA 19	-0.97	0.03	39.5	7.8849	0.0886	0.3378
249	SLE RA 20	-0.99	0.07	39.88	7.9557	0.0895	0.3449
249	SLE RA 21	-0.98	0.04	39.86	7.9519	0.0895	0.3418
249	SLE FR 1	-0.92	0.02	35.87	7.205	0.08	0.322
249	SLE FR 2	-0.92	0.01	35.86	7.2037	0.08	0.321
249	SLE FR 3	-0.93	0.02	36.01	7.2318	0.0804	0.3236
249	SLE FR 4	-0.94	0.02	36.96	7.4088	0.0826	0.3266
249	SLE FR 5	-0.94	0.03	37.11	7.4369	0.083	0.3293
249	SLE FR 6	-0.95	0.04	37.7	7.5468	0.0843	0.3314
249	SLE QP 1	-0.92	0.02	35.87	7.205	0.08	0.322
249	SLE QP 2	-0.94	0.03	36.97	7.4101	0.0826	0.3277
249	SLD 1	2.33	0.57	47.43	9.5444	0.1234	-0.8189
249	SLD 2	2.69	0.07	46.96	9.4607	0.1218	-0.9414
249	SLD 3	2.44	-0.62	46.66	9.4124	0.1201	-0.8531
249	SLD 4	2.79	-1.11	46.19	9.3286	0.1185	-0.9755
249	SLD 5	-0.18	2.08	41.35	8.2659	0.1002	0.0577
249	SLD 6	0.06	1.76	41.04	8.2103	0.0991	-0.0236
249	SLD 7	0.17	-1.88	38.79	7.8257	0.0891	-0.056
249	SLD 8	0.4	-2.2	38.48	7.7701	0.0881	-0.1373
249	SLD 9	-2.28	2.26	35.45	7.0501	0.0772	0.7926
249	SLD 10	-2.04	1.94	35.14	6.9945	0.0761	0.7113
249	SLD 11	-1.93	-1.69	32.89	6.6099	0.0661	0.6789
249	SLD 12	-1.7	-2.02	32.58	6.5543	0.0651	0.5977
249	SLD 13	-4.67	1.17	27.74	5.4916	0.0467	1.6309
249	SLD 14	-4.31	0.68	27.27	5.4078	0.0451	1.5084
249	SLD 15	-4.57	-0.01	26.97	5.3595	0.0434	1.5968
249	SLD 16	-4.21	-0.51	26.5	5.2758	0.0418	1.4743
249	SLV 1	6.72	1.24	61.41	12.4007	0.178	-2.354
249	SLV 2	7.54	0.09	60.33	12.2056	0.1743	-2.6392
249	SLV 3	6.95	-1.45	59.67	12.0976	0.1705	-2.4326
249	SLV 4	7.78	-2.59	58.58	11.9026	0.1667	-2.7177
249	SLV 5	0.85	4.67	47.14	9.4012	0.1233	-0.3076
249	SLV 6	1.39	3.92	46.43	9.2741	0.1208	-0.4934
249	SLV 7	1.64	-4.28	41.32	8.391	0.0983	-0.5694
249	SLV 8	2.18	-5.03	40.61	8.2639	0.0958	-0.7552
249	SLV 9	-4.06	5.09	33.32	6.5563	0.0694	1.4105
249	SLV 10	-3.52	4.34	32.61	6.4292	0.067	1.2247
249	SLV 11	-3.27	-3.86	27.5	5.5461	0.0444	1.1487
249	SLV 12	-2.73	-4.61	26.79	5.419	0.0419	0.9629
249	SLV 13	-9.65	2.66	15.35	2.9176	-0.0015	3.3731
249	SLV 14	-8.83	1.51	14.26	2.7226	-0.0053	3.0879
249	SLV 15	-9.42	-0.03	13.61	2.6146	-0.009	3.2945
249	SLV 16	-8.59	-1.18	12.52	2.4195	-0.0128	3.0094
249	CRTFP Ux+	0	0	0	0	0	0
249	CRTFP Ux-	0	0	0	0	0	0
249	CRTFP Uy+	0	0	0	0	0	0
249	CRTFP Uy-	0	0	0	0	0	0
250	SLU 1	-0.89	-0.03	32.59	5.5019	0.0597	0.3124
250	SLU 2	-0.87	-0.1	32.54	5.4949	0.0595	0.3047
250	SLU 3	-0.92	-0.02	33.36	5.621	0.0612	0.3214
250	SLU 4	-0.91	-0.07	33.33	5.6168	0.0612	0.3168
250	SLU 5	-0.89	-0.09	33.03	5.5706	0.0605	0.3108
250	SLU 6	-0.94	-0.02	33.86	5.6968	0.0622	0.3274
250	SLU 7	-0.92	-0.06	33.83	5.6926	0.0622	0.3228
250	SLU 8	-0.93	-0.02	33.58	5.6534	0.0617	0.3244
250	SLU 9	-0.92	-0.06	33.55	5.6492	0.0616	0.3198
250	SLU 10	-0.93	-0.05	36.12	6.0327	0.0664	0.3248
250	SLU 11	-0.98	0.02	36.95	6.1589	0.0681	0.3414
250	SLU 12	-0.96	-0.02	36.92	6.1547	0.0681	0.3368
250	SLU 13	-0.95	-0.05	36.62	6.1085	0.0674	0.3308
250	SLU 14	-1	0.03	37.44	6.2346	0.0691	0.3474
250	SLU 15	-0.98	-0.02	37.42	6.2304	0.0691	0.3428
250	SLU 16	-0.99	0.03	37.16	6.1912	0.0686	0.3444
250	SLU 17	-0.97	-0.02	37.13	6.187	0.0685	0.3398
250	SLU 18	-0.98	0.04	37.71	6.2702	0.0695	0.341
250	SLU 19	-0.96	0	37.68	6.266	0.0694	0.3364
250	SLU 20	-0.99	0.04	38.2	6.346	0.0705	0.347
250	SLU 21	-0.98	0	38.17	6.3418	0.0704	0.3424
250	SLU 22	-1	0.03	36.15	6.0435	0.0669	0.3501
250	SLU 23	-0.98	-0.04	36.1	6.0365	0.0668	0.3424
250	SLU 24	-1.03	0.04	36.93	6.1626	0.0685	0.3591
250	SLU 25	-1.02	-0.01	36.9	6.1584	0.0684	0.3545
250	SLU 26	-1	-0.04	36.6	6.1122	0.0678	0.3484
250	SLU 27	-1.05	0.04	37.42	6.2384	0.0695	0.3651
250	SLU 28	-1.03	0	37.4	6.2342	0.0694	0.3605
250	SLU 29	-1.04	0.04	37.14	6.195	0.0689	0.3621
250	SLU 30	-1.02	0	37.11	6.1908	0.0688	0.3575
250	SLU 31	-1.04	0.01	39.69	6.5743	0.0737	0.3625
250	SLU 32	-1.09	0.08	40.52	6.7005	0.0754	0.3791
250	SLU 33	-1.07	0.04	40.49	6.6963	0.0753	0.3745
250	SLU 34	-1.06	0.01	40.18	6.6501	0.0747	0.3685

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	SLU 35	-1.1	0.09	41.01	6.7762	0.0764	0.3851
250	SLU 36	-1.09	0.04	40.98	6.772	0.0763	0.3805
250	SLU 37	-1.1	0.09	40.73	6.7328	0.0758	0.3821
250	SLU 38	-1.08	0.04	40.7	6.7286	0.0757	0.3775
250	SLU 39	-1.09	0.1	41.28	6.8119	0.0768	0.3787
250	SLU 40	-1.07	0.06	41.25	6.8076	0.0767	0.3741
250	SLU 41	-1.1	0.1	41.77	6.8876	0.0778	0.3847
250	SLU 42	-1.09	0.06	41.74	6.8834	0.0777	0.3801
250	SLU 43	-1.13	-0.06	41.14	6.9668	0.0751	0.3932
250	SLU 44	-1.1	-0.13	41.09	6.9598	0.0749	0.3855
250	SLU 45	-1.15	-0.05	41.92	7.0859	0.0766	0.4022
250	SLU 46	-1.14	-0.09	41.89	7.0817	0.0766	0.3976
250	SLU 47	-1.12	-0.12	41.59	7.0355	0.0759	0.3916
250	SLU 48	-1.17	-0.05	42.41	7.1616	0.0777	0.4082
250	SLU 49	-1.16	-0.09	42.38	7.1574	0.0776	0.4036
250	SLU 50	-1.16	-0.05	42.13	7.1182	0.0771	0.4052
250	SLU 51	-1.15	-0.09	42.1	7.114	0.077	0.4006
250	SLU 52	-1.16	-0.08	44.68	7.4976	0.0818	0.4056
250	SLU 53	-1.21	-0.01	45.5	7.6237	0.0836	0.4222
250	SLU 54	-1.2	-0.05	45.47	7.6195	0.0835	0.4176
250	SLU 55	-1.18	-0.08	45.17	7.5733	0.0828	0.4116
250	SLU 56	-1.23	0	46	7.6995	0.0846	0.4282
250	SLU 57	-1.21	-0.04	45.97	7.6953	0.0845	0.4236
250	SLU 58	-1.22	0	45.72	7.6561	0.084	0.4252
250	SLU 59	-1.2	-0.05	45.69	7.6519	0.0839	0.4206
250	SLU 60	-1.21	0.01	46.26	7.7351	0.0849	0.4218
250	SLU 61	-1.2	-0.03	46.23	7.7309	0.0848	0.4172
250	SLU 62	-1.23	0.01	46.76	7.8108	0.0859	0.4278
250	SLU 63	-1.21	-0.03	46.73	7.8066	0.0858	0.4232
250	SLU 64	-1.23	0	44.71	7.5084	0.0823	0.4309
250	SLU 65	-1.21	-0.07	44.66	7.5014	0.0822	0.4232
250	SLU 66	-1.26	0.01	45.48	7.6275	0.0839	0.4399
250	SLU 67	-1.25	-0.04	45.45	7.6233	0.0838	0.4353
250	SLU 68	-1.23	-0.06	45.15	7.5771	0.0832	0.4292
250	SLU 69	-1.28	0.01	45.98	7.7032	0.0849	0.4459
250	SLU 70	-1.26	-0.03	45.95	7.699	0.0848	0.4413
250	SLU 71	-1.27	0.01	45.7	7.6599	0.0843	0.4429
250	SLU 72	-1.26	-0.03	45.67	7.6556	0.0842	0.4383
250	SLU 73	-1.27	-0.02	48.24	8.0392	0.0891	0.4432
250	SLU 74	-1.32	0.05	49.07	8.1654	0.0908	0.4599
250	SLU 75	-1.3	0.01	49.04	8.1611	0.0907	0.4553
250	SLU 76	-1.29	-0.02	48.74	8.1149	0.0901	0.4493
250	SLU 77	-1.33	0.06	49.56	8.2411	0.0918	0.4659
250	SLU 78	-1.32	0.01	49.53	8.2369	0.0917	0.4613
250	SLU 79	-1.33	0.06	49.28	8.1977	0.0912	0.4629
250	SLU 80	-1.31	0.01	49.25	8.1935	0.0911	0.4583
250	SLU 81	-1.32	0.07	49.83	8.2767	0.0922	0.4595
250	SLU 82	-1.3	0.03	49.8	8.2725	0.0921	0.4549
250	SLU 83	-1.33	0.07	50.32	8.3525	0.0932	0.4655
250	SLU 84	-1.32	0.03	50.29	8.3482	0.0931	0.4609
250	SLE RA 1	-0.93	-0.01	33.61	5.6567	0.0617	0.3232
250	SLE RA 2	-0.91	-0.06	33.57	5.652	0.0616	0.3181
250	SLE RA 3	-0.94	-0.01	34.12	5.7361	0.0628	0.3292
250	SLE RA 4	-0.93	-0.04	34.1	5.7333	0.0627	0.3261
250	SLE RA 5	-0.92	-0.06	33.9	5.7025	0.0623	0.3221
250	SLE RA 6	-0.95	-0.01	34.45	5.7866	0.0635	0.3332
250	SLE RA 7	-0.95	-0.03	34.43	5.7838	0.0634	0.3301
250	SLE RA 8	-0.95	-0.01	34.27	5.7576	0.0631	0.3312
250	SLE RA 9	-0.94	-0.03	34.25	5.7548	0.063	0.3281
250	SLE RA 10	-0.95	-0.03	35.96	6.0105	0.0662	0.3314
250	SLE RA 11	-0.98	0.02	36.51	6.0946	0.0674	0.3425
250	SLE RA 12	-0.97	-0.01	36.49	6.0918	0.0673	0.3394
250	SLE RA 13	-0.96	-0.02	36.29	6.061	0.0669	0.3354
250	SLE RA 14	-0.99	0.03	36.84	6.1451	0.0681	0.3465
250	SLE RA 15	-0.98	0	36.82	6.1423	0.068	0.3434
250	SLE RA 16	-0.99	0.03	36.66	6.1162	0.0677	0.3445
250	SLE RA 17	-0.98	0	36.64	6.1134	0.0676	0.3415
250	SLE RA 18	-0.98	0.03	37.02	6.1689	0.0683	0.3422
250	SLE RA 19	-0.97	0.01	37	6.1661	0.0682	0.3392
250	SLE RA 20	-0.99	0.04	37.35	6.2194	0.069	0.3462
250	SLE RA 21	-0.98	0.01	37.33	6.2166	0.0689	0.3432
250	SLE FR 1	-0.93	-0.01	33.61	5.6567	0.0617	0.3232
250	SLE FR 2	-0.92	-0.02	33.6	5.6557	0.0617	0.3221
250	SLE FR 3	-0.93	-0.01	33.74	5.6769	0.062	0.3248
250	SLE FR 4	-0.94	-0.01	34.62	5.8094	0.0637	0.3279
250	SLE FR 5	-0.95	0	34.76	5.8305	0.064	0.3305
250	SLE FR 6	-0.95	0.01	35.31	5.9128	0.065	0.3327
250	SLE QP 1	-0.93	-0.01	33.61	5.6567	0.0617	0.3232
250	SLE QP 2	-0.94	0	34.63	5.8103	0.0637	0.3289
250	SLD 1	2.34	0.5	43.89	7.3734	0.0983	-0.82
250	SLD 2	2.69	0.05	43.47	7.3126	0.097	-0.9427
250	SLD 3	2.44	-0.62	43.21	7.2617	0.0957	-0.854
250	SLD 4	2.79	-1.07	42.79	7.2009	0.0943	-0.9766
250	SLD 5	-0.18	1.92	38.51	6.4597	0.0784	0.058
250	SLD 6	0.06	1.62	38.23	6.4194	0.0775	-0.0234
250	SLD 7	0.16	-1.79	36.25	6.0874	0.0695	-0.0552
250	SLD 8	0.4	-2.09	35.97	6.047	0.0686	-0.1366
250	SLD 9	-2.28	2.09	33.29	5.5736	0.0588	0.7943
250	SLD 10	-2.05	1.79	33.01	5.5333	0.0579	0.7129
250	SLD 11	-1.94	-1.61	31.03	5.2012	0.0499	0.6812

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	SLD 12	-1.71	-1.91	30.75	5.1609	0.049	0.5998
250	SLD 13	-4.68	1.07	26.47	4.4197	0.0331	1.6344
250	SLD 14	-4.32	0.62	26.05	4.3589	0.0317	1.5117
250	SLD 15	-4.57	-0.04	25.79	4.308	0.0304	1.6004
250	SLD 16	-4.22	-0.49	25.37	4.2472	0.0291	1.4778
250	SLV 1	6.73	1.11	56.27	9.4661	0.1447	-2.3581
250	SLV 2	7.55	0.06	55.29	9.3246	0.1415	-2.6437
250	SLV 3	6.96	-1.41	54.73	9.2071	0.1386	-2.4363
250	SLV 4	7.79	-2.45	53.75	9.0656	0.1354	-2.7219
250	SLV 5	0.86	4.33	43.63	7.3248	0.0978	-0.3084
250	SLV 6	1.39	3.65	43	7.2325	0.0957	-0.4945
250	SLV 7	1.64	-4.05	38.49	6.4614	0.0775	-0.5691
250	SLV 8	2.18	-4.73	37.85	6.3692	0.0754	-0.7552
250	SLV 9	-4.06	4.74	31.41	5.2514	0.052	1.4129
250	SLV 10	-3.52	4.06	30.77	5.1592	0.0499	1.2268
250	SLV 11	-3.28	-3.65	26.26	4.3881	0.0317	1.1523
250	SLV 12	-2.74	-4.33	25.63	4.2959	0.0296	0.9662
250	SLV 13	-9.67	2.46	15.51	2.5551	-0.008	3.3797
250	SLV 14	-8.85	1.41	14.53	2.4136	-0.0112	3.0941
250	SLV 15	-9.43	-0.06	13.97	2.2961	-0.0141	3.3015
250	SLV 16	-8.61	-1.1	12.99	2.1546	-0.0173	3.0159
250	CRTFP Ux+	0	0	0	0	0	0
250	CRTFP Ux-	0	0	0	0	0	0
250	CRTFP Uy+	0	0	0	0	0	0
250	CRTFP Uy-	0	0	0	0	0	0
251	SLU 1	-0.9	-0.05	30.96	4.4351	0.0424	0.313
251	SLU 2	-0.87	-0.12	30.91	4.4299	0.0423	0.3053
251	SLU 3	-0.92	-0.05	31.69	4.5263	0.0435	0.322
251	SLU 4	-0.91	-0.09	31.67	4.5232	0.0435	0.3174
251	SLU 5	-0.89	-0.11	31.38	4.4879	0.043	0.3114
251	SLU 6	-0.94	-0.05	32.16	4.5844	0.0442	0.328
251	SLU 7	-0.93	-0.09	32.13	4.5812	0.0442	0.3234
251	SLU 8	-0.93	-0.05	31.89	4.5512	0.0438	0.325
251	SLU 9	-0.92	-0.09	31.87	4.5481	0.0437	0.3204
251	SLU 10	-0.93	-0.08	34.31	4.8399	0.0471	0.3255
251	SLU 11	-0.98	-0.01	35.09	4.9364	0.0483	0.3421
251	SLU 12	-0.97	-0.05	35.06	4.9333	0.0482	0.3375
251	SLU 13	-0.95	-0.07	34.78	4.898	0.0478	0.3315
251	SLU 14	-1	-0.01	35.56	4.9944	0.049	0.3481
251	SLU 15	-0.98	-0.05	35.53	4.9913	0.049	0.3435
251	SLU 16	-0.99	-0.01	35.29	4.9613	0.0486	0.3452
251	SLU 17	-0.98	-0.05	35.27	4.9582	0.0485	0.3406
251	SLU 18	-0.98	0.01	35.81	5.0209	0.0492	0.3418
251	SLU 19	-0.97	-0.03	35.79	5.0178	0.0492	0.3372
251	SLU 20	-1	0.01	36.28	5.079	0.0499	0.3478
251	SLU 21	-0.98	-0.03	36.26	5.0758	0.0499	0.3432
251	SLU 22	-1	0	34.33	4.8475	0.0475	0.3508
251	SLU 23	-0.98	-0.06	34.28	4.8423	0.0474	0.3432
251	SLU 24	-1.03	0.01	35.06	4.9387	0.0487	0.3598
251	SLU 25	-1.02	-0.03	35.03	4.9356	0.0486	0.3552
251	SLU 26	-1	-0.06	34.75	4.9003	0.0481	0.3492
251	SLU 27	-1.05	0.01	35.53	4.9968	0.0494	0.3658
251	SLU 28	-1.03	-0.03	35.5	4.9937	0.0493	0.3612
251	SLU 29	-1.04	0.01	35.26	4.9636	0.049	0.3628
251	SLU 30	-1.03	-0.03	35.23	4.9605	0.0489	0.3582
251	SLU 31	-1.04	-0.02	37.68	5.2524	0.0522	0.3633
251	SLU 32	-1.09	0.05	38.46	5.3488	0.0535	0.38
251	SLU 33	-1.08	0.01	38.43	5.3457	0.0534	0.3753
251	SLU 34	-1.06	-0.02	38.15	5.3104	0.0529	0.3693
251	SLU 35	-1.11	0.05	38.93	5.4069	0.0542	0.386
251	SLU 36	-1.09	0.01	38.9	5.4037	0.0541	0.3814
251	SLU 37	-1.1	0.05	38.66	5.3737	0.0538	0.383
251	SLU 38	-1.08	0.01	38.63	5.3706	0.0537	0.3784
251	SLU 39	-1.09	0.06	39.18	5.4333	0.0544	0.3796
251	SLU 40	-1.07	0.02	39.16	5.4302	0.0543	0.375
251	SLU 41	-1.11	0.06	39.65	5.4914	0.0551	0.3856
251	SLU 42	-1.09	0.02	39.62	5.4883	0.055	0.381
251	SLU 43	-1.13	-0.09	39.09	5.6242	0.0533	0.3939
251	SLU 44	-1.11	-0.15	39.05	5.619	0.0532	0.3863
251	SLU 45	-1.15	-0.08	39.83	5.7154	0.0545	0.4029
251	SLU 46	-1.14	-0.12	39.8	5.7123	0.0544	0.3983
251	SLU 47	-1.12	-0.15	39.51	5.677	0.0539	0.3923
251	SLU 48	-1.17	-0.08	40.29	5.7735	0.0552	0.4089
251	SLU 49	-1.16	-0.12	40.27	5.7704	0.0551	0.4043
251	SLU 50	-1.16	-0.08	40.03	5.7403	0.0548	0.406
251	SLU 51	-1.15	-0.12	40	5.7372	0.0547	0.4014
251	SLU 52	-1.16	-0.11	42.45	6.0291	0.058	0.4064
251	SLU 53	-1.21	-0.04	43.22	6.1255	0.0593	0.4231
251	SLU 54	-1.2	-0.08	43.2	6.1224	0.0592	0.4185
251	SLU 55	-1.18	-0.11	42.91	6.0871	0.0587	0.4124
251	SLU 56	-1.23	-0.04	43.69	6.1836	0.06	0.4291
251	SLU 57	-1.22	-0.08	43.67	6.1804	0.0599	0.4245
251	SLU 58	-1.22	-0.04	43.43	6.1504	0.0596	0.4261
251	SLU 59	-1.21	-0.08	43.4	6.1473	0.0595	0.4215
251	SLU 60	-1.21	-0.03	43.95	6.21	0.0602	0.4227
251	SLU 61	-1.2	-0.07	43.92	6.2069	0.0601	0.4181
251	SLU 62	-1.23	-0.02	44.42	6.2681	0.0609	0.4287
251	SLU 63	-1.21	-0.06	44.39	6.265	0.0608	0.4241
251	SLU 64	-1.24	-0.03	42.46	6.0366	0.0585	0.4318
251	SLU 65	-1.21	-0.1	42.41	6.0314	0.0584	0.4241

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
251	SLU 66	-1.26	-0.03	43.19	6.1278	0.0596	0.4408
251	SLU 67	-1.25	-0.07	43.17	6.1247	0.0596	0.4361
251	SLU 68	-1.23	-0.09	42.88	6.0895	0.0591	0.4301
251	SLU 69	-1.28	-0.03	43.66	6.1859	0.0603	0.4468
251	SLU 70	-1.27	-0.07	43.63	6.1828	0.0603	0.4422
251	SLU 71	-1.27	-0.03	43.39	6.1527	0.0599	0.4438
251	SLU 72	-1.26	-0.07	43.37	6.1496	0.0599	0.4392
251	SLU 73	-1.27	-0.06	45.81	6.4415	0.0632	0.4442
251	SLU 74	-1.32	0.01	46.59	6.5379	0.0644	0.4609
251	SLU 75	-1.31	-0.03	46.57	6.5348	0.0644	0.4563
251	SLU 76	-1.29	-0.05	46.28	6.4995	0.0639	0.4502
251	SLU 77	-1.34	0.01	47.06	6.596	0.0651	0.4669
251	SLU 78	-1.32	-0.02	47.03	6.5929	0.0651	0.4623
251	SLU 79	-1.33	0.01	46.79	6.5628	0.0647	0.4639
251	SLU 80	-1.32	-0.02	46.77	6.5597	0.0646	0.4593
251	SLU 81	-1.32	0.03	47.32	6.6224	0.0653	0.4605
251	SLU 82	-1.31	-0.01	47.29	6.6193	0.0653	0.4559
251	SLU 83	-1.34	0.03	47.78	6.6805	0.0661	0.4665
251	SLU 84	-1.32	-0.01	47.76	6.6774	0.066	0.4619
251	SLE RA 1	-0.93	-0.04	31.92	4.5529	0.0439	0.3238
251	SLE RA 2	-0.91	-0.08	31.89	4.5494	0.0438	0.3187
251	SLE RA 3	-0.94	-0.03	32.41	4.6137	0.0446	0.3298
251	SLE RA 4	-0.94	-0.06	32.39	4.6116	0.0446	0.3267
251	SLE RA 5	-0.92	-0.08	32.2	4.5881	0.0443	0.3227
251	SLE RA 6	-0.96	-0.03	32.72	4.6524	0.0451	0.3338
251	SLE RA 7	-0.95	-0.06	32.7	4.6504	0.045	0.3307
251	SLE RA 8	-0.95	-0.03	32.54	4.6303	0.0448	0.3318
251	SLE RA 9	-0.94	-0.06	32.53	4.6282	0.0448	0.3288
251	SLE RA 10	-0.95	-0.05	34.16	4.8228	0.047	0.3321
251	SLE RA 11	-0.98	-0.01	34.68	4.8871	0.0478	0.3432
251	SLE RA 12	-0.97	-0.03	34.66	4.885	0.0478	0.3402
251	SLE RA 13	-0.96	-0.05	34.47	4.8615	0.0475	0.3361
251	SLE RA 14	-0.99	-0.01	34.99	4.9258	0.0483	0.3472
251	SLE RA 15	-0.99	-0.03	34.97	4.9237	0.0482	0.3442
251	SLE RA 16	-0.99	-0.01	34.81	4.9037	0.048	0.3453
251	SLE RA 17	-0.98	-0.03	34.79	4.9016	0.048	0.3422
251	SLE RA 18	-0.98	0	35.16	4.9435	0.0484	0.343
251	SLE RA 19	-0.97	-0.02	35.14	4.9414	0.0484	0.3399
251	SLE RA 20	-0.99	0	35.47	4.9822	0.0489	0.347
251	SLE RA 21	-0.99	-0.02	35.45	4.9801	0.0489	0.3439
251	SLE FR 1	-0.93	-0.04	31.92	4.5529	0.0439	0.3238
251	SLE FR 2	-0.92	-0.04	31.91	4.5522	0.0438	0.3228
251	SLE FR 3	-0.93	-0.04	32.05	4.5684	0.0441	0.3254
251	SLE FR 4	-0.94	-0.03	32.89	4.6694	0.0452	0.3285
251	SLE FR 5	-0.95	-0.02	33.02	4.6856	0.0454	0.3312
251	SLE FR 6	-0.96	-0.02	33.54	4.7482	0.0461	0.3334
251	SLE QP 1	-0.93	-0.04	31.92	4.5529	0.0439	0.3238
251	SLE QP 2	-0.94	-0.02	32.89	4.6701	0.0452	0.3296
251	SLD 1	2.34	0.42	41.14	5.805	0.074	-0.8215
251	SLD 2	2.7	0.01	40.76	5.7613	0.0729	-0.9444
251	SLD 3	2.44	-0.62	40.54	5.6912	0.072	-0.8554
251	SLD 4	2.8	-1.03	40.15	5.6474	0.0709	-0.9783
251	SLD 5	-0.18	1.77	36.36	5.1911	0.0571	0.058
251	SLD 6	0.06	1.5	36.11	5.1621	0.0564	-0.0236
251	SLD 7	0.16	-1.71	34.33	4.8117	0.0504	-0.055
251	SLD 8	0.4	-1.99	34.08	4.7827	0.0497	-0.1365
251	SLD 9	-2.28	1.94	31.71	4.5574	0.0408	0.7957
251	SLD 10	-2.05	1.67	31.45	4.5284	0.0401	0.7141
251	SLD 11	-1.95	-1.54	29.68	4.178	0.0341	0.6827
251	SLD 12	-1.71	-1.82	29.42	4.149	0.0333	0.6012
251	SLD 13	-4.68	0.99	25.63	3.6927	0.0196	1.6374
251	SLD 14	-4.33	0.58	25.25	3.6489	0.0185	1.5146
251	SLD 15	-4.58	-0.06	25.02	3.5789	0.0176	1.6035
251	SLD 16	-4.23	-0.47	24.64	3.5351	0.0165	1.4807
251	SLV 1	6.74	0.97	52.18	7.3248	0.1124	-2.3627
251	SLV 2	7.56	0.02	51.29	7.2229	0.1099	-2.6487
251	SLV 3	6.97	-1.39	50.79	7.0595	0.1079	-2.4407
251	SLV 4	7.8	-2.34	49.91	6.9576	0.1053	-2.7268
251	SLV 5	0.86	4.03	40.94	5.8868	0.0728	-0.3094
251	SLV 6	1.4	3.4	40.36	5.8204	0.0711	-0.4958
251	SLV 7	1.64	-3.85	36.32	5.0024	0.0575	-0.5696
251	SLV 8	2.18	-4.47	35.74	4.936	0.0558	-0.756
251	SLV 9	-4.06	4.42	30.05	4.4041	0.0346	1.4151
251	SLV 10	-3.53	3.8	29.47	4.3377	0.033	1.2287
251	SLV 11	-3.29	-3.45	25.43	3.5197	0.0193	1.155
251	SLV 12	-2.75	-4.07	24.85	3.4533	0.0177	0.9686
251	SLV 13	-9.68	2.3	15.88	2.3825	-0.0148	3.3859
251	SLV 14	-8.86	1.34	14.99	2.2806	-0.0174	3.0998
251	SLV 15	-9.45	-0.07	14.49	2.1172	-0.0194	3.3078
251	SLV 16	-8.63	-1.02	13.61	2.0153	-0.022	3.0218
251	CRTFP Ux+	0	0	0	0	0	0
251	CRTFP Ux-	0	0	0	0	0	0
251	CRTFP Uy+	0	0	0	0	0	0
251	CRTFP Uy-	0	0	0	0	0	0
252	SLU 1	-0.9	-0.08	29.87	3.7726	0.026	0.3131
252	SLU 2	-0.87	-0.14	29.83	3.7685	0.0259	0.3054
252	SLU 3	-0.92	-0.07	30.57	3.8465	0.0267	0.322
252	SLU 4	-0.91	-0.11	30.55	3.844	0.0267	0.3174
252	SLU 5	-0.89	-0.13	30.28	3.8156	0.0264	0.3114
252	SLU 6	-0.94	-0.07	31.02	3.8936	0.0271	0.328

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLU 7	-0.93	-0.11	31	3.8911	0.0271	0.3234
252	SLU 8	-0.93	-0.07	30.77	3.8668	0.0269	0.3251
252	SLU 9	-0.92	-0.11	30.74	3.8644	0.0268	0.3205
252	SLU 10	-0.93	-0.1	33.1	4.1002	0.0287	0.3256
252	SLU 11	-0.98	-0.04	33.85	4.1782	0.0295	0.3423
252	SLU 12	-0.97	-0.07	33.83	4.1757	0.0294	0.3376
252	SLU 13	-0.95	-0.1	33.55	4.1473	0.0292	0.3316
252	SLU 14	-1	-0.04	34.3	4.2253	0.0299	0.3483
252	SLU 15	-0.98	-0.07	34.28	4.2228	0.0299	0.3436
252	SLU 16	-0.99	-0.04	34.05	4.1985	0.0297	0.3453
252	SLU 17	-0.98	-0.07	34.02	4.1961	0.0296	0.3407
252	SLU 18	-0.98	-0.02	34.55	4.2464	0.03	0.3419
252	SLU 19	-0.97	-0.06	34.53	4.244	0.0299	0.3373
252	SLU 20	-1	-0.02	35	4.2935	0.0304	0.348
252	SLU 21	-0.98	-0.06	34.98	4.2911	0.0304	0.3433
252	SLU 22	-1.01	-0.02	33.1	4.1048	0.0292	0.3509
252	SLU 23	-0.98	-0.09	33.06	4.1007	0.0291	0.3433
252	SLU 24	-1.03	-0.02	33.81	4.1787	0.0299	0.3599
252	SLU 25	-1.02	-0.06	33.78	4.1763	0.0298	0.3553
252	SLU 26	-1	-0.08	33.51	4.1479	0.0295	0.3493
252	SLU 27	-1.05	-0.02	34.26	4.2259	0.0303	0.3659
252	SLU 28	-1.03	-0.06	34.23	4.2234	0.0303	0.3613
252	SLU 29	-1.04	-0.02	34	4.1991	0.03	0.363
252	SLU 30	-1.03	-0.06	33.98	4.1966	0.03	0.3583
252	SLU 31	-1.04	-0.05	36.34	4.4324	0.0319	0.3635
252	SLU 32	-1.09	0.01	37.09	4.5104	0.0327	0.3801
252	SLU 33	-1.08	-0.02	37.06	4.508	0.0326	0.3755
252	SLU 34	-1.06	-0.05	36.79	4.4796	0.0323	0.3695
252	SLU 35	-1.11	0.01	37.54	4.5576	0.0331	0.3861
252	SLU 36	-1.09	-0.02	37.51	4.5551	0.033	0.3815
252	SLU 37	-1.1	0.01	37.28	4.5308	0.0328	0.3832
252	SLU 38	-1.08	-0.02	37.26	4.5283	0.0328	0.3786
252	SLU 39	-1.09	0.03	37.79	4.5787	0.0331	0.3798
252	SLU 40	-1.07	-0.01	37.76	4.5762	0.0331	0.3752
252	SLU 41	-1.11	0.03	38.24	4.6258	0.0336	0.3858
252	SLU 42	-1.09	-0.01	38.21	4.6234	0.0335	0.3812
252	SLU 43	-1.13	-0.12	37.72	4.7904	0.0327	0.394
252	SLU 44	-1.11	-0.18	37.68	4.7863	0.0327	0.3863
252	SLU 45	-1.15	-0.11	38.42	4.8643	0.0334	0.403
252	SLU 46	-1.14	-0.15	38.4	4.8619	0.0334	0.3983
252	SLU 47	-1.12	-0.17	38.13	4.8335	0.0331	0.3923
252	SLU 48	-1.17	-0.11	38.87	4.9114	0.0339	0.409
252	SLU 49	-1.16	-0.15	38.85	4.909	0.0338	0.4044
252	SLU 50	-1.16	-0.11	38.62	4.8847	0.0336	0.406
252	SLU 51	-1.15	-0.15	38.59	4.8822	0.0336	0.4014
252	SLU 52	-1.16	-0.14	40.96	5.118	0.0354	0.4065
252	SLU 53	-1.21	-0.08	41.7	5.196	0.0362	0.4232
252	SLU 54	-1.2	-0.11	41.68	5.1936	0.0362	0.4186
252	SLU 55	-1.18	-0.14	41.41	5.1651	0.0359	0.4125
252	SLU 56	-1.23	-0.08	42.15	5.2431	0.0366	0.4292
252	SLU 57	-1.22	-0.11	42.13	5.2407	0.0366	0.4246
252	SLU 58	-1.22	-0.08	41.9	5.2164	0.0364	0.4262
252	SLU 59	-1.21	-0.11	41.87	5.2139	0.0363	0.4216
252	SLU 60	-1.21	-0.06	42.4	5.2642	0.0367	0.4229
252	SLU 61	-1.2	-0.1	42.38	5.2618	0.0367	0.4183
252	SLU 62	-1.23	-0.06	42.85	5.3114	0.0371	0.4289
252	SLU 63	-1.22	-0.1	42.83	5.3089	0.0371	0.4243
252	SLU 64	-1.24	-0.06	40.96	5.1227	0.0359	0.4319
252	SLU 65	-1.21	-0.13	40.91	5.1186	0.0358	0.4242
252	SLU 66	-1.26	-0.06	41.66	5.1966	0.0366	0.4408
252	SLU 67	-1.25	-0.1	41.64	5.1941	0.0365	0.4362
252	SLU 68	-1.23	-0.12	41.36	5.1657	0.0363	0.4302
252	SLU 69	-1.28	-0.06	42.11	5.2437	0.037	0.4468
252	SLU 70	-1.27	-0.1	42.08	5.2413	0.037	0.4422
252	SLU 71	-1.27	-0.06	41.85	5.2169	0.0368	0.4439
252	SLU 72	-1.26	-0.1	41.83	5.2145	0.0367	0.4393
252	SLU 73	-1.27	-0.09	44.19	5.4503	0.0386	0.4444
252	SLU 74	-1.32	-0.03	44.94	5.5283	0.0394	0.4611
252	SLU 75	-1.31	-0.06	44.91	5.5258	0.0393	0.4564
252	SLU 76	-1.29	-0.09	44.64	5.4974	0.039	0.4504
252	SLU 77	-1.34	-0.03	45.39	5.5754	0.0398	0.4671
252	SLU 78	-1.32	-0.06	45.36	5.573	0.0398	0.4625
252	SLU 79	-1.33	-0.03	45.13	5.5486	0.0395	0.4641
252	SLU 80	-1.32	-0.06	45.11	5.5462	0.0395	0.4595
252	SLU 81	-1.32	-0.01	45.64	5.5965	0.0399	0.4608
252	SLU 82	-1.31	-0.05	45.61	5.5941	0.0398	0.4561
252	SLU 83	-1.34	-0.01	46.09	5.6437	0.0403	0.4668
252	SLU 84	-1.32	-0.05	46.06	5.6412	0.0403	0.4621
252	SLE RA 1	-0.93	-0.06	30.79	3.8675	0.0269	0.3239
252	SLE RA 2	-0.91	-0.1	30.76	3.8648	0.0269	0.3188
252	SLE RA 3	-0.94	-0.06	31.26	3.9168	0.0274	0.3299
252	SLE RA 4	-0.94	-0.08	31.25	3.9151	0.0273	0.3268
252	SLE RA 5	-0.92	-0.1	31.06	3.8962	0.0272	0.3228
252	SLE RA 6	-0.96	-0.06	31.56	3.9482	0.0277	0.3339
252	SLE RA 7	-0.95	-0.08	31.55	3.9466	0.0276	0.3308
252	SLE RA 8	-0.95	-0.06	31.39	3.9303	0.0275	0.3319
252	SLE RA 9	-0.94	-0.08	31.38	3.9287	0.0275	0.3288
252	SLE RA 10	-0.95	-0.08	32.95	4.0859	0.0287	0.3322
252	SLE RA 11	-0.98	-0.04	33.45	4.1379	0.0292	0.3433
252	SLE RA 12	-0.97	-0.06	33.43	4.1363	0.0292	0.3403

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLE RA 13	-0.96	-0.08	33.25	4.1173	0.029	0.3362
252	SLE RA 14	-1	-0.04	33.75	4.1693	0.0295	0.3473
252	SLE RA 15	-0.99	-0.06	33.73	4.1677	0.0295	0.3443
252	SLE RA 16	-0.99	-0.04	33.58	4.1515	0.0293	0.3454
252	SLE RA 17	-0.98	-0.06	33.56	4.1498	0.0293	0.3423
252	SLE RA 18	-0.98	-0.03	33.92	4.1834	0.0296	0.3431
252	SLE RA 19	-0.97	-0.05	33.9	4.1818	0.0295	0.3401
252	SLE RA 20	-0.99	-0.03	34.22	4.2148	0.0299	0.3471
252	SLE RA 21	-0.99	-0.05	34.2	4.2132	0.0298	0.3441
252	SLE FR 1	-0.93	-0.06	30.79	3.8675	0.0269	0.3239
252	SLE FR 2	-0.92	-0.07	30.79	3.8669	0.0269	0.3229
252	SLE FR 3	-0.93	-0.06	30.91	3.8801	0.027	0.3255
252	SLE FR 4	-0.94	-0.06	31.72	3.9617	0.0277	0.3286
252	SLE FR 5	-0.95	-0.05	31.85	3.9748	0.0278	0.3313
252	SLE FR 6	-0.96	-0.04	32.35	4.0254	0.0282	0.3335
252	SLE QP 1	-0.93	-0.06	30.79	3.8675	0.0269	0.3239
252	SLE QP 2	-0.94	-0.05	31.73	3.9623	0.0277	0.3297
252	SLD 1	2.35	0.35	39.15	4.792	0.0511	-0.8236
252	SLD 2	2.7	-0.03	38.8	4.7596	0.0503	-0.9466
252	SLD 3	2.45	-0.64	38.59	4.6678	0.0498	-0.8574
252	SLD 4	2.8	-1.02	38.24	4.6354	0.0489	-0.9805
252	SLD 5	-0.17	1.64	34.87	4.4054	0.0369	0.0575
252	SLD 6	0.06	1.39	34.64	4.3839	0.0364	-0.0242
252	SLD 7	0.16	-1.66	33	3.9915	0.0324	-0.0555
252	SLD 8	0.4	-1.91	32.77	3.97	0.0319	-0.1371
252	SLD 9	-2.28	1.81	30.69	3.9545	0.0236	0.7965
252	SLD 10	-2.05	1.56	30.46	3.933	0.023	0.7148
252	SLD 11	-1.95	-1.49	28.82	3.5406	0.019	0.6835
252	SLD 12	-1.71	-1.74	28.59	3.5191	0.0185	0.6019
252	SLD 13	-4.69	0.91	25.22	3.2891	0.0065	1.6398
252	SLD 14	-4.34	0.54	24.87	3.2567	0.0057	1.5168
252	SLD 15	-4.59	-0.07	24.66	3.1649	0.0052	1.606
252	SLD 16	-4.24	-0.45	24.31	3.1325	0.0043	1.4829
252	SLV 1	6.75	0.84	49.08	5.903	0.0824	-2.3675
252	SLV 2	7.58	-0.04	48.27	5.8275	0.0804	-2.654
252	SLV 3	6.98	-1.39	47.8	5.6133	0.0793	-2.4456
252	SLV 4	7.81	-2.27	46.99	5.5378	0.0773	-2.7321
252	SLV 5	0.87	3.76	39.01	4.9971	0.0491	-0.3108
252	SLV 6	1.41	3.19	38.48	4.9479	0.0478	-0.4974
252	SLV 7	1.64	-3.69	34.76	4.0315	0.0389	-0.5709
252	SLV 8	2.18	-4.26	34.23	3.9823	0.0376	-0.7576
252	SLV 9	-4.07	4.16	29.23	3.9422	0.0178	1.4169
252	SLV 10	-3.53	3.59	28.7	3.893	0.0165	1.2302
252	SLV 11	-3.3	-3.29	24.98	2.9766	0.0076	1.1568
252	SLV 12	-2.76	-3.86	24.45	2.9275	0.0063	0.9701
252	SLV 13	-9.7	2.17	16.47	2.3867	-0.0219	3.3914
252	SLV 14	-8.87	1.29	15.66	2.3112	-0.0239	3.1049
252	SLV 15	-9.47	-0.07	15.19	2.097	-0.025	3.3134
252	SLV 16	-8.64	-0.94	14.38	2.0216	-0.027	3.0269
252	CRTFP Ux+	0	0	0	0	0	0
252	CRTFP Ux-	0	0	0	0	0	0
252	CRTFP Uy+	0	0	0	0	0	0
252	CRTFP Uy-	0	0	0	0	0	0
253	SLU 1	-0.9	-0.1	29.29	3.4845	0.0107	0.3126
253	SLU 2	-0.87	-0.16	29.24	3.481	0.0106	0.3048
253	SLU 3	-0.92	-0.1	29.97	3.5509	0.011	0.3215
253	SLU 4	-0.91	-0.13	29.95	3.5487	0.0109	0.3169
253	SLU 5	-0.89	-0.16	29.68	3.5234	0.0108	0.3108
253	SLU 6	-0.94	-0.1	30.41	3.5933	0.0111	0.3275
253	SLU 7	-0.92	-0.13	30.39	3.5911	0.0111	0.3229
253	SLU 8	-0.93	-0.1	30.16	3.5693	0.011	0.3245
253	SLU 9	-0.92	-0.13	30.14	3.5672	0.011	0.3199
253	SLU 10	-0.93	-0.13	32.47	3.7801	0.0115	0.3251
253	SLU 11	-0.98	-0.07	33.2	3.8501	0.0118	0.3418
253	SLU 12	-0.97	-0.1	33.17	3.8479	0.0118	0.3371
253	SLU 13	-0.95	-0.12	32.9	3.8225	0.0117	0.3311
253	SLU 14	-1	-0.07	33.63	3.8924	0.012	0.3477
253	SLU 15	-0.98	-0.1	33.61	3.8903	0.012	0.3431
253	SLU 16	-0.99	-0.07	33.39	3.8685	0.0119	0.3448
253	SLU 17	-0.97	-0.1	33.36	3.8663	0.0119	0.3402
253	SLU 18	-0.98	-0.06	33.89	3.9119	0.0119	0.3415
253	SLU 19	-0.97	-0.09	33.86	3.9098	0.0119	0.3369
253	SLU 20	-1	-0.06	34.33	3.9543	0.0121	0.3475
253	SLU 21	-0.98	-0.09	34.3	3.9522	0.0121	0.3429
253	SLU 22	-1	-0.05	32.45	3.782	0.012	0.3504
253	SLU 23	-0.98	-0.11	32.41	3.7784	0.0119	0.3427
253	SLU 24	-1.03	-0.05	33.14	3.8483	0.0122	0.3594
253	SLU 25	-1.02	-0.09	33.12	3.8462	0.0122	0.3548
253	SLU 26	-1	-0.11	32.85	3.8208	0.0121	0.3487
253	SLU 27	-1.05	-0.05	33.58	3.8907	0.0124	0.3654
253	SLU 28	-1.03	-0.09	33.55	3.8886	0.0124	0.3607
253	SLU 29	-1.04	-0.05	33.33	3.8668	0.0123	0.3624
253	SLU 30	-1.02	-0.09	33.31	3.8646	0.0123	0.3578
253	SLU 31	-1.04	-0.08	35.63	4.0776	0.0128	0.363
253	SLU 32	-1.09	-0.02	36.36	4.1475	0.0131	0.3796
253	SLU 33	-1.07	-0.05	36.34	4.1454	0.0131	0.375
253	SLU 34	-1.06	-0.08	36.07	4.12	0.013	0.369
253	SLU 35	-1.1	-0.02	36.8	4.1899	0.0133	0.3856
253	SLU 36	-1.09	-0.05	36.78	4.1878	0.0133	0.381
253	SLU 37	-1.1	-0.02	36.55	4.1659	0.0132	0.3827

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
253	SLU 38	-1.08	-0.05	36.53	4.1638	0.0132	0.378
253	SLU 39	-1.09	-0.01	37.05	4.2094	0.0132	0.3794
253	SLU 40	-1.07	-0.04	37.03	4.2072	0.0132	0.3748
253	SLU 41	-1.1	-0.01	37.49	4.2518	0.0134	0.3854
253	SLU 42	-1.09	-0.04	37.47	4.2496	0.0134	0.3807
253	SLU 43	-1.13	-0.15	36.99	4.4279	0.0134	0.3933
253	SLU 44	-1.1	-0.2	36.95	4.4243	0.0134	0.3856
253	SLU 45	-1.15	-0.15	37.68	4.4943	0.0137	0.4023
253	SLU 46	-1.14	-0.18	37.65	4.4921	0.0137	0.3976
253	SLU 47	-1.12	-0.2	37.39	4.4667	0.0135	0.3916
253	SLU 48	-1.17	-0.15	38.12	4.5367	0.0139	0.4083
253	SLU 49	-1.16	-0.18	38.09	4.5345	0.0139	0.4036
253	SLU 50	-1.16	-0.15	37.87	4.5127	0.0138	0.4053
253	SLU 51	-1.15	-0.18	37.84	4.5106	0.0137	0.4007
253	SLU 52	-1.16	-0.17	40.17	4.7235	0.0143	0.4059
253	SLU 53	-1.21	-0.11	40.9	4.7934	0.0146	0.4225
253	SLU 54	-1.2	-0.15	40.87	4.7913	0.0146	0.4179
253	SLU 55	-1.18	-0.17	40.61	4.7659	0.0144	0.4119
253	SLU 56	-1.23	-0.11	41.34	4.8358	0.0148	0.4285
253	SLU 57	-1.21	-0.15	41.31	4.8337	0.0147	0.4239
253	SLU 58	-1.22	-0.11	41.09	4.8119	0.0147	0.4256
253	SLU 59	-1.21	-0.15	41.06	4.8097	0.0146	0.4209
253	SLU 60	-1.21	-0.1	41.59	4.8553	0.0147	0.4223
253	SLU 61	-1.2	-0.14	41.56	4.8532	0.0147	0.4176
253	SLU 62	-1.23	-0.1	42.03	4.8977	0.0149	0.4283
253	SLU 63	-1.21	-0.14	42	4.8955	0.0148	0.4236
253	SLU 64	-1.24	-0.1	40.15	4.7254	0.0147	0.4312
253	SLU 65	-1.21	-0.16	40.11	4.7218	0.0147	0.4235
253	SLU 66	-1.26	-0.1	40.84	4.7917	0.015	0.4402
253	SLU 67	-1.25	-0.13	40.82	4.7896	0.015	0.4355
253	SLU 68	-1.23	-0.15	40.55	4.7642	0.0148	0.4295
253	SLU 69	-1.28	-0.1	41.28	4.8341	0.0152	0.4461
253	SLU 70	-1.26	-0.13	41.26	4.832	0.0152	0.4415
253	SLU 71	-1.27	-0.1	41.03	4.8102	0.0151	0.4432
253	SLU 72	-1.26	-0.13	41.01	4.808	0.015	0.4386
253	SLU 73	-1.27	-0.12	43.33	5.021	0.0156	0.4438
253	SLU 74	-1.32	-0.07	44.06	5.0909	0.0159	0.4604
253	SLU 75	-1.31	-0.1	44.04	5.0887	0.0159	0.4558
253	SLU 76	-1.29	-0.12	43.77	5.0634	0.0157	0.4498
253	SLU 77	-1.34	-0.07	44.5	5.1333	0.0161	0.4664
253	SLU 78	-1.32	-0.1	44.48	5.1311	0.016	0.4618
253	SLU 79	-1.33	-0.07	44.25	5.1093	0.0159	0.4635
253	SLU 80	-1.31	-0.1	44.23	5.1072	0.0159	0.4588
253	SLU 81	-1.32	-0.05	44.75	5.1528	0.016	0.4602
253	SLU 82	-1.31	-0.09	44.73	5.1506	0.0159	0.4555
253	SLU 83	-1.34	-0.05	45.19	5.1952	0.0162	0.4662
253	SLU 84	-1.32	-0.09	45.17	5.193	0.0161	0.4615
253	SLE RA 1	-0.93	-0.09	30.19	3.5695	0.011	0.3234
253	SLE RA 2	-0.91	-0.12	30.16	3.5671	0.011	0.3182
253	SLE RA 3	-0.94	-0.09	30.65	3.6138	0.0112	0.3293
253	SLE RA 4	-0.93	-0.11	30.63	3.6123	0.0112	0.3263
253	SLE RA 5	-0.92	-0.12	30.46	3.5954	0.0111	0.3222
253	SLE RA 6	-0.95	-0.09	30.94	3.642	0.0113	0.3333
253	SLE RA 7	-0.95	-0.11	30.93	3.6406	0.0113	0.3302
253	SLE RA 8	-0.95	-0.09	30.78	3.6261	0.0113	0.3314
253	SLE RA 9	-0.94	-0.11	30.76	3.6246	0.0112	0.3283
253	SLE RA 10	-0.95	-0.1	32.31	3.7666	0.0116	0.3317
253	SLE RA 11	-0.98	-0.07	32.8	3.8132	0.0118	0.3428
253	SLE RA 12	-0.97	-0.09	32.78	3.8118	0.0118	0.3398
253	SLE RA 13	-0.96	-0.1	32.6	3.7948	0.0117	0.3357
253	SLE RA 14	-0.99	-0.07	33.09	3.8415	0.0119	0.3468
253	SLE RA 15	-0.98	-0.09	33.07	3.84	0.0119	0.3438
253	SLE RA 16	-0.99	-0.07	32.92	3.8255	0.0119	0.3449
253	SLE RA 17	-0.98	-0.09	32.91	3.8241	0.0118	0.3418
253	SLE RA 18	-0.98	-0.06	33.26	3.8545	0.0119	0.3427
253	SLE RA 19	-0.97	-0.08	33.24	3.853	0.0119	0.3396
253	SLE RA 20	-0.99	-0.06	33.55	3.8827	0.012	0.3467
253	SLE RA 21	-0.98	-0.08	33.53	3.8813	0.012	0.3436
253	SLE FR 1	-0.93	-0.09	30.19	3.5695	0.011	0.3234
253	SLE FR 2	-0.92	-0.09	30.18	3.5691	0.011	0.3224
253	SLE FR 3	-0.93	-0.09	30.31	3.5808	0.0111	0.325
253	SLE FR 4	-0.94	-0.09	31.1	3.6545	0.0113	0.3281
253	SLE FR 5	-0.95	-0.08	31.23	3.6663	0.0113	0.3308
253	SLE FR 6	-0.95	-0.07	31.72	3.712	0.0115	0.333
253	SLE QP 1	-0.93	-0.09	30.19	3.5695	0.011	0.3234
253	SLE QP 2	-0.94	-0.08	31.11	3.655	0.0113	0.3292
253	SLD 1	2.35	0.28	37.87	4.2828	0.0299	-0.826
253	SLD 2	2.71	-0.07	37.54	4.2567	0.0293	-0.9493
253	SLD 3	2.45	-0.67	37.34	4.1507	0.0292	-0.86
253	SLD 4	2.81	-1.01	37.01	4.1246	0.0286	-0.9832
253	SLD 5	-0.17	1.52	34	4.0486	0.0181	0.0564
253	SLD 6	0.07	1.29	33.78	4.0312	0.0177	-0.0253
253	SLD 7	0.16	-1.62	32.23	3.608	0.0157	-0.0566
253	SLD 8	0.4	-1.85	32.02	3.5907	0.0153	-0.1384
253	SLD 9	-2.28	1.7	30.2	3.7193	0.0073	0.7967
253	SLD 10	-2.05	1.47	29.99	3.702	0.0069	0.7149
253	SLD 11	-1.95	-1.45	28.44	3.2788	0.0049	0.6837
253	SLD 12	-1.72	-1.68	28.22	3.2615	0.0045	0.6019
253	SLD 13	-4.69	0.86	25.21	3.1854	-0.006	1.6415
253	SLD 14	-4.34	0.51	24.88	3.1593	-0.0067	1.5183

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
253	SLD 15	-4.59	-0.08	24.68	3.0533	-0.0068	1.6076
253	SLD 16	-4.24	-0.43	24.35	3.0272	-0.0074	1.4844
253	SLV 1	6.77	0.71	46.9	5.1233	0.0549	-2.3727
253	SLV 2	7.59	-0.1	46.14	5.0626	0.0535	-2.6596
253	SLV 3	7	-1.42	45.69	4.815	0.0533	-2.4508
253	SLV 4	7.82	-2.23	44.93	4.7543	0.0518	-2.7377
253	SLV 5	0.88	3.54	37.81	4.5738	0.0271	-0.3125
253	SLV 6	1.42	3.01	37.32	4.5342	0.0262	-0.4994
253	SLV 7	1.64	-3.57	33.78	3.5461	0.0217	-0.5729
253	SLV 8	2.18	-4.1	33.29	3.5065	0.0207	-0.7598
253	SLV 9	-4.07	3.94	28.93	3.8035	0.0019	1.4182
253	SLV 10	-3.53	3.42	28.44	3.7639	0.0009	1.2312
253	SLV 11	-3.3	-3.16	24.9	2.7758	-0.0036	1.1578
253	SLV 12	-2.76	-3.69	24.41	2.7362	-0.0046	0.9708
253	SLV 13	-9.71	2.07	17.29	2.5557	-0.0293	3.3961
253	SLV 14	-8.88	1.27	16.53	2.495	-0.0307	3.1092
253	SLV 15	-9.48	-0.06	16.08	2.2474	-0.0309	3.3179
253	SLV 16	-8.65	-0.87	15.32	2.1867	-0.0324	3.031
253	CRTFP Ux+	0	0	0	0	0	0
253	CRTFP Ux-	0	0	0	0	0	0
253	CRTFP Uy+	0	0	0	0	0	0
253	CRTFP Uy-	0	0	0	0	0	0
254	SLU 1	-0.89	-0.13	29.18	3.5432	-0.0037	0.3115
254	SLU 2	-0.87	-0.18	29.14	3.5395	-0.0037	0.3038
254	SLU 3	-0.92	-0.13	29.86	3.611	-0.0038	0.3204
254	SLU 4	-0.9	-0.16	29.84	3.6088	-0.0038	0.3158
254	SLU 5	-0.89	-0.18	29.57	3.5829	-0.0037	0.3098
254	SLU 6	-0.94	-0.13	30.3	3.6544	-0.0038	0.3264
254	SLU 7	-0.92	-0.16	30.28	3.6522	-0.0038	0.3217
254	SLU 8	-0.93	-0.13	30.05	3.6299	-0.0038	0.3235
254	SLU 9	-0.91	-0.16	30.03	3.6277	-0.0038	0.3188
254	SLU 10	-0.93	-0.15	32.36	3.8489	-0.0046	0.3241
254	SLU 11	-0.98	-0.1	33.08	3.9203	-0.0046	0.3407
254	SLU 12	-0.96	-0.13	33.06	3.9181	-0.0046	0.336
254	SLU 13	-0.95	-0.15	32.8	3.8923	-0.0046	0.33
254	SLU 14	-0.99	-0.1	33.52	3.9637	-0.0047	0.3466
254	SLU 15	-0.98	-0.13	33.5	3.9615	-0.0047	0.342
254	SLU 16	-0.99	-0.1	33.27	3.9393	-0.0047	0.3437
254	SLU 17	-0.97	-0.13	33.25	3.9371	-0.0047	0.3391
254	SLU 18	-0.98	-0.09	33.78	3.9851	-0.0049	0.3405
254	SLU 19	-0.96	-0.12	33.75	3.9829	-0.0049	0.3358
254	SLU 20	-0.99	-0.09	34.22	4.0285	-0.005	0.3464
254	SLU 21	-0.98	-0.12	34.19	4.0263	-0.005	0.3418
254	SLU 22	-1	-0.08	32.33	3.8477	-0.0041	0.3494
254	SLU 23	-0.98	-0.13	32.29	3.8441	-0.0041	0.3416
254	SLU 24	-1.03	-0.08	33.01	3.9155	-0.0042	0.3583
254	SLU 25	-1.01	-0.11	32.99	3.9133	-0.0042	0.3536
254	SLU 26	-1	-0.13	32.73	3.8874	-0.0042	0.3476
254	SLU 27	-1.04	-0.08	33.45	3.9589	-0.0043	0.3642
254	SLU 28	-1.03	-0.11	33.43	3.9567	-0.0043	0.3596
254	SLU 29	-1.04	-0.08	33.2	3.9345	-0.0042	0.3613
254	SLU 30	-1.02	-0.11	33.18	3.9323	-0.0042	0.3567
254	SLU 31	-1.04	-0.11	35.51	4.1534	-0.005	0.3619
254	SLU 32	-1.08	-0.05	36.23	4.2249	-0.0051	0.3785
254	SLU 33	-1.07	-0.09	36.21	4.2227	-0.0051	0.3739
254	SLU 34	-1.05	-0.11	35.95	4.1968	-0.0051	0.3679
254	SLU 35	-1.1	-0.05	36.67	4.2682	-0.0051	0.3845
254	SLU 36	-1.09	-0.09	36.65	4.266	-0.0052	0.3798
254	SLU 37	-1.09	-0.05	36.42	4.2438	-0.0051	0.3816
254	SLU 38	-1.08	-0.09	36.4	4.2416	-0.0051	0.3769
254	SLU 39	-1.08	-0.04	36.93	4.2897	-0.0054	0.3783
254	SLU 40	-1.07	-0.08	36.9	4.2875	-0.0054	0.3737
254	SLU 41	-1.1	-0.04	37.37	4.333	-0.0054	0.3843
254	SLU 42	-1.09	-0.08	37.34	4.3308	-0.0054	0.3796
254	SLU 43	-1.12	-0.18	36.85	4.5017	-0.0046	0.392
254	SLU 44	-1.1	-0.23	36.81	4.4981	-0.0046	0.3843
254	SLU 45	-1.15	-0.18	37.53	4.5695	-0.0047	0.4009
254	SLU 46	-1.14	-0.21	37.51	4.5673	-0.0047	0.3963
254	SLU 47	-1.12	-0.23	37.25	4.5415	-0.0047	0.3902
254	SLU 48	-1.17	-0.18	37.97	4.6129	-0.0048	0.4069
254	SLU 49	-1.15	-0.21	37.95	4.6107	-0.0048	0.4022
254	SLU 50	-1.16	-0.18	37.72	4.5885	-0.0047	0.4039
254	SLU 51	-1.14	-0.21	37.7	4.5863	-0.0047	0.3993
254	SLU 52	-1.16	-0.21	40.03	4.8075	-0.0055	0.4045
254	SLU 53	-1.21	-0.15	40.76	4.8789	-0.0056	0.4212
254	SLU 54	-1.19	-0.18	40.73	4.8767	-0.0056	0.4165
254	SLU 55	-1.18	-0.21	40.47	4.8508	-0.0056	0.4105
254	SLU 56	-1.22	-0.15	41.19	4.9223	-0.0057	0.4271
254	SLU 57	-1.21	-0.18	41.17	4.9201	-0.0057	0.4225
254	SLU 58	-1.22	-0.15	40.95	4.8978	-0.0056	0.4242
254	SLU 59	-1.2	-0.18	40.92	4.8957	-0.0056	0.4196
254	SLU 60	-1.21	-0.14	41.45	4.9437	-0.0059	0.421
254	SLU 61	-1.19	-0.17	41.43	4.9415	-0.0059	0.4163
254	SLU 62	-1.22	-0.14	41.89	4.9871	-0.0059	0.4269
254	SLU 63	-1.21	-0.17	41.86	4.9849	-0.006	0.4223
254	SLU 64	-1.23	-0.13	40	4.8063	-0.0051	0.4299
254	SLU 65	-1.21	-0.19	39.96	4.8026	-0.0051	0.4221
254	SLU 66	-1.26	-0.13	40.69	4.8741	-0.0051	0.4388
254	SLU 67	-1.24	-0.17	40.66	4.8719	-0.0051	0.4341
254	SLU 68	-1.23	-0.19	40.4	4.846	-0.0051	0.4281

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLU 69	-1.27	-0.13	41.12	4.9174	-0.0052	0.4447
254	SLU 70	-1.26	-0.17	41.1	4.9152	-0.0052	0.4401
254	SLU 71	-1.27	-0.13	40.88	4.893	-0.0052	0.4418
254	SLU 72	-1.25	-0.17	40.85	4.8908	-0.0052	0.4371
254	SLU 73	-1.27	-0.16	43.18	5.112	-0.006	0.4424
254	SLU 74	-1.32	-0.11	43.91	5.1834	-0.006	0.459
254	SLU 75	-1.3	-0.14	43.88	5.1812	-0.006	0.4544
254	SLU 76	-1.28	-0.16	43.62	5.1553	-0.006	0.4483
254	SLU 77	-1.33	-0.11	44.34	5.2268	-0.0061	0.465
254	SLU 78	-1.32	-0.14	44.32	5.2246	-0.0061	0.4603
254	SLU 79	-1.32	-0.11	44.1	5.2024	-0.0061	0.462
254	SLU 80	-1.31	-0.14	44.07	5.2002	-0.0061	0.4574
254	SLU 81	-1.31	-0.1	44.6	5.2482	-0.0063	0.4588
254	SLU 82	-1.3	-0.13	44.58	5.246	-0.0063	0.4542
254	SLU 83	-1.33	-0.1	45.04	5.2916	-0.0064	0.4648
254	SLU 84	-1.32	-0.13	45.01	5.2894	-0.0064	0.4601
254	SLE RA 1	-0.92	-0.11	30.08	3.6302	-0.0038	0.3223
254	SLE RA 2	-0.91	-0.15	30.05	3.6278	-0.0038	0.3172
254	SLE RA 3	-0.94	-0.11	30.53	3.6754	-0.0038	0.3283
254	SLE RA 4	-0.93	-0.13	30.52	3.6739	-0.0039	0.3252
254	SLE RA 5	-0.92	-0.15	30.34	3.6567	-0.0038	0.3212
254	SLE RA 6	-0.95	-0.11	30.83	3.7043	-0.0039	0.3322
254	SLE RA 7	-0.94	-0.13	30.81	3.7028	-0.0039	0.3291
254	SLE RA 8	-0.95	-0.11	30.66	3.688	-0.0039	0.3303
254	SLE RA 9	-0.94	-0.13	30.64	3.6866	-0.0039	0.3272
254	SLE RA 10	-0.95	-0.13	32.2	3.834	-0.0044	0.3307
254	SLE RA 11	-0.98	-0.1	32.68	3.8816	-0.0044	0.3418
254	SLE RA 12	-0.97	-0.12	32.67	3.8802	-0.0044	0.3387
254	SLE RA 13	-0.96	-0.13	32.49	3.8629	-0.0044	0.3347
254	SLE RA 14	-0.99	-0.1	32.97	3.9105	-0.0045	0.3458
254	SLE RA 15	-0.98	-0.12	32.96	3.9091	-0.0045	0.3427
254	SLE RA 16	-0.99	-0.1	32.81	3.8943	-0.0045	0.3438
254	SLE RA 17	-0.98	-0.12	32.79	3.8928	-0.0045	0.3407
254	SLE RA 18	-0.98	-0.09	33.14	3.9248	-0.0046	0.3416
254	SLE RA 19	-0.97	-0.11	33.13	3.9234	-0.0046	0.3386
254	SLE RA 20	-0.99	-0.09	33.44	3.9537	-0.0047	0.3456
254	SLE RA 21	-0.98	-0.11	33.42	3.9523	-0.0047	0.3425
254	SLE FR 1	-0.92	-0.11	30.08	3.6302	-0.0038	0.3223
254	SLE FR 2	-0.92	-0.12	30.07	3.6297	-0.0038	0.3213
254	SLE FR 3	-0.93	-0.11	30.19	3.6418	-0.0038	0.3239
254	SLE FR 4	-0.94	-0.11	30.99	3.7181	-0.004	0.3271
254	SLE FR 5	-0.94	-0.11	31.11	3.7302	-0.0041	0.3297
254	SLE FR 6	-0.95	-0.1	31.61	3.7775	-0.0042	0.332
254	SLE QP 1	-0.92	-0.11	30.08	3.6302	-0.0038	0.3223
254	SLE QP 2	-0.94	-0.11	31	3.7186	-0.004	0.3281
254	SLD 1	2.36	0.21	37.23	4.2325	0.0106	-0.8289
254	SLD 2	2.72	-0.11	36.92	4.2085	0.0102	-0.9523
254	SLD 3	2.46	-0.7	36.71	4.0988	0.0103	-0.8629
254	SLD 4	2.82	-1.03	36.4	4.0748	0.0099	-0.9862
254	SLD 5	-0.16	1.43	33.71	4.0799	0.0009	0.055
254	SLD 6	0.07	1.21	33.5	4.064	0.0006	-0.0269
254	SLD 7	0.17	-1.61	31.98	3.6342	-0.0001	-0.0582
254	SLD 8	0.4	-1.82	31.77	3.6183	-0.0004	-0.1401
254	SLD 9	-2.28	1.61	30.22	3.8189	-0.0077	0.7964
254	SLD 10	-2.05	1.39	30.01	3.803	-0.008	0.7145
254	SLD 11	-1.95	-1.42	28.49	3.3732	-0.0087	0.6832
254	SLD 12	-1.72	-1.64	28.28	3.3572	-0.0089	0.6013
254	SLD 13	-4.7	0.81	25.6	3.3624	-0.018	1.6425
254	SLD 14	-4.34	0.49	25.29	3.3384	-0.0184	1.5191
254	SLD 15	-4.6	-0.1	25.08	3.2287	-0.0183	1.6085
254	SLD 16	-4.24	-0.42	24.77	3.2046	-0.0187	1.4852
254	SLV 1	6.78	0.59	45.55	4.9206	0.0303	-2.378
254	SLV 2	7.61	-0.16	44.83	4.8646	0.0293	-2.6652
254	SLV 3	7.01	-1.47	44.37	4.6085	0.0296	-2.4562
254	SLV 4	7.84	-2.22	43.65	4.5525	0.0286	-2.7435
254	SLV 5	0.89	3.36	37.28	4.5624	0.0074	-0.3146
254	SLV 6	1.42	2.87	36.81	4.5259	0.0068	-0.5017
254	SLV 7	1.65	-3.5	33.34	3.522	0.0052	-0.5753
254	SLV 8	2.18	-4	32.87	3.4855	0.0046	-0.7625
254	SLV 9	-4.06	3.78	29.12	3.9516	-0.0126	1.4187
254	SLV 10	-3.53	3.29	28.65	3.9152	-0.0133	1.2316
254	SLV 11	-3.3	-3.08	25.18	2.9113	-0.0149	1.158
254	SLV 12	-2.77	-3.57	24.71	2.8748	-0.0155	0.9709
254	SLV 13	-9.72	2.01	18.35	2.8847	-0.0367	3.3997
254	SLV 14	-8.89	1.25	17.63	2.8287	-0.0377	3.1125
254	SLV 15	-9.49	-0.05	17.16	2.5726	-0.0374	3.3215
254	SLV 16	-8.66	-0.81	16.44	2.5166	-0.0383	3.0343
254	CRTFP Ux+	0	0	0	0	0	0
254	CRTFP Ux-	0	0	0	0	0	0
254	CRTFP Uy+	0	0	0	0	0	0
254	CRTFP Uy-	0	0	0	0	0	0
255	SLU 1	-0.89	-0.16	29.51	3.9246	-0.0169	0.3101
255	SLU 2	-0.87	-0.21	29.47	3.9204	-0.0169	0.3023
255	SLU 3	-0.91	-0.16	30.2	4.0022	-0.0174	0.3189
255	SLU 4	-0.9	-0.19	30.18	3.9997	-0.0174	0.3142
255	SLU 5	-0.88	-0.21	29.91	3.97	-0.0172	0.3082
255	SLU 6	-0.93	-0.16	30.65	4.0519	-0.0177	0.3248
255	SLU 7	-0.92	-0.19	30.62	4.0493	-0.0177	0.3201
255	SLU 8	-0.92	-0.16	30.39	4.0239	-0.0175	0.3219
255	SLU 9	-0.91	-0.19	30.37	4.0214	-0.0175	0.3172

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLU 10	-0.92	-0.18	32.74	4.2799	-0.0195	0.3225
255	SLU 11	-0.97	-0.13	33.48	4.3617	-0.0199	0.3391
255	SLU 12	-0.96	-0.16	33.45	4.3592	-0.0199	0.3345
255	SLU 13	-0.94	-0.19	33.19	4.3296	-0.0198	0.3285
255	SLU 14	-0.99	-0.13	33.92	4.4114	-0.0202	0.345
255	SLU 15	-0.98	-0.17	33.9	4.4089	-0.0202	0.3404
255	SLU 16	-0.98	-0.14	33.67	4.3835	-0.0201	0.3421
255	SLU 17	-0.97	-0.17	33.65	4.381	-0.02	0.3375
255	SLU 18	-0.97	-0.12	34.19	4.4383	-0.0206	0.339
255	SLU 19	-0.96	-0.15	34.16	4.4357	-0.0206	0.3343
255	SLU 20	-0.99	-0.13	34.63	4.4879	-0.0209	0.3449
255	SLU 21	-0.98	-0.16	34.61	4.4854	-0.0209	0.3402
255	SLU 22	-1	-0.11	32.7	4.2751	-0.019	0.3478
255	SLU 23	-0.97	-0.16	32.66	4.2709	-0.019	0.34
255	SLU 24	-1.02	-0.11	33.39	4.3527	-0.0194	0.3566
255	SLU 25	-1.01	-0.14	33.37	4.3502	-0.0194	0.352
255	SLU 26	-0.99	-0.16	33.1	4.3206	-0.0193	0.346
255	SLU 27	-1.04	-0.11	33.84	4.4024	-0.0197	0.3625
255	SLU 28	-1.03	-0.14	33.81	4.3999	-0.0197	0.3579
255	SLU 29	-1.03	-0.11	33.59	4.3745	-0.0196	0.3596
255	SLU 30	-1.02	-0.14	33.56	4.3719	-0.0195	0.355
255	SLU 31	-1.03	-0.14	35.94	4.6305	-0.0215	0.3603
255	SLU 32	-1.08	-0.09	36.67	4.7123	-0.022	0.3769
255	SLU 33	-1.07	-0.12	36.65	4.7097	-0.022	0.3722
255	SLU 34	-1.05	-0.14	36.38	4.6801	-0.0218	0.3662
255	SLU 35	-1.1	-0.09	37.11	4.7619	-0.0223	0.3828
255	SLU 36	-1.08	-0.12	37.09	4.7594	-0.0222	0.3781
255	SLU 37	-1.09	-0.09	36.86	4.734	-0.0221	0.3799
255	SLU 38	-1.08	-0.12	36.84	4.7315	-0.0221	0.3752
255	SLU 39	-1.08	-0.08	37.38	4.7888	-0.0226	0.3767
255	SLU 40	-1.07	-0.11	37.36	4.7863	-0.0226	0.372
255	SLU 41	-1.1	-0.08	37.82	4.8385	-0.0229	0.3826
255	SLU 42	-1.08	-0.11	37.8	4.8359	-0.0229	0.378
255	SLU 43	-1.12	-0.22	37.27	4.9818	-0.0213	0.3901
255	SLU 44	-1.1	-0.27	37.23	4.9776	-0.0213	0.3824
255	SLU 45	-1.14	-0.22	37.96	5.0594	-0.0218	0.399
255	SLU 46	-1.13	-0.25	37.94	5.0568	-0.0217	0.3943
255	SLU 47	-1.11	-0.27	37.67	5.0272	-0.0216	0.3883
255	SLU 48	-1.16	-0.22	38.4	5.109	-0.022	0.4049
255	SLU 49	-1.15	-0.25	38.38	5.1065	-0.022	0.4002
255	SLU 50	-1.15	-0.22	38.15	5.0811	-0.0219	0.402
255	SLU 51	-1.14	-0.25	38.13	5.0786	-0.0219	0.3973
255	SLU 52	-1.15	-0.25	40.5	5.3371	-0.0239	0.4026
255	SLU 53	-1.2	-0.2	41.24	5.4189	-0.0243	0.4192
255	SLU 54	-1.19	-0.23	41.21	5.4164	-0.0243	0.4145
255	SLU 55	-1.17	-0.25	40.95	5.3868	-0.0241	0.4085
255	SLU 56	-1.22	-0.2	41.68	5.4686	-0.0246	0.4251
255	SLU 57	-1.21	-0.23	41.66	5.4661	-0.0246	0.4205
255	SLU 58	-1.21	-0.2	41.43	5.4407	-0.0244	0.4222
255	SLU 59	-1.2	-0.23	41.4	5.4382	-0.0244	0.4176
255	SLU 60	-1.2	-0.19	41.95	5.4954	-0.025	0.419
255	SLU 61	-1.19	-0.22	41.92	5.4929	-0.0249	0.4144
255	SLU 62	-1.22	-0.19	42.39	5.5451	-0.0252	0.425
255	SLU 63	-1.21	-0.22	42.37	5.5426	-0.0252	0.4203
255	SLU 64	-1.23	-0.17	40.46	5.3323	-0.0234	0.4279
255	SLU 65	-1.2	-0.23	40.42	5.3281	-0.0234	0.4201
255	SLU 66	-1.25	-0.17	41.15	5.4099	-0.0238	0.4367
255	SLU 67	-1.24	-0.21	41.13	5.4074	-0.0238	0.432
255	SLU 68	-1.22	-0.23	40.86	5.3778	-0.0236	0.426
255	SLU 69	-1.27	-0.18	41.6	5.4596	-0.0241	0.4426
255	SLU 70	-1.26	-0.21	41.57	5.457	-0.0241	0.438
255	SLU 71	-1.26	-0.18	41.34	5.4317	-0.0239	0.4397
255	SLU 72	-1.25	-0.21	41.32	5.4291	-0.0239	0.4351
255	SLU 73	-1.26	-0.2	43.69	5.6877	-0.0259	0.4403
255	SLU 74	-1.31	-0.15	44.43	5.7695	-0.0263	0.4569
255	SLU 75	-1.3	-0.18	44.4	5.7669	-0.0263	0.4523
255	SLU 76	-1.28	-0.2	44.14	5.7373	-0.0262	0.4463
255	SLU 77	-1.33	-0.15	44.87	5.8191	-0.0266	0.4629
255	SLU 78	-1.31	-0.18	44.85	5.8166	-0.0266	0.4582
255	SLU 79	-1.32	-0.15	44.62	5.7912	-0.0265	0.46
255	SLU 80	-1.31	-0.18	44.6	5.7887	-0.0265	0.4553
255	SLU 81	-1.31	-0.14	45.14	5.846	-0.027	0.4568
255	SLU 82	-1.3	-0.17	45.11	5.8434	-0.027	0.4521
255	SLU 83	-1.33	-0.14	45.58	5.8956	-0.0273	0.4627
255	SLU 84	-1.31	-0.17	45.56	5.8931	-0.0273	0.458
255	SLE RA 1	-0.92	-0.14	30.42	4.0247	-0.0175	0.3208
255	SLE RA 2	-0.9	-0.18	30.39	4.0219	-0.0175	0.3157
255	SLE RA 3	-0.94	-0.14	30.88	4.0765	-0.0178	0.3267
255	SLE RA 4	-0.93	-0.16	30.87	4.0748	-0.0178	0.3236
255	SLE RA 5	-0.92	-0.18	30.69	4.055	-0.0177	0.3196
255	SLE RA 6	-0.95	-0.14	31.18	4.1096	-0.018	0.3307
255	SLE RA 7	-0.94	-0.16	31.16	4.1079	-0.018	0.3276
255	SLE RA 8	-0.94	-0.14	31.01	4.091	-0.0179	0.3287
255	SLE RA 9	-0.93	-0.16	30.99	4.0893	-0.0179	0.3256
255	SLE RA 10	-0.94	-0.16	32.58	4.2616	-0.0192	0.3292
255	SLE RA 11	-0.98	-0.13	33.07	4.3162	-0.0195	0.3402
255	SLE RA 12	-0.97	-0.15	33.05	4.3145	-0.0195	0.3371
255	SLE RA 13	-0.95	-0.16	32.87	4.2948	-0.0194	0.3331
255	SLE RA 14	-0.99	-0.13	33.36	4.3493	-0.0197	0.3442
255	SLE RA 15	-0.98	-0.15	33.35	4.3476	-0.0197	0.3411

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLE RA 16	-0.98	-0.13	33.19	4.3307	-0.0196	0.3422
255	SLE RA 17	-0.97	-0.15	33.18	4.329	-0.0196	0.3391
255	SLE RA 18	-0.98	-0.12	33.54	4.3672	-0.0199	0.3401
255	SLE RA 19	-0.97	-0.14	33.52	4.3655	-0.0199	0.337
255	SLE RA 20	-0.99	-0.12	33.84	4.4003	-0.0201	0.3441
255	SLE RA 21	-0.98	-0.14	33.82	4.3986	-0.0201	0.341
255	SLE FR 1	-0.92	-0.14	30.42	4.0247	-0.0175	0.3208
255	SLE FR 2	-0.92	-0.15	30.41	4.0242	-0.0175	0.3198
255	SLE FR 3	-0.92	-0.14	30.54	4.038	-0.0176	0.3224
255	SLE FR 4	-0.93	-0.14	31.35	4.1269	-0.0182	0.3256
255	SLE FR 5	-0.94	-0.14	31.47	4.1407	-0.0183	0.3282
255	SLE FR 6	-0.95	-0.13	31.98	4.196	-0.0187	0.3305
255	SLE QP 1	-0.92	-0.14	30.42	4.0247	-0.0175	0.3208
255	SLE QP 2	-0.94	-0.14	31.36	4.1275	-0.0183	0.3266
255	SLD 1	2.37	0.14	37.18	4.6032	-0.0073	-0.8321
255	SLD 2	2.73	-0.16	36.88	4.5777	-0.0075	-0.9555
255	SLD 3	2.47	-0.75	36.65	4.4742	-0.0067	-0.8661
255	SLD 4	2.82	-1.05	36.35	4.4487	-0.0069	-0.9895
255	SLD 5	-0.16	1.35	33.95	4.4705	-0.0158	0.053
255	SLD 6	0.08	1.15	33.75	4.4535	-0.016	-0.0289
255	SLD 7	0.17	-1.61	32.21	4.0405	-0.0138	-0.0603
255	SLD 8	0.4	-1.82	32.01	4.0235	-0.014	-0.1422
255	SLD 9	-2.28	1.54	30.7	4.2314	-0.0225	0.7955
255	SLD 10	-2.04	1.34	30.51	4.2145	-0.0227	0.7135
255	SLD 11	-1.95	-1.42	28.96	3.8014	-0.0205	0.6821
255	SLD 12	-1.72	-1.63	28.76	3.7844	-0.0207	0.6002
255	SLD 13	-4.7	0.78	26.36	3.8063	-0.0296	1.6427
255	SLD 14	-4.34	0.47	26.06	3.7807	-0.0298	1.5193
255	SLD 15	-4.6	-0.11	25.83	3.6773	-0.029	1.6087
255	SLD 16	-4.24	-0.42	25.53	3.6517	-0.0292	1.4853
255	SLV 1	6.8	0.48	44.96	5.2403	0.0075	-2.3834
255	SLV 2	7.62	-0.23	44.26	5.1808	0.0069	-2.6708
255	SLV 3	7.03	-1.53	43.76	4.9389	0.0089	-2.4617
255	SLV 4	7.85	-2.24	43.07	4.8794	0.0083	-2.7491
255	SLV 5	0.9	3.23	37.37	4.9289	-0.0125	-0.3171
255	SLV 6	1.43	2.76	36.91	4.8901	-0.0129	-0.5044
255	SLV 7	1.65	-3.48	33.39	3.9242	-0.0079	-0.5781
255	SLV 8	2.19	-3.95	32.94	3.8855	-0.0083	-0.7654
255	SLV 9	-4.06	3.67	29.77	4.3695	-0.0282	1.4186
255	SLV 10	-3.52	3.21	29.32	4.3307	-0.0286	1.2314
255	SLV 11	-3.31	-3.04	25.8	3.3648	-0.0236	1.1576
255	SLV 12	-2.77	-3.5	25.35	3.3261	-0.024	0.9703
255	SLV 13	-9.72	1.97	19.64	3.3755	-0.0448	3.4023
255	SLV 14	-8.9	1.25	18.95	3.3161	-0.0454	3.1149
255	SLV 15	-9.5	-0.04	18.45	3.0741	-0.0434	3.324
255	SLV 16	-8.67	-0.76	17.76	3.0147	-0.044	3.0366
255	CRTFP Ux+	0	0	0	0	0	0
255	CRTFP Ux-	0	0	0	0	0	0
255	CRTFP Uy+	0	0	0	0	0	0
255	CRTFP Uy-	0	0	0	0	0	0
256	SLU 1	-0.88	-0.19	30.24	4.608	-0.029	0.3082
256	SLU 2	-0.86	-0.24	30.2	4.6028	-0.029	0.3004
256	SLU 3	-0.91	-0.19	30.96	4.7032	-0.0298	0.3169
256	SLU 4	-0.9	-0.22	30.93	4.7001	-0.0297	0.3122
256	SLU 5	-0.88	-0.24	30.66	4.6637	-0.0295	0.3063
256	SLU 6	-0.93	-0.19	31.41	4.7641	-0.0302	0.3228
256	SLU 7	-0.91	-0.22	31.39	4.761	-0.0302	0.3181
256	SLU 8	-0.92	-0.2	31.16	4.7299	-0.03	0.3199
256	SLU 9	-0.9	-0.22	31.13	4.7268	-0.03	0.3153
256	SLU 10	-0.92	-0.22	33.59	5.0503	-0.033	0.3206
256	SLU 11	-0.97	-0.18	34.34	5.1508	-0.0338	0.3371
256	SLU 12	-0.95	-0.21	34.32	5.1476	-0.0338	0.3324
256	SLU 13	-0.94	-0.23	34.04	5.1113	-0.0335	0.3265
256	SLU 14	-0.98	-0.18	34.8	5.2117	-0.0343	0.343
256	SLU 15	-0.97	-0.21	34.77	5.2086	-0.0343	0.3383
256	SLU 16	-0.98	-0.18	34.54	5.1774	-0.034	0.3401
256	SLU 17	-0.96	-0.21	34.51	5.1743	-0.034	0.3355
256	SLU 18	-0.97	-0.17	35.08	5.2473	-0.0348	0.337
256	SLU 19	-0.95	-0.2	35.05	5.2442	-0.0348	0.3323
256	SLU 20	-0.98	-0.17	35.53	5.3083	-0.0353	0.3429
256	SLU 21	-0.97	-0.2	35.51	5.3052	-0.0353	0.3382
256	SLU 22	-0.99	-0.15	33.52	5.041	-0.0325	0.3458
256	SLU 23	-0.97	-0.2	33.48	5.0358	-0.0325	0.338
256	SLU 24	-1.02	-0.15	34.24	5.1362	-0.0333	0.3545
256	SLU 25	-1	-0.18	34.21	5.1331	-0.0332	0.3498
256	SLU 26	-0.99	-0.2	33.94	5.0967	-0.033	0.3439
256	SLU 27	-1.03	-0.15	34.69	5.1971	-0.0337	0.3604
256	SLU 28	-1.02	-0.18	34.67	5.194	-0.0337	0.3557
256	SLU 29	-1.03	-0.15	34.44	5.1629	-0.0335	0.3575
256	SLU 30	-1.01	-0.18	34.41	5.1598	-0.0335	0.3529
256	SLU 31	-1.03	-0.18	36.87	5.4833	-0.0365	0.3582
256	SLU 32	-1.07	-0.14	37.62	5.5837	-0.0373	0.3747
256	SLU 33	-1.06	-0.17	37.6	5.5806	-0.0373	0.37
256	SLU 34	-1.04	-0.19	37.32	5.5443	-0.037	0.364
256	SLU 35	-1.09	-0.14	38.08	5.6447	-0.0378	0.3806
256	SLU 36	-1.08	-0.17	38.05	5.6416	-0.0378	0.3759
256	SLU 37	-1.08	-0.14	37.82	5.6104	-0.0375	0.3777
256	SLU 38	-1.07	-0.17	37.79	5.6073	-0.0375	0.373
256	SLU 39	-1.07	-0.13	38.36	5.6803	-0.0383	0.3746
256	SLU 40	-1.06	-0.16	38.33	5.6772	-0.0383	0.3699

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
256	SLU 41	-1.09	-0.13	38.81	5.7413	-0.0388	0.3805
256	SLU 42	-1.08	-0.16	38.79	5.7382	-0.0388	0.3758
256	SLU 43	-1.11	-0.26	38.19	5.8419	-0.0365	0.3877
256	SLU 44	-1.09	-0.31	38.15	5.8367	-0.0365	0.3799
256	SLU 45	-1.14	-0.27	38.91	5.9371	-0.0373	0.3965
256	SLU 46	-1.12	-0.29	38.88	5.934	-0.0372	0.3918
256	SLU 47	-1.11	-0.32	38.61	5.8977	-0.037	0.3858
256	SLU 48	-1.15	-0.27	39.36	5.9981	-0.0378	0.4024
256	SLU 49	-1.14	-0.3	39.34	5.995	-0.0377	0.3977
256	SLU 50	-1.15	-0.27	39.1	5.9638	-0.0375	0.3995
256	SLU 51	-1.13	-0.3	39.08	5.9607	-0.0375	0.3948
256	SLU 52	-1.15	-0.3	41.53	6.2843	-0.0405	0.4001
256	SLU 53	-1.2	-0.25	42.29	6.3847	-0.0413	0.4167
256	SLU 54	-1.18	-0.28	42.26	6.3816	-0.0413	0.412
256	SLU 55	-1.17	-0.3	41.99	6.3452	-0.041	0.406
256	SLU 56	-1.21	-0.25	42.74	6.4456	-0.0418	0.4226
256	SLU 57	-1.2	-0.28	42.72	6.4425	-0.0418	0.4179
256	SLU 58	-1.2	-0.25	42.49	6.4114	-0.0415	0.4197
256	SLU 59	-1.19	-0.28	42.46	6.4083	-0.0415	0.415
256	SLU 60	-1.2	-0.24	43.02	6.4813	-0.0423	0.4166
256	SLU 61	-1.18	-0.27	43	6.4782	-0.0423	0.4119
256	SLU 62	-1.21	-0.24	43.48	6.5422	-0.0428	0.4225
256	SLU 63	-1.2	-0.27	43.46	6.5391	-0.0428	0.4178
256	SLU 64	-1.22	-0.22	41.47	6.2749	-0.04	0.4253
256	SLU 65	-1.2	-0.27	41.43	6.2697	-0.04	0.4175
256	SLU 66	-1.25	-0.22	42.19	6.3701	-0.0408	0.4341
256	SLU 67	-1.23	-0.25	42.16	6.367	-0.0407	0.4294
256	SLU 68	-1.21	-0.27	41.89	6.3307	-0.0405	0.4234
256	SLU 69	-1.26	-0.23	42.64	6.4311	-0.0412	0.44
256	SLU 70	-1.25	-0.26	42.62	6.428	-0.0412	0.4353
256	SLU 71	-1.25	-0.23	42.39	6.3968	-0.041	0.4371
256	SLU 72	-1.24	-0.26	42.36	6.3937	-0.041	0.4324
256	SLU 73	-1.26	-0.26	44.81	6.7173	-0.044	0.4377
256	SLU 74	-1.3	-0.21	45.57	6.8177	-0.0448	0.4543
256	SLU 75	-1.29	-0.24	45.54	6.8146	-0.0448	0.4496
256	SLU 76	-1.27	-0.26	45.27	6.7782	-0.0445	0.4436
256	SLU 77	-1.32	-0.21	46.02	6.8786	-0.0453	0.4601
256	SLU 78	-1.31	-0.24	46	6.8755	-0.0453	0.4555
256	SLU 79	-1.31	-0.21	45.77	6.8444	-0.045	0.4573
256	SLU 80	-1.3	-0.24	45.74	6.8413	-0.045	0.4526
256	SLU 81	-1.3	-0.2	46.3	6.9143	-0.0458	0.4541
256	SLU 82	-1.29	-0.23	46.28	6.9112	-0.0458	0.4495
256	SLU 83	-1.32	-0.2	46.76	6.9752	-0.0463	0.46
256	SLU 84	-1.31	-0.23	46.74	6.9721	-0.0463	0.4554
256	SLE RA 1	-0.91	-0.18	31.18	4.7317	-0.03	0.3189
256	SLE RA 2	-0.9	-0.21	31.15	4.7282	-0.03	0.3137
256	SLE RA 3	-0.93	-0.18	31.66	4.7952	-0.0305	0.3247
256	SLE RA 4	-0.92	-0.2	31.64	4.7931	-0.0305	0.3216
256	SLE RA 5	-0.91	-0.21	31.46	4.7689	-0.0303	0.3176
256	SLE RA 6	-0.94	-0.18	31.96	4.8358	-0.0308	0.3287
256	SLE RA 7	-0.93	-0.2	31.95	4.8337	-0.0308	0.3256
256	SLE RA 8	-0.94	-0.18	31.79	4.8129	-0.0307	0.3268
256	SLE RA 9	-0.93	-0.2	31.77	4.8109	-0.0306	0.3236
256	SLE RA 10	-0.94	-0.2	33.41	5.0266	-0.0327	0.3272
256	SLE RA 11	-0.97	-0.17	33.91	5.0935	-0.0332	0.3382
256	SLE RA 12	-0.96	-0.19	33.9	5.0915	-0.0332	0.3351
256	SLE RA 13	-0.95	-0.2	33.71	5.0672	-0.033	0.3311
256	SLE RA 14	-0.98	-0.17	34.22	5.1342	-0.0335	0.3421
256	SLE RA 15	-0.97	-0.19	34.2	5.1321	-0.0335	0.339
256	SLE RA 16	-0.98	-0.17	34.04	5.1113	-0.0334	0.3402
256	SLE RA 17	-0.97	-0.19	34.03	5.1093	-0.0333	0.3371
256	SLE RA 18	-0.97	-0.16	34.4	5.1579	-0.0339	0.3381
256	SLE RA 19	-0.96	-0.18	34.39	5.1559	-0.0339	0.335
256	SLE RA 20	-0.98	-0.17	34.71	5.1986	-0.0342	0.3421
256	SLE RA 21	-0.97	-0.19	34.69	5.1965	-0.0342	0.3389
256	SLE FR 1	-0.91	-0.18	31.18	4.7317	-0.03	0.3189
256	SLE FR 2	-0.91	-0.19	31.18	4.731	-0.03	0.3179
256	SLE FR 3	-0.92	-0.18	31.3	4.7479	-0.0301	0.3205
256	SLE FR 4	-0.93	-0.18	32.14	4.8589	-0.0312	0.3236
256	SLE FR 5	-0.94	-0.18	32.27	4.8758	-0.0313	0.3262
256	SLE FR 6	-0.94	-0.17	32.79	4.9448	-0.0319	0.3285
256	SLE QP 1	-0.91	-0.18	31.18	4.7317	-0.03	0.3189
256	SLE QP 2	-0.93	-0.18	32.15	4.8596	-0.0312	0.3247
256	SLD 1	2.38	0.08	37.66	5.3635	-0.0231	-0.8355
256	SLD 2	2.73	-0.22	37.37	5.3336	-0.0232	-0.9589
256	SLD 3	2.48	-0.8	37.12	5.2423	-0.022	-0.8695
256	SLD 4	2.83	-1.1	36.83	5.2123	-0.0221	-0.9929
256	SLD 5	-0.15	1.29	34.68	5.2001	-0.0303	0.0506
256	SLD 6	0.09	1.09	34.48	5.1803	-0.0304	-0.0313
256	SLD 7	0.17	-1.65	32.87	4.7959	-0.0268	-0.0627
256	SLD 8	0.41	-1.84	32.68	4.776	-0.0269	-0.1446
256	SLD 9	-2.27	1.49	31.62	4.9431	-0.0355	0.794
256	SLD 10	-2.04	1.29	31.43	4.9232	-0.0355	0.712
256	SLD 11	-1.95	-1.45	29.81	4.5388	-0.0319	0.6806
256	SLD 12	-1.71	-1.64	29.62	4.519	-0.032	0.5987
256	SLD 13	-4.69	0.75	27.47	4.5068	-0.0402	1.6423
256	SLD 14	-4.34	0.45	27.18	4.4769	-0.0403	1.5188
256	SLD 15	-4.6	-0.14	26.93	4.3855	-0.0392	1.6083
256	SLD 16	-4.24	-0.43	26.63	4.3556	-0.0393	1.4848
256	SLV 1	6.82	0.38	45.03	6.0382	-0.0122	-2.3888

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
256	SLV 2	7.64	-0.3	44.35	5.9686	-0.0124	-2.6762
256	SLV 3	7.04	-1.61	43.8	5.755	-0.0098	-2.4671
256	SLV 4	7.86	-2.3	43.11	5.6853	-0.01	-2.7545
256	SLV 5	0.91	3.13	38	5.655	-0.0291	-0.3201
256	SLV 6	1.44	2.69	37.56	5.6097	-0.0292	-0.5073
256	SLV 7	1.65	-3.51	33.89	4.7108	-0.0211	-0.5811
256	SLV 8	2.19	-3.95	33.45	4.6654	-0.0212	-0.7684
256	SLV 9	-4.05	3.6	30.85	5.0537	-0.0411	1.4177
256	SLV 10	-3.52	3.16	30.41	5.0083	-0.0413	1.2305
256	SLV 11	-3.31	-3.04	26.74	4.1094	-0.0331	1.1567
256	SLV 12	-2.77	-3.48	26.29	4.0641	-0.0332	0.9694
256	SLV 13	-9.73	1.94	21.18	4.0338	-0.0523	3.4038
256	SLV 14	-8.9	1.26	20.5	3.9642	-0.0525	3.1164
256	SLV 15	-9.5	-0.05	19.95	3.7505	-0.0499	3.3255
256	SLV 16	-8.68	-0.73	19.27	3.6809	-0.0501	3.0381
256	CRTFP Ux+	0	0	0	0	0	0
256	CRTFP Ux-	0	0	0	0	0	0
256	CRTFP Uy+	0	0	0	0	0	0
256	CRTFP Uy-	0	0	0	0	0	0
257	SLU 1	-0.88	-0.24	31.34	5.5699	-0.0394	0.3059
257	SLU 2	-0.86	-0.29	31.3	5.5634	-0.0393	0.2981
257	SLU 3	-0.9	-0.24	32.08	5.69	-0.0404	0.3145
257	SLU 4	-0.89	-0.27	32.06	5.6861	-0.0404	0.3099
257	SLU 5	-0.87	-0.29	31.77	5.6402	-0.04	0.3039
257	SLU 6	-0.92	-0.24	32.56	5.7668	-0.0411	0.3204
257	SLU 7	-0.91	-0.27	32.53	5.7629	-0.041	0.3157
257	SLU 8	-0.91	-0.24	32.29	5.7235	-0.0407	0.3176
257	SLU 9	-0.9	-0.27	32.26	5.7196	-0.0407	0.3129
257	SLU 10	-0.91	-0.28	34.83	6.134	-0.0447	0.3182
257	SLU 11	-0.96	-0.23	35.62	6.2606	-0.0458	0.3346
257	SLU 12	-0.95	-0.26	35.59	6.2567	-0.0457	0.33
257	SLU 13	-0.93	-0.28	35.31	6.2108	-0.0454	0.324
257	SLU 14	-0.98	-0.23	36.09	6.3374	-0.0464	0.3405
257	SLU 15	-0.97	-0.26	36.06	6.3335	-0.0464	0.3358
257	SLU 16	-0.97	-0.23	35.82	6.2942	-0.0461	0.3377
257	SLU 17	-0.96	-0.26	35.8	6.2903	-0.046	0.333
257	SLU 18	-0.96	-0.22	36.39	6.3851	-0.047	0.3346
257	SLU 19	-0.95	-0.25	36.36	6.3812	-0.047	0.3299
257	SLU 20	-0.98	-0.23	36.86	6.4619	-0.0477	0.3404
257	SLU 21	-0.97	-0.25	36.84	6.458	-0.0477	0.3358
257	SLU 22	-0.99	-0.2	34.75	6.119	-0.0441	0.3433
257	SLU 23	-0.96	-0.25	34.71	6.1125	-0.0441	0.3355
257	SLU 24	-1.01	-0.2	35.5	6.239	-0.0452	0.3519
257	SLU 25	-1	-0.23	35.47	6.2351	-0.0451	0.3472
257	SLU 26	-0.98	-0.25	35.19	6.1893	-0.0447	0.3413
257	SLU 27	-1.03	-0.21	35.97	6.3159	-0.0458	0.3578
257	SLU 28	-1.01	-0.24	35.95	6.312	-0.0458	0.3531
257	SLU 29	-1.02	-0.21	35.7	6.2726	-0.0455	0.3549
257	SLU 30	-1.01	-0.24	35.68	6.2687	-0.0454	0.3503
257	SLU 31	-1.02	-0.24	38.24	6.6831	-0.0494	0.3556
257	SLU 32	-1.07	-0.19	39.03	6.8097	-0.0505	0.372
257	SLU 33	-1.06	-0.22	39	6.8058	-0.0505	0.3673
257	SLU 34	-1.04	-0.24	38.72	6.7599	-0.0501	0.3614
257	SLU 35	-1.09	-0.19	39.5	6.8865	-0.0512	0.3779
257	SLU 36	-1.07	-0.22	39.48	6.8826	-0.0511	0.3732
257	SLU 37	-1.08	-0.2	39.23	6.8432	-0.0508	0.375
257	SLU 38	-1.06	-0.22	39.21	6.8393	-0.0508	0.3704
257	SLU 39	-1.07	-0.19	39.8	6.9342	-0.0518	0.372
257	SLU 40	-1.06	-0.22	39.77	6.9303	-0.0518	0.3673
257	SLU 41	-1.09	-0.19	40.27	7.011	-0.0524	0.3778
257	SLU 42	-1.07	-0.22	40.25	7.0071	-0.0524	0.3731
257	SLU 43	-1.11	-0.33	39.57	7.0526	-0.0496	0.3848
257	SLU 44	-1.08	-0.37	39.53	7.0461	-0.0495	0.377
257	SLU 45	-1.13	-0.33	40.32	7.1727	-0.0506	0.3935
257	SLU 46	-1.12	-0.36	40.29	7.1688	-0.0506	0.3888
257	SLU 47	-1.1	-0.38	40.01	7.1229	-0.0502	0.3829
257	SLU 48	-1.15	-0.33	40.79	7.2495	-0.0513	0.3993
257	SLU 49	-1.13	-0.36	40.77	7.2456	-0.0512	0.3946
257	SLU 50	-1.14	-0.33	40.52	7.2062	-0.0509	0.3965
257	SLU 51	-1.13	-0.36	40.5	7.2023	-0.0509	0.3918
257	SLU 52	-1.14	-0.36	43.06	7.6167	-0.0549	0.3971
257	SLU 53	-1.19	-0.32	43.85	7.7433	-0.056	0.4136
257	SLU 54	-1.18	-0.34	43.82	7.7394	-0.0559	0.4089
257	SLU 55	-1.16	-0.36	43.54	7.6936	-0.0556	0.403
257	SLU 56	-1.21	-0.32	44.32	7.8201	-0.0566	0.4194
257	SLU 57	-1.19	-0.35	44.3	7.8162	-0.0566	0.4147
257	SLU 58	-1.2	-0.32	44.05	7.7769	-0.0563	0.4166
257	SLU 59	-1.18	-0.35	44.03	7.773	-0.0562	0.4119
257	SLU 60	-1.19	-0.31	44.62	7.8678	-0.0572	0.4135
257	SLU 61	-1.18	-0.34	44.59	7.8639	-0.0572	0.4089
257	SLU 62	-1.21	-0.31	45.09	7.9446	-0.0579	0.4194
257	SLU 63	-1.19	-0.34	45.07	7.9407	-0.0579	0.4147
257	SLU 64	-1.21	-0.29	42.99	7.6017	-0.0543	0.4222
257	SLU 65	-1.19	-0.34	42.94	7.5952	-0.0543	0.4144
257	SLU 66	-1.24	-0.29	43.73	7.7217	-0.0554	0.4309
257	SLU 67	-1.22	-0.32	43.7	7.7178	-0.0553	0.4262
257	SLU 68	-1.21	-0.34	43.42	7.672	-0.0549	0.4202
257	SLU 69	-1.25	-0.29	44.2	7.7986	-0.056	0.4367
257	SLU 70	-1.24	-0.32	44.18	7.7947	-0.056	0.432
257	SLU 71	-1.25	-0.29	43.93	7.7553	-0.0556	0.4339

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
257	SLU 72	-1.23	-0.32	43.91	7.7514	-0.0556	0.4292
257	SLU 73	-1.25	-0.32	46.48	8.1658	-0.0596	0.4345
257	SLU 74	-1.3	-0.28	47.26	8.2924	-0.0607	0.451
257	SLU 75	-1.28	-0.31	47.24	8.2885	-0.0607	0.4463
257	SLU 76	-1.27	-0.33	46.95	8.2426	-0.0603	0.4403
257	SLU 77	-1.31	-0.28	47.74	8.3692	-0.0614	0.4568
257	SLU 78	-1.3	-0.31	47.71	8.3653	-0.0613	0.4521
257	SLU 79	-1.3	-0.28	47.47	8.326	-0.061	0.454
257	SLU 80	-1.29	-0.31	47.44	8.3221	-0.061	0.4493
257	SLU 81	-1.3	-0.27	48.03	8.4169	-0.062	0.4509
257	SLU 82	-1.28	-0.3	48.01	8.413	-0.062	0.4462
257	SLU 83	-1.31	-0.27	48.51	8.4937	-0.0626	0.4568
257	SLU 84	-1.3	-0.3	48.48	8.4898	-0.0626	0.4521
257	SLE RA 1	-0.91	-0.23	32.32	5.7268	-0.0408	0.3166
257	SLE RA 2	-0.89	-0.26	32.29	5.7224	-0.0407	0.3114
257	SLE RA 3	-0.93	-0.23	32.81	5.8068	-0.0414	0.3223
257	SLE RA 4	-0.92	-0.25	32.79	5.8042	-0.0414	0.3192
257	SLE RA 5	-0.91	-0.26	32.6	5.7737	-0.0412	0.3153
257	SLE RA 6	-0.94	-0.23	33.13	5.858	-0.0419	0.3262
257	SLE RA 7	-0.93	-0.25	33.11	5.8554	-0.0419	0.3231
257	SLE RA 8	-0.93	-0.23	32.95	5.8292	-0.0416	0.3243
257	SLE RA 9	-0.92	-0.25	32.93	5.8266	-0.0416	0.3212
257	SLE RA 10	-0.93	-0.25	34.64	6.1029	-0.0443	0.3248
257	SLE RA 11	-0.96	-0.22	35.17	6.1872	-0.045	0.3357
257	SLE RA 12	-0.96	-0.24	35.15	6.1846	-0.045	0.3326
257	SLE RA 13	-0.94	-0.26	34.96	6.1541	-0.0447	0.3287
257	SLE RA 14	-0.98	-0.22	35.48	6.2384	-0.0454	0.3396
257	SLE RA 15	-0.97	-0.24	35.47	6.2358	-0.0454	0.3365
257	SLE RA 16	-0.97	-0.22	35.3	6.2096	-0.0452	0.3377
257	SLE RA 17	-0.96	-0.24	35.29	6.207	-0.0452	0.3346
257	SLE RA 18	-0.96	-0.22	35.68	6.2702	-0.0459	0.3357
257	SLE RA 19	-0.96	-0.24	35.66	6.2676	-0.0458	0.3326
257	SLE RA 20	-0.98	-0.22	36	6.3214	-0.0463	0.3396
257	SLE RA 21	-0.97	-0.24	35.98	6.3188	-0.0463	0.3365
257	SLE FR 1	-0.91	-0.23	32.32	5.7268	-0.0408	0.3166
257	SLE FR 2	-0.91	-0.24	32.31	5.7259	-0.0407	0.3155
257	SLE FR 3	-0.91	-0.23	32.44	5.7473	-0.0409	0.3181
257	SLE FR 4	-0.92	-0.23	33.32	5.8889	-0.0423	0.3213
257	SLE FR 5	-0.93	-0.23	33.45	5.9103	-0.0425	0.3239
257	SLE FR 6	-0.94	-0.22	34	5.9985	-0.0433	0.3261
257	SLE QP 1	-0.91	-0.23	32.32	5.7268	-0.0408	0.3166
257	SLE QP 2	-0.93	-0.23	33.33	5.8898	-0.0423	0.3223
257	SLD 1	2.39	0	38.62	6.4802	-0.0365	-0.8391
257	SLD 2	2.74	-0.28	38.33	6.4435	-0.0365	-0.9625
257	SLD 3	2.49	-0.88	38.04	6.3634	-0.0351	-0.8731
257	SLD 4	2.84	-1.16	37.75	6.3267	-0.0351	-0.9965
257	SLD 5	-0.14	1.23	35.84	6.2507	-0.0427	0.0478
257	SLD 6	0.09	1.04	35.64	6.2264	-0.0427	-0.0341
257	SLD 7	0.18	-1.71	33.92	5.8614	-0.038	-0.0654
257	SLD 8	0.41	-1.9	33.73	5.8371	-0.038	-0.1473
257	SLD 9	-2.27	1.44	32.92	5.9425	-0.0466	0.7919
257	SLD 10	-2.03	1.25	32.73	5.9182	-0.0466	0.71
257	SLD 11	-1.94	-1.5	31.01	5.5532	-0.0419	0.6787
257	SLD 12	-1.71	-1.68	30.81	5.5289	-0.0419	0.5968
257	SLD 13	-4.69	0.71	28.9	5.4529	-0.0495	1.6411
257	SLD 14	-4.34	0.43	28.61	5.4162	-0.0495	1.5177
257	SLD 15	-4.6	-0.17	28.33	5.3361	-0.0481	1.6071
257	SLD 16	-4.24	-0.46	28.03	5.2994	-0.0481	1.4837
257	SLV 1	6.83	0.27	45.69	7.2699	-0.0287	-2.3942
257	SLV 2	7.65	-0.39	45	7.1846	-0.0286	-2.6814
257	SLV 3	7.05	-1.72	44.38	6.9983	-0.0255	-2.4724
257	SLV 4	7.88	-2.38	43.7	6.913	-0.0254	-2.7596
257	SLV 5	0.92	3.06	39.13	6.7309	-0.0431	-0.3235
257	SLV 6	1.46	2.64	38.69	6.6753	-0.043	-0.5107
257	SLV 7	1.66	-3.59	34.78	5.8253	-0.0324	-0.5842
257	SLV 8	2.2	-4.01	34.34	5.7697	-0.0324	-0.7714
257	SLV 9	-4.05	3.56	32.31	6.0099	-0.0522	1.416
257	SLV 10	-3.51	3.13	31.87	5.9543	-0.0521	1.2288
257	SLV 11	-3.31	-3.09	27.96	5.1043	-0.0416	1.1553
257	SLV 12	-2.77	-3.52	27.52	5.0487	-0.0415	0.9681
257	SLV 13	-9.73	1.93	22.95	4.8667	-0.0591	3.4042
257	SLV 14	-8.91	1.27	22.27	4.7814	-0.059	3.117
257	SLV 15	-9.51	-0.07	21.65	4.595	-0.0559	3.326
257	SLV 16	-8.68	-0.73	20.97	4.5097	-0.0558	3.0388
257	CRTFP Ux+	0	0	0	0	0	0
257	CRTFP Ux-	0	0	0	0	0	0
257	CRTFP Uy+	0	0	0	0	0	0
257	CRTFP Uy-	0	0	0	0	0	0
258	SLU 1	-0.87	-0.3	32.73	6.7746	-0.0472	0.3031
258	SLU 2	-0.85	-0.35	32.69	6.7665	-0.0471	0.2953
258	SLU 3	-0.9	-0.31	33.51	6.9258	-0.0484	0.3117
258	SLU 4	-0.88	-0.34	33.48	6.921	-0.0484	0.307
258	SLU 5	-0.87	-0.36	33.18	6.8632	-0.0479	0.3011
258	SLU 6	-0.91	-0.31	34.01	7.0224	-0.0492	0.3175
258	SLU 7	-0.9	-0.34	33.98	7.0176	-0.0492	0.3128
258	SLU 8	-0.91	-0.31	33.73	6.9679	-0.0488	0.3147
258	SLU 9	-0.89	-0.34	33.7	6.9631	-0.0487	0.31
258	SLU 10	-0.91	-0.35	36.41	7.491	-0.0535	0.3153
258	SLU 11	-0.95	-0.3	37.23	7.6502	-0.0548	0.3317
258	SLU 12	-0.94	-0.33	37.2	7.6454	-0.0547	0.327

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLU 13	-0.92	-0.35	36.9	7.5876	-0.0543	0.3211
258	SLU 14	-0.97	-0.3	37.73	7.7468	-0.0555	0.3375
258	SLU 15	-0.96	-0.33	37.7	7.742	-0.0555	0.3328
258	SLU 16	-0.96	-0.3	37.45	7.6923	-0.0551	0.3347
258	SLU 17	-0.95	-0.33	37.42	7.6875	-0.0551	0.33
258	SLU 18	-0.96	-0.3	38.05	7.8094	-0.0562	0.3317
258	SLU 19	-0.94	-0.33	38.02	7.8046	-0.0562	0.327
258	SLU 20	-0.97	-0.3	38.54	7.9061	-0.057	0.3375
258	SLU 21	-0.96	-0.33	38.52	7.9013	-0.057	0.3328
258	SLU 22	-0.98	-0.27	36.31	7.469	-0.0529	0.3403
258	SLU 23	-0.96	-0.32	36.27	7.461	-0.0528	0.3325
258	SLU 24	-1	-0.27	37.09	7.6202	-0.0541	0.3488
258	SLU 25	-0.99	-0.3	37.06	7.6154	-0.054	0.3441
258	SLU 26	-0.97	-0.32	36.76	7.5577	-0.0536	0.3382
258	SLU 27	-1.02	-0.28	37.59	7.7169	-0.0549	0.3546
258	SLU 28	-1.01	-0.31	37.56	7.7121	-0.0548	0.3499
258	SLU 29	-1.01	-0.28	37.31	7.6624	-0.0544	0.3518
258	SLU 30	-1	-0.31	37.28	7.6576	-0.0544	0.3472
258	SLU 31	-1.01	-0.31	39.99	8.1854	-0.0591	0.3524
258	SLU 32	-1.06	-0.27	40.81	8.3446	-0.0604	0.3688
258	SLU 33	-1.05	-0.3	40.78	8.3398	-0.0604	0.3641
258	SLU 34	-1.03	-0.32	40.48	8.2821	-0.0599	0.3582
258	SLU 35	-1.08	-0.27	41.31	8.4413	-0.0612	0.3746
258	SLU 36	-1.06	-0.3	41.28	8.4365	-0.0612	0.3699
258	SLU 37	-1.07	-0.27	41.03	8.3868	-0.0608	0.3718
258	SLU 38	-1.06	-0.3	41	8.382	-0.0607	0.3671
258	SLU 39	-1.06	-0.26	41.62	8.5039	-0.0619	0.3688
258	SLU 40	-1.05	-0.29	41.6	8.4991	-0.0619	0.3641
258	SLU 41	-1.08	-0.27	42.12	8.6005	-0.0627	0.3746
258	SLU 42	-1.06	-0.3	42.1	8.5957	-0.0626	0.3699
258	SLU 43	-1.1	-0.41	41.32	8.5688	-0.0594	0.3814
258	SLU 44	-1.08	-0.46	41.28	8.5608	-0.0594	0.3735
258	SLU 45	-1.12	-0.41	42.1	8.72	-0.0606	0.3899
258	SLU 46	-1.11	-0.44	42.08	8.7152	-0.0606	0.3852
258	SLU 47	-1.09	-0.46	41.78	8.6575	-0.0601	0.3793
258	SLU 48	-1.14	-0.41	42.6	8.8167	-0.0614	0.3957
258	SLU 49	-1.13	-0.44	42.57	8.8119	-0.0614	0.391
258	SLU 50	-1.13	-0.41	42.32	8.7622	-0.061	0.3929
258	SLU 51	-1.12	-0.44	42.29	8.7574	-0.0609	0.3882
258	SLU 52	-1.13	-0.45	45	9.2852	-0.0657	0.3935
258	SLU 53	-1.18	-0.4	45.82	9.4444	-0.067	0.4099
258	SLU 54	-1.17	-0.43	45.8	9.4396	-0.0669	0.4052
258	SLU 55	-1.15	-0.45	45.5	9.3819	-0.0665	0.3993
258	SLU 56	-1.2	-0.41	46.32	9.5411	-0.0678	0.4157
258	SLU 57	-1.18	-0.44	46.29	9.5363	-0.0677	0.411
258	SLU 58	-1.19	-0.41	46.04	9.4866	-0.0673	0.4129
258	SLU 59	-1.18	-0.44	46.01	9.4818	-0.0673	0.4082
258	SLU 60	-1.18	-0.4	46.64	9.6037	-0.0685	0.4099
258	SLU 61	-1.17	-0.43	46.61	9.5989	-0.0684	0.4052
258	SLU 62	-1.2	-0.4	47.13	9.7004	-0.0692	0.4157
258	SLU 63	-1.18	-0.43	47.11	9.6956	-0.0692	0.411
258	SLU 64	-1.2	-0.37	44.9	9.2633	-0.0651	0.4185
258	SLU 65	-1.18	-0.42	44.86	9.2553	-0.065	0.4107
258	SLU 66	-1.23	-0.38	45.68	9.4145	-0.0663	0.427
258	SLU 67	-1.22	-0.41	45.65	9.4097	-0.0663	0.4224
258	SLU 68	-1.2	-0.43	45.36	9.3519	-0.0658	0.4165
258	SLU 69	-1.25	-0.38	46.18	9.5112	-0.0671	0.4328
258	SLU 70	-1.23	-0.41	46.15	9.5063	-0.067	0.4281
258	SLU 71	-1.24	-0.38	45.9	9.4566	-0.0666	0.43
258	SLU 72	-1.22	-0.41	45.87	9.4518	-0.0666	0.4254
258	SLU 73	-1.24	-0.42	48.58	9.9797	-0.0713	0.4307
258	SLU 74	-1.29	-0.37	49.4	10.1389	-0.0726	0.447
258	SLU 75	-1.27	-0.4	49.37	10.1341	-0.0726	0.4423
258	SLU 76	-1.26	-0.42	49.08	10.0763	-0.0721	0.4364
258	SLU 77	-1.3	-0.37	49.9	10.2356	-0.0734	0.4528
258	SLU 78	-1.29	-0.4	49.87	10.2308	-0.0734	0.4481
258	SLU 79	-1.3	-0.37	49.62	10.181	-0.073	0.45
258	SLU 80	-1.28	-0.4	49.59	10.1762	-0.0729	0.4453
258	SLU 81	-1.29	-0.37	50.22	10.2981	-0.0741	0.447
258	SLU 82	-1.27	-0.4	50.19	10.2933	-0.0741	0.4423
258	SLU 83	-1.3	-0.37	50.71	10.3948	-0.0749	0.4528
258	SLU 84	-1.29	-0.4	50.69	10.39	-0.0749	0.4481
258	SLE RA 1	-0.9	-0.3	33.75	6.973	-0.0488	0.3137
258	SLE RA 2	-0.89	-0.33	33.72	6.9676	-0.0488	0.3085
258	SLE RA 3	-0.92	-0.3	34.27	7.0738	-0.0496	0.3195
258	SLE RA 4	-0.91	-0.32	34.26	7.0706	-0.0496	0.3163
258	SLE RA 5	-0.9	-0.33	34.06	7.0321	-0.0493	0.3124
258	SLE RA 6	-0.93	-0.3	34.6	7.1382	-0.0502	0.3233
258	SLE RA 7	-0.92	-0.32	34.59	7.135	-0.0501	0.3202
258	SLE RA 8	-0.93	-0.3	34.42	7.1019	-0.0499	0.3215
258	SLE RA 9	-0.92	-0.32	34.4	7.0987	-0.0498	0.3183
258	SLE RA 10	-0.93	-0.32	36.2	7.4506	-0.053	0.3219
258	SLE RA 11	-0.96	-0.29	36.75	7.5567	-0.0539	0.3328
258	SLE RA 12	-0.95	-0.31	36.74	7.5535	-0.0538	0.3297
258	SLE RA 13	-0.94	-0.33	36.54	7.515	-0.0535	0.3257
258	SLE RA 14	-0.97	-0.29	37.08	7.6212	-0.0544	0.3366
258	SLE RA 15	-0.96	-0.31	37.07	7.618	-0.0544	0.3335
258	SLE RA 16	-0.96	-0.3	36.9	7.5848	-0.0541	0.3348
258	SLE RA 17	-0.95	-0.31	36.88	7.5816	-0.0541	0.3317
258	SLE RA 18	-0.96	-0.29	37.3	7.6629	-0.0548	0.3328

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLE RA 19	-0.95	-0.31	37.28	7.6597	-0.0548	0.3297
258	SLE RA 20	-0.97	-0.29	37.63	7.7273	-0.0554	0.3366
258	SLE RA 21	-0.96	-0.31	37.61	7.7241	-0.0553	0.3335
258	SLE FR 1	-0.9	-0.3	33.75	6.973	-0.0488	0.3137
258	SLE FR 2	-0.9	-0.3	33.75	6.9719	-0.0488	0.3127
258	SLE FR 3	-0.91	-0.3	33.89	6.9987	-0.049	0.3153
258	SLE FR 4	-0.92	-0.3	34.81	7.1789	-0.0506	0.3184
258	SLE FR 5	-0.92	-0.29	34.95	7.2057	-0.0508	0.321
258	SLE FR 6	-0.93	-0.29	35.53	7.3179	-0.0518	0.3233
258	SLE QP 1	-0.9	-0.3	33.75	6.973	-0.0488	0.3137
258	SLE QP 2	-0.92	-0.29	34.82	7.1799	-0.0506	0.3195
258	SLD 1	2.4	-0.08	39.95	7.9058	-0.0465	-0.8431
258	SLD 2	2.75	-0.36	39.66	7.8606	-0.0464	-0.9663
258	SLD 3	2.5	-0.97	39.34	7.7836	-0.0449	-0.8769
258	SLD 4	2.85	-1.25	39.04	7.7383	-0.0448	-1.0002
258	SLD 5	-0.13	1.17	37.34	7.5914	-0.0518	0.0444
258	SLD 6	0.1	0.99	37.15	7.5614	-0.0517	-0.0374
258	SLD 7	0.19	-1.8	35.3	7.1838	-0.0465	-0.0684
258	SLD 8	0.42	-1.98	35.1	7.1538	-0.0465	-0.1501
258	SLD 9	-2.26	1.39	34.53	7.2061	-0.0548	0.789
258	SLD 10	-2.03	1.21	34.34	7.1761	-0.0547	0.7073
258	SLD 11	-1.94	-1.58	32.49	6.7985	-0.0495	0.6763
258	SLD 12	-1.71	-1.76	32.29	6.7685	-0.0494	0.5945
258	SLD 13	-4.69	0.66	30.59	6.6215	-0.0564	1.6391
258	SLD 14	-4.34	0.39	30.3	6.5763	-0.0563	1.5159
258	SLD 15	-4.59	-0.23	29.98	6.4993	-0.0549	1.6052
258	SLD 16	-4.24	-0.5	29.68	6.4541	-0.0547	1.482
258	SLV 1	6.85	0.16	46.8	8.8756	-0.0409	-2.3997
258	SLV 2	7.67	-0.48	46.12	8.7704	-0.0406	-2.6866
258	SLV 3	7.07	-1.85	45.41	8.5938	-0.0373	-2.4776
258	SLV 4	7.89	-2.49	44.72	8.4885	-0.0371	-2.7645
258	SLV 5	0.93	3.01	40.65	8.1346	-0.0532	-0.3277
258	SLV 6	1.47	2.6	40.2	8.066	-0.053	-0.5146
258	SLV 7	1.67	-3.7	36	7.1952	-0.0412	-0.5874
258	SLV 8	2.2	-4.12	35.55	7.1266	-0.0411	-0.7744
258	SLV 9	-4.04	3.54	34.08	7.2333	-0.0602	1.4133
258	SLV 10	-3.51	3.12	33.63	7.1647	-0.06	1.2264
258	SLV 11	-3.31	-3.18	29.43	6.2939	-0.0482	1.1535
258	SLV 12	-2.77	-3.6	28.98	6.2253	-0.0481	0.9666
258	SLV 13	-9.73	1.91	24.91	5.8713	-0.0642	3.4034
258	SLV 14	-8.91	1.26	24.22	5.7661	-0.0639	3.1165
258	SLV 15	-9.51	-0.11	23.52	5.5895	-0.0606	3.3255
258	SLV 16	-8.68	-0.75	22.83	5.4842	-0.0603	3.0386
258	CRTFP Ux+	0	0	0	0	0	0
258	CRTFP Ux-	0	0	0	0	0	0
258	CRTFP Uy+	0	0	0	0	0	0
258	CRTFP Uy-	0	0	0	0	0	0
259	SLU 1	-0.86	-0.39	34.31	8.1626	-0.0508	0.2998
259	SLU 2	-0.84	-0.43	34.26	8.153	-0.0508	0.292
259	SLU 3	-0.89	-0.39	35.13	8.3497	-0.0522	0.3083
259	SLU 4	-0.88	-0.42	35.1	8.3439	-0.0521	0.3036
259	SLU 5	-0.86	-0.44	34.79	8.2725	-0.0516	0.2978
259	SLU 6	-0.91	-0.39	35.65	8.4692	-0.053	0.314
259	SLU 7	-0.89	-0.42	35.62	8.4635	-0.053	0.3093
259	SLU 8	-0.9	-0.39	35.36	8.4017	-0.0525	0.3113
259	SLU 9	-0.88	-0.42	35.33	8.3959	-0.0525	0.3066
259	SLU 10	-0.9	-0.44	38.19	9.0544	-0.0576	0.3118
259	SLU 11	-0.95	-0.39	39.06	9.2511	-0.059	0.3281
259	SLU 12	-0.93	-0.42	39.03	9.2454	-0.0589	0.3234
259	SLU 13	-0.92	-0.44	38.72	9.174	-0.0584	0.3176
259	SLU 14	-0.96	-0.4	39.58	9.3707	-0.0598	0.3338
259	SLU 15	-0.95	-0.43	39.55	9.3649	-0.0598	0.3291
259	SLU 16	-0.96	-0.4	39.29	9.3031	-0.0593	0.3311
259	SLU 17	-0.94	-0.43	39.26	9.2974	-0.0593	0.3264
259	SLU 18	-0.95	-0.39	39.92	9.4504	-0.0605	0.3281
259	SLU 19	-0.93	-0.42	39.9	9.4446	-0.0605	0.3235
259	SLU 20	-0.96	-0.39	40.45	9.5699	-0.0614	0.3339
259	SLU 21	-0.95	-0.42	40.42	9.5642	-0.0614	0.3292
259	SLU 22	-0.97	-0.36	38.08	9.0244	-0.0569	0.3366
259	SLU 23	-0.95	-0.41	38.03	9.0148	-0.0568	0.3288
259	SLU 24	-1	-0.36	38.9	9.2115	-0.0582	0.3451
259	SLU 25	-0.98	-0.39	38.87	9.2057	-0.0582	0.3404
259	SLU 26	-0.96	-0.41	38.55	9.1343	-0.0577	0.3345
259	SLU 27	-1.01	-0.37	39.42	9.331	-0.0591	0.3508
259	SLU 28	-1	-0.4	39.39	9.3253	-0.059	0.3461
259	SLU 29	-1	-0.37	39.12	9.2635	-0.0586	0.3481
259	SLU 30	-0.99	-0.4	39.1	9.2577	-0.0586	0.3434
259	SLU 31	-1.01	-0.41	41.96	9.9162	-0.0636	0.3486
259	SLU 32	-1.05	-0.37	42.83	10.1129	-0.065	0.3649
259	SLU 33	-1.04	-0.4	42.8	10.1072	-0.065	0.3602
259	SLU 34	-1.02	-0.41	42.48	10.0358	-0.0645	0.3543
259	SLU 35	-1.07	-0.37	43.35	10.2325	-0.0659	0.3706
259	SLU 36	-1.06	-0.4	43.32	10.2267	-0.0658	0.3659
259	SLU 37	-1.06	-0.37	43.05	10.1649	-0.0654	0.3679
259	SLU 38	-1.05	-0.4	43.03	10.1592	-0.0653	0.3632
259	SLU 39	-1.05	-0.36	43.69	10.3122	-0.0666	0.3649
259	SLU 40	-1.04	-0.39	43.66	10.3064	-0.0666	0.3602
259	SLU 41	-1.07	-0.37	44.22	10.4317	-0.0675	0.3706
259	SLU 42	-1.06	-0.4	44.19	10.426	-0.0674	0.366
259	SLU 43	-1.09	-0.51	43.31	10.3158	-0.064	0.3772

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLU 44	-1.07	-0.56	43.26	10.3063	-0.064	0.3694
259	SLU 45	-1.11	-0.51	44.13	10.5029	-0.0653	0.3856
259	SLU 46	-1.1	-0.54	44.1	10.4972	-0.0653	0.381
259	SLU 47	-1.08	-0.56	43.79	10.4258	-0.0648	0.3751
259	SLU 48	-1.13	-0.52	44.65	10.6225	-0.0662	0.3914
259	SLU 49	-1.12	-0.55	44.62	10.6167	-0.0661	0.3867
259	SLU 50	-1.12	-0.52	44.36	10.5549	-0.0657	0.3886
259	SLU 51	-1.11	-0.55	44.33	10.5492	-0.0657	0.3839
259	SLU 52	-1.12	-0.56	47.19	11.2077	-0.0708	0.3892
259	SLU 53	-1.17	-0.52	48.06	11.4044	-0.0721	0.4054
259	SLU 54	-1.16	-0.55	48.03	11.3987	-0.0721	0.4008
259	SLU 55	-1.14	-0.57	47.72	11.3273	-0.0716	0.3949
259	SLU 56	-1.19	-0.52	48.58	11.524	-0.073	0.4112
259	SLU 57	-1.17	-0.55	48.55	11.5182	-0.0729	0.4065
259	SLU 58	-1.18	-0.52	48.29	11.4564	-0.0725	0.4084
259	SLU 59	-1.17	-0.55	48.26	11.4507	-0.0725	0.4038
259	SLU 60	-1.17	-0.52	48.92	11.6036	-0.0737	0.4055
259	SLU 61	-1.16	-0.54	48.9	11.5979	-0.0737	0.4008
259	SLU 62	-1.19	-0.52	49.45	11.7232	-0.0746	0.4112
259	SLU 63	-1.17	-0.55	49.42	11.7175	-0.0745	0.4065
259	SLU 64	-1.19	-0.49	47.08	11.1777	-0.0701	0.414
259	SLU 65	-1.17	-0.53	47.03	11.1681	-0.07	0.4062
259	SLU 66	-1.22	-0.49	47.9	11.3648	-0.0714	0.4224
259	SLU 67	-1.2	-0.52	47.87	11.359	-0.0714	0.4177
259	SLU 68	-1.19	-0.54	47.55	11.2876	-0.0709	0.4119
259	SLU 69	-1.23	-0.49	48.42	11.4843	-0.0722	0.4281
259	SLU 70	-1.22	-0.52	48.39	11.4786	-0.0722	0.4235
259	SLU 71	-1.23	-0.49	48.12	11.4168	-0.0718	0.4254
259	SLU 72	-1.21	-0.52	48.1	11.411	-0.0717	0.4207
259	SLU 73	-1.23	-0.54	50.96	12.0695	-0.0768	0.426
259	SLU 74	-1.28	-0.49	51.83	12.2662	-0.0782	0.4422
259	SLU 75	-1.26	-0.52	51.8	12.2605	-0.0782	0.4375
259	SLU 76	-1.25	-0.54	51.49	12.1891	-0.0777	0.4317
259	SLU 77	-1.29	-0.5	52.35	12.3858	-0.079	0.4479
259	SLU 78	-1.28	-0.52	52.32	12.38	-0.079	0.4433
259	SLU 79	-1.28	-0.5	52.05	12.3182	-0.0786	0.4452
259	SLU 80	-1.27	-0.52	52.03	12.3125	-0.0785	0.4405
259	SLU 81	-1.28	-0.49	52.69	12.4655	-0.0798	0.4423
259	SLU 82	-1.26	-0.52	52.66	12.4597	-0.0798	0.4376
259	SLU 83	-1.29	-0.49	53.22	12.585	-0.0806	0.448
259	SLU 84	-1.28	-0.52	53.19	12.5793	-0.0806	0.4433
259	SLE RA 1	-0.9	-0.38	35.38	8.4088	-0.0526	0.3103
259	SLE RA 2	-0.88	-0.41	35.35	8.4024	-0.0525	0.3051
259	SLE RA 3	-0.91	-0.38	35.93	8.5335	-0.0535	0.316
259	SLE RA 4	-0.9	-0.4	35.91	8.5297	-0.0534	0.3129
259	SLE RA 5	-0.89	-0.41	35.7	8.4821	-0.0531	0.309
259	SLE RA 6	-0.92	-0.38	36.28	8.6132	-0.054	0.3198
259	SLE RA 7	-0.91	-0.4	36.26	8.6094	-0.054	0.3167
259	SLE RA 8	-0.92	-0.38	36.08	8.5682	-0.0537	0.318
259	SLE RA 9	-0.91	-0.4	36.06	8.5644	-0.0537	0.3149
259	SLE RA 10	-0.92	-0.41	37.97	9.0034	-0.0571	0.3183
259	SLE RA 11	-0.95	-0.38	38.55	9.1345	-0.058	0.3292
259	SLE RA 12	-0.94	-0.4	38.53	9.1307	-0.058	0.3261
259	SLE RA 13	-0.93	-0.42	38.32	9.0831	-0.0576	0.3222
259	SLE RA 14	-0.96	-0.39	38.9	9.2142	-0.0585	0.333
259	SLE RA 15	-0.95	-0.4	38.88	9.2104	-0.0585	0.3299
259	SLE RA 16	-0.96	-0.39	38.7	9.1692	-0.0582	0.3312
259	SLE RA 17	-0.95	-0.41	38.68	9.1653	-0.0582	0.3281
259	SLE RA 18	-0.95	-0.38	39.13	9.2673	-0.059	0.3292
259	SLE RA 19	-0.94	-0.4	39.11	9.2635	-0.059	0.3261
259	SLE RA 20	-0.96	-0.38	39.48	9.347	-0.0596	0.333
259	SLE RA 21	-0.95	-0.4	39.46	9.3432	-0.0596	0.3299
259	SLE FR 1	-0.9	-0.38	35.38	8.4088	-0.0526	0.3103
259	SLE FR 2	-0.89	-0.39	35.38	8.4075	-0.0526	0.3093
259	SLE FR 3	-0.9	-0.38	35.52	8.4407	-0.0528	0.3119
259	SLE FR 4	-0.91	-0.39	36.5	8.6651	-0.0545	0.315
259	SLE FR 5	-0.92	-0.38	36.65	8.6982	-0.0547	0.3175
259	SLE FR 6	-0.92	-0.38	37.26	8.8381	-0.0558	0.3198
259	SLE QP 1	-0.9	-0.38	35.38	8.4088	-0.0526	0.3103
259	SLE QP 2	-0.91	-0.38	36.51	8.6663	-0.0545	0.316
259	SLD 1	2.41	-0.18	41.52	9.5625	-0.0512	-0.8475
259	SLD 2	2.76	-0.45	41.22	9.5075	-0.0511	-0.9705
259	SLD 3	2.51	-1.09	40.87	9.4239	-0.0497	-0.8811
259	SLD 4	2.86	-1.36	40.57	9.3689	-0.0496	-1.0041
259	SLD 5	-0.12	1.1	39.06	9.1553	-0.0558	0.0403
259	SLD 6	0.11	0.92	38.87	9.1189	-0.0557	-0.0413
259	SLD 7	0.19	-1.92	36.87	8.6935	-0.0508	-0.0718
259	SLD 8	0.43	-2.09	36.67	8.657	-0.0507	-0.1534
259	SLD 9	-2.25	1.33	36.34	8.6757	-0.0583	0.7854
259	SLD 10	-2.02	1.16	36.14	8.6392	-0.0582	0.7038
259	SLD 11	-1.93	-1.68	34.15	8.2138	-0.0533	0.6733
259	SLD 12	-1.7	-1.86	33.95	8.1774	-0.0532	0.5917
259	SLD 13	-4.68	0.6	32.45	7.9637	-0.0595	1.6361
259	SLD 14	-4.33	0.33	32.15	7.9088	-0.0594	1.5132
259	SLD 15	-4.59	-0.31	31.79	7.8252	-0.058	1.6025
259	SLD 16	-4.23	-0.58	31.49	7.7702	-0.0578	1.4795
259	SLV 1	6.86	0.05	48.22	10.7585	-0.0467	-2.4054
259	SLV 2	7.68	-0.58	47.52	10.6305	-0.0464	-2.6917
259	SLV 3	7.08	-2	46.73	10.4419	-0.0432	-2.4829
259	SLV 4	7.9	-2.63	46.03	10.3139	-0.0429	-2.7692

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLV 5	0.94	2.96	42.41	9.7967	-0.0574	-0.3326
259	SLV 6	1.48	2.56	41.95	9.7133	-0.0572	-0.5192
259	SLV 7	1.67	-3.86	37.43	8.7413	-0.046	-0.5908
259	SLV 8	2.21	-4.27	36.98	8.6579	-0.0458	-0.7773
259	SLV 9	-4.03	3.51	36.04	8.6748	-0.0632	1.4094
259	SLV 10	-3.5	3.1	35.58	8.5914	-0.063	1.2228
259	SLV 11	-3.3	-3.31	31.06	7.6194	-0.0518	1.1512
259	SLV 12	-2.77	-3.72	30.61	7.536	-0.0516	0.9646
259	SLV 13	-9.72	1.87	26.99	7.0188	-0.0661	3.4012
259	SLV 14	-8.9	1.24	26.29	6.8908	-0.0658	3.1149
259	SLV 15	-9.5	-0.18	25.5	6.7022	-0.0627	3.3237
259	SLV 16	-8.68	-0.81	24.8	6.5742	-0.0624	3.0374
259	CRTFP Ux+	0	0	0	0	0	0
259	CRTFP Ux-	0	0	0	0	0	0
259	CRTFP Uy+	0	0	0	0	0	0
259	CRTFP Uy-	0	0	0	0	0	0
260	SLU 1	-0.85	-0.49	35.9	9.6429	-0.048	0.2958
260	SLU 2	-0.83	-0.54	35.86	9.6319	-0.048	0.288
260	SLU 3	-0.88	-0.49	36.76	9.8683	-0.0492	0.3041
260	SLU 4	-0.87	-0.52	36.74	9.8617	-0.0492	0.2994
260	SLU 5	-0.85	-0.54	36.41	9.7758	-0.0488	0.2936
260	SLU 6	-0.9	-0.5	37.31	10.0123	-0.05	0.3097
260	SLU 7	-0.88	-0.53	37.29	10.0057	-0.05	0.3051
260	SLU 8	-0.89	-0.5	37	9.9308	-0.0496	0.3071
260	SLU 9	-0.87	-0.53	36.97	9.9241	-0.0496	0.3024
260	SLU 10	-0.89	-0.55	40	10.7223	-0.0544	0.3075
260	SLU 11	-0.94	-0.51	40.91	10.9587	-0.0557	0.3236
260	SLU 12	-0.92	-0.54	40.88	10.9521	-0.0557	0.319
260	SLU 13	-0.91	-0.55	40.55	10.8662	-0.0552	0.3132
260	SLU 14	-0.95	-0.51	41.46	11.1026	-0.0565	0.3293
260	SLU 15	-0.94	-0.54	41.43	11.096	-0.0564	0.3246
260	SLU 16	-0.94	-0.51	41.15	11.0211	-0.056	0.3266
260	SLU 17	-0.93	-0.54	41.12	11.0145	-0.056	0.3219
260	SLU 18	-0.94	-0.51	41.82	11.2006	-0.0572	0.3237
260	SLU 19	-0.92	-0.54	41.8	11.194	-0.0572	0.319
260	SLU 20	-0.95	-0.51	42.37	11.3445	-0.058	0.3293
260	SLU 21	-0.94	-0.54	42.35	11.3379	-0.058	0.3247
260	SLU 22	-0.96	-0.47	39.86	10.683	-0.0537	0.3321
260	SLU 23	-0.94	-0.52	39.81	10.672	-0.0536	0.3243
260	SLU 24	-0.98	-0.48	40.72	10.9085	-0.0549	0.3404
260	SLU 25	-0.97	-0.51	40.69	10.9019	-0.0549	0.3357
260	SLU 26	-0.95	-0.52	40.36	10.816	-0.0544	0.3299
260	SLU 27	-1	-0.48	41.27	11.0524	-0.0557	0.3461
260	SLU 28	-0.99	-0.51	41.24	11.0458	-0.0557	0.3414
260	SLU 29	-0.99	-0.48	40.96	10.9709	-0.0553	0.3434
260	SLU 30	-0.98	-0.51	40.93	10.9643	-0.0552	0.3387
260	SLU 31	-0.99	-0.53	43.96	11.7624	-0.0601	0.3438
260	SLU 32	-1.04	-0.49	44.87	11.9988	-0.0614	0.36
260	SLU 33	-1.03	-0.52	44.84	11.9922	-0.0613	0.3553
260	SLU 34	-1.01	-0.54	44.51	11.9063	-0.0609	0.3495
260	SLU 35	-1.06	-0.49	45.42	12.1428	-0.0621	0.3656
260	SLU 36	-1.04	-0.52	45.39	12.1362	-0.0621	0.3609
260	SLU 37	-1.05	-0.49	45.11	12.0613	-0.0617	0.3629
260	SLU 38	-1.04	-0.52	45.08	12.0547	-0.0617	0.3583
260	SLU 39	-1.04	-0.49	45.78	12.2407	-0.0629	0.36
260	SLU 40	-1.03	-0.52	45.75	12.2341	-0.0629	0.3553
260	SLU 41	-1.06	-0.49	46.33	12.3846	-0.0637	0.3657
260	SLU 42	-1.04	-0.52	46.3	12.378	-0.0636	0.361
260	SLU 43	-1.08	-0.64	45.32	12.1792	-0.0605	0.372
260	SLU 44	-1.05	-0.69	45.27	12.1682	-0.0604	0.3642
260	SLU 45	-1.1	-0.65	46.18	12.4046	-0.0617	0.3804
260	SLU 46	-1.09	-0.67	46.15	12.398	-0.0617	0.3757
260	SLU 47	-1.07	-0.69	45.82	12.3121	-0.0612	0.3699
260	SLU 48	-1.12	-0.65	46.73	12.5485	-0.0625	0.386
260	SLU 49	-1.1	-0.68	46.7	12.5419	-0.0625	0.3813
260	SLU 50	-1.11	-0.65	46.42	12.467	-0.062	0.3833
260	SLU 51	-1.09	-0.68	46.39	12.4604	-0.062	0.3786
260	SLU 52	-1.11	-0.7	49.42	13.2585	-0.0669	0.3838
260	SLU 53	-1.16	-0.66	50.32	13.495	-0.0681	0.3999
260	SLU 54	-1.14	-0.69	50.29	13.4884	-0.0681	0.3952
260	SLU 55	-1.13	-0.71	49.96	13.4025	-0.0676	0.3894
260	SLU 56	-1.17	-0.66	50.87	13.6389	-0.0689	0.4055
260	SLU 57	-1.16	-0.69	50.84	13.6323	-0.0689	0.4009
260	SLU 58	-1.16	-0.66	50.56	13.5574	-0.0685	0.4029
260	SLU 59	-1.15	-0.69	50.53	13.5508	-0.0684	0.3982
260	SLU 60	-1.16	-0.66	51.24	13.7369	-0.0697	0.4
260	SLU 61	-1.14	-0.69	51.21	13.7303	-0.0696	0.3953
260	SLU 62	-1.17	-0.66	51.79	13.8808	-0.0704	0.4056
260	SLU 63	-1.16	-0.69	51.76	13.8742	-0.0704	0.4009
260	SLU 64	-1.18	-0.62	49.28	13.2193	-0.0661	0.4084
260	SLU 65	-1.16	-0.67	49.23	13.2083	-0.0661	0.4006
260	SLU 66	-1.2	-0.63	50.14	13.4447	-0.0674	0.4167
260	SLU 67	-1.19	-0.66	50.11	13.4381	-0.0674	0.412
260	SLU 68	-1.17	-0.68	49.78	13.3522	-0.0669	0.4062
260	SLU 69	-1.22	-0.63	50.69	13.5886	-0.0682	0.4223
260	SLU 70	-1.21	-0.66	50.66	13.582	-0.0681	0.4177
260	SLU 71	-1.21	-0.63	50.38	13.5071	-0.0677	0.4196
260	SLU 72	-1.2	-0.66	50.35	13.5005	-0.0677	0.415
260	SLU 73	-1.21	-0.68	53.37	14.2987	-0.0725	0.4201
260	SLU 74	-1.26	-0.64	54.28	14.5351	-0.0738	0.4362

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
260	SLU 75	-1.25	-0.67	54.25	14.5285	-0.0738	0.4316
260	SLU 76	-1.23	-0.69	53.92	14.4426	-0.0733	0.4258
260	SLU 77	-1.28	-0.65	54.83	14.679	-0.0746	0.4419
260	SLU 78	-1.26	-0.68	54.8	14.6724	-0.0746	0.4372
260	SLU 79	-1.27	-0.65	54.52	14.5975	-0.0741	0.4392
260	SLU 80	-1.26	-0.68	54.49	14.5909	-0.0741	0.4345
260	SLU 81	-1.26	-0.64	55.2	14.777	-0.0753	0.4363
260	SLU 82	-1.25	-0.67	55.17	14.7704	-0.0753	0.4316
260	SLU 83	-1.28	-0.65	55.75	14.9209	-0.0761	0.4419
260	SLU 84	-1.26	-0.68	55.72	14.9143	-0.0761	0.4373
260	SLE RA 1	-0.88	-0.48	37.03	9.9401	-0.0496	0.3061
260	SLE RA 2	-0.87	-0.52	37	9.9328	-0.0496	0.3009
260	SLE RA 3	-0.9	-0.49	37.61	10.0904	-0.0505	0.3117
260	SLE RA 4	-0.89	-0.51	37.59	10.086	-0.0504	0.3086
260	SLE RA 5	-0.88	-0.52	37.37	10.0287	-0.0501	0.3047
260	SLE RA 6	-0.91	-0.49	37.97	10.1863	-0.051	0.3154
260	SLE RA 7	-0.9	-0.51	37.96	10.1819	-0.051	0.3123
260	SLE RA 8	-0.91	-0.49	37.77	10.132	-0.0507	0.3137
260	SLE RA 9	-0.9	-0.51	37.75	10.1276	-0.0507	0.3105
260	SLE RA 10	-0.91	-0.52	39.77	10.6597	-0.0539	0.314
260	SLE RA 11	-0.94	-0.5	40.37	10.8173	-0.0547	0.3247
260	SLE RA 12	-0.93	-0.51	40.35	10.8129	-0.0547	0.3216
260	SLE RA 13	-0.92	-0.53	40.13	10.7556	-0.0544	0.3177
260	SLE RA 14	-0.95	-0.5	40.74	10.9132	-0.0553	0.3285
260	SLE RA 15	-0.94	-0.52	40.72	10.9088	-0.0553	0.3254
260	SLE RA 16	-0.94	-0.5	40.53	10.8589	-0.055	0.3267
260	SLE RA 17	-0.94	-0.52	40.51	10.8545	-0.055	0.3236
260	SLE RA 18	-0.94	-0.5	40.98	10.9786	-0.0558	0.3248
260	SLE RA 19	-0.93	-0.51	40.96	10.9741	-0.0557	0.3216
260	SLE RA 20	-0.95	-0.5	41.35	11.0745	-0.0563	0.3285
260	SLE RA 21	-0.94	-0.52	41.33	11.0701	-0.0563	0.3254
260	SLE FR 1	-0.88	-0.48	37.03	9.9401	-0.0496	0.3061
260	SLE FR 2	-0.88	-0.49	37.03	9.9386	-0.0496	0.3051
260	SLE FR 3	-0.89	-0.48	37.18	9.9785	-0.0498	0.3076
260	SLE FR 4	-0.9	-0.49	38.21	10.2502	-0.0515	0.3107
260	SLE FR 5	-0.91	-0.49	38.37	10.29	-0.0517	0.3132
260	SLE FR 6	-0.91	-0.49	39.01	10.4593	-0.0527	0.3154
260	SLE QP 1	-0.88	-0.48	37.03	9.9401	-0.0496	0.3061
260	SLE QP 2	-0.9	-0.49	38.22	10.2516	-0.0515	0.3117
260	SLD 1	2.42	-0.3	43.13	11.3315	-0.0478	-0.8526
260	SLD 2	2.78	-0.56	42.82	11.2664	-0.0477	-0.9752
260	SLD 3	2.52	-1.22	42.43	11.1725	-0.0467	-0.8859
260	SLD 4	2.87	-1.48	42.13	11.1074	-0.0466	-1.0085
260	SLD 5	-0.11	1.01	40.8	10.8286	-0.0521	0.0352
260	SLD 6	0.12	0.84	40.6	10.7854	-0.052	-0.0462
260	SLD 7	0.2	-2.05	38.48	10.2985	-0.0484	-0.0758
260	SLD 8	0.44	-2.23	38.28	10.2553	-0.0483	-0.1571
260	SLD 9	-2.24	1.25	38.15	10.248	-0.0546	0.7806
260	SLD 10	-2.01	1.08	37.95	10.2048	-0.0546	0.6992
260	SLD 11	-1.93	-1.81	35.84	9.7178	-0.0509	0.6696
260	SLD 12	-1.69	-1.99	35.64	9.6746	-0.0509	0.5883
260	SLD 13	-4.67	0.51	34.31	9.3959	-0.0563	1.632
260	SLD 14	-4.32	0.24	34.01	9.3308	-0.0562	1.5094
260	SLD 15	-4.58	-0.41	33.61	9.2369	-0.0552	1.5987
260	SLD 16	-4.23	-0.68	33.31	9.1718	-0.0551	1.4761
260	SLV 1	6.88	-0.08	49.67	12.772	-0.0428	-2.4116
260	SLV 2	7.7	-0.69	48.97	12.6205	-0.0427	-2.6971
260	SLV 3	7.09	-2.16	48.1	12.4104	-0.0403	-2.4883
260	SLV 4	7.91	-2.77	47.39	12.2588	-0.0402	-2.7738
260	SLV 5	0.96	2.9	44.17	11.5829	-0.0527	-0.3388
260	SLV 6	1.49	2.5	43.71	11.4842	-0.0526	-0.5247
260	SLV 7	1.68	-4.04	38.92	10.3774	-0.0443	-0.5945
260	SLV 8	2.22	-4.44	38.46	10.2786	-0.0442	-0.7805
260	SLV 9	-4.02	3.46	37.98	10.2246	-0.0587	1.4039
260	SLV 10	-3.49	3.07	37.52	10.1259	-0.0586	1.2179
260	SLV 11	-3.29	-3.48	32.73	9.0191	-0.0503	1.1482
260	SLV 12	-2.76	-3.87	32.27	8.9204	-0.0502	0.9622
260	SLV 13	-9.71	1.8	29.05	8.2444	-0.0628	3.3972
260	SLV 14	-8.9	1.19	28.34	8.0929	-0.0626	3.1118
260	SLV 15	-9.5	-0.28	27.47	7.8828	-0.0602	3.3205
260	SLV 16	-8.68	-0.89	26.77	7.7312	-0.0601	3.0351
260	CRTFP Ux+	0	0	0	0	0	0
260	CRTFP Ux-	0	0	0	0	0	0
260	CRTFP Uy+	0	0	0	0	0	0
260	CRTFP Uy-	0	0	0	0	0	0
261	SLU 1	-0.76	-0.54	33.58	9.9739	0.5982	0.2731
261	SLU 2	-0.74	-0.58	33.54	9.963	0.5974	0.2669
261	SLU 3	-0.78	-0.55	34.39	10.2103	0.6126	0.2806
261	SLU 4	-0.77	-0.57	34.36	10.2037	0.6121	0.2769
261	SLU 5	-0.75	-0.59	34.06	10.1138	0.6066	0.2721
261	SLU 6	-0.8	-0.55	34.91	10.361	0.6217	0.2858
261	SLU 7	-0.78	-0.58	34.88	10.3545	0.6213	0.2821
261	SLU 8	-0.79	-0.55	34.61	10.2754	0.6166	0.2834
261	SLU 9	-0.78	-0.58	34.59	10.2689	0.6161	0.2797
261	SLU 10	-0.79	-0.61	37.44	11.1095	0.6664	0.2847
261	SLU 11	-0.83	-0.57	38.29	11.3568	0.6815	0.2984
261	SLU 12	-0.82	-0.6	38.26	11.3503	0.681	0.2947
261	SLU 13	-0.8	-0.61	37.95	11.2603	0.6755	0.2898
261	SLU 14	-0.85	-0.58	38.81	11.5076	0.6907	0.3036
261	SLU 15	-0.83	-0.6	38.78	11.501	0.6902	0.2998

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
261	SLU 16	-0.84	-0.58	38.51	11.4219	0.6855	0.3012
261	SLU 17	-0.83	-0.6	38.49	11.4154	0.685	0.2975
261	SLU 18	-0.83	-0.57	39.15	11.6118	0.6967	0.2985
261	SLU 19	-0.82	-0.6	39.13	11.6052	0.6962	0.2948
261	SLU 20	-0.85	-0.58	39.67	11.7625	0.7059	0.3037
261	SLU 21	-0.83	-0.6	39.64	11.756	0.7054	0.2999
261	SLU 22	-0.85	-0.54	37.29	11.0656	0.6642	0.3053
261	SLU 23	-0.83	-0.58	37.25	11.0547	0.6634	0.2991
261	SLU 24	-0.87	-0.54	38.1	11.302	0.6785	0.3128
261	SLU 25	-0.86	-0.57	38.07	11.2954	0.678	0.3091
261	SLU 26	-0.85	-0.59	37.77	11.2055	0.6725	0.3043
261	SLU 27	-0.89	-0.55	38.62	11.4527	0.6877	0.318
261	SLU 28	-0.88	-0.58	38.59	11.4462	0.6872	0.3143
261	SLU 29	-0.88	-0.55	38.32	11.3671	0.6825	0.3156
261	SLU 30	-0.87	-0.57	38.3	11.3606	0.682	0.3119
261	SLU 31	-0.88	-0.6	41.15	12.2012	0.7323	0.3169
261	SLU 32	-0.92	-0.56	42	12.4485	0.7474	0.3306
261	SLU 33	-0.91	-0.59	41.97	12.442	0.747	0.3269
261	SLU 34	-0.9	-0.61	41.67	12.352	0.7415	0.322
261	SLU 35	-0.94	-0.57	42.52	12.5993	0.7566	0.3358
261	SLU 36	-0.93	-0.6	42.49	12.5927	0.7561	0.332
261	SLU 37	-0.93	-0.57	42.22	12.5136	0.7514	0.3334
261	SLU 38	-0.92	-0.6	42.2	12.5071	0.7509	0.3297
261	SLU 39	-0.92	-0.57	42.86	12.7035	0.7626	0.3307
261	SLU 40	-0.91	-0.59	42.84	12.697	0.7622	0.327
261	SLU 41	-0.94	-0.57	43.38	12.8542	0.7718	0.3359
261	SLU 42	-0.93	-0.6	43.35	12.8477	0.7713	0.3321
261	SLU 43	-0.96	-0.71	42.39	12.5917	0.7551	0.344
261	SLU 44	-0.94	-0.75	42.34	12.5809	0.7543	0.3378
261	SLU 45	-0.98	-0.71	43.19	12.8281	0.7694	0.3515
261	SLU 46	-0.96	-0.74	43.17	12.8216	0.769	0.3478
261	SLU 47	-0.95	-0.76	42.86	12.7316	0.7635	0.3429
261	SLU 48	-0.99	-0.72	43.71	12.9789	0.7786	0.3567
261	SLU 49	-0.98	-0.75	43.68	12.9724	0.7781	0.3529
261	SLU 50	-0.98	-0.72	43.42	12.8933	0.7734	0.3543
261	SLU 51	-0.97	-0.74	43.39	12.8867	0.7729	0.3506
261	SLU 52	-0.99	-0.77	46.24	13.7274	0.8232	0.3556
261	SLU 53	-1.03	-0.73	47.09	13.9747	0.8384	0.3693
261	SLU 54	-1.02	-0.76	47.07	13.9681	0.8379	0.3656
261	SLU 55	-1	-0.78	46.76	13.8782	0.8324	0.3607
261	SLU 56	-1.04	-0.74	47.61	14.1254	0.8475	0.3744
261	SLU 57	-1.03	-0.77	47.58	14.1189	0.847	0.3707
261	SLU 58	-1.04	-0.74	47.32	14.0398	0.8423	0.3721
261	SLU 59	-1.02	-0.77	47.29	14.0333	0.8419	0.3684
261	SLU 60	-1.03	-0.74	47.96	14.2296	0.8536	0.3694
261	SLU 61	-1.02	-0.76	47.93	14.2231	0.8531	0.3657
261	SLU 62	-1.04	-0.74	48.47	14.3804	0.8627	0.3745
261	SLU 63	-1.03	-0.77	48.45	14.3739	0.8622	0.3708
261	SLU 64	-1.05	-0.7	46.1	13.6834	0.821	0.3762
261	SLU 65	-1.03	-0.74	46.05	13.6726	0.8202	0.37
261	SLU 66	-1.07	-0.71	46.9	13.9198	0.8354	0.3837
261	SLU 67	-1.06	-0.73	46.88	13.9133	0.8349	0.38
261	SLU 68	-1.04	-0.75	46.57	13.8233	0.8294	0.3752
261	SLU 69	-1.08	-0.71	47.42	14.0706	0.8445	0.3889
261	SLU 70	-1.07	-0.74	47.39	14.0641	0.8441	0.3852
261	SLU 71	-1.08	-0.71	47.13	13.985	0.8394	0.3865
261	SLU 72	-1.07	-0.74	47.1	13.9784	0.8389	0.3828
261	SLU 73	-1.08	-0.76	49.95	14.8191	0.8892	0.3878
261	SLU 74	-1.12	-0.73	50.8	15.0664	0.9043	0.4015
261	SLU 75	-1.11	-0.75	50.78	15.0598	0.9038	0.3978
261	SLU 76	-1.09	-0.77	50.47	14.9699	0.8983	0.3929
261	SLU 77	-1.13	-0.74	51.32	15.2171	0.9135	0.4067
261	SLU 78	-1.12	-0.76	51.29	15.2106	0.913	0.4029
261	SLU 79	-1.13	-0.73	51.03	15.1315	0.9083	0.4043
261	SLU 80	-1.12	-0.76	51	15.125	0.9078	0.4006
261	SLU 81	-1.12	-0.73	51.67	15.3213	0.9195	0.4016
261	SLU 82	-1.11	-0.76	51.64	15.3148	0.919	0.3979
261	SLU 83	-1.14	-0.74	52.18	15.4721	0.9287	0.4068
261	SLU 84	-1.12	-0.76	52.16	15.4656	0.9282	0.403
261	SLE RA 1	-0.79	-0.54	34.64	10.2858	0.6171	0.2823
261	SLE RA 2	-0.77	-0.57	34.61	10.2785	0.6165	0.2782
261	SLE RA 3	-0.8	-0.54	35.18	10.4434	0.6266	0.2873
261	SLE RA 4	-0.79	-0.56	35.16	10.439	0.6263	0.2848
261	SLE RA 5	-0.78	-0.57	34.96	10.379	0.6227	0.2816
261	SLE RA 6	-0.81	-0.55	35.52	10.5439	0.6327	0.2908
261	SLE RA 7	-0.8	-0.57	35.51	10.5395	0.6324	0.2883
261	SLE RA 8	-0.81	-0.55	35.33	10.4868	0.6293	0.2892
261	SLE RA 9	-0.8	-0.57	35.31	10.4825	0.629	0.2867
261	SLE RA 10	-0.81	-0.58	37.21	11.0429	0.6625	0.29
261	SLE RA 11	-0.83	-0.56	37.78	11.2077	0.6726	0.2992
261	SLE RA 12	-0.83	-0.58	37.76	11.2034	0.6723	0.2967
261	SLE RA 13	-0.82	-0.59	37.56	11.1434	0.6686	0.2935
261	SLE RA 14	-0.84	-0.56	38.12	11.3082	0.6787	0.3026
261	SLE RA 15	-0.84	-0.58	38.11	11.3039	0.6784	0.3001
261	SLE RA 16	-0.84	-0.56	37.93	11.2512	0.6752	0.301
261	SLE RA 17	-0.83	-0.58	37.91	11.2468	0.6749	0.2985
261	SLE RA 18	-0.83	-0.56	38.36	11.3777	0.6827	0.2992
261	SLE RA 19	-0.83	-0.58	38.34	11.3734	0.6824	0.2968
261	SLE RA 20	-0.84	-0.56	38.7	11.4782	0.6888	0.3027
261	SLE RA 21	-0.84	-0.58	38.68	11.4739	0.6885	0.3002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
261	SLE FR 1	-0.79	-0.54	34.64	10.2858	0.6171	0.2823
261	SLE FR 2	-0.78	-0.55	34.64	10.2843	0.617	0.2815
261	SLE FR 3	-0.79	-0.54	34.78	10.326	0.6195	0.2837
261	SLE FR 4	-0.8	-0.55	35.75	10.6119	0.6367	0.2866
261	SLE FR 5	-0.8	-0.55	35.89	10.6536	0.6392	0.2888
261	SLE FR 6	-0.81	-0.55	36.5	10.8318	0.6499	0.2908
261	SLE QP 1	-0.79	-0.54	34.64	10.2858	0.6171	0.2823
261	SLE QP 2	-0.8	-0.55	35.76	10.6134	0.6368	0.2874
261	SLD 1	2.2	-0.38	40.06	11.7412	0.721	-0.7638
261	SLD 2	2.52	-0.61	39.79	11.6739	0.7158	-0.8699
261	SLD 3	2.29	-1.22	39.42	11.5839	0.7091	-0.7847
261	SLD 4	2.6	-1.45	39.15	11.5167	0.704	-0.8908
261	SLD 5	-0.08	0.82	38.07	11.2025	0.6809	0.023
261	SLD 6	0.13	0.67	37.89	11.1579	0.6775	-0.0474
261	SLD 7	0.2	-1.98	35.93	10.6782	0.6415	-0.0466
261	SLD 8	0.41	-2.13	35.75	10.6336	0.6381	-0.117
261	SLD 9	-2.01	1.04	35.77	10.5931	0.6355	0.6918
261	SLD 10	-1.8	0.89	35.58	10.5485	0.6321	0.6214
261	SLD 11	-1.73	-1.76	33.62	10.0689	0.5961	0.6222
261	SLD 12	-1.52	-1.91	33.44	10.0243	0.5926	0.5518
261	SLD 13	-4.2	0.36	32.37	9.7101	0.5696	1.4656
261	SLD 14	-3.89	0.13	32.09	9.6428	0.5644	1.3594
261	SLD 15	-4.12	-0.48	31.72	9.5528	0.5577	1.4447
261	SLD 16	-3.8	-0.71	31.45	9.4855	0.5526	1.3386
261	SLV 1	6.22	-0.19	45.81	13.2456	0.8332	-2.1706
261	SLV 2	6.96	-0.72	45.17	13.0891	0.8213	-2.4176
261	SLV 3	6.42	-2.1	44.35	12.8886	0.8064	-2.2197
261	SLV 4	7.15	-2.62	43.71	12.7321	0.7944	-2.4667
261	SLV 5	0.88	2.54	41.1	11.972	0.7385	-0.3321
261	SLV 6	1.36	2.19	40.68	11.87	0.7307	-0.4931
261	SLV 7	1.53	-3.8	36.23	10.782	0.6491	-0.4957
261	SLV 8	2.01	-4.15	35.82	10.6801	0.6413	-0.6567
261	SLV 9	-3.61	3.06	35.69	10.5467	0.6323	1.2315
261	SLV 10	-3.13	2.71	35.28	10.4447	0.6245	1.0705
261	SLV 11	-2.96	-3.29	30.83	9.3567	0.5428	1.0679
261	SLV 12	-2.48	-3.63	30.42	9.2548	0.535	0.9069
261	SLV 13	-8.76	1.53	27.8	8.4946	0.4791	3.0415
261	SLV 14	-8.02	1	27.17	8.3381	0.4671	2.7944
261	SLV 15	-8.56	-0.37	26.34	8.1376	0.4523	2.9924
261	SLV 16	-7.83	-0.9	25.71	7.9811	0.4403	2.7454
261	CRTFP Ux+	0	0	0	0	0	0
261	CRTFP Ux-	0	0	0	0	0	0
261	CRTFP Uy+	0	0	0	0	0	0
261	CRTFP Uy-	0	0	0	0	0	0
263	SLU 1	-1.96	-1.65	87.99	19.9969	-0.0097	0.4373
263	SLU 2	-1.91	-1.76	87.87	19.9745	-0.0107	0.4256
263	SLU 3	-2.01	-1.68	90.11	20.4768	-0.0101	0.4495
263	SLU 4	-1.98	-1.74	90.04	20.4634	-0.0107	0.4425
263	SLU 5	-1.94	-1.78	89.23	20.2804	-0.0108	0.434
263	SLU 6	-2.05	-1.7	91.46	20.7826	-0.0101	0.4579
263	SLU 7	-2.02	-1.76	91.39	20.7692	-0.0107	0.4509
263	SLU 8	-2.03	-1.7	90.69	20.6086	-0.0098	0.454
263	SLU 9	-2	-1.76	90.62	20.5952	-0.0104	0.447
263	SLU 10	-2.04	-1.84	98.14	22.3052	-0.0207	0.4538
263	SLU 11	-2.14	-1.76	100.37	22.8075	-0.02	0.4777
263	SLU 12	-2.11	-1.83	100.3	22.7941	-0.0206	0.4707
263	SLU 13	-2.07	-1.87	99.49	22.6111	-0.0207	0.4621
263	SLU 14	-2.18	-1.78	101.73	23.1133	-0.02	0.486
263	SLU 15	-2.15	-1.85	101.66	23.0999	-0.0206	0.479
263	SLU 16	-2.16	-1.78	100.96	22.9393	-0.0197	0.4821
263	SLU 17	-2.13	-1.84	100.89	22.9259	-0.0203	0.4752
263	SLU 18	-2.14	-1.77	102.65	23.3265	-0.0239	0.4775
263	SLU 19	-2.11	-1.84	102.59	23.3131	-0.0245	0.4705
263	SLU 20	-2.18	-1.79	104.01	23.6323	-0.0239	0.4858
263	SLU 21	-2.15	-1.86	103.94	23.6189	-0.0245	0.4789
263	SLU 22	-2.2	-1.67	97.71	22.209	-0.0097	0.4907
263	SLU 23	-2.14	-1.78	97.59	22.1866	-0.0107	0.479
263	SLU 24	-2.25	-1.69	99.82	22.6889	-0.0101	0.5029
263	SLU 25	-2.22	-1.76	99.76	22.6755	-0.0107	0.4959
263	SLU 26	-2.18	-1.8	98.95	22.4925	-0.0108	0.4874
263	SLU 27	-2.29	-1.72	101.18	22.9947	-0.0101	0.5113
263	SLU 28	-2.26	-1.78	101.11	22.9813	-0.0107	0.5043
263	SLU 29	-2.27	-1.71	100.41	22.8207	-0.0098	0.5074
263	SLU 30	-2.24	-1.78	100.34	22.8073	-0.0104	0.5004
263	SLU 31	-2.28	-1.86	107.86	24.5174	-0.0206	0.5072
263	SLU 32	-2.38	-1.78	110.09	25.0196	-0.02	0.5311
263	SLU 33	-2.35	-1.84	110.02	25.0062	-0.0206	0.5241
263	SLU 34	-2.31	-1.88	109.21	24.8232	-0.0207	0.5155
263	SLU 35	-2.42	-1.8	111.44	25.3255	-0.02	0.5394
263	SLU 36	-2.39	-1.86	111.38	25.312	-0.0206	0.5324
263	SLU 37	-2.4	-1.8	110.68	25.1514	-0.0197	0.5355
263	SLU 38	-2.37	-1.86	110.61	25.138	-0.0203	0.5286
263	SLU 39	-2.38	-1.79	112.37	25.5386	-0.0239	0.5309
263	SLU 40	-2.35	-1.85	112.3	25.5252	-0.0245	0.5239
263	SLU 41	-2.42	-1.81	113.73	25.8445	-0.0239	0.5392
263	SLU 42	-2.39	-1.87	113.66	25.831	-0.0245	0.5323
263	SLU 43	-2.46	-2.14	111.05	25.2375	-0.0126	0.5502
263	SLU 44	-2.41	-2.25	110.94	25.2152	-0.0137	0.5385
263	SLU 45	-2.52	-2.17	113.17	25.7174	-0.013	0.5624
263	SLU 46	-2.49	-2.23	113.1	25.704	-0.0136	0.5554

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
263	SLU 47	-2.45	-2.27	112.29	25.521	-0.0137	0.5469
263	SLU 48	-2.55	-2.19	114.52	26.0233	-0.013	0.5708
263	SLU 49	-2.52	-2.26	114.45	26.0098	-0.0136	0.5638
263	SLU 50	-2.54	-2.19	113.76	25.8492	-0.0127	0.5669
263	SLU 51	-2.51	-2.25	113.69	25.8358	-0.0133	0.5599
263	SLU 52	-2.54	-2.33	121.2	27.5459	-0.0236	0.5666
263	SLU 53	-2.65	-2.25	123.44	28.0481	-0.0229	0.5905
263	SLU 54	-2.62	-2.32	123.37	28.0347	-0.0235	0.5835
263	SLU 55	-2.58	-2.36	122.56	27.8517	-0.0236	0.575
263	SLU 56	-2.68	-2.27	124.79	28.354	-0.0229	0.5989
263	SLU 57	-2.65	-2.34	124.72	28.3406	-0.0236	0.5919
263	SLU 58	-2.67	-2.27	124.02	28.1799	-0.0226	0.595
263	SLU 59	-2.64	-2.33	123.96	28.1665	-0.0232	0.588
263	SLU 60	-2.65	-2.26	125.72	28.5671	-0.0268	0.5904
263	SLU 61	-2.62	-2.33	125.65	28.5537	-0.0274	0.5834
263	SLU 62	-2.69	-2.28	127.07	28.873	-0.0268	0.5987
263	SLU 63	-2.66	-2.35	127	28.8595	-0.0274	0.5917
263	SLU 64	-2.7	-2.16	120.77	27.4496	-0.0126	0.6036
263	SLU 65	-2.65	-2.27	120.66	27.4273	-0.0136	0.5919
263	SLU 66	-2.75	-2.19	122.89	27.9295	-0.013	0.6158
263	SLU 67	-2.72	-2.25	122.82	27.9161	-0.0136	0.6088
263	SLU 68	-2.69	-2.29	122.01	27.7331	-0.0137	0.6003
263	SLU 69	-2.79	-2.21	124.24	28.2354	-0.013	0.6242
263	SLU 70	-2.76	-2.27	124.17	28.222	-0.0136	0.6172
263	SLU 71	-2.77	-2.2	123.48	28.0613	-0.0127	0.6203
263	SLU 72	-2.74	-2.27	123.41	28.0479	-0.0133	0.6133
263	SLU 73	-2.78	-2.35	130.92	29.758	-0.0236	0.62
263	SLU 74	-2.89	-2.27	133.16	30.2602	-0.0229	0.6439
263	SLU 75	-2.86	-2.33	133.09	30.2468	-0.0235	0.6369
263	SLU 76	-2.82	-2.37	132.28	30.0638	-0.0236	0.6284
263	SLU 77	-2.92	-2.29	134.51	30.5661	-0.0229	0.6523
263	SLU 78	-2.89	-2.35	134.44	30.5527	-0.0235	0.6453
263	SLU 79	-2.91	-2.29	133.74	30.3921	-0.0226	0.6484
263	SLU 80	-2.88	-2.35	133.67	30.3786	-0.0232	0.6414
263	SLU 81	-2.89	-2.28	135.44	30.7792	-0.0268	0.6438
263	SLU 82	-2.86	-2.34	135.37	30.7658	-0.0274	0.6368
263	SLU 83	-2.93	-2.3	136.79	31.0851	-0.0268	0.6521
263	SLU 84	-2.89	-2.36	136.72	31.0717	-0.0274	0.6451
263	SLE RA 1	-2.02	-1.66	90.76	20.6289	-0.0097	0.4525
263	SLE RA 2	-1.99	-1.73	90.69	20.614	-0.0104	0.4448
263	SLE RA 3	-2.06	-1.67	92.18	20.9489	-0.0099	0.4607
263	SLE RA 4	-2.04	-1.72	92.13	20.9399	-0.0104	0.456
263	SLE RA 5	-2.02	-1.74	91.59	20.8179	-0.0104	0.4503
263	SLE RA 6	-2.09	-1.69	93.08	21.1528	-0.01	0.4663
263	SLE RA 7	-2.07	-1.73	93.03	21.1438	-0.0104	0.4616
263	SLE RA 8	-2.07	-1.69	92.57	21.0367	-0.0098	0.4637
263	SLE RA 9	-2.05	-1.73	92.52	21.0278	-0.0102	0.459
263	SLE RA 10	-2.08	-1.79	97.53	22.1678	-0.017	0.4635
263	SLE RA 11	-2.15	-1.73	99.02	22.5027	-0.0166	0.4795
263	SLE RA 12	-2.13	-1.77	98.98	22.4937	-0.017	0.4748
263	SLE RA 13	-2.1	-1.8	98.43	22.3717	-0.017	0.4691
263	SLE RA 14	-2.17	-1.74	99.92	22.7066	-0.0166	0.485
263	SLE RA 15	-2.15	-1.79	99.88	22.6976	-0.017	0.4804
263	SLE RA 16	-2.16	-1.74	99.41	22.5905	-0.0164	0.4825
263	SLE RA 17	-2.14	-1.79	99.37	22.5816	-0.0168	0.4778
263	SLE RA 18	-2.15	-1.74	100.54	22.8487	-0.0191	0.4793
263	SLE RA 19	-2.13	-1.78	100.5	22.8397	-0.0196	0.4747
263	SLE RA 20	-2.17	-1.75	101.44	23.0526	-0.0192	0.4849
263	SLE RA 21	-2.15	-1.79	101.4	23.0436	-0.0196	0.4803
263	SLE FR 1	-2.02	-1.66	90.76	20.6289	-0.0097	0.4525
263	SLE FR 2	-2.02	-1.67	90.75	20.6259	-0.0098	0.451
263	SLE FR 3	-2.03	-1.66	91.13	20.7105	-0.0097	0.4548
263	SLE FR 4	-2.06	-1.7	93.68	21.2919	-0.0127	0.459
263	SLE FR 5	-2.07	-1.69	94.06	21.3764	-0.0125	0.4628
263	SLE FR 6	-2.09	-1.7	95.65	21.7388	-0.0144	0.4659
263	SLE QP 1	-2.02	-1.66	90.76	20.6289	-0.0097	0.4525
263	SLE QP 2	-2.06	-1.68	93.7	21.2949	-0.0125	0.4606
263	SLD 1	5.52	-1.27	104.31	23.5988	0.1614	-1.365
263	SLD 2	6.33	-1.81	103.61	23.4554	0.1542	-1.5517
263	SLD 3	5.73	-3.41	102.61	23.2749	0.1413	-1.4109
263	SLD 4	6.54	-3.94	101.9	23.1315	0.134	-1.5976
263	SLD 5	-0.26	1.77	99.59	22.5034	0.0715	0.0165
263	SLD 6	0.28	1.42	99.12	22.4083	0.0667	-0.1074
263	SLD 7	0.45	-5.34	93.92	21.4236	0.0044	-0.1365
263	SLD 8	0.99	-5.69	93.45	21.3284	-0.0004	-0.2604
263	SLD 9	-5.11	2.32	93.94	21.2613	-0.0246	1.1816
263	SLD 10	-4.58	1.97	93.48	21.1661	-0.0295	1.0577
263	SLD 11	-4.4	-4.78	88.27	20.1814	-0.0918	1.0286
263	SLD 12	-3.87	-5.13	87.81	20.0863	-0.0966	0.9047
263	SLD 13	-10.67	0.57	85.49	19.4582	-0.1591	2.5187
263	SLD 14	-9.86	0.04	84.79	19.3148	-0.1664	2.3321
263	SLD 15	-10.45	-1.56	83.79	19.1343	-0.1792	2.4728
263	SLD 16	-9.65	-2.09	83.09	18.9909	-0.1865	2.2862
263	SLV 1	15.67	-0.81	118.46	26.6718	0.394	-3.809
263	SLV 2	17.56	-2.05	116.82	26.3379	0.377	-4.2436
263	SLV 3	16.16	-5.64	114.6	25.937	0.348	-3.9153
263	SLV 4	18.04	-6.88	112.96	25.6031	0.331	-4.3499
263	SLV 5	2.19	6.11	107.26	24.0811	0.1821	-0.5828
263	SLV 6	3.41	5.3	106.19	23.8635	0.1711	-0.8659
263	SLV 7	3.82	-9.97	94.41	21.6318	0.0289	-0.9369

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
263	SLV 8	5.04	-10.77	93.34	21.4142	0.0178	-1.2201
263	SLV 9	-9.17	7.41	94.06	21.1755	-0.0429	2.1412
263	SLV 10	-7.94	6.6	92.99	20.9579	-0.054	1.8581
263	SLV 11	-7.54	-8.67	81.2	18.7262	-0.1961	1.7871
263	SLV 12	-6.31	-9.48	80.13	18.5086	-0.2072	1.5039
263	SLV 13	-22.17	3.51	74.44	16.9866	-0.3561	5.271
263	SLV 14	-20.29	2.27	72.8	16.6527	-0.3731	4.8365
263	SLV 15	-21.68	-1.31	70.58	16.2518	-0.4021	5.1648
263	SLV 16	-19.8	-2.55	68.94	15.9179	-0.419	4.7302
263	CRTFP Ux+	0	0	0	0	0	0
263	CRTFP Ux-	0	0	0	0	0	0
263	CRTFP Uy+	0	0	0	0	0	0
263	CRTFP Uy-	0	0	0	0	0	0
265	SLU 1	-0.68	-0.71	32.29	10.3497	-0.6014	0.2232
265	SLU 2	-0.66	-0.75	32.25	10.3395	-0.6008	0.216
265	SLU 3	-0.7	-0.72	33.06	10.5972	-0.6159	0.2296
265	SLU 4	-0.69	-0.75	33.04	10.5911	-0.6155	0.2253
265	SLU 5	-0.68	-0.76	32.75	10.497	-0.61	0.2203
265	SLU 6	-0.71	-0.73	33.56	10.7547	-0.6251	0.234
265	SLU 7	-0.7	-0.76	33.54	10.7485	-0.6247	0.2296
265	SLU 8	-0.71	-0.73	33.28	10.6646	-0.6198	0.2319
265	SLU 9	-0.7	-0.75	33.26	10.6585	-0.6195	0.2276
265	SLU 10	-0.71	-0.79	36.03	11.5446	-0.6714	0.2307
265	SLU 11	-0.75	-0.76	36.84	11.8023	-0.6864	0.2444
265	SLU 12	-0.73	-0.79	36.82	11.7962	-0.6861	0.24
265	SLU 13	-0.72	-0.8	36.52	11.7021	-0.6806	0.235
265	SLU 14	-0.76	-0.77	37.34	11.9598	-0.6957	0.2487
265	SLU 15	-0.75	-0.8	37.32	11.9536	-0.6953	0.2444
265	SLU 16	-0.75	-0.77	37.06	11.8697	-0.6904	0.2466
265	SLU 17	-0.74	-0.79	37.03	11.8636	-0.69	0.2423
265	SLU 18	-0.75	-0.77	37.69	12.0712	-0.7023	0.2443
265	SLU 19	-0.73	-0.79	37.66	12.0651	-0.7019	0.2399
265	SLU 20	-0.76	-0.78	38.18	12.2287	-0.7115	0.2486
265	SLU 21	-0.75	-0.8	38.16	12.2226	-0.7111	0.2443
265	SLU 22	-0.77	-0.73	35.85	11.4925	-0.6676	0.2521
265	SLU 23	-0.75	-0.77	35.81	11.4823	-0.667	0.2448
265	SLU 24	-0.78	-0.74	36.63	11.74	-0.682	0.2585
265	SLU 25	-0.77	-0.76	36.61	11.7339	-0.6817	0.2541
265	SLU 26	-0.76	-0.78	36.31	11.6398	-0.6762	0.2492
265	SLU 27	-0.8	-0.75	37.12	11.8975	-0.6912	0.2628
265	SLU 28	-0.79	-0.77	37.1	11.8914	-0.6909	0.2585
265	SLU 29	-0.79	-0.75	36.84	11.8075	-0.686	0.2608
265	SLU 30	-0.78	-0.77	36.82	11.8014	-0.6856	0.2564
265	SLU 31	-0.79	-0.81	39.59	12.6874	-0.7375	0.2595
265	SLU 32	-0.83	-0.78	40.41	12.9451	-0.7526	0.2732
265	SLU 33	-0.82	-0.8	40.38	12.939	-0.7522	0.2689
265	SLU 34	-0.8	-0.82	40.09	12.8449	-0.7467	0.2639
265	SLU 35	-0.84	-0.79	40.9	13.1026	-0.7618	0.2776
265	SLU 36	-0.83	-0.81	40.88	13.0965	-0.7614	0.2732
265	SLU 37	-0.84	-0.79	40.62	13.0126	-0.7566	0.2755
265	SLU 38	-0.83	-0.81	40.6	13.0065	-0.7562	0.2711
265	SLU 39	-0.83	-0.78	41.25	13.2141	-0.7684	0.2731
265	SLU 40	-0.82	-0.81	41.23	13.208	-0.7681	0.2688
265	SLU 41	-0.84	-0.79	41.75	13.3716	-0.7777	0.2775
265	SLU 42	-0.83	-0.82	41.72	13.3654	-0.7773	0.2731
265	SLU 43	-0.86	-0.92	40.75	13.0627	-0.7592	0.2803
265	SLU 44	-0.84	-0.96	40.71	13.0526	-0.7585	0.273
265	SLU 45	-0.88	-0.93	41.53	13.3102	-0.7736	0.2867
265	SLU 46	-0.87	-0.95	41.51	13.3041	-0.7732	0.2824
265	SLU 47	-0.85	-0.97	41.21	13.21	-0.7677	0.2774
265	SLU 48	-0.89	-0.94	42.02	13.4677	-0.7828	0.2911
265	SLU 49	-0.88	-0.96	42	13.4616	-0.7824	0.2867
265	SLU 50	-0.88	-0.94	41.74	13.3777	-0.7776	0.289
265	SLU 51	-0.87	-0.96	41.72	13.3716	-0.7772	0.2846
265	SLU 52	-0.88	-1	44.49	14.2576	-0.8291	0.2878
265	SLU 53	-0.92	-0.97	45.31	14.5153	-0.8442	0.3014
265	SLU 54	-0.91	-0.99	45.29	14.5092	-0.8438	0.2971
265	SLU 55	-0.9	-1.01	44.99	14.4151	-0.8383	0.2921
265	SLU 56	-0.93	-0.98	45.8	14.6728	-0.8534	0.3058
265	SLU 57	-0.92	-1	45.78	14.6667	-0.853	0.3014
265	SLU 58	-0.93	-0.98	45.52	14.5828	-0.8482	0.3037
265	SLU 59	-0.92	-1	45.5	14.5767	-0.8478	0.2994
265	SLU 60	-0.92	-0.98	46.15	14.7843	-0.86	0.3014
265	SLU 61	-0.91	-1	46.13	14.7782	-0.8596	0.297
265	SLU 62	-0.93	-0.99	46.65	14.9418	-0.8692	0.3057
265	SLU 63	-0.92	-1.01	46.62	14.9357	-0.8688	0.3013
265	SLU 64	-0.94	-0.93	44.32	14.2056	-0.8254	0.3092
265	SLU 65	-0.92	-0.97	44.28	14.1954	-0.8247	0.3019
265	SLU 66	-0.96	-0.95	45.09	14.4531	-0.8398	0.3156
265	SLU 67	-0.95	-0.97	45.07	14.447	-0.8394	0.3112
265	SLU 68	-0.94	-0.98	44.77	14.3529	-0.8339	0.3062
265	SLU 69	-0.97	-0.96	45.59	14.6106	-0.849	0.3199
265	SLU 70	-0.96	-0.98	45.57	14.6045	-0.8486	0.3155
265	SLU 71	-0.97	-0.95	45.31	14.5206	-0.8438	0.3178
265	SLU 72	-0.96	-0.98	45.28	14.5144	-0.8434	0.3135
265	SLU 73	-0.97	-1.01	48.06	15.4005	-0.8953	0.3166
265	SLU 74	-1.01	-0.99	48.87	15.6582	-0.9104	0.3303
265	SLU 75	-0.99	-1.01	48.85	15.6521	-0.91	0.3259
265	SLU 76	-0.98	-1.02	48.55	15.558	-0.9045	0.321
265	SLU 77	-1.02	-1	49.37	15.8157	-0.9196	0.3346

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
265	SLU 78	-1.01	-1.02	49.34	15.8096	-0.9192	0.3303
265	SLU 79	-1.01	-0.99	49.09	15.7256	-0.9143	0.3326
265	SLU 80	-1	-1.02	49.06	15.7195	-0.914	0.3282
265	SLU 81	-1.01	-0.99	49.72	15.9271	-0.9262	0.3302
265	SLU 82	-0.99	-1.02	49.69	15.921	-0.9258	0.3258
265	SLU 83	-1.02	-1	50.21	16.0846	-0.9354	0.3345
265	SLU 84	-1.01	-1.03	50.19	16.0785	-0.935	0.3302
265	SLE RA 1	-0.71	-0.72	33.31	10.6762	-0.6203	0.2315
265	SLE RA 2	-0.69	-0.74	33.28	10.6694	-0.6199	0.2266
265	SLE RA 3	-0.72	-0.72	33.82	10.8412	-0.63	0.2357
265	SLE RA 4	-0.71	-0.74	33.81	10.8371	-0.6297	0.2328
265	SLE RA 5	-0.7	-0.75	33.61	10.7744	-0.626	0.2295
265	SLE RA 6	-0.73	-0.73	34.15	10.9462	-0.6361	0.2386
265	SLE RA 7	-0.72	-0.75	34.14	10.9421	-0.6358	0.2357
265	SLE RA 8	-0.72	-0.73	33.97	10.8862	-0.6326	0.2373
265	SLE RA 9	-0.72	-0.74	33.95	10.8821	-0.6324	0.2344
265	SLE RA 10	-0.72	-0.77	35.8	11.4728	-0.667	0.2364
265	SLE RA 11	-0.75	-0.75	36.34	11.6446	-0.677	0.2456
265	SLE RA 12	-0.74	-0.77	36.33	11.6405	-0.6768	0.2427
265	SLE RA 13	-0.73	-0.78	36.13	11.5778	-0.6731	0.2393
265	SLE RA 14	-0.76	-0.76	36.67	11.7496	-0.6832	0.2485
265	SLE RA 15	-0.75	-0.77	36.66	11.7455	-0.6829	0.2456
265	SLE RA 16	-0.75	-0.76	36.49	11.6896	-0.6797	0.2471
265	SLE RA 17	-0.75	-0.77	36.47	11.6855	-0.6794	0.2442
265	SLE RA 18	-0.75	-0.75	36.91	11.8239	-0.6876	0.2455
265	SLE RA 19	-0.74	-0.77	36.89	11.8198	-0.6873	0.2426
265	SLE RA 20	-0.76	-0.76	37.24	11.9289	-0.6937	0.2484
265	SLE RA 21	-0.75	-0.78	37.22	11.9248	-0.6934	0.2455
265	SLE FR 1	-0.71	-0.72	33.31	10.6762	-0.6203	0.2315
265	SLE FR 2	-0.7	-0.72	33.3	10.6748	-0.6203	0.2305
265	SLE FR 3	-0.71	-0.72	33.44	10.7182	-0.6228	0.2326
265	SLE FR 4	-0.72	-0.73	34.38	11.0192	-0.6404	0.2347
265	SLE FR 5	-0.72	-0.73	34.52	11.0625	-0.643	0.2368
265	SLE FR 6	-0.73	-0.73	35.11	11.2501	-0.654	0.2385
265	SLE QP 1	-0.71	-0.72	33.31	10.6762	-0.6203	0.2315
265	SLE QP 2	-0.72	-0.73	34.39	11.0205	-0.6405	0.2357
265	SLD 1	2.09	-0.59	37.93	12.1061	-0.6992	-0.747
265	SLD 2	2.39	-0.78	37.69	12.036	-0.6952	-0.8534
265	SLD 3	2.17	-1.38	37.37	11.9671	-0.6898	-0.7862
265	SLD 4	2.46	-1.56	37.14	11.8969	-0.6857	-0.8926
265	SLD 5	-0.05	0.54	36.34	11.5699	-0.6731	0.0197
265	SLD 6	0.15	0.42	36.18	11.5233	-0.6705	-0.0509
265	SLD 7	0.21	-2.08	34.48	11.1063	-0.6417	-0.111
265	SLD 8	0.41	-2.2	34.32	11.0597	-0.6391	-0.1816
265	SLD 9	-1.84	0.75	34.45	10.9813	-0.642	0.6529
265	SLD 10	-1.65	0.63	34.29	10.9347	-0.6393	0.5824
265	SLD 11	-1.59	-1.87	32.59	10.5177	-0.6106	0.5223
265	SLD 12	-1.39	-1.99	32.43	10.4711	-0.6079	0.4517
265	SLD 13	-3.9	0.11	31.64	10.1441	-0.5953	1.3639
265	SLD 14	-3.61	-0.08	31.4	10.074	-0.5913	1.2576
265	SLD 15	-3.82	-0.68	31.08	10.005	-0.5859	1.3247
265	SLD 16	-3.53	-0.86	30.84	9.9349	-0.5818	1.2184
265	SLV 1	5.85	-0.44	42.65	13.5547	-0.7774	-2.0635
265	SLV 2	6.54	-0.87	42.1	13.3914	-0.768	-2.3111
265	SLV 3	6.03	-2.22	41.39	13.2389	-0.756	-2.153
265	SLV 4	6.72	-2.65	40.84	13.0756	-0.7466	-2.4006
265	SLV 5	0.86	2.13	38.88	12.2884	-0.7157	-0.2748
265	SLV 6	1.31	1.85	38.52	12.182	-0.7096	-0.4361
265	SLV 7	1.46	-3.8	34.67	11.2358	-0.6444	-0.5732
265	SLV 8	1.91	-4.08	34.31	11.1294	-0.6382	-0.7345
265	SLV 9	-3.34	2.62	34.47	10.9116	-0.6428	1.2058
265	SLV 10	-2.9	2.35	34.11	10.8052	-0.6367	1.0445
265	SLV 11	-2.74	-3.31	30.25	9.859	-0.5715	0.9075
265	SLV 12	-2.3	-3.59	29.89	9.7526	-0.5653	0.7462
265	SLV 13	-8.16	1.2	27.93	8.9655	-0.5344	2.8719
265	SLV 14	-7.47	0.77	27.38	8.8021	-0.525	2.6244
265	SLV 15	-7.98	-0.58	26.67	8.6497	-0.513	2.7824
265	SLV 16	-7.29	-1.01	26.12	8.4864	-0.5036	2.5349
265	CRTFP Ux+	0	0	0	0	0	0
265	CRTFP Ux-	0	0	0	0	0	0
265	CRTFP Uy+	0	0	0	0	0	0
265	CRTFP Uy-	0	0	0	0	0	0
266	SLU 1	-0.75	-0.88	35.88	11.3862	0.0095	0.2604
266	SLU 2	-0.73	-0.92	35.84	11.3758	0.0094	0.2531
266	SLU 3	-0.77	-0.9	36.74	11.6577	0.0098	0.2677
266	SLU 4	-0.76	-0.92	36.72	11.6515	0.0097	0.2633
266	SLU 5	-0.74	-0.94	36.39	11.5485	0.0096	0.2581
266	SLU 6	-0.79	-0.91	37.29	11.8305	0.01	0.2727
266	SLU 7	-0.77	-0.93	37.26	11.8242	0.0099	0.2683
266	SLU 8	-0.78	-0.9	36.98	11.7316	0.0099	0.2704
266	SLU 9	-0.77	-0.93	36.95	11.7254	0.0098	0.266
266	SLU 10	-0.78	-0.98	40.04	12.7009	0.0103	0.2702
266	SLU 11	-0.82	-0.95	40.95	12.9829	0.0107	0.2848
266	SLU 12	-0.81	-0.97	40.92	12.9766	0.0107	0.2804
266	SLU 13	-0.79	-0.99	40.59	12.8736	0.0105	0.2752
266	SLU 14	-0.84	-0.96	41.49	13.1556	0.0109	0.2898
266	SLU 15	-0.82	-0.99	41.47	13.1493	0.0109	0.2854
266	SLU 16	-0.83	-0.96	41.18	13.0568	0.0108	0.2875
266	SLU 17	-0.82	-0.98	41.16	13.0505	0.0107	0.2831
266	SLU 18	-0.82	-0.96	41.89	13.2793	0.0108	0.2849

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLU 19	-0.81	-0.98	41.86	13.273	0.0108	0.2805
266	SLU 20	-0.84	-0.97	42.44	13.452	0.011	0.2899
266	SLU 21	-0.82	-0.99	42.41	13.4457	0.011	0.2855
266	SLU 22	-0.84	-0.91	39.83	12.6396	0.011	0.2926
266	SLU 23	-0.82	-0.95	39.79	12.6291	0.0109	0.2853
266	SLU 24	-0.86	-0.92	40.69	12.9111	0.0113	0.2999
266	SLU 25	-0.85	-0.95	40.66	12.9048	0.0112	0.2955
266	SLU 26	-0.84	-0.96	40.34	12.8018	0.011	0.2903
266	SLU 27	-0.88	-0.93	41.24	13.0838	0.0114	0.3049
266	SLU 28	-0.87	-0.96	41.21	13.0775	0.0114	0.3005
266	SLU 29	-0.87	-0.93	40.93	12.985	0.0113	0.3025
266	SLU 30	-0.86	-0.96	40.9	12.9787	0.0113	0.2982
266	SLU 31	-0.87	-1	43.99	13.9542	0.0118	0.3024
266	SLU 32	-0.91	-0.97	44.89	14.2362	0.0122	0.317
266	SLU 33	-0.9	-1	44.87	14.2299	0.0121	0.3126
266	SLU 34	-0.89	-1.01	44.54	14.1269	0.012	0.3074
266	SLU 35	-0.93	-0.99	45.44	14.4089	0.0124	0.322
266	SLU 36	-0.92	-1.01	45.42	14.4027	0.0123	0.3176
266	SLU 37	-0.92	-0.98	45.13	14.3101	0.0123	0.3197
266	SLU 38	-0.91	-1.01	45.11	14.3038	0.0122	0.3153
266	SLU 39	-0.91	-0.98	45.84	14.5326	0.0123	0.317
266	SLU 40	-0.9	-1.01	45.81	14.5263	0.0123	0.3126
266	SLU 41	-0.93	-0.99	46.38	14.7053	0.0125	0.322
266	SLU 42	-0.92	-1.02	46.36	14.6991	0.0124	0.3176
266	SLU 43	-0.94	-1.14	45.29	14.3724	0.0118	0.3275
266	SLU 44	-0.92	-1.18	45.25	14.3619	0.0117	0.3202
266	SLU 45	-0.97	-1.15	46.15	14.6439	0.0121	0.3348
266	SLU 46	-0.95	-1.18	46.13	14.6376	0.012	0.3304
266	SLU 47	-0.94	-1.19	45.8	14.5346	0.0119	0.3252
266	SLU 48	-0.98	-1.16	46.7	14.8166	0.0123	0.3398
266	SLU 49	-0.97	-1.19	46.67	14.8103	0.0122	0.3354
266	SLU 50	-0.97	-1.16	46.39	14.7178	0.0122	0.3375
266	SLU 51	-0.96	-1.19	46.36	14.7115	0.0121	0.3331
266	SLU 52	-0.97	-1.23	49.45	15.6871	0.0127	0.3373
266	SLU 53	-1.01	-1.2	50.36	15.969	0.0131	0.3519
266	SLU 54	-1	-1.23	50.33	15.9628	0.013	0.3475
266	SLU 55	-0.99	-1.24	50	15.8598	0.0128	0.3423
266	SLU 56	-1.03	-1.22	50.9	16.1418	0.0132	0.3569
266	SLU 57	-1.02	-1.24	50.88	16.1355	0.0132	0.3525
266	SLU 58	-1.02	-1.21	50.59	16.0429	0.0131	0.3546
266	SLU 59	-1.01	-1.24	50.57	16.0367	0.0131	0.3502
266	SLU 60	-1.02	-1.21	51.3	16.2654	0.0132	0.352
266	SLU 61	-1	-1.24	51.27	16.2592	0.0131	0.3476
266	SLU 62	-1.03	-1.22	51.85	16.4381	0.0134	0.357
266	SLU 63	-1.02	-1.25	51.82	16.4319	0.0133	0.3526
266	SLU 64	-1.04	-1.16	49.24	15.6257	0.0133	0.3597
266	SLU 65	-1.02	-1.2	49.2	15.6152	0.0132	0.3524
266	SLU 66	-1.06	-1.18	50.1	15.8972	0.0136	0.367
266	SLU 67	-1.05	-1.2	50.07	15.8909	0.0135	0.3626
266	SLU 68	-1.03	-1.22	49.75	15.788	0.0134	0.3574
266	SLU 69	-1.07	-1.19	50.65	16.0699	0.0138	0.372
266	SLU 70	-1.06	-1.21	50.62	16.0637	0.0137	0.3676
266	SLU 71	-1.07	-1.19	50.34	15.9711	0.0137	0.3697
266	SLU 72	-1.05	-1.21	50.31	15.9649	0.0136	0.3653
266	SLU 73	-1.07	-1.26	53.4	16.9404	0.0141	0.3695
266	SLU 74	-1.11	-1.23	54.3	17.2224	0.0145	0.3841
266	SLU 75	-1.09	-1.25	54.28	17.2161	0.0145	0.3797
266	SLU 76	-1.08	-1.27	53.95	17.1131	0.0143	0.3745
266	SLU 77	-1.12	-1.24	54.85	17.3951	0.0147	0.3891
266	SLU 78	-1.11	-1.27	54.83	17.3888	0.0147	0.3847
266	SLU 79	-1.11	-1.24	54.54	17.2963	0.0146	0.3868
266	SLU 80	-1.1	-1.26	54.52	17.29	0.0146	0.3824
266	SLU 81	-1.11	-1.24	55.25	17.5188	0.0146	0.3841
266	SLU 82	-1.09	-1.26	55.22	17.5125	0.0146	0.3797
266	SLU 83	-1.12	-1.25	55.79	17.6915	0.0148	0.3891
266	SLU 84	-1.11	-1.27	55.77	17.6852	0.0148	0.3847
266	SLE RA 1	-0.78	-0.89	37.01	11.7443	0.0099	0.2696
266	SLE RA 2	-0.76	-0.92	36.98	11.7373	0.0098	0.2647
266	SLE RA 3	-0.79	-0.9	37.58	11.9253	0.0101	0.2745
266	SLE RA 4	-0.78	-0.91	37.56	11.9211	0.0101	0.2716
266	SLE RA 5	-0.77	-0.92	37.35	11.8525	0.01	0.2681
266	SLE RA 6	-0.8	-0.91	37.95	12.0405	0.0102	0.2778
266	SLE RA 7	-0.79	-0.92	37.93	12.0363	0.0102	0.2749
266	SLE RA 8	-0.8	-0.9	37.74	11.9746	0.0101	0.2763
266	SLE RA 9	-0.79	-0.92	37.72	11.9704	0.0101	0.2733
266	SLE RA 10	-0.8	-0.95	39.78	12.6208	0.0105	0.2761
266	SLE RA 11	-0.82	-0.93	40.38	12.8088	0.0107	0.2859
266	SLE RA 12	-0.82	-0.95	40.37	12.8046	0.0107	0.283
266	SLE RA 13	-0.81	-0.96	40.15	12.7359	0.0106	0.2795
266	SLE RA 14	-0.83	-0.94	40.75	12.9239	0.0109	0.2892
266	SLE RA 15	-0.83	-0.96	40.73	12.9197	0.0108	0.2863
266	SLE RA 16	-0.83	-0.94	40.54	12.858	0.0108	0.2877
266	SLE RA 17	-0.82	-0.96	40.53	12.8538	0.0107	0.2847
266	SLE RA 18	-0.82	-0.94	41.01	13.0064	0.0108	0.2859
266	SLE RA 19	-0.82	-0.96	41	13.0022	0.0108	0.283
266	SLE RA 20	-0.83	-0.95	41.38	13.1215	0.0109	0.2892
266	SLE RA 21	-0.83	-0.96	41.36	13.1173	0.0109	0.2863
266	SLE FR 1	-0.78	-0.89	37.01	11.7443	0.0099	0.2696
266	SLE FR 2	-0.77	-0.89	37	11.7429	0.0099	0.2686
266	SLE FR 3	-0.78	-0.89	37.15	11.7904	0.0099	0.271

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLE FR 4	-0.79	-0.91	38.2	12.1215	0.0102	0.2735
266	SLE FR 5	-0.8	-0.91	38.35	12.169	0.0102	0.2758
266	SLE FR 6	-0.8	-0.91	39.01	12.3753	0.0103	0.2778
266	SLE QP 1	-0.78	-0.89	37.01	11.7443	0.0099	0.2696
266	SLE QP 2	-0.79	-0.9	38.21	12.1229	0.0102	0.2745
266	SLD 1	2.35	-0.79	41.8	13.2153	0.0224	-0.8264
266	SLD 2	2.68	-0.99	41.56	13.1403	0.0217	-0.9415
266	SLD 3	2.44	-1.66	41.23	13.0784	0.0206	-0.8566
266	SLD 4	2.77	-1.86	40.98	13.0034	0.02	-0.9717
266	SLD 5	-0.04	0.5	40.2	12.672	0.0166	0.011
266	SLD 6	0.18	0.37	40.04	12.6222	0.0162	-0.0654
266	SLD 7	0.25	-2.42	38.29	12.2155	0.0108	-0.0897
266	SLD 8	0.47	-2.56	38.13	12.1657	0.0103	-0.1661
266	SLD 9	-2.05	0.75	38.29	12.0801	0.01	0.7152
266	SLD 10	-1.83	0.62	38.13	12.0303	0.0096	0.6388
266	SLD 11	-1.76	-2.17	36.38	11.6237	0.0042	0.6144
266	SLD 12	-1.54	-2.3	36.22	11.5739	0.0037	0.538
266	SLD 13	-4.35	0.06	35.43	11.2425	0.0004	1.5207
266	SLD 14	-4.02	-0.14	35.19	11.1674	-0.0003	1.4056
266	SLD 15	-4.26	-0.82	34.86	11.1056	-0.0014	1.4905
266	SLD 16	-3.93	-1.02	34.62	11.0305	-0.002	1.3754
266	SLV 1	6.56	-0.67	46.59	14.6731	0.0387	-2.3004
266	SLV 2	7.32	-1.13	46.02	14.4984	0.0371	-2.5684
266	SLV 3	6.76	-2.65	45.29	14.3619	0.0347	-2.3701
266	SLV 4	7.52	-3.11	44.72	14.1871	0.0331	-2.6381
266	SLV 5	0.98	2.26	42.8	13.3908	0.0251	-0.3451
266	SLV 6	1.48	1.96	42.42	13.2769	0.024	-0.5197
266	SLV 7	1.64	-4.35	38.46	12.3533	0.0117	-0.5775
266	SLV 8	2.14	-4.66	38.09	12.2394	0.0107	-0.7521
266	SLV 9	-3.72	2.85	38.33	12.0064	0.0096	1.3012
266	SLV 10	-3.22	2.55	37.96	11.8926	0.0086	1.1265
266	SLV 11	-3.06	-3.76	33.99	10.9689	-0.0037	1.0687
266	SLV 12	-2.56	-4.06	33.62	10.8551	-0.0047	0.8941
266	SLV 13	-9.11	1.31	31.7	10.0587	-0.0128	3.1871
266	SLV 14	-8.34	0.85	31.13	9.884	-0.0143	2.9191
266	SLV 15	-8.91	-0.67	30.4	9.7475	-0.0168	3.1174
266	SLV 16	-8.14	-1.14	29.83	9.5727	-0.0183	2.8494
266	CRTFP Ux+	0	0	0	0	0	0
266	CRTFP Ux-	0	0	0	0	0	0
266	CRTFP Uy+	0	0	0	0	0	0
266	CRTFP Uy-	0	0	0	0	0	0
267	SLU 1	-0.63	-0.79	29.93	9.468	0.8462	0.2413
267	SLU 2	-0.61	-0.82	29.9	9.4601	0.8453	0.2361
267	SLU 3	-0.65	-0.8	30.65	9.6931	0.8665	0.2478
267	SLU 4	-0.63	-0.82	30.63	9.6884	0.866	0.2446
267	SLU 5	-0.62	-0.84	30.36	9.6032	0.8583	0.2406
267	SLU 6	-0.66	-0.81	31.11	9.8363	0.8795	0.2522
267	SLU 7	-0.65	-0.84	31.09	9.8315	0.8789	0.2491
267	SLU 8	-0.65	-0.81	30.85	9.7543	0.8721	0.2502
267	SLU 9	-0.64	-0.83	30.83	9.7496	0.8716	0.2471
267	SLU 10	-0.65	-0.87	33.42	10.5625	0.9445	0.252
267	SLU 11	-0.69	-0.85	34.16	10.7956	0.9658	0.2637
267	SLU 12	-0.68	-0.87	34.14	10.7908	0.9652	0.2606
267	SLU 13	-0.66	-0.89	33.87	10.7057	0.9575	0.2565
267	SLU 14	-0.7	-0.86	34.62	10.9387	0.9787	0.2682
267	SLU 15	-0.69	-0.88	34.6	10.934	0.9782	0.2651
267	SLU 16	-0.69	-0.86	34.36	10.8568	0.9714	0.2662
267	SLU 17	-0.68	-0.88	34.34	10.852	0.9708	0.2631
267	SLU 18	-0.69	-0.86	34.95	11.0429	0.988	0.264
267	SLU 19	-0.68	-0.88	34.93	11.0382	0.9874	0.2609
267	SLU 20	-0.7	-0.87	35.41	11.1861	1.0009	0.2685
267	SLU 21	-0.69	-0.89	35.39	11.1813	1.0004	0.2654
267	SLU 22	-0.71	-0.81	33.22	10.5068	0.9393	0.269
267	SLU 23	-0.69	-0.85	33.18	10.4989	0.9384	0.2638
267	SLU 24	-0.72	-0.83	33.93	10.7319	0.9596	0.2755
267	SLU 25	-0.71	-0.85	33.91	10.7272	0.9591	0.2723
267	SLU 26	-0.7	-0.86	33.64	10.642	0.9513	0.2683
267	SLU 27	-0.73	-0.84	34.39	10.8751	0.9726	0.2799
267	SLU 28	-0.72	-0.86	34.37	10.8704	0.972	0.2768
267	SLU 29	-0.73	-0.84	34.13	10.7931	0.9652	0.2779
267	SLU 30	-0.72	-0.86	34.11	10.7884	0.9647	0.2748
267	SLU 31	-0.73	-0.9	36.7	11.6013	1.0376	0.2797
267	SLU 32	-0.76	-0.88	37.44	11.8344	1.0588	0.2914
267	SLU 33	-0.75	-0.9	37.42	11.8296	1.0583	0.2883
267	SLU 34	-0.74	-0.91	37.15	11.7445	1.0506	0.2842
267	SLU 35	-0.78	-0.89	37.9	11.9776	1.0718	0.2959
267	SLU 36	-0.77	-0.91	37.88	11.9728	1.0712	0.2927
267	SLU 37	-0.77	-0.88	37.64	11.8956	1.0644	0.2939
267	SLU 38	-0.76	-0.91	37.62	11.8908	1.0639	0.2907
267	SLU 39	-0.76	-0.88	38.23	12.0817	1.0811	0.2917
267	SLU 40	-0.75	-0.9	38.21	12.077	1.0805	0.2886
267	SLU 41	-0.78	-0.89	38.69	12.2249	1.094	0.2962
267	SLU 42	-0.77	-0.92	38.67	12.2201	1.0935	0.2931
267	SLU 43	-0.79	-1.02	37.79	11.9522	1.0682	0.3041
267	SLU 44	-0.77	-1.05	37.76	11.9443	1.0673	0.299
267	SLU 45	-0.81	-1.03	38.51	12.1774	1.0885	0.3106
267	SLU 46	-0.8	-1.05	38.49	12.1726	1.0879	0.3075
267	SLU 47	-0.78	-1.06	38.22	12.0875	1.0802	0.3034
267	SLU 48	-0.82	-1.04	38.96	12.3205	1.1014	0.3151
267	SLU 49	-0.81	-1.06	38.94	12.3158	1.1009	0.312

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
267	SLU 50	-0.81	-1.04	38.7	12.2385	1.0941	0.3131
267	SLU 51	-0.8	-1.06	38.68	12.2338	1.0935	0.31
267	SLU 52	-0.81	-1.1	41.27	13.0468	1.1665	0.3149
267	SLU 53	-0.85	-1.08	42.02	13.2798	1.1877	0.3266
267	SLU 54	-0.84	-1.1	42	13.2751	1.1872	0.3234
267	SLU 55	-0.83	-1.11	41.73	13.1899	1.1795	0.3194
267	SLU 56	-0.86	-1.09	42.47	13.423	1.2007	0.3311
267	SLU 57	-0.85	-1.11	42.46	13.4182	1.2001	0.3279
267	SLU 58	-0.86	-1.09	42.21	13.341	1.1933	0.329
267	SLU 59	-0.85	-1.11	42.2	13.3362	1.1928	0.3259
267	SLU 60	-0.85	-1.09	42.81	13.5272	1.21	0.3269
267	SLU 61	-0.84	-1.11	42.79	13.5224	1.2094	0.3238
267	SLU 62	-0.86	-1.1	43.26	13.6703	1.2229	0.3314
267	SLU 63	-0.85	-1.12	43.24	13.6656	1.2224	0.3283
267	SLU 64	-0.87	-1.04	41.07	12.991	1.1613	0.3318
267	SLU 65	-0.85	-1.08	41.04	12.9831	1.1604	0.3267
267	SLU 66	-0.88	-1.05	41.79	13.2162	1.1816	0.3383
267	SLU 67	-0.87	-1.08	41.77	13.2114	1.181	0.3352
267	SLU 68	-0.86	-1.09	41.5	13.1263	1.1733	0.3311
267	SLU 69	-0.9	-1.07	42.24	13.3593	1.1945	0.3428
267	SLU 70	-0.89	-1.09	42.22	13.3546	1.194	0.3397
267	SLU 71	-0.89	-1.06	41.98	13.2774	1.1872	0.3408
267	SLU 72	-0.88	-1.09	41.97	13.2726	1.1866	0.3377
267	SLU 73	-0.89	-1.13	44.55	14.0856	1.2596	0.3426
267	SLU 74	-0.93	-1.1	45.3	14.3186	1.2808	0.3543
267	SLU 75	-0.92	-1.13	45.28	14.3139	1.2802	0.3511
267	SLU 76	-0.9	-1.14	45.01	14.2287	1.2725	0.3471
267	SLU 77	-0.94	-1.12	45.76	14.4618	1.2937	0.3587
267	SLU 78	-0.93	-1.14	45.74	14.457	1.2932	0.3556
267	SLU 79	-0.93	-1.11	45.5	14.3798	1.2864	0.3567
267	SLU 80	-0.92	-1.13	45.48	14.3751	1.2858	0.3536
267	SLU 81	-0.93	-1.11	46.09	14.566	1.303	0.3546
267	SLU 82	-0.92	-1.13	46.07	14.5612	1.3025	0.3515
267	SLU 83	-0.94	-1.12	46.54	14.7091	1.316	0.3591
267	SLU 84	-0.93	-1.14	46.53	14.7044	1.3154	0.356
267	SLE RA 1	-0.65	-0.8	30.87	9.7648	0.8728	0.2492
267	SLE RA 2	-0.64	-0.82	30.85	9.7595	0.8722	0.2457
267	SLE RA 3	-0.66	-0.8	31.35	9.9149	0.8864	0.2535
267	SLE RA 4	-0.65	-0.82	31.34	9.9117	0.886	0.2514
267	SLE RA 5	-0.65	-0.83	31.16	9.855	0.8808	0.2487
267	SLE RA 6	-0.67	-0.81	31.65	10.0103	0.895	0.2565
267	SLE RA 7	-0.66	-0.83	31.64	10.0072	0.8946	0.2544
267	SLE RA 8	-0.67	-0.81	31.48	9.9557	0.8901	0.2552
267	SLE RA 9	-0.66	-0.82	31.47	9.9525	0.8897	0.2531
267	SLE RA 10	-0.67	-0.85	33.19	10.4945	0.9384	0.2563
267	SLE RA 11	-0.69	-0.84	33.69	10.6499	0.9525	0.2641
267	SLE RA 12	-0.68	-0.85	33.68	10.6467	0.9521	0.262
267	SLE RA 13	-0.67	-0.86	33.5	10.5899	0.947	0.2593
267	SLE RA 14	-0.7	-0.84	33.99	10.7453	0.9611	0.2671
267	SLE RA 15	-0.69	-0.86	33.98	10.7421	0.9608	0.265
267	SLE RA 16	-0.69	-0.84	33.82	10.6906	0.9562	0.2658
267	SLE RA 17	-0.69	-0.86	33.81	10.6875	0.9559	0.2637
267	SLE RA 18	-0.69	-0.84	34.22	10.8148	0.9673	0.2643
267	SLE RA 19	-0.68	-0.86	34.2	10.8116	0.967	0.2623
267	SLE RA 20	-0.7	-0.85	34.52	10.9102	0.976	0.2673
267	SLE RA 21	-0.69	-0.86	34.51	10.907	0.9756	0.2653
267	SLE FR 1	-0.65	-0.8	30.87	9.7648	0.8728	0.2492
267	SLE FR 2	-0.65	-0.8	30.87	9.7637	0.8727	0.2485
267	SLE FR 3	-0.65	-0.8	30.99	9.803	0.8763	0.2504
267	SLE FR 4	-0.66	-0.81	31.87	10.0787	0.9011	0.253
267	SLE FR 5	-0.67	-0.81	32	10.118	0.9046	0.2549
267	SLE FR 6	-0.67	-0.82	32.54	10.2898	0.9201	0.2568
267	SLE QP 1	-0.65	-0.8	30.87	9.7648	0.8728	0.2492
267	SLE QP 2	-0.66	-0.81	31.88	10.0798	0.9012	0.2537
267	SLD 1	1.99	-0.74	34.57	10.89	0.9844	-0.6897
267	SLD 2	2.27	-0.9	34.39	10.8306	0.9787	-0.7824
267	SLD 3	2.07	-1.48	34.13	10.7917	0.9711	-0.6723
267	SLD 4	2.35	-1.64	33.95	10.7323	0.9654	-0.765
267	SLD 5	-0.03	0.36	33.39	10.4827	0.9473	-0.0389
267	SLD 6	0.16	0.26	33.26	10.4433	0.9435	-0.1004
267	SLD 7	0.22	-2.1	31.92	10.155	0.9031	0.0192
267	SLD 8	0.4	-2.21	31.8	10.1156	0.8993	-0.0424
267	SLD 9	-1.73	0.59	31.96	10.0439	0.9031	0.5498
267	SLD 10	-1.54	0.48	31.83	10.0045	0.8993	0.4883
267	SLD 11	-1.48	-1.88	30.49	9.7162	0.8589	0.6078
267	SLD 12	-1.3	-1.98	30.36	9.6768	0.8551	0.5463
267	SLD 13	-3.67	0.02	29.8	9.4273	0.837	1.2725
267	SLD 14	-3.39	-0.14	29.62	9.3679	0.8313	1.1798
267	SLD 15	-3.6	-0.72	29.36	9.329	0.8237	1.2899
267	SLD 16	-3.32	-0.88	29.18	9.2696	0.818	1.1972
267	SLV 1	5.55	-0.67	38.17	11.9714	1.0952	-1.9527
267	SLV 2	6.2	-1.05	37.73	11.8331	1.082	-2.1686
267	SLV 3	5.72	-2.35	37.17	11.7475	1.0651	-1.9116
267	SLV 4	6.37	-2.73	36.73	11.6092	1.0519	-2.1275
267	SLV 5	0.83	1.84	35.36	11.0111	1.0074	-0.4326
267	SLV 6	1.26	1.59	35.07	10.9211	0.9987	-0.5732
267	SLV 7	1.39	-3.75	32.03	10.2648	0.9071	-0.2956
267	SLV 8	1.81	-3.99	31.74	10.1747	0.8984	-0.4363
267	SLV 9	-3.14	2.38	32.01	9.9848	0.9039	0.9437
267	SLV 10	-2.72	2.13	31.72	9.8947	0.8953	0.8031

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
267	SLV 11	-2.58	-3.21	28.68	9.2385	0.8036	1.0807
267	SLV 12	-2.16	-3.46	28.39	9.1484	0.795	0.94
267	SLV 13	-7.69	1.11	27.02	8.5503	0.7505	2.635
267	SLV 14	-7.04	0.73	26.58	8.4121	0.7372	2.4191
267	SLV 15	-7.52	-0.57	26.02	8.3264	0.7204	2.676
267	SLV 16	-6.88	-0.95	25.58	8.1882	0.7071	2.4602
267	CRTFP Ux+	0	0	0	0	0	0
267	CRTFP Ux-	0	0	0	0	0	0
267	CRTFP Uy+	0	0	0	0	0	0
267	CRTFP Uy-	0	0	0	0	0	0
268	SLU 1	-1.2	-1.51	56.74	17.2459	-2.148	0.3432
268	SLU 2	-1.17	-1.58	56.68	17.2336	-2.1462	0.3291
268	SLU 3	-1.24	-1.54	58.09	17.6553	-2.1989	0.3534
268	SLU 4	-1.22	-1.58	58.06	17.648	-2.1978	0.345
268	SLU 5	-1.19	-1.6	57.55	17.4938	-2.1787	0.3359
268	SLU 6	-1.26	-1.56	58.95	17.9155	-2.2313	0.3602
268	SLU 7	-1.24	-1.6	58.92	17.9081	-2.2303	0.3518
268	SLU 8	-1.25	-1.55	58.46	17.7662	-2.2129	0.3568
268	SLU 9	-1.23	-1.59	58.43	17.7589	-2.2118	0.3483
268	SLU 10	-1.25	-1.67	63.35	19.2504	-2.3988	0.3526
268	SLU 11	-1.32	-1.63	64.75	19.6721	-2.4515	0.3769
268	SLU 12	-1.3	-1.67	64.72	19.6648	-2.4504	0.3685
268	SLU 13	-1.27	-1.69	64.21	19.5106	-2.4312	0.3594
268	SLU 14	-1.34	-1.65	65.62	19.9323	-2.4839	0.3837
268	SLU 15	-1.32	-1.69	65.58	19.9249	-2.4828	0.3753
268	SLU 16	-1.33	-1.65	65.13	19.783	-2.4654	0.3802
268	SLU 17	-1.31	-1.69	65.09	19.7757	-2.4643	0.3718
268	SLU 18	-1.32	-1.64	66.26	20.127	-2.5088	0.3767
268	SLU 19	-1.3	-1.68	66.22	20.1197	-2.5077	0.3683
268	SLU 20	-1.34	-1.66	67.12	20.3872	-2.5412	0.3835
268	SLU 21	-1.32	-1.71	67.09	20.3798	-2.5401	0.3751
268	SLU 22	-1.35	-1.55	62.92	19.1324	-2.38	0.3914
268	SLU 23	-1.32	-1.62	62.87	19.1201	-2.3782	0.3774
268	SLU 24	-1.39	-1.57	64.27	19.5418	-2.4309	0.4017
268	SLU 25	-1.37	-1.62	64.24	19.5344	-2.4299	0.3932
268	SLU 26	-1.34	-1.64	63.73	19.3802	-2.4107	0.3842
268	SLU 27	-1.41	-1.6	65.13	19.8019	-2.4634	0.4084
268	SLU 28	-1.39	-1.64	65.1	19.7946	-2.4623	0.4
268	SLU 29	-1.4	-1.59	64.65	19.6527	-2.4449	0.405
268	SLU 30	-1.38	-1.63	64.61	19.6453	-2.4438	0.3966
268	SLU 31	-1.4	-1.71	69.53	21.1369	-2.6308	0.4008
268	SLU 32	-1.47	-1.67	70.94	21.5586	-2.6835	0.4251
268	SLU 33	-1.45	-1.71	70.9	21.5512	-2.6824	0.4167
268	SLU 34	-1.42	-1.73	70.39	21.397	-2.6632	0.4076
268	SLU 35	-1.49	-1.69	71.8	21.8187	-2.7159	0.4319
268	SLU 36	-1.47	-1.73	71.77	21.8114	-2.7148	0.4235
268	SLU 37	-1.48	-1.68	71.31	21.6695	-2.6974	0.4284
268	SLU 38	-1.46	-1.73	71.28	21.6621	-2.6964	0.42
268	SLU 39	-1.47	-1.68	72.44	22.0135	-2.7408	0.4249
268	SLU 40	-1.45	-1.72	72.41	22.0061	-2.7397	0.4165
268	SLU 41	-1.49	-1.7	73.3	22.2737	-2.7732	0.4317
268	SLU 42	-1.47	-1.74	73.27	22.2663	-2.7722	0.4233
268	SLU 43	-1.52	-1.95	71.64	21.7729	-2.7129	0.4296
268	SLU 44	-1.48	-2.02	71.59	21.7606	-2.7111	0.4156
268	SLU 45	-1.55	-1.97	72.99	22.1823	-2.7638	0.4398
268	SLU 46	-1.53	-2.02	72.96	22.1749	-2.7627	0.4314
268	SLU 47	-1.5	-2.04	72.45	22.0208	-2.7435	0.4224
268	SLU 48	-1.57	-2	73.85	22.4425	-2.7962	0.4466
268	SLU 49	-1.55	-2.04	73.82	22.4351	-2.7951	0.4382
268	SLU 50	-1.56	-1.99	73.36	22.2932	-2.7777	0.4432
268	SLU 51	-1.54	-2.03	73.33	22.2859	-2.7767	0.4348
268	SLU 52	-1.56	-2.11	78.25	23.7774	-2.9636	0.439
268	SLU 53	-1.63	-2.07	79.66	24.1991	-3.0163	0.4633
268	SLU 54	-1.61	-2.11	79.62	24.1917	-3.0152	0.4549
268	SLU 55	-1.58	-2.13	79.11	24.0376	-2.9961	0.4458
268	SLU 56	-1.65	-2.09	80.52	24.4593	-3.0487	0.4701
268	SLU 57	-1.63	-2.13	80.48	24.4519	-3.0477	0.4617
268	SLU 58	-1.64	-2.09	80.03	24.31	-3.0303	0.4666
268	SLU 59	-1.62	-2.13	80	24.3027	-3.0292	0.4582
268	SLU 60	-1.63	-2.08	81.16	24.654	-3.0736	0.4631
268	SLU 61	-1.61	-2.12	81.13	24.6467	-3.0726	0.4547
268	SLU 62	-1.65	-2.1	82.02	24.9142	-3.1061	0.4699
268	SLU 63	-1.63	-2.15	81.99	24.9068	-3.105	0.4615
268	SLU 64	-1.66	-1.99	77.82	23.6593	-2.9449	0.4778
268	SLU 65	-1.63	-2.06	77.77	23.6471	-2.9431	0.4638
268	SLU 66	-1.7	-2.01	79.17	24.0688	-2.9958	0.4881
268	SLU 67	-1.68	-2.05	79.14	24.0614	-2.9947	0.4796
268	SLU 68	-1.65	-2.08	78.63	23.9072	-2.9755	0.4706
268	SLU 69	-1.72	-2.03	80.04	24.3289	-3.0282	0.4949
268	SLU 70	-1.7	-2.08	80	24.3216	-3.0271	0.4864
268	SLU 71	-1.71	-2.03	79.55	24.1797	-3.0098	0.4914
268	SLU 72	-1.69	-2.07	79.51	24.1723	-3.0087	0.483
268	SLU 73	-1.71	-2.15	84.43	25.6639	-3.1956	0.4872
268	SLU 74	-1.78	-2.11	85.84	26.0856	-3.2483	0.5115
268	SLU 75	-1.76	-2.15	85.81	26.0782	-3.2473	0.5031
268	SLU 76	-1.73	-2.17	85.29	25.924	-3.2281	0.494
268	SLU 77	-1.8	-2.13	86.7	26.3457	-3.2808	0.5183
268	SLU 78	-1.78	-2.17	86.67	26.3384	-3.2797	0.5099
268	SLU 79	-1.79	-2.12	86.21	26.1965	-3.2623	0.5149
268	SLU 80	-1.77	-2.17	86.18	26.1891	-3.2612	0.5064

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
268	SLU 81	-1.78	-2.12	87.34	26.5405	-3.3057	0.5113
268	SLU 82	-1.76	-2.16	87.31	26.5331	-3.3046	0.5029
268	SLU 83	-1.8	-2.14	88.2	26.8006	-3.3381	0.5181
268	SLU 84	-1.78	-2.18	88.17	26.7933	-3.337	0.5097
268	SLE RA 1	-1.25	-1.52	58.5	17.7849	-2.2143	0.357
268	SLE RA 2	-1.22	-1.57	58.47	17.7767	-2.2131	0.3476
268	SLE RA 3	-1.27	-1.54	59.41	18.0578	-2.2482	0.3638
268	SLE RA 4	-1.26	-1.57	59.38	18.0529	-2.2475	0.3582
268	SLE RA 5	-1.24	-1.58	59.04	17.9501	-2.2347	0.3521
268	SLE RA 6	-1.28	-1.55	59.98	18.2313	-2.2699	0.3683
268	SLE RA 7	-1.27	-1.58	59.96	18.2264	-2.2691	0.3627
268	SLE RA 8	-1.28	-1.55	59.65	18.1318	-2.2576	0.366
268	SLE RA 9	-1.26	-1.58	59.63	18.1269	-2.2568	0.3604
268	SLE RA 10	-1.28	-1.63	62.91	19.1212	-2.3815	0.3632
268	SLE RA 11	-1.32	-1.6	63.85	19.4024	-2.4166	0.3794
268	SLE RA 12	-1.31	-1.63	63.83	19.3975	-2.4159	0.3738
268	SLE RA 13	-1.29	-1.64	63.49	19.2947	-2.4031	0.3678
268	SLE RA 14	-1.34	-1.61	64.42	19.5758	-2.4382	0.384
268	SLE RA 15	-1.32	-1.64	64.4	19.5709	-2.4375	0.3783
268	SLE RA 16	-1.33	-1.61	64.1	19.4763	-2.4259	0.3817
268	SLE RA 17	-1.32	-1.64	64.07	19.4714	-2.4252	0.376
268	SLE RA 18	-1.32	-1.61	64.85	19.7056	-2.4548	0.3793
268	SLE RA 19	-1.31	-1.64	64.83	19.7007	-2.4541	0.3737
268	SLE RA 20	-1.34	-1.62	65.43	19.8791	-2.4764	0.3838
268	SLE RA 21	-1.33	-1.65	65.4	19.8742	-2.4757	0.3782
268	SLE FR 1	-1.25	-1.52	58.5	17.7849	-2.2143	0.357
268	SLE FR 2	-1.24	-1.53	58.5	17.7832	-2.2141	0.3551
268	SLE FR 3	-1.25	-1.53	58.73	17.8543	-2.223	0.3588
268	SLE FR 4	-1.27	-1.56	60.4	18.3595	-2.2862	0.3618
268	SLE FR 5	-1.28	-1.55	60.64	18.4305	-2.2951	0.3655
268	SLE FR 6	-1.29	-1.57	61.68	18.7453	-2.3346	0.3681
268	SLE QP 1	-1.25	-1.52	58.5	17.7849	-2.2143	0.357
268	SLE QP 2	-1.27	-1.55	60.41	18.3611	-2.2865	0.3637
268	SLD 1	3.88	-1.41	64.81	19.5774	-2.4104	-1.3349
268	SLD 2	4.42	-1.72	64.48	19.4803	-2.4003	-1.5243
268	SLD 3	4.02	-2.86	64.03	19.4363	-2.3856	-1.4317
268	SLD 4	4.56	-3.16	63.71	19.3392	-2.3754	-1.6211
268	SLD 5	-0.03	0.74	62.95	18.9576	-2.3632	0.0353
268	SLD 6	0.32	0.53	62.74	18.8932	-2.3564	-0.0904
268	SLD 7	0.43	-4.07	60.39	18.4874	-2.2804	-0.2873
268	SLD 8	0.79	-4.28	60.17	18.4229	-2.2736	-0.413
268	SLD 9	-3.33	1.18	60.64	18.2993	-2.2993	1.1403
268	SLD 10	-2.97	0.98	60.43	18.2349	-2.2926	1.0146
268	SLD 11	-2.86	-3.63	58.07	17.8291	-2.2165	0.8177
268	SLD 12	-2.51	-3.83	57.86	17.7646	-2.2098	0.692
268	SLD 13	-7.1	0.07	57.1	17.383	-2.1975	2.3484
268	SLD 14	-6.56	-0.24	56.78	17.2859	-2.1874	2.159
268	SLD 15	-6.96	-1.38	56.33	17.242	-2.1727	2.2516
268	SLD 16	-6.42	-1.68	56.01	17.1449	-2.1625	2.0622
268	SLV 1	10.78	-1.29	70.67	21.2016	-2.5755	-3.6119
268	SLV 2	12.03	-2	69.92	20.9756	-2.5519	-4.0529
268	SLV 3	11.1	-4.56	68.91	20.8787	-2.5189	-3.8318
268	SLV 4	12.35	-5.27	68.17	20.6526	-2.4953	-4.2728
268	SLV 5	1.63	3.61	66.27	19.7428	-2.4632	-0.4179
268	SLV 6	2.45	3.14	65.79	19.5955	-2.4478	-0.7053
268	SLV 7	2.71	-7.28	60.43	18.6664	-2.2745	-1.151
268	SLV 8	3.53	-7.74	59.95	18.5191	-2.2591	-1.4384
268	SLV 9	-6.07	4.64	60.87	18.2032	-2.3138	2.1657
268	SLV 10	-5.25	4.18	60.38	18.0559	-2.2984	1.8783
268	SLV 11	-4.99	-6.24	55.03	17.1268	-2.1251	1.4326
268	SLV 12	-4.17	-6.7	54.54	16.9795	-2.1098	1.1452
268	SLV 13	-14.89	2.17	52.65	16.0696	-2.0776	5.0001
268	SLV 14	-13.64	1.46	51.9	15.8435	-2.054	4.5591
268	SLV 15	-14.57	-1.1	50.9	15.7467	-2.021	4.7802
268	SLV 16	-13.32	-1.81	50.15	15.5206	-1.9974	4.3392
268	CRTFP Ux+	0	0	0	0	0	0
268	CRTFP Ux-	0	0	0	0	0	0
268	CRTFP Uy+	0	0	0	0	0	0
268	CRTFP Uy-	0	0	0	0	0	0
269	SLU 1	-0.94	-1.09	43.48	12.0222	0.352	0.2975
269	SLU 2	-0.91	-1.14	43.44	12.0149	0.3517	0.2898
269	SLU 3	-0.96	-1.1	44.51	12.3063	0.3605	0.3056
269	SLU 4	-0.95	-1.14	44.49	12.302	0.3603	0.301
269	SLU 5	-0.93	-1.16	44.1	12.1953	0.3571	0.2953
269	SLU 6	-0.98	-1.12	45.17	12.4867	0.3659	0.3112
269	SLU 7	-0.96	-1.15	45.15	12.4824	0.3656	0.3066
269	SLU 8	-0.97	-1.12	44.8	12.383	0.3628	0.3086
269	SLU 9	-0.96	-1.15	44.77	12.3787	0.3626	0.304
269	SLU 10	-0.97	-1.2	48.56	13.4238	0.3928	0.3099
269	SLU 11	-1.03	-1.17	49.63	13.7152	0.4016	0.3258
269	SLU 12	-1.01	-1.2	49.6	13.7109	0.4014	0.3211
269	SLU 13	-0.99	-1.22	49.21	13.6042	0.3982	0.3155
269	SLU 14	-1.04	-1.18	50.29	13.8956	0.407	0.3313
269	SLU 15	-1.03	-1.21	50.26	13.8913	0.4068	0.3267
269	SLU 16	-1.03	-1.18	49.91	13.7919	0.404	0.3288
269	SLU 17	-1.02	-1.21	49.89	13.7876	0.4038	0.3242
269	SLU 18	-1.03	-1.18	50.79	14.0349	0.4108	0.3263
269	SLU 19	-1.01	-1.21	50.76	14.0305	0.4106	0.3216
269	SLU 20	-1.04	-1.19	51.45	14.2153	0.4162	0.3318
269	SLU 21	-1.03	-1.22	51.42	14.211	0.416	0.3272

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
269	SLU 22	-1.05	-1.1	48.19	13.328	0.3909	0.333
269	SLU 23	-1.02	-1.16	48.15	13.3207	0.3905	0.3253
269	SLU 24	-1.08	-1.12	49.22	13.6121	0.3993	0.3411
269	SLU 25	-1.06	-1.15	49.19	13.6078	0.3991	0.3365
269	SLU 26	-1.04	-1.17	48.8	13.5012	0.3959	0.3309
269	SLU 27	-1.09	-1.13	49.88	13.7926	0.4047	0.3467
269	SLU 28	-1.08	-1.17	49.85	13.7882	0.4045	0.3421
269	SLU 29	-1.09	-1.13	49.5	13.6888	0.4016	0.3442
269	SLU 30	-1.07	-1.17	49.48	13.6845	0.4014	0.3396
269	SLU 31	-1.09	-1.22	53.26	14.7296	0.4316	0.3455
269	SLU 32	-1.14	-1.18	54.33	15.021	0.4404	0.3613
269	SLU 33	-1.12	-1.21	54.31	15.0167	0.4402	0.3567
269	SLU 34	-1.1	-1.23	53.92	14.9101	0.437	0.3511
269	SLU 35	-1.16	-1.2	54.99	15.2015	0.4458	0.3669
269	SLU 36	-1.14	-1.23	54.97	15.1971	0.4456	0.3623
269	SLU 37	-1.15	-1.2	54.62	15.0977	0.4428	0.3643
269	SLU 38	-1.13	-1.23	54.59	15.0934	0.4426	0.3597
269	SLU 39	-1.14	-1.19	55.49	15.3407	0.4496	0.3618
269	SLU 40	-1.12	-1.22	55.47	15.3364	0.4494	0.3572
269	SLU 41	-1.16	-1.21	56.15	15.5211	0.455	0.3674
269	SLU 42	-1.14	-1.24	56.13	15.5168	0.4548	0.3628
269	SLU 43	-1.18	-1.41	54.91	15.1811	0.4444	0.3745
269	SLU 44	-1.15	-1.46	54.87	15.1739	0.444	0.3668
269	SLU 45	-1.2	-1.43	55.94	15.4653	0.4528	0.3826
269	SLU 46	-1.19	-1.46	55.92	15.4609	0.4526	0.378
269	SLU 47	-1.17	-1.48	55.53	15.3543	0.4494	0.3724
269	SLU 48	-1.22	-1.44	56.6	15.6457	0.4582	0.3882
269	SLU 49	-1.21	-1.47	56.58	15.6413	0.4579	0.3836
269	SLU 50	-1.21	-1.44	56.23	15.542	0.4551	0.3857
269	SLU 51	-1.2	-1.47	56.2	15.5376	0.4549	0.3811
269	SLU 52	-1.21	-1.53	59.99	16.5828	0.4851	0.387
269	SLU 53	-1.27	-1.49	61.06	16.8742	0.4939	0.4028
269	SLU 54	-1.25	-1.52	61.03	16.8698	0.4937	0.3982
269	SLU 55	-1.23	-1.54	60.64	16.7632	0.4905	0.3926
269	SLU 56	-1.28	-1.5	61.72	17.0546	0.4993	0.4084
269	SLU 57	-1.27	-1.54	61.69	17.0502	0.4991	0.4038
269	SLU 58	-1.28	-1.5	61.34	16.9509	0.4963	0.4058
269	SLU 59	-1.26	-1.54	61.32	16.9465	0.4961	0.4012
269	SLU 60	-1.27	-1.5	62.22	17.1939	0.5031	0.4033
269	SLU 61	-1.25	-1.53	62.19	17.1895	0.5029	0.3987
269	SLU 62	-1.29	-1.51	62.88	17.3743	0.5085	0.4089
269	SLU 63	-1.27	-1.55	62.85	17.3699	0.5083	0.4043
269	SLU 64	-1.29	-1.42	59.62	16.487	0.4832	0.4101
269	SLU 65	-1.27	-1.48	59.58	16.4797	0.4828	0.4024
269	SLU 66	-1.32	-1.44	60.65	16.7711	0.4916	0.4182
269	SLU 67	-1.3	-1.47	60.63	16.7667	0.4914	0.4136
269	SLU 68	-1.28	-1.49	60.24	16.6601	0.4882	0.4079
269	SLU 69	-1.34	-1.46	61.31	16.9515	0.497	0.4238
269	SLU 70	-1.32	-1.49	61.28	16.9471	0.4968	0.4192
269	SLU 71	-1.33	-1.46	60.93	16.8478	0.4939	0.4212
269	SLU 72	-1.31	-1.49	60.91	16.8434	0.4937	0.4166
269	SLU 73	-1.33	-1.54	64.69	17.8886	0.524	0.4225
269	SLU 74	-1.38	-1.5	65.76	18.18	0.5327	0.4384
269	SLU 75	-1.37	-1.54	65.74	18.1756	0.5325	0.4337
269	SLU 76	-1.35	-1.56	65.35	18.069	0.5293	0.4281
269	SLU 77	-1.4	-1.52	66.42	18.3604	0.5381	0.4439
269	SLU 78	-1.38	-1.55	66.4	18.356	0.5379	0.4393
269	SLU 79	-1.39	-1.52	66.05	18.2567	0.5351	0.4414
269	SLU 80	-1.37	-1.55	66.02	18.2523	0.5349	0.4368
269	SLU 81	-1.38	-1.51	66.92	18.4997	0.542	0.4389
269	SLU 82	-1.37	-1.55	66.9	18.4953	0.5417	0.4342
269	SLU 83	-1.4	-1.53	67.58	18.6801	0.5473	0.4444
269	SLU 84	-1.38	-1.56	67.56	18.6757	0.5471	0.4398
269	SLE RA 1	-0.97	-1.09	44.82	12.3953	0.3631	0.3076
269	SLE RA 2	-0.95	-1.13	44.8	12.3904	0.3629	0.3025
269	SLE RA 3	-0.99	-1.1	45.51	12.5847	0.3688	0.313
269	SLE RA 4	-0.98	-1.13	45.5	12.5818	0.3686	0.31
269	SLE RA 5	-0.96	-1.14	45.24	12.5107	0.3665	0.3062
269	SLE RA 6	-1	-1.11	45.95	12.705	0.3723	0.3168
269	SLE RA 7	-0.99	-1.14	45.94	12.7021	0.3722	0.3137
269	SLE RA 8	-0.99	-1.11	45.7	12.6358	0.3703	0.3151
269	SLE RA 9	-0.98	-1.13	45.69	12.6329	0.3702	0.312
269	SLE RA 10	-0.99	-1.17	48.21	13.3297	0.3903	0.3159
269	SLE RA 11	-1.03	-1.15	48.92	13.524	0.3962	0.3265
269	SLE RA 12	-1.02	-1.17	48.91	13.5211	0.396	0.3234
269	SLE RA 13	-1	-1.18	48.65	13.45	0.3939	0.3196
269	SLE RA 14	-1.04	-1.16	49.36	13.6443	0.3998	0.3302
269	SLE RA 15	-1.03	-1.18	49.35	13.6413	0.3996	0.3271
269	SLE RA 16	-1.03	-1.15	49.11	13.5751	0.3978	0.3285
269	SLE RA 17	-1.02	-1.18	49.1	13.5722	0.3976	0.3254
269	SLE RA 18	-1.03	-1.15	49.7	13.7371	0.4023	0.3268
269	SLE RA 19	-1.02	-1.17	49.68	13.7342	0.4022	0.3237
269	SLE RA 20	-1.04	-1.16	50.13	13.8574	0.4059	0.3305
269	SLE RA 21	-1.03	-1.18	50.12	13.8545	0.4058	0.3275
269	SLE FR 1	-0.97	-1.09	44.82	12.3953	0.3631	0.3076
269	SLE FR 2	-0.97	-1.1	44.82	12.3943	0.3631	0.3066
269	SLE FR 3	-0.97	-1.1	45	12.4434	0.3646	0.3091
269	SLE FR 4	-0.98	-1.12	46.28	12.7969	0.3748	0.3123
269	SLE FR 5	-0.99	-1.11	46.46	12.8459	0.3763	0.3149
269	SLE FR 6	-1	-1.12	47.26	13.0662	0.3827	0.3172

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
269	SLE QP 1	-0.97	-1.09	44.82	12.3953	0.3631	0.3076
269	SLE QP 2	-0.99	-1.11	46.29	12.7978	0.3749	0.3134
269	SLD 1	3.08	-0.96	49.05	13.4596	0.4111	-0.9033
269	SLD 2	3.51	-1.18	48.83	13.4021	0.4087	-1.0286
269	SLD 3	3.19	-2.11	48.49	13.3795	0.406	-0.931
269	SLD 4	3.62	-2.33	48.27	13.322	0.4037	-1.0563
269	SLD 5	-0.01	0.72	48.01	13.1284	0.3938	0.0131
269	SLD 6	0.27	0.57	47.86	13.0902	0.3923	-0.0701
269	SLD 7	0.35	-3.12	46.13	12.8612	0.377	-0.0791
269	SLD 8	0.64	-3.26	45.99	12.8231	0.3754	-0.1622
269	SLD 9	-2.61	1.04	46.58	12.7726	0.3744	0.789
269	SLD 10	-2.33	0.89	46.44	12.7344	0.3728	0.7058
269	SLD 11	-2.25	-2.79	44.71	12.5055	0.3575	0.6968
269	SLD 12	-1.96	-2.94	44.56	12.4673	0.3559	0.6137
269	SLD 13	-5.59	0.11	44.3	12.2737	0.3461	1.683
269	SLD 14	-5.16	-0.11	44.08	12.2162	0.3437	1.5577
269	SLD 15	-5.48	-1.04	43.74	12.1936	0.3411	1.6554
269	SLD 16	-5.06	-1.26	43.52	12.136	0.3387	1.5301
269	SLV 1	8.53	-0.8	52.73	14.344	0.4594	-2.5321
269	SLV 2	9.52	-1.33	52.23	14.21	0.4539	-2.8239
269	SLV 3	8.78	-3.41	51.45	14.1592	0.4479	-2.5964
269	SLV 4	9.77	-3.93	50.95	14.0252	0.4424	-2.8882
269	SLV 5	1.31	3.02	50.25	13.5655	0.4186	-0.3915
269	SLV 6	1.96	2.68	49.92	13.4782	0.415	-0.5816
269	SLV 7	2.15	-5.66	45.99	12.9495	0.3803	-0.6058
269	SLV 8	2.8	-6	45.66	12.8622	0.3767	-0.7959
269	SLV 9	-4.77	3.78	46.92	12.7334	0.373	1.4226
269	SLV 10	-4.12	3.44	46.59	12.6461	0.3694	1.2326
269	SLV 11	-3.93	-4.9	42.65	12.1174	0.3348	1.2083
269	SLV 12	-3.29	-5.24	42.32	12.0302	0.3312	1.0182
269	SLV 13	-11.75	1.71	41.63	11.5704	0.3074	3.5149
269	SLV 14	-10.75	1.19	41.12	11.4365	0.3019	3.2232
269	SLV 15	-11.5	-0.9	40.35	11.3856	0.2959	3.4506
269	SLV 16	-10.5	-1.42	39.84	11.2517	0.2904	3.1589
269	CRTFP Ux+	0	0	0	0	0	0
269	CRTFP Ux-	0	0	0	0	0	0
269	CRTFP Uy+	0	0	0	0	0	0
269	CRTFP Uy-	0	0	0	0	0	0
270	SLU 1	-0.88	-0.89	39.72	11.1505	0.0293	0.2762
270	SLU 2	-0.85	-0.94	39.68	11.1443	0.0293	0.2684
270	SLU 3	-0.9	-0.9	40.66	11.4135	0.03	0.2838
270	SLU 4	-0.89	-0.93	40.64	11.4098	0.03	0.2791
270	SLU 5	-0.87	-0.95	40.28	11.3111	0.0298	0.2736
270	SLU 6	-0.92	-0.92	41.26	11.5802	0.0305	0.289
270	SLU 7	-0.9	-0.95	41.24	11.5765	0.0305	0.2843
270	SLU 8	-0.91	-0.92	40.91	11.4839	0.0303	0.2866
270	SLU 9	-0.89	-0.95	40.89	11.4802	0.0303	0.2819
270	SLU 10	-0.91	-0.99	44.36	12.4549	0.0323	0.2874
270	SLU 11	-0.96	-0.95	45.34	12.7241	0.033	0.3027
270	SLU 12	-0.94	-0.98	45.32	12.7204	0.033	0.2981
270	SLU 13	-0.93	-1	44.96	12.6217	0.0328	0.2926
270	SLU 14	-0.98	-0.96	45.94	12.8908	0.0335	0.3079
270	SLU 15	-0.96	-0.99	45.92	12.8871	0.0335	0.3033
270	SLU 16	-0.97	-0.96	45.6	12.7945	0.0333	0.3055
270	SLU 17	-0.95	-0.99	45.58	12.7908	0.0333	0.3008
270	SLU 18	-0.96	-0.96	46.41	13.0228	0.0336	0.3032
270	SLU 19	-0.95	-0.99	46.39	13.0191	0.0336	0.2986
270	SLU 20	-0.98	-0.97	47.01	13.1895	0.0341	0.3084
270	SLU 21	-0.96	-1	46.99	13.1858	0.0341	0.3038
270	SLU 22	-0.98	-0.89	43.99	12.3553	0.033	0.3098
270	SLU 23	-0.96	-0.94	43.96	12.3492	0.0329	0.3021
270	SLU 24	-1.01	-0.9	44.94	12.6183	0.0337	0.3174
270	SLU 25	-0.99	-0.93	44.91	12.6146	0.0336	0.3128
270	SLU 26	-0.97	-0.95	44.56	12.5159	0.0334	0.3073
270	SLU 27	-1.02	-0.91	45.53	12.785	0.0342	0.3226
270	SLU 28	-1.01	-0.94	45.51	12.7813	0.0341	0.318
270	SLU 29	-1.02	-0.91	45.19	12.6888	0.0339	0.3202
270	SLU 30	-1	-0.94	45.17	12.6851	0.0339	0.3156
270	SLU 31	-1.02	-0.98	48.64	13.6598	0.0359	0.321
270	SLU 32	-1.07	-0.94	49.62	13.9289	0.0367	0.3364
270	SLU 33	-1.05	-0.97	49.6	13.9252	0.0366	0.3317
270	SLU 34	-1.03	-0.99	49.24	13.8265	0.0364	0.3262
270	SLU 35	-1.08	-0.96	50.22	14.0956	0.0372	0.3416
270	SLU 36	-1.07	-0.99	50.2	14.0919	0.0371	0.3369
270	SLU 37	-1.08	-0.96	49.88	13.9994	0.0369	0.3391
270	SLU 38	-1.06	-0.99	49.86	13.9957	0.0369	0.3345
270	SLU 39	-1.07	-0.95	50.68	14.2276	0.0373	0.3369
270	SLU 40	-1.05	-0.98	50.66	14.2239	0.0372	0.3322
270	SLU 41	-1.08	-0.96	51.28	14.3943	0.0377	0.3421
270	SLU 42	-1.07	-0.99	51.26	14.3906	0.0377	0.3374
270	SLU 43	-1.1	-1.16	50.16	14.0825	0.0369	0.3475
270	SLU 44	-1.08	-1.21	50.13	14.0764	0.0368	0.3397
270	SLU 45	-1.13	-1.17	51.11	14.3455	0.0376	0.3551
270	SLU 46	-1.11	-1.2	51.08	14.3418	0.0376	0.3504
270	SLU 47	-1.09	-1.22	50.73	14.2431	0.0373	0.3449
270	SLU 48	-1.14	-1.18	51.7	14.5123	0.0381	0.3603
270	SLU 49	-1.13	-1.21	51.68	14.5086	0.038	0.3556
270	SLU 50	-1.14	-1.19	51.36	14.416	0.0378	0.3579
270	SLU 51	-1.12	-1.22	51.34	14.4123	0.0378	0.3532
270	SLU 52	-1.14	-1.26	54.81	15.387	0.0398	0.3587

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
270	SLU 53	-1.19	-1.22	55.79	15.6561	0.0406	0.374
270	SLU 54	-1.17	-1.25	55.77	15.6524	0.0406	0.3694
270	SLU 55	-1.15	-1.27	55.41	15.5537	0.0403	0.3639
270	SLU 56	-1.2	-1.23	56.39	15.8229	0.0411	0.3792
270	SLU 57	-1.19	-1.26	56.37	15.8192	0.041	0.3746
270	SLU 58	-1.2	-1.23	56.05	15.7266	0.0408	0.3768
270	SLU 59	-1.18	-1.26	56.03	15.7229	0.0408	0.3721
270	SLU 60	-1.19	-1.22	56.85	15.9548	0.0412	0.3745
270	SLU 61	-1.17	-1.25	56.83	15.9511	0.0411	0.3699
270	SLU 62	-1.2	-1.24	57.45	16.1215	0.0416	0.3797
270	SLU 63	-1.19	-1.27	57.43	16.1179	0.0416	0.3751
270	SLU 64	-1.21	-1.16	54.44	15.2874	0.0405	0.3811
270	SLU 65	-1.18	-1.21	54.41	15.2812	0.0405	0.3734
270	SLU 66	-1.23	-1.17	55.38	15.5504	0.0412	0.3887
270	SLU 67	-1.22	-1.2	55.36	15.5467	0.0412	0.3841
270	SLU 68	-1.2	-1.22	55.01	15.448	0.041	0.3786
270	SLU 69	-1.25	-1.18	55.98	15.7171	0.0417	0.3939
270	SLU 70	-1.24	-1.21	55.96	15.7134	0.0417	0.3893
270	SLU 71	-1.24	-1.18	55.64	15.6208	0.0415	0.3915
270	SLU 72	-1.23	-1.21	55.62	15.6171	0.0415	0.3869
270	SLU 73	-1.24	-1.25	59.09	16.5918	0.0435	0.3923
270	SLU 74	-1.29	-1.21	60.07	16.861	0.0442	0.4077
270	SLU 75	-1.28	-1.24	60.05	16.8573	0.0442	0.403
270	SLU 76	-1.26	-1.26	59.69	16.7586	0.0439	0.3975
270	SLU 77	-1.31	-1.22	60.67	17.0277	0.0447	0.4129
270	SLU 78	-1.29	-1.25	60.65	17.024	0.0447	0.4082
270	SLU 79	-1.3	-1.23	60.32	16.9314	0.0445	0.4105
270	SLU 80	-1.29	-1.26	60.3	16.9277	0.0444	0.4058
270	SLU 81	-1.29	-1.22	61.13	17.1597	0.0448	0.4082
270	SLU 82	-1.28	-1.25	61.11	17.156	0.0448	0.4035
270	SLU 83	-1.31	-1.23	61.73	17.3264	0.0453	0.4134
270	SLU 84	-1.3	-1.26	61.71	17.3227	0.0453	0.4087
270	SLE RA 1	-0.91	-0.89	40.94	11.4947	0.0304	0.2858
270	SLE RA 2	-0.89	-0.92	40.91	11.4906	0.0303	0.2806
270	SLE RA 3	-0.92	-0.9	41.57	11.6701	0.0308	0.2909
270	SLE RA 4	-0.91	-0.92	41.55	11.6676	0.0308	0.2878
270	SLE RA 5	-0.9	-0.93	41.31	11.6018	0.0307	0.2841
270	SLE RA 6	-0.93	-0.91	41.97	11.7812	0.0312	0.2943
270	SLE RA 7	-0.92	-0.93	41.95	11.7787	0.0311	0.2912
270	SLE RA 8	-0.93	-0.91	41.74	11.717	0.031	0.2927
270	SLE RA 9	-0.92	-0.93	41.72	11.7146	0.031	0.2896
270	SLE RA 10	-0.93	-0.95	44.04	12.3644	0.0323	0.2932
270	SLE RA 11	-0.96	-0.93	44.69	12.5438	0.0328	0.3035
270	SLE RA 12	-0.95	-0.95	44.67	12.5413	0.0328	0.3004
270	SLE RA 13	-0.94	-0.96	44.44	12.4755	0.0327	0.2967
270	SLE RA 14	-0.97	-0.94	45.09	12.6549	0.0332	0.3069
270	SLE RA 15	-0.96	-0.96	45.07	12.6525	0.0331	0.3038
270	SLE RA 16	-0.97	-0.94	44.86	12.5908	0.033	0.3053
270	SLE RA 17	-0.96	-0.96	44.85	12.5883	0.033	0.3022
270	SLE RA 18	-0.96	-0.93	45.4	12.7429	0.0332	0.3038
270	SLE RA 19	-0.95	-0.95	45.38	12.7405	0.0332	0.3007
270	SLE RA 20	-0.97	-0.94	45.8	12.8541	0.0335	0.3073
270	SLE RA 21	-0.96	-0.96	45.78	12.8516	0.0335	0.3042
270	SLE FR 1	-0.91	-0.89	40.94	11.4947	0.0304	0.2858
270	SLE FR 2	-0.9	-0.9	40.93	11.4939	0.0304	0.2847
270	SLE FR 3	-0.91	-0.89	41.1	11.5392	0.0305	0.2872
270	SLE FR 4	-0.92	-0.91	42.27	11.8684	0.0312	0.2902
270	SLE FR 5	-0.93	-0.91	42.44	11.9136	0.0314	0.2926
270	SLE FR 6	-0.94	-0.91	43.17	12.1188	0.0318	0.2948
270	SLE QP 1	-0.91	-0.89	40.94	11.4947	0.0304	0.2858
270	SLE QP 2	-0.92	-0.9	42.28	11.8692	0.0312	0.2912
270	SLD 1	2.9	-0.69	44.36	12.3519	0.0442	-0.8706
270	SLD 2	3.3	-0.89	44.18	12.3049	0.0436	-0.9916
270	SLD 3	3	-1.79	43.86	12.2842	0.0436	-0.9024
270	SLD 4	3.4	-1.98	43.68	12.2372	0.043	-1.0234
270	SLD 5	-0.01	0.85	43.69	12.1252	0.0361	0.0128
270	SLD 6	0.26	0.73	43.57	12.094	0.0357	-0.0675
270	SLD 7	0.34	-2.79	42.03	11.8996	0.0342	-0.093
270	SLD 8	0.6	-2.92	41.91	11.8684	0.0337	-0.1734
270	SLD 9	-2.45	1.12	42.64	11.87	0.0287	0.7557
270	SLD 10	-2.19	0.99	42.52	11.8388	0.0283	0.6754
270	SLD 11	-2.11	-2.53	40.98	11.6444	0.0267	0.6499
270	SLD 12	-1.84	-2.66	40.86	11.6132	0.0263	0.5696
270	SLD 13	-5.25	0.17	40.87	11.5012	0.0195	1.6058
270	SLD 14	-4.85	-0.02	40.69	11.4542	0.0189	1.4847
270	SLD 15	-5.15	-0.92	40.37	11.4335	0.0189	1.574
270	SLD 16	-4.75	-1.11	40.19	11.3865	0.0183	1.453
270	SLV 1	8.02	-0.45	47.13	12.997	0.0615	-2.4263
270	SLV 2	8.95	-0.91	46.71	12.8875	0.0601	-2.708
270	SLV 3	8.26	-2.93	46	12.8405	0.0601	-2.4995
270	SLV 4	9.19	-3.38	45.58	12.731	0.0587	-2.7812
270	SLV 5	1.24	3.07	45.52	12.4641	0.0427	-0.3635
270	SLV 6	1.84	2.77	45.25	12.3928	0.0417	-0.5471
270	SLV 7	2.03	-5.19	41.75	11.9424	0.0381	-0.6075
270	SLV 8	2.63	-5.49	41.48	11.8711	0.0371	-0.7911
270	SLV 9	-4.48	3.68	43.07	11.8672	0.0254	1.3734
270	SLV 10	-3.87	3.38	42.8	11.7959	0.0244	1.1899
270	SLV 11	-3.69	-4.58	39.3	11.3456	0.0207	1.1295
270	SLV 12	-3.08	-4.88	39.03	11.2743	0.0198	0.9459
270	SLV 13	-11.04	1.58	38.97	11.0073	0.0038	3.3636

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
270	SLV 14	-10.11	1.12	38.55	10.8979	0.0023	3.0819
270	SLV 15	-10.8	-0.9	37.84	10.8508	0.0024	3.2904
270	SLV 16	-9.87	-1.35	37.42	10.7414	0.0009	3.0087
270	CRTFP Ux+	0	0	0	0	0	0
270	CRTFP Ux-	0	0	0	0	0	0
270	CRTFP Uy+	0	0	0	0	0	0
270	CRTFP Uy-	0	0	0	0	0	0
271	SLU 1	-0.87	-0.75	38.79	10.8785	0.0165	0.2736
271	SLU 2	-0.84	-0.8	38.76	10.8727	0.0164	0.2659
271	SLU 3	-0.89	-0.75	39.71	11.1352	0.0168	0.2812
271	SLU 4	-0.87	-0.78	39.69	11.1317	0.0168	0.2765
271	SLU 5	-0.86	-0.81	39.34	11.0351	0.0167	0.2711
271	SLU 6	-0.91	-0.76	40.3	11.2975	0.0171	0.2863
271	SLU 7	-0.89	-0.79	40.28	11.2941	0.017	0.2817
271	SLU 8	-0.9	-0.77	39.96	11.2032	0.017	0.2839
271	SLU 9	-0.88	-0.8	39.94	11.1998	0.017	0.2793
271	SLU 10	-0.9	-0.82	43.35	12.1584	0.0176	0.2847
271	SLU 11	-0.95	-0.78	44.31	12.4209	0.018	0.2999
271	SLU 12	-0.93	-0.81	44.29	12.4174	0.0179	0.2953
271	SLU 13	-0.92	-0.83	43.94	12.3208	0.0178	0.2898
271	SLU 14	-0.96	-0.79	44.89	12.5833	0.0182	0.3051
271	SLU 15	-0.95	-0.82	44.87	12.5798	0.0182	0.3004
271	SLU 16	-0.96	-0.8	44.56	12.4889	0.0181	0.3027
271	SLU 17	-0.94	-0.82	44.54	12.4855	0.0181	0.2981
271	SLU 18	-0.95	-0.79	45.36	12.7152	0.0181	0.3004
271	SLU 19	-0.93	-0.82	45.34	12.7118	0.0181	0.2958
271	SLU 20	-0.97	-0.8	45.94	12.8776	0.0184	0.3056
271	SLU 21	-0.95	-0.83	45.92	12.8741	0.0183	0.301
271	SLU 22	-0.97	-0.72	42.95	12.0497	0.0185	0.3069
271	SLU 23	-0.95	-0.77	42.92	12.0439	0.0185	0.2992
271	SLU 24	-0.99	-0.73	43.88	12.3064	0.0188	0.3144
271	SLU 25	-0.98	-0.76	43.86	12.3029	0.0188	0.3098
271	SLU 26	-0.96	-0.78	43.51	12.2063	0.0187	0.3043
271	SLU 27	-1.01	-0.74	44.46	12.4687	0.0191	0.3196
271	SLU 28	-1	-0.77	44.44	12.4653	0.019	0.315
271	SLU 29	-1	-0.74	44.12	12.3744	0.019	0.3172
271	SLU 30	-0.99	-0.77	44.1	12.371	0.019	0.3126
271	SLU 31	-1	-0.8	47.52	13.3296	0.0196	0.318
271	SLU 32	-1.05	-0.76	48.47	13.5921	0.02	0.3332
271	SLU 33	-1.04	-0.79	48.45	13.5886	0.0199	0.3286
271	SLU 34	-1.02	-0.81	48.1	13.492	0.0199	0.3231
271	SLU 35	-1.07	-0.77	49.06	13.7545	0.0202	0.3384
271	SLU 36	-1.05	-0.8	49.04	13.751	0.0202	0.3337
271	SLU 37	-1.06	-0.77	48.72	13.6601	0.0201	0.336
271	SLU 38	-1.05	-0.8	48.7	13.6567	0.0201	0.3313
271	SLU 39	-1.05	-0.77	49.52	13.8864	0.0201	0.3337
271	SLU 40	-1.04	-0.8	49.5	13.8829	0.0201	0.3291
271	SLU 41	-1.07	-0.78	50.11	14.0488	0.0204	0.3389
271	SLU 42	-1.06	-0.8	50.09	14.0453	0.0204	0.3342
271	SLU 43	-1.09	-0.98	49	13.7405	0.0207	0.3443
271	SLU 44	-1.06	-1.03	48.97	13.7347	0.0207	0.3366
271	SLU 45	-1.11	-0.99	49.92	13.9972	0.0211	0.3518
271	SLU 46	-1.1	-1.01	49.9	13.9937	0.021	0.3472
271	SLU 47	-1.08	-1.04	49.55	13.8971	0.0209	0.3417
271	SLU 48	-1.13	-1	50.5	14.1595	0.0213	0.357
271	SLU 49	-1.11	-1.02	50.48	14.1561	0.0213	0.3523
271	SLU 50	-1.12	-1	50.17	14.0652	0.0212	0.3546
271	SLU 51	-1.11	-1.03	50.15	14.0618	0.0212	0.35
271	SLU 52	-1.12	-1.06	53.56	15.0204	0.0218	0.3554
271	SLU 53	-1.17	-1.01	54.52	15.2829	0.0222	0.3706
271	SLU 54	-1.16	-1.04	54.5	15.2794	0.0222	0.366
271	SLU 55	-1.14	-1.07	54.15	15.1828	0.0221	0.3605
271	SLU 56	-1.19	-1.02	55.1	15.4453	0.0225	0.3757
271	SLU 57	-1.17	-1.05	55.08	15.4418	0.0224	0.3711
271	SLU 58	-1.18	-1.03	54.77	15.3509	0.0224	0.3734
271	SLU 59	-1.17	-1.06	54.75	15.3475	0.0224	0.3687
271	SLU 60	-1.17	-1.02	55.57	15.5772	0.0224	0.3711
271	SLU 61	-1.16	-1.05	55.55	15.5737	0.0223	0.3665
271	SLU 62	-1.19	-1.03	56.15	15.7396	0.0226	0.3763
271	SLU 63	-1.17	-1.06	56.13	15.7361	0.0226	0.3716
271	SLU 64	-1.19	-0.96	53.16	14.9116	0.0227	0.3776
271	SLU 65	-1.17	-1.01	53.13	14.9059	0.0227	0.3699
271	SLU 66	-1.22	-0.96	54.08	15.1683	0.0231	0.3851
271	SLU 67	-1.2	-0.99	54.06	15.1649	0.0231	0.3805
271	SLU 68	-1.19	-1.01	53.72	15.0683	0.023	0.375
271	SLU 69	-1.24	-0.97	54.67	15.3307	0.0233	0.3903
271	SLU 70	-1.22	-1	54.65	15.3273	0.0233	0.3856
271	SLU 71	-1.23	-0.98	54.33	15.2364	0.0232	0.3879
271	SLU 72	-1.21	-1.01	54.31	15.2329	0.0232	0.3832
271	SLU 73	-1.23	-1.03	57.73	16.1916	0.0239	0.3887
271	SLU 74	-1.28	-0.99	58.68	16.4541	0.0242	0.4039
271	SLU 75	-1.26	-1.02	58.66	16.4506	0.0242	0.3993
271	SLU 76	-1.24	-1.04	58.31	16.354	0.0241	0.3938
271	SLU 77	-1.29	-1	59.27	16.6164	0.0245	0.409
271	SLU 78	-1.28	-1.03	59.25	16.613	0.0244	0.4044
271	SLU 79	-1.29	-1	58.93	16.5221	0.0244	0.4066
271	SLU 80	-1.27	-1.03	58.91	16.5187	0.0244	0.402
271	SLU 81	-1.28	-1	59.73	16.7484	0.0244	0.4044
271	SLU 82	-1.26	-1.03	59.71	16.7449	0.0244	0.3998
271	SLU 83	-1.29	-1.01	60.32	16.9108	0.0246	0.4095

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
271	SLU 84	-1.28	-1.04	60.3	16.9073	0.0246	0.4049
271	SLE RA 1	-0.9	-0.74	39.98	11.2131	0.017	0.2831
271	SLE RA 2	-0.88	-0.77	39.96	11.2093	0.017	0.278
271	SLE RA 3	-0.91	-0.74	40.59	11.3842	0.0173	0.2882
271	SLE RA 4	-0.9	-0.76	40.58	11.3819	0.0173	0.2851
271	SLE RA 5	-0.89	-0.78	40.35	11.3175	0.0172	0.2814
271	SLE RA 6	-0.92	-0.75	40.98	11.4925	0.0174	0.2916
271	SLE RA 7	-0.91	-0.77	40.97	11.4902	0.0174	0.2885
271	SLE RA 8	-0.92	-0.75	40.76	11.4296	0.0174	0.29
271	SLE RA 9	-0.91	-0.77	40.75	11.4273	0.0174	0.2869
271	SLE RA 10	-0.92	-0.79	43.02	12.0664	0.0178	0.2905
271	SLE RA 11	-0.95	-0.76	43.66	12.2414	0.018	0.3007
271	SLE RA 12	-0.94	-0.78	43.65	12.2391	0.018	0.2976
271	SLE RA 13	-0.93	-0.8	43.41	12.1747	0.018	0.2939
271	SLE RA 14	-0.96	-0.77	44.05	12.3496	0.0182	0.3041
271	SLE RA 15	-0.95	-0.79	44.04	12.3473	0.0182	0.301
271	SLE RA 16	-0.96	-0.77	43.82	12.2867	0.0181	0.3025
271	SLE RA 17	-0.95	-0.79	43.81	12.2844	0.0181	0.2994
271	SLE RA 18	-0.95	-0.77	44.36	12.4376	0.0181	0.301
271	SLE RA 19	-0.94	-0.79	44.34	12.4353	0.0181	0.2979
271	SLE RA 20	-0.96	-0.77	44.75	12.5458	0.0183	0.3044
271	SLE RA 21	-0.95	-0.79	44.73	12.5435	0.0183	0.3014
271	SLE FR 1	-0.9	-0.74	39.98	11.2131	0.017	0.2831
271	SLE FR 2	-0.89	-0.75	39.98	11.2123	0.017	0.2821
271	SLE FR 3	-0.9	-0.74	40.14	11.2564	0.0171	0.2845
271	SLE FR 4	-0.91	-0.76	41.29	11.5797	0.0174	0.2875
271	SLE FR 5	-0.92	-0.75	41.45	11.6237	0.0174	0.2899
271	SLE FR 6	-0.92	-0.75	42.17	11.8253	0.0176	0.2921
271	SLE QP 1	-0.9	-0.74	39.98	11.2131	0.017	0.2831
271	SLE QP 2	-0.91	-0.75	41.29	11.5804	0.0174	0.2885
271	SLD 1	2.9	-0.46	42.93	11.9364	0.0285	-0.8707
271	SLD 2	3.3	-0.64	42.77	11.8961	0.028	-0.9913
271	SLD 3	3	-1.56	42.44	11.871	0.0289	-0.9025
271	SLD 4	3.4	-1.74	42.28	11.8308	0.0284	-1.023
271	SLD 5	0	1.04	42.55	11.7936	0.0202	0.0109
271	SLD 6	0.27	0.93	42.45	11.7669	0.0199	-0.0691
271	SLD 7	0.34	-2.64	40.93	11.5759	0.0215	-0.0951
271	SLD 8	0.61	-2.75	40.82	11.5491	0.0212	-0.1751
271	SLD 9	-2.43	1.25	41.76	11.6117	0.0136	0.7521
271	SLD 10	-2.17	1.14	41.66	11.585	0.0132	0.6721
271	SLD 11	-2.09	-2.42	40.14	11.394	0.0149	0.6461
271	SLD 12	-1.83	-2.54	40.04	11.3673	0.0145	0.5661
271	SLD 13	-5.22	0.24	40.3	11.3301	0.0064	1.6
271	SLD 14	-4.83	0.07	40.15	11.2898	0.0058	1.4795
271	SLD 15	-5.12	-0.86	39.82	11.2648	0.0067	1.5683
271	SLD 16	-4.72	-1.04	39.66	11.2245	0.0062	1.4477
271	SLV 1	8	-0.12	45.1	12.4118	0.0435	-2.4229
271	SLV 2	8.93	-0.52	44.73	12.318	0.0422	-2.7036
271	SLV 3	8.24	-2.61	43.99	12.261	0.0444	-2.4962
271	SLV 4	9.17	-3.02	43.62	12.1672	0.0432	-2.7769
271	SLV 5	1.24	3.3	44.18	12.075	0.024	-0.3645
271	SLV 6	1.84	3.04	43.94	12.0139	0.0232	-0.5474
271	SLV 7	2.03	-5.03	40.49	11.5724	0.0271	-0.6086
271	SLV 8	2.63	-5.29	40.25	11.5113	0.0263	-0.7915
271	SLV 9	-4.46	3.8	42.34	11.6496	0.0084	1.3685
271	SLV 10	-3.85	3.53	42.1	11.5885	0.0076	1.1856
271	SLV 11	-3.67	-4.53	38.65	11.147	0.0116	1.1244
271	SLV 12	-3.07	-4.8	38.41	11.0859	0.0108	0.9415
271	SLV 13	-10.99	1.53	38.96	10.9937	-0.0084	3.3538
271	SLV 14	-10.06	1.12	38.6	10.8999	-0.0097	3.0732
271	SLV 15	-10.75	-0.97	37.86	10.8429	-0.0075	3.2806
271	SLV 16	-9.83	-1.38	37.49	10.7491	-0.0087	2.9999
271	CRTFP Ux+	0	0	0	0	0	0
271	CRTFP Ux-	0	0	0	0	0	0
271	CRTFP Uy+	0	0	0	0	0	0
271	CRTFP Uy-	0	0	0	0	0	0
272	SLU 1	-0.85	-0.6	38.46	10.7807	-0.0008	0.27
272	SLU 2	-0.83	-0.65	38.43	10.775	-0.0008	0.2624
272	SLU 3	-0.88	-0.6	39.38	11.0361	-0.0009	0.2775
272	SLU 4	-0.86	-0.63	39.36	11.0327	-0.0009	0.2728
272	SLU 5	-0.84	-0.66	39.01	10.9361	-0.0009	0.2674
272	SLU 6	-0.89	-0.61	39.96	11.1972	-0.001	0.2825
272	SLU 7	-0.88	-0.64	39.94	11.1938	-0.001	0.2779
272	SLU 8	-0.89	-0.62	39.62	11.1029	-0.0009	0.2802
272	SLU 9	-0.87	-0.65	39.6	11.0995	-0.0009	0.2756
272	SLU 10	-0.89	-0.66	43.02	12.0606	-0.0021	0.2808
272	SLU 11	-0.93	-0.62	43.97	12.3217	-0.0022	0.2959
272	SLU 12	-0.92	-0.65	43.95	12.3182	-0.0022	0.2913
272	SLU 13	-0.9	-0.67	43.61	12.2217	-0.0021	0.2859
272	SLU 14	-0.95	-0.63	44.55	12.4828	-0.0023	0.301
272	SLU 15	-0.94	-0.65	44.54	12.4793	-0.0023	0.2964
272	SLU 16	-0.94	-0.63	44.22	12.3885	-0.0022	0.2987
272	SLU 17	-0.93	-0.66	44.2	12.3851	-0.0022	0.294
272	SLU 18	-0.94	-0.62	45.03	12.6173	-0.0026	0.2964
272	SLU 19	-0.92	-0.65	45.01	12.6138	-0.0026	0.2918
272	SLU 20	-0.95	-0.63	45.61	12.7784	-0.0027	0.3015
272	SLU 21	-0.94	-0.66	45.59	12.7749	-0.0027	0.2969
272	SLU 22	-0.96	-0.56	42.59	11.9401	-0.0009	0.3029
272	SLU 23	-0.93	-0.61	42.56	11.9344	-0.0009	0.2952
272	SLU 24	-0.98	-0.56	43.51	12.1954	-0.0011	0.3103

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
272	SLU 25	-0.97	-0.59	43.49	12.192	-0.0011	0.3057
272	SLU 26	-0.95	-0.62	43.14	12.0955	-0.001	0.3002
272	SLU 27	-1	-0.57	44.09	12.3565	-0.0011	0.3154
272	SLU 28	-0.98	-0.6	44.07	12.3531	-0.0011	0.3107
272	SLU 29	-0.99	-0.58	43.75	12.2623	-0.0011	0.313
272	SLU 30	-0.97	-0.61	43.73	12.2589	-0.001	0.3084
272	SLU 31	-0.99	-0.62	47.15	13.2199	-0.0022	0.3137
272	SLU 32	-1.04	-0.58	48.1	13.481	-0.0024	0.3288
272	SLU 33	-1.02	-0.61	48.08	13.4776	-0.0024	0.3241
272	SLU 34	-1.01	-0.63	47.73	13.381	-0.0023	0.3187
272	SLU 35	-1.05	-0.58	48.68	13.6421	-0.0024	0.3338
272	SLU 36	-1.04	-0.61	48.66	13.6387	-0.0024	0.3292
272	SLU 37	-1.05	-0.59	48.35	13.5478	-0.0023	0.3315
272	SLU 38	-1.03	-0.62	48.33	13.5444	-0.0023	0.3269
272	SLU 39	-1.04	-0.58	49.15	13.7766	-0.0028	0.3293
272	SLU 40	-1.02	-0.61	49.13	13.7732	-0.0028	0.3247
272	SLU 41	-1.06	-0.59	49.73	13.9377	-0.0028	0.3343
272	SLU 42	-1.04	-0.62	49.71	13.9343	-0.0028	0.3297
272	SLU 43	-1.07	-0.8	48.59	13.6175	-0.001	0.3398
272	SLU 44	-1.05	-0.84	48.55	13.6118	-0.001	0.3321
272	SLU 45	-1.1	-0.8	49.5	13.8728	-0.0011	0.3472
272	SLU 46	-1.08	-0.83	49.48	13.8694	-0.0011	0.3426
272	SLU 47	-1.07	-0.85	49.14	13.7729	-0.001	0.3372
272	SLU 48	-1.11	-0.81	50.08	14.0339	-0.0012	0.3523
272	SLU 49	-1.1	-0.84	50.06	14.0305	-0.0012	0.3477
272	SLU 50	-1.11	-0.81	49.75	13.9397	-0.0011	0.3499
272	SLU 51	-1.09	-0.84	49.73	13.9363	-0.0011	0.3453
272	SLU 52	-1.11	-0.86	53.15	14.8973	-0.0023	0.3506
272	SLU 53	-1.16	-0.81	54.1	15.1584	-0.0024	0.3657
272	SLU 54	-1.14	-0.84	54.08	15.155	-0.0024	0.3611
272	SLU 55	-1.12	-0.87	53.73	15.0584	-0.0023	0.3557
272	SLU 56	-1.17	-0.82	54.68	15.3195	-0.0025	0.3708
272	SLU 57	-1.16	-0.85	54.66	15.3161	-0.0025	0.3661
272	SLU 58	-1.16	-0.82	54.34	15.2252	-0.0024	0.3684
272	SLU 59	-1.15	-0.85	54.32	15.2218	-0.0024	0.3638
272	SLU 60	-1.16	-0.82	55.15	15.454	-0.0028	0.3662
272	SLU 61	-1.14	-0.84	55.13	15.4506	-0.0028	0.3616
272	SLU 62	-1.17	-0.82	55.73	15.6151	-0.0029	0.3713
272	SLU 63	-1.16	-0.85	55.71	15.6117	-0.0029	0.3666
272	SLU 64	-1.18	-0.76	52.71	14.7768	-0.0011	0.3726
272	SLU 65	-1.15	-0.8	52.68	14.7711	-0.0011	0.3649
272	SLU 66	-1.2	-0.76	53.63	15.0322	-0.0013	0.38
272	SLU 67	-1.19	-0.79	53.61	15.0288	-0.0013	0.3754
272	SLU 68	-1.17	-0.81	53.26	14.9322	-0.0012	0.37
272	SLU 69	-1.22	-0.77	54.21	15.1933	-0.0013	0.3851
272	SLU 70	-1.2	-0.79	54.19	15.1899	-0.0013	0.3805
272	SLU 71	-1.21	-0.77	53.88	15.099	-0.0012	0.3828
272	SLU 72	-1.2	-0.8	53.86	15.0956	-0.0012	0.3781
272	SLU 73	-1.21	-0.82	57.28	16.0567	-0.0024	0.3834
272	SLU 74	-1.26	-0.77	58.22	16.3177	-0.0025	0.3985
272	SLU 75	-1.24	-0.8	58.2	16.3143	-0.0025	0.3939
272	SLU 76	-1.23	-0.82	57.86	16.2178	-0.0025	0.3885
272	SLU 77	-1.28	-0.78	58.81	16.4788	-0.0026	0.4036
272	SLU 78	-1.26	-0.81	58.79	16.4754	-0.0026	0.399
272	SLU 79	-1.27	-0.78	58.47	16.3846	-0.0025	0.4012
272	SLU 80	-1.25	-0.81	58.45	16.3812	-0.0025	0.3966
272	SLU 81	-1.26	-0.77	59.28	16.6133	-0.0029	0.399
272	SLU 82	-1.25	-0.8	59.26	16.6099	-0.0029	0.3944
272	SLU 83	-1.28	-0.78	59.86	16.7744	-0.003	0.4041
272	SLU 84	-1.26	-0.81	59.84	16.771	-0.003	0.3995
272	SLE RA 1	-0.88	-0.59	39.64	11.112	-0.0008	0.2794
272	SLE RA 2	-0.87	-0.62	39.62	11.1082	-0.0008	0.2743
272	SLE RA 3	-0.9	-0.59	40.25	11.2822	-0.0009	0.2844
272	SLE RA 4	-0.89	-0.61	40.24	11.2799	-0.0009	0.2813
272	SLE RA 5	-0.88	-0.63	40.01	11.2156	-0.0009	0.2777
272	SLE RA 6	-0.91	-0.6	40.64	11.3896	-0.001	0.2877
272	SLE RA 7	-0.9	-0.62	40.63	11.3873	-0.001	0.2847
272	SLE RA 8	-0.91	-0.6	40.42	11.3268	-0.0009	0.2862
272	SLE RA 9	-0.9	-0.62	40.4	11.3245	-0.0009	0.2831
272	SLE RA 10	-0.91	-0.63	42.68	11.9652	-0.0017	0.2866
272	SLE RA 11	-0.94	-0.6	43.32	12.1393	-0.0018	0.2967
272	SLE RA 12	-0.93	-0.62	43.3	12.137	-0.0018	0.2936
272	SLE RA 13	-0.92	-0.64	43.07	12.0726	-0.0017	0.29
272	SLE RA 14	-0.95	-0.61	43.7	12.2467	-0.0018	0.3001
272	SLE RA 15	-0.94	-0.63	43.69	12.2444	-0.0018	0.297
272	SLE RA 16	-0.94	-0.61	43.48	12.1838	-0.0018	0.2985
272	SLE RA 17	-0.93	-0.63	43.47	12.1815	-0.0018	0.2954
272	SLE RA 18	-0.94	-0.6	44.02	12.3363	-0.0021	0.297
272	SLE RA 19	-0.93	-0.62	44	12.334	-0.002	0.2939
272	SLE RA 20	-0.95	-0.61	44.41	12.4437	-0.0021	0.3004
272	SLE RA 21	-0.94	-0.63	44.39	12.4414	-0.0021	0.2973
272	SLE FR 1	-0.88	-0.59	39.64	11.112	-0.0008	0.2794
272	SLE FR 2	-0.88	-0.6	39.64	11.1112	-0.0008	0.2784
272	SLE FR 3	-0.89	-0.59	39.8	11.1549	-0.0009	0.2808
272	SLE FR 4	-0.9	-0.6	40.95	11.4785	-0.0012	0.2837
272	SLE FR 5	-0.9	-0.6	41.11	11.5222	-0.0012	0.2861
272	SLE FR 6	-0.91	-0.6	41.83	11.7241	-0.0014	0.2882
272	SLE QP 1	-0.88	-0.59	39.64	11.112	-0.0008	0.2794
272	SLE QP 2	-0.9	-0.59	40.95	11.4793	-0.0012	0.2847
272	SLD 1	2.9	-0.22	42.2	11.7275	0.0087	-0.8723

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
272	SLD 2	3.3	-0.38	42.06	11.6928	0.0082	-0.9924
272	SLD 3	3	-1.34	41.7	11.6584	0.0094	-0.9041
272	SLD 4	3.4	-1.49	41.56	11.6238	0.0089	-1.0243
272	SLD 5	0.01	1.24	42.11	11.6647	0.0008	0.0077
272	SLD 6	0.28	1.13	42.01	11.6417	0.0005	-0.072
272	SLD 7	0.35	-2.48	40.45	11.4347	0.0031	-0.0984
272	SLD 8	0.62	-2.58	40.36	11.4117	0.0028	-0.1781
272	SLD 9	-2.42	1.4	41.55	11.5469	-0.0052	0.7475
272	SLD 10	-2.15	1.29	41.46	11.5239	-0.0055	0.6678
272	SLD 11	-2.08	-2.32	39.9	11.3169	-0.0029	0.6414
272	SLD 12	-1.81	-2.42	39.8	11.2939	-0.0032	0.5617
272	SLD 13	-5.2	0.31	40.35	11.3348	-0.0114	1.5937
272	SLD 14	-4.8	0.15	40.21	11.3001	-0.0118	1.4735
272	SLD 15	-5.1	-0.81	39.85	11.2658	-0.0107	1.5618
272	SLD 16	-4.7	-0.97	39.71	11.2311	-0.0111	1.4417
272	SLV 1	7.99	0.23	43.84	12.0585	0.022	-2.4216
272	SLV 2	8.92	-0.13	43.52	11.9777	0.0209	-2.7013
272	SLV 3	8.23	-2.29	42.71	11.8999	0.0236	-2.4949
272	SLV 4	9.15	-2.65	42.39	11.8191	0.0225	-2.7746
272	SLV 5	1.25	3.55	43.59	11.9078	0.0034	-0.3668
272	SLV 6	1.85	3.31	43.38	11.8552	0.0028	-0.5491
272	SLV 7	2.03	-4.87	39.83	11.3791	0.0089	-0.6112
272	SLV 8	2.64	-5.1	39.62	11.3264	0.0082	-0.7934
272	SLV 9	-4.44	3.92	42.29	11.6321	-0.0106	1.3629
272	SLV 10	-3.83	3.68	42.08	11.5795	-0.0113	1.1806
272	SLV 11	-3.65	-4.5	38.53	11.1033	-0.0052	1.1185
272	SLV 12	-3.05	-4.73	38.32	11.0507	-0.0059	0.9362
272	SLV 13	-10.95	1.47	39.52	11.1394	-0.0249	3.344
272	SLV 14	-10.03	1.1	39.2	11.0587	-0.026	3.0643
272	SLV 15	-10.72	-1.06	38.39	10.9808	-0.0233	3.2707
272	SLV 16	-9.79	-1.42	38.07	10.9001	-0.0244	2.991
272	CRTFP Ux+	0	0	0	0	0	0
272	CRTFP Ux-	0	0	0	0	0	0
272	CRTFP Uy+	0	0	0	0	0	0
272	CRTFP Uy-	0	0	0	0	0	0
273	SLU 1	-0.84	-0.46	38.8	10.8989	-0.0195	0.2657
273	SLU 2	-0.82	-0.51	38.77	10.8929	-0.0194	0.2581
273	SLU 3	-0.86	-0.46	39.73	11.1589	-0.0201	0.273
273	SLU 4	-0.85	-0.49	39.71	11.1553	-0.0201	0.2684
273	SLU 5	-0.83	-0.51	39.36	11.0565	-0.0198	0.263
273	SLU 6	-0.88	-0.46	40.32	11.3225	-0.0205	0.278
273	SLU 7	-0.86	-0.49	40.3	11.3189	-0.0205	0.2734
273	SLU 8	-0.87	-0.47	39.98	11.2261	-0.0202	0.2757
273	SLU 9	-0.86	-0.5	39.96	11.2225	-0.0202	0.2711
273	SLU 10	-0.87	-0.51	43.45	12.2083	-0.0233	0.2762
273	SLU 11	-0.92	-0.46	44.42	12.4743	-0.024	0.2911
273	SLU 12	-0.9	-0.49	44.4	12.4707	-0.024	0.2865
273	SLU 13	-0.89	-0.51	44.04	12.3719	-0.0237	0.2811
273	SLU 14	-0.94	-0.46	45	12.6379	-0.0244	0.2961
273	SLU 15	-0.92	-0.49	44.98	12.6343	-0.0244	0.2915
273	SLU 16	-0.93	-0.47	44.66	12.5415	-0.0241	0.2938
273	SLU 17	-0.91	-0.5	44.64	12.5379	-0.0241	0.2892
273	SLU 18	-0.92	-0.46	45.49	12.778	-0.025	0.2916
273	SLU 19	-0.91	-0.49	45.47	12.7744	-0.025	0.287
273	SLU 20	-0.94	-0.46	46.08	12.9416	-0.0254	0.2966
273	SLU 21	-0.92	-0.49	46.06	12.938	-0.0253	0.292
273	SLU 22	-0.94	-0.4	42.97	12.073	-0.0219	0.298
273	SLU 23	-0.92	-0.45	42.94	12.0671	-0.0219	0.2904
273	SLU 24	-0.97	-0.4	43.9	12.333	-0.0226	0.3053
273	SLU 25	-0.95	-0.43	43.88	12.3294	-0.0226	0.3007
273	SLU 26	-0.93	-0.45	43.53	12.2306	-0.0223	0.2953
273	SLU 27	-0.98	-0.41	44.49	12.4966	-0.023	0.3103
273	SLU 28	-0.97	-0.43	44.47	12.493	-0.0229	0.3057
273	SLU 29	-0.97	-0.41	44.15	12.4002	-0.0227	0.308
273	SLU 30	-0.96	-0.44	44.13	12.3966	-0.0227	0.3034
273	SLU 31	-0.97	-0.45	47.62	13.3825	-0.0258	0.3085
273	SLU 32	-1.02	-0.4	48.59	13.6484	-0.0264	0.3234
273	SLU 33	-1.01	-0.43	48.57	13.6448	-0.0264	0.3188
273	SLU 34	-0.99	-0.45	48.21	13.546	-0.0261	0.3134
273	SLU 35	-1.04	-0.4	49.17	13.812	-0.0268	0.3284
273	SLU 36	-1.02	-0.43	49.15	13.8084	-0.0268	0.3238
273	SLU 37	-1.03	-0.41	48.83	13.7156	-0.0265	0.3261
273	SLU 38	-1.01	-0.44	48.81	13.712	-0.0265	0.3215
273	SLU 39	-1.02	-0.4	49.66	13.9522	-0.0274	0.3239
273	SLU 40	-1.01	-0.43	49.64	13.9486	-0.0274	0.3193
273	SLU 41	-1.04	-0.41	50.25	14.1158	-0.0278	0.3289
273	SLU 42	-1.02	-0.43	50.23	14.1122	-0.0278	0.3243
273	SLU 43	-1.06	-0.62	49.01	13.766	-0.0245	0.3344
273	SLU 44	-1.03	-0.67	48.98	13.76	-0.0245	0.3267
273	SLU 45	-1.08	-0.62	49.94	14.026	-0.0251	0.3417
273	SLU 46	-1.07	-0.64	49.92	14.0224	-0.0251	0.3371
273	SLU 47	-1.05	-0.67	49.57	13.9236	-0.0248	0.3317
273	SLU 48	-1.1	-0.62	50.53	14.1896	-0.0255	0.3466
273	SLU 49	-1.08	-0.65	50.51	14.186	-0.0255	0.342
273	SLU 50	-1.09	-0.63	50.19	14.0932	-0.0252	0.3443
273	SLU 51	-1.07	-0.66	50.17	14.0896	-0.0252	0.3397
273	SLU 52	-1.09	-0.66	53.66	15.0754	-0.0283	0.3448
273	SLU 53	-1.14	-0.62	54.63	15.3414	-0.029	0.3598
273	SLU 54	-1.12	-0.64	54.61	15.3378	-0.029	0.3552
273	SLU 55	-1.1	-0.67	54.25	15.239	-0.0287	0.3498

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
273	SLU 56	-1.15	-0.62	55.21	15.505	-0.0294	0.3647
273	SLU 57	-1.14	-0.65	55.19	15.5014	-0.0294	0.3601
273	SLU 58	-1.15	-0.63	54.87	15.4086	-0.0291	0.3624
273	SLU 59	-1.13	-0.66	54.85	15.405	-0.0291	0.3578
273	SLU 60	-1.14	-0.62	55.7	15.6451	-0.03	0.3602
273	SLU 61	-1.12	-0.64	55.68	15.6416	-0.03	0.3556
273	SLU 62	-1.15	-0.62	56.29	15.8087	-0.0304	0.3652
273	SLU 63	-1.14	-0.65	56.27	15.8051	-0.0304	0.3606
273	SLU 64	-1.16	-0.56	53.18	14.9402	-0.0269	0.3667
273	SLU 65	-1.13	-0.61	53.15	14.9342	-0.0269	0.359
273	SLU 66	-1.18	-0.56	54.11	15.2001	-0.0276	0.374
273	SLU 67	-1.17	-0.59	54.09	15.1965	-0.0276	0.3694
273	SLU 68	-1.15	-0.61	53.74	15.0977	-0.0273	0.364
273	SLU 69	-1.2	-0.56	54.7	15.3637	-0.028	0.3789
273	SLU 70	-1.18	-0.59	54.68	15.3601	-0.0279	0.3743
273	SLU 71	-1.19	-0.57	54.36	15.2673	-0.0277	0.3766
273	SLU 72	-1.18	-0.6	54.34	15.2637	-0.0277	0.372
273	SLU 73	-1.19	-0.61	57.83	16.2496	-0.0308	0.3771
273	SLU 74	-1.24	-0.56	58.8	16.5155	-0.0314	0.3921
273	SLU 75	-1.22	-0.59	58.78	16.5119	-0.0314	0.3874
273	SLU 76	-1.21	-0.61	58.42	16.4131	-0.0311	0.3821
273	SLU 77	-1.25	-0.56	59.39	16.6791	-0.0318	0.397
273	SLU 78	-1.24	-0.59	59.37	16.6755	-0.0318	0.3924
273	SLU 79	-1.25	-0.57	59.04	16.5827	-0.0315	0.3947
273	SLU 80	-1.23	-0.6	59.02	16.5791	-0.0315	0.3901
273	SLU 81	-1.24	-0.56	59.87	16.8193	-0.0324	0.3925
273	SLU 82	-1.22	-0.59	59.85	16.8157	-0.0324	0.3879
273	SLU 83	-1.26	-0.56	60.46	16.9829	-0.0328	0.3975
273	SLU 84	-1.24	-0.59	60.44	16.9793	-0.0328	0.3929
273	SLE RA 1	-0.87	-0.44	39.99	11.2344	-0.0202	0.275
273	SLE RA 2	-0.85	-0.47	39.97	11.2304	-0.0202	0.2699
273	SLE RA 3	-0.88	-0.44	40.61	11.4077	-0.0206	0.2798
273	SLE RA 4	-0.87	-0.46	40.6	11.4053	-0.0206	0.2767
273	SLE RA 5	-0.86	-0.48	40.36	11.3394	-0.0204	0.2732
273	SLE RA 6	-0.9	-0.45	41.01	11.5167	-0.0209	0.2831
273	SLE RA 7	-0.89	-0.46	40.99	11.5143	-0.0209	0.2801
273	SLE RA 8	-0.89	-0.45	40.78	11.4525	-0.0207	0.2816
273	SLE RA 9	-0.88	-0.47	40.76	11.4501	-0.0207	0.2785
273	SLE RA 10	-0.89	-0.47	43.09	12.1073	-0.0227	0.2819
273	SLE RA 11	-0.92	-0.44	43.74	12.2846	-0.0232	0.2919
273	SLE RA 12	-0.91	-0.46	43.72	12.2822	-0.0232	0.2888
273	SLE RA 13	-0.9	-0.48	43.49	12.2164	-0.023	0.2852
273	SLE RA 14	-0.93	-0.45	44.13	12.3937	-0.0234	0.2952
273	SLE RA 15	-0.92	-0.46	44.11	12.3913	-0.0234	0.2921
273	SLE RA 16	-0.93	-0.45	43.9	12.3294	-0.0233	0.2937
273	SLE RA 17	-0.92	-0.47	43.89	12.327	-0.0232	0.2906
273	SLE RA 18	-0.92	-0.44	44.45	12.4871	-0.0238	0.2922
273	SLE RA 19	-0.91	-0.46	44.44	12.4847	-0.0238	0.2891
273	SLE RA 20	-0.93	-0.45	44.85	12.5962	-0.0241	0.2955
273	SLE RA 21	-0.92	-0.46	44.83	12.5938	-0.0241	0.2924
273	SLE FR 1	-0.87	-0.44	39.99	11.2344	-0.0202	0.275
273	SLE FR 2	-0.87	-0.45	39.99	11.2336	-0.0202	0.2739
273	SLE FR 3	-0.87	-0.44	40.15	11.278	-0.0203	0.2763
273	SLE FR 4	-0.88	-0.45	41.33	11.6094	-0.0213	0.2791
273	SLE FR 5	-0.89	-0.44	41.49	11.6538	-0.0214	0.2815
273	SLE FR 6	-0.9	-0.44	42.22	11.8608	-0.022	0.2836
273	SLE QP 1	-0.87	-0.44	39.99	11.2344	-0.0202	0.275
273	SLE QP 2	-0.89	-0.44	41.33	11.6102	-0.0213	0.2801
273	SLD 1	2.91	0.01	42.23	11.7684	-0.0124	-0.8748
273	SLD 2	3.3	-0.12	42.1	11.7383	-0.0128	-0.9945
273	SLD 3	3.01	-1.11	41.7	11.6895	-0.0113	-0.9066
273	SLD 4	3.4	-1.25	41.58	11.6594	-0.0117	-1.0263
273	SLD 5	0.03	1.43	42.42	11.7829	-0.0202	0.0037
273	SLD 6	0.29	1.34	42.34	11.7629	-0.0205	-0.0757
273	SLD 7	0.37	-2.33	40.67	11.5197	-0.0165	-0.1024
273	SLD 8	0.63	-2.42	40.59	11.4997	-0.0168	-0.1818
273	SLD 9	-2.4	1.53	42.07	11.7207	-0.0258	0.7421
273	SLD 10	-2.14	1.44	41.99	11.7007	-0.026	0.6626
273	SLD 11	-2.06	-2.22	40.33	11.4575	-0.0221	0.636
273	SLD 12	-1.8	-2.31	40.24	11.4375	-0.0223	0.5566
273	SLD 13	-5.18	0.36	41.08	11.561	-0.0309	1.5865
273	SLD 14	-4.78	0.23	40.96	11.5309	-0.0313	1.4669
273	SLD 15	-5.07	-0.76	40.56	11.4821	-0.0298	1.5547
273	SLD 16	-4.68	-0.9	40.43	11.452	-0.0302	1.435
273	SLV 1	7.99	0.58	43.41	11.9793	-0.0005	-2.4212
273	SLV 2	8.91	0.27	43.12	11.9092	-0.0014	-2.6999
273	SLV 3	8.22	-1.97	42.22	11.7986	0.0021	-2.4945
273	SLV 4	9.14	-2.29	41.93	11.7285	0.0012	-2.7732
273	SLV 5	1.26	3.79	43.81	12.0074	-0.0188	-0.3701
273	SLV 6	1.86	3.58	43.62	11.9616	-0.0194	-0.5517
273	SLV 7	2.04	-4.72	39.84	11.405	-0.0102	-0.6144
273	SLV 8	2.64	-4.92	39.65	11.3593	-0.0108	-0.796
273	SLV 9	-4.41	4.04	43.01	11.8611	-0.0318	1.3563
273	SLV 10	-3.81	3.83	42.82	11.8154	-0.0323	1.1747
273	SLV 11	-3.63	-4.47	39.04	11.2588	-0.0232	1.112
273	SLV 12	-3.03	-4.68	38.85	11.213	-0.0238	0.9304
273	SLV 13	-10.91	1.4	40.73	11.4919	-0.0437	3.3335
273	SLV 14	-9.99	1.08	40.44	11.4218	-0.0446	3.0548
273	SLV 15	-10.68	-1.15	39.54	11.3112	-0.0412	3.2602
273	SLV 16	-9.76	-1.47	39.25	11.2411	-0.0421	2.9815

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
273	CRTFP Ux+	0	0	0	0	0	0
273	CRTFP Ux-	0	0	0	0	0	0
273	CRTFP Uy+	0	0	0	0	0	0
273	CRTFP Uy-	0	0	0	0	0	0
274	SLU 1	-0.82	-0.32	39.77	11.231	-0.037	0.2607
274	SLU 2	-0.8	-0.37	39.74	11.2244	-0.0369	0.2531
274	SLU 3	-0.85	-0.32	40.74	11.5014	-0.0381	0.2678
274	SLU 4	-0.83	-0.35	40.72	11.4974	-0.0381	0.2633
274	SLU 5	-0.82	-0.37	40.35	11.3941	-0.0376	0.258
274	SLU 6	-0.86	-0.32	41.34	11.6711	-0.0388	0.2727
274	SLU 7	-0.85	-0.35	41.32	11.6672	-0.0387	0.2681
274	SLU 8	-0.86	-0.33	40.99	11.5704	-0.0383	0.2705
274	SLU 9	-0.84	-0.36	40.97	11.5665	-0.0383	0.2659
274	SLU 10	-0.85	-0.36	44.6	12.5991	-0.0432	0.2707
274	SLU 11	-0.9	-0.3	45.6	12.8761	-0.0444	0.2855
274	SLU 12	-0.89	-0.33	45.58	12.8721	-0.0443	0.2809
274	SLU 13	-0.87	-0.36	45.21	12.7688	-0.0438	0.2756
274	SLU 14	-0.92	-0.31	46.21	13.0458	-0.045	0.2904
274	SLU 15	-0.9	-0.34	46.18	13.0419	-0.045	0.2858
274	SLU 16	-0.91	-0.32	45.85	12.9451	-0.0446	0.2881
274	SLU 17	-0.9	-0.34	45.83	12.9412	-0.0445	0.2835
274	SLU 18	-0.9	-0.3	46.72	13.1948	-0.0459	0.2859
274	SLU 19	-0.89	-0.33	46.7	13.1909	-0.0459	0.2814
274	SLU 20	-0.92	-0.31	47.33	13.3645	-0.0466	0.2908
274	SLU 21	-0.9	-0.33	47.31	13.3606	-0.0465	0.2862
274	SLU 22	-0.92	-0.25	44.07	12.4461	-0.0416	0.2924
274	SLU 23	-0.9	-0.3	44.03	12.4396	-0.0415	0.2848
274	SLU 24	-0.95	-0.24	45.03	12.7166	-0.0427	0.2995
274	SLU 25	-0.93	-0.27	45.01	12.7126	-0.0427	0.2949
274	SLU 26	-0.92	-0.3	44.64	12.6093	-0.0422	0.2896
274	SLU 27	-0.96	-0.25	45.64	12.8863	-0.0434	0.3044
274	SLU 28	-0.95	-0.27	45.61	12.8824	-0.0433	0.2998
274	SLU 29	-0.96	-0.26	45.28	12.7856	-0.0429	0.3022
274	SLU 30	-0.94	-0.28	45.26	12.7817	-0.0429	0.2976
274	SLU 31	-0.95	-0.28	48.89	13.8143	-0.0478	0.3024
274	SLU 32	-1	-0.23	49.89	14.0913	-0.049	0.3172
274	SLU 33	-0.99	-0.26	49.87	14.0873	-0.0489	0.3126
274	SLU 34	-0.97	-0.28	49.5	13.984	-0.0484	0.3073
274	SLU 35	-1.02	-0.23	50.5	14.261	-0.0496	0.322
274	SLU 36	-1	-0.26	50.48	14.2571	-0.0496	0.3175
274	SLU 37	-1.01	-0.24	50.14	14.1603	-0.0492	0.3198
274	SLU 38	-1	-0.27	50.12	14.1564	-0.0491	0.3152
274	SLU 39	-1	-0.23	51.01	14.41	-0.0505	0.3176
274	SLU 40	-0.99	-0.25	50.99	14.406	-0.0505	0.313
274	SLU 41	-1.02	-0.23	51.62	14.5797	-0.0512	0.3225
274	SLU 42	-1	-0.26	51.6	14.5758	-0.0511	0.3179
274	SLU 43	-1.04	-0.45	50.23	14.1836	-0.0465	0.3281
274	SLU 44	-1.01	-0.49	50.2	14.177	-0.0464	0.3205
274	SLU 45	-1.06	-0.44	51.2	14.454	-0.0476	0.3352
274	SLU 46	-1.05	-0.47	51.18	14.4501	-0.0476	0.3306
274	SLU 47	-1.03	-0.5	50.81	14.3468	-0.0471	0.3253
274	SLU 48	-1.08	-0.45	51.8	14.6238	-0.0483	0.3401
274	SLU 49	-1.06	-0.47	51.78	14.6198	-0.0483	0.3355
274	SLU 50	-1.07	-0.45	51.45	14.5231	-0.0478	0.3378
274	SLU 51	-1.05	-0.48	51.43	14.5192	-0.0478	0.3333
274	SLU 52	-1.07	-0.48	55.06	15.5517	-0.0527	0.3381
274	SLU 53	-1.11	-0.43	56.06	15.8287	-0.0539	0.3529
274	SLU 54	-1.1	-0.45	56.04	15.8248	-0.0538	0.3483
274	SLU 55	-1.08	-0.48	55.67	15.7215	-0.0534	0.343
274	SLU 56	-1.13	-0.43	56.67	15.9985	-0.0545	0.3577
274	SLU 57	-1.12	-0.46	56.64	15.9945	-0.0545	0.3531
274	SLU 58	-1.12	-0.44	56.31	15.8978	-0.0541	0.3555
274	SLU 59	-1.11	-0.47	56.29	15.8938	-0.0541	0.3509
274	SLU 60	-1.12	-0.43	57.18	16.1474	-0.0554	0.3533
274	SLU 61	-1.1	-0.45	57.16	16.1435	-0.0554	0.3487
274	SLU 62	-1.13	-0.43	57.79	16.3172	-0.0561	0.3582
274	SLU 63	-1.12	-0.46	57.77	16.3132	-0.0561	0.3536
274	SLU 64	-1.14	-0.37	54.53	15.3988	-0.0511	0.3598
274	SLU 65	-1.11	-0.42	54.49	15.3922	-0.051	0.3521
274	SLU 66	-1.16	-0.37	55.49	15.6692	-0.0522	0.3669
274	SLU 67	-1.15	-0.39	55.47	15.6653	-0.0522	0.3623
274	SLU 68	-1.13	-0.42	55.1	15.562	-0.0517	0.357
274	SLU 69	-1.18	-0.37	56.1	15.839	-0.0529	0.3718
274	SLU 70	-1.16	-0.4	56.08	15.835	-0.0529	0.3672
274	SLU 71	-1.17	-0.38	55.74	15.7383	-0.0524	0.3695
274	SLU 72	-1.15	-0.41	55.72	15.7343	-0.0524	0.3649
274	SLU 73	-1.17	-0.4	59.36	16.7669	-0.0573	0.3698
274	SLU 74	-1.22	-0.35	60.35	17.0439	-0.0585	0.3845
274	SLU 75	-1.2	-0.38	60.33	17.04	-0.0584	0.3799
274	SLU 76	-1.18	-0.41	59.96	16.9367	-0.058	0.3746
274	SLU 77	-1.23	-0.35	60.96	17.2137	-0.0591	0.3894
274	SLU 78	-1.22	-0.38	60.94	17.2097	-0.0591	0.3848
274	SLU 79	-1.22	-0.36	60.6	17.113	-0.0587	0.3872
274	SLU 80	-1.21	-0.39	60.58	17.109	-0.0587	0.3826
274	SLU 81	-1.22	-0.35	61.47	17.3626	-0.06	0.385
274	SLU 82	-1.2	-0.38	61.45	17.3587	-0.06	0.3804
274	SLU 83	-1.23	-0.35	62.08	17.5324	-0.0607	0.3899
274	SLU 84	-1.22	-0.38	62.06	17.5284	-0.0607	0.3853
274	SLE RA 1	-0.85	-0.3	41	11.5781	-0.0383	0.2698
274	SLE RA 2	-0.84	-0.33	40.98	11.5738	-0.0382	0.2647

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
274	SLE RA 3	-0.87	-0.3	41.64	11.7584	-0.039	0.2745
274	SLE RA 4	-0.86	-0.32	41.63	11.7558	-0.039	0.2715
274	SLE RA 5	-0.85	-0.34	41.38	11.6869	-0.0387	0.2679
274	SLE RA 6	-0.88	-0.3	42.05	11.8716	-0.0395	0.2778
274	SLE RA 7	-0.87	-0.32	42.03	11.869	-0.0395	0.2747
274	SLE RA 8	-0.87	-0.31	41.81	11.8045	-0.0392	0.2763
274	SLE RA 9	-0.86	-0.33	41.8	11.8018	-0.0392	0.2732
274	SLE RA 10	-0.87	-0.32	44.22	12.4902	-0.0424	0.2765
274	SLE RA 11	-0.9	-0.29	44.88	12.6749	-0.0432	0.2863
274	SLE RA 12	-0.89	-0.31	44.87	12.6723	-0.0432	0.2832
274	SLE RA 13	-0.88	-0.33	44.62	12.6034	-0.0429	0.2797
274	SLE RA 14	-0.92	-0.29	45.29	12.7881	-0.0437	0.2895
274	SLE RA 15	-0.91	-0.31	45.27	12.7854	-0.0436	0.2865
274	SLE RA 16	-0.91	-0.3	45.05	12.7209	-0.0433	0.288
274	SLE RA 17	-0.9	-0.32	45.04	12.7183	-0.0433	0.285
274	SLE RA 18	-0.91	-0.29	45.63	12.8874	-0.0442	0.2866
274	SLE RA 19	-0.9	-0.31	45.62	12.8848	-0.0442	0.2835
274	SLE RA 20	-0.92	-0.29	46.04	13.0005	-0.0447	0.2898
274	SLE RA 21	-0.91	-0.31	46.02	12.9979	-0.0447	0.2868
274	SLE FR 1	-0.85	-0.3	41	11.5781	-0.0383	0.2698
274	SLE FR 2	-0.85	-0.31	41	11.5773	-0.0383	0.2688
274	SLE FR 3	-0.86	-0.3	41.16	11.6234	-0.0385	0.2711
274	SLE FR 4	-0.87	-0.3	42.39	11.97	-0.0401	0.2738
274	SLE FR 5	-0.87	-0.3	42.55	12.0162	-0.0402	0.2761
274	SLE FR 6	-0.88	-0.3	43.32	12.2328	-0.0413	0.2782
274	SLE QP 1	-0.85	-0.3	41	11.5781	-0.0383	0.2698
274	SLE QP 2	-0.87	-0.3	42.39	11.9709	-0.0401	0.2748
274	SLD 1	2.91	0.24	42.99	12.0749	-0.0318	-0.8779
274	SLD 2	3.3	0.12	42.88	12.0484	-0.0321	-0.9971
274	SLD 3	3.01	-0.9	42.42	11.9804	-0.0303	-0.9096
274	SLD 4	3.41	-1.01	42.31	11.9539	-0.0306	-1.0288
274	SLD 5	0.04	1.61	43.45	12.1502	-0.0397	-0.0013
274	SLD 6	0.3	1.53	43.38	12.1326	-0.0399	-0.0804
274	SLD 7	0.38	-2.19	41.56	11.8353	-0.0349	-0.1069
274	SLD 8	0.64	-2.26	41.49	11.8178	-0.0351	-0.186
274	SLD 9	-2.38	1.66	43.29	12.1241	-0.045	0.7356
274	SLD 10	-2.12	1.59	43.22	12.1065	-0.0453	0.6566
274	SLD 11	-2.04	-2.13	41.4	11.8092	-0.0402	0.63
274	SLD 12	-1.78	-2.21	41.33	11.7917	-0.0404	0.5509
274	SLD 13	-5.14	0.42	42.47	11.9879	-0.0495	1.5784
274	SLD 14	-4.75	0.3	42.36	11.9614	-0.0498	1.4593
274	SLD 15	-5.04	-0.72	41.9	11.8935	-0.048	1.5467
274	SLD 16	-4.65	-0.84	41.79	11.867	-0.0483	1.4276
274	SLV 1	7.97	0.92	43.78	12.2152	-0.0206	-2.4216
274	SLV 2	8.89	0.65	43.52	12.1535	-0.0214	-2.699
274	SLV 3	8.21	-1.66	42.49	11.9995	-0.0173	-2.4945
274	SLV 4	9.12	-1.93	42.23	11.9379	-0.018	-2.7719
274	SLV 5	1.27	4.03	44.81	12.3821	-0.0392	-0.3747
274	SLV 6	1.86	3.85	44.64	12.3419	-0.0396	-0.5554
274	SLV 7	2.05	-4.57	40.51	11.6633	-0.028	-0.6179
274	SLV 8	2.65	-4.75	40.34	11.6231	-0.0285	-0.7986
274	SLV 9	-4.38	4.15	44.44	12.3187	-0.0516	1.3483
274	SLV 10	-3.79	3.97	44.27	12.2785	-0.0521	1.1675
274	SLV 11	-3.6	-4.45	40.14	11.5999	-0.0405	1.1051
274	SLV 12	-3.01	-4.62	39.97	11.5598	-0.041	0.9243
274	SLV 13	-10.86	1.33	42.55	12.0039	-0.0621	3.3216
274	SLV 14	-9.95	1.06	42.29	11.9423	-0.0628	3.0442
274	SLV 15	-10.63	-1.25	41.26	11.7883	-0.0587	3.2486
274	SLV 16	-9.71	-1.51	41	11.7267	-0.0595	2.9712
274	CRTFP Ux+	0	0	0	0	0	0
274	CRTFP Ux-	0	0	0	0	0	0
274	CRTFP Uy+	0	0	0	0	0	0
274	CRTFP Uy-	0	0	0	0	0	0
275	SLU 1	-2.24	-0.51	116.4	40.8236	-9.1396	0.7965
275	SLU 2	-2.17	-0.64	116.3	40.7935	-9.1315	0.763
275	SLU 3	-2.3	-0.49	119.24	41.8201	-9.3677	0.8209
275	SLU 4	-2.26	-0.56	119.18	41.802	-9.3629	0.8008
275	SLU 5	-2.22	-0.64	118.09	41.4186	-9.2743	0.7781
275	SLU 6	-2.35	-0.49	121.03	42.4452	-9.5105	0.8361
275	SLU 7	-2.3	-0.57	120.97	42.4271	-9.5057	0.8159
275	SLU 8	-2.33	-0.52	119.98	42.0738	-9.4252	0.8268
275	SLU 9	-2.28	-0.6	119.92	42.0558	-9.4204	0.8067
275	SLU 10	-2.32	-0.55	130.76	45.8756	-10.3	0.8249
275	SLU 11	-2.45	-0.4	133.71	46.9021	-10.5362	0.8828
275	SLU 12	-2.41	-0.48	133.65	46.8841	-10.5313	0.8627
275	SLU 13	-2.36	-0.56	132.55	46.5007	-10.4428	0.84
275	SLU 14	-2.49	-0.4	135.5	47.5272	-10.679	0.898
275	SLU 15	-2.45	-0.48	135.44	47.5092	-10.6741	0.8778
275	SLU 16	-2.47	-0.43	134.44	47.1559	-10.5937	0.8887
275	SLU 17	-2.43	-0.51	134.38	47.1378	-10.5889	0.8686
275	SLU 18	-2.45	-0.39	137.06	48.0837	-10.8088	0.885
275	SLU 19	-2.41	-0.47	137	48.0656	-10.804	0.8649
275	SLU 20	-2.5	-0.39	138.85	48.7088	-10.9516	0.9001
275	SLU 21	-2.45	-0.47	138.79	48.6907	-10.9468	0.88
275	SLU 22	-2.51	-0.25	129.05	45.2684	-10.1472	0.9159
275	SLU 23	-2.44	-0.38	128.95	45.2383	-10.1392	0.8823
275	SLU 24	-2.57	-0.22	131.9	46.2648	-10.3753	0.9403
275	SLU 25	-2.53	-0.3	131.84	46.2468	-10.3705	0.9202
275	SLU 26	-2.49	-0.38	130.74	45.8634	-10.282	0.8975
275	SLU 27	-2.62	-0.23	133.69	46.89	-10.5182	0.9554

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
275	SLU 28	-2.57	-0.3	133.63	46.8719	-10.5133	0.9353
275	SLU 29	-2.6	-0.26	132.63	46.5186	-10.4329	0.9461
275	SLU 30	-2.56	-0.33	132.57	46.5006	-10.428	0.926
275	SLU 31	-2.59	-0.29	143.42	50.3203	-11.3076	0.9442
275	SLU 32	-2.72	-0.14	146.36	51.3469	-11.5438	1.0022
275	SLU 33	-2.68	-0.21	146.3	51.3288	-11.539	0.9821
275	SLU 34	-2.63	-0.3	145.21	50.9455	-11.4504	0.9594
275	SLU 35	-2.76	-0.14	148.15	51.972	-11.6866	1.0173
275	SLU 36	-2.72	-0.22	148.09	51.954	-11.6818	0.9972
275	SLU 37	-2.75	-0.17	147.1	51.6007	-11.6014	1.008
275	SLU 38	-2.7	-0.25	147.04	51.5826	-11.5965	0.9879
275	SLU 39	-2.72	-0.13	149.71	52.5284	-11.8165	1.0043
275	SLU 40	-2.68	-0.2	149.65	52.5104	-11.8116	0.9842
275	SLU 41	-2.77	-0.13	151.5	53.1536	-11.9593	1.0194
275	SLU 42	-2.73	-0.21	151.44	53.1355	-11.9544	0.9993
275	SLU 43	-2.82	-0.76	146.98	51.5468	-11.536	0.9946
275	SLU 44	-2.75	-0.88	146.88	51.5167	-11.5279	0.961
275	SLU 45	-2.88	-0.73	149.82	52.5432	-11.7641	1.019
275	SLU 46	-2.84	-0.81	149.76	52.5252	-11.7592	0.9988
275	SLU 47	-2.8	-0.89	148.67	52.1418	-11.6707	0.9762
275	SLU 48	-2.92	-0.73	151.61	53.1683	-11.9069	1.0341
275	SLU 49	-2.88	-0.81	151.55	53.1503	-11.9021	1.014
275	SLU 50	-2.91	-0.76	150.56	52.797	-11.8216	1.0248
275	SLU 51	-2.86	-0.84	150.5	52.7789	-11.8168	1.0047
275	SLU 52	-2.9	-0.8	161.34	56.5987	-12.6964	1.0229
275	SLU 53	-3.03	-0.64	164.29	57.6253	-12.9326	1.0809
275	SLU 54	-2.99	-0.72	164.23	57.6072	-12.9277	1.0608
275	SLU 55	-2.94	-0.8	163.13	57.2238	-12.8392	1.0381
275	SLU 56	-3.07	-0.65	166.08	58.2504	-13.0754	1.096
275	SLU 57	-3.03	-0.72	166.02	58.2323	-13.0705	1.0759
275	SLU 58	-3.05	-0.68	165.02	57.879	-12.9901	1.0867
275	SLU 59	-3.01	-0.75	164.96	57.861	-12.9853	1.0666
275	SLU 60	-3.03	-0.63	167.64	58.8068	-13.2052	1.083
275	SLU 61	-2.99	-0.71	167.58	58.7888	-13.2004	1.0629
275	SLU 62	-3.08	-0.64	169.43	59.4319	-13.348	1.0981
275	SLU 63	-3.03	-0.71	169.37	59.4139	-13.3432	1.078
275	SLU 64	-3.09	-0.49	159.63	55.9915	-12.5436	1.1139
275	SLU 65	-3.02	-0.62	159.53	55.9614	-12.5356	1.0804
275	SLU 66	-3.15	-0.47	162.48	56.988	-12.7717	1.1383
275	SLU 67	-3.11	-0.54	162.42	56.9699	-12.7669	1.1182
275	SLU 68	-3.07	-0.62	161.32	56.5866	-12.6784	1.0955
275	SLU 69	-3.2	-0.47	164.27	57.6131	-12.9146	1.1534
275	SLU 70	-3.15	-0.55	164.21	57.5951	-12.9097	1.1333
275	SLU 71	-3.18	-0.5	163.21	57.2418	-12.8293	1.1442
275	SLU 72	-3.14	-0.58	163.15	57.2237	-12.8244	1.1241
275	SLU 73	-3.17	-0.54	174	61.0435	-13.704	1.1423
275	SLU 74	-3.3	-0.38	176.94	62.07	-13.9402	1.2002
275	SLU 75	-3.26	-0.46	176.88	62.052	-13.9354	1.1801
275	SLU 76	-3.21	-0.54	175.79	61.6686	-13.8468	1.1574
275	SLU 77	-3.34	-0.39	178.73	62.6952	-14.083	1.2154
275	SLU 78	-3.3	-0.46	178.67	62.6771	-14.0782	1.1952
275	SLU 79	-3.33	-0.42	177.68	62.3238	-13.9978	1.2061
275	SLU 80	-3.28	-0.49	177.62	62.3058	-13.9929	1.186
275	SLU 81	-3.3	-0.37	180.3	63.2516	-14.2129	1.2024
275	SLU 82	-3.26	-0.45	180.23	63.2335	-14.208	1.1822
275	SLU 83	-3.35	-0.38	182.08	63.8767	-14.3557	1.2175
275	SLU 84	-3.31	-0.45	182.02	63.8587	-14.3508	1.1974
275	SLE RA 1	-2.32	-0.44	120.01	42.0935	-9.4275	0.8306
275	SLE RA 2	-2.27	-0.52	119.95	42.0735	-9.4221	0.8083
275	SLE RA 3	-2.36	-0.42	121.91	42.7578	-9.5796	0.8469
275	SLE RA 4	-2.33	-0.47	121.87	42.7458	-9.5763	0.8335
275	SLE RA 5	-2.3	-0.52	121.14	42.4902	-9.5173	0.8184
275	SLE RA 6	-2.39	-0.42	123.1	43.1746	-9.6748	0.857
275	SLE RA 7	-2.36	-0.47	123.06	43.1626	-9.6715	0.8436
275	SLE RA 8	-2.38	-0.44	122.4	42.927	-9.6179	0.8508
275	SLE RA 9	-2.35	-0.49	122.36	42.915	-9.6147	0.8374
275	SLE RA 10	-2.37	-0.47	129.59	45.4615	-10.2011	0.8495
275	SLE RA 11	-2.46	-0.36	131.55	46.1459	-10.3585	0.8882
275	SLE RA 12	-2.43	-0.41	131.51	46.1338	-10.3553	0.8748
275	SLE RA 13	-2.4	-0.47	130.78	45.8783	-10.2963	0.8596
275	SLE RA 14	-2.49	-0.37	132.75	46.5626	-10.4538	0.8983
275	SLE RA 15	-2.46	-0.42	132.71	46.5506	-10.4505	0.8848
275	SLE RA 16	-2.47	-0.39	132.04	46.3151	-10.3969	0.8921
275	SLE RA 17	-2.45	-0.44	132	46.303	-10.3937	0.8787
275	SLE RA 18	-2.46	-0.36	133.79	46.9336	-10.5403	0.8896
275	SLE RA 19	-2.43	-0.41	133.75	46.9215	-10.5371	0.8762
275	SLE RA 20	-2.49	-0.36	134.98	47.3503	-10.6355	0.8997
275	SLE RA 21	-2.46	-0.41	134.94	47.3383	-10.6323	0.8863
275	SLE FR 1	-2.32	-0.44	120.01	42.0935	-9.4275	0.8306
275	SLE FR 2	-2.31	-0.45	120	42.0895	-9.4264	0.8262
275	SLE FR 3	-2.33	-0.44	120.49	42.2602	-9.4656	0.8347
275	SLE FR 4	-2.35	-0.43	124.13	43.5415	-9.7603	0.8438
275	SLE FR 5	-2.37	-0.41	124.62	43.7122	-9.7994	0.8524
275	SLE FR 6	-2.39	-0.4	126.9	44.5136	-9.9839	0.8601
275	SLE QP 1	-2.32	-0.44	120.01	42.0935	-9.4275	0.8306
275	SLE QP 2	-2.36	-0.41	124.15	43.5455	-9.7613	0.8483
275	SLD 1	8.2	1.57	124.51	43.5326	-9.6446	-2.8372
275	SLD 2	9.29	1.32	124.25	43.4475	-9.6306	-3.2387
275	SLD 3	8.48	-1.67	122.81	43.0392	-9.4983	-3.1488
275	SLD 4	9.56	-1.92	122.54	42.954	-9.4843	-3.5502

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
275	SLD 5	0.19	5.15	126.89	44.3056	-9.9507	0.2882
275	SLD 6	0.91	4.98	126.71	44.2491	-9.9414	0.0218
275	SLD 7	1.12	-5.66	121.21	42.6607	-9.4631	-0.7504
275	SLD 8	1.83	-5.83	121.03	42.6041	-9.4538	-1.0168
275	SLD 9	-6.56	5.01	127.26	44.4869	-10.0689	2.7134
275	SLD 10	-5.84	4.84	127.09	44.4304	-10.0596	2.447
275	SLD 11	-5.63	-5.81	121.58	42.842	-9.5812	1.6748
275	SLD 12	-4.91	-5.97	121.4	42.7855	-9.5719	1.4084
275	SLD 13	-14.29	1.1	125.75	44.1371	-10.0384	5.2469
275	SLD 14	-13.21	0.85	125.48	44.0519	-10.0243	4.8454
275	SLD 15	-14.01	-2.15	124.05	43.6436	-9.8921	4.9353
275	SLD 16	-12.93	-2.4	123.78	43.5584	-9.878	4.5339
275	SLV 1	22.35	4.11	124.92	43.4907	-9.4825	-7.7818
275	SLV 2	24.87	3.52	124.3	43.2924	-9.4498	-8.7164
275	SLV 3	22.99	-3.24	121.05	42.3682	-9.1501	-8.4883
275	SLV 4	25.51	-3.82	120.42	42.1699	-9.1175	-9.4229
275	SLV 5	3.64	12.19	130.37	45.2664	-10.1875	-0.5048
275	SLV 6	5.28	11.81	129.96	45.1372	-10.1662	-1.1138
275	SLV 7	5.77	-12.3	117.45	41.5247	-9.0797	-2.86
275	SLV 8	7.41	-12.68	117.04	41.3955	-9.0584	-3.4689
275	SLV 9	-12.14	11.85	131.25	45.6956	-10.4643	5.1656
275	SLV 10	-10.5	11.47	130.84	45.5664	-10.443	4.5566
275	SLV 11	-10.01	-12.63	118.33	41.9539	-9.3565	2.8104
275	SLV 12	-8.36	-13.01	117.93	41.8246	-9.3352	2.2015
275	SLV 13	-30.24	3	127.87	44.9212	-10.4052	11.1196
275	SLV 14	-27.72	2.41	127.24	44.7229	-10.3725	10.185
275	SLV 15	-29.6	-4.35	124	43.7987	-10.0729	10.413
275	SLV 16	-27.08	-4.93	123.37	43.6004	-10.0402	9.4784
275	CRTFP Ux+	0	0	0	0	0	0
275	CRTFP Ux-	0	0	0	0	0	0
275	CRTFP Uy+	0	0	0	0	0	0
275	CRTFP Uy-	0	0	0	0	0	0
278	SLU 1	-0.54	-0.07	28.56	8.5477	3.8243	0.1866
278	SLU 2	-0.52	-0.1	28.53	8.5422	3.8209	0.1853
278	SLU 3	-0.56	-0.06	29.26	8.7577	3.9184	0.1904
278	SLU 4	-0.55	-0.08	29.25	8.7544	3.9164	0.1896
278	SLU 5	-0.53	-0.1	28.97	8.6735	3.8801	0.1886
278	SLU 6	-0.57	-0.06	29.7	8.889	3.9775	0.1937
278	SLU 7	-0.56	-0.08	29.69	8.8857	3.9755	0.1929
278	SLU 8	-0.56	-0.07	29.44	8.8103	3.9426	0.1933
278	SLU 9	-0.55	-0.09	29.43	8.807	3.9406	0.1925
278	SLU 10	-0.56	-0.07	32.11	9.6164	4.2993	0.1937
278	SLU 11	-0.59	-0.04	32.84	9.8318	4.3968	0.1988
278	SLU 12	-0.58	-0.05	32.82	9.8285	4.3948	0.198
278	SLU 13	-0.57	-0.07	32.55	9.7477	4.3585	0.197
278	SLU 14	-0.6	-0.04	33.28	9.9631	4.4559	0.2021
278	SLU 15	-0.59	-0.05	33.26	9.9598	4.4539	0.2013
278	SLU 16	-0.6	-0.04	33.02	9.8845	4.421	0.2017
278	SLU 17	-0.59	-0.06	33	9.8812	4.4189	0.2009
278	SLU 18	-0.59	-0.03	33.67	10.0822	4.5078	0.1986
278	SLU 19	-0.58	-0.05	33.65	10.0789	4.5057	0.1978
278	SLU 20	-0.6	-0.03	34.11	10.2135	4.5669	0.202
278	SLU 21	-0.59	-0.05	34.09	10.2102	4.5649	0.2012
278	SLU 22	-0.61	0	31.68	9.4837	4.2417	0.1989
278	SLU 23	-0.59	-0.03	31.65	9.4782	4.2383	0.1976
278	SLU 24	-0.62	0.01	32.38	9.6937	4.3358	0.2027
278	SLU 25	-0.61	-0.01	32.36	9.6904	4.3337	0.2019
278	SLU 26	-0.6	-0.03	32.09	9.6095	4.2974	0.2009
278	SLU 27	-0.63	0.01	32.82	9.825	4.3949	0.206
278	SLU 28	-0.62	-0.01	32.81	9.8216	4.3929	0.2052
278	SLU 29	-0.63	0	32.56	9.7463	4.36	0.2056
278	SLU 30	-0.62	-0.02	32.54	9.743	4.3579	0.2047
278	SLU 31	-0.63	0	35.23	10.5524	4.7167	0.206
278	SLU 32	-0.66	0.03	35.96	10.7678	4.8142	0.2111
278	SLU 33	-0.65	0.02	35.94	10.7645	4.8121	0.2103
278	SLU 34	-0.64	0	35.67	10.6837	4.7758	0.2093
278	SLU 35	-0.67	0.03	36.4	10.8991	4.8733	0.2144
278	SLU 36	-0.66	0.02	36.38	10.8958	4.8713	0.2136
278	SLU 37	-0.66	0.03	36.14	10.8205	4.8384	0.214
278	SLU 38	-0.65	0.01	36.12	10.8171	4.8363	0.2132
278	SLU 39	-0.66	0.04	36.79	11.0182	4.9251	0.2109
278	SLU 40	-0.65	0.02	36.77	11.0149	4.9231	0.2101
278	SLU 41	-0.67	0.04	37.23	11.1495	4.9843	0.2143
278	SLU 42	-0.66	0.02	37.21	11.1462	4.9822	0.2134
278	SLU 43	-0.68	-0.11	36.06	10.7912	4.8285	0.2384
278	SLU 44	-0.66	-0.14	36.03	10.7857	4.8251	0.237
278	SLU 45	-0.7	-0.11	36.76	11.0011	4.9226	0.2422
278	SLU 46	-0.69	-0.12	36.74	10.9978	4.9206	0.2414
278	SLU 47	-0.67	-0.14	36.47	10.9169	4.8843	0.2404
278	SLU 48	-0.71	-0.11	37.2	11.1324	4.9817	0.2455
278	SLU 49	-0.7	-0.12	37.19	11.1291	4.9797	0.2447
278	SLU 50	-0.7	-0.11	36.94	11.0537	4.9468	0.245
278	SLU 51	-0.69	-0.13	36.92	11.0504	4.9448	0.2442
278	SLU 52	-0.7	-0.12	39.61	11.8598	5.3035	0.2455
278	SLU 53	-0.73	-0.08	40.34	12.0752	5.401	0.2506
278	SLU 54	-0.72	-0.1	40.32	12.0719	5.399	0.2498
278	SLU 55	-0.71	-0.12	40.05	11.9911	5.3627	0.2488
278	SLU 56	-0.74	-0.08	40.78	12.2065	5.4601	0.2539
278	SLU 57	-0.73	-0.1	40.76	12.2032	5.4581	0.2531
278	SLU 58	-0.74	-0.09	40.52	12.1279	5.4252	0.2535

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
278	SLU 59	-0.73	-0.11	40.5	12.1246	5.4232	0.2527
278	SLU 60	-0.73	-0.08	41.17	12.3257	5.512	0.2504
278	SLU 61	-0.72	-0.09	41.15	12.3224	5.5099	0.2496
278	SLU 62	-0.74	-0.08	41.61	12.4569	5.5711	0.2537
278	SLU 63	-0.73	-0.09	41.59	12.4536	5.5691	0.2529
278	SLU 64	-0.75	-0.04	39.17	11.7272	5.2459	0.2507
278	SLU 65	-0.73	-0.07	39.15	11.7216	5.2425	0.2493
278	SLU 66	-0.76	-0.04	39.88	11.9371	5.34	0.2545
278	SLU 67	-0.75	-0.05	39.86	11.9338	5.3379	0.2537
278	SLU 68	-0.74	-0.07	39.59	11.8529	5.3016	0.2527
278	SLU 69	-0.77	-0.04	40.32	12.0684	5.3991	0.2578
278	SLU 70	-0.76	-0.05	40.3	12.0651	5.3971	0.257
278	SLU 71	-0.77	-0.05	40.06	11.9897	5.3642	0.2573
278	SLU 72	-0.76	-0.06	40.04	11.9864	5.3621	0.2565
278	SLU 73	-0.77	-0.05	42.73	12.7958	5.7209	0.2577
278	SLU 74	-0.8	-0.01	43.45	13.0112	5.8184	0.2629
278	SLU 75	-0.79	-0.03	43.44	13.0079	5.8163	0.2621
278	SLU 76	-0.78	-0.05	43.17	12.9271	5.78	0.2611
278	SLU 77	-0.81	-0.01	43.9	13.1425	5.8775	0.2662
278	SLU 78	-0.8	-0.03	43.88	13.1392	5.8755	0.2654
278	SLU 79	-0.8	-0.02	43.64	13.0639	5.8426	0.2657
278	SLU 80	-0.79	-0.04	43.62	13.0606	5.8405	0.2649
278	SLU 81	-0.8	-0.01	44.28	13.2616	5.9293	0.2627
278	SLU 82	-0.79	-0.02	44.27	13.2583	5.9273	0.2619
278	SLU 83	-0.81	-0.01	44.73	13.3929	5.9885	0.266
278	SLU 84	-0.8	-0.02	44.71	13.3896	5.9864	0.2652
278	SLE RA 1	-0.56	-0.05	29.45	8.8152	3.9436	0.1901
278	SLE RA 2	-0.55	-0.07	29.43	8.8115	3.9413	0.1892
278	SLE RA 3	-0.57	-0.04	29.92	8.9551	4.0063	0.1927
278	SLE RA 4	-0.56	-0.06	29.91	8.9529	4.0049	0.1921
278	SLE RA 5	-0.56	-0.07	29.73	8.899	3.9807	0.1914
278	SLE RA 6	-0.58	-0.04	30.21	9.0426	4.0457	0.1949
278	SLE RA 7	-0.57	-0.06	30.2	9.0404	4.0444	0.1943
278	SLE RA 8	-0.57	-0.05	30.04	8.9902	4.0224	0.1946
278	SLE RA 9	-0.57	-0.06	30.03	8.988	4.0211	0.194
278	SLE RA 10	-0.57	-0.05	31.82	9.5276	4.2603	0.1948
278	SLE RA 11	-0.59	-0.03	32.3	9.6712	4.3252	0.1983
278	SLE RA 12	-0.59	-0.04	32.29	9.669	4.3239	0.1977
278	SLE RA 13	-0.58	-0.05	32.11	9.6151	4.2997	0.1971
278	SLE RA 14	-0.6	-0.03	32.6	9.7587	4.3647	0.2005
278	SLE RA 15	-0.59	-0.04	32.59	9.7565	4.3633	0.1999
278	SLE RA 16	-0.6	-0.03	32.42	9.7063	4.3414	0.2002
278	SLE RA 17	-0.59	-0.04	32.41	9.7041	4.34	0.1996
278	SLE RA 18	-0.59	-0.02	32.86	9.8382	4.3992	0.1981
278	SLE RA 19	-0.59	-0.04	32.85	9.836	4.3978	0.1976
278	SLE RA 20	-0.6	-0.02	33.15	9.9257	4.4386	0.2004
278	SLE RA 21	-0.59	-0.04	33.14	9.9235	4.4373	0.1998
278	SLE FR 1	-0.56	-0.05	29.45	8.8152	3.9436	0.1901
278	SLE FR 2	-0.56	-0.05	29.45	8.8144	3.9431	0.1899
278	SLE FR 3	-0.56	-0.05	29.57	8.8502	3.9594	0.191
278	SLE FR 4	-0.57	-0.05	30.47	9.1213	4.0798	0.1924
278	SLE FR 5	-0.57	-0.04	30.59	9.1571	4.096	0.1934
278	SLE FR 6	-0.58	-0.04	31.15	9.3267	4.1714	0.1941
278	SLE QP 1	-0.56	-0.05	29.45	8.8152	3.9436	0.1901
278	SLE QP 2	-0.57	-0.04	30.47	9.1221	4.0803	0.1925
278	SLD 1	1.93	0.46	30.44	9.0507	4.0793	-0.6815
278	SLD 2	2.19	0.41	30.38	9.0361	4.071	-0.7579
278	SLD 3	2	-0.31	30	8.9613	4.0205	-0.5927
278	SLD 4	2.26	-0.36	29.94	8.9467	4.0122	-0.669
278	SLD 5	0.03	1.29	31.14	9.2388	4.1706	-0.1906
278	SLD 6	0.2	1.26	31.1	9.2291	4.1651	-0.2413
278	SLD 7	0.26	-1.28	29.67	8.941	3.9748	0.1056
278	SLD 8	0.43	-1.32	29.63	8.9313	3.9693	0.055
278	SLD 9	-1.57	1.23	31.31	9.3128	4.1913	0.3301
278	SLD 10	-1.4	1.2	31.27	9.3031	4.1858	0.2794
278	SLD 11	-1.34	-1.34	29.84	9.015	3.9955	0.6263
278	SLD 12	-1.17	-1.37	29.8	9.0054	3.99	0.5757
278	SLD 13	-3.4	0.27	31	9.2974	4.1483	1.0541
278	SLD 14	-3.14	0.22	30.94	9.2828	4.14	0.9777
278	SLD 15	-3.33	-0.5	30.56	9.2081	4.0896	1.143
278	SLD 16	-3.07	-0.55	30.5	9.1935	4.0813	1.0666
278	SLV 1	5.28	1.11	30.38	8.951	4.0753	-1.8483
278	SLV 2	5.89	1	30.24	8.917	4.056	-2.0261
278	SLV 3	5.44	-0.64	29.38	8.7475	3.9418	-1.6468
278	SLV 4	6.04	-0.75	29.24	8.7135	3.9226	-1.8246
278	SLV 5	0.84	2.97	31.98	9.3854	4.2845	-0.6941
278	SLV 6	1.24	2.9	31.89	9.3633	4.272	-0.81
278	SLV 7	1.36	-2.85	28.66	8.707	3.8398	-0.0224
278	SLV 8	1.76	-2.92	28.56	8.6849	3.8272	-0.1382
278	SLV 9	-2.9	2.84	32.38	9.5593	4.3333	0.5233
278	SLV 10	-2.5	2.77	32.29	9.5371	4.3208	0.4074
278	SLV 11	-2.38	-2.98	29.05	8.8809	3.8886	1.195
278	SLV 12	-1.98	-3.06	28.96	8.8587	3.876	1.0792
278	SLV 13	-7.18	0.67	31.7	9.5306	4.238	2.2097
278	SLV 14	-6.58	0.55	31.56	9.4966	4.2187	2.0319
278	SLV 15	-7.03	-1.08	30.7	9.3271	4.1045	2.4112
278	SLV 16	-6.42	-1.19	30.56	9.2931	4.0853	2.2334
278	CRTFP Ux+	0	0	0	0	0	0
278	CRTFP Ux-	0	0	0	0	0	0
278	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
278	CRTFP Uy-	0	0	0	0	0	0
280	SLU 1	0.27	-0.28	77.7	8.9563	13.5488	-0.0202
280	SLU 2	0.31	-0.35	77.64	8.9523	13.5357	-0.0124
280	SLU 3	0.27	-0.26	79.59	9.1725	13.8804	-0.0256
280	SLU 4	0.3	-0.31	79.55	9.1701	13.8725	-0.0209
280	SLU 5	0.31	-0.36	78.83	9.0877	13.7451	-0.0132
280	SLU 6	0.28	-0.27	80.78	9.3078	14.0898	-0.0263
280	SLU 7	0.3	-0.31	80.74	9.3054	14.082	-0.0217
280	SLU 8	0.27	-0.29	80.08	9.227	13.9677	-0.0217
280	SLU 9	0.3	-0.33	80.05	9.2246	13.9598	-0.017
280	SLU 10	0.31	-0.24	87.34	10.0737	15.2469	-0.0369
280	SLU 11	0.27	-0.15	89.29	10.2938	15.5916	-0.0501
280	SLU 12	0.3	-0.19	89.25	10.2914	15.5837	-0.0454
280	SLU 13	0.31	-0.24	88.53	10.2091	15.4564	-0.0377
280	SLU 14	0.27	-0.15	90.48	10.4292	15.8011	-0.0509
280	SLU 15	0.3	-0.19	90.44	10.4268	15.7932	-0.0462
280	SLU 16	0.27	-0.17	89.79	10.3484	15.6789	-0.0462
280	SLU 17	0.29	-0.21	89.75	10.346	15.671	-0.0416
280	SLU 18	0.27	-0.12	91.56	10.5583	15.9934	-0.0552
280	SLU 19	0.29	-0.16	91.53	10.5559	15.9855	-0.0506
280	SLU 20	0.27	-0.12	92.75	10.6936	16.2029	-0.056
280	SLU 21	0.29	-0.16	92.72	10.6912	16.195	-0.0513
280	SLU 22	0.32	-0.11	86.05	9.9243	15.0052	-0.0616
280	SLU 23	0.36	-0.18	85.99	9.9203	14.9921	-0.0538
280	SLU 24	0.32	-0.09	87.94	10.1404	15.3368	-0.067
280	SLU 25	0.35	-0.13	87.9	10.138	15.3289	-0.0623
280	SLU 26	0.36	-0.18	87.18	10.0557	15.2015	-0.0546
280	SLU 27	0.32	-0.09	89.13	10.2758	15.5462	-0.0677
280	SLU 28	0.35	-0.13	89.09	10.2734	15.5383	-0.0631
280	SLU 29	0.32	-0.11	88.44	10.195	15.4241	-0.0631
280	SLU 30	0.34	-0.15	88.4	10.1926	15.4162	-0.0584
280	SLU 31	0.36	-0.06	95.69	11.0417	16.7033	-0.0783
280	SLU 32	0.32	0.03	97.64	11.2618	17.048	-0.0915
280	SLU 33	0.35	-0.01	97.6	11.2594	17.0401	-0.0868
280	SLU 34	0.36	-0.06	96.89	11.177	16.9127	-0.0791
280	SLU 35	0.32	0.03	98.83	11.3971	17.2574	-0.0923
280	SLU 36	0.35	-0.01	98.8	11.3948	17.2496	-0.0876
280	SLU 37	0.32	0.01	98.14	11.3163	17.1353	-0.0876
280	SLU 38	0.34	-0.03	98.1	11.314	17.1274	-0.083
280	SLU 39	0.31	0.06	99.91	11.5262	17.4498	-0.0966
280	SLU 40	0.34	0.02	99.88	11.5238	17.4419	-0.092
280	SLU 41	0.31	0.06	101.1	11.6616	17.6593	-0.0974
280	SLU 42	0.34	0.02	101.07	11.6592	17.6514	-0.0927
280	SLU 43	0.33	-0.43	98.15	11.3113	17.1141	-0.012
280	SLU 44	0.37	-0.5	98.09	11.3074	17.101	-0.0043
280	SLU 45	0.34	-0.41	100.04	11.5275	17.4457	-0.0174
280	SLU 46	0.36	-0.45	100	11.5251	17.4378	-0.0128
280	SLU 47	0.37	-0.5	99.28	11.4427	17.3104	-0.005
280	SLU 48	0.34	-0.41	101.23	11.6628	17.6552	-0.0182
280	SLU 49	0.36	-0.45	101.19	11.6604	17.6473	-0.0135
280	SLU 50	0.33	-0.43	100.53	11.582	17.533	-0.0136
280	SLU 51	0.36	-0.47	100.5	11.5796	17.5251	-0.0089
280	SLU 52	0.37	-0.38	107.79	12.4287	18.8122	-0.0288
280	SLU 53	0.34	-0.29	109.74	12.6488	19.1569	-0.042
280	SLU 54	0.36	-0.34	109.7	12.6465	19.1491	-0.0373
280	SLU 55	0.37	-0.38	108.98	12.5641	19.0217	-0.0296
280	SLU 56	0.34	-0.3	110.93	12.7842	19.3664	-0.0427
280	SLU 57	0.36	-0.34	110.89	12.7818	19.3585	-0.0381
280	SLU 58	0.33	-0.32	110.23	12.7034	19.2442	-0.0381
280	SLU 59	0.36	-0.36	110.2	12.701	19.2364	-0.0334
280	SLU 60	0.33	-0.26	112.01	12.9133	19.5587	-0.0471
280	SLU 61	0.35	-0.31	111.97	12.9109	19.5509	-0.0424
280	SLU 62	0.33	-0.26	113.2	13.0486	19.7682	-0.0479
280	SLU 63	0.36	-0.31	113.16	13.0463	19.7603	-0.0432
280	SLU 64	0.38	-0.25	106.5	12.2793	18.5705	-0.0534
280	SLU 65	0.42	-0.32	106.44	12.2753	18.5574	-0.0457
280	SLU 66	0.39	-0.23	108.39	12.4954	18.9021	-0.0588
280	SLU 67	0.41	-0.28	108.35	12.4931	18.8942	-0.0542
280	SLU 68	0.42	-0.32	107.63	12.4107	18.7668	-0.0464
280	SLU 69	0.39	-0.23	109.58	12.6308	19.1115	-0.0596
280	SLU 70	0.41	-0.28	109.54	12.6284	19.1037	-0.0549
280	SLU 71	0.38	-0.25	108.88	12.55	18.9894	-0.055
280	SLU 72	0.41	-0.3	108.85	12.5476	18.9815	-0.0503
280	SLU 73	0.42	-0.21	116.14	13.3967	20.2686	-0.0702
280	SLU 74	0.39	-0.12	118.09	13.6168	20.6133	-0.0834
280	SLU 75	0.41	-0.16	118.05	13.6144	20.6054	-0.0787
280	SLU 76	0.42	-0.21	117.33	13.532	20.4781	-0.071
280	SLU 77	0.39	-0.12	119.28	13.7522	20.8228	-0.0841
280	SLU 78	0.41	-0.16	119.24	13.7498	20.8149	-0.0795
280	SLU 79	0.38	-0.14	118.58	13.6714	20.7006	-0.0795
280	SLU 80	0.41	-0.18	118.55	13.669	20.6927	-0.0748
280	SLU 81	0.38	-0.09	120.36	13.8812	21.0151	-0.0885
280	SLU 82	0.4	-0.13	120.32	13.8789	21.0072	-0.0838
280	SLU 83	0.38	-0.09	121.55	14.0166	21.2246	-0.0893
280	SLU 84	0.4	-0.13	121.51	14.0142	21.2167	-0.0846
280	SLE RA 1	0.28	-0.23	80.09	9.2329	13.9649	-0.032
280	SLE RA 2	0.31	-0.28	80.05	9.2302	13.9562	-0.0268
280	SLE RA 3	0.29	-0.22	81.35	9.377	14.186	-0.0356
280	SLE RA 4	0.3	-0.25	81.32	9.3754	14.1807	-0.0325
280	SLE RA 5	0.31	-0.28	80.84	9.3205	14.0958	-0.0273

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
280	SLE RA 6	0.29	-0.22	82.14	9.4672	14.3256	-0.0361
280	SLE RA 7	0.3	-0.25	82.12	9.4656	14.3204	-0.033
280	SLE RA 8	0.28	-0.23	81.68	9.4133	14.2442	-0.033
280	SLE RA 9	0.3	-0.26	81.65	9.4117	14.2389	-0.0299
280	SLE RA 10	0.31	-0.2	86.52	9.9778	15.097	-0.0432
280	SLE RA 11	0.29	-0.14	87.81	10.1245	15.3268	-0.052
280	SLE RA 12	0.3	-0.17	87.79	10.123	15.3215	-0.0488
280	SLE RA 13	0.31	-0.2	87.31	10.068	15.2366	-0.0437
280	SLE RA 14	0.29	-0.14	88.61	10.2148	15.4664	-0.0525
280	SLE RA 15	0.3	-0.17	88.58	10.2132	15.4612	-0.0494
280	SLE RA 16	0.28	-0.16	88.14	10.1609	15.385	-0.0494
280	SLE RA 17	0.3	-0.18	88.12	10.1593	15.3797	-0.0463
280	SLE RA 18	0.28	-0.12	89.33	10.3008	15.5947	-0.0554
280	SLE RA 19	0.3	-0.15	89.3	10.2993	15.5894	-0.0523
280	SLE RA 20	0.28	-0.12	90.12	10.3911	15.7343	-0.0559
280	SLE RA 21	0.3	-0.15	90.1	10.3895	15.729	-0.0528
280	SLE FR 1	0.28	-0.23	80.09	9.2329	13.9649	-0.032
280	SLE FR 2	0.29	-0.24	80.08	9.2323	13.9632	-0.031
280	SLE FR 3	0.28	-0.23	80.41	9.269	14.0208	-0.0322
280	SLE FR 4	0.29	-0.21	82.85	9.5527	14.4521	-0.038
280	SLE FR 5	0.28	-0.2	83.18	9.5894	14.5097	-0.0392
280	SLE FR 6	0.28	-0.18	84.71	9.7669	14.7798	-0.0437
280	SLE QP 1	0.28	-0.23	80.09	9.2329	13.9649	-0.032
280	SLE QP 2	0.28	-0.2	82.86	9.5533	14.4539	-0.039
280	SLD 1	7.71	1.01	84.07	9.6924	14.8324	-1.1199
280	SLD 2	8.45	1.08	84.23	9.7101	14.8488	-1.2115
280	SLD 3	7.55	-1.08	82.55	9.5875	14.5284	-0.7405
280	SLD 4	8.29	-1.01	82.71	9.6051	14.5448	-0.832
280	SLD 5	2.62	3.32	85.5	9.7509	15.0255	-0.9222
280	SLD 6	3.11	3.36	85.61	9.7627	15.0363	-0.9829
280	SLD 7	2.08	-3.64	80.43	9.4012	14.0122	0.3427
280	SLD 8	2.57	-3.6	80.54	9.4129	14.0231	0.282
280	SLD 9	-2.01	3.2	85.18	9.6936	14.8846	-0.36
280	SLD 10	-1.52	3.24	85.29	9.7053	14.8955	-0.4207
280	SLD 11	-2.55	-3.76	80.11	9.3439	13.8714	0.9049
280	SLD 12	-2.06	-3.72	80.22	9.3556	13.8822	0.8441
280	SLD 13	-7.72	0.61	83.01	9.5014	14.3629	0.754
280	SLD 14	-6.99	0.68	83.17	9.519	14.3793	0.6624
280	SLD 15	-7.89	-1.48	81.49	9.3964	14.0589	1.1334
280	SLD 16	-7.15	-1.41	81.65	9.4141	14.0753	1.0419
280	SLV 1	17.65	2.55	85.64	9.8754	15.3284	-2.5531
280	SLV 2	19.37	2.71	86.02	9.9165	15.3665	-2.7662
280	SLV 3	17.28	-2.17	82.2	9.6369	14.6392	-1.6934
280	SLV 4	19	-2.02	82.57	9.678	14.6774	-1.9065
280	SLV 5	5.76	7.77	88.85	10.0045	15.7547	-2.0595
280	SLV 6	6.88	7.87	89.1	10.0312	15.7795	-2.1984
280	SLV 7	4.51	-7.99	77.37	9.2094	13.4576	0.8059
280	SLV 8	5.63	-7.89	77.62	9.2361	13.4825	0.667
280	SLV 9	-5.07	7.49	88.1	9.8704	15.4252	-0.7451
280	SLV 10	-3.95	7.59	88.35	9.8972	15.4501	-0.8839
280	SLV 11	-6.32	-8.27	76.62	9.0753	13.1282	2.1204
280	SLV 12	-5.2	-8.17	76.87	9.1021	13.1531	1.9815
280	SLV 13	-18.43	1.62	83.15	9.4286	14.2303	1.8285
280	SLV 14	-16.72	1.77	83.52	9.4696	14.2685	1.6154
280	SLV 15	-18.81	-3.11	79.7	9.19	13.5412	2.6881
280	SLV 16	-17.09	-2.95	80.08	9.2311	13.5794	2.475
280	CRTFP Ux+	0	0	0	0	0	0
280	CRTFP Ux-	0	0	0	0	0	0
280	CRTFP Uy+	0	0	0	0	0	0
280	CRTFP Uy-	0	0	0	0	0	0
282	SLU 1	0.19	-0.29	41.06	12.1398	0.0278	-0.0635
282	SLU 2	0.21	-0.32	41.03	12.1347	0.0277	-0.0702
282	SLU 3	0.19	-0.28	42.04	12.4315	0.0286	-0.0653
282	SLU 4	0.21	-0.3	42.03	12.4285	0.0285	-0.0693
282	SLU 5	0.21	-0.33	41.65	12.3178	0.0282	-0.0708
282	SLU 6	0.19	-0.29	42.67	12.6146	0.0291	-0.0658
282	SLU 7	0.21	-0.31	42.65	12.6115	0.029	-0.0698
282	SLU 8	0.19	-0.3	42.3	12.5059	0.0288	-0.0647
282	SLU 9	0.2	-0.32	42.29	12.5029	0.0287	-0.0687
282	SLU 10	0.21	-0.28	46.1	13.6411	0.0324	-0.072
282	SLU 11	0.2	-0.24	47.12	13.9379	0.0332	-0.067
282	SLU 12	0.21	-0.26	47.1	13.9348	0.0332	-0.071
282	SLU 13	0.22	-0.28	46.73	13.8241	0.0328	-0.0725
282	SLU 14	0.2	-0.24	47.74	14.1209	0.0337	-0.0676
282	SLU 15	0.21	-0.26	47.73	14.1179	0.0337	-0.0716
282	SLU 16	0.19	-0.25	47.38	14.0123	0.0334	-0.0664
282	SLU 17	0.21	-0.27	47.36	14.0092	0.0334	-0.0704
282	SLU 18	0.19	-0.22	48.3	14.2917	0.0344	-0.0661
282	SLU 19	0.21	-0.24	48.29	14.2887	0.0344	-0.0701
282	SLU 20	0.19	-0.23	48.93	14.4748	0.0349	-0.0666
282	SLU 21	0.21	-0.25	48.91	14.4717	0.0349	-0.0706
282	SLU 22	0.22	-0.21	45.46	13.4485	0.031	-0.0741
282	SLU 23	0.24	-0.24	45.44	13.4434	0.0309	-0.0808
282	SLU 24	0.22	-0.2	46.45	13.7402	0.0318	-0.0758
282	SLU 25	0.24	-0.22	46.44	13.7371	0.0318	-0.0798
282	SLU 26	0.24	-0.25	46.06	13.6264	0.0314	-0.0813
282	SLU 27	0.23	-0.21	47.07	13.9232	0.0323	-0.0764
282	SLU 28	0.24	-0.23	47.06	13.9202	0.0323	-0.0804
282	SLU 29	0.22	-0.22	46.71	13.8146	0.032	-0.0752
282	SLU 30	0.24	-0.24	46.69	13.8115	0.032	-0.0792

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLU 31	0.25	-0.2	50.51	14.9497	0.0356	-0.0826
282	SLU 32	0.23	-0.16	51.52	15.2465	0.0365	-0.0776
282	SLU 33	0.24	-0.18	51.51	15.2435	0.0364	-0.0816
282	SLU 34	0.25	-0.2	51.13	15.1328	0.0361	-0.0831
282	SLU 35	0.23	-0.16	52.15	15.4296	0.037	-0.0782
282	SLU 36	0.24	-0.18	52.13	15.4265	0.0369	-0.0822
282	SLU 37	0.23	-0.17	51.78	15.3209	0.0367	-0.077
282	SLU 38	0.24	-0.19	51.77	15.3179	0.0366	-0.081
282	SLU 39	0.23	-0.14	52.71	15.6004	0.0377	-0.0766
282	SLU 40	0.24	-0.16	52.69	15.5973	0.0376	-0.0806
282	SLU 41	0.23	-0.15	53.33	15.7834	0.0382	-0.0772
282	SLU 42	0.24	-0.17	53.32	15.7804	0.0381	-0.0812
282	SLU 43	0.23	-0.4	51.86	15.3331	0.035	-0.079
282	SLU 44	0.26	-0.44	51.84	15.328	0.0349	-0.0857
282	SLU 45	0.24	-0.4	52.85	15.6248	0.0358	-0.0807
282	SLU 46	0.25	-0.42	52.83	15.6217	0.0358	-0.0847
282	SLU 47	0.26	-0.44	52.46	15.5111	0.0354	-0.0862
282	SLU 48	0.24	-0.4	53.47	15.8078	0.0363	-0.0813
282	SLU 49	0.25	-0.42	53.46	15.8048	0.0363	-0.0853
282	SLU 50	0.24	-0.41	53.11	15.6992	0.036	-0.0801
282	SLU 51	0.25	-0.43	53.09	15.6961	0.0359	-0.0841
282	SLU 52	0.26	-0.39	56.91	16.8343	0.0396	-0.0874
282	SLU 53	0.24	-0.35	57.92	17.1311	0.0405	-0.0825
282	SLU 54	0.26	-0.37	57.91	17.1281	0.0404	-0.0865
282	SLU 55	0.26	-0.39	57.53	17.0174	0.0401	-0.088
282	SLU 56	0.24	-0.35	58.55	17.3142	0.041	-0.083
282	SLU 57	0.26	-0.37	58.53	17.3111	0.0409	-0.087
282	SLU 58	0.24	-0.36	58.18	17.2055	0.0406	-0.0819
282	SLU 59	0.25	-0.38	58.17	17.2025	0.0406	-0.0859
282	SLU 60	0.24	-0.34	59.11	17.485	0.0416	-0.0815
282	SLU 61	0.25	-0.36	59.09	17.4819	0.0416	-0.0855
282	SLU 62	0.24	-0.34	59.73	17.668	0.0421	-0.0821
282	SLU 63	0.25	-0.36	59.72	17.665	0.0421	-0.0861
282	SLU 64	0.27	-0.32	56.27	16.6417	0.0382	-0.0895
282	SLU 65	0.29	-0.36	56.24	16.6366	0.0382	-0.0962
282	SLU 66	0.27	-0.32	57.26	16.9334	0.039	-0.0913
282	SLU 67	0.28	-0.34	57.24	16.9304	0.039	-0.0953
282	SLU 68	0.29	-0.36	56.87	16.8197	0.0386	-0.0968
282	SLU 69	0.27	-0.32	57.88	17.1165	0.0395	-0.0918
282	SLU 70	0.29	-0.34	57.87	17.1134	0.0395	-0.0958
282	SLU 71	0.27	-0.33	57.52	17.0078	0.0392	-0.0907
282	SLU 72	0.28	-0.35	57.5	17.0048	0.0392	-0.0947
282	SLU 73	0.29	-0.31	61.32	18.143	0.0428	-0.098
282	SLU 74	0.27	-0.27	62.33	18.4398	0.0437	-0.093
282	SLU 75	0.29	-0.29	62.31	18.4367	0.0437	-0.097
282	SLU 76	0.29	-0.32	61.94	18.326	0.0433	-0.0986
282	SLU 77	0.28	-0.27	62.95	18.6228	0.0442	-0.0936
282	SLU 78	0.29	-0.3	62.94	18.6198	0.0442	-0.0976
282	SLU 79	0.27	-0.28	62.59	18.5142	0.0439	-0.0924
282	SLU 80	0.29	-0.3	62.57	18.5111	0.0438	-0.0964
282	SLU 81	0.27	-0.26	63.51	18.7936	0.0449	-0.0921
282	SLU 82	0.28	-0.28	63.5	18.7906	0.0448	-0.0961
282	SLU 83	0.27	-0.26	64.14	18.9767	0.0454	-0.0926
282	SLU 84	0.29	-0.28	64.12	18.9736	0.0453	-0.0966
282	SLE RA 1	0.2	-0.27	42.31	12.5137	0.0287	-0.0666
282	SLE RA 2	0.21	-0.29	42.3	12.5103	0.0286	-0.071
282	SLE RA 3	0.2	-0.26	42.97	12.7082	0.0292	-0.0677
282	SLE RA 4	0.21	-0.28	42.96	12.7062	0.0292	-0.0704
282	SLE RA 5	0.21	-0.29	42.71	12.6324	0.029	-0.0714
282	SLE RA 6	0.2	-0.26	43.39	12.8302	0.0296	-0.0681
282	SLE RA 7	0.21	-0.28	43.38	12.8282	0.0295	-0.0708
282	SLE RA 8	0.2	-0.27	43.15	12.7578	0.0294	-0.0673
282	SLE RA 9	0.21	-0.29	43.14	12.7558	0.0293	-0.07
282	SLE RA 10	0.21	-0.26	45.68	13.5145	0.0318	-0.0722
282	SLE RA 11	0.2	-0.23	46.36	13.7124	0.0323	-0.0689
282	SLE RA 12	0.21	-0.25	46.35	13.7104	0.0323	-0.0716
282	SLE RA 13	0.22	-0.26	46.1	13.6366	0.0321	-0.0726
282	SLE RA 14	0.2	-0.23	46.77	13.8344	0.0327	-0.0693
282	SLE RA 15	0.21	-0.25	46.76	13.8324	0.0326	-0.0719
282	SLE RA 16	0.2	-0.24	46.53	13.762	0.0325	-0.0685
282	SLE RA 17	0.21	-0.25	46.52	13.76	0.0324	-0.0712
282	SLE RA 18	0.2	-0.22	47.15	13.9483	0.0331	-0.0682
282	SLE RA 19	0.21	-0.24	47.14	13.9463	0.0331	-0.0709
282	SLE RA 20	0.2	-0.22	47.56	14.0704	0.0335	-0.0686
282	SLE RA 21	0.21	-0.24	47.55	14.0683	0.0334	-0.0713
282	SLE FR 1	0.2	-0.27	42.31	12.5137	0.0287	-0.0666
282	SLE FR 2	0.2	-0.27	42.31	12.513	0.0287	-0.0675
282	SLE FR 3	0.2	-0.27	42.48	12.5625	0.0288	-0.0667
282	SLE FR 4	0.2	-0.26	43.76	12.9434	0.03	-0.068
282	SLE FR 5	0.2	-0.25	43.93	12.9929	0.0302	-0.0672
282	SLE FR 6	0.2	-0.24	44.73	13.231	0.0309	-0.0674
282	SLE QP 1	0.2	-0.27	42.31	12.5137	0.0287	-0.0666
282	SLE QP 2	0.2	-0.25	43.76	12.9441	0.03	-0.0671
282	SLD 1	4.19	0.5	43.93	13.0633	0.0377	-1.3026
282	SLD 2	4.58	0.58	44.05	13.0925	0.0373	-1.422
282	SLD 3	4.1	-0.61	43.24	12.9202	0.0365	-1.2737
282	SLD 4	4.49	-0.53	43.35	12.9494	0.0361	-1.3931
282	SLD 5	1.46	1.64	44.84	13.1917	0.0343	-0.4598
282	SLD 6	1.72	1.69	44.92	13.211	0.034	-0.5391
282	SLD 7	1.16	-2.05	42.54	12.7145	0.0302	-0.3635

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLD 8	1.42	-2	42.61	12.7339	0.0299	-0.4428
282	SLD 9	-1.02	1.5	44.91	13.1543	0.0302	0.3086
282	SLD 10	-0.76	1.55	44.99	13.1736	0.0299	0.2294
282	SLD 11	-1.32	-2.2	42.61	12.6772	0.026	0.405
282	SLD 12	-1.07	-2.15	42.69	12.6965	0.0258	0.3257
282	SLD 13	-4.09	0.02	44.17	12.9388	0.024	1.259
282	SLD 14	-3.7	0.1	44.28	12.968	0.0236	1.1395
282	SLD 15	-4.18	-1.09	43.48	12.7957	0.0228	1.2879
282	SLD 16	-3.79	-1.01	43.59	12.8248	0.0224	1.1684
282	SLV 1	9.53	1.48	44.14	13.2184	0.0479	-2.9562
282	SLV 2	10.44	1.65	44.4	13.2863	0.047	-3.2342
282	SLV 3	9.32	-1.04	42.57	12.8931	0.0451	-2.8893
282	SLV 4	10.23	-0.86	42.83	12.961	0.0442	-3.1674
282	SLV 5	3.16	4.04	46.21	13.5078	0.0398	-0.9863
282	SLV 6	3.75	4.16	46.37	13.5521	0.0392	-1.1675
282	SLV 7	2.46	-4.33	40.99	12.4235	0.0304	-0.7634
282	SLV 8	3.05	-4.21	41.15	12.4677	0.0298	-0.9446
282	SLV 9	-2.65	3.71	46.37	13.4205	0.0302	0.8105
282	SLV 10	-2.06	3.82	46.54	13.4647	0.0296	0.6293
282	SLV 11	-3.35	-4.66	41.15	12.3361	0.0208	1.0334
282	SLV 12	-2.76	-4.55	41.32	12.3803	0.0202	0.8522
282	SLV 13	-9.83	0.35	44.7	12.9272	0.0159	3.0332
282	SLV 14	-8.93	0.53	44.96	12.9951	0.0149	2.7552
282	SLV 15	-10.04	-2.16	43.13	12.6019	0.0131	3.1001
282	SLV 16	-9.14	-1.98	43.39	12.6698	0.0121	2.8221
282	CRTFP Ux+	0	0	0	0	0	0
282	CRTFP Ux-	0	0	0	0	0	0
282	CRTFP Uy+	0	0	0	0	0	0
282	CRTFP Uy-	0	0	0	0	0	0
283	SLU 1	0.2	-0.38	40.93	11.9042	0.0154	-0.0656
283	SLU 2	0.22	-0.41	40.91	11.9001	0.0153	-0.0723
283	SLU 3	0.2	-0.38	41.91	12.1886	0.0159	-0.0674
283	SLU 4	0.22	-0.4	41.9	12.1862	0.0159	-0.0714
283	SLU 5	0.22	-0.42	41.53	12.0788	0.0156	-0.0729
283	SLU 6	0.2	-0.38	42.53	12.3673	0.0162	-0.068
283	SLU 7	0.22	-0.4	42.51	12.3648	0.0162	-0.072
283	SLU 8	0.2	-0.39	42.17	12.2615	0.016	-0.0668
283	SLU 9	0.21	-0.41	42.15	12.2591	0.016	-0.0708
283	SLU 10	0.22	-0.38	45.92	13.3625	0.0185	-0.0741
283	SLU 11	0.21	-0.34	46.92	13.6511	0.0191	-0.0692
283	SLU 12	0.22	-0.36	46.91	13.6486	0.0191	-0.0732
283	SLU 13	0.22	-0.38	46.54	13.5412	0.0188	-0.0747
283	SLU 14	0.21	-0.34	47.54	13.8297	0.0194	-0.0698
283	SLU 15	0.22	-0.36	47.53	13.8273	0.0194	-0.0738
283	SLU 16	0.2	-0.35	47.18	13.724	0.0192	-0.0686
283	SLU 17	0.22	-0.37	47.16	13.7215	0.0192	-0.0727
283	SLU 18	0.2	-0.33	48.09	13.9934	0.0199	-0.0682
283	SLU 19	0.22	-0.35	48.07	13.9909	0.0199	-0.0722
283	SLU 20	0.2	-0.33	48.71	14.1721	0.0203	-0.0688
283	SLU 21	0.22	-0.35	48.69	14.1696	0.0202	-0.0728
283	SLU 22	0.23	-0.31	45.31	13.1849	0.0173	-0.0764
283	SLU 23	0.25	-0.34	45.29	13.1808	0.0172	-0.0831
283	SLU 24	0.23	-0.31	46.29	13.4693	0.0178	-0.0782
283	SLU 25	0.25	-0.33	46.28	13.4669	0.0177	-0.0822
283	SLU 26	0.25	-0.35	45.91	13.3595	0.0175	-0.0837
283	SLU 27	0.24	-0.31	46.91	13.648	0.0181	-0.0788
283	SLU 28	0.25	-0.33	46.9	13.6455	0.018	-0.0828
283	SLU 29	0.23	-0.32	46.55	13.5422	0.0179	-0.0776
283	SLU 30	0.25	-0.34	46.54	13.5398	0.0178	-0.0816
283	SLU 31	0.26	-0.31	50.3	14.6432	0.0204	-0.0849
283	SLU 32	0.24	-0.27	51.31	14.9318	0.021	-0.08
283	SLU 33	0.25	-0.29	51.29	14.9293	0.0209	-0.084
283	SLU 34	0.26	-0.31	50.92	14.8219	0.0207	-0.0855
283	SLU 35	0.24	-0.28	51.92	15.1104	0.0213	-0.0806
283	SLU 36	0.25	-0.3	51.91	15.108	0.0212	-0.0846
283	SLU 37	0.24	-0.28	51.56	15.0047	0.0211	-0.0794
283	SLU 38	0.25	-0.3	51.55	15.0022	0.021	-0.0834
283	SLU 39	0.23	-0.26	52.47	15.2741	0.0218	-0.079
283	SLU 40	0.25	-0.28	52.46	15.2716	0.0218	-0.083
283	SLU 41	0.24	-0.26	53.09	15.4528	0.0221	-0.0796
283	SLU 42	0.25	-0.28	53.08	15.4503	0.0221	-0.0836
283	SLU 43	0.24	-0.52	51.71	15.0364	0.0194	-0.0816
283	SLU 44	0.27	-0.55	51.68	15.0323	0.0193	-0.0883
283	SLU 45	0.25	-0.51	52.69	15.3208	0.0199	-0.0834
283	SLU 46	0.26	-0.53	52.67	15.3184	0.0198	-0.0874
283	SLU 47	0.27	-0.55	52.3	15.2109	0.0196	-0.0889
283	SLU 48	0.25	-0.52	53.3	15.4995	0.0202	-0.084
283	SLU 49	0.26	-0.54	53.29	15.497	0.0201	-0.088
283	SLU 50	0.25	-0.53	52.94	15.3937	0.02	-0.0828
283	SLU 51	0.26	-0.55	52.93	15.3912	0.0199	-0.0868
283	SLU 52	0.27	-0.51	56.69	16.4947	0.0225	-0.0901
283	SLU 53	0.25	-0.48	57.7	16.7832	0.0231	-0.0852
283	SLU 54	0.27	-0.5	57.68	16.7808	0.023	-0.0892
283	SLU 55	0.27	-0.52	57.31	16.6734	0.0228	-0.0907
283	SLU 56	0.25	-0.48	58.32	16.9619	0.0234	-0.0858
283	SLU 57	0.27	-0.5	58.3	16.9594	0.0233	-0.0898
283	SLU 58	0.25	-0.49	57.95	16.8561	0.0232	-0.0846
283	SLU 59	0.26	-0.51	57.94	16.8537	0.0231	-0.0886
283	SLU 60	0.25	-0.46	58.86	17.1256	0.0239	-0.0842
283	SLU 61	0.26	-0.48	58.85	17.1231	0.0239	-0.0882

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
283	SLU 62	0.25	-0.47	59.48	17.3042	0.0242	-0.0848
283	SLU 63	0.26	-0.49	59.47	17.3018	0.0242	-0.0888
283	SLU 64	0.28	-0.45	56.09	16.3171	0.0212	-0.0924
283	SLU 65	0.3	-0.48	56.07	16.313	0.0212	-0.0991
283	SLU 66	0.28	-0.44	57.07	16.6015	0.0217	-0.0942
283	SLU 67	0.3	-0.46	57.06	16.5991	0.0217	-0.0982
283	SLU 68	0.3	-0.49	56.69	16.4916	0.0215	-0.0997
283	SLU 69	0.28	-0.45	57.69	16.7802	0.0221	-0.0948
283	SLU 70	0.3	-0.47	57.67	16.7777	0.022	-0.0988
283	SLU 71	0.28	-0.46	57.33	16.6744	0.0219	-0.0936
283	SLU 72	0.29	-0.48	57.31	16.6719	0.0218	-0.0976
283	SLU 73	0.3	-0.44	61.08	17.7754	0.0243	-0.1009
283	SLU 74	0.29	-0.41	62.08	18.0639	0.0249	-0.096
283	SLU 75	0.3	-0.43	62.07	18.0615	0.0249	-0.1
283	SLU 76	0.3	-0.45	61.7	17.9541	0.0247	-0.1015
283	SLU 77	0.29	-0.41	62.7	18.2426	0.0253	-0.0966
283	SLU 78	0.3	-0.43	62.69	18.2401	0.0252	-0.1006
283	SLU 79	0.28	-0.42	62.34	18.1368	0.0251	-0.0954
283	SLU 80	0.3	-0.44	62.33	18.1344	0.025	-0.0994
283	SLU 81	0.28	-0.39	63.25	18.4063	0.0258	-0.095
283	SLU 82	0.3	-0.41	63.23	18.4038	0.0257	-0.099
283	SLU 83	0.28	-0.4	63.87	18.5849	0.0261	-0.0956
283	SLU 84	0.3	-0.42	63.85	18.5825	0.0261	-0.0996
283	SLE RA 1	0.21	-0.36	42.18	12.2701	0.0159	-0.0687
283	SLE RA 2	0.22	-0.38	42.17	12.2674	0.0159	-0.0732
283	SLE RA 3	0.21	-0.36	42.84	12.4598	0.0163	-0.0699
283	SLE RA 4	0.22	-0.37	42.83	12.4581	0.0162	-0.0726
283	SLE RA 5	0.22	-0.38	42.58	12.3865	0.0161	-0.0736
283	SLE RA 6	0.21	-0.36	43.25	12.5789	0.0165	-0.0703
283	SLE RA 7	0.22	-0.37	43.24	12.5772	0.0164	-0.073
283	SLE RA 8	0.21	-0.37	43.01	12.5083	0.0163	-0.0695
283	SLE RA 9	0.22	-0.38	43	12.5067	0.0163	-0.0722
283	SLE RA 10	0.22	-0.36	45.51	13.2424	0.018	-0.0744
283	SLE RA 11	0.21	-0.33	46.18	13.4347	0.0184	-0.0711
283	SLE RA 12	0.22	-0.35	46.17	13.4331	0.0184	-0.0738
283	SLE RA 13	0.22	-0.36	45.92	13.3615	0.0182	-0.0748
283	SLE RA 14	0.21	-0.34	46.59	13.5538	0.0186	-0.0715
283	SLE RA 15	0.22	-0.35	46.58	13.5522	0.0186	-0.0742
283	SLE RA 16	0.21	-0.34	46.35	13.4833	0.0185	-0.0707
283	SLE RA 17	0.22	-0.36	46.34	13.4816	0.0184	-0.0734
283	SLE RA 18	0.21	-0.32	46.95	13.6629	0.019	-0.0704
283	SLE RA 19	0.22	-0.34	46.95	13.6613	0.0189	-0.0731
283	SLE RA 20	0.21	-0.33	47.37	13.782	0.0192	-0.0708
283	SLE RA 21	0.22	-0.34	47.36	13.7804	0.0191	-0.0735
283	SLE FR 1	0.21	-0.36	42.18	12.2701	0.0159	-0.0687
283	SLE FR 2	0.21	-0.36	42.18	12.2696	0.0159	-0.0696
283	SLE FR 3	0.21	-0.36	42.35	12.3178	0.016	-0.0689
283	SLE FR 4	0.21	-0.35	43.61	12.6874	0.0168	-0.0701
283	SLE FR 5	0.21	-0.35	43.78	12.7356	0.0169	-0.0694
283	SLE FR 6	0.21	-0.34	44.57	12.9665	0.0174	-0.0696
283	SLE QP 1	0.21	-0.36	42.18	12.2701	0.0159	-0.0687
283	SLE QP 2	0.21	-0.35	43.61	12.688	0.0168	-0.0692
283	SLD 1	4.25	0.47	43.55	12.6972	0.0249	-1.3051
283	SLD 2	4.64	0.57	43.67	12.7306	0.0245	-1.4247
283	SLD 3	4.15	-0.63	42.88	12.5691	0.0237	-1.2764
283	SLD 4	4.55	-0.53	43.01	12.6025	0.0233	-1.3961
283	SLD 5	1.49	1.56	44.58	12.8789	0.021	-0.4617
283	SLD 6	1.75	1.62	44.66	12.901	0.0207	-0.5411
283	SLD 7	1.18	-2.13	42.37	12.452	0.0173	-0.3662
283	SLD 8	1.44	-2.06	42.45	12.4742	0.017	-0.4456
283	SLD 9	-1.03	1.37	44.78	12.9018	0.0167	0.3071
283	SLD 10	-0.77	1.43	44.86	12.9239	0.0164	0.2277
283	SLD 11	-1.33	-2.32	42.57	12.4749	0.0129	0.4026
283	SLD 12	-1.07	-2.25	42.65	12.497	0.0126	0.3232
283	SLD 13	-4.14	-0.16	44.22	12.7735	0.0103	1.2576
283	SLD 14	-3.74	-0.06	44.34	12.8068	0.0099	1.138
283	SLD 15	-4.23	-1.27	43.55	12.6454	0.0092	1.2863
283	SLD 16	-3.83	-1.17	43.68	12.6787	0.0088	1.1666
283	SLV 1	9.65	1.53	43.43	12.7056	0.0356	-2.9591
283	SLV 2	10.57	1.76	43.73	12.7832	0.0346	-3.2378
283	SLV 3	9.44	-0.97	41.93	12.4144	0.033	-2.8928
283	SLV 4	10.36	-0.74	42.23	12.492	0.0321	-3.1714
283	SLV 5	3.2	3.97	45.79	13.1213	0.0265	-0.9878
283	SLV 6	3.8	4.12	45.98	13.1719	0.0259	-1.1694
283	SLV 7	2.49	-4.37	40.78	12.1506	0.018	-0.7667
283	SLV 8	3.09	-4.22	40.97	12.2012	0.0173	-0.9483
283	SLV 9	-2.68	3.53	46.26	13.1748	0.0163	0.8098
283	SLV 10	-2.08	3.68	46.45	13.2254	0.0157	0.6283
283	SLV 11	-3.39	-4.82	41.25	12.2041	0.0078	1.0309
283	SLV 12	-2.79	-4.67	41.44	12.2547	0.0071	0.8493
283	SLV 13	-9.94	0.05	45	12.884	0.0016	3.033
283	SLV 14	-9.03	0.28	45.3	12.9616	0.0006	2.7543
283	SLV 15	-10.16	-2.46	43.5	12.5928	-0.001	3.0993
283	SLV 16	-9.24	-2.23	43.8	12.6704	-0.0019	2.8207
283	CRTFP Ux+	0	0	0	0	0	0
283	CRTFP Ux-	0	0	0	0	0	0
283	CRTFP Uy+	0	0	0	0	0	0
283	CRTFP Uy-	0	0	0	0	0	0
284	SLU 1	0.2	-0.46	40.5	11.7195	0.0095	-0.0679
284	SLU 2	0.23	-0.5	40.48	11.7163	0.0094	-0.0746

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	SLU 3	0.21	-0.46	41.46	11.9979	0.0099	-0.0698
284	SLU 4	0.22	-0.48	41.45	11.996	0.0098	-0.0738
284	SLU 5	0.23	-0.5	41.09	11.8914	0.0097	-0.0753
284	SLU 6	0.21	-0.47	42.07	12.1729	0.0101	-0.0704
284	SLU 7	0.22	-0.49	42.06	12.171	0.01	-0.0744
284	SLU 8	0.21	-0.48	41.72	12.0695	0.0099	-0.0692
284	SLU 9	0.22	-0.5	41.7	12.0676	0.0099	-0.0732
284	SLU 10	0.23	-0.47	45.39	13.1411	0.0118	-0.0765
284	SLU 11	0.21	-0.44	46.37	13.4226	0.0123	-0.0716
284	SLU 12	0.23	-0.46	46.36	13.4207	0.0122	-0.0757
284	SLU 13	0.23	-0.48	46	13.3161	0.0121	-0.0771
284	SLU 14	0.22	-0.44	46.98	13.5976	0.0125	-0.0723
284	SLU 15	0.23	-0.46	46.97	13.5957	0.0124	-0.0763
284	SLU 16	0.21	-0.45	46.63	13.4943	0.0123	-0.071
284	SLU 17	0.23	-0.47	46.61	13.4924	0.0123	-0.0751
284	SLU 18	0.21	-0.43	47.51	13.7549	0.0129	-0.0706
284	SLU 19	0.22	-0.45	47.5	13.753	0.0129	-0.0746
284	SLU 20	0.21	-0.43	48.12	13.9299	0.0132	-0.0712
284	SLU 21	0.23	-0.45	48.11	13.928	0.0131	-0.0752
284	SLU 22	0.24	-0.41	44.83	12.9788	0.0106	-0.0789
284	SLU 23	0.26	-0.44	44.81	12.9756	0.0105	-0.0857
284	SLU 24	0.24	-0.41	45.79	13.2571	0.011	-0.0808
284	SLU 25	0.26	-0.42	45.78	13.2552	0.0109	-0.0849
284	SLU 26	0.26	-0.44	45.42	13.1506	0.0107	-0.0863
284	SLU 27	0.25	-0.41	46.4	13.4322	0.0112	-0.0814
284	SLU 28	0.26	-0.43	46.39	13.4303	0.0111	-0.0855
284	SLU 29	0.24	-0.42	46.05	13.3288	0.011	-0.0802
284	SLU 30	0.26	-0.44	46.04	13.3269	0.011	-0.0843
284	SLU 31	0.26	-0.41	49.72	14.4003	0.0129	-0.0876
284	SLU 32	0.25	-0.38	50.7	14.6819	0.0134	-0.0827
284	SLU 33	0.26	-0.4	50.69	14.68	0.0133	-0.0867
284	SLU 34	0.27	-0.42	50.33	14.5753	0.0131	-0.0882
284	SLU 35	0.25	-0.39	51.31	14.8569	0.0136	-0.0833
284	SLU 36	0.26	-0.41	51.3	14.855	0.0135	-0.0874
284	SLU 37	0.25	-0.39	50.96	14.7535	0.0134	-0.0821
284	SLU 38	0.26	-0.41	50.95	14.7516	0.0134	-0.0861
284	SLU 39	0.24	-0.37	51.84	15.0141	0.014	-0.0816
284	SLU 40	0.26	-0.39	51.83	15.0122	0.014	-0.0857
284	SLU 41	0.25	-0.38	52.45	15.1891	0.0142	-0.0822
284	SLU 42	0.26	-0.39	52.44	15.1872	0.0142	-0.0863
284	SLU 43	0.25	-0.62	51.16	14.8036	0.012	-0.0845
284	SLU 44	0.28	-0.65	51.14	14.8005	0.0119	-0.0912
284	SLU 45	0.26	-0.62	52.12	15.082	0.0123	-0.0863
284	SLU 46	0.27	-0.64	52.11	15.0801	0.0123	-0.0904
284	SLU 47	0.28	-0.66	51.75	14.9755	0.0121	-0.0919
284	SLU 48	0.26	-0.63	52.73	15.257	0.0126	-0.087
284	SLU 49	0.27	-0.65	52.72	15.2551	0.0125	-0.091
284	SLU 50	0.26	-0.64	52.38	15.1536	0.0124	-0.0858
284	SLU 51	0.27	-0.66	52.37	15.1517	0.0124	-0.0898
284	SLU 52	0.28	-0.63	56.05	16.2252	0.0143	-0.0931
284	SLU 53	0.26	-0.6	57.03	16.5067	0.0147	-0.0882
284	SLU 54	0.28	-0.62	57.02	16.5048	0.0147	-0.0922
284	SLU 55	0.28	-0.64	56.66	16.4002	0.0145	-0.0937
284	SLU 56	0.27	-0.6	57.64	16.6818	0.015	-0.0888
284	SLU 57	0.28	-0.62	57.63	16.6799	0.0149	-0.0929
284	SLU 58	0.26	-0.61	57.29	16.5784	0.0148	-0.0876
284	SLU 59	0.27	-0.63	57.28	16.5765	0.0148	-0.0917
284	SLU 60	0.26	-0.59	58.18	16.839	0.0154	-0.0871
284	SLU 61	0.27	-0.6	58.16	16.8371	0.0154	-0.0912
284	SLU 62	0.26	-0.59	58.79	17.014	0.0156	-0.0878
284	SLU 63	0.27	-0.61	58.77	17.0121	0.0156	-0.0918
284	SLU 64	0.29	-0.56	55.49	16.0629	0.0131	-0.0955
284	SLU 65	0.31	-0.6	55.47	16.0597	0.013	-0.1023
284	SLU 66	0.29	-0.56	56.46	16.3413	0.0134	-0.0974
284	SLU 67	0.31	-0.58	56.44	16.3394	0.0134	-0.1014
284	SLU 68	0.31	-0.6	56.08	16.2347	0.0132	-0.1029
284	SLU 69	0.3	-0.57	57.07	16.5163	0.0137	-0.098
284	SLU 70	0.31	-0.59	57.05	16.5144	0.0136	-0.1021
284	SLU 71	0.29	-0.58	56.71	16.4129	0.0135	-0.0968
284	SLU 72	0.3	-0.6	56.7	16.411	0.0135	-0.1009
284	SLU 73	0.31	-0.57	60.38	17.4844	0.0154	-0.1041
284	SLU 74	0.3	-0.54	61.37	17.766	0.0158	-0.0992
284	SLU 75	0.31	-0.56	61.36	17.7641	0.0158	-0.1033
284	SLU 76	0.32	-0.58	60.99	17.6595	0.0156	-0.1048
284	SLU 77	0.3	-0.55	61.98	17.941	0.0161	-0.0999
284	SLU 78	0.31	-0.56	61.96	17.9391	0.016	-0.1039
284	SLU 79	0.3	-0.55	61.62	17.8376	0.0159	-0.0987
284	SLU 80	0.31	-0.57	61.61	17.8357	0.0159	-0.1027
284	SLU 81	0.29	-0.53	62.51	18.0982	0.0165	-0.0982
284	SLU 82	0.31	-0.55	62.5	18.0963	0.0165	-0.1022
284	SLU 83	0.3	-0.53	63.12	18.2732	0.0167	-0.0988
284	SLU 84	0.31	-0.55	63.11	18.2713	0.0167	-0.1029
284	SLE RA 1	0.21	-0.45	41.73	12.0793	0.0098	-0.0711
284	SLE RA 2	0.23	-0.47	41.72	12.0772	0.0098	-0.0756
284	SLE RA 3	0.22	-0.45	42.38	12.2649	0.0101	-0.0723
284	SLE RA 4	0.23	-0.46	42.37	12.2636	0.01	-0.075
284	SLE RA 5	0.23	-0.47	42.13	12.1939	0.0099	-0.076
284	SLE RA 6	0.22	-0.45	42.78	12.3816	0.0102	-0.0727
284	SLE RA 7	0.23	-0.46	42.77	12.3803	0.0102	-0.0754
284	SLE RA 8	0.22	-0.46	42.55	12.3126	0.0101	-0.0719

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	SLE RA 9	0.23	-0.47	42.54	12.3114	0.0101	-0.0746
284	SLE RA 10	0.23	-0.45	44.99	13.027	0.0114	-0.0768
284	SLE RA 11	0.22	-0.43	45.65	13.2147	0.0117	-0.0735
284	SLE RA 12	0.23	-0.44	45.64	13.2134	0.0116	-0.0762
284	SLE RA 13	0.23	-0.46	45.4	13.1437	0.0115	-0.0772
284	SLE RA 14	0.22	-0.43	46.06	13.3314	0.0118	-0.074
284	SLE RA 15	0.23	-0.45	46.05	13.3301	0.0118	-0.0767
284	SLE RA 16	0.22	-0.44	45.82	13.2625	0.0117	-0.0731
284	SLE RA 17	0.23	-0.45	45.81	13.2612	0.0117	-0.0758
284	SLE RA 18	0.22	-0.42	46.41	13.4362	0.0121	-0.0728
284	SLE RA 19	0.23	-0.43	46.4	13.4349	0.0121	-0.0755
284	SLE RA 20	0.22	-0.43	46.82	13.5529	0.0123	-0.0732
284	SLE RA 21	0.23	-0.44	46.81	13.5516	0.0122	-0.076
284	SLE FR 1	0.21	-0.45	41.73	12.0793	0.0098	-0.0711
284	SLE FR 2	0.22	-0.45	41.73	12.0789	0.0098	-0.072
284	SLE FR 3	0.21	-0.45	41.9	12.126	0.0099	-0.0712
284	SLE FR 4	0.22	-0.44	43.13	12.4859	0.0105	-0.0725
284	SLE FR 5	0.22	-0.44	43.3	12.533	0.0106	-0.0718
284	SLE FR 6	0.22	-0.43	44.07	12.7577	0.011	-0.0719
284	SLE QP 1	0.21	-0.45	41.73	12.0793	0.0098	-0.0711
284	SLE QP 2	0.22	-0.44	43.14	12.4864	0.0105	-0.0716
284	SLD 1	4.27	0.43	42.77	12.4262	0.0194	-1.31
284	SLD 2	4.66	0.55	42.91	12.4639	0.019	-1.4301
284	SLD 3	4.17	-0.66	42.14	12.3122	0.0184	-1.2813
284	SLD 4	4.57	-0.54	42.28	12.3499	0.018	-1.4015
284	SLD 5	1.5	1.46	43.95	12.6344	0.0148	-0.4647
284	SLD 6	1.76	1.54	44.05	12.6594	0.0145	-0.5444
284	SLD 7	1.19	-2.19	41.86	12.2544	0.0114	-0.3692
284	SLD 8	1.45	-2.11	41.95	12.2794	0.0111	-0.449
284	SLD 9	-1.02	1.23	44.32	12.6934	0.0099	0.3058
284	SLD 10	-0.76	1.31	44.41	12.7183	0.0096	0.2261
284	SLD 11	-1.33	-2.42	42.23	12.3134	0.0065	0.4012
284	SLD 12	-1.07	-2.34	42.32	12.3383	0.0063	0.3215
284	SLD 13	-4.14	-0.34	43.99	12.6229	0.0031	1.2583
284	SLD 14	-3.74	-0.22	44.13	12.6605	0.0026	1.1382
284	SLD 15	-4.23	-1.43	43.36	12.5089	0.0021	1.2869
284	SLD 16	-3.83	-1.31	43.51	12.5465	0.0016	1.1668
284	SLV 1	9.69	1.56	42.25	12.3423	0.0312	-2.9675
284	SLV 2	10.61	1.84	42.58	12.4299	0.0302	-3.2472
284	SLV 3	9.47	-0.92	40.83	12.0829	0.0289	-2.9012
284	SLV 4	10.39	-0.63	41.16	12.1705	0.0279	-3.1809
284	SLV 5	3.22	3.87	44.97	12.8213	0.0204	-0.9917
284	SLV 6	3.82	4.05	45.19	12.8784	0.0197	-1.174
284	SLV 7	2.51	-4.39	40.23	11.9564	0.0127	-0.7707
284	SLV 8	3.11	-4.2	40.44	12.0135	0.0121	-0.953
284	SLV 9	-2.68	3.32	45.83	12.9593	0.0089	0.8098
284	SLV 10	-2.08	3.51	46.05	13.0164	0.0083	0.6276
284	SLV 11	-3.39	-4.93	41.08	12.0944	0.0013	1.0308
284	SLV 12	-2.79	-4.75	41.3	12.1514	0.0006	0.8486
284	SLV 13	-9.96	-0.25	45.11	12.8023	-0.0069	3.0377
284	SLV 14	-9.04	0.04	45.45	12.8899	-0.0079	2.758
284	SLV 15	-10.18	-2.72	43.69	12.5428	-0.0092	3.104
284	SLV 16	-9.26	-2.44	44.02	12.6304	-0.0102	2.8243
284	CRTFP Ux+	0	0	0	0	0	0
284	CRTFP Ux-	0	0	0	0	0	0
284	CRTFP Uy+	0	0	0	0	0	0
284	CRTFP Uy-	0	0	0	0	0	0
285	SLU 1	0.21	-0.55	40.34	11.6433	-0.0013	-0.0703
285	SLU 2	0.23	-0.58	40.32	11.641	-0.0014	-0.0771
285	SLU 3	0.22	-0.55	41.3	11.9186	-0.0012	-0.0723
285	SLU 4	0.23	-0.57	41.29	11.9172	-0.0013	-0.0763
285	SLU 5	0.24	-0.59	40.93	11.8141	-0.0013	-0.0778
285	SLU 6	0.22	-0.56	41.9	12.0918	-0.0012	-0.073
285	SLU 7	0.23	-0.58	41.89	12.0904	-0.0012	-0.077
285	SLU 8	0.22	-0.57	41.55	11.9897	-0.0012	-0.0717
285	SLU 9	0.23	-0.58	41.54	11.9883	-0.0013	-0.0758
285	SLU 10	0.24	-0.56	45.17	13.0428	-0.0005	-0.079
285	SLU 11	0.22	-0.53	46.15	13.3204	-0.0003	-0.0742
285	SLU 12	0.24	-0.55	46.14	13.319	-0.0004	-0.0782
285	SLU 13	0.24	-0.57	45.78	13.216	-0.0004	-0.0797
285	SLU 14	0.22	-0.54	46.75	13.4936	-0.0003	-0.0749
285	SLU 15	0.24	-0.56	46.74	13.4922	-0.0003	-0.0789
285	SLU 16	0.22	-0.55	46.4	13.3915	-0.0003	-0.0736
285	SLU 17	0.23	-0.57	46.39	13.3901	-0.0004	-0.0777
285	SLU 18	0.22	-0.53	47.27	13.6459	0	-0.073
285	SLU 19	0.23	-0.54	47.26	13.6445	-0.0001	-0.0771
285	SLU 20	0.22	-0.54	47.87	13.8191	0	-0.0737
285	SLU 21	0.23	-0.55	47.86	13.8177	0	-0.0778
285	SLU 22	0.25	-0.5	44.66	12.8948	-0.0016	-0.0817
285	SLU 23	0.27	-0.53	44.64	12.8925	-0.0016	-0.0885
285	SLU 24	0.25	-0.5	45.61	13.1701	-0.0015	-0.0836
285	SLU 25	0.27	-0.52	45.6	13.1687	-0.0016	-0.0877
285	SLU 26	0.27	-0.54	45.24	13.0657	-0.0016	-0.0892
285	SLU 27	0.25	-0.51	46.22	13.3433	-0.0015	-0.0843
285	SLU 28	0.27	-0.53	46.21	13.3419	-0.0015	-0.0884
285	SLU 29	0.25	-0.52	45.87	13.2412	-0.0015	-0.0831
285	SLU 30	0.26	-0.54	45.86	13.2398	-0.0016	-0.0871
285	SLU 31	0.27	-0.51	49.49	14.2943	-0.0007	-0.0904
285	SLU 32	0.26	-0.49	50.46	14.572	-0.0006	-0.0855
285	SLU 33	0.27	-0.51	50.45	14.5706	-0.0007	-0.0896

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLU 34	0.28	-0.52	50.09	14.4675	-0.0007	-0.0911
285	SLU 35	0.26	-0.5	51.07	14.7452	-0.0006	-0.0862
285	SLU 36	0.27	-0.51	51.06	14.7438	-0.0006	-0.0903
285	SLU 37	0.26	-0.5	50.72	14.6431	-0.0006	-0.085
285	SLU 38	0.27	-0.52	50.71	14.6417	-0.0007	-0.089
285	SLU 39	0.25	-0.48	51.59	14.8974	-0.0003	-0.0844
285	SLU 40	0.27	-0.5	51.58	14.8961	-0.0003	-0.0885
285	SLU 41	0.25	-0.49	52.19	15.0706	-0.0003	-0.0851
285	SLU 42	0.27	-0.51	52.18	15.0692	-0.0003	-0.0892
285	SLU 43	0.26	-0.73	50.96	14.7072	-0.0016	-0.0875
285	SLU 44	0.29	-0.76	50.95	14.7048	-0.0017	-0.0943
285	SLU 45	0.27	-0.73	51.92	14.9825	-0.0015	-0.0895
285	SLU 46	0.28	-0.75	51.91	14.9811	-0.0016	-0.0935
285	SLU 47	0.29	-0.77	51.55	14.878	-0.0016	-0.095
285	SLU 48	0.27	-0.74	52.52	15.1556	-0.0015	-0.0902
285	SLU 49	0.29	-0.76	52.51	15.1542	-0.0015	-0.0942
285	SLU 50	0.27	-0.75	52.17	15.0535	-0.0015	-0.0889
285	SLU 51	0.28	-0.77	52.16	15.0522	-0.0016	-0.093
285	SLU 52	0.29	-0.74	55.8	16.1067	-0.0008	-0.0962
285	SLU 53	0.27	-0.72	56.77	16.3843	-0.0006	-0.0914
285	SLU 54	0.29	-0.73	56.76	16.3829	-0.0007	-0.0954
285	SLU 55	0.29	-0.75	56.4	16.2798	-0.0007	-0.0969
285	SLU 56	0.28	-0.73	57.37	16.5575	-0.0006	-0.0921
285	SLU 57	0.29	-0.74	57.36	16.5561	-0.0006	-0.0961
285	SLU 58	0.27	-0.73	57.02	16.4554	-0.0006	-0.0908
285	SLU 59	0.29	-0.75	57.01	16.454	-0.0007	-0.0949
285	SLU 60	0.27	-0.71	57.89	16.7098	-0.0003	-0.0902
285	SLU 61	0.28	-0.72	57.88	16.7084	-0.0003	-0.0943
285	SLU 62	0.27	-0.72	58.5	16.883	-0.0003	-0.0909
285	SLU 63	0.29	-0.73	58.49	16.8816	-0.0003	-0.095
285	SLU 64	0.3	-0.68	55.28	15.9587	-0.0019	-0.0989
285	SLU 65	0.32	-0.71	55.26	15.9564	-0.0019	-0.1057
285	SLU 66	0.3	-0.68	56.24	16.234	-0.0018	-0.1008
285	SLU 67	0.32	-0.7	56.23	16.2326	-0.0019	-0.1049
285	SLU 68	0.32	-0.72	55.87	16.1296	-0.0019	-0.1064
285	SLU 69	0.31	-0.69	56.84	16.4072	-0.0018	-0.1015
285	SLU 70	0.32	-0.71	56.83	16.4058	-0.0018	-0.1056
285	SLU 71	0.3	-0.7	56.49	16.3051	-0.0018	-0.1003
285	SLU 72	0.32	-0.72	56.48	16.3037	-0.0019	-0.1043
285	SLU 73	0.33	-0.7	60.11	17.3582	-0.001	-0.1076
285	SLU 74	0.31	-0.67	61.09	17.6358	-0.0009	-0.1027
285	SLU 75	0.32	-0.69	61.08	17.6344	-0.001	-0.1068
285	SLU 76	0.33	-0.7	60.72	17.5314	-0.001	-0.1083
285	SLU 77	0.31	-0.68	61.69	17.809	-0.0009	-0.1034
285	SLU 78	0.32	-0.7	61.68	17.8076	-0.0009	-0.1075
285	SLU 79	0.31	-0.68	61.34	17.7069	-0.0009	-0.1022
285	SLU 80	0.32	-0.7	61.33	17.7055	-0.001	-0.1062
285	SLU 81	0.3	-0.66	62.21	17.9613	-0.0006	-0.1016
285	SLU 82	0.32	-0.68	62.2	17.9599	-0.0006	-0.1057
285	SLU 83	0.31	-0.67	62.81	18.1345	-0.0006	-0.1023
285	SLU 84	0.32	-0.69	62.8	18.1331	-0.0006	-0.1064
285	SLE RA 1	0.22	-0.53	41.57	12.0009	-0.0014	-0.0736
285	SLE RA 2	0.24	-0.55	41.56	11.9993	-0.0014	-0.0781
285	SLE RA 3	0.23	-0.54	42.21	12.1844	-0.0013	-0.0749
285	SLE RA 4	0.24	-0.55	42.2	12.1835	-0.0014	-0.0776
285	SLE RA 5	0.24	-0.56	41.97	12.1148	-0.0014	-0.0786
285	SLE RA 6	0.23	-0.54	42.62	12.2999	-0.0013	-0.0753
285	SLE RA 7	0.24	-0.55	42.61	12.2989	-0.0013	-0.078
285	SLE RA 8	0.22	-0.55	42.38	12.2318	-0.0013	-0.0745
285	SLE RA 9	0.23	-0.56	42.37	12.2309	-0.0014	-0.0772
285	SLE RA 10	0.24	-0.54	44.8	12.9339	-0.0008	-0.0794
285	SLE RA 11	0.23	-0.53	45.45	13.1189	-0.0007	-0.0761
285	SLE RA 12	0.24	-0.54	45.44	13.118	-0.0008	-0.0788
285	SLE RA 13	0.24	-0.55	45.2	13.0493	-0.0008	-0.0798
285	SLE RA 14	0.23	-0.53	45.85	13.2344	-0.0007	-0.0766
285	SLE RA 15	0.24	-0.54	45.84	13.2335	-0.0007	-0.0793
285	SLE RA 16	0.23	-0.54	45.61	13.1663	-0.0007	-0.0758
285	SLE RA 17	0.24	-0.55	45.61	13.1654	-0.0008	-0.0785
285	SLE RA 18	0.23	-0.52	46.19	13.3359	-0.0005	-0.0754
285	SLE RA 19	0.24	-0.53	46.19	13.335	-0.0005	-0.0781
285	SLE RA 20	0.23	-0.53	46.6	13.4514	-0.0005	-0.0758
285	SLE RA 21	0.24	-0.54	46.59	13.4505	-0.0005	-0.0786
285	SLE FR 1	0.22	-0.53	41.57	12.0009	-0.0014	-0.0736
285	SLE FR 2	0.23	-0.54	41.57	12.0006	-0.0014	-0.0745
285	SLE FR 3	0.22	-0.54	41.74	12.0471	-0.0014	-0.0738
285	SLE FR 4	0.23	-0.53	42.96	12.4011	-0.0011	-0.075
285	SLE FR 5	0.22	-0.53	43.12	12.4476	-0.0011	-0.0743
285	SLE FR 6	0.22	-0.53	43.88	12.6684	-0.001	-0.0745
285	SLE QP 1	0.22	-0.53	41.57	12.0009	-0.0014	-0.0736
285	SLE QP 2	0.22	-0.53	42.96	12.4014	-0.0011	-0.0741
285	SLD 1	4.28	0.39	42.25	12.2492	0.0088	-1.3146
285	SLD 2	4.68	0.53	42.41	12.2916	0.0083	-1.4352
285	SLD 3	4.19	-0.69	41.65	12.1459	0.0081	-1.2861
285	SLD 4	4.58	-0.55	41.81	12.1883	0.0076	-1.4066
285	SLD 5	1.51	1.36	43.63	12.5047	0.003	-0.4677
285	SLD 6	1.77	1.46	43.74	12.5329	0.0027	-0.5477
285	SLD 7	1.2	-2.24	41.63	12.1603	0.0006	-0.3725
285	SLD 8	1.46	-2.15	41.73	12.1885	0.0003	-0.4524
285	SLD 9	-1.02	1.09	44.19	12.6143	-0.0026	0.3042
285	SLD 10	-0.75	1.18	44.29	12.6425	-0.0029	0.2242

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLD 11	-1.32	-2.51	42.18	12.2699	-0.005	0.3994
285	SLD 12	-1.06	-2.42	42.29	12.2981	-0.0053	0.3195
285	SLD 13	-4.14	-0.51	44.11	12.6145	-0.0098	1.2584
285	SLD 14	-3.74	-0.37	44.27	12.6569	-0.0103	1.1378
285	SLD 15	-4.23	-1.59	43.51	12.5112	-0.0106	1.2869
285	SLD 16	-3.83	-1.45	43.67	12.5536	-0.011	1.1664
285	SLV 1	9.71	1.58	41.28	12.0425	0.0221	-2.975
285	SLV 2	10.63	1.92	41.65	12.1413	0.0209	-3.2556
285	SLV 3	9.49	-0.87	39.92	11.807	0.0204	-2.9088
285	SLV 4	10.42	-0.53	40.29	11.9058	0.0193	-3.1894
285	SLV 5	3.23	3.76	44.46	12.6335	0.0086	-0.9954
285	SLV 6	3.83	3.98	44.7	12.6979	0.0078	-1.1782
285	SLV 7	2.52	-4.4	39.91	11.8486	0.003	-0.7748
285	SLV 8	3.12	-4.19	40.16	11.9129	0.0023	-0.9577
285	SLV 9	-2.68	3.13	45.76	12.8899	-0.0045	0.8095
285	SLV 10	-2.07	3.35	46.01	12.9542	-0.0052	0.6266
285	SLV 11	-3.39	-5.04	41.22	12.1049	-0.0101	1.03
285	SLV 12	-2.78	-4.82	41.46	12.1692	-0.0108	0.8472
285	SLV 13	-9.97	-0.53	45.63	12.897	-0.0215	3.0412
285	SLV 14	-9.05	-0.19	46	12.9958	-0.0226	2.7606
285	SLV 15	-10.19	-2.98	44.27	12.6615	-0.0232	3.1074
285	SLV 16	-9.26	-2.64	44.64	12.7603	-0.0243	2.8268
285	CRTFP Ux+	0	0	0	0	0	0
285	CRTFP Ux-	0	0	0	0	0	0
285	CRTFP Uy+	0	0	0	0	0	0
285	CRTFP Uy-	0	0	0	0	0	0
286	SLU 1	0.22	-0.63	40.58	11.7134	-0.0136	-0.0727
286	SLU 2	0.24	-0.66	40.56	11.7117	-0.0137	-0.0795
286	SLU 3	0.23	-0.64	41.54	11.9896	-0.0139	-0.0747
286	SLU 4	0.24	-0.65	41.53	11.9887	-0.014	-0.0788
286	SLU 5	0.24	-0.67	41.17	11.8856	-0.0139	-0.0803
286	SLU 6	0.23	-0.65	42.14	12.1635	-0.0141	-0.0755
286	SLU 7	0.24	-0.67	42.13	12.1626	-0.0141	-0.0796
286	SLU 8	0.22	-0.65	41.79	12.0612	-0.014	-0.0742
286	SLU 9	0.24	-0.67	41.78	12.0602	-0.014	-0.0783
286	SLU 10	0.25	-0.65	45.41	13.111	-0.0145	-0.0814
286	SLU 11	0.23	-0.63	46.38	13.3889	-0.0148	-0.0766
286	SLU 12	0.24	-0.65	46.37	13.3879	-0.0148	-0.0807
286	SLU 13	0.25	-0.67	46.01	13.2849	-0.0147	-0.0822
286	SLU 14	0.23	-0.64	46.99	13.5628	-0.0149	-0.0774
286	SLU 15	0.25	-0.66	46.98	13.5618	-0.015	-0.0815
286	SLU 16	0.23	-0.65	46.64	13.4604	-0.0149	-0.0761
286	SLU 17	0.24	-0.67	46.63	13.4594	-0.0149	-0.0802
286	SLU 18	0.23	-0.62	47.5	13.7123	-0.0148	-0.0754
286	SLU 19	0.24	-0.64	47.49	13.7113	-0.0149	-0.0795
286	SLU 20	0.23	-0.64	48.11	13.8862	-0.015	-0.0762
286	SLU 21	0.24	-0.65	48.1	13.8852	-0.0151	-0.0803
286	SLU 22	0.26	-0.59	44.93	12.9756	-0.0155	-0.0844
286	SLU 23	0.28	-0.62	44.91	12.974	-0.0155	-0.0912
286	SLU 24	0.26	-0.6	45.89	13.2519	-0.0158	-0.0864
286	SLU 25	0.28	-0.62	45.88	13.2509	-0.0158	-0.0905
286	SLU 26	0.28	-0.63	45.52	13.1479	-0.0157	-0.092
286	SLU 27	0.26	-0.61	46.5	13.4258	-0.016	-0.0872
286	SLU 28	0.28	-0.63	46.49	13.4248	-0.016	-0.0913
286	SLU 29	0.26	-0.62	46.14	13.3234	-0.0159	-0.0859
286	SLU 30	0.27	-0.63	46.13	13.3224	-0.0159	-0.09
286	SLU 31	0.28	-0.62	49.76	14.3732	-0.0164	-0.0931
286	SLU 32	0.27	-0.59	50.73	14.6511	-0.0166	-0.0883
286	SLU 33	0.28	-0.61	50.72	14.6501	-0.0166	-0.0924
286	SLU 34	0.28	-0.63	50.36	14.5471	-0.0165	-0.0939
286	SLU 35	0.27	-0.61	51.34	14.825	-0.0168	-0.0891
286	SLU 36	0.28	-0.62	51.33	14.824	-0.0168	-0.0932
286	SLU 37	0.26	-0.61	50.99	14.7226	-0.0167	-0.0878
286	SLU 38	0.28	-0.63	50.98	14.7217	-0.0167	-0.0919
286	SLU 39	0.26	-0.59	51.85	14.9745	-0.0167	-0.0871
286	SLU 40	0.28	-0.6	51.84	14.9735	-0.0167	-0.0912
286	SLU 41	0.26	-0.6	52.46	15.1484	-0.0169	-0.0878
286	SLU 42	0.28	-0.62	52.45	15.1474	-0.0169	-0.0919
286	SLU 43	0.27	-0.83	51.26	14.7946	-0.0171	-0.0905
286	SLU 44	0.3	-0.86	51.24	14.793	-0.0172	-0.0973
286	SLU 45	0.28	-0.84	52.22	15.0709	-0.0174	-0.0925
286	SLU 46	0.29	-0.86	52.21	15.0699	-0.0174	-0.0966
286	SLU 47	0.3	-0.87	51.85	14.9669	-0.0173	-0.0981
286	SLU 48	0.28	-0.85	52.83	15.2448	-0.0176	-0.0933
286	SLU 49	0.3	-0.87	52.82	15.2438	-0.0176	-0.0974
286	SLU 50	0.28	-0.86	52.47	15.1424	-0.0175	-0.092
286	SLU 51	0.29	-0.87	52.46	15.1415	-0.0175	-0.0961
286	SLU 52	0.3	-0.86	56.09	16.1922	-0.018	-0.0992
286	SLU 53	0.28	-0.83	57.06	16.4701	-0.0182	-0.0944
286	SLU 54	0.3	-0.85	57.05	16.4691	-0.0183	-0.0985
286	SLU 55	0.3	-0.87	56.69	16.3661	-0.0182	-0.1
286	SLU 56	0.29	-0.85	57.67	16.644	-0.0184	-0.0952
286	SLU 57	0.3	-0.86	57.66	16.643	-0.0184	-0.0993
286	SLU 58	0.28	-0.85	57.32	16.5417	-0.0183	-0.0939
286	SLU 59	0.3	-0.87	57.31	16.5407	-0.0183	-0.098
286	SLU 60	0.28	-0.83	58.18	16.7935	-0.0183	-0.0932
286	SLU 61	0.29	-0.84	58.17	16.7926	-0.0183	-0.0973
286	SLU 62	0.28	-0.84	58.79	16.9674	-0.0185	-0.094
286	SLU 63	0.3	-0.85	58.78	16.9665	-0.0185	-0.0981
286	SLU 64	0.31	-0.8	55.61	16.0569	-0.0189	-0.1022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
286	SLU 65	0.33	-0.82	55.59	16.0552	-0.019	-0.109
286	SLU 66	0.32	-0.8	56.57	16.3331	-0.0192	-0.1042
286	SLU 67	0.33	-0.82	56.56	16.3321	-0.0193	-0.1083
286	SLU 68	0.33	-0.84	56.2	16.2291	-0.0192	-0.1098
286	SLU 69	0.32	-0.81	57.18	16.507	-0.0194	-0.105
286	SLU 70	0.33	-0.83	57.17	16.506	-0.0194	-0.1091
286	SLU 71	0.31	-0.82	56.83	16.4047	-0.0193	-0.1037
286	SLU 72	0.33	-0.84	56.82	16.4037	-0.0193	-0.1078
286	SLU 73	0.34	-0.82	60.44	17.4545	-0.0198	-0.1109
286	SLU 74	0.32	-0.8	61.41	17.7323	-0.0201	-0.1061
286	SLU 75	0.33	-0.81	61.4	17.7314	-0.0201	-0.1102
286	SLU 76	0.34	-0.83	61.05	17.6284	-0.02	-0.1117
286	SLU 77	0.32	-0.81	62.02	17.9062	-0.0202	-0.1069
286	SLU 78	0.34	-0.82	62.01	17.9053	-0.0203	-0.111
286	SLU 79	0.32	-0.81	61.67	17.8039	-0.0202	-0.1056
286	SLU 80	0.33	-0.83	61.66	17.8029	-0.0202	-0.1097
286	SLU 81	0.32	-0.79	62.53	18.0558	-0.0201	-0.1049
286	SLU 82	0.33	-0.81	62.52	18.0548	-0.0202	-0.109
286	SLU 83	0.32	-0.8	63.14	18.2297	-0.0203	-0.1057
286	SLU 84	0.33	-0.82	63.13	18.2287	-0.0204	-0.1098
286	SLE RA 1	0.23	-0.62	41.82	12.074	-0.0142	-0.076
286	SLE RA 2	0.25	-0.64	41.81	12.0729	-0.0142	-0.0806
286	SLE RA 3	0.23	-0.62	42.46	12.2582	-0.0144	-0.0774
286	SLE RA 4	0.24	-0.64	42.45	12.2575	-0.0144	-0.0801
286	SLE RA 5	0.25	-0.65	42.21	12.1889	-0.0143	-0.0811
286	SLE RA 6	0.24	-0.63	42.87	12.3741	-0.0145	-0.0779
286	SLE RA 7	0.24	-0.64	42.86	12.3735	-0.0145	-0.0806
286	SLE RA 8	0.23	-0.64	42.63	12.3059	-0.0144	-0.077
286	SLE RA 9	0.24	-0.65	42.62	12.3052	-0.0144	-0.0798
286	SLE RA 10	0.25	-0.64	45.04	13.0057	-0.0148	-0.0819
286	SLE RA 11	0.24	-0.62	45.69	13.191	-0.0149	-0.0787
286	SLE RA 12	0.25	-0.63	45.68	13.1904	-0.0149	-0.0814
286	SLE RA 13	0.25	-0.64	45.44	13.1217	-0.0149	-0.0824
286	SLE RA 14	0.24	-0.63	46.1	13.3069	-0.015	-0.0792
286	SLE RA 15	0.25	-0.64	46.09	13.3063	-0.0151	-0.0819
286	SLE RA 16	0.24	-0.63	45.86	13.2387	-0.015	-0.0783
286	SLE RA 17	0.24	-0.64	45.85	13.2381	-0.015	-0.081
286	SLE RA 18	0.23	-0.62	46.43	13.4066	-0.015	-0.0779
286	SLE RA 19	0.24	-0.63	46.43	13.406	-0.015	-0.0806
286	SLE RA 20	0.24	-0.62	46.84	13.5226	-0.0151	-0.0783
286	SLE RA 21	0.24	-0.63	46.83	13.5219	-0.0151	-0.0811
286	SLE FR 1	0.23	-0.62	41.82	12.074	-0.0142	-0.076
286	SLE FR 2	0.23	-0.62	41.82	12.0738	-0.0142	-0.077
286	SLE FR 3	0.23	-0.62	41.98	12.1204	-0.0142	-0.0762
286	SLE FR 4	0.23	-0.62	43.2	12.4736	-0.0144	-0.0775
286	SLE FR 5	0.23	-0.62	43.37	12.5202	-0.0145	-0.0768
286	SLE FR 6	0.23	-0.62	44.13	12.7403	-0.0146	-0.0769
286	SLE QP 1	0.23	-0.62	41.82	12.074	-0.0142	-0.076
286	SLE QP 2	0.23	-0.62	43.21	12.4738	-0.0144	-0.0766
286	SLD 1	4.29	0.34	42.12	12.2148	-0.0033	-1.3191
286	SLD 2	4.69	0.51	42.29	12.2628	-0.0039	-1.44
286	SLD 3	4.2	-0.72	41.53	12.1172	-0.0037	-1.2906
286	SLD 4	4.6	-0.56	41.71	12.1652	-0.0043	-1.4115
286	SLD 5	1.52	1.26	43.74	12.5354	-0.0104	-0.4705
286	SLD 6	1.78	1.37	43.85	12.5673	-0.0107	-0.5508
286	SLD 7	1.21	-2.3	41.78	12.2101	-0.0117	-0.3756
286	SLD 8	1.47	-2.19	41.9	12.2419	-0.0121	-0.4559
286	SLD 9	-1.01	0.96	44.51	12.7057	-0.0167	0.3027
286	SLD 10	-0.75	1.06	44.63	12.7375	-0.0171	0.2224
286	SLD 11	-1.32	-2.61	42.56	12.3803	-0.0181	0.3976
286	SLD 12	-1.05	-2.5	42.67	12.4122	-0.0185	0.3174
286	SLD 13	-4.13	-0.68	44.7	12.7824	-0.0246	1.2584
286	SLD 14	-3.73	-0.51	44.88	12.8304	-0.0251	1.1375
286	SLD 15	-4.22	-1.75	44.12	12.6848	-0.025	1.2869
286	SLD 16	-3.83	-1.58	44.29	12.7328	-0.0255	1.1659
286	SLV 1	9.72	1.6	40.64	11.8655	0.0116	-2.9821
286	SLV 2	10.65	1.98	41.05	11.9773	0.0103	-3.2637
286	SLV 3	9.51	-0.83	39.3	11.6427	0.0106	-2.9162
286	SLV 4	10.44	-0.44	39.72	11.7545	0.0093	-3.1977
286	SLV 5	3.24	3.65	44.38	12.6096	-0.0049	-0.9988
286	SLV 6	3.84	3.9	44.65	12.6824	-0.0057	-1.1823
286	SLV 7	2.53	-4.42	39.94	11.8669	-0.0082	-0.7789
286	SLV 8	3.13	-4.17	40.21	11.9397	-0.009	-0.9623
286	SLV 9	-2.67	2.94	46.2	13.0079	-0.0198	0.8092
286	SLV 10	-2.07	3.19	46.47	13.0807	-0.0206	0.6257
286	SLV 11	-3.38	-5.14	41.76	12.2652	-0.0231	1.0291
286	SLV 12	-2.77	-4.89	42.03	12.338	-0.0239	0.8457
286	SLV 13	-9.97	-0.79	46.69	13.1931	-0.0381	3.0445
286	SLV 14	-9.05	-0.41	47.11	13.305	-0.0394	2.763
286	SLV 15	-10.18	-3.22	45.36	12.9703	-0.0391	3.1105
286	SLV 16	-9.26	-2.84	45.77	13.0821	-0.0404	2.829
286	CRTFP Ux+	0	0	0	0	0	0
286	CRTFP Ux-	0	0	0	0	0	0
286	CRTFP Uy+	0	0	0	0	0	0
286	CRTFP Uy-	0	0	0	0	0	0
287	SLU 1	0.23	-0.71	41.16	11.9206	-0.0241	-0.0746
287	SLU 2	0.25	-0.74	41.15	11.9195	-0.0241	-0.0815
287	SLU 3	0.23	-0.72	42.14	12.2017	-0.0247	-0.0767
287	SLU 4	0.25	-0.74	42.13	12.201	-0.0247	-0.0808
287	SLU 5	0.25	-0.75	41.76	12.0965	-0.0245	-0.0822

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
287	SLU 6	0.24	-0.73	42.75	12.3788	-0.0251	-0.0775
287	SLU 7	0.25	-0.75	42.74	12.3781	-0.0251	-0.0816
287	SLU 8	0.23	-0.74	42.39	12.2747	-0.0248	-0.0762
287	SLU 9	0.24	-0.75	42.39	12.274	-0.0249	-0.0803
287	SLU 10	0.25	-0.74	46.04	13.3357	-0.0265	-0.0833
287	SLU 11	0.24	-0.72	47.03	13.618	-0.027	-0.0785
287	SLU 12	0.25	-0.74	47.02	13.6173	-0.0271	-0.0826
287	SLU 13	0.26	-0.76	46.65	13.5127	-0.0269	-0.0841
287	SLU 14	0.24	-0.74	47.64	13.795	-0.0274	-0.0793
287	SLU 15	0.25	-0.75	47.63	13.7943	-0.0274	-0.0834
287	SLU 16	0.24	-0.74	47.29	13.6909	-0.0272	-0.078
287	SLU 17	0.25	-0.76	47.28	13.6902	-0.0272	-0.0821
287	SLU 18	0.23	-0.72	48.15	13.9438	-0.0275	-0.0772
287	SLU 19	0.25	-0.73	48.14	13.9431	-0.0275	-0.0813
287	SLU 20	0.23	-0.73	48.77	14.1208	-0.0278	-0.078
287	SLU 21	0.25	-0.75	48.76	14.1201	-0.0279	-0.0821
287	SLU 22	0.26	-0.68	45.59	13.2108	-0.0273	-0.0866
287	SLU 23	0.29	-0.71	45.58	13.2097	-0.0273	-0.0935
287	SLU 24	0.27	-0.69	46.57	13.492	-0.0279	-0.0887
287	SLU 25	0.28	-0.71	46.56	13.4913	-0.0279	-0.0928
287	SLU 26	0.29	-0.72	46.2	13.3867	-0.0277	-0.0943
287	SLU 27	0.27	-0.7	47.18	13.669	-0.0282	-0.0895
287	SLU 28	0.29	-0.72	47.17	13.6683	-0.0283	-0.0936
287	SLU 29	0.27	-0.71	46.83	13.5649	-0.028	-0.0882
287	SLU 30	0.28	-0.73	46.82	13.5642	-0.028	-0.0923
287	SLU 31	0.29	-0.72	50.47	14.6259	-0.0297	-0.0953
287	SLU 32	0.27	-0.7	51.46	14.9082	-0.0302	-0.0905
287	SLU 33	0.29	-0.71	51.45	14.9075	-0.0302	-0.0946
287	SLU 34	0.29	-0.73	51.09	14.803	-0.03	-0.0961
287	SLU 35	0.28	-0.71	52.07	15.0852	-0.0306	-0.0913
287	SLU 36	0.29	-0.73	52.07	15.0845	-0.0306	-0.0954
287	SLU 37	0.27	-0.71	51.72	14.9811	-0.0304	-0.09
287	SLU 38	0.29	-0.73	51.71	14.9804	-0.0304	-0.0941
287	SLU 39	0.27	-0.69	52.58	15.234	-0.0306	-0.0892
287	SLU 40	0.28	-0.71	52.57	15.2333	-0.0307	-0.0933
287	SLU 41	0.27	-0.7	53.2	15.411	-0.031	-0.09
287	SLU 42	0.29	-0.72	53.19	15.4104	-0.031	-0.0941
287	SLU 43	0.28	-0.93	51.99	15.0545	-0.0302	-0.0928
287	SLU 44	0.3	-0.96	51.98	15.0533	-0.0303	-0.0997
287	SLU 45	0.29	-0.94	52.97	15.3356	-0.0308	-0.095
287	SLU 46	0.3	-0.96	52.96	15.3349	-0.0308	-0.0991
287	SLU 47	0.31	-0.97	52.59	15.2303	-0.0307	-0.1005
287	SLU 48	0.29	-0.96	53.58	15.5126	-0.0312	-0.0958
287	SLU 49	0.3	-0.97	53.57	15.5119	-0.0312	-0.0999
287	SLU 50	0.29	-0.96	53.22	15.4085	-0.031	-0.0944
287	SLU 51	0.3	-0.98	53.22	15.4078	-0.031	-0.0986
287	SLU 52	0.31	-0.97	56.87	16.4695	-0.0326	-0.1015
287	SLU 53	0.29	-0.95	57.86	16.7518	-0.0332	-0.0968
287	SLU 54	0.31	-0.96	57.85	16.7511	-0.0332	-0.1009
287	SLU 55	0.31	-0.98	57.48	16.6466	-0.033	-0.1023
287	SLU 56	0.29	-0.96	58.47	16.9288	-0.0336	-0.0976
287	SLU 57	0.31	-0.98	58.46	16.9281	-0.0336	-0.1017
287	SLU 58	0.29	-0.97	58.11	16.8247	-0.0333	-0.0963
287	SLU 59	0.3	-0.98	58.11	16.824	-0.0334	-0.1004
287	SLU 60	0.29	-0.94	58.98	17.0776	-0.0336	-0.0954
287	SLU 61	0.3	-0.96	58.97	17.0769	-0.0336	-0.0996
287	SLU 62	0.29	-0.95	59.59	17.2547	-0.034	-0.0962
287	SLU 63	0.3	-0.97	59.59	17.254	-0.034	-0.1004
287	SLU 64	0.32	-0.91	56.42	16.3447	-0.0334	-0.1049
287	SLU 65	0.34	-0.93	56.41	16.3435	-0.0334	-0.1117
287	SLU 66	0.33	-0.91	57.4	16.6258	-0.034	-0.107
287	SLU 67	0.34	-0.93	57.39	16.6251	-0.034	-0.1111
287	SLU 68	0.34	-0.95	57.03	16.5206	-0.0338	-0.1125
287	SLU 69	0.33	-0.93	58.01	16.8028	-0.0344	-0.1078
287	SLU 70	0.34	-0.94	58	16.8021	-0.0344	-0.1119
287	SLU 71	0.32	-0.93	57.66	16.6987	-0.0342	-0.1064
287	SLU 72	0.34	-0.95	57.65	16.698	-0.0342	-0.1106
287	SLU 73	0.35	-0.94	61.3	17.7597	-0.0358	-0.1135
287	SLU 74	0.33	-0.92	62.29	18.042	-0.0364	-0.1088
287	SLU 75	0.34	-0.94	62.28	18.0413	-0.0364	-0.1129
287	SLU 76	0.35	-0.95	61.92	17.9368	-0.0362	-0.1143
287	SLU 77	0.33	-0.93	62.9	18.219	-0.0367	-0.1096
287	SLU 78	0.35	-0.95	62.89	18.2183	-0.0367	-0.1137
287	SLU 79	0.33	-0.94	62.55	18.115	-0.0365	-0.1083
287	SLU 80	0.34	-0.95	62.54	18.1143	-0.0365	-0.1124
287	SLU 81	0.33	-0.91	63.41	18.3678	-0.0368	-0.1074
287	SLU 82	0.34	-0.93	63.4	18.3672	-0.0368	-0.1116
287	SLU 83	0.33	-0.93	64.03	18.5449	-0.0372	-0.1082
287	SLU 84	0.34	-0.94	64.02	18.5442	-0.0372	-0.1124
287	SLE RA 1	0.24	-0.7	42.43	12.2893	-0.025	-0.078
287	SLE RA 2	0.25	-0.72	42.42	12.2885	-0.025	-0.0826
287	SLE RA 3	0.24	-0.71	43.08	12.4767	-0.0254	-0.0794
287	SLE RA 4	0.25	-0.72	43.07	12.4762	-0.0254	-0.0822
287	SLE RA 5	0.25	-0.73	42.83	12.4065	-0.0253	-0.0831
287	SLE RA 6	0.24	-0.72	43.49	12.5947	-0.0256	-0.08
287	SLE RA 7	0.25	-0.73	43.48	12.5942	-0.0257	-0.0827
287	SLE RA 8	0.24	-0.72	43.25	12.5253	-0.0255	-0.0791
287	SLE RA 9	0.25	-0.73	43.24	12.5248	-0.0255	-0.0818
287	SLE RA 10	0.26	-0.72	45.68	13.2326	-0.0266	-0.0838
287	SLE RA 11	0.24	-0.71	46.34	13.4208	-0.027	-0.0806

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
287	SLE RA 12	0.25	-0.72	46.33	13.4204	-0.027	-0.0834
287	SLE RA 13	0.26	-0.73	46.09	13.3507	-0.0268	-0.0843
287	SLE RA 14	0.25	-0.72	46.75	13.5388	-0.0272	-0.0812
287	SLE RA 15	0.25	-0.73	46.74	13.5384	-0.0272	-0.0839
287	SLE RA 16	0.24	-0.72	46.51	13.4694	-0.0271	-0.0803
287	SLE RA 17	0.25	-0.73	46.5	13.469	-0.0271	-0.083
287	SLE RA 18	0.24	-0.71	47.09	13.638	-0.0272	-0.0797
287	SLE RA 19	0.25	-0.72	47.08	13.6376	-0.0273	-0.0825
287	SLE RA 20	0.24	-0.72	47.5	13.7561	-0.0275	-0.0803
287	SLE RA 21	0.25	-0.73	47.49	13.7556	-0.0275	-0.083
287	SLE FR 1	0.24	-0.7	42.43	12.2893	-0.025	-0.078
287	SLE FR 2	0.24	-0.71	42.43	12.2891	-0.025	-0.0789
287	SLE FR 3	0.24	-0.71	42.59	12.3365	-0.0251	-0.0782
287	SLE FR 4	0.24	-0.71	43.82	12.6937	-0.0257	-0.0795
287	SLE FR 5	0.24	-0.71	43.99	12.7411	-0.0258	-0.0787
287	SLE FR 6	0.24	-0.71	44.76	12.9637	-0.0261	-0.0789
287	SLE QP 1	0.24	-0.7	42.43	12.2893	-0.025	-0.078
287	SLE QP 2	0.24	-0.7	43.83	12.6939	-0.0257	-0.0785
287	SLD 1	4.29	0.3	42.32	12.3129	-0.0136	-1.3233
287	SLD 2	4.69	0.48	42.52	12.3675	-0.0142	-1.4446
287	SLD 3	4.2	-0.76	41.73	12.2153	-0.0132	-1.2949
287	SLD 4	4.6	-0.58	41.93	12.2699	-0.0138	-1.4162
287	SLD 5	1.52	1.17	44.23	12.7176	-0.0226	-0.473
287	SLD 6	1.78	1.29	44.36	12.7539	-0.023	-0.5535
287	SLD 7	1.22	-2.36	42.27	12.3924	-0.0212	-0.3783
287	SLD 8	1.48	-2.24	42.4	12.4287	-0.0216	-0.4588
287	SLD 9	-1	0.83	45.25	12.9591	-0.0298	0.3018
287	SLD 10	-0.74	0.95	45.38	12.9953	-0.0302	0.2212
287	SLD 11	-1.31	-2.7	43.29	12.6339	-0.0284	0.3964
287	SLD 12	-1.04	-2.57	43.42	12.6702	-0.0288	0.3159
287	SLD 13	-4.12	-0.83	45.72	13.1178	-0.0376	1.2592
287	SLD 14	-3.72	-0.65	45.92	13.1724	-0.0382	1.1378
287	SLD 15	-4.21	-1.89	45.14	13.0203	-0.0372	1.2876
287	SLD 16	-3.81	-1.7	45.33	13.0749	-0.0378	1.1662
287	SLV 1	9.72	1.6	40.28	11.8003	0.0026	-2.9893
287	SLV 2	10.64	2.03	40.74	11.9274	0.0012	-3.2718
287	SLV 3	9.5	-0.8	38.94	11.5774	0.0036	-2.9235
287	SLV 4	10.43	-0.37	39.41	11.7045	0.0022	-3.206
287	SLV 5	3.24	3.54	44.7	12.7416	-0.0185	-1.002
287	SLV 6	3.84	3.82	45	12.8244	-0.0194	-1.186
287	SLV 7	2.53	-4.44	40.26	11.9985	-0.0151	-0.7825
287	SLV 8	3.14	-4.16	40.56	12.0813	-0.016	-0.9666
287	SLV 9	-2.66	2.75	47.09	13.3065	-0.0353	0.8095
287	SLV 10	-2.06	3.03	47.39	13.3893	-0.0363	0.6254
287	SLV 11	-3.37	-5.23	42.65	12.5634	-0.0319	1.029
287	SLV 12	-2.76	-4.95	42.95	12.6462	-0.0329	0.8449
287	SLV 13	-9.95	-1.04	48.24	13.6833	-0.0535	3.0489
287	SLV 14	-9.03	-0.61	48.71	13.8104	-0.055	2.7664
287	SLV 15	-10.17	-3.43	46.91	13.4604	-0.0525	3.1148
287	SLV 16	-9.24	-3.01	47.37	13.5875	-0.054	2.8322
287	CRTFP Ux+	0	0	0	0	0	0
287	CRTFP Ux-	0	0	0	0	0	0
287	CRTFP Uy+	0	0	0	0	0	0
287	CRTFP Uy-	0	0	0	0	0	0
288	SLU 1	0.2	-0.66	36.08	10.2993	0.8955	-0.0464
288	SLU 2	0.22	-0.69	36.07	10.2986	0.8952	-0.0517
288	SLU 3	0.21	-0.67	36.93	10.5426	0.9167	-0.048
288	SLU 4	0.22	-0.69	36.93	10.5422	0.9165	-0.0512
288	SLU 5	0.22	-0.7	36.61	10.4518	0.9086	-0.052
288	SLU 6	0.21	-0.69	37.47	10.6958	0.93	-0.0483
288	SLU 7	0.22	-0.7	37.47	10.6954	0.9299	-0.0515
288	SLU 8	0.2	-0.69	37.16	10.6058	0.9223	-0.0471
288	SLU 9	0.22	-0.7	37.15	10.6053	0.9221	-0.0503
288	SLU 10	0.22	-0.7	40.34	11.5185	1.0015	-0.0527
288	SLU 11	0.21	-0.69	41.21	11.7625	1.0229	-0.049
288	SLU 12	0.22	-0.7	41.2	11.7621	1.0228	-0.0522
288	SLU 13	0.22	-0.71	40.88	11.6717	1.0149	-0.0531
288	SLU 14	0.21	-0.7	41.75	11.9158	1.0363	-0.0494
288	SLU 15	0.22	-0.71	41.74	11.9153	1.0362	-0.0525
288	SLU 16	0.21	-0.7	41.43	11.8257	1.0286	-0.0482
288	SLU 17	0.22	-0.71	41.43	11.8253	1.0284	-0.0513
288	SLU 18	0.2	-0.68	42.19	12.042	1.0473	-0.0479
288	SLU 19	0.22	-0.69	42.18	12.0416	1.0472	-0.051
288	SLU 20	0.21	-0.69	42.73	12.1953	1.0607	-0.0482
288	SLU 21	0.22	-0.71	42.72	12.1949	1.0605	-0.0514
288	SLU 22	0.23	-0.65	39.98	11.4199	0.992	-0.0571
288	SLU 23	0.25	-0.67	39.97	11.4191	0.9917	-0.0624
288	SLU 24	0.24	-0.66	40.84	11.6632	1.0132	-0.0587
288	SLU 25	0.25	-0.67	40.83	11.6627	1.013	-0.0619
288	SLU 26	0.25	-0.68	40.51	11.5724	1.0051	-0.0628
288	SLU 27	0.24	-0.67	41.38	11.8164	1.0266	-0.0591
288	SLU 28	0.25	-0.68	41.37	11.816	1.0264	-0.0622
288	SLU 29	0.24	-0.67	41.06	11.7263	1.0188	-0.0578
288	SLU 30	0.25	-0.69	41.06	11.7259	1.0186	-0.061
288	SLU 31	0.26	-0.68	44.24	12.6391	1.098	-0.0634
288	SLU 32	0.24	-0.67	45.11	12.8831	1.1194	-0.0597
288	SLU 33	0.25	-0.68	45.1	12.8827	1.1193	-0.0629
288	SLU 34	0.26	-0.69	44.79	12.7923	1.1114	-0.0638
288	SLU 35	0.24	-0.68	45.65	13.0363	1.1328	-0.0601
288	SLU 36	0.26	-0.69	45.64	13.0359	1.1327	-0.0633

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
288	SLU 37	0.24	-0.68	45.34	12.9463	1.1251	-0.0589
288	SLU 38	0.25	-0.7	45.33	12.9458	1.1249	-0.062
288	SLU 39	0.24	-0.66	46.09	13.1626	1.1438	-0.0586
288	SLU 40	0.25	-0.68	46.08	13.1622	1.1437	-0.0618
288	SLU 41	0.24	-0.68	46.63	13.3158	1.1572	-0.0589
288	SLU 42	0.25	-0.69	46.62	13.3154	1.1571	-0.0621
288	SLU 43	0.25	-0.87	45.56	13.0049	1.1311	-0.0566
288	SLU 44	0.27	-0.89	45.55	13.0042	1.1308	-0.0619
288	SLU 45	0.25	-0.88	46.42	13.2482	1.1522	-0.0582
288	SLU 46	0.27	-0.89	46.41	13.2478	1.152	-0.0614
288	SLU 47	0.27	-0.9	46.09	13.1574	1.1442	-0.0623
288	SLU 48	0.26	-0.89	46.96	13.4014	1.1656	-0.0586
288	SLU 49	0.27	-0.9	46.95	13.401	1.1654	-0.0618
288	SLU 50	0.25	-0.89	46.65	13.3114	1.1578	-0.0574
288	SLU 51	0.26	-0.91	46.64	13.3109	1.1577	-0.0605
288	SLU 52	0.27	-0.9	49.83	14.2241	1.2371	-0.063
288	SLU 53	0.26	-0.89	50.69	14.4681	1.2585	-0.0593
288	SLU 54	0.27	-0.9	50.69	14.4677	1.2583	-0.0624
288	SLU 55	0.27	-0.92	50.37	14.3773	1.2504	-0.0633
288	SLU 56	0.26	-0.9	51.23	14.6214	1.2719	-0.0596
288	SLU 57	0.27	-0.92	51.23	14.6209	1.2717	-0.0628
288	SLU 58	0.26	-0.91	50.92	14.5313	1.2641	-0.0584
288	SLU 59	0.27	-0.92	50.91	14.5309	1.264	-0.0616
288	SLU 60	0.25	-0.89	51.67	14.7476	1.2829	-0.0581
288	SLU 61	0.26	-0.9	51.66	14.7472	1.2827	-0.0613
288	SLU 62	0.26	-0.9	52.21	14.9009	1.2963	-0.0585
288	SLU 63	0.27	-0.91	52.2	14.9004	1.2961	-0.0616
288	SLU 64	0.28	-0.85	49.47	14.1254	1.2276	-0.0674
288	SLU 65	0.3	-0.88	49.45	14.1247	1.2273	-0.0726
288	SLU 66	0.29	-0.86	50.32	14.3688	1.2487	-0.0689
288	SLU 67	0.3	-0.88	50.31	14.3683	1.2486	-0.0721
288	SLU 68	0.3	-0.89	50	14.278	1.2407	-0.073
288	SLU 69	0.29	-0.88	50.86	14.522	1.2621	-0.0693
288	SLU 70	0.3	-0.89	50.85	14.5216	1.2619	-0.0725
288	SLU 71	0.29	-0.88	50.55	14.4319	1.2543	-0.0681
288	SLU 72	0.3	-0.89	50.54	14.4315	1.2542	-0.0713
288	SLU 73	0.3	-0.89	53.73	15.3447	1.3336	-0.0737
288	SLU 74	0.29	-0.87	54.6	15.5887	1.355	-0.07
288	SLU 75	0.3	-0.89	54.59	15.5883	1.3548	-0.0731
288	SLU 76	0.31	-0.9	54.27	15.4979	1.347	-0.074
288	SLU 77	0.29	-0.89	55.14	15.7419	1.3684	-0.0703
288	SLU 78	0.3	-0.9	55.13	15.7415	1.3682	-0.0735
288	SLU 79	0.29	-0.89	54.82	15.6518	1.3606	-0.0691
288	SLU 80	0.3	-0.9	54.82	15.6514	1.3605	-0.0723
288	SLU 81	0.29	-0.87	55.57	15.8682	1.3794	-0.0688
288	SLU 82	0.3	-0.88	55.57	15.8678	1.3792	-0.072
288	SLU 83	0.29	-0.88	56.11	16.0214	1.3928	-0.0692
288	SLU 84	0.3	-0.9	56.11	16.021	1.3926	-0.0724
288	SLE RA 1	0.21	-0.66	37.19	10.6195	0.9231	-0.0495
288	SLE RA 2	0.22	-0.67	37.19	10.619	0.9229	-0.053
288	SLE RA 3	0.21	-0.67	37.76	10.7817	0.9372	-0.0505
288	SLE RA 4	0.22	-0.67	37.76	10.7814	0.9371	-0.0526
288	SLE RA 5	0.22	-0.68	37.55	10.7211	0.9318	-0.0532
288	SLE RA 6	0.21	-0.67	38.12	10.8838	0.9461	-0.0508
288	SLE RA 7	0.22	-0.68	38.12	10.8835	0.946	-0.0529
288	SLE RA 8	0.21	-0.68	37.91	10.8238	0.9409	-0.0499
288	SLE RA 9	0.22	-0.69	37.91	10.8235	0.9408	-0.0521
288	SLE RA 10	0.22	-0.68	40.04	11.4323	0.9937	-0.0537
288	SLE RA 11	0.22	-0.67	40.61	11.5949	1.008	-0.0512
288	SLE RA 12	0.22	-0.68	40.61	11.5947	1.0079	-0.0533
288	SLE RA 13	0.23	-0.69	40.4	11.5344	1.0027	-0.0539
288	SLE RA 14	0.22	-0.68	40.97	11.6971	1.017	-0.0514
288	SLE RA 15	0.22	-0.69	40.97	11.6968	1.0168	-0.0536
288	SLE RA 16	0.21	-0.68	40.76	11.6371	1.0118	-0.0506
288	SLE RA 17	0.22	-0.69	40.76	11.6368	1.0117	-0.0527
288	SLE RA 18	0.21	-0.67	41.27	11.7813	1.0243	-0.0504
288	SLE RA 19	0.22	-0.68	41.26	11.781	1.0242	-0.0526
288	SLE RA 20	0.21	-0.68	41.63	11.8834	1.0332	-0.0507
288	SLE RA 21	0.22	-0.69	41.62	11.8832	1.0331	-0.0528
288	SLE FR 1	0.21	-0.66	37.19	10.6195	0.9231	-0.0495
288	SLE FR 2	0.21	-0.66	37.19	10.6194	0.923	-0.0502
288	SLE FR 3	0.21	-0.66	37.34	10.6603	0.9266	-0.0496
288	SLE FR 4	0.21	-0.67	38.41	10.9679	0.9534	-0.0505
288	SLE FR 5	0.21	-0.67	38.56	11.0089	0.957	-0.0499
288	SLE FR 6	0.21	-0.67	39.23	11.2004	0.9737	-0.0499
288	SLE QP 1	0.21	-0.66	37.19	10.6195	0.9231	-0.0495
288	SLE QP 2	0.21	-0.66	38.41	10.968	0.9534	-0.0498
288	SLD 1	3.69	0.22	36.75	10.5394	0.9198	-1.1248
288	SLD 2	4.03	0.39	36.94	10.5914	0.9241	-1.2323
288	SLD 3	3.61	-0.68	36.23	10.4531	0.9076	-1.0822
288	SLD 4	3.95	-0.51	36.42	10.5051	0.912	-1.1897
288	SLD 5	1.31	0.93	38.67	10.9609	0.961	-0.4174
288	SLD 6	1.54	1.05	38.8	10.9954	0.9639	-0.4887
288	SLD 7	1.05	-2.06	36.94	10.6731	0.9205	-0.2753
288	SLD 8	1.28	-1.95	37.06	10.7076	0.9234	-0.3466
288	SLD 9	-0.86	0.62	39.77	11.2284	0.9835	0.2471
288	SLD 10	-0.63	0.74	39.89	11.2629	0.9864	0.1758
288	SLD 11	-1.12	-2.37	38.03	10.9406	0.943	0.3892
288	SLD 12	-0.89	-2.26	38.16	10.9751	0.9459	0.3179
288	SLD 13	-3.53	-0.82	40.41	11.4309	0.9949	1.0902

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
288	SLD 14	-3.19	-0.64	40.6	11.4829	0.9993	0.9827
288	SLD 15	-3.61	-1.71	39.89	11.3446	0.9827	1.1328
288	SLD 16	-3.27	-1.54	40.08	11.3966	0.9871	1.0253
288	SLV 1	8.34	1.36	34.5	9.9633	0.8743	-2.5628
288	SLV 2	9.14	1.76	34.94	10.0844	0.8845	-2.8131
288	SLV 3	8.16	-0.67	33.32	9.766	0.8467	-2.4655
288	SLV 4	8.96	-0.27	33.76	9.8871	0.8568	-2.7158
288	SLV 5	2.78	2.96	38.96	10.9445	0.9698	-0.9073
288	SLV 6	3.3	3.22	39.24	11.0234	0.9764	-1.0704
288	SLV 7	2.18	-3.82	35.02	10.2869	0.8777	-0.5828
288	SLV 8	2.7	-3.56	35.3	10.3658	0.8844	-0.7459
288	SLV 9	-2.28	2.24	41.53	11.5702	1.0225	0.6464
288	SLV 10	-1.76	2.5	41.81	11.6491	1.0291	0.4833
288	SLV 11	-2.88	-4.55	37.59	10.9126	0.9305	0.9709
288	SLV 12	-2.36	-4.29	37.87	10.9915	0.9371	0.8078
288	SLV 13	-8.54	-1.05	43.07	12.0489	1.05	2.6163
288	SLV 14	-7.74	-0.65	43.51	12.17	1.0602	2.366
288	SLV 15	-8.72	-3.09	41.89	11.8516	1.0224	2.7136
288	SLV 16	-7.92	-2.69	42.33	11.9727	1.0326	2.4633
288	CRTFP Ux+	0	0	0	0	0	0
288	CRTFP Ux-	0	0	0	0	0	0
288	CRTFP Uy+	0	0	0	0	0	0
288	CRTFP Uy-	0	0	0	0	0	0
289	SLU 1	0.14	-0.46	24.62	6.7393	0.5642	-0.0296
289	SLU 2	0.15	-0.48	24.61	6.7389	0.564	-0.0331
289	SLU 3	0.14	-0.47	25.2	6.8988	0.5775	-0.0306
289	SLU 4	0.15	-0.48	25.19	6.8986	0.5774	-0.0327
289	SLU 5	0.15	-0.49	24.98	6.8394	0.5724	-0.0333
289	SLU 6	0.14	-0.48	25.57	6.9993	0.586	-0.0309
289	SLU 7	0.15	-0.49	25.56	6.9991	0.5859	-0.033
289	SLU 8	0.14	-0.48	25.35	6.9402	0.5811	-0.0301
289	SLU 9	0.15	-0.49	25.35	6.94	0.581	-0.0322
289	SLU 10	0.15	-0.49	27.52	7.5362	0.6308	-0.0335
289	SLU 11	0.14	-0.48	28.11	7.6961	0.6443	-0.0311
289	SLU 12	0.15	-0.49	28.11	7.6959	0.6442	-0.0332
289	SLU 13	0.15	-0.5	27.89	7.6366	0.6392	-0.0338
289	SLU 14	0.14	-0.49	28.48	7.7966	0.6528	-0.0313
289	SLU 15	0.15	-0.5	28.48	7.7964	0.6527	-0.0334
289	SLU 16	0.14	-0.49	28.27	7.7375	0.6479	-0.0305
289	SLU 17	0.15	-0.5	28.26	7.7373	0.6478	-0.0326
289	SLU 18	0.14	-0.48	28.78	7.8782	0.6596	-0.0303
289	SLU 19	0.15	-0.49	28.77	7.878	0.6595	-0.0323
289	SLU 20	0.14	-0.49	29.15	7.9787	0.668	-0.0305
289	SLU 21	0.15	-0.49	29.14	7.9785	0.6679	-0.0326
289	SLU 22	0.16	-0.45	27.29	7.4757	0.6253	-0.0365
289	SLU 23	0.17	-0.47	27.28	7.4753	0.6252	-0.0399
289	SLU 24	0.16	-0.46	27.87	7.6353	0.6387	-0.0375
289	SLU 25	0.17	-0.47	27.87	7.635	0.6386	-0.0396
289	SLU 26	0.17	-0.48	27.65	7.5758	0.6336	-0.0402
289	SLU 27	0.16	-0.47	28.24	7.7357	0.6472	-0.0377
289	SLU 28	0.17	-0.48	28.24	7.7355	0.6471	-0.0398
289	SLU 29	0.16	-0.47	28.03	7.6766	0.6423	-0.0369
289	SLU 30	0.17	-0.48	28.02	7.6764	0.6422	-0.039
289	SLU 31	0.17	-0.48	30.19	8.2726	0.692	-0.0404
289	SLU 32	0.16	-0.47	30.79	8.4325	0.7055	-0.0379
289	SLU 33	0.17	-0.48	30.78	8.4323	0.7054	-0.04
289	SLU 34	0.17	-0.49	30.56	8.3731	0.7004	-0.0406
289	SLU 35	0.17	-0.48	31.16	8.533	0.714	-0.0382
289	SLU 36	0.17	-0.49	31.15	8.5328	0.7139	-0.0402
289	SLU 37	0.16	-0.48	30.94	8.4739	0.7091	-0.0374
289	SLU 38	0.17	-0.49	30.94	8.4737	0.709	-0.0395
289	SLU 39	0.16	-0.47	31.45	8.6147	0.7208	-0.0371
289	SLU 40	0.17	-0.48	31.45	8.6144	0.7207	-0.0392
289	SLU 41	0.16	-0.48	31.82	8.7151	0.7292	-0.0374
289	SLU 42	0.17	-0.49	31.82	8.7149	0.7291	-0.0394
289	SLU 43	0.17	-0.6	31.08	8.5086	0.7124	-0.0362
289	SLU 44	0.18	-0.62	31.08	8.5082	0.7123	-0.0396
289	SLU 45	0.17	-0.61	31.67	8.6681	0.7258	-0.0372
289	SLU 46	0.18	-0.62	31.66	8.6679	0.7257	-0.0393
289	SLU 47	0.18	-0.63	31.45	8.6087	0.7207	-0.0399
289	SLU 48	0.17	-0.62	32.04	8.7686	0.7342	-0.0374
289	SLU 49	0.18	-0.63	32.03	8.7684	0.7341	-0.0395
289	SLU 50	0.17	-0.62	31.82	8.7095	0.7293	-0.0366
289	SLU 51	0.18	-0.63	31.82	8.7093	0.7292	-0.0387
289	SLU 52	0.18	-0.63	33.99	9.3055	0.7791	-0.0401
289	SLU 53	0.17	-0.62	34.58	9.4654	0.7926	-0.0376
289	SLU 54	0.18	-0.63	34.58	9.4652	0.7925	-0.0397
289	SLU 55	0.19	-0.64	34.36	9.4059	0.7875	-0.0403
289	SLU 56	0.18	-0.63	34.95	9.5659	0.801	-0.0379
289	SLU 57	0.18	-0.64	34.95	9.5657	0.8009	-0.0399
289	SLU 58	0.17	-0.63	34.74	9.5068	0.7961	-0.0371
289	SLU 59	0.18	-0.64	34.73	9.5066	0.796	-0.0392
289	SLU 60	0.17	-0.62	35.25	9.6475	0.8078	-0.0368
289	SLU 61	0.18	-0.63	35.24	9.6473	0.8077	-0.0389
289	SLU 62	0.17	-0.63	35.62	9.748	0.8163	-0.037
289	SLU 63	0.18	-0.64	35.61	9.7478	0.8162	-0.0391
289	SLU 64	0.19	-0.6	33.76	9.245	0.7736	-0.043
289	SLU 65	0.2	-0.61	33.75	9.2446	0.7734	-0.0465
289	SLU 66	0.2	-0.6	34.34	9.4046	0.787	-0.044
289	SLU 67	0.2	-0.61	34.34	9.4043	0.7869	-0.0461

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
289	SLU 68	0.21	-0.62	34.12	9.3451	0.7819	-0.0467
289	SLU 69	0.2	-0.61	34.71	9.505	0.7954	-0.0443
289	SLU 70	0.2	-0.62	34.71	9.5048	0.7953	-0.0463
289	SLU 71	0.19	-0.61	34.5	9.4459	0.7905	-0.0435
289	SLU 72	0.2	-0.62	34.49	9.4457	0.7904	-0.0456
289	SLU 73	0.21	-0.62	36.66	10.0419	0.8402	-0.0469
289	SLU 74	0.2	-0.61	37.25	10.2018	0.8538	-0.0445
289	SLU 75	0.21	-0.62	37.25	10.2016	0.8537	-0.0466
289	SLU 76	0.21	-0.63	37.03	10.1424	0.8487	-0.0472
289	SLU 77	0.2	-0.62	37.62	10.3023	0.8622	-0.0447
289	SLU 78	0.21	-0.63	37.62	10.3021	0.8621	-0.0468
289	SLU 79	0.2	-0.62	37.41	10.2432	0.8573	-0.0439
289	SLU 80	0.2	-0.63	37.4	10.243	0.8572	-0.046
289	SLU 81	0.19	-0.61	37.92	10.384	0.869	-0.0437
289	SLU 82	0.2	-0.62	37.91	10.3837	0.8689	-0.0457
289	SLU 83	0.2	-0.62	38.29	10.4844	0.8775	-0.0439
289	SLU 84	0.2	-0.63	38.28	10.4842	0.8774	-0.046
289	SLE RA 1	0.14	-0.46	25.38	6.9497	0.5816	-0.0316
289	SLE RA 2	0.15	-0.47	25.37	6.9494	0.5815	-0.0339
289	SLE RA 3	0.14	-0.46	25.77	7.0561	0.5905	-0.0323
289	SLE RA 4	0.15	-0.47	25.77	7.0559	0.5905	-0.0336
289	SLE RA 5	0.15	-0.48	25.62	7.0164	0.5872	-0.0341
289	SLE RA 6	0.15	-0.47	26.01	7.123	0.5962	-0.0324
289	SLE RA 7	0.15	-0.48	26.01	7.1229	0.5961	-0.0338
289	SLE RA 8	0.14	-0.47	25.87	7.0837	0.5929	-0.0319
289	SLE RA 9	0.15	-0.48	25.87	7.0835	0.5928	-0.0333
289	SLE RA 10	0.15	-0.48	27.32	7.4809	0.6261	-0.0342
289	SLE RA 11	0.15	-0.47	27.71	7.5876	0.6351	-0.0326
289	SLE RA 12	0.15	-0.48	27.71	7.5874	0.635	-0.0339
289	SLE RA 13	0.15	-0.48	27.56	7.5479	0.6317	-0.0343
289	SLE RA 14	0.15	-0.48	27.96	7.6546	0.6407	-0.0327
289	SLE RA 15	0.15	-0.48	27.95	7.6544	0.6406	-0.0341
289	SLE RA 16	0.15	-0.48	27.81	7.6152	0.6374	-0.0322
289	SLE RA 17	0.15	-0.48	27.81	7.615	0.6374	-0.0336
289	SLE RA 18	0.14	-0.47	28.15	7.709	0.6453	-0.032
289	SLE RA 19	0.15	-0.48	28.15	7.7088	0.6452	-0.0334
289	SLE RA 20	0.15	-0.48	28.4	7.776	0.6509	-0.0322
289	SLE RA 21	0.15	-0.48	28.4	7.7758	0.6508	-0.0336
289	SLE FR 1	0.14	-0.46	25.38	6.9497	0.5816	-0.0316
289	SLE FR 2	0.14	-0.46	25.38	6.9496	0.5816	-0.0321
289	SLE FR 3	0.14	-0.46	25.48	6.9765	0.5839	-0.0317
289	SLE FR 4	0.14	-0.46	26.21	7.1774	0.6007	-0.0322
289	SLE FR 5	0.14	-0.47	26.31	7.2043	0.603	-0.0318
289	SLE FR 6	0.14	-0.46	26.77	7.3293	0.6134	-0.0318
289	SLE QP 1	0.14	-0.46	25.38	6.9497	0.5816	-0.0316
289	SLE QP 2	0.14	-0.46	26.21	7.1775	0.6007	-0.0317
289	SLD 1	2.47	0.13	24.89	6.8462	0.5729	-0.7245
289	SLD 2	2.7	0.25	25.03	6.8828	0.5759	-0.7941
289	SLD 3	2.42	-0.47	24.53	6.7873	0.565	-0.6979
289	SLD 4	2.65	-0.35	24.67	6.8239	0.5681	-0.7674
289	SLD 5	0.88	0.6	26.35	7.1608	0.6037	-0.2674
289	SLD 6	1.03	0.68	26.44	7.1851	0.6057	-0.3135
289	SLD 7	0.7	-1.39	25.13	6.9644	0.5776	-0.1785
289	SLD 8	0.86	-1.31	25.22	6.9887	0.5796	-0.2246
289	SLD 9	-0.57	0.39	27.21	7.3663	0.6219	0.1612
289	SLD 10	-0.42	0.47	27.3	7.3905	0.6239	0.115
289	SLD 11	-0.75	-1.61	25.99	7.1699	0.5957	0.2501
289	SLD 12	-0.59	-1.53	26.08	7.1941	0.5977	0.2039
289	SLD 13	-2.36	-0.58	27.76	7.5311	0.6334	0.704
289	SLD 14	-2.13	-0.46	27.89	7.5676	0.6364	0.6344
289	SLD 15	-2.42	-1.18	27.39	7.4722	0.6255	0.7306
289	SLD 16	-2.19	-1.06	27.53	7.5087	0.6286	0.6611
289	SLV 1	5.59	0.9	23.12	6.4011	0.5353	-1.6513
289	SLV 2	6.12	1.18	23.44	6.4863	0.5424	-1.8132
289	SLV 3	5.47	-0.46	22.29	6.2666	0.5175	-1.5903
289	SLV 4	6	-0.17	22.61	6.3517	0.5246	-1.7523
289	SLV 5	1.87	1.95	26.49	7.1336	0.6069	-0.5816
289	SLV 6	2.22	2.14	26.7	7.1891	0.6115	-0.6871
289	SLV 7	1.46	-2.57	23.72	6.6852	0.5475	-0.3784
289	SLV 8	1.81	-2.38	23.93	6.7407	0.5521	-0.4839
289	SLV 9	-1.53	1.46	28.5	7.6142	0.6493	0.4205
289	SLV 10	-1.18	1.64	28.7	7.6697	0.654	0.315
289	SLV 11	-1.93	-3.06	25.73	7.1659	0.5899	0.6236
289	SLV 12	-1.58	-2.88	25.94	7.2213	0.5945	0.5181
289	SLV 13	-5.72	-0.75	29.81	8.0032	0.6768	1.6888
289	SLV 14	-5.18	-0.47	30.13	8.0884	0.6839	1.5269
289	SLV 15	-5.84	-2.11	28.98	7.8687	0.659	1.7498
289	SLV 16	-5.3	-1.83	29.3	7.9538	0.6661	1.5878
289	CRTFP Ux+	0	0	0	0	0	0
289	CRTFP Ux-	0	0	0	0	0	0
289	CRTFP Uy+	0	0	0	0	0	0
289	CRTFP Uy-	0	0	0	0	0	0
290	SLU 1	0.25	-0.83	44.47	13.9807	-1.0777	-0.1019
290	SLU 2	0.27	-0.85	44.46	13.9799	-1.0774	-0.1103
290	SLU 3	0.26	-0.84	45.53	14.3128	-1.1034	-0.1047
290	SLU 4	0.27	-0.85	45.52	14.3123	-1.1033	-0.1097
290	SLU 5	0.27	-0.87	45.13	14.1889	-1.0937	-0.1116
290	SLU 6	0.26	-0.86	46.2	14.5218	-1.1197	-0.106
290	SLU 7	0.27	-0.87	46.19	14.5213	-1.1196	-0.111
290	SLU 8	0.25	-0.86	45.81	14.3987	-1.1103	-0.1046

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLU 9	0.27	-0.87	45.8	14.3983	-1.1101	-0.1096
290	SLU 10	0.28	-0.87	49.72	15.6323	-1.2047	-0.1119
290	SLU 11	0.26	-0.86	50.79	15.9652	-1.2308	-0.1063
290	SLU 12	0.27	-0.87	50.78	15.9647	-1.2306	-0.1113
290	SLU 13	0.28	-0.89	50.39	15.8413	-1.221	-0.1132
290	SLU 14	0.26	-0.87	51.46	16.1742	-1.2471	-0.1076
290	SLU 15	0.28	-0.89	51.45	16.1737	-1.2469	-0.1126
290	SLU 16	0.26	-0.88	51.07	16.0511	-1.2376	-0.1062
290	SLU 17	0.27	-0.89	51.06	16.0506	-1.2374	-0.1112
290	SLU 18	0.25	-0.85	51.99	16.3413	-1.2596	-0.1043
290	SLU 19	0.27	-0.87	51.98	16.3408	-1.2594	-0.1093
290	SLU 20	0.26	-0.87	52.66	16.5503	-1.2759	-0.1056
290	SLU 21	0.27	-0.88	52.65	16.5498	-1.2757	-0.1106
290	SLU 22	0.29	-0.81	49.33	15.5161	-1.1964	-0.1154
290	SLU 23	0.31	-0.84	49.31	15.5153	-1.1961	-0.1238
290	SLU 24	0.3	-0.83	50.38	15.8482	-1.2222	-0.1182
290	SLU 25	0.31	-0.84	50.38	15.8477	-1.222	-0.1232
290	SLU 26	0.32	-0.86	49.98	15.7243	-1.2124	-0.1251
290	SLU 27	0.3	-0.84	51.05	16.0572	-1.2385	-0.1195
290	SLU 28	0.31	-0.86	51.05	16.0567	-1.2383	-0.1245
290	SLU 29	0.29	-0.85	50.67	15.9341	-1.229	-0.1181
290	SLU 30	0.31	-0.86	50.66	15.9336	-1.2288	-0.1231
290	SLU 31	0.32	-0.86	54.57	17.1677	-1.3235	-0.1254
290	SLU 32	0.3	-0.85	55.65	17.5006	-1.3496	-0.1198
290	SLU 33	0.31	-0.86	55.64	17.5001	-1.3494	-0.1248
290	SLU 34	0.32	-0.87	55.24	17.3767	-1.3398	-0.1267
290	SLU 35	0.3	-0.86	56.31	17.7096	-1.3658	-0.1211
290	SLU 36	0.32	-0.88	56.31	17.7091	-1.3657	-0.1261
290	SLU 37	0.3	-0.87	55.93	17.5865	-1.3564	-0.1197
290	SLU 38	0.31	-0.88	55.92	17.586	-1.3562	-0.1247
290	SLU 39	0.29	-0.84	56.84	17.8767	-1.3784	-0.1178
290	SLU 40	0.31	-0.86	56.83	17.8762	-1.3782	-0.1228
290	SLU 41	0.3	-0.86	57.51	18.0857	-1.3947	-0.1191
290	SLU 42	0.31	-0.87	57.5	18.0852	-1.3945	-0.1241
290	SLU 43	0.31	-1.08	56.15	17.6485	-1.3603	-0.1279
290	SLU 44	0.33	-1.1	56.14	17.6477	-1.36	-0.1362
290	SLU 45	0.32	-1.09	57.21	17.9806	-1.386	-0.1306
290	SLU 46	0.33	-1.11	57.2	17.9801	-1.3859	-0.1356
290	SLU 47	0.33	-1.12	56.8	17.8567	-1.3763	-0.1375
290	SLU 48	0.32	-1.11	57.88	18.1896	-1.4023	-0.132
290	SLU 49	0.33	-1.12	57.87	18.1891	-1.4021	-0.137
290	SLU 50	0.31	-1.11	57.49	18.0665	-1.3929	-0.1305
290	SLU 51	0.33	-1.13	57.48	18.0661	-1.3927	-0.1355
290	SLU 52	0.34	-1.12	61.4	19.3001	-1.4873	-0.1378
290	SLU 53	0.32	-1.11	62.47	19.633	-1.5134	-0.1323
290	SLU 54	0.33	-1.13	62.46	19.6325	-1.5132	-0.1373
290	SLU 55	0.34	-1.14	62.07	19.5091	-1.5036	-0.1392
290	SLU 56	0.32	-1.13	63.14	19.842	-1.5297	-0.1336
290	SLU 57	0.34	-1.14	63.13	19.8415	-1.5295	-0.1386
290	SLU 58	0.32	-1.13	62.75	19.7189	-1.5202	-0.1321
290	SLU 59	0.33	-1.14	62.74	19.7184	-1.52	-0.1371
290	SLU 60	0.31	-1.1	63.66	20.0091	-1.5422	-0.1302
290	SLU 61	0.33	-1.12	63.66	20.0086	-1.542	-0.1352
290	SLU 62	0.32	-1.12	64.33	20.2181	-1.5585	-0.1315
290	SLU 63	0.33	-1.14	64.33	20.2176	-1.5583	-0.1365
290	SLU 64	0.35	-1.07	61	19.1839	-1.479	-0.1414
290	SLU 65	0.37	-1.09	60.99	19.1831	-1.4787	-0.1497
290	SLU 66	0.36	-1.08	62.06	19.516	-1.5048	-0.1441
290	SLU 67	0.37	-1.09	62.05	19.5155	-1.5046	-0.1491
290	SLU 68	0.38	-1.11	61.66	19.3921	-1.495	-0.151
290	SLU 69	0.36	-1.1	62.73	19.725	-1.5211	-0.1455
290	SLU 70	0.37	-1.11	62.72	19.7245	-1.5209	-0.1505
290	SLU 71	0.36	-1.1	62.34	19.6019	-1.5116	-0.144
290	SLU 72	0.37	-1.11	62.33	19.6014	-1.5114	-0.149
290	SLU 73	0.38	-1.11	66.25	20.8355	-1.6061	-0.1513
290	SLU 74	0.36	-1.1	67.32	21.1684	-1.6321	-0.1458
290	SLU 75	0.37	-1.11	67.31	21.1679	-1.632	-0.1508
290	SLU 76	0.38	-1.13	66.92	21.0445	-1.6224	-0.1527
290	SLU 77	0.36	-1.11	67.99	21.3774	-1.6484	-0.1471
290	SLU 78	0.38	-1.13	67.98	21.3769	-1.6483	-0.1521
290	SLU 79	0.36	-1.12	67.6	21.2543	-1.639	-0.1456
290	SLU 80	0.37	-1.13	67.59	21.2538	-1.6388	-0.1506
290	SLU 81	0.36	-1.09	68.52	21.5445	-1.661	-0.1437
290	SLU 82	0.37	-1.11	68.51	21.544	-1.6608	-0.1487
290	SLU 83	0.36	-1.11	69.19	21.7535	-1.6772	-0.145
290	SLU 84	0.37	-1.12	69.18	21.753	-1.6771	-0.15
290	SLE RA 1	0.26	-0.82	45.86	14.4194	-1.1116	-0.1058
290	SLE RA 2	0.28	-0.84	45.85	14.4189	-1.1114	-0.1113
290	SLE RA 3	0.27	-0.83	46.56	14.6408	-1.1288	-0.1076
290	SLE RA 4	0.27	-0.84	46.56	14.6405	-1.1287	-0.111
290	SLE RA 5	0.28	-0.85	46.3	14.5582	-1.1223	-0.1122
290	SLE RA 6	0.27	-0.84	47.01	14.7801	-1.1397	-0.1085
290	SLE RA 7	0.28	-0.85	47	14.7798	-1.1395	-0.1118
290	SLE RA 8	0.26	-0.84	46.75	14.6981	-1.1333	-0.1075
290	SLE RA 9	0.27	-0.85	46.75	14.6978	-1.1332	-0.1109
290	SLE RA 10	0.28	-0.85	49.36	15.5204	-1.1963	-0.1124
290	SLE RA 11	0.27	-0.84	50.07	15.7424	-1.2137	-0.1087
290	SLE RA 12	0.28	-0.85	50.07	15.7421	-1.2136	-0.112
290	SLE RA 13	0.28	-0.86	49.8	15.6598	-1.2072	-0.1133
290	SLE RA 14	0.27	-0.85	50.52	15.8817	-1.2246	-0.1096

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLE RA 15	0.28	-0.86	50.51	15.8814	-1.2244	-0.1129
290	SLE RA 16	0.27	-0.86	50.26	15.7997	-1.2182	-0.1086
290	SLE RA 17	0.28	-0.87	50.25	15.7994	-1.2181	-0.112
290	SLE RA 18	0.26	-0.84	50.87	15.9931	-1.2329	-0.1073
290	SLE RA 19	0.27	-0.85	50.86	15.9928	-1.2328	-0.1107
290	SLE RA 20	0.27	-0.85	51.32	16.1324	-1.2438	-0.1082
290	SLE RA 21	0.27	-0.86	51.31	16.1321	-1.2436	-0.1116
290	SLE FR 1	0.26	-0.82	45.86	14.4194	-1.1116	-0.1058
290	SLE FR 2	0.26	-0.83	45.86	14.4193	-1.1116	-0.1069
290	SLE FR 3	0.26	-0.83	46.04	14.4751	-1.116	-0.1061
290	SLE FR 4	0.26	-0.83	47.36	14.8914	-1.148	-0.1074
290	SLE FR 5	0.26	-0.83	47.54	14.9472	-1.1523	-0.1066
290	SLE FR 6	0.26	-0.83	48.36	15.2063	-1.1723	-0.1066
290	SLE QP 1	0.26	-0.82	45.86	14.4194	-1.1116	-0.1058
290	SLE QP 2	0.26	-0.83	47.36	14.8915	-1.148	-0.1063
290	SLD 1	4.42	0.21	44.62	14.075	-1.0642	-1.4599
290	SLD 2	4.83	0.44	44.89	14.1578	-1.0715	-1.5908
290	SLD 3	4.33	-0.85	43.95	13.9407	-1.0469	-1.4842
290	SLD 4	4.74	-0.63	44.22	14.0236	-1.0542	-1.6151
290	SLD 5	1.58	1.06	47.5	14.8351	-1.1477	-0.4517
290	SLD 6	1.85	1.21	47.67	14.8901	-1.1526	-0.5386
290	SLD 7	1.26	-2.49	45.28	14.3876	-1.0901	-0.5327
290	SLD 8	1.54	-2.34	45.46	14.4426	-1.095	-0.6195
290	SLD 9	-1.01	0.68	49.26	15.3404	-1.201	0.407
290	SLD 10	-0.74	0.83	49.44	15.3954	-1.2059	0.3202
290	SLD 11	-1.33	-2.86	47.05	14.8929	-1.1434	0.3261
290	SLD 12	-1.05	-2.71	47.23	14.948	-1.1483	0.2392
290	SLD 13	-4.21	-1.03	50.5	15.7594	-1.2418	1.4026
290	SLD 14	-3.8	-0.8	50.77	15.8423	-1.2491	1.2716
290	SLD 15	-4.31	-2.09	49.84	15.6252	-1.2245	1.3783
290	SLD 16	-3.9	-1.87	50.11	15.7081	-1.2318	1.2474
290	SLV 1	9.99	1.56	40.92	12.9776	-0.9513	-3.2717
290	SLV 2	10.94	2.09	41.54	13.1706	-0.9684	-3.5765
290	SLV 3	9.77	-0.85	39.42	12.6717	-0.9121	-3.3288
290	SLV 4	10.72	-0.32	40.04	12.8647	-0.9292	-3.6336
290	SLV 5	3.34	3.45	47.61	14.7474	-1.1455	-0.9158
290	SLV 6	3.96	3.8	48.01	14.8731	-1.1566	-1.1144
290	SLV 7	2.62	-4.58	42.58	13.7277	-1.0147	-1.1059
290	SLV 8	3.24	-4.24	42.99	13.8534	-1.0259	-1.3045
290	SLV 9	-2.71	2.58	51.74	15.9296	-1.2701	1.092
290	SLV 10	-2.09	2.93	52.14	16.0553	-1.2813	0.8934
290	SLV 11	-3.44	-5.45	46.71	14.9099	-1.1394	0.9019
290	SLV 12	-2.82	-5.11	47.12	15.0356	-1.1505	0.7033
290	SLV 13	-10.2	-1.34	54.69	16.9183	-1.3668	3.4211
290	SLV 14	-9.25	-0.81	55.31	17.1113	-1.3839	3.1163
290	SLV 15	-10.42	-3.75	53.18	16.6124	-1.3276	3.364
290	SLV 16	-9.47	-3.22	53.8	16.8054	-1.3447	3.0592
290	CRTFP Ux+	0	0	0	0	0	0
290	CRTFP Ux-	0	0	0	0	0	0
290	CRTFP Uy+	0	0	0	0	0	0
290	CRTFP Uy-	0	0	0	0	0	0
291	SLU 1	0.18	-0.54	31.07	10.0667	-0.8754	-0.0761
291	SLU 2	0.19	-0.56	31.06	10.0658	-0.8752	-0.0821
291	SLU 3	0.18	-0.55	31.81	10.3062	-0.8964	-0.0782
291	SLU 4	0.19	-0.56	31.81	10.3056	-0.8962	-0.0818
291	SLU 5	0.2	-0.57	31.53	10.2164	-0.8884	-0.0832
291	SLU 6	0.18	-0.56	32.28	10.4568	-0.9096	-0.0792
291	SLU 7	0.19	-0.57	32.28	10.4563	-0.9095	-0.0828
291	SLU 8	0.18	-0.57	32.01	10.3679	-0.9019	-0.0781
291	SLU 9	0.19	-0.58	32	10.3674	-0.9018	-0.0818
291	SLU 10	0.2	-0.57	34.73	11.2515	-0.9786	-0.0832
291	SLU 11	0.18	-0.56	35.49	11.492	-0.9998	-0.0792
291	SLU 12	0.19	-0.57	35.48	11.4914	-0.9997	-0.0829
291	SLU 13	0.2	-0.58	35.2	11.4021	-0.9919	-0.0842
291	SLU 14	0.19	-0.57	35.95	11.6426	-1.0131	-0.0803
291	SLU 15	0.2	-0.58	35.95	11.642	-1.0129	-0.0839
291	SLU 16	0.18	-0.58	35.68	11.5537	-1.0054	-0.0792
291	SLU 17	0.19	-0.59	35.68	11.5531	-1.0052	-0.0828
291	SLU 18	0.18	-0.56	36.32	11.7606	-1.0232	-0.0776
291	SLU 19	0.19	-0.57	36.31	11.7601	-1.0231	-0.0813
291	SLU 20	0.18	-0.57	36.79	11.9113	-1.0365	-0.0786
291	SLU 21	0.19	-0.58	36.78	11.9107	-1.0363	-0.0823
291	SLU 22	0.21	-0.53	34.48	11.1758	-0.9719	-0.086
291	SLU 23	0.22	-0.55	34.47	11.1748	-0.9717	-0.092
291	SLU 24	0.21	-0.54	35.22	11.4153	-0.9929	-0.088
291	SLU 25	0.22	-0.55	35.22	11.4147	-0.9927	-0.0917
291	SLU 26	0.22	-0.56	34.94	11.3254	-0.9849	-0.093
291	SLU 27	0.21	-0.55	35.69	11.5659	-1.0061	-0.089
291	SLU 28	0.22	-0.56	35.69	11.5653	-1.006	-0.0927
291	SLU 29	0.21	-0.56	35.42	11.477	-0.9984	-0.088
291	SLU 30	0.22	-0.57	35.41	11.4764	-0.9983	-0.0916
291	SLU 31	0.22	-0.56	38.15	12.3606	-1.0752	-0.0931
291	SLU 32	0.21	-0.55	38.9	12.601	-1.0964	-0.0891
291	SLU 33	0.22	-0.56	38.89	12.6005	-1.0962	-0.0927
291	SLU 34	0.23	-0.57	38.62	12.5112	-1.0884	-0.0941
291	SLU 35	0.22	-0.56	39.37	12.7517	-1.1096	-0.0901
291	SLU 36	0.23	-0.57	39.36	12.7511	-1.1095	-0.0938
291	SLU 37	0.21	-0.57	39.09	12.6628	-1.1019	-0.0891
291	SLU 38	0.22	-0.58	39.09	12.6622	-1.1017	-0.0927
291	SLU 39	0.21	-0.55	39.73	12.8697	-1.1198	-0.0875

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
291	SLU 40	0.22	-0.56	39.72	12.8691	-1.1196	-0.0911
291	SLU 41	0.21	-0.56	40.2	13.0203	-1.133	-0.0885
291	SLU 42	0.22	-0.57	40.19	13.0198	-1.1328	-0.0922
291	SLU 43	0.22	-0.71	39.22	12.7065	-1.105	-0.0955
291	SLU 44	0.24	-0.73	39.21	12.7055	-1.1047	-0.1016
291	SLU 45	0.23	-0.72	39.96	12.946	-1.1259	-0.0976
291	SLU 46	0.24	-0.73	39.96	12.9454	-1.1258	-0.1012
291	SLU 47	0.24	-0.74	39.68	12.8561	-1.118	-0.1026
291	SLU 48	0.23	-0.73	40.43	13.0966	-1.1392	-0.0986
291	SLU 49	0.24	-0.74	40.43	13.096	-1.139	-0.1022
291	SLU 50	0.22	-0.73	40.16	13.0077	-1.1315	-0.0976
291	SLU 51	0.23	-0.74	40.15	13.0071	-1.1313	-0.1012
291	SLU 52	0.24	-0.74	42.89	13.8913	-1.2082	-0.1027
291	SLU 53	0.23	-0.73	43.64	14.1317	-1.2294	-0.0987
291	SLU 54	0.24	-0.74	43.63	14.1312	-1.2292	-0.1023
291	SLU 55	0.24	-0.75	43.36	14.0419	-1.2214	-0.1037
291	SLU 56	0.23	-0.74	44.11	14.2823	-1.2426	-0.0997
291	SLU 57	0.24	-0.75	44.1	14.2818	-1.2425	-0.1033
291	SLU 58	0.23	-0.74	43.83	14.1935	-1.2349	-0.0986
291	SLU 59	0.24	-0.75	43.83	14.1929	-1.2348	-0.1023
291	SLU 60	0.22	-0.72	44.47	14.4004	-1.2528	-0.0971
291	SLU 61	0.23	-0.73	44.46	14.3998	-1.2526	-0.1007
291	SLU 62	0.23	-0.74	44.94	14.551	-1.266	-0.0981
291	SLU 63	0.24	-0.75	44.93	14.5504	-1.2659	-0.1017
291	SLU 64	0.25	-0.7	42.63	13.8155	-1.2015	-0.1054
291	SLU 65	0.27	-0.72	42.62	13.8146	-1.2012	-0.1115
291	SLU 66	0.25	-0.71	43.38	14.055	-1.2224	-0.1075
291	SLU 67	0.26	-0.72	43.37	14.0545	-1.2223	-0.1111
291	SLU 68	0.27	-0.73	43.09	13.9652	-1.2145	-0.1125
291	SLU 69	0.26	-0.72	43.84	14.2057	-1.2357	-0.1085
291	SLU 70	0.27	-0.73	43.84	14.2051	-1.2355	-0.1121
291	SLU 71	0.25	-0.72	43.57	14.1168	-1.228	-0.1074
291	SLU 72	0.26	-0.73	43.57	14.1162	-1.2278	-0.1111
291	SLU 73	0.27	-0.73	46.3	15.0003	-1.3047	-0.1125
291	SLU 74	0.26	-0.72	47.05	15.2408	-1.3259	-0.1085
291	SLU 75	0.27	-0.73	47.04	15.2402	-1.3258	-0.1122
291	SLU 76	0.27	-0.74	46.77	15.151	-1.3179	-0.1136
291	SLU 77	0.26	-0.73	47.52	15.3914	-1.3391	-0.1096
291	SLU 78	0.27	-0.74	47.51	15.3908	-1.339	-0.1132
291	SLU 79	0.26	-0.73	47.24	15.3025	-1.3314	-0.1085
291	SLU 80	0.27	-0.74	47.24	15.302	-1.3313	-0.1122
291	SLU 81	0.25	-0.71	47.88	15.5095	-1.3493	-0.1069
291	SLU 82	0.26	-0.72	47.88	15.5089	-1.3491	-0.1106
291	SLU 83	0.25	-0.73	48.35	15.6601	-1.3625	-0.108
291	SLU 84	0.26	-0.74	48.34	15.6595	-1.3624	-0.1116
291	SLE RA 1	0.19	-0.54	32.05	10.3836	-0.903	-0.0789
291	SLE RA 2	0.2	-0.55	32.04	10.3829	-0.9028	-0.0829
291	SLE RA 3	0.19	-0.55	32.54	10.5433	-0.917	-0.0803
291	SLE RA 4	0.2	-0.55	32.54	10.5429	-0.9169	-0.0827
291	SLE RA 5	0.2	-0.56	32.35	10.4834	-0.9117	-0.0836
291	SLE RA 6	0.19	-0.55	32.85	10.6437	-0.9258	-0.081
291	SLE RA 7	0.2	-0.56	32.85	10.6433	-0.9257	-0.0834
291	SLE RA 8	0.19	-0.56	32.67	10.5844	-0.9207	-0.0803
291	SLE RA 9	0.19	-0.56	32.67	10.584	-0.9206	-0.0827
291	SLE RA 10	0.2	-0.56	34.49	11.1734	-0.9718	-0.0837
291	SLE RA 11	0.19	-0.55	34.99	11.3338	-0.986	-0.081
291	SLE RA 12	0.2	-0.56	34.98	11.3334	-0.9859	-0.0834
291	SLE RA 13	0.2	-0.57	34.8	11.2739	-0.9806	-0.0843
291	SLE RA 14	0.19	-0.56	35.3	11.4342	-0.9948	-0.0817
291	SLE RA 15	0.2	-0.57	35.3	11.4338	-0.9947	-0.0841
291	SLE RA 16	0.19	-0.56	35.12	11.3749	-0.9896	-0.081
291	SLE RA 17	0.2	-0.57	35.12	11.3745	-0.9895	-0.0834
291	SLE RA 18	0.19	-0.55	35.54	11.5129	-1.0015	-0.0799
291	SLE RA 19	0.19	-0.56	35.54	11.5125	-1.0014	-0.0824
291	SLE RA 20	0.19	-0.56	35.86	11.6133	-1.0104	-0.0806
291	SLE RA 21	0.2	-0.56	35.85	11.6129	-1.0103	-0.083
291	SLE FR 1	0.19	-0.54	32.05	10.3836	-0.903	-0.0789
291	SLE FR 2	0.19	-0.54	32.04	10.3835	-0.903	-0.0797
291	SLE FR 3	0.19	-0.54	32.17	10.4237	-0.9065	-0.0792
291	SLE FR 4	0.19	-0.55	33.09	10.7222	-0.9325	-0.08
291	SLE FR 5	0.19	-0.55	33.22	10.7625	-0.9361	-0.0795
291	SLE FR 6	0.19	-0.55	33.79	10.9482	-0.9523	-0.0794
291	SLE QP 1	0.19	-0.54	32.05	10.3836	-0.903	-0.0789
291	SLE QP 2	0.19	-0.54	33.09	10.7224	-0.9326	-0.0792
291	SLD 1	3.05	0.14	30.88	10.0243	-0.8639	-1.0524
291	SLD 2	3.33	0.3	31.08	10.0892	-0.87	-1.1462
291	SLD 3	2.98	-0.59	30.39	9.9099	-0.8495	-1.0704
291	SLD 4	3.26	-0.43	30.59	9.9748	-0.8556	-1.1642
291	SLD 5	1.09	0.74	33.13	10.6748	-0.9327	-0.3267
291	SLD 6	1.28	0.85	33.27	10.7178	-0.9368	-0.389
291	SLD 7	0.87	-1.69	31.51	10.2932	-0.8847	-0.3869
291	SLD 8	1.06	-1.58	31.64	10.3363	-0.8887	-0.4492
291	SLD 9	-0.69	0.5	34.55	11.1084	-0.9764	0.2907
291	SLD 10	-0.5	0.61	34.68	11.1515	-0.9805	0.2285
291	SLD 11	-0.91	-1.93	32.92	10.7269	-0.9284	0.2306
291	SLD 12	-0.72	-1.82	33.06	10.77	-0.9324	0.1683
291	SLD 13	-2.89	-0.66	35.6	11.47	-1.0096	1.0058
291	SLD 14	-2.61	-0.5	35.8	11.5348	-1.0156	0.912
291	SLD 15	-2.96	-1.39	35.11	11.3555	-0.9951	0.9878
291	SLD 16	-2.67	-1.23	35.31	11.4204	-1.0012	0.8939

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
291	SLV 1	6.88	1.03	27.89	9.0859	-0.7715	-2.355
291	SLV 2	7.53	1.41	28.36	9.237	-0.7857	-2.5734
291	SLV 3	6.73	-0.63	26.79	8.8258	-0.7388	-2.3973
291	SLV 4	7.38	-0.24	27.26	8.9768	-0.753	-2.6157
291	SLV 5	2.31	2.37	33.12	10.5994	-0.9314	-0.6594
291	SLV 6	2.73	2.62	33.43	10.6979	-0.9406	-0.8017
291	SLV 7	1.8	-3.14	29.45	9.7323	-0.8224	-0.8004
291	SLV 8	2.23	-2.89	29.75	9.8307	-0.8316	-0.9427
291	SLV 9	-1.86	1.81	36.44	11.6141	-1.0336	0.7843
291	SLV 10	-1.43	2.06	36.74	11.7125	-1.0428	0.642
291	SLV 11	-2.36	-3.7	32.76	10.7469	-0.9246	0.6433
291	SLV 12	-1.93	-3.45	33.06	10.8453	-0.9338	0.501
291	SLV 13	-7.01	-0.84	38.93	12.4679	-1.1122	2.4573
291	SLV 14	-6.35	-0.46	39.4	12.619	-1.1263	2.2389
291	SLV 15	-7.16	-2.5	37.83	12.2078	-1.0795	2.415
291	SLV 16	-6.5	-2.11	38.3	12.3588	-1.0936	2.1966
291	CRTFP Ux+	0	0	0	0	0	0
291	CRTFP Ux-	0	0	0	0	0	0
291	CRTFP Uy+	0	0	0	0	0	0
291	CRTFP Uy-	0	0	0	0	0	0
292	SLU 1	0.22	-0.57	37.02	12.0007	-0.0037	-0.0743
292	SLU 2	0.24	-0.59	37.01	11.9991	-0.0037	-0.0809
292	SLU 3	0.23	-0.58	37.9	12.287	-0.0039	-0.0765
292	SLU 4	0.24	-0.6	37.9	12.2861	-0.0039	-0.0805
292	SLU 5	0.24	-0.61	37.57	12.1792	-0.0038	-0.0818
292	SLU 6	0.23	-0.6	38.47	12.467	-0.004	-0.0774
292	SLU 7	0.24	-0.61	38.46	12.4661	-0.004	-0.0814
292	SLU 8	0.22	-0.6	38.14	12.3607	-0.0039	-0.076
292	SLU 9	0.24	-0.61	38.13	12.3598	-0.0039	-0.08
292	SLU 10	0.24	-0.6	41.38	13.4117	-0.004	-0.0817
292	SLU 11	0.23	-0.59	42.28	13.6996	-0.0042	-0.0773
292	SLU 12	0.24	-0.6	42.27	13.6986	-0.0042	-0.0813
292	SLU 13	0.24	-0.61	41.94	13.5917	-0.0041	-0.0826
292	SLU 14	0.23	-0.6	42.84	13.8796	-0.0043	-0.0782
292	SLU 15	0.24	-0.61	42.83	13.8786	-0.0043	-0.0822
292	SLU 16	0.23	-0.61	42.51	13.7733	-0.0042	-0.0769
292	SLU 17	0.24	-0.62	42.51	13.7724	-0.0042	-0.0808
292	SLU 18	0.22	-0.58	43.27	14.0187	-0.0042	-0.0754
292	SLU 19	0.23	-0.6	43.26	14.0177	-0.0042	-0.0794
292	SLU 20	0.23	-0.6	43.83	14.1987	-0.0043	-0.0763
292	SLU 21	0.24	-0.61	43.82	14.1977	-0.0043	-0.0803
292	SLU 22	0.25	-0.56	41.1	13.3278	-0.0046	-0.0866
292	SLU 23	0.27	-0.58	41.09	13.3263	-0.0046	-0.0932
292	SLU 24	0.26	-0.57	41.99	13.6141	-0.0048	-0.0888
292	SLU 25	0.27	-0.58	41.98	13.6132	-0.0048	-0.0928
292	SLU 26	0.28	-0.59	41.65	13.5063	-0.0047	-0.0941
292	SLU 27	0.26	-0.58	42.55	13.7941	-0.0049	-0.0897
292	SLU 28	0.28	-0.59	42.54	13.7932	-0.0049	-0.0937
292	SLU 29	0.26	-0.58	42.22	13.6879	-0.0049	-0.0883
292	SLU 30	0.27	-0.59	42.22	13.6869	-0.0049	-0.0923
292	SLU 31	0.28	-0.58	45.47	14.7388	-0.005	-0.094
292	SLU 32	0.26	-0.57	46.36	15.0267	-0.0052	-0.0896
292	SLU 33	0.28	-0.59	46.36	15.0258	-0.0051	-0.0936
292	SLU 34	0.28	-0.6	46.03	14.9189	-0.0051	-0.0949
292	SLU 35	0.27	-0.59	46.92	15.2067	-0.0053	-0.0905
292	SLU 36	0.28	-0.6	46.92	15.2058	-0.0053	-0.0945
292	SLU 37	0.26	-0.59	46.6	15.1004	-0.0052	-0.0892
292	SLU 38	0.27	-0.6	46.59	15.0995	-0.0052	-0.0931
292	SLU 39	0.26	-0.57	47.35	15.3458	-0.0051	-0.0877
292	SLU 40	0.27	-0.58	47.34	15.3448	-0.0051	-0.0917
292	SLU 41	0.26	-0.58	47.91	15.5258	-0.0052	-0.0886
292	SLU 42	0.27	-0.59	47.9	15.5249	-0.0052	-0.0926
292	SLU 43	0.27	-0.75	46.72	15.1459	-0.0045	-0.0923
292	SLU 44	0.29	-0.77	46.71	15.1443	-0.0044	-0.0989
292	SLU 45	0.28	-0.76	47.61	15.4322	-0.0046	-0.0946
292	SLU 46	0.29	-0.77	47.6	15.4313	-0.0046	-0.0985
292	SLU 47	0.29	-0.78	47.27	15.3244	-0.0046	-0.0998
292	SLU 48	0.28	-0.77	48.17	15.6122	-0.0047	-0.0955
292	SLU 49	0.29	-0.79	48.16	15.6113	-0.0047	-0.0994
292	SLU 50	0.28	-0.78	47.84	15.5059	-0.0047	-0.0941
292	SLU 51	0.29	-0.79	47.84	15.505	-0.0047	-0.0981
292	SLU 52	0.29	-0.78	51.09	16.5569	-0.0048	-0.0998
292	SLU 53	0.28	-0.77	51.98	16.8448	-0.005	-0.0954
292	SLU 54	0.29	-0.78	51.98	16.8438	-0.005	-0.0994
292	SLU 55	0.3	-0.79	51.65	16.7369	-0.0049	-0.1007
292	SLU 56	0.28	-0.78	52.54	17.0248	-0.0051	-0.0963
292	SLU 57	0.3	-0.79	52.54	17.0238	-0.0051	-0.1003
292	SLU 58	0.28	-0.78	52.22	16.9185	-0.005	-0.0949
292	SLU 59	0.29	-0.8	52.21	16.9176	-0.005	-0.0989
292	SLU 60	0.28	-0.76	52.97	17.1639	-0.0049	-0.0935
292	SLU 61	0.29	-0.77	52.97	17.1629	-0.0049	-0.0975
292	SLU 62	0.28	-0.77	53.53	17.3439	-0.005	-0.0944
292	SLU 63	0.29	-0.79	53.53	17.3429	-0.005	-0.0984
292	SLU 64	0.31	-0.74	50.81	16.473	-0.0054	-0.1046
292	SLU 65	0.33	-0.76	50.8	16.4715	-0.0054	-0.1112
292	SLU 66	0.31	-0.75	51.69	16.7593	-0.0056	-0.1069
292	SLU 67	0.33	-0.76	51.69	16.7584	-0.0056	-0.1108
292	SLU 68	0.33	-0.77	51.36	16.6515	-0.0055	-0.1121
292	SLU 69	0.32	-0.76	52.25	16.9393	-0.0057	-0.1078
292	SLU 70	0.33	-0.77	52.25	16.9384	-0.0057	-0.1117

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLU 71	0.31	-0.76	51.93	16.8331	-0.0056	-0.1064
292	SLU 72	0.33	-0.77	51.92	16.8321	-0.0056	-0.1104
292	SLU 73	0.33	-0.76	55.17	17.884	-0.0057	-0.1121
292	SLU 74	0.32	-0.75	56.07	18.1719	-0.0059	-0.1077
292	SLU 75	0.33	-0.76	56.06	18.1709	-0.0059	-0.1117
292	SLU 76	0.33	-0.77	55.73	18.064	-0.0058	-0.113
292	SLU 77	0.32	-0.76	56.63	18.3519	-0.006	-0.1086
292	SLU 78	0.33	-0.78	56.62	18.351	-0.006	-0.1126
292	SLU 79	0.32	-0.77	56.3	18.2456	-0.006	-0.1072
292	SLU 80	0.33	-0.78	56.3	18.2447	-0.006	-0.1112
292	SLU 81	0.31	-0.75	57.06	18.491	-0.0059	-0.1058
292	SLU 82	0.32	-0.76	57.05	18.49	-0.0059	-0.1098
292	SLU 83	0.32	-0.76	57.62	18.671	-0.006	-0.1067
292	SLU 84	0.33	-0.77	57.61	18.6701	-0.006	-0.1107
292	SLE RA 1	0.23	-0.57	38.19	12.3799	-0.004	-0.0778
292	SLE RA 2	0.24	-0.58	38.18	12.3788	-0.0039	-0.0822
292	SLE RA 3	0.23	-0.58	38.78	12.5707	-0.0041	-0.0793
292	SLE RA 4	0.24	-0.58	38.77	12.5701	-0.0041	-0.0819
292	SLE RA 5	0.24	-0.59	38.55	12.4989	-0.004	-0.0828
292	SLE RA 6	0.24	-0.58	39.15	12.6908	-0.0041	-0.0799
292	SLE RA 7	0.24	-0.59	39.15	12.6901	-0.0041	-0.0825
292	SLE RA 8	0.23	-0.59	38.93	12.6199	-0.0041	-0.079
292	SLE RA 9	0.24	-0.59	38.93	12.6193	-0.0041	-0.0816
292	SLE RA 10	0.24	-0.59	41.09	13.3206	-0.0042	-0.0827
292	SLE RA 11	0.24	-0.58	41.69	13.5125	-0.0043	-0.0798
292	SLE RA 12	0.24	-0.59	41.69	13.5118	-0.0043	-0.0825
292	SLE RA 13	0.25	-0.6	41.47	13.4406	-0.0042	-0.0833
292	SLE RA 14	0.24	-0.59	42.07	13.6325	-0.0044	-0.0804
292	SLE RA 15	0.25	-0.6	42.06	13.6318	-0.0044	-0.0831
292	SLE RA 16	0.23	-0.59	41.85	13.5616	-0.0043	-0.0795
292	SLE RA 17	0.24	-0.6	41.84	13.561	-0.0043	-0.0822
292	SLE RA 18	0.23	-0.58	42.35	13.7252	-0.0043	-0.0786
292	SLE RA 19	0.24	-0.58	42.35	13.7246	-0.0043	-0.0812
292	SLE RA 20	0.23	-0.58	42.72	13.8452	-0.0043	-0.0792
292	SLE RA 21	0.24	-0.59	42.72	13.8446	-0.0043	-0.0818
292	SLE FR 1	0.23	-0.57	38.19	12.3799	-0.004	-0.0778
292	SLE FR 2	0.23	-0.57	38.18	12.3797	-0.004	-0.0786
292	SLE FR 3	0.23	-0.57	38.33	12.4279	-0.004	-0.078
292	SLE FR 4	0.23	-0.57	39.43	12.7833	-0.0041	-0.0789
292	SLE FR 5	0.23	-0.58	39.58	12.8315	-0.0041	-0.0782
292	SLE FR 6	0.23	-0.57	40.27	13.0525	-0.0041	-0.0782
292	SLE QP 1	0.23	-0.57	38.19	12.3799	-0.004	-0.0778
292	SLE QP 2	0.23	-0.57	39.43	12.7835	-0.0041	-0.078
292	SLD 1	3.61	0.18	36.49	11.8511	0.0055	-1.2611
292	SLD 2	3.94	0.38	36.75	11.9321	0.0049	-1.3774
292	SLD 3	3.53	-0.68	35.87	11.6977	0.007	-1.2342
292	SLD 4	3.86	-0.48	36.13	11.7788	0.0063	-1.3504
292	SLD 5	1.3	0.93	39.44	12.7216	-0.0033	-0.4527
292	SLD 6	1.52	1.06	39.61	12.7754	-0.0037	-0.5299
292	SLD 7	1.04	-1.95	37.38	12.2105	0.0016	-0.3628
292	SLD 8	1.26	-1.82	37.55	12.2642	0.0012	-0.44
292	SLD 9	-0.8	0.67	41.32	13.3027	-0.0093	0.284
292	SLD 10	-0.58	0.81	41.49	13.3565	-0.0097	0.2068
292	SLD 11	-1.06	-2.2	39.25	12.7916	-0.0044	0.3739
292	SLD 12	-0.84	-2.07	39.43	12.8454	-0.0048	0.2967
292	SLD 13	-3.4	-0.66	42.74	13.7882	-0.0144	1.1944
292	SLD 14	-3.07	-0.46	43	13.8692	-0.0151	1.0782
292	SLD 15	-3.48	-1.53	42.12	13.6348	-0.013	1.2214
292	SLD 16	-3.15	-1.32	42.38	13.7159	-0.0136	1.1051
292	SLV 1	8.12	1.16	32.52	10.5973	0.0184	-2.8447
292	SLV 2	8.9	1.63	33.13	10.7859	0.0169	-3.1154
292	SLV 3	7.95	-0.79	31.12	10.2491	0.0217	-2.7822
292	SLV 4	8.72	-0.32	31.72	10.4378	0.0202	-3.0529
292	SLV 5	2.73	2.83	39.38	12.6225	-0.0021	-0.9553
292	SLV 6	3.24	3.14	39.78	12.7454	-0.0031	-1.1317
292	SLV 7	2.14	-3.68	34.7	11.462	0.009	-0.7468
292	SLV 8	2.64	-3.38	35.1	11.5849	0.008	-0.9232
292	SLV 9	-2.18	2.24	43.77	13.982	-0.0161	0.7672
292	SLV 10	-1.68	2.54	44.17	14.105	-0.0171	0.5908
292	SLV 11	-2.78	-4.28	39.09	12.8216	-0.005	0.9757
292	SLV 12	-2.27	-3.97	39.49	12.9445	-0.006	0.7993
292	SLV 13	-8.26	-0.82	47.15	15.1292	-0.0283	2.8969
292	SLV 14	-7.49	-0.35	47.75	15.3178	-0.0298	2.6262
292	SLV 15	-8.44	-2.77	45.74	14.781	-0.025	2.9594
292	SLV 16	-7.66	-2.3	46.35	14.9697	-0.0265	2.6887
292	CRTFP Ux+	0	0	0	0	0	0
292	CRTFP Ux-	0	0	0	0	0	0
292	CRTFP Uy+	0	0	0	0	0	0
292	CRTFP Uy-	0	0	0	0	0	0
293	SLU 1	0.15	-0.33	24.27	7.8912	1.5077	-0.0316
293	SLU 2	0.16	-0.34	24.26	7.8899	1.5073	-0.0352
293	SLU 3	0.16	-0.34	24.85	8.0798	1.5439	-0.0328
293	SLU 4	0.16	-0.35	24.85	8.079	1.5436	-0.035
293	SLU 5	0.17	-0.35	24.63	8.0085	1.5301	-0.0354
293	SLU 6	0.16	-0.35	25.22	8.1985	1.5668	-0.033
293	SLU 7	0.16	-0.35	25.22	8.1977	1.5665	-0.0352
293	SLU 8	0.15	-0.35	25.01	8.1285	1.5534	-0.032
293	SLU 9	0.16	-0.35	25	8.1277	1.5532	-0.0341
293	SLU 10	0.17	-0.35	27.13	8.8187	1.6853	-0.0358
293	SLU 11	0.16	-0.34	27.72	9.0086	1.7219	-0.0335

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
293	SLU 12	0.17	-0.35	27.71	9.0078	1.7217	-0.0357
293	SLU 13	0.17	-0.35	27.5	8.9374	1.7082	-0.036
293	SLU 14	0.16	-0.35	28.09	9.1273	1.7448	-0.0337
293	SLU 15	0.17	-0.35	28.08	9.1265	1.7445	-0.0358
293	SLU 16	0.16	-0.35	27.87	9.0573	1.7315	-0.0327
293	SLU 17	0.16	-0.36	27.87	9.0566	1.7312	-0.0348
293	SLU 18	0.15	-0.33	28.36	9.2181	1.7621	-0.0326
293	SLU 19	0.16	-0.34	28.36	9.2173	1.7618	-0.0347
293	SLU 20	0.16	-0.34	28.73	9.3367	1.7849	-0.0327
293	SLU 21	0.16	-0.35	28.73	9.336	1.7847	-0.0349
293	SLU 22	0.18	-0.32	26.96	8.7665	1.6745	-0.0409
293	SLU 23	0.19	-0.33	26.95	8.7652	1.674	-0.0445
293	SLU 24	0.18	-0.32	27.54	8.9551	1.7107	-0.0422
293	SLU 25	0.19	-0.33	27.53	8.9543	1.7104	-0.0443
293	SLU 26	0.19	-0.34	27.32	8.8839	1.6969	-0.0447
293	SLU 27	0.18	-0.33	27.91	9.0738	1.7335	-0.0424
293	SLU 28	0.19	-0.34	27.9	9.073	1.7332	-0.0445
293	SLU 29	0.18	-0.33	27.69	9.0039	1.7202	-0.0413
293	SLU 30	0.19	-0.34	27.69	9.0031	1.7199	-0.0434
293	SLU 31	0.19	-0.33	29.81	9.694	1.8521	-0.0452
293	SLU 32	0.18	-0.32	30.4	9.884	1.8887	-0.0428
293	SLU 33	0.19	-0.33	30.4	9.8832	1.8884	-0.045
293	SLU 34	0.19	-0.34	30.18	9.8127	1.8749	-0.0453
293	SLU 35	0.18	-0.33	30.77	10.0026	1.9116	-0.043
293	SLU 36	0.19	-0.34	30.77	10.0018	1.9113	-0.0452
293	SLU 37	0.18	-0.33	30.56	9.9327	1.8983	-0.042
293	SLU 38	0.19	-0.34	30.55	9.9319	1.898	-0.0441
293	SLU 39	0.18	-0.32	31.05	10.0934	1.9288	-0.0419
293	SLU 40	0.19	-0.33	31.04	10.0926	1.9286	-0.044
293	SLU 41	0.18	-0.33	31.42	10.2121	1.9517	-0.0421
293	SLU 42	0.19	-0.33	31.41	10.2113	1.9514	-0.0442
293	SLU 43	0.19	-0.44	30.63	9.9584	1.9029	-0.0379
293	SLU 44	0.2	-0.45	30.62	9.9571	1.9024	-0.0415
293	SLU 45	0.19	-0.44	31.21	10.147	1.939	-0.0391
293	SLU 46	0.2	-0.45	31.21	10.1463	1.9388	-0.0413
293	SLU 47	0.2	-0.46	30.99	10.0758	1.9253	-0.0417
293	SLU 48	0.19	-0.45	31.58	10.2657	1.9619	-0.0393
293	SLU 49	0.2	-0.46	31.58	10.2649	1.9616	-0.0415
293	SLU 50	0.19	-0.45	31.37	10.1958	1.9486	-0.0383
293	SLU 51	0.2	-0.46	31.36	10.195	1.9483	-0.0404
293	SLU 52	0.2	-0.45	33.49	10.8859	2.0805	-0.0421
293	SLU 53	0.19	-0.44	34.08	11.0759	2.1171	-0.0398
293	SLU 54	0.2	-0.45	34.07	11.0751	2.1168	-0.0419
293	SLU 55	0.2	-0.46	33.86	11.0046	2.1033	-0.0423
293	SLU 56	0.2	-0.45	34.45	11.1945	2.1399	-0.04
293	SLU 57	0.2	-0.46	34.44	11.1937	2.1397	-0.0421
293	SLU 58	0.19	-0.45	34.23	11.1246	2.1266	-0.0389
293	SLU 59	0.2	-0.46	34.23	11.1238	2.1264	-0.0411
293	SLU 60	0.19	-0.44	34.72	11.2853	2.1572	-0.0388
293	SLU 61	0.2	-0.45	34.72	11.2845	2.1569	-0.041
293	SLU 62	0.19	-0.45	35.09	11.404	2.1801	-0.039
293	SLU 63	0.2	-0.45	35.09	11.4032	2.1798	-0.0412
293	SLU 64	0.21	-0.42	33.32	10.8338	2.0696	-0.0472
293	SLU 65	0.22	-0.43	33.31	10.8324	2.0692	-0.0508
293	SLU 66	0.22	-0.43	33.9	11.0224	2.1058	-0.0485
293	SLU 67	0.22	-0.44	33.89	11.0216	2.1055	-0.0506
293	SLU 68	0.23	-0.44	33.68	10.9511	2.092	-0.051
293	SLU 69	0.22	-0.44	34.27	11.141	2.1287	-0.0486
293	SLU 70	0.23	-0.44	34.26	11.1403	2.1284	-0.0508
293	SLU 71	0.22	-0.44	34.05	11.0711	2.1153	-0.0476
293	SLU 72	0.22	-0.45	34.05	11.0703	2.1151	-0.0497
293	SLU 73	0.23	-0.44	36.17	11.7613	2.2472	-0.0514
293	SLU 74	0.22	-0.43	36.76	11.9512	2.2838	-0.0491
293	SLU 75	0.23	-0.44	36.76	11.9504	2.2836	-0.0513
293	SLU 76	0.23	-0.44	36.54	11.8799	2.2701	-0.0516
293	SLU 77	0.22	-0.44	37.13	12.0699	2.3067	-0.0493
293	SLU 78	0.23	-0.44	37.13	12.0691	2.3064	-0.0514
293	SLU 79	0.22	-0.44	36.92	11.9999	2.2934	-0.0483
293	SLU 80	0.23	-0.45	36.91	11.9991	2.2931	-0.0504
293	SLU 81	0.22	-0.42	37.41	12.1606	2.324	-0.0482
293	SLU 82	0.22	-0.43	37.4	12.1599	2.3237	-0.0503
293	SLU 83	0.22	-0.43	37.78	12.2793	2.3468	-0.0484
293	SLU 84	0.22	-0.44	37.77	12.2785	2.3466	-0.0505
293	SLE RA 1	0.16	-0.33	25.04	8.1413	1.5554	-0.0343
293	SLE RA 2	0.17	-0.34	25.03	8.1404	1.5551	-0.0366
293	SLE RA 3	0.16	-0.33	25.43	8.267	1.5795	-0.0351
293	SLE RA 4	0.17	-0.34	25.42	8.2665	1.5793	-0.0365
293	SLE RA 5	0.17	-0.34	25.28	8.2195	1.5703	-0.0368
293	SLE RA 6	0.16	-0.34	25.67	8.3461	1.5947	-0.0352
293	SLE RA 7	0.17	-0.34	25.67	8.3456	1.5945	-0.0366
293	SLE RA 8	0.16	-0.34	25.53	8.2995	1.5859	-0.0345
293	SLE RA 9	0.17	-0.34	25.53	8.299	1.5857	-0.0359
293	SLE RA 10	0.17	-0.34	26.94	8.7596	1.6738	-0.0371
293	SLE RA 11	0.16	-0.33	27.34	8.8862	1.6982	-0.0355
293	SLE RA 12	0.17	-0.34	27.33	8.8857	1.698	-0.037
293	SLE RA 13	0.17	-0.34	27.19	8.8387	1.689	-0.0372
293	SLE RA 14	0.16	-0.34	27.58	8.9653	1.7134	-0.0357
293	SLE RA 15	0.17	-0.34	27.58	8.9648	1.7132	-0.0371
293	SLE RA 16	0.16	-0.34	27.44	8.9187	1.7045	-0.035
293	SLE RA 17	0.17	-0.34	27.44	8.9182	1.7044	-0.0364

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
293	SLE RA 18	0.16	-0.33	27.77	9.0259	1.7249	-0.0349
293	SLE RA 19	0.17	-0.33	27.76	9.0253	1.7248	-0.0363
293	SLE RA 20	0.16	-0.33	28.01	9.105	1.7402	-0.035
293	SLE RA 21	0.17	-0.34	28.01	9.1045	1.74	-0.0365
293	SLE FR 1	0.16	-0.33	25.04	8.1413	1.5554	-0.0343
293	SLE FR 2	0.16	-0.33	25.04	8.1411	1.5553	-0.0347
293	SLE FR 3	0.16	-0.33	25.14	8.1729	1.5615	-0.0343
293	SLE FR 4	0.16	-0.33	25.86	8.4065	1.6062	-0.0349
293	SLE FR 5	0.16	-0.33	25.95	8.4383	1.6123	-0.0345
293	SLE FR 6	0.16	-0.33	26.4	8.5836	1.6402	-0.0346
293	SLE QP 1	0.16	-0.33	25.04	8.1413	1.5554	-0.0343
293	SLE QP 2	0.16	-0.33	25.86	8.4067	1.6062	-0.0345
293	SLD 1	2.37	0.14	23.76	7.749	1.4785	-0.8345
293	SLD 2	2.59	0.28	23.94	7.8034	1.4896	-0.9194
293	SLD 3	2.32	-0.43	23.33	7.6398	1.4522	-0.7858
293	SLD 4	2.54	-0.29	23.52	7.6942	1.4633	-0.8707
293	SLD 5	0.86	0.65	25.85	8.365	1.6058	-0.3329
293	SLD 6	1	0.74	25.97	8.4011	1.6132	-0.3892
293	SLD 7	0.69	-1.24	24.42	8.0012	1.5181	-0.1706
293	SLD 8	0.83	-1.15	24.54	8.0373	1.5255	-0.2269
293	SLD 9	-0.52	0.49	27.18	8.776	1.687	0.158
293	SLD 10	-0.37	0.58	27.3	8.8121	1.6944	0.1017
293	SLD 11	-0.69	-1.39	25.75	8.4122	1.5993	0.3203
293	SLD 12	-0.54	-1.3	25.87	8.4483	1.6067	0.264
293	SLD 13	-2.22	-0.37	28.2	9.1191	1.7492	0.8018
293	SLD 14	-2	-0.23	28.38	9.1735	1.7603	0.7169
293	SLD 15	-2.27	-0.93	27.77	9.0099	1.7229	0.8504
293	SLD 16	-2.05	-0.8	27.95	9.0644	1.734	0.7656
293	SLV 1	5.32	0.75	20.95	6.8644	1.3065	-1.904
293	SLV 2	5.83	1.07	21.37	6.9911	1.3324	-2.1016
293	SLV 3	5.21	-0.54	19.97	6.6167	1.2468	-1.7933
293	SLV 4	5.72	-0.21	20.4	6.7434	1.2727	-1.9908
293	SLV 5	1.8	1.88	25.78	8.2973	1.6022	-0.7286
293	SLV 6	2.13	2.09	26.06	8.3799	1.6191	-0.8573
293	SLV 7	1.41	-2.39	22.54	7.4718	1.4034	-0.3594
293	SLV 8	1.74	-2.18	22.82	7.5543	1.4202	-0.4881
293	SLV 9	-1.42	1.53	28.89	9.259	1.7922	0.4192
293	SLV 10	-1.09	1.74	29.17	9.3415	1.8091	0.2905
293	SLV 11	-1.81	-2.75	25.65	8.4334	1.5934	0.7883
293	SLV 12	-1.48	-2.54	25.93	8.516	1.6102	0.6596
293	SLV 13	-5.4	-0.44	31.32	10.0699	1.9398	1.9219
293	SLV 14	-4.89	-0.12	31.74	10.1966	1.9657	1.7244
293	SLV 15	-5.52	-1.72	30.34	9.8222	1.8801	2.0326
293	SLV 16	-5.01	-1.4	30.77	9.9489	1.906	1.8351
293	CRTFP Ux+	0	0	0	0	0	0
293	CRTFP Ux-	0	0	0	0	0	0
293	CRTFP Uy+	0	0	0	0	0	0
293	CRTFP Uy-	0	0	0	0	0	0
295	SLU 1	0.42	-0.65	57.75	10.0078	-0.3962	-0.0619
295	SLU 2	0.45	-0.68	57.73	10.0048	-0.3958	-0.0674
295	SLU 3	0.43	-0.66	59.14	10.248	-0.4061	-0.0638
295	SLU 4	0.45	-0.68	59.13	10.2462	-0.4059	-0.0671
295	SLU 5	0.46	-0.7	58.61	10.1566	-0.4024	-0.0682
295	SLU 6	0.44	-0.68	60.02	10.3998	-0.4127	-0.0647
295	SLU 7	0.46	-0.7	60.01	10.398	-0.4125	-0.0679
295	SLU 8	0.43	-0.69	59.51	10.3114	-0.4093	-0.0637
295	SLU 9	0.45	-0.7	59.5	10.3097	-0.409	-0.067
295	SLU 10	0.46	-0.67	64.53	11.1823	-0.4358	-0.0672
295	SLU 11	0.44	-0.66	65.94	11.4255	-0.4461	-0.0636
295	SLU 12	0.46	-0.67	65.93	11.4237	-0.4459	-0.0669
295	SLU 13	0.47	-0.69	65.41	11.3341	-0.4424	-0.0681
295	SLU 14	0.45	-0.67	66.82	11.5773	-0.4527	-0.0645
295	SLU 15	0.47	-0.69	66.81	11.5755	-0.4525	-0.0678
295	SLU 16	0.44	-0.68	66.31	11.4889	-0.4493	-0.0635
295	SLU 17	0.46	-0.69	66.3	11.4872	-0.4491	-0.0668
295	SLU 18	0.43	-0.64	67.47	11.6899	-0.4533	-0.0617
295	SLU 19	0.45	-0.66	67.45	11.6881	-0.4531	-0.0649
295	SLU 20	0.44	-0.66	68.35	11.8418	-0.4599	-0.0626
295	SLU 21	0.46	-0.67	68.33	11.84	-0.4597	-0.0658
295	SLU 22	0.48	-0.61	64.16	11.1193	-0.4459	-0.0707
295	SLU 23	0.51	-0.64	64.14	11.1164	-0.4456	-0.0761
295	SLU 24	0.5	-0.62	65.55	11.3595	-0.4559	-0.0725
295	SLU 25	0.51	-0.64	65.53	11.3578	-0.4557	-0.0758
295	SLU 26	0.52	-0.65	65.02	11.2682	-0.4521	-0.077
295	SLU 27	0.5	-0.63	66.43	11.5114	-0.4624	-0.0734
295	SLU 28	0.52	-0.65	66.41	11.5096	-0.4622	-0.0767
295	SLU 29	0.49	-0.64	65.92	11.423	-0.459	-0.0724
295	SLU 30	0.51	-0.66	65.9	11.4212	-0.4588	-0.0757
295	SLU 31	0.52	-0.63	70.93	12.2939	-0.4856	-0.0759
295	SLU 32	0.51	-0.61	72.34	12.537	-0.4959	-0.0724
295	SLU 33	0.52	-0.63	72.33	12.5353	-0.4957	-0.0756
295	SLU 34	0.53	-0.64	71.81	12.4457	-0.4921	-0.0768
295	SLU 35	0.51	-0.63	73.22	12.6889	-0.5024	-0.0733
295	SLU 36	0.53	-0.64	73.21	12.6871	-0.5022	-0.0765
295	SLU 37	0.5	-0.63	72.71	12.6005	-0.499	-0.0723
295	SLU 38	0.52	-0.65	72.7	12.5987	-0.4988	-0.0755
295	SLU 39	0.5	-0.59	73.87	12.8015	-0.5031	-0.0704
295	SLU 40	0.52	-0.61	73.86	12.7997	-0.5029	-0.0737
295	SLU 41	0.5	-0.61	74.75	12.9533	-0.5096	-0.0713
295	SLU 42	0.52	-0.63	74.74	12.9515	-0.5094	-0.0746

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLU 43	0.52	-0.87	72.89	12.629	-0.498	-0.0775
295	SLU 44	0.55	-0.89	72.86	12.626	-0.4976	-0.0829
295	SLU 45	0.54	-0.88	74.27	12.8692	-0.5079	-0.0794
295	SLU 46	0.55	-0.89	74.26	12.8674	-0.5077	-0.0826
295	SLU 47	0.56	-0.91	73.74	12.7779	-0.5041	-0.0838
295	SLU 48	0.54	-0.89	75.15	13.0211	-0.5145	-0.0803
295	SLU 49	0.56	-0.91	75.14	13.0193	-0.5142	-0.0835
295	SLU 50	0.54	-0.9	74.65	12.9327	-0.511	-0.0793
295	SLU 51	0.55	-0.92	74.63	12.9309	-0.5108	-0.0825
295	SLU 52	0.56	-0.88	79.66	13.8035	-0.5376	-0.0828
295	SLU 53	0.55	-0.87	81.07	14.0467	-0.5479	-0.0792
295	SLU 54	0.56	-0.88	81.06	14.0449	-0.5477	-0.0825
295	SLU 55	0.57	-0.9	80.54	13.9554	-0.5442	-0.0836
295	SLU 56	0.55	-0.88	81.95	14.1986	-0.5545	-0.0801
295	SLU 57	0.57	-0.9	81.94	14.1968	-0.5543	-0.0833
295	SLU 58	0.55	-0.89	81.44	14.1102	-0.5511	-0.0791
295	SLU 59	0.56	-0.91	81.43	14.1084	-0.5509	-0.0824
295	SLU 60	0.54	-0.85	82.6	14.3111	-0.5551	-0.0772
295	SLU 61	0.56	-0.87	82.58	14.3094	-0.5549	-0.0805
295	SLU 62	0.54	-0.87	83.48	14.463	-0.5617	-0.0781
295	SLU 63	0.56	-0.89	83.46	14.4612	-0.5615	-0.0814
295	SLU 64	0.59	-0.82	79.29	13.7405	-0.5477	-0.0862
295	SLU 65	0.62	-0.85	79.27	13.7376	-0.5473	-0.0917
295	SLU 66	0.6	-0.83	80.68	13.9808	-0.5577	-0.0881
295	SLU 67	0.62	-0.85	80.66	13.979	-0.5574	-0.0914
295	SLU 68	0.62	-0.86	80.15	13.8894	-0.5539	-0.0926
295	SLU 69	0.61	-0.85	81.56	14.1326	-0.5642	-0.089
295	SLU 70	0.62	-0.86	81.55	14.1308	-0.564	-0.0923
295	SLU 71	0.6	-0.85	81.05	14.0442	-0.5608	-0.088
295	SLU 72	0.62	-0.87	81.04	14.0424	-0.5606	-0.0913
295	SLU 73	0.63	-0.84	86.07	14.9151	-0.5874	-0.0915
295	SLU 74	0.61	-0.82	87.47	15.1583	-0.5977	-0.0879
295	SLU 75	0.63	-0.84	87.46	15.1565	-0.5975	-0.0912
295	SLU 76	0.63	-0.86	86.95	15.0669	-0.5939	-0.0924
295	SLU 77	0.62	-0.84	88.36	15.3101	-0.6042	-0.0888
295	SLU 78	0.63	-0.85	88.34	15.3083	-0.604	-0.0921
295	SLU 79	0.61	-0.84	87.85	15.2217	-0.6008	-0.0878
295	SLU 80	0.63	-0.86	87.83	15.2199	-0.6006	-0.0911
295	SLU 81	0.6	-0.81	89	15.4227	-0.6049	-0.086
295	SLU 82	0.62	-0.82	88.99	15.4209	-0.6047	-0.0892
295	SLU 83	0.61	-0.82	89.88	15.5745	-0.6114	-0.0869
295	SLU 84	0.63	-0.84	89.87	15.5728	-0.6112	-0.0901
295	SLE RA 1	0.44	-0.64	59.58	10.3254	-0.4104	-0.0644
295	SLE RA 2	0.46	-0.66	59.57	10.3234	-0.4101	-0.068
295	SLE RA 3	0.45	-0.65	60.51	10.4855	-0.417	-0.0657
295	SLE RA 4	0.46	-0.66	60.5	10.4843	-0.4169	-0.0678
295	SLE RA 5	0.46	-0.67	60.16	10.4246	-0.4145	-0.0686
295	SLE RA 6	0.45	-0.66	61.1	10.5867	-0.4214	-0.0663
295	SLE RA 7	0.46	-0.67	61.09	10.5855	-0.4212	-0.0684
295	SLE RA 8	0.45	-0.66	60.76	10.5278	-0.4191	-0.0656
295	SLE RA 9	0.46	-0.67	60.75	10.5266	-0.419	-0.0678
295	SLE RA 10	0.46	-0.65	64.1	11.1084	-0.4368	-0.0679
295	SLE RA 11	0.45	-0.64	65.04	11.2705	-0.4437	-0.0655
295	SLE RA 12	0.46	-0.65	65.03	11.2693	-0.4436	-0.0677
295	SLE RA 13	0.47	-0.66	64.69	11.2096	-0.4412	-0.0685
295	SLE RA 14	0.46	-0.65	65.63	11.3717	-0.4481	-0.0661
295	SLE RA 15	0.47	-0.66	65.62	11.3705	-0.4479	-0.0683
295	SLE RA 16	0.45	-0.66	65.29	11.3128	-0.4458	-0.0655
295	SLE RA 17	0.46	-0.67	65.28	11.3116	-0.4456	-0.0677
295	SLE RA 18	0.45	-0.63	66.06	11.4468	-0.4485	-0.0642
295	SLE RA 19	0.46	-0.64	66.05	11.4456	-0.4483	-0.0664
295	SLE RA 20	0.45	-0.64	66.64	11.548	-0.4529	-0.0648
295	SLE RA 21	0.46	-0.65	66.64	11.5468	-0.4527	-0.067
295	SLE FR 1	0.44	-0.64	59.58	10.3254	-0.4104	-0.0644
295	SLE FR 2	0.44	-0.65	59.58	10.325	-0.4103	-0.0651
295	SLE FR 3	0.44	-0.65	59.82	10.3658	-0.4121	-0.0646
295	SLE FR 4	0.44	-0.64	61.52	10.6614	-0.4218	-0.0651
295	SLE FR 5	0.44	-0.64	61.76	10.7023	-0.4236	-0.0646
295	SLE FR 6	0.44	-0.64	62.82	10.8861	-0.4294	-0.0643
295	SLE QP 1	0.44	-0.64	59.58	10.3254	-0.4104	-0.0644
295	SLE QP 2	0.44	-0.64	61.53	10.6618	-0.4218	-0.0644
295	SLD 1	5.65	0.44	55.98	9.7308	-0.2384	-0.9823
295	SLD 2	6.18	0.79	56.46	9.809	-0.2512	-1.0674
295	SLD 3	5.53	-0.9	54.81	9.5496	-0.2098	-0.9979
295	SLD 4	6.06	-0.54	55.3	9.6279	-0.2227	-1.083
295	SLD 5	2.09	1.65	61.54	10.643	-0.4077	-0.3006
295	SLD 6	2.44	1.88	61.86	10.6949	-0.4163	-0.3571
295	SLD 7	1.69	-2.81	57.65	10.0392	-0.3126	-0.3526
295	SLD 8	2.04	-2.57	57.98	10.0911	-0.3211	-0.4091
295	SLD 9	-1.16	1.3	65.07	11.2324	-0.5225	0.2804
295	SLD 10	-0.81	1.53	65.4	11.2844	-0.531	0.2239
295	SLD 11	-1.56	-3.16	61.19	10.6287	-0.4274	0.2284
295	SLD 12	-1.21	-2.93	61.51	10.6806	-0.4359	0.1719
295	SLD 13	-5.18	-0.73	67.75	11.6957	-0.621	0.9543
295	SLD 14	-4.65	-0.38	68.24	11.7739	-0.6338	0.8692
295	SLD 15	-5.3	-2.07	66.59	11.5145	-0.5924	0.9387
295	SLD 16	-4.77	-1.72	67.07	11.5928	-0.6052	0.8536
295	SLV 1	12.63	1.84	48.51	8.4775	0.0081	-2.211
295	SLV 2	13.86	2.66	49.63	8.6597	-0.0217	-2.4092
295	SLV 3	12.35	-1.19	45.86	8.0669	0.0731	-2.2477

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLV 4	13.58	-0.37	46.99	8.2491	0.0433	-2.4458
295	SLV 5	4.31	4.56	61.43	10.5973	-0.3861	-0.618
295	SLV 6	5.11	5.09	62.16	10.716	-0.4056	-0.7471
295	SLV 7	3.37	-5.54	52.62	9.2285	-0.1695	-0.7401
295	SLV 8	4.17	-5.01	53.36	9.3472	-0.189	-0.8692
295	SLV 9	-3.29	3.73	69.7	11.9764	-0.6546	0.7404
295	SLV 10	-2.49	4.27	70.43	12.0951	-0.6741	0.6113
295	SLV 11	-4.23	-6.37	60.89	10.6076	-0.4381	0.6184
295	SLV 12	-3.43	-5.83	61.62	10.7263	-0.4575	0.4893
295	SLV 13	-12.7	-0.91	76.06	13.0745	-0.8869	2.3171
295	SLV 14	-11.47	-0.09	77.19	13.2567	-0.9167	2.1189
295	SLV 15	-12.98	-3.94	73.42	12.6639	-0.8219	2.2805
295	SLV 16	-11.75	-3.12	74.54	12.8461	-0.8518	2.0823
295	CRTFP Ux+	0	0	0	0	0	0
295	CRTFP Ux-	0	0	0	0	0	0
295	CRTFP Uy+	0	0	0	0	0	0
295	CRTFP Uy-	0	0	0	0	0	0
297	SLU 1	0.19	-0.26	27.84	8.3558	-1.7118	-0.0829
297	SLU 2	0.21	-0.28	27.83	8.3533	-1.7113	-0.0889
297	SLU 3	0.2	-0.27	28.5	8.5542	-1.753	-0.0851
297	SLU 4	0.21	-0.27	28.5	8.5527	-1.7526	-0.0887
297	SLU 5	0.21	-0.28	28.25	8.4786	-1.7373	-0.0902
297	SLU 6	0.2	-0.27	28.93	8.6795	-1.779	-0.0864
297	SLU 7	0.21	-0.28	28.92	8.678	-1.7787	-0.09
297	SLU 8	0.2	-0.28	28.68	8.6064	-1.7639	-0.0855
297	SLU 9	0.21	-0.28	28.68	8.6049	-1.7636	-0.0891
297	SLU 10	0.21	-0.26	31.09	9.3262	-1.9118	-0.0892
297	SLU 11	0.2	-0.26	31.77	9.5271	-1.9535	-0.0855
297	SLU 12	0.21	-0.26	31.76	9.5256	-1.9532	-0.0891
297	SLU 13	0.21	-0.27	31.51	9.4515	-1.9379	-0.0906
297	SLU 14	0.21	-0.26	32.19	9.6524	-1.9796	-0.0868
297	SLU 15	0.21	-0.27	32.19	9.6509	-1.9792	-0.0904
297	SLU 16	0.2	-0.27	31.95	9.5793	-1.9645	-0.0859
297	SLU 17	0.21	-0.27	31.94	9.5778	-1.9641	-0.0895
297	SLU 18	0.2	-0.25	32.5	9.7456	-1.9983	-0.0834
297	SLU 19	0.21	-0.25	32.49	9.7441	-1.998	-0.087
297	SLU 20	0.2	-0.25	32.92	9.871	-2.0243	-0.0847
297	SLU 21	0.21	-0.26	32.92	9.8695	-2.024	-0.0883
297	SLU 22	0.22	-0.23	30.93	9.2816	-1.9023	-0.0915
297	SLU 23	0.24	-0.25	30.92	9.2791	-1.9018	-0.0975
297	SLU 24	0.23	-0.24	31.6	9.48	-1.9435	-0.0938
297	SLU 25	0.24	-0.24	31.6	9.4785	-1.9432	-0.0974
297	SLU 26	0.24	-0.25	31.35	9.4045	-1.9278	-0.0989
297	SLU 27	0.23	-0.24	32.03	9.6054	-1.9695	-0.0951
297	SLU 28	0.24	-0.25	32.02	9.6039	-1.9692	-0.0987
297	SLU 29	0.23	-0.25	31.78	9.5323	-1.9545	-0.0942
297	SLU 30	0.24	-0.25	31.77	9.5308	-1.9541	-0.0978
297	SLU 31	0.24	-0.23	34.19	10.252	-2.1023	-0.0979
297	SLU 32	0.23	-0.23	34.87	10.453	-2.144	-0.0942
297	SLU 33	0.24	-0.23	34.86	10.4515	-2.1437	-0.0978
297	SLU 34	0.24	-0.24	34.61	10.3774	-2.1284	-0.0992
297	SLU 35	0.24	-0.23	35.29	10.5783	-2.1701	-0.0955
297	SLU 36	0.24	-0.24	35.28	10.5768	-2.1697	-0.0991
297	SLU 37	0.23	-0.24	35.04	10.5052	-2.155	-0.0946
297	SLU 38	0.24	-0.24	35.04	10.5037	-2.1546	-0.0982
297	SLU 39	0.23	-0.22	35.6	10.6715	-2.1888	-0.0921
297	SLU 40	0.24	-0.23	35.59	10.67	-2.1885	-0.0957
297	SLU 41	0.23	-0.22	36.02	10.7968	-2.2149	-0.0934
297	SLU 42	0.24	-0.23	36.01	10.7953	-2.2145	-0.097
297	SLU 43	0.24	-0.35	35.12	10.545	-2.16	-0.1047
297	SLU 44	0.26	-0.36	35.11	10.5425	-2.1595	-0.1107
297	SLU 45	0.25	-0.35	35.79	10.7435	-2.2012	-0.107
297	SLU 46	0.26	-0.36	35.79	10.742	-2.2009	-0.1106
297	SLU 47	0.26	-0.37	35.54	10.6679	-2.1855	-0.1121
297	SLU 48	0.25	-0.36	36.22	10.8688	-2.2273	-0.1083
297	SLU 49	0.26	-0.37	36.21	10.8673	-2.2269	-0.1119
297	SLU 50	0.25	-0.37	35.97	10.7957	-2.2122	-0.1074
297	SLU 51	0.26	-0.37	35.97	10.7942	-2.2118	-0.111
297	SLU 52	0.26	-0.35	38.38	11.5155	-2.36	-0.1111
297	SLU 53	0.25	-0.34	39.06	11.7164	-2.4017	-0.1074
297	SLU 54	0.26	-0.35	39.05	11.7149	-2.4014	-0.111
297	SLU 55	0.26	-0.36	38.8	11.6408	-2.3861	-0.1124
297	SLU 56	0.25	-0.35	39.48	11.8417	-2.4278	-0.1087
297	SLU 57	0.26	-0.36	39.48	11.8402	-2.4275	-0.1123
297	SLU 58	0.25	-0.35	39.24	11.7686	-2.4127	-0.1078
297	SLU 59	0.26	-0.36	39.23	11.7671	-2.4124	-0.1114
297	SLU 60	0.25	-0.34	39.79	11.9349	-2.4465	-0.1053
297	SLU 61	0.25	-0.34	39.78	11.9334	-2.4462	-0.1089
297	SLU 62	0.25	-0.34	40.21	12.0603	-2.4726	-0.1066
297	SLU 63	0.26	-0.35	40.21	12.0588	-2.4722	-0.1102
297	SLU 64	0.27	-0.32	38.22	11.4709	-2.3506	-0.1134
297	SLU 65	0.29	-0.33	38.21	11.4684	-2.35	-0.1194
297	SLU 66	0.28	-0.32	38.89	11.6693	-2.3917	-0.1157
297	SLU 67	0.29	-0.33	38.89	11.6678	-2.3914	-0.1193
297	SLU 68	0.29	-0.34	38.64	11.5938	-2.3761	-0.1207
297	SLU 69	0.28	-0.33	39.31	11.7947	-2.4178	-0.117
297	SLU 70	0.29	-0.34	39.31	11.7932	-2.4174	-0.1206
297	SLU 71	0.28	-0.34	39.07	11.7216	-2.4027	-0.1161
297	SLU 72	0.29	-0.34	39.06	11.7201	-2.4023	-0.1197
297	SLU 73	0.29	-0.32	41.48	12.4413	-2.5505	-0.1198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLU 74	0.28	-0.31	42.16	12.6422	-2.5922	-0.1161
297	SLU 75	0.29	-0.32	42.15	12.6407	-2.5919	-0.1197
297	SLU 76	0.29	-0.33	41.9	12.5667	-2.5766	-0.1211
297	SLU 77	0.28	-0.32	42.58	12.7676	-2.6183	-0.1174
297	SLU 78	0.29	-0.33	42.57	12.7661	-2.618	-0.121
297	SLU 79	0.28	-0.32	42.33	12.6945	-2.6032	-0.1165
297	SLU 80	0.29	-0.33	42.33	12.693	-2.6029	-0.1201
297	SLU 81	0.28	-0.31	42.89	12.8608	-2.637	-0.114
297	SLU 82	0.28	-0.31	42.88	12.8593	-2.6367	-0.1176
297	SLU 83	0.28	-0.31	43.31	12.9861	-2.6631	-0.1153
297	SLU 84	0.29	-0.32	43.3	12.9846	-2.6628	-0.1189
297	SLE RA 1	0.2	-0.25	28.72	8.6203	-1.7663	-0.0853
297	SLE RA 2	0.21	-0.26	28.71	8.6186	-1.7659	-0.0893
297	SLE RA 3	0.21	-0.26	29.17	8.7526	-1.7937	-0.0868
297	SLE RA 4	0.21	-0.26	29.16	8.7516	-1.7935	-0.0892
297	SLE RA 5	0.21	-0.27	29	8.7022	-1.7833	-0.0902
297	SLE RA 6	0.21	-0.26	29.45	8.8361	-1.8111	-0.0877
297	SLE RA 7	0.21	-0.27	29.45	8.8351	-1.8108	-0.0901
297	SLE RA 8	0.21	-0.26	29.29	8.7874	-1.801	-0.0871
297	SLE RA 9	0.21	-0.27	29.28	8.7864	-1.8008	-0.0895
297	SLE RA 10	0.21	-0.26	30.89	9.2672	-1.8996	-0.0896
297	SLE RA 11	0.21	-0.25	31.34	9.4012	-1.9274	-0.0871
297	SLE RA 12	0.21	-0.25	31.34	9.4002	-1.9272	-0.0895
297	SLE RA 13	0.22	-0.26	31.17	9.3508	-1.9169	-0.0905
297	SLE RA 14	0.21	-0.25	31.63	9.4847	-1.9447	-0.088
297	SLE RA 15	0.22	-0.26	31.62	9.4837	-1.9445	-0.0904
297	SLE RA 16	0.21	-0.26	31.46	9.436	-1.9347	-0.0874
297	SLE RA 17	0.21	-0.26	31.46	9.435	-1.9345	-0.0898
297	SLE RA 18	0.21	-0.24	31.83	9.5469	-1.9572	-0.0857
297	SLE RA 19	0.21	-0.25	31.83	9.5459	-1.957	-0.0881
297	SLE RA 20	0.21	-0.25	32.11	9.6304	-1.9746	-0.0866
297	SLE RA 21	0.21	-0.25	32.11	9.6294	-1.9744	-0.089
297	SLE FR 1	0.2	-0.25	28.72	8.6203	-1.7663	-0.0853
297	SLE FR 2	0.2	-0.26	28.72	8.62	-1.7662	-0.0861
297	SLE FR 3	0.2	-0.26	28.83	8.6537	-1.7732	-0.0857
297	SLE FR 4	0.2	-0.25	29.65	8.8979	-1.8235	-0.0863
297	SLE FR 5	0.2	-0.25	29.77	8.9317	-1.8305	-0.0858
297	SLE FR 6	0.2	-0.25	30.27	9.0836	-1.8617	-0.0855
297	SLE QP 1	0.2	-0.25	28.72	8.6203	-1.7663	-0.0853
297	SLE QP 2	0.2	-0.25	29.65	8.8983	-1.8235	-0.0855
297	SLD 1	2.83	0.28	26.79	8.1704	-1.6436	-0.967
297	SLD 2	3.09	0.48	27.02	8.2314	-1.6584	-1.046
297	SLD 3	2.77	-0.39	26.23	8.0278	-1.6093	-0.9984
297	SLD 4	3.03	-0.19	26.47	8.0888	-1.6242	-1.0775
297	SLD 5	1.04	0.89	29.59	8.885	-1.8188	-0.2879
297	SLD 6	1.21	1.02	29.75	8.9254	-1.8287	-0.3403
297	SLD 7	0.83	-1.34	27.75	8.4099	-1.7046	-0.3926
297	SLD 8	1.01	-1.22	27.9	8.4504	-1.7145	-0.4451
297	SLD 9	-0.6	0.72	31.4	9.3462	-1.9326	0.2742
297	SLD 10	-0.43	0.84	31.56	9.3866	-1.9425	0.2217
297	SLD 11	-0.8	-1.52	29.56	8.8711	-1.8184	0.1694
297	SLD 12	-0.63	-1.39	29.72	8.9116	-1.8283	0.1169
297	SLD 13	-2.62	-0.31	32.83	9.7077	-2.0229	0.9066
297	SLD 14	-2.36	-0.11	33.07	9.7687	-2.0378	0.8275
297	SLD 15	-2.69	-0.98	32.28	9.5652	-1.9887	0.8751
297	SLD 16	-2.42	-0.78	32.52	9.6262	-2.0035	0.7961
297	SLV 1	6.35	0.98	22.93	7.1906	-1.4014	-2.1478
297	SLV 2	6.95	1.42	23.48	7.3326	-1.4359	-2.3318
297	SLV 3	6.21	-0.55	21.67	6.8673	-1.3237	-2.2195
297	SLV 4	6.81	-0.1	22.23	7.0093	-1.3582	-2.4036
297	SLV 5	2.15	2.35	29.44	8.8515	-1.8086	-0.5629
297	SLV 6	2.55	2.64	29.8	8.944	-1.8311	-0.6829
297	SLV 7	1.69	-2.72	25.26	7.7736	-1.5497	-0.8022
297	SLV 8	2.08	-2.43	25.62	7.8661	-1.5722	-0.9221
297	SLV 9	-1.67	1.93	33.68	9.9305	-2.0749	0.7512
297	SLV 10	-1.28	2.22	34.04	10.023	-2.0974	0.6313
297	SLV 11	-2.14	-3.14	29.51	8.8525	-1.8159	0.512
297	SLV 12	-1.75	-2.85	29.87	8.9451	-1.8385	0.392
297	SLV 13	-6.41	-0.4	37.08	10.7873	-2.2889	2.2327
297	SLV 14	-5.8	0.04	37.63	10.9293	-2.3234	2.0486
297	SLV 15	-6.55	-1.93	35.82	10.4639	-2.2112	2.1609
297	SLV 16	-5.94	-1.48	36.38	10.6059	-2.2457	1.9769
297	CRTFP Ux+	0	0	0	0	0	0
297	CRTFP Ux-	0	0	0	0	0	0
297	CRTFP Uy+	0	0	0	0	0	0
297	CRTFP Uy-	0	0	0	0	0	0
298	SLU 1	0.29	-0.3	38.75	10.6703	0.0583	-0.0975
298	SLU 2	0.31	-0.31	38.73	10.6665	0.0582	-0.105
298	SLU 3	0.3	-0.3	39.68	10.9212	0.0597	-0.1005
298	SLU 4	0.31	-0.31	39.67	10.9189	0.0597	-0.105
298	SLU 5	0.31	-0.32	39.32	10.8251	0.0591	-0.1063
298	SLU 6	0.3	-0.31	40.27	11.0798	0.0606	-0.1018
298	SLU 7	0.31	-0.32	40.26	11.0775	0.0606	-0.1063
298	SLU 8	0.3	-0.32	39.92	10.9876	0.0601	-0.1001
298	SLU 9	0.31	-0.33	39.92	10.9853	0.0601	-0.1046
298	SLU 10	0.31	-0.29	43.26	11.8937	0.066	-0.1063
298	SLU 11	0.3	-0.28	44.2	12.1484	0.0675	-0.1019
298	SLU 12	0.31	-0.29	44.19	12.1461	0.0675	-0.1063
298	SLU 13	0.32	-0.3	43.85	12.0524	0.0669	-0.1076
298	SLU 14	0.3	-0.29	44.79	12.307	0.0684	-0.1032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLU 15	0.32	-0.3	44.78	12.3047	0.0684	-0.1076
298	SLU 16	0.3	-0.29	44.45	12.2148	0.0679	-0.1015
298	SLU 17	0.31	-0.3	44.44	12.2125	0.0679	-0.106
298	SLU 18	0.29	-0.26	45.21	12.4235	0.0694	-0.0994
298	SLU 19	0.31	-0.28	45.2	12.4212	0.0693	-0.1039
298	SLU 20	0.3	-0.27	45.8	12.5821	0.0703	-0.1008
298	SLU 21	0.31	-0.28	45.79	12.5798	0.0703	-0.1052
298	SLU 22	0.33	-0.25	43.05	11.8425	0.065	-0.1128
298	SLU 23	0.35	-0.27	43.04	11.8387	0.065	-0.1203
298	SLU 24	0.34	-0.25	43.98	12.0934	0.0665	-0.1158
298	SLU 25	0.35	-0.26	43.98	12.0911	0.0665	-0.1203
298	SLU 26	0.36	-0.27	43.63	11.9973	0.0659	-0.1216
298	SLU 27	0.34	-0.26	44.57	12.252	0.0674	-0.1171
298	SLU 28	0.36	-0.27	44.57	12.2497	0.0674	-0.1216
298	SLU 29	0.34	-0.27	44.23	12.1598	0.0669	-0.1154
298	SLU 30	0.35	-0.28	44.22	12.1575	0.0669	-0.1199
298	SLU 31	0.36	-0.24	47.56	13.0659	0.0728	-0.1216
298	SLU 32	0.35	-0.23	48.51	13.3206	0.0743	-0.1171
298	SLU 33	0.36	-0.24	48.5	13.3183	0.0743	-0.1216
298	SLU 34	0.36	-0.25	48.15	13.2246	0.0737	-0.1229
298	SLU 35	0.35	-0.24	49.1	13.4792	0.0752	-0.1185
298	SLU 36	0.36	-0.25	49.09	13.4769	0.0752	-0.1229
298	SLU 37	0.34	-0.24	48.75	13.387	0.0747	-0.1168
298	SLU 38	0.36	-0.25	48.75	13.3847	0.0746	-0.1213
298	SLU 39	0.34	-0.22	49.51	13.5957	0.0762	-0.1147
298	SLU 40	0.35	-0.23	49.51	13.5934	0.0761	-0.1192
298	SLU 41	0.34	-0.22	50.1	13.7544	0.0771	-0.116
298	SLU 42	0.36	-0.24	50.1	13.752	0.0771	-0.1205
298	SLU 43	0.36	-0.4	48.89	13.4695	0.0734	-0.1215
298	SLU 44	0.38	-0.42	48.88	13.4657	0.0734	-0.129
298	SLU 45	0.37	-0.41	49.82	13.7204	0.0749	-0.1245
298	SLU 46	0.38	-0.42	49.82	13.7181	0.0748	-0.129
298	SLU 47	0.38	-0.43	49.47	13.6243	0.0743	-0.1303
298	SLU 48	0.37	-0.42	50.41	13.879	0.0758	-0.1258
298	SLU 49	0.38	-0.43	50.4	13.8767	0.0758	-0.1303
298	SLU 50	0.37	-0.42	50.07	13.7868	0.0752	-0.1241
298	SLU 51	0.38	-0.43	50.06	13.7845	0.0752	-0.1286
298	SLU 52	0.38	-0.4	53.4	14.6929	0.0811	-0.1303
298	SLU 53	0.37	-0.38	54.35	14.9476	0.0827	-0.1259
298	SLU 54	0.38	-0.4	54.34	14.9453	0.0826	-0.1303
298	SLU 55	0.39	-0.41	53.99	14.8516	0.0821	-0.1316
298	SLU 56	0.38	-0.39	54.93	15.1062	0.0836	-0.1272
298	SLU 57	0.39	-0.4	54.93	15.1039	0.0836	-0.1317
298	SLU 58	0.37	-0.4	54.59	15.014	0.083	-0.1255
298	SLU 59	0.38	-0.41	54.59	15.0117	0.083	-0.13
298	SLU 60	0.37	-0.37	55.35	15.2227	0.0845	-0.1234
298	SLU 61	0.38	-0.38	55.35	15.2204	0.0845	-0.1279
298	SLU 62	0.37	-0.38	55.94	15.3813	0.0854	-0.1248
298	SLU 63	0.38	-0.39	55.94	15.379	0.0854	-0.1292
298	SLU 64	0.4	-0.35	53.2	14.6417	0.0802	-0.1368
298	SLU 65	0.42	-0.37	53.19	14.6379	0.0802	-0.1443
298	SLU 66	0.41	-0.36	54.13	14.8926	0.0817	-0.1398
298	SLU 67	0.42	-0.37	54.12	14.8903	0.0816	-0.1443
298	SLU 68	0.43	-0.38	53.78	14.7965	0.0811	-0.1456
298	SLU 69	0.42	-0.37	54.72	15.0512	0.0826	-0.1411
298	SLU 70	0.43	-0.38	54.71	15.0489	0.0826	-0.1456
298	SLU 71	0.41	-0.37	54.38	14.959	0.082	-0.1394
298	SLU 72	0.42	-0.38	54.37	14.9567	0.082	-0.1439
298	SLU 73	0.43	-0.35	57.71	15.8651	0.0879	-0.1456
298	SLU 74	0.42	-0.34	58.65	16.1198	0.0894	-0.1412
298	SLU 75	0.43	-0.35	58.65	16.1175	0.0894	-0.1456
298	SLU 76	0.43	-0.36	58.3	16.0238	0.0889	-0.1469
298	SLU 77	0.42	-0.34	59.24	16.2784	0.0904	-0.1425
298	SLU 78	0.43	-0.36	59.24	16.2761	0.0903	-0.1469
298	SLU 79	0.42	-0.35	58.9	16.1862	0.0898	-0.1408
298	SLU 80	0.43	-0.36	58.89	16.1839	0.0898	-0.1453
298	SLU 81	0.41	-0.32	59.66	16.3949	0.0913	-0.1387
298	SLU 82	0.42	-0.33	59.65	16.3926	0.0913	-0.1432
298	SLU 83	0.41	-0.33	60.25	16.5536	0.0922	-0.1401
298	SLU 84	0.43	-0.34	60.24	16.5513	0.0922	-0.1445
298	SLE RA 1	0.3	-0.28	39.98	11.0053	0.0602	-0.1019
298	SLE RA 2	0.31	-0.29	39.97	11.0027	0.0602	-0.1068
298	SLE RA 3	0.31	-0.29	40.6	11.1725	0.0612	-0.1039
298	SLE RA 4	0.31	-0.29	40.59	11.1709	0.0612	-0.1068
298	SLE RA 5	0.32	-0.3	40.36	11.1085	0.0608	-0.1077
298	SLE RA 6	0.31	-0.29	40.99	11.2782	0.0618	-0.1047
298	SLE RA 7	0.32	-0.3	40.98	11.2767	0.0618	-0.1077
298	SLE RA 8	0.31	-0.3	40.76	11.2168	0.0614	-0.1036
298	SLE RA 9	0.31	-0.3	40.76	11.2152	0.0614	-0.1066
298	SLE RA 10	0.32	-0.28	42.98	11.8208	0.0654	-0.1078
298	SLE RA 11	0.31	-0.27	43.61	11.9906	0.0664	-0.1048
298	SLE RA 12	0.32	-0.28	43.61	11.9891	0.0663	-0.1078
298	SLE RA 13	0.32	-0.29	43.38	11.9266	0.066	-0.1086
298	SLE RA 14	0.31	-0.28	44	12.0964	0.067	-0.1056
298	SLE RA 15	0.32	-0.28	44	12.0948	0.067	-0.1086
298	SLE RA 16	0.31	-0.28	43.78	12.0349	0.0666	-0.1045
298	SLE RA 17	0.32	-0.29	43.77	12.0334	0.0666	-0.1075
298	SLE RA 18	0.3	-0.26	44.28	12.174	0.0676	-0.1032
298	SLE RA 19	0.31	-0.27	44.28	12.1725	0.0676	-0.1061
298	SLE RA 20	0.31	-0.27	44.68	12.2798	0.0682	-0.104

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
298	SLE RA 21	0.32	-0.27	44.67	12.2783	0.0682	-0.107
298	SLE FR 1	0.3	-0.28	39.98	11.0053	0.0602	-0.1019
298	SLE FR 2	0.3	-0.29	39.97	11.0047	0.0602	-0.1029
298	SLE FR 3	0.3	-0.29	40.13	11.0476	0.0604	-0.1022
298	SLE FR 4	0.3	-0.28	41.27	11.3554	0.0624	-0.1032
298	SLE FR 5	0.3	-0.28	41.43	11.3982	0.0627	-0.1026
298	SLE FR 6	0.3	-0.27	42.13	11.5896	0.0639	-0.1025
298	SLE QP 1	0.3	-0.28	39.98	11.0053	0.0602	-0.1019
298	SLE QP 2	0.3	-0.28	41.27	11.3559	0.0624	-0.1023
298	SLD 1	4.08	0.47	36.99	10.4609	0.0681	-1.4246
298	SLD 2	4.45	0.76	37.34	10.5408	0.0682	-1.5557
298	SLD 3	3.99	-0.49	36.21	10.2668	0.0669	-1.3941
298	SLD 4	4.37	-0.2	36.56	10.3467	0.0669	-1.5252
298	SLD 5	1.5	1.35	41.11	11.3673	0.066	-0.5214
298	SLD 6	1.75	1.54	41.33	11.4202	0.066	-0.6083
298	SLD 7	1.21	-1.85	38.51	10.7203	0.0619	-0.4198
298	SLD 8	1.46	-1.65	38.73	10.7733	0.0619	-0.5067
298	SLD 9	-0.85	1.1	43.8	11.9385	0.0629	0.3022
298	SLD 10	-0.61	1.29	44.03	11.9915	0.063	0.2153
298	SLD 11	-1.14	-2.09	41.2	11.2915	0.0588	0.4038
298	SLD 12	-0.89	-1.9	41.43	11.3445	0.0588	0.3169
298	SLD 13	-3.76	-0.35	45.98	12.3651	0.0579	1.3207
298	SLD 14	-3.39	-0.06	46.33	12.445	0.0579	1.1896
298	SLD 15	-3.85	-1.31	45.2	12.171	0.0567	1.3512
298	SLD 16	-3.47	-1.02	45.55	12.2509	0.0567	1.2201
298	SLV 1	9.13	1.43	31.23	9.256	0.0758	-3.1944
298	SLV 2	10.01	2.11	32.04	9.4419	0.0758	-3.4996
298	SLV 3	8.93	-0.74	29.47	8.815	0.073	-3.1238
298	SLV 4	9.8	-0.07	30.27	9.0009	0.073	-3.429
298	SLV 5	3.1	3.41	40.8	11.3621	0.0707	-1.0833
298	SLV 6	3.67	3.85	41.32	11.4832	0.0707	-1.2822
298	SLV 7	2.43	-3.83	34.9	9.8921	0.0613	-0.848
298	SLV 8	3	-3.39	35.43	10.0132	0.0613	-1.0468
298	SLV 9	-2.4	2.83	47.11	12.6986	0.0635	0.8423
298	SLV 10	-1.83	3.27	47.63	12.8197	0.0636	0.6435
298	SLV 11	-3.07	-4.4	41.21	11.2285	0.0541	1.0777
298	SLV 12	-2.5	-3.96	41.74	11.3496	0.0541	0.8788
298	SLV 13	-9.2	-0.49	52.27	13.7109	0.0518	3.2245
298	SLV 14	-8.33	0.19	53.07	13.8968	0.0519	2.9193
298	SLV 15	-9.4	-2.66	50.5	13.2699	0.049	3.2951
298	SLV 16	-8.53	-1.98	51.3	13.4558	0.049	2.9899
298	CRTFP Ux+	0	0	0	0	0	0
298	CRTFP Ux-	0	0	0	0	0	0
298	CRTFP Uy+	0	0	0	0	0	0
298	CRTFP Uy-	0	0	0	0	0	0
299	SLU 1	0.29	-0.21	36.87	9.0141	0.0649	-0.1003
299	SLU 2	0.32	-0.23	36.86	9.0104	0.0648	-0.1078
299	SLU 3	0.3	-0.21	37.75	9.2222	0.0666	-0.1034
299	SLU 4	0.32	-0.22	37.75	9.2201	0.0665	-0.1079
299	SLU 5	0.32	-0.23	37.42	9.1422	0.0659	-0.1092
299	SLU 6	0.31	-0.22	38.31	9.3541	0.0676	-0.1048
299	SLU 7	0.32	-0.23	38.31	9.3519	0.0676	-0.1093
299	SLU 8	0.3	-0.23	37.99	9.2777	0.067	-0.1031
299	SLU 9	0.32	-0.24	37.98	9.2755	0.0669	-0.1076
299	SLU 10	0.32	-0.19	41.13	10.0253	0.0735	-0.1091
299	SLU 11	0.31	-0.18	42.03	10.2371	0.0752	-0.1047
299	SLU 12	0.32	-0.19	42.02	10.2349	0.0752	-0.1092
299	SLU 13	0.32	-0.2	41.69	10.1571	0.0746	-0.1104
299	SLU 14	0.31	-0.19	42.59	10.3689	0.0763	-0.1061
299	SLU 15	0.32	-0.2	42.58	10.3667	0.0763	-0.1106
299	SLU 16	0.31	-0.19	42.26	10.2926	0.0757	-0.1043
299	SLU 17	0.32	-0.2	42.26	10.2904	0.0756	-0.1088
299	SLU 18	0.3	-0.16	42.97	10.4639	0.0773	-0.1021
299	SLU 19	0.31	-0.17	42.97	10.4617	0.0773	-0.1066
299	SLU 20	0.3	-0.17	43.53	10.5957	0.0783	-0.1035
299	SLU 21	0.32	-0.18	43.53	10.5935	0.0783	-0.108
299	SLU 22	0.34	-0.15	40.96	9.9875	0.0727	-0.1158
299	SLU 23	0.36	-0.17	40.95	9.9838	0.0726	-0.1233
299	SLU 24	0.35	-0.16	41.84	10.1957	0.0743	-0.1189
299	SLU 25	0.36	-0.17	41.83	10.1935	0.0743	-0.1234
299	SLU 26	0.36	-0.18	41.51	10.1156	0.0737	-0.1247
299	SLU 27	0.35	-0.16	42.4	10.3275	0.0754	-0.1203
299	SLU 28	0.37	-0.17	42.39	10.3253	0.0753	-0.1248
299	SLU 29	0.35	-0.17	42.08	10.2511	0.0747	-0.1186
299	SLU 30	0.36	-0.18	42.07	10.2489	0.0747	-0.1231
299	SLU 31	0.37	-0.14	45.22	10.9987	0.0813	-0.1246
299	SLU 32	0.35	-0.12	46.11	11.2105	0.083	-0.1202
299	SLU 33	0.37	-0.13	46.11	11.2083	0.083	-0.1247
299	SLU 34	0.37	-0.15	45.78	11.1305	0.0823	-0.126
299	SLU 35	0.36	-0.13	46.67	11.3423	0.0841	-0.1216
299	SLU 36	0.37	-0.14	46.67	11.3402	0.084	-0.1261
299	SLU 37	0.35	-0.14	46.35	11.266	0.0834	-0.1198
299	SLU 38	0.36	-0.15	46.34	11.2638	0.0834	-0.1244
299	SLU 39	0.35	-0.11	47.06	11.4373	0.0851	-0.1176
299	SLU 40	0.36	-0.12	47.05	11.4351	0.085	-0.1221
299	SLU 41	0.35	-0.12	47.62	11.5691	0.0861	-0.119
299	SLU 42	0.36	-0.13	47.61	11.5669	0.0861	-0.1235
299	SLU 43	0.37	-0.29	46.53	11.3845	0.0817	-0.1251
299	SLU 44	0.39	-0.31	46.52	11.3809	0.0816	-0.1326
299	SLU 45	0.38	-0.29	47.42	11.5927	0.0834	-0.1282

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLU 46	0.39	-0.3	47.41	11.5905	0.0833	-0.1327
299	SLU 47	0.39	-0.32	47.08	11.5127	0.0827	-0.134
299	SLU 48	0.38	-0.3	47.97	11.7245	0.0844	-0.1296
299	SLU 49	0.39	-0.31	47.97	11.7223	0.0844	-0.1341
299	SLU 50	0.38	-0.31	47.65	11.6482	0.0838	-0.1278
299	SLU 51	0.39	-0.32	47.64	11.646	0.0838	-0.1323
299	SLU 52	0.39	-0.28	50.79	12.3958	0.0903	-0.1338
299	SLU 53	0.38	-0.26	51.69	12.6076	0.092	-0.1294
299	SLU 54	0.39	-0.27	51.68	12.6054	0.092	-0.1339
299	SLU 55	0.4	-0.28	51.35	12.5276	0.0914	-0.1352
299	SLU 56	0.38	-0.27	52.25	12.7394	0.0931	-0.1308
299	SLU 57	0.4	-0.28	52.24	12.7372	0.0931	-0.1353
299	SLU 58	0.38	-0.28	51.92	12.663	0.0925	-0.1291
299	SLU 59	0.39	-0.29	51.92	12.6609	0.0924	-0.1336
299	SLU 60	0.37	-0.25	52.64	12.8344	0.0941	-0.1269
299	SLU 61	0.39	-0.26	52.63	12.8322	0.0941	-0.1314
299	SLU 62	0.38	-0.25	53.19	12.9662	0.0952	-0.1282
299	SLU 63	0.39	-0.26	53.19	12.964	0.0951	-0.1328
299	SLU 64	0.41	-0.23	50.62	12.358	0.0895	-0.1406
299	SLU 65	0.43	-0.25	50.61	12.3543	0.0894	-0.1481
299	SLU 66	0.42	-0.24	51.5	12.5661	0.0911	-0.1437
299	SLU 67	0.43	-0.25	51.49	12.5639	0.0911	-0.1482
299	SLU 68	0.44	-0.26	51.17	12.4861	0.0905	-0.1495
299	SLU 69	0.43	-0.25	52.06	12.6979	0.0922	-0.1451
299	SLU 70	0.44	-0.26	52.05	12.6958	0.0921	-0.1496
299	SLU 71	0.42	-0.25	51.74	12.6216	0.0916	-0.1434
299	SLU 72	0.43	-0.26	51.73	12.6194	0.0915	-0.1479
299	SLU 73	0.44	-0.22	54.88	13.3692	0.0981	-0.1494
299	SLU 74	0.43	-0.21	55.77	13.581	0.0998	-0.145
299	SLU 75	0.44	-0.22	55.77	13.5788	0.0998	-0.1495
299	SLU 76	0.44	-0.23	55.44	13.501	0.0991	-0.1507
299	SLU 77	0.43	-0.21	56.33	13.7128	0.1009	-0.1463
299	SLU 78	0.44	-0.22	56.33	13.7106	0.1008	-0.1508
299	SLU 79	0.42	-0.22	56.01	13.6365	0.1002	-0.1446
299	SLU 80	0.44	-0.23	56	13.6343	0.1002	-0.1491
299	SLU 81	0.42	-0.19	56.72	13.8078	0.1019	-0.1424
299	SLU 82	0.43	-0.2	56.71	13.8056	0.1018	-0.1469
299	SLU 83	0.42	-0.2	57.28	13.9396	0.1029	-0.1438
299	SLU 84	0.44	-0.21	57.27	13.9374	0.1029	-0.1483
299	SLE RA 1	0.31	-0.19	38.04	9.2922	0.0671	-0.1047
299	SLE RA 2	0.32	-0.2	38.03	9.2897	0.0671	-0.1097
299	SLE RA 3	0.31	-0.19	38.63	9.431	0.0682	-0.1068
299	SLE RA 4	0.32	-0.2	38.62	9.4295	0.0682	-0.1098
299	SLE RA 5	0.32	-0.21	38.4	9.3776	0.0678	-0.1107
299	SLE RA 6	0.32	-0.2	39	9.5188	0.0689	-0.1077
299	SLE RA 7	0.32	-0.21	39	9.5174	0.0689	-0.1107
299	SLE RA 8	0.31	-0.2	38.79	9.4679	0.0685	-0.1066
299	SLE RA 9	0.32	-0.21	38.78	9.4665	0.0685	-0.1096
299	SLE RA 10	0.32	-0.18	40.88	9.9663	0.0729	-0.1106
299	SLE RA 11	0.32	-0.17	41.48	10.1076	0.074	-0.1076
299	SLE RA 12	0.32	-0.18	41.47	10.1061	0.074	-0.1106
299	SLE RA 13	0.33	-0.19	41.25	10.0542	0.0736	-0.1115
299	SLE RA 14	0.32	-0.18	41.85	10.1954	0.0747	-0.1086
299	SLE RA 15	0.33	-0.19	41.84	10.194	0.0747	-0.1116
299	SLE RA 16	0.32	-0.18	41.63	10.1445	0.0743	-0.1074
299	SLE RA 17	0.32	-0.19	41.63	10.1431	0.0743	-0.1104
299	SLE RA 18	0.31	-0.16	42.11	10.2587	0.0754	-0.1059
299	SLE RA 19	0.32	-0.17	42.1	10.2573	0.0754	-0.1089
299	SLE RA 20	0.31	-0.17	42.48	10.3466	0.0761	-0.1069
299	SLE RA 21	0.32	-0.18	42.48	10.3451	0.0761	-0.1099
299	SLE FR 1	0.31	-0.19	38.04	9.2922	0.0671	-0.1047
299	SLE FR 2	0.31	-0.19	38.04	9.2917	0.0671	-0.1057
299	SLE FR 3	0.31	-0.19	38.19	9.3273	0.0674	-0.1051
299	SLE FR 4	0.31	-0.19	39.26	9.5817	0.0696	-0.1061
299	SLE FR 5	0.31	-0.19	39.41	9.6173	0.0699	-0.1055
299	SLE FR 6	0.31	-0.18	40.07	9.7755	0.0713	-0.1053
299	SLE QP 1	0.31	-0.19	38.04	9.2922	0.0671	-0.1047
299	SLE QP 2	0.31	-0.18	39.26	9.5821	0.0696	-0.1051
299	SLD 1	4.08	0.52	34.82	8.8614	0.0754	-1.4258
299	SLD 2	4.46	0.82	35.16	8.9301	0.0756	-1.5573
299	SLD 3	3.99	-0.43	34.08	8.6911	0.0735	-1.3954
299	SLD 4	4.37	-0.12	34.42	8.7598	0.0737	-1.5268
299	SLD 5	1.5	1.41	38.98	9.6117	0.0742	-0.5236
299	SLD 6	1.75	1.61	39.21	9.6572	0.0743	-0.6108
299	SLD 7	1.21	-1.75	36.52	9.0441	0.0679	-0.4221
299	SLD 8	1.46	-1.55	36.75	9.0897	0.068	-0.5093
299	SLD 9	-0.85	1.18	41.77	10.0746	0.0712	0.2991
299	SLD 10	-0.6	1.38	42	10.1202	0.0713	0.2119
299	SLD 11	-1.14	-1.98	39.31	9.507	0.0649	0.4007
299	SLD 12	-0.89	-1.78	39.54	9.5526	0.065	0.3134
299	SLD 13	-3.75	-0.24	44.1	10.4045	0.0655	1.3166
299	SLD 14	-3.37	0.06	44.44	10.4732	0.0657	1.1852
299	SLD 15	-3.84	-1.19	43.36	10.2342	0.0636	1.3471
299	SLD 16	-3.46	-0.89	43.7	10.3029	0.0638	1.2157
299	SLV 1	9.12	1.43	28.84	7.8913	0.0831	-3.1934
299	SLV 2	10	2.13	29.63	8.0512	0.0835	-3.4994
299	SLV 3	8.92	-0.71	27.16	7.5029	0.0788	-3.1229
299	SLV 4	9.8	-0.01	27.96	7.6628	0.0792	-3.4289
299	SLV 5	3.1	3.43	38.53	9.6359	0.0801	-1.0847
299	SLV 6	3.68	3.89	39.05	9.7401	0.0804	-1.2841

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLV 7	2.43	-3.72	32.95	8.3412	0.0657	-0.8497
299	SLV 8	3.01	-3.27	33.47	8.4453	0.066	-1.0491
299	SLV 9	-2.39	2.9	45.05	10.7189	0.0732	0.8389
299	SLV 10	-1.82	3.35	45.57	10.8231	0.0735	0.6395
299	SLV 11	-3.06	-4.26	39.47	9.4242	0.0588	1.074
299	SLV 12	-2.49	-3.8	39.99	9.5284	0.0591	0.8746
299	SLV 13	-9.18	-0.36	50.56	11.5015	0.06	3.2188
299	SLV 14	-8.31	0.34	51.36	11.6614	0.0604	2.9127
299	SLV 15	-9.38	-2.5	48.89	11.1131	0.0557	3.2893
299	SLV 16	-8.51	-1.8	49.68	11.273	0.0561	2.9832
299	CRTFP Ux+	0	0	0	0	0	0
299	CRTFP Ux-	0	0	0	0	0	0
299	CRTFP Uy+	0	0	0	0	0	0
299	CRTFP Uy-	0	0	0	0	0	0
300	SLU 1	0.3	-0.13	34.96	7.4131	0.0614	-0.1024
300	SLU 2	0.32	-0.15	34.95	7.4099	0.0614	-0.1099
300	SLU 3	0.31	-0.13	35.79	7.5799	0.063	-0.1056
300	SLU 4	0.32	-0.14	35.79	7.578	0.063	-0.1101
300	SLU 5	0.32	-0.16	35.48	7.5157	0.0624	-0.1114
300	SLU 6	0.31	-0.14	36.32	7.6857	0.064	-0.107
300	SLU 7	0.33	-0.15	36.32	7.6838	0.064	-0.1115
300	SLU 8	0.31	-0.15	36.02	7.6246	0.0634	-0.1053
300	SLU 9	0.32	-0.16	36.01	7.6227	0.0634	-0.1098
300	SLU 10	0.32	-0.11	38.97	8.2189	0.0697	-0.111
300	SLU 11	0.31	-0.1	39.81	8.3889	0.0713	-0.1067
300	SLU 12	0.33	-0.11	39.8	8.387	0.0713	-0.1112
300	SLU 13	0.33	-0.12	39.49	8.3246	0.0707	-0.1124
300	SLU 14	0.32	-0.1	40.34	8.4946	0.0723	-0.1081
300	SLU 15	0.33	-0.11	40.33	8.4927	0.0723	-0.1126
300	SLU 16	0.31	-0.11	40.03	8.4335	0.0717	-0.1064
300	SLU 17	0.32	-0.12	40.03	8.4316	0.0717	-0.1109
300	SLU 18	0.3	-0.08	40.7	8.5688	0.0733	-0.1039
300	SLU 19	0.32	-0.09	40.69	8.5669	0.0732	-0.1085
300	SLU 20	0.31	-0.09	41.22	8.6745	0.0743	-0.1054
300	SLU 21	0.32	-0.1	41.22	8.6726	0.0742	-0.1099
300	SLU 22	0.34	-0.07	38.82	8.1923	0.0689	-0.118
300	SLU 23	0.37	-0.09	38.81	8.1892	0.0688	-0.1256
300	SLU 24	0.35	-0.07	39.65	8.3592	0.0705	-0.1212
300	SLU 25	0.37	-0.08	39.64	8.3573	0.0704	-0.1257
300	SLU 26	0.37	-0.09	39.33	8.2949	0.0698	-0.127
300	SLU 27	0.36	-0.08	40.18	8.4649	0.0715	-0.1227
300	SLU 28	0.37	-0.09	40.17	8.463	0.0714	-0.1272
300	SLU 29	0.35	-0.09	39.87	8.4038	0.0709	-0.1209
300	SLU 30	0.37	-0.1	39.87	8.4019	0.0708	-0.1254
300	SLU 31	0.37	-0.05	42.82	8.9981	0.0771	-0.1266
300	SLU 32	0.36	-0.03	43.66	9.1681	0.0788	-0.1223
300	SLU 33	0.37	-0.04	43.66	9.1662	0.0787	-0.1268
300	SLU 34	0.37	-0.06	43.35	9.1039	0.0781	-0.1281
300	SLU 35	0.36	-0.04	44.19	9.2739	0.0797	-0.1238
300	SLU 36	0.37	-0.05	44.19	9.272	0.0797	-0.1283
300	SLU 37	0.36	-0.05	43.89	9.2128	0.0792	-0.122
300	SLU 38	0.37	-0.06	43.88	9.2109	0.0791	-0.1265
300	SLU 39	0.35	-0.02	44.55	9.348	0.0807	-0.1196
300	SLU 40	0.36	-0.03	44.55	9.3461	0.0807	-0.1241
300	SLU 41	0.35	-0.02	45.08	9.4538	0.0817	-0.121
300	SLU 42	0.37	-0.03	45.07	9.4519	0.0817	-0.1255
300	SLU 43	0.37	-0.19	44.13	9.3699	0.0773	-0.1277
300	SLU 44	0.4	-0.21	44.12	9.3667	0.0772	-0.1353
300	SLU 45	0.38	-0.19	44.96	9.5367	0.0789	-0.1309
300	SLU 46	0.4	-0.2	44.95	9.5348	0.0788	-0.1355
300	SLU 47	0.4	-0.22	44.64	9.4724	0.0782	-0.1367
300	SLU 48	0.39	-0.2	45.49	9.6424	0.0799	-0.1324
300	SLU 49	0.4	-0.21	45.48	9.6405	0.0798	-0.1369
300	SLU 50	0.38	-0.21	45.18	9.5813	0.0793	-0.1306
300	SLU 51	0.39	-0.22	45.18	9.5794	0.0792	-0.1351
300	SLU 52	0.4	-0.17	48.13	10.1757	0.0855	-0.1364
300	SLU 53	0.39	-0.16	48.97	10.3457	0.0872	-0.132
300	SLU 54	0.4	-0.17	48.97	10.3438	0.0871	-0.1365
300	SLU 55	0.4	-0.18	48.66	10.2814	0.0865	-0.1378
300	SLU 56	0.39	-0.16	49.5	10.4514	0.0882	-0.1335
300	SLU 57	0.4	-0.17	49.5	10.4495	0.0881	-0.138
300	SLU 58	0.39	-0.17	49.2	10.3903	0.0876	-0.1317
300	SLU 59	0.4	-0.18	49.19	10.3884	0.0875	-0.1362
300	SLU 60	0.38	-0.14	49.86	10.5255	0.0891	-0.1293
300	SLU 61	0.39	-0.15	49.86	10.5236	0.0891	-0.1338
300	SLU 62	0.38	-0.15	50.39	10.6313	0.0901	-0.1307
300	SLU 63	0.4	-0.16	50.39	10.6294	0.0901	-0.1353
300	SLU 64	0.42	-0.13	47.98	10.1491	0.0848	-0.1434
300	SLU 65	0.44	-0.15	47.97	10.1459	0.0847	-0.1509
300	SLU 66	0.43	-0.13	48.81	10.3159	0.0863	-0.1466
300	SLU 67	0.44	-0.14	48.81	10.314	0.0863	-0.1511
300	SLU 68	0.44	-0.16	48.5	10.2517	0.0857	-0.1523
300	SLU 69	0.43	-0.14	49.34	10.4217	0.0873	-0.148
300	SLU 70	0.44	-0.15	49.34	10.4198	0.0873	-0.1525
300	SLU 71	0.43	-0.15	49.04	10.3606	0.0867	-0.1463
300	SLU 72	0.44	-0.16	49.03	10.3587	0.0867	-0.1508
300	SLU 73	0.44	-0.11	51.99	10.9549	0.093	-0.152
300	SLU 74	0.43	-0.1	52.83	11.1249	0.0946	-0.1477
300	SLU 75	0.44	-0.11	52.82	11.123	0.0946	-0.1522
300	SLU 76	0.45	-0.12	52.52	11.0606	0.094	-0.1534

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLU 77	0.44	-0.1	53.36	11.2306	0.0956	-0.1491
300	SLU 78	0.45	-0.11	53.35	11.2287	0.0956	-0.1536
300	SLU 79	0.43	-0.11	53.05	11.1696	0.095	-0.1473
300	SLU 80	0.44	-0.12	53.05	11.1677	0.095	-0.1519
300	SLU 81	0.42	-0.08	53.72	11.3048	0.0966	-0.1449
300	SLU 82	0.44	-0.09	53.71	11.3029	0.0966	-0.1494
300	SLU 83	0.43	-0.08	54.25	11.4105	0.0976	-0.1464
300	SLU 84	0.44	-0.09	54.24	11.4086	0.0976	-0.1509
300	SLE RA 1	0.31	-0.11	36.06	7.6357	0.0636	-0.1068
300	SLE RA 2	0.33	-0.13	36.05	7.6336	0.0635	-0.1119
300	SLE RA 3	0.32	-0.12	36.62	7.747	0.0646	-0.109
300	SLE RA 4	0.33	-0.12	36.61	7.7457	0.0646	-0.112
300	SLE RA 5	0.33	-0.13	36.41	7.7041	0.0642	-0.1128
300	SLE RA 6	0.32	-0.12	36.97	7.8175	0.0653	-0.1099
300	SLE RA 7	0.33	-0.13	36.97	7.8162	0.0653	-0.113
300	SLE RA 8	0.32	-0.12	36.77	7.7767	0.0649	-0.1088
300	SLE RA 9	0.33	-0.13	36.76	7.7755	0.0649	-0.1118
300	SLE RA 10	0.33	-0.1	38.73	8.1729	0.069	-0.1126
300	SLE RA 11	0.32	-0.09	39.29	8.2863	0.0701	-0.1097
300	SLE RA 12	0.33	-0.1	39.29	8.285	0.0701	-0.1127
300	SLE RA 13	0.33	-0.11	39.08	8.2434	0.0697	-0.1136
300	SLE RA 14	0.32	-0.1	39.65	8.3568	0.0708	-0.1107
300	SLE RA 15	0.33	-0.1	39.64	8.3555	0.0708	-0.1137
300	SLE RA 16	0.32	-0.1	39.44	8.316	0.0704	-0.1095
300	SLE RA 17	0.33	-0.11	39.44	8.3148	0.0704	-0.1125
300	SLE RA 18	0.32	-0.08	39.89	8.4062	0.0715	-0.1079
300	SLE RA 19	0.32	-0.09	39.88	8.4049	0.0714	-0.1109
300	SLE RA 20	0.32	-0.08	40.24	8.4767	0.0721	-0.1088
300	SLE RA 21	0.33	-0.09	40.23	8.4754	0.0721	-0.1119
300	SLE FR 1	0.31	-0.11	36.06	7.6357	0.0636	-0.1068
300	SLE FR 2	0.31	-0.12	36.06	7.6353	0.0636	-0.1078
300	SLE FR 3	0.31	-0.12	36.2	7.6639	0.0638	-0.1072
300	SLE FR 4	0.32	-0.11	37.21	7.8665	0.0659	-0.1082
300	SLE FR 5	0.31	-0.11	37.35	7.8951	0.0662	-0.1075
300	SLE FR 6	0.31	-0.1	37.97	8.021	0.0675	-0.1074
300	SLE QP 1	0.31	-0.11	36.06	7.6357	0.0636	-0.1068
300	SLE QP 2	0.31	-0.1	37.21	7.8669	0.0659	-0.1072
300	SLD 1	4.08	0.56	32.58	7.3085	0.0729	-1.426
300	SLD 2	4.45	0.87	32.92	7.3654	0.073	-1.5577
300	SLD 3	3.99	-0.38	31.89	7.1619	0.0708	-1.3957
300	SLD 4	4.37	-0.07	32.23	7.2187	0.071	-1.5274
300	SLD 5	1.51	1.46	36.8	7.9115	0.0711	-0.5249
300	SLD 6	1.76	1.67	37.02	7.9492	0.0712	-0.6123
300	SLD 7	1.22	-1.67	34.51	7.4226	0.0642	-0.4237
300	SLD 8	1.47	-1.46	34.74	7.4603	0.0644	-0.5111
300	SLD 9	-0.84	1.26	39.68	8.2735	0.0675	0.2968
300	SLD 10	-0.59	1.46	39.9	8.3112	0.0676	0.2094
300	SLD 11	-1.13	-1.88	37.39	7.7845	0.0606	0.398
300	SLD 12	-0.88	-1.67	37.62	7.8222	0.0608	0.3106
300	SLD 13	-3.74	-0.14	42.19	8.5151	0.0609	1.313
300	SLD 14	-3.36	0.17	42.52	8.5719	0.061	1.1814
300	SLD 15	-3.83	-1.08	41.5	8.3684	0.0588	1.3434
300	SLD 16	-3.45	-0.76	41.84	8.4252	0.059	1.2117
300	SLV 1	9.12	1.41	26.36	6.5579	0.0821	-3.1911
300	SLV 2	9.99	2.13	27.14	6.6902	0.0825	-3.4976
300	SLV 3	8.91	-0.72	24.8	6.2207	0.0774	-3.1208
300	SLV 4	9.79	0	25.58	6.353	0.0778	-3.4274
300	SLV 5	3.1	3.45	36.18	7.9624	0.0778	-1.085
300	SLV 6	3.68	3.92	36.69	8.0486	0.078	-1.2847
300	SLV 7	2.43	-3.65	30.99	6.8383	0.0622	-0.8508
300	SLV 8	3.01	-3.17	31.5	6.9245	0.0625	-1.0506
300	SLV 9	-2.38	2.97	42.92	8.8093	0.0693	0.8363
300	SLV 10	-1.81	3.44	43.43	8.8955	0.0696	0.6365
300	SLV 11	-3.05	-4.13	37.73	7.6852	0.0538	1.0704
300	SLV 12	-2.48	-3.66	38.24	7.7714	0.0541	0.8707
300	SLV 13	-9.17	-0.21	48.83	9.3808	0.054	3.2131
300	SLV 14	-8.29	0.51	49.62	9.5131	0.0544	2.9065
300	SLV 15	-9.37	-2.34	47.28	9.0436	0.0494	3.2833
300	SLV 16	-8.49	-1.62	48.06	9.1758	0.0498	2.9768
300	CRTFP Ux+	0	0	0	0	0	0
300	CRTFP Ux-	0	0	0	0	0	0
300	CRTFP Uy+	0	0	0	0	0	0
300	CRTFP Uy-	0	0	0	0	0	0
301	SLU 1	0.3	-0.07	33.25	6.0091	0.0516	-0.104
301	SLU 2	0.32	-0.08	33.25	6.0066	0.0515	-0.1115
301	SLU 3	0.31	-0.07	34.04	6.1396	0.0529	-0.1073
301	SLU 4	0.33	-0.08	34.04	6.1381	0.0529	-0.1118
301	SLU 5	0.33	-0.09	33.75	6.0894	0.0524	-0.113
301	SLU 6	0.32	-0.08	34.54	6.2224	0.0538	-0.1088
301	SLU 7	0.33	-0.09	34.54	6.2209	0.0537	-0.1133
301	SLU 8	0.31	-0.08	34.26	6.1747	0.0533	-0.107
301	SLU 9	0.32	-0.09	34.25	6.1732	0.0532	-0.1115
301	SLU 10	0.33	-0.04	37.03	6.6344	0.0586	-0.1124
301	SLU 11	0.32	-0.02	37.83	6.7675	0.06	-0.1082
301	SLU 12	0.33	-0.03	37.82	6.7659	0.06	-0.1127
301	SLU 13	0.33	-0.05	37.53	6.7172	0.0594	-0.1139
301	SLU 14	0.32	-0.03	38.33	6.8502	0.0608	-0.1097
301	SLU 15	0.33	-0.04	38.32	6.8487	0.0608	-0.1142
301	SLU 16	0.31	-0.04	38.04	6.8025	0.0603	-0.1079
301	SLU 17	0.33	-0.05	38.03	6.801	0.0603	-0.1124

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
301	SLU 18	0.31	0	38.66	6.906	0.0617	-0.1053
301	SLU 19	0.32	-0.01	38.65	6.9045	0.0617	-0.1098
301	SLU 20	0.31	-0.01	39.16	6.9888	0.0625	-0.1068
301	SLU 21	0.32	-0.02	39.16	6.9873	0.0625	-0.1113
301	SLU 22	0.35	0	36.9	6.6169	0.0579	-0.1197
301	SLU 23	0.37	-0.02	36.89	6.6143	0.0579	-0.1272
301	SLU 24	0.36	0	37.69	6.7474	0.0593	-0.123
301	SLU 25	0.37	-0.01	37.69	6.7458	0.0592	-0.1275
301	SLU 26	0.37	-0.03	37.39	6.6971	0.0587	-0.1287
301	SLU 27	0.36	-0.01	38.19	6.8302	0.0601	-0.1245
301	SLU 28	0.37	-0.02	38.19	6.8286	0.0601	-0.129
301	SLU 29	0.36	-0.02	37.9	6.7825	0.0596	-0.1227
301	SLU 30	0.37	-0.03	37.9	6.7809	0.0596	-0.1272
301	SLU 31	0.37	0.03	40.68	7.2421	0.0649	-0.1281
301	SLU 32	0.36	0.04	41.47	7.3752	0.0663	-0.1239
301	SLU 33	0.37	0.03	41.47	7.3737	0.0663	-0.1284
301	SLU 34	0.38	0.02	41.18	7.3249	0.0658	-0.1296
301	SLU 35	0.36	0.03	41.98	7.458	0.0672	-0.1254
301	SLU 36	0.38	0.02	41.97	7.4564	0.0671	-0.1299
301	SLU 37	0.36	0.03	41.69	7.4103	0.0667	-0.1236
301	SLU 38	0.37	0.02	41.68	7.4087	0.0666	-0.1281
301	SLU 39	0.35	0.06	42.31	7.5138	0.068	-0.121
301	SLU 40	0.37	0.05	42.3	7.5122	0.068	-0.1255
301	SLU 41	0.36	0.05	42.81	7.5966	0.0689	-0.1225
301	SLU 42	0.37	0.04	42.8	7.595	0.0688	-0.127
301	SLU 43	0.38	-0.11	41.98	7.6035	0.0649	-0.1298
301	SLU 44	0.4	-0.13	41.97	7.6009	0.0648	-0.1374
301	SLU 45	0.39	-0.11	42.77	7.734	0.0662	-0.1331
301	SLU 46	0.4	-0.12	42.76	7.7325	0.0662	-0.1376
301	SLU 47	0.4	-0.13	42.47	7.6837	0.0657	-0.1389
301	SLU 48	0.39	-0.12	43.27	7.8168	0.0671	-0.1346
301	SLU 49	0.4	-0.13	43.27	7.8152	0.067	-0.1391
301	SLU 50	0.39	-0.12	42.98	7.7691	0.0666	-0.1328
301	SLU 51	0.4	-0.13	42.98	7.7675	0.0665	-0.1373
301	SLU 52	0.4	-0.08	45.76	8.2288	0.0719	-0.1383
301	SLU 53	0.39	-0.07	46.55	8.3618	0.0733	-0.134
301	SLU 54	0.4	-0.08	46.55	8.3603	0.0733	-0.1385
301	SLU 55	0.41	-0.09	46.26	8.3115	0.0727	-0.1398
301	SLU 56	0.4	-0.07	47.05	8.4446	0.0741	-0.1355
301	SLU 57	0.41	-0.08	47.05	8.4431	0.0741	-0.14
301	SLU 58	0.39	-0.08	46.76	8.3969	0.0736	-0.1337
301	SLU 59	0.4	-0.09	46.76	8.3954	0.0736	-0.1382
301	SLU 60	0.38	-0.05	47.38	8.5004	0.075	-0.1311
301	SLU 61	0.4	-0.06	47.38	8.4989	0.075	-0.1356
301	SLU 62	0.39	-0.05	47.89	8.5832	0.0758	-0.1326
301	SLU 63	0.4	-0.06	47.88	8.5816	0.0758	-0.1371
301	SLU 64	0.42	-0.05	45.63	8.2113	0.0712	-0.1455
301	SLU 65	0.44	-0.06	45.62	8.2087	0.0712	-0.1531
301	SLU 66	0.43	-0.05	46.42	8.3418	0.0726	-0.1488
301	SLU 67	0.45	-0.06	46.41	8.3402	0.0725	-0.1533
301	SLU 68	0.45	-0.07	46.12	8.2915	0.072	-0.1546
301	SLU 69	0.44	-0.05	46.92	8.4245	0.0734	-0.1503
301	SLU 70	0.45	-0.06	46.91	8.423	0.0734	-0.1548
301	SLU 71	0.43	-0.06	46.63	8.3768	0.0729	-0.1485
301	SLU 72	0.44	-0.07	46.62	8.3753	0.0729	-0.153
301	SLU 73	0.45	-0.02	49.4	8.8365	0.0782	-0.154
301	SLU 74	0.44	0	50.2	8.9696	0.0796	-0.1497
301	SLU 75	0.45	-0.01	50.2	8.968	0.0796	-0.1542
301	SLU 76	0.45	-0.02	49.9	8.9193	0.0791	-0.1555
301	SLU 77	0.44	-0.01	50.7	9.0524	0.0805	-0.1512
301	SLU 78	0.45	-0.02	50.7	9.0508	0.0804	-0.1557
301	SLU 79	0.44	-0.01	50.41	9.0046	0.08	-0.1494
301	SLU 80	0.45	-0.02	50.41	9.0031	0.0799	-0.1539
301	SLU 81	0.43	0.02	51.03	9.1081	0.0813	-0.1468
301	SLU 82	0.44	0.01	51.03	9.1066	0.0813	-0.1513
301	SLU 83	0.43	0.01	51.53	9.1909	0.0822	-0.1483
301	SLU 84	0.45	0	51.53	9.1894	0.0821	-0.1528
301	SLE RA 1	0.32	-0.05	34.3	6.1828	0.0534	-0.1085
301	SLE RA 2	0.33	-0.06	34.29	6.1811	0.0534	-0.1135
301	SLE RA 3	0.32	-0.05	34.82	6.2698	0.0543	-0.1107
301	SLE RA 4	0.33	-0.06	34.82	6.2688	0.0543	-0.1137
301	SLE RA 5	0.33	-0.06	34.62	6.2363	0.0539	-0.1145
301	SLE RA 6	0.32	-0.05	35.16	6.325	0.0548	-0.1117
301	SLE RA 7	0.33	-0.06	35.15	6.3239	0.0548	-0.1147
301	SLE RA 8	0.32	-0.06	34.96	6.2932	0.0545	-0.1105
301	SLE RA 9	0.33	-0.06	34.96	6.2921	0.0545	-0.1135
301	SLE RA 10	0.33	-0.03	36.81	6.5996	0.0581	-0.1141
301	SLE RA 11	0.32	-0.02	37.34	6.6883	0.059	-0.1113
301	SLE RA 12	0.33	-0.03	37.34	6.6873	0.059	-0.1143
301	SLE RA 13	0.34	-0.03	37.15	6.6548	0.0586	-0.1151
301	SLE RA 14	0.33	-0.03	37.68	6.7435	0.0596	-0.1123
301	SLE RA 15	0.34	-0.03	37.68	6.7425	0.0595	-0.1153
301	SLE RA 16	0.32	-0.03	37.49	6.7117	0.0592	-0.1111
301	SLE RA 17	0.33	-0.04	37.48	6.7107	0.0592	-0.1141
301	SLE RA 18	0.32	-0.01	37.9	6.7807	0.0601	-0.1093
301	SLE RA 19	0.33	-0.01	37.9	6.7797	0.0601	-0.1124
301	SLE RA 20	0.32	-0.01	38.23	6.8359	0.0607	-0.1103
301	SLE RA 21	0.33	-0.02	38.23	6.8349	0.0607	-0.1134
301	SLE FR 1	0.32	-0.05	34.3	6.1828	0.0534	-0.1085
301	SLE FR 2	0.32	-0.05	34.29	6.1824	0.0534	-0.1095

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
301	SLE FR 3	0.32	-0.05	34.43	6.2049	0.0536	-0.1089
301	SLE FR 4	0.32	-0.04	35.38	6.3618	0.0554	-0.1097
301	SLE FR 5	0.32	-0.04	35.51	6.3842	0.0556	-0.1091
301	SLE FR 6	0.32	-0.03	36.1	6.4817	0.0568	-0.1089
301	SLE QP 1	0.32	-0.05	34.3	6.1828	0.0534	-0.1085
301	SLE QP 2	0.32	-0.04	35.38	6.3622	0.0554	-0.1087
301	SLD 1	4.07	0.58	30.52	5.9371	0.0643	-1.4255
301	SLD 2	4.45	0.9	30.85	5.983	0.0644	-1.5573
301	SLD 3	3.99	-0.36	29.88	5.8037	0.0624	-1.3953
301	SLD 4	4.37	-0.04	30.21	5.8496	0.0625	-1.5271
301	SLD 5	1.51	1.51	34.82	6.4286	0.0608	-0.5256
301	SLD 6	1.76	1.73	35.04	6.4591	0.0609	-0.613
301	SLD 7	1.22	-1.62	32.7	5.984	0.0547	-0.4249
301	SLD 8	1.47	-1.4	32.92	6.0144	0.0548	-0.5124
301	SLD 9	-0.84	1.33	37.83	6.7099	0.0561	0.295
301	SLD 10	-0.58	1.54	38.05	6.7404	0.0561	0.2075
301	SLD 11	-1.12	-1.8	35.71	6.2652	0.05	0.3956
301	SLD 12	-0.87	-1.59	35.93	6.2957	0.05	0.3081
301	SLD 13	-3.73	-0.03	40.54	6.8747	0.0483	1.3096
301	SLD 14	-3.35	0.29	40.87	6.9206	0.0484	1.1778
301	SLD 15	-3.82	-0.97	39.9	6.7413	0.0465	1.3398
301	SLD 16	-3.44	-0.65	40.23	6.7872	0.0466	1.208
301	SLV 1	9.1	1.37	23.99	5.3666	0.0761	-3.1876
301	SLV 2	9.98	2.12	24.77	5.4734	0.0763	-3.4945
301	SLV 3	8.9	-0.76	22.54	5.0569	0.0719	-3.1178
301	SLV 4	9.78	-0.01	23.32	5.1637	0.0721	-3.4246
301	SLV 5	3.1	3.48	34.02	6.5144	0.0679	-1.0844
301	SLV 6	3.68	3.97	34.52	6.5839	0.068	-1.2843
301	SLV 7	2.43	-3.61	29.2	5.4822	0.054	-0.8516
301	SLV 8	3.01	-3.12	29.7	5.5518	0.0542	-1.0515
301	SLV 9	-2.37	3.05	41.05	7.1726	0.0567	0.8341
301	SLV 10	-1.8	3.54	41.56	7.2421	0.0568	0.6341
301	SLV 11	-3.04	-4.04	36.23	6.1404	0.0428	1.0669
301	SLV 12	-2.47	-3.55	36.73	6.21	0.043	0.8669
301	SLV 13	-9.15	-0.06	47.44	7.5606	0.0388	3.2072
301	SLV 14	-8.27	0.69	48.21	7.6674	0.039	2.9003
301	SLV 15	-9.35	-2.19	45.99	7.2509	0.0346	3.277
301	SLV 16	-8.47	-1.44	46.76	7.3577	0.0348	2.9702
301	CRTFP Ux+	0	0	0	0	0	0
301	CRTFP Ux-	0	0	0	0	0	0
301	CRTFP Uy+	0	0	0	0	0	0
301	CRTFP Uy-	0	0	0	0	0	0
302	SLU 1	0.31	-0.01	31.9	4.8928	0.0379	-0.1053
302	SLU 2	0.33	-0.03	31.9	4.8909	0.0378	-0.1129
302	SLU 3	0.32	-0.01	32.66	4.9944	0.0388	-0.1086
302	SLU 4	0.33	-0.02	32.66	4.9932	0.0388	-0.1132
302	SLU 5	0.33	-0.04	32.38	4.9554	0.0384	-0.1144
302	SLU 6	0.32	-0.02	33.14	5.0589	0.0394	-0.1102
302	SLU 7	0.33	-0.03	33.14	5.0577	0.0394	-0.1147
302	SLU 8	0.31	-0.03	32.86	5.0218	0.0391	-0.1084
302	SLU 9	0.33	-0.04	32.86	5.0206	0.039	-0.1129
302	SLU 10	0.33	0.02	35.5	5.374	0.0431	-0.1136
302	SLU 11	0.32	0.04	36.26	5.4775	0.0442	-0.1093
302	SLU 12	0.33	0.03	36.25	5.4763	0.0441	-0.1139
302	SLU 13	0.33	0.01	35.97	5.4385	0.0438	-0.1151
302	SLU 14	0.32	0.03	36.74	5.542	0.0448	-0.1109
302	SLU 15	0.34	0.02	36.73	5.5408	0.0447	-0.1154
302	SLU 16	0.32	0.02	36.46	5.5049	0.0444	-0.1091
302	SLU 17	0.33	0.01	36.46	5.5038	0.0444	-0.1136
302	SLU 18	0.31	0.06	37.04	5.583	0.0455	-0.1063
302	SLU 19	0.32	0.05	37.04	5.5818	0.0455	-0.1108
302	SLU 20	0.31	0.05	37.52	5.6475	0.0461	-0.1078
302	SLU 21	0.33	0.04	37.52	5.6463	0.0461	-0.1124
302	SLU 22	0.35	0.05	35.39	5.3634	0.0426	-0.121
302	SLU 23	0.37	0.04	35.38	5.3614	0.0425	-0.1286
302	SLU 24	0.36	0.05	36.14	5.465	0.0435	-0.1243
302	SLU 25	0.37	0.04	36.14	5.4638	0.0435	-0.1289
302	SLU 26	0.38	0.03	35.86	5.4259	0.0431	-0.1301
302	SLU 27	0.36	0.05	36.62	5.5294	0.0441	-0.1259
302	SLU 28	0.38	0.04	36.62	5.5283	0.0441	-0.1304
302	SLU 29	0.36	0.04	36.34	5.4924	0.0438	-0.1241
302	SLU 30	0.37	0.03	36.34	5.4912	0.0437	-0.1286
302	SLU 31	0.38	0.09	38.98	5.8445	0.0478	-0.1293
302	SLU 32	0.36	0.1	39.74	5.9481	0.0489	-0.125
302	SLU 33	0.38	0.09	39.73	5.9469	0.0488	-0.1296
302	SLU 34	0.38	0.08	39.46	5.909	0.0485	-0.1308
302	SLU 35	0.37	0.1	40.22	6.0126	0.0495	-0.1266
302	SLU 36	0.38	0.09	40.21	6.0114	0.0494	-0.1311
302	SLU 37	0.36	0.09	39.94	5.9755	0.0491	-0.1248
302	SLU 38	0.38	0.08	39.94	5.9743	0.0491	-0.1293
302	SLU 39	0.35	0.13	40.52	6.0536	0.0502	-0.122
302	SLU 40	0.37	0.12	40.52	6.0524	0.0502	-0.1265
302	SLU 41	0.36	0.12	41	6.118	0.0508	-0.1235
302	SLU 42	0.37	0.11	41	6.1169	0.0508	-0.1281
302	SLU 43	0.38	-0.04	40.28	6.1993	0.0476	-0.1315
302	SLU 44	0.4	-0.06	40.28	6.1974	0.0475	-0.1391
302	SLU 45	0.39	-0.04	41.04	6.3009	0.0486	-0.1348
302	SLU 46	0.4	-0.05	41.03	6.2997	0.0485	-0.1394
302	SLU 47	0.41	-0.06	40.76	6.2619	0.0482	-0.1406
302	SLU 48	0.4	-0.05	41.52	6.3654	0.0492	-0.1364

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLU 49	0.41	-0.06	41.51	6.3642	0.0491	-0.1409
302	SLU 50	0.39	-0.05	41.24	6.3283	0.0488	-0.1346
302	SLU 51	0.4	-0.06	41.24	6.3271	0.0488	-0.1391
302	SLU 52	0.41	-0.01	43.87	6.6805	0.0529	-0.1398
302	SLU 53	0.39	0.01	44.64	6.784	0.0539	-0.1355
302	SLU 54	0.41	0	44.63	6.7829	0.0539	-0.1401
302	SLU 55	0.41	-0.01	44.35	6.745	0.0535	-0.1413
302	SLU 56	0.4	0	45.11	6.8485	0.0545	-0.1371
302	SLU 57	0.41	-0.01	45.11	6.8474	0.0545	-0.1416
302	SLU 58	0.39	0	44.84	6.8114	0.0542	-0.1353
302	SLU 59	0.41	-0.01	44.83	6.8103	0.0541	-0.1398
302	SLU 60	0.39	0.03	45.42	6.8895	0.0552	-0.1325
302	SLU 61	0.4	0.02	45.42	6.8883	0.0552	-0.137
302	SLU 62	0.39	0.02	45.9	6.954	0.0558	-0.134
302	SLU 63	0.4	0.02	45.9	6.9528	0.0558	-0.1386
302	SLU 64	0.43	0.03	43.76	6.6699	0.0523	-0.1472
302	SLU 65	0.45	0.01	43.76	6.6679	0.0522	-0.1548
302	SLU 66	0.44	0.03	44.52	6.7715	0.0533	-0.1505
302	SLU 67	0.45	0.02	44.52	6.7703	0.0532	-0.1551
302	SLU 68	0.45	0	44.24	6.7324	0.0529	-0.1563
302	SLU 69	0.44	0.02	45	6.836	0.0539	-0.1521
302	SLU 70	0.45	0.01	44.99	6.8348	0.0538	-0.1566
302	SLU 71	0.44	0.01	44.72	6.7989	0.0535	-0.1503
302	SLU 72	0.45	0	44.72	6.7977	0.0535	-0.1548
302	SLU 73	0.45	0.06	47.35	7.1511	0.0576	-0.1555
302	SLU 74	0.44	0.08	48.12	7.2546	0.0586	-0.1512
302	SLU 75	0.45	0.07	48.11	7.2534	0.0586	-0.1558
302	SLU 76	0.46	0.06	47.83	7.2155	0.0582	-0.157
302	SLU 77	0.44	0.07	48.59	7.3191	0.0592	-0.1528
302	SLU 78	0.46	0.06	48.59	7.3179	0.0592	-0.1573
302	SLU 79	0.44	0.06	48.32	7.282	0.0589	-0.151
302	SLU 80	0.45	0.06	48.32	7.2808	0.0588	-0.1555
302	SLU 81	0.43	0.1	48.9	7.3601	0.0599	-0.1482
302	SLU 82	0.44	0.09	48.9	7.3589	0.0599	-0.1527
302	SLU 83	0.44	0.09	49.38	7.4246	0.0605	-0.1497
302	SLU 84	0.45	0.08	49.38	7.4234	0.0605	-0.1543
302	SLE RA 1	0.32	0.01	32.9	5.0273	0.0392	-0.1098
302	SLE RA 2	0.33	-0.01	32.9	5.026	0.0392	-0.1148
302	SLE RA 3	0.32	0.01	33.4	5.095	0.0398	-0.112
302	SLE RA 4	0.33	0	33.4	5.0942	0.0398	-0.115
302	SLE RA 5	0.34	-0.01	33.21	5.069	0.0396	-0.1158
302	SLE RA 6	0.33	0	33.72	5.138	0.0402	-0.113
302	SLE RA 7	0.34	-0.01	33.72	5.1372	0.0402	-0.1161
302	SLE RA 8	0.32	0	33.54	5.1133	0.04	-0.1118
302	SLE RA 9	0.33	-0.01	33.54	5.1125	0.04	-0.1149
302	SLE RA 10	0.33	0.03	35.29	5.348	0.0427	-0.1153
302	SLE RA 11	0.33	0.04	35.8	5.4171	0.0434	-0.1125
302	SLE RA 12	0.34	0.03	35.8	5.4163	0.0434	-0.1155
302	SLE RA 13	0.34	0.02	35.61	5.391	0.0431	-0.1163
302	SLE RA 14	0.33	0.03	36.12	5.4601	0.0438	-0.1135
302	SLE RA 15	0.34	0.03	36.12	5.4593	0.0438	-0.1165
302	SLE RA 16	0.33	0.03	35.94	5.4353	0.0436	-0.1123
302	SLE RA 17	0.33	0.02	35.93	5.4346	0.0435	-0.1153
302	SLE RA 18	0.32	0.05	36.32	5.4874	0.0443	-0.1104
302	SLE RA 19	0.33	0.05	36.32	5.4866	0.0443	-0.1135
302	SLE RA 20	0.32	0.05	36.64	5.5304	0.0447	-0.1115
302	SLE RA 21	0.33	0.04	36.64	5.5296	0.0447	-0.1145
302	SLE FR 1	0.32	0.01	32.9	5.0273	0.0392	-0.1098
302	SLE FR 2	0.32	0	32.9	5.027	0.0392	-0.1108
302	SLE FR 3	0.32	0	33.03	5.0445	0.0394	-0.1102
302	SLE FR 4	0.32	0.02	33.93	5.165	0.0407	-0.111
302	SLE FR 5	0.32	0.02	34.05	5.1825	0.0409	-0.1104
302	SLE FR 6	0.32	0.03	34.61	5.2573	0.0417	-0.1101
302	SLE QP 1	0.32	0.01	32.9	5.0273	0.0392	-0.1098
302	SLE QP 2	0.32	0.02	33.93	5.1653	0.0407	-0.11
302	SLD 1	4.07	0.59	28.77	4.8267	0.0521	-1.4244
302	SLD 2	4.45	0.93	29.1	4.8637	0.0521	-1.5562
302	SLD 3	3.98	-0.36	28.17	4.6945	0.0508	-1.3944
302	SLD 4	4.36	-0.02	28.51	4.7316	0.0507	-1.5262
302	SLD 5	1.51	1.57	33.23	5.2574	0.0462	-0.5258
302	SLD 6	1.76	1.79	33.45	5.282	0.0462	-0.6133
302	SLD 7	1.22	-1.59	31.23	4.8169	0.0417	-0.4258
302	SLD 8	1.47	-1.37	31.45	4.8415	0.0417	-0.5133
302	SLD 9	-0.83	1.41	36.4	5.4891	0.0398	0.2934
302	SLD 10	-0.58	1.63	36.62	5.5137	0.0397	0.2059
302	SLD 11	-1.12	-1.75	34.41	5.0486	0.0353	0.3934
302	SLD 12	-0.87	-1.53	34.63	5.0732	0.0352	0.3059
302	SLD 13	-3.72	0.06	39.35	5.599	0.0307	1.3063
302	SLD 14	-3.35	0.4	39.68	5.6361	0.0307	1.1744
302	SLD 15	-3.81	-0.89	38.75	5.4669	0.0294	1.3363
302	SLD 16	-3.43	-0.55	39.08	5.504	0.0293	1.2044
302	SLV 1	9.09	1.32	21.85	4.3727	0.0674	-3.1833
302	SLV 2	9.97	2.1	22.62	4.4589	0.0672	-3.4902
302	SLV 3	8.89	-0.83	20.49	4.0641	0.0643	-3.114
302	SLV 4	9.77	-0.04	21.26	4.1504	0.0641	-3.4208
302	SLV 5	3.1	3.53	32.23	5.3803	0.0534	-1.0833
302	SLV 6	3.67	4.04	32.74	5.4365	0.0533	-1.2832
302	SLV 7	2.43	-3.63	27.7	4.3519	0.0432	-0.852
302	SLV 8	3.01	-3.12	28.2	4.4081	0.0431	-1.0519
302	SLV 9	-2.37	3.16	39.65	5.9225	0.0384	0.832

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLV 10	-1.79	3.67	40.16	5.9787	0.0383	0.632
302	SLV 11	-3.04	-4	35.12	4.8941	0.0282	1.0633
302	SLV 12	-2.46	-3.49	35.62	4.9503	0.028	0.8634
302	SLV 13	-9.13	0.08	46.59	6.1802	0.0173	3.2009
302	SLV 14	-8.25	0.87	47.36	6.2665	0.0171	2.894
302	SLV 15	-9.33	-2.06	45.23	5.8717	0.0143	3.2703
302	SLV 16	-8.45	-1.28	46	5.958	0.0141	2.9634
302	CRTFP Ux+	0	0	0	0	0	0
302	CRTFP Ux-	0	0	0	0	0	0
302	CRTFP Uy+	0	0	0	0	0	0
302	CRTFP Uy-	0	0	0	0	0	0
303	SLU 1	0.31	0.03	31.01	4.1195	0.0216	-0.1063
303	SLU 2	0.33	0.02	31	4.118	0.0215	-0.1139
303	SLU 3	0.32	0.03	31.74	4.201	0.0221	-0.1097
303	SLU 4	0.33	0.02	31.74	4.2001	0.0221	-0.1143
303	SLU 5	0.33	0.01	31.47	4.1698	0.0219	-0.1155
303	SLU 6	0.32	0.03	32.21	4.2528	0.0225	-0.1113
303	SLU 7	0.34	0.02	32.2	4.2519	0.0224	-0.1158
303	SLU 8	0.32	0.02	31.94	4.223	0.0223	-0.1095
303	SLU 9	0.33	0.01	31.94	4.2222	0.0222	-0.114
303	SLU 10	0.33	0.07	34.47	4.4999	0.0248	-0.1144
303	SLU 11	0.32	0.09	35.21	4.5828	0.0254	-0.1102
303	SLU 12	0.33	0.08	35.2	4.582	0.0254	-0.1148
303	SLU 13	0.34	0.07	34.94	4.5517	0.0252	-0.116
303	SLU 14	0.32	0.08	35.67	4.6346	0.0258	-0.1118
303	SLU 15	0.34	0.07	35.67	4.6338	0.0257	-0.1164
303	SLU 16	0.32	0.08	35.4	4.6049	0.0256	-0.11
303	SLU 17	0.33	0.07	35.4	4.604	0.0255	-0.1145
303	SLU 18	0.31	0.11	35.96	4.665	0.0263	-0.107
303	SLU 19	0.32	0.11	35.96	4.6641	0.0263	-0.1116
303	SLU 20	0.32	0.11	36.43	4.7167	0.0266	-0.1086
303	SLU 21	0.33	0.1	36.42	4.7159	0.0266	-0.1132
303	SLU 22	0.35	0.1	34.38	4.4942	0.0243	-0.122
303	SLU 23	0.37	0.09	34.37	4.4928	0.0243	-0.1296
303	SLU 24	0.36	0.1	35.11	4.5757	0.0249	-0.1254
303	SLU 25	0.38	0.09	35.11	4.5749	0.0248	-0.1299
303	SLU 26	0.38	0.08	34.84	4.5446	0.0246	-0.1311
303	SLU 27	0.37	0.1	35.57	4.6275	0.0252	-0.127
303	SLU 28	0.38	0.09	35.57	4.6267	0.0252	-0.1315
303	SLU 29	0.36	0.09	35.31	4.5978	0.025	-0.1251
303	SLU 30	0.38	0.08	35.3	4.5969	0.025	-0.1297
303	SLU 31	0.38	0.15	37.84	4.8746	0.0276	-0.1301
303	SLU 32	0.36	0.16	38.58	4.9576	0.0282	-0.1259
303	SLU 33	0.38	0.15	38.57	4.9567	0.0281	-0.1305
303	SLU 34	0.38	0.14	38.3	4.9264	0.0279	-0.1317
303	SLU 35	0.37	0.16	39.04	5.0094	0.0285	-0.1275
303	SLU 36	0.38	0.15	39.04	5.0085	0.0285	-0.1321
303	SLU 37	0.36	0.15	38.77	4.9796	0.0283	-0.1257
303	SLU 38	0.38	0.14	38.77	4.9788	0.0283	-0.1302
303	SLU 39	0.36	0.19	39.33	5.0397	0.0291	-0.1227
303	SLU 40	0.37	0.18	39.33	5.0389	0.029	-0.1273
303	SLU 41	0.36	0.18	39.79	5.0915	0.0294	-0.1243
303	SLU 42	0.37	0.17	39.79	5.0906	0.0294	-0.1289
303	SLU 43	0.38	0.02	39.16	5.2268	0.0271	-0.1328
303	SLU 44	0.41	0	39.15	5.2254	0.0271	-0.1404
303	SLU 45	0.39	0.02	39.89	5.3083	0.0277	-0.1362
303	SLU 46	0.41	0.01	39.89	5.3075	0.0276	-0.1408
303	SLU 47	0.41	0	39.62	5.2772	0.0274	-0.142
303	SLU 48	0.4	0.01	40.35	5.3601	0.028	-0.1378
303	SLU 49	0.41	0	40.35	5.3593	0.028	-0.1424
303	SLU 50	0.39	0.01	40.09	5.3304	0.0278	-0.136
303	SLU 51	0.41	0	40.08	5.3295	0.0278	-0.1405
303	SLU 52	0.41	0.06	42.62	5.6072	0.0304	-0.1409
303	SLU 53	0.4	0.08	43.36	5.6902	0.031	-0.1367
303	SLU 54	0.41	0.07	43.35	5.6893	0.0309	-0.1413
303	SLU 55	0.41	0.05	43.08	5.659	0.0307	-0.1425
303	SLU 56	0.4	0.07	43.82	5.742	0.0313	-0.1383
303	SLU 57	0.41	0.06	43.82	5.7411	0.0313	-0.1429
303	SLU 58	0.4	0.06	43.55	5.7122	0.0311	-0.1365
303	SLU 59	0.41	0.06	43.55	5.7114	0.0311	-0.141
303	SLU 60	0.39	0.1	44.11	5.7723	0.0318	-0.1335
303	SLU 61	0.4	0.09	44.11	5.7715	0.0318	-0.1381
303	SLU 62	0.39	0.09	44.57	5.8241	0.0322	-0.1351
303	SLU 63	0.41	0.09	44.57	5.8232	0.0322	-0.1397
303	SLU 64	0.43	0.09	42.52	5.6016	0.0299	-0.1485
303	SLU 65	0.45	0.07	42.52	5.6001	0.0298	-0.1561
303	SLU 66	0.44	0.09	43.26	5.6831	0.0304	-0.1519
303	SLU 67	0.45	0.08	43.25	5.6822	0.0304	-0.1564
303	SLU 68	0.46	0.07	42.98	5.6519	0.0302	-0.1577
303	SLU 69	0.44	0.08	43.72	5.7349	0.0308	-0.1535
303	SLU 70	0.46	0.07	43.72	5.734	0.0307	-0.158
303	SLU 71	0.44	0.08	43.45	5.7051	0.0306	-0.1516
303	SLU 72	0.45	0.07	43.45	5.7043	0.0305	-0.1562
303	SLU 73	0.45	0.13	45.99	5.982	0.0331	-0.1566
303	SLU 74	0.44	0.15	46.72	6.0649	0.0337	-0.1524
303	SLU 75	0.45	0.14	46.72	6.0641	0.0337	-0.157
303	SLU 76	0.46	0.13	46.45	6.0338	0.0335	-0.1582
303	SLU 77	0.45	0.14	47.19	6.1167	0.0341	-0.154
303	SLU 78	0.46	0.13	47.19	6.1159	0.034	-0.1586
303	SLU 79	0.44	0.14	46.92	6.087	0.0339	-0.1522

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
303	SLU 80	0.45	0.13	46.92	6.0861	0.0338	-0.1567
303	SLU 81	0.43	0.17	47.48	6.1471	0.0346	-0.1492
303	SLU 82	0.45	0.16	47.47	6.1462	0.0346	-0.1538
303	SLU 83	0.44	0.17	47.94	6.1988	0.0349	-0.1508
303	SLU 84	0.45	0.16	47.94	6.198	0.0349	-0.1554
303	SLE RA 1	0.32	0.05	31.97	4.2265	0.0224	-0.1108
303	SLE RA 2	0.34	0.04	31.97	4.2256	0.0223	-0.1158
303	SLE RA 3	0.33	0.05	32.46	4.2809	0.0227	-0.113
303	SLE RA 4	0.34	0.05	32.46	4.2803	0.0227	-0.1161
303	SLE RA 5	0.34	0.04	32.28	4.2601	0.0226	-0.1169
303	SLE RA 6	0.33	0.05	32.77	4.3154	0.023	-0.1141
303	SLE RA 7	0.34	0.04	32.77	4.3148	0.0229	-0.1171
303	SLE RA 8	0.33	0.05	32.59	4.2956	0.0228	-0.1129
303	SLE RA 9	0.34	0.04	32.59	4.295	0.0228	-0.1159
303	SLE RA 10	0.34	0.08	34.28	4.4802	0.0245	-0.1162
303	SLE RA 11	0.33	0.09	34.77	4.5354	0.0249	-0.1134
303	SLE RA 12	0.34	0.09	34.77	4.5349	0.0249	-0.1164
303	SLE RA 13	0.34	0.08	34.59	4.5147	0.0248	-0.1172
303	SLE RA 14	0.33	0.09	35.08	4.57	0.0252	-0.1144
303	SLE RA 15	0.34	0.08	35.08	4.5694	0.0251	-0.1175
303	SLE RA 16	0.33	0.08	34.9	4.5501	0.025	-0.1132
303	SLE RA 17	0.34	0.08	34.9	4.5496	0.025	-0.1163
303	SLE RA 18	0.32	0.11	35.27	4.5902	0.0255	-0.1113
303	SLE RA 19	0.33	0.1	35.27	4.5896	0.0255	-0.1143
303	SLE RA 20	0.33	0.1	35.58	4.6247	0.0257	-0.1123
303	SLE RA 21	0.33	0.1	35.58	4.6242	0.0257	-0.1154
303	SLE FR 1	0.32	0.05	31.97	4.2265	0.0224	-0.1108
303	SLE FR 2	0.32	0.05	31.97	4.2263	0.0224	-0.1118
303	SLE FR 3	0.32	0.05	32.09	4.2403	0.0225	-0.1112
303	SLE FR 4	0.32	0.07	32.96	4.3354	0.0233	-0.1119
303	SLE FR 5	0.32	0.07	33.08	4.3494	0.0234	-0.1113
303	SLE FR 6	0.32	0.08	33.62	4.4084	0.024	-0.111
303	SLE QP 1	0.32	0.05	31.97	4.2265	0.0224	-0.1108
303	SLE QP 2	0.32	0.07	32.96	4.3356	0.0233	-0.1109
303	SLD 1	4.07	0.6	27.42	4.0176	0.038	-1.4227
303	SLD 2	4.44	0.96	27.76	4.049	0.0377	-1.5545
303	SLD 3	3.98	-0.37	26.85	3.8814	0.0372	-1.3929
303	SLD 4	4.36	-0.01	27.18	3.9128	0.0369	-1.5247
303	SLD 5	1.51	1.63	32.11	4.4411	0.0289	-0.5257
303	SLD 6	1.76	1.87	32.33	4.4619	0.0287	-0.6132
303	SLD 7	1.22	-1.59	30.19	3.9871	0.0264	-0.4263
303	SLD 8	1.47	-1.35	30.42	4.0079	0.0263	-0.5137
303	SLD 9	-0.83	1.49	35.5	4.6634	0.0204	0.2919
303	SLD 10	-0.57	1.73	35.73	4.6842	0.0202	0.2045
303	SLD 11	-1.12	-1.73	33.59	4.2093	0.018	0.3914
303	SLD 12	-0.86	-1.49	33.81	4.2301	0.0178	0.3039
303	SLD 13	-3.71	0.15	38.74	4.7585	0.0097	1.3029
303	SLD 14	-3.34	0.51	39.07	4.7898	0.0094	1.1711
303	SLD 15	-3.8	-0.82	38.16	4.6223	0.009	1.3327
303	SLD 16	-3.42	-0.46	38.5	4.6536	0.0087	1.2009
303	SLV 1	9.08	1.27	19.99	3.5914	0.0576	-3.1783
303	SLV 2	9.96	2.11	20.77	3.6643	0.0569	-3.485
303	SLV 3	8.87	-0.92	18.68	3.273	0.0559	-3.1093
303	SLV 4	9.76	-0.09	19.46	3.346	0.0552	-3.416
303	SLV 5	3.1	3.61	30.92	4.5824	0.0362	-1.0818
303	SLV 6	3.67	4.15	31.43	4.6299	0.0358	-1.2816
303	SLV 7	2.43	-3.7	26.55	3.5212	0.0307	-0.8519
303	SLV 8	3	-3.15	27.06	3.5687	0.0303	-1.0518
303	SLV 9	-2.36	3.29	38.86	5.1026	0.0164	0.83
303	SLV 10	-1.78	3.84	39.37	5.1501	0.0159	0.6301
303	SLV 11	-3.03	-4.01	34.49	4.0413	0.0108	1.0598
303	SLV 12	-2.45	-3.47	35.01	4.0889	0.0104	0.86
303	SLV 13	-9.11	0.23	46.46	5.3253	-0.0086	3.1942
303	SLV 14	-8.23	1.06	47.25	5.3982	-0.0093	2.8875
303	SLV 15	-9.31	-1.97	45.15	5.0069	-0.0103	3.2632
303	SLV 16	-8.43	-1.13	45.94	5.0799	-0.0109	2.9564
303	CRTFP Ux+	0	0	0	0	0	0
303	CRTFP Ux-	0	0	0	0	0	0
303	CRTFP Uy+	0	0	0	0	0	0
303	CRTFP Uy-	0	0	0	0	0	0
304	SLU 1	0.31	0.08	30.63	3.7267	0.0035	-0.107
304	SLU 2	0.33	0.06	30.62	3.7257	0.0035	-0.1146
304	SLU 3	0.32	0.08	31.35	3.7981	0.0036	-0.1105
304	SLU 4	0.33	0.07	31.35	3.7975	0.0035	-0.115
304	SLU 5	0.34	0.06	31.08	3.7711	0.0035	-0.1162
304	SLU 6	0.32	0.07	31.81	3.8434	0.0036	-0.1121
304	SLU 7	0.34	0.06	31.81	3.8428	0.0036	-0.1167
304	SLU 8	0.32	0.07	31.55	3.8173	0.0036	-0.1102
304	SLU 9	0.33	0.06	31.54	3.8168	0.0036	-0.1148
304	SLU 10	0.33	0.12	34.03	4.0543	0.0045	-0.1149
304	SLU 11	0.32	0.14	34.75	4.1266	0.0046	-0.1108
304	SLU 12	0.33	0.13	34.75	4.126	0.0046	-0.1154
304	SLU 13	0.34	0.12	34.48	4.0996	0.0045	-0.1166
304	SLU 14	0.33	0.14	35.21	4.1719	0.0046	-0.1124
304	SLU 15	0.34	0.13	35.21	4.1713	0.0046	-0.117
304	SLU 16	0.32	0.13	34.95	4.1459	0.0046	-0.1106
304	SLU 17	0.33	0.12	34.95	4.1453	0.0046	-0.1152
304	SLU 18	0.31	0.17	35.49	4.196	0.005	-0.1075
304	SLU 19	0.33	0.16	35.48	4.1955	0.005	-0.1121
304	SLU 20	0.32	0.16	35.95	4.2414	0.005	-0.1091

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
304	SLU 21	0.33	0.15	35.94	4.2408	0.005	-0.1137
304	SLU 22	0.35	0.15	33.95	4.0518	0.0041	-0.1226
304	SLU 23	0.38	0.13	33.94	4.0509	0.004	-0.1302
304	SLU 24	0.36	0.15	34.67	4.1232	0.0041	-0.1261
304	SLU 25	0.38	0.14	34.67	4.1226	0.0041	-0.1307
304	SLU 26	0.38	0.13	34.4	4.0962	0.0041	-0.1319
304	SLU 27	0.37	0.15	35.13	4.1685	0.0042	-0.1277
304	SLU 28	0.38	0.14	35.13	4.1679	0.0041	-0.1323
304	SLU 29	0.36	0.14	34.86	4.1425	0.0041	-0.1259
304	SLU 30	0.38	0.13	34.86	4.1419	0.0041	-0.1304
304	SLU 31	0.38	0.2	37.34	4.3794	0.005	-0.1306
304	SLU 32	0.37	0.21	38.07	4.4517	0.0051	-0.1265
304	SLU 33	0.38	0.2	38.07	4.4511	0.0051	-0.131
304	SLU 34	0.38	0.19	37.8	4.4247	0.0051	-0.1322
304	SLU 35	0.37	0.21	38.53	4.497	0.0052	-0.1281
304	SLU 36	0.38	0.2	38.53	4.4965	0.0052	-0.1326
304	SLU 37	0.37	0.2	38.27	4.471	0.0052	-0.1262
304	SLU 38	0.38	0.19	38.26	4.4704	0.0051	-0.1308
304	SLU 39	0.36	0.24	38.8	4.5211	0.0055	-0.1231
304	SLU 40	0.37	0.23	38.8	4.5206	0.0055	-0.1277
304	SLU 41	0.36	0.24	39.26	4.5665	0.0056	-0.1248
304	SLU 42	0.37	0.23	39.26	4.5659	0.0055	-0.1293
304	SLU 43	0.39	0.07	38.68	4.7332	0.0044	-0.1337
304	SLU 44	0.41	0.06	38.67	4.7323	0.0043	-0.1413
304	SLU 45	0.4	0.07	39.4	4.8046	0.0044	-0.1372
304	SLU 46	0.41	0.06	39.4	4.804	0.0044	-0.1418
304	SLU 47	0.41	0.05	39.13	4.7776	0.0044	-0.143
304	SLU 48	0.4	0.07	39.86	4.8499	0.0045	-0.1388
304	SLU 49	0.41	0.06	39.86	4.8494	0.0045	-0.1434
304	SLU 50	0.4	0.06	39.6	4.8239	0.0045	-0.137
304	SLU 51	0.41	0.05	39.59	4.8233	0.0044	-0.1415
304	SLU 52	0.41	0.12	42.08	5.0608	0.0054	-0.1417
304	SLU 53	0.4	0.14	42.8	5.1331	0.0055	-0.1376
304	SLU 54	0.41	0.13	42.8	5.1326	0.0054	-0.1421
304	SLU 55	0.42	0.12	42.54	5.1061	0.0054	-0.1433
304	SLU 56	0.4	0.13	43.26	5.1785	0.0055	-0.1392
304	SLU 57	0.42	0.12	43.26	5.1779	0.0055	-0.1437
304	SLU 58	0.4	0.13	43	5.1524	0.0055	-0.1373
304	SLU 59	0.41	0.12	43	5.1519	0.0055	-0.1419
304	SLU 60	0.39	0.17	43.54	5.2026	0.0059	-0.1342
304	SLU 61	0.4	0.16	43.53	5.202	0.0058	-0.1388
304	SLU 62	0.39	0.16	44	5.2479	0.0059	-0.1359
304	SLU 63	0.41	0.15	43.99	5.2473	0.0059	-0.1404
304	SLU 64	0.43	0.15	42	5.0584	0.0049	-0.1494
304	SLU 65	0.45	0.13	41.99	5.0574	0.0049	-0.157
304	SLU 66	0.44	0.15	42.72	5.1297	0.005	-0.1528
304	SLU 67	0.46	0.14	42.72	5.1291	0.005	-0.1574
304	SLU 68	0.46	0.13	42.45	5.1027	0.0049	-0.1586
304	SLU 69	0.45	0.14	43.18	5.175	0.005	-0.1545
304	SLU 70	0.46	0.13	43.18	5.1745	0.005	-0.159
304	SLU 71	0.44	0.14	42.91	5.149	0.005	-0.1526
304	SLU 72	0.45	0.13	42.91	5.1484	0.005	-0.1572
304	SLU 73	0.46	0.2	45.39	5.3859	0.0059	-0.1573
304	SLU 74	0.44	0.21	46.12	5.4582	0.006	-0.1532
304	SLU 75	0.46	0.2	46.12	5.4577	0.006	-0.1578
304	SLU 76	0.46	0.19	45.85	5.4313	0.0059	-0.1589
304	SLU 77	0.45	0.21	46.58	5.5036	0.0061	-0.1548
304	SLU 78	0.46	0.2	46.58	5.503	0.006	-0.1594
304	SLU 79	0.44	0.2	46.32	5.4775	0.006	-0.153
304	SLU 80	0.46	0.19	46.31	5.477	0.006	-0.1575
304	SLU 81	0.43	0.24	46.86	5.5277	0.0064	-0.1499
304	SLU 82	0.45	0.23	46.85	5.5271	0.0064	-0.1544
304	SLU 83	0.44	0.23	47.31	5.573	0.0064	-0.1515
304	SLU 84	0.45	0.22	47.31	5.5724	0.0064	-0.1561
304	SLE RA 1	0.32	0.1	31.58	3.8196	0.0037	-0.1115
304	SLE RA 2	0.34	0.09	31.57	3.819	0.0036	-0.1165
304	SLE RA 3	0.33	0.1	32.06	3.8672	0.0037	-0.1138
304	SLE RA 4	0.34	0.09	32.06	3.8668	0.0037	-0.1168
304	SLE RA 5	0.34	0.08	31.88	3.8492	0.0037	-0.1176
304	SLE RA 6	0.33	0.09	32.36	3.8974	0.0037	-0.1149
304	SLE RA 7	0.34	0.09	32.36	3.897	0.0037	-0.1179
304	SLE RA 8	0.33	0.09	32.19	3.88	0.0037	-0.1136
304	SLE RA 9	0.34	0.08	32.19	3.8796	0.0037	-0.1167
304	SLE RA 10	0.34	0.13	33.84	4.038	0.0043	-0.1168
304	SLE RA 11	0.33	0.14	34.33	4.0862	0.0044	-0.114
304	SLE RA 12	0.34	0.13	34.32	4.0858	0.0044	-0.1171
304	SLE RA 13	0.34	0.13	34.15	4.0682	0.0044	-0.1178
304	SLE RA 14	0.33	0.14	34.63	4.1164	0.0044	-0.1151
304	SLE RA 15	0.34	0.13	34.63	4.116	0.0044	-0.1181
304	SLE RA 16	0.33	0.13	34.46	4.099	0.0044	-0.1139
304	SLE RA 17	0.34	0.13	34.45	4.0987	0.0044	-0.1169
304	SLE RA 18	0.32	0.16	34.81	4.1325	0.0047	-0.1118
304	SLE RA 19	0.33	0.15	34.81	4.1321	0.0046	-0.1148
304	SLE RA 20	0.33	0.15	35.12	4.1627	0.0047	-0.1129
304	SLE RA 21	0.34	0.15	35.12	4.1623	0.0047	-0.1159
304	SLE FR 1	0.32	0.1	31.58	3.8196	0.0037	-0.1115
304	SLE FR 2	0.33	0.1	31.57	3.8195	0.0037	-0.1125
304	SLE FR 3	0.32	0.1	31.7	3.8317	0.0037	-0.1119
304	SLE FR 4	0.33	0.11	32.55	3.9133	0.004	-0.1126
304	SLE FR 5	0.32	0.11	32.67	3.9255	0.004	-0.112

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
304	SLE FR 6	0.32	0.13	33.2	3.976	0.0042	-0.1116
304	SLE QP 1	0.32	0.1	31.58	3.8196	0.0037	-0.1115
304	SLE QP 2	0.32	0.12	32.55	3.9135	0.004	-0.1116
304	SLD 1	4.06	0.61	26.51	3.5313	0.0224	-1.4206
304	SLD 2	4.44	1	26.86	3.5609	0.0219	-1.5522
304	SLD 3	3.97	-0.39	25.94	3.3934	0.0228	-1.3909
304	SLD 4	4.35	0	26.29	3.423	0.0222	-1.5226
304	SLD 5	1.51	1.71	31.54	4.0026	0.0091	-0.5254
304	SLD 6	1.76	1.96	31.77	4.0222	0.0087	-0.6127
304	SLD 7	1.22	-1.62	29.64	3.5429	0.0102	-0.4264
304	SLD 8	1.47	-1.36	29.87	3.5626	0.0098	-0.5138
304	SLD 9	-0.82	1.6	35.22	4.2643	-0.0019	0.2906
304	SLD 10	-0.57	1.85	35.46	4.284	-0.0023	0.2033
304	SLD 11	-1.11	-1.73	33.32	3.8047	-0.0008	0.3896
304	SLD 12	-0.86	-1.48	33.56	3.8243	-0.0012	0.3023
304	SLD 13	-3.71	0.23	38.8	4.4039	-0.0143	1.2994
304	SLD 14	-3.33	0.62	39.15	4.4335	-0.0148	1.1678
304	SLD 15	-3.79	-0.76	38.23	4.266	-0.014	1.3291
304	SLD 16	-3.41	-0.38	38.58	4.2956	-0.0145	1.1975
304	SLV 1	9.06	1.24	18.42	3.019	0.0472	-3.1724
304	SLV 2	9.94	2.14	19.23	3.088	0.0459	-3.4788
304	SLV 3	8.86	-1.02	17.12	2.6969	0.0479	-3.1038
304	SLV 4	9.74	-0.13	17.93	2.7659	0.0467	-3.4102
304	SLV 5	3.09	3.73	30.14	4.1215	0.016	-1.08
304	SLV 6	3.67	4.31	30.67	4.1664	0.0152	-1.2797
304	SLV 7	2.42	-3.81	25.8	3.0479	0.0185	-0.8513
304	SLV 8	3	-3.23	26.34	3.0928	0.0177	-1.051
304	SLV 9	-2.35	3.46	38.76	4.7341	-0.0098	0.8278
304	SLV 10	-1.78	4.04	39.29	4.779	-0.0106	0.6282
304	SLV 11	-3.02	-4.08	34.43	3.6605	-0.0072	1.0565
304	SLV 12	-2.45	-3.5	34.96	3.7054	-0.0081	0.8569
304	SLV 13	-9.09	0.36	47.16	5.061	-0.0387	3.1871
304	SLV 14	-8.21	1.25	47.98	5.13	-0.04	2.8807
304	SLV 15	-9.3	-1.9	45.86	4.739	-0.038	3.2557
304	SLV 16	-8.41	-1.01	46.68	4.8079	-0.0393	2.9493
304	CRTFP Ux+	0	0	0	0	0	0
304	CRTFP Ux-	0	0	0	0	0	0
304	CRTFP Uy+	0	0	0	0	0	0
304	CRTFP Uy-	0	0	0	0	0	0
305	SLU 1	0.31	0.12	30.81	3.7476	-0.0162	-0.1074
305	SLU 2	0.33	0.1	30.81	3.747	-0.0162	-0.115
305	SLU 3	0.32	0.12	31.54	3.8196	-0.0167	-0.1109
305	SLU 4	0.33	0.11	31.54	3.8192	-0.0167	-0.1155
305	SLU 5	0.34	0.1	31.27	3.7927	-0.0165	-0.1166
305	SLU 6	0.33	0.11	32.01	3.8652	-0.017	-0.1125
305	SLU 7	0.34	0.1	32.01	3.8649	-0.017	-0.1171
305	SLU 8	0.32	0.11	31.74	3.8389	-0.0168	-0.1107
305	SLU 9	0.33	0.1	31.74	3.8386	-0.0168	-0.1152
305	SLU 10	0.33	0.17	34.22	4.0739	-0.0177	-0.1152
305	SLU 11	0.32	0.19	34.95	4.1465	-0.0181	-0.1111
305	SLU 12	0.33	0.18	34.95	4.1461	-0.0181	-0.1156
305	SLU 13	0.34	0.17	34.68	4.1196	-0.018	-0.1168
305	SLU 14	0.33	0.18	35.41	4.1921	-0.0184	-0.1127
305	SLU 15	0.34	0.17	35.41	4.1918	-0.0184	-0.1173
305	SLU 16	0.32	0.18	35.15	4.1658	-0.0182	-0.1109
305	SLU 17	0.33	0.17	35.15	4.1655	-0.0183	-0.1154
305	SLU 18	0.31	0.22	35.68	4.2146	-0.0183	-0.1076
305	SLU 19	0.33	0.21	35.68	4.2142	-0.0183	-0.1122
305	SLU 20	0.32	0.21	36.14	4.2602	-0.0186	-0.1093
305	SLU 21	0.33	0.2	36.14	4.2599	-0.0186	-0.1138
305	SLU 22	0.36	0.2	34.15	4.0733	-0.0181	-0.1229
305	SLU 23	0.38	0.18	34.15	4.0727	-0.0181	-0.1305
305	SLU 24	0.37	0.2	34.88	4.1453	-0.0185	-0.1265
305	SLU 25	0.38	0.19	34.88	4.1449	-0.0186	-0.131
305	SLU 26	0.38	0.17	34.61	4.1184	-0.0184	-0.1322
305	SLU 27	0.37	0.19	35.34	4.191	-0.0188	-0.1281
305	SLU 28	0.38	0.18	35.34	4.1906	-0.0189	-0.1327
305	SLU 29	0.37	0.19	35.08	4.1646	-0.0187	-0.1262
305	SLU 30	0.38	0.18	35.08	4.1643	-0.0187	-0.1308
305	SLU 31	0.38	0.25	37.56	4.3996	-0.0195	-0.1307
305	SLU 32	0.37	0.27	38.29	4.4722	-0.02	-0.1266
305	SLU 33	0.38	0.26	38.29	4.4718	-0.02	-0.1312
305	SLU 34	0.38	0.24	38.02	4.4453	-0.0198	-0.1324
305	SLU 35	0.37	0.26	38.75	4.5179	-0.0203	-0.1283
305	SLU 36	0.38	0.25	38.75	4.5175	-0.0203	-0.1329
305	SLU 37	0.37	0.26	38.48	4.4915	-0.0201	-0.1264
305	SLU 38	0.38	0.25	38.48	4.4912	-0.0201	-0.131
305	SLU 39	0.36	0.3	39.02	4.5403	-0.0201	-0.1232
305	SLU 40	0.37	0.29	39.02	4.5399	-0.0201	-0.1278
305	SLU 41	0.36	0.29	39.48	4.586	-0.0204	-0.1249
305	SLU 42	0.38	0.28	39.48	4.5856	-0.0204	-0.1294
305	SLU 43	0.39	0.13	38.91	4.7602	-0.0204	-0.1342
305	SLU 44	0.41	0.11	38.91	4.7596	-0.0205	-0.1418
305	SLU 45	0.4	0.13	39.64	4.8322	-0.0209	-0.1378
305	SLU 46	0.41	0.12	39.64	4.8318	-0.0209	-0.1423
305	SLU 47	0.41	0.1	39.37	4.8053	-0.0208	-0.1435
305	SLU 48	0.4	0.12	40.11	4.8778	-0.0212	-0.1394
305	SLU 49	0.42	0.11	40.1	4.8775	-0.0212	-0.144
305	SLU 50	0.4	0.12	39.84	4.8515	-0.021	-0.1376
305	SLU 51	0.41	0.11	39.84	4.8512	-0.021	-0.1421

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLU 52	0.41	0.18	42.32	5.0865	-0.0219	-0.142
305	SLU 53	0.4	0.2	43.05	5.159	-0.0223	-0.1379
305	SLU 54	0.41	0.19	43.05	5.1587	-0.0224	-0.1425
305	SLU 55	0.42	0.17	42.78	5.1322	-0.0222	-0.1437
305	SLU 56	0.4	0.19	43.51	5.2047	-0.0226	-0.1396
305	SLU 57	0.42	0.18	43.51	5.2044	-0.0226	-0.1442
305	SLU 58	0.4	0.19	43.25	5.1784	-0.0225	-0.1377
305	SLU 59	0.41	0.18	43.25	5.1781	-0.0225	-0.1423
305	SLU 60	0.39	0.23	43.78	5.2272	-0.0225	-0.1345
305	SLU 61	0.4	0.22	43.78	5.2268	-0.0225	-0.1391
305	SLU 62	0.39	0.22	44.24	5.2728	-0.0228	-0.1362
305	SLU 63	0.41	0.21	44.24	5.2725	-0.0228	-0.1407
305	SLU 64	0.43	0.2	42.25	5.0859	-0.0223	-0.1498
305	SLU 65	0.45	0.19	42.25	5.0853	-0.0223	-0.1574
305	SLU 66	0.44	0.2	42.98	5.1579	-0.0228	-0.1533
305	SLU 67	0.46	0.19	42.98	5.1575	-0.0228	-0.1579
305	SLU 68	0.46	0.18	42.71	5.131	-0.0226	-0.1591
305	SLU 69	0.45	0.2	43.44	5.2035	-0.0231	-0.155
305	SLU 70	0.46	0.19	43.44	5.2032	-0.0231	-0.1595
305	SLU 71	0.44	0.19	43.18	5.1772	-0.0229	-0.1531
305	SLU 72	0.46	0.18	43.18	5.1769	-0.0229	-0.1577
305	SLU 73	0.46	0.26	45.66	5.4122	-0.0238	-0.1576
305	SLU 74	0.44	0.28	46.39	5.4848	-0.0242	-0.1535
305	SLU 75	0.46	0.27	46.39	5.4844	-0.0242	-0.1581
305	SLU 76	0.46	0.25	46.12	5.4579	-0.0241	-0.1592
305	SLU 77	0.45	0.27	46.85	5.5304	-0.0245	-0.1552
305	SLU 78	0.46	0.26	46.85	5.5301	-0.0245	-0.1597
305	SLU 79	0.44	0.27	46.58	5.5041	-0.0243	-0.1533
305	SLU 80	0.46	0.25	46.58	5.5038	-0.0243	-0.1579
305	SLU 81	0.44	0.31	47.12	5.5529	-0.0243	-0.1501
305	SLU 82	0.45	0.29	47.12	5.5525	-0.0244	-0.1546
305	SLU 83	0.44	0.3	47.58	5.5986	-0.0246	-0.1517
305	SLU 84	0.45	0.29	47.58	5.5982	-0.0247	-0.1563
305	SLE RA 1	0.32	0.14	31.77	3.8406	-0.0167	-0.1118
305	SLE RA 2	0.34	0.13	31.77	3.8402	-0.0168	-0.1169
305	SLE RA 3	0.33	0.14	32.25	3.8886	-0.0171	-0.1142
305	SLE RA 4	0.34	0.13	32.25	3.8884	-0.0171	-0.1172
305	SLE RA 5	0.34	0.13	32.07	3.8707	-0.017	-0.118
305	SLE RA 6	0.33	0.14	32.56	3.9191	-0.0172	-0.1153
305	SLE RA 7	0.34	0.13	32.56	3.9188	-0.0173	-0.1183
305	SLE RA 8	0.33	0.13	32.38	3.9015	-0.0171	-0.114
305	SLE RA 9	0.34	0.13	32.38	3.9013	-0.0171	-0.1171
305	SLE RA 10	0.34	0.18	34.04	4.0582	-0.0177	-0.117
305	SLE RA 11	0.33	0.19	34.52	4.1066	-0.018	-0.1143
305	SLE RA 12	0.34	0.18	34.52	4.1063	-0.018	-0.1173
305	SLE RA 13	0.34	0.17	34.35	4.0886	-0.0179	-0.1181
305	SLE RA 14	0.33	0.18	34.83	4.137	-0.0182	-0.1154
305	SLE RA 15	0.34	0.18	34.83	4.1368	-0.0182	-0.1184
305	SLE RA 16	0.33	0.18	34.66	4.1195	-0.0181	-0.1141
305	SLE RA 17	0.34	0.17	34.66	4.1192	-0.0181	-0.1172
305	SLE RA 18	0.32	0.21	35.01	4.152	-0.0181	-0.112
305	SLE RA 19	0.33	0.2	35.01	4.1517	-0.0181	-0.115
305	SLE RA 20	0.33	0.2	35.32	4.1824	-0.0183	-0.1131
305	SLE RA 21	0.34	0.2	35.32	4.1822	-0.0183	-0.1161
305	SLE FR 1	0.32	0.14	31.77	3.8406	-0.0167	-0.1118
305	SLE FR 2	0.33	0.14	31.77	3.8406	-0.0167	-0.1128
305	SLE FR 3	0.32	0.14	31.89	3.8528	-0.0168	-0.1123
305	SLE FR 4	0.33	0.16	32.74	3.934	-0.0172	-0.1129
305	SLE FR 5	0.33	0.16	32.86	3.9462	-0.0172	-0.1123
305	SLE FR 6	0.32	0.17	33.39	3.9963	-0.0174	-0.1119
305	SLE QP 1	0.32	0.14	31.77	3.8406	-0.0167	-0.1118
305	SLE QP 2	0.32	0.16	32.74	3.934	-0.0171	-0.1119
305	SLD 1	4.05	0.64	26.08	3.3845	0.0062	-1.418
305	SLD 2	4.43	1.05	26.45	3.4173	0.0054	-1.5494
305	SLD 3	3.96	-0.4	25.5	3.2513	0.0072	-1.3884
305	SLD 4	4.34	0.01	25.87	3.2841	0.0063	-1.5198
305	SLD 5	1.51	1.81	31.56	3.9652	-0.0115	-0.5247
305	SLD 6	1.76	2.08	31.81	3.987	-0.012	-0.6119
305	SLD 7	1.21	-1.66	29.61	3.5212	-0.0082	-0.426
305	SLD 8	1.47	-1.39	29.86	3.543	-0.0088	-0.5132
305	SLD 9	-0.82	1.71	35.62	4.325	-0.0255	0.2895
305	SLD 10	-0.57	1.98	35.87	4.3468	-0.0261	0.2023
305	SLD 11	-1.11	-1.76	33.67	3.8811	-0.0223	0.3882
305	SLD 12	-0.86	-1.49	33.92	3.9029	-0.0228	0.301
305	SLD 13	-3.7	0.31	39.61	4.5839	-0.0406	1.2961
305	SLD 14	-3.32	0.72	39.98	4.6168	-0.0415	1.1646
305	SLD 15	-3.78	-0.73	39.03	4.4507	-0.0397	1.3257
305	SLD 16	-3.4	-0.32	39.4	4.4836	-0.0405	1.1942
305	SLV 1	9.04	1.24	17.14	2.6479	0.0375	-3.1658
305	SLV 2	9.92	2.21	18.01	2.7244	0.0356	-3.4718
305	SLV 3	8.84	-1.12	15.81	2.337	0.0398	-3.0974
305	SLV 4	9.72	-0.15	16.67	2.4135	0.0378	-3.4034
305	SLV 5	3.09	3.89	29.93	4.0063	-0.0038	-1.078
305	SLV 6	3.67	4.52	30.5	4.0562	-0.0051	-1.2774
305	SLV 7	2.42	-3.97	25.49	2.9699	0.0036	-0.85
305	SLV 8	2.99	-3.34	26.05	3.0197	0.0024	-1.0494
305	SLV 9	-2.34	3.66	39.43	4.8483	-0.0367	0.8256
305	SLV 10	-1.77	4.29	39.99	4.8981	-0.0379	0.6262
305	SLV 11	-3.02	-4.2	34.98	3.8119	-0.0292	1.0537
305	SLV 12	-2.44	-3.57	35.55	3.8617	-0.0305	0.8543

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLV 13	-9.07	0.47	48.81	5.4546	-0.0721	3.1796
305	SLV 14	-8.19	1.44	49.67	5.5311	-0.0741	2.8736
305	SLV 15	-9.28	-1.89	47.47	5.1437	-0.0699	3.248
305	SLV 16	-8.39	-0.92	48.34	5.2201	-0.0718	2.942
305	CRTFP Ux+	0	0	0	0	0	0
305	CRTFP Ux-	0	0	0	0	0	0
305	CRTFP Uy+	0	0	0	0	0	0
305	CRTFP Uy-	0	0	0	0	0	0
306	SLU 1	0.31	0.16	31.62	4.2204	-0.0376	-0.1074
306	SLU 2	0.33	0.14	31.61	4.2202	-0.0376	-0.1149
306	SLU 3	0.32	0.16	32.37	4.3049	-0.0386	-0.1109
306	SLU 4	0.33	0.15	32.37	4.3047	-0.0386	-0.1155
306	SLU 5	0.34	0.13	32.09	4.2737	-0.0383	-0.1166
306	SLU 6	0.33	0.15	32.84	4.3584	-0.0393	-0.1126
306	SLU 7	0.34	0.14	32.84	4.3582	-0.0393	-0.1171
306	SLU 8	0.32	0.15	32.57	4.3274	-0.0389	-0.1107
306	SLU 9	0.33	0.14	32.57	4.3273	-0.0389	-0.1153
306	SLU 10	0.33	0.22	35.1	4.6015	-0.0417	-0.115
306	SLU 11	0.32	0.24	35.86	4.6862	-0.0427	-0.1109
306	SLU 12	0.33	0.22	35.86	4.686	-0.0427	-0.1155
306	SLU 13	0.34	0.21	35.58	4.655	-0.0424	-0.1167
306	SLU 14	0.33	0.23	36.33	4.7397	-0.0434	-0.1126
306	SLU 15	0.34	0.22	36.33	4.7395	-0.0434	-0.1172
306	SLU 16	0.32	0.22	36.06	4.7087	-0.043	-0.1107
306	SLU 17	0.33	0.21	36.06	4.7086	-0.043	-0.1153
306	SLU 18	0.31	0.27	36.6	4.7651	-0.0434	-0.1074
306	SLU 19	0.32	0.26	36.6	4.765	-0.0435	-0.1119
306	SLU 20	0.32	0.26	37.08	4.8186	-0.0441	-0.1091
306	SLU 21	0.33	0.25	37.08	4.8185	-0.0441	-0.1136
306	SLU 22	0.35	0.24	35.05	4.6017	-0.0421	-0.1228
306	SLU 23	0.38	0.22	35.05	4.6015	-0.0421	-0.1304
306	SLU 24	0.37	0.24	35.8	4.6862	-0.0431	-0.1264
306	SLU 25	0.38	0.23	35.8	4.686	-0.0431	-0.1309
306	SLU 26	0.38	0.22	35.52	4.655	-0.0428	-0.1321
306	SLU 27	0.37	0.24	36.28	4.7397	-0.0438	-0.128
306	SLU 28	0.38	0.22	36.28	4.7396	-0.0438	-0.1326
306	SLU 29	0.36	0.23	36	4.7088	-0.0434	-0.1262
306	SLU 30	0.38	0.22	36	4.7086	-0.0434	-0.1307
306	SLU 31	0.38	0.3	38.54	4.9828	-0.0462	-0.1304
306	SLU 32	0.37	0.32	39.29	5.0675	-0.0472	-0.1264
306	SLU 33	0.38	0.31	39.29	5.0673	-0.0472	-0.1309
306	SLU 34	0.38	0.29	39.01	5.0363	-0.0469	-0.1321
306	SLU 35	0.37	0.31	39.77	5.121	-0.0479	-0.1281
306	SLU 36	0.38	0.3	39.77	5.1209	-0.0479	-0.1326
306	SLU 37	0.37	0.31	39.49	5.0901	-0.0475	-0.1262
306	SLU 38	0.38	0.3	39.49	5.0899	-0.0475	-0.1307
306	SLU 39	0.36	0.35	40.03	5.1465	-0.0479	-0.1228
306	SLU 40	0.37	0.34	40.03	5.1463	-0.0479	-0.1274
306	SLU 41	0.36	0.35	40.51	5.2	-0.0486	-0.1245
306	SLU 42	0.37	0.34	40.51	5.1998	-0.0486	-0.1291
306	SLU 43	0.39	0.17	39.92	5.3558	-0.0473	-0.1343
306	SLU 44	0.41	0.16	39.92	5.3556	-0.0474	-0.1419
306	SLU 45	0.4	0.18	40.68	5.4403	-0.0484	-0.1378
306	SLU 46	0.41	0.16	40.68	5.4401	-0.0484	-0.1424
306	SLU 47	0.41	0.15	40.4	5.4091	-0.048	-0.1435
306	SLU 48	0.4	0.17	41.15	5.4938	-0.049	-0.1395
306	SLU 49	0.42	0.16	41.15	5.4936	-0.049	-0.144
306	SLU 50	0.4	0.16	40.88	5.4628	-0.0486	-0.1376
306	SLU 51	0.41	0.15	40.88	5.4627	-0.0486	-0.1422
306	SLU 52	0.41	0.23	43.41	5.7369	-0.0515	-0.1419
306	SLU 53	0.4	0.25	44.17	5.8216	-0.0525	-0.1378
306	SLU 54	0.41	0.24	44.16	5.8214	-0.0525	-0.1424
306	SLU 55	0.42	0.23	43.89	5.7904	-0.0521	-0.1436
306	SLU 56	0.4	0.25	44.64	5.8751	-0.0531	-0.1395
306	SLU 57	0.42	0.24	44.64	5.8749	-0.0531	-0.1441
306	SLU 58	0.4	0.24	44.37	5.8441	-0.0527	-0.1376
306	SLU 59	0.41	0.23	44.37	5.844	-0.0527	-0.1422
306	SLU 60	0.39	0.29	44.91	5.9005	-0.0532	-0.1343
306	SLU 61	0.4	0.27	44.91	5.9004	-0.0532	-0.1389
306	SLU 62	0.39	0.28	45.39	5.954	-0.0538	-0.136
306	SLU 63	0.41	0.27	45.39	5.9539	-0.0538	-0.1405
306	SLU 64	0.43	0.26	43.36	5.7371	-0.0518	-0.1497
306	SLU 65	0.45	0.24	43.36	5.7369	-0.0518	-0.1573
306	SLU 66	0.44	0.26	44.11	5.8216	-0.0528	-0.1533
306	SLU 67	0.46	0.25	44.11	5.8214	-0.0529	-0.1578
306	SLU 68	0.46	0.23	43.83	5.7904	-0.0525	-0.159
306	SLU 69	0.45	0.25	44.59	5.8751	-0.0535	-0.1549
306	SLU 70	0.46	0.24	44.58	5.8749	-0.0535	-0.1595
306	SLU 71	0.44	0.25	44.31	5.8441	-0.0531	-0.1531
306	SLU 72	0.46	0.24	44.31	5.844	-0.0531	-0.1576
306	SLU 73	0.46	0.32	46.84	6.1182	-0.0559	-0.1573
306	SLU 74	0.44	0.34	47.6	6.2029	-0.0569	-0.1533
306	SLU 75	0.46	0.33	47.6	6.2027	-0.057	-0.1578
306	SLU 76	0.46	0.31	47.32	6.1717	-0.0566	-0.159
306	SLU 77	0.45	0.33	48.07	6.2564	-0.0576	-0.155
306	SLU 78	0.46	0.32	48.07	6.2562	-0.0576	-0.1595
306	SLU 79	0.44	0.33	47.8	6.2254	-0.0572	-0.1531
306	SLU 80	0.46	0.32	47.8	6.2253	-0.0572	-0.1577
306	SLU 81	0.43	0.37	48.34	6.2818	-0.0577	-0.1498
306	SLU 82	0.45	0.36	48.34	6.2817	-0.0577	-0.1543

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
306	SLU 83	0.44	0.36	48.82	6.3354	-0.0583	-0.1514
306	SLU 84	0.45	0.35	48.82	6.3352	-0.0583	-0.156
306	SLE RA 1	0.32	0.18	32.6	4.3294	-0.0389	-0.1118
306	SLE RA 2	0.34	0.17	32.6	4.3292	-0.0389	-0.1168
306	SLE RA 3	0.33	0.18	33.1	4.3857	-0.0396	-0.1141
306	SLE RA 4	0.34	0.17	33.1	4.3856	-0.0396	-0.1172
306	SLE RA 5	0.34	0.16	32.91	4.3649	-0.0393	-0.118
306	SLE RA 6	0.33	0.18	33.42	4.4213	-0.04	-0.1153
306	SLE RA 7	0.34	0.17	33.42	4.4212	-0.04	-0.1183
306	SLE RA 8	0.33	0.17	33.23	4.4007	-0.0397	-0.114
306	SLE RA 9	0.34	0.17	33.23	4.4006	-0.0397	-0.117
306	SLE RA 10	0.34	0.22	34.92	4.5834	-0.0416	-0.1169
306	SLE RA 11	0.33	0.23	35.42	4.6399	-0.0423	-0.1142
306	SLE RA 12	0.34	0.23	35.42	4.6398	-0.0423	-0.1172
306	SLE RA 13	0.34	0.22	35.24	4.6191	-0.0421	-0.118
306	SLE RA 14	0.33	0.23	35.74	4.6755	-0.0427	-0.1153
306	SLE RA 15	0.34	0.22	35.74	4.6754	-0.0427	-0.1183
306	SLE RA 16	0.33	0.23	35.56	4.6549	-0.0425	-0.114
306	SLE RA 17	0.34	0.22	35.56	4.6548	-0.0425	-0.1171
306	SLE RA 18	0.32	0.25	35.92	4.6925	-0.0428	-0.1118
306	SLE RA 19	0.33	0.25	35.92	4.6924	-0.0428	-0.1148
306	SLE RA 20	0.33	0.25	36.24	4.7282	-0.0432	-0.1129
306	SLE RA 21	0.34	0.24	36.24	4.7281	-0.0432	-0.116
306	SLE FR 1	0.32	0.18	32.6	4.3294	-0.0389	-0.1118
306	SLE FR 2	0.33	0.18	32.6	4.3293	-0.0389	-0.1128
306	SLE FR 3	0.32	0.18	32.72	4.3436	-0.039	-0.1122
306	SLE FR 4	0.33	0.2	33.59	4.4383	-0.04	-0.1128
306	SLE FR 5	0.32	0.2	33.72	4.4526	-0.0402	-0.1122
306	SLE FR 6	0.32	0.22	34.26	4.5109	-0.0408	-0.1118
306	SLE QP 1	0.32	0.18	32.6	4.3294	-0.0389	-0.1118
306	SLE QP 2	0.32	0.2	33.59	4.4383	-0.04	-0.1118
306	SLD 1	4.04	0.67	26.15	3.6	-0.0109	-1.4148
306	SLD 2	4.42	1.13	26.55	3.6421	-0.0121	-1.546
306	SLD 3	3.96	-0.42	25.53	3.477	-0.0091	-1.3852
306	SLD 4	4.33	0.03	25.93	3.5191	-0.0103	-1.5164
306	SLD 5	1.5	1.92	32.23	4.3657	-0.0338	-0.5238
306	SLD 6	1.76	2.22	32.5	4.3937	-0.0346	-0.6109
306	SLD 7	1.21	-1.73	30.16	3.9557	-0.0278	-0.425
306	SLD 8	1.46	-1.43	30.42	3.9836	-0.0286	-0.5121
306	SLD 9	-0.81	1.83	36.76	4.893	-0.0515	0.2885
306	SLD 10	-0.56	2.13	37.03	4.921	-0.0523	0.2014
306	SLD 11	-1.11	-1.82	34.69	4.4829	-0.0455	0.3873
306	SLD 12	-0.86	-1.52	34.96	4.5109	-0.0462	0.3002
306	SLD 13	-3.69	0.37	41.26	5.3575	-0.0698	1.2929
306	SLD 14	-3.31	0.82	41.66	5.3997	-0.0709	1.1616
306	SLD 15	-3.78	-0.72	40.64	5.2345	-0.0679	1.3225
306	SLD 16	-3.4	-0.27	41.04	5.2766	-0.0691	1.1913
306	SLV 1	9.02	1.27	16.16	2.4766	0.0281	-3.1585
306	SLV 2	9.9	2.32	17.09	2.5747	0.0254	-3.464
306	SLV 3	8.82	-1.21	14.74	2.1895	0.0322	-3.09
306	SLV 4	9.7	-0.16	15.67	2.2876	0.0295	-3.3956
306	SLV 5	3.09	4.1	30.35	4.2679	-0.0253	-1.0759
306	SLV 6	3.66	4.79	30.96	4.3319	-0.0271	-1.275
306	SLV 7	2.41	-4.17	25.62	3.311	-0.0117	-0.8477
306	SLV 8	2.98	-3.48	26.23	3.375	-0.0134	-1.0468
306	SLV 9	-2.34	3.88	40.96	5.5017	-0.0666	0.8233
306	SLV 10	-1.76	4.57	41.56	5.5656	-0.0684	0.6242
306	SLV 11	-3.02	-4.38	36.23	4.5448	-0.0529	1.0514
306	SLV 12	-2.44	-3.69	36.84	4.6087	-0.0547	0.8523
306	SLV 13	-9.05	0.56	51.51	6.589	-0.1095	3.172
306	SLV 14	-8.17	1.62	52.45	6.6871	-0.1123	2.8665
306	SLV 15	-9.26	-1.92	50.1	6.3019	-0.1054	3.2404
306	SLV 16	-8.38	-0.87	51.03	6.4	-0.1082	2.9349
306	CRTFP Ux+	0	0	0	0	0	0
306	CRTFP Ux-	0	0	0	0	0	0
306	CRTFP Uy+	0	0	0	0	0	0
306	CRTFP Uy-	0	0	0	0	0	0
307	SLU 1	0.31	0.19	33.08	5.189	-0.0606	-0.1069
307	SLU 2	0.33	0.17	33.08	5.1891	-0.0607	-0.1145
307	SLU 3	0.32	0.19	33.88	5.299	-0.0623	-0.1105
307	SLU 4	0.33	0.18	33.88	5.299	-0.0623	-0.115
307	SLU 5	0.33	0.17	33.59	5.2587	-0.0617	-0.1162
307	SLU 6	0.32	0.19	34.38	5.3686	-0.0633	-0.1122
307	SLU 7	0.34	0.18	34.38	5.3686	-0.0634	-0.1167
307	SLU 8	0.32	0.18	34.09	5.3282	-0.0627	-0.1103
307	SLU 9	0.33	0.17	34.09	5.3282	-0.0627	-0.1148
307	SLU 10	0.33	0.26	36.74	5.6858	-0.0676	-0.1144
307	SLU 11	0.32	0.28	37.53	5.7957	-0.0693	-0.1104
307	SLU 12	0.33	0.27	37.53	5.7958	-0.0693	-0.1149
307	SLU 13	0.34	0.25	37.24	5.7554	-0.0687	-0.1161
307	SLU 14	0.32	0.27	38.03	5.8653	-0.0703	-0.112
307	SLU 15	0.34	0.26	38.03	5.8654	-0.0703	-0.1166
307	SLU 16	0.32	0.27	37.74	5.825	-0.0697	-0.1102
307	SLU 17	0.33	0.26	37.74	5.825	-0.0697	-0.1147
307	SLU 18	0.31	0.31	38.31	5.8987	-0.0706	-0.1067
307	SLU 19	0.32	0.3	38.31	5.8987	-0.0706	-0.1113
307	SLU 20	0.31	0.31	38.81	5.9683	-0.0716	-0.1084
307	SLU 21	0.33	0.3	38.81	5.9683	-0.0716	-0.113
307	SLU 22	0.35	0.28	36.69	5.6862	-0.0679	-0.1222
307	SLU 23	0.37	0.26	36.69	5.6863	-0.068	-0.1298

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLU 24	0.36	0.28	37.49	5.7962	-0.0696	-0.1258
307	SLU 25	0.38	0.27	37.49	5.7963	-0.0696	-0.1303
307	SLU 26	0.38	0.25	37.2	5.7559	-0.069	-0.1315
307	SLU 27	0.37	0.27	37.99	5.8658	-0.0706	-0.1275
307	SLU 28	0.38	0.26	37.99	5.8659	-0.0707	-0.132
307	SLU 29	0.36	0.27	37.7	5.8254	-0.07	-0.1256
307	SLU 30	0.38	0.26	37.7	5.8255	-0.0701	-0.1302
307	SLU 31	0.37	0.34	40.35	6.1831	-0.0749	-0.1297
307	SLU 32	0.36	0.37	41.14	6.293	-0.0766	-0.1257
307	SLU 33	0.38	0.35	41.14	6.293	-0.0766	-0.1302
307	SLU 34	0.38	0.34	40.85	6.2527	-0.076	-0.1314
307	SLU 35	0.37	0.36	41.64	6.3626	-0.0776	-0.1274
307	SLU 36	0.38	0.35	41.64	6.3626	-0.0776	-0.1319
307	SLU 37	0.36	0.35	41.35	6.3222	-0.077	-0.1255
307	SLU 38	0.38	0.34	41.35	6.3223	-0.077	-0.13
307	SLU 39	0.35	0.4	41.91	6.3959	-0.0779	-0.1221
307	SLU 40	0.37	0.39	41.91	6.396	-0.0779	-0.1266
307	SLU 41	0.36	0.4	42.42	6.4655	-0.0789	-0.1237
307	SLU 42	0.37	0.38	42.42	6.4656	-0.079	-0.1283
307	SLU 43	0.39	0.22	41.77	6.5752	-0.0763	-0.1338
307	SLU 44	0.41	0.2	41.77	6.5753	-0.0764	-0.1413
307	SLU 45	0.4	0.22	42.56	6.6852	-0.078	-0.1373
307	SLU 46	0.41	0.21	42.56	6.6852	-0.078	-0.1419
307	SLU 47	0.41	0.19	42.28	6.6449	-0.0774	-0.143
307	SLU 48	0.4	0.21	43.07	6.7548	-0.079	-0.139
307	SLU 49	0.41	0.2	43.07	6.7548	-0.079	-0.1435
307	SLU 50	0.4	0.21	42.78	6.7144	-0.0784	-0.1371
307	SLU 51	0.41	0.2	42.78	6.7144	-0.0784	-0.1417
307	SLU 52	0.41	0.28	45.43	7.072	-0.0833	-0.1412
307	SLU 53	0.4	0.3	46.22	7.182	-0.0849	-0.1372
307	SLU 54	0.41	0.29	46.22	7.182	-0.085	-0.1417
307	SLU 55	0.41	0.28	45.93	7.1416	-0.0844	-0.1429
307	SLU 56	0.4	0.3	46.72	7.2516	-0.086	-0.1389
307	SLU 57	0.41	0.29	46.72	7.2516	-0.086	-0.1434
307	SLU 58	0.4	0.29	46.43	7.2112	-0.0854	-0.137
307	SLU 59	0.41	0.28	46.43	7.2112	-0.0854	-0.1415
307	SLU 60	0.39	0.34	46.99	7.2849	-0.0863	-0.1336
307	SLU 61	0.4	0.33	46.99	7.2849	-0.0863	-0.1381
307	SLU 62	0.39	0.33	47.5	7.3545	-0.0873	-0.1353
307	SLU 63	0.4	0.32	47.5	7.3545	-0.0873	-0.1398
307	SLU 64	0.43	0.3	45.38	7.0725	-0.0836	-0.1491
307	SLU 65	0.45	0.29	45.38	7.0725	-0.0837	-0.1566
307	SLU 66	0.44	0.31	46.17	7.1824	-0.0853	-0.1526
307	SLU 67	0.45	0.29	46.17	7.1825	-0.0853	-0.1572
307	SLU 68	0.46	0.28	45.88	7.1421	-0.0847	-0.1583
307	SLU 69	0.45	0.3	46.68	7.252	-0.0863	-0.1543
307	SLU 70	0.46	0.29	46.68	7.2521	-0.0863	-0.1589
307	SLU 71	0.44	0.3	46.39	7.2117	-0.0857	-0.1524
307	SLU 72	0.45	0.28	46.39	7.2117	-0.0857	-0.157
307	SLU 73	0.45	0.37	49.04	7.5693	-0.0906	-0.1565
307	SLU 74	0.44	0.39	49.83	7.6792	-0.0922	-0.1525
307	SLU 75	0.45	0.38	49.83	7.6793	-0.0923	-0.157
307	SLU 76	0.46	0.37	49.54	7.6389	-0.0917	-0.1582
307	SLU 77	0.45	0.39	50.33	7.7488	-0.0933	-0.1542
307	SLU 78	0.46	0.38	50.33	7.7489	-0.0933	-0.1587
307	SLU 79	0.44	0.38	50.04	7.7084	-0.0927	-0.1523
307	SLU 80	0.45	0.37	50.04	7.7085	-0.0927	-0.1569
307	SLU 81	0.43	0.43	50.6	7.7821	-0.0936	-0.1489
307	SLU 82	0.44	0.42	50.6	7.7822	-0.0936	-0.1534
307	SLU 83	0.44	0.42	51.11	7.8517	-0.0946	-0.1506
307	SLU 84	0.45	0.41	51.11	7.8518	-0.0946	-0.1551
307	SLE RA 1	0.32	0.21	34.12	5.3311	-0.0627	-0.1113
307	SLE RA 2	0.34	0.2	34.12	5.3311	-0.0628	-0.1164
307	SLE RA 3	0.33	0.22	34.64	5.4044	-0.0638	-0.1137
307	SLE RA 4	0.34	0.21	34.64	5.4044	-0.0638	-0.1167
307	SLE RA 5	0.34	0.2	34.45	5.3775	-0.0634	-0.1175
307	SLE RA 6	0.33	0.21	34.98	5.4508	-0.0645	-0.1148
307	SLE RA 7	0.34	0.21	34.98	5.4508	-0.0645	-0.1178
307	SLE RA 8	0.33	0.21	34.79	5.4239	-0.0641	-0.1136
307	SLE RA 9	0.34	0.2	34.79	5.4239	-0.0641	-0.1166
307	SLE RA 10	0.34	0.26	36.55	5.6623	-0.0674	-0.1163
307	SLE RA 11	0.33	0.27	37.08	5.7356	-0.0685	-0.1136
307	SLE RA 12	0.34	0.27	37.08	5.7356	-0.0685	-0.1166
307	SLE RA 13	0.34	0.26	36.89	5.7087	-0.0681	-0.1174
307	SLE RA 14	0.33	0.27	37.42	5.782	-0.0692	-0.1147
307	SLE RA 15	0.34	0.26	37.42	5.782	-0.0692	-0.1177
307	SLE RA 16	0.33	0.27	37.22	5.755	-0.0688	-0.1135
307	SLE RA 17	0.34	0.26	37.22	5.7551	-0.0688	-0.1165
307	SLE RA 18	0.32	0.3	37.6	5.8042	-0.0694	-0.1112
307	SLE RA 19	0.33	0.29	37.6	5.8042	-0.0694	-0.1142
307	SLE RA 20	0.32	0.29	37.93	5.8506	-0.0701	-0.1123
307	SLE RA 21	0.33	0.29	37.93	5.8506	-0.0701	-0.1153
307	SLE FR 1	0.32	0.21	34.12	5.3311	-0.0627	-0.1113
307	SLE FR 2	0.32	0.21	34.12	5.3311	-0.0627	-0.1123
307	SLE FR 3	0.32	0.21	34.25	5.3496	-0.063	-0.1118
307	SLE FR 4	0.32	0.24	35.16	5.473	-0.0647	-0.1123
307	SLE FR 5	0.32	0.24	35.29	5.4916	-0.065	-0.1117
307	SLE FR 6	0.32	0.25	35.86	5.5676	-0.066	-0.1112
307	SLE QP 1	0.32	0.21	34.12	5.3311	-0.0627	-0.1113
307	SLE QP 2	0.32	0.24	35.16	5.473	-0.0647	-0.1113

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLD 1	4.03	0.72	26.74	4.2078	-0.029	-1.4112
307	SLD 2	4.41	1.22	27.18	4.2663	-0.0305	-1.5422
307	SLD 3	3.94	-0.44	26.06	4.0923	-0.0263	-1.3814
307	SLD 4	4.32	0.06	26.5	4.1507	-0.0279	-1.5124
307	SLD 5	1.5	2.05	33.59	5.258	-0.0577	-0.5226
307	SLD 6	1.75	2.38	33.88	5.2968	-0.0587	-0.6096
307	SLD 7	1.2	-1.81	31.31	4.8729	-0.0489	-0.4233
307	SLD 8	1.46	-1.48	31.61	4.9117	-0.0499	-0.5102
307	SLD 9	-0.81	1.95	38.71	6.0343	-0.0795	0.2877
307	SLD 10	-0.56	2.28	39.01	6.0731	-0.0805	0.2008
307	SLD 11	-1.11	-1.9	36.44	5.6492	-0.0707	0.387
307	SLD 12	-0.86	-1.57	36.73	5.688	-0.0717	0.3001
307	SLD 13	-3.68	0.42	43.82	6.7953	-0.1016	1.2899
307	SLD 14	-3.3	0.91	44.26	6.8537	-0.1031	1.1588
307	SLD 15	-3.77	-0.74	43.14	6.6797	-0.0989	1.3197
307	SLD 16	-3.39	-0.24	43.58	6.7382	-0.1005	1.1886
307	SLV 1	9	1.33	15.45	2.5122	0.019	-3.1506
307	SLV 2	9.88	2.48	16.47	2.6483	0.0155	-3.4557
307	SLV 3	8.8	-1.29	13.89	2.2435	0.025	-3.0818
307	SLV 4	9.68	-0.14	14.92	2.3796	0.0215	-3.3869
307	SLV 5	3.08	4.33	31.42	4.9684	-0.0481	-1.0738
307	SLV 6	3.66	5.09	32.09	5.0571	-0.0504	-1.2725
307	SLV 7	2.4	-4.4	26.24	4.0726	-0.0281	-0.8445
307	SLV 8	2.97	-3.64	26.91	4.1613	-0.0304	-1.0433
307	SLV 9	-2.33	4.12	43.41	6.7847	-0.0991	0.8207
307	SLV 10	-1.75	4.88	44.08	6.8734	-0.1014	0.622
307	SLV 11	-3.02	-4.61	38.23	5.8889	-0.079	1.05
307	SLV 12	-2.44	-3.86	38.9	5.9776	-0.0813	0.8512
307	SLV 13	-9.04	0.61	55.4	8.5664	-0.1509	3.1643
307	SLV 14	-8.15	1.77	56.43	8.7025	-0.1544	2.8593
307	SLV 15	-9.24	-2.01	53.85	8.2977	-0.1449	3.2331
307	SLV 16	-8.36	-0.85	54.87	8.4338	-0.1484	2.9281
307	CRTFP Ux+	0	0	0	0	0	0
307	CRTFP Ux-	0	0	0	0	0	0
307	CRTFP Uy+	0	0	0	0	0	0
307	CRTFP Uy-	0	0	0	0	0	0
308	SLU 1	0.31	0.21	35.27	6.7011	-0.0851	-0.1061
308	SLU 2	0.33	0.2	35.27	6.7016	-0.0851	-0.1137
308	SLU 3	0.32	0.22	36.12	6.851	-0.0874	-0.1097
308	SLU 4	0.33	0.21	36.12	6.8513	-0.0874	-0.1142
308	SLU 5	0.33	0.19	35.81	6.7963	-0.0866	-0.1153
308	SLU 6	0.32	0.21	36.66	6.9458	-0.0889	-0.1114
308	SLU 7	0.33	0.2	36.66	6.9461	-0.0889	-0.1159
308	SLU 8	0.31	0.21	36.35	6.8907	-0.088	-0.1095
308	SLU 9	0.33	0.2	36.35	6.891	-0.088	-0.114
308	SLU 10	0.33	0.29	39.18	7.3805	-0.0951	-0.1134
308	SLU 11	0.32	0.31	40.03	7.5299	-0.0974	-0.1094
308	SLU 12	0.33	0.3	40.03	7.5302	-0.0974	-0.1139
308	SLU 13	0.33	0.29	39.72	7.4753	-0.0966	-0.1151
308	SLU 14	0.32	0.31	40.57	7.6247	-0.0989	-0.1111
308	SLU 15	0.33	0.3	40.57	7.625	-0.0989	-0.1156
308	SLU 16	0.31	0.3	40.26	7.5696	-0.098	-0.1092
308	SLU 17	0.33	0.29	40.26	7.5699	-0.098	-0.1137
308	SLU 18	0.3	0.35	40.85	7.671	-0.0994	-0.1057
308	SLU 19	0.32	0.34	40.85	7.6713	-0.0994	-0.1102
308	SLU 20	0.31	0.34	41.39	7.7658	-0.1008	-0.1074
308	SLU 21	0.32	0.33	41.39	7.766	-0.1008	-0.1119
308	SLU 22	0.35	0.31	39.14	7.3805	-0.0954	-0.1213
308	SLU 23	0.37	0.29	39.14	7.381	-0.0954	-0.1288
308	SLU 24	0.36	0.31	39.99	7.5304	-0.0977	-0.1248
308	SLU 25	0.37	0.3	39.99	7.5307	-0.0977	-0.1293
308	SLU 26	0.38	0.29	39.68	7.4758	-0.0969	-0.1305
308	SLU 27	0.36	0.31	40.53	7.6252	-0.0992	-0.1265
308	SLU 28	0.38	0.3	40.53	7.6255	-0.0992	-0.131
308	SLU 29	0.36	0.3	40.22	7.5701	-0.0983	-0.1246
308	SLU 30	0.37	0.29	40.22	7.5704	-0.0983	-0.1292
308	SLU 31	0.37	0.38	43.05	8.0599	-0.1054	-0.1285
308	SLU 32	0.36	0.4	43.9	8.2093	-0.1077	-0.1245
308	SLU 33	0.37	0.39	43.9	8.2096	-0.1077	-0.1291
308	SLU 34	0.38	0.38	43.59	8.1547	-0.1069	-0.1302
308	SLU 35	0.36	0.4	44.44	8.3041	-0.1092	-0.1262
308	SLU 36	0.38	0.39	44.44	8.3044	-0.1092	-0.1307
308	SLU 37	0.36	0.39	44.13	8.249	-0.1083	-0.1243
308	SLU 38	0.37	0.38	44.13	8.2493	-0.1083	-0.1289
308	SLU 39	0.35	0.44	44.72	8.3504	-0.1097	-0.1209
308	SLU 40	0.36	0.43	44.72	8.3507	-0.1097	-0.1254
308	SLU 41	0.35	0.44	45.26	8.4452	-0.1111	-0.1225
308	SLU 42	0.37	0.43	45.26	8.4455	-0.1111	-0.1271
308	SLU 43	0.38	0.25	44.52	8.4785	-0.1071	-0.1328
308	SLU 44	0.4	0.23	44.52	8.479	-0.1071	-0.1403
308	SLU 45	0.39	0.25	45.37	8.6284	-0.1094	-0.1363
308	SLU 46	0.4	0.24	45.37	8.6287	-0.1094	-0.1408
308	SLU 47	0.41	0.22	45.06	8.5737	-0.1086	-0.142
308	SLU 48	0.4	0.25	45.91	8.7232	-0.1109	-0.138
308	SLU 49	0.41	0.23	45.91	8.7235	-0.1109	-0.1425
308	SLU 50	0.39	0.24	45.6	8.6681	-0.11	-0.1361
308	SLU 51	0.4	0.23	45.6	8.6684	-0.11	-0.1406
308	SLU 52	0.4	0.32	48.43	9.1579	-0.1171	-0.14
308	SLU 53	0.39	0.34	49.28	9.3073	-0.1194	-0.136
308	SLU 54	0.4	0.33	49.28	9.3076	-0.1194	-0.1405

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
308	SLU 55	0.41	0.32	48.97	9.2527	-0.1186	-0.1417
308	SLU 56	0.4	0.34	49.82	9.4021	-0.1209	-0.1377
308	SLU 57	0.41	0.33	49.82	9.4024	-0.1209	-0.1422
308	SLU 58	0.39	0.33	49.51	9.347	-0.12	-0.1358
308	SLU 59	0.4	0.32	49.51	9.3473	-0.12	-0.1404
308	SLU 60	0.38	0.38	50.1	9.4484	-0.1214	-0.1323
308	SLU 61	0.39	0.37	50.1	9.4487	-0.1214	-0.1369
308	SLU 62	0.39	0.38	50.64	9.5432	-0.1228	-0.134
308	SLU 63	0.4	0.36	50.64	9.5434	-0.1228	-0.1386
308	SLU 64	0.43	0.34	48.39	9.1579	-0.1174	-0.1479
308	SLU 65	0.45	0.32	48.39	9.1584	-0.1174	-0.1554
308	SLU 66	0.44	0.34	49.24	9.3078	-0.1197	-0.1515
308	SLU 67	0.45	0.33	49.24	9.3081	-0.1197	-0.156
308	SLU 68	0.45	0.32	48.93	9.2532	-0.1189	-0.1571
308	SLU 69	0.44	0.34	49.78	9.4026	-0.1212	-0.1531
308	SLU 70	0.45	0.33	49.78	9.4029	-0.1212	-0.1577
308	SLU 71	0.44	0.33	49.47	9.3475	-0.1203	-0.1513
308	SLU 72	0.45	0.32	49.47	9.3478	-0.1203	-0.1558
308	SLU 73	0.45	0.41	52.3	9.8373	-0.1274	-0.1552
308	SLU 74	0.44	0.44	53.15	9.9867	-0.1297	-0.1512
308	SLU 75	0.45	0.43	53.15	9.987	-0.1297	-0.1557
308	SLU 76	0.45	0.41	52.84	9.9321	-0.1289	-0.1568
308	SLU 77	0.44	0.43	53.69	10.0815	-0.1312	-0.1529
308	SLU 78	0.45	0.42	53.69	10.0818	-0.1312	-0.1574
308	SLU 79	0.44	0.43	53.38	10.0264	-0.1303	-0.151
308	SLU 80	0.45	0.41	53.38	10.0267	-0.1303	-0.1555
308	SLU 81	0.43	0.47	53.98	10.1278	-0.1317	-0.1475
308	SLU 82	0.44	0.46	53.98	10.1281	-0.1317	-0.152
308	SLU 83	0.43	0.47	54.51	10.2226	-0.1331	-0.1492
308	SLU 84	0.44	0.46	54.52	10.2229	-0.1331	-0.1537
308	SLE RA 1	0.32	0.24	36.37	6.8952	-0.0881	-0.1104
308	SLE RA 2	0.33	0.23	36.37	6.8955	-0.0881	-0.1155
308	SLE RA 3	0.32	0.24	36.94	6.9952	-0.0896	-0.1128
308	SLE RA 4	0.33	0.24	36.94	6.9953	-0.0896	-0.1158
308	SLE RA 5	0.34	0.23	36.73	6.9587	-0.089	-0.1166
308	SLE RA 6	0.33	0.24	37.3	7.0584	-0.0906	-0.1139
308	SLE RA 7	0.34	0.23	37.3	7.0585	-0.0906	-0.117
308	SLE RA 8	0.32	0.24	37.09	7.0216	-0.09	-0.1127
308	SLE RA 9	0.33	0.23	37.09	7.0218	-0.09	-0.1157
308	SLE RA 10	0.33	0.29	38.98	7.3481	-0.0947	-0.1153
308	SLE RA 11	0.32	0.31	39.55	7.4478	-0.0962	-0.1126
308	SLE RA 12	0.33	0.3	39.55	7.448	-0.0963	-0.1156
308	SLE RA 13	0.34	0.29	39.34	7.4113	-0.0957	-0.1164
308	SLE RA 14	0.33	0.3	39.91	7.511	-0.0972	-0.1137
308	SLE RA 15	0.34	0.3	39.91	7.5111	-0.0972	-0.1168
308	SLE RA 16	0.32	0.3	39.7	7.4742	-0.0966	-0.1125
308	SLE RA 17	0.33	0.29	39.7	7.4744	-0.0967	-0.1155
308	SLE RA 18	0.32	0.33	40.1	7.5418	-0.0976	-0.1102
308	SLE RA 19	0.33	0.32	40.1	7.542	-0.0976	-0.1132
308	SLE RA 20	0.32	0.33	40.46	7.605	-0.0985	-0.1113
308	SLE RA 21	0.33	0.32	40.46	7.6052	-0.0985	-0.1143
308	SLE FR 1	0.32	0.24	36.37	6.8952	-0.0881	-0.1104
308	SLE FR 2	0.32	0.24	36.37	6.8953	-0.0881	-0.1114
308	SLE FR 3	0.32	0.24	36.52	6.9205	-0.0884	-0.1109
308	SLE FR 4	0.32	0.27	37.49	7.0893	-0.0909	-0.1114
308	SLE FR 5	0.32	0.27	37.63	7.1145	-0.0913	-0.1108
308	SLE FR 6	0.32	0.29	38.23	7.2185	-0.0928	-0.1103
308	SLE QP 1	0.32	0.24	36.37	6.8952	-0.0881	-0.1104
308	SLE QP 2	0.32	0.27	37.49	7.0892	-0.0909	-0.1104
308	SLD 1	4.02	0.77	27.89	5.2453	-0.0477	-1.4072
308	SLD 2	4.4	1.31	28.38	5.328	-0.0496	-1.538
308	SLD 3	3.93	-0.45	27.12	5.1181	-0.0443	-1.377
308	SLD 4	4.31	0.09	27.61	5.2008	-0.0462	-1.5079
308	SLD 5	1.5	2.17	35.68	6.714	-0.0829	-0.5213
308	SLD 6	1.75	2.53	36.01	6.7689	-0.0841	-0.6081
308	SLD 7	1.2	-1.9	33.13	6.2899	-0.0713	-0.4209
308	SLD 8	1.45	-1.54	33.45	6.3447	-0.0726	-0.5077
308	SLD 9	-0.81	2.08	41.53	7.8337	-0.1092	0.287
308	SLD 10	-0.56	2.44	41.85	7.8886	-0.1105	0.2002
308	SLD 11	-1.11	-2	38.97	7.4096	-0.0977	0.3874
308	SLD 12	-0.86	-1.64	39.3	7.4644	-0.099	0.3006
308	SLD 13	-3.68	0.44	47.37	8.9777	-0.1356	1.2871
308	SLD 14	-3.3	0.99	47.86	9.0604	-0.1375	1.1563
308	SLD 15	-3.77	-0.78	46.6	8.8504	-0.1322	1.3173
308	SLD 16	-3.39	-0.23	47.09	8.9331	-0.1341	1.1864
308	SLV 1	8.98	1.4	15	2.7729	0.0102	-3.1424
308	SLV 2	9.86	2.67	16.15	2.9654	0.0058	-3.447
308	SLV 3	8.77	-1.37	13.26	2.4798	0.0181	-3.0729
308	SLV 4	9.65	-0.1	14.4	2.6723	0.0137	-3.3775
308	SLV 5	3.08	4.59	33.19	6.205	-0.0717	-1.0718
308	SLV 6	3.65	5.41	33.94	6.3305	-0.0745	-1.2703
308	SLV 7	2.38	-4.65	27.37	5.228	-0.0456	-0.8402
308	SLV 8	2.96	-3.82	28.12	5.3534	-0.0484	-1.0387
308	SLV 9	-2.32	4.36	46.86	8.825	-0.1334	0.8179
308	SLV 10	-1.75	5.19	47.61	8.9505	-0.1362	0.6194
308	SLV 11	-3.02	-4.88	41.04	7.8479	-0.1073	1.0496
308	SLV 12	-2.44	-4.05	41.79	7.9734	-0.1101	0.8511
308	SLV 13	-9.02	0.64	60.58	11.5061	-0.1955	3.1568
308	SLV 14	-8.14	1.91	61.72	11.6987	-0.1999	2.8522
308	SLV 15	-9.23	-2.13	58.83	11.213	-0.1877	3.2263

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
308	SLV 16	-8.35	-0.86	59.98	11.4056	-0.192	2.9217
308	CRTFP Ux+	0	0	0	0	0	0
308	CRTFP Ux-	0	0	0	0	0	0
308	CRTFP Uy+	0	0	0	0	0	0
308	CRTFP Uy-	0	0	0	0	0	0
309	SLU 1	0.3	0.23	38.19	8.8019	-0.1101	-0.105
309	SLU 2	0.32	0.21	38.2	8.8027	-0.1102	-0.1125
309	SLU 3	0.31	0.23	39.12	9.0073	-0.1131	-0.1085
309	SLU 4	0.32	0.22	39.13	9.0078	-0.1131	-0.113
309	SLU 5	0.33	0.21	38.79	8.9326	-0.112	-0.1142
309	SLU 6	0.32	0.23	39.71	9.1372	-0.115	-0.1102
309	SLU 7	0.33	0.22	39.72	9.1377	-0.115	-0.1147
309	SLU 8	0.31	0.22	39.37	9.0617	-0.1139	-0.1083
309	SLU 9	0.32	0.21	39.37	9.0622	-0.1139	-0.1128
309	SLU 10	0.32	0.31	42.45	9.7358	-0.1232	-0.1121
309	SLU 11	0.31	0.33	43.38	9.9404	-0.1262	-0.1081
309	SLU 12	0.32	0.32	43.38	9.9409	-0.1262	-0.1126
309	SLU 13	0.33	0.31	43.04	9.8656	-0.1251	-0.1137
309	SLU 14	0.32	0.33	43.97	10.0702	-0.128	-0.1098
309	SLU 15	0.33	0.32	43.97	10.0707	-0.1281	-0.1143
309	SLU 16	0.31	0.32	43.63	9.9947	-0.1269	-0.1079
309	SLU 17	0.32	0.31	43.63	9.9952	-0.127	-0.1124
309	SLU 18	0.3	0.37	44.27	10.1348	-0.1288	-0.1044
309	SLU 19	0.31	0.36	44.27	10.1353	-0.1288	-0.1089
309	SLU 20	0.3	0.37	44.86	10.2647	-0.1307	-0.1061
309	SLU 21	0.32	0.36	44.86	10.2652	-0.1307	-0.1106
309	SLU 22	0.34	0.33	42.42	9.7352	-0.1235	-0.12
309	SLU 23	0.37	0.31	42.42	9.736	-0.1235	-0.1275
309	SLU 24	0.35	0.33	43.35	9.9406	-0.1265	-0.1235
309	SLU 25	0.37	0.32	43.35	9.9411	-0.1265	-0.128
309	SLU 26	0.37	0.31	43.01	9.8659	-0.1254	-0.1291
309	SLU 27	0.36	0.33	43.94	10.0705	-0.1283	-0.1252
309	SLU 28	0.37	0.32	43.94	10.0709	-0.1284	-0.1297
309	SLU 29	0.35	0.32	43.6	9.9949	-0.1272	-0.1233
309	SLU 30	0.37	0.31	43.6	9.9954	-0.1273	-0.1278
309	SLU 31	0.36	0.41	46.68	10.669	-0.1366	-0.127
309	SLU 32	0.35	0.43	47.61	10.8736	-0.1395	-0.1231
309	SLU 33	0.37	0.42	47.61	10.8741	-0.1395	-0.1276
309	SLU 34	0.37	0.4	47.27	10.7989	-0.1384	-0.1287
309	SLU 35	0.36	0.43	48.19	11.0035	-0.1414	-0.1248
309	SLU 36	0.37	0.42	48.2	11.004	-0.1414	-0.1293
309	SLU 37	0.35	0.42	47.85	10.9279	-0.1403	-0.1229
309	SLU 38	0.37	0.41	47.86	10.9284	-0.1403	-0.1274
309	SLU 39	0.34	0.47	48.5	11.0681	-0.1421	-0.1194
309	SLU 40	0.36	0.46	48.5	11.0686	-0.1422	-0.1239
309	SLU 41	0.35	0.47	49.09	11.1979	-0.144	-0.121
309	SLU 42	0.36	0.45	49.09	11.1984	-0.144	-0.1255
309	SLU 43	0.38	0.27	48.2	11.1225	-0.1386	-0.1314
309	SLU 44	0.4	0.25	48.2	11.1234	-0.1386	-0.1389
309	SLU 45	0.39	0.27	49.13	11.328	-0.1416	-0.1349
309	SLU 46	0.4	0.26	49.13	11.3284	-0.1416	-0.1394
309	SLU 47	0.4	0.24	48.79	11.2532	-0.1405	-0.1405
309	SLU 48	0.39	0.27	49.72	11.4578	-0.1434	-0.1366
309	SLU 49	0.4	0.25	49.72	11.4583	-0.1435	-0.1411
309	SLU 50	0.39	0.26	49.38	11.3823	-0.1423	-0.1347
309	SLU 51	0.4	0.25	49.38	11.3828	-0.1424	-0.1392
309	SLU 52	0.4	0.35	52.46	12.0564	-0.1517	-0.1384
309	SLU 53	0.39	0.37	53.39	12.261	-0.1546	-0.1345
309	SLU 54	0.4	0.36	53.39	12.2615	-0.1546	-0.139
309	SLU 55	0.4	0.34	53.05	12.1863	-0.1536	-0.1401
309	SLU 56	0.39	0.36	53.98	12.3908	-0.1565	-0.1362
309	SLU 57	0.4	0.35	53.98	12.3913	-0.1565	-0.1407
309	SLU 58	0.39	0.36	53.64	12.3153	-0.1554	-0.1343
309	SLU 59	0.4	0.35	53.64	12.3158	-0.1554	-0.1388
309	SLU 60	0.38	0.41	54.28	12.4554	-0.1572	-0.1308
309	SLU 61	0.39	0.4	54.28	12.4559	-0.1573	-0.1353
309	SLU 62	0.38	0.4	54.87	12.5853	-0.1591	-0.1324
309	SLU 63	0.39	0.39	54.87	12.5858	-0.1591	-0.1369
309	SLU 64	0.42	0.36	52.43	12.0558	-0.1519	-0.1463
309	SLU 65	0.44	0.34	52.43	12.0566	-0.152	-0.1538
309	SLU 66	0.43	0.37	53.36	12.2612	-0.1549	-0.1499
309	SLU 67	0.44	0.36	53.36	12.2617	-0.1549	-0.1544
309	SLU 68	0.45	0.34	53.02	12.1865	-0.1539	-0.1555
309	SLU 69	0.43	0.36	53.95	12.3911	-0.1568	-0.1516
309	SLU 70	0.45	0.35	53.95	12.3916	-0.1568	-0.156
309	SLU 71	0.43	0.36	53.61	12.3155	-0.1557	-0.1497
309	SLU 72	0.44	0.34	53.61	12.316	-0.1557	-0.1542
309	SLU 73	0.44	0.44	56.69	12.9896	-0.165	-0.1534
309	SLU 74	0.43	0.47	57.61	13.1942	-0.168	-0.1495
309	SLU 75	0.44	0.45	57.61	13.1947	-0.168	-0.154
309	SLU 76	0.45	0.44	57.27	13.1195	-0.1669	-0.1551
309	SLU 77	0.43	0.46	58.2	13.3241	-0.1699	-0.1511
309	SLU 78	0.45	0.45	58.2	13.3246	-0.1699	-0.1556
309	SLU 79	0.43	0.46	57.86	13.2485	-0.1688	-0.1493
309	SLU 80	0.44	0.44	57.86	13.249	-0.1688	-0.1538
309	SLU 81	0.42	0.51	58.51	13.3887	-0.1706	-0.1457
309	SLU 82	0.43	0.49	58.51	13.3892	-0.1706	-0.1502
309	SLU 83	0.42	0.5	59.1	13.5185	-0.1725	-0.1474
309	SLU 84	0.44	0.49	59.1	13.519	-0.1725	-0.1519
309	SLE RA 1	0.31	0.26	39.4	9.0686	-0.1139	-0.1093

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
309	SLE RA 2	0.33	0.25	39.4	9.0691	-0.114	-0.1143
309	SLE RA 3	0.32	0.26	40.02	9.2055	-0.1159	-0.1116
309	SLE RA 4	0.33	0.25	40.02	9.2058	-0.1159	-0.1146
309	SLE RA 5	0.33	0.24	39.8	9.1557	-0.1152	-0.1154
309	SLE RA 6	0.32	0.26	40.41	9.2921	-0.1172	-0.1128
309	SLE RA 7	0.33	0.25	40.42	9.2924	-0.1172	-0.1158
309	SLE RA 8	0.32	0.25	40.19	9.2417	-0.1164	-0.1115
309	SLE RA 9	0.33	0.25	40.19	9.2421	-0.1165	-0.1145
309	SLE RA 10	0.33	0.31	42.24	9.6911	-0.1227	-0.114
309	SLE RA 11	0.32	0.33	42.86	9.8275	-0.1246	-0.1114
309	SLE RA 12	0.33	0.32	42.86	9.8279	-0.1246	-0.1144
309	SLE RA 13	0.33	0.31	42.63	9.7777	-0.1239	-0.1151
309	SLE RA 14	0.32	0.32	43.25	9.9141	-0.1259	-0.1125
309	SLE RA 15	0.33	0.32	43.25	9.9144	-0.1259	-0.1155
309	SLE RA 16	0.32	0.32	43.02	9.8637	-0.1252	-0.1112
309	SLE RA 17	0.33	0.31	43.02	9.8641	-0.1252	-0.1142
309	SLE RA 18	0.31	0.35	43.45	9.9572	-0.1264	-0.1089
309	SLE RA 19	0.32	0.34	43.45	9.9575	-0.1264	-0.1119
309	SLE RA 20	0.32	0.35	43.85	10.0437	-0.1276	-0.11
309	SLE RA 21	0.32	0.34	43.85	10.0441	-0.1276	-0.113
309	SLE FR 1	0.31	0.26	39.4	9.0686	-0.1139	-0.1093
309	SLE FR 2	0.32	0.26	39.4	9.0687	-0.114	-0.1103
309	SLE FR 3	0.31	0.26	39.56	9.1032	-0.1144	-0.1097
309	SLE FR 4	0.32	0.28	40.62	9.3353	-0.1177	-0.1102
309	SLE FR 5	0.31	0.29	40.77	9.3698	-0.1182	-0.1096
309	SLE FR 6	0.31	0.31	41.43	9.5129	-0.1202	-0.1091
309	SLE QP 1	0.31	0.26	39.4	9.0686	-0.1139	-0.1093
309	SLE QP 2	0.31	0.29	40.62	9.3351	-0.1177	-0.1092
309	SLD 1	4.01	0.81	29.6	6.7443	-0.0666	-1.4029
309	SLD 2	4.39	1.41	30.16	6.8596	-0.0689	-1.5336
309	SLD 3	3.92	-0.48	28.72	6.5745	-0.0625	-1.3722
309	SLD 4	4.3	0.12	29.28	6.6898	-0.0647	-1.503
309	SLD 5	1.49	2.29	38.54	8.7946	-0.1083	-0.52
309	SLD 6	1.74	2.69	38.91	8.8711	-0.1098	-0.6068
309	SLD 7	1.19	-2	35.62	8.2284	-0.0944	-0.4178
309	SLD 8	1.44	-1.61	35.99	8.3049	-0.0959	-0.5046
309	SLD 9	-0.81	2.18	45.25	10.3654	-0.1395	0.2862
309	SLD 10	-0.56	2.58	45.61	10.4419	-0.141	0.1995
309	SLD 11	-1.12	-2.11	42.33	9.7992	-0.1256	0.3885
309	SLD 12	-0.87	-1.72	42.69	9.8757	-0.1271	0.3017
309	SLD 13	-3.67	0.45	51.95	11.9805	-0.1706	1.2847
309	SLD 14	-3.29	1.05	52.51	12.0958	-0.1729	1.1539
309	SLD 15	-3.76	-0.84	51.08	11.8107	-0.1665	1.3153
309	SLD 16	-3.39	-0.24	51.63	11.9259	-0.1687	1.1846
309	SLV 1	8.96	1.47	14.81	3.2687	0.0019	-3.134
309	SLV 2	9.84	2.86	16.1	3.5371	-0.0033	-3.4384
309	SLV 3	8.75	-1.45	12.82	2.8809	0.0114	-3.0633
309	SLV 4	9.63	-0.06	14.11	3.1494	0.0061	-3.3677
309	SLV 5	3.07	4.83	35.67	8.0561	-0.0952	-1.0703
309	SLV 6	3.65	5.73	36.51	8.231	-0.0986	-1.2686
309	SLV 7	2.37	-4.91	29.03	6.7636	-0.0637	-0.8347
309	SLV 8	2.94	-4	29.87	6.9385	-0.0671	-1.033
309	SLV 9	-2.32	4.57	51.36	11.7318	-0.1683	0.8147
309	SLV 10	-1.74	5.48	52.2	11.9067	-0.1717	0.6164
309	SLV 11	-3.02	-5.16	44.72	10.4392	-0.1367	1.0503
309	SLV 12	-2.45	-4.25	45.56	10.6141	-0.1401	0.852
309	SLV 13	-9	0.63	67.12	15.5209	-0.2415	3.1494
309	SLV 14	-8.12	2.02	68.41	15.7893	-0.2467	2.845
309	SLV 15	-9.22	-2.29	65.13	15.1332	-0.232	3.2201
309	SLV 16	-8.34	-0.9	66.42	15.4016	-0.2373	2.9157
309	CRTFP Ux+	0	0	0	0	0	0
309	CRTFP Ux-	0	0	0	0	0	0
309	CRTFP Uy+	0	0	0	0	0	0
309	CRTFP Uy-	0	0	0	0	0	0
310	SLU 1	0.26	0.2	35.87	9.8013	0.9163	-0.0952
310	SLU 2	0.27	0.18	35.87	9.8024	0.9163	-0.1012
310	SLU 3	0.26	0.2	36.75	10.0369	0.9386	-0.0983
310	SLU 4	0.28	0.19	36.75	10.0376	0.9386	-0.1019
310	SLU 5	0.28	0.18	36.43	9.9513	0.9305	-0.1025
310	SLU 6	0.27	0.2	37.31	10.1859	0.9527	-0.0997
310	SLU 7	0.28	0.19	37.31	10.1865	0.9528	-0.1033
310	SLU 8	0.26	0.19	36.99	10.0992	0.9446	-0.0979
310	SLU 9	0.28	0.18	36.99	10.0999	0.9446	-0.1015
310	SLU 10	0.27	0.27	39.89	10.8749	1.0183	-0.1032
310	SLU 11	0.26	0.29	40.77	11.1095	1.0406	-0.1004
310	SLU 12	0.27	0.28	40.77	11.1101	1.0406	-0.104
310	SLU 13	0.28	0.27	40.45	11.0239	1.0325	-0.1046
310	SLU 14	0.27	0.29	41.33	11.2585	1.0547	-0.1017
310	SLU 15	0.28	0.28	41.33	11.2591	1.0548	-0.1053
310	SLU 16	0.26	0.28	41	11.1718	1.0466	-0.0999
310	SLU 17	0.27	0.27	41	11.1724	1.0466	-0.1035
310	SLU 18	0.25	0.33	41.61	11.3335	1.062	-0.0981
310	SLU 19	0.27	0.32	41.61	11.3342	1.062	-0.1017
310	SLU 20	0.26	0.32	42.17	11.4825	1.0761	-0.0995
310	SLU 21	0.27	0.31	42.17	11.4831	1.0762	-0.1031
310	SLU 22	0.29	0.29	39.87	10.8736	1.0176	-0.1105
310	SLU 23	0.31	0.27	39.87	10.8746	1.0177	-0.1164
310	SLU 24	0.3	0.29	40.75	11.1092	1.04	-0.1136
310	SLU 25	0.31	0.28	40.75	11.1098	1.04	-0.1172
310	SLU 26	0.32	0.27	40.43	11.0236	1.0318	-0.1178

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLU 27	0.31	0.29	41.31	11.2582	1.0541	-0.1149
310	SLU 28	0.32	0.28	41.31	11.2588	1.0541	-0.1185
310	SLU 29	0.3	0.28	40.99	11.1715	1.0459	-0.1131
310	SLU 30	0.31	0.27	40.99	11.1721	1.046	-0.1167
310	SLU 31	0.31	0.36	43.89	11.9472	1.1197	-0.1185
310	SLU 32	0.3	0.38	44.77	12.1818	1.142	-0.1156
310	SLU 33	0.31	0.37	44.77	12.1824	1.142	-0.1192
310	SLU 34	0.31	0.36	44.45	12.0961	1.1338	-0.1198
310	SLU 35	0.3	0.38	45.33	12.3307	1.1561	-0.117
310	SLU 36	0.32	0.37	45.33	12.3313	1.1561	-0.1206
310	SLU 37	0.3	0.37	45	12.2441	1.1479	-0.1152
310	SLU 38	0.31	0.36	45	12.2447	1.148	-0.1188
310	SLU 39	0.29	0.42	45.61	12.4058	1.1633	-0.1134
310	SLU 40	0.3	0.41	45.61	12.4064	1.1634	-0.117
310	SLU 41	0.3	0.41	46.17	12.5548	1.1775	-0.1147
310	SLU 42	0.31	0.4	46.17	12.5554	1.1775	-0.1183
310	SLU 43	0.32	0.23	45.26	12.3741	1.1564	-0.1185
310	SLU 44	0.34	0.21	45.26	12.3751	1.1564	-0.1245
310	SLU 45	0.33	0.23	46.14	12.6097	1.1787	-0.1217
310	SLU 46	0.34	0.22	46.14	12.6103	1.1787	-0.1252
310	SLU 47	0.34	0.21	45.82	12.5241	1.1706	-0.1258
310	SLU 48	0.33	0.23	46.7	12.7587	1.1929	-0.123
310	SLU 49	0.34	0.22	46.7	12.7593	1.1929	-0.1266
310	SLU 50	0.33	0.22	46.37	12.672	1.1847	-0.1212
310	SLU 51	0.34	0.21	46.38	12.6726	1.1847	-0.1248
310	SLU 52	0.34	0.3	49.28	13.4477	1.2584	-0.1266
310	SLU 53	0.33	0.32	50.16	13.6823	1.2807	-0.1237
310	SLU 54	0.34	0.31	50.16	13.6829	1.2807	-0.1273
310	SLU 55	0.34	0.3	49.83	13.5967	1.2726	-0.1279
310	SLU 56	0.33	0.32	50.71	13.8312	1.2949	-0.125
310	SLU 57	0.34	0.31	50.72	13.8319	1.2949	-0.1286
310	SLU 58	0.33	0.31	50.39	13.7446	1.2867	-0.1233
310	SLU 59	0.34	0.3	50.39	13.7452	1.2867	-0.1268
310	SLU 60	0.32	0.36	51	13.9063	1.3021	-0.1215
310	SLU 61	0.33	0.35	51	13.9069	1.3021	-0.125
310	SLU 62	0.32	0.35	51.55	14.0553	1.3162	-0.1228
310	SLU 63	0.33	0.34	51.56	14.0559	1.3163	-0.1264
310	SLU 64	0.36	0.32	49.26	13.4463	1.2578	-0.1338
310	SLU 65	0.38	0.3	49.26	13.4474	1.2578	-0.1398
310	SLU 66	0.37	0.32	50.14	13.682	1.2801	-0.1369
310	SLU 67	0.38	0.31	50.14	13.6826	1.2801	-0.1405
310	SLU 68	0.38	0.3	49.82	13.5964	1.272	-0.1411
310	SLU 69	0.37	0.32	50.7	13.8309	1.2942	-0.1383
310	SLU 70	0.38	0.31	50.7	13.8316	1.2942	-0.1418
310	SLU 71	0.36	0.31	50.37	13.7443	1.286	-0.1365
310	SLU 72	0.38	0.3	50.38	13.7449	1.2861	-0.14
310	SLU 73	0.37	0.39	53.28	14.5199	1.3598	-0.1418
310	SLU 74	0.36	0.41	54.16	14.7545	1.3821	-0.139
310	SLU 75	0.38	0.4	54.16	14.7552	1.3821	-0.1426
310	SLU 76	0.38	0.39	53.84	14.6689	1.374	-0.1432
310	SLU 77	0.37	0.41	54.71	14.9035	1.3962	-0.1403
310	SLU 78	0.38	0.4	54.72	14.9041	1.3962	-0.1439
310	SLU 79	0.36	0.4	54.39	14.8168	1.388	-0.1385
310	SLU 80	0.37	0.39	54.39	14.8175	1.3881	-0.1421
310	SLU 81	0.36	0.45	55	14.9786	1.4035	-0.1367
310	SLU 82	0.37	0.44	55	14.9792	1.4035	-0.1403
310	SLU 83	0.36	0.44	55.55	15.1275	1.4176	-0.1381
310	SLU 84	0.37	0.43	55.56	15.1282	1.4176	-0.1416
310	SLE RA 1	0.27	0.23	37.01	10.1077	0.9452	-0.0996
310	SLE RA 2	0.28	0.22	37.01	10.1084	0.9453	-0.1035
310	SLE RA 3	0.27	0.23	37.6	10.2648	0.9601	-0.1016
310	SLE RA 4	0.28	0.22	37.6	10.2652	0.9601	-0.104
310	SLE RA 5	0.28	0.21	37.39	10.2077	0.9547	-0.1044
310	SLE RA 6	0.27	0.23	37.97	10.3641	0.9695	-0.1025
310	SLE RA 7	0.28	0.22	37.97	10.3645	0.9696	-0.1049
310	SLE RA 8	0.27	0.22	37.76	10.3063	0.9641	-0.1013
310	SLE RA 9	0.28	0.22	37.76	10.3067	0.9641	-0.1037
310	SLE RA 10	0.28	0.27	39.69	10.8234	1.0133	-0.1049
310	SLE RA 11	0.27	0.29	40.28	10.9798	1.0281	-0.103
310	SLE RA 12	0.28	0.28	40.28	10.9802	1.0281	-0.1054
310	SLE RA 13	0.28	0.27	40.06	10.9227	1.0227	-0.1058
310	SLE RA 14	0.27	0.29	40.65	11.0791	1.0375	-0.1039
310	SLE RA 15	0.28	0.28	40.65	11.0795	1.0376	-0.1063
310	SLE RA 16	0.27	0.28	40.43	11.0213	1.0321	-0.1027
310	SLE RA 17	0.28	0.27	40.43	11.0218	1.0321	-0.1051
310	SLE RA 18	0.27	0.31	40.84	11.1292	1.0424	-0.1015
310	SLE RA 19	0.27	0.3	40.84	11.1296	1.0424	-0.1039
310	SLE RA 20	0.27	0.31	41.21	11.2285	1.0518	-0.1024
310	SLE RA 21	0.28	0.3	41.21	11.2289	1.0518	-0.1048
310	SLE FR 1	0.27	0.23	37.01	10.1077	0.9452	-0.0996
310	SLE FR 2	0.27	0.22	37.01	10.1078	0.9452	-0.1004
310	SLE FR 3	0.27	0.23	37.16	10.1474	0.949	-0.0999
310	SLE FR 4	0.27	0.25	38.16	10.4143	0.9744	-0.1009
310	SLE FR 5	0.27	0.25	38.31	10.4538	0.9781	-0.1005
310	SLE FR 6	0.27	0.27	38.92	10.6184	0.9938	-0.1005
310	SLE QP 1	0.27	0.23	37.01	10.1077	0.9452	-0.0996
310	SLE QP 2	0.27	0.25	38.16	10.4141	0.9744	-0.1001
310	SLD 1	3.45	0.73	27.34	7.4233	0.7097	-1.2233
310	SLD 2	3.78	1.29	27.88	7.5559	0.7231	-1.352
310	SLD 3	3.37	-0.43	26.48	7.2205	0.6887	-1.167

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLD 4	3.7	0.13	27.02	7.3531	0.702	-1.2957
310	SLD 5	1.28	2.05	36.12	9.8004	0.9245	-0.499
310	SLD 6	1.5	2.42	36.47	9.8884	0.9333	-0.5845
310	SLD 7	1.02	-1.81	33.25	9.1243	0.8543	-0.3114
310	SLD 8	1.23	-1.44	33.61	9.2123	0.8631	-0.3969
310	SLD 9	-0.7	1.94	42.71	11.6159	1.0856	0.1966
310	SLD 10	-0.48	2.31	43.06	11.7039	1.0944	0.1112
310	SLD 11	-0.97	-1.92	39.84	10.9399	1.0154	0.3842
310	SLD 12	-0.75	-1.55	40.2	11.0279	1.0242	0.2988
310	SLD 13	-3.17	0.37	49.3	13.4751	1.2467	1.0954
310	SLD 14	-2.84	0.93	49.84	13.6078	1.2601	0.9667
310	SLD 15	-3.25	-0.79	48.44	13.2723	1.2257	1.1517
310	SLD 16	-2.92	-0.23	48.98	13.405	1.239	1.023
310	SLV 1	7.72	1.33	12.81	3.4099	0.3545	-2.7249
310	SLV 2	8.48	2.63	14.06	3.7187	0.3855	-3.0246
310	SLV 3	7.53	-1.29	10.86	2.9486	0.3067	-2.5968
310	SLV 4	8.29	0	12.11	3.2574	0.3377	-2.8965
310	SLV 5	2.65	4.33	33.3	8.9582	0.8555	-1.0292
310	SLV 6	3.14	5.18	34.11	9.1594	0.8757	-1.2245
310	SLV 7	2.03	-4.43	26.79	7.4206	0.696	-0.6021
310	SLV 8	2.53	-3.58	27.6	7.6218	0.7163	-0.7974
310	SLV 9	-1.99	4.08	48.71	13.2065	1.2325	0.5971
310	SLV 10	-1.5	4.93	49.53	13.4076	1.2527	0.4019
310	SLV 11	-2.61	-4.68	42.21	11.6689	1.073	1.0242
310	SLV 12	-2.12	-3.83	43.02	11.8701	1.0932	0.8289
310	SLV 13	-7.76	0.5	64.21	17.5709	1.611	2.6962
310	SLV 14	-7	1.8	65.46	17.8796	1.6421	2.3965
310	SLV 15	-7.94	-2.13	62.25	17.1096	1.5632	2.8243
310	SLV 16	-7.18	-0.83	63.5	17.4183	1.5942	2.5247
310	CRTFP Ux+	0	0	0	0	0	0
310	CRTFP Ux-	0	0	0	0	0	0
310	CRTFP Uy+	0	0	0	0	0	0
310	CRTFP Uy-	0	0	0	0	0	0
312	SLU 1	0.36	0.29	55.76	12.4876	12.1265	-0.1575
312	SLU 2	0.39	0.27	55.77	12.4888	12.1272	-0.1584
312	SLU 3	0.38	0.29	57.14	12.7945	12.4239	-0.1618
312	SLU 4	0.39	0.28	57.14	12.7952	12.4243	-0.1623
312	SLU 5	0.4	0.26	56.64	12.6829	12.3157	-0.1587
312	SLU 6	0.38	0.29	58.02	12.9887	12.6125	-0.1621
312	SLU 7	0.4	0.28	58.02	12.9894	12.6129	-0.1626
312	SLU 8	0.38	0.28	57.51	12.8759	12.5036	-0.1581
312	SLU 9	0.39	0.27	57.51	12.8766	12.5041	-0.1586
312	SLU 10	0.39	0.4	62.04	13.8873	13.482	-0.1891
312	SLU 11	0.38	0.43	63.41	14.193	13.7787	-0.1925
312	SLU 12	0.39	0.41	63.41	14.1937	13.7791	-0.193
312	SLU 13	0.4	0.39	62.91	14.0815	13.6705	-0.1893
312	SLU 14	0.38	0.42	64.29	14.3872	13.9673	-0.1928
312	SLU 15	0.4	0.41	64.29	14.3879	13.9677	-0.1933
312	SLU 16	0.37	0.41	63.78	14.2745	13.8584	-0.1888
312	SLU 17	0.39	0.4	63.78	14.2752	13.8588	-0.1893
312	SLU 18	0.36	0.48	64.72	14.4855	14.0619	-0.2013
312	SLU 19	0.38	0.46	64.72	14.4862	14.0623	-0.2019
312	SLU 20	0.37	0.47	65.59	14.6797	14.2505	-0.2016
312	SLU 21	0.38	0.46	65.6	14.6804	14.2509	-0.2021
312	SLU 22	0.42	0.42	62.01	13.8836	13.474	-0.2012
312	SLU 23	0.45	0.4	62.02	13.8848	13.4747	-0.202
312	SLU 24	0.43	0.42	63.39	14.1905	13.7715	-0.2054
312	SLU 25	0.45	0.41	63.39	14.1912	13.7719	-0.206
312	SLU 26	0.45	0.39	62.89	14.079	13.6633	-0.2023
312	SLU 27	0.44	0.42	64.27	14.3847	13.96	-0.2057
312	SLU 28	0.45	0.41	64.27	14.3854	13.9605	-0.2062
312	SLU 29	0.43	0.41	63.76	14.272	13.8512	-0.2017
312	SLU 30	0.45	0.4	63.76	14.2727	13.8516	-0.2022
312	SLU 31	0.44	0.53	68.29	15.2833	14.8295	-0.2327
312	SLU 32	0.43	0.56	69.66	15.5891	15.1263	-0.2361
312	SLU 33	0.45	0.54	69.66	15.5898	15.1267	-0.2366
312	SLU 34	0.45	0.52	69.16	15.4775	15.0181	-0.233
312	SLU 35	0.44	0.55	70.53	15.7832	15.3148	-0.2364
312	SLU 36	0.45	0.54	70.54	15.784	15.3153	-0.2369
312	SLU 37	0.43	0.54	70.03	15.6705	15.206	-0.2324
312	SLU 38	0.44	0.53	70.03	15.6712	15.2064	-0.2329
312	SLU 39	0.42	0.61	70.97	15.8816	15.4094	-0.245
312	SLU 40	0.43	0.59	70.97	15.8823	15.4099	-0.2455
312	SLU 41	0.42	0.6	71.84	16.0757	15.598	-0.2452
312	SLU 42	0.44	0.59	71.84	16.0764	15.5985	-0.2457
312	SLU 43	0.46	0.33	70.35	15.7552	15.3024	-0.1898
312	SLU 44	0.48	0.31	70.35	15.7564	15.3031	-0.1907
312	SLU 45	0.47	0.34	71.73	16.0621	15.5998	-0.1941
312	SLU 46	0.48	0.32	71.73	16.0628	15.6002	-0.1947
312	SLU 47	0.49	0.3	71.23	15.9506	15.4917	-0.191
312	SLU 48	0.47	0.33	72.6	16.2563	15.7884	-0.1944
312	SLU 49	0.49	0.32	72.6	16.257	15.7888	-0.1949
312	SLU 50	0.47	0.32	72.1	16.1436	15.6795	-0.1904
312	SLU 51	0.48	0.31	72.1	16.1443	15.68	-0.1909
312	SLU 52	0.48	0.44	76.62	17.1549	16.6579	-0.2214
312	SLU 53	0.47	0.47	78	17.4607	16.9546	-0.2248
312	SLU 54	0.48	0.45	78	17.4614	16.955	-0.2253
312	SLU 55	0.49	0.43	77.5	17.3491	16.8465	-0.2216
312	SLU 56	0.47	0.46	78.87	17.6548	17.1432	-0.2251
312	SLU 57	0.49	0.45	78.87	17.6555	17.1436	-0.2256

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
312	SLU 58	0.47	0.45	78.37	17.5421	17.0343	-0.2211
312	SLU 59	0.48	0.44	78.37	17.5428	17.0348	-0.2216
312	SLU 60	0.45	0.52	79.31	17.7532	17.2378	-0.2336
312	SLU 61	0.47	0.5	79.31	17.7539	17.2382	-0.2342
312	SLU 62	0.46	0.51	80.18	17.9473	17.4264	-0.2339
312	SLU 63	0.48	0.5	80.18	17.948	17.4268	-0.2344
312	SLU 64	0.51	0.46	76.6	17.1513	16.6499	-0.2335
312	SLU 65	0.54	0.44	76.6	17.1524	16.6506	-0.2343
312	SLU 66	0.52	0.47	77.98	17.4581	16.9474	-0.2378
312	SLU 67	0.54	0.45	77.98	17.4589	16.9478	-0.2383
312	SLU 68	0.54	0.43	77.48	17.3466	16.8392	-0.2346
312	SLU 69	0.53	0.46	78.85	17.6523	17.136	-0.238
312	SLU 70	0.54	0.45	78.85	17.653	17.1364	-0.2385
312	SLU 71	0.52	0.45	78.35	17.5396	17.0271	-0.234
312	SLU 72	0.54	0.44	78.35	17.5403	17.0275	-0.2345
312	SLU 73	0.53	0.57	82.87	18.551	18.0054	-0.265
312	SLU 74	0.52	0.6	84.25	18.8567	18.3022	-0.2684
312	SLU 75	0.54	0.58	84.25	18.8574	18.3026	-0.2689
312	SLU 76	0.54	0.56	83.75	18.7452	18.194	-0.2653
312	SLU 77	0.53	0.59	85.12	19.0509	18.4908	-0.2687
312	SLU 78	0.54	0.58	85.12	19.0516	18.4912	-0.2692
312	SLU 79	0.52	0.58	84.62	18.9382	18.3819	-0.2647
312	SLU 80	0.54	0.57	84.62	18.9389	18.3823	-0.2652
312	SLU 81	0.51	0.65	85.55	19.1492	18.5854	-0.2773
312	SLU 82	0.52	0.63	85.56	19.1499	18.5858	-0.2778
312	SLU 83	0.51	0.64	86.43	19.3434	18.7739	-0.2775
312	SLU 84	0.53	0.63	86.43	19.3441	18.7744	-0.2781
312	SLE RA 1	0.38	0.33	57.55	12.8865	12.5115	-0.17
312	SLE RA 2	0.4	0.31	57.55	12.8872	12.5119	-0.1706
312	SLE RA 3	0.39	0.33	58.47	13.091	12.7098	-0.1729
312	SLE RA 4	0.4	0.32	58.47	13.0915	12.71	-0.1732
312	SLE RA 5	0.4	0.31	58.13	13.0167	12.6377	-0.1708
312	SLE RA 6	0.39	0.33	59.05	13.2205	12.8355	-0.173
312	SLE RA 7	0.4	0.32	59.05	13.221	12.8358	-0.1734
312	SLE RA 8	0.39	0.32	58.71	13.1454	12.7629	-0.1704
312	SLE RA 9	0.4	0.31	58.72	13.1458	12.7632	-0.1707
312	SLE RA 10	0.4	0.4	61.73	13.8196	13.4151	-0.191
312	SLE RA 11	0.39	0.42	62.65	14.0234	13.613	-0.1933
312	SLE RA 12	0.4	0.41	62.65	14.0239	13.6132	-0.1936
312	SLE RA 13	0.4	0.39	62.31	13.9491	13.5409	-0.1912
312	SLE RA 14	0.39	0.41	63.23	14.1529	13.7387	-0.1935
312	SLE RA 15	0.4	0.4	63.23	14.1533	13.739	-0.1938
312	SLE RA 16	0.39	0.41	62.89	14.0777	13.6661	-0.1908
312	SLE RA 17	0.4	0.4	62.9	14.0782	13.6664	-0.1912
312	SLE RA 18	0.38	0.45	63.52	14.2184	13.8018	-0.1992
312	SLE RA 19	0.39	0.44	63.52	14.2189	13.802	-0.1995
312	SLE RA 20	0.38	0.45	64.1	14.3479	13.9275	-0.1994
312	SLE RA 21	0.39	0.44	64.1	14.3483	13.9278	-0.1997
312	SLE FR 1	0.38	0.33	57.55	12.8865	12.5115	-0.17
312	SLE FR 2	0.38	0.32	57.55	12.8866	12.5116	-0.1701
312	SLE FR 3	0.38	0.33	57.78	12.9382	12.5618	-0.1701
312	SLE FR 4	0.38	0.36	59.34	13.2862	12.8987	-0.1789
312	SLE FR 5	0.38	0.36	59.57	13.3378	12.9489	-0.1788
312	SLE FR 6	0.38	0.39	60.53	13.5524	13.1566	-0.1846
312	SLE QP 1	0.38	0.33	57.55	12.8865	12.5115	-0.17
312	SLE QP 2	0.38	0.36	59.34	13.286	12.8986	-0.1788
312	SLD 1	5.03	1.08	42.16	9.4256	9.2972	-1.4289
312	SLD 2	5.52	1.93	43.02	9.6039	9.4852	-1.7433
312	SLD 3	4.9	-0.63	40.75	9.1404	8.9962	-0.9966
312	SLD 4	5.39	0.21	41.62	9.3187	9.1842	-1.311
312	SLD 5	1.88	3.03	56.16	12.5281	12.2405	-1.1523
312	SLD 6	2.21	3.59	56.73	12.6464	12.3653	-1.361
312	SLD 7	1.45	-2.7	51.48	11.5773	11.2371	0.2887
312	SLD 8	1.78	-2.14	52.05	11.6956	11.3619	0.0801
312	SLD 9	-1.02	2.86	66.63	14.8765	14.4353	-0.4376
312	SLD 10	-0.69	3.42	67.2	14.9948	14.56	-0.6463
312	SLD 11	-1.45	-2.87	61.95	13.9256	13.4319	1.0035
312	SLD 12	-1.12	-2.31	62.52	14.044	13.5566	0.7948
312	SLD 13	-4.64	0.52	77.06	17.2534	16.613	0.9534
312	SLD 14	-4.14	1.36	77.93	17.4317	16.8009	0.6391
312	SLD 15	-4.76	-1.2	75.66	16.9682	16.312	1.3858
312	SLD 16	-4.27	-0.36	76.52	17.1465	16.4999	1.0714
312	SLV 1	11.25	1.99	19.09	4.2442	4.4625	-3.0881
312	SLV 2	12.4	3.96	21.11	4.6593	4.9001	-3.82
312	SLV 3	10.96	-1.9	15.9	3.5963	3.7789	-2.108
312	SLV 4	12.1	0.06	17.92	4.0114	4.2164	-2.8399
312	SLV 5	3.89	6.42	51.74	11.4831	11.3276	-2.4094
312	SLV 6	4.64	7.7	53.06	11.7536	11.6127	-2.8863
312	SLV 7	2.9	-6.57	41.12	9.3236	9.0489	0.8577
312	SLV 8	3.65	-5.29	42.44	9.594	9.334	0.3808
312	SLV 9	-2.89	6.02	76.24	16.978	16.4631	-0.7383
312	SLV 10	-2.14	7.3	77.56	17.2485	16.7482	-1.2152
312	SLV 11	-3.88	-6.97	65.62	14.8185	14.1844	2.5288
312	SLV 12	-3.13	-5.69	66.94	15.089	14.4695	2.0519
312	SLV 13	-11.35	0.67	100.76	22.5607	21.5807	2.4823
312	SLV 14	-10.2	2.63	102.78	22.9758	22.0182	1.7504
312	SLV 15	-11.64	-3.23	97.57	21.9128	20.8971	3.4625
312	SLV 16	-10.5	-1.27	99.59	22.3279	21.3346	2.7306
312	CRTFP Ux+	0	0	0	0	0	0
312	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
312	CRTFP Uy+	0	0	0	0	0	0
312	CRTFP Uy-	0	0	0	0	0	0
375	SLU 1	-1.19	-1.06	56.29	1.5177	-0.3068	0.0016
375	SLU 2	-1.16	-1.13	56.22	1.5161	-0.3076	0.0011
375	SLU 3	-1.23	-1.08	57.65	1.5542	-0.3144	0.0017
375	SLU 4	-1.21	-1.12	57.6	1.5533	-0.3149	0.0014
375	SLU 5	-1.18	-1.15	57.09	1.5394	-0.3122	0.0012
375	SLU 6	-1.25	-1.09	58.51	1.5774	-0.3189	0.0018
375	SLU 7	-1.23	-1.14	58.47	1.5765	-0.3195	0.0015
375	SLU 8	-1.24	-1.09	58.02	1.5642	-0.316	0.0018
375	SLU 9	-1.22	-1.13	57.98	1.5632	-0.3165	0.0015
375	SLU 10	-1.24	-1.19	62.79	1.6935	-0.3539	0.0001
375	SLU 11	-1.3	-1.13	64.22	1.7315	-0.3606	0.0007
375	SLU 12	-1.29	-1.18	64.18	1.7306	-0.3611	0.0004
375	SLU 13	-1.26	-1.2	63.66	1.7167	-0.3585	0.0002
375	SLU 14	-1.33	-1.15	65.08	1.7548	-0.3652	0.0008
375	SLU 15	-1.31	-1.19	65.04	1.7538	-0.3657	0.0005
375	SLU 16	-1.32	-1.14	64.59	1.7415	-0.3622	0.0008
375	SLU 17	-1.3	-1.19	64.55	1.7406	-0.3627	0.0005
375	SLU 18	-1.3	-1.14	65.68	1.7711	-0.3729	0.0002
375	SLU 19	-1.29	-1.18	65.64	1.7701	-0.3734	-0.0001
375	SLU 20	-1.33	-1.15	66.54	1.7943	-0.3775	0.0002
375	SLU 21	-1.31	-1.2	66.5	1.7933	-0.378	0
375	SLU 22	-1.34	-1.07	62.52	1.6863	-0.3395	0.002
375	SLU 23	-1.31	-1.14	62.45	1.6847	-0.3403	0.0015
375	SLU 24	-1.37	-1.09	63.87	1.7227	-0.3471	0.0021
375	SLU 25	-1.35	-1.13	63.83	1.7218	-0.3476	0.0018
375	SLU 26	-1.33	-1.16	63.32	1.7079	-0.3449	0.0016
375	SLU 27	-1.4	-1.1	64.74	1.746	-0.3516	0.0022
375	SLU 28	-1.38	-1.15	64.7	1.745	-0.3521	0.0019
375	SLU 29	-1.39	-1.1	64.25	1.7327	-0.3486	0.0022
375	SLU 30	-1.37	-1.14	64.21	1.7318	-0.3491	0.0019
375	SLU 31	-1.39	-1.2	69.02	1.862	-0.3866	0.0005
375	SLU 32	-1.45	-1.14	70.45	1.9001	-0.3933	0.0011
375	SLU 33	-1.43	-1.18	70.41	1.8991	-0.3938	0.0008
375	SLU 34	-1.41	-1.21	69.89	1.8852	-0.3911	0.0006
375	SLU 35	-1.47	-1.16	71.31	1.9233	-0.3979	0.0012
375	SLU 36	-1.45	-1.2	71.27	1.9224	-0.3984	0.0009
375	SLU 37	-1.46	-1.15	70.82	1.9101	-0.3949	0.0012
375	SLU 38	-1.44	-1.2	70.78	1.9091	-0.3954	0.0009
375	SLU 39	-1.45	-1.15	71.91	1.9396	-0.4056	0.0006
375	SLU 40	-1.43	-1.19	71.87	1.9387	-0.4061	0.0003
375	SLU 41	-1.47	-1.16	72.77	1.9628	-0.4101	0.0007
375	SLU 42	-1.45	-1.2	72.73	1.9619	-0.4106	0.0004
375	SLU 43	-1.5	-1.38	71.04	1.9153	-0.3876	0.0019
375	SLU 44	-1.47	-1.45	70.97	1.9137	-0.3885	0.0014
375	SLU 45	-1.54	-1.4	72.4	1.9517	-0.3952	0.002
375	SLU 46	-1.52	-1.44	72.36	1.9508	-0.3957	0.0017
375	SLU 47	-1.49	-1.46	71.84	1.9369	-0.3931	0.0015
375	SLU 48	-1.56	-1.41	73.26	1.975	-0.3998	0.0021
375	SLU 49	-1.54	-1.45	73.22	1.974	-0.4003	0.0018
375	SLU 50	-1.55	-1.41	72.77	1.9617	-0.3968	0.0021
375	SLU 51	-1.53	-1.45	72.73	1.9608	-0.3973	0.0018
375	SLU 52	-1.55	-1.5	77.55	2.091	-0.4347	0.0004
375	SLU 53	-1.61	-1.45	78.97	2.1291	-0.4415	0.001
375	SLU 54	-1.59	-1.49	78.93	2.1281	-0.442	0.0007
375	SLU 55	-1.57	-1.52	78.41	2.1142	-0.4393	0.0005
375	SLU 56	-1.64	-1.46	79.83	2.1523	-0.446	0.0011
375	SLU 57	-1.62	-1.51	79.79	2.1513	-0.4465	0.0008
375	SLU 58	-1.63	-1.46	79.34	2.139	-0.443	0.0011
375	SLU 59	-1.61	-1.5	79.3	2.1381	-0.4435	0.0008
375	SLU 60	-1.61	-1.46	80.43	2.1686	-0.4537	0.0005
375	SLU 61	-1.59	-1.5	80.39	2.1677	-0.4542	0.0002
375	SLU 62	-1.64	-1.47	81.29	2.1918	-0.4583	0.0006
375	SLU 63	-1.62	-1.51	81.25	2.1909	-0.4588	0.0003
375	SLU 64	-1.65	-1.39	77.27	2.0838	-0.4203	0.0023
375	SLU 65	-1.62	-1.46	77.2	2.0822	-0.4212	0.0019
375	SLU 66	-1.68	-1.41	78.63	2.1203	-0.4279	0.0024
375	SLU 67	-1.66	-1.45	78.59	2.1193	-0.4284	0.0022
375	SLU 68	-1.64	-1.47	78.07	2.1054	-0.4257	0.0019
375	SLU 69	-1.7	-1.42	79.49	2.1435	-0.4325	0.0025
375	SLU 70	-1.68	-1.46	79.45	2.1425	-0.433	0.0023
375	SLU 71	-1.69	-1.42	79	2.1302	-0.4295	0.0025
375	SLU 72	-1.67	-1.46	78.96	2.1293	-0.43	0.0022
375	SLU 73	-1.69	-1.51	83.78	2.2595	-0.4674	0.0008
375	SLU 74	-1.76	-1.46	85.2	2.2976	-0.4741	0.0014
375	SLU 75	-1.74	-1.5	85.16	2.2967	-0.4746	0.0012
375	SLU 76	-1.72	-1.53	84.64	2.2828	-0.472	0.0009
375	SLU 77	-1.78	-1.47	86.06	2.3208	-0.4787	0.0015
375	SLU 78	-1.76	-1.51	86.02	2.3199	-0.4792	0.0012
375	SLU 79	-1.77	-1.47	85.57	2.3076	-0.4757	0.0015
375	SLU 80	-1.75	-1.51	85.53	2.3066	-0.4762	0.0012
375	SLU 81	-1.76	-1.47	86.66	2.3371	-0.4864	0.0009
375	SLU 82	-1.74	-1.51	86.62	2.3362	-0.4869	0.0006
375	SLU 83	-1.78	-1.48	87.52	2.3604	-0.491	0.001
375	SLU 84	-1.76	-1.52	87.48	2.3594	-0.4915	0.0007
375	SLE RA 1	-1.24	-1.07	58.07	1.5659	-0.3161	0.0017
375	SLE RA 2	-1.21	-1.11	58.03	1.5648	-0.3167	0.0014
375	SLE RA 3	-1.26	-1.08	58.97	1.5902	-0.3212	0.0018
375	SLE RA 4	-1.24	-1.11	58.95	1.5896	-0.3215	0.0016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
375	SLE RA 5	-1.23	-1.12	58.6	1.5803	-0.3198	0.0014
375	SLE RA 6	-1.27	-1.09	59.55	1.6057	-0.3242	0.0018
375	SLE RA 7	-1.26	-1.11	59.52	1.605	-0.3246	0.0016
375	SLE RA 8	-1.27	-1.09	59.22	1.5968	-0.3222	0.0018
375	SLE RA 9	-1.25	-1.11	59.2	1.5962	-0.3226	0.0016
375	SLE RA 10	-1.27	-1.15	62.41	1.683	-0.3475	0.0007
375	SLE RA 11	-1.31	-1.11	63.35	1.7084	-0.352	0.0011
375	SLE RA 12	-1.3	-1.14	63.33	1.7078	-0.3524	0.0009
375	SLE RA 13	-1.28	-1.16	62.98	1.6985	-0.3506	0.0008
375	SLE RA 14	-1.32	-1.12	63.93	1.7239	-0.3551	0.0012
375	SLE RA 15	-1.31	-1.15	63.9	1.7233	-0.3554	0.001
375	SLE RA 16	-1.32	-1.12	63.6	1.7151	-0.3531	0.0012
375	SLE RA 17	-1.3	-1.15	63.58	1.7144	-0.3534	0.001
375	SLE RA 18	-1.31	-1.12	64.33	1.7348	-0.3602	0.0007
375	SLE RA 19	-1.3	-1.15	64.3	1.7341	-0.3605	0.0006
375	SLE RA 20	-1.32	-1.13	64.91	1.7503	-0.3632	0.0008
375	SLE RA 21	-1.31	-1.15	64.88	1.7496	-0.3636	0.0006
375	SLE FR 1	-1.24	-1.07	58.07	1.5659	-0.3161	0.0017
375	SLE FR 2	-1.23	-1.08	58.06	1.5657	-0.3163	0.0016
375	SLE FR 3	-1.24	-1.07	58.3	1.5721	-0.3174	0.0017
375	SLE FR 4	-1.25	-1.09	59.94	1.6163	-0.3295	0.0014
375	SLE FR 5	-1.26	-1.09	60.18	1.6227	-0.3306	0.0014
375	SLE FR 6	-1.27	-1.09	61.2	1.6503	-0.3382	0.0012
375	SLE QP 1	-1.24	-1.07	58.07	1.5659	-0.3161	0.0017
375	SLE QP 2	-1.26	-1.08	59.95	1.6166	-0.3294	0.0014
375	SLD 1	3.67	-0.81	66.62	1.7903	-0.16	-0.1306
375	SLD 2	4.18	-1.15	66.19	1.7799	-0.166	-0.1377
375	SLD 3	3.8	-2.2	65.61	1.7673	-0.179	-0.1335
375	SLD 4	4.31	-2.54	65.18	1.7569	-0.1851	-0.1406
375	SLD 5	-0.08	1.17	63.55	1.7053	-0.2485	-0.0324
375	SLD 6	0.26	0.94	63.27	1.6984	-0.2526	-0.0371
375	SLD 7	0.37	-3.46	60.2	1.6289	-0.312	-0.0423
375	SLD 8	0.71	-3.69	59.91	1.622	-0.3161	-0.047
375	SLD 9	-3.22	1.53	59.98	1.6111	-0.3426	0.0498
375	SLD 10	-2.89	1.3	59.7	1.6042	-0.3467	0.0451
375	SLD 11	-2.78	-3.11	56.63	1.5347	-0.4061	0.0399
375	SLD 12	-2.44	-3.34	56.34	1.5278	-0.4102	0.0352
375	SLD 13	-6.83	0.38	54.72	1.4762	-0.4736	0.1435
375	SLD 14	-6.32	0.03	54.29	1.4658	-0.4797	0.1364
375	SLD 15	-6.69	-1.01	53.71	1.4532	-0.4927	0.1405
375	SLD 16	-6.18	-1.36	53.28	1.4428	-0.4988	0.1334
375	SLV 1	10.26	-0.49	75.51	2.022	0.0666	-0.3072
375	SLV 2	11.45	-1.3	74.51	1.9978	0.0524	-0.3237
375	SLV 3	10.57	-3.64	73.23	1.97	0.0229	-0.3141
375	SLV 4	11.76	-4.44	72.23	1.9458	0.0087	-0.3307
375	SLV 5	1.52	4.01	68.26	1.8214	-0.1418	-0.0778
375	SLV 6	2.29	3.49	67.61	1.8056	-0.1511	-0.0885
375	SLV 7	2.56	-6.48	60.64	1.6479	-0.2874	-0.1009
375	SLV 8	3.33	-7.01	59.99	1.6321	-0.2967	-0.1116
375	SLV 9	-5.84	4.84	59.9	1.601	-0.3621	0.1144
375	SLV 10	-5.07	4.32	59.25	1.5852	-0.3713	0.1037
375	SLV 11	-4.81	-5.65	52.29	1.4275	-0.5076	0.0914
375	SLV 12	-4.03	-6.17	51.64	1.4117	-0.5169	0.0806
375	SLV 13	-14.27	2.28	47.67	1.2874	-0.6675	0.3335
375	SLV 14	-13.09	1.47	46.67	1.2631	-0.6816	0.317
375	SLV 15	-13.96	-0.87	45.39	1.2353	-0.7111	0.3266
375	SLV 16	-12.78	-1.67	44.39	1.2111	-0.7253	0.3101
375	CRTFP Ux+	0	0	0	0	0	0
375	CRTFP Ux-	0	0	0	0	0	0
375	CRTFP Uy+	0	0	0	0	0	0
375	CRTFP Uy-	0	0	0	0	0	0
379	SLU 1	0.37	-0.65	56.96	1.5393	0.369	0.0032
379	SLU 2	0.4	-0.68	56.94	1.5389	0.3692	0.0028
379	SLU 3	0.38	-0.66	58.32	1.5762	0.3774	0.0032
379	SLU 4	0.4	-0.68	58.31	1.576	0.3775	0.0029
379	SLU 5	0.41	-0.69	57.8	1.5622	0.3742	0.0029
379	SLU 6	0.39	-0.68	59.19	1.5995	0.3824	0.0032
379	SLU 7	0.41	-0.69	59.18	1.5993	0.3825	0.003
379	SLU 8	0.38	-0.68	58.69	1.5859	0.379	0.0033
379	SLU 9	0.4	-0.7	58.68	1.5857	0.3791	0.003
379	SLU 10	0.41	-0.67	63.65	1.7206	0.42	0.0037
379	SLU 11	0.39	-0.65	65.03	1.7579	0.4283	0.004
379	SLU 12	0.41	-0.67	65.02	1.7577	0.4284	0.0038
379	SLU 13	0.41	-0.68	64.51	1.7439	0.425	0.0037
379	SLU 14	0.39	-0.66	65.9	1.7812	0.4333	0.004
379	SLU 15	0.41	-0.68	65.89	1.7809	0.4334	0.0038
379	SLU 16	0.39	-0.67	65.4	1.7675	0.4299	0.0041
379	SLU 17	0.41	-0.69	65.39	1.7673	0.43	0.0039
379	SLU 18	0.38	-0.63	66.54	1.7988	0.4417	0.0044
379	SLU 19	0.4	-0.65	66.53	1.7985	0.4418	0.0042
379	SLU 20	0.39	-0.65	67.41	1.822	0.4467	0.0044
379	SLU 21	0.4	-0.67	67.4	1.8218	0.4468	0.0042
379	SLU 22	0.43	-0.6	63.29	1.7112	0.4032	0.003
379	SLU 23	0.46	-0.63	63.27	1.7108	0.4034	0.0026
379	SLU 24	0.44	-0.61	64.66	1.7481	0.4116	0.003
379	SLU 25	0.46	-0.63	64.65	1.7479	0.4117	0.0027
379	SLU 26	0.46	-0.65	64.14	1.7341	0.4084	0.0026
379	SLU 27	0.45	-0.63	65.52	1.7714	0.4166	0.003
379	SLU 28	0.46	-0.65	65.51	1.7712	0.4167	0.0028
379	SLU 29	0.44	-0.63	65.02	1.7577	0.4132	0.0031

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
379	SLU 30	0.46	-0.65	65.01	1.7575	0.4133	0.0028
379	SLU 31	0.47	-0.62	69.98	1.8924	0.4542	0.0034
379	SLU 32	0.45	-0.6	71.37	1.9297	0.4625	0.0038
379	SLU 33	0.47	-0.62	71.36	1.9295	0.4626	0.0036
379	SLU 34	0.47	-0.64	70.85	1.9157	0.4592	0.0035
379	SLU 35	0.45	-0.62	72.23	1.953	0.4675	0.0038
379	SLU 36	0.47	-0.63	72.22	1.9528	0.4676	0.0036
379	SLU 37	0.45	-0.62	71.73	1.9394	0.4641	0.0039
379	SLU 38	0.46	-0.64	71.72	1.9392	0.4642	0.0037
379	SLU 39	0.44	-0.59	72.87	1.9706	0.4759	0.0042
379	SLU 40	0.46	-0.6	72.86	1.9704	0.476	0.004
379	SLU 41	0.44	-0.6	73.74	1.9939	0.4809	0.0042
379	SLU 42	0.46	-0.62	73.73	1.9937	0.481	0.004
379	SLU 43	0.46	-0.86	71.87	1.9421	0.468	0.0043
379	SLU 44	0.49	-0.89	71.85	1.9418	0.4682	0.0039
379	SLU 45	0.47	-0.87	73.24	1.9791	0.4764	0.0042
379	SLU 46	0.49	-0.89	73.23	1.9789	0.4765	0.004
379	SLU 47	0.5	-0.91	72.72	1.9651	0.4731	0.0039
379	SLU 48	0.48	-0.89	74.11	2.0024	0.4814	0.0042
379	SLU 49	0.5	-0.9	74.1	2.0022	0.4815	0.004
379	SLU 50	0.47	-0.89	73.6	1.9887	0.478	0.0043
379	SLU 51	0.49	-0.91	73.59	1.9885	0.4781	0.0041
379	SLU 52	0.5	-0.88	78.56	2.1234	0.519	0.0047
379	SLU 53	0.48	-0.86	79.95	2.1607	0.5273	0.0051
379	SLU 54	0.5	-0.88	79.94	2.1605	0.5274	0.0048
379	SLU 55	0.5	-0.89	79.43	2.1467	0.524	0.0047
379	SLU 56	0.49	-0.88	80.82	2.184	0.5322	0.0051
379	SLU 57	0.5	-0.89	80.81	2.1838	0.5323	0.0048
379	SLU 58	0.48	-0.88	80.31	2.1703	0.5288	0.0051
379	SLU 59	0.5	-0.9	80.3	2.1701	0.5289	0.0049
379	SLU 60	0.47	-0.85	81.46	2.2016	0.5406	0.0055
379	SLU 61	0.49	-0.86	81.45	2.2014	0.5408	0.0052
379	SLU 62	0.48	-0.86	82.32	2.2249	0.5456	0.0055
379	SLU 63	0.49	-0.88	82.31	2.2247	0.5457	0.0052
379	SLU 64	0.52	-0.81	78.2	2.114	0.5022	0.0041
379	SLU 65	0.55	-0.84	78.19	2.1137	0.5023	0.0037
379	SLU 66	0.53	-0.82	79.57	2.151	0.5106	0.004
379	SLU 67	0.55	-0.84	79.56	2.1508	0.5107	0.0038
379	SLU 68	0.56	-0.86	79.05	2.137	0.5073	0.0037
379	SLU 69	0.54	-0.84	80.44	2.1743	0.5156	0.004
379	SLU 70	0.56	-0.86	80.43	2.1741	0.5157	0.0038
379	SLU 71	0.53	-0.85	79.93	2.1606	0.5122	0.0041
379	SLU 72	0.55	-0.86	79.92	2.1604	0.5123	0.0039
379	SLU 73	0.56	-0.83	84.9	2.2953	0.5532	0.0045
379	SLU 74	0.54	-0.81	86.28	2.3326	0.5615	0.0048
379	SLU 75	0.56	-0.83	86.27	2.3324	0.5616	0.0046
379	SLU 76	0.56	-0.85	85.76	2.3186	0.5582	0.0045
379	SLU 77	0.54	-0.83	87.15	2.3559	0.5664	0.0049
379	SLU 78	0.56	-0.85	87.14	2.3557	0.5665	0.0046
379	SLU 79	0.54	-0.83	86.64	2.3422	0.563	0.0049
379	SLU 80	0.56	-0.85	86.63	2.342	0.5631	0.0047
379	SLU 81	0.53	-0.8	87.79	2.3735	0.5748	0.0052
379	SLU 82	0.55	-0.81	87.78	2.3733	0.5749	0.005
379	SLU 83	0.54	-0.81	88.65	2.3968	0.5798	0.0053
379	SLU 84	0.55	-0.83	88.64	2.3966	0.5799	0.005
379	SLE RA 1	0.39	-0.64	58.76	1.5884	0.3788	0.0032
379	SLE RA 2	0.41	-0.66	58.75	1.5882	0.3789	0.0029
379	SLE RA 3	0.4	-0.64	59.68	1.613	0.3844	0.0031
379	SLE RA 4	0.41	-0.65	59.67	1.6129	0.3844	0.003
379	SLE RA 5	0.41	-0.67	59.33	1.6037	0.3822	0.0029
379	SLE RA 6	0.4	-0.65	60.25	1.6286	0.3877	0.0032
379	SLE RA 7	0.41	-0.67	60.25	1.6284	0.3878	0.003
379	SLE RA 8	0.4	-0.66	59.92	1.6194	0.3854	0.0032
379	SLE RA 9	0.41	-0.67	59.91	1.6193	0.3855	0.003
379	SLE RA 10	0.41	-0.65	63.23	1.7092	0.4128	0.0035
379	SLE RA 11	0.4	-0.64	64.15	1.7341	0.4183	0.0037
379	SLE RA 12	0.41	-0.65	64.14	1.734	0.4184	0.0035
379	SLE RA 13	0.42	-0.66	63.8	1.7248	0.4161	0.0035
379	SLE RA 14	0.4	-0.65	64.73	1.7496	0.4216	0.0037
379	SLE RA 15	0.42	-0.66	64.72	1.7495	0.4217	0.0035
379	SLE RA 16	0.4	-0.65	64.39	1.7405	0.4193	0.0038
379	SLE RA 17	0.41	-0.66	64.39	1.7404	0.4194	0.0036
379	SLE RA 18	0.39	-0.63	65.16	1.7614	0.4272	0.004
379	SLE RA 19	0.41	-0.64	65.15	1.7612	0.4273	0.0038
379	SLE RA 20	0.4	-0.64	65.73	1.7769	0.4305	0.004
379	SLE RA 21	0.41	-0.65	65.73	1.7768	0.4306	0.0038
379	SLE FR 1	0.39	-0.64	58.76	1.5884	0.3788	0.0032
379	SLE FR 2	0.39	-0.64	58.76	1.5883	0.3788	0.0031
379	SLE FR 3	0.39	-0.64	59	1.5946	0.3801	0.0032
379	SLE FR 4	0.39	-0.64	60.68	1.6402	0.3933	0.0033
379	SLE FR 5	0.39	-0.64	60.91	1.6465	0.3946	0.0034
379	SLE FR 6	0.39	-0.63	61.96	1.6749	0.403	0.0036
379	SLE QP 1	0.39	-0.64	58.76	1.5884	0.3788	0.0032
379	SLE QP 2	0.39	-0.63	60.68	1.6403	0.3933	0.0034
379	SLD 1	5.64	0.45	55.35	1.501	0.5191	-0.1344
379	SLD 2	6.15	0.8	55.8	1.512	0.5113	-0.1422
379	SLD 3	5.52	-0.91	54.31	1.4769	0.5371	-0.1314
379	SLD 4	6.03	-0.55	54.76	1.4879	0.5293	-0.1391
379	SLD 5	2.05	1.68	60.58	1.633	0.4051	-0.0412
379	SLD 6	2.39	1.91	60.88	1.6403	0.4	-0.0463

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
379	SLD 7	1.65	-2.83	57.11	1.5527	0.4652	-0.031
379	SLD 8	1.99	-2.6	57.41	1.56	0.46	-0.0361
379	SLD 9	-1.21	1.33	63.96	1.7206	0.3266	0.0429
379	SLD 10	-0.87	1.57	64.26	1.7278	0.3215	0.0378
379	SLD 11	-1.61	-3.18	60.49	1.6403	0.3866	0.0531
379	SLD 12	-1.27	-2.94	60.78	1.6475	0.3815	0.048
379	SLD 13	-5.25	-0.72	66.61	1.7927	0.2574	0.1459
379	SLD 14	-4.73	-0.36	67.06	1.8037	0.2496	0.1382
379	SLD 15	-5.37	-2.07	65.57	1.7686	0.2754	0.149
379	SLD 16	-4.85	-1.71	66.01	1.7796	0.2676	0.1413
379	SLV 1	12.65	1.85	48.17	1.3136	0.6878	-0.3189
379	SLV 2	13.85	2.67	49.22	1.3391	0.6697	-0.3369
379	SLV 3	12.38	-1.22	45.81	1.2589	0.7292	-0.3119
379	SLV 4	13.57	-0.39	46.85	1.2845	0.711	-0.3298
379	SLV 5	4.28	4.61	60.33	1.6206	0.4221	-0.1008
379	SLV 6	5.06	5.15	61.01	1.6373	0.4103	-0.1125
379	SLV 7	3.36	-5.6	52.45	1.4385	0.56	-0.0773
379	SLV 8	4.13	-5.07	53.13	1.4552	0.5482	-0.089
379	SLV 9	-3.35	3.8	68.23	1.8254	0.2385	0.0958
379	SLV 10	-2.58	4.34	68.91	1.8421	0.2266	0.0841
379	SLV 11	-4.28	-6.42	60.36	1.6433	0.3763	0.1193
379	SLV 12	-3.5	-5.88	61.03	1.6599	0.3645	0.1076
379	SLV 13	-12.79	-0.87	74.51	1.9961	0.0756	0.3366
379	SLV 14	-11.6	-0.05	75.55	2.0216	0.0574	0.3187
379	SLV 15	-13.06	-3.94	72.15	1.9415	0.1169	0.3437
379	SLV 16	-11.87	-3.11	73.19	1.967	0.0988	0.3257
379	CRTFP Ux+	0	0	0	0	0	0
379	CRTFP Ux-	0	0	0	0	0	0
379	CRTFP Uy+	0	0	0	0	0	0
379	CRTFP Uy-	0	0	0	0	0	0
380	SLU 1	0.25	0.19	34.55	0.9126	9.4921	-0.0739
380	SLU 2	0.26	0.17	34.55	0.9127	9.4928	-0.0689
380	SLU 3	0.25	0.19	35.4	0.935	9.7198	-0.0753
380	SLU 4	0.26	0.18	35.4	0.935	9.7203	-0.0723
380	SLU 5	0.27	0.17	35.09	0.9268	9.637	-0.0679
380	SLU 6	0.26	0.19	35.94	0.9491	9.8641	-0.0744
380	SLU 7	0.27	0.18	35.94	0.9491	9.8645	-0.0714
380	SLU 8	0.25	0.18	35.63	0.9409	9.7806	-0.072
380	SLU 9	0.26	0.17	35.63	0.9409	9.781	-0.069
380	SLU 10	0.26	0.26	38.43	1.0148	10.537	-0.0988
380	SLU 11	0.25	0.28	39.27	1.037	10.764	-0.1052
380	SLU 12	0.26	0.27	39.28	1.0371	10.7645	-0.1022
380	SLU 13	0.27	0.26	38.96	1.0289	10.6813	-0.0978
380	SLU 14	0.26	0.28	39.81	1.0511	10.9083	-0.1043
380	SLU 15	0.27	0.27	39.81	1.0512	10.9087	-0.1013
380	SLU 16	0.25	0.27	39.5	1.0429	10.8248	-0.1019
380	SLU 17	0.26	0.26	39.5	1.043	10.8252	-0.0989
380	SLU 18	0.25	0.31	40.08	1.0584	10.9838	-0.1166
380	SLU 19	0.26	0.3	40.09	1.0585	10.9843	-0.1136
380	SLU 20	0.25	0.31	40.62	1.0725	11.1281	-0.1156
380	SLU 21	0.26	0.3	40.62	1.0726	11.1285	-0.1126
380	SLU 22	0.28	0.28	38.41	1.0144	10.5288	-0.1044
380	SLU 23	0.3	0.26	38.41	1.0145	10.5295	-0.0994
380	SLU 24	0.29	0.28	39.26	1.0367	10.7566	-0.1059
380	SLU 25	0.3	0.27	39.26	1.0368	10.757	-0.1029
380	SLU 26	0.3	0.26	38.95	1.0286	10.6738	-0.0984
380	SLU 27	0.29	0.28	39.8	1.0509	10.9008	-0.1049
380	SLU 28	0.3	0.27	39.8	1.0509	10.9012	-0.1019
380	SLU 29	0.29	0.27	39.49	1.0427	10.8173	-0.1025
380	SLU 30	0.3	0.26	39.49	1.0427	10.8178	-0.0995
380	SLU 31	0.3	0.34	42.29	1.1166	11.5738	-0.1293
380	SLU 32	0.29	0.36	43.13	1.1388	11.8008	-0.1358
380	SLU 33	0.3	0.35	43.13	1.1389	11.8012	-0.1328
380	SLU 34	0.3	0.34	42.82	1.1307	11.718	-0.1283
380	SLU 35	0.29	0.36	43.67	1.1529	11.945	-0.1348
380	SLU 36	0.3	0.35	43.67	1.153	11.9454	-0.1318
380	SLU 37	0.29	0.35	43.36	1.1447	11.8615	-0.1324
380	SLU 38	0.3	0.34	43.36	1.1448	11.862	-0.1294
380	SLU 39	0.28	0.4	43.94	1.1602	12.0206	-0.1471
380	SLU 40	0.29	0.39	43.94	1.1603	12.021	-0.1441
380	SLU 41	0.28	0.39	44.48	1.1743	12.1648	-0.1462
380	SLU 42	0.29	0.38	44.48	1.1744	12.1652	-0.1432
380	SLU 43	0.31	0.22	43.59	1.1515	11.9843	-0.0856
380	SLU 44	0.33	0.2	43.6	1.1516	11.985	-0.0806
380	SLU 45	0.32	0.22	44.44	1.1738	12.212	-0.0871
380	SLU 46	0.33	0.21	44.44	1.1739	12.2124	-0.0841
380	SLU 47	0.33	0.2	44.13	1.1657	12.1292	-0.0797
380	SLU 48	0.32	0.22	44.98	1.188	12.3563	-0.0861
380	SLU 49	0.33	0.21	44.98	1.188	12.3567	-0.0831
380	SLU 50	0.32	0.21	44.67	1.1798	12.2728	-0.0837
380	SLU 51	0.33	0.2	44.67	1.1798	12.2732	-0.0807
380	SLU 52	0.32	0.29	47.47	1.2537	13.0292	-0.1105
380	SLU 53	0.32	0.31	48.32	1.2759	13.2562	-0.117
380	SLU 54	0.33	0.3	48.32	1.276	13.2566	-0.114
380	SLU 55	0.33	0.29	48.01	1.2678	13.1734	-0.1095
380	SLU 56	0.32	0.3	48.85	1.29	13.4005	-0.116
380	SLU 57	0.33	0.3	48.86	1.2901	13.4009	-0.113
380	SLU 58	0.32	0.3	48.54	1.2818	13.317	-0.1136
380	SLU 59	0.33	0.29	48.54	1.2819	13.3174	-0.1106
380	SLU 60	0.31	0.34	49.13	1.2973	13.476	-0.1283

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
380	SLU 61	0.32	0.33	49.13	1.2974	13.4764	-0.1253
380	SLU 62	0.31	0.34	49.66	1.3114	13.6203	-0.1274
380	SLU 63	0.32	0.33	49.67	1.3115	13.6207	-0.1244
380	SLU 64	0.34	0.3	47.45	1.2533	13.021	-0.1162
380	SLU 65	0.36	0.29	47.46	1.2534	13.0217	-0.1111
380	SLU 66	0.35	0.31	48.3	1.2756	13.2488	-0.1176
380	SLU 67	0.36	0.3	48.3	1.2757	13.2492	-0.1146
380	SLU 68	0.36	0.28	47.99	1.2675	13.166	-0.1102
380	SLU 69	0.36	0.3	48.84	1.2898	13.393	-0.1166
380	SLU 70	0.37	0.29	48.84	1.2898	13.3934	-0.1136
380	SLU 71	0.35	0.3	48.53	1.2815	13.3095	-0.1142
380	SLU 72	0.36	0.29	48.53	1.2816	13.3099	-0.1112
380	SLU 73	0.36	0.37	51.33	1.3555	14.0659	-0.141
380	SLU 74	0.35	0.39	52.18	1.3777	14.293	-0.1475
380	SLU 75	0.36	0.38	52.18	1.3777	14.2934	-0.1445
380	SLU 76	0.36	0.37	51.87	1.3696	14.2102	-0.1401
380	SLU 77	0.35	0.39	52.71	1.3918	14.4372	-0.1465
380	SLU 78	0.36	0.38	52.72	1.3919	14.4376	-0.1435
380	SLU 79	0.35	0.38	52.4	1.3836	14.3537	-0.1441
380	SLU 80	0.36	0.37	52.4	1.3837	14.3541	-0.1411
380	SLU 81	0.34	0.43	52.99	1.3991	14.5128	-0.1589
380	SLU 82	0.35	0.42	52.99	1.3992	14.5132	-0.1559
380	SLU 83	0.35	0.42	53.52	1.4132	14.657	-0.1579
380	SLU 84	0.36	0.41	53.53	1.4133	14.6574	-0.1549
380	SLE RA 1	0.26	0.21	35.65	0.9417	9.7883	-0.0826
380	SLE RA 2	0.27	0.2	35.66	0.9418	9.7888	-0.0793
380	SLE RA 3	0.26	0.22	36.22	0.9566	9.9401	-0.0836
380	SLE RA 4	0.27	0.21	36.22	0.9566	9.9404	-0.0816
380	SLE RA 5	0.27	0.2	36.01	0.9512	9.8849	-0.0786
380	SLE RA 6	0.26	0.21	36.58	0.966	10.0363	-0.0829
380	SLE RA 7	0.27	0.21	36.58	0.966	10.0366	-0.0809
380	SLE RA 8	0.26	0.21	36.37	0.9605	9.9806	-0.0813
380	SLE RA 9	0.27	0.2	36.37	0.9606	9.9809	-0.0793
380	SLE RA 10	0.27	0.26	38.24	1.0098	10.4849	-0.0992
380	SLE RA 11	0.26	0.27	38.8	1.0246	10.6363	-0.1035
380	SLE RA 12	0.27	0.27	38.8	1.0247	10.6366	-0.1015
380	SLE RA 13	0.27	0.26	38.6	1.0192	10.5811	-0.0986
380	SLE RA 14	0.26	0.27	39.16	1.034	10.7324	-0.1029
380	SLE RA 15	0.27	0.27	39.16	1.0341	10.7327	-0.1009
380	SLE RA 16	0.26	0.27	38.95	1.0286	10.6768	-0.1013
380	SLE RA 17	0.27	0.26	38.95	1.0286	10.6771	-0.0993
380	SLE RA 18	0.26	0.3	39.34	1.0389	10.7828	-0.1111
380	SLE RA 19	0.26	0.29	39.34	1.039	10.7831	-0.1091
380	SLE RA 20	0.26	0.29	39.7	1.0483	10.879	-0.1105
380	SLE RA 21	0.27	0.29	39.7	1.0484	10.8792	-0.1085
380	SLE FR 1	0.26	0.21	35.65	0.9417	9.7883	-0.0826
380	SLE FR 2	0.26	0.21	35.65	0.9417	9.7884	-0.082
380	SLE FR 3	0.26	0.21	35.8	0.9455	9.8268	-0.0824
380	SLE FR 4	0.26	0.24	36.76	0.9709	10.0868	-0.0905
380	SLE FR 5	0.26	0.24	36.9	0.9746	10.1251	-0.0909
380	SLE FR 6	0.26	0.26	37.5	0.9903	10.2856	-0.0969
380	SLE QP 1	0.26	0.21	35.65	0.9417	9.7883	-0.0826
380	SLE QP 2	0.26	0.24	36.76	0.9709	10.0867	-0.0912
380	SLD 1	3.28	0.7	26.25	0.6946	7.3699	-0.3163
380	SLD 2	3.58	1.25	26.76	0.7068	7.5096	-0.5138
380	SLD 3	3.2	-0.42	25.44	0.6752	7.1514	0.0772
380	SLD 4	3.5	0.12	25.95	0.6875	7.2911	-0.1202
380	SLD 5	1.22	1.98	34.76	0.9152	9.5777	-0.7197
380	SLD 6	1.43	2.34	35.1	0.9233	9.6704	-0.8508
380	SLD 7	0.97	-1.76	32.03	0.8506	8.8493	0.5922
380	SLD 8	1.17	-1.4	32.37	0.8587	8.942	0.4611
380	SLD 9	-0.66	1.88	41.15	1.0831	11.2314	-0.6435
380	SLD 10	-0.45	2.24	41.49	1.0912	11.3241	-0.7745
380	SLD 11	-0.91	-1.86	38.42	1.0185	10.503	0.6684
380	SLD 12	-0.71	-1.5	38.76	1.0266	10.5956	0.5374
380	SLD 13	-2.99	0.35	47.58	1.2543	12.8822	-0.0621
380	SLD 14	-2.69	0.9	48.09	1.2665	13.0219	-0.2596
380	SLD 15	-3.07	-0.77	46.76	1.2349	12.6637	0.3314
380	SLD 16	-2.76	-0.22	47.27	1.2471	12.8034	0.134
380	SLV 1	7.32	1.29	12.15	0.3239	3.7231	-0.6049
380	SLV 2	8.03	2.55	13.34	0.3523	4.0483	-1.0646
380	SLV 3	7.14	-1.25	10.29	0.2798	3.2267	0.2872
380	SLV 4	7.85	0.01	11.48	0.3083	3.5519	-0.1725
380	SLV 5	2.52	4.19	31.99	0.8386	8.8733	-1.5175
380	SLV 6	2.98	5.01	32.76	0.8571	9.0852	-1.8171
380	SLV 7	1.92	-4.29	25.79	0.6918	7.2186	1.4562
380	SLV 8	2.39	-3.46	26.56	0.7103	7.4305	1.1566
380	SLV 9	-1.88	3.94	46.96	1.2315	12.7428	-1.339
380	SLV 10	-1.41	4.76	47.73	1.25	12.9547	-1.6386
380	SLV 11	-2.47	-4.53	40.76	1.0847	11.0881	1.6347
380	SLV 12	-2.01	-3.71	41.53	1.1032	11.3	1.3352
380	SLV 13	-7.34	0.47	62.04	1.6335	16.6215	-0.0098
380	SLV 14	-6.63	1.73	63.23	1.6619	16.9466	-0.4696
380	SLV 15	-7.52	-2.07	60.18	1.5894	16.1251	0.8823
380	SLV 16	-6.8	-0.81	61.37	1.6179	16.4502	0.4225
380	CRTFP Ux+	0	0	0	0	0	0
380	CRTFP Ux-	0	0	0	0	0	0
380	CRTFP Uy+	0	0	0	0	0	0
380	CRTFP Uy-	0	0	0	0	0	0
382	SLU 1	-0.67	0.04	32.62	0.8477	-6.0733	0.0284

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
382	SLU 2	-0.66	-0.03	32.56	0.8465	-6.0633	0.0099
382	SLU 3	-0.69	0.05	33.41	0.8683	-6.2177	0.0306
382	SLU 4	-0.68	0.01	33.38	0.8676	-6.2117	0.0195
382	SLU 5	-0.67	-0.02	33.07	0.8596	-6.1551	0.0116
382	SLU 6	-0.71	0.06	33.92	0.8814	-6.3095	0.0323
382	SLU 7	-0.7	0.01	33.89	0.8806	-6.3035	0.0212
382	SLU 8	-0.7	0.06	33.63	0.8738	-6.2568	0.0319
382	SLU 9	-0.69	0.01	33.6	0.8731	-6.2509	0.0208
382	SLU 10	-0.7	0.02	36.21	0.941	-6.7272	0.0238
382	SLU 11	-0.74	0.1	37.06	0.9628	-6.8816	0.0446
382	SLU 12	-0.73	0.06	37.03	0.9621	-6.8756	0.0334
382	SLU 13	-0.71	0.03	36.71	0.9541	-6.819	0.0255
382	SLU 14	-0.75	0.11	37.56	0.9759	-6.9734	0.0463
382	SLU 15	-0.74	0.06	37.53	0.9752	-6.9674	0.0351
382	SLU 16	-0.74	0.11	37.27	0.9684	-6.9208	0.0459
382	SLU 17	-0.73	0.06	37.24	0.9676	-6.9148	0.0347
382	SLU 18	-0.74	0.12	37.82	0.9827	-7.0217	0.0484
382	SLU 19	-0.73	0.07	37.79	0.982	-7.0157	0.0372
382	SLU 20	-0.75	0.12	38.33	0.9958	-7.1135	0.0501
382	SLU 21	-0.74	0.08	38.3	0.9951	-7.1075	0.039
382	SLU 22	-0.76	0.11	36.27	0.9426	-6.7371	0.0459
382	SLU 23	-0.74	0.03	36.22	0.9414	-6.7271	0.0273
382	SLU 24	-0.78	0.11	37.07	0.9633	-6.8815	0.048
382	SLU 25	-0.77	0.07	37.04	0.9625	-6.8756	0.0369
382	SLU 26	-0.75	0.04	36.73	0.9545	-6.8189	0.029
382	SLU 27	-0.79	0.12	37.58	0.9763	-6.9733	0.0498
382	SLU 28	-0.78	0.07	37.55	0.9756	-6.9673	0.0386
382	SLU 29	-0.78	0.12	37.29	0.9688	-6.9207	0.0493
382	SLU 30	-0.77	0.07	37.26	0.9681	-6.9147	0.0382
382	SLU 31	-0.78	0.08	39.87	1.0359	-7.391	0.0412
382	SLU 32	-0.82	0.16	40.72	1.0578	-7.5455	0.062
382	SLU 33	-0.81	0.12	40.68	1.057	-7.5395	0.0508
382	SLU 34	-0.79	0.09	40.37	1.049	-7.4828	0.043
382	SLU 35	-0.83	0.17	41.22	1.0708	-7.6372	0.0637
382	SLU 36	-0.82	0.13	41.19	1.0701	-7.6312	0.0526
382	SLU 37	-0.82	0.17	40.93	1.0633	-7.5846	0.0633
382	SLU 38	-0.81	0.12	40.9	1.0626	-7.5786	0.0521
382	SLU 39	-0.82	0.18	41.48	1.0777	-7.6856	0.0658
382	SLU 40	-0.81	0.14	41.45	1.0769	-7.6796	0.0547
382	SLU 41	-0.83	0.18	41.99	1.0907	-7.7773	0.0675
382	SLU 42	-0.82	0.14	41.95	1.09	-7.7713	0.0564
382	SLU 43	-0.85	0.04	41.15	1.0694	-7.6677	0.031
382	SLU 44	-0.83	-0.04	41.09	1.0682	-7.6577	0.0124
382	SLU 45	-0.87	0.04	41.94	1.09	-7.8121	0.0332
382	SLU 46	-0.86	0	41.91	1.0893	-7.8061	0.022
382	SLU 47	-0.85	-0.03	41.6	1.0813	-7.7495	0.0141
382	SLU 48	-0.88	0.05	42.45	1.1031	-7.9039	0.0349
382	SLU 49	-0.87	0	42.42	1.1024	-7.8979	0.0237
382	SLU 50	-0.88	0.05	42.16	1.0956	-7.8512	0.0345
382	SLU 51	-0.87	0	42.13	1.0949	-7.8452	0.0233
382	SLU 52	-0.88	0.01	44.74	1.1627	-8.3216	0.0264
382	SLU 53	-0.91	0.09	45.59	1.1845	-8.476	0.0471
382	SLU 54	-0.9	0.05	45.56	1.1838	-8.47	0.036
382	SLU 55	-0.89	0.02	45.24	1.1758	-8.4134	0.0281
382	SLU 56	-0.92	0.1	46.09	1.1976	-8.5678	0.0488
382	SLU 57	-0.91	0.06	46.06	1.1969	-8.5618	0.0377
382	SLU 58	-0.92	0.1	45.8	1.1901	-8.5151	0.0484
382	SLU 59	-0.91	0.06	45.77	1.1894	-8.5091	0.0373
382	SLU 60	-0.91	0.11	46.35	1.2044	-8.6161	0.0509
382	SLU 61	-0.9	0.07	46.32	1.2037	-8.6101	0.0398
382	SLU 62	-0.92	0.12	46.86	1.2175	-8.7079	0.0527
382	SLU 63	-0.91	0.07	46.83	1.2168	-8.7019	0.0415
382	SLU 64	-0.93	0.1	44.8	1.1644	-8.3315	0.0484
382	SLU 65	-0.91	0.02	44.75	1.1632	-8.3215	0.0298
382	SLU 66	-0.95	0.1	45.6	1.185	-8.4759	0.0506
382	SLU 67	-0.94	0.06	45.57	1.1843	-8.4699	0.0394
382	SLU 68	-0.93	0.03	45.26	1.1763	-8.4133	0.0316
382	SLU 69	-0.96	0.11	46.11	1.1981	-8.5677	0.0523
382	SLU 70	-0.95	0.07	46.08	1.1974	-8.5617	0.0412
382	SLU 71	-0.96	0.11	45.82	1.1905	-8.5151	0.0519
382	SLU 72	-0.95	0.07	45.79	1.1898	-8.5091	0.0407
382	SLU 73	-0.96	0.08	48.4	1.2577	-8.9854	0.0438
382	SLU 74	-0.99	0.16	49.25	1.2795	-9.1398	0.0646
382	SLU 75	-0.98	0.11	49.21	1.2788	-9.1338	0.0534
382	SLU 76	-0.97	0.08	48.9	1.2708	-9.0772	0.0455
382	SLU 77	-1.01	0.16	49.75	1.2926	-9.2316	0.0663
382	SLU 78	-1	0.12	49.72	1.2919	-9.2256	0.0551
382	SLU 79	-1	0.16	49.46	1.2851	-9.179	0.0659
382	SLU 80	-0.99	0.12	49.43	1.2843	-9.173	0.0547
382	SLU 81	-0.99	0.17	50.01	1.2994	-9.2799	0.0684
382	SLU 82	-0.98	0.13	49.98	1.2987	-9.2739	0.0572
382	SLU 83	-1	0.18	50.52	1.3125	-9.3717	0.0701
382	SLU 84	-0.99	0.13	50.48	1.3118	-9.3657	0.059
382	SLE RA 1	-0.7	0.06	33.66	0.8748	-6.263	0.0334
382	SLE RA 2	-0.69	0.01	33.63	0.874	-6.2563	0.021
382	SLE RA 3	-0.71	0.07	34.19	0.8886	-6.3592	0.0349
382	SLE RA 4	-0.7	0.04	34.17	0.8881	-6.3552	0.0274
382	SLE RA 5	-0.7	0.02	33.96	0.8827	-6.3175	0.0222
382	SLE RA 6	-0.72	0.07	34.53	0.8973	-6.4204	0.036
382	SLE RA 7	-0.71	0.04	34.51	0.8968	-6.4164	0.0286

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
382	SLE RA 8	-0.72	0.07	34.34	0.8923	-6.3853	0.0357
382	SLE RA 9	-0.71	0.04	34.32	0.8918	-6.3813	0.0283
382	SLE RA 10	-0.72	0.05	36.06	0.937	-6.6989	0.0303
382	SLE RA 11	-0.74	0.1	36.62	0.9516	-6.8018	0.0442
382	SLE RA 12	-0.73	0.07	36.6	0.9511	-6.7978	0.0367
382	SLE RA 13	-0.72	0.05	36.39	0.9457	-6.7601	0.0315
382	SLE RA 14	-0.75	0.1	36.96	0.9603	-6.863	0.0453
382	SLE RA 15	-0.74	0.08	36.94	0.9598	-6.859	0.0379
382	SLE RA 16	-0.74	0.1	36.77	0.9553	-6.8279	0.045
382	SLE RA 17	-0.74	0.07	36.74	0.9548	-6.8239	0.0376
382	SLE RA 18	-0.74	0.11	37.13	0.9648	-6.8952	0.0467
382	SLE RA 19	-0.73	0.08	37.11	0.9643	-6.8912	0.0393
382	SLE RA 20	-0.75	0.11	37.47	0.9735	-6.9564	0.0479
382	SLE RA 21	-0.74	0.09	37.45	0.9731	-6.9524	0.0404
382	SLE FR 1	-0.7	0.06	33.66	0.8748	-6.263	0.0334
382	SLE FR 2	-0.7	0.05	33.65	0.8746	-6.2616	0.0309
382	SLE FR 3	-0.7	0.06	33.8	0.8783	-6.2874	0.0339
382	SLE FR 4	-0.71	0.07	34.69	0.9017	-6.4513	0.0349
382	SLE FR 5	-0.71	0.08	34.84	0.9053	-6.4771	0.0379
382	SLE FR 6	-0.72	0.09	35.4	0.9198	-6.5791	0.0401
382	SLE QP 1	-0.7	0.06	33.66	0.8748	-6.263	0.0334
382	SLE QP 2	-0.71	0.08	34.7	0.9018	-6.4526	0.0374
382	SLD 1	1.83	0.56	45.57	1.1813	-8.3685	0.0918
382	SLD 2	2.1	0.08	45.1	1.1706	-8.2808	-0.0346
382	SLD 3	1.91	-0.53	44.77	1.1629	-8.223	-0.18
382	SLD 4	2.18	-1.01	44.31	1.1521	-8.1354	-0.3064
382	SLD 5	-0.12	1.95	39.25	1.0156	-7.264	0.489
382	SLD 6	0.06	1.63	38.95	1.0084	-7.2058	0.4051
382	SLD 7	0.15	-1.66	36.6	0.9541	-6.779	-0.4171
382	SLD 8	0.33	-1.98	36.29	0.947	-6.7209	-0.501
382	SLD 9	-1.75	2.13	33.11	0.8566	-6.1844	0.5758
382	SLD 10	-1.57	1.81	32.81	0.8495	-6.1263	0.4919
382	SLD 11	-1.48	-1.48	30.46	0.7952	-5.6994	-0.3303
382	SLD 12	-1.3	-1.8	30.15	0.7881	-5.6413	-0.4142
382	SLD 13	-3.6	1.16	25.1	0.6515	-4.7699	0.3812
382	SLD 14	-3.33	0.68	24.63	0.6408	-4.6823	0.2548
382	SLD 15	-3.52	0.07	24.3	0.6331	-4.6244	0.1094
382	SLD 16	-3.25	-0.4	23.84	0.6223	-4.5368	-0.017
382	SLV 1	5.23	1.16	60.09	1.5551	-10.93	0.1535
382	SLV 2	5.86	0.04	59.02	1.5301	-10.726	-0.1408
382	SLV 3	5.41	-1.3	58.28	1.5132	-10.5994	-0.4613
382	SLV 4	6.04	-2.41	57.21	1.4882	-10.3954	-0.7556
382	SLV 5	0.69	4.32	45.25	1.1657	-8.3331	1.0565
382	SLV 6	1.1	3.59	44.55	1.1494	-8.2002	0.8647
382	SLV 7	1.29	-3.86	39.22	1.0261	-7.2311	-0.993
382	SLV 8	1.7	-4.59	38.52	1.0098	-7.0982	-1.1847
382	SLV 9	-3.12	4.74	30.88	0.7938	-5.8071	1.2596
382	SLV 10	-2.71	4.01	30.18	0.7775	-5.6741	1.0678
382	SLV 11	-2.52	-3.44	24.85	0.6542	-4.7051	-0.7899
382	SLV 12	-2.11	-4.16	24.15	0.6379	-4.5722	-0.9817
382	SLV 13	-7.46	2.56	12.2	0.3154	-2.5099	0.8304
382	SLV 14	-6.84	1.45	11.12	0.2904	-2.3059	0.5362
382	SLV 15	-7.28	0.11	10.39	0.2735	-2.1793	0.2156
382	SLV 16	-6.65	-1	9.31	0.2486	-1.9753	-0.0787
382	CRTFP Ux+	0	0	0	0	0	0
382	CRTFP Ux-	0	0	0	0	0	0
382	CRTFP Uy+	0	0	0	0	0	0
382	CRTFP Uy-	0	0	0	0	0	0
385	SLU 1	0.15	-0.09	34.05	0.9237	10.4989	0.0277
385	SLU 2	0.17	-0.12	34.03	0.9232	10.4913	0.0386
385	SLU 3	0.16	-0.08	34.88	0.9461	10.7513	0.0241
385	SLU 4	0.17	-0.1	34.86	0.9458	10.7468	0.0307
385	SLU 5	0.17	-0.12	34.55	0.9372	10.6496	0.0384
385	SLU 6	0.16	-0.08	35.4	0.96	10.9096	0.024
385	SLU 7	0.17	-0.1	35.38	0.9597	10.905	0.0305
385	SLU 8	0.15	-0.09	35.09	0.9517	10.8155	0.0274
385	SLU 9	0.16	-0.11	35.08	0.9514	10.8109	0.0339
385	SLU 10	0.17	-0.07	38.31	1.0399	11.8047	0.0185
385	SLU 11	0.16	-0.03	39.16	1.0628	12.0647	0.0041
385	SLU 12	0.17	-0.05	39.15	1.0625	12.0601	0.0106
385	SLU 13	0.17	-0.07	38.83	1.0539	11.9629	0.0183
385	SLU 14	0.16	-0.03	39.68	1.0768	12.2229	0.0039
385	SLU 15	0.17	-0.05	39.66	1.0765	12.2184	0.0104
385	SLU 16	0.16	-0.04	39.37	1.0684	12.1288	0.0073
385	SLU 17	0.17	-0.05	39.36	1.0681	12.1243	0.0138
385	SLU 18	0.16	-0.01	40.17	1.0905	12.3751	-0.001
385	SLU 19	0.17	-0.03	40.15	1.0902	12.3706	0.0056
385	SLU 20	0.16	-0.01	40.69	1.1045	12.5334	-0.0011
385	SLU 21	0.17	-0.03	40.67	1.1042	12.5288	0.0054
385	SLU 22	0.18	-0.01	37.72	1.0237	11.6174	-0.0026
385	SLU 23	0.19	-0.04	37.7	1.0232	11.6098	0.0082
385	SLU 24	0.18	0	38.55	1.0461	11.8698	-0.0062
385	SLU 25	0.19	-0.02	38.54	1.0458	11.8652	0.0003
385	SLU 26	0.2	-0.04	38.22	1.0372	11.7681	0.0081
385	SLU 27	0.18	0	39.07	1.0601	12.028	-0.0063
385	SLU 28	0.19	-0.02	39.06	1.0598	12.0235	0.0002
385	SLU 29	0.18	-0.01	38.76	1.0517	11.9339	-0.0029
385	SLU 30	0.19	-0.03	38.75	1.0514	11.9294	0.0036
385	SLU 31	0.2	0.02	41.98	1.14	12.9231	-0.0118
385	SLU 32	0.19	0.06	42.83	1.1628	13.1831	-0.0262

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
385	SLU 33	0.2	0.04	42.82	1.1625	13.1786	-0.0197
385	SLU 34	0.2	0.02	42.5	1.154	13.0814	-0.012
385	SLU 35	0.19	0.06	43.35	1.1768	13.3414	-0.0264
385	SLU 36	0.2	0.04	43.34	1.1765	13.3368	-0.0199
385	SLU 37	0.18	0.05	43.04	1.1684	13.2473	-0.023
385	SLU 38	0.19	0.03	43.03	1.1681	13.2427	-0.0165
385	SLU 39	0.18	0.07	43.84	1.1905	13.4936	-0.0313
385	SLU 40	0.19	0.05	43.83	1.1902	13.489	-0.0248
385	SLU 41	0.18	0.07	44.36	1.2045	13.6519	-0.0314
385	SLU 42	0.19	0.05	44.35	1.2042	13.6473	-0.0249
385	SLU 43	0.19	-0.15	43.01	1.1665	13.2652	0.0464
385	SLU 44	0.2	-0.18	42.98	1.166	13.2576	0.0573
385	SLU 45	0.19	-0.14	43.83	1.1889	13.5175	0.0429
385	SLU 46	0.2	-0.16	43.82	1.1886	13.513	0.0494
385	SLU 47	0.21	-0.18	43.5	1.18	13.4158	0.0571
385	SLU 48	0.19	-0.14	44.35	1.2029	13.6758	0.0427
385	SLU 49	0.2	-0.16	44.34	1.2026	13.6713	0.0492
385	SLU 50	0.19	-0.15	44.05	1.1945	13.5817	0.0461
385	SLU 51	0.2	-0.17	44.03	1.1942	13.5771	0.0526
385	SLU 52	0.21	-0.12	47.26	1.2828	14.5709	0.0372
385	SLU 53	0.2	-0.08	48.11	1.3056	14.8309	0.0228
385	SLU 54	0.21	-0.1	48.1	1.3053	14.8263	0.0293
385	SLU 55	0.21	-0.12	47.78	1.2967	14.7292	0.037
385	SLU 56	0.2	-0.08	48.63	1.3196	14.9892	0.0226
385	SLU 57	0.21	-0.1	48.62	1.3193	14.9846	0.0291
385	SLU 58	0.19	-0.09	48.33	1.3112	14.895	0.0261
385	SLU 59	0.21	-0.11	48.31	1.3109	14.8905	0.0326
385	SLU 60	0.19	-0.07	49.12	1.3333	15.1414	0.0178
385	SLU 61	0.2	-0.09	49.11	1.333	15.1368	0.0243
385	SLU 62	0.2	-0.07	49.64	1.3473	15.2996	0.0176
385	SLU 63	0.21	-0.09	49.63	1.347	15.2951	0.0241
385	SLU 64	0.21	-0.06	46.68	1.2665	14.3836	0.0161
385	SLU 65	0.23	-0.1	46.66	1.266	14.376	0.027
385	SLU 66	0.22	-0.06	47.51	1.2889	14.636	0.0125
385	SLU 67	0.23	-0.07	47.49	1.2886	14.6314	0.019
385	SLU 68	0.23	-0.1	47.18	1.28	14.5343	0.0268
385	SLU 69	0.22	-0.05	48.03	1.3029	14.7943	0.0124
385	SLU 70	0.23	-0.07	48.01	1.3026	14.7897	0.0189
385	SLU 71	0.22	-0.06	47.72	1.2945	14.7001	0.0158
385	SLU 72	0.23	-0.08	47.7	1.2942	14.6956	0.0223
385	SLU 73	0.24	-0.04	50.94	1.3828	15.6893	0.0069
385	SLU 74	0.22	0	51.79	1.4056	15.9493	-0.0075
385	SLU 75	0.23	-0.02	51.77	1.4054	15.9448	-0.001
385	SLU 76	0.24	-0.04	51.46	1.3968	15.8476	0.0067
385	SLU 77	0.22	0	52.31	1.4196	16.1076	-0.0077
385	SLU 78	0.23	-0.02	52.29	1.4193	16.103	-0.0012
385	SLU 79	0.22	-0.01	52	1.4112	16.0135	-0.0043
385	SLU 80	0.23	-0.03	51.99	1.4109	16.0089	0.0022
385	SLU 81	0.22	0.02	52.8	1.4333	16.2598	-0.0126
385	SLU 82	0.23	0	52.78	1.433	16.2552	-0.0061
385	SLU 83	0.22	0.02	53.32	1.4473	16.4181	-0.0127
385	SLU 84	0.23	0	53.3	1.447	16.4135	-0.0062
385	SLE RA 1	0.16	-0.07	35.1	0.9523	10.8185	0.0191
385	SLE RA 2	0.17	-0.09	35.08	0.9519	10.8134	0.0263
385	SLE RA 3	0.16	-0.06	35.65	0.9672	10.9868	0.0167
385	SLE RA 4	0.17	-0.07	35.64	0.967	10.9837	0.021
385	SLE RA 5	0.17	-0.09	35.43	0.9613	10.9189	0.0262
385	SLE RA 6	0.16	-0.06	36	0.9765	11.0923	0.0166
385	SLE RA 7	0.17	-0.07	35.99	0.9763	11.0892	0.0209
385	SLE RA 8	0.16	-0.07	35.79	0.9709	11.0295	0.0189
385	SLE RA 9	0.17	-0.08	35.78	0.9707	11.0265	0.0232
385	SLE RA 10	0.17	-0.05	37.94	1.0298	11.689	0.0129
385	SLE RA 11	0.16	-0.02	38.51	1.045	11.8623	0.0033
385	SLE RA 12	0.17	-0.04	38.5	1.0448	11.8593	0.0076
385	SLE RA 13	0.17	-0.05	38.29	1.0391	11.7945	0.0128
385	SLE RA 14	0.16	-0.02	38.85	1.0543	11.9678	0.0032
385	SLE RA 15	0.17	-0.04	38.84	1.0541	11.9648	0.0075
385	SLE RA 16	0.16	-0.03	38.65	1.0487	11.9051	0.0055
385	SLE RA 17	0.17	-0.04	38.64	1.0485	11.902	0.0098
385	SLE RA 18	0.16	-0.01	39.18	1.0635	12.0693	-0.0001
385	SLE RA 19	0.17	-0.03	39.17	1.0633	12.0663	0.0043
385	SLE RA 20	0.16	-0.01	39.52	1.0728	12.1748	-0.0002
385	SLE RA 21	0.17	-0.03	39.51	1.0726	12.1718	0.0042
385	SLE FR 1	0.16	-0.07	35.1	0.9523	10.8185	0.0191
385	SLE FR 2	0.16	-0.07	35.1	0.9522	10.8175	0.0205
385	SLE FR 3	0.16	-0.07	35.24	0.956	10.8607	0.019
385	SLE FR 4	0.16	-0.06	36.32	0.9856	11.1927	0.0148
385	SLE FR 5	0.16	-0.05	36.46	0.9894	11.2359	0.0133
385	SLE FR 6	0.16	-0.04	37.14	1.0079	11.4439	0.0095
385	SLE QP 1	0.16	-0.07	35.1	0.9523	10.8185	0.0191
385	SLE QP 2	0.16	-0.05	36.32	0.9856	11.1937	0.0133
385	SLD 1	3.43	0.48	37	1.0051	11.4793	-0.2506
385	SLD 2	3.74	0.5	37.06	1.0064	11.4912	-0.266
385	SLD 3	3.35	-0.47	36.43	0.993	11.3036	0.0821
385	SLD 4	3.67	-0.45	36.49	0.9944	11.3155	0.0667
385	SLD 5	1.2	1.54	37.38	1.0095	11.5437	-0.5676
385	SLD 6	1.4	1.55	37.41	1.0104	11.5516	-0.5778
385	SLD 7	0.95	-1.62	35.49	0.9693	10.958	0.5413
385	SLD 8	1.16	-1.6	35.52	0.9702	10.9659	0.5311
385	SLD 9	-0.84	1.5	37.12	1.001	11.4215	-0.5045

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
385	SLD 10	-0.63	1.51	37.16	1.0019	11.4294	-0.5147
385	SLD 11	-1.08	-1.66	35.23	0.9609	10.8359	0.6045
385	SLD 12	-0.88	-1.64	35.27	0.9618	10.8437	0.5943
385	SLD 13	-3.35	0.34	36.15	0.9769	11.072	-0.04
385	SLD 14	-3.04	0.36	36.21	0.9782	11.0839	-0.0554
385	SLD 15	-3.42	-0.6	35.59	0.9648	10.8963	0.2926
385	SLD 16	-3.11	-0.58	35.65	0.9662	10.9082	0.2773
385	SLV 1	7.8	1.15	37.89	1.0307	11.8556	-0.5917
385	SLV 2	8.53	1.2	38.02	1.0339	11.8833	-0.6275
385	SLV 3	7.63	-0.99	36.6	1.0034	11.4568	0.1618
385	SLV 4	8.36	-0.94	36.74	1.0065	11.4845	0.126
385	SLV 5	2.58	3.55	38.72	1.0401	11.9923	-1.3048
385	SLV 6	3.06	3.59	38.81	1.0422	12.0103	-1.3281
385	SLV 7	2.02	-3.59	34.43	0.9489	10.663	1.207
385	SLV 8	2.49	-3.56	34.52	0.9509	10.681	1.1837
385	SLV 9	-2.17	3.46	38.13	1.0203	11.7065	-1.157
385	SLV 10	-1.7	3.49	38.21	1.0224	11.7245	-1.1804
385	SLV 11	-2.74	-3.69	33.84	0.9291	10.3772	1.3547
385	SLV 12	-2.27	-3.66	33.93	0.9311	10.3952	1.3314
385	SLV 13	-8.04	0.83	35.91	0.9647	10.903	-0.0993
385	SLV 14	-7.31	0.89	36.04	0.9679	10.9306	-0.1352
385	SLV 15	-8.21	-1.31	34.62	0.9374	10.5042	0.6542
385	SLV 16	-7.48	-1.26	34.76	0.9405	10.5319	0.6184
385	CRTFP Ux+	0	0	0	0	0	0
385	CRTFP Ux-	0	0	0	0	0	0
385	CRTFP Uy+	0	0	0	0	0	0
385	CRTFP Uy-	0	0	0	0	0	0
389	SLU 1	-1.21	-1.22	63.58	-0.0616	-0.3292	-0.0358
389	SLU 2	-1.18	-1.3	63.51	-0.0611	-0.3301	-0.0352
389	SLU 3	-1.24	-1.23	65.1	-0.0631	-0.3374	-0.0368
389	SLU 4	-1.22	-1.28	65.06	-0.0628	-0.338	-0.0364
389	SLU 5	-1.2	-1.31	64.48	-0.0621	-0.335	-0.0358
389	SLU 6	-1.27	-1.25	66.08	-0.0641	-0.3423	-0.0374
389	SLU 7	-1.25	-1.3	66.04	-0.0638	-0.3429	-0.037
389	SLU 8	-1.26	-1.25	65.52	-0.0636	-0.339	-0.0371
389	SLU 9	-1.24	-1.3	65.48	-0.0634	-0.3396	-0.0367
389	SLU 10	-1.25	-1.36	70.94	-0.0677	-0.3808	-0.0388
389	SLU 11	-1.32	-1.29	72.54	-0.0697	-0.388	-0.0405
389	SLU 12	-1.3	-1.34	72.5	-0.0694	-0.3886	-0.0401
389	SLU 13	-1.27	-1.37	71.92	-0.0687	-0.3857	-0.0394
389	SLU 14	-1.34	-1.31	73.51	-0.0707	-0.3929	-0.0411
389	SLU 15	-1.32	-1.36	73.47	-0.0704	-0.3935	-0.0407
389	SLU 16	-1.33	-1.31	72.96	-0.0702	-0.3896	-0.0407
389	SLU 17	-1.31	-1.35	72.92	-0.07	-0.3902	-0.0403
389	SLU 18	-1.31	-1.3	74.2	-0.071	-0.4015	-0.0411
389	SLU 19	-1.29	-1.35	74.16	-0.0707	-0.4021	-0.0406
389	SLU 20	-1.34	-1.31	75.17	-0.072	-0.4064	-0.0417
389	SLU 21	-1.32	-1.36	75.13	-0.0718	-0.407	-0.0413
389	SLU 22	-1.36	-1.22	70.64	-0.0672	-0.3643	-0.0404
389	SLU 23	-1.32	-1.3	70.58	-0.0667	-0.3653	-0.0397
389	SLU 24	-1.39	-1.24	72.17	-0.0686	-0.3725	-0.0413
389	SLU 25	-1.37	-1.29	72.13	-0.0684	-0.3731	-0.0409
389	SLU 26	-1.35	-1.32	71.55	-0.0677	-0.3701	-0.0403
389	SLU 27	-1.42	-1.26	73.14	-0.0697	-0.3774	-0.042
389	SLU 28	-1.4	-1.31	73.1	-0.0694	-0.378	-0.0415
389	SLU 29	-1.41	-1.25	72.59	-0.0692	-0.3741	-0.0416
389	SLU 30	-1.38	-1.3	72.55	-0.0689	-0.3747	-0.0412
389	SLU 31	-1.4	-1.36	78.01	-0.0733	-0.4159	-0.0433
389	SLU 32	-1.46	-1.3	79.61	-0.0752	-0.4232	-0.045
389	SLU 33	-1.44	-1.35	79.57	-0.075	-0.4237	-0.0446
389	SLU 34	-1.42	-1.38	78.98	-0.0743	-0.4208	-0.044
389	SLU 35	-1.49	-1.32	80.58	-0.0763	-0.4281	-0.0456
389	SLU 36	-1.47	-1.36	80.54	-0.076	-0.4286	-0.0452
389	SLU 37	-1.48	-1.31	80.02	-0.0758	-0.4247	-0.0452
389	SLU 38	-1.46	-1.36	79.98	-0.0755	-0.4253	-0.0448
389	SLU 39	-1.46	-1.31	81.26	-0.0766	-0.4366	-0.0456
389	SLU 40	-1.44	-1.36	81.22	-0.0763	-0.4372	-0.0452
389	SLU 41	-1.49	-1.32	82.24	-0.0776	-0.4415	-0.0462
389	SLU 42	-1.46	-1.37	82.2	-0.0773	-0.4421	-0.0458
389	SLU 43	-1.52	-1.58	80.22	-0.0781	-0.4159	-0.045
389	SLU 44	-1.49	-1.66	80.16	-0.0777	-0.4169	-0.0444
389	SLU 45	-1.56	-1.6	81.75	-0.0796	-0.4241	-0.046
389	SLU 46	-1.54	-1.64	81.71	-0.0793	-0.4247	-0.0456
389	SLU 47	-1.51	-1.68	81.13	-0.0787	-0.4218	-0.045
389	SLU 48	-1.58	-1.61	82.73	-0.0806	-0.429	-0.0466
389	SLU 49	-1.56	-1.66	82.69	-0.0804	-0.4296	-0.0462
389	SLU 50	-1.57	-1.61	82.17	-0.0802	-0.4257	-0.0463
389	SLU 51	-1.55	-1.66	82.13	-0.0799	-0.4263	-0.0459
389	SLU 52	-1.56	-1.72	87.59	-0.0843	-0.4675	-0.048
389	SLU 53	-1.63	-1.65	89.19	-0.0862	-0.4748	-0.0497
389	SLU 54	-1.61	-1.7	89.15	-0.0859	-0.4753	-0.0493
389	SLU 55	-1.58	-1.73	88.57	-0.0853	-0.4724	-0.0486
389	SLU 56	-1.65	-1.67	90.16	-0.0873	-0.4797	-0.0503
389	SLU 57	-1.63	-1.72	90.12	-0.087	-0.4802	-0.0499
389	SLU 58	-1.64	-1.67	89.6	-0.0868	-0.4763	-0.0499
389	SLU 59	-1.62	-1.72	89.57	-0.0865	-0.4769	-0.0495
389	SLU 60	-1.63	-1.66	90.85	-0.0876	-0.4882	-0.0503
389	SLU 61	-1.6	-1.71	90.81	-0.0873	-0.4888	-0.0498
389	SLU 62	-1.65	-1.68	91.82	-0.0886	-0.4931	-0.0509
389	SLU 63	-1.63	-1.73	91.78	-0.0883	-0.4937	-0.0505

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
389	SLU 64	-1.67	-1.59	87.29	-0.0837	-0.451	-0.0496
389	SLU 65	-1.64	-1.67	87.23	-0.0832	-0.452	-0.0489
389	SLU 66	-1.7	-1.6	88.82	-0.0852	-0.4593	-0.0505
389	SLU 67	-1.68	-1.65	88.78	-0.0849	-0.4598	-0.0501
389	SLU 68	-1.66	-1.68	88.2	-0.0843	-0.4569	-0.0495
389	SLU 69	-1.73	-1.62	89.79	-0.0862	-0.4641	-0.0512
389	SLU 70	-1.71	-1.67	89.75	-0.086	-0.4647	-0.0508
389	SLU 71	-1.72	-1.62	89.24	-0.0858	-0.4608	-0.0508
389	SLU 72	-1.7	-1.67	89.2	-0.0855	-0.4614	-0.0504
389	SLU 73	-1.71	-1.73	94.66	-0.0899	-0.5026	-0.0525
389	SLU 74	-1.78	-1.66	96.25	-0.0918	-0.5099	-0.0542
389	SLU 75	-1.76	-1.71	96.22	-0.0915	-0.5104	-0.0538
389	SLU 76	-1.73	-1.74	95.63	-0.0909	-0.5075	-0.0532
389	SLU 77	-1.8	-1.68	97.23	-0.0928	-0.5148	-0.0548
389	SLU 78	-1.78	-1.73	97.19	-0.0926	-0.5153	-0.0544
389	SLU 79	-1.79	-1.68	96.67	-0.0924	-0.5114	-0.0545
389	SLU 80	-1.77	-1.72	96.63	-0.0921	-0.512	-0.054
389	SLU 81	-1.77	-1.67	97.91	-0.0931	-0.5234	-0.0548
389	SLU 82	-1.75	-1.72	97.87	-0.0929	-0.5239	-0.0544
389	SLU 83	-1.8	-1.68	98.88	-0.0942	-0.5283	-0.0554
389	SLU 84	-1.78	-1.73	98.85	-0.0939	-0.5288	-0.055
389	SLE RA 1	-1.25	-1.22	65.59	-0.0632	-0.3392	-0.0371
389	SLE RA 2	-1.23	-1.27	65.55	-0.0629	-0.3399	-0.0367
389	SLE RA 3	-1.28	-1.23	66.61	-0.0642	-0.3447	-0.0378
389	SLE RA 4	-1.26	-1.26	66.59	-0.064	-0.3451	-0.0375
389	SLE RA 5	-1.24	-1.28	66.2	-0.0635	-0.3431	-0.0371
389	SLE RA 6	-1.29	-1.24	67.26	-0.0648	-0.348	-0.0382
389	SLE RA 7	-1.28	-1.27	67.24	-0.0647	-0.3484	-0.0379
389	SLE RA 8	-1.28	-1.24	66.89	-0.0645	-0.3458	-0.038
389	SLE RA 9	-1.27	-1.27	66.87	-0.0644	-0.3461	-0.0377
389	SLE RA 10	-1.28	-1.31	70.51	-0.0673	-0.3736	-0.0391
389	SLE RA 11	-1.32	-1.27	71.57	-0.0686	-0.3785	-0.0402
389	SLE RA 12	-1.31	-1.3	71.54	-0.0684	-0.3788	-0.0399
389	SLE RA 13	-1.29	-1.32	71.16	-0.0679	-0.3769	-0.0395
389	SLE RA 14	-1.34	-1.28	72.22	-0.0692	-0.3817	-0.0406
389	SLE RA 15	-1.33	-1.31	72.19	-0.0691	-0.3821	-0.0404
389	SLE RA 16	-1.33	-1.28	71.85	-0.0689	-0.3795	-0.0404
389	SLE RA 17	-1.32	-1.31	71.82	-0.0688	-0.3799	-0.0401
389	SLE RA 18	-1.32	-1.27	72.67	-0.0695	-0.3874	-0.0406
389	SLE RA 19	-1.31	-1.31	72.65	-0.0693	-0.3878	-0.0403
389	SLE RA 20	-1.34	-1.28	73.32	-0.0701	-0.3907	-0.041
389	SLE RA 21	-1.32	-1.32	73.3	-0.07	-0.3911	-0.0407
389	SLE FR 1	-1.25	-1.22	65.59	-0.0632	-0.3392	-0.0371
389	SLE FR 2	-1.25	-1.23	65.59	-0.0631	-0.3394	-0.037
389	SLE FR 3	-1.26	-1.22	65.85	-0.0634	-0.3405	-0.0373
389	SLE FR 4	-1.27	-1.25	67.71	-0.065	-0.3538	-0.0381
389	SLE FR 5	-1.28	-1.24	67.98	-0.0653	-0.355	-0.0383
389	SLE FR 6	-1.29	-1.25	69.13	-0.0663	-0.3633	-0.0389
389	SLE QP 1	-1.25	-1.22	65.59	-0.0632	-0.3392	-0.0371
389	SLE QP 2	-1.27	-1.23	67.72	-0.0651	-0.3537	-0.0382
389	SLD 1	4.42	-0.9	74.99	-0.0809	-0.1595	-0.0262
389	SLD 2	4.97	-1.3	74.56	-0.0786	-0.1661	-0.0154
389	SLD 3	4.57	-2.52	74.04	-0.0734	-0.1824	-0.023
389	SLD 4	5.11	-2.92	73.61	-0.0712	-0.1889	-0.0122
389	SLD 5	0.11	1.4	71.42	-0.0816	-0.2595	-0.0414
389	SLD 6	0.48	1.14	71.13	-0.0801	-0.2639	-0.0342
389	SLD 7	0.6	-4.01	68.25	-0.0566	-0.3358	-0.0308
389	SLD 8	0.96	-4.28	67.97	-0.0551	-0.3402	-0.0236
389	SLD 9	-3.51	1.81	67.47	-0.075	-0.3672	-0.0527
389	SLD 10	-3.15	1.54	67.18	-0.0735	-0.3716	-0.0456
389	SLD 11	-3.02	-3.61	64.3	-0.05	-0.4435	-0.0422
389	SLD 12	-2.66	-3.87	64.02	-0.0485	-0.4479	-0.035
389	SLD 13	-7.66	0.45	61.83	-0.0589	-0.5185	-0.0641
389	SLD 14	-7.12	0.05	61.39	-0.0567	-0.525	-0.0533
389	SLD 15	-7.51	-1.17	60.88	-0.0515	-0.5413	-0.061
389	SLD 16	-6.97	-1.57	60.45	-0.0492	-0.5479	-0.0502
389	SLV 1	12.05	-0.51	84.69	-0.1019	0.1002	-0.0101
389	SLV 2	13.31	-1.45	83.69	-0.0966	0.0848	0.0151
389	SLV 3	12.39	-4.19	82.54	-0.085	0.0478	-0.0027
389	SLV 4	13.65	-5.12	81.54	-0.0797	0.0325	0.0224
389	SLV 5	1.99	4.72	76.25	-0.1027	-0.1354	-0.0453
389	SLV 6	2.81	4.11	75.6	-0.0993	-0.1454	-0.0289
389	SLV 7	3.12	-7.53	69.08	-0.0463	-0.31	-0.0208
389	SLV 8	3.94	-8.14	68.42	-0.0428	-0.32	-0.0045
389	SLV 9	-6.49	5.67	67.02	-0.0873	-0.3874	-0.0719
389	SLV 10	-5.66	5.06	66.36	-0.0838	-0.3974	-0.0555
389	SLV 11	-5.36	-6.58	59.84	-0.0308	-0.562	-0.0474
389	SLV 12	-4.53	-7.19	59.18	-0.0274	-0.572	-0.0311
389	SLV 13	-16.2	2.65	53.9	-0.0504	-0.7399	-0.0987
389	SLV 14	-14.93	1.72	52.9	-0.0451	-0.7552	-0.0736
389	SLV 15	-15.86	-1.02	51.75	-0.0335	-0.7922	-0.0914
389	SLV 16	-14.59	-1.96	50.74	-0.0282	-0.8076	-0.0663
389	CRTFP Ux+	0	0	0	0	0	0
389	CRTFP Ux-	0	0	0	0	0	0
389	CRTFP Uy+	0	0	0	0	0	0
389	CRTFP Uy-	0	0	0	0	0	0
393	SLU 1	0.38	-0.73	64.47	-0.0581	0.3981	0.0074
393	SLU 2	0.41	-0.76	64.46	-0.0579	0.3984	0.0081
393	SLU 3	0.39	-0.74	66.02	-0.0595	0.4073	0.0076
393	SLU 4	0.41	-0.76	66.01	-0.0594	0.4074	0.008

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
393	SLU 5	0.42	-0.78	65.43	-0.0589	0.4037	0.0081
393	SLU 6	0.4	-0.76	66.99	-0.0605	0.4125	0.0076
393	SLU 7	0.42	-0.78	66.99	-0.0604	0.4127	0.008
393	SLU 8	0.39	-0.77	66.42	-0.0601	0.4087	0.0075
393	SLU 9	0.41	-0.79	66.41	-0.06	0.4088	0.0079
393	SLU 10	0.41	-0.75	72.07	-0.064	0.4537	0.0084
393	SLU 11	0.4	-0.73	73.63	-0.0656	0.4626	0.0079
393	SLU 12	0.41	-0.75	73.62	-0.0655	0.4627	0.0083
393	SLU 13	0.42	-0.77	73.04	-0.065	0.459	0.0084
393	SLU 14	0.4	-0.74	74.61	-0.0666	0.4679	0.0079
393	SLU 15	0.42	-0.76	74.6	-0.0665	0.468	0.0083
393	SLU 16	0.39	-0.75	74.03	-0.0662	0.464	0.0078
393	SLU 17	0.41	-0.77	74.02	-0.0661	0.4642	0.0082
393	SLU 18	0.38	-0.71	75.35	-0.0668	0.4772	0.0079
393	SLU 19	0.4	-0.73	75.34	-0.0667	0.4773	0.0083
393	SLU 20	0.39	-0.73	76.32	-0.0678	0.4824	0.0079
393	SLU 21	0.41	-0.75	76.31	-0.0677	0.4826	0.0083
393	SLU 22	0.44	-0.67	71.68	-0.0631	0.4339	0.0085
393	SLU 23	0.47	-0.71	71.66	-0.0629	0.4342	0.0091
393	SLU 24	0.45	-0.68	73.22	-0.0645	0.443	0.0087
393	SLU 25	0.47	-0.7	73.22	-0.0644	0.4432	0.009
393	SLU 26	0.48	-0.72	72.64	-0.0639	0.4394	0.0092
393	SLU 27	0.46	-0.7	74.2	-0.0655	0.4483	0.0087
393	SLU 28	0.48	-0.72	74.19	-0.0654	0.4485	0.0091
393	SLU 29	0.45	-0.71	73.63	-0.0651	0.4444	0.0086
393	SLU 30	0.47	-0.73	73.62	-0.065	0.4446	0.009
393	SLU 31	0.48	-0.69	79.27	-0.069	0.4895	0.0095
393	SLU 32	0.46	-0.67	80.84	-0.0706	0.4983	0.009
393	SLU 33	0.48	-0.69	80.83	-0.0705	0.4985	0.0093
393	SLU 34	0.48	-0.71	80.25	-0.07	0.4948	0.0095
393	SLU 35	0.46	-0.69	81.81	-0.0716	0.5036	0.009
393	SLU 36	0.48	-0.71	81.8	-0.0715	0.5038	0.0094
393	SLU 37	0.46	-0.69	81.24	-0.0712	0.4998	0.0089
393	SLU 38	0.47	-0.71	81.23	-0.0711	0.4999	0.0093
393	SLU 39	0.45	-0.65	82.55	-0.0718	0.5129	0.009
393	SLU 40	0.47	-0.67	82.54	-0.0717	0.5131	0.0093
393	SLU 41	0.45	-0.67	83.53	-0.0728	0.5182	0.009
393	SLU 42	0.47	-0.69	83.52	-0.0727	0.5184	0.0094
393	SLU 43	0.47	-0.97	81.34	-0.0738	0.5053	0.0093
393	SLU 44	0.5	-1	81.33	-0.0736	0.5056	0.0099
393	SLU 45	0.48	-0.98	82.89	-0.0752	0.5144	0.0095
393	SLU 46	0.5	-1	82.88	-0.0751	0.5146	0.0098
393	SLU 47	0.51	-1.02	82.3	-0.0746	0.5109	0.01
393	SLU 48	0.49	-1	83.86	-0.0762	0.5197	0.0095
393	SLU 49	0.51	-1.02	83.86	-0.0761	0.5199	0.0099
393	SLU 50	0.48	-1.01	83.29	-0.0758	0.5159	0.0094
393	SLU 51	0.5	-1.03	83.28	-0.0757	0.516	0.0098
393	SLU 52	0.51	-0.99	88.94	-0.0797	0.5609	0.0102
393	SLU 53	0.49	-0.96	90.5	-0.0814	0.5698	0.0098
393	SLU 54	0.51	-0.98	90.49	-0.0812	0.5699	0.0101
393	SLU 55	0.51	-1.01	89.91	-0.0808	0.5662	0.0103
393	SLU 56	0.49	-0.98	91.48	-0.0824	0.575	0.0098
393	SLU 57	0.51	-1	91.47	-0.0822	0.5752	0.0102
393	SLU 58	0.49	-0.99	90.9	-0.082	0.5712	0.0097
393	SLU 59	0.5	-1.01	90.9	-0.0818	0.5714	0.0101
393	SLU 60	0.48	-0.95	92.22	-0.0826	0.5843	0.0097
393	SLU 61	0.5	-0.97	92.21	-0.0824	0.5845	0.0101
393	SLU 62	0.48	-0.97	93.19	-0.0836	0.5896	0.0098
393	SLU 63	0.5	-0.99	93.18	-0.0835	0.5898	0.0102
393	SLU 64	0.53	-0.91	88.55	-0.0788	0.5411	0.0104
393	SLU 65	0.57	-0.94	88.53	-0.0786	0.5413	0.011
393	SLU 66	0.55	-0.92	90.09	-0.0802	0.5502	0.0105
393	SLU 67	0.56	-0.94	90.09	-0.0801	0.5504	0.0109
393	SLU 68	0.57	-0.96	89.51	-0.0796	0.5466	0.0111
393	SLU 69	0.55	-0.94	91.07	-0.0812	0.5555	0.0106
393	SLU 70	0.57	-0.96	91.06	-0.0811	0.5556	0.011
393	SLU 71	0.54	-0.95	90.5	-0.0808	0.5516	0.0105
393	SLU 72	0.56	-0.97	90.49	-0.0807	0.5518	0.0109
393	SLU 73	0.57	-0.93	96.14	-0.0847	0.5967	0.0113
393	SLU 74	0.55	-0.91	97.71	-0.0864	0.6055	0.0108
393	SLU 75	0.57	-0.93	97.7	-0.0862	0.6057	0.0112
393	SLU 76	0.57	-0.95	97.12	-0.0858	0.6019	0.0114
393	SLU 77	0.55	-0.92	98.68	-0.0874	0.6108	0.0109
393	SLU 78	0.57	-0.94	98.67	-0.0872	0.611	0.0113
393	SLU 79	0.55	-0.93	98.11	-0.087	0.6069	0.0108
393	SLU 80	0.57	-0.95	98.1	-0.0868	0.6071	0.0112
393	SLU 81	0.54	-0.89	99.42	-0.0876	0.6201	0.0108
393	SLU 82	0.56	-0.91	99.41	-0.0874	0.6203	0.0112
393	SLU 83	0.54	-0.91	100.4	-0.0886	0.6254	0.0109
393	SLU 84	0.56	-0.93	100.39	-0.0885	0.6255	0.0112
393	SLE RA 1	0.4	-0.71	66.53	-0.0595	0.4083	0.0078
393	SLE RA 2	0.42	-0.74	66.52	-0.0594	0.4085	0.0082
393	SLE RA 3	0.41	-0.72	67.56	-0.0605	0.4144	0.0078
393	SLE RA 4	0.42	-0.73	67.56	-0.0604	0.4145	0.0081
393	SLE RA 5	0.42	-0.75	67.17	-0.0601	0.412	0.0082
393	SLE RA 6	0.41	-0.73	68.21	-0.0611	0.4179	0.0079
393	SLE RA 7	0.42	-0.75	68.21	-0.0611	0.4181	0.0081
393	SLE RA 8	0.4	-0.74	67.83	-0.0609	0.4154	0.0078
393	SLE RA 9	0.42	-0.75	67.82	-0.0608	0.4155	0.0081
393	SLE RA 10	0.42	-0.73	71.59	-0.0635	0.4454	0.0084

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
393	SLE RA 11	0.41	-0.71	72.64	-0.0646	0.4513	0.0081
393	SLE RA 12	0.42	-0.72	72.63	-0.0645	0.4514	0.0083
393	SLE RA 13	0.42	-0.74	72.24	-0.0642	0.4489	0.0084
393	SLE RA 14	0.41	-0.72	73.29	-0.0652	0.4548	0.0081
393	SLE RA 15	0.42	-0.74	73.28	-0.0651	0.4549	0.0083
393	SLE RA 16	0.41	-0.73	72.9	-0.065	0.4523	0.008
393	SLE RA 17	0.42	-0.74	72.9	-0.0649	0.4524	0.0083
393	SLE RA 18	0.4	-0.7	73.78	-0.0654	0.461	0.008
393	SLE RA 19	0.41	-0.71	73.77	-0.0653	0.4611	0.0083
393	SLE RA 20	0.4	-0.71	74.43	-0.066	0.4646	0.0081
393	SLE RA 21	0.42	-0.72	74.42	-0.066	0.4647	0.0083
393	SLE FR 1	0.4	-0.71	66.53	-0.0595	0.4083	0.0078
393	SLE FR 2	0.4	-0.72	66.53	-0.0595	0.4084	0.0078
393	SLE FR 3	0.4	-0.72	66.79	-0.0598	0.4098	0.0078
393	SLE FR 4	0.4	-0.71	68.7	-0.0613	0.4242	0.0079
393	SLE FR 5	0.4	-0.71	68.96	-0.0615	0.4256	0.0079
393	SLE FR 6	0.4	-0.71	70.15	-0.0624	0.4347	0.0079
393	SLE QP 1	0.4	-0.71	66.53	-0.0595	0.4083	0.0078
393	SLE QP 2	0.4	-0.71	68.7	-0.0613	0.4242	0.0078
393	SLD 1	6.43	0.53	62.87	-0.0495	0.5612	0.0305
393	SLD 2	6.98	0.95	63.33	-0.0517	0.5523	0.0406
393	SLD 3	6.29	-1.05	61.87	-0.0423	0.5835	0.0284
393	SLD 4	6.84	-0.63	62.33	-0.0445	0.5746	0.0385
393	SLD 5	2.31	1.99	68.39	-0.0682	0.4331	0.016
393	SLD 6	2.67	2.26	68.69	-0.0697	0.4272	0.0227
393	SLD 7	1.86	-3.28	65.06	-0.0443	0.5074	0.0089
393	SLD 8	2.23	-3.01	65.36	-0.0457	0.5015	0.0157
393	SLD 9	-1.43	1.59	72.05	-0.0768	0.3468	0
393	SLD 10	-1.07	1.87	72.35	-0.0783	0.3409	0.0067
393	SLD 11	-1.88	-3.68	68.72	-0.0529	0.4211	-0.007
393	SLD 12	-1.51	-3.4	69.02	-0.0543	0.4152	-0.0003
393	SLD 13	-6.05	-0.78	75.08	-0.0781	0.2737	-0.0228
393	SLD 14	-5.5	-0.37	75.54	-0.0803	0.2648	-0.0127
393	SLD 15	-6.18	-2.36	74.08	-0.0709	0.296	-0.0249
393	SLD 16	-5.63	-1.95	74.54	-0.0731	0.2871	-0.0148
393	SLV 1	14.49	2.14	55.02	-0.0334	0.7452	0.0609
393	SLV 2	15.78	3.1	56.09	-0.0385	0.7246	0.0844
393	SLV 3	14.19	-1.44	52.76	-0.0172	0.7962	0.0558
393	SLV 4	15.47	-0.48	53.82	-0.0223	0.7756	0.0794
393	SLV 5	4.87	5.41	67.85	-0.0767	0.4467	0.0273
393	SLV 6	5.71	6.03	68.54	-0.08	0.4333	0.0426
393	SLV 7	3.84	-6.53	60.3	-0.0225	0.6168	0.0104
393	SLV 8	4.68	-5.9	60.99	-0.0258	0.6034	0.0257
393	SLV 9	-3.88	4.48	76.42	-0.0968	0.2449	-0.0101
393	SLV 10	-3.04	5.11	77.11	-0.1001	0.2315	0.0053
393	SLV 11	-4.91	-7.45	68.87	-0.0425	0.415	-0.027
393	SLV 12	-4.07	-6.83	69.56	-0.0459	0.4016	-0.0116
393	SLV 13	-14.67	-0.94	83.59	-0.1003	0.0727	-0.0637
393	SLV 14	-13.39	0.02	84.65	-0.1054	0.0521	-0.0402
393	SLV 15	-14.98	-4.52	81.32	-0.084	0.1237	-0.0687
393	SLV 16	-13.7	-3.56	82.38	-0.0891	0.1031	-0.0452
393	CRTFP Ux+	0	0	0	0	0	0
393	CRTFP Ux-	0	0	0	0	0	0
393	CRTFP Uy+	0	0	0	0	0	0
393	CRTFP Uy-	0	0	0	0	0	0
394	SLU 1	0.31	0.22	38.24	-0.0612	9.4083	-0.0774
394	SLU 2	0.33	0.2	38.25	-0.0612	9.4093	-0.0709
394	SLU 3	0.32	0.22	39.18	-0.0629	9.6291	-0.0787
394	SLU 4	0.33	0.21	39.18	-0.0629	9.6297	-0.0749
394	SLU 5	0.33	0.2	38.84	-0.0623	9.5488	-0.0696
394	SLU 6	0.33	0.22	39.77	-0.064	9.7685	-0.0774
394	SLU 7	0.34	0.21	39.77	-0.064	9.7691	-0.0736
394	SLU 8	0.32	0.21	39.42	-0.0634	9.6872	-0.0748
394	SLU 9	0.33	0.2	39.43	-0.0634	9.6878	-0.0709
394	SLU 10	0.33	0.3	42.52	-0.0682	10.4321	-0.1058
394	SLU 11	0.32	0.32	43.46	-0.0699	10.6518	-0.1136
394	SLU 12	0.33	0.31	43.46	-0.0699	10.6524	-0.1098
394	SLU 13	0.34	0.3	43.12	-0.0693	10.5715	-0.1045
394	SLU 14	0.33	0.32	44.05	-0.071	10.7912	-0.1123
394	SLU 15	0.34	0.31	44.05	-0.071	10.7918	-0.1085
394	SLU 16	0.32	0.31	43.7	-0.0704	10.7099	-0.1097
394	SLU 17	0.33	0.3	43.7	-0.0704	10.7105	-0.1058
394	SLU 18	0.31	0.36	44.35	-0.0712	10.8694	-0.1273
394	SLU 19	0.32	0.35	44.36	-0.0712	10.87	-0.1234
394	SLU 20	0.32	0.36	44.95	-0.0723	11.0088	-0.126
394	SLU 21	0.33	0.35	44.95	-0.0723	11.0094	-0.1221
394	SLU 22	0.35	0.32	42.51	-0.0681	10.4228	-0.1118
394	SLU 23	0.37	0.3	42.51	-0.0681	10.4238	-0.1053
394	SLU 24	0.36	0.32	43.44	-0.0698	10.6435	-0.1131
394	SLU 25	0.37	0.31	43.45	-0.0697	10.6441	-0.1092
394	SLU 26	0.37	0.29	43.1	-0.0692	10.5633	-0.104
394	SLU 27	0.37	0.32	44.04	-0.0709	10.783	-0.1118
394	SLU 28	0.38	0.31	44.04	-0.0708	10.7836	-0.1079
394	SLU 29	0.36	0.31	43.69	-0.0703	10.7017	-0.1092
394	SLU 30	0.37	0.3	43.69	-0.0703	10.7023	-0.1053
394	SLU 31	0.37	0.4	46.79	-0.0751	11.4465	-0.1402
394	SLU 32	0.36	0.42	47.72	-0.0768	11.6662	-0.148
394	SLU 33	0.37	0.41	47.73	-0.0767	11.6668	-0.1442
394	SLU 34	0.38	0.39	47.38	-0.0762	11.586	-0.1389
394	SLU 35	0.37	0.42	48.31	-0.0779	11.8057	-0.1467

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
394	SLU 36	0.38	0.41	48.32	-0.0778	11.8063	-0.1429
394	SLU 37	0.36	0.41	47.97	-0.0773	11.7244	-0.1441
394	SLU 38	0.37	0.4	47.97	-0.0773	11.725	-0.1402
394	SLU 39	0.35	0.46	48.62	-0.0781	11.8838	-0.1616
394	SLU 40	0.36	0.45	48.62	-0.0781	11.8844	-0.1578
394	SLU 41	0.36	0.45	49.21	-0.0792	12.0233	-0.1603
394	SLU 42	0.37	0.44	49.22	-0.0792	12.0239	-0.1565
394	SLU 43	0.39	0.25	48.25	-0.0772	11.883	-0.0888
394	SLU 44	0.41	0.23	48.25	-0.0772	11.884	-0.0824
394	SLU 45	0.4	0.25	49.19	-0.0789	12.1037	-0.0902
394	SLU 46	0.41	0.24	49.19	-0.0789	12.1043	-0.0863
394	SLU 47	0.41	0.23	48.85	-0.0783	12.0235	-0.0811
394	SLU 48	0.4	0.25	49.78	-0.08	12.2432	-0.0889
394	SLU 49	0.42	0.24	49.78	-0.08	12.2438	-0.085
394	SLU 50	0.4	0.24	49.43	-0.0794	12.1619	-0.0862
394	SLU 51	0.41	0.23	49.44	-0.0794	12.1625	-0.0823
394	SLU 52	0.41	0.33	52.53	-0.0842	12.9067	-0.1173
394	SLU 53	0.4	0.35	53.46	-0.0859	13.1264	-0.1251
394	SLU 54	0.41	0.34	53.47	-0.0859	13.1271	-0.1212
394	SLU 55	0.41	0.33	53.12	-0.0853	13.0462	-0.116
394	SLU 56	0.41	0.35	54.06	-0.087	13.2659	-0.1238
394	SLU 57	0.42	0.34	54.06	-0.087	13.2665	-0.1199
394	SLU 58	0.4	0.34	53.71	-0.0864	13.1846	-0.1211
394	SLU 59	0.41	0.33	53.71	-0.0864	13.1852	-0.1173
394	SLU 60	0.39	0.39	54.36	-0.0872	13.344	-0.1387
394	SLU 61	0.4	0.38	54.37	-0.0872	13.3446	-0.1348
394	SLU 62	0.4	0.39	54.95	-0.0883	13.4835	-0.1374
394	SLU 63	0.41	0.38	54.96	-0.0883	13.4841	-0.1335
394	SLU 64	0.43	0.35	52.52	-0.0841	12.8975	-0.1232
394	SLU 65	0.45	0.33	52.52	-0.0841	12.8985	-0.1167
394	SLU 66	0.44	0.35	53.45	-0.0858	13.1182	-0.1245
394	SLU 67	0.45	0.34	53.46	-0.0858	13.1188	-0.1207
394	SLU 68	0.45	0.33	53.11	-0.0852	13.0379	-0.1154
394	SLU 69	0.45	0.35	54.05	-0.0869	13.2576	-0.1232
394	SLU 70	0.46	0.34	54.05	-0.0868	13.2582	-0.1194
394	SLU 71	0.44	0.34	53.7	-0.0863	13.1764	-0.1206
394	SLU 72	0.45	0.33	53.7	-0.0863	13.177	-0.1167
394	SLU 73	0.45	0.43	56.8	-0.0911	13.9212	-0.1517
394	SLU 74	0.44	0.45	57.73	-0.0928	14.1409	-0.1595
394	SLU 75	0.45	0.44	57.73	-0.0928	14.1415	-0.1556
394	SLU 76	0.45	0.43	57.39	-0.0922	14.0606	-0.1504
394	SLU 77	0.45	0.45	58.32	-0.0939	14.2803	-0.1582
394	SLU 78	0.46	0.44	58.33	-0.0939	14.281	-0.1543
394	SLU 79	0.44	0.44	57.98	-0.0933	14.1991	-0.1555
394	SLU 80	0.45	0.43	57.98	-0.0933	14.1997	-0.1516
394	SLU 81	0.43	0.49	58.63	-0.0941	14.3585	-0.1731
394	SLU 82	0.44	0.48	58.63	-0.0941	14.3591	-0.1692
394	SLU 83	0.44	0.49	59.22	-0.0952	14.4979	-0.1718
394	SLU 84	0.45	0.48	59.22	-0.0952	14.4985	-0.1679
394	SLE RA 1	0.32	0.25	39.46	-0.0632	9.6982	-0.0872
394	SLE RA 2	0.33	0.23	39.46	-0.0632	9.6989	-0.0829
394	SLE RA 3	0.33	0.25	40.08	-0.0643	9.8453	-0.0881
394	SLE RA 4	0.34	0.24	40.09	-0.0643	9.8457	-0.0855
394	SLE RA 5	0.34	0.23	39.86	-0.0639	9.7918	-0.082
394	SLE RA 6	0.33	0.25	40.48	-0.065	9.9383	-0.0872
394	SLE RA 7	0.34	0.24	40.48	-0.065	9.9387	-0.0847
394	SLE RA 8	0.33	0.24	40.25	-0.0646	9.8841	-0.0855
394	SLE RA 9	0.34	0.23	40.25	-0.0646	9.8845	-0.0829
394	SLE RA 10	0.34	0.3	42.32	-0.0678	10.3807	-0.1062
394	SLE RA 11	0.33	0.32	42.94	-0.069	10.5271	-0.1114
394	SLE RA 12	0.34	0.31	42.94	-0.069	10.5275	-0.1088
394	SLE RA 13	0.34	0.3	42.71	-0.0686	10.4736	-0.1053
394	SLE RA 14	0.33	0.31	43.33	-0.0697	10.6201	-0.1105
394	SLE RA 15	0.34	0.31	43.33	-0.0697	10.6205	-0.1079
394	SLE RA 16	0.33	0.31	43.1	-0.0693	10.5659	-0.1088
394	SLE RA 17	0.34	0.3	43.1	-0.0693	10.5663	-0.1062
394	SLE RA 18	0.32	0.34	43.54	-0.0698	10.6722	-0.1205
394	SLE RA 19	0.33	0.33	43.54	-0.0698	10.6726	-0.1179
394	SLE RA 20	0.33	0.34	43.93	-0.0706	10.7651	-0.1196
394	SLE RA 21	0.33	0.33	43.93	-0.0706	10.7656	-0.117
394	SLE FR 1	0.32	0.25	39.46	-0.0632	9.6982	-0.0872
394	SLE FR 2	0.32	0.24	39.46	-0.0632	9.6983	-0.0864
394	SLE FR 3	0.32	0.25	39.62	-0.0635	9.7354	-0.0869
394	SLE FR 4	0.33	0.27	40.68	-0.0652	9.9905	-0.0963
394	SLE FR 5	0.32	0.27	40.84	-0.0655	10.0276	-0.0968
394	SLE FR 6	0.32	0.29	41.5	-0.0665	10.1852	-0.1038
394	SLE QP 1	0.32	0.25	39.46	-0.0632	9.6982	-0.0872
394	SLE QP 2	0.32	0.27	40.68	-0.0652	9.9904	-0.0972
394	SLD 1	3.76	0.82	29.11	-0.0447	7.3549	-0.2855
394	SLD 2	4.08	1.45	29.62	-0.0476	7.4774	-0.5059
394	SLD 3	3.68	-0.49	28.31	-0.0396	7.1683	0.1728
394	SLD 4	4	0.14	28.82	-0.0425	7.2908	-0.0476
394	SLD 5	1.42	2.31	38.34	-0.0662	9.4605	-0.8087
394	SLD 6	1.63	2.73	38.67	-0.0681	9.5418	-0.955
394	SLD 7	1.15	-2.06	35.66	-0.0493	8.8385	0.719
394	SLD 8	1.36	-1.64	36	-0.0512	8.9198	0.5727
394	SLD 9	-0.72	2.19	45.37	-0.0792	11.061	-0.7671
394	SLD 10	-0.51	2.61	45.71	-0.0811	11.1423	-0.9134
394	SLD 11	-0.98	-2.18	42.69	-0.0622	10.439	0.7606
394	SLD 12	-0.77	-1.76	43.03	-0.0642	10.5203	0.6143

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
394	SLD 13	-3.35	0.41	52.55	-0.0879	12.69	-0.1468
394	SLD 14	-3.04	1.04	53.06	-0.0908	12.8125	-0.3672
394	SLD 15	-3.43	-0.9	51.75	-0.0828	12.5034	0.3115
394	SLD 16	-3.12	-0.27	52.25	-0.0857	12.6259	0.0911
394	SLV 1	8.37	1.5	13.58	-0.017	3.8179	-0.5226
394	SLV 2	9.1	2.98	14.76	-0.0238	4.1031	-1.0358
394	SLV 3	8.18	-1.47	11.76	-0.0055	3.3939	0.5162
394	SLV 4	8.92	0	12.94	-0.0123	3.6791	0.003
394	SLV 5	2.89	4.89	35.11	-0.067	8.7315	-1.7102
394	SLV 6	3.37	5.85	35.88	-0.0714	8.9173	-2.0446
394	SLV 7	2.27	-5.01	29.03	-0.0286	7.3183	1.7527
394	SLV 8	2.75	-4.05	29.8	-0.033	7.5041	1.4182
394	SLV 9	-2.11	4.6	51.57	-0.0973	12.4767	-1.6126
394	SLV 10	-1.63	5.56	52.33	-0.1018	12.6625	-1.947
394	SLV 11	-2.72	-5.3	45.49	-0.0589	11.0635	1.8502
394	SLV 12	-2.24	-4.34	46.25	-0.0634	11.2493	1.5158
394	SLV 13	-8.27	0.55	68.43	-0.1181	16.3017	-0.1974
394	SLV 14	-7.54	2.02	69.61	-0.1249	16.5869	-0.7106
394	SLV 15	-8.46	-2.43	66.6	-0.1066	15.8777	0.8415
394	SLV 16	-7.72	-0.95	67.78	-0.1134	16.1629	0.3282
394	CRTFP Ux+	0	0	0	0	0	0
394	CRTFP Ux-	0	0	0	0	0	0
394	CRTFP Uy+	0	0	0	0	0	0
394	CRTFP Uy-	0	0	0	0	0	0
396	SLU 1	-0.71	0.04	35.41	-0.0716	-5.5129	0.008
396	SLU 2	-0.7	-0.04	35.36	-0.0713	-5.5049	-0.013
396	SLU 3	-0.73	0.05	36.27	-0.0735	-5.6401	0.0098
396	SLU 4	-0.72	0	36.24	-0.0733	-5.6354	-0.0028
396	SLU 5	-0.71	-0.04	35.91	-0.0725	-5.5857	-0.0115
396	SLU 6	-0.75	0.06	36.82	-0.0747	-5.7208	0.0113
396	SLU 7	-0.74	0.01	36.79	-0.0745	-5.7161	-0.0013
396	SLU 8	-0.74	0.06	36.51	-0.0741	-5.6743	0.011
396	SLU 9	-0.73	0	36.48	-0.0739	-5.6696	-0.0016
396	SLU 10	-0.74	0.02	39.31	-0.0793	-6.0969	0.0015
396	SLU 11	-0.78	0.11	40.23	-0.0816	-6.2321	0.0243
396	SLU 12	-0.77	0.06	40.2	-0.0814	-6.2273	0.0117
396	SLU 13	-0.75	0.02	39.86	-0.0805	-6.1776	0.003
396	SLU 14	-0.79	0.12	40.77	-0.0828	-6.3128	0.0258
396	SLU 15	-0.78	0.06	40.74	-0.0826	-6.308	0.0132
396	SLU 16	-0.78	0.11	40.46	-0.0821	-6.2663	0.0256
396	SLU 17	-0.77	0.06	40.43	-0.0819	-6.2615	0.013
396	SLU 18	-0.77	0.13	41.06	-0.0831	-6.3586	0.0288
396	SLU 19	-0.76	0.08	41.03	-0.0829	-6.3538	0.0161
396	SLU 20	-0.79	0.13	41.6	-0.0844	-6.4393	0.0303
396	SLU 21	-0.78	0.08	41.57	-0.0841	-6.4345	0.0177
396	SLU 22	-0.8	0.11	39.38	-0.0796	-6.1039	0.0252
396	SLU 23	-0.78	0.03	39.33	-0.0792	-6.096	0.0042
396	SLU 24	-0.82	0.12	40.24	-0.0815	-6.2311	0.027
396	SLU 25	-0.81	0.07	40.21	-0.0813	-6.2264	0.0144
396	SLU 26	-0.8	0.03	39.88	-0.0805	-6.1767	0.0057
396	SLU 27	-0.83	0.13	40.79	-0.0827	-6.3119	0.0285
396	SLU 28	-0.82	0.08	40.76	-0.0825	-6.3071	0.0159
396	SLU 29	-0.83	0.13	40.48	-0.082	-6.2653	0.0283
396	SLU 30	-0.82	0.08	40.45	-0.0818	-6.2606	0.0157
396	SLU 31	-0.82	0.09	43.28	-0.0873	-6.6879	0.0187
396	SLU 32	-0.86	0.18	44.2	-0.0895	-6.8231	0.0415
396	SLU 33	-0.85	0.13	44.17	-0.0893	-6.8183	0.0289
396	SLU 34	-0.84	0.09	43.83	-0.0885	-6.7686	0.0203
396	SLU 35	-0.87	0.19	44.74	-0.0908	-6.9038	0.0431
396	SLU 36	-0.86	0.14	44.71	-0.0905	-6.899	0.0305
396	SLU 37	-0.87	0.18	44.43	-0.0901	-6.8573	0.0428
396	SLU 38	-0.86	0.13	44.4	-0.0899	-6.8525	0.0302
396	SLU 39	-0.86	0.2	45.03	-0.0911	-6.9496	0.046
396	SLU 40	-0.85	0.15	45	-0.0909	-6.9448	0.0334
396	SLU 41	-0.87	0.2	45.57	-0.0923	-7.0303	0.0475
396	SLU 42	-0.86	0.15	45.54	-0.0921	-7.0255	0.0349
396	SLU 43	-0.9	0.03	44.67	-0.0904	-6.9642	0.0045
396	SLU 44	-0.88	-0.05	44.62	-0.09	-6.9562	-0.0165
396	SLU 45	-0.92	0.04	45.54	-0.0923	-7.0914	0.0063
396	SLU 46	-0.91	-0.01	45.51	-0.0921	-7.0866	-0.0063
396	SLU 47	-0.9	-0.05	45.17	-0.0913	-7.0369	-0.015
396	SLU 48	-0.93	0.05	46.08	-0.0935	-7.1721	0.0078
396	SLU 49	-0.92	-0.01	46.05	-0.0933	-7.1673	-0.0048
396	SLU 50	-0.93	0.04	45.77	-0.0928	-7.1256	0.0075
396	SLU 51	-0.92	-0.01	45.74	-0.0926	-7.1208	-0.0051
396	SLU 52	-0.93	0.01	48.58	-0.0981	-7.5481	-0.002
396	SLU 53	-0.96	0.1	49.49	-0.1003	-7.6833	0.0208
396	SLU 54	-0.95	0.05	49.46	-0.1001	-7.6786	0.0082
396	SLU 55	-0.94	0.01	49.12	-0.0993	-7.6289	-0.0005
396	SLU 56	-0.97	0.1	50.03	-0.1016	-7.764	0.0223
396	SLU 57	-0.97	0.05	50	-0.1013	-7.7593	0.0097
396	SLU 58	-0.97	0.1	49.72	-0.1009	-7.7175	0.0221
396	SLU 59	-0.96	0.05	49.69	-0.1007	-7.7128	0.0095
396	SLU 60	-0.96	0.12	50.32	-0.1019	-7.8098	0.0252
396	SLU 61	-0.95	0.07	50.29	-0.1017	-7.805	0.0126
396	SLU 62	-0.97	0.12	50.87	-0.1031	-7.8905	0.0268
396	SLU 63	-0.96	0.07	50.84	-0.1029	-7.8857	0.0142
396	SLU 64	-0.98	0.1	48.65	-0.0984	-7.5552	0.0217
396	SLU 65	-0.97	0.02	48.59	-0.098	-7.5472	0.0007
396	SLU 66	-1	0.11	49.51	-0.1003	-7.6824	0.0235

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
396	SLU 67	-0.99	0.06	49.48	-0.1	-7.6776	0.0109
396	SLU 68	-0.98	0.02	49.14	-0.0992	-7.6279	0.0022
396	SLU 69	-1.02	0.12	50.05	-0.1015	-7.7631	0.025
396	SLU 70	-1.01	0.06	50.02	-0.1013	-7.7583	0.0124
396	SLU 71	-1.01	0.11	49.74	-0.1008	-7.7166	0.0248
396	SLU 72	-1	0.06	49.71	-0.1006	-7.7118	0.0122
396	SLU 73	-1.01	0.08	52.55	-0.1061	-8.1392	0.0152
396	SLU 74	-1.05	0.17	53.46	-0.1083	-8.2743	0.038
396	SLU 75	-1.04	0.12	53.43	-0.1081	-8.2696	0.0254
396	SLU 76	-1.02	0.08	53.09	-0.1073	-8.2199	0.0168
396	SLU 77	-1.06	0.17	54.01	-0.1095	-8.355	0.0396
396	SLU 78	-1.05	0.12	53.98	-0.1093	-8.3503	0.027
396	SLU 79	-1.05	0.17	53.69	-0.1089	-8.3085	0.0393
396	SLU 80	-1.04	0.12	53.66	-0.1086	-8.3038	0.0267
396	SLU 81	-1.04	0.19	54.29	-0.1099	-8.4008	0.0425
396	SLU 82	-1.03	0.14	54.26	-0.1097	-8.396	0.0299
396	SLU 83	-1.06	0.19	54.84	-0.1111	-8.4815	0.044
396	SLU 84	-1.05	0.14	54.81	-0.1109	-8.4767	0.0314
396	SLE RA 1	-0.74	0.06	36.55	-0.0739	-5.6818	0.0129
396	SLE RA 2	-0.73	0.01	36.51	-0.0737	-5.6765	-0.0011
396	SLE RA 3	-0.75	0.07	37.12	-0.0752	-5.7666	0.0141
396	SLE RA 4	-0.74	0.03	37.1	-0.075	-5.7634	0.0057
396	SLE RA 5	-0.74	0.01	36.88	-0.0745	-5.7303	-0.0001
396	SLE RA 6	-0.76	0.07	37.49	-0.076	-5.8204	0.0151
396	SLE RA 7	-0.75	0.04	37.47	-0.0758	-5.8172	0.0067
396	SLE RA 8	-0.76	0.07	37.28	-0.0755	-5.7894	0.015
396	SLE RA 9	-0.75	0.04	37.26	-0.0754	-5.7862	0.0065
396	SLE RA 10	-0.76	0.05	39.15	-0.079	-6.0711	0.0086
396	SLE RA 11	-0.78	0.11	39.76	-0.0805	-6.1612	0.0238
396	SLE RA 12	-0.77	0.07	39.74	-0.0804	-6.158	0.0154
396	SLE RA 13	-0.76	0.05	39.51	-0.0799	-6.1249	0.0096
396	SLE RA 14	-0.79	0.11	40.12	-0.0814	-6.215	0.0248
396	SLE RA 15	-0.78	0.08	40.1	-0.0812	-6.2118	0.0164
396	SLE RA 16	-0.78	0.11	39.91	-0.0809	-6.184	0.0246
396	SLE RA 17	-0.78	0.08	39.89	-0.0808	-6.1808	0.0162
396	SLE RA 18	-0.78	0.12	40.31	-0.0816	-6.2455	0.0268
396	SLE RA 19	-0.77	0.09	40.29	-0.0814	-6.2424	0.0184
396	SLE RA 20	-0.79	0.12	40.67	-0.0824	-6.2994	0.0278
396	SLE RA 21	-0.78	0.09	40.65	-0.0823	-6.2962	0.0194
396	SLE FR 1	-0.74	0.06	36.55	-0.0739	-5.6818	0.0129
396	SLE FR 2	-0.74	0.05	36.54	-0.0739	-5.6807	0.0101
396	SLE FR 3	-0.74	0.06	36.69	-0.0742	-5.7033	0.0133
396	SLE FR 4	-0.75	0.07	37.67	-0.0762	-5.8498	0.0143
396	SLE FR 5	-0.75	0.08	37.82	-0.0765	-5.8724	0.0175
396	SLE FR 6	-0.76	0.09	38.43	-0.0778	-5.9637	0.0198
396	SLE QP 1	-0.74	0.06	36.55	-0.0739	-5.6818	0.0129
396	SLE QP 2	-0.75	0.08	37.68	-0.0762	-5.8509	0.0171
396	SLD 1	2.12	0.64	49.35	-0.1045	-7.5405	0.1594
396	SLD 2	2.39	0.08	48.9	-0.1015	-7.4698	0.022
396	SLD 3	2.18	-0.62	48.58	-0.0992	-7.4252	-0.1542
396	SLD 4	2.45	-1.18	48.14	-0.0961	-7.3545	-0.2917
396	SLD 5	-0.04	2.26	42.42	-0.0934	-6.5455	0.5605
396	SLD 6	0.14	1.89	42.13	-0.0913	-6.4985	0.4693
396	SLD 7	0.18	-1.94	39.87	-0.0756	-6.1612	-0.4851
396	SLD 8	0.36	-2.31	39.57	-0.0735	-6.1143	-0.5763
396	SLD 9	-1.86	2.47	35.78	-0.0789	-5.5875	0.6104
396	SLD 10	-1.68	2.1	35.49	-0.0769	-5.5406	0.5192
396	SLD 11	-1.64	-1.73	33.23	-0.0611	-5.2033	-0.4351
396	SLD 12	-1.46	-2.1	32.93	-0.0591	-5.1563	-0.5264
396	SLD 13	-3.95	1.33	27.22	-0.0563	-4.3473	0.3258
396	SLD 14	-3.68	0.78	26.77	-0.0533	-4.2766	0.1884
396	SLD 15	-3.89	0.08	26.45	-0.051	-4.2321	0.0121
396	SLD 16	-3.62	-0.48	26	-0.0479	-4.1613	-0.1253
396	SLV 1	5.95	1.33	64.96	-0.1422	-9.8002	0.3371
396	SLV 2	6.58	0.04	63.92	-0.1351	-9.6355	0.0171
396	SLV 3	6.1	-1.51	63.22	-0.1301	-9.5381	-0.3723
396	SLV 4	6.73	-2.8	62.18	-0.123	-9.3734	-0.6923
396	SLV 5	0.92	5	48.69	-0.1156	-7.4621	1.2453
396	SLV 6	1.33	4.16	48.01	-0.111	-7.3548	1.0368
396	SLV 7	1.42	-4.49	42.88	-0.0753	-6.5886	-1.1195
396	SLV 8	1.83	-5.33	42.2	-0.0707	-6.4812	-1.328
396	SLV 9	-3.33	5.49	33.15	-0.0818	-5.2206	1.3621
396	SLV 10	-2.92	4.64	32.47	-0.0772	-5.1133	1.1536
396	SLV 11	-2.83	-4	27.34	-0.0414	-4.347	-1.0027
396	SLV 12	-2.42	-4.84	26.66	-0.0368	-4.2397	-1.2112
396	SLV 13	-8.23	2.96	13.17	-0.0294	-2.3284	0.7265
396	SLV 14	-7.6	1.67	12.13	-0.0223	-2.1637	0.4065
396	SLV 15	-8.08	0.12	11.43	-0.0173	-2.0663	0.017
396	SLV 16	-7.45	-1.18	10.39	-0.0102	-1.9016	-0.303
396	CRTFP Ux+	0	0	0	0	0	0
396	CRTFP Ux-	0	0	0	0	0	0
396	CRTFP Uy+	0	0	0	0	0	0
396	CRTFP Uy-	0	0	0	0	0	0
399	SLU 1	0.17	-0.11	38.5	-0.0219	11.1891	0.0373
399	SLU 2	0.19	-0.14	38.48	-0.0217	11.1828	0.0505
399	SLU 3	0.18	-0.09	39.43	-0.0225	11.4549	0.0334
399	SLU 4	0.19	-0.12	39.42	-0.0224	11.4511	0.0413
399	SLU 5	0.19	-0.14	39.06	-0.0222	11.3483	0.0503
399	SLU 6	0.18	-0.09	40.01	-0.023	11.6203	0.0333
399	SLU 7	0.19	-0.12	40	-0.0229	11.6166	0.0411

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
399	SLU 8	0.18	-0.1	39.66	-0.0229	11.5199	0.0371
399	SLU 9	0.19	-0.13	39.65	-0.0228	11.5162	0.045
399	SLU 10	0.2	-0.08	43.34	-0.0234	12.5824	0.0277
399	SLU 11	0.19	-0.03	44.3	-0.0242	12.8545	0.0106
399	SLU 12	0.2	-0.05	44.28	-0.0241	12.8507	0.0185
399	SLU 13	0.21	-0.08	43.93	-0.0239	12.7479	0.0276
399	SLU 14	0.19	-0.03	44.88	-0.0248	13.0199	0.0105
399	SLU 15	0.2	-0.05	44.87	-0.0246	13.0162	0.0184
399	SLU 16	0.19	-0.04	44.53	-0.0246	12.9195	0.0143
399	SLU 17	0.2	-0.06	44.52	-0.0245	12.9158	0.0222
399	SLU 18	0.19	-0.01	45.45	-0.0243	13.1885	0.0049
399	SLU 19	0.2	-0.04	45.44	-0.0242	13.1847	0.0127
399	SLU 20	0.19	-0.01	46.03	-0.0249	13.3539	0.0047
399	SLU 21	0.2	-0.04	46.02	-0.0247	13.3502	0.0126
399	SLU 22	0.2	-0.01	42.67	-0.0236	12.3773	0.0032
399	SLU 23	0.22	-0.04	42.65	-0.0234	12.3711	0.0164
399	SLU 24	0.21	0	43.6	-0.0242	12.6431	-0.0007
399	SLU 25	0.22	-0.02	43.59	-0.0241	12.6394	0.0071
399	SLU 26	0.22	-0.04	43.23	-0.0239	12.5365	0.0162
399	SLU 27	0.21	0	44.18	-0.0247	12.8086	-0.0009
399	SLU 28	0.22	-0.02	44.17	-0.0246	12.8048	0.007
399	SLU 29	0.21	-0.01	43.83	-0.0246	12.7082	0.003
399	SLU 30	0.22	-0.03	43.82	-0.0245	12.7044	0.0108
399	SLU 31	0.23	0.02	47.51	-0.0251	13.7707	-0.0064
399	SLU 32	0.22	0.07	48.47	-0.0259	14.0427	-0.0235
399	SLU 33	0.23	0.05	48.45	-0.0258	14.039	-0.0156
399	SLU 34	0.24	0.02	48.1	-0.0256	13.9361	-0.0065
399	SLU 35	0.22	0.07	49.05	-0.0264	14.2081	-0.0236
399	SLU 36	0.23	0.05	49.04	-0.0263	14.2044	-0.0157
399	SLU 37	0.22	0.06	48.7	-0.0263	14.1078	-0.0198
399	SLU 38	0.23	0.04	48.69	-0.0262	14.104	-0.0119
399	SLU 39	0.22	0.08	49.62	-0.026	14.3767	-0.0293
399	SLU 40	0.23	0.06	49.61	-0.0259	14.373	-0.0214
399	SLU 41	0.22	0.08	50.2	-0.0265	14.5422	-0.0294
399	SLU 42	0.23	0.06	50.19	-0.0264	14.5384	-0.0215
399	SLU 43	0.22	-0.17	48.62	-0.0279	14.1384	0.0603
399	SLU 44	0.23	-0.21	48.59	-0.0277	14.1322	0.0734
399	SLU 45	0.22	-0.16	49.55	-0.0285	14.4042	0.0563
399	SLU 46	0.23	-0.18	49.54	-0.0284	14.4005	0.0642
399	SLU 47	0.24	-0.21	49.18	-0.0282	14.2976	0.0733
399	SLU 48	0.22	-0.16	50.13	-0.029	14.5696	0.0562
399	SLU 49	0.24	-0.18	50.12	-0.0289	14.5659	0.064
399	SLU 50	0.22	-0.17	49.78	-0.0289	14.4693	0.06
399	SLU 51	0.23	-0.19	49.77	-0.0288	14.4655	0.0679
399	SLU 52	0.25	-0.14	53.46	-0.0294	15.5317	0.0506
399	SLU 53	0.23	-0.09	54.42	-0.0302	15.8038	0.0335
399	SLU 54	0.24	-0.12	54.4	-0.0301	15.8001	0.0414
399	SLU 55	0.25	-0.14	54.05	-0.0299	15.6972	0.0505
399	SLU 56	0.24	-0.09	55	-0.0307	15.9692	0.0334
399	SLU 57	0.25	-0.12	54.99	-0.0306	15.9655	0.0413
399	SLU 58	0.23	-0.11	54.65	-0.0306	15.8689	0.0373
399	SLU 59	0.24	-0.13	54.64	-0.0305	15.8651	0.0451
399	SLU 60	0.23	-0.08	55.57	-0.0303	16.1378	0.0278
399	SLU 61	0.24	-0.1	55.56	-0.0302	16.1341	0.0356
399	SLU 62	0.23	-0.08	56.15	-0.0308	16.3033	0.0276
399	SLU 63	0.25	-0.1	56.14	-0.0307	16.2995	0.0355
399	SLU 64	0.25	-0.07	52.79	-0.0296	15.3266	0.0261
399	SLU 65	0.26	-0.11	52.76	-0.0294	15.3204	0.0393
399	SLU 66	0.25	-0.06	53.72	-0.0302	15.5924	0.0222
399	SLU 67	0.26	-0.08	53.7	-0.0301	15.5887	0.03
399	SLU 68	0.27	-0.11	53.35	-0.0299	15.4858	0.0391
399	SLU 69	0.25	-0.06	54.3	-0.0307	15.7579	0.022
399	SLU 70	0.26	-0.08	54.29	-0.0306	15.7541	0.0299
399	SLU 71	0.25	-0.07	53.95	-0.0306	15.6575	0.0259
399	SLU 72	0.26	-0.09	53.94	-0.0305	15.6538	0.0337
399	SLU 73	0.28	-0.05	57.63	-0.0311	16.72	0.0165
399	SLU 74	0.26	0	58.59	-0.0319	16.992	-0.0006
399	SLU 75	0.27	-0.02	58.57	-0.0318	16.9883	0.0073
399	SLU 76	0.28	-0.04	58.21	-0.0316	16.8854	0.0164
399	SLU 77	0.27	0	59.17	-0.0324	17.1575	-0.0007
399	SLU 78	0.28	-0.02	59.16	-0.0323	17.1537	0.0072
399	SLU 79	0.26	-0.01	58.82	-0.0323	17.0571	0.0031
399	SLU 80	0.27	-0.03	58.81	-0.0322	17.0534	0.011
399	SLU 81	0.26	0.02	59.74	-0.032	17.326	-0.0064
399	SLU 82	0.27	0	59.73	-0.0319	17.3223	0.0015
399	SLU 83	0.26	0.02	60.32	-0.0325	17.4915	-0.0065
399	SLU 84	0.28	0	60.31	-0.0324	17.4877	0.0014
399	SLE RA 1	0.18	-0.08	39.69	-0.0224	11.5286	0.0276
399	SLE RA 2	0.19	-0.1	39.67	-0.0222	11.5244	0.0363
399	SLE RA 3	0.19	-0.07	40.31	-0.0228	11.7058	0.025
399	SLE RA 4	0.19	-0.08	40.3	-0.0227	11.7033	0.0302
399	SLE RA 5	0.2	-0.1	40.06	-0.0226	11.6347	0.0363
399	SLE RA 6	0.19	-0.07	40.7	-0.0231	11.8161	0.0249
399	SLE RA 7	0.2	-0.08	40.69	-0.0231	11.8136	0.0301
399	SLE RA 8	0.19	-0.08	40.46	-0.0231	11.7492	0.0274
399	SLE RA 9	0.19	-0.09	40.46	-0.023	11.7467	0.0327
399	SLE RA 10	0.2	-0.06	42.92	-0.0234	12.4575	0.0212
399	SLE RA 11	0.19	-0.03	43.55	-0.0239	12.6388	0.0098
399	SLE RA 12	0.2	-0.04	43.55	-0.0239	12.6363	0.015
399	SLE RA 13	0.2	-0.06	43.31	-0.0237	12.5678	0.0211

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
399	SLE RA 14	0.2	-0.03	43.94	-0.0243	12.7491	0.0097
399	SLE RA 15	0.2	-0.04	43.93	-0.0242	12.7466	0.015
399	SLE RA 16	0.19	-0.03	43.71	-0.0242	12.6822	0.0123
399	SLE RA 17	0.2	-0.05	43.7	-0.0241	12.6797	0.0175
399	SLE RA 18	0.19	-0.02	44.32	-0.024	12.8615	0.0059
399	SLE RA 19	0.2	-0.03	44.32	-0.0239	12.859	0.0112
399	SLE RA 20	0.2	-0.02	44.71	-0.0244	12.9718	0.0059
399	SLE RA 21	0.2	-0.03	44.7	-0.0243	12.9693	0.0111
399	SLE FR 1	0.18	-0.08	39.69	-0.0224	11.5286	0.0276
399	SLE FR 2	0.19	-0.08	39.68	-0.0224	11.5277	0.0293
399	SLE FR 3	0.18	-0.08	39.84	-0.0225	11.5727	0.0276
399	SLE FR 4	0.19	-0.06	41.08	-0.0228	11.9276	0.0228
399	SLE FR 5	0.19	-0.06	41.23	-0.023	11.9726	0.0211
399	SLE FR 6	0.19	-0.05	42.01	-0.0232	12.195	0.0168
399	SLE QP 1	0.18	-0.08	39.69	-0.0224	11.5286	0.0276
399	SLE QP 2	0.19	-0.06	41.08	-0.0229	11.9284	0.0211
399	SLD 1	3.82	0.56	41.86	-0.0239	12.2339	-0.1923
399	SLD 2	4.14	0.58	41.92	-0.0241	12.2441	-0.1997
399	SLD 3	3.74	-0.54	41.35	-0.0189	12.0916	0.1912
399	SLD 4	4.06	-0.51	41.41	-0.0192	12.1017	0.1838
399	SLD 5	1.34	1.78	42.07	-0.0306	12.2342	-0.6232
399	SLD 6	1.55	1.8	42.11	-0.0308	12.2409	-0.6281
399	SLD 7	1.07	-1.87	40.38	-0.0141	11.7596	0.6551
399	SLD 8	1.28	-1.85	40.41	-0.0143	11.7663	0.6502
399	SLD 9	-0.91	1.74	41.74	-0.0314	12.0906	-0.608
399	SLD 10	-0.7	1.75	41.78	-0.0316	12.0973	-0.6129
399	SLD 11	-1.18	-1.92	40.04	-0.0149	11.616	0.6703
399	SLD 12	-0.97	-1.9	40.08	-0.0151	11.6227	0.6654
399	SLD 13	-3.69	0.4	40.75	-0.0265	11.7552	-0.1416
399	SLD 14	-3.37	0.42	40.81	-0.0268	11.7653	-0.149
399	SLD 15	-3.77	-0.7	40.24	-0.0216	11.6128	0.2419
399	SLD 16	-3.45	-0.67	40.3	-0.0219	11.623	0.2344
399	SLV 1	8.69	1.34	42.88	-0.025	12.6384	-0.4638
399	SLV 2	9.43	1.4	43.02	-0.0257	12.662	-0.481
399	SLV 3	8.5	-1.14	41.73	-0.0138	12.3147	0.4048
399	SLV 4	9.25	-1.08	41.86	-0.0145	12.3383	0.3875
399	SLV 5	2.89	4.12	43.35	-0.0404	12.6282	-1.4386
399	SLV 6	3.37	4.16	43.44	-0.0408	12.6436	-1.4498
399	SLV 7	2.27	-4.16	39.5	-0.0031	11.5492	1.4565
399	SLV 8	2.75	-4.12	39.58	-0.0035	11.5646	1.4453
399	SLV 9	-2.38	4	42.57	-0.0423	12.2923	-1.4031
399	SLV 10	-1.9	4.04	42.66	-0.0427	12.3077	-1.4143
399	SLV 11	-3	-4.27	38.72	-0.0049	11.2133	1.492
399	SLV 12	-2.52	-4.23	38.81	-0.0053	11.2286	1.4808
399	SLV 13	-8.87	0.96	40.3	-0.0313	11.5186	-0.3453
399	SLV 14	-8.13	1.02	40.43	-0.0319	11.5422	-0.3626
399	SLV 15	-9.06	-1.52	39.14	-0.0201	11.1949	0.5232
399	SLV 16	-8.32	-1.46	39.27	-0.0207	11.2185	0.506
399	CRTFP Ux+	0	0	0	0	0	0
399	CRTFP Ux-	0	0	0	0	0	0
399	CRTFP Uy+	0	0	0	0	0	0
399	CRTFP Uy-	0	0	0	0	0	0
403	SLU 1	-1.03	-1.18	61.95	-0.0436	-0.3	-0.0321
403	SLU 2	-1	-1.26	61.9	-0.0431	-0.3009	-0.0313
403	SLU 3	-1.06	-1.2	63.44	-0.0446	-0.3076	-0.033
403	SLU 4	-1.04	-1.25	63.41	-0.0443	-0.3082	-0.0325
403	SLU 5	-1.02	-1.28	62.84	-0.0439	-0.3054	-0.0319
403	SLU 6	-1.08	-1.22	64.38	-0.0453	-0.3121	-0.0336
403	SLU 7	-1.06	-1.26	64.35	-0.0451	-0.3126	-0.0331
403	SLU 8	-1.07	-1.21	63.84	-0.0451	-0.3089	-0.0332
403	SLU 9	-1.05	-1.26	63.81	-0.0448	-0.3095	-0.0327
403	SLU 10	-1.05	-1.32	69.16	-0.0473	-0.3483	-0.0346
403	SLU 11	-1.11	-1.26	70.71	-0.0488	-0.355	-0.0364
403	SLU 12	-1.1	-1.3	70.67	-0.0485	-0.3555	-0.0359
403	SLU 13	-1.07	-1.33	70.11	-0.0481	-0.3527	-0.0352
403	SLU 14	-1.13	-1.27	71.65	-0.0495	-0.3594	-0.0369
403	SLU 15	-1.12	-1.32	71.62	-0.0493	-0.36	-0.0364
403	SLU 16	-1.13	-1.27	71.11	-0.0492	-0.3562	-0.0366
403	SLU 17	-1.11	-1.32	71.08	-0.049	-0.3568	-0.0361
403	SLU 18	-1.11	-1.26	72.33	-0.0496	-0.3677	-0.0369
403	SLU 19	-1.09	-1.31	72.3	-0.0493	-0.3682	-0.0364
403	SLU 20	-1.13	-1.28	73.28	-0.0503	-0.3721	-0.0374
403	SLU 21	-1.11	-1.33	73.24	-0.05	-0.3726	-0.037
403	SLU 22	-1.16	-1.19	68.88	-0.0469	-0.3321	-0.0365
403	SLU 23	-1.12	-1.27	68.83	-0.0465	-0.333	-0.0357
403	SLU 24	-1.18	-1.2	70.37	-0.048	-0.3397	-0.0374
403	SLU 25	-1.17	-1.25	70.34	-0.0477	-0.3402	-0.0369
403	SLU 26	-1.15	-1.28	69.77	-0.0472	-0.3374	-0.0363
403	SLU 27	-1.21	-1.22	71.31	-0.0487	-0.3441	-0.038
403	SLU 28	-1.19	-1.27	71.28	-0.0484	-0.3447	-0.0375
403	SLU 29	-1.2	-1.22	70.77	-0.0484	-0.341	-0.0376
403	SLU 30	-1.18	-1.27	70.74	-0.0482	-0.3415	-0.0371
403	SLU 31	-1.18	-1.32	76.09	-0.0507	-0.3803	-0.039
403	SLU 32	-1.24	-1.26	77.63	-0.0521	-0.387	-0.0407
403	SLU 33	-1.22	-1.31	77.6	-0.0519	-0.3876	-0.0403
403	SLU 34	-1.2	-1.34	77.04	-0.0514	-0.3848	-0.0396
403	SLU 35	-1.26	-1.27	78.58	-0.0529	-0.3915	-0.0413
403	SLU 36	-1.24	-1.32	78.55	-0.0526	-0.392	-0.0408
403	SLU 37	-1.25	-1.27	78.04	-0.0526	-0.3883	-0.041
403	SLU 38	-1.23	-1.32	78	-0.0523	-0.3888	-0.0405

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
403	SLU 39	-1.23	-1.27	79.26	-0.0529	-0.3997	-0.0413
403	SLU 40	-1.21	-1.31	79.23	-0.0527	-0.4003	-0.0408
403	SLU 41	-1.25	-1.28	80.2	-0.0537	-0.4041	-0.0418
403	SLU 42	-1.23	-1.33	80.17	-0.0534	-0.4047	-0.0413
403	SLU 43	-1.3	-1.54	78.16	-0.0555	-0.379	-0.0402
403	SLU 44	-1.27	-1.62	78.11	-0.0551	-0.38	-0.0394
403	SLU 45	-1.33	-1.55	79.65	-0.0565	-0.3867	-0.0411
403	SLU 46	-1.31	-1.6	79.62	-0.0563	-0.3872	-0.0407
403	SLU 47	-1.29	-1.63	79.05	-0.0558	-0.3844	-0.04
403	SLU 48	-1.35	-1.57	80.59	-0.0573	-0.3911	-0.0417
403	SLU 49	-1.33	-1.62	80.56	-0.057	-0.3917	-0.0412
403	SLU 50	-1.34	-1.57	80.05	-0.057	-0.3879	-0.0414
403	SLU 51	-1.32	-1.62	80.02	-0.0567	-0.3885	-0.0409
403	SLU 52	-1.32	-1.67	85.37	-0.0593	-0.4273	-0.0428
403	SLU 53	-1.38	-1.61	86.91	-0.0607	-0.434	-0.0445
403	SLU 54	-1.36	-1.66	86.88	-0.0604	-0.4346	-0.044
403	SLU 55	-1.34	-1.69	86.32	-0.06	-0.4317	-0.0433
403	SLU 56	-1.4	-1.62	87.86	-0.0615	-0.4384	-0.045
403	SLU 57	-1.38	-1.67	87.83	-0.0612	-0.439	-0.0446
403	SLU 58	-1.39	-1.62	87.32	-0.0612	-0.4353	-0.0447
403	SLU 59	-1.37	-1.67	87.28	-0.0609	-0.4358	-0.0442
403	SLU 60	-1.37	-1.61	88.54	-0.0615	-0.4467	-0.045
403	SLU 61	-1.36	-1.66	88.51	-0.0612	-0.4472	-0.0445
403	SLU 62	-1.39	-1.63	89.48	-0.0622	-0.4511	-0.0456
403	SLU 63	-1.38	-1.68	89.45	-0.062	-0.4517	-0.0451
403	SLU 64	-1.42	-1.54	85.09	-0.0588	-0.4111	-0.0446
403	SLU 65	-1.39	-1.62	85.03	-0.0584	-0.412	-0.0438
403	SLU 66	-1.45	-1.56	86.58	-0.0599	-0.4187	-0.0455
403	SLU 67	-1.43	-1.61	86.55	-0.0596	-0.4193	-0.045
403	SLU 68	-1.41	-1.64	85.98	-0.0592	-0.4165	-0.0444
403	SLU 69	-1.47	-1.57	87.52	-0.0606	-0.4231	-0.0461
403	SLU 70	-1.45	-1.62	87.49	-0.0604	-0.4237	-0.0456
403	SLU 71	-1.46	-1.57	86.98	-0.0603	-0.42	-0.0457
403	SLU 72	-1.44	-1.62	86.95	-0.0601	-0.4205	-0.0453
403	SLU 73	-1.45	-1.68	92.3	-0.0626	-0.4594	-0.0472
403	SLU 74	-1.51	-1.61	93.84	-0.0641	-0.4661	-0.0489
403	SLU 75	-1.49	-1.66	93.81	-0.0638	-0.4666	-0.0484
403	SLU 76	-1.47	-1.69	93.25	-0.0633	-0.4638	-0.0477
403	SLU 77	-1.53	-1.63	94.79	-0.0648	-0.4705	-0.0494
403	SLU 78	-1.51	-1.68	94.76	-0.0645	-0.471	-0.049
403	SLU 79	-1.52	-1.63	94.24	-0.0645	-0.4673	-0.0491
403	SLU 80	-1.5	-1.67	94.21	-0.0643	-0.4679	-0.0486
403	SLU 81	-1.5	-1.62	95.47	-0.0648	-0.4787	-0.0494
403	SLU 82	-1.48	-1.67	95.44	-0.0646	-0.4793	-0.0489
403	SLU 83	-1.52	-1.63	96.41	-0.0656	-0.4832	-0.0499
403	SLU 84	-1.5	-1.68	96.38	-0.0653	-0.4837	-0.0495
403	SLE RA 1	-1.07	-1.18	63.93	-0.0445	-0.3092	-0.0334
403	SLE RA 2	-1.05	-1.24	63.89	-0.0442	-0.3098	-0.0328
403	SLE RA 3	-1.09	-1.2	64.92	-0.0452	-0.3143	-0.034
403	SLE RA 4	-1.07	-1.23	64.9	-0.045	-0.3146	-0.0336
403	SLE RA 5	-1.06	-1.25	64.52	-0.0447	-0.3128	-0.0332
403	SLE RA 6	-1.1	-1.21	65.55	-0.0457	-0.3172	-0.0343
403	SLE RA 7	-1.09	-1.24	65.53	-0.0455	-0.3176	-0.034
403	SLE RA 8	-1.09	-1.2	65.19	-0.0455	-0.3151	-0.0341
403	SLE RA 9	-1.08	-1.24	65.17	-0.0453	-0.3155	-0.0338
403	SLE RA 10	-1.08	-1.28	68.74	-0.047	-0.3414	-0.035
403	SLE RA 11	-1.12	-1.23	69.77	-0.048	-0.3458	-0.0362
403	SLE RA 12	-1.11	-1.26	69.75	-0.0478	-0.3462	-0.0359
403	SLE RA 13	-1.1	-1.29	69.37	-0.0475	-0.3443	-0.0354
403	SLE RA 14	-1.14	-1.24	70.4	-0.0485	-0.3488	-0.0366
403	SLE RA 15	-1.12	-1.27	70.38	-0.0483	-0.3491	-0.0362
403	SLE RA 16	-1.13	-1.24	70.03	-0.0483	-0.3467	-0.0363
403	SLE RA 17	-1.12	-1.27	70.01	-0.0481	-0.347	-0.036
403	SLE RA 18	-1.12	-1.24	70.85	-0.0485	-0.3543	-0.0365
403	SLE RA 19	-1.11	-1.27	70.83	-0.0483	-0.3546	-0.0362
403	SLE RA 20	-1.13	-1.25	71.48	-0.049	-0.3572	-0.0369
403	SLE RA 21	-1.12	-1.28	71.46	-0.0488	-0.3576	-0.0366
403	SLE FR 1	-1.07	-1.18	63.93	-0.0445	-0.3092	-0.0334
403	SLE FR 2	-1.06	-1.2	63.92	-0.0445	-0.3093	-0.0332
403	SLE FR 3	-1.07	-1.19	64.18	-0.0447	-0.3104	-0.0335
403	SLE FR 4	-1.08	-1.21	66	-0.0457	-0.3228	-0.0342
403	SLE FR 5	-1.09	-1.2	66.26	-0.0459	-0.3239	-0.0345
403	SLE FR 6	-1.09	-1.21	67.39	-0.0465	-0.3317	-0.0349
403	SLE QP 1	-1.07	-1.18	63.93	-0.0445	-0.3092	-0.0334
403	SLE QP 2	-1.08	-1.2	66	-0.0457	-0.3227	-0.0343
403	SLD 1	4.54	-0.85	72.84	-0.0584	-0.1308	-0.0191
403	SLD 2	5.02	-1.25	72.48	-0.0563	-0.1369	-0.0067
403	SLD 3	4.67	-2.47	72.12	-0.0515	-0.1546	-0.0153
403	SLD 4	5.15	-2.87	71.76	-0.0493	-0.1607	-0.0029
403	SLD 5	0.32	1.45	69.22	-0.0604	-0.2279	-0.0378
403	SLD 6	0.64	1.18	68.98	-0.059	-0.232	-0.0295
403	SLD 7	0.76	-3.98	66.8	-0.0373	-0.3073	-0.0251
403	SLD 8	1.08	-4.24	66.56	-0.0359	-0.3113	-0.0169
403	SLD 9	-3.24	1.84	65.45	-0.0556	-0.3341	-0.0517
403	SLD 10	-2.92	1.58	65.21	-0.0541	-0.3381	-0.0435
403	SLD 11	-2.8	-3.58	63.02	-0.0325	-0.4135	-0.0391
403	SLD 12	-2.48	-3.85	62.78	-0.031	-0.4175	-0.0309
403	SLD 13	-7.31	0.47	60.25	-0.0421	-0.4847	-0.0657
403	SLD 14	-6.83	0.07	59.89	-0.04	-0.4908	-0.0533
403	SLD 15	-7.18	-1.15	59.53	-0.0352	-0.5085	-0.0619

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
403	SLD 16	-6.7	-1.55	59.16	-0.033	-0.5146	-0.0495
403	SLV 1	12.06	-0.44	81.98	-0.0752	0.1256	0.0013
403	SLV 2	13.18	-1.37	81.13	-0.0702	0.1115	0.0302
403	SLV 3	12.36	-4.12	80.33	-0.0595	0.0712	0.01
403	SLV 4	13.48	-5.05	79.48	-0.0545	0.0571	0.0388
403	SLV 5	2.2	4.78	73.45	-0.0793	-0.1032	-0.0419
403	SLV 6	2.93	4.17	72.9	-0.076	-0.1125	-0.0231
403	SLV 7	3.22	-7.49	67.95	-0.0269	-0.2845	-0.0129
403	SLV 8	3.95	-8.1	67.4	-0.0236	-0.2937	0.0059
403	SLV 9	-6.11	5.7	64.61	-0.0678	-0.3517	-0.0745
403	SLV 10	-5.38	5.09	64.06	-0.0645	-0.3609	-0.0557
403	SLV 11	-5.09	-6.57	59.11	-0.0155	-0.533	-0.0456
403	SLV 12	-4.36	-7.18	58.56	-0.0122	-0.5422	-0.0268
403	SLV 13	-15.65	2.65	52.53	-0.037	-0.7025	-0.1075
403	SLV 14	-14.52	1.72	51.68	-0.032	-0.7167	-0.0786
403	SLV 15	-15.34	-1.03	50.88	-0.0213	-0.7569	-0.0988
403	SLV 16	-14.22	-1.96	50.03	-0.0163	-0.771	-0.0699
403	CRTFP Ux+	0	0	0	0	0	0
403	CRTFP Ux-	0	0	0	0	0	0
407	SLU 1	0.37	-0.7	62.93	-0.0418	0.3653	-0.0008
407	SLU 2	0.39	-0.73	62.92	-0.0416	0.3657	-0.0001
407	SLU 3	0.38	-0.71	64.44	-0.0428	0.3738	-0.0008
407	SLU 4	0.39	-0.73	64.43	-0.0427	0.374	-0.0004
407	SLU 5	0.4	-0.75	63.87	-0.0424	0.3704	-0.0002
407	SLU 6	0.38	-0.72	65.39	-0.0436	0.3785	-0.0009
407	SLU 7	0.4	-0.74	65.38	-0.0434	0.3787	-0.0005
407	SLU 8	0.38	-0.73	64.82	-0.0433	0.3748	-0.001
407	SLU 9	0.39	-0.75	64.82	-0.0432	0.375	-0.0005
407	SLU 10	0.4	-0.71	70.38	-0.0456	0.417	-0.0006
407	SLU 11	0.38	-0.69	71.89	-0.0468	0.4251	-0.0013
407	SLU 12	0.4	-0.71	71.89	-0.0467	0.4253	-0.0009
407	SLU 13	0.4	-0.73	71.32	-0.0463	0.4217	-0.0007
407	SLU 14	0.39	-0.71	72.84	-0.0475	0.4298	-0.0014
407	SLU 15	0.4	-0.73	72.84	-0.0474	0.43	-0.001
407	SLU 16	0.38	-0.71	72.28	-0.0473	0.4261	-0.0015
407	SLU 17	0.4	-0.73	72.28	-0.0472	0.4263	-0.001
407	SLU 18	0.37	-0.67	73.58	-0.0475	0.4386	-0.0015
407	SLU 19	0.39	-0.69	73.57	-0.0474	0.4388	-0.0011
407	SLU 20	0.38	-0.69	74.53	-0.0482	0.4433	-0.0016
407	SLU 21	0.39	-0.71	74.52	-0.0481	0.4435	-0.0012
407	SLU 22	0.42	-0.64	70.01	-0.0448	0.3968	-0.0003
407	SLU 23	0.45	-0.67	70	-0.0447	0.3971	0.0004
407	SLU 24	0.44	-0.65	71.52	-0.0459	0.4052	-0.0004
407	SLU 25	0.45	-0.67	71.51	-0.0458	0.4054	0.0001
407	SLU 26	0.46	-0.69	70.95	-0.0454	0.4019	0.0003
407	SLU 27	0.44	-0.66	72.47	-0.0466	0.4099	-0.0004
407	SLU 28	0.46	-0.68	72.46	-0.0465	0.4102	0
407	SLU 29	0.43	-0.67	71.91	-0.0464	0.4062	-0.0005
407	SLU 30	0.45	-0.69	71.9	-0.0462	0.4064	-0.0001
407	SLU 31	0.46	-0.65	77.46	-0.0486	0.4484	-0.0001
407	SLU 32	0.44	-0.63	78.98	-0.0498	0.4565	-0.0008
407	SLU 33	0.46	-0.65	78.97	-0.0497	0.4567	-0.0004
407	SLU 34	0.46	-0.67	78.41	-0.0494	0.4531	-0.0002
407	SLU 35	0.45	-0.64	79.93	-0.0506	0.4612	-0.0009
407	SLU 36	0.46	-0.66	79.92	-0.0505	0.4614	-0.0005
407	SLU 37	0.44	-0.65	79.36	-0.0503	0.4575	-0.001
407	SLU 38	0.46	-0.67	79.36	-0.0502	0.4577	-0.0006
407	SLU 39	0.43	-0.61	80.66	-0.0505	0.4701	-0.001
407	SLU 40	0.45	-0.63	80.66	-0.0504	0.4703	-0.0006
407	SLU 41	0.44	-0.63	81.61	-0.0513	0.4748	-0.0011
407	SLU 42	0.45	-0.65	81.61	-0.0512	0.475	-0.0007
407	SLU 43	0.46	-0.93	79.38	-0.0533	0.4642	-0.0012
407	SLU 44	0.48	-0.96	79.37	-0.0531	0.4645	-0.0005
407	SLU 45	0.47	-0.94	80.89	-0.0543	0.4726	-0.0012
407	SLU 46	0.48	-0.96	80.88	-0.0542	0.4728	-0.0008
407	SLU 47	0.49	-0.98	80.32	-0.0539	0.4692	-0.0006
407	SLU 48	0.47	-0.95	81.84	-0.055	0.4773	-0.0013
407	SLU 49	0.49	-0.97	81.83	-0.0549	0.4775	-0.0009
407	SLU 50	0.47	-0.96	81.27	-0.0548	0.4736	-0.0014
407	SLU 51	0.48	-0.98	81.27	-0.0547	0.4738	-0.0009
407	SLU 52	0.49	-0.94	86.83	-0.0571	0.5158	-0.001
407	SLU 53	0.47	-0.92	88.34	-0.0583	0.5239	-0.0017
407	SLU 54	0.49	-0.94	88.34	-0.0582	0.5241	-0.0013
407	SLU 55	0.49	-0.96	87.77	-0.0578	0.5205	-0.0011
407	SLU 56	0.48	-0.94	89.29	-0.059	0.5286	-0.0018
407	SLU 57	0.49	-0.96	89.29	-0.0589	0.5288	-0.0014
407	SLU 58	0.47	-0.94	88.73	-0.0588	0.5249	-0.0019
407	SLU 59	0.49	-0.96	88.72	-0.0586	0.5251	-0.0014
407	SLU 60	0.46	-0.9	90.03	-0.0589	0.5374	-0.0019
407	SLU 61	0.48	-0.92	90.02	-0.0588	0.5376	-0.0015
407	SLU 62	0.47	-0.92	90.98	-0.0597	0.5421	-0.002
407	SLU 63	0.48	-0.94	90.97	-0.0596	0.5423	-0.0015
407	SLU 64	0.51	-0.87	86.46	-0.0563	0.4956	-0.0007
407	SLU 65	0.54	-0.9	86.45	-0.0562	0.496	0
407	SLU 66	0.53	-0.88	87.97	-0.0573	0.504	-0.0008
407	SLU 67	0.54	-0.9	87.96	-0.0572	0.5043	-0.0003
407	SLU 68	0.55	-0.92	87.4	-0.0569	0.5007	-0.0001
407	SLU 69	0.53	-0.89	88.92	-0.0581	0.5088	-0.0008
407	SLU 70	0.55	-0.91	88.91	-0.058	0.509	-0.0004
407	SLU 71	0.52	-0.9	88.36	-0.0578	0.505	-0.0009

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
407	SLU 72	0.54	-0.92	88.35	-0.0577	0.5052	-0.0005
407	SLU 73	0.55	-0.88	93.91	-0.0601	0.5472	-0.0005
407	SLU 74	0.53	-0.86	95.43	-0.0613	0.5553	-0.0012
407	SLU 75	0.55	-0.88	95.42	-0.0612	0.5555	-0.0008
407	SLU 76	0.55	-0.9	94.86	-0.0609	0.552	-0.0006
407	SLU 77	0.54	-0.87	96.37	-0.0621	0.56	-0.0013
407	SLU 78	0.55	-0.89	96.37	-0.062	0.5603	-0.0009
407	SLU 79	0.53	-0.88	95.81	-0.0618	0.5563	-0.0014
407	SLU 80	0.55	-0.9	95.81	-0.0617	0.5565	-0.001
407	SLU 81	0.52	-0.84	97.11	-0.062	0.5689	-0.0014
407	SLU 82	0.54	-0.86	97.11	-0.0619	0.5691	-0.001
407	SLU 83	0.53	-0.86	98.06	-0.0628	0.5736	-0.0015
407	SLU 84	0.54	-0.88	98.05	-0.0627	0.5738	-0.0011
407	SLE RA 1	0.38	-0.68	64.95	-0.0427	0.3743	-0.0007
407	SLE RA 2	0.4	-0.7	64.94	-0.0425	0.3746	-0.0002
407	SLE RA 3	0.39	-0.69	65.96	-0.0433	0.3799	-0.0007
407	SLE RA 4	0.4	-0.7	65.95	-0.0433	0.3801	-0.0004
407	SLE RA 5	0.4	-0.71	65.58	-0.043	0.3777	-0.0002
407	SLE RA 6	0.39	-0.7	66.59	-0.0438	0.3831	-0.0007
407	SLE RA 7	0.4	-0.71	66.59	-0.0438	0.3832	-0.0005
407	SLE RA 8	0.39	-0.7	66.21	-0.0437	0.3806	-0.0008
407	SLE RA 9	0.4	-0.72	66.21	-0.0436	0.3808	-0.0005
407	SLE RA 10	0.4	-0.69	69.92	-0.0452	0.4087	-0.0005
407	SLE RA 11	0.39	-0.67	70.93	-0.046	0.4141	-0.001
407	SLE RA 12	0.4	-0.69	70.93	-0.0459	0.4143	-0.0007
407	SLE RA 13	0.41	-0.7	70.55	-0.0457	0.4119	-0.0006
407	SLE RA 14	0.4	-0.68	71.56	-0.0465	0.4173	-0.0011
407	SLE RA 15	0.41	-0.7	71.56	-0.0464	0.4174	-0.0008
407	SLE RA 16	0.39	-0.69	71.19	-0.0463	0.4148	-0.0011
407	SLE RA 17	0.4	-0.7	71.18	-0.0462	0.4149	-0.0008
407	SLE RA 18	0.39	-0.66	72.05	-0.0464	0.4232	-0.0011
407	SLE RA 19	0.4	-0.67	72.05	-0.0464	0.4233	-0.0008
407	SLE RA 20	0.39	-0.67	72.68	-0.0469	0.4263	-0.0012
407	SLE RA 21	0.4	-0.69	72.68	-0.0469	0.4265	-0.0009
407	SLE FR 1	0.38	-0.68	64.95	-0.0427	0.3743	-0.0007
407	SLE FR 2	0.39	-0.68	64.95	-0.0426	0.3744	-0.0006
407	SLE FR 3	0.38	-0.68	65.2	-0.0429	0.3756	-0.0007
407	SLE FR 4	0.39	-0.68	67.08	-0.0438	0.389	-0.0007
407	SLE FR 5	0.39	-0.68	67.33	-0.044	0.3902	-0.0008
407	SLE FR 6	0.38	-0.67	68.5	-0.0446	0.3987	-0.0009
407	SLE QP 1	0.38	-0.68	64.95	-0.0427	0.3743	-0.0007
407	SLE QP 2	0.38	-0.67	67.08	-0.0438	0.389	-0.0008
407	SLD 1	6.27	0.55	61.57	-0.0347	0.5164	0.0293
407	SLD 2	6.76	0.96	61.96	-0.0368	0.5078	0.041
407	SLD 3	6.14	-1.04	60.79	-0.0281	0.5404	0.0272
407	SLD 4	6.63	-0.62	61.18	-0.0302	0.5317	0.0389
407	SLD 5	2.25	2.02	66.55	-0.0508	0.3925	0.0093
407	SLD 6	2.58	2.29	66.81	-0.0522	0.3867	0.0171
407	SLD 7	1.83	-3.26	63.93	-0.0286	0.4723	0.0022
407	SLD 8	2.16	-2.98	64.19	-0.03	0.4665	0.01
407	SLD 9	-1.39	1.64	69.97	-0.0576	0.3114	-0.0116
407	SLD 10	-1.06	1.91	70.23	-0.059	0.3057	-0.0038
407	SLD 11	-1.81	-3.64	67.36	-0.0354	0.3912	-0.0187
407	SLD 12	-1.48	-3.36	67.61	-0.0368	0.3855	-0.011
407	SLD 13	-5.87	-0.72	72.98	-0.0574	0.2462	-0.0405
407	SLD 14	-5.37	-0.31	73.37	-0.0595	0.2376	-0.0288
407	SLD 15	-5.99	-2.31	72.2	-0.0508	0.2702	-0.0426
407	SLD 16	-5.5	-1.89	72.59	-0.0529	0.2615	-0.0309
407	SLV 1	14.14	2.12	54.17	-0.0223	0.6877	0.0697
407	SLV 2	15.29	3.08	55.07	-0.0272	0.6676	0.0969
407	SLV 3	13.85	-1.46	52.39	-0.0073	0.7423	0.0647
407	SLV 4	15	-0.5	53.29	-0.0121	0.7222	0.0919
407	SLV 5	4.75	5.43	65.75	-0.0593	0.3992	0.0232
407	SLV 6	5.49	6.06	66.34	-0.0625	0.3861	0.041
407	SLV 7	3.78	-6.51	59.81	-0.0092	0.5814	0.0064
407	SLV 8	4.53	-5.89	60.4	-0.0123	0.5683	0.0241
407	SLV 9	-3.76	4.54	73.76	-0.0753	0.2096	-0.0257
407	SLV 10	-3.02	5.17	74.35	-0.0784	0.1965	-0.008
407	SLV 11	-4.73	-7.41	67.82	-0.0251	0.3918	-0.0426
407	SLV 12	-3.98	-6.78	68.41	-0.0283	0.3787	-0.0248
407	SLV 13	-14.23	-0.85	80.87	-0.0755	0.0557	-0.0935
407	SLV 14	-13.08	0.11	81.77	-0.0803	0.0356	-0.0663
407	SLV 15	-14.52	-4.43	79.09	-0.0604	0.1104	-0.0985
407	SLV 16	-13.37	-3.47	79.99	-0.0653	0.0903	-0.0713
407	CRTFP Ux+	0	0	0	0	0	0
407	CRTFP Ux-	0	0	0	0	0	0
408	SLU 1	0.35	0.21	36.72	-0.0366	8.2433	-0.0763
408	SLU 2	0.37	0.2	36.73	-0.0366	8.2446	-0.0698
408	SLU 3	0.36	0.22	37.61	-0.0376	8.4324	-0.0776
408	SLU 4	0.37	0.21	37.62	-0.0376	8.4331	-0.0737
408	SLU 5	0.37	0.19	37.29	-0.0373	8.3635	-0.0685
408	SLU 6	0.37	0.21	38.18	-0.0383	8.5513	-0.0763
408	SLU 7	0.37	0.2	38.18	-0.0383	8.552	-0.0724
408	SLU 8	0.36	0.21	37.85	-0.038	8.4812	-0.0737
408	SLU 9	0.37	0.2	37.85	-0.038	8.4819	-0.0698
408	SLU 10	0.37	0.29	40.83	-0.0405	9.1334	-0.1047
408	SLU 11	0.37	0.32	41.72	-0.0416	9.3212	-0.1125
408	SLU 12	0.37	0.31	41.72	-0.0416	9.3219	-0.1086
408	SLU 13	0.38	0.29	41.4	-0.0412	9.2523	-0.1034
408	SLU 14	0.37	0.31	42.29	-0.0423	9.4401	-0.1112

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
408	SLU 15	0.38	0.3	42.29	-0.0423	9.4409	-0.1073
408	SLU 16	0.37	0.31	41.96	-0.0419	9.37	-0.1086
408	SLU 17	0.38	0.29	41.96	-0.0419	9.3708	-0.1047
408	SLU 18	0.36	0.36	42.59	-0.0423	9.5131	-0.1262
408	SLU 19	0.37	0.34	42.59	-0.0422	9.5139	-0.1223
408	SLU 20	0.36	0.35	43.15	-0.0429	9.632	-0.1248
408	SLU 21	0.37	0.34	43.16	-0.0429	9.6328	-0.1209
408	SLU 22	0.39	0.31	40.82	-0.0405	9.1241	-0.1106
408	SLU 23	0.41	0.29	40.83	-0.0404	9.1254	-0.1041
408	SLU 24	0.4	0.32	41.72	-0.0415	9.3132	-0.1119
408	SLU 25	0.41	0.3	41.72	-0.0415	9.3139	-0.108
408	SLU 26	0.41	0.29	41.39	-0.0411	9.2443	-0.1028
408	SLU 27	0.41	0.31	42.28	-0.0422	9.4321	-0.1106
408	SLU 28	0.42	0.3	42.28	-0.0422	9.4328	-0.1067
408	SLU 29	0.4	0.3	41.95	-0.0418	9.362	-0.108
408	SLU 30	0.41	0.29	41.95	-0.0418	9.3627	-0.1041
408	SLU 31	0.41	0.39	44.94	-0.0444	10.0142	-0.139
408	SLU 32	0.41	0.41	45.82	-0.0454	10.202	-0.1468
408	SLU 33	0.42	0.4	45.83	-0.0454	10.2027	-0.1429
408	SLU 34	0.42	0.39	45.5	-0.0451	10.1331	-0.1377
408	SLU 35	0.41	0.41	46.39	-0.0461	10.3209	-0.1455
408	SLU 36	0.42	0.4	46.39	-0.0461	10.3217	-0.1416
408	SLU 37	0.41	0.4	46.06	-0.0458	10.2508	-0.1429
408	SLU 38	0.42	0.39	46.06	-0.0458	10.2516	-0.1389
408	SLU 39	0.4	0.45	46.69	-0.0461	10.3939	-0.1605
408	SLU 40	0.41	0.44	46.69	-0.0461	10.3946	-0.1566
408	SLU 41	0.4	0.45	47.25	-0.0468	10.5128	-0.1591
408	SLU 42	0.41	0.44	47.26	-0.0468	10.5136	-0.1552
408	SLU 43	0.44	0.24	46.33	-0.0463	10.4144	-0.0875
408	SLU 44	0.46	0.23	46.34	-0.0463	10.4156	-0.0809
408	SLU 45	0.45	0.25	47.22	-0.0473	10.6034	-0.0888
408	SLU 46	0.46	0.24	47.23	-0.0473	10.6041	-0.0849
408	SLU 47	0.46	0.22	46.9	-0.047	10.5345	-0.0796
408	SLU 48	0.46	0.24	47.79	-0.048	10.7223	-0.0874
408	SLU 49	0.47	0.23	47.79	-0.048	10.723	-0.0835
408	SLU 50	0.45	0.24	47.46	-0.0477	10.6522	-0.0848
408	SLU 51	0.46	0.23	47.46	-0.0476	10.6529	-0.0809
408	SLU 52	0.46	0.33	50.44	-0.0502	11.3044	-0.1158
408	SLU 53	0.46	0.35	51.33	-0.0513	11.4922	-0.1237
408	SLU 54	0.47	0.34	51.33	-0.0512	11.493	-0.1197
408	SLU 55	0.47	0.32	51.01	-0.0509	11.4234	-0.1145
408	SLU 56	0.46	0.34	51.9	-0.052	11.6112	-0.1223
408	SLU 57	0.47	0.33	51.9	-0.0519	11.6119	-0.1184
408	SLU 58	0.46	0.34	51.57	-0.0516	11.5411	-0.1197
408	SLU 59	0.47	0.33	51.57	-0.0516	11.5418	-0.1158
408	SLU 60	0.45	0.39	52.2	-0.0519	11.6841	-0.1373
408	SLU 61	0.46	0.38	52.2	-0.0519	11.6849	-0.1334
408	SLU 62	0.45	0.38	52.76	-0.0526	11.8031	-0.136
408	SLU 63	0.46	0.37	52.77	-0.0526	11.8038	-0.1321
408	SLU 64	0.48	0.34	50.43	-0.0501	11.2952	-0.1218
408	SLU 65	0.5	0.32	50.44	-0.0501	11.2964	-0.1152
408	SLU 66	0.49	0.35	51.33	-0.0512	11.4842	-0.1231
408	SLU 67	0.5	0.34	51.33	-0.0511	11.4849	-0.1192
408	SLU 68	0.5	0.32	51	-0.0508	11.4153	-0.1139
408	SLU 69	0.5	0.34	51.89	-0.0518	11.6031	-0.1217
408	SLU 70	0.51	0.33	51.89	-0.0518	11.6038	-0.1178
408	SLU 71	0.49	0.33	51.56	-0.0515	11.533	-0.1191
408	SLU 72	0.5	0.32	51.56	-0.0515	11.5337	-0.1152
408	SLU 73	0.5	0.42	54.55	-0.054	12.1852	-0.1501
408	SLU 74	0.5	0.45	55.43	-0.0551	12.373	-0.158
408	SLU 75	0.51	0.43	55.44	-0.0551	12.3738	-0.154
408	SLU 76	0.51	0.42	55.11	-0.0547	12.3041	-0.1488
408	SLU 77	0.5	0.44	56	-0.0558	12.4919	-0.1566
408	SLU 78	0.51	0.43	56	-0.0558	12.4927	-0.1527
408	SLU 79	0.5	0.43	55.67	-0.0554	12.4218	-0.154
408	SLU 80	0.51	0.42	55.67	-0.0554	12.4226	-0.1501
408	SLU 81	0.49	0.48	56.3	-0.0558	12.5649	-0.1716
408	SLU 82	0.5	0.47	56.3	-0.0557	12.5657	-0.1677
408	SLU 83	0.49	0.48	56.86	-0.0564	12.6839	-0.1703
408	SLU 84	0.5	0.47	56.87	-0.0564	12.6846	-0.1664
408	SLE RA 1	0.36	0.24	37.89	-0.0377	8.495	-0.0861
408	SLE RA 2	0.37	0.23	37.9	-0.0377	8.4958	-0.0818
408	SLE RA 3	0.37	0.24	38.49	-0.0384	8.621	-0.087
408	SLE RA 4	0.37	0.24	38.49	-0.0384	8.6215	-0.0844
408	SLE RA 5	0.38	0.23	38.27	-0.0382	8.5751	-0.0809
408	SLE RA 6	0.37	0.24	38.86	-0.0389	8.7003	-0.0861
408	SLE RA 7	0.38	0.23	38.87	-0.0388	8.7008	-0.0835
408	SLE RA 8	0.37	0.24	38.64	-0.0386	8.6536	-0.0843
408	SLE RA 9	0.37	0.23	38.65	-0.0386	8.6541	-0.0817
408	SLE RA 10	0.38	0.3	40.63	-0.0403	9.0884	-0.105
408	SLE RA 11	0.37	0.31	41.23	-0.041	9.2136	-0.1102
408	SLE RA 12	0.38	0.3	41.23	-0.041	9.2141	-0.1076
408	SLE RA 13	0.38	0.29	41.01	-0.0408	9.1677	-0.1042
408	SLE RA 14	0.38	0.31	41.6	-0.0415	9.2929	-0.1094
408	SLE RA 15	0.38	0.3	41.6	-0.0415	9.2933	-0.1068
408	SLE RA 16	0.37	0.3	41.38	-0.0413	9.2461	-0.1076
408	SLE RA 17	0.38	0.3	41.38	-0.0413	9.2466	-0.105
408	SLE RA 18	0.37	0.34	41.81	-0.0415	9.3415	-0.1194
408	SLE RA 19	0.37	0.33	41.81	-0.0415	9.342	-0.1167
408	SLE RA 20	0.37	0.33	42.18	-0.0419	9.4208	-0.1185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
408	SLE RA 21	0.38	0.33	42.18	-0.0419	9.4213	-0.1159
408	SLE FR 1	0.36	0.24	37.89	-0.0377	8.495	-0.0861
408	SLE FR 2	0.36	0.24	37.89	-0.0377	8.4952	-0.0852
408	SLE FR 3	0.36	0.24	38.04	-0.0379	8.5267	-0.0858
408	SLE FR 4	0.36	0.27	39.07	-0.0388	8.7491	-0.0952
408	SLE FR 5	0.36	0.27	39.22	-0.039	8.7807	-0.0957
408	SLE FR 6	0.36	0.29	39.85	-0.0396	8.9183	-0.1027
408	SLE QP 1	0.36	0.24	37.89	-0.0377	8.495	-0.0861
408	SLE QP 2	0.36	0.27	39.07	-0.0388	8.749	-0.0961
408	SLD 1	3.71	0.81	28.01	-0.026	6.4929	-0.2848
408	SLD 2	3.98	1.45	28.44	-0.0286	6.5797	-0.5056
408	SLD 3	3.63	-0.5	27.36	-0.0215	6.3667	0.1747
408	SLD 4	3.91	0.13	27.78	-0.0241	6.4536	-0.0461
408	SLD 5	1.43	2.31	36.67	-0.0415	8.2477	-0.8095
408	SLD 6	1.61	2.73	36.95	-0.0432	8.3053	-0.956
408	SLD 7	1.18	-2.07	34.48	-0.0262	7.8272	0.7222
408	SLD 8	1.36	-1.65	34.76	-0.028	7.8848	0.5757
408	SLD 9	-0.63	2.19	43.37	-0.0497	9.6131	-0.7679
408	SLD 10	-0.45	2.61	43.65	-0.0514	9.6707	-0.9144
408	SLD 11	-0.89	-2.19	41.19	-0.0345	9.1926	0.7639
408	SLD 12	-0.71	-1.77	41.47	-0.0362	9.2503	0.6173
408	SLD 13	-3.18	0.41	50.35	-0.0536	11.0443	-0.1461
408	SLD 14	-2.9	1.04	50.77	-0.0562	11.1312	-0.3669
408	SLD 15	-3.26	-0.91	49.7	-0.049	10.9182	0.3135
408	SLD 16	-2.98	-0.27	50.12	-0.0516	11.005	0.0926
408	SLV 1	8.18	1.5	13.19	-0.0087	3.4662	-0.5225
408	SLV 2	8.82	2.97	14.17	-0.0148	3.6684	-1.0366
408	SLV 3	8	-1.48	11.7	0.0016	3.1794	0.5191
408	SLV 4	8.64	0	12.68	-0.0044	3.3816	0.005
408	SLV 5	2.86	4.89	33.39	-0.0444	7.5636	-1.7134
408	SLV 6	3.28	5.86	34.03	-0.0484	7.6953	-2.0484
408	SLV 7	2.27	-5.03	28.43	-0.0099	6.6075	1.7586
408	SLV 8	2.69	-4.07	29.06	-0.0139	6.7393	1.4236
408	SLV 9	-1.97	4.61	49.07	-0.0638	10.7586	-1.6158
408	SLV 10	-1.55	5.57	49.71	-0.0677	10.8904	-1.9508
408	SLV 11	-2.56	-5.32	44.11	-0.0293	9.8026	1.8562
408	SLV 12	-2.14	-4.35	44.74	-0.0332	9.9343	1.5213
408	SLV 13	-7.92	0.54	65.46	-0.0733	14.1163	-0.1972
408	SLV 14	-7.28	2.02	66.43	-0.0793	14.3185	-0.7113
408	SLV 15	-8.1	-2.43	63.97	-0.0629	13.8295	0.8444
408	SLV 16	-7.46	-0.96	64.95	-0.0689	14.0317	0.3304
408	CRTFP Ux+	0	0	0	0	0	0
408	CRTFP Ux-	0	0	0	0	0	0
408	CRTFP Uy+	0	0	0	0	0	0
408	CRTFP Uy-	0	0	0	0	0	0
410	SLU 1	-0.63	0.03	33.69	-0.0447	-4.4571	0.0054
410	SLU 2	-0.62	-0.05	33.65	-0.0443	-4.4522	-0.0157
410	SLU 3	-0.65	0.04	34.5	-0.0459	-4.5564	0.0071
410	SLU 4	-0.64	-0.01	34.48	-0.0457	-4.5534	-0.0056
410	SLU 5	-0.63	-0.05	34.17	-0.0451	-4.515	-0.0142
410	SLU 6	-0.66	0.05	35.02	-0.0466	-4.6192	0.0086
410	SLU 7	-0.65	0	35	-0.0464	-4.6162	-0.0041
410	SLU 8	-0.66	0.05	34.72	-0.0462	-4.5827	0.0083
410	SLU 9	-0.65	-0.01	34.7	-0.046	-4.5797	-0.0043
410	SLU 10	-0.65	0.01	37.41	-0.0491	-4.9237	-0.0014
410	SLU 11	-0.68	0.1	38.27	-0.0506	-5.028	0.0214
410	SLU 12	-0.68	0.05	38.24	-0.0504	-5.025	0.0087
410	SLU 13	-0.67	0.01	37.93	-0.0499	-4.9866	0.0001
410	SLU 14	-0.7	0.1	38.78	-0.0514	-5.0908	0.0229
410	SLU 15	-0.69	0.05	38.76	-0.0512	-5.0878	0.0102
410	SLU 16	-0.69	0.1	38.49	-0.051	-5.0543	0.0227
410	SLU 17	-0.68	0.05	38.46	-0.0508	-5.0513	0.01
410	SLU 18	-0.68	0.12	39.06	-0.0514	-5.1307	0.0258
410	SLU 19	-0.67	0.07	39.04	-0.0512	-5.1278	0.0132
410	SLU 20	-0.69	0.12	39.58	-0.0522	-5.1936	0.0273
410	SLU 21	-0.69	0.07	39.56	-0.052	-5.1906	0.0147
410	SLU 22	-0.71	0.1	37.47	-0.0493	-4.9268	0.0223
410	SLU 23	-0.69	0.02	37.43	-0.049	-4.9219	0.0012
410	SLU 24	-0.72	0.11	38.29	-0.0505	-5.0261	0.024
410	SLU 25	-0.71	0.06	38.26	-0.0503	-5.0231	0.0114
410	SLU 26	-0.7	0.02	37.95	-0.0498	-4.9847	0.0027
410	SLU 27	-0.73	0.12	38.81	-0.0513	-5.0889	0.0255
410	SLU 28	-0.73	0.06	38.78	-0.0511	-5.086	0.0129
410	SLU 29	-0.73	0.11	38.51	-0.0509	-5.0524	0.0253
410	SLU 30	-0.72	0.06	38.48	-0.0507	-5.0494	0.0127
410	SLU 31	-0.73	0.08	41.19	-0.0537	-5.3935	0.0156
410	SLU 32	-0.76	0.17	42.05	-0.0553	-5.4977	0.0384
410	SLU 33	-0.75	0.12	42.03	-0.0551	-5.4947	0.0257
410	SLU 34	-0.74	0.08	41.71	-0.0545	-5.4563	0.0171
410	SLU 35	-0.77	0.17	42.57	-0.056	-5.5605	0.0399
410	SLU 36	-0.76	0.12	42.54	-0.0558	-5.5575	0.0272
410	SLU 37	-0.76	0.17	42.27	-0.0556	-5.524	0.0396
410	SLU 38	-0.76	0.12	42.24	-0.0554	-5.521	0.027
410	SLU 39	-0.75	0.19	42.85	-0.0561	-5.6005	0.0428
410	SLU 40	-0.75	0.13	42.82	-0.0559	-5.5975	0.0301
410	SLU 41	-0.77	0.19	43.36	-0.0569	-5.6633	0.0443
410	SLU 42	-0.76	0.14	43.34	-0.0567	-5.6603	0.0316
410	SLU 43	-0.8	0.02	42.5	-0.0565	-5.6331	0.0012
410	SLU 44	-0.78	-0.07	42.46	-0.0561	-5.6282	-0.0199
410	SLU 45	-0.81	0.03	43.31	-0.0577	-5.7324	0.0029

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
410	SLU 46	-0.81	-0.02	43.29	-0.0575	-5.7295	-0.0098
410	SLU 47	-0.8	-0.06	42.98	-0.0569	-5.691	-0.0185
410	SLU 48	-0.83	0.03	43.83	-0.0584	-5.7952	0.0044
410	SLU 49	-0.82	-0.02	43.81	-0.0582	-5.7923	-0.0083
410	SLU 50	-0.82	0.03	43.53	-0.058	-5.7587	0.0041
410	SLU 51	-0.81	-0.02	43.51	-0.0578	-5.7558	-0.0085
410	SLU 52	-0.82	-0.01	46.22	-0.0609	-6.0998	-0.0056
410	SLU 53	-0.85	0.08	47.08	-0.0624	-6.204	0.0172
410	SLU 54	-0.84	0.03	47.05	-0.0622	-6.2011	0.0045
410	SLU 55	-0.83	0	46.74	-0.0617	-6.1626	-0.0041
410	SLU 56	-0.86	0.09	47.59	-0.0632	-6.2668	0.0187
410	SLU 57	-0.85	0.04	47.57	-0.063	-6.2639	0.006
410	SLU 58	-0.85	0.09	47.3	-0.0628	-6.2303	0.0185
410	SLU 59	-0.85	0.04	47.27	-0.0626	-6.2274	0.0058
410	SLU 60	-0.85	0.1	47.87	-0.0632	-6.3068	0.0216
410	SLU 61	-0.84	0.05	47.85	-0.063	-6.3039	0.009
410	SLU 62	-0.86	0.11	48.39	-0.064	-6.3696	0.0231
410	SLU 63	-0.85	0.06	48.37	-0.0638	-6.3667	0.0105
410	SLU 64	-0.87	0.09	46.28	-0.0611	-6.1028	0.0181
410	SLU 65	-0.86	0	46.24	-0.0608	-6.0979	-0.003
410	SLU 66	-0.89	0.1	47.1	-0.0623	-6.2022	0.0198
410	SLU 67	-0.88	0.04	47.07	-0.0621	-6.1992	0.0072
410	SLU 68	-0.87	0.01	46.76	-0.0616	-6.1608	-0.0015
410	SLU 69	-0.9	0.1	47.61	-0.0631	-6.265	0.0213
410	SLU 70	-0.89	0.05	47.59	-0.0629	-6.262	0.0087
410	SLU 71	-0.89	0.1	47.32	-0.0627	-6.2285	0.0211
410	SLU 72	-0.89	0.05	47.29	-0.0625	-6.2255	0.0084
410	SLU 73	-0.89	0.06	50	-0.0655	-6.5695	0.0114
410	SLU 74	-0.92	0.15	50.86	-0.0671	-6.6737	0.0342
410	SLU 75	-0.91	0.1	50.84	-0.0669	-6.6708	0.0215
410	SLU 76	-0.9	0.07	50.52	-0.0663	-6.6323	0.0128
410	SLU 77	-0.93	0.16	51.38	-0.0678	-6.7365	0.0357
410	SLU 78	-0.93	0.11	51.35	-0.0676	-6.7336	0.023
410	SLU 79	-0.93	0.16	51.08	-0.0674	-6.7	0.0354
410	SLU 80	-0.92	0.11	51.05	-0.0672	-6.6971	0.0228
410	SLU 81	-0.92	0.17	51.66	-0.0679	-6.7765	0.0386
410	SLU 82	-0.91	0.12	51.63	-0.0677	-6.7736	0.0259
410	SLU 83	-0.93	0.18	52.17	-0.0687	-6.8393	0.0401
410	SLU 84	-0.92	0.13	52.15	-0.0685	-6.8364	0.0274
410	SLE RA 1	-0.65	0.05	34.77	-0.046	-4.5913	0.0102
410	SLE RA 2	-0.64	0	34.74	-0.0458	-4.588	-0.0039
410	SLE RA 3	-0.66	0.06	35.31	-0.0468	-4.6575	0.0114
410	SLE RA 4	-0.66	0.02	35.3	-0.0467	-4.6555	0.0029
410	SLE RA 5	-0.65	0	35.09	-0.0463	-4.6299	-0.0029
410	SLE RA 6	-0.67	0.06	35.66	-0.0473	-4.6993	0.0123
410	SLE RA 7	-0.67	0.03	35.64	-0.0472	-4.6974	0.0039
410	SLE RA 8	-0.67	0.06	35.46	-0.047	-4.675	0.0122
410	SLE RA 9	-0.66	0.03	35.44	-0.0469	-4.673	0.0038
410	SLE RA 10	-0.67	0.03	37.25	-0.0489	-4.9024	0.0057
410	SLE RA 11	-0.69	0.1	37.82	-0.05	-4.9719	0.0209
410	SLE RA 12	-0.68	0.06	37.81	-0.0498	-4.9699	0.0125
410	SLE RA 13	-0.68	0.04	37.6	-0.0495	-4.9443	0.0067
410	SLE RA 14	-0.7	0.1	38.17	-0.0505	-5.0137	0.0219
410	SLE RA 15	-0.69	0.07	38.15	-0.0503	-5.0118	0.0135
410	SLE RA 16	-0.69	0.1	37.97	-0.0502	-4.9894	0.0218
410	SLE RA 17	-0.69	0.07	37.95	-0.0501	-4.9874	0.0133
410	SLE RA 18	-0.69	0.11	38.35	-0.0505	-5.0404	0.0239
410	SLE RA 19	-0.68	0.07	38.34	-0.0504	-5.0384	0.0154
410	SLE RA 20	-0.69	0.11	38.7	-0.051	-5.0823	0.0249
410	SLE RA 21	-0.69	0.08	38.68	-0.0509	-5.0803	0.0164
410	SLE FR 1	-0.65	0.05	34.77	-0.046	-4.5913	0.0102
410	SLE FR 2	-0.65	0.04	34.76	-0.046	-4.5906	0.0074
410	SLE FR 3	-0.66	0.05	34.91	-0.0462	-4.608	0.0106
410	SLE FR 4	-0.66	0.06	35.84	-0.0473	-4.7253	0.0115
410	SLE FR 5	-0.67	0.07	35.98	-0.0476	-4.7427	0.0147
410	SLE FR 6	-0.67	0.08	36.56	-0.0483	-4.8158	0.017
410	SLE QP 1	-0.65	0.05	34.77	-0.046	-4.5913	0.0102
410	SLE QP 2	-0.66	0.07	35.84	-0.0474	-4.726	0.0143
410	SLD 1	2.1	0.63	46.82	-0.0664	-6.043	0.1571
410	SLD 2	2.33	0.07	46.46	-0.0637	-5.9984	0.0193
410	SLD 3	2.15	-0.63	46.2	-0.0616	-5.9725	-0.1578
410	SLD 4	2.38	-1.19	45.84	-0.0589	-5.928	-0.2956
410	SLD 5	0.05	2.25	40.14	-0.0608	-5.236	0.5597
410	SLD 6	0.2	1.88	39.9	-0.059	-5.2064	0.4683
410	SLD 7	0.22	-1.95	38.08	-0.0449	-5.0012	-0.4898
410	SLD 8	0.37	-2.32	37.84	-0.0431	-4.9717	-0.5813
410	SLD 9	-1.7	2.46	33.85	-0.0516	-4.4803	0.6099
410	SLD 10	-1.55	2.09	33.61	-0.0498	-4.4507	0.5184
410	SLD 11	-1.52	-1.74	31.79	-0.0357	-4.2456	-0.4397
410	SLD 12	-1.37	-2.11	31.55	-0.0339	-4.216	-0.5311
410	SLD 13	-3.71	1.33	25.85	-0.0358	-3.524	0.3242
410	SLD 14	-3.48	0.77	25.49	-0.0331	-3.4795	0.1864
410	SLD 15	-3.66	0.07	25.23	-0.031	-3.4536	0.0093
410	SLD 16	-3.43	-0.49	24.87	-0.0283	-3.409	-0.1285
410	SLV 1	5.8	1.33	61.5	-0.0917	-7.8052	0.3352
410	SLV 2	6.33	0.03	60.66	-0.0854	-7.7015	0.0145
410	SLV 3	5.92	-1.53	60.09	-0.0809	-7.6448	-0.3769
410	SLV 4	6.46	-2.82	59.25	-0.0746	-7.5411	-0.6977
410	SLV 5	1	5	45.83	-0.0782	-5.9113	1.2471
410	SLV 6	1.34	4.15	45.28	-0.0741	-5.8438	1.0381

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
410	SLV 7	1.4	-4.51	41.13	-0.0421	-5.3765	-1.1268
410	SLV 8	1.75	-5.35	40.58	-0.038	-5.309	-1.3358
410	SLV 9	-3.08	5.49	31.11	-0.0567	-4.143	1.3644
410	SLV 10	-2.73	4.64	30.56	-0.0526	-4.0755	1.1554
410	SLV 11	-2.67	-4.02	26.41	-0.0206	-3.6082	-1.0095
410	SLV 12	-2.32	-4.86	25.86	-0.0165	-3.5407	-1.2185
410	SLV 13	-7.78	2.96	12.44	-0.0201	-1.9109	0.7263
410	SLV 14	-7.25	1.66	11.6	-0.0138	-1.8072	0.4055
410	SLV 15	-7.66	0.11	11.03	-0.0093	-1.7505	0.0141
410	SLV 16	-7.13	-1.19	10.19	-0.003	-1.6468	-0.3066
410	CRTFP Ux+	0	0	0	0	0	0
410	CRTFP Ux-	0	0	0	0	0	0
410	CRTFP Uy+	0	0	0	0	0	0
410	CRTFP Uy-	0	0	0	0	0	0
413	SLU 1	0.15	-0.11	38.17	-0.0006	10.9059	0.038
413	SLU 2	0.16	-0.14	38.15	-0.0004	10.9016	0.0511
413	SLU 3	0.15	-0.09	39.09	-0.0007	11.163	0.034
413	SLU 4	0.16	-0.12	39.08	-0.0006	11.1604	0.0419
413	SLU 5	0.17	-0.14	38.72	-0.0006	11.0603	0.051
413	SLU 6	0.16	-0.09	39.66	-0.0009	11.3217	0.0339
413	SLU 7	0.17	-0.12	39.65	-0.0008	11.3191	0.0418
413	SLU 8	0.15	-0.1	39.31	-0.001	11.2234	0.0377
413	SLU 9	0.16	-0.13	39.3	-0.0009	11.2208	0.0456
413	SLU 10	0.18	-0.08	43.01	0.0007	12.275	0.0289
413	SLU 11	0.17	-0.03	43.95	0.0004	12.5364	0.0119
413	SLU 12	0.18	-0.05	43.94	0.0005	12.5338	0.0198
413	SLU 13	0.18	-0.08	43.58	0.0005	12.4337	0.0288
413	SLU 14	0.17	-0.03	44.52	0.0002	12.6951	0.0118
413	SLU 15	0.18	-0.05	44.51	0.0003	12.6925	0.0196
413	SLU 16	0.17	-0.04	44.17	0.0001	12.5968	0.0156
413	SLU 17	0.18	-0.06	44.16	0.0002	12.5942	0.0235
413	SLU 18	0.17	-0.02	45.11	0.001	12.8679	0.0063
413	SLU 19	0.18	-0.04	45.1	0.0011	12.8653	0.0142
413	SLU 20	0.18	-0.02	45.68	0.0008	13.0267	0.0062
413	SLU 21	0.18	-0.04	45.67	0.0009	13.0241	0.0141
413	SLU 22	0.17	-0.01	42.32	0.0001	12.0675	0.004
413	SLU 23	0.19	-0.04	42.31	0.0003	12.0632	0.0171
413	SLU 24	0.18	0	43.25	0	12.3246	0
413	SLU 25	0.19	-0.02	43.24	0.0001	12.322	0.0079
413	SLU 26	0.19	-0.04	42.88	0.0001	12.2219	0.017
413	SLU 27	0.18	0	43.82	-0.0002	12.4833	-0.0001
413	SLU 28	0.19	-0.02	43.81	-0.0001	12.4807	0.0078
413	SLU 29	0.18	-0.01	43.47	-0.0003	12.385	0.0037
413	SLU 30	0.19	-0.03	43.46	-0.0001	12.3824	0.0116
413	SLU 31	0.21	0.02	47.17	0.0015	13.4366	-0.0051
413	SLU 32	0.2	0.07	48.11	0.0012	13.698	-0.0221
413	SLU 33	0.21	0.04	48.1	0.0013	13.6954	-0.0143
413	SLU 34	0.21	0.02	47.74	0.0013	13.5953	-0.0052
413	SLU 35	0.2	0.07	48.68	0.001	13.8567	-0.0222
413	SLU 36	0.21	0.04	48.67	0.0011	13.8541	-0.0144
413	SLU 37	0.2	0.06	48.33	0.0009	13.7584	-0.0184
413	SLU 38	0.21	0.03	48.32	0.001	13.7558	-0.0105
413	SLU 39	0.2	0.08	49.27	0.0018	14.0295	-0.0277
413	SLU 40	0.21	0.06	49.26	0.0019	14.0269	-0.0198
413	SLU 41	0.2	0.08	49.84	0.0016	14.1883	-0.0278
413	SLU 42	0.21	0.06	49.83	0.0017	14.1857	-0.0199
413	SLU 43	0.18	-0.17	48.19	-0.0011	13.7794	0.061
413	SLU 44	0.2	-0.21	48.18	-0.0009	13.7751	0.0741
413	SLU 45	0.19	-0.16	49.11	-0.0012	14.0365	0.0571
413	SLU 46	0.2	-0.18	49.11	-0.0011	14.0339	0.065
413	SLU 47	0.2	-0.21	48.75	-0.0011	13.9339	0.074
413	SLU 48	0.19	-0.16	49.69	-0.0014	14.1952	0.057
413	SLU 49	0.2	-0.18	49.68	-0.0013	14.1926	0.0649
413	SLU 50	0.19	-0.17	49.34	-0.0015	14.0969	0.0608
413	SLU 51	0.2	-0.19	49.33	-0.0013	14.0943	0.0687
413	SLU 52	0.22	-0.14	53.04	0.0003	15.1485	0.052
413	SLU 53	0.21	-0.1	53.98	0	15.4099	0.0349
413	SLU 54	0.22	-0.12	53.97	0.0001	15.4073	0.0428
413	SLU 55	0.22	-0.14	53.61	0.0001	15.3073	0.0519
413	SLU 56	0.21	-0.1	54.55	-0.0002	15.5686	0.0348
413	SLU 57	0.22	-0.12	54.54	-0.0001	15.566	0.0427
413	SLU 58	0.21	-0.11	54.2	-0.0003	15.4703	0.0386
413	SLU 59	0.22	-0.13	54.19	-0.0002	15.4677	0.0465
413	SLU 60	0.21	-0.08	55.14	0.0006	15.7415	0.0293
413	SLU 61	0.22	-0.1	55.13	0.0007	15.7389	0.0372
413	SLU 62	0.21	-0.08	55.71	0.0004	15.9002	0.0292
413	SLU 63	0.22	-0.1	55.7	0.0005	15.8976	0.0371
413	SLU 64	0.21	-0.07	52.35	-0.0003	14.941	0.027
413	SLU 65	0.23	-0.11	52.33	-0.0001	14.9367	0.0401
413	SLU 66	0.22	-0.06	53.27	-0.0004	15.1981	0.0231
413	SLU 67	0.22	-0.08	53.26	-0.0003	15.1955	0.031
413	SLU 68	0.23	-0.11	52.91	-0.0003	15.0954	0.04
413	SLU 69	0.22	-0.06	53.84	-0.0006	15.3568	0.023
413	SLU 70	0.23	-0.08	53.83	-0.0005	15.3542	0.0308
413	SLU 71	0.22	-0.07	53.49	-0.0007	15.2585	0.0268
413	SLU 72	0.23	-0.09	53.48	-0.0006	15.2559	0.0347
413	SLU 73	0.24	-0.05	57.19	0.001	16.3101	0.018
413	SLU 74	0.23	0	58.13	0.0007	16.5715	0.0009
413	SLU 75	0.24	-0.02	58.12	0.0008	16.5689	0.0088
413	SLU 76	0.25	-0.05	57.77	0.0008	16.4689	0.0179

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
413	SLU 77	0.24	0	58.7	0.0005	16.7302	0.0008
413	SLU 78	0.24	-0.02	58.69	0.0006	16.7276	0.0087
413	SLU 79	0.23	-0.01	58.35	0.0005	16.6319	0.0046
413	SLU 80	0.24	-0.03	58.34	0.0006	16.6293	0.0125
413	SLU 81	0.23	0.02	59.29	0.0013	16.9031	-0.0047
413	SLU 82	0.24	-0.01	59.28	0.0014	16.9004	0.0032
413	SLU 83	0.24	0.02	59.86	0.0011	17.0618	-0.0048
413	SLU 84	0.25	-0.01	59.86	0.0012	17.0592	0.0031
413	SLE RA 1	0.16	-0.08	39.36	-0.0004	11.2378	0.0282
413	SLE RA 2	0.17	-0.1	39.35	-0.0003	11.2349	0.037
413	SLE RA 3	0.16	-0.07	39.97	-0.0005	11.4092	0.0256
413	SLE RA 4	0.17	-0.08	39.96	-0.0004	11.4074	0.0309
413	SLE RA 5	0.17	-0.1	39.73	-0.0004	11.3407	0.0369
413	SLE RA 6	0.16	-0.07	40.35	-0.0006	11.515	0.0256
413	SLE RA 7	0.17	-0.08	40.34	-0.0005	11.5133	0.0308
413	SLE RA 8	0.16	-0.08	40.12	-0.0007	11.4495	0.0281
413	SLE RA 9	0.17	-0.09	40.11	-0.0006	11.4477	0.0334
413	SLE RA 10	0.18	-0.06	42.59	0.0005	12.1505	0.0222
413	SLE RA 11	0.17	-0.03	43.21	0.0003	12.3248	0.0109
413	SLE RA 12	0.18	-0.04	43.2	0.0004	12.323	0.0161
413	SLE RA 13	0.18	-0.06	42.97	0.0003	12.2564	0.0222
413	SLE RA 14	0.17	-0.03	43.59	0.0002	12.4306	0.0108
413	SLE RA 15	0.18	-0.04	43.59	0.0002	12.4289	0.016
413	SLE RA 16	0.17	-0.04	43.36	0.0001	12.3651	0.0133
413	SLE RA 17	0.18	-0.05	43.35	0.0002	12.3633	0.0186
413	SLE RA 18	0.17	-0.02	43.98	0.0007	12.5458	0.0071
413	SLE RA 19	0.18	-0.03	43.98	0.0008	12.5441	0.0124
413	SLE RA 20	0.17	-0.02	44.37	0.0006	12.6517	0.0071
413	SLE RA 21	0.18	-0.03	44.36	0.0006	12.6499	0.0123
413	SLE FR 1	0.16	-0.08	39.36	-0.0004	11.2378	0.0282
413	SLE FR 2	0.16	-0.08	39.35	-0.0004	11.2372	0.03
413	SLE FR 3	0.16	-0.08	39.51	-0.0005	11.2801	0.0282
413	SLE FR 4	0.16	-0.06	40.74	-0.0001	11.6296	0.0237
413	SLE FR 5	0.16	-0.06	40.9	-0.0001	11.6725	0.0219
413	SLE FR 6	0.16	-0.05	41.67	0.0001	11.8918	0.0177
413	SLE QP 1	0.16	-0.08	39.36	-0.0004	11.2378	0.0282
413	SLE QP 2	0.16	-0.06	40.74	-0.0001	11.6302	0.0219
413	SLD 1	3.63	0.56	41.47	-0.0028	11.8898	-0.192
413	SLD 2	3.9	0.59	41.52	-0.0031	11.8976	-0.1996
413	SLD 3	3.56	-0.54	41.09	0.0014	11.7906	0.1918
413	SLD 4	3.83	-0.51	41.14	0.0011	11.7984	0.1842
413	SLD 5	1.26	1.79	41.53	-0.0073	11.8572	-0.623
413	SLD 6	1.44	1.8	41.56	-0.0074	11.8624	-0.628
413	SLD 7	1.02	-1.87	40.26	0.0068	11.5264	0.6563
413	SLD 8	1.2	-1.86	40.3	0.0067	11.5316	0.6513
413	SLD 9	-0.88	1.74	41.19	-0.0068	11.7288	-0.6075
413	SLD 10	-0.7	1.75	41.23	-0.007	11.734	-0.6125
413	SLD 11	-1.12	-1.92	39.92	0.0073	11.3981	0.6718
413	SLD 12	-0.94	-1.91	39.96	0.0071	11.4032	0.6668
413	SLD 13	-3.51	0.39	40.34	-0.0013	11.462	-0.1404
413	SLD 14	-3.24	0.42	40.4	-0.0015	11.4698	-0.148
413	SLD 15	-3.58	-0.7	39.96	0.0029	11.3628	0.2434
413	SLD 16	-3.31	-0.68	40.01	0.0027	11.3706	0.2358
413	SLV 1	8.27	1.35	42.44	-0.0064	12.2347	-0.4642
413	SLV 2	8.9	1.41	42.56	-0.0069	12.2528	-0.4819
413	SLV 3	8.11	-1.14	41.57	0.0032	12.0083	0.405
413	SLV 4	8.74	-1.08	41.69	0.0026	12.0264	0.3874
413	SLV 5	2.73	4.12	42.55	-0.0164	12.1518	-1.4392
413	SLV 6	3.14	4.16	42.62	-0.0167	12.1636	-1.4507
413	SLV 7	2.19	-4.16	39.66	0.0155	11.397	1.4583
413	SLV 8	2.6	-4.12	39.73	0.0151	11.4089	1.4468
413	SLV 9	-2.27	4.01	41.75	-0.0153	11.8516	-1.403
413	SLV 10	-1.86	4.05	41.83	-0.0156	11.8634	-1.4145
413	SLV 11	-2.82	-4.28	38.87	0.0166	11.0968	1.4945
413	SLV 12	-2.41	-4.24	38.94	0.0162	11.1087	1.483
413	SLV 13	-8.42	0.96	39.8	-0.0028	11.234	-0.3435
413	SLV 14	-7.79	1.02	39.92	-0.0033	11.2522	-0.3612
413	SLV 15	-8.58	-1.53	38.93	0.0068	11.0076	0.5257
413	SLV 16	-7.95	-1.47	39.05	0.0062	11.0258	0.5081
413	CRTFP Ux+	0	0	0	0	0	0
413	CRTFP Ux-	0	0	0	0	0	0
413	CRTFP Uy+	0	0	0	0	0	0
413	CRTFP Uy-	0	0	0	0	0	0
416	SLU 1	-1.89	-0.54	119.77	2.5989	-0.4992	-0.1329
416	SLU 2	-1.84	-0.68	119.74	2.6073	-0.4985	-0.1295
416	SLU 3	-1.93	-0.51	122.68	2.6614	-0.5117	-0.1372
416	SLU 4	-1.9	-0.6	122.66	2.6665	-0.5113	-0.1352
416	SLU 5	-1.87	-0.69	121.55	2.6428	-0.5061	-0.1326
416	SLU 6	-1.96	-0.51	124.49	2.6968	-0.5193	-0.1403
416	SLU 7	-1.93	-0.6	124.47	2.7019	-0.5189	-0.1383
416	SLU 8	-1.95	-0.55	123.39	2.6698	-0.5144	-0.1391
416	SLU 9	-1.92	-0.63	123.37	2.6748	-0.5141	-0.1371
416	SLU 10	-1.95	-0.6	134.93	2.9959	-0.58	-0.1436
416	SLU 11	-2.05	-0.42	137.87	3.05	-0.5931	-0.1513
416	SLU 12	-2.02	-0.51	137.85	3.0551	-0.5927	-0.1493
416	SLU 13	-1.98	-0.6	136.73	3.0313	-0.5876	-0.1467
416	SLU 14	-2.08	-0.42	139.68	3.0854	-0.6008	-0.1544
416	SLU 15	-2.05	-0.51	139.66	3.0905	-0.6004	-0.1524
416	SLU 16	-2.06	-0.46	138.58	3.0584	-0.5959	-0.1531
416	SLU 17	-2.03	-0.54	138.56	3.0634	-0.5955	-0.1511

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
416	SLU 18	-2.05	-0.41	141.47	3.1541	-0.6156	-0.153
416	SLU 19	-2.02	-0.5	141.45	3.1591	-0.6152	-0.151
416	SLU 20	-2.08	-0.41	143.28	3.1895	-0.6232	-0.1561
416	SLU 21	-2.05	-0.5	143.26	3.1945	-0.6228	-0.1541
416	SLU 22	-2.1	-0.24	132.97	2.9238	-0.5562	-0.1517
416	SLU 23	-2.05	-0.38	132.93	2.9322	-0.5556	-0.1483
416	SLU 24	-2.15	-0.2	135.88	2.9863	-0.5687	-0.156
416	SLU 25	-2.12	-0.29	135.86	2.9914	-0.5683	-0.154
416	SLU 26	-2.08	-0.39	134.74	2.9677	-0.5632	-0.1514
416	SLU 27	-2.18	-0.21	137.68	3.0218	-0.5763	-0.1591
416	SLU 28	-2.15	-0.3	137.66	3.0268	-0.576	-0.1571
416	SLU 29	-2.16	-0.24	136.58	2.9947	-0.5715	-0.1578
416	SLU 30	-2.13	-0.33	136.56	2.9997	-0.5711	-0.1558
416	SLU 31	-2.16	-0.29	148.12	3.3208	-0.637	-0.1624
416	SLU 32	-2.26	-0.11	151.07	3.3749	-0.6502	-0.1701
416	SLU 33	-2.23	-0.2	151.04	3.38	-0.6498	-0.1681
416	SLU 34	-2.2	-0.3	149.93	3.3563	-0.6447	-0.1655
416	SLU 35	-2.29	-0.12	152.87	3.4104	-0.6578	-0.1732
416	SLU 36	-2.26	-0.21	152.85	3.4154	-0.6574	-0.1712
416	SLU 37	-2.28	-0.15	151.77	3.3833	-0.653	-0.1719
416	SLU 38	-2.25	-0.24	151.75	3.3883	-0.6526	-0.1699
416	SLU 39	-2.26	-0.11	154.66	3.479	-0.6726	-0.1718
416	SLU 40	-2.23	-0.2	154.64	3.484	-0.6722	-0.1698
416	SLU 41	-2.29	-0.11	156.47	3.5144	-0.6803	-0.1749
416	SLU 42	-2.26	-0.2	156.45	3.5194	-0.6799	-0.1729
416	SLU 43	-2.38	-0.8	151.18	3.2672	-0.6294	-0.1663
416	SLU 44	-2.33	-0.95	151.15	3.2756	-0.6287	-0.163
416	SLU 45	-2.43	-0.77	154.09	3.3297	-0.6418	-0.1706
416	SLU 46	-2.4	-0.86	154.07	3.3347	-0.6415	-0.1686
416	SLU 47	-2.36	-0.95	152.95	3.311	-0.6363	-0.166
416	SLU 48	-2.46	-0.78	155.9	3.3651	-0.6495	-0.1737
416	SLU 49	-2.43	-0.86	155.88	3.3702	-0.6491	-0.1717
416	SLU 50	-2.44	-0.81	154.8	3.3381	-0.6446	-0.1725
416	SLU 51	-2.41	-0.9	154.78	3.3431	-0.6442	-0.1705
416	SLU 52	-2.44	-0.86	166.33	3.6642	-0.7102	-0.177
416	SLU 53	-2.54	-0.68	169.28	3.7183	-0.7233	-0.1847
416	SLU 54	-2.51	-0.77	169.26	3.7233	-0.7229	-0.1827
416	SLU 55	-2.47	-0.87	168.14	3.6996	-0.7178	-0.1801
416	SLU 56	-2.57	-0.69	171.09	3.7537	-0.731	-0.1878
416	SLU 57	-2.54	-0.78	171.07	3.7588	-0.7306	-0.1858
416	SLU 58	-2.55	-0.72	169.99	3.7267	-0.7261	-0.1865
416	SLU 59	-2.52	-0.81	169.96	3.7317	-0.7257	-0.1845
416	SLU 60	-2.54	-0.68	172.88	3.8223	-0.7458	-0.1864
416	SLU 61	-2.51	-0.76	172.86	3.8274	-0.7454	-0.1844
416	SLU 62	-2.57	-0.68	174.69	3.8578	-0.7534	-0.1895
416	SLU 63	-2.54	-0.77	174.67	3.8628	-0.753	-0.1875
416	SLU 64	-2.59	-0.5	164.37	3.5921	-0.6864	-0.1851
416	SLU 65	-2.54	-0.65	164.34	3.6005	-0.6857	-0.1818
416	SLU 66	-2.64	-0.47	167.29	3.6546	-0.6989	-0.1894
416	SLU 67	-2.61	-0.56	167.26	3.6597	-0.6985	-0.1874
416	SLU 68	-2.57	-0.65	166.15	3.6359	-0.6934	-0.1848
416	SLU 69	-2.67	-0.47	169.09	3.69	-0.7065	-0.1925
416	SLU 70	-2.64	-0.56	169.07	3.6951	-0.7061	-0.1905
416	SLU 71	-2.66	-0.51	167.99	3.663	-0.7017	-0.1913
416	SLU 72	-2.63	-0.6	167.97	3.668	-0.7013	-0.1893
416	SLU 73	-2.66	-0.56	179.53	3.9891	-0.7672	-0.1958
416	SLU 74	-2.75	-0.38	182.47	4.0432	-0.7804	-0.2035
416	SLU 75	-2.72	-0.47	182.45	4.0482	-0.78	-0.2015
416	SLU 76	-2.69	-0.56	181.33	4.0245	-0.7749	-0.1989
416	SLU 77	-2.79	-0.38	184.28	4.0786	-0.788	-0.2066
416	SLU 78	-2.76	-0.47	184.26	4.0837	-0.7876	-0.2046
416	SLU 79	-2.77	-0.42	183.18	4.0516	-0.7832	-0.2053
416	SLU 80	-2.74	-0.51	183.16	4.0566	-0.7828	-0.2033
416	SLU 81	-2.76	-0.37	186.07	4.1473	-0.8028	-0.2052
416	SLU 82	-2.73	-0.46	186.05	4.1523	-0.8024	-0.2032
416	SLU 83	-2.79	-0.38	187.88	4.1827	-0.8104	-0.2083
416	SLU 84	-2.76	-0.47	187.86	4.1877	-0.8101	-0.2063
416	SLE RA 1	-1.95	-0.45	123.54	2.6918	-0.5155	-0.1382
416	SLE RA 2	-1.91	-0.55	123.52	2.6974	-0.515	-0.136
416	SLE RA 3	-1.98	-0.43	125.48	2.7334	-0.5238	-0.1411
416	SLE RA 4	-1.96	-0.49	125.47	2.7368	-0.5235	-0.1398
416	SLE RA 5	-1.93	-0.55	124.72	2.721	-0.5201	-0.1381
416	SLE RA 6	-2	-0.43	126.69	2.757	-0.5289	-0.1432
416	SLE RA 7	-1.98	-0.49	126.67	2.7604	-0.5286	-0.1419
416	SLE RA 8	-1.99	-0.46	125.95	2.739	-0.5257	-0.1424
416	SLE RA 9	-1.97	-0.52	125.94	2.7424	-0.5254	-0.141
416	SLE RA 10	-1.99	-0.49	133.64	2.9564	-0.5693	-0.1454
416	SLE RA 11	-2.06	-0.37	135.61	2.9925	-0.5781	-0.1505
416	SLE RA 12	-2.03	-0.43	135.59	2.9958	-0.5778	-0.1492
416	SLE RA 13	-2.01	-0.49	134.85	2.98	-0.5744	-0.1475
416	SLE RA 14	-2.08	-0.37	136.81	3.0161	-0.5832	-0.1526
416	SLE RA 15	-2.06	-0.43	136.8	3.0195	-0.5829	-0.1512
416	SLE RA 16	-2.06	-0.4	136.08	2.9981	-0.58	-0.1517
416	SLE RA 17	-2.04	-0.46	136.06	3.0014	-0.5797	-0.1504
416	SLE RA 18	-2.06	-0.37	138.01	3.0618	-0.5931	-0.1516
416	SLE RA 19	-2.04	-0.43	137.99	3.0652	-0.5928	-0.1503
416	SLE RA 20	-2.08	-0.37	139.21	3.0855	-0.5982	-0.1537
416	SLE RA 21	-2.06	-0.43	139.2	3.0888	-0.5979	-0.1524
416	SLE FR 1	-1.95	-0.45	123.54	2.6918	-0.5155	-0.1382
416	SLE FR 2	-1.94	-0.47	123.54	2.6929	-0.5154	-0.1378

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
416	SLE FR 3	-1.96	-0.45	124.02	2.7012	-0.5175	-0.1391
416	SLE FR 4	-1.97	-0.45	127.88	2.8039	-0.5387	-0.1418
416	SLE FR 5	-1.99	-0.43	128.36	2.8122	-0.5408	-0.1431
416	SLE FR 6	-2	-0.41	130.77	2.8768	-0.5543	-0.1449
416	SLE QP 1	-1.95	-0.45	123.54	2.6918	-0.5155	-0.1382
416	SLE QP 2	-1.98	-0.43	127.88	2.8028	-0.5387	-0.1423
416	SLD 1	9.17	1.92	126.84	2.6287	-0.4975	-0.3336
416	SLD 2	10.01	1.63	126.7	2.6441	-0.4982	-0.2915
416	SLD 3	9.38	-1.82	126.35	2.8013	-0.4824	-0.3064
416	SLD 4	10.21	-2.11	126.21	2.8166	-0.4831	-0.2642
416	SLD 5	0.9	6.01	128.34	2.486	-0.5491	-0.2487
416	SLD 6	1.46	5.81	128.25	2.4962	-0.5496	-0.2207
416	SLD 7	1.58	-6.47	126.7	3.0613	-0.4989	-0.1578
416	SLD 8	2.14	-6.66	126.61	3.0714	-0.4993	-0.1299
416	SLD 9	-6.1	5.81	129.16	2.5341	-0.5782	-0.1547
416	SLD 10	-5.55	5.61	129.06	2.5443	-0.5786	-0.1267
416	SLD 11	-5.42	-6.66	127.51	3.1093	-0.5279	-0.0638
416	SLD 12	-4.87	-6.86	127.42	3.1195	-0.5284	-0.0359
416	SLD 13	-14.17	1.26	129.55	2.7889	-0.5944	-0.0203
416	SLD 14	-13.34	0.97	129.41	2.8043	-0.5951	0.0218
416	SLD 15	-13.97	-2.48	129.06	2.9615	-0.5793	0.007
416	SLD 16	-13.13	-2.77	128.92	2.9769	-0.58	0.0491
416	SLV 1	24.1	4.93	125.42	2.401	-0.4418	-0.5886
416	SLV 2	26.04	4.24	125.09	2.4368	-0.4434	-0.4906
416	SLV 3	24.58	-3.55	124.28	2.7909	-0.4075	-0.5268
416	SLV 4	26.52	-4.23	123.95	2.8267	-0.4091	-0.4287
416	SLV 5	4.78	14.15	128.93	2.0846	-0.5613	-0.3872
416	SLV 6	6.05	13.7	128.72	2.1079	-0.5624	-0.3233
416	SLV 7	6.37	-14.09	125.13	3.3843	-0.4471	-0.181
416	SLV 8	7.63	-14.54	124.92	3.4076	-0.4482	-0.1171
416	SLV 9	-11.59	13.68	130.85	2.198	-0.6293	-0.1674
416	SLV 10	-10.33	13.24	130.63	2.2212	-0.6304	-0.1035
416	SLV 11	-10.01	-14.55	127.05	3.4977	-0.5151	0.0388
416	SLV 12	-8.74	-15	126.83	3.521	-0.5162	0.1027
416	SLV 13	-30.48	3.38	131.81	2.7789	-0.6684	0.1442
416	SLV 14	-28.54	2.69	131.49	2.8146	-0.67	0.2422
416	SLV 15	-30	-5.09	130.67	3.1688	-0.6341	0.2061
416	SLV 16	-28.06	-5.78	130.35	3.2045	-0.6357	0.3041
416	CRTFP Ux+	0	0	0	0	0	0
416	CRTFP Ux-	0	0	0	0	0	0
416	CRTFP Uy+	0	0	0	0	0	0
416	CRTFP Uy-	0	0	0	0	0	0
418	SLU 1	-0.87	-1.15	60.8	-0.0307	-0.2712	-0.0279
418	SLU 2	-0.85	-1.23	60.76	-0.0303	-0.2721	-0.027
418	SLU 3	-0.9	-1.16	62.26	-0.0314	-0.2782	-0.0287
418	SLU 4	-0.88	-1.21	62.24	-0.0311	-0.2788	-0.0282
418	SLU 5	-0.86	-1.24	61.69	-0.0308	-0.2761	-0.0275
418	SLU 6	-0.92	-1.18	63.19	-0.0319	-0.2822	-0.0292
418	SLU 7	-0.9	-1.23	63.16	-0.0317	-0.2827	-0.0287
418	SLU 8	-0.91	-1.18	62.65	-0.0318	-0.2792	-0.0288
418	SLU 9	-0.89	-1.23	62.63	-0.0315	-0.2797	-0.0283
418	SLU 10	-0.88	-1.28	67.93	-0.0326	-0.3162	-0.03
418	SLU 11	-0.93	-1.21	69.43	-0.0338	-0.3223	-0.0317
418	SLU 12	-0.92	-1.26	69.4	-0.0335	-0.3229	-0.0311
418	SLU 13	-0.9	-1.29	68.85	-0.0332	-0.3202	-0.0305
418	SLU 14	-0.95	-1.23	70.35	-0.0343	-0.3263	-0.0322
418	SLU 15	-0.94	-1.28	70.33	-0.0341	-0.3268	-0.0316
418	SLU 16	-0.95	-1.23	69.82	-0.0341	-0.3233	-0.0318
418	SLU 17	-0.93	-1.28	69.79	-0.0339	-0.3238	-0.0313
418	SLU 18	-0.93	-1.22	71.04	-0.0341	-0.3342	-0.0321
418	SLU 19	-0.91	-1.27	71.01	-0.0338	-0.3348	-0.0316
418	SLU 20	-0.94	-1.23	71.96	-0.0346	-0.3382	-0.0326
418	SLU 21	-0.93	-1.28	71.94	-0.0344	-0.3387	-0.0321
418	SLU 22	-0.98	-1.15	67.65	-0.0324	-0.3002	-0.032
418	SLU 23	-0.95	-1.23	67.61	-0.032	-0.3011	-0.0311
418	SLU 24	-1	-1.16	69.11	-0.0331	-0.3072	-0.0328
418	SLU 25	-0.98	-1.21	69.09	-0.0329	-0.3078	-0.0323
418	SLU 26	-0.97	-1.24	68.54	-0.0325	-0.3051	-0.0316
418	SLU 27	-1.02	-1.18	70.04	-0.0336	-0.3112	-0.0333
418	SLU 28	-1	-1.23	70.01	-0.0334	-0.3118	-0.0328
418	SLU 29	-1.01	-1.18	69.5	-0.0335	-0.3082	-0.0329
418	SLU 30	-0.99	-1.23	69.48	-0.0332	-0.3087	-0.0324
418	SLU 31	-0.99	-1.28	74.78	-0.0344	-0.3452	-0.0341
418	SLU 32	-1.04	-1.22	76.28	-0.0355	-0.3514	-0.0358
418	SLU 33	-1.02	-1.26	76.26	-0.0352	-0.3519	-0.0352
418	SLU 34	-1	-1.3	75.7	-0.0349	-0.3492	-0.0346
418	SLU 35	-1.05	-1.23	77.2	-0.036	-0.3553	-0.0363
418	SLU 36	-1.04	-1.28	77.18	-0.0358	-0.3559	-0.0357
418	SLU 37	-1.05	-1.23	76.67	-0.0359	-0.3523	-0.0359
418	SLU 38	-1.03	-1.28	76.64	-0.0356	-0.3528	-0.0354
418	SLU 39	-1.03	-1.22	77.89	-0.0358	-0.3632	-0.0362
418	SLU 40	-1.01	-1.27	77.86	-0.0356	-0.3638	-0.0357
418	SLU 41	-1.05	-1.24	78.81	-0.0363	-0.3672	-0.0367
418	SLU 42	-1.03	-1.28	78.79	-0.0361	-0.3678	-0.0362
418	SLU 43	-1.1	-1.49	76.69	-0.0393	-0.3426	-0.0348
418	SLU 44	-1.07	-1.57	76.65	-0.0389	-0.3435	-0.0339
418	SLU 45	-1.12	-1.51	78.15	-0.04	-0.3496	-0.0356
418	SLU 46	-1.11	-1.56	78.13	-0.0397	-0.3502	-0.0351
418	SLU 47	-1.09	-1.59	77.58	-0.0394	-0.3475	-0.0344
418	SLU 48	-1.14	-1.52	79.08	-0.0405	-0.3536	-0.0361

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
418	SLU 49	-1.13	-1.57	79.05	-0.0403	-0.3541	-0.0356
418	SLU 50	-1.14	-1.52	78.54	-0.0404	-0.3506	-0.0358
418	SLU 51	-1.12	-1.57	78.52	-0.0401	-0.3511	-0.0353
418	SLU 52	-1.11	-1.62	83.82	-0.0413	-0.3876	-0.0369
418	SLU 53	-1.16	-1.56	85.32	-0.0424	-0.3937	-0.0386
418	SLU 54	-1.15	-1.61	85.3	-0.0421	-0.3943	-0.0381
418	SLU 55	-1.13	-1.64	84.74	-0.0418	-0.3916	-0.0374
418	SLU 56	-1.18	-1.57	86.24	-0.0429	-0.3977	-0.0391
418	SLU 57	-1.16	-1.62	86.22	-0.0427	-0.3983	-0.0386
418	SLU 58	-1.17	-1.57	85.71	-0.0428	-0.3947	-0.0388
418	SLU 59	-1.16	-1.62	85.68	-0.0425	-0.3952	-0.0383
418	SLU 60	-1.15	-1.56	86.93	-0.0427	-0.4056	-0.0391
418	SLU 61	-1.14	-1.61	86.9	-0.0425	-0.4062	-0.0385
418	SLU 62	-1.17	-1.58	87.85	-0.0432	-0.4096	-0.0396
418	SLU 63	-1.15	-1.63	87.83	-0.043	-0.4101	-0.039
418	SLU 64	-1.2	-1.49	83.54	-0.041	-0.3716	-0.0389
418	SLU 65	-1.18	-1.57	83.5	-0.0406	-0.3725	-0.038
418	SLU 66	-1.23	-1.51	85	-0.0417	-0.3787	-0.0397
418	SLU 67	-1.21	-1.56	84.98	-0.0415	-0.3792	-0.0392
418	SLU 68	-1.19	-1.59	84.43	-0.0411	-0.3765	-0.0385
418	SLU 69	-1.24	-1.52	85.93	-0.0423	-0.3826	-0.0402
418	SLU 70	-1.23	-1.57	85.91	-0.042	-0.3832	-0.0397
418	SLU 71	-1.24	-1.52	85.39	-0.0421	-0.3796	-0.0399
418	SLU 72	-1.22	-1.57	85.37	-0.0418	-0.3801	-0.0394
418	SLU 73	-1.21	-1.62	90.67	-0.043	-0.4166	-0.041
418	SLU 74	-1.26	-1.56	92.17	-0.0441	-0.4228	-0.0427
418	SLU 75	-1.25	-1.61	92.15	-0.0438	-0.4233	-0.0422
418	SLU 76	-1.23	-1.64	91.59	-0.0435	-0.4206	-0.0415
418	SLU 77	-1.28	-1.57	93.09	-0.0446	-0.4267	-0.0432
418	SLU 78	-1.27	-1.62	93.07	-0.0444	-0.4273	-0.0427
418	SLU 79	-1.27	-1.57	92.56	-0.0445	-0.4237	-0.0429
418	SLU 80	-1.26	-1.62	92.53	-0.0442	-0.4243	-0.0423
418	SLU 81	-1.26	-1.57	93.78	-0.0444	-0.4346	-0.0432
418	SLU 82	-1.24	-1.61	93.75	-0.0442	-0.4352	-0.0426
418	SLU 83	-1.27	-1.58	94.7	-0.045	-0.4386	-0.0436
418	SLU 84	-1.26	-1.63	94.68	-0.0447	-0.4392	-0.0431
418	SLE RA 1	-0.9	-1.15	62.76	-0.0312	-0.2795	-0.029
418	SLE RA 2	-0.88	-1.2	62.73	-0.0309	-0.2801	-0.0284
418	SLE RA 3	-0.92	-1.16	63.73	-0.0316	-0.2842	-0.0296
418	SLE RA 4	-0.91	-1.19	63.72	-0.0315	-0.2845	-0.0292
418	SLE RA 5	-0.9	-1.21	63.35	-0.0313	-0.2827	-0.0288
418	SLE RA 6	-0.93	-1.17	64.35	-0.032	-0.2868	-0.0299
418	SLE RA 7	-0.92	-1.2	64.33	-0.0318	-0.2872	-0.0296
418	SLE RA 8	-0.93	-1.17	63.99	-0.0319	-0.2848	-0.0297
418	SLE RA 9	-0.92	-1.2	63.97	-0.0317	-0.2852	-0.0293
418	SLE RA 10	-0.91	-1.24	67.51	-0.0325	-0.3095	-0.0304
418	SLE RA 11	-0.94	-1.19	68.51	-0.0332	-0.3136	-0.0316
418	SLE RA 12	-0.93	-1.23	68.49	-0.0331	-0.3139	-0.0312
418	SLE RA 13	-0.92	-1.25	68.12	-0.0328	-0.3122	-0.0308
418	SLE RA 14	-0.96	-1.2	69.13	-0.0336	-0.3162	-0.0319
418	SLE RA 15	-0.94	-1.23	69.11	-0.0334	-0.3166	-0.0315
418	SLE RA 16	-0.95	-1.2	68.77	-0.0335	-0.3142	-0.0317
418	SLE RA 17	-0.94	-1.23	68.75	-0.0333	-0.3146	-0.0313
418	SLE RA 18	-0.94	-1.2	69.58	-0.0334	-0.3215	-0.0319
418	SLE RA 19	-0.93	-1.23	69.57	-0.0333	-0.3219	-0.0315
418	SLE RA 20	-0.95	-1.21	70.2	-0.0338	-0.3242	-0.0322
418	SLE RA 21	-0.94	-1.24	70.18	-0.0336	-0.3245	-0.0318
418	SLE FR 1	-0.9	-1.15	62.76	-0.0312	-0.2795	-0.029
418	SLE FR 2	-0.9	-1.16	62.75	-0.0311	-0.2796	-0.0289
418	SLE FR 3	-0.91	-1.15	63	-0.0313	-0.2806	-0.0292
418	SLE FR 4	-0.91	-1.17	64.8	-0.0318	-0.2922	-0.0298
418	SLE FR 5	-0.92	-1.17	65.05	-0.032	-0.2932	-0.03
418	SLE FR 6	-0.92	-1.17	66.17	-0.0323	-0.3005	-0.0304
418	SLE QP 1	-0.9	-1.15	62.76	-0.0312	-0.2795	-0.029
418	SLE QP 2	-0.91	-1.16	64.8	-0.0319	-0.2921	-0.0299
418	SLD 1	4.62	-0.79	71.29	-0.0423	-0.1023	-0.014
418	SLD 2	5.03	-1.19	71	-0.0402	-0.1079	-0.0007
418	SLD 3	4.73	-2.42	70.77	-0.0357	-0.1271	-0.0098
418	SLD 4	5.15	-2.82	70.48	-0.0336	-0.1327	0.0035
418	SLD 5	0.5	1.49	67.59	-0.0453	-0.1965	-0.034
418	SLD 6	0.77	1.22	67.4	-0.0439	-0.2002	-0.0251
418	SLD 7	0.88	-3.94	65.86	-0.0235	-0.2792	-0.0199
418	SLD 8	1.16	-4.2	65.66	-0.0221	-0.2829	-0.011
418	SLD 9	-2.98	1.87	63.94	-0.0416	-0.3013	-0.0487
418	SLD 10	-2.71	1.61	63.75	-0.0402	-0.305	-0.0399
418	SLD 11	-2.6	-3.55	62.21	-0.0198	-0.384	-0.0346
418	SLD 12	-2.32	-3.81	62.01	-0.0184	-0.3877	-0.0258
418	SLD 13	-6.97	0.49	59.13	-0.0301	-0.4515	-0.0633
418	SLD 14	-6.56	0.09	58.83	-0.028	-0.4571	-0.0499
418	SLD 15	-6.86	-1.13	58.61	-0.0235	-0.4763	-0.059
418	SLD 16	-6.44	-1.53	58.31	-0.0214	-0.4819	-0.0457
418	SLV 1	12.02	-0.36	79.97	-0.056	0.1513	0.0073
418	SLV 2	12.98	-1.29	79.28	-0.0511	0.1383	0.0383
418	SLV 3	12.29	-4.04	78.79	-0.0412	0.0947	0.017
418	SLV 4	13.25	-4.97	78.1	-0.0363	0.0817	0.048
418	SLV 5	2.39	4.83	71.27	-0.0625	-0.071	-0.0388
418	SLV 6	3.02	4.22	70.82	-0.0593	-0.0794	-0.0186
418	SLV 7	3.28	-7.45	67.33	-0.013	-0.2596	-0.0066
418	SLV 8	3.91	-8.05	66.88	-0.0098	-0.268	0.0136
418	SLV 9	-5.74	5.73	62.73	-0.0539	-0.3161	-0.0733

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
418	SLV 10	-5.11	5.12	62.28	-0.0507	-0.3246	-0.0531
418	SLV 11	-4.84	-6.55	58.79	-0.0044	-0.5048	-0.0412
418	SLV 12	-4.22	-7.15	58.34	-0.0012	-0.5132	-0.021
418	SLV 13	-15.07	2.65	51.51	-0.0274	-0.6659	-0.1077
418	SLV 14	-14.11	1.72	50.82	-0.0225	-0.6789	-0.0767
418	SLV 15	-14.81	-1.03	50.33	-0.0126	-0.7225	-0.0981
418	SLV 16	-13.84	-1.96	49.64	-0.0077	-0.7355	-0.0671
418	CRTFP Ux+	0	0	0	0	0	0
418	CRTFP Ux-	0	0	0	0	0	0
422	SLU 1	0.39	-0.66	61.8	-0.0313	0.3331	-0.0073
422	SLU 2	0.41	-0.69	61.79	-0.0311	0.3335	-0.0065
422	SLU 3	0.4	-0.67	63.28	-0.0321	0.3408	-0.0074
422	SLU 4	0.42	-0.69	63.28	-0.032	0.3411	-0.007
422	SLU 5	0.42	-0.71	62.72	-0.0317	0.3377	-0.0067
422	SLU 6	0.41	-0.69	64.21	-0.0327	0.345	-0.0076
422	SLU 7	0.42	-0.71	64.21	-0.0325	0.3453	-0.0072
422	SLU 8	0.4	-0.69	63.65	-0.0325	0.3414	-0.0077
422	SLU 9	0.42	-0.71	63.65	-0.0324	0.3417	-0.0072
422	SLU 10	0.42	-0.67	69.15	-0.0337	0.3808	-0.0076
422	SLU 11	0.41	-0.65	70.64	-0.0346	0.3882	-0.0085
422	SLU 12	0.43	-0.67	70.64	-0.0345	0.3884	-0.0081
422	SLU 13	0.43	-0.69	70.08	-0.0343	0.385	-0.0078
422	SLU 14	0.42	-0.66	71.56	-0.0352	0.3923	-0.0087
422	SLU 15	0.43	-0.68	71.56	-0.0351	0.3926	-0.0082
422	SLU 16	0.41	-0.67	71.01	-0.035	0.3887	-0.0087
422	SLU 17	0.43	-0.69	71.01	-0.0349	0.389	-0.0083
422	SLU 18	0.4	-0.63	72.31	-0.0349	0.4007	-0.0088
422	SLU 19	0.42	-0.65	72.31	-0.0348	0.401	-0.0084
422	SLU 20	0.41	-0.64	73.23	-0.0355	0.4049	-0.009
422	SLU 21	0.42	-0.66	73.23	-0.0354	0.4051	-0.0086
422	SLU 22	0.45	-0.6	68.8	-0.0331	0.3603	-0.0073
422	SLU 23	0.47	-0.63	68.8	-0.033	0.3607	-0.0066
422	SLU 24	0.46	-0.6	70.29	-0.0339	0.368	-0.0075
422	SLU 25	0.47	-0.62	70.29	-0.0338	0.3683	-0.007
422	SLU 26	0.48	-0.65	69.73	-0.0336	0.3649	-0.0067
422	SLU 27	0.47	-0.62	71.21	-0.0345	0.3722	-0.0077
422	SLU 28	0.48	-0.64	71.21	-0.0344	0.3725	-0.0072
422	SLU 29	0.46	-0.63	70.66	-0.0343	0.3686	-0.0077
422	SLU 30	0.47	-0.65	70.66	-0.0342	0.3689	-0.0072
422	SLU 31	0.48	-0.61	76.16	-0.0355	0.408	-0.0076
422	SLU 32	0.47	-0.58	77.64	-0.0364	0.4154	-0.0086
422	SLU 33	0.48	-0.6	77.64	-0.0363	0.4156	-0.0081
422	SLU 34	0.49	-0.62	77.09	-0.0361	0.4122	-0.0078
422	SLU 35	0.48	-0.6	78.57	-0.037	0.4195	-0.0087
422	SLU 36	0.49	-0.62	78.57	-0.0369	0.4198	-0.0083
422	SLU 37	0.47	-0.61	78.02	-0.0369	0.4159	-0.0088
422	SLU 38	0.48	-0.63	78.01	-0.0368	0.4162	-0.0083
422	SLU 39	0.46	-0.56	79.31	-0.0368	0.4279	-0.0089
422	SLU 40	0.48	-0.58	79.31	-0.0367	0.4281	-0.0084
422	SLU 41	0.47	-0.58	80.24	-0.0374	0.4321	-0.0091
422	SLU 42	0.48	-0.6	80.24	-0.0373	0.4323	-0.0086
422	SLU 43	0.49	-0.88	77.93	-0.04	0.4237	-0.0095
422	SLU 44	0.51	-0.91	77.93	-0.0399	0.4241	-0.0087
422	SLU 45	0.5	-0.89	79.42	-0.0408	0.4314	-0.0096
422	SLU 46	0.51	-0.91	79.42	-0.0407	0.4317	-0.0092
422	SLU 47	0.52	-0.93	78.86	-0.0405	0.4283	-0.0089
422	SLU 48	0.51	-0.91	80.34	-0.0414	0.4356	-0.0098
422	SLU 49	0.52	-0.93	80.34	-0.0413	0.4359	-0.0093
422	SLU 50	0.5	-0.91	79.79	-0.0412	0.432	-0.0098
422	SLU 51	0.51	-0.93	79.79	-0.0411	0.4323	-0.0094
422	SLU 52	0.52	-0.89	85.29	-0.0424	0.4714	-0.0098
422	SLU 53	0.51	-0.87	86.77	-0.0434	0.4788	-0.0107
422	SLU 54	0.52	-0.89	86.77	-0.0433	0.479	-0.0102
422	SLU 55	0.53	-0.91	86.21	-0.043	0.4756	-0.01
422	SLU 56	0.52	-0.88	87.7	-0.044	0.4829	-0.0109
422	SLU 57	0.53	-0.9	87.7	-0.0439	0.4832	-0.0104
422	SLU 58	0.51	-0.89	87.15	-0.0438	0.4793	-0.0109
422	SLU 59	0.52	-0.91	87.14	-0.0437	0.4796	-0.0104
422	SLU 60	0.5	-0.85	88.44	-0.0437	0.4913	-0.011
422	SLU 61	0.52	-0.87	88.44	-0.0436	0.4916	-0.0105
422	SLU 62	0.51	-0.86	89.37	-0.0443	0.4955	-0.0112
422	SLU 63	0.52	-0.88	89.37	-0.0442	0.4957	-0.0107
422	SLU 64	0.55	-0.82	84.94	-0.0419	0.4509	-0.0095
422	SLU 65	0.57	-0.85	84.94	-0.0417	0.4513	-0.0087
422	SLU 66	0.56	-0.82	86.42	-0.0426	0.4586	-0.0097
422	SLU 67	0.57	-0.84	86.42	-0.0425	0.4589	-0.0092
422	SLU 68	0.58	-0.87	85.87	-0.0423	0.4555	-0.0089
422	SLU 69	0.56	-0.84	87.35	-0.0432	0.4628	-0.0098
422	SLU 70	0.58	-0.86	87.35	-0.0431	0.4631	-0.0094
422	SLU 71	0.56	-0.85	86.8	-0.0431	0.4592	-0.0099
422	SLU 72	0.57	-0.87	86.79	-0.043	0.4595	-0.0094
422	SLU 73	0.58	-0.83	92.29	-0.0443	0.4986	-0.0098
422	SLU 74	0.57	-0.8	93.78	-0.0452	0.506	-0.0107
422	SLU 75	0.58	-0.82	93.78	-0.0451	0.5062	-0.0103
422	SLU 76	0.58	-0.84	93.22	-0.0449	0.5028	-0.01
422	SLU 77	0.57	-0.82	94.71	-0.0458	0.5101	-0.0109
422	SLU 78	0.59	-0.84	94.71	-0.0457	0.5104	-0.0105
422	SLU 79	0.57	-0.83	94.15	-0.0456	0.5065	-0.0109
422	SLU 80	0.58	-0.85	94.15	-0.0455	0.5068	-0.0105
422	SLU 81	0.56	-0.78	95.45	-0.0455	0.5185	-0.011

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
422	SLU 82	0.57	-0.8	95.45	-0.0454	0.5187	-0.0106
422	SLU 83	0.56	-0.8	96.38	-0.0461	0.5227	-0.0112
422	SLU 84	0.58	-0.82	96.38	-0.046	0.5229	-0.0108
422	SLE RA 1	0.41	-0.64	63.8	-0.0318	0.3409	-0.0073
422	SLE RA 2	0.42	-0.66	63.8	-0.0317	0.3411	-0.0068
422	SLE RA 3	0.42	-0.65	64.79	-0.0323	0.346	-0.0074
422	SLE RA 4	0.42	-0.66	64.79	-0.0323	0.3462	-0.0071
422	SLE RA 5	0.43	-0.68	64.42	-0.0321	0.3439	-0.0069
422	SLE RA 6	0.42	-0.66	65.41	-0.0327	0.3488	-0.0075
422	SLE RA 7	0.43	-0.67	65.41	-0.0327	0.349	-0.0072
422	SLE RA 8	0.42	-0.66	65.04	-0.0326	0.3464	-0.0075
422	SLE RA 9	0.42	-0.68	65.03	-0.0325	0.3466	-0.0072
422	SLE RA 10	0.43	-0.65	68.7	-0.0334	0.3727	-0.0075
422	SLE RA 11	0.42	-0.63	69.69	-0.034	0.3776	-0.0081
422	SLE RA 12	0.43	-0.65	69.69	-0.034	0.3778	-0.0078
422	SLE RA 13	0.43	-0.66	69.32	-0.0338	0.3755	-0.0076
422	SLE RA 14	0.43	-0.64	70.31	-0.0344	0.3804	-0.0082
422	SLE RA 15	0.43	-0.66	70.31	-0.0344	0.3805	-0.0079
422	SLE RA 16	0.42	-0.65	69.94	-0.0343	0.378	-0.0083
422	SLE RA 17	0.43	-0.66	69.94	-0.0342	0.3781	-0.008
422	SLE RA 18	0.42	-0.62	70.81	-0.0342	0.3859	-0.0083
422	SLE RA 19	0.43	-0.63	70.8	-0.0342	0.3861	-0.008
422	SLE RA 20	0.42	-0.63	71.42	-0.0346	0.3887	-0.0084
422	SLE RA 21	0.43	-0.64	71.42	-0.0346	0.3889	-0.0081
422	SLE FR 1	0.41	-0.64	63.8	-0.0318	0.3409	-0.0073
422	SLE FR 2	0.41	-0.65	63.8	-0.0318	0.3409	-0.0072
422	SLE FR 3	0.41	-0.65	64.05	-0.032	0.342	-0.0073
422	SLE FR 4	0.41	-0.64	65.9	-0.0325	0.3544	-0.0075
422	SLE FR 5	0.41	-0.64	66.15	-0.0327	0.3555	-0.0077
422	SLE FR 6	0.41	-0.63	67.3	-0.033	0.3634	-0.0078
422	SLE QP 1	0.41	-0.64	63.8	-0.0318	0.3409	-0.0073
422	SLE QP 2	0.41	-0.63	65.9	-0.0325	0.3544	-0.0076
422	SLD 1	6.12	0.56	60.64	-0.0256	0.4724	0.0258
422	SLD 2	6.55	0.97	60.97	-0.0276	0.464	0.0385
422	SLD 3	6	-1.02	60.06	-0.0193	0.4981	0.0237
422	SLD 4	6.43	-0.61	60.38	-0.0213	0.4897	0.0363
422	SLD 5	2.22	2.05	65.15	-0.0397	0.3524	0.0035
422	SLD 6	2.5	2.32	65.37	-0.041	0.3468	0.0119
422	SLD 7	1.83	-3.22	63.2	-0.0186	0.438	-0.0039
422	SLD 8	2.12	-2.95	63.42	-0.0199	0.4324	0.0046
422	SLD 9	-1.3	1.68	68.38	-0.0452	0.2764	-0.0198
422	SLD 10	-1.01	1.95	68.6	-0.0465	0.2708	-0.0113
422	SLD 11	-1.69	-3.59	66.43	-0.024	0.362	-0.0271
422	SLD 12	-1.4	-3.32	66.65	-0.0254	0.3564	-0.0187
422	SLD 13	-5.61	-0.66	71.42	-0.0438	0.2191	-0.0515
422	SLD 14	-5.18	-0.25	71.74	-0.0458	0.2106	-0.0389
422	SLD 15	-5.73	-2.24	70.83	-0.0375	0.2448	-0.0537
422	SLD 16	-5.3	-1.83	71.16	-0.0395	0.2363	-0.0411
422	SLV 1	13.76	2.11	53.58	-0.0161	0.6312	0.0707
422	SLV 2	14.76	3.07	54.34	-0.0208	0.6116	0.1002
422	SLV 3	13.49	-1.47	52.25	-0.0017	0.6897	0.0655
422	SLV 4	14.49	-0.52	53.01	-0.0064	0.6701	0.095
422	SLV 5	4.65	5.46	64.09	-0.0485	0.3521	0.0185
422	SLV 6	5.3	6.08	64.58	-0.0516	0.3393	0.0377
422	SLV 7	3.75	-6.49	59.66	-0.0007	0.5472	0.0013
422	SLV 8	4.4	-5.87	60.15	-0.0038	0.5344	0.0206
422	SLV 9	-3.58	4.6	71.65	-0.0613	0.1744	-0.0358
422	SLV 10	-2.93	5.22	72.14	-0.0644	0.1616	-0.0165
422	SLV 11	-4.48	-7.35	67.22	-0.0135	0.3694	-0.0529
422	SLV 12	-3.83	-6.73	67.72	-0.0165	0.3566	-0.0337
422	SLV 13	-13.67	-0.75	78.79	-0.0586	0.0387	-0.1102
422	SLV 14	-12.67	0.2	79.55	-0.0633	0.019	-0.0807
422	SLV 15	-13.94	-4.34	77.47	-0.0443	0.0972	-0.1154
422	SLV 16	-12.94	-3.38	78.22	-0.049	0.0775	-0.0859
422	CRTFP Ux+	0	0	0	0	0	0
422	CRTFP Ux-	0	0	0	0	0	0
423	SLU 1	0.4	0.21	35.97	-0.012	7.6879	-0.0754
423	SLU 2	0.41	0.19	35.98	-0.012	7.6894	-0.0688
423	SLU 3	0.41	0.21	36.84	-0.0124	7.8614	-0.0766
423	SLU 4	0.42	0.2	36.85	-0.0124	7.8623	-0.0727
423	SLU 5	0.42	0.19	36.52	-0.0122	7.7981	-0.0675
423	SLU 6	0.42	0.21	37.39	-0.0127	7.9701	-0.0753
423	SLU 7	0.43	0.2	37.39	-0.0126	7.971	-0.0714
423	SLU 8	0.41	0.2	37.07	-0.0125	7.9052	-0.0727
423	SLU 9	0.42	0.19	37.07	-0.0125	7.9061	-0.0687
423	SLU 10	0.43	0.29	40.01	-0.0128	8.519	-0.1037
423	SLU 11	0.42	0.31	40.88	-0.0132	8.691	-0.1115
423	SLU 12	0.43	0.3	40.88	-0.0132	8.6919	-0.1076
423	SLU 13	0.43	0.29	40.56	-0.0131	8.6277	-0.1023
423	SLU 14	0.43	0.31	41.42	-0.0135	8.7997	-0.1102
423	SLU 15	0.44	0.3	41.43	-0.0135	8.8006	-0.1062
423	SLU 16	0.43	0.3	41.1	-0.0134	8.7348	-0.1075
423	SLU 17	0.43	0.29	41.1	-0.0134	8.7357	-0.1036
423	SLU 18	0.42	0.35	41.73	-0.0132	8.8731	-0.1252
423	SLU 19	0.43	0.34	41.74	-0.0132	8.874	-0.1213
423	SLU 20	0.42	0.35	42.28	-0.0135	8.9817	-0.1238
423	SLU 21	0.43	0.34	42.29	-0.0135	8.9826	-0.1199
423	SLU 22	0.45	0.31	40	-0.0128	8.5094	-0.1096
423	SLU 23	0.46	0.29	40.01	-0.0128	8.5109	-0.103
423	SLU 24	0.46	0.31	40.87	-0.0132	8.6829	-0.1109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
423	SLU 25	0.47	0.3	40.88	-0.0131	8.6838	-0.1069
423	SLU 26	0.47	0.29	40.56	-0.013	8.6195	-0.1017
423	SLU 27	0.46	0.31	41.42	-0.0134	8.7915	-0.1095
423	SLU 28	0.47	0.3	41.42	-0.0134	8.7924	-0.1056
423	SLU 29	0.46	0.3	41.1	-0.0133	8.7267	-0.1069
423	SLU 30	0.47	0.29	41.1	-0.0133	8.7276	-0.103
423	SLU 31	0.47	0.39	44.04	-0.0136	9.3405	-0.1379
423	SLU 32	0.47	0.41	44.91	-0.014	9.5125	-0.1457
423	SLU 33	0.48	0.4	44.91	-0.014	9.5134	-0.1418
423	SLU 34	0.48	0.38	44.59	-0.0139	9.4492	-0.1366
423	SLU 35	0.48	0.41	45.45	-0.0143	9.6212	-0.1444
423	SLU 36	0.48	0.4	45.46	-0.0143	9.6221	-0.1404
423	SLU 37	0.47	0.4	45.13	-0.0142	9.5563	-0.1418
423	SLU 38	0.48	0.39	45.14	-0.0142	9.5572	-0.1378
423	SLU 39	0.46	0.45	45.76	-0.014	9.6945	-0.1594
423	SLU 40	0.47	0.44	45.77	-0.014	9.6954	-0.1555
423	SLU 41	0.47	0.45	46.31	-0.0143	9.8032	-0.1581
423	SLU 42	0.48	0.43	46.32	-0.0143	9.8041	-0.1541
423	SLU 43	0.51	0.24	45.38	-0.0153	9.7126	-0.0863
423	SLU 44	0.52	0.22	45.39	-0.0153	9.7141	-0.0797
423	SLU 45	0.52	0.24	46.25	-0.0157	9.8861	-0.0875
423	SLU 46	0.53	0.23	46.25	-0.0157	9.887	-0.0836
423	SLU 47	0.53	0.22	45.93	-0.0156	9.8228	-0.0784
423	SLU 48	0.52	0.24	46.8	-0.016	9.9948	-0.0862
423	SLU 49	0.53	0.23	46.8	-0.016	9.9957	-0.0822
423	SLU 50	0.52	0.23	46.48	-0.0159	9.9299	-0.0835
423	SLU 51	0.53	0.22	46.48	-0.0159	9.9308	-0.0796
423	SLU 52	0.53	0.32	49.42	-0.0162	10.5437	-0.1146
423	SLU 53	0.53	0.34	50.29	-0.0166	10.7157	-0.1224
423	SLU 54	0.54	0.33	50.29	-0.0166	10.7167	-0.1185
423	SLU 55	0.54	0.32	49.97	-0.0164	10.6524	-0.1132
423	SLU 56	0.54	0.34	50.83	-0.0169	10.8244	-0.121
423	SLU 57	0.54	0.33	50.84	-0.0168	10.8253	-0.1171
423	SLU 58	0.53	0.33	50.51	-0.0168	10.7595	-0.1184
423	SLU 59	0.54	0.32	50.51	-0.0167	10.7604	-0.1145
423	SLU 60	0.52	0.38	51.14	-0.0166	10.8978	-0.1361
423	SLU 61	0.53	0.37	51.15	-0.0166	10.8987	-0.1321
423	SLU 62	0.53	0.38	51.69	-0.0168	11.0064	-0.1347
423	SLU 63	0.54	0.37	51.69	-0.0168	11.0073	-0.1308
423	SLU 64	0.55	0.34	49.41	-0.0161	10.5341	-0.1205
423	SLU 65	0.56	0.32	49.42	-0.0161	10.5356	-0.1139
423	SLU 66	0.56	0.34	50.28	-0.0165	10.7076	-0.1217
423	SLU 67	0.57	0.33	50.29	-0.0165	10.7085	-0.1178
423	SLU 68	0.57	0.31	49.96	-0.0164	10.6443	-0.1126
423	SLU 69	0.57	0.34	50.83	-0.0168	10.8163	-0.1204
423	SLU 70	0.58	0.33	50.83	-0.0167	10.8172	-0.1165
423	SLU 71	0.56	0.33	50.51	-0.0167	10.7514	-0.1178
423	SLU 72	0.57	0.32	50.51	-0.0166	10.7523	-0.1138
423	SLU 73	0.58	0.42	53.45	-0.017	11.3652	-0.1488
423	SLU 74	0.57	0.44	54.32	-0.0174	11.5372	-0.1566
423	SLU 75	0.58	0.43	54.32	-0.0173	11.5381	-0.1527
423	SLU 76	0.58	0.41	54	-0.0172	11.4739	-0.1474
423	SLU 77	0.58	0.44	54.86	-0.0176	11.6459	-0.1553
423	SLU 78	0.59	0.42	54.87	-0.0176	11.6468	-0.1513
423	SLU 79	0.58	0.43	54.54	-0.0175	11.581	-0.1526
423	SLU 80	0.58	0.42	54.54	-0.0175	11.5819	-0.1487
423	SLU 81	0.57	0.48	55.17	-0.0174	11.7193	-0.1703
423	SLU 82	0.58	0.47	55.18	-0.0173	11.7202	-0.1664
423	SLU 83	0.57	0.47	55.72	-0.0176	11.8279	-0.1689
423	SLU 84	0.58	0.46	55.73	-0.0176	11.8288	-0.165
423	SLE RA 1	0.41	0.24	37.12	-0.0122	7.9226	-0.0852
423	SLE RA 2	0.42	0.23	37.13	-0.0122	7.9236	-0.0808
423	SLE RA 3	0.42	0.24	37.7	-0.0125	8.0383	-0.086
423	SLE RA 4	0.43	0.23	37.71	-0.0125	8.0389	-0.0834
423	SLE RA 5	0.43	0.22	37.49	-0.0124	7.996	-0.0799
423	SLE RA 6	0.43	0.24	38.07	-0.0127	8.1107	-0.0851
423	SLE RA 7	0.43	0.23	38.07	-0.0126	8.1113	-0.0825
423	SLE RA 8	0.42	0.23	37.85	-0.0126	8.0675	-0.0833
423	SLE RA 9	0.43	0.23	37.86	-0.0126	8.0681	-0.0807
423	SLE RA 10	0.43	0.29	39.82	-0.0128	8.4767	-0.104
423	SLE RA 11	0.43	0.31	40.39	-0.0131	8.5914	-0.1092
423	SLE RA 12	0.43	0.3	40.39	-0.013	8.592	-0.1066
423	SLE RA 13	0.43	0.29	40.18	-0.013	8.5491	-0.1031
423	SLE RA 14	0.43	0.3	40.76	-0.0132	8.6638	-0.1083
423	SLE RA 15	0.44	0.3	40.76	-0.0132	8.6644	-0.1057
423	SLE RA 16	0.43	0.3	40.54	-0.0132	8.6205	-0.1066
423	SLE RA 17	0.44	0.29	40.55	-0.0132	8.6212	-0.104
423	SLE RA 18	0.43	0.33	40.96	-0.013	8.7127	-0.1184
423	SLE RA 19	0.43	0.32	40.97	-0.013	8.7133	-0.1157
423	SLE RA 20	0.43	0.33	41.33	-0.0132	8.7851	-0.1175
423	SLE RA 21	0.43	0.32	41.33	-0.0132	8.7858	-0.1148
423	SLE FR 1	0.41	0.24	37.12	-0.0122	7.9226	-0.0852
423	SLE FR 2	0.42	0.24	37.12	-0.0122	7.9228	-0.0843
423	SLE FR 3	0.42	0.24	37.27	-0.0123	7.9516	-0.0848
423	SLE FR 4	0.42	0.26	38.28	-0.0125	8.1598	-0.0942
423	SLE FR 5	0.42	0.27	38.42	-0.0125	8.1886	-0.0948
423	SLE FR 6	0.42	0.29	39.04	-0.0126	8.3177	-0.1018
423	SLE QP 1	0.41	0.24	37.12	-0.0122	7.9226	-0.0852
423	SLE QP 2	0.42	0.27	38.28	-0.0125	8.1596	-0.0951
423	SLD 1	3.67	0.81	27.5	-0.0075	6.0932	-0.2843

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
423	SLD 2	3.9	1.45	27.84	-0.0098	6.1518	-0.5055
423	SLD 3	3.59	-0.51	26.98	-0.0034	6.0153	0.1762
423	SLD 4	3.82	0.13	27.32	-0.0057	6.0739	-0.045
423	SLD 5	1.47	2.31	35.77	-0.0167	7.6472	-0.8101
423	SLD 6	1.62	2.73	36	-0.0183	7.686	-0.9568
423	SLD 7	1.21	-2.08	34.03	-0.0032	7.3876	0.7249
423	SLD 8	1.36	-1.65	34.26	-0.0047	7.4264	0.5781
423	SLD 9	-0.53	2.19	42.29	-0.0203	8.8928	-0.7684
423	SLD 10	-0.37	2.61	42.52	-0.0218	8.9317	-0.9151
423	SLD 11	-0.79	-2.2	40.55	-0.0067	8.6332	0.7666
423	SLD 12	-0.63	-1.78	40.78	-0.0082	8.6721	0.6199
423	SLD 13	-2.99	0.4	49.23	-0.0192	10.2454	-0.1452
423	SLD 14	-2.75	1.04	49.57	-0.0215	10.304	-0.3664
423	SLD 15	-3.07	-0.91	48.71	-0.0152	10.1675	0.3153
423	SLD 16	-2.83	-0.28	49.05	-0.0175	10.2261	0.0941
423	SLV 1	8.01	1.5	13.05	-0.0006	3.3223	-0.5227
423	SLV 2	8.56	2.97	13.85	-0.006	3.4587	-1.0375
423	SLV 3	7.83	-1.49	11.86	0.0086	3.1447	0.5211
423	SLV 4	8.38	-0.01	12.66	0.0033	3.2812	0.0063
423	SLV 5	2.87	4.9	32.38	-0.022	6.9537	-1.716
423	SLV 6	3.23	5.86	32.9	-0.0255	7.0426	-2.0514
423	SLV 7	2.27	-5.04	28.4	0.0088	6.3619	1.7634
423	SLV 8	2.63	-4.08	28.92	0.0053	6.4508	1.4279
423	SLV 9	-1.8	4.61	47.63	-0.0302	9.8685	-1.6181
423	SLV 10	-1.44	5.57	48.15	-0.0337	9.9573	-1.9536
423	SLV 11	-2.4	-5.33	43.65	0.0005	9.2767	1.8612
423	SLV 12	-2.04	-4.36	44.18	-0.0029	9.3656	1.5257
423	SLV 13	-7.55	0.54	63.89	-0.0282	13.0381	-0.1965
423	SLV 14	-7	2.02	64.69	-0.0335	13.1745	-0.7114
423	SLV 15	-7.73	-2.44	62.7	-0.019	12.8606	0.8473
423	SLV 16	-7.18	-0.96	63.5	-0.0243	12.997	0.3324
423	CRTFP Ux+	0	0	0	0	0	0
423	CRTFP Ux-	0	0	0	0	0	0
423	CRTFP Uy+	0	0	0	0	0	0
423	CRTFP Uy-	0	0	0	0	0	0
426	SLU 1	-0.55	0.02	32.74	-0.0196	-3.9184	0.0029
426	SLU 2	-0.54	-0.06	32.71	-0.0193	-3.9159	-0.0183
426	SLU 3	-0.57	0.03	33.53	-0.0202	-4.0033	0.0045
426	SLU 4	-0.56	-0.02	33.51	-0.02	-4.0018	-0.0082
426	SLU 5	-0.55	-0.06	33.21	-0.0197	-3.9694	-0.0168
426	SLU 6	-0.58	0.03	34.03	-0.0205	-4.0568	0.006
426	SLU 7	-0.57	-0.02	34.01	-0.0203	-4.0553	-0.0067
426	SLU 8	-0.57	0.03	33.74	-0.0204	-4.0253	0.0058
426	SLU 9	-0.56	-0.02	33.72	-0.0202	-4.0239	-0.0069
426	SLU 10	-0.57	-0.01	36.38	-0.021	-4.3299	-0.0042
426	SLU 11	-0.59	0.09	37.2	-0.0218	-4.4172	0.0186
426	SLU 12	-0.59	0.04	37.18	-0.0216	-4.4158	0.0059
426	SLU 13	-0.58	0	36.88	-0.0213	-4.3833	-0.0027
426	SLU 14	-0.6	0.09	37.7	-0.0222	-4.4707	0.0201
426	SLU 15	-0.6	0.04	37.68	-0.022	-4.4692	0.0074
426	SLU 16	-0.6	0.09	37.41	-0.022	-4.4392	0.0199
426	SLU 17	-0.59	0.04	37.39	-0.0218	-4.4378	0.0072
426	SLU 18	-0.59	0.1	37.98	-0.022	-4.5097	0.023
426	SLU 19	-0.58	0.05	37.96	-0.0218	-4.5082	0.0103
426	SLU 20	-0.6	0.11	38.48	-0.0223	-4.5632	0.0245
426	SLU 21	-0.59	0.06	38.46	-0.0222	-4.5617	0.0118
426	SLU 22	-0.61	0.09	36.43	-0.0212	-4.3296	0.0196
426	SLU 23	-0.6	0.01	36.4	-0.0209	-4.3272	-0.0016
426	SLU 24	-0.63	0.1	37.22	-0.0217	-4.4145	0.0212
426	SLU 25	-0.62	0.05	37.2	-0.0216	-4.4131	0.0085
426	SLU 26	-0.61	0.01	36.9	-0.0213	-4.3806	-0.0001
426	SLU 27	-0.64	0.1	37.72	-0.0221	-4.468	0.0227
426	SLU 28	-0.63	0.05	37.7	-0.0219	-4.4665	0.01
426	SLU 29	-0.63	0.1	37.43	-0.0219	-4.4365	0.0225
426	SLU 30	-0.63	0.05	37.41	-0.0218	-4.4351	0.0098
426	SLU 31	-0.63	0.06	40.07	-0.0225	-4.7411	0.0125
426	SLU 32	-0.65	0.15	40.89	-0.0234	-4.8284	0.0353
426	SLU 33	-0.65	0.1	40.87	-0.0232	-4.827	0.0226
426	SLU 34	-0.64	0.07	40.57	-0.0229	-4.7946	0.014
426	SLU 35	-0.66	0.16	41.39	-0.0237	-4.8819	0.0368
426	SLU 36	-0.66	0.11	41.37	-0.0236	-4.8804	0.0241
426	SLU 37	-0.66	0.16	41.1	-0.0236	-4.8505	0.0366
426	SLU 38	-0.65	0.11	41.08	-0.0234	-4.849	0.0239
426	SLU 39	-0.65	0.17	41.67	-0.0235	-4.9209	0.0397
426	SLU 40	-0.65	0.12	41.65	-0.0234	-4.9195	0.027
426	SLU 41	-0.66	0.18	42.17	-0.0239	-4.9744	0.0412
426	SLU 42	-0.66	0.13	42.15	-0.0237	-4.9729	0.0285
426	SLU 43	-0.7	0.01	41.3	-0.025	-4.9529	-0.002
426	SLU 44	-0.68	-0.08	41.27	-0.0247	-4.9505	-0.0232
426	SLU 45	-0.71	0.01	42.09	-0.0255	-5.0378	-0.0003
426	SLU 46	-0.7	-0.04	42.07	-0.0253	-5.0364	-0.0131
426	SLU 47	-0.69	-0.07	41.77	-0.025	-5.0039	-0.0217
426	SLU 48	-0.72	0.02	42.59	-0.0259	-5.0913	0.0011
426	SLU 49	-0.71	-0.03	42.57	-0.0257	-5.0898	-0.0116
426	SLU 50	-0.72	0.02	42.3	-0.0257	-5.0598	0.0009
426	SLU 51	-0.71	-0.03	42.28	-0.0255	-5.0584	-0.0118
426	SLU 52	-0.71	-0.02	44.93	-0.0263	-5.3644	-0.0091
426	SLU 53	-0.74	0.07	45.75	-0.0272	-5.4517	0.0138
426	SLU 54	-0.73	0.02	45.74	-0.027	-5.4503	0.0011
426	SLU 55	-0.72	-0.02	45.43	-0.0267	-5.4179	-0.0076

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
426	SLU 56	-0.75	0.08	46.26	-0.0275	-5.5052	0.0152
426	SLU 57	-0.74	0.02	46.24	-0.0273	-5.5038	0.0025
426	SLU 58	-0.74	0.07	45.96	-0.0273	-5.4738	0.015
426	SLU 59	-0.74	0.02	45.95	-0.0272	-5.4723	0.0023
426	SLU 60	-0.73	0.09	46.54	-0.0273	-5.5442	0.0182
426	SLU 61	-0.73	0.04	46.52	-0.0271	-5.5428	0.0055
426	SLU 62	-0.74	0.09	47.04	-0.0277	-5.5977	0.0196
426	SLU 63	-0.74	0.04	47.02	-0.0275	-5.5962	0.0069
426	SLU 64	-0.76	0.07	44.99	-0.0266	-5.3641	0.0147
426	SLU 65	-0.75	-0.01	44.96	-0.0263	-5.3617	-0.0065
426	SLU 66	-0.77	0.08	45.78	-0.0271	-5.449	0.0164
426	SLU 67	-0.77	0.03	45.76	-0.0269	-5.4476	0.0037
426	SLU 68	-0.76	-0.01	45.46	-0.0266	-5.4152	-0.005
426	SLU 69	-0.78	0.09	46.28	-0.0275	-5.5025	0.0178
426	SLU 70	-0.78	0.04	46.26	-0.0273	-5.501	0.0051
426	SLU 71	-0.78	0.09	45.99	-0.0273	-5.4711	0.0176
426	SLU 72	-0.77	0.03	45.97	-0.0271	-5.4696	0.0049
426	SLU 73	-0.77	0.05	48.62	-0.0279	-5.7756	0.0077
426	SLU 74	-0.8	0.14	49.45	-0.0287	-5.863	0.0305
426	SLU 75	-0.79	0.09	49.43	-0.0285	-5.8615	0.0178
426	SLU 76	-0.78	0.05	49.13	-0.0283	-5.8291	0.0091
426	SLU 77	-0.81	0.14	49.95	-0.0291	-5.9164	0.0319
426	SLU 78	-0.8	0.09	49.93	-0.0289	-5.915	0.0192
426	SLU 79	-0.8	0.14	49.66	-0.0289	-5.885	0.0317
426	SLU 80	-0.8	0.09	49.64	-0.0287	-5.8835	0.019
426	SLU 81	-0.8	0.16	50.23	-0.0289	-5.9554	0.0349
426	SLU 82	-0.79	0.1	50.21	-0.0287	-5.954	0.0222
426	SLU 83	-0.81	0.16	50.73	-0.0293	-6.0089	0.0363
426	SLU 84	-0.8	0.11	50.71	-0.0291	-6.0075	0.0236
426	SLE RA 1	-0.57	0.04	33.79	-0.0201	-4.0359	0.0076
426	SLE RA 2	-0.56	-0.02	33.77	-0.0199	-4.0342	-0.0065
426	SLE RA 3	-0.58	0.05	34.32	-0.0204	-4.0925	0.0087
426	SLE RA 4	-0.57	0.01	34.31	-0.0203	-4.0915	0.0003
426	SLE RA 5	-0.57	-0.01	34.11	-0.0201	-4.0699	-0.0055
426	SLE RA 6	-0.59	0.05	34.65	-0.0207	-4.1281	0.0097
426	SLE RA 7	-0.58	0.02	34.64	-0.0206	-4.1272	0.0012
426	SLE RA 8	-0.58	0.05	34.46	-0.0206	-4.1072	0.0096
426	SLE RA 9	-0.58	0.02	34.45	-0.0204	-4.1062	0.0011
426	SLE RA 10	-0.58	0.02	36.22	-0.021	-4.3102	0.0029
426	SLE RA 11	-0.6	0.08	36.77	-0.0215	-4.3684	0.0181
426	SLE RA 12	-0.59	0.05	36.75	-0.0214	-4.3675	0.0097
426	SLE RA 13	-0.59	0.03	36.55	-0.0212	-4.3458	0.0039
426	SLE RA 14	-0.6	0.09	37.1	-0.0218	-4.4041	0.0191
426	SLE RA 15	-0.6	0.05	37.09	-0.0217	-4.4031	0.0106
426	SLE RA 16	-0.6	0.09	36.91	-0.0217	-4.3831	0.019
426	SLE RA 17	-0.6	0.05	36.89	-0.0215	-4.3821	0.0105
426	SLE RA 18	-0.59	0.1	37.29	-0.0216	-4.4301	0.0211
426	SLE RA 19	-0.59	0.06	37.28	-0.0215	-4.4291	0.0126
426	SLE RA 20	-0.6	0.1	37.62	-0.0219	-4.4657	0.0221
426	SLE RA 21	-0.6	0.07	37.61	-0.0218	-4.4648	0.0136
426	SLE FR 1	-0.57	0.04	33.79	-0.0201	-4.0359	0.0076
426	SLE FR 2	-0.57	0.03	33.79	-0.02	-4.0355	0.0048
426	SLE FR 3	-0.57	0.04	33.93	-0.0202	-4.0501	0.008
426	SLE FR 4	-0.58	0.05	34.84	-0.0205	-4.1538	0.0089
426	SLE FR 5	-0.58	0.06	34.98	-0.0206	-4.1684	0.0121
426	SLE FR 6	-0.58	0.07	35.54	-0.0209	-4.233	0.0144
426	SLE QP 1	-0.57	0.04	33.79	-0.0201	-4.0359	0.0076
426	SLE QP 2	-0.58	0.06	34.84	-0.0206	-4.1541	0.0117
426	SLD 1	2.09	0.62	45.39	-0.0308	-5.2752	0.1539
426	SLD 2	2.29	0.06	45.1	-0.0284	-5.2512	0.0159
426	SLD 3	2.14	-0.65	44.9	-0.0265	-5.2368	-0.1618
426	SLD 4	2.33	-1.2	44.61	-0.0241	-5.2128	-0.2998
426	SLD 5	0.12	2.24	38.8	-0.0306	-4.5531	0.5582
426	SLD 6	0.25	1.87	38.61	-0.029	-4.5372	0.4666
426	SLD 7	0.28	-1.97	37.17	-0.0163	-4.425	-0.4941
426	SLD 8	0.4	-2.34	36.98	-0.0147	-4.409	-0.5857
426	SLD 9	-1.56	2.45	32.71	-0.0264	-3.8992	0.609
426	SLD 10	-1.43	2.08	32.52	-0.0248	-3.8833	0.5174
426	SLD 11	-1.4	-1.76	31.07	-0.0121	-3.7711	-0.4433
426	SLD 12	-1.27	-2.13	30.88	-0.0105	-3.7551	-0.5349
426	SLD 13	-3.49	1.32	25.07	-0.017	-3.0955	0.3232
426	SLD 14	-3.29	0.76	24.79	-0.0146	-3.0715	0.1852
426	SLD 15	-3.44	0.06	24.58	-0.0127	-3.0571	0.0075
426	SLD 16	-3.25	-0.5	24.3	-0.0103	-3.033	-0.1305
426	SLV 1	5.67	1.31	59.49	-0.0444	-6.7766	0.3312
426	SLV 2	6.11	0.02	58.83	-0.0388	-6.7207	0.0099
426	SLV 3	5.78	-1.54	58.38	-0.0347	-6.6881	-0.3828
426	SLV 4	6.22	-2.84	57.72	-0.029	-6.6321	-0.7041
426	SLV 5	1.05	4.99	44.05	-0.0434	-5.085	1.2469
426	SLV 6	1.34	4.15	43.61	-0.0398	-5.0485	1.0376
426	SLV 7	1.42	-4.53	40.33	-0.011	-4.7899	-1.1331
426	SLV 8	1.71	-5.37	39.9	-0.0074	-4.7534	-1.3424
426	SLV 9	-2.86	5.49	29.79	-0.0337	-3.5548	1.3658
426	SLV 10	-2.57	4.64	29.36	-0.0301	-3.5184	1.1564
426	SLV 11	-2.49	-4.03	26.07	-0.0013	-3.2597	-1.0142
426	SLV 12	-2.2	-4.88	25.64	0.0023	-3.2233	-1.2236
426	SLV 13	-7.38	2.96	11.97	-0.0121	-1.6761	0.7274
426	SLV 14	-6.93	1.66	11.3	-0.0064	-1.6202	0.4061
426	SLV 15	-7.27	0.1	10.85	-0.0023	-1.5876	0.0134
426	SLV 16	-6.82	-1.2	10.19	0.0033	-1.5317	-0.3079

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
426	CRTFP Ux+	0	0	0	0	0	0
426	CRTFP Ux-	0	0	0	0	0	0
426	CRTFP Uy+	0	0	0	0	0	0
426	CRTFP Uy-	0	0	0	0	0	0
429	SLU 1	0.11	-0.11	38.41	0.0163	11.2363	0.038
429	SLU 2	0.13	-0.14	38.4	0.0164	11.2333	0.0511
429	SLU 3	0.12	-0.09	39.34	0.0166	11.5009	0.0341
429	SLU 4	0.13	-0.12	39.33	0.0167	11.4992	0.0419
429	SLU 5	0.13	-0.14	38.97	0.0165	11.396	0.051
429	SLU 6	0.12	-0.09	39.91	0.0167	11.6636	0.0339
429	SLU 7	0.13	-0.12	39.9	0.0168	11.6618	0.0418
429	SLU 8	0.12	-0.1	39.55	0.0165	11.5616	0.0377
429	SLU 9	0.13	-0.13	39.55	0.0166	11.5599	0.0456
429	SLU 10	0.15	-0.08	43.33	0.0199	12.666	0.0296
429	SLU 11	0.14	-0.03	44.27	0.02	12.9336	0.0126
429	SLU 12	0.15	-0.06	44.26	0.0201	12.9319	0.0204
429	SLU 13	0.15	-0.08	43.9	0.0199	12.8287	0.0295
429	SLU 14	0.14	-0.03	44.84	0.0201	13.0963	0.0125
429	SLU 15	0.15	-0.06	44.83	0.0202	13.0945	0.0203
429	SLU 16	0.14	-0.04	44.48	0.0199	12.9943	0.0163
429	SLU 17	0.15	-0.07	44.48	0.02	12.9926	0.0241
429	SLU 18	0.15	-0.02	45.45	0.0212	13.283	0.0073
429	SLU 19	0.15	-0.04	45.45	0.0213	13.2812	0.0151
429	SLU 20	0.15	-0.02	46.02	0.0212	13.4457	0.0072
429	SLU 21	0.16	-0.04	46.02	0.0213	13.4439	0.015
429	SLU 22	0.14	-0.01	42.62	0.019	12.4442	0.004
429	SLU 23	0.15	-0.04	42.61	0.0192	12.4412	0.0171
429	SLU 24	0.14	0	43.55	0.0194	12.7089	0.0001
429	SLU 25	0.15	-0.02	43.54	0.0195	12.7071	0.008
429	SLU 26	0.15	-0.04	43.18	0.0193	12.6039	0.017
429	SLU 27	0.14	0	44.12	0.0195	12.8715	0
429	SLU 28	0.15	-0.02	44.11	0.0195	12.8698	0.0079
429	SLU 29	0.14	-0.01	43.76	0.0192	12.7695	0.0038
429	SLU 30	0.15	-0.03	43.76	0.0193	12.7678	0.0117
429	SLU 31	0.17	0.02	47.54	0.0226	13.8739	-0.0044
429	SLU 32	0.16	0.06	48.48	0.0228	14.1416	-0.0214
429	SLU 33	0.17	0.04	48.47	0.0229	14.1398	-0.0135
429	SLU 34	0.17	0.02	48.11	0.0227	14.0366	-0.0045
429	SLU 35	0.17	0.06	49.05	0.0229	14.3042	-0.0215
429	SLU 36	0.17	0.04	49.04	0.023	14.3025	-0.0136
429	SLU 37	0.16	0.05	48.69	0.0226	14.2022	-0.0177
429	SLU 38	0.17	0.03	48.69	0.0227	14.2005	-0.0098
429	SLU 39	0.17	0.08	49.66	0.0239	14.4909	-0.0267
429	SLU 40	0.17	0.06	49.66	0.024	14.4891	-0.0188
429	SLU 41	0.17	0.08	50.23	0.024	14.6536	-0.0268
429	SLU 42	0.18	0.06	50.23	0.0241	14.6518	-0.0189
429	SLU 43	0.14	-0.17	48.49	0.0202	14.193	0.061
429	SLU 44	0.15	-0.21	48.48	0.0204	14.1901	0.0741
429	SLU 45	0.15	-0.16	49.42	0.0206	14.4577	0.0571
429	SLU 46	0.15	-0.18	49.41	0.0207	14.4559	0.0649
429	SLU 47	0.16	-0.21	49.05	0.0205	14.3527	0.074
429	SLU 48	0.15	-0.16	49.99	0.0207	14.6204	0.057
429	SLU 49	0.16	-0.18	49.98	0.0207	14.6186	0.0648
429	SLU 50	0.15	-0.17	49.63	0.0204	14.5184	0.0608
429	SLU 51	0.15	-0.19	49.63	0.0205	14.5166	0.0686
429	SLU 52	0.18	-0.15	53.41	0.0238	15.6228	0.0526
429	SLU 53	0.17	-0.1	54.35	0.024	15.8904	0.0356
429	SLU 54	0.18	-0.12	54.34	0.0241	15.8886	0.0435
429	SLU 55	0.18	-0.15	53.98	0.0239	15.7854	0.0525
429	SLU 56	0.17	-0.1	54.92	0.0241	16.0531	0.0355
429	SLU 57	0.18	-0.12	54.91	0.0242	16.0513	0.0434
429	SLU 58	0.17	-0.11	54.56	0.0238	15.9511	0.0393
429	SLU 59	0.18	-0.13	54.56	0.0239	15.9493	0.0472
429	SLU 60	0.17	-0.08	55.54	0.0251	16.2397	0.0303
429	SLU 61	0.18	-0.11	55.53	0.0252	16.238	0.0382
429	SLU 62	0.18	-0.08	56.11	0.0252	16.4024	0.0302
429	SLU 63	0.18	-0.11	56.1	0.0253	16.4006	0.0381
429	SLU 64	0.16	-0.07	52.7	0.023	15.4009	0.027
429	SLU 65	0.17	-0.11	52.69	0.0231	15.398	0.0401
429	SLU 66	0.17	-0.06	53.63	0.0233	15.6656	0.0231
429	SLU 67	0.17	-0.08	53.62	0.0234	15.6638	0.031
429	SLU 68	0.18	-0.11	53.26	0.0232	15.5606	0.04
429	SLU 69	0.17	-0.06	54.2	0.0234	15.8283	0.023
429	SLU 70	0.18	-0.08	54.19	0.0235	15.8265	0.0309
429	SLU 71	0.17	-0.07	53.84	0.0232	15.7263	0.0268
429	SLU 72	0.18	-0.09	53.84	0.0233	15.7245	0.0347
429	SLU 73	0.2	-0.05	57.62	0.0265	16.8307	0.0187
429	SLU 74	0.19	0	58.56	0.0267	17.0983	0.0017
429	SLU 75	0.2	-0.02	58.55	0.0268	17.0965	0.0095
429	SLU 76	0.2	-0.05	58.19	0.0266	16.9933	0.0186
429	SLU 77	0.19	0	59.13	0.0268	17.261	0.0015
429	SLU 78	0.2	-0.02	59.12	0.0269	17.2592	0.0094
429	SLU 79	0.19	-0.01	58.77	0.0266	17.159	0.0053
429	SLU 80	0.2	-0.03	58.77	0.0267	17.1572	0.0132
429	SLU 81	0.19	0.01	59.74	0.0279	17.4476	-0.0036
429	SLU 82	0.2	-0.01	59.74	0.0279	17.4459	0.0042
429	SLU 83	0.2	0.01	60.31	0.0279	17.6103	-0.0037
429	SLU 84	0.2	-0.01	60.31	0.028	17.6085	0.0041
429	SLE RA 1	0.12	-0.08	39.62	0.0171	11.5814	0.0283
429	SLE RA 2	0.13	-0.1	39.61	0.0172	11.5794	0.037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
429	SLE RA 3	0.12	-0.07	40.23	0.0173	11.7578	0.0257
429	SLE RA 4	0.13	-0.08	40.23	0.0174	11.7567	0.0309
429	SLE RA 5	0.13	-0.1	39.99	0.0172	11.6879	0.0369
429	SLE RA 6	0.13	-0.07	40.61	0.0174	11.8663	0.0256
429	SLE RA 7	0.13	-0.08	40.61	0.0174	11.8651	0.0308
429	SLE RA 8	0.12	-0.08	40.38	0.0172	11.7983	0.0281
429	SLE RA 9	0.13	-0.09	40.37	0.0173	11.7971	0.0334
429	SLE RA 10	0.14	-0.06	42.89	0.0195	12.5346	0.0227
429	SLE RA 11	0.14	-0.03	43.52	0.0196	12.713	0.0113
429	SLE RA 12	0.14	-0.04	43.51	0.0196	12.7118	0.0166
429	SLE RA 13	0.15	-0.06	43.27	0.0195	12.643	0.0226
429	SLE RA 14	0.14	-0.03	43.9	0.0196	12.8214	0.0113
429	SLE RA 15	0.14	-0.04	43.89	0.0197	12.8202	0.0165
429	SLE RA 16	0.14	-0.04	43.66	0.0195	12.7534	0.0138
429	SLE RA 17	0.14	-0.05	43.66	0.0195	12.7522	0.019
429	SLE RA 18	0.14	-0.02	44.31	0.0203	12.9459	0.0078
429	SLE RA 19	0.15	-0.03	44.31	0.0204	12.9447	0.0131
429	SLE RA 20	0.14	-0.02	44.69	0.0204	13.0543	0.0077
429	SLE RA 21	0.15	-0.03	44.69	0.0204	13.0531	0.013
429	SLE FR 1	0.12	-0.08	39.62	0.0171	11.5814	0.0283
429	SLE FR 2	0.12	-0.08	39.61	0.0171	11.581	0.03
429	SLE FR 3	0.12	-0.08	39.77	0.0171	11.6248	0.0282
429	SLE FR 4	0.13	-0.06	41.02	0.0181	11.9903	0.0239
429	SLE FR 5	0.13	-0.06	41.18	0.0181	12.0341	0.0221
429	SLE FR 6	0.13	-0.05	41.96	0.0187	12.2636	0.018
429	SLE QP 1	0.12	-0.08	39.62	0.0171	11.5814	0.0283
429	SLE QP 2	0.13	-0.06	41.02	0.0181	11.9907	0.0221
429	SLD 1	3.44	0.56	41.67	0.0144	12.1935	-0.1929
429	SLD 2	3.66	0.59	41.71	0.0141	12.1998	-0.2009
429	SLD 3	3.38	-0.54	41.4	0.0183	12.1224	0.1911
429	SLD 4	3.6	-0.51	41.44	0.018	12.1287	0.1831
429	SLD 5	1.17	1.79	41.62	0.0111	12.1583	-0.6233
429	SLD 6	1.32	1.81	41.65	0.011	12.1625	-0.6286
429	SLD 7	0.97	-1.87	40.71	0.024	11.9212	0.6566
429	SLD 8	1.12	-1.86	40.74	0.0239	11.9254	0.6514
429	SLD 9	-0.87	1.74	41.3	0.0122	12.056	-0.6071
429	SLD 10	-0.72	1.75	41.33	0.0121	12.0602	-0.6124
429	SLD 11	-1.07	-1.93	40.39	0.0251	11.819	0.6729
429	SLD 12	-0.92	-1.91	40.42	0.025	11.8232	0.6676
429	SLD 13	-3.35	0.39	40.61	0.0181	11.8527	-0.1389
429	SLD 14	-3.13	0.42	40.65	0.0178	11.8591	-0.1468
429	SLD 15	-3.41	-0.71	40.33	0.022	11.7816	0.2451
429	SLD 16	-3.19	-0.68	40.38	0.0217	11.788	0.2372
429	SLV 1	7.88	1.35	42.53	0.0096	12.4635	-0.4667
429	SLV 2	8.39	1.42	42.63	0.0091	12.4782	-0.4852
429	SLV 3	7.74	-1.13	41.91	0.0184	12.3003	0.403
429	SLV 4	8.25	-1.07	42.01	0.0178	12.315	0.3845
429	SLV 5	2.57	4.13	42.41	0.0024	12.3775	-1.4403
429	SLV 6	2.91	4.17	42.47	0.002	12.3871	-1.4524
429	SLV 7	2.11	-4.17	40.32	0.0315	11.8335	1.4587
429	SLV 8	2.44	-4.12	40.39	0.0311	11.8431	1.4466
429	SLV 9	-2.19	4	41.66	0.005	12.1384	-1.4024
429	SLV 10	-1.86	4.05	41.72	0.0046	12.148	-1.4145
429	SLV 11	-2.65	-4.29	39.58	0.0341	11.5944	1.4966
429	SLV 12	-2.32	-4.25	39.64	0.0337	11.604	1.4846
429	SLV 13	-8	0.95	40.04	0.0183	11.6664	-0.3402
429	SLV 14	-7.48	1.01	40.14	0.0177	11.6812	-0.3588
429	SLV 15	-8.14	-1.54	39.42	0.027	11.5032	0.5295
429	SLV 16	-7.62	-1.47	39.52	0.0265	11.518	0.5109
429	CRTFP Ux+	0	0	0	0	0	0
429	CRTFP Ux-	0	0	0	0	0	0
429	CRTFP Uy+	0	0	0	0	0	0
429	CRTFP Uy-	0	0	0	0	0	0
432	SLU 1	-0.74	-1.11	60	-0.0209	-0.2426	-0.0232
432	SLU 2	-0.72	-1.19	59.97	-0.0205	-0.2435	-0.0223
432	SLU 3	-0.76	-1.13	61.44	-0.0214	-0.2491	-0.0239
432	SLU 4	-0.75	-1.17	61.43	-0.0211	-0.2496	-0.0234
432	SLU 5	-0.73	-1.21	60.88	-0.0209	-0.247	-0.0227
432	SLU 6	-0.77	-1.14	62.36	-0.0217	-0.2526	-0.0244
432	SLU 7	-0.76	-1.19	62.34	-0.0215	-0.2531	-0.0238
432	SLU 8	-0.77	-1.14	61.82	-0.0217	-0.2497	-0.0241
432	SLU 9	-0.76	-1.19	61.81	-0.0214	-0.2502	-0.0235
432	SLU 10	-0.74	-1.24	67.09	-0.0214	-0.2844	-0.0249
432	SLU 11	-0.78	-1.17	68.56	-0.0223	-0.29	-0.0265
432	SLU 12	-0.77	-1.22	68.54	-0.022	-0.2905	-0.026
432	SLU 13	-0.75	-1.25	68	-0.0218	-0.288	-0.0253
432	SLU 14	-0.8	-1.19	69.47	-0.0227	-0.2935	-0.0269
432	SLU 15	-0.78	-1.24	69.45	-0.0224	-0.294	-0.0264
432	SLU 16	-0.79	-1.19	68.94	-0.0226	-0.2906	-0.0266
432	SLU 17	-0.78	-1.23	68.92	-0.0224	-0.2912	-0.0261
432	SLU 18	-0.77	-1.18	70.16	-0.0222	-0.3011	-0.0269
432	SLU 19	-0.76	-1.23	70.15	-0.022	-0.3016	-0.0263
432	SLU 20	-0.79	-1.19	71.07	-0.0226	-0.3046	-0.0273
432	SLU 21	-0.77	-1.24	71.06	-0.0224	-0.3052	-0.0267
432	SLU 22	-0.82	-1.11	66.82	-0.0213	-0.2687	-0.0269
432	SLU 23	-0.8	-1.19	66.79	-0.0209	-0.2695	-0.026
432	SLU 24	-0.84	-1.12	68.26	-0.0218	-0.2751	-0.0276
432	SLU 25	-0.83	-1.17	68.25	-0.0215	-0.2756	-0.0271
432	SLU 26	-0.81	-1.2	67.7	-0.0213	-0.2731	-0.0264
432	SLU 27	-0.86	-1.14	69.17	-0.0222	-0.2786	-0.028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
432	SLU 28	-0.84	-1.19	69.16	-0.0219	-0.2791	-0.0275
432	SLU 29	-0.85	-1.14	68.64	-0.0221	-0.2757	-0.0277
432	SLU 30	-0.84	-1.18	68.62	-0.0219	-0.2763	-0.0272
432	SLU 31	-0.82	-1.24	73.91	-0.0219	-0.3105	-0.0285
432	SLU 32	-0.86	-1.17	75.38	-0.0227	-0.316	-0.0302
432	SLU 33	-0.85	-1.22	75.36	-0.0225	-0.3165	-0.0296
432	SLU 34	-0.84	-1.25	74.82	-0.0223	-0.314	-0.029
432	SLU 35	-0.88	-1.18	76.29	-0.0231	-0.3195	-0.0306
432	SLU 36	-0.87	-1.23	76.27	-0.0229	-0.3201	-0.03
432	SLU 37	-0.87	-1.18	75.75	-0.023	-0.3167	-0.0303
432	SLU 38	-0.86	-1.23	75.74	-0.0228	-0.3172	-0.0297
432	SLU 39	-0.85	-1.17	76.98	-0.0227	-0.3271	-0.0305
432	SLU 40	-0.84	-1.22	76.96	-0.0224	-0.3277	-0.03
432	SLU 41	-0.87	-1.19	77.89	-0.0231	-0.3307	-0.0309
432	SLU 42	-0.85	-1.24	77.88	-0.0228	-0.3312	-0.0304
432	SLU 43	-0.93	-1.45	75.66	-0.027	-0.3065	-0.0289
432	SLU 44	-0.91	-1.53	75.64	-0.0266	-0.3074	-0.028
432	SLU 45	-0.95	-1.46	77.11	-0.0275	-0.3129	-0.0296
432	SLU 46	-0.94	-1.51	77.09	-0.0272	-0.3135	-0.0291
432	SLU 47	-0.93	-1.54	76.55	-0.027	-0.3109	-0.0284
432	SLU 48	-0.97	-1.47	78.02	-0.0279	-0.3165	-0.0301
432	SLU 49	-0.95	-1.52	78	-0.0276	-0.317	-0.0295
432	SLU 50	-0.96	-1.47	77.48	-0.0278	-0.3136	-0.0298
432	SLU 51	-0.95	-1.52	77.47	-0.0276	-0.3141	-0.0292
432	SLU 52	-0.93	-1.57	82.75	-0.0276	-0.3483	-0.0306
432	SLU 53	-0.98	-1.51	84.22	-0.0284	-0.3539	-0.0322
432	SLU 54	-0.96	-1.56	84.21	-0.0282	-0.3544	-0.0317
432	SLU 55	-0.95	-1.59	83.66	-0.0279	-0.3518	-0.031
432	SLU 56	-0.99	-1.52	85.13	-0.0288	-0.3574	-0.0326
432	SLU 57	-0.98	-1.57	85.12	-0.0286	-0.3579	-0.0321
432	SLU 58	-0.99	-1.52	84.6	-0.0287	-0.3545	-0.0323
432	SLU 59	-0.97	-1.57	84.58	-0.0285	-0.355	-0.0318
432	SLU 60	-0.96	-1.51	85.82	-0.0284	-0.365	-0.0326
432	SLU 61	-0.95	-1.56	85.81	-0.0281	-0.3655	-0.032
432	SLU 62	-0.98	-1.53	86.74	-0.0287	-0.3685	-0.033
432	SLU 63	-0.97	-1.57	86.72	-0.0285	-0.369	-0.0325
432	SLU 64	-1.01	-1.44	82.48	-0.0275	-0.3325	-0.0326
432	SLU 65	-0.99	-1.52	82.45	-0.0271	-0.3334	-0.0317
432	SLU 66	-1.03	-1.46	83.92	-0.0279	-0.339	-0.0333
432	SLU 67	-1.02	-1.51	83.91	-0.0277	-0.3395	-0.0328
432	SLU 68	-1.01	-1.54	83.36	-0.0274	-0.3369	-0.0321
432	SLU 69	-1.05	-1.47	84.84	-0.0283	-0.3425	-0.0337
432	SLU 70	-1.04	-1.52	84.82	-0.0281	-0.343	-0.0332
432	SLU 71	-1.04	-1.47	84.3	-0.0282	-0.3396	-0.0334
432	SLU 72	-1.03	-1.52	84.29	-0.028	-0.3401	-0.0329
432	SLU 73	-1.01	-1.57	89.57	-0.028	-0.3743	-0.0342
432	SLU 74	-1.06	-1.5	91.04	-0.0288	-0.3799	-0.0359
432	SLU 75	-1.04	-1.55	91.02	-0.0286	-0.3804	-0.0353
432	SLU 76	-1.03	-1.58	90.48	-0.0284	-0.3779	-0.0347
432	SLU 77	-1.07	-1.52	91.95	-0.0292	-0.3834	-0.0363
432	SLU 78	-1.06	-1.57	91.93	-0.029	-0.3839	-0.0357
432	SLU 79	-1.07	-1.52	91.42	-0.0292	-0.3805	-0.036
432	SLU 80	-1.05	-1.57	91.4	-0.0289	-0.381	-0.0354
432	SLU 81	-1.05	-1.51	92.64	-0.0288	-0.391	-0.0362
432	SLU 82	-1.03	-1.56	92.63	-0.0286	-0.3915	-0.0357
432	SLU 83	-1.06	-1.52	93.55	-0.0292	-0.3945	-0.0367
432	SLU 84	-1.05	-1.57	93.54	-0.0289	-0.3951	-0.0361
432	SLE RA 1	-0.76	-1.11	61.95	-0.021	-0.2501	-0.0243
432	SLE RA 2	-0.75	-1.16	61.93	-0.0208	-0.2507	-0.0237
432	SLE RA 3	-0.78	-1.12	62.91	-0.0213	-0.2544	-0.0247
432	SLE RA 4	-0.77	-1.15	62.9	-0.0212	-0.2547	-0.0244
432	SLE RA 5	-0.76	-1.17	62.54	-0.021	-0.253	-0.0239
432	SLE RA 6	-0.79	-1.13	63.52	-0.0216	-0.2567	-0.025
432	SLE RA 7	-0.78	-1.16	63.51	-0.0214	-0.2571	-0.0247
432	SLE RA 8	-0.78	-1.13	63.16	-0.0215	-0.2548	-0.0248
432	SLE RA 9	-0.77	-1.16	63.15	-0.0214	-0.2551	-0.0245
432	SLE RA 10	-0.76	-1.2	66.67	-0.0214	-0.2779	-0.0254
432	SLE RA 11	-0.79	-1.15	67.65	-0.022	-0.2816	-0.0264
432	SLE RA 12	-0.78	-1.18	67.64	-0.0218	-0.282	-0.0261
432	SLE RA 13	-0.77	-1.2	67.28	-0.0216	-0.2803	-0.0256
432	SLE RA 14	-0.8	-1.16	68.26	-0.0222	-0.284	-0.0267
432	SLE RA 15	-0.79	-1.19	68.25	-0.022	-0.2843	-0.0264
432	SLE RA 16	-0.8	-1.16	67.9	-0.0222	-0.2821	-0.0265
432	SLE RA 17	-0.79	-1.19	67.89	-0.022	-0.2824	-0.0262
432	SLE RA 18	-0.78	-1.15	68.72	-0.0219	-0.289	-0.0267
432	SLE RA 19	-0.77	-1.19	68.71	-0.0218	-0.2894	-0.0263
432	SLE RA 20	-0.79	-1.16	69.33	-0.0222	-0.2914	-0.027
432	SLE RA 21	-0.78	-1.2	69.32	-0.022	-0.2918	-0.0266
432	SLE FR 1	-0.76	-1.11	61.95	-0.021	-0.2501	-0.0243
432	SLE FR 2	-0.76	-1.12	61.94	-0.021	-0.2502	-0.0241
432	SLE FR 3	-0.77	-1.11	62.19	-0.0211	-0.251	-0.0244
432	SLE FR 4	-0.77	-1.13	63.98	-0.0212	-0.2619	-0.0249
432	SLE FR 5	-0.77	-1.13	64.22	-0.0214	-0.2627	-0.0251
432	SLE FR 6	-0.77	-1.13	65.33	-0.0215	-0.2696	-0.0255
432	SLE QP 1	-0.76	-1.11	61.95	-0.021	-0.2501	-0.0243
432	SLE QP 2	-0.77	-1.12	63.98	-0.0213	-0.2618	-0.025
432	SLD 1	4.68	-0.74	70.18	-0.0301	-0.0738	-0.0103
432	SLD 2	5.02	-1.14	69.95	-0.028	-0.0789	0.0034
432	SLD 3	4.78	-2.37	69.85	-0.0239	-0.0997	-0.0059
432	SLD 4	5.12	-2.76	69.62	-0.0218	-0.1048	0.0078

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
432	SLD 5	0.65	1.53	66.38	-0.0338	-0.1652	-0.0298
432	SLD 6	0.88	1.27	66.23	-0.0324	-0.1686	-0.0207
432	SLD 7	0.98	-3.89	65.29	-0.013	-0.2515	-0.015
432	SLD 8	1.21	-4.15	65.14	-0.0116	-0.2548	-0.006
432	SLD 9	-2.75	1.91	62.82	-0.031	-0.2687	-0.044
432	SLD 10	-2.52	1.64	62.67	-0.0296	-0.2721	-0.035
432	SLD 11	-2.41	-3.51	61.73	-0.0102	-0.3549	-0.0293
432	SLD 12	-2.19	-3.78	61.58	-0.0088	-0.3583	-0.0202
432	SLD 13	-6.65	0.52	58.33	-0.0208	-0.4188	-0.0578
432	SLD 14	-6.31	0.12	58.1	-0.0187	-0.4238	-0.0441
432	SLD 15	-6.55	-1.11	58.01	-0.0146	-0.4446	-0.0533
432	SLD 16	-6.21	-1.51	57.78	-0.0125	-0.4497	-0.0397
432	SLV 1	11.96	-0.29	78.47	-0.0417	0.1772	0.0096
432	SLV 2	12.76	-1.21	77.94	-0.0368	0.1654	0.0414
432	SLV 3	12.19	-3.97	77.73	-0.0276	0.1182	0.0197
432	SLV 4	12.99	-4.89	77.19	-0.0227	0.1064	0.0514
432	SLV 5	2.56	4.87	69.55	-0.0497	-0.0386	-0.0354
432	SLV 6	3.08	4.27	69.2	-0.0465	-0.0463	-0.0147
432	SLV 7	3.33	-7.4	67.07	-0.0026	-0.2351	-0.0019
432	SLV 8	3.85	-8	66.72	0.0006	-0.2428	0.0187
432	SLV 9	-5.39	5.75	61.24	-0.0431	-0.2807	-0.0687
432	SLV 10	-4.87	5.15	60.89	-0.04	-0.2884	-0.048
432	SLV 11	-4.61	-6.52	58.76	0.0039	-0.4772	-0.0352
432	SLV 12	-4.1	-7.12	58.41	0.0071	-0.4849	-0.0146
432	SLV 13	-14.53	2.65	50.77	-0.0199	-0.63	-0.1014
432	SLV 14	-13.73	1.72	50.23	-0.015	-0.6418	-0.0696
432	SLV 15	-14.29	-1.03	50.02	-0.0058	-0.6889	-0.0913
432	SLV 16	-13.5	-1.96	49.48	-0.0009	-0.7007	-0.0596
432	CRTFP Ux+	0	0	0	0	0	0
432	CRTFP Ux-	0	0	0	0	0	0
436	SLU 1	0.45	-0.62	60.93	-0.0246	0.3013	-0.012
436	SLU 2	0.46	-0.65	60.93	-0.0245	0.3018	-0.0112
436	SLU 3	0.46	-0.63	62.39	-0.0253	0.3084	-0.0122
436	SLU 4	0.47	-0.65	62.39	-0.0252	0.3087	-0.0118
436	SLU 5	0.47	-0.67	61.84	-0.025	0.3054	-0.0114
436	SLU 6	0.47	-0.65	63.3	-0.0258	0.312	-0.0125
436	SLU 7	0.48	-0.67	63.3	-0.0257	0.3123	-0.012
436	SLU 8	0.46	-0.65	62.75	-0.0257	0.3085	-0.0125
436	SLU 9	0.47	-0.67	62.75	-0.0256	0.3088	-0.012
436	SLU 10	0.48	-0.63	68.23	-0.0261	0.3453	-0.0127
436	SLU 11	0.47	-0.6	69.69	-0.0269	0.3519	-0.0137
436	SLU 12	0.49	-0.62	69.69	-0.0268	0.3522	-0.0132
436	SLU 13	0.49	-0.64	69.14	-0.0266	0.3489	-0.0129
436	SLU 14	0.48	-0.62	70.6	-0.0274	0.3555	-0.0139
436	SLU 15	0.49	-0.64	70.6	-0.0273	0.3558	-0.0135
436	SLU 16	0.48	-0.63	70.04	-0.0273	0.352	-0.0139
436	SLU 17	0.49	-0.65	70.05	-0.0272	0.3523	-0.0135
436	SLU 18	0.47	-0.58	71.35	-0.0269	0.3634	-0.0141
436	SLU 19	0.48	-0.6	71.35	-0.0269	0.3637	-0.0136
436	SLU 20	0.48	-0.6	72.26	-0.0275	0.367	-0.0143
436	SLU 21	0.49	-0.62	72.26	-0.0274	0.3673	-0.0138
436	SLU 22	0.5	-0.55	67.89	-0.0257	0.3243	-0.0124
436	SLU 23	0.52	-0.59	67.9	-0.0256	0.3248	-0.0116
436	SLU 24	0.52	-0.56	69.36	-0.0264	0.3314	-0.0126
436	SLU 25	0.53	-0.58	69.36	-0.0263	0.3317	-0.0122
436	SLU 26	0.53	-0.6	68.81	-0.0261	0.3284	-0.0119
436	SLU 27	0.52	-0.58	70.27	-0.0269	0.335	-0.0129
436	SLU 28	0.54	-0.6	70.27	-0.0268	0.3353	-0.0124
436	SLU 29	0.52	-0.59	69.71	-0.0268	0.3315	-0.0129
436	SLU 30	0.53	-0.61	69.71	-0.0267	0.3318	-0.0124
436	SLU 31	0.54	-0.56	75.19	-0.0272	0.3682	-0.0131
436	SLU 32	0.53	-0.53	76.65	-0.028	0.3748	-0.0141
436	SLU 33	0.54	-0.55	76.65	-0.0279	0.3751	-0.0136
436	SLU 34	0.55	-0.58	76.1	-0.0277	0.3719	-0.0133
436	SLU 35	0.54	-0.55	77.56	-0.0285	0.3785	-0.0144
436	SLU 36	0.55	-0.57	77.56	-0.0284	0.3788	-0.0139
436	SLU 37	0.53	-0.56	77.01	-0.0284	0.375	-0.0144
436	SLU 38	0.55	-0.58	77.01	-0.0283	0.3753	-0.0139
436	SLU 39	0.53	-0.51	78.31	-0.028	0.3864	-0.0145
436	SLU 40	0.54	-0.53	78.31	-0.028	0.3867	-0.014
436	SLU 41	0.53	-0.53	79.22	-0.0286	0.39	-0.0147
436	SLU 42	0.55	-0.55	79.22	-0.0285	0.3903	-0.0143
436	SLU 43	0.56	-0.83	76.82	-0.0317	0.3838	-0.0154
436	SLU 44	0.58	-0.86	76.83	-0.0315	0.3843	-0.0146
436	SLU 45	0.57	-0.84	78.29	-0.0323	0.3909	-0.0157
436	SLU 46	0.58	-0.86	78.29	-0.0322	0.3912	-0.0152
436	SLU 47	0.59	-0.88	77.74	-0.032	0.3879	-0.0149
436	SLU 48	0.58	-0.86	79.2	-0.0328	0.3945	-0.0159
436	SLU 49	0.59	-0.88	79.2	-0.0327	0.3948	-0.0154
436	SLU 50	0.57	-0.86	78.64	-0.0327	0.391	-0.0159
436	SLU 51	0.58	-0.88	78.65	-0.0326	0.3914	-0.0154
436	SLU 52	0.59	-0.84	84.12	-0.0331	0.4278	-0.0161
436	SLU 53	0.59	-0.81	85.58	-0.0339	0.4344	-0.0171
436	SLU 54	0.6	-0.83	85.58	-0.0338	0.4347	-0.0167
436	SLU 55	0.6	-0.85	85.03	-0.0336	0.4314	-0.0164
436	SLU 56	0.6	-0.83	86.49	-0.0344	0.438	-0.0174
436	SLU 57	0.61	-0.85	86.49	-0.0343	0.4383	-0.0169
436	SLU 58	0.59	-0.84	85.94	-0.0343	0.4345	-0.0174
436	SLU 59	0.6	-0.86	85.94	-0.0342	0.4348	-0.0169
436	SLU 60	0.58	-0.79	87.24	-0.034	0.4459	-0.0175

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
436	SLU 61	0.59	-0.81	87.24	-0.0339	0.4462	-0.017
436	SLU 62	0.59	-0.81	88.15	-0.0345	0.4495	-0.0178
436	SLU 63	0.6	-0.83	88.15	-0.0344	0.4498	-0.0173
436	SLU 64	0.62	-0.76	83.79	-0.0328	0.4068	-0.0158
436	SLU 65	0.64	-0.8	83.79	-0.0326	0.4073	-0.0151
436	SLU 66	0.63	-0.77	85.25	-0.0334	0.4139	-0.0161
436	SLU 67	0.64	-0.79	85.25	-0.0333	0.4142	-0.0156
436	SLU 68	0.64	-0.81	84.7	-0.0331	0.4109	-0.0153
436	SLU 69	0.64	-0.79	86.16	-0.0339	0.4175	-0.0163
436	SLU 70	0.65	-0.81	86.16	-0.0338	0.4178	-0.0159
436	SLU 71	0.63	-0.8	85.61	-0.0338	0.414	-0.0163
436	SLU 72	0.64	-0.82	85.61	-0.0337	0.4143	-0.0159
436	SLU 73	0.65	-0.77	91.08	-0.0342	0.4508	-0.0165
436	SLU 74	0.65	-0.74	92.54	-0.035	0.4574	-0.0176
436	SLU 75	0.66	-0.76	92.54	-0.0349	0.4577	-0.0171
436	SLU 76	0.66	-0.79	91.99	-0.0347	0.4544	-0.0168
436	SLU 77	0.65	-0.76	93.45	-0.0355	0.461	-0.0178
436	SLU 78	0.67	-0.78	93.45	-0.0354	0.4613	-0.0173
436	SLU 79	0.65	-0.77	92.9	-0.0354	0.4575	-0.0178
436	SLU 80	0.66	-0.79	92.9	-0.0353	0.4578	-0.0173
436	SLU 81	0.64	-0.72	94.2	-0.0351	0.4689	-0.0179
436	SLU 82	0.65	-0.74	94.21	-0.035	0.4692	-0.0175
436	SLU 83	0.65	-0.74	95.11	-0.0356	0.4725	-0.0182
436	SLU 84	0.66	-0.76	95.12	-0.0355	0.4728	-0.0177
436	SLE RA 1	0.46	-0.6	62.92	-0.025	0.3079	-0.0121
436	SLE RA 2	0.47	-0.62	62.92	-0.0248	0.3082	-0.0116
436	SLE RA 3	0.47	-0.61	63.9	-0.0254	0.3126	-0.0123
436	SLE RA 4	0.48	-0.62	63.9	-0.0253	0.3128	-0.0119
436	SLE RA 5	0.48	-0.64	63.53	-0.0252	0.3106	-0.0117
436	SLE RA 6	0.48	-0.62	64.5	-0.0257	0.315	-0.0124
436	SLE RA 7	0.48	-0.63	64.5	-0.0257	0.3152	-0.0121
436	SLE RA 8	0.47	-0.62	64.13	-0.0256	0.3127	-0.0124
436	SLE RA 9	0.48	-0.64	64.13	-0.0256	0.3129	-0.0121
436	SLE RA 10	0.49	-0.61	67.78	-0.0259	0.3372	-0.0125
436	SLE RA 11	0.48	-0.59	68.76	-0.0265	0.3416	-0.0132
436	SLE RA 12	0.49	-0.6	68.76	-0.0264	0.3418	-0.0129
436	SLE RA 13	0.49	-0.62	68.39	-0.0263	0.3396	-0.0127
436	SLE RA 14	0.49	-0.6	69.36	-0.0268	0.344	-0.0134
436	SLE RA 15	0.49	-0.61	69.36	-0.0267	0.3442	-0.0131
436	SLE RA 16	0.48	-0.61	69	-0.0267	0.3417	-0.0134
436	SLE RA 17	0.49	-0.62	69	-0.0267	0.3419	-0.0131
436	SLE RA 18	0.48	-0.58	69.87	-0.0265	0.3493	-0.0135
436	SLE RA 19	0.49	-0.59	69.87	-0.0264	0.3495	-0.0132
436	SLE RA 20	0.48	-0.59	70.47	-0.0268	0.3517	-0.0137
436	SLE RA 21	0.49	-0.6	70.47	-0.0268	0.3519	-0.0133
436	SLE FR 1	0.46	-0.6	62.92	-0.025	0.3079	-0.0121
436	SLE FR 2	0.46	-0.61	62.92	-0.0249	0.3079	-0.012
436	SLE FR 3	0.46	-0.61	63.16	-0.0251	0.3088	-0.0122
436	SLE FR 4	0.47	-0.6	65	-0.0254	0.3204	-0.0124
436	SLE FR 5	0.47	-0.6	65.25	-0.0256	0.3213	-0.0126
436	SLE FR 6	0.47	-0.59	66.39	-0.0257	0.3286	-0.0128
436	SLE QP 1	0.46	-0.6	62.92	-0.025	0.3079	-0.0121
436	SLE QP 2	0.47	-0.59	65	-0.0254	0.3203	-0.0125
436	SLD 1	6	0.58	59.94	-0.0203	0.4292	0.0208
436	SLD 2	6.36	0.99	60.2	-0.0223	0.4209	0.0339
436	SLD 3	5.89	-1	59.54	-0.0141	0.4567	0.0186
436	SLD 4	6.25	-0.59	59.8	-0.0161	0.4484	0.0317
436	SLD 5	2.22	2.08	64.03	-0.0328	0.3127	-0.0015
436	SLD 6	2.46	2.35	64.21	-0.0342	0.3072	0.0072
436	SLD 7	1.87	-3.19	62.72	-0.0123	0.4044	-0.0089
436	SLD 8	2.1	-2.92	62.89	-0.0136	0.399	-0.0002
436	SLD 9	-1.17	1.73	67.11	-0.0372	0.2416	-0.0248
436	SLD 10	-0.93	2	67.29	-0.0385	0.2361	-0.0161
436	SLD 11	-1.53	-3.54	65.8	-0.0167	0.3333	-0.0322
436	SLD 12	-1.29	-3.27	65.98	-0.018	0.3279	-0.0235
436	SLD 13	-5.32	-0.6	70.2	-0.0347	0.1922	-0.0567
436	SLD 14	-4.96	-0.19	70.47	-0.0367	0.1839	-0.0436
436	SLD 15	-5.42	-2.18	69.81	-0.0286	0.2197	-0.0589
436	SLD 16	-5.06	-1.77	70.07	-0.0306	0.2114	-0.0458
436	SLV 1	13.4	2.1	53.13	-0.0131	0.5757	0.0654
436	SLV 2	14.23	3.05	53.74	-0.0178	0.5565	0.096
436	SLV 3	13.15	-1.48	52.24	0.0008	0.6383	0.0603
436	SLV 4	13.99	-0.53	52.85	-0.0039	0.619	0.0908
436	SLV 5	4.57	5.48	62.69	-0.0421	0.3054	0.0134
436	SLV 6	5.12	6.1	63.09	-0.0451	0.2929	0.0333
436	SLV 7	3.75	-6.46	59.71	0.0044	0.514	-0.0039
436	SLV 8	4.3	-5.84	60.11	0.0014	0.5014	0.016
436	SLV 9	-3.36	4.65	69.9	-0.0522	0.1391	-0.041
436	SLV 10	-2.82	5.27	70.3	-0.0553	0.1266	-0.0211
436	SLV 11	-4.18	-7.29	66.92	-0.0057	0.3477	-0.0583
436	SLV 12	-3.64	-6.67	67.31	-0.0088	0.3352	-0.0384
436	SLV 13	-13.05	-0.66	77.16	-0.047	0.0215	-0.1158
436	SLV 14	-12.22	0.3	77.77	-0.0516	0.0023	-0.0853
436	SLV 15	-13.3	-4.24	76.26	-0.033	0.0841	-0.121
436	SLV 16	-12.46	-3.29	76.88	-0.0377	0.0649	-0.0905
436	CRTFP Ux+	0	0	0	0	0	0
436	CRTFP Ux-	0	0	0	0	0	0
437	SLU 1	0.47	0.21	35.97	0.011	7.7095	-0.0746
437	SLU 2	0.48	0.19	35.97	0.0111	7.7114	-0.068
437	SLU 3	0.48	0.21	36.84	0.0112	7.8828	-0.0758

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
437	SLU 4	0.49	0.2	36.84	0.0113	7.8839	-0.0719
437	SLU 5	0.48	0.18	36.52	0.0112	7.8194	-0.0666
437	SLU 6	0.49	0.21	37.38	0.0113	7.9908	-0.0744
437	SLU 7	0.49	0.19	37.39	0.0114	7.992	-0.0705
437	SLU 8	0.48	0.2	37.06	0.0112	7.9256	-0.0718
437	SLU 9	0.49	0.19	37.06	0.0112	7.9267	-0.0679
437	SLU 10	0.49	0.29	40.03	0.0131	8.5526	-0.1029
437	SLU 11	0.5	0.31	40.89	0.0132	8.724	-0.1107
437	SLU 12	0.5	0.3	40.89	0.0133	8.7251	-0.1067
437	SLU 13	0.5	0.28	40.57	0.0132	8.6606	-0.1015
437	SLU 14	0.5	0.3	41.44	0.0134	8.832	-0.1093
437	SLU 15	0.51	0.29	41.44	0.0134	8.8332	-0.1053
437	SLU 16	0.5	0.3	41.11	0.0132	8.7668	-0.1067
437	SLU 17	0.51	0.29	41.12	0.0132	8.7679	-0.1027
437	SLU 18	0.49	0.35	41.76	0.0139	8.9112	-0.1244
437	SLU 19	0.5	0.34	41.76	0.0139	8.9123	-0.1204
437	SLU 20	0.5	0.34	42.3	0.014	9.0193	-0.123
437	SLU 21	0.51	0.33	42.31	0.014	9.0204	-0.119
437	SLU 22	0.51	0.3	40.02	0.0131	8.5423	-0.1087
437	SLU 23	0.53	0.29	40.03	0.0131	8.5442	-0.1021
437	SLU 24	0.53	0.31	40.89	0.0133	8.7156	-0.11
437	SLU 25	0.53	0.3	40.89	0.0133	8.7167	-0.106
437	SLU 26	0.53	0.28	40.57	0.0132	8.6522	-0.1008
437	SLU 27	0.54	0.3	41.43	0.0134	8.8237	-0.1086
437	SLU 28	0.54	0.29	41.44	0.0134	8.8248	-0.1046
437	SLU 29	0.53	0.3	41.11	0.0133	8.7584	-0.106
437	SLU 30	0.54	0.28	41.11	0.0133	8.7595	-0.102
437	SLU 31	0.54	0.38	44.08	0.0151	9.3854	-0.137
437	SLU 32	0.55	0.41	44.94	0.0153	9.5568	-0.1448
437	SLU 33	0.55	0.4	44.95	0.0153	9.558	-0.1408
437	SLU 34	0.55	0.38	44.62	0.0152	9.4934	-0.1356
437	SLU 35	0.55	0.4	45.49	0.0154	9.6649	-0.1434
437	SLU 36	0.56	0.39	45.49	0.0154	9.666	-0.1395
437	SLU 37	0.55	0.39	45.16	0.0153	9.5996	-0.1408
437	SLU 38	0.55	0.38	45.17	0.0153	9.6007	-0.1369
437	SLU 39	0.54	0.45	45.81	0.0159	9.744	-0.1585
437	SLU 40	0.55	0.43	45.81	0.016	9.7452	-0.1546
437	SLU 41	0.55	0.44	46.36	0.016	9.8521	-0.1571
437	SLU 42	0.55	0.43	46.36	0.0161	9.8532	-0.1532
437	SLU 43	0.59	0.24	45.37	0.0136	9.7368	-0.0853
437	SLU 44	0.6	0.22	45.38	0.0137	9.7387	-0.0787
437	SLU 45	0.6	0.24	46.24	0.0138	9.9101	-0.0865
437	SLU 46	0.61	0.23	46.24	0.0139	9.9112	-0.0825
437	SLU 47	0.61	0.21	45.92	0.0138	9.8467	-0.0773
437	SLU 48	0.61	0.23	46.78	0.0139	10.0181	-0.0851
437	SLU 49	0.62	0.22	46.79	0.014	10.0193	-0.0812
437	SLU 50	0.6	0.23	46.46	0.0138	9.9529	-0.0825
437	SLU 51	0.61	0.22	46.46	0.0138	9.954	-0.0786
437	SLU 52	0.62	0.32	49.43	0.0157	10.5799	-0.1135
437	SLU 53	0.62	0.34	50.29	0.0158	10.7513	-0.1213
437	SLU 54	0.63	0.33	50.29	0.0159	10.7524	-0.1174
437	SLU 55	0.63	0.31	49.97	0.0158	10.6879	-0.1121
437	SLU 56	0.63	0.33	50.84	0.0159	10.8594	-0.12
437	SLU 57	0.63	0.32	50.84	0.016	10.8605	-0.116
437	SLU 58	0.62	0.33	50.51	0.0158	10.7941	-0.1174
437	SLU 59	0.63	0.32	50.52	0.0158	10.7952	-0.1134
437	SLU 60	0.62	0.38	51.16	0.0165	10.9385	-0.135
437	SLU 61	0.62	0.37	51.16	0.0165	10.9397	-0.1311
437	SLU 62	0.62	0.37	51.7	0.0166	11.0466	-0.1337
437	SLU 63	0.63	0.36	51.71	0.0166	11.0477	-0.1297
437	SLU 64	0.64	0.33	49.42	0.0157	10.5696	-0.1194
437	SLU 65	0.65	0.31	49.43	0.0157	10.5715	-0.1128
437	SLU 66	0.65	0.34	50.29	0.0159	10.7429	-0.1206
437	SLU 67	0.66	0.32	50.29	0.0159	10.7441	-0.1167
437	SLU 68	0.66	0.31	49.97	0.0158	10.6795	-0.1114
437	SLU 69	0.66	0.33	50.84	0.016	10.851	-0.1192
437	SLU 70	0.66	0.32	50.84	0.016	10.8521	-0.1153
437	SLU 71	0.65	0.32	50.51	0.0159	10.7857	-0.1166
437	SLU 72	0.66	0.31	50.52	0.0159	10.7868	-0.1127
437	SLU 73	0.67	0.41	53.48	0.0177	11.4127	-0.1477
437	SLU 74	0.67	0.43	54.34	0.0179	11.5841	-0.1555
437	SLU 75	0.68	0.42	54.35	0.0179	11.5853	-0.1515
437	SLU 76	0.67	0.41	54.03	0.0178	11.5208	-0.1463
437	SLU 77	0.68	0.43	54.89	0.018	11.6922	-0.1541
437	SLU 78	0.68	0.42	54.89	0.018	11.6933	-0.1501
437	SLU 79	0.67	0.42	54.57	0.0179	11.6269	-0.1515
437	SLU 80	0.68	0.41	54.57	0.0179	11.628	-0.1475
437	SLU 81	0.66	0.47	55.21	0.0185	11.7713	-0.1692
437	SLU 82	0.67	0.46	55.21	0.0186	11.7725	-0.1652
437	SLU 83	0.67	0.47	55.76	0.0186	11.8794	-0.1678
437	SLU 84	0.68	0.46	55.76	0.0187	11.8805	-0.1639
437	SLE RA 1	0.48	0.23	37.13	0.0116	7.9474	-0.0843
437	SLE RA 2	0.49	0.22	37.13	0.0116	7.9487	-0.08
437	SLE RA 3	0.49	0.24	37.7	0.0118	8.063	-0.0852
437	SLE RA 4	0.49	0.23	37.71	0.0118	8.0637	-0.0825
437	SLE RA 5	0.49	0.22	37.49	0.0117	8.0207	-0.079
437	SLE RA 6	0.49	0.23	38.07	0.0118	8.135	-0.0842
437	SLE RA 7	0.5	0.23	38.07	0.0118	8.1358	-0.0816
437	SLE RA 8	0.49	0.23	37.85	0.0117	8.0915	-0.0825
437	SLE RA 9	0.49	0.22	37.86	0.0118	8.0922	-0.0799

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
437	SLE RA 10	0.5	0.29	39.83	0.013	8.5095	-0.1032
437	SLE RA 11	0.5	0.3	40.41	0.0131	8.6238	-0.1084
437	SLE RA 12	0.5	0.3	40.41	0.0131	8.6245	-0.1058
437	SLE RA 13	0.5	0.29	40.2	0.013	8.5815	-0.1023
437	SLE RA 14	0.51	0.3	40.77	0.0132	8.6958	-0.1075
437	SLE RA 15	0.51	0.29	40.77	0.0132	8.6966	-0.1048
437	SLE RA 16	0.5	0.3	40.56	0.0131	8.6523	-0.1057
437	SLE RA 17	0.51	0.29	40.56	0.0131	8.6531	-0.1031
437	SLE RA 18	0.5	0.33	40.99	0.0135	8.7486	-0.1175
437	SLE RA 19	0.5	0.32	40.99	0.0135	8.7493	-0.1149
437	SLE RA 20	0.5	0.33	41.35	0.0136	8.8206	-0.1166
437	SLE RA 21	0.51	0.32	41.35	0.0136	8.8214	-0.114
437	SLE FR 1	0.48	0.23	37.13	0.0116	7.9474	-0.0843
437	SLE FR 2	0.48	0.23	37.13	0.0116	7.9477	-0.0835
437	SLE FR 3	0.48	0.23	37.27	0.0116	7.9762	-0.084
437	SLE FR 4	0.49	0.26	38.28	0.0122	8.188	-0.0934
437	SLE FR 5	0.49	0.26	38.43	0.0122	8.2166	-0.0939
437	SLE FR 6	0.49	0.28	39.06	0.0126	8.348	-0.1009
437	SLE QP 1	0.48	0.23	37.13	0.0116	7.9474	-0.0843
437	SLE QP 2	0.49	0.26	38.28	0.0122	8.1878	-0.0943
437	SLD 1	3.64	0.81	27.55	0.0097	6.1329	-0.284
437	SLD 2	3.85	1.44	27.83	0.0077	6.1698	-0.5054
437	SLD 3	3.56	-0.51	27.14	0.0133	6.0892	0.1772
437	SLD 4	3.76	0.13	27.42	0.0113	6.1261	-0.0442
437	SLD 5	1.52	2.31	35.63	0.0063	7.6309	-0.8104
437	SLD 6	1.66	2.73	35.82	0.005	7.6554	-0.9574
437	SLD 7	1.25	-2.08	34.27	0.0184	7.4852	0.7269
437	SLD 8	1.38	-1.66	34.45	0.017	7.5097	0.5799
437	SLD 9	-0.41	2.19	42.12	0.0073	8.8659	-0.7685
437	SLD 10	-0.28	2.61	42.3	0.006	8.8904	-0.9155
437	SLD 11	-0.69	-2.2	40.75	0.0194	8.7201	0.7687
437	SLD 12	-0.55	-1.78	40.93	0.018	8.7446	0.6218
437	SLD 13	-2.79	0.4	49.15	0.0131	10.2494	-0.1444
437	SLD 14	-2.59	1.04	49.43	0.0111	10.2863	-0.3658
437	SLD 15	-2.88	-0.92	48.74	0.0167	10.2057	0.3168
437	SLD 16	-2.67	-0.28	49.02	0.0147	10.2426	0.0954
437	SLV 1	7.87	1.49	13.15	0.0064	3.3792	-0.5229
437	SLV 2	8.34	2.97	13.8	0.0018	3.4651	-1.0384
437	SLV 3	7.68	-1.49	12.22	0.0146	3.2784	0.5225
437	SLV 4	8.15	-0.01	12.86	0.0099	3.3643	0.0069
437	SLV 5	2.91	4.9	32.05	-0.0011	6.8831	-1.7177
437	SLV 6	3.21	5.86	32.47	-0.0042	6.9391	-2.0536
437	SLV 7	2.27	-5.05	28.93	0.0261	6.5469	1.7668
437	SLV 8	2.58	-4.09	29.35	0.0231	6.6028	1.4309
437	SLV 9	-1.61	4.61	47.22	0.0013	9.7727	-1.6195
437	SLV 10	-1.3	5.58	47.64	-0.0018	9.8287	-1.9554
437	SLV 11	-2.24	-5.34	44.09	0.0285	9.4365	1.865
437	SLV 12	-1.94	-4.37	44.52	0.0255	9.4925	1.5291
437	SLV 13	-7.18	0.54	63.7	0.0144	13.0113	-0.1955
437	SLV 14	-6.71	2.02	64.35	0.0097	13.0972	-0.7111
437	SLV 15	-7.37	-2.45	62.77	0.0226	12.9104	0.8498
437	SLV 16	-6.9	-0.97	63.41	0.0179	12.9963	0.3343
437	CRTFP Ux+	0	0	0	0	0	0
437	CRTFP Ux-	0	0	0	0	0	0
437	CRTFP Uy+	0	0	0	0	0	0
437	CRTFP Uy-	0	0	0	0	0	0
440	SLU 1	-0.48	0.01	32.49	0.0026	-3.8458	0.0005
440	SLU 2	-0.47	-0.07	32.47	0.0029	-3.8453	-0.0208
440	SLU 3	-0.49	0.02	33.28	0.0026	-3.9285	0.002
440	SLU 4	-0.49	-0.03	33.26	0.0028	-3.9282	-0.0107
440	SLU 5	-0.48	-0.07	32.97	0.0029	-3.8972	-0.0194
440	SLU 6	-0.5	0.02	33.77	0.0026	-3.9803	0.0034
440	SLU 7	-0.5	-0.03	33.76	0.0028	-3.98	-0.0093
440	SLU 8	-0.5	0.02	33.48	0.0026	-3.9494	0.0033
440	SLU 9	-0.49	-0.03	33.47	0.0028	-3.9492	-0.0095
440	SLU 10	-0.49	-0.02	36.13	0.004	-4.2583	-0.0069
440	SLU 11	-0.51	0.07	36.94	0.0038	-4.3415	0.0159
440	SLU 12	-0.51	0.02	36.93	0.0039	-4.3412	0.0032
440	SLU 13	-0.5	-0.01	36.63	0.004	-4.3101	-0.0055
440	SLU 14	-0.52	0.08	37.43	0.0038	-4.3933	0.0173
440	SLU 15	-0.52	0.03	37.42	0.0039	-4.393	0.0046
440	SLU 16	-0.52	0.08	37.15	0.0037	-4.3624	0.0171
440	SLU 17	-0.51	0.03	37.13	0.0039	-4.3621	0.0044
440	SLU 18	-0.51	0.09	37.72	0.0042	-4.4358	0.0203
440	SLU 19	-0.5	0.04	37.71	0.0044	-4.4355	0.0075
440	SLU 20	-0.52	0.1	38.22	0.0042	-4.4876	0.0217
440	SLU 21	-0.51	0.05	38.21	0.0044	-4.4873	0.0089
440	SLU 22	-0.53	0.08	36.18	0.0038	-4.2554	0.0169
440	SLU 23	-0.52	-0.01	36.16	0.0041	-4.2549	-0.0043
440	SLU 24	-0.54	0.08	36.96	0.0038	-4.338	0.0185
440	SLU 25	-0.54	0.03	36.95	0.004	-4.3378	0.0057
440	SLU 26	-0.53	0	36.65	0.0041	-4.3067	-0.0029
440	SLU 27	-0.55	0.09	37.46	0.0038	-4.3899	0.0199
440	SLU 28	-0.55	0.04	37.45	0.004	-4.3896	0.0071
440	SLU 29	-0.55	0.09	37.17	0.0038	-4.359	0.0197
440	SLU 30	-0.54	0.04	37.16	0.004	-4.3587	0.007
440	SLU 31	-0.54	0.05	39.82	0.0052	-4.6679	0.0095
440	SLU 32	-0.56	0.14	40.62	0.005	-4.751	0.0323
440	SLU 33	-0.56	0.09	40.61	0.0051	-4.7507	0.0196
440	SLU 34	-0.55	0.05	40.31	0.0052	-4.7197	0.0109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLU 35	-0.57	0.15	41.12	0.005	-4.8029	0.0337
440	SLU 36	-0.57	0.1	41.11	0.0051	-4.8026	0.021
440	SLU 37	-0.57	0.15	40.83	0.0049	-4.772	0.0336
440	SLU 38	-0.56	0.09	40.82	0.0051	-4.7717	0.0208
440	SLU 39	-0.56	0.16	41.41	0.0054	-4.8453	0.0367
440	SLU 40	-0.55	0.11	41.4	0.0056	-4.8451	0.024
440	SLU 41	-0.57	0.16	41.91	0.0054	-4.8972	0.0381
440	SLU 42	-0.56	0.11	41.89	0.0056	-4.8969	0.0254
440	SLU 43	-0.61	-0.01	40.98	0.003	-4.8591	-0.005
440	SLU 44	-0.6	-0.09	40.96	0.0033	-4.8586	-0.0263
440	SLU 45	-0.62	0	41.76	0.003	-4.9418	-0.0035
440	SLU 46	-0.61	-0.05	41.75	0.0032	-4.9415	-0.0162
440	SLU 47	-0.61	-0.09	41.45	0.0033	-4.9105	-0.0248
440	SLU 48	-0.63	0	42.26	0.003	-4.9936	-0.0021
440	SLU 49	-0.62	-0.05	42.24	0.0032	-4.9933	-0.0148
440	SLU 50	-0.62	0	41.97	0.003	-4.9628	-0.0022
440	SLU 51	-0.62	-0.05	41.95	0.0031	-4.9625	-0.0149
440	SLU 52	-0.62	-0.04	44.62	0.0044	-5.2716	-0.0124
440	SLU 53	-0.64	0.05	45.42	0.0041	-5.3548	0.0104
440	SLU 54	-0.63	0	45.41	0.0043	-5.3545	-0.0023
440	SLU 55	-0.63	-0.03	45.11	0.0044	-5.3234	-0.011
440	SLU 56	-0.65	0.06	45.92	0.0041	-5.4066	0.0118
440	SLU 57	-0.64	0.01	45.9	0.0043	-5.4063	-0.0009
440	SLU 58	-0.64	0.06	45.63	0.0041	-5.3757	0.0116
440	SLU 59	-0.64	0.01	45.62	0.0043	-5.3755	-0.0011
440	SLU 60	-0.64	0.07	46.21	0.0046	-5.4491	0.0148
440	SLU 61	-0.63	0.02	46.19	0.0048	-5.4488	0.002
440	SLU 62	-0.64	0.08	46.7	0.0046	-5.5009	0.0162
440	SLU 63	-0.64	0.03	46.69	0.0048	-5.5006	0.0034
440	SLU 64	-0.66	0.06	44.66	0.0042	-5.2687	0.0114
440	SLU 65	-0.65	-0.03	44.64	0.0044	-5.2682	-0.0098
440	SLU 66	-0.67	0.06	45.45	0.0042	-5.3514	0.013
440	SLU 67	-0.67	0.01	45.43	0.0044	-5.3511	0.0002
440	SLU 68	-0.66	-0.02	45.14	0.0044	-5.32	-0.0084
440	SLU 69	-0.68	0.07	45.94	0.0042	-5.4032	0.0144
440	SLU 70	-0.67	0.02	45.93	0.0044	-5.4029	0.0016
440	SLU 71	-0.68	0.07	45.65	0.0042	-5.3723	0.0142
440	SLU 72	-0.67	0.02	45.64	0.0043	-5.372	0.0015
440	SLU 73	-0.67	0.03	48.3	0.0056	-5.6812	0.004
440	SLU 74	-0.69	0.12	49.11	0.0053	-5.7643	0.0268
440	SLU 75	-0.69	0.07	49.1	0.0055	-5.7641	0.0141
440	SLU 76	-0.68	0.03	48.8	0.0056	-5.733	0.0055
440	SLU 77	-0.7	0.13	49.6	0.0053	-5.8162	0.0282
440	SLU 78	-0.69	0.08	49.59	0.0055	-5.8159	0.0155
440	SLU 79	-0.7	0.13	49.32	0.0053	-5.7853	0.0281
440	SLU 80	-0.69	0.07	49.3	0.0055	-5.785	0.0154
440	SLU 81	-0.69	0.14	49.89	0.0058	-5.8587	0.0312
440	SLU 82	-0.68	0.09	49.88	0.0059	-5.8584	0.0185
440	SLU 83	-0.7	0.14	50.39	0.0058	-5.9105	0.0326
440	SLU 84	-0.69	0.09	50.38	0.0059	-5.9102	0.0199
440	SLE RA 1	-0.5	0.03	33.55	0.0029	-3.9628	0.0052
440	SLE RA 2	-0.49	-0.03	33.53	0.0031	-3.9625	-0.009
440	SLE RA 3	-0.5	0.03	34.07	0.003	-4.0179	0.0062
440	SLE RA 4	-0.5	0	34.06	0.0031	-4.0177	-0.0023
440	SLE RA 5	-0.49	-0.02	33.86	0.0031	-3.9971	-0.008
440	SLE RA 6	-0.51	0.04	34.4	0.003	-4.0525	0.0071
440	SLE RA 7	-0.51	0	34.39	0.0031	-4.0523	-0.0013
440	SLE RA 8	-0.51	0.04	34.21	0.0029	-4.0319	0.007
440	SLE RA 9	-0.5	0	34.2	0.0031	-4.0317	-0.0014
440	SLE RA 10	-0.5	0.01	35.97	0.0039	-4.2378	0.0003
440	SLE RA 11	-0.52	0.07	36.51	0.0037	-4.2933	0.0154
440	SLE RA 12	-0.51	0.04	36.5	0.0038	-4.2931	0.007
440	SLE RA 13	-0.51	0.01	36.3	0.0039	-4.2724	0.0012
440	SLE RA 14	-0.52	0.08	36.84	0.0037	-4.3278	0.0164
440	SLE RA 15	-0.52	0.04	36.83	0.0038	-4.3276	0.0079
440	SLE RA 16	-0.52	0.07	36.65	0.0037	-4.3072	0.0163
440	SLE RA 17	-0.52	0.04	36.64	0.0038	-4.307	0.0078
440	SLE RA 18	-0.51	0.08	37.03	0.004	-4.3561	0.0184
440	SLE RA 19	-0.51	0.05	37.02	0.0041	-4.3559	0.0099
440	SLE RA 20	-0.52	0.09	37.36	0.004	-4.3907	0.0193
440	SLE RA 21	-0.52	0.05	37.35	0.0041	-4.3905	0.0108
440	SLE FR 1	-0.5	0.03	33.55	0.0029	-3.9628	0.0052
440	SLE FR 2	-0.49	0.02	33.54	0.003	-3.9628	0.0023
440	SLE FR 3	-0.5	0.03	33.68	0.0029	-3.9766	0.0055
440	SLE FR 4	-0.5	0.03	34.59	0.0033	-4.0807	0.0063
440	SLE FR 5	-0.5	0.05	34.72	0.0033	-4.0946	0.0095
440	SLE FR 6	-0.5	0.06	35.29	0.0035	-4.1595	0.0118
440	SLE QP 1	-0.5	0.03	33.55	0.0029	-3.9628	0.0052
440	SLE QP 2	-0.5	0.05	34.59	0.0033	-4.0808	0.0091
440	SLD 1	2.1	0.6	44.96	0.0012	-5.171	0.15
440	SLD 2	2.26	0.05	44.74	0.0034	-5.1628	0.0118
440	SLD 3	2.14	-0.66	44.58	0.005	-5.1413	-0.1661
440	SLD 4	2.3	-1.22	44.36	0.0072	-5.1331	-0.3042
440	SLD 5	0.18	2.23	38.31	-0.0036	-4.4544	0.5559
440	SLD 6	0.28	1.86	38.17	-0.0022	-4.4489	0.4642
440	SLD 7	0.33	-1.98	37.06	0.0092	-4.3555	-0.4977
440	SLD 8	0.44	-2.35	36.91	0.0107	-4.35	-0.5894
440	SLD 9	-1.44	2.44	32.27	-0.0042	-3.8116	0.6076
440	SLD 10	-1.34	2.07	32.13	-0.0027	-3.8062	0.516
440	SLD 11	-1.29	-1.77	31.02	0.0087	-3.7127	-0.446

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLD 12	-1.18	-2.14	30.87	0.0101	-3.7072	-0.5377
440	SLD 13	-3.3	1.31	24.82	-0.0007	-3.0285	0.3225
440	SLD 14	-3.15	0.75	24.61	0.0015	-3.0203	0.1843
440	SLD 15	-3.26	0.05	24.45	0.0032	-2.9988	0.0064
440	SLD 16	-3.1	-0.51	24.23	0.0054	-2.9906	-0.1318
440	SLV 1	5.58	1.3	58.83	-0.0015	-6.6319	0.3256
440	SLV 2	5.94	0	58.32	0.0036	-6.6127	0.004
440	SLV 3	5.68	-1.56	57.97	0.0073	-6.5621	-0.3893
440	SLV 4	6.05	-2.86	57.46	0.0124	-6.5429	-0.711
440	SLV 5	1.09	4.98	43.26	-0.0123	-4.9553	1.2449
440	SLV 6	1.33	4.14	42.93	-0.009	-4.9428	1.0353
440	SLV 7	1.46	-4.54	40.39	0.0169	-4.7227	-1.1381
440	SLV 8	1.69	-5.39	40.06	0.0202	-4.7102	-1.3477
440	SLV 9	-2.7	5.48	29.13	-0.0137	-3.4514	1.366
440	SLV 10	-2.46	4.63	28.8	-0.0104	-3.4389	1.1564
440	SLV 11	-2.33	-4.05	26.26	0.0155	-3.2188	-1.0171
440	SLV 12	-2.09	-4.89	25.93	0.0189	-3.2063	-1.2267
440	SLV 13	-7.05	2.95	11.72	-0.0059	-1.6187	0.7292
440	SLV 14	-6.69	1.65	11.22	-0.0008	-1.5995	0.4075
440	SLV 15	-6.95	0.09	10.86	0.0029	-1.5489	0.0143
440	SLV 16	-6.58	-1.2	10.36	0.008	-1.5298	-0.3074
440	CRTFP Ux+	0	0	0	0	0	0
440	CRTFP Ux-	0	0	0	0	0	0
440	CRTFP Uy+	0	0	0	0	0	0
440	CRTFP Uy-	0	0	0	0	0	0
443	SLU 1	0.08	-0.1	36.66	-0.4352	11.329	0.0355
443	SLU 2	0.09	-0.13	36.66	-0.435	11.3273	0.0479
443	SLU 3	0.08	-0.09	37.55	-0.4457	11.5981	0.0318
443	SLU 4	0.09	-0.11	37.54	-0.4456	11.5971	0.0392
443	SLU 5	0.09	-0.13	37.2	-0.4415	11.4929	0.0478
443	SLU 6	0.08	-0.09	38.09	-0.4522	11.7638	0.0317
443	SLU 7	0.09	-0.11	38.08	-0.4521	11.7628	0.0392
443	SLU 8	0.08	-0.1	37.75	-0.4482	11.6603	0.0353
443	SLU 9	0.09	-0.12	37.74	-0.4481	11.6593	0.0427
443	SLU 10	0.11	-0.08	41.4	-0.4902	12.7948	0.0286
443	SLU 11	0.11	-0.03	42.29	-0.5009	13.0657	0.0126
443	SLU 12	0.11	-0.05	42.28	-0.5008	13.0646	0.02
443	SLU 13	0.11	-0.08	41.94	-0.4967	12.9605	0.0285
443	SLU 14	0.11	-0.03	42.83	-0.5074	13.2313	0.0125
443	SLU 15	0.11	-0.05	42.82	-0.5073	13.2303	0.0199
443	SLU 16	0.11	-0.04	42.49	-0.5035	13.1278	0.0161
443	SLU 17	0.11	-0.06	42.48	-0.5033	13.1268	0.0235
443	SLU 18	0.11	-0.02	43.44	-0.5141	13.4254	0.008
443	SLU 19	0.12	-0.04	43.43	-0.514	13.4244	0.0154
443	SLU 20	0.12	-0.02	43.98	-0.5206	13.5911	0.0079
443	SLU 21	0.12	-0.04	43.97	-0.5205	13.5901	0.0154
443	SLU 22	0.09	0	40.71	-0.4824	12.5644	0.0036
443	SLU 23	0.1	-0.04	40.7	-0.4822	12.5627	0.016
443	SLU 24	0.1	0.01	41.59	-0.4929	12.8336	0
443	SLU 25	0.1	-0.01	41.59	-0.4927	12.8326	0.0074
443	SLU 26	0.1	-0.04	41.24	-0.4887	12.7284	0.0159
443	SLU 27	0.1	0.01	42.13	-0.4994	12.9992	-0.0001
443	SLU 28	0.1	-0.01	42.13	-0.4993	12.9982	0.0073
443	SLU 29	0.1	0	41.79	-0.4954	12.8958	0.0035
443	SLU 30	0.1	-0.02	41.79	-0.4953	12.8947	0.0109
443	SLU 31	0.13	0.02	45.44	-0.5374	14.0303	-0.0032
443	SLU 32	0.12	0.06	46.33	-0.5481	14.3011	-0.0192
443	SLU 33	0.13	0.04	46.33	-0.548	14.3001	-0.0118
443	SLU 34	0.13	0.02	45.99	-0.5439	14.1959	-0.0033
443	SLU 35	0.12	0.06	46.87	-0.5546	14.4668	-0.0193
443	SLU 36	0.13	0.04	46.87	-0.5545	14.4658	-0.0119
443	SLU 37	0.12	0.05	46.53	-0.5506	14.3633	-0.0158
443	SLU 38	0.13	0.03	46.53	-0.5505	14.3623	-0.0083
443	SLU 39	0.13	0.08	47.48	-0.5612	14.6609	-0.0238
443	SLU 40	0.13	0.05	47.48	-0.5611	14.6599	-0.0164
443	SLU 41	0.13	0.08	48.02	-0.5677	14.8266	-0.0239
443	SLU 42	0.14	0.05	48.02	-0.5676	14.8256	-0.0165
443	SLU 43	0.09	-0.16	46.28	-0.5496	14.3041	0.057
443	SLU 44	0.1	-0.19	46.27	-0.5494	14.3024	0.0694
443	SLU 45	0.1	-0.15	47.16	-0.5601	14.5732	0.0534
443	SLU 46	0.1	-0.17	47.15	-0.56	14.5722	0.0608
443	SLU 47	0.11	-0.19	46.81	-0.5559	14.468	0.0693
443	SLU 48	0.1	-0.15	47.7	-0.5666	14.7389	0.0533
443	SLU 49	0.11	-0.17	47.7	-0.5665	14.7379	0.0607
443	SLU 50	0.1	-0.16	47.36	-0.5626	14.6354	0.0568
443	SLU 51	0.11	-0.18	47.36	-0.5625	14.6344	0.0643
443	SLU 52	0.13	-0.14	51.01	-0.6046	15.7699	0.0502
443	SLU 53	0.12	-0.09	51.9	-0.6153	16.0408	0.0341
443	SLU 54	0.13	-0.11	51.9	-0.6152	16.0398	0.0416
443	SLU 55	0.13	-0.14	51.55	-0.6111	15.9356	0.0501
443	SLU 56	0.13	-0.09	52.44	-0.6218	16.2064	0.0341
443	SLU 57	0.13	-0.11	52.44	-0.6217	16.2054	0.0415
443	SLU 58	0.13	-0.1	52.1	-0.6179	16.1029	0.0376
443	SLU 59	0.13	-0.12	52.1	-0.6177	16.1019	0.0451
443	SLU 60	0.13	-0.08	53.05	-0.6285	16.4006	0.0296
443	SLU 61	0.14	-0.1	53.05	-0.6284	16.3995	0.037
443	SLU 62	0.13	-0.08	53.59	-0.635	16.5662	0.0295
443	SLU 63	0.14	-0.1	53.59	-0.6349	16.5652	0.0369
443	SLU 64	0.11	-0.06	50.32	-0.5968	15.5395	0.0252
443	SLU 65	0.12	-0.1	50.32	-0.5966	15.5378	0.0376

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
443	SLU 66	0.11	-0.05	51.2	-0.6073	15.8087	0.0215
443	SLU 67	0.12	-0.07	51.2	-0.6072	15.8077	0.029
443	SLU 68	0.12	-0.1	50.86	-0.6031	15.7035	0.0375
443	SLU 69	0.12	-0.05	51.74	-0.6138	15.9744	0.0215
443	SLU 70	0.12	-0.07	51.74	-0.6137	15.9733	0.0289
443	SLU 71	0.12	-0.06	51.4	-0.6098	15.8709	0.025
443	SLU 72	0.12	-0.08	51.4	-0.6097	15.8698	0.0324
443	SLU 73	0.14	-0.04	55.06	-0.6518	17.0054	0.0184
443	SLU 74	0.14	0	55.94	-0.6625	17.2762	0.0023
443	SLU 75	0.14	-0.02	55.94	-0.6624	17.2752	0.0098
443	SLU 76	0.15	-0.04	55.6	-0.6583	17.171	0.0183
443	SLU 77	0.14	0	56.49	-0.669	17.4419	0.0022
443	SLU 78	0.15	-0.02	56.48	-0.6689	17.4409	0.0097
443	SLU 79	0.14	-0.01	56.14	-0.665	17.3384	0.0058
443	SLU 80	0.15	-0.03	56.14	-0.6649	17.3374	0.0132
443	SLU 81	0.15	0.01	57.09	-0.6756	17.636	-0.0023
443	SLU 82	0.15	-0.01	57.09	-0.6755	17.635	0.0052
443	SLU 83	0.15	0.02	57.63	-0.6821	17.8017	-0.0024
443	SLU 84	0.15	-0.01	57.63	-0.682	17.8007	0.0051
443	SLE RA 1	0.08	-0.07	37.82	-0.4487	11.6819	0.0264
443	SLE RA 2	0.09	-0.09	37.82	-0.4486	11.6808	0.0346
443	SLE RA 3	0.08	-0.06	38.41	-0.4557	11.8614	0.0239
443	SLE RA 4	0.09	-0.08	38.41	-0.4556	11.8607	0.0289
443	SLE RA 5	0.09	-0.09	38.18	-0.4529	11.7913	0.0346
443	SLE RA 6	0.09	-0.06	38.77	-0.46	11.9718	0.0239
443	SLE RA 7	0.09	-0.08	38.77	-0.46	11.9712	0.0288
443	SLE RA 8	0.09	-0.07	38.54	-0.4574	11.9028	0.0263
443	SLE RA 9	0.09	-0.08	38.54	-0.4573	11.9022	0.0312
443	SLE RA 10	0.1	-0.06	40.98	-0.4854	12.6592	0.0218
443	SLE RA 11	0.1	-0.03	41.57	-0.4925	12.8398	0.0111
443	SLE RA 12	0.1	-0.04	41.57	-0.4924	12.8391	0.0161
443	SLE RA 13	0.11	-0.06	41.34	-0.4897	12.7696	0.0218
443	SLE RA 14	0.1	-0.03	41.93	-0.4968	12.9502	0.0111
443	SLE RA 15	0.11	-0.04	41.93	-0.4968	12.9495	0.016
443	SLE RA 16	0.1	-0.03	41.7	-0.4942	12.8812	0.0134
443	SLE RA 17	0.11	-0.05	41.7	-0.4941	12.8805	0.0184
443	SLE RA 18	0.11	-0.02	42.33	-0.5013	13.0796	0.0081
443	SLE RA 19	0.11	-0.03	42.33	-0.5012	13.0789	0.013
443	SLE RA 20	0.11	-0.02	42.7	-0.5056	13.1901	0.008
443	SLE RA 21	0.11	-0.03	42.69	-0.5055	13.1894	0.013
443	SLE FR 1	0.08	-0.07	37.82	-0.4487	11.6819	0.0264
443	SLE FR 2	0.08	-0.07	37.82	-0.4487	11.6817	0.028
443	SLE FR 3	0.08	-0.07	37.96	-0.4504	11.7261	0.0263
443	SLE FR 4	0.09	-0.06	39.17	-0.4644	12.101	0.0225
443	SLE FR 5	0.09	-0.05	39.32	-0.4662	12.1454	0.0209
443	SLE FR 6	0.09	-0.04	40.08	-0.475	12.3808	0.0172
443	SLE QP 1	0.08	-0.07	37.82	-0.4487	11.6819	0.0264
443	SLE QP 2	0.09	-0.05	39.17	-0.4645	12.1012	0.0209
443	SLD 1	3.1	0.53	39.69	-0.4742	12.2439	-0.1264
443	SLD 2	3.26	0.56	39.72	-0.4749	12.2486	-0.1325
443	SLD 3	3.05	-0.5	39.52	-0.4692	12.1941	0.2344
443	SLD 4	3.21	-0.47	39.55	-0.4699	12.1989	0.2283
443	SLD 5	1.04	1.68	39.59	-0.4748	12.2186	-0.5694
443	SLD 6	1.14	1.7	39.61	-0.4753	12.2217	-0.5735
443	SLD 7	0.87	-1.76	39.01	-0.4582	12.0529	0.6333
443	SLD 8	0.98	-1.74	39.03	-0.4586	12.056	0.6292
443	SLD 9	-0.8	1.63	39.32	-0.4703	12.1465	-0.5875
443	SLD 10	-0.7	1.65	39.34	-0.4707	12.1496	-0.5915
443	SLD 11	-0.97	-1.81	38.74	-0.4537	11.9808	0.6153
443	SLD 12	-0.86	-1.79	38.76	-0.4541	11.9839	0.6112
443	SLD 13	-3.03	0.36	38.8	-0.4591	12.0036	-0.1865
443	SLD 14	-2.87	0.39	38.83	-0.4597	12.0083	-0.1927
443	SLD 15	-3.08	-0.67	38.63	-0.4541	11.9539	0.1743
443	SLD 16	-2.92	-0.64	38.66	-0.4547	11.9586	0.1681
443	SLV 1	7.12	1.28	40.38	-0.4871	12.4343	-0.3102
443	SLV 2	7.5	1.35	40.46	-0.4886	12.4453	-0.3246
443	SLV 3	7.01	-1.06	39.98	-0.4757	12.3192	0.507
443	SLV 4	7.39	-0.99	40.06	-0.4773	12.3303	0.4926
443	SLV 5	2.3	3.88	40.13	-0.4882	12.3737	-1.3154
443	SLV 6	2.55	3.92	40.18	-0.4892	12.3809	-1.3247
443	SLV 7	1.92	-3.91	38.8	-0.4503	11.9902	1.4087
443	SLV 8	2.17	-3.87	38.85	-0.4514	11.9974	1.3993
443	SLV 9	-2	3.76	39.5	-0.4776	12.2051	-1.3576
443	SLV 10	-1.75	3.8	39.55	-0.4786	12.2123	-1.3669
443	SLV 11	-2.38	-4.03	38.17	-0.4397	11.8216	1.3665
443	SLV 12	-2.13	-3.99	38.22	-0.4407	11.8288	1.3571
443	SLV 13	-7.21	0.88	38.29	-0.4517	11.8722	-0.4509
443	SLV 14	-6.83	0.95	38.37	-0.4532	11.8833	-0.4652
443	SLV 15	-7.33	-1.45	37.89	-0.4403	11.7572	0.3663
443	SLV 16	-6.94	-1.39	37.97	-0.4419	11.7682	0.352
443	CRTFP Ux+	0	0	0	0	0	0
443	CRTFP Ux-	0	0	0	0	0	0
443	CRTFP Uy+	0	0	0	0	0	0
443	CRTFP Uy-	0	0	0	0	0	0
447	SLU 1	-0.63	-1.07	59.47	-0.013	-0.2143	-0.0183
447	SLU 2	-0.61	-1.15	59.46	-0.0126	-0.2151	-0.0174
447	SLU 3	-0.65	-1.09	60.91	-0.0132	-0.2201	-0.0189
447	SLU 4	-0.64	-1.14	60.9	-0.013	-0.2206	-0.0183
447	SLU 5	-0.63	-1.17	60.36	-0.0129	-0.2182	-0.0177
447	SLU 6	-0.66	-1.1	61.81	-0.0135	-0.2232	-0.0192

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
447	SLU 7	-0.65	-1.15	61.8	-0.0133	-0.2237	-0.0187
447	SLU 8	-0.66	-1.1	61.28	-0.0135	-0.2204	-0.019
447	SLU 9	-0.65	-1.15	61.27	-0.0133	-0.221	-0.0184
447	SLU 10	-0.62	-1.2	66.56	-0.0123	-0.2529	-0.0195
447	SLU 11	-0.66	-1.13	68.01	-0.013	-0.2579	-0.0209
447	SLU 12	-0.65	-1.18	68	-0.0127	-0.2584	-0.0204
447	SLU 13	-0.64	-1.21	67.47	-0.0126	-0.256	-0.0198
447	SLU 14	-0.67	-1.14	68.91	-0.0132	-0.261	-0.0213
447	SLU 15	-0.66	-1.19	68.91	-0.013	-0.2615	-0.0208
447	SLU 16	-0.67	-1.14	68.38	-0.0132	-0.2582	-0.0211
447	SLU 17	-0.66	-1.19	68.37	-0.013	-0.2587	-0.0205
447	SLU 18	-0.64	-1.13	69.62	-0.0126	-0.2682	-0.0212
447	SLU 19	-0.63	-1.18	69.62	-0.0123	-0.2688	-0.0207
447	SLU 20	-0.66	-1.15	70.52	-0.0128	-0.2713	-0.0216
447	SLU 21	-0.65	-1.2	70.52	-0.0126	-0.2718	-0.0211
447	SLU 22	-0.69	-1.07	66.29	-0.0123	-0.2373	-0.0213
447	SLU 23	-0.68	-1.15	66.28	-0.0119	-0.2382	-0.0205
447	SLU 24	-0.71	-1.08	67.73	-0.0126	-0.2431	-0.0219
447	SLU 25	-0.7	-1.13	67.72	-0.0124	-0.2437	-0.0214
447	SLU 26	-0.69	-1.16	67.18	-0.0122	-0.2413	-0.0208
447	SLU 27	-0.72	-1.09	68.63	-0.0128	-0.2462	-0.0223
447	SLU 28	-0.71	-1.14	68.62	-0.0126	-0.2467	-0.0218
447	SLU 29	-0.72	-1.09	68.1	-0.0129	-0.2435	-0.022
447	SLU 30	-0.71	-1.14	68.09	-0.0126	-0.244	-0.0215
447	SLU 31	-0.69	-1.19	73.39	-0.0117	-0.276	-0.0225
447	SLU 32	-0.72	-1.12	74.83	-0.0123	-0.2809	-0.024
447	SLU 33	-0.71	-1.17	74.83	-0.0121	-0.2814	-0.0235
447	SLU 34	-0.7	-1.2	74.29	-0.0119	-0.279	-0.0229
447	SLU 35	-0.73	-1.14	75.74	-0.0126	-0.284	-0.0244
447	SLU 36	-0.72	-1.18	75.73	-0.0123	-0.2845	-0.0238
447	SLU 37	-0.73	-1.14	75.2	-0.0126	-0.2813	-0.0241
447	SLU 38	-0.72	-1.18	75.19	-0.0123	-0.2818	-0.0236
447	SLU 39	-0.71	-1.13	76.44	-0.0119	-0.2913	-0.0243
447	SLU 40	-0.7	-1.18	76.44	-0.0117	-0.2918	-0.0238
447	SLU 41	-0.72	-1.14	77.35	-0.0122	-0.2944	-0.0247
447	SLU 42	-0.71	-1.19	77.34	-0.0119	-0.2949	-0.0241
447	SLU 43	-0.8	-1.4	74.98	-0.0171	-0.2707	-0.0227
447	SLU 44	-0.78	-1.48	74.96	-0.0167	-0.2715	-0.0218
447	SLU 45	-0.81	-1.41	76.41	-0.0174	-0.2765	-0.0233
447	SLU 46	-0.8	-1.46	76.4	-0.0171	-0.277	-0.0227
447	SLU 47	-0.79	-1.49	75.86	-0.017	-0.2746	-0.0221
447	SLU 48	-0.83	-1.43	77.31	-0.0176	-0.2796	-0.0236
447	SLU 49	-0.82	-1.47	77.3	-0.0174	-0.2801	-0.0231
447	SLU 50	-0.82	-1.42	76.78	-0.0176	-0.2768	-0.0234
447	SLU 51	-0.81	-1.47	76.77	-0.0174	-0.2773	-0.0229
447	SLU 52	-0.79	-1.52	82.07	-0.0164	-0.3093	-0.0239
447	SLU 53	-0.82	-1.45	83.52	-0.0171	-0.3143	-0.0254
447	SLU 54	-0.81	-1.5	83.51	-0.0168	-0.3148	-0.0248
447	SLU 55	-0.8	-1.53	82.97	-0.0167	-0.3124	-0.0242
447	SLU 56	-0.84	-1.47	84.42	-0.0173	-0.3174	-0.0257
447	SLU 57	-0.83	-1.52	84.41	-0.0171	-0.3179	-0.0252
447	SLU 58	-0.83	-1.47	83.88	-0.0174	-0.3146	-0.0255
447	SLU 59	-0.82	-1.52	83.88	-0.0171	-0.3151	-0.0249
447	SLU 60	-0.81	-1.46	85.13	-0.0167	-0.3246	-0.0257
447	SLU 61	-0.8	-1.51	85.12	-0.0165	-0.3251	-0.0251
447	SLU 62	-0.82	-1.47	86.03	-0.017	-0.3277	-0.026
447	SLU 63	-0.81	-1.52	86.02	-0.0167	-0.3282	-0.0255
447	SLU 64	-0.86	-1.39	81.8	-0.0165	-0.2937	-0.0258
447	SLU 65	-0.84	-1.47	81.78	-0.0161	-0.2946	-0.0249
447	SLU 66	-0.88	-1.4	83.23	-0.0167	-0.2995	-0.0264
447	SLU 67	-0.87	-1.45	83.22	-0.0165	-0.3	-0.0258
447	SLU 68	-0.86	-1.48	82.69	-0.0163	-0.2976	-0.0252
447	SLU 69	-0.89	-1.42	84.13	-0.017	-0.3026	-0.0267
447	SLU 70	-0.88	-1.47	84.13	-0.0167	-0.3031	-0.0262
447	SLU 71	-0.89	-1.42	83.6	-0.017	-0.2999	-0.0265
447	SLU 72	-0.88	-1.47	83.59	-0.0168	-0.3004	-0.0259
447	SLU 73	-0.85	-1.51	88.89	-0.0158	-0.3323	-0.027
447	SLU 74	-0.89	-1.45	90.34	-0.0164	-0.3373	-0.0285
447	SLU 75	-0.88	-1.5	90.33	-0.0162	-0.3378	-0.0279
447	SLU 76	-0.87	-1.53	89.79	-0.016	-0.3354	-0.0273
447	SLU 77	-0.9	-1.46	91.24	-0.0167	-0.3404	-0.0288
447	SLU 78	-0.89	-1.51	91.23	-0.0164	-0.3409	-0.0283
447	SLU 79	-0.9	-1.46	90.71	-0.0167	-0.3376	-0.0286
447	SLU 80	-0.89	-1.51	90.7	-0.0165	-0.3382	-0.028
447	SLU 81	-0.87	-1.45	91.95	-0.016	-0.3477	-0.0288
447	SLU 82	-0.86	-1.5	91.94	-0.0158	-0.3482	-0.0282
447	SLU 83	-0.89	-1.46	92.85	-0.0163	-0.3508	-0.0291
447	SLU 84	-0.88	-1.51	92.84	-0.0161	-0.3513	-0.0286
447	SLE RA 1	-0.65	-1.07	61.42	-0.0128	-0.2209	-0.0191
447	SLE RA 2	-0.64	-1.13	61.41	-0.0125	-0.2214	-0.0185
447	SLE RA 3	-0.66	-1.08	62.38	-0.013	-0.2247	-0.0195
447	SLE RA 4	-0.65	-1.11	62.37	-0.0128	-0.2251	-0.0192
447	SLE RA 5	-0.65	-1.13	62.01	-0.0127	-0.2235	-0.0188
447	SLE RA 6	-0.67	-1.09	62.98	-0.0131	-0.2268	-0.0198
447	SLE RA 7	-0.66	-1.12	62.97	-0.013	-0.2271	-0.0194
447	SLE RA 8	-0.66	-1.09	62.62	-0.0132	-0.225	-0.0196
447	SLE RA 9	-0.66	-1.12	62.62	-0.013	-0.2253	-0.0193
447	SLE RA 10	-0.64	-1.15	66.15	-0.0124	-0.2466	-0.0199
447	SLE RA 11	-0.67	-1.11	67.12	-0.0128	-0.2499	-0.0209
447	SLE RA 12	-0.66	-1.14	67.11	-0.0126	-0.2503	-0.0206

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
447	SLE RA 13	-0.65	-1.16	66.75	-0.0125	-0.2487	-0.0202
447	SLE RA 14	-0.67	-1.12	67.72	-0.013	-0.252	-0.0212
447	SLE RA 15	-0.67	-1.15	67.71	-0.0128	-0.2523	-0.0208
447	SLE RA 16	-0.67	-1.12	67.36	-0.013	-0.2502	-0.021
447	SLE RA 17	-0.67	-1.15	67.36	-0.0128	-0.2505	-0.0206
447	SLE RA 18	-0.66	-1.11	68.19	-0.0125	-0.2568	-0.0211
447	SLE RA 19	-0.65	-1.14	68.18	-0.0124	-0.2572	-0.0208
447	SLE RA 20	-0.67	-1.12	68.79	-0.0127	-0.2589	-0.0214
447	SLE RA 21	-0.66	-1.15	68.78	-0.0125	-0.2592	-0.021
447	SLE FR 1	-0.65	-1.07	61.42	-0.0128	-0.2209	-0.0191
447	SLE FR 2	-0.65	-1.08	61.42	-0.0128	-0.221	-0.019
447	SLE FR 3	-0.65	-1.07	61.66	-0.0129	-0.2217	-0.0192
447	SLE FR 4	-0.65	-1.09	63.45	-0.0127	-0.2318	-0.0196
447	SLE FR 5	-0.65	-1.09	63.69	-0.0128	-0.2325	-0.0198
447	SLE FR 6	-0.65	-1.09	64.81	-0.0127	-0.2388	-0.0201
447	SLE QP 1	-0.65	-1.07	61.42	-0.0128	-0.2209	-0.0191
447	SLE QP 2	-0.65	-1.08	63.45	-0.0127	-0.2316	-0.0197
447	SLD 1	4.72	-0.68	69.41	-0.0203	-0.0454	-0.0072
447	SLD 2	4.99	-1.08	69.25	-0.0183	-0.0499	0.0062
447	SLD 3	4.8	-2.31	69.25	-0.0145	-0.0724	-0.0029
447	SLD 4	5.07	-2.71	69.09	-0.0125	-0.0769	0.0105
447	SLD 5	0.78	1.57	65.51	-0.0242	-0.134	-0.025
447	SLD 6	0.96	1.31	65.4	-0.0228	-0.137	-0.0161
447	SLD 7	1.07	-3.84	64.98	-0.0048	-0.224	-0.0106
447	SLD 8	1.25	-4.11	64.87	-0.0034	-0.227	-0.0017
447	SLD 9	-2.55	1.94	62.03	-0.022	-0.2363	-0.0378
447	SLD 10	-2.37	1.68	61.92	-0.0206	-0.2393	-0.0289
447	SLD 11	-2.26	-3.48	61.5	-0.0026	-0.3263	-0.0234
447	SLD 12	-2.08	-3.74	61.39	-0.0012	-0.3293	-0.0145
447	SLD 13	-6.37	0.54	57.82	-0.013	-0.3864	-0.05
447	SLD 14	-6.1	0.14	57.65	-0.0109	-0.3909	-0.0366
447	SLD 15	-6.29	-1.09	57.66	-0.0072	-0.4134	-0.0457
447	SLD 16	-6.02	-1.48	57.49	-0.0051	-0.4179	-0.0323
447	SLV 1	11.9	-0.22	77.39	-0.0304	0.2034	0.0097
447	SLV 2	12.53	-1.14	77.01	-0.0256	0.1927	0.0409
447	SLV 3	12.1	-3.89	77.02	-0.0172	0.142	0.0196
447	SLV 4	12.73	-4.81	76.64	-0.0124	0.1313	0.0507
447	SLV 5	2.7	4.92	68.26	-0.0389	-0.006	-0.0313
447	SLV 6	3.1	4.32	68.01	-0.0358	-0.013	-0.011
447	SLV 7	3.37	-7.34	67.03	0.0051	-0.2109	0.0015
447	SLV 8	3.78	-7.94	66.78	0.0083	-0.2179	0.0218
447	SLV 9	-5.08	5.78	60.12	-0.0337	-0.2454	-0.0612
447	SLV 10	-4.67	5.18	59.87	-0.0306	-0.2524	-0.0409
447	SLV 11	-4.41	-6.48	58.89	0.0103	-0.4503	-0.0285
447	SLV 12	-4	-7.08	58.64	0.0135	-0.4573	-0.0082
447	SLV 13	-14.03	2.65	50.27	-0.0131	-0.5946	-0.0902
447	SLV 14	-13.4	1.73	49.88	-0.0083	-0.6053	-0.059
447	SLV 15	-13.83	-1.03	49.9	0.0001	-0.656	-0.0804
447	SLV 16	-13.2	-1.95	49.51	0.0049	-0.6667	-0.0492
447	CRTFP Ux+	0	0	0	0	0	0
447	CRTFP Ux-	0	0	0	0	0	0
451	SLU 1	0.52	-0.58	60.23	-0.0203	0.27	-0.0148
451	SLU 2	0.53	-0.61	60.24	-0.0201	0.2706	-0.014
451	SLU 3	0.53	-0.59	61.68	-0.0208	0.2764	-0.0151
451	SLU 4	0.54	-0.61	61.68	-0.0208	0.2768	-0.0147
451	SLU 5	0.54	-0.63	61.14	-0.0206	0.2736	-0.0143
451	SLU 6	0.54	-0.6	62.57	-0.0213	0.2795	-0.0154
451	SLU 7	0.55	-0.62	62.58	-0.0212	0.2798	-0.0149
451	SLU 8	0.54	-0.61	62.02	-0.0212	0.2761	-0.0154
451	SLU 9	0.55	-0.63	62.03	-0.0211	0.2765	-0.0149
451	SLU 10	0.56	-0.58	67.49	-0.0211	0.3102	-0.0157
451	SLU 11	0.56	-0.56	68.93	-0.0218	0.316	-0.0168
451	SLU 12	0.57	-0.58	68.93	-0.0217	0.3164	-0.0163
451	SLU 13	0.57	-0.6	68.39	-0.0215	0.3133	-0.016
451	SLU 14	0.57	-0.57	69.83	-0.0223	0.3191	-0.017
451	SLU 15	0.58	-0.59	69.83	-0.0222	0.3195	-0.0166
451	SLU 16	0.56	-0.58	69.28	-0.0222	0.3157	-0.017
451	SLU 17	0.57	-0.6	69.28	-0.0221	0.3161	-0.0166
451	SLU 18	0.55	-0.54	70.6	-0.0217	0.3266	-0.0171
451	SLU 19	0.56	-0.56	70.6	-0.0216	0.3269	-0.0167
451	SLU 20	0.56	-0.55	71.49	-0.0221	0.3296	-0.0174
451	SLU 21	0.57	-0.57	71.49	-0.022	0.33	-0.017
451	SLU 22	0.58	-0.51	67.17	-0.0209	0.2888	-0.0155
451	SLU 23	0.6	-0.54	67.18	-0.0208	0.2894	-0.0147
451	SLU 24	0.6	-0.52	68.61	-0.0215	0.2952	-0.0158
451	SLU 25	0.61	-0.54	68.62	-0.0214	0.2956	-0.0153
451	SLU 26	0.61	-0.56	68.07	-0.0212	0.2924	-0.015
451	SLU 27	0.6	-0.53	69.51	-0.0219	0.2983	-0.0161
451	SLU 28	0.61	-0.55	69.51	-0.0218	0.2986	-0.0156
451	SLU 29	0.6	-0.54	68.96	-0.0218	0.2949	-0.0161
451	SLU 30	0.61	-0.56	68.96	-0.0217	0.2953	-0.0156
451	SLU 31	0.62	-0.51	74.43	-0.0217	0.329	-0.0164
451	SLU 32	0.62	-0.49	75.87	-0.0224	0.3348	-0.0174
451	SLU 33	0.63	-0.51	75.87	-0.0223	0.3352	-0.017
451	SLU 34	0.63	-0.53	75.32	-0.0222	0.3321	-0.0166
451	SLU 35	0.63	-0.5	76.76	-0.0229	0.3379	-0.0177
451	SLU 36	0.64	-0.52	76.76	-0.0228	0.3383	-0.0173
451	SLU 37	0.62	-0.51	76.21	-0.0228	0.3345	-0.0177
451	SLU 38	0.63	-0.53	76.22	-0.0227	0.3349	-0.0172
451	SLU 39	0.62	-0.46	77.53	-0.0223	0.3454	-0.0178

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
451	SLU 40	0.63	-0.48	77.54	-0.0222	0.3457	-0.0174
451	SLU 41	0.62	-0.48	78.43	-0.0227	0.3484	-0.0181
451	SLU 42	0.63	-0.5	78.43	-0.0227	0.3488	-0.0177
451	SLU 43	0.65	-0.78	75.93	-0.0262	0.3445	-0.019
451	SLU 44	0.67	-0.81	75.93	-0.026	0.3451	-0.0182
451	SLU 45	0.67	-0.79	77.37	-0.0267	0.351	-0.0193
451	SLU 46	0.68	-0.81	77.37	-0.0266	0.3513	-0.0189
451	SLU 47	0.68	-0.83	76.83	-0.0265	0.3482	-0.0185
451	SLU 48	0.68	-0.8	78.26	-0.0272	0.354	-0.0196
451	SLU 49	0.69	-0.82	78.27	-0.0271	0.3544	-0.0191
451	SLU 50	0.67	-0.81	77.72	-0.0271	0.3507	-0.0196
451	SLU 51	0.68	-0.83	77.72	-0.027	0.351	-0.0191
451	SLU 52	0.69	-0.78	83.19	-0.027	0.3847	-0.0199
451	SLU 53	0.69	-0.76	84.62	-0.0277	0.3906	-0.021
451	SLU 54	0.7	-0.78	84.63	-0.0276	0.3909	-0.0205
451	SLU 55	0.7	-0.8	84.08	-0.0274	0.3878	-0.0202
451	SLU 56	0.7	-0.77	85.52	-0.0281	0.3937	-0.0212
451	SLU 57	0.71	-0.79	85.52	-0.028	0.394	-0.0208
451	SLU 58	0.7	-0.78	84.97	-0.028	0.3903	-0.0212
451	SLU 59	0.71	-0.8	84.97	-0.0279	0.3906	-0.0208
451	SLU 60	0.69	-0.74	86.29	-0.0275	0.4011	-0.0214
451	SLU 61	0.7	-0.76	86.29	-0.0274	0.4015	-0.0209
451	SLU 62	0.7	-0.75	87.18	-0.028	0.4042	-0.0216
451	SLU 63	0.71	-0.77	87.19	-0.0279	0.4045	-0.0212
451	SLU 64	0.72	-0.71	82.86	-0.0268	0.3633	-0.0197
451	SLU 65	0.73	-0.74	82.87	-0.0266	0.3639	-0.0189
451	SLU 66	0.73	-0.72	84.31	-0.0273	0.3698	-0.02
451	SLU 67	0.74	-0.74	84.31	-0.0272	0.3701	-0.0195
451	SLU 68	0.74	-0.76	83.76	-0.0271	0.367	-0.0192
451	SLU 69	0.74	-0.73	85.2	-0.0278	0.3728	-0.0203
451	SLU 70	0.75	-0.75	85.2	-0.0277	0.3732	-0.0198
451	SLU 71	0.73	-0.74	84.65	-0.0277	0.3695	-0.0203
451	SLU 72	0.74	-0.76	84.66	-0.0276	0.3698	-0.0198
451	SLU 73	0.76	-0.71	90.12	-0.0276	0.4035	-0.0206
451	SLU 74	0.76	-0.68	91.56	-0.0283	0.4094	-0.0216
451	SLU 75	0.76	-0.7	91.56	-0.0282	0.4097	-0.0212
451	SLU 76	0.76	-0.73	91.02	-0.028	0.4066	-0.0209
451	SLU 77	0.76	-0.7	92.45	-0.0288	0.4125	-0.0219
451	SLU 78	0.77	-0.72	92.46	-0.0287	0.4128	-0.0215
451	SLU 79	0.76	-0.71	91.9	-0.0287	0.4091	-0.0219
451	SLU 80	0.77	-0.73	91.91	-0.0286	0.4094	-0.0214
451	SLU 81	0.75	-0.66	93.22	-0.0282	0.4199	-0.022
451	SLU 82	0.76	-0.68	93.23	-0.0281	0.4203	-0.0216
451	SLU 83	0.76	-0.68	94.12	-0.0286	0.423	-0.0223
451	SLU 84	0.77	-0.7	94.12	-0.0285	0.4233	-0.0219
451	SLE RA 1	0.54	-0.56	62.22	-0.0205	0.2753	-0.015
451	SLE RA 2	0.55	-0.58	62.22	-0.0204	0.2757	-0.0145
451	SLE RA 3	0.55	-0.57	63.18	-0.0208	0.2796	-0.0152
451	SLE RA 4	0.55	-0.58	63.18	-0.0208	0.2799	-0.0149
451	SLE RA 5	0.55	-0.59	62.82	-0.0207	0.2778	-0.0147
451	SLE RA 6	0.55	-0.58	63.77	-0.0211	0.2817	-0.0154
451	SLE RA 7	0.56	-0.59	63.78	-0.0211	0.2819	-0.0151
451	SLE RA 8	0.55	-0.58	63.41	-0.0211	0.2794	-0.0154
451	SLE RA 9	0.55	-0.6	63.41	-0.021	0.2797	-0.0151
451	SLE RA 10	0.56	-0.56	67.06	-0.021	0.3021	-0.0156
451	SLE RA 11	0.56	-0.54	68.01	-0.0215	0.3061	-0.0163
451	SLE RA 12	0.57	-0.56	68.02	-0.0214	0.3063	-0.016
451	SLE RA 13	0.57	-0.57	67.65	-0.0213	0.3042	-0.0158
451	SLE RA 14	0.57	-0.56	68.61	-0.0218	0.3081	-0.0165
451	SLE RA 15	0.58	-0.57	68.61	-0.0217	0.3083	-0.0162
451	SLE RA 16	0.57	-0.56	68.24	-0.0217	0.3058	-0.0165
451	SLE RA 17	0.57	-0.57	68.25	-0.0217	0.3061	-0.0162
451	SLE RA 18	0.56	-0.53	69.12	-0.0214	0.3131	-0.0166
451	SLE RA 19	0.57	-0.54	69.13	-0.0213	0.3133	-0.0163
451	SLE RA 20	0.57	-0.54	69.72	-0.0217	0.3151	-0.0167
451	SLE RA 21	0.57	-0.55	69.72	-0.0216	0.3154	-0.0164
451	SLE FR 1	0.54	-0.56	62.22	-0.0205	0.2753	-0.015
451	SLE FR 2	0.54	-0.56	62.22	-0.0204	0.2754	-0.0149
451	SLE FR 3	0.54	-0.56	62.45	-0.0206	0.2762	-0.0151
451	SLE FR 4	0.55	-0.56	64.29	-0.0207	0.2867	-0.0154
451	SLE FR 5	0.55	-0.56	64.53	-0.0209	0.2875	-0.0155
451	SLE FR 6	0.55	-0.55	65.67	-0.0209	0.2942	-0.0158
451	SLE QP 1	0.54	-0.56	62.22	-0.0205	0.2753	-0.015
451	SLE QP 2	0.54	-0.55	64.29	-0.0207	0.2867	-0.0155
451	SLD 1	5.9	0.6	59.36	-0.0173	0.3866	0.0149
451	SLD 2	6.19	1.01	59.56	-0.0193	0.3785	0.028
451	SLD 3	5.81	-0.98	59.15	-0.0112	0.416	0.0128
451	SLD 4	6.09	-0.57	59.35	-0.0132	0.4079	0.0258
451	SLD 5	2.25	2.12	63.09	-0.0285	0.2735	-0.0054
451	SLD 6	2.44	2.39	63.23	-0.0299	0.2681	0.0032
451	SLD 7	1.92	-3.15	62.39	-0.0083	0.3716	-0.0127
451	SLD 8	2.11	-2.88	62.52	-0.0096	0.3662	-0.004
451	SLD 9	-1.03	1.78	66.06	-0.0318	0.2071	-0.0269
451	SLD 10	-0.83	2.05	66.19	-0.0332	0.2017	-0.0183
451	SLD 11	-1.35	-3.49	65.35	-0.0116	0.3052	-0.0342
451	SLD 12	-1.16	-3.22	65.48	-0.0129	0.2999	-0.0255
451	SLD 13	-5.01	-0.53	69.23	-0.0283	0.1654	-0.0567
451	SLD 14	-4.72	-0.12	69.43	-0.0303	0.1573	-0.0437
451	SLD 15	-5.1	-2.11	69.02	-0.0222	0.1948	-0.0589
451	SLD 16	-4.82	-1.7	69.22	-0.0242	0.1868	-0.0458

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
451	SLV 1	13.08	2.09	52.75	-0.0124	0.5211	0.0556
451	SLV 2	13.75	3.04	53.21	-0.0171	0.5023	0.0861
451	SLV 3	12.85	-1.49	52.26	0.0013	0.588	0.0506
451	SLV 4	13.52	-0.54	52.73	-0.0033	0.5691	0.081
451	SLV 5	4.53	5.5	61.48	-0.0383	0.2589	0.0082
451	SLV 6	4.97	6.12	61.78	-0.0413	0.2466	0.028
451	SLV 7	3.77	-6.43	59.86	0.0076	0.4817	-0.0086
451	SLV 8	4.21	-5.81	60.17	0.0045	0.4695	0.0112
451	SLV 9	-3.12	4.71	68.41	-0.046	0.1038	-0.0421
451	SLV 10	-2.69	5.33	68.71	-0.0491	0.0916	-0.0223
451	SLV 11	-3.88	-7.22	66.79	-0.0001	0.3267	-0.0589
451	SLV 12	-3.44	-6.61	67.1	-0.0032	0.3144	-0.0391
451	SLV 13	-12.43	-0.56	75.85	-0.0382	0.0042	-0.1119
451	SLV 14	-11.76	0.39	76.31	-0.0428	-0.0146	-0.0815
451	SLV 15	-12.66	-4.14	75.36	-0.0244	0.071	-0.117
451	SLV 16	-11.99	-3.19	75.83	-0.0291	0.0522	-0.0866
451	CRTFP Ux+	0	0	0	0	0	0
451	CRTFP Ux-	0	0	0	0	0	0
452	SLU 1	0.54	0.2	36.64	0.0307	8.2508	-0.074
452	SLU 2	0.55	0.19	36.64	0.0308	8.2531	-0.0674
452	SLU 3	0.56	0.21	37.52	0.0315	8.4376	-0.0752
452	SLU 4	0.56	0.2	37.52	0.0315	8.439	-0.0712
452	SLU 5	0.56	0.18	37.2	0.0312	8.3692	-0.066
452	SLU 6	0.56	0.2	38.07	0.0319	8.5538	-0.0738
452	SLU 7	0.57	0.19	38.08	0.0319	8.5552	-0.0698
452	SLU 8	0.56	0.2	37.74	0.0316	8.483	-0.0712
452	SLU 9	0.56	0.18	37.75	0.0316	8.4844	-0.0672
452	SLU 10	0.57	0.28	40.8	0.0352	9.1696	-0.1022
452	SLU 11	0.58	0.31	41.68	0.0359	9.3542	-0.11
452	SLU 12	0.59	0.29	41.68	0.036	9.3556	-0.106
452	SLU 13	0.58	0.28	41.35	0.0357	9.2858	-0.1008
452	SLU 14	0.59	0.3	42.23	0.0364	9.4703	-0.1086
452	SLU 15	0.59	0.29	42.23	0.0364	9.4717	-0.1046
452	SLU 16	0.58	0.29	41.9	0.0361	9.3996	-0.106
452	SLU 17	0.59	0.28	41.9	0.0361	9.401	-0.102
452	SLU 18	0.58	0.35	42.57	0.0371	9.5601	-0.1237
452	SLU 19	0.58	0.33	42.58	0.0371	9.5615	-0.1197
452	SLU 20	0.59	0.34	43.13	0.0375	9.6763	-0.1223
452	SLU 21	0.59	0.33	43.13	0.0376	9.6776	-0.1183
452	SLU 22	0.59	0.3	40.79	0.0353	9.1586	-0.1081
452	SLU 23	0.6	0.28	40.8	0.0353	9.1609	-0.1014
452	SLU 24	0.61	0.3	41.68	0.036	9.3455	-0.1092
452	SLU 25	0.61	0.29	41.68	0.036	9.3469	-0.1053
452	SLU 26	0.61	0.28	41.35	0.0357	9.2771	-0.1
452	SLU 27	0.62	0.3	42.23	0.0364	9.4616	-0.1078
452	SLU 28	0.62	0.29	42.23	0.0364	9.463	-0.1039
452	SLU 29	0.61	0.29	41.9	0.0361	9.3909	-0.1053
452	SLU 30	0.62	0.28	41.9	0.0361	9.3923	-0.1013
452	SLU 31	0.63	0.38	44.95	0.0397	10.0775	-0.1362
452	SLU 32	0.63	0.4	45.83	0.0405	10.2621	-0.1441
452	SLU 33	0.64	0.39	45.84	0.0405	10.2634	-0.1401
452	SLU 34	0.64	0.38	45.51	0.0402	10.1936	-0.1348
452	SLU 35	0.64	0.4	46.39	0.0409	10.3782	-0.1427
452	SLU 36	0.65	0.39	46.39	0.0409	10.3796	-0.1387
452	SLU 37	0.64	0.39	46.06	0.0406	10.3074	-0.1401
452	SLU 38	0.64	0.38	46.06	0.0406	10.3088	-0.1361
452	SLU 39	0.63	0.44	46.73	0.0416	10.468	-0.1578
452	SLU 40	0.64	0.43	46.73	0.0416	10.4694	-0.1538
452	SLU 41	0.64	0.44	47.28	0.0421	10.5841	-0.1564
452	SLU 42	0.64	0.43	47.29	0.0421	10.5855	-0.1524
452	SLU 43	0.68	0.23	46.2	0.0384	10.4147	-0.0845
452	SLU 44	0.69	0.21	46.21	0.0385	10.417	-0.0779
452	SLU 45	0.7	0.24	47.09	0.0392	10.6016	-0.0857
452	SLU 46	0.7	0.22	47.09	0.0392	10.603	-0.0817
452	SLU 47	0.7	0.21	46.76	0.0389	10.5332	-0.0765
452	SLU 48	0.71	0.23	47.64	0.0396	10.7177	-0.0843
452	SLU 49	0.71	0.22	47.64	0.0396	10.7191	-0.0803
452	SLU 50	0.7	0.22	47.31	0.0393	10.647	-0.0817
452	SLU 51	0.71	0.21	47.31	0.0393	10.6484	-0.0777
452	SLU 52	0.72	0.31	50.36	0.0429	11.3336	-0.1127
452	SLU 53	0.72	0.33	51.24	0.0436	11.5182	-0.1205
452	SLU 54	0.73	0.32	51.25	0.0436	11.5195	-0.1165
452	SLU 55	0.73	0.31	50.92	0.0433	11.4497	-0.1113
452	SLU 56	0.73	0.33	51.8	0.0441	11.6343	-0.1191
452	SLU 57	0.74	0.32	51.8	0.0441	11.6357	-0.1151
452	SLU 58	0.73	0.32	51.47	0.0437	11.5635	-0.1165
452	SLU 59	0.73	0.31	51.47	0.0438	11.5649	-0.1125
452	SLU 60	0.72	0.37	52.14	0.0448	11.7241	-0.1342
452	SLU 61	0.73	0.36	52.14	0.0448	11.7255	-0.1303
452	SLU 62	0.73	0.37	52.69	0.0452	11.8402	-0.1328
452	SLU 63	0.73	0.36	52.7	0.0452	11.8416	-0.1289
452	SLU 64	0.74	0.33	50.36	0.0429	11.3226	-0.1186
452	SLU 65	0.75	0.31	50.36	0.043	11.3249	-0.112
452	SLU 66	0.75	0.33	51.24	0.0437	11.5095	-0.1198
452	SLU 67	0.76	0.32	51.25	0.0437	11.5109	-0.1158
452	SLU 68	0.75	0.31	50.92	0.0434	11.441	-0.1106
452	SLU 69	0.76	0.33	51.8	0.0441	11.6256	-0.1184
452	SLU 70	0.77	0.32	51.8	0.0441	11.627	-0.1144
452	SLU 71	0.76	0.32	51.47	0.0438	11.5549	-0.1158
452	SLU 72	0.76	0.31	51.47	0.0438	11.5562	-0.1118

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
452	SLU 73	0.77	0.41	54.52	0.0474	12.2415	-0.1468
452	SLU 74	0.78	0.43	55.4	0.0481	12.426	-0.1546
452	SLU 75	0.78	0.42	55.4	0.0482	12.4274	-0.1506
452	SLU 76	0.78	0.41	55.07	0.0479	12.3576	-0.1454
452	SLU 77	0.79	0.43	55.95	0.0486	12.5421	-0.1532
452	SLU 78	0.79	0.42	55.96	0.0486	12.5435	-0.1492
452	SLU 79	0.78	0.42	55.62	0.0483	12.4714	-0.1506
452	SLU 80	0.79	0.41	55.63	0.0483	12.4728	-0.1466
452	SLU 81	0.77	0.47	56.29	0.0493	12.632	-0.1683
452	SLU 82	0.78	0.46	56.3	0.0493	12.6333	-0.1643
452	SLU 83	0.78	0.47	56.85	0.0497	12.7481	-0.1669
452	SLU 84	0.79	0.45	56.85	0.0498	12.7495	-0.1629
452	SLE RA 1	0.56	0.23	37.82	0.032	8.5102	-0.0837
452	SLE RA 2	0.56	0.22	37.83	0.0321	8.5117	-0.0793
452	SLE RA 3	0.57	0.23	38.41	0.0325	8.6347	-0.0845
452	SLE RA 4	0.57	0.23	38.42	0.0325	8.6357	-0.0819
452	SLE RA 5	0.57	0.22	38.2	0.0323	8.5891	-0.0784
452	SLE RA 6	0.57	0.23	38.78	0.0328	8.7122	-0.0836
452	SLE RA 7	0.57	0.22	38.78	0.0328	8.7131	-0.0809
452	SLE RA 8	0.57	0.23	38.56	0.0326	8.665	-0.0819
452	SLE RA 9	0.57	0.22	38.56	0.0326	8.6659	-0.0792
452	SLE RA 10	0.58	0.29	40.6	0.035	9.1227	-0.1025
452	SLE RA 11	0.58	0.3	41.18	0.0355	9.2458	-0.1077
452	SLE RA 12	0.59	0.29	41.19	0.0355	9.2467	-0.1051
452	SLE RA 13	0.58	0.28	40.97	0.0353	9.2002	-0.1016
452	SLE RA 14	0.59	0.3	41.55	0.0358	9.3232	-0.1068
452	SLE RA 15	0.59	0.29	41.56	0.0358	9.3241	-0.1041
452	SLE RA 16	0.58	0.29	41.33	0.0356	9.276	-0.1051
452	SLE RA 17	0.59	0.28	41.34	0.0356	9.277	-0.1024
452	SLE RA 18	0.58	0.33	41.78	0.0363	9.3831	-0.1169
452	SLE RA 19	0.58	0.32	41.78	0.0363	9.384	-0.1142
452	SLE RA 20	0.59	0.32	42.15	0.0366	9.4605	-0.1159
452	SLE RA 21	0.59	0.32	42.15	0.0366	9.4614	-0.1133
452	SLE FR 1	0.56	0.23	37.82	0.032	8.5102	-0.0837
452	SLE FR 2	0.56	0.23	37.82	0.032	8.5105	-0.0828
452	SLE FR 3	0.56	0.23	37.97	0.0321	8.5411	-0.0833
452	SLE FR 4	0.56	0.26	39.01	0.0333	8.7723	-0.0928
452	SLE FR 5	0.57	0.26	39.16	0.0334	8.803	-0.0933
452	SLE FR 6	0.57	0.28	39.8	0.0342	8.9466	-0.1003
452	SLE QP 1	0.56	0.23	37.82	0.032	8.5102	-0.0837
452	SLE QP 2	0.56	0.26	39.01	0.0333	8.772	-0.0937
452	SLD 1	3.65	0.8	28.1	0.0245	6.574	-0.2837
452	SLD 2	3.82	1.44	28.32	0.0228	6.5949	-0.5053
452	SLD 3	3.56	-0.51	27.79	0.0277	6.5411	0.1779
452	SLD 4	3.73	0.12	28.01	0.0259	6.562	-0.0437
452	SLD 5	1.59	2.31	36.18	0.0262	8.1587	-0.8104
452	SLD 6	1.7	2.73	36.32	0.025	8.1726	-0.9575
452	SLD 7	1.3	-2.09	35.13	0.0367	8.0491	0.7282
452	SLD 8	1.41	-1.66	35.27	0.0356	8.063	0.5811
452	SLD 9	-0.28	2.18	42.75	0.0311	9.4811	-0.7684
452	SLD 10	-0.17	2.61	42.89	0.0299	9.495	-0.9155
452	SLD 11	-0.58	-2.21	41.7	0.0416	9.3715	0.7702
452	SLD 12	-0.47	-1.79	41.84	0.0404	9.3854	0.6231
452	SLD 13	-2.6	0.4	50.02	0.0407	10.982	-0.1436
452	SLD 14	-2.43	1.03	50.23	0.0389	11.003	-0.3652
452	SLD 15	-2.69	-0.92	49.7	0.0439	10.9492	0.318
452	SLD 16	-2.52	-0.28	49.92	0.0421	10.9701	0.0963
452	SLV 1	7.77	1.49	13.48	0.0129	3.6293	-0.523
452	SLV 2	8.16	2.97	13.99	0.0088	3.6781	-1.0391
452	SLV 3	7.57	-1.5	12.76	0.02	3.552	0.5232
452	SLV 4	7.96	-0.02	13.27	0.0159	3.6008	0.0072
452	SLV 5	2.96	4.9	32.36	0.017	7.3379	-1.7186
452	SLV 6	3.22	5.87	32.69	0.0144	7.3696	-2.0548
452	SLV 7	2.29	-5.06	29.95	0.0409	7.0802	1.7689
452	SLV 8	2.54	-4.09	30.28	0.0382	7.112	1.4327
452	SLV 9	-1.42	4.61	47.74	0.0284	10.4321	-1.62
452	SLV 10	-1.16	5.58	48.07	0.0257	10.4638	-1.9563
452	SLV 11	-2.09	-5.35	45.33	0.0523	10.1744	1.8675
452	SLV 12	-1.84	-4.38	45.66	0.0496	10.2062	1.5312
452	SLV 13	-6.83	0.54	64.75	0.0507	13.9433	-0.1945
452	SLV 14	-6.44	2.02	65.26	0.0466	13.9921	-0.7106
452	SLV 15	-7.04	-2.45	64.03	0.0579	13.866	0.8517
452	SLV 16	-6.65	-0.97	64.54	0.0537	13.9148	0.3357
452	CRTFP Ux+	0	0	0	0	0	0
452	CRTFP Ux-	0	0	0	0	0	0
452	CRTFP Uy+	0	0	0	0	0	0
452	CRTFP Uy-	0	0	0	0	0	0
459	SLU 1	-0.43	0	32.85	0.0211	-4.1825	-0.0019
459	SLU 2	-0.42	-0.09	32.84	0.0214	-4.1836	-0.0232
459	SLU 3	-0.44	0	33.65	0.0216	-4.2736	-0.0004
459	SLU 4	-0.43	-0.05	33.64	0.0218	-4.2743	-0.0132
459	SLU 5	-0.43	-0.08	33.34	0.0217	-4.2405	-0.0218
459	SLU 6	-0.45	0.01	34.15	0.0219	-4.3306	0.0009
459	SLU 7	-0.44	-0.04	34.14	0.0221	-4.3312	-0.0118
459	SLU 8	-0.44	0.01	33.85	0.0217	-4.2964	0.0008
459	SLU 9	-0.44	-0.04	33.85	0.0219	-4.297	-0.012
459	SLU 10	-0.43	-0.03	36.57	0.0248	-4.6454	-0.0096
459	SLU 11	-0.45	0.06	37.38	0.0251	-4.7355	0.0132
459	SLU 12	-0.45	0.01	37.37	0.0252	-4.7361	0.0004
459	SLU 13	-0.44	-0.03	37.07	0.0251	-4.7024	-0.0082

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
459	SLU 14	-0.46	0.06	37.88	0.0254	-4.7925	0.0145
459	SLU 15	-0.46	0.01	37.87	0.0255	-4.7931	0.0018
459	SLU 16	-0.46	0.06	37.58	0.0252	-4.7583	0.0144
459	SLU 17	-0.45	0.01	37.58	0.0253	-4.7589	0.0016
459	SLU 18	-0.45	0.08	38.18	0.026	-4.8423	0.0175
459	SLU 19	-0.44	0.03	38.17	0.0262	-4.843	0.0047
459	SLU 20	-0.46	0.08	38.68	0.0263	-4.8993	0.0189
459	SLU 21	-0.45	0.03	38.67	0.0265	-4.8999	0.0061
459	SLU 22	-0.47	0.06	36.61	0.0246	-4.6405	0.0142
459	SLU 23	-0.46	-0.02	36.6	0.0248	-4.6416	-0.007
459	SLU 24	-0.48	0.07	37.4	0.0251	-4.7316	0.0157
459	SLU 25	-0.48	0.02	37.39	0.0253	-4.7323	0.003
459	SLU 26	-0.47	-0.02	37.1	0.0251	-4.6985	-0.0057
459	SLU 27	-0.49	0.08	37.9	0.0254	-4.7886	0.0171
459	SLU 28	-0.48	0.02	37.89	0.0256	-4.7892	0.0043
459	SLU 29	-0.49	0.07	37.61	0.0252	-4.7544	0.017
459	SLU 30	-0.48	0.02	37.6	0.0254	-4.755	0.0042
459	SLU 31	-0.48	0.03	40.33	0.0283	-5.1034	0.0066
459	SLU 32	-0.5	0.12	41.13	0.0285	-5.1935	0.0293
459	SLU 33	-0.49	0.07	41.12	0.0287	-5.1941	0.0166
459	SLU 34	-0.48	0.04	40.83	0.0286	-5.1604	0.0079
459	SLU 35	-0.5	0.13	41.63	0.0289	-5.2504	0.0307
459	SLU 36	-0.5	0.08	41.62	0.029	-5.2511	0.0179
459	SLU 37	-0.5	0.13	41.34	0.0286	-5.2163	0.0305
459	SLU 38	-0.5	0.08	41.33	0.0288	-5.2169	0.0178
459	SLU 39	-0.49	0.14	41.94	0.0295	-5.3003	0.0336
459	SLU 40	-0.49	0.09	41.93	0.0297	-5.301	0.0209
459	SLU 41	-0.5	0.15	42.44	0.0298	-5.3573	0.035
459	SLU 42	-0.49	0.1	42.43	0.03	-5.3579	0.0223
459	SLU 43	-0.54	-0.03	41.42	0.0262	-5.2802	-0.008
459	SLU 44	-0.53	-0.11	41.41	0.0265	-5.2813	-0.0293
459	SLU 45	-0.55	-0.02	42.21	0.0268	-5.3713	-0.0065
459	SLU 46	-0.55	-0.07	42.21	0.0269	-5.372	-0.0193
459	SLU 47	-0.54	-0.11	41.91	0.0268	-5.3382	-0.0279
459	SLU 48	-0.56	-0.01	42.71	0.0271	-5.4283	-0.0052
459	SLU 49	-0.56	-0.06	42.71	0.0272	-5.4289	-0.0179
459	SLU 50	-0.56	-0.01	42.42	0.0269	-5.3941	-0.0053
459	SLU 51	-0.55	-0.07	42.41	0.027	-5.3948	-0.0181
459	SLU 52	-0.55	-0.06	45.14	0.0299	-5.7432	-0.0157
459	SLU 53	-0.57	0.04	45.94	0.0302	-5.8332	0.007
459	SLU 54	-0.56	-0.02	45.94	0.0304	-5.8339	-0.0057
459	SLU 55	-0.56	-0.05	45.64	0.0302	-5.8001	-0.0143
459	SLU 56	-0.58	0.04	46.44	0.0305	-5.8902	0.0084
459	SLU 57	-0.57	-0.01	46.44	0.0307	-5.8908	-0.0044
459	SLU 58	-0.57	0.04	46.15	0.0303	-5.856	0.0083
459	SLU 59	-0.57	-0.01	46.14	0.0304	-5.8566	-0.0045
459	SLU 60	-0.56	0.05	46.75	0.0312	-5.9401	0.0114
459	SLU 61	-0.56	0	46.74	0.0313	-5.9407	-0.0014
459	SLU 62	-0.57	0.06	47.25	0.0315	-5.997	0.0127
459	SLU 63	-0.57	0.01	47.24	0.0316	-5.9976	0
459	SLU 64	-0.58	0.04	45.18	0.0297	-5.7382	0.0081
459	SLU 65	-0.58	-0.04	45.16	0.03	-5.7393	-0.0131
459	SLU 66	-0.6	0.05	45.97	0.0302	-5.8293	0.0096
459	SLU 67	-0.59	0	45.96	0.0304	-5.83	-0.0032
459	SLU 68	-0.58	-0.04	45.66	0.0303	-5.7962	-0.0118
459	SLU 69	-0.6	0.05	46.47	0.0306	-5.8863	0.011
459	SLU 70	-0.6	0	46.46	0.0307	-5.8869	-0.0018
459	SLU 71	-0.6	0.05	46.18	0.0303	-5.8521	0.0108
459	SLU 72	-0.6	0	46.17	0.0305	-5.8528	-0.0019
459	SLU 73	-0.59	0.01	48.89	0.0334	-6.2012	0.0004
459	SLU 74	-0.61	0.1	49.7	0.0337	-6.2912	0.0232
459	SLU 75	-0.6	0.05	49.69	0.0338	-6.2919	0.0104
459	SLU 76	-0.6	0.02	49.39	0.0337	-6.2581	0.0018
459	SLU 77	-0.62	0.11	50.2	0.034	-6.3482	0.0246
459	SLU 78	-0.61	0.06	50.19	0.0341	-6.3488	0.0118
459	SLU 79	-0.61	0.11	49.91	0.0338	-6.314	0.0244
459	SLU 80	-0.61	0.06	49.9	0.0339	-6.3146	0.0117
459	SLU 81	-0.6	0.12	50.51	0.0346	-6.3981	0.0275
459	SLU 82	-0.6	0.07	50.5	0.0348	-6.3987	0.0148
459	SLU 83	-0.61	0.12	51.01	0.0349	-6.455	0.0289
459	SLU 84	-0.61	0.07	51	0.0351	-6.4556	0.0161
459	SLE RA 1	-0.44	0.02	33.93	0.0221	-4.3134	0.0027
459	SLE RA 2	-0.43	-0.04	33.92	0.0223	-4.3141	-0.0115
459	SLE RA 3	-0.45	0.02	34.46	0.0224	-4.3741	0.0037
459	SLE RA 4	-0.44	-0.01	34.45	0.0225	-4.3745	-0.0048
459	SLE RA 5	-0.44	-0.04	34.25	0.0225	-4.352	-0.0106
459	SLE RA 6	-0.45	0.02	34.79	0.0227	-4.4121	0.0046
459	SLE RA 7	-0.45	-0.01	34.78	0.0228	-4.4125	-0.0039
459	SLE RA 8	-0.45	0.02	34.59	0.0225	-4.3893	0.0045
459	SLE RA 9	-0.45	-0.01	34.59	0.0226	-4.3897	-0.004
459	SLE RA 10	-0.44	0	36.4	0.0246	-4.622	-0.0024
459	SLE RA 11	-0.46	0.06	36.94	0.0247	-4.682	0.0127
459	SLE RA 12	-0.45	0.02	36.94	0.0248	-4.6825	0.0042
459	SLE RA 13	-0.45	0	36.74	0.0248	-4.66	-0.0015
459	SLE RA 14	-0.46	0.06	37.28	0.0249	-4.72	0.0137
459	SLE RA 15	-0.46	0.03	37.27	0.025	-4.7204	0.0051
459	SLE RA 16	-0.46	0.06	37.08	0.0248	-4.6972	0.0136
459	SLE RA 17	-0.46	0.03	37.07	0.0249	-4.6976	0.0051
459	SLE RA 18	-0.45	0.07	37.48	0.0254	-4.7532	0.0156
459	SLE RA 19	-0.45	0.03	37.47	0.0255	-4.7537	0.0071

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
459	SLE RA 20	-0.46	0.07	37.81	0.0256	-4.7912	0.0165
459	SLE RA 21	-0.46	0.04	37.81	0.0257	-4.7916	0.008
459	SLE FR 1	-0.44	0.02	33.93	0.0221	-4.3134	0.0027
459	SLE FR 2	-0.44	0.01	33.93	0.0221	-4.3135	-0.0001
459	SLE FR 3	-0.44	0.02	34.06	0.0222	-4.3285	0.0031
459	SLE FR 4	-0.44	0.02	34.99	0.0231	-4.4455	0.0037
459	SLE FR 5	-0.45	0.03	35.13	0.0232	-4.4605	0.0069
459	SLE FR 6	-0.45	0.04	35.7	0.0237	-4.5333	0.0092
459	SLE QP 1	-0.44	0.02	33.93	0.0221	-4.3134	0.0027
459	SLE QP 2	-0.44	0.03	34.99	0.0231	-4.4453	0.0066
459	SLD 1	2.11	0.59	45.4	0.0275	-5.6066	0.1457
459	SLD 2	2.24	0.03	45.24	0.0295	-5.6102	0.0075
459	SLD 3	2.16	-0.68	45.11	0.0309	-5.6496	-0.1703
459	SLD 4	2.29	-1.23	44.96	0.0329	-5.6532	-0.3086
459	SLD 5	0.23	2.22	38.57	0.0188	-4.7278	0.5528
459	SLD 6	0.31	1.85	38.47	0.0201	-4.7302	0.4611
459	SLD 7	0.39	-2	37.63	0.0303	-4.8712	-0.5007
459	SLD 8	0.47	-2.37	37.52	0.0317	-4.8736	-0.5925
459	SLD 9	-1.36	2.43	32.46	0.0145	-4.017	0.6056
459	SLD 10	-1.28	2.06	32.36	0.0158	-4.0194	0.5139
459	SLD 11	-1.2	-1.78	31.52	0.0261	-4.1605	-0.4479
459	SLD 12	-1.11	-2.15	31.41	0.0274	-4.1629	-0.5397
459	SLD 13	-3.18	1.3	25.03	0.0132	-3.2374	0.3217
459	SLD 14	-3.05	0.74	24.87	0.0152	-3.241	0.1835
459	SLD 15	-3.13	0.04	24.75	0.0167	-3.2804	0.0056
459	SLD 16	-3	-0.52	24.59	0.0187	-3.284	-0.1326
459	SLV 1	5.54	1.28	59.32	0.0335	-7.1626	0.319
459	SLV 2	5.83	-0.02	58.96	0.0381	-7.171	-0.0028
459	SLV 3	5.65	-1.58	58.68	0.0413	-7.2629	-0.3958
459	SLV 4	5.95	-2.88	58.32	0.046	-7.2713	-0.7177
459	SLV 5	1.13	4.97	43.34	0.0134	-5.1069	1.2411
459	SLV 6	1.32	4.12	43.1	0.0165	-5.1124	1.0314
459	SLV 7	1.5	-4.56	41.18	0.0397	-5.4413	-1.1418
459	SLV 8	1.7	-5.4	40.94	0.0427	-5.4467	-1.3515
459	SLV 9	-2.59	5.47	29.04	0.0034	-3.4439	1.3646
459	SLV 10	-2.39	4.62	28.81	0.0065	-3.4494	1.1549
459	SLV 11	-2.21	-4.06	26.88	0.0297	-3.7783	-1.0183
459	SLV 12	-2.01	-4.9	26.65	0.0328	-3.7838	-1.228
459	SLV 13	-6.84	2.94	11.67	0.0002	-1.6194	0.7308
459	SLV 14	-6.54	1.65	11.31	0.0048	-1.6277	0.409
459	SLV 15	-6.72	0.09	11.02	0.0081	-1.7197	0.0159
459	SLV 16	-6.43	-1.21	10.66	0.0127	-1.7281	-0.3059
459	CRTFP Ux+	0	0	0	0	0	0
459	CRTFP Ux-	0	0	0	0	0	0
459	CRTFP Uy+	0	0	0	0	0	0
459	CRTFP Uy-	0	0	0	0	0	0
462	SLU 1	0.06	-0.11	46.26	0.4698	15.6146	0.0398
462	SLU 2	0.07	-0.15	46.26	0.47	15.6143	0.0549
462	SLU 3	0.06	-0.1	47.37	0.4811	15.9934	0.0351
462	SLU 4	0.07	-0.12	47.37	0.4812	15.9932	0.0441
462	SLU 5	0.07	-0.15	46.94	0.4768	15.8498	0.0546
462	SLU 6	0.06	-0.1	48.05	0.4879	16.229	0.0348
462	SLU 7	0.07	-0.12	48.05	0.488	16.2288	0.0439
462	SLU 8	0.06	-0.11	47.62	0.4834	16.0857	0.0393
462	SLU 9	0.07	-0.14	47.62	0.4835	16.0855	0.0484
462	SLU 10	0.1	-0.09	52.28	0.533	17.6769	0.031
462	SLU 11	0.09	-0.03	53.4	0.544	18.056	0.0112
462	SLU 12	0.1	-0.06	53.39	0.5442	18.0558	0.0203
462	SLU 13	0.1	-0.09	52.96	0.5398	17.9124	0.0308
462	SLU 14	0.1	-0.03	54.07	0.5508	18.2915	0.011
462	SLU 15	0.1	-0.05	54.07	0.551	18.2913	0.02
462	SLU 16	0.1	-0.04	53.64	0.5464	18.1483	0.0154
462	SLU 17	0.1	-0.07	53.64	0.5465	18.1481	0.0245
462	SLU 18	0.1	-0.01	54.87	0.5598	18.5611	0.0057
462	SLU 19	0.11	-0.04	54.86	0.5599	18.5609	0.0148
462	SLU 20	0.11	-0.01	55.54	0.5666	18.7967	0.0054
462	SLU 21	0.11	-0.04	55.54	0.5667	18.7965	0.0145
462	SLU 22	0.07	0	51.4	0.5238	17.3529	-0.0003
462	SLU 23	0.08	-0.04	51.4	0.524	17.3526	0.0148
462	SLU 24	0.08	0.02	52.51	0.535	17.7317	-0.005
462	SLU 25	0.08	-0.01	52.51	0.5352	17.7315	0.004
462	SLU 26	0.08	-0.04	52.08	0.5308	17.5881	0.0145
462	SLU 27	0.08	0.02	53.19	0.5418	17.9672	-0.0053
462	SLU 28	0.08	-0.01	53.19	0.542	17.967	0.0038
462	SLU 29	0.08	0.01	52.76	0.5374	17.824	-0.0008
462	SLU 30	0.08	-0.02	52.76	0.5375	17.8238	0.0083
462	SLU 31	0.11	0.03	57.42	0.587	19.4151	-0.0091
462	SLU 32	0.11	0.09	58.54	0.598	19.7942	-0.0289
462	SLU 33	0.11	0.06	58.54	0.5982	19.794	-0.0198
462	SLU 34	0.12	0.03	58.1	0.5938	19.6506	-0.0093
462	SLU 35	0.11	0.09	59.22	0.6048	20.0298	-0.0291
462	SLU 36	0.12	0.06	59.22	0.605	20.0296	-0.0201
462	SLU 37	0.11	0.07	58.79	0.6004	19.8865	-0.0247
462	SLU 38	0.12	0.05	58.78	0.6005	19.8863	-0.0156
462	SLU 39	0.12	0.1	60.01	0.6137	20.2994	-0.0344
462	SLU 40	0.12	0.07	60.01	0.6139	20.2992	-0.0253
462	SLU 41	0.12	0.1	60.69	0.6205	20.5349	-0.0347
462	SLU 42	0.13	0.08	60.69	0.6207	20.5347	-0.0256
462	SLU 43	0.07	-0.18	58.37	0.5922	19.7031	0.0655
462	SLU 44	0.08	-0.23	58.37	0.5924	19.7027	0.0806

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
462	SLU 45	0.07	-0.17	59.48	0.6035	20.0818	0.0608
462	SLU 46	0.08	-0.2	59.48	0.6036	20.0816	0.0698
462	SLU 47	0.08	-0.23	59.05	0.5993	19.9383	0.0803
462	SLU 48	0.08	-0.17	60.16	0.6103	20.3174	0.0605
462	SLU 49	0.08	-0.2	60.16	0.6104	20.3172	0.0696
462	SLU 50	0.08	-0.18	59.73	0.6058	20.1741	0.065
462	SLU 51	0.08	-0.21	59.73	0.606	20.1739	0.074
462	SLU 52	0.11	-0.16	64.4	0.6554	21.7653	0.0567
462	SLU 53	0.11	-0.1	65.51	0.6665	22.1444	0.0369
462	SLU 54	0.11	-0.13	65.51	0.6666	22.1442	0.046
462	SLU 55	0.11	-0.16	65.08	0.6622	22.0008	0.0565
462	SLU 56	0.11	-0.1	66.19	0.6733	22.3799	0.0367
462	SLU 57	0.11	-0.13	66.19	0.6734	22.3797	0.0457
462	SLU 58	0.11	-0.11	65.76	0.6688	22.2367	0.0411
462	SLU 59	0.11	-0.14	65.76	0.669	22.2365	0.0502
462	SLU 60	0.12	-0.09	66.98	0.6822	22.6496	0.0314
462	SLU 61	0.12	-0.11	66.98	0.6823	22.6494	0.0404
462	SLU 62	0.12	-0.09	67.66	0.689	22.8851	0.0311
462	SLU 63	0.12	-0.11	67.66	0.6891	22.8849	0.0402
462	SLU 64	0.08	-0.07	63.52	0.6462	21.4413	0.0254
462	SLU 65	0.09	-0.11	63.51	0.6464	21.441	0.0405
462	SLU 66	0.09	-0.05	64.63	0.6575	21.8201	0.0207
462	SLU 67	0.09	-0.08	64.63	0.6576	21.8199	0.0297
462	SLU 68	0.1	-0.11	64.19	0.6532	21.6765	0.0402
462	SLU 69	0.09	-0.05	65.31	0.6643	22.0556	0.0204
462	SLU 70	0.1	-0.08	65.31	0.6644	22.0554	0.0295
462	SLU 71	0.09	-0.07	64.87	0.6598	21.9124	0.0249
462	SLU 72	0.1	-0.09	64.87	0.6599	21.9122	0.0339
462	SLU 73	0.12	-0.04	69.54	0.7094	23.5035	0.0166
462	SLU 74	0.12	0.01	70.65	0.7204	23.8826	-0.0032
462	SLU 75	0.13	-0.01	70.65	0.7206	23.8824	0.0059
462	SLU 76	0.13	-0.04	70.22	0.7162	23.7391	0.0164
462	SLU 77	0.12	0.01	71.33	0.7273	24.1182	-0.0034
462	SLU 78	0.13	-0.01	71.33	0.7274	24.118	0.0056
462	SLU 79	0.12	0	70.9	0.7228	23.9749	0.001
462	SLU 80	0.13	-0.03	70.9	0.7229	23.9747	0.0101
462	SLU 81	0.13	0.03	72.12	0.7362	24.3878	-0.0087
462	SLU 82	0.14	0	72.12	0.7363	24.3876	0.0003
462	SLU 83	0.13	0.03	72.8	0.743	24.6233	-0.009
462	SLU 84	0.14	0	72.8	0.7431	24.6232	0.0001
462	SLE RA 1	0.06	-0.08	47.73	0.4852	16.1113	0.0283
462	SLE RA 2	0.07	-0.11	47.73	0.4854	16.1111	0.0384
462	SLE RA 3	0.06	-0.07	48.47	0.4927	16.3638	0.0252
462	SLE RA 4	0.07	-0.09	48.47	0.4928	16.3637	0.0312
462	SLE RA 5	0.07	-0.11	48.18	0.4899	16.2681	0.0382
462	SLE RA 6	0.07	-0.07	48.92	0.4973	16.5208	0.025
462	SLE RA 7	0.07	-0.09	48.92	0.4974	16.5207	0.0311
462	SLE RA 8	0.07	-0.08	48.63	0.4943	16.4253	0.028
462	SLE RA 9	0.07	-0.09	48.63	0.4944	16.4252	0.034
462	SLE RA 10	0.09	-0.06	51.74	0.5273	17.4861	0.0225
462	SLE RA 11	0.09	-0.02	52.49	0.5347	17.7388	0.0093
462	SLE RA 12	0.09	-0.04	52.48	0.5348	17.7387	0.0153
462	SLE RA 13	0.09	-0.06	52.2	0.5319	17.6431	0.0223
462	SLE RA 14	0.09	-0.02	52.94	0.5392	17.8959	0.0091
462	SLE RA 15	0.09	-0.04	52.94	0.5393	17.8957	0.0152
462	SLE RA 16	0.09	-0.03	52.65	0.5363	17.8004	0.0121
462	SLE RA 17	0.09	-0.05	52.65	0.5364	17.8002	0.0181
462	SLE RA 18	0.09	-0.01	53.47	0.5452	18.0756	0.0056
462	SLE RA 19	0.1	-0.03	53.47	0.5453	18.0755	0.0116
462	SLE RA 20	0.09	-0.01	53.92	0.5497	18.2326	0.0054
462	SLE RA 21	0.1	-0.03	53.92	0.5498	18.2325	0.0115
462	SLE FR 1	0.06	-0.08	47.73	0.4852	16.1113	0.0283
462	SLE FR 2	0.06	-0.08	47.73	0.4852	16.1112	0.0303
462	SLE FR 3	0.06	-0.08	47.91	0.487	16.1741	0.0283
462	SLE FR 4	0.07	-0.06	49.45	0.5032	16.7005	0.0235
462	SLE FR 5	0.07	-0.06	49.63	0.505	16.7634	0.0214
462	SLE FR 6	0.08	-0.05	50.6	0.5152	17.0934	0.017
462	SLE QP 1	0.06	-0.08	47.73	0.4852	16.1113	0.0283
462	SLE QP 2	0.07	-0.06	49.45	0.5032	16.7006	0.0215
462	SLD 1	3.73	0.68	49.97	0.4981	16.8502	-0.2631
462	SLD 2	3.88	0.71	50	0.4976	16.854	-0.2749
462	SLD 3	3.67	-0.6	49.82	0.505	16.7897	0.1849
462	SLD 4	3.83	-0.57	49.85	0.5045	16.7936	0.1732
462	SLD 5	1.22	2.1	49.83	0.4913	16.8364	-0.7412
462	SLD 6	1.33	2.12	49.84	0.491	16.839	-0.749
462	SLD 7	1.04	-2.17	49.33	0.5143	16.635	0.7521
462	SLD 8	1.14	-2.15	49.35	0.514	16.6375	0.7443
462	SLD 9	-1	2.03	49.55	0.4924	16.7636	-0.7013
462	SLD 10	-0.9	2.05	49.57	0.4921	16.7662	-0.7091
462	SLD 11	-1.19	-2.24	49.06	0.5154	16.5622	0.792
462	SLD 12	-1.08	-2.21	49.07	0.5151	16.5647	0.7842
462	SLD 13	-3.68	0.45	49.05	0.5019	16.6076	-0.1302
462	SLD 14	-3.53	0.49	49.08	0.5014	16.6114	-0.1419
462	SLD 15	-3.74	-0.83	48.9	0.5088	16.5471	0.3179
462	SLD 16	-3.58	-0.79	48.93	0.5083	16.551	0.3061
462	SLV 1	8.62	1.61	50.66	0.4915	17.0496	-0.6276
462	SLV 2	8.98	1.69	50.73	0.4904	17.0585	-0.655
462	SLV 3	8.49	-1.29	50.32	0.507	16.9105	0.3871
462	SLV 4	8.85	-1.21	50.38	0.5059	16.9194	0.3597
462	SLV 5	2.77	4.82	50.32	0.4763	17.0147	-1.7073

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
462	SLV 6	3	4.88	50.36	0.4756	17.0205	-1.7252
462	SLV 7	2.33	-4.84	49.18	0.5281	16.551	1.6749
462	SLV 8	2.57	-4.78	49.22	0.5274	16.5568	1.6571
462	SLV 9	-2.43	4.67	49.68	0.479	16.8443	-1.6141
462	SLV 10	-2.19	4.72	49.72	0.4783	16.8502	-1.6319
462	SLV 11	-2.86	-4.99	48.53	0.5308	16.3807	1.7682
462	SLV 12	-2.63	-4.94	48.57	0.5301	16.3865	1.7503
462	SLV 13	-8.71	1.09	48.52	0.5004	16.4818	-0.3167
462	SLV 14	-8.35	1.17	48.58	0.4994	16.4907	-0.3441
462	SLV 15	-8.84	-1.81	48.17	0.516	16.3427	0.698
462	SLV 16	-8.48	-1.73	48.23	0.5149	16.3516	0.6706
462	CRTFP Ux+	0	0	0	0	0	0
462	CRTFP Ux-	0	0	0	0	0	0
462	CRTFP Uy+	0	0	0	0	0	0
462	CRTFP Uy-	0	0	0	0	0	0
466	SLU 1	-0.55	-1.04	59.17	-0.0064	-0.1861	-0.0131
466	SLU 2	-0.53	-1.12	59.17	-0.0061	-0.1869	-0.0122
466	SLU 3	-0.56	-1.05	60.6	-0.0065	-0.1913	-0.0135
466	SLU 4	-0.55	-1.1	60.6	-0.0063	-0.1918	-0.013
466	SLU 5	-0.55	-1.13	60.07	-0.0062	-0.1895	-0.0125
466	SLU 6	-0.57	-1.06	61.5	-0.0067	-0.1939	-0.0138
466	SLU 7	-0.57	-1.11	61.5	-0.0065	-0.1944	-0.0133
466	SLU 8	-0.57	-1.06	60.96	-0.0068	-0.1913	-0.0136
466	SLU 9	-0.56	-1.11	60.96	-0.0065	-0.1918	-0.0131
466	SLU 10	-0.54	-1.15	66.3	-0.0048	-0.2216	-0.0138
466	SLU 11	-0.56	-1.09	67.73	-0.0052	-0.226	-0.0151
466	SLU 12	-0.55	-1.14	67.73	-0.005	-0.2265	-0.0146
466	SLU 13	-0.55	-1.17	67.2	-0.0049	-0.2242	-0.0141
466	SLU 14	-0.57	-1.1	68.63	-0.0054	-0.2286	-0.0154
466	SLU 15	-0.57	-1.15	68.63	-0.0051	-0.2291	-0.0149
466	SLU 16	-0.57	-1.1	68.09	-0.0054	-0.226	-0.0152
466	SLU 17	-0.56	-1.15	68.09	-0.0052	-0.2265	-0.0147
466	SLU 18	-0.55	-1.09	69.36	-0.0045	-0.2356	-0.0153
466	SLU 19	-0.54	-1.14	69.36	-0.0043	-0.2361	-0.0148
466	SLU 20	-0.56	-1.1	70.25	-0.0047	-0.2382	-0.0156
466	SLU 21	-0.55	-1.15	70.25	-0.0045	-0.2387	-0.0151
466	SLU 22	-0.6	-1.02	66.03	-0.0048	-0.2061	-0.0155
466	SLU 23	-0.58	-1.11	66.03	-0.0045	-0.207	-0.0146
466	SLU 24	-0.61	-1.04	67.46	-0.0049	-0.2114	-0.0159
466	SLU 25	-0.6	-1.09	67.46	-0.0047	-0.2119	-0.0154
466	SLU 26	-0.6	-1.12	66.92	-0.0046	-0.2096	-0.0149
466	SLU 27	-0.62	-1.05	68.35	-0.0051	-0.214	-0.0162
466	SLU 28	-0.61	-1.1	68.35	-0.0049	-0.2145	-0.0157
466	SLU 29	-0.62	-1.05	67.82	-0.0052	-0.2114	-0.016
466	SLU 30	-0.61	-1.1	67.82	-0.0049	-0.2119	-0.0155
466	SLU 31	-0.58	-1.14	73.16	-0.0031	-0.2416	-0.0162
466	SLU 32	-0.61	-1.08	74.59	-0.0036	-0.246	-0.0175
466	SLU 33	-0.6	-1.13	74.59	-0.0034	-0.2466	-0.017
466	SLU 34	-0.6	-1.16	74.05	-0.0033	-0.2443	-0.0164
466	SLU 35	-0.62	-1.09	75.48	-0.0038	-0.2487	-0.0177
466	SLU 36	-0.61	-1.14	75.48	-0.0035	-0.2492	-0.0172
466	SLU 37	-0.62	-1.09	74.95	-0.0038	-0.2461	-0.0176
466	SLU 38	-0.61	-1.14	74.95	-0.0036	-0.2466	-0.0171
466	SLU 39	-0.6	-1.08	76.22	-0.0029	-0.2557	-0.0177
466	SLU 40	-0.59	-1.13	76.22	-0.0027	-0.2562	-0.0172
466	SLU 41	-0.61	-1.09	77.11	-0.0031	-0.2583	-0.018
466	SLU 42	-0.6	-1.14	77.11	-0.0029	-0.2588	-0.0175
466	SLU 43	-0.69	-1.35	74.57	-0.0089	-0.235	-0.0162
466	SLU 44	-0.68	-1.43	74.57	-0.0086	-0.2358	-0.0153
466	SLU 45	-0.71	-1.36	76	-0.009	-0.2402	-0.0166
466	SLU 46	-0.7	-1.41	76	-0.0088	-0.2407	-0.0161
466	SLU 47	-0.69	-1.44	75.47	-0.0087	-0.2385	-0.0156
466	SLU 48	-0.72	-1.38	76.9	-0.0092	-0.2429	-0.0169
466	SLU 49	-0.71	-1.42	76.9	-0.009	-0.2434	-0.0164
466	SLU 50	-0.72	-1.37	76.36	-0.0092	-0.2403	-0.0167
466	SLU 51	-0.71	-1.42	76.36	-0.009	-0.2408	-0.0162
466	SLU 52	-0.68	-1.47	81.7	-0.0072	-0.2705	-0.0169
466	SLU 53	-0.71	-1.4	83.13	-0.0077	-0.2749	-0.0182
466	SLU 54	-0.7	-1.45	83.13	-0.0075	-0.2754	-0.0177
466	SLU 55	-0.69	-1.48	82.6	-0.0074	-0.2731	-0.0172
466	SLU 56	-0.72	-1.41	84.03	-0.0078	-0.2775	-0.0185
466	SLU 57	-0.71	-1.46	84.03	-0.0076	-0.278	-0.018
466	SLU 58	-0.72	-1.41	83.49	-0.0079	-0.2749	-0.0183
466	SLU 59	-0.71	-1.46	83.49	-0.0077	-0.2754	-0.0178
466	SLU 60	-0.69	-1.4	84.76	-0.007	-0.2845	-0.0184
466	SLU 61	-0.69	-1.45	84.76	-0.0068	-0.285	-0.0179
466	SLU 62	-0.71	-1.42	85.66	-0.0072	-0.2872	-0.0187
466	SLU 63	-0.7	-1.47	85.65	-0.007	-0.2877	-0.0182
466	SLU 64	-0.74	-1.34	81.43	-0.0073	-0.2551	-0.0186
466	SLU 65	-0.73	-1.42	81.43	-0.007	-0.2559	-0.0177
466	SLU 66	-0.76	-1.35	82.86	-0.0074	-0.2603	-0.019
466	SLU 67	-0.75	-1.4	82.86	-0.0072	-0.2608	-0.0185
466	SLU 68	-0.74	-1.43	82.32	-0.0071	-0.2585	-0.018
466	SLU 69	-0.77	-1.36	83.75	-0.0076	-0.263	-0.0193
466	SLU 70	-0.76	-1.41	83.75	-0.0074	-0.2635	-0.0188
466	SLU 71	-0.77	-1.36	83.22	-0.0076	-0.2603	-0.0191
466	SLU 72	-0.76	-1.41	83.22	-0.0074	-0.2608	-0.0186
466	SLU 73	-0.73	-1.46	88.56	-0.0056	-0.2906	-0.0193
466	SLU 74	-0.76	-1.39	89.99	-0.0061	-0.295	-0.0206
466	SLU 75	-0.75	-1.44	89.99	-0.0059	-0.2955	-0.0201

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
466	SLU 76	-0.74	-1.47	89.45	-0.0058	-0.2932	-0.0195
466	SLU 77	-0.77	-1.4	90.89	-0.0062	-0.2976	-0.0209
466	SLU 78	-0.76	-1.45	90.88	-0.006	-0.2981	-0.0203
466	SLU 79	-0.77	-1.4	90.35	-0.0063	-0.295	-0.0207
466	SLU 80	-0.76	-1.45	90.35	-0.0061	-0.2955	-0.0202
466	SLU 81	-0.74	-1.39	91.62	-0.0054	-0.3046	-0.0208
466	SLU 82	-0.74	-1.44	91.62	-0.0052	-0.3051	-0.0203
466	SLU 83	-0.76	-1.41	92.51	-0.0056	-0.3072	-0.0211
466	SLU 84	-0.75	-1.46	92.51	-0.0054	-0.3077	-0.0206
466	SLE RA 1	-0.56	-1.03	61.13	-0.006	-0.1918	-0.0138
466	SLE RA 2	-0.55	-1.09	61.13	-0.0057	-0.1923	-0.0132
466	SLE RA 3	-0.57	-1.04	62.08	-0.006	-0.1953	-0.0141
466	SLE RA 4	-0.57	-1.07	62.08	-0.0059	-0.1956	-0.0137
466	SLE RA 5	-0.56	-1.09	61.73	-0.0059	-0.1941	-0.0134
466	SLE RA 6	-0.58	-1.05	62.68	-0.0062	-0.197	-0.0142
466	SLE RA 7	-0.57	-1.08	62.68	-0.006	-0.1974	-0.0139
466	SLE RA 8	-0.58	-1.05	62.32	-0.0062	-0.1953	-0.0141
466	SLE RA 9	-0.57	-1.08	62.32	-0.0061	-0.1956	-0.0138
466	SLE RA 10	-0.55	-1.11	65.88	-0.0049	-0.2155	-0.0142
466	SLE RA 11	-0.57	-1.07	66.84	-0.0052	-0.2184	-0.0151
466	SLE RA 12	-0.57	-1.1	66.84	-0.005	-0.2187	-0.0148
466	SLE RA 13	-0.56	-1.12	66.48	-0.005	-0.2172	-0.0144
466	SLE RA 14	-0.58	-1.08	67.44	-0.0053	-0.2202	-0.0153
466	SLE RA 15	-0.57	-1.11	67.43	-0.0051	-0.2205	-0.0149
466	SLE RA 16	-0.58	-1.07	67.08	-0.0053	-0.2184	-0.0152
466	SLE RA 17	-0.57	-1.11	67.08	-0.0052	-0.2188	-0.0148
466	SLE RA 18	-0.56	-1.07	67.92	-0.0047	-0.2248	-0.0152
466	SLE RA 19	-0.56	-1.1	67.92	-0.0046	-0.2251	-0.0149
466	SLE RA 20	-0.57	-1.08	68.52	-0.0048	-0.2266	-0.0154
466	SLE RA 21	-0.56	-1.11	68.52	-0.0047	-0.2269	-0.0151
466	SLE FR 1	-0.56	-1.03	61.13	-0.006	-0.1918	-0.0138
466	SLE FR 2	-0.56	-1.04	61.13	-0.0059	-0.1919	-0.0136
466	SLE FR 3	-0.56	-1.04	61.37	-0.006	-0.1925	-0.0138
466	SLE FR 4	-0.56	-1.05	63.17	-0.0056	-0.2018	-0.0141
466	SLE FR 5	-0.56	-1.05	63.41	-0.0056	-0.2024	-0.0143
466	SLE FR 6	-0.56	-1.05	64.53	-0.0054	-0.2083	-0.0145
466	SLE QP 1	-0.56	-1.03	61.13	-0.006	-0.1918	-0.0138
466	SLE QP 2	-0.56	-1.04	63.17	-0.0056	-0.2017	-0.0142
466	SLD 1	4.74	-0.63	68.97	-0.0124	-0.0168	-0.0042
466	SLD 2	4.94	-1.02	68.87	-0.0104	-0.0209	0.0084
466	SLD 3	4.82	-2.25	68.86	-0.0072	-0.045	-0.0003
466	SLD 4	5.02	-2.65	68.76	-0.0052	-0.0491	0.0123
466	SLD 5	0.87	1.61	65.1	-0.0159	-0.1027	-0.0195
466	SLD 6	1.01	1.35	65.03	-0.0146	-0.1054	-0.0111
466	SLD 7	1.14	-3.8	64.72	0.0015	-0.1967	-0.0064
466	SLD 8	1.27	-4.06	64.65	0.0028	-0.1994	0.002
466	SLD 9	-2.39	1.97	61.68	-0.014	-0.204	-0.0304
466	SLD 10	-2.26	1.71	61.62	-0.0127	-0.2067	-0.022
466	SLD 11	-2.13	-3.44	61.31	0.0034	-0.2979	-0.0173
466	SLD 12	-1.99	-3.7	61.24	0.0047	-0.3007	-0.0089
466	SLD 13	-6.14	0.56	57.58	-0.006	-0.3543	-0.0407
466	SLD 14	-5.94	0.17	57.48	-0.004	-0.3584	-0.0281
466	SLD 15	-6.06	-1.06	57.47	-0.0008	-0.3825	-0.0368
466	SLD 16	-5.86	-1.45	57.37	0.0012	-0.3866	-0.0242
466	SLV 1	11.83	-0.15	76.74	-0.0213	0.23	0.0093
466	SLV 2	12.3	-1.06	76.51	-0.0167	0.2204	0.0386
466	SLV 3	12.02	-3.82	76.48	-0.0095	0.1659	0.0182
466	SLV 4	12.49	-4.73	76.24	-0.0048	0.1563	0.0476
466	SLV 5	2.79	4.96	67.69	-0.0291	0.0268	-0.0259
466	SLV 6	3.1	4.36	67.53	-0.0261	0.0205	-0.0067
466	SLV 7	3.41	-7.28	66.8	0.0104	-0.187	0.0039
466	SLV 8	3.72	-7.88	66.64	0.0134	-0.1933	0.023
466	SLV 9	-4.84	5.79	59.7	-0.0246	-0.2101	-0.0515
466	SLV 10	-4.53	5.2	59.54	-0.0216	-0.2164	-0.0323
466	SLV 11	-4.22	-6.45	58.81	0.0149	-0.4239	-0.0217
466	SLV 12	-3.91	-7.04	58.65	0.0179	-0.4302	-0.0025
466	SLV 13	-13.61	2.65	50.1	-0.0064	-0.5597	-0.076
466	SLV 14	-13.14	1.73	49.86	-0.0017	-0.5693	-0.0466
466	SLV 15	-13.42	-1.03	49.83	0.0055	-0.6238	-0.067
466	SLV 16	-12.95	-1.94	49.6	0.0101	-0.6334	-0.0377
466	CRTFP Ux+	0	0	0	0	0	0
466	CRTFP Ux-	0	0	0	0	0	0
470	SLU 1	0.6	-0.54	59.66	-0.0169	0.239	-0.0157
470	SLU 2	0.61	-0.57	59.67	-0.0167	0.2397	-0.015
470	SLU 3	0.62	-0.55	61.08	-0.0174	0.2448	-0.016
470	SLU 4	0.63	-0.57	61.09	-0.0173	0.2452	-0.0156
470	SLU 5	0.63	-0.59	60.55	-0.0172	0.2422	-0.0153
470	SLU 6	0.63	-0.56	61.96	-0.0178	0.2474	-0.0163
470	SLU 7	0.64	-0.58	61.97	-0.0177	0.2478	-0.0159
470	SLU 8	0.62	-0.57	61.42	-0.0177	0.2441	-0.0163
470	SLU 9	0.63	-0.59	61.42	-0.0177	0.2445	-0.0159
470	SLU 10	0.65	-0.54	66.9	-0.0171	0.2755	-0.0166
470	SLU 11	0.65	-0.51	68.31	-0.0178	0.2807	-0.0177
470	SLU 12	0.66	-0.53	68.32	-0.0177	0.2811	-0.0172
470	SLU 13	0.66	-0.55	67.78	-0.0176	0.2781	-0.0169
470	SLU 14	0.66	-0.53	69.19	-0.0182	0.2832	-0.018
470	SLU 15	0.67	-0.55	69.2	-0.0181	0.2836	-0.0175
470	SLU 16	0.66	-0.53	68.65	-0.0182	0.2799	-0.0179
470	SLU 17	0.66	-0.55	68.66	-0.0181	0.2803	-0.0175
470	SLU 18	0.65	-0.49	69.99	-0.0175	0.2902	-0.018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
470	SLU 19	0.66	-0.51	69.99	-0.0174	0.2906	-0.0176
470	SLU 20	0.66	-0.5	70.87	-0.0179	0.2928	-0.0183
470	SLU 21	0.67	-0.52	70.87	-0.0178	0.2932	-0.0179
470	SLU 22	0.67	-0.46	66.58	-0.0171	0.2537	-0.0165
470	SLU 23	0.68	-0.5	66.59	-0.017	0.2543	-0.0158
470	SLU 24	0.69	-0.47	68	-0.0177	0.2595	-0.0168
470	SLU 25	0.69	-0.49	68.01	-0.0176	0.2599	-0.0164
470	SLU 26	0.69	-0.51	67.47	-0.0174	0.2569	-0.0161
470	SLU 27	0.7	-0.49	68.88	-0.0181	0.262	-0.0171
470	SLU 28	0.7	-0.51	68.89	-0.018	0.2624	-0.0167
470	SLU 29	0.69	-0.49	68.34	-0.018	0.2587	-0.0171
470	SLU 30	0.7	-0.51	68.35	-0.0179	0.2591	-0.0167
470	SLU 31	0.71	-0.46	73.82	-0.0174	0.2902	-0.0174
470	SLU 32	0.72	-0.43	75.24	-0.0181	0.2953	-0.0185
470	SLU 33	0.73	-0.45	75.24	-0.018	0.2957	-0.018
470	SLU 34	0.72	-0.48	74.7	-0.0178	0.2927	-0.0177
470	SLU 35	0.73	-0.45	76.12	-0.0185	0.2979	-0.0188
470	SLU 36	0.74	-0.47	76.12	-0.0184	0.2983	-0.0183
470	SLU 37	0.72	-0.46	75.57	-0.0184	0.2946	-0.0187
470	SLU 38	0.73	-0.48	75.58	-0.0183	0.295	-0.0183
470	SLU 39	0.72	-0.41	76.91	-0.0177	0.3049	-0.0188
470	SLU 40	0.72	-0.43	76.92	-0.0176	0.3053	-0.0184
470	SLU 41	0.73	-0.43	77.79	-0.0182	0.3074	-0.0191
470	SLU 42	0.73	-0.45	77.8	-0.0181	0.3078	-0.0187
470	SLU 43	0.76	-0.73	75.18	-0.0218	0.3057	-0.0201
470	SLU 44	0.77	-0.76	75.19	-0.0217	0.3064	-0.0194
470	SLU 45	0.78	-0.73	76.61	-0.0224	0.3115	-0.0205
470	SLU 46	0.79	-0.75	76.61	-0.0223	0.3119	-0.02
470	SLU 47	0.78	-0.78	76.07	-0.0221	0.3089	-0.0197
470	SLU 48	0.79	-0.75	77.49	-0.0228	0.314	-0.0208
470	SLU 49	0.8	-0.77	77.49	-0.0227	0.3144	-0.0203
470	SLU 50	0.78	-0.76	76.94	-0.0227	0.3108	-0.0207
470	SLU 51	0.79	-0.78	76.95	-0.0226	0.3112	-0.0203
470	SLU 52	0.81	-0.72	82.42	-0.0221	0.3422	-0.021
470	SLU 53	0.81	-0.7	83.84	-0.0228	0.3474	-0.0221
470	SLU 54	0.82	-0.72	83.84	-0.0227	0.3478	-0.0217
470	SLU 55	0.82	-0.74	83.3	-0.0225	0.3448	-0.0213
470	SLU 56	0.82	-0.71	84.72	-0.0232	0.3499	-0.0224
470	SLU 57	0.83	-0.73	84.73	-0.0231	0.3503	-0.022
470	SLU 58	0.82	-0.72	84.17	-0.0231	0.3466	-0.0223
470	SLU 59	0.82	-0.74	84.18	-0.023	0.347	-0.0219
470	SLU 60	0.81	-0.68	85.51	-0.0224	0.3569	-0.0225
470	SLU 61	0.82	-0.7	85.52	-0.0223	0.3573	-0.022
470	SLU 62	0.82	-0.69	86.39	-0.0229	0.3594	-0.0227
470	SLU 63	0.83	-0.71	86.4	-0.0228	0.3598	-0.0223
470	SLU 64	0.83	-0.65	82.1	-0.0221	0.3203	-0.0209
470	SLU 65	0.84	-0.68	82.11	-0.022	0.321	-0.0202
470	SLU 66	0.84	-0.66	83.53	-0.0226	0.3262	-0.0213
470	SLU 67	0.85	-0.68	83.53	-0.0225	0.3266	-0.0209
470	SLU 68	0.85	-0.7	82.99	-0.0224	0.3235	-0.0205
470	SLU 69	0.85	-0.67	84.41	-0.0231	0.3287	-0.0216
470	SLU 70	0.86	-0.69	84.42	-0.023	0.3291	-0.0211
470	SLU 71	0.85	-0.68	83.86	-0.023	0.3254	-0.0215
470	SLU 72	0.86	-0.7	83.87	-0.0229	0.3258	-0.0211
470	SLU 73	0.87	-0.65	89.34	-0.0224	0.3569	-0.0218
470	SLU 74	0.88	-0.62	90.76	-0.023	0.362	-0.0229
470	SLU 75	0.88	-0.64	90.77	-0.0229	0.3624	-0.0225
470	SLU 76	0.88	-0.66	90.23	-0.0228	0.3594	-0.0221
470	SLU 77	0.89	-0.64	91.64	-0.0235	0.3645	-0.0232
470	SLU 78	0.9	-0.66	91.65	-0.0234	0.3649	-0.0228
470	SLU 79	0.88	-0.65	91.09	-0.0234	0.3613	-0.0231
470	SLU 80	0.89	-0.67	91.1	-0.0233	0.3617	-0.0227
470	SLU 81	0.88	-0.6	92.43	-0.0227	0.3716	-0.0233
470	SLU 82	0.88	-0.62	92.44	-0.0226	0.372	-0.0228
470	SLU 83	0.89	-0.62	93.31	-0.0231	0.3741	-0.0236
470	SLU 84	0.89	-0.64	93.32	-0.023	0.3745	-0.0231
470	SLE RA 1	0.62	-0.52	61.63	-0.017	0.2432	-0.0159
470	SLE RA 2	0.63	-0.54	61.64	-0.0168	0.2436	-0.0155
470	SLE RA 3	0.63	-0.52	62.58	-0.0173	0.2471	-0.0162
470	SLE RA 4	0.64	-0.53	62.59	-0.0172	0.2473	-0.0159
470	SLE RA 5	0.64	-0.55	62.23	-0.0171	0.2453	-0.0156
470	SLE RA 6	0.64	-0.53	63.17	-0.0176	0.2488	-0.0164
470	SLE RA 7	0.64	-0.55	63.18	-0.0175	0.249	-0.0161
470	SLE RA 8	0.64	-0.54	62.81	-0.0175	0.2466	-0.0163
470	SLE RA 9	0.64	-0.55	62.81	-0.0175	0.2468	-0.016
470	SLE RA 10	0.65	-0.52	66.46	-0.0171	0.2676	-0.0165
470	SLE RA 11	0.66	-0.5	67.41	-0.0176	0.271	-0.0172
470	SLE RA 12	0.66	-0.51	67.41	-0.0175	0.2712	-0.017
470	SLE RA 13	0.66	-0.53	67.05	-0.0174	0.2692	-0.0167
470	SLE RA 14	0.66	-0.51	67.99	-0.0179	0.2727	-0.0174
470	SLE RA 15	0.67	-0.52	68	-0.0178	0.2729	-0.0171
470	SLE RA 16	0.66	-0.51	67.63	-0.0178	0.2705	-0.0174
470	SLE RA 17	0.66	-0.53	67.63	-0.0177	0.2707	-0.0171
470	SLE RA 18	0.65	-0.48	68.52	-0.0173	0.2773	-0.0175
470	SLE RA 19	0.66	-0.5	68.53	-0.0173	0.2776	-0.0172
470	SLE RA 20	0.66	-0.49	69.11	-0.0176	0.279	-0.0177
470	SLE RA 21	0.67	-0.51	69.11	-0.0176	0.2793	-0.0174
470	SLE FR 1	0.62	-0.52	61.63	-0.017	0.2432	-0.0159
470	SLE FR 2	0.62	-0.52	61.64	-0.0169	0.2433	-0.0158
470	SLE FR 3	0.62	-0.52	61.87	-0.0171	0.2439	-0.016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
470	SLE FR 4	0.63	-0.51	63.7	-0.017	0.2535	-0.0163
470	SLE FR 5	0.63	-0.51	63.93	-0.0172	0.2541	-0.0165
470	SLE FR 6	0.64	-0.5	65.08	-0.0171	0.2603	-0.0167
470	SLE QP 1	0.62	-0.52	61.63	-0.017	0.2432	-0.0159
470	SLE QP 2	0.63	-0.51	63.7	-0.0171	0.2534	-0.0164
470	SLD 1	5.84	0.62	58.88	-0.0154	0.3446	0.0089
470	SLD 2	6.06	1.03	59.02	-0.0174	0.3367	0.0215
470	SLD 3	5.75	-0.96	58.8	-0.0094	0.3761	0.0069
470	SLD 4	5.97	-0.55	58.93	-0.0114	0.3681	0.0195
470	SLD 5	2.29	2.15	62.35	-0.0254	0.2346	-0.008
470	SLD 6	2.44	2.42	62.44	-0.0267	0.2293	0.0003
470	SLD 7	1.99	-3.11	62.08	-0.0052	0.3393	-0.0148
470	SLD 8	2.14	-2.84	62.17	-0.0066	0.3341	-0.0064
470	SLD 9	-0.87	1.82	65.23	-0.0276	0.1728	-0.0264
470	SLD 10	-0.73	2.09	65.32	-0.0289	0.1675	-0.018
470	SLD 11	-1.18	-3.43	64.95	-0.0074	0.2776	-0.0331
470	SLD 12	-1.03	-3.16	65.05	-0.0088	0.2723	-0.0248
470	SLD 13	-4.71	-0.46	68.47	-0.0228	0.1388	-0.0523
470	SLD 14	-4.49	-0.06	68.6	-0.0248	0.1308	-0.0397
470	SLD 15	-4.8	-2.04	68.38	-0.0167	0.1702	-0.0543
470	SLD 16	-4.58	-1.64	68.52	-0.0187	0.1623	-0.0417
470	SLV 1	12.82	2.08	52.42	-0.013	0.4675	0.0429
470	SLV 2	13.33	3.02	52.74	-0.0176	0.4491	0.0721
470	SLV 3	12.61	-1.5	52.23	0.0007	0.5388	0.0382
470	SLV 4	13.12	-0.55	52.55	-0.0039	0.5204	0.0674
470	SLV 5	4.52	5.52	60.55	-0.0358	0.2127	0.0033
470	SLV 6	4.85	6.14	60.76	-0.0388	0.2007	0.0224
470	SLV 7	3.82	-6.39	59.91	0.0099	0.4505	-0.0123
470	SLV 8	4.15	-5.78	60.12	0.0068	0.4385	0.0068
470	SLV 9	-2.89	4.76	67.28	-0.041	0.0684	-0.0396
470	SLV 10	-2.55	5.38	67.49	-0.044	0.0564	-0.0205
470	SLV 11	-3.59	-7.15	66.64	0.0047	0.3062	-0.0552
470	SLV 12	-3.25	-6.54	66.85	0.0016	0.2941	-0.0361
470	SLV 13	-11.86	-0.46	74.85	-0.0302	-0.0135	-0.1002
470	SLV 14	-11.35	0.48	75.17	-0.0349	-0.032	-0.071
470	SLV 15	-12.07	-4.04	74.66	-0.0165	0.0578	-0.1049
470	SLV 16	-11.56	-3.09	74.98	-0.0212	0.0394	-0.0757
470	CRTFP Ux+	0	0	0	0	0	0
470	CRTFP Ux-	0	0	0	0	0	0
470	CRTFP Uy+	0	0	0	0	0	0
470	CRTFP Uy-	0	0	0	0	0	0
471	SLU 1	0.62	0.2	37.84	0.0452	9.2205	-0.0736
471	SLU 2	0.63	0.18	37.85	0.0452	9.2232	-0.0669
471	SLU 3	0.64	0.21	38.76	0.0463	9.4323	-0.0748
471	SLU 4	0.64	0.19	38.76	0.0463	9.4339	-0.0708
471	SLU 5	0.64	0.18	38.42	0.0458	9.3546	-0.0655
471	SLU 6	0.65	0.2	39.33	0.0469	9.5637	-0.0733
471	SLU 7	0.65	0.19	39.33	0.047	9.5653	-0.0693
471	SLU 8	0.64	0.19	38.98	0.0465	9.4833	-0.0708
471	SLU 9	0.65	0.18	38.99	0.0465	9.4849	-0.0668
471	SLU 10	0.66	0.28	42.17	0.0514	10.2673	-0.1017
471	SLU 11	0.67	0.3	43.08	0.0525	10.4764	-0.1095
471	SLU 12	0.68	0.29	43.09	0.0525	10.478	-0.1055
471	SLU 13	0.67	0.28	42.75	0.0521	10.3987	-0.1003
471	SLU 14	0.68	0.3	43.65	0.0532	10.6077	-0.1081
471	SLU 15	0.69	0.29	43.66	0.0532	10.6094	-0.1041
471	SLU 16	0.68	0.29	43.31	0.0527	10.5274	-0.1055
471	SLU 17	0.68	0.28	43.32	0.0527	10.529	-0.1015
471	SLU 18	0.67	0.34	44.02	0.0541	10.7121	-0.1233
471	SLU 19	0.67	0.33	44.03	0.0541	10.7137	-0.1193
471	SLU 20	0.68	0.34	44.59	0.0547	10.8434	-0.1218
471	SLU 21	0.68	0.33	44.6	0.0548	10.8451	-0.1179
471	SLU 22	0.68	0.3	42.17	0.0514	10.2558	-0.1076
471	SLU 23	0.69	0.28	42.18	0.0515	10.2585	-0.101
471	SLU 24	0.7	0.3	43.08	0.0526	10.4676	-0.1088
471	SLU 25	0.7	0.29	43.09	0.0526	10.4692	-0.1048
471	SLU 26	0.7	0.28	42.75	0.0521	10.3899	-0.0995
471	SLU 27	0.71	0.3	43.65	0.0532	10.5989	-0.1073
471	SLU 28	0.71	0.29	43.66	0.0532	10.6006	-0.1034
471	SLU 29	0.7	0.29	43.31	0.0528	10.5185	-0.1048
471	SLU 30	0.71	0.28	43.32	0.0528	10.5202	-0.1008
471	SLU 31	0.72	0.38	46.5	0.0577	11.3026	-0.1357
471	SLU 32	0.73	0.4	47.41	0.0588	11.5116	-0.1435
471	SLU 33	0.74	0.39	47.41	0.0588	11.5133	-0.1395
471	SLU 34	0.73	0.37	47.07	0.0584	11.434	-0.1343
471	SLU 35	0.74	0.4	47.98	0.0595	11.643	-0.1421
471	SLU 36	0.75	0.39	47.98	0.0595	11.6447	-0.1381
471	SLU 37	0.74	0.39	47.64	0.059	11.5626	-0.1395
471	SLU 38	0.74	0.38	47.64	0.059	11.5643	-0.1355
471	SLU 39	0.73	0.44	48.35	0.0604	11.7473	-0.1573
471	SLU 40	0.73	0.43	48.35	0.0604	11.749	-0.1533
471	SLU 41	0.74	0.44	48.92	0.061	11.8787	-0.1558
471	SLU 42	0.74	0.42	48.92	0.061	11.8804	-0.1519
471	SLU 43	0.79	0.23	47.71	0.0565	11.6317	-0.084
471	SLU 44	0.79	0.21	47.72	0.0566	11.6344	-0.0774
471	SLU 45	0.8	0.23	48.62	0.0577	11.8435	-0.0852
471	SLU 46	0.81	0.22	48.63	0.0577	11.8451	-0.0812
471	SLU 47	0.8	0.21	48.29	0.0572	11.7658	-0.076
471	SLU 48	0.81	0.23	49.2	0.0583	11.9748	-0.0838
471	SLU 49	0.82	0.22	49.2	0.0583	11.9765	-0.0798

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
471	SLU 50	0.81	0.22	48.85	0.0579	11.8945	-0.0812
471	SLU 51	0.81	0.21	48.86	0.0579	11.8961	-0.0772
471	SLU 52	0.83	0.31	52.04	0.0628	12.6785	-0.1121
471	SLU 53	0.84	0.33	52.95	0.0639	12.8876	-0.1199
471	SLU 54	0.84	0.32	52.95	0.0639	12.8892	-0.1159
471	SLU 55	0.84	0.31	52.62	0.0635	12.8099	-0.1107
471	SLU 56	0.85	0.33	53.52	0.0646	13.0189	-0.1185
471	SLU 57	0.85	0.32	53.53	0.0646	13.0206	-0.1145
471	SLU 58	0.84	0.32	53.18	0.0641	12.9385	-0.116
471	SLU 59	0.85	0.31	53.18	0.0641	12.9402	-0.112
471	SLU 60	0.84	0.37	53.89	0.0655	13.1233	-0.1337
471	SLU 61	0.84	0.36	53.89	0.0655	13.1249	-0.1297
471	SLU 62	0.85	0.37	54.46	0.0661	13.2546	-0.1323
471	SLU 63	0.85	0.36	54.47	0.0661	13.2563	-0.1283
471	SLU 64	0.85	0.33	52.04	0.0628	12.667	-0.118
471	SLU 65	0.85	0.31	52.05	0.0629	12.6697	-0.1114
471	SLU 66	0.86	0.33	52.95	0.0639	12.8787	-0.1192
471	SLU 67	0.87	0.32	52.96	0.064	12.8804	-0.1152
471	SLU 68	0.86	0.3	52.62	0.0635	12.8011	-0.11
471	SLU 69	0.87	0.33	53.52	0.0646	13.0101	-0.1178
471	SLU 70	0.88	0.31	53.53	0.0646	13.0118	-0.1138
471	SLU 71	0.87	0.32	53.18	0.0642	12.9297	-0.1152
471	SLU 72	0.87	0.31	53.19	0.0642	12.9314	-0.1112
471	SLU 73	0.89	0.41	56.37	0.0691	13.7138	-0.1461
471	SLU 74	0.9	0.43	57.28	0.0702	13.9228	-0.1539
471	SLU 75	0.9	0.42	57.28	0.0702	13.9245	-0.1499
471	SLU 76	0.9	0.4	56.94	0.0698	13.8452	-0.1447
471	SLU 77	0.91	0.42	57.85	0.0709	14.0542	-0.1525
471	SLU 78	0.91	0.41	57.85	0.0709	14.0559	-0.1485
471	SLU 79	0.9	0.42	57.51	0.0704	13.9738	-0.15
471	SLU 80	0.91	0.41	57.51	0.0704	13.9755	-0.146
471	SLU 81	0.9	0.47	58.22	0.0717	14.1585	-0.1677
471	SLU 82	0.9	0.46	58.22	0.0718	14.1602	-0.1637
471	SLU 83	0.91	0.46	58.79	0.0724	14.2899	-0.1663
471	SLU 84	0.91	0.45	58.79	0.0724	14.2915	-0.1623
471	SLE RA 1	0.64	0.23	39.08	0.0469	9.5163	-0.0833
471	SLE RA 2	0.64	0.22	39.08	0.047	9.5181	-0.0789
471	SLE RA 3	0.65	0.23	39.69	0.0477	9.6575	-0.0841
471	SLE RA 4	0.65	0.22	39.69	0.0477	9.6586	-0.0814
471	SLE RA 5	0.65	0.22	39.46	0.0474	9.6057	-0.0779
471	SLE RA 6	0.66	0.23	40.07	0.0481	9.7451	-0.0831
471	SLE RA 7	0.66	0.22	40.07	0.0481	9.7461	-0.0805
471	SLE RA 8	0.65	0.22	39.84	0.0478	9.6915	-0.0814
471	SLE RA 9	0.65	0.22	39.84	0.0478	9.6926	-0.0788
471	SLE RA 10	0.66	0.28	41.97	0.0511	10.2142	-0.1021
471	SLE RA 11	0.67	0.3	42.57	0.0519	10.3535	-0.1073
471	SLE RA 12	0.67	0.29	42.57	0.0519	10.3546	-0.1046
471	SLE RA 13	0.67	0.28	42.35	0.0516	10.3018	-0.1011
471	SLE RA 14	0.68	0.3	42.95	0.0523	10.4411	-0.1063
471	SLE RA 15	0.68	0.29	42.96	0.0523	10.4422	-0.1037
471	SLE RA 16	0.67	0.29	42.72	0.052	10.3875	-0.1046
471	SLE RA 17	0.68	0.28	42.73	0.052	10.3886	-0.1019
471	SLE RA 18	0.67	0.32	43.2	0.0529	10.5107	-0.1164
471	SLE RA 19	0.67	0.32	43.2	0.0529	10.5118	-0.1138
471	SLE RA 20	0.68	0.32	43.58	0.0533	10.5983	-0.1155
471	SLE RA 21	0.68	0.31	43.58	0.0533	10.5993	-0.1128
471	SLE FR 1	0.64	0.23	39.08	0.0469	9.5163	-0.0833
471	SLE FR 2	0.64	0.23	39.08	0.0469	9.5167	-0.0824
471	SLE FR 3	0.64	0.23	39.23	0.0471	9.5513	-0.0829
471	SLE FR 4	0.65	0.26	40.31	0.0487	9.815	-0.0924
471	SLE FR 5	0.65	0.26	40.47	0.0489	9.8496	-0.0929
471	SLE FR 6	0.65	0.28	41.14	0.0499	10.0135	-0.0999
471	SLE QP 1	0.64	0.23	39.08	0.0469	9.5163	-0.0833
471	SLE QP 2	0.65	0.26	40.31	0.0487	9.8146	-0.0932
471	SLD 1	3.67	0.8	29.06	0.0353	7.3036	-0.2834
471	SLD 2	3.8	1.44	29.23	0.0337	7.3135	-0.5052
471	SLD 3	3.58	-0.52	28.82	0.038	7.3466	0.1783
471	SLD 4	3.71	0.12	28.99	0.0364	7.3565	-0.0435
471	SLD 5	1.67	2.31	37.27	0.0409	8.9943	-0.8102
471	SLD 6	1.76	2.73	37.38	0.0398	9.0009	-0.9573
471	SLD 7	1.36	-2.09	36.47	0.0499	9.1376	0.7287
471	SLD 8	1.45	-1.67	36.58	0.0489	9.1442	0.5815
471	SLD 9	-0.15	2.18	44.05	0.0486	10.485	-0.768
471	SLD 10	-0.06	2.61	44.16	0.0476	10.4916	-0.9152
471	SLD 11	-0.46	-2.21	43.24	0.0576	10.6284	0.7709
471	SLD 12	-0.37	-1.79	43.35	0.0566	10.635	0.6237
471	SLD 13	-2.42	0.4	51.64	0.061	12.2727	-0.143
471	SLD 14	-2.28	1.03	51.81	0.0595	12.2826	-0.3648
471	SLD 15	-2.51	-0.92	51.4	0.0637	12.3157	0.3187
471	SLD 16	-2.37	-0.29	51.57	0.0622	12.3256	0.0969
471	SLV 1	7.71	1.49	13.98	0.0174	3.9398	-0.5229
471	SLV 2	8.02	2.97	14.37	0.0138	3.963	-1.0393
471	SLV 3	7.5	-1.5	13.43	0.0235	4.0399	0.5236
471	SLV 4	7.81	-0.02	13.82	0.0199	4.0631	0.0072
471	SLV 5	3.03	4.9	33.19	0.0307	7.8962	-1.7185
471	SLV 6	3.24	5.87	33.44	0.0283	7.9113	-2.0549
471	SLV 7	2.33	-5.06	31.34	0.0511	8.23	1.7697
471	SLV 8	2.53	-4.1	31.59	0.0488	8.2451	1.4332
471	SLV 9	-1.23	4.61	49.04	0.0487	11.3841	-1.6197
471	SLV 10	-1.03	5.58	49.29	0.0464	11.3992	-1.9562

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
471	SLV 11	-1.94	-5.35	47.19	0.0691	11.7179	1.8685
471	SLV 12	-1.74	-4.38	47.44	0.0668	11.733	1.532
471	SLV 13	-6.52	0.53	66.81	0.0775	15.5661	-0.1937
471	SLV 14	-6.2	2.02	67.2	0.0739	15.5893	-0.7101
471	SLV 15	-6.73	-2.46	66.25	0.0837	15.6663	0.8528
471	SLV 16	-6.41	-0.97	66.64	0.0801	15.6894	0.3364
471	CRTFP Ux+	0	0	0	0	0	0
471	CRTFP Ux-	0	0	0	0	0	0
471	CRTFP Uy+	0	0	0	0	0	0
471	CRTFP Uy-	0	0	0	0	0	0
474	SLU 1	-0.4	-0.02	33.69	0.0345	-4.8605	-0.0043
474	SLU 2	-0.39	-0.1	33.68	0.0347	-4.8626	-0.0256
474	SLU 3	-0.41	-0.01	34.51	0.0354	-4.969	-0.0029
474	SLU 4	-0.41	-0.06	34.5	0.0355	-4.9703	-0.0157
474	SLU 5	-0.4	-0.1	34.2	0.0353	-4.9304	-0.0243
474	SLU 6	-0.42	0	35.02	0.0359	-5.0367	-0.0016
474	SLU 7	-0.42	-0.06	35.01	0.0361	-5.038	-0.0144
474	SLU 8	-0.42	-0.01	34.72	0.0356	-4.996	-0.0017
474	SLU 9	-0.41	-0.06	34.71	0.0357	-4.9973	-0.0145
474	SLU 10	-0.4	-0.05	37.54	0.0398	-5.4146	-0.0123
474	SLU 11	-0.42	0.04	38.36	0.0405	-5.521	0.0104
474	SLU 12	-0.42	-0.01	38.36	0.0406	-5.5223	-0.0024
474	SLU 13	-0.41	-0.04	38.06	0.0404	-5.4824	-0.011
474	SLU 14	-0.43	0.05	38.88	0.041	-5.5887	0.0117
474	SLU 15	-0.43	0	38.87	0.0411	-5.59	-0.0011
474	SLU 16	-0.43	0.05	38.58	0.0407	-5.548	0.0116
474	SLU 17	-0.42	0	38.57	0.0408	-5.5493	-0.0012
474	SLU 18	-0.42	0.06	39.2	0.0418	-5.649	0.0147
474	SLU 19	-0.41	0.01	39.2	0.0419	-5.6503	0.0019
474	SLU 20	-0.42	0.07	39.72	0.0423	-5.7168	0.016
474	SLU 21	-0.42	0.01	39.71	0.0425	-5.7181	0.0032
474	SLU 22	-0.44	0.05	37.58	0.0397	-5.4085	0.0115
474	SLU 23	-0.43	-0.04	37.57	0.0399	-5.4107	-0.0098
474	SLU 24	-0.45	0.05	38.39	0.0405	-5.517	0.0129
474	SLU 25	-0.44	0	38.39	0.0407	-5.5183	0.0001
474	SLU 26	-0.44	-0.03	38.08	0.0404	-5.4785	-0.0085
474	SLU 27	-0.46	0.06	38.9	0.0411	-5.5848	0.0142
474	SLU 28	-0.45	0.01	38.9	0.0412	-5.5861	0.0015
474	SLU 29	-0.45	0.06	38.6	0.0407	-5.544	0.0141
474	SLU 30	-0.45	0.01	38.6	0.0409	-5.5453	0.0014
474	SLU 31	-0.44	0.02	41.43	0.045	-5.9627	0.0035
474	SLU 32	-0.46	0.11	42.25	0.0456	-6.069	0.0262
474	SLU 33	-0.45	0.06	42.25	0.0458	-6.0703	0.0134
474	SLU 34	-0.45	0.02	41.94	0.0455	-6.0305	0.0048
474	SLU 35	-0.47	0.11	42.76	0.0462	-6.1368	0.0275
474	SLU 36	-0.46	0.06	42.76	0.0463	-6.1381	0.0148
474	SLU 37	-0.46	0.11	42.46	0.0458	-6.096	0.0274
474	SLU 38	-0.46	0.06	42.46	0.046	-6.0973	0.0147
474	SLU 39	-0.45	0.12	43.09	0.0469	-6.1971	0.0305
474	SLU 40	-0.45	0.07	43.09	0.0471	-6.1984	0.0177
474	SLU 41	-0.46	0.13	43.6	0.0475	-6.2649	0.0318
474	SLU 42	-0.46	0.08	43.6	0.0476	-6.2662	0.019
474	SLU 43	-0.51	-0.04	42.47	0.0431	-6.1307	-0.0111
474	SLU 44	-0.5	-0.13	42.46	0.0433	-6.1328	-0.0323
474	SLU 45	-0.52	-0.04	43.28	0.044	-6.2392	-0.0097
474	SLU 46	-0.52	-0.09	43.28	0.0441	-6.2405	-0.0224
474	SLU 47	-0.51	-0.12	42.97	0.0439	-6.2006	-0.031
474	SLU 48	-0.53	-0.03	43.79	0.0445	-6.3069	-0.0083
474	SLU 49	-0.52	-0.08	43.79	0.0446	-6.3082	-0.0211
474	SLU 50	-0.53	-0.03	43.49	0.0442	-6.2662	-0.0084
474	SLU 51	-0.52	-0.08	43.49	0.0443	-6.2675	-0.0212
474	SLU 52	-0.51	-0.07	46.32	0.0484	-6.6848	-0.0191
474	SLU 53	-0.53	0.02	47.14	0.0491	-6.7912	0.0036
474	SLU 54	-0.53	-0.03	47.13	0.0492	-6.7925	-0.0091
474	SLU 55	-0.52	-0.07	46.83	0.049	-6.7526	-0.0177
474	SLU 56	-0.54	0.02	47.65	0.0496	-6.8589	0.0049
474	SLU 57	-0.53	-0.03	47.65	0.0497	-6.8602	-0.0078
474	SLU 58	-0.54	0.02	47.35	0.0493	-6.8182	0.0049
474	SLU 59	-0.53	-0.03	47.35	0.0494	-6.8195	-0.0079
474	SLU 60	-0.52	0.03	47.98	0.0504	-6.9192	0.0079
474	SLU 61	-0.52	-0.02	47.98	0.0505	-6.9205	-0.0048
474	SLU 62	-0.53	0.04	48.49	0.0509	-6.987	0.0092
474	SLU 63	-0.53	-0.01	48.49	0.0511	-6.9883	-0.0035
474	SLU 64	-0.55	0.02	46.35	0.0483	-6.6788	0.0048
474	SLU 65	-0.54	-0.06	46.35	0.0485	-6.6809	-0.0165
474	SLU 66	-0.56	0.03	47.17	0.0491	-6.7873	0.0062
474	SLU 67	-0.55	-0.02	47.16	0.0493	-6.7886	-0.0066
474	SLU 68	-0.55	-0.06	46.86	0.049	-6.7487	-0.0152
474	SLU 69	-0.56	0.03	47.68	0.0497	-6.855	0.0075
474	SLU 70	-0.56	-0.02	47.67	0.0498	-6.8563	-0.0053
474	SLU 71	-0.56	0.03	47.38	0.0493	-6.8143	0.0074
474	SLU 72	-0.56	-0.02	47.37	0.0495	-6.8156	-0.0054
474	SLU 73	-0.55	-0.01	50.2	0.0536	-7.2329	-0.0032
474	SLU 74	-0.57	0.08	51.02	0.0542	-7.3393	0.0195
474	SLU 75	-0.56	0.03	51.02	0.0544	-7.3406	0.0067
474	SLU 76	-0.56	0	50.72	0.0541	-7.3007	-0.0019
474	SLU 77	-0.57	0.09	51.54	0.0548	-7.407	0.0208
474	SLU 78	-0.57	0.03	51.53	0.0549	-7.4083	0.008
474	SLU 79	-0.57	0.09	51.24	0.0544	-7.3663	0.0207
474	SLU 80	-0.57	0.03	51.23	0.0545	-7.3676	0.0079

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
474	SLU 81	-0.56	0.1	51.87	0.0555	-7.4673	0.0238
474	SLU 82	-0.56	0.05	51.86	0.0557	-7.4686	0.011
474	SLU 83	-0.57	0.1	52.38	0.0561	-7.5351	0.0251
474	SLU 84	-0.56	0.05	52.37	0.0562	-7.5364	0.0123
474	SLE RA 1	-0.41	0	34.8	0.036	-5.017	0.0002
474	SLE RA 2	-0.41	-0.05	34.8	0.0361	-5.0185	-0.014
474	SLE RA 3	-0.42	0.01	35.34	0.0366	-5.0894	0.0011
474	SLE RA 4	-0.42	-0.03	35.34	0.0367	-5.0903	-0.0074
474	SLE RA 5	-0.41	-0.05	35.14	0.0365	-5.0637	-0.0131
474	SLE RA 6	-0.42	0.01	35.69	0.0369	-5.1346	0.002
474	SLE RA 7	-0.42	-0.02	35.68	0.037	-5.1354	-0.0065
474	SLE RA 8	-0.42	0.01	35.49	0.0367	-5.1074	0.0019
474	SLE RA 9	-0.42	-0.02	35.48	0.0368	-5.1083	-0.0066
474	SLE RA 10	-0.41	-0.02	37.37	0.0395	-5.3865	-0.0051
474	SLE RA 11	-0.43	0.04	37.92	0.04	-5.4574	0.01
474	SLE RA 12	-0.42	0.01	37.91	0.0401	-5.4583	0.0015
474	SLE RA 13	-0.42	-0.02	37.71	0.0399	-5.4317	-0.0043
474	SLE RA 14	-0.43	0.05	38.26	0.0403	-5.5026	0.0109
474	SLE RA 15	-0.43	0.01	38.26	0.0404	-5.5034	0.0024
474	SLE RA 16	-0.43	0.05	38.06	0.0401	-5.4754	0.0108
474	SLE RA 17	-0.43	0.01	38.06	0.0402	-5.4763	0.0023
474	SLE RA 18	-0.42	0.05	38.48	0.0408	-5.5428	0.0129
474	SLE RA 19	-0.42	0.02	38.47	0.0409	-5.5436	0.0043
474	SLE RA 20	-0.43	0.06	38.82	0.0412	-5.5879	0.0137
474	SLE RA 21	-0.42	0.02	38.82	0.0413	-5.5888	0.0052
474	SLE FR 1	-0.41	0	34.8	0.036	-5.017	0.0002
474	SLE FR 2	-0.41	-0.01	34.8	0.036	-5.0173	-0.0026
474	SLE FR 3	-0.41	0	34.94	0.0361	-5.0351	0.0005
474	SLE FR 4	-0.41	0.01	35.9	0.0375	-5.1751	0.0012
474	SLE FR 5	-0.42	0.02	36.04	0.0376	-5.1928	0.0043
474	SLE FR 6	-0.42	0.03	36.64	0.0384	-5.2799	0.0065
474	SLE QP 1	-0.41	0	34.8	0.036	-5.017	0.0002
474	SLE QP 2	-0.42	0.02	35.9	0.0374	-5.1748	0.004
474	SLD 1	2.13	0.57	46.53	0.0467	-6.5456	0.1412
474	SLD 2	2.23	0.01	46.43	0.0485	-6.5575	0.0031
474	SLD 3	2.18	-0.69	46.31	0.0497	-6.6034	-0.1744
474	SLD 4	2.28	-1.25	46.21	0.0515	-6.6152	-0.3125
474	SLD 5	0.25	2.2	39.43	0.0353	-5.4963	0.549
474	SLD 6	0.32	1.83	39.37	0.0365	-5.5042	0.4573
474	SLD 7	0.43	-2.01	38.72	0.0454	-5.6888	-0.5031
474	SLD 8	0.49	-2.38	38.66	0.0466	-5.6966	-0.5948
474	SLD 9	-1.32	2.41	33.15	0.0283	-4.6529	0.6028
474	SLD 10	-1.26	2.04	33.09	0.0295	-4.6608	0.5111
474	SLD 11	-1.15	-1.79	32.44	0.0384	-4.8454	-0.4493
474	SLD 12	-1.08	-2.16	32.38	0.0396	-4.8532	-0.541
474	SLD 13	-3.11	1.29	25.6	0.0233	-3.7343	0.3205
474	SLD 14	-3.02	0.73	25.5	0.0252	-3.7461	0.1824
474	SLD 15	-3.06	0.02	25.38	0.0264	-3.7921	0.0049
474	SLD 16	-2.96	-0.53	25.28	0.0282	-3.8039	-0.1333
474	SLV 1	5.54	1.25	60.75	0.0591	-8.3827	0.312
474	SLV 2	5.77	-0.04	60.52	0.0634	-8.4102	-0.0097
474	SLV 3	5.66	-1.6	60.26	0.0661	-8.5167	-0.4018
474	SLV 4	5.89	-2.9	60.03	0.0703	-8.5442	-0.7235
474	SLV 5	1.15	4.94	44.14	0.0327	-5.9291	1.2356
474	SLV 6	1.3	4.1	44	0.0355	-5.947	1.026
474	SLV 7	1.55	-4.57	42.5	0.0558	-6.3757	-1.1439
474	SLV 8	1.7	-5.41	42.36	0.0586	-6.3937	-1.3535
474	SLV 9	-2.53	5.45	29.45	0.0163	-3.9559	1.3615
474	SLV 10	-2.38	4.61	29.3	0.0191	-3.9738	1.1519
474	SLV 11	-2.13	-4.07	27.81	0.0394	-4.4025	-1.018
474	SLV 12	-1.98	-4.91	27.66	0.0422	-4.4205	-1.2276
474	SLV 13	-6.72	2.93	11.78	0.0046	-1.8053	0.7315
474	SLV 14	-6.49	1.64	11.55	0.0088	-1.8328	0.4098
474	SLV 15	-6.6	0.08	11.29	0.0115	-1.9393	0.0177
474	SLV 16	-6.37	-1.22	11.06	0.0158	-1.9668	-0.304
474	CRTFP Ux+	0	0	0	0	0	0
474	CRTFP Ux-	0	0	0	0	0	0
474	CRTFP Uy+	0	0	0	0	0	0
474	CRTFP Uy-	0	0	0	0	0	0
478	SLU 1	-0.55	-0.68	153.78	-5.5407	34.184	0.0274
478	SLU 2	-0.53	-0.86	153.8	-5.536	34.1932	0.0737
478	SLU 3	-0.56	-0.64	157.53	-5.6694	35.0275	0.0158
478	SLU 4	-0.54	-0.75	157.54	-5.6666	35.033	0.0436
478	SLU 5	-0.53	-0.86	156.1	-5.6173	34.7099	0.0733
478	SLU 6	-0.56	-0.65	159.83	-5.7506	35.5442	0.0154
478	SLU 7	-0.55	-0.75	159.84	-5.7478	35.5497	0.0432
478	SLU 8	-0.56	-0.69	158.37	-5.7032	35.2174	0.0267
478	SLU 9	-0.54	-0.8	158.39	-5.7004	35.223	0.0545
478	SLU 10	-0.49	-0.77	173.99	-6.2631	38.591	0.041
478	SLU 11	-0.52	-0.56	177.72	-6.3965	39.4253	-0.0169
478	SLU 12	-0.5	-0.66	177.73	-6.3937	39.4308	0.0109
478	SLU 13	-0.49	-0.78	176.29	-6.3444	39.1078	0.0406
478	SLU 14	-0.52	-0.56	180.01	-6.4777	39.942	-0.0173
478	SLU 15	-0.51	-0.67	180.03	-6.4749	39.9475	0.0105
478	SLU 16	-0.52	-0.6	178.56	-6.4303	39.6153	-0.006
478	SLU 17	-0.5	-0.71	178.58	-6.4275	39.6208	0.0218
478	SLU 18	-0.49	-0.56	182.62	-6.5794	40.4666	-0.0193
478	SLU 19	-0.48	-0.66	182.63	-6.5766	40.4721	0.0085
478	SLU 20	-0.49	-0.56	184.91	-6.6606	40.9833	-0.0196
478	SLU 21	-0.48	-0.67	184.93	-6.6578	40.9889	0.0081

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
478	SLU 22	-0.59	-0.32	171.27	-6.1092	38.0974	-0.0729
478	SLU 23	-0.56	-0.5	171.3	-6.1046	38.1066	-0.0266
478	SLU 24	-0.59	-0.28	175.03	-6.2379	38.9408	-0.0845
478	SLU 25	-0.58	-0.39	175.04	-6.2351	38.9464	-0.0568
478	SLU 26	-0.57	-0.5	173.6	-6.1858	38.6233	-0.027
478	SLU 27	-0.6	-0.29	177.33	-6.3192	39.4576	-0.0849
478	SLU 28	-0.59	-0.39	177.34	-6.3164	39.4631	-0.0571
478	SLU 29	-0.6	-0.33	175.87	-6.2717	39.1308	-0.0736
478	SLU 30	-0.58	-0.44	175.89	-6.2689	39.1363	-0.0459
478	SLU 31	-0.52	-0.41	191.49	-6.8316	42.5044	-0.0593
478	SLU 32	-0.55	-0.2	195.21	-6.965	43.3387	-0.1172
478	SLU 33	-0.54	-0.3	195.23	-6.9622	43.3442	-0.0894
478	SLU 34	-0.53	-0.42	193.79	-6.9129	43.0211	-0.0597
478	SLU 35	-0.56	-0.2	197.51	-7.0462	43.8554	-0.1176
478	SLU 36	-0.55	-0.31	197.53	-7.0434	43.8609	-0.0898
478	SLU 37	-0.56	-0.24	196.06	-6.9988	43.5287	-0.1063
478	SLU 38	-0.54	-0.35	196.08	-6.996	43.5342	-0.0785
478	SLU 39	-0.53	-0.2	200.11	-7.1479	44.38	-0.1196
478	SLU 40	-0.52	-0.3	200.13	-7.1451	44.3855	-0.0918
478	SLU 41	-0.53	-0.2	202.41	-7.2291	44.8967	-0.1199
478	SLU 42	-0.52	-0.31	202.43	-7.2264	44.9022	-0.0922
478	SLU 43	-0.7	-1.01	193.91	-7.008	43.0975	0.0701
478	SLU 44	-0.68	-1.18	193.94	-7.0033	43.1067	0.1163
478	SLU 45	-0.71	-0.97	197.66	-7.1367	43.9409	0.0584
478	SLU 46	-0.69	-1.08	197.68	-7.1339	43.9465	0.0862
478	SLU 47	-0.68	-1.19	196.24	-7.0846	43.6234	0.116
478	SLU 48	-0.71	-0.97	199.96	-7.2179	44.4577	0.058
478	SLU 49	-0.7	-1.08	199.98	-7.2151	44.4632	0.0858
478	SLU 50	-0.71	-1.02	198.51	-7.1705	44.1309	0.0693
478	SLU 51	-0.69	-1.12	198.52	-7.1677	44.1364	0.0971
478	SLU 52	-0.64	-1.1	214.12	-7.7304	47.5045	0.0836
478	SLU 53	-0.67	-0.88	217.85	-7.8637	48.3388	0.0257
478	SLU 54	-0.65	-0.99	217.87	-7.8609	48.3443	0.0535
478	SLU 55	-0.64	-1.1	216.42	-7.8117	48.0212	0.0833
478	SLU 56	-0.67	-0.89	220.15	-7.945	48.8555	0.0254
478	SLU 57	-0.66	-1	220.16	-7.9422	48.861	0.0531
478	SLU 58	-0.67	-0.93	218.7	-7.8976	48.5288	0.0366
478	SLU 59	-0.65	-1.04	218.71	-7.8948	48.5343	0.0644
478	SLU 60	-0.64	-0.88	222.75	-8.0467	49.3801	0.0234
478	SLU 61	-0.63	-0.99	222.77	-8.0439	49.3856	0.0511
478	SLU 62	-0.65	-0.89	225.05	-8.1279	49.8968	0.023
478	SLU 63	-0.63	-1	225.06	-8.1251	49.9023	0.0508
478	SLU 64	-0.74	-0.65	211.41	-7.5765	47.0109	-0.0303
478	SLU 65	-0.72	-0.82	211.44	-7.5719	47.0201	0.016
478	SLU 66	-0.75	-0.61	215.16	-7.7052	47.8543	-0.0419
478	SLU 67	-0.73	-0.72	215.18	-7.7024	47.8598	-0.0141
478	SLU 68	-0.72	-0.83	213.73	-7.6531	47.5368	0.0156
478	SLU 69	-0.75	-0.61	217.46	-7.7864	48.371	-0.0423
478	SLU 70	-0.74	-0.72	217.47	-7.7837	48.3766	-0.0145
478	SLU 71	-0.75	-0.66	216.01	-7.739	48.0443	-0.031
478	SLU 72	-0.73	-0.76	216.02	-7.7362	48.0498	-0.0032
478	SLU 73	-0.68	-0.74	231.62	-8.2989	51.4179	-0.0167
478	SLU 74	-0.71	-0.52	235.35	-8.4323	52.2522	-0.0746
478	SLU 75	-0.69	-0.63	235.36	-8.4295	52.2577	-0.0468
478	SLU 76	-0.68	-0.74	233.92	-8.3802	51.9346	-0.017
478	SLU 77	-0.71	-0.53	237.65	-8.5135	52.7689	-0.075
478	SLU 78	-0.7	-0.64	237.66	-8.5107	52.7744	-0.0472
478	SLU 79	-0.71	-0.57	236.19	-8.4661	52.4421	-0.0637
478	SLU 80	-0.69	-0.68	236.21	-8.4633	52.4476	-0.0359
478	SLU 81	-0.68	-0.52	240.25	-8.6152	53.2935	-0.0769
478	SLU 82	-0.67	-0.63	240.26	-8.6124	53.299	-0.0492
478	SLU 83	-0.68	-0.53	242.55	-8.6964	53.8102	-0.0773
478	SLU 84	-0.67	-0.64	242.56	-8.6936	53.8157	-0.0496
478	SLE RA 1	-0.56	-0.58	158.78	-5.7031	35.3021	-0.0012
478	SLE RA 2	-0.54	-0.69	158.79	-5.7	35.3083	0.0296
478	SLE RA 3	-0.56	-0.55	161.28	-5.7889	35.8644	-0.009
478	SLE RA 4	-0.56	-0.62	161.29	-5.7871	35.8681	0.0095
478	SLE RA 5	-0.55	-0.7	160.33	-5.7542	35.6527	0.0294
478	SLE RA 6	-0.57	-0.56	162.81	-5.8431	36.2089	-0.0092
478	SLE RA 7	-0.56	-0.63	162.82	-5.8412	36.2126	0.0093
478	SLE RA 8	-0.56	-0.58	161.84	-5.8115	35.9911	-0.0017
478	SLE RA 9	-0.56	-0.65	161.85	-5.8096	35.9948	0.0168
478	SLE RA 10	-0.52	-0.64	172.25	-6.1847	38.2401	0.0078
478	SLE RA 11	-0.54	-0.49	174.74	-6.2736	38.7963	-0.0308
478	SLE RA 12	-0.53	-0.57	174.75	-6.2718	38.8	-0.0123
478	SLE RA 13	-0.52	-0.64	173.78	-6.2389	38.5846	0.0076
478	SLE RA 14	-0.54	-0.5	176.27	-6.3278	39.1408	-0.031
478	SLE RA 15	-0.53	-0.57	176.28	-6.3259	39.1445	-0.0125
478	SLE RA 16	-0.54	-0.53	175.3	-6.2962	38.923	-0.0235
478	SLE RA 17	-0.53	-0.6	175.31	-6.2943	38.9266	-0.005
478	SLE RA 18	-0.52	-0.49	178	-6.3956	39.4905	-0.0324
478	SLE RA 19	-0.51	-0.57	178.01	-6.3937	39.4942	-0.0138
478	SLE RA 20	-0.52	-0.5	179.53	-6.4498	39.835	-0.0326
478	SLE RA 21	-0.51	-0.57	179.55	-6.4479	39.8387	-0.0141
478	SLE FR 1	-0.56	-0.58	158.78	-5.7031	35.3021	-0.0012
478	SLE FR 2	-0.56	-0.6	158.78	-5.7025	35.3033	0.0049
478	SLE FR 3	-0.56	-0.58	159.39	-5.7248	35.4399	-0.0013
478	SLE FR 4	-0.54	-0.58	164.55	-5.9102	36.5599	-0.0044
478	SLE FR 5	-0.55	-0.55	165.16	-5.9325	36.6964	-0.0107
478	SLE FR 6	-0.54	-0.54	168.39	-6.0494	37.3963	-0.0168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
478	SLE QP 1	-0.56	-0.58	158.78	-5.7031	35.3021	-0.0012
478	SLE QP 2	-0.55	-0.55	164.54	-5.9109	36.5586	-0.0106
478	SLD 1	12.55	2.37	162.03	-5.9021	35.9504	-0.1409
478	SLD 2	12.98	2.02	161.98	-5.8949	35.9435	0.011
478	SLD 3	12.34	-2.2	163.08	-5.8145	36.2429	0.9484
478	SLD 4	12.77	-2.55	163.03	-5.8074	36.2361	1.1003
478	SLD 5	3.61	7.31	162.21	-6.0423	35.9338	-1.7294
478	SLD 6	3.9	7.08	162.18	-6.0375	35.9292	-1.6286
478	SLD 7	2.93	-7.91	165.7	-5.7505	36.9088	1.9017
478	SLD 8	3.22	-8.14	165.67	-5.7458	36.9043	2.0025
478	SLD 9	-4.31	7.04	163.42	-6.076	36.213	-2.0236
478	SLD 10	-4.03	6.81	163.39	-6.0712	36.2085	-1.9228
478	SLD 11	-4.99	-8.19	166.91	-5.7842	37.1881	1.6075
478	SLD 12	-4.71	-8.42	166.87	-5.7795	37.1835	1.7083
478	SLD 13	-13.87	1.44	166.06	-6.0144	36.8812	-1.1214
478	SLD 14	-13.44	1.1	166.01	-6.0072	36.8743	-0.9695
478	SLD 15	-14.07	-3.12	167.11	-5.9269	37.1737	-0.0321
478	SLD 16	-13.64	-3.47	167.05	-5.9197	37.1669	0.1198
478	SLV 1	30.07	6.1	158.68	-5.8854	35.1378	-0.274
478	SLV 2	31.08	5.3	158.56	-5.8687	35.1218	0.0796
478	SLV 3	29.6	-4.24	161.04	-5.6862	35.7971	2.1923
478	SLV 4	30.6	-5.05	160.92	-5.6694	35.7811	2.5458
478	SLV 5	9.18	17.27	159.23	-6.2083	35.1352	-3.8921
478	SLV 6	9.84	16.74	159.15	-6.1974	35.1248	-3.6618
478	SLV 7	7.6	-17.2	167.09	-5.5442	37.333	4.3285
478	SLV 8	8.25	-17.72	167.01	-5.5333	37.3225	4.5589
478	SLV 9	-9.35	16.62	162.08	-6.2884	35.7947	-4.58
478	SLV 10	-8.7	16.1	162	-6.2775	35.7843	-4.3497
478	SLV 11	-10.93	-17.85	169.94	-5.6243	37.9925	3.6406
478	SLV 12	-10.28	-18.37	169.86	-5.6134	37.9821	3.871
478	SLV 13	-31.69	3.94	168.17	-6.1523	37.3362	-2.5669
478	SLV 14	-30.69	3.14	168.05	-6.1356	37.3201	-2.2134
478	SLV 15	-32.17	-6.4	170.53	-5.9531	37.9955	-0.1007
478	SLV 16	-31.17	-7.2	170.41	-5.9364	37.9795	0.2528
478	CRTFP Ux+	0	0	0	0	0	0
478	CRTFP Ux-	0	0	0	0	0	0
478	CRTFP Uy+	0	0	0	0	0	0
478	CRTFP Uy-	0	0	0	0	0	0
479	SLU 1	-0.09	-0.34	56.37	-0.8057	-0.0734	0.0025
479	SLU 2	-0.08	-0.39	56.37	-0.8011	-0.0731	0.0026
479	SLU 3	-0.09	-0.32	57.72	-0.8025	-0.0746	0.0026
479	SLU 4	-0.08	-0.36	57.72	-0.7997	-0.0745	0.0026
479	SLU 5	-0.08	-0.39	57.2	-0.8	-0.0739	0.0026
479	SLU 6	-0.09	-0.33	58.55	-0.8014	-0.0754	0.0026
479	SLU 7	-0.08	-0.36	58.55	-0.7987	-0.0753	0.0027
479	SLU 8	-0.09	-0.34	58.03	-0.8035	-0.0749	0.0026
479	SLU 9	-0.08	-0.37	58.03	-0.8008	-0.0748	0.0026
479	SLU 10	-0.06	-0.38	63.96	-1.1721	-0.085	0.0031
479	SLU 11	-0.06	-0.31	65.31	-1.1735	-0.0865	0.0031
479	SLU 12	-0.06	-0.34	65.31	-1.1707	-0.0864	0.0032
479	SLU 13	-0.06	-0.38	64.79	-1.171	-0.0858	0.0031
479	SLU 14	-0.06	-0.31	66.14	-1.1724	-0.0873	0.0032
479	SLU 15	-0.06	-0.35	66.14	-1.1697	-0.0872	0.0032
479	SLU 16	-0.06	-0.33	65.62	-1.1745	-0.0868	0.0031
479	SLU 17	-0.06	-0.36	65.62	-1.1718	-0.0867	0.0032
479	SLU 18	-0.05	-0.31	67.21	-1.3356	-0.0903	0.0033
479	SLU 19	-0.05	-0.35	67.21	-1.3329	-0.0902	0.0033
479	SLU 20	-0.05	-0.32	68.04	-1.3346	-0.0911	0.0033
479	SLU 21	-0.05	-0.35	68.04	-1.3318	-0.091	0.0033
479	SLU 22	-0.09	-0.23	62.73	-0.9117	-0.08	0.0029
479	SLU 23	-0.08	-0.28	62.73	-0.9071	-0.0797	0.0029
479	SLU 24	-0.09	-0.21	64.08	-0.9085	-0.0813	0.003
479	SLU 25	-0.09	-0.25	64.08	-0.9058	-0.0811	0.003
479	SLU 26	-0.08	-0.28	63.56	-0.9061	-0.0805	0.003
479	SLU 27	-0.09	-0.22	64.91	-0.9075	-0.0821	0.003
479	SLU 28	-0.09	-0.25	64.91	-0.9047	-0.0819	0.0031
479	SLU 29	-0.09	-0.23	64.39	-0.9096	-0.0816	0.003
479	SLU 30	-0.09	-0.26	64.39	-0.9068	-0.0814	0.003
479	SLU 31	-0.06	-0.27	70.32	-1.2781	-0.0916	0.0035
479	SLU 32	-0.07	-0.2	71.67	-1.2795	-0.0931	0.0035
479	SLU 33	-0.06	-0.23	71.67	-1.2767	-0.093	0.0035
479	SLU 34	-0.06	-0.27	71.15	-1.277	-0.0924	0.0035
479	SLU 35	-0.07	-0.2	72.5	-1.2784	-0.0939	0.0035
479	SLU 36	-0.06	-0.24	72.5	-1.2757	-0.0938	0.0036
479	SLU 37	-0.07	-0.22	71.98	-1.2805	-0.0934	0.0035
479	SLU 38	-0.06	-0.25	71.98	-1.2778	-0.0933	0.0035
479	SLU 39	-0.06	-0.2	73.57	-1.4416	-0.0969	0.0036
479	SLU 40	-0.05	-0.24	73.57	-1.4389	-0.0968	0.0037
479	SLU 41	-0.06	-0.21	74.4	-1.4406	-0.0977	0.0037
479	SLU 42	-0.05	-0.24	74.4	-1.4378	-0.0976	0.0037
479	SLU 43	-0.11	-0.47	71.1	-1.011	-0.0931	0.0031
479	SLU 44	-0.11	-0.53	71.1	-1.0064	-0.0929	0.0032
479	SLU 45	-0.11	-0.46	72.46	-1.0078	-0.0944	0.0032
479	SLU 46	-0.11	-0.5	72.46	-1.0051	-0.0942	0.0033
479	SLU 47	-0.11	-0.53	71.93	-1.0054	-0.0937	0.0032
479	SLU 48	-0.11	-0.47	73.28	-1.0068	-0.0952	0.0033
479	SLU 49	-0.11	-0.5	73.29	-1.004	-0.095	0.0033
479	SLU 50	-0.11	-0.48	72.76	-1.0089	-0.0947	0.0032
479	SLU 51	-0.11	-0.51	72.76	-1.0061	-0.0946	0.0033
479	SLU 52	-0.08	-0.51	78.69	-1.3774	-0.1047	0.0037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
479	SLU 53	-0.09	-0.45	80.04	-1.3788	-0.1063	0.0037
479	SLU 54	-0.09	-0.48	80.04	-1.3761	-0.1061	0.0038
479	SLU 55	-0.08	-0.52	79.52	-1.3763	-0.1055	0.0038
479	SLU 56	-0.09	-0.45	80.87	-1.3777	-0.1071	0.0038
479	SLU 57	-0.09	-0.48	80.87	-1.375	-0.1069	0.0038
479	SLU 58	-0.09	-0.46	80.35	-1.3799	-0.1066	0.0037
479	SLU 59	-0.09	-0.5	80.35	-1.3771	-0.1064	0.0038
479	SLU 60	-0.08	-0.45	81.94	-1.541	-0.1101	0.0039
479	SLU 61	-0.08	-0.49	81.94	-1.5382	-0.1099	0.0039
479	SLU 62	-0.08	-0.46	82.77	-1.5399	-0.1109	0.0039
479	SLU 63	-0.08	-0.49	82.77	-1.5372	-0.1107	0.004
479	SLU 64	-0.12	-0.36	77.46	-1.117	-0.0997	0.0035
479	SLU 65	-0.11	-0.42	77.46	-1.1125	-0.0995	0.0036
479	SLU 66	-0.12	-0.35	78.81	-1.1139	-0.101	0.0036
479	SLU 67	-0.11	-0.39	78.82	-1.1111	-0.1009	0.0036
479	SLU 68	-0.11	-0.42	78.29	-1.1114	-0.1003	0.0036
479	SLU 69	-0.12	-0.36	79.64	-1.1128	-0.1018	0.0036
479	SLU 70	-0.11	-0.39	79.64	-1.1101	-0.1017	0.0037
479	SLU 71	-0.12	-0.37	79.12	-1.1149	-0.1013	0.0036
479	SLU 72	-0.11	-0.4	79.12	-1.1122	-0.1012	0.0036
479	SLU 73	-0.09	-0.4	85.05	-1.4834	-0.1114	0.0041
479	SLU 74	-0.09	-0.34	86.4	-1.4848	-0.1129	0.0041
479	SLU 75	-0.09	-0.37	86.4	-1.4821	-0.1127	0.0042
479	SLU 76	-0.09	-0.41	85.88	-1.4824	-0.1122	0.0041
479	SLU 77	-0.09	-0.34	87.23	-1.4838	-0.1137	0.0042
479	SLU 78	-0.09	-0.37	87.23	-1.481	-0.1135	0.0042
479	SLU 79	-0.09	-0.35	86.71	-1.4859	-0.1132	0.0041
479	SLU 80	-0.09	-0.39	86.71	-1.4831	-0.1131	0.0042
479	SLU 81	-0.08	-0.34	88.3	-1.647	-0.1167	0.0043
479	SLU 82	-0.08	-0.38	88.3	-1.6442	-0.1165	0.0043
479	SLU 83	-0.08	-0.34	89.13	-1.6459	-0.1175	0.0043
479	SLU 84	-0.08	-0.38	89.13	-1.6432	-0.1173	0.0043
479	SLE RA 1	-0.09	-0.3	58.19	-0.8359	-0.0752	0.0026
479	SLE RA 2	-0.08	-0.34	58.19	-0.8329	-0.0751	0.0027
479	SLE RA 3	-0.09	-0.3	59.09	-0.8338	-0.0761	0.0027
479	SLE RA 4	-0.09	-0.32	59.09	-0.832	-0.076	0.0027
479	SLE RA 5	-0.08	-0.34	58.74	-0.8322	-0.0756	0.0027
479	SLE RA 6	-0.09	-0.3	59.64	-0.8331	-0.0766	0.0027
479	SLE RA 7	-0.09	-0.32	59.64	-0.8313	-0.0765	0.0027
479	SLE RA 8	-0.09	-0.31	59.29	-0.8345	-0.0763	0.0027
479	SLE RA 9	-0.09	-0.33	59.29	-0.8327	-0.0762	0.0027
479	SLE RA 10	-0.07	-0.33	63.25	-1.0802	-0.083	0.003
479	SLE RA 11	-0.07	-0.29	64.15	-1.0811	-0.084	0.003
479	SLE RA 12	-0.07	-0.31	64.15	-1.0793	-0.0839	0.003
479	SLE RA 13	-0.07	-0.33	63.8	-1.0795	-0.0835	0.003
479	SLE RA 14	-0.07	-0.29	64.7	-1.0804	-0.0846	0.0031
479	SLE RA 15	-0.07	-0.31	64.7	-1.0786	-0.0845	0.0031
479	SLE RA 16	-0.07	-0.3	64.35	-1.0819	-0.0842	0.003
479	SLE RA 17	-0.07	-0.32	64.35	-1.08	-0.0841	0.0031
479	SLE RA 18	-0.07	-0.29	65.42	-1.1893	-0.0866	0.0031
479	SLE RA 19	-0.06	-0.31	65.42	-1.1874	-0.0865	0.0031
479	SLE RA 20	-0.07	-0.29	65.97	-1.1885	-0.0871	0.0031
479	SLE RA 21	-0.06	-0.31	65.97	-1.1867	-0.087	0.0032
479	SLE FR 1	-0.09	-0.3	58.19	-0.8359	-0.0752	0.0026
479	SLE FR 2	-0.09	-0.31	58.19	-0.8353	-0.0752	0.0026
479	SLE FR 3	-0.09	-0.3	58.41	-0.8357	-0.0755	0.0026
479	SLE FR 4	-0.08	-0.31	60.36	-0.9413	-0.0786	0.0028
479	SLE FR 5	-0.08	-0.3	60.58	-0.9417	-0.0788	0.0028
479	SLE FR 6	-0.08	-0.3	61.8	-1.0126	-0.0809	0.0029
479	SLE QP 1	-0.09	-0.3	58.19	-0.8359	-0.0752	0.0026
479	SLE QP 2	-0.08	-0.3	60.36	-0.9419	-0.0786	0.0028
479	SLD 1	4.25	0.69	59.66	-1.0121	-0.0676	0.006
479	SLD 2	4.39	0.64	59.62	-1.0097	-0.0668	0.0075
479	SLD 3	4.18	-0.84	59.4	-0.9091	-0.0634	0.0053
479	SLD 4	4.32	-0.89	59.36	-0.9067	-0.0626	0.0068
479	SLD 5	1.3	2.33	60.54	-1.1196	-0.0819	0.0045
479	SLD 6	1.39	2.3	60.52	-1.1181	-0.0814	0.0055
479	SLD 7	1.07	-2.78	59.69	-0.7763	-0.0678	0.0022
479	SLD 8	1.16	-2.81	59.66	-0.7747	-0.0673	0.0032
479	SLD 9	-1.32	2.21	61.05	-1.1092	-0.09	0.0023
479	SLD 10	-1.23	2.18	61.03	-1.1076	-0.0895	0.0033
479	SLD 11	-1.55	-2.9	60.2	-0.7658	-0.0759	0
479	SLD 12	-1.46	-2.93	60.17	-0.7642	-0.0754	0.001
479	SLD 13	-4.48	0.29	61.35	-0.9772	-0.0947	-0.0013
479	SLD 14	-4.35	0.25	61.31	-0.9748	-0.0939	0.0002
479	SLD 15	-4.55	-1.24	61.09	-0.8742	-0.0904	-0.002
479	SLD 16	-4.41	-1.29	61.06	-0.8718	-0.0897	-0.0004
479	SLV 1	10.05	1.95	58.7	-1.1025	-0.0527	0.0103
479	SLV 2	10.37	1.85	58.62	-1.0969	-0.0509	0.0139
479	SLV 3	9.89	-1.52	58.12	-0.8693	-0.0431	0.0087
479	SLV 4	10.21	-1.63	58.04	-0.8638	-0.0413	0.0123
479	SLV 5	3.14	5.66	60.76	-1.3446	-0.0857	0.0068
479	SLV 6	3.35	5.59	60.7	-1.341	-0.0846	0.0092
479	SLV 7	2.62	-5.91	58.82	-0.5676	-0.0537	0.0015
479	SLV 8	2.82	-5.98	58.77	-0.5639	-0.0525	0.0039
479	SLV 9	-2.99	5.38	61.95	-1.3199	-0.1047	0.0017
479	SLV 10	-2.78	5.31	61.89	-1.3163	-0.1036	0.004
479	SLV 11	-3.51	-6.19	60.01	-0.5429	-0.0727	-0.0036
479	SLV 12	-3.3	-6.26	59.96	-0.5392	-0.0715	-0.0013
479	SLV 13	-10.37	1.03	62.68	-1.0201	-0.116	-0.0068

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
479	SLV 14	-10.06	0.92	62.59	-1.0145	-0.1142	-0.0032
479	SLV 15	-10.53	-2.45	62.09	-0.787	-0.1064	-0.0084
479	SLV 16	-10.21	-2.55	62.01	-0.7814	-0.1046	-0.0048
479	CRTFP Ux+	0	0	0	0	0	0
479	CRTFP Ux-	0	0	0	0	0	0
479	CRTFP Uy+	0	0	0	0	0	0
479	CRTFP Uy-	0	0	0	0	0	0
480	SLU 1	-0.04	-0.32	89.92	0.8813	-8.2477	-0.009
480	SLU 2	-0.03	-0.41	89.91	0.8914	-8.2475	-0.0168
480	SLU 3	-0.04	-0.3	92.06	0.9086	-8.4444	-0.0063
480	SLU 4	-0.03	-0.35	92.06	0.9147	-8.4443	-0.011
480	SLU 5	-0.03	-0.41	91.23	0.9063	-8.3678	-0.0165
480	SLU 6	-0.04	-0.3	93.38	0.9235	-8.5647	-0.006
480	SLU 7	-0.03	-0.35	93.38	0.9295	-8.5646	-0.0107
480	SLU 8	-0.04	-0.32	92.55	0.911	-8.4883	-0.0084
480	SLU 9	-0.03	-0.37	92.54	0.9171	-8.4881	-0.0131
480	SLU 10	0.01	-0.34	101.98	0.9534	-9.3419	-0.0052
480	SLU 11	0.01	-0.23	104.12	0.9705	-9.5388	0.0052
480	SLU 12	0.01	-0.28	104.12	0.9766	-9.5386	0.0006
480	SLU 13	0.02	-0.34	103.29	0.9682	-9.4621	-0.0049
480	SLU 14	0.01	-0.23	105.44	0.9854	-9.659	0.0055
480	SLU 15	0.01	-0.28	105.44	0.9915	-9.6589	0.0009
480	SLU 16	0.01	-0.25	104.61	0.973	-9.5826	0.0031
480	SLU 17	0.01	-0.3	104.61	0.9791	-9.5825	-0.0015
480	SLU 18	0.02	-0.22	107.15	0.9698	-9.8111	0.0075
480	SLU 19	0.03	-0.27	107.15	0.9759	-9.811	0.0028
480	SLU 20	0.02	-0.22	108.46	0.9847	-9.9313	0.0078
480	SLU 21	0.03	-0.27	108.46	0.9907	-9.9312	0.0031
480	SLU 22	-0.04	-0.12	100	0.9875	-9.1685	0.0123
480	SLU 23	-0.02	-0.21	100	0.9976	-9.1683	0.0046
480	SLU 24	-0.03	-0.1	102.15	1.0148	-9.3651	0.015
480	SLU 25	-0.03	-0.15	102.14	1.0209	-9.365	0.0104
480	SLU 26	-0.02	-0.21	101.31	1.0125	-9.2885	0.0049
480	SLU 27	-0.03	-0.1	103.46	1.0297	-9.4854	0.0153
480	SLU 28	-0.02	-0.15	103.46	1.0358	-9.4853	0.0107
480	SLU 29	-0.03	-0.12	102.63	1.0173	-9.409	0.0129
480	SLU 30	-0.02	-0.17	102.63	1.0233	-9.4089	0.0083
480	SLU 31	0.02	-0.14	112.06	1.0596	-10.2626	0.0161
480	SLU 32	0.01	-0.03	114.21	1.0768	-10.4595	0.0266
480	SLU 33	0.02	-0.08	114.21	1.0828	-10.4594	0.0219
480	SLU 34	0.02	-0.14	113.37	1.0745	-10.3829	0.0164
480	SLU 35	0.01	-0.03	115.52	1.0916	-10.5798	0.0269
480	SLU 36	0.02	-0.08	115.52	1.0977	-10.5796	0.0222
480	SLU 37	0.01	-0.05	114.69	1.0792	-10.5033	0.0245
480	SLU 38	0.02	-0.1	114.69	1.0853	-10.5032	0.0198
480	SLU 39	0.03	-0.02	117.23	1.076	-10.7318	0.0289
480	SLU 40	0.04	-0.07	117.23	1.0821	-10.7317	0.0242
480	SLU 41	0.03	-0.02	118.55	1.0909	-10.8521	0.0292
480	SLU 42	0.04	-0.07	118.54	1.097	-10.852	0.0245
480	SLU 43	-0.06	-0.49	113.43	1.1092	-10.4064	-0.0191
480	SLU 44	-0.05	-0.57	113.43	1.1194	-10.4062	-0.0268
480	SLU 45	-0.06	-0.46	115.58	1.1365	-10.603	-0.0164
480	SLU 46	-0.05	-0.52	115.58	1.1426	-10.6029	-0.021
480	SLU 47	-0.04	-0.57	114.75	1.1342	-10.5264	-0.0265
480	SLU 48	-0.05	-0.46	116.9	1.1514	-10.7233	-0.0161
480	SLU 49	-0.05	-0.52	116.89	1.1575	-10.7232	-0.0207
480	SLU 50	-0.05	-0.49	116.06	1.139	-10.6469	-0.0185
480	SLU 51	-0.05	-0.54	116.06	1.1451	-10.6468	-0.0231
480	SLU 52	0	-0.5	125.49	1.1813	-11.5005	-0.0153
480	SLU 53	-0.01	-0.39	127.64	1.1985	-11.6974	-0.0048
480	SLU 54	0	-0.45	127.64	1.2046	-11.6973	-0.0094
480	SLU 55	0	-0.5	126.81	1.1962	-11.6208	-0.015
480	SLU 56	-0.01	-0.4	128.96	1.2134	-11.8177	-0.0045
480	SLU 57	0	-0.45	128.96	1.2194	-11.8175	-0.0092
480	SLU 58	-0.01	-0.42	128.13	1.201	-11.7412	-0.0069
480	SLU 59	0	-0.47	128.12	1.207	-11.7411	-0.0115
480	SLU 60	0.01	-0.39	130.67	1.1977	-11.9697	-0.0025
480	SLU 61	0.01	-0.44	130.66	1.2038	-11.9696	-0.0072
480	SLU 62	0.01	-0.39	131.98	1.2126	-12.09	-0.0022
480	SLU 63	0.02	-0.44	131.98	1.2187	-12.0899	-0.0069
480	SLU 64	-0.05	-0.29	123.52	1.2155	-11.3271	0.0023
480	SLU 65	-0.04	-0.37	123.52	1.2256	-11.3269	-0.0055
480	SLU 66	-0.05	-0.26	125.66	1.2428	-11.5238	0.005
480	SLU 67	-0.04	-0.31	125.66	1.2488	-11.5237	0.0004
480	SLU 68	-0.04	-0.37	124.83	1.2405	-11.4472	-0.0052
480	SLU 69	-0.05	-0.26	126.98	1.2576	-11.644	0.0053
480	SLU 70	-0.04	-0.31	126.98	1.2637	-11.6439	0.0006
480	SLU 71	-0.05	-0.29	126.15	1.2452	-11.5676	0.0029
480	SLU 72	-0.04	-0.34	126.15	1.2513	-11.5675	-0.0017
480	SLU 73	0.01	-0.3	135.58	1.2875	-12.4212	0.0061
480	SLU 74	0	-0.19	137.73	1.3047	-12.6181	0.0166
480	SLU 75	0	-0.24	137.72	1.3108	-12.618	0.0119
480	SLU 76	0.01	-0.3	136.89	1.3024	-12.5415	0.0064
480	SLU 77	0	-0.19	139.04	1.3196	-12.7384	0.0169
480	SLU 78	0.01	-0.24	139.04	1.3257	-12.7383	0.0122
480	SLU 79	0	-0.22	138.21	1.3072	-12.662	0.0145
480	SLU 80	0.01	-0.27	138.21	1.3133	-12.6619	0.0098
480	SLU 81	0.01	-0.19	140.75	1.304	-12.8904	0.0188
480	SLU 82	0.02	-0.24	140.75	1.31	-12.8903	0.0142
480	SLU 83	0.02	-0.19	142.06	1.3188	-13.0107	0.0191

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
480	SLU 84	0.02	-0.24	142.06	1.3249	-13.0106	0.0145
480	SLE RA 1	-0.04	-0.26	92.8	0.9116	-8.5108	-0.0029
480	SLE RA 2	-0.03	-0.32	92.8	0.9184	-8.5107	-0.0081
480	SLE RA 3	-0.04	-0.25	94.23	0.9298	-8.6419	-0.0011
480	SLE RA 4	-0.03	-0.28	94.23	0.9339	-8.6418	-0.0042
480	SLE RA 5	-0.03	-0.32	93.67	0.9283	-8.5908	-0.0079
480	SLE RA 6	-0.04	-0.25	95.11	0.9397	-8.7221	-0.0009
480	SLE RA 7	-0.03	-0.28	95.1	0.9438	-8.722	-0.004
480	SLE RA 8	-0.04	-0.26	94.55	0.9315	-8.6711	-0.0025
480	SLE RA 9	-0.03	-0.3	94.55	0.9355	-8.6711	-0.0056
480	SLE RA 10	0	-0.27	100.84	0.9597	-9.2402	-0.0004
480	SLE RA 11	-0.01	-0.2	102.27	0.9711	-9.3715	0.0066
480	SLE RA 12	0	-0.24	102.27	0.9752	-9.3714	0.0035
480	SLE RA 13	0	-0.28	101.71	0.9696	-9.3204	-0.0002
480	SLE RA 14	-0.01	-0.2	103.15	0.981	-9.4517	0.0068
480	SLE RA 15	0	-0.24	103.14	0.9851	-9.4516	0.0037
480	SLE RA 16	-0.01	-0.22	102.59	0.9728	-9.4007	0.0052
480	SLE RA 17	0	-0.25	102.59	0.9768	-9.4006	0.0021
480	SLE RA 18	0	-0.2	104.28	0.9706	-9.553	0.0081
480	SLE RA 19	0.01	-0.23	104.28	0.9747	-9.5529	0.005
480	SLE RA 20	0	-0.2	105.16	0.9805	-9.6332	0.0083
480	SLE RA 21	0.01	-0.23	105.16	0.9846	-9.6331	0.0052
480	SLE FR 1	-0.04	-0.26	92.8	0.9116	-8.5108	-0.0029
480	SLE FR 2	-0.04	-0.28	92.8	0.913	-8.5108	-0.004
480	SLE FR 3	-0.04	-0.26	93.15	0.9156	-8.5429	-0.0028
480	SLE FR 4	-0.03	-0.26	96.24	0.9307	-8.8234	-0.0007
480	SLE FR 5	-0.03	-0.24	96.59	0.9333	-8.8555	0.0005
480	SLE FR 6	-0.02	-0.23	98.54	0.9411	-9.0319	0.0026
480	SLE QP 1	-0.04	-0.26	92.8	0.9116	-8.5108	-0.0029
480	SLE QP 2	-0.03	-0.24	96.24	0.9293	-8.8235	0.0004
480	SLD 1	6.83	1.32	95.11	0.6759	-8.7616	0.1354
480	SLD 2	7.05	1.3	95.05	0.6734	-8.7586	0.1379
480	SLD 3	6.73	-1.11	94.75	0.9167	-8.7291	-0.0887
480	SLD 4	6.94	-1.13	94.69	0.9143	-8.7261	-0.0863
480	SLD 5	2.15	3.91	96.47	0.4884	-8.8547	0.3804
480	SLD 6	2.29	3.9	96.43	0.4868	-8.8527	0.382
480	SLD 7	1.8	-4.18	95.25	1.2913	-8.7464	-0.3667
480	SLD 8	1.94	-4.2	95.22	1.2897	-8.7444	-0.3651
480	SLD 9	-2	3.71	97.27	0.569	-8.9025	0.3659
480	SLD 10	-1.86	3.7	97.23	0.5674	-8.9005	0.3675
480	SLD 11	-2.35	-4.38	96.06	1.3719	-8.7942	-0.3812
480	SLD 12	-2.21	-4.4	96.02	1.3702	-8.7922	-0.3796
480	SLD 13	-7	0.64	97.8	0.9444	-8.9208	0.087
480	SLD 14	-6.78	0.62	97.74	0.9419	-8.9178	0.0895
480	SLD 15	-7.1	-1.78	97.44	1.1852	-8.8883	-0.1371
480	SLD 16	-6.89	-1.8	97.38	1.1828	-8.8853	-0.1347
480	SLV 1	16.01	3.31	93.57	0.3446	-8.6775	0.3079
480	SLV 2	16.52	3.27	93.44	0.3389	-8.6704	0.3136
480	SLV 3	15.77	-2.19	92.74	0.8899	-8.6032	-0.1997
480	SLV 4	16.27	-2.23	92.61	0.8842	-8.5961	-0.194
480	SLV 5	5.07	9.17	96.72	-0.0722	-8.8936	0.8615
480	SLV 6	5.39	9.14	96.64	-0.0759	-8.889	0.8653
480	SLV 7	4.25	-9.16	93.96	1.7456	-8.6459	-0.8305
480	SLV 8	4.58	-9.19	93.87	1.7419	-8.6413	-0.8268
480	SLV 9	-4.64	8.7	98.62	0.1168	-9.0056	0.8276
480	SLV 10	-4.31	8.67	98.53	0.1131	-9.001	0.8313
480	SLV 11	-5.45	-9.63	95.85	1.9345	-8.7579	-0.8645
480	SLV 12	-5.12	-9.66	95.76	1.9308	-8.7533	-0.8608
480	SLV 13	-16.33	1.74	99.88	0.9744	-9.0508	0.1947
480	SLV 14	-15.82	1.7	99.74	0.9687	-9.0438	0.2005
480	SLV 15	-16.57	-3.75	99.05	1.5197	-8.9765	-0.3129
480	SLV 16	-16.07	-3.8	98.91	1.5141	-8.9694	-0.3072
480	CRTFP Ux+	0	0	0	0	0	0
480	CRTFP Ux-	0	0	0	0	0	0
480	CRTFP Uy+	0	0	0	0	0	0
480	CRTFP Uy-	0	0	0	0	0	0
482	SLU 1	0.07	-0.19	89.04	-0.4201	45.6363	0.0965
482	SLU 2	0.08	-0.27	89.05	-0.4172	45.6378	0.1393
482	SLU 3	0.07	-0.16	91.18	-0.4297	46.7289	0.0829
482	SLU 4	0.08	-0.21	91.18	-0.428	46.7298	0.1086
482	SLU 5	0.09	-0.27	90.35	-0.4236	46.3059	0.1384
482	SLU 6	0.08	-0.16	92.48	-0.4361	47.397	0.0821
482	SLU 7	0.09	-0.21	92.48	-0.4344	47.3979	0.1078
482	SLU 8	0.08	-0.19	91.65	-0.4329	46.9725	0.0947
482	SLU 9	0.09	-0.24	91.65	-0.4311	46.9734	0.1204
482	SLU 10	0.14	-0.15	100.76	-0.4668	51.6729	0.0788
482	SLU 11	0.13	-0.04	102.89	-0.4794	52.764	0.0225
482	SLU 12	0.14	-0.09	102.9	-0.4776	52.7649	0.0482
482	SLU 13	0.14	-0.15	102.07	-0.4732	52.341	0.078
482	SLU 14	0.14	-0.04	104.2	-0.4858	53.432	0.0216
482	SLU 15	0.14	-0.09	104.2	-0.484	53.4329	0.0473
482	SLU 16	0.13	-0.06	103.37	-0.4825	53.0076	0.0343
482	SLU 17	0.14	-0.11	103.37	-0.4807	53.0085	0.06
482	SLU 18	0.15	-0.02	105.78	-0.491	54.2578	0.0101
482	SLU 19	0.16	-0.07	105.78	-0.4893	54.2587	0.0358
482	SLU 20	0.15	-0.01	107.08	-0.4974	54.9259	0.0092
482	SLU 21	0.16	-0.06	107.09	-0.4956	54.9268	0.0349
482	SLU 22	0.09	0.03	99.01	-0.4554	50.7428	-0.0166
482	SLU 23	0.1	-0.05	99.02	-0.4525	50.7443	0.0262
482	SLU 24	0.09	0.06	101.15	-0.4651	51.8353	-0.0301

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
482	SLU 25	0.1	0.01	101.15	-0.4633	51.8362	-0.0044
482	SLU 26	0.11	-0.05	100.32	-0.4589	51.4124	0.0253
482	SLU 27	0.1	0.06	102.45	-0.4714	52.5034	-0.031
482	SLU 28	0.11	0.01	102.45	-0.4697	52.5043	-0.0053
482	SLU 29	0.1	0.03	101.62	-0.4682	52.0789	-0.0183
482	SLU 30	0.11	-0.01	101.62	-0.4664	52.0798	0.0073
482	SLU 31	0.16	0.07	110.73	-0.5021	56.7793	-0.0342
482	SLU 32	0.15	0.18	112.86	-0.5147	57.8704	-0.0906
482	SLU 33	0.16	0.13	112.87	-0.513	57.8713	-0.0649
482	SLU 34	0.16	0.07	112.04	-0.5085	57.4474	-0.0351
482	SLU 35	0.15	0.18	114.17	-0.5211	58.5385	-0.0914
482	SLU 36	0.16	0.13	114.17	-0.5193	58.5394	-0.0657
482	SLU 37	0.15	0.16	113.34	-0.5178	58.114	-0.0788
482	SLU 38	0.16	0.11	113.34	-0.5161	58.1149	-0.0531
482	SLU 39	0.17	0.2	115.75	-0.5263	59.3643	-0.1029
482	SLU 40	0.18	0.15	115.75	-0.5246	59.3652	-0.0773
482	SLU 41	0.17	0.21	117.05	-0.5327	60.0324	-0.1038
482	SLU 42	0.18	0.16	117.06	-0.531	60.0333	-0.0781
482	SLU 43	0.08	-0.32	112.33	-0.534	57.5764	0.1641
482	SLU 44	0.1	-0.4	112.34	-0.5311	57.5779	0.207
482	SLU 45	0.09	-0.3	114.47	-0.5437	58.669	0.1506
482	SLU 46	0.1	-0.35	114.47	-0.5419	58.6699	0.1763
482	SLU 47	0.1	-0.4	113.64	-0.5375	58.246	0.2061
482	SLU 48	0.09	-0.29	115.77	-0.55	59.3371	0.1498
482	SLU 49	0.1	-0.34	115.78	-0.5483	59.338	0.1754
482	SLU 50	0.09	-0.32	114.94	-0.5468	58.9126	0.1624
482	SLU 51	0.1	-0.37	114.95	-0.545	58.9135	0.1881
482	SLU 52	0.15	-0.28	124.06	-0.5807	63.613	0.1465
482	SLU 53	0.14	-0.17	126.19	-0.5933	64.7041	0.0902
482	SLU 54	0.15	-0.22	126.19	-0.5916	64.705	0.1159
482	SLU 55	0.16	-0.28	125.36	-0.5871	64.2811	0.1457
482	SLU 56	0.15	-0.17	127.49	-0.5997	65.3722	0.0893
482	SLU 57	0.16	-0.22	127.5	-0.5979	65.3731	0.115
482	SLU 58	0.15	-0.2	126.66	-0.5964	64.9477	0.102
482	SLU 59	0.16	-0.25	126.66	-0.5947	64.9486	0.1277
482	SLU 60	0.16	-0.15	129.08	-0.6049	66.1979	0.0778
482	SLU 61	0.17	-0.2	129.08	-0.6032	66.1989	0.1035
482	SLU 62	0.17	-0.15	130.38	-0.6113	66.866	0.0769
482	SLU 63	0.17	-0.2	130.38	-0.6096	66.8669	0.1026
482	SLU 64	0.1	-0.1	122.3	-0.5693	62.6829	0.0511
482	SLU 65	0.11	-0.18	122.31	-0.5664	62.6844	0.0939
482	SLU 66	0.11	-0.07	124.44	-0.579	63.7754	0.0376
482	SLU 67	0.12	-0.12	124.44	-0.5772	63.7763	0.0633
482	SLU 68	0.12	-0.18	123.61	-0.5728	63.3525	0.093
482	SLU 69	0.11	-0.07	125.74	-0.5854	64.4435	0.0367
482	SLU 70	0.12	-0.12	125.75	-0.5836	64.4444	0.0624
482	SLU 71	0.11	-0.1	124.91	-0.5821	64.019	0.0494
482	SLU 72	0.12	-0.15	124.91	-0.5804	64.0199	0.075
482	SLU 73	0.17	-0.06	134.03	-0.6161	68.7194	0.0335
482	SLU 74	0.16	0.05	136.16	-0.6286	69.8105	-0.0229
482	SLU 75	0.17	0	136.16	-0.6269	69.8114	0.0028
482	SLU 76	0.18	-0.06	135.33	-0.6224	69.3875	0.0326
482	SLU 77	0.17	0.05	137.46	-0.635	70.4786	-0.0237
482	SLU 78	0.18	0	137.47	-0.6333	70.4795	0.002
482	SLU 79	0.17	0.02	136.63	-0.6317	70.0541	-0.0111
482	SLU 80	0.17	-0.03	136.63	-0.63	70.055	0.0146
482	SLU 81	0.18	0.07	139.05	-0.6402	71.3044	-0.0352
482	SLU 82	0.19	0.02	139.05	-0.6385	71.3053	-0.0096
482	SLU 83	0.19	0.07	140.35	-0.6466	71.9725	-0.0361
482	SLU 84	0.19	0.02	140.35	-0.6449	71.9734	-0.0104
482	SLE RA 1	0.07	-0.13	91.89	-0.4302	47.0953	0.0641
482	SLE RA 2	0.08	-0.18	91.89	-0.4283	47.0963	0.0927
482	SLE RA 3	0.08	-0.11	93.31	-0.4366	47.8237	0.0551
482	SLE RA 4	0.08	-0.14	93.31	-0.4355	47.8243	0.0723
482	SLE RA 5	0.09	-0.18	92.76	-0.4325	47.5417	0.0921
482	SLE RA 6	0.08	-0.11	94.18	-0.4409	48.2691	0.0546
482	SLE RA 7	0.09	-0.14	94.18	-0.4397	48.2697	0.0717
482	SLE RA 8	0.08	-0.12	93.63	-0.4387	47.9861	0.063
482	SLE RA 9	0.09	-0.16	93.63	-0.4375	47.9867	0.0801
482	SLE RA 10	0.12	-0.1	99.71	-0.4613	51.1197	0.0524
482	SLE RA 11	0.12	-0.03	101.13	-0.4697	51.8471	0.0148
482	SLE RA 12	0.12	-0.06	101.13	-0.4685	51.8477	0.032
482	SLE RA 13	0.12	-0.1	100.57	-0.4656	51.5651	0.0518
482	SLE RA 14	0.12	-0.03	101.99	-0.474	52.2925	0.0143
482	SLE RA 15	0.12	-0.06	102	-0.4728	52.2931	0.0314
482	SLE RA 16	0.12	-0.04	101.44	-0.4718	52.0095	0.0227
482	SLE RA 17	0.12	-0.08	101.44	-0.4706	52.0101	0.0398
482	SLE RA 18	0.13	-0.01	103.05	-0.4774	52.843	0.0066
482	SLE RA 19	0.13	-0.04	103.05	-0.4763	52.8436	0.0237
482	SLE RA 20	0.13	-0.01	103.92	-0.4817	53.2884	0.006
482	SLE RA 21	0.14	-0.04	103.92	-0.4805	53.289	0.0231
482	SLE FR 1	0.07	-0.13	91.89	-0.4302	47.0953	0.0641
482	SLE FR 2	0.08	-0.14	91.89	-0.4298	47.0955	0.0699
482	SLE FR 3	0.08	-0.13	92.24	-0.4319	47.2734	0.0639
482	SLE FR 4	0.09	-0.1	95.24	-0.444	48.8198	0.0526
482	SLE FR 5	0.09	-0.09	95.58	-0.4461	48.9978	0.0466
482	SLE FR 6	0.1	-0.07	97.47	-0.4538	49.9691	0.0354
482	SLE QP 1	0.07	-0.13	91.89	-0.4302	47.0953	0.0641
482	SLE QP 2	0.09	-0.09	95.24	-0.4444	48.8196	0.0469
482	SLD 1	7.02	1.34	95.81	-0.5055	48.7334	-0.6607

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
482	SLD 2	7.24	1.39	95.81	-0.5102	48.7261	-0.6808
482	SLD 3	6.91	-1.1	95.42	-0.4315	48.5413	0.5885
482	SLD 4	7.13	-1.05	95.43	-0.4362	48.5341	0.5684
482	SLD 5	2.28	4.02	95.99	-0.5741	49.0863	-2.0564
482	SLD 6	2.43	4.06	95.99	-0.5772	49.0815	-2.0697
482	SLD 7	1.94	-4.1	94.71	-0.3274	48.4462	2.1076
482	SLD 8	2.09	-4.06	94.71	-0.3306	48.4414	2.0943
482	SLD 9	-1.91	3.88	95.76	-0.5582	49.1978	-2.0006
482	SLD 10	-1.76	3.91	95.76	-0.5613	49.193	-2.0139
482	SLD 11	-2.25	-4.24	94.48	-0.3115	48.5577	2.1635
482	SLD 12	-2.1	-4.21	94.49	-0.3147	48.5529	2.1501
482	SLD 13	-6.95	0.86	95.05	-0.4525	49.1051	-0.4747
482	SLD 14	-6.73	0.91	95.05	-0.4572	49.0979	-0.4948
482	SLD 15	-7.06	-1.57	94.66	-0.3785	48.9131	0.7745
482	SLD 16	-6.83	-1.52	94.67	-0.3832	48.9058	0.7544
482	SLV 1	16.28	3.16	96.56	-0.5847	48.608	-1.5619
482	SLV 2	16.8	3.28	96.57	-0.5957	48.5912	-1.6087
482	SLV 3	16.04	-2.36	95.69	-0.4171	48.171	1.2673
482	SLV 4	16.56	-2.24	95.7	-0.4282	48.1541	1.2205
482	SLV 5	5.22	9.23	96.95	-0.7386	49.422	-4.7185
482	SLV 6	5.56	9.31	96.96	-0.7458	49.411	-4.7489
482	SLV 7	4.42	-9.16	94.05	-0.1802	47.9651	4.7122
482	SLV 8	4.76	-9.08	94.06	-0.1874	47.9541	4.6817
482	SLV 9	-4.58	8.9	96.42	-0.7013	49.6851	-4.5879
482	SLV 10	-4.24	8.98	96.42	-0.7085	49.6741	-4.6184
482	SLV 11	-5.38	-9.49	93.52	-0.1429	48.2282	4.8427
482	SLV 12	-5.04	-9.42	93.52	-0.1501	48.2172	4.8122
482	SLV 13	-16.38	2.05	94.78	-0.4605	49.4851	-1.1268
482	SLV 14	-15.86	2.17	94.78	-0.4716	49.4682	-1.1735
482	SLV 15	-16.62	-3.46	93.91	-0.293	49.048	1.7024
482	SLV 16	-16.1	-3.35	93.91	-0.304	49.0312	1.6557
482	CRTFP Ux+	0	0	0	0	0	0
482	CRTFP Ux-	0	0	0	0	0	0
482	CRTFP Uy+	0	0	0	0	0	0
482	CRTFP Uy-	0	0	0	0	0	0
484	SLU 1	-0.49	-1	59.05	-0.0016	-0.158	-0.0077
484	SLU 2	-0.48	-1.08	59.06	-0.0012	-0.1588	-0.0069
484	SLU 3	-0.5	-1.01	60.48	-0.0015	-0.1626	-0.008
484	SLU 4	-0.5	-1.06	60.49	-0.0013	-0.1631	-0.0075
484	SLU 5	-0.49	-1.09	59.95	-0.0013	-0.161	-0.0071
484	SLU 6	-0.51	-1.02	61.37	-0.0016	-0.1648	-0.0082
484	SLU 7	-0.51	-1.07	61.38	-0.0014	-0.1653	-0.0077
484	SLU 8	-0.51	-1.02	60.83	-0.0017	-0.1624	-0.0081
484	SLU 9	-0.51	-1.07	60.84	-0.0015	-0.1628	-0.0076
484	SLU 10	-0.48	-1.11	66.25	0.0009	-0.1904	-0.0079
484	SLU 11	-0.5	-1.05	67.67	0.0006	-0.1942	-0.009
484	SLU 12	-0.49	-1.09	67.67	0.0008	-0.1947	-0.0085
484	SLU 13	-0.49	-1.13	67.14	0.0008	-0.1926	-0.0081
484	SLU 14	-0.51	-1.06	68.56	0.0005	-0.1964	-0.0092
484	SLU 15	-0.5	-1.11	68.56	0.0007	-0.1969	-0.0087
484	SLU 16	-0.51	-1.06	68.02	0.0004	-0.1939	-0.0091
484	SLU 17	-0.5	-1.1	68.02	0.0006	-0.1944	-0.0086
484	SLU 18	-0.48	-1.05	69.32	0.0014	-0.2031	-0.0091
484	SLU 19	-0.48	-1.1	69.32	0.0016	-0.2036	-0.0087
484	SLU 20	-0.49	-1.06	70.21	0.0014	-0.2053	-0.0093
484	SLU 21	-0.49	-1.11	70.21	0.0016	-0.2058	-0.0088
484	SLU 22	-0.53	-0.98	65.97	0.0008	-0.1751	-0.0093
484	SLU 23	-0.52	-1.06	65.98	0.0011	-0.1759	-0.0085
484	SLU 24	-0.54	-1	67.4	0.0008	-0.1797	-0.0095
484	SLU 25	-0.54	-1.04	67.4	0.001	-0.1802	-0.0091
484	SLU 26	-0.53	-1.08	66.87	0.001	-0.1781	-0.0087
484	SLU 27	-0.55	-1.01	68.29	0.0007	-0.1819	-0.0097
484	SLU 28	-0.55	-1.06	68.3	0.0009	-0.1824	-0.0093
484	SLU 29	-0.55	-1.01	67.75	0.0006	-0.1795	-0.0096
484	SLU 30	-0.55	-1.06	67.76	0.0008	-0.18	-0.0092
484	SLU 31	-0.52	-1.1	73.17	0.0032	-0.2075	-0.0095
484	SLU 32	-0.54	-1.03	74.59	0.0029	-0.2113	-0.0105
484	SLU 33	-0.53	-1.08	74.59	0.0031	-0.2118	-0.0101
484	SLU 34	-0.53	-1.11	74.06	0.0031	-0.2097	-0.0097
484	SLU 35	-0.55	-1.04	75.48	0.0028	-0.2135	-0.0107
484	SLU 36	-0.54	-1.09	75.48	0.003	-0.214	-0.0103
484	SLU 37	-0.55	-1.04	74.94	0.0027	-0.2111	-0.0106
484	SLU 38	-0.54	-1.09	74.94	0.0029	-0.2115	-0.0102
484	SLU 39	-0.52	-1.03	76.24	0.0038	-0.2202	-0.0107
484	SLU 40	-0.52	-1.08	76.24	0.004	-0.2207	-0.0102
484	SLU 41	-0.53	-1.05	77.13	0.0037	-0.2224	-0.0109
484	SLU 42	-0.53	-1.09	77.13	0.0039	-0.2229	-0.0104
484	SLU 43	-0.63	-1.3	74.4	-0.0028	-0.1995	-0.0095
484	SLU 44	-0.62	-1.38	74.4	-0.0025	-0.2003	-0.0087
484	SLU 45	-0.64	-1.31	75.82	-0.0028	-0.2042	-0.0098
484	SLU 46	-0.63	-1.36	75.83	-0.0026	-0.2046	-0.0093
484	SLU 47	-0.63	-1.39	75.3	-0.0026	-0.2025	-0.0089
484	SLU 48	-0.65	-1.33	76.72	-0.0029	-0.2063	-0.01
484	SLU 49	-0.64	-1.37	76.72	-0.0027	-0.2068	-0.0095
484	SLU 50	-0.65	-1.33	76.18	-0.003	-0.2039	-0.0099
484	SLU 51	-0.64	-1.37	76.18	-0.0028	-0.2044	-0.0094
484	SLU 52	-0.61	-1.42	81.59	-0.0004	-0.2319	-0.0097
484	SLU 53	-0.63	-1.35	83.01	-0.0007	-0.2357	-0.0108
484	SLU 54	-0.63	-1.4	83.01	-0.0005	-0.2362	-0.0103
484	SLU 55	-0.62	-1.43	82.48	-0.0005	-0.2341	-0.0099

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
484	SLU 56	-0.64	-1.36	83.9	-0.0008	-0.2379	-0.011
484	SLU 57	-0.64	-1.41	83.91	-0.0006	-0.2384	-0.0105
484	SLU 58	-0.64	-1.36	83.36	-0.0009	-0.2355	-0.0109
484	SLU 59	-0.64	-1.41	83.37	-0.0007	-0.236	-0.0104
484	SLU 60	-0.62	-1.35	84.66	0.0002	-0.2446	-0.0109
484	SLU 61	-0.61	-1.4	84.67	0.0004	-0.2451	-0.0104
484	SLU 62	-0.63	-1.36	85.55	0.0001	-0.2468	-0.0111
484	SLU 63	-0.62	-1.41	85.56	0.0003	-0.2473	-0.0106
484	SLU 64	-0.66	-1.29	81.31	-0.0005	-0.2166	-0.011
484	SLU 65	-0.66	-1.37	81.32	-0.0002	-0.2174	-0.0103
484	SLU 66	-0.68	-1.3	82.74	-0.0005	-0.2213	-0.0113
484	SLU 67	-0.67	-1.35	82.75	-0.0003	-0.2218	-0.0109
484	SLU 68	-0.67	-1.38	82.21	-0.0003	-0.2196	-0.0105
484	SLU 69	-0.69	-1.31	83.63	-0.0005	-0.2235	-0.0115
484	SLU 70	-0.68	-1.36	83.64	-0.0004	-0.224	-0.0111
484	SLU 71	-0.69	-1.31	83.1	-0.0007	-0.221	-0.0114
484	SLU 72	-0.68	-1.36	83.1	-0.0005	-0.2215	-0.011
484	SLU 73	-0.65	-1.4	88.51	0.0019	-0.249	-0.0113
484	SLU 74	-0.67	-1.34	89.93	0.0016	-0.2529	-0.0123
484	SLU 75	-0.67	-1.38	89.93	0.0018	-0.2533	-0.0119
484	SLU 76	-0.66	-1.42	89.4	0.0018	-0.2512	-0.0114
484	SLU 77	-0.68	-1.35	90.82	0.0016	-0.2551	-0.0125
484	SLU 78	-0.68	-1.4	90.82	0.0017	-0.2555	-0.012
484	SLU 79	-0.68	-1.35	90.28	0.0014	-0.2526	-0.0124
484	SLU 80	-0.67	-1.4	90.29	0.0016	-0.2531	-0.0119
484	SLU 81	-0.66	-1.34	91.58	0.0025	-0.2617	-0.0124
484	SLU 82	-0.65	-1.39	91.58	0.0027	-0.2622	-0.012
484	SLU 83	-0.67	-1.35	92.47	0.0024	-0.2639	-0.0126
484	SLU 84	-0.66	-1.4	92.48	0.0026	-0.2644	-0.0122
484	SLE RA 1	-0.5	-0.99	61.03	-0.0009	-0.1629	-0.0081
484	SLE RA 2	-0.5	-1.05	61.03	-0.0007	-0.1634	-0.0076
484	SLE RA 3	-0.51	-1	61.98	-0.0009	-0.166	-0.0083
484	SLE RA 4	-0.51	-1.03	61.98	-0.0007	-0.1663	-0.008
484	SLE RA 5	-0.5	-1.06	61.63	-0.0007	-0.1649	-0.0078
484	SLE RA 6	-0.52	-1.01	62.58	-0.0009	-0.1674	-0.0085
484	SLE RA 7	-0.51	-1.04	62.58	-0.0008	-0.1678	-0.0082
484	SLE RA 8	-0.52	-1.01	62.22	-0.001	-0.1658	-0.0084
484	SLE RA 9	-0.51	-1.04	62.22	-0.0009	-0.1661	-0.0081
484	SLE RA 10	-0.49	-1.07	65.82	0.0007	-0.1845	-0.0083
484	SLE RA 11	-0.51	-1.03	66.77	0.0005	-0.187	-0.009
484	SLE RA 12	-0.5	-1.06	66.78	0.0007	-0.1874	-0.0087
484	SLE RA 13	-0.5	-1.08	66.42	0.0007	-0.1859	-0.0084
484	SLE RA 14	-0.51	-1.03	67.37	0.0005	-0.1885	-0.0091
484	SLE RA 15	-0.51	-1.07	67.37	0.0006	-0.1888	-0.0088
484	SLE RA 16	-0.51	-1.03	67.01	0.0004	-0.1868	-0.0091
484	SLE RA 17	-0.51	-1.07	67.01	0.0005	-0.1872	-0.0088
484	SLE RA 18	-0.5	-1.03	67.87	0.0011	-0.1929	-0.0091
484	SLE RA 19	-0.49	-1.06	67.88	0.0012	-0.1933	-0.0088
484	SLE RA 20	-0.5	-1.04	68.47	0.0011	-0.1944	-0.0092
484	SLE RA 21	-0.5	-1.07	68.47	0.0012	-0.1947	-0.0089
484	SLE FR 1	-0.5	-0.99	61.03	-0.0009	-0.1629	-0.0081
484	SLE FR 2	-0.5	-1	61.03	-0.0008	-0.163	-0.008
484	SLE FR 3	-0.51	-1	61.27	-0.0009	-0.1634	-0.0082
484	SLE FR 4	-0.5	-1.01	63.08	-0.0002	-0.172	-0.0083
484	SLE FR 5	-0.5	-1.01	63.32	-0.0003	-0.1725	-0.0085
484	SLE FR 6	-0.5	-1.01	64.45	0.0001	-0.1779	-0.0086
484	SLE QP 1	-0.5	-0.99	61.03	-0.0009	-0.1629	-0.0081
484	SLE QP 2	-0.5	-1	63.08	-0.0003	-0.1719	-0.0084
484	SLD 1	4.75	-0.58	68.6	-0.0064	0.0118	-0.0007
484	SLD 2	4.88	-0.97	68.55	-0.0045	0.0082	0.0106
484	SLD 3	4.82	-2.2	68.82	-0.0022	-0.0176	0.0025
484	SLD 4	4.96	-2.59	68.78	-0.0003	-0.0213	0.0139
484	SLD 5	0.93	1.65	64.41	-0.0089	-0.0714	-0.0131
484	SLD 6	1.02	1.39	64.38	-0.0076	-0.0739	-0.0056
484	SLD 7	1.19	-3.75	65.15	0.0052	-0.1696	-0.0022
484	SLD 8	1.28	-4.01	65.12	0.0064	-0.172	0.0053
484	SLD 9	-2.28	2	61.04	-0.007	-0.1717	-0.0221
484	SLD 10	-2.19	1.74	61.02	-0.0058	-0.1741	-0.0146
484	SLD 11	-2.02	-3.4	61.79	0.007	-0.2699	-0.0112
484	SLD 12	-1.93	-3.66	61.76	0.0083	-0.2723	-0.0037
484	SLD 13	-5.96	0.58	57.39	-0.0003	-0.3225	-0.0307
484	SLD 14	-5.83	0.19	57.35	0.0016	-0.3261	-0.0194
484	SLD 15	-5.89	-1.04	57.61	0.004	-0.352	-0.0275
484	SLD 16	-5.75	-1.43	57.57	0.0058	-0.3556	-0.0161
484	SLV 1	11.77	-0.08	75.98	-0.0144	0.257	0.0097
484	SLV 2	12.09	-0.99	75.89	-0.0101	0.2485	0.0361
484	SLV 3	11.95	-3.74	76.49	-0.0048	0.19	0.0171
484	SLV 4	12.27	-4.65	76.4	-0.0005	0.1816	0.0436
484	SLV 5	2.85	4.99	66.2	-0.0199	0.0599	-0.0189
484	SLV 6	3.06	4.4	66.13	-0.0171	0.0543	-0.0017
484	SLV 7	3.45	-7.22	67.9	0.0122	-0.1634	0.0059
484	SLV 8	3.66	-7.81	67.83	0.015	-0.1689	0.0231
484	SLV 9	-4.66	5.81	58.33	-0.0155	-0.1749	-0.0399
484	SLV 10	-4.45	5.21	58.27	-0.0127	-0.1804	-0.0227
484	SLV 11	-4.06	-6.4	60.03	0.0165	-0.3981	-0.0152
484	SLV 12	-3.85	-7	59.97	0.0193	-0.4036	0.002
484	SLV 13	-13.27	2.64	49.77	-0.0001	-0.5253	-0.0604
484	SLV 14	-12.95	1.73	49.67	0.0042	-0.5338	-0.034
484	SLV 15	-13.09	-1.02	50.28	0.0095	-0.5923	-0.053
484	SLV 16	-12.77	-1.93	50.18	0.0138	-0.6008	-0.0266

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
484	CRTFP Ux+	0	0	0	0	0	0
484	CRTFP Ux-	0	0	0	0	0	0
488	SLU 1	0.69	-0.49	59.19	-0.0132	0.2084	-0.0146
488	SLU 2	0.7	-0.53	59.2	-0.013	0.2092	-0.014
488	SLU 3	0.71	-0.5	60.6	-0.0136	0.2136	-0.0149
488	SLU 4	0.71	-0.52	60.61	-0.0135	0.214	-0.0146
488	SLU 5	0.71	-0.54	60.07	-0.0134	0.2111	-0.0142
488	SLU 6	0.72	-0.51	61.46	-0.014	0.2156	-0.0152
488	SLU 7	0.72	-0.54	61.47	-0.0139	0.216	-0.0148
488	SLU 8	0.71	-0.52	60.92	-0.014	0.2124	-0.0151
488	SLU 9	0.72	-0.54	60.93	-0.0139	0.2128	-0.0147
488	SLU 10	0.74	-0.49	66.43	-0.0129	0.2413	-0.0154
488	SLU 11	0.75	-0.46	67.82	-0.0135	0.2457	-0.0163
488	SLU 12	0.75	-0.48	67.83	-0.0134	0.2462	-0.0159
488	SLU 13	0.75	-0.5	67.3	-0.0133	0.2433	-0.0156
488	SLU 14	0.76	-0.48	68.69	-0.0139	0.2477	-0.0166
488	SLU 15	0.76	-0.5	68.7	-0.0138	0.2482	-0.0162
488	SLU 16	0.75	-0.48	68.15	-0.0138	0.2445	-0.0165
488	SLU 17	0.76	-0.5	68.16	-0.0137	0.245	-0.0161
488	SLU 18	0.75	-0.44	69.51	-0.0129	0.2543	-0.0166
488	SLU 19	0.75	-0.46	69.52	-0.0129	0.2548	-0.0162
488	SLU 20	0.76	-0.45	70.38	-0.0133	0.2563	-0.0169
488	SLU 21	0.76	-0.47	70.39	-0.0132	0.2568	-0.0165
488	SLU 22	0.76	-0.42	66.1	-0.013	0.2189	-0.0154
488	SLU 23	0.77	-0.45	66.12	-0.0129	0.2197	-0.0148
488	SLU 24	0.78	-0.42	67.52	-0.0135	0.2241	-0.0157
488	SLU 25	0.78	-0.44	67.53	-0.0134	0.2245	-0.0153
488	SLU 26	0.78	-0.46	66.99	-0.0133	0.2217	-0.015
488	SLU 27	0.79	-0.44	68.38	-0.0139	0.2261	-0.016
488	SLU 28	0.79	-0.46	68.39	-0.0138	0.2265	-0.0156
488	SLU 29	0.78	-0.44	67.84	-0.0138	0.2229	-0.0159
488	SLU 30	0.79	-0.46	67.85	-0.0137	0.2234	-0.0155
488	SLU 31	0.81	-0.41	73.35	-0.0127	0.2518	-0.0162
488	SLU 32	0.82	-0.38	74.74	-0.0133	0.2562	-0.0171
488	SLU 33	0.82	-0.4	74.75	-0.0132	0.2567	-0.0167
488	SLU 34	0.82	-0.42	74.22	-0.0131	0.2538	-0.0164
488	SLU 35	0.83	-0.4	75.61	-0.0137	0.2582	-0.0174
488	SLU 36	0.83	-0.42	75.62	-0.0136	0.2587	-0.017
488	SLU 37	0.82	-0.41	75.07	-0.0137	0.255	-0.0173
488	SLU 38	0.83	-0.43	75.08	-0.0136	0.2555	-0.0169
488	SLU 39	0.82	-0.36	76.43	-0.0128	0.2648	-0.0174
488	SLU 40	0.82	-0.38	76.44	-0.0127	0.2653	-0.017
488	SLU 41	0.83	-0.37	77.3	-0.0132	0.2668	-0.0176
488	SLU 42	0.83	-0.39	77.31	-0.0131	0.2673	-0.0173
488	SLU 43	0.87	-0.67	74.57	-0.0172	0.2673	-0.0187
488	SLU 44	0.88	-0.7	74.59	-0.017	0.2681	-0.0181
488	SLU 45	0.89	-0.68	75.98	-0.0176	0.2725	-0.0191
488	SLU 46	0.89	-0.7	75.99	-0.0175	0.2729	-0.0187
488	SLU 47	0.89	-0.72	75.45	-0.0174	0.2701	-0.0184
488	SLU 48	0.9	-0.69	76.85	-0.018	0.2745	-0.0193
488	SLU 49	0.9	-0.71	76.86	-0.0179	0.2749	-0.0189
488	SLU 50	0.89	-0.7	76.3	-0.018	0.2713	-0.0193
488	SLU 51	0.9	-0.72	76.31	-0.0179	0.2718	-0.0189
488	SLU 52	0.92	-0.66	81.81	-0.0169	0.3002	-0.0195
488	SLU 53	0.93	-0.64	83.21	-0.0175	0.3046	-0.0204
488	SLU 54	0.93	-0.66	83.22	-0.0174	0.3051	-0.0201
488	SLU 55	0.93	-0.68	82.68	-0.0173	0.3022	-0.0197
488	SLU 56	0.94	-0.65	84.08	-0.0179	0.3066	-0.0207
488	SLU 57	0.95	-0.67	84.09	-0.0178	0.3071	-0.0203
488	SLU 58	0.94	-0.66	83.53	-0.0178	0.3034	-0.0206
488	SLU 59	0.94	-0.68	83.54	-0.0177	0.3039	-0.0202
488	SLU 60	0.93	-0.61	84.89	-0.017	0.3132	-0.0207
488	SLU 61	0.93	-0.63	84.9	-0.0169	0.3137	-0.0203
488	SLU 62	0.94	-0.63	85.76	-0.0173	0.3152	-0.021
488	SLU 63	0.95	-0.65	85.77	-0.0173	0.3157	-0.0206
488	SLU 64	0.94	-0.59	81.49	-0.0171	0.2778	-0.0195
488	SLU 65	0.95	-0.62	81.5	-0.0169	0.2786	-0.0189
488	SLU 66	0.96	-0.6	82.9	-0.0175	0.283	-0.0199
488	SLU 67	0.96	-0.62	82.91	-0.0174	0.2835	-0.0195
488	SLU 68	0.96	-0.64	82.37	-0.0173	0.2806	-0.0191
488	SLU 69	0.97	-0.61	83.77	-0.0179	0.285	-0.0201
488	SLU 70	0.97	-0.63	83.78	-0.0178	0.2855	-0.0197
488	SLU 71	0.96	-0.62	83.22	-0.0178	0.2818	-0.02
488	SLU 72	0.97	-0.64	83.23	-0.0178	0.2823	-0.0197
488	SLU 73	0.99	-0.59	88.73	-0.0167	0.3107	-0.0203
488	SLU 74	1	-0.56	90.13	-0.0173	0.3151	-0.0212
488	SLU 75	1	-0.58	90.14	-0.0172	0.3156	-0.0208
488	SLU 76	1	-0.6	89.6	-0.0171	0.3127	-0.0205
488	SLU 77	1.01	-0.57	90.99	-0.0177	0.3171	-0.0215
488	SLU 78	1.02	-0.59	91	-0.0176	0.3176	-0.0211
488	SLU 79	1.01	-0.58	90.45	-0.0177	0.314	-0.0214
488	SLU 80	1.01	-0.6	90.46	-0.0176	0.3144	-0.021
488	SLU 81	1	-0.54	91.81	-0.0168	0.3237	-0.0215
488	SLU 82	1	-0.56	91.82	-0.0167	0.3242	-0.0211
488	SLU 83	1.01	-0.55	92.68	-0.0172	0.3257	-0.0218
488	SLU 84	1.02	-0.57	92.69	-0.0171	0.3262	-0.0214
488	SLE RA 1	0.71	-0.47	61.16	-0.0131	0.2114	-0.0149
488	SLE RA 2	0.71	-0.49	61.17	-0.013	0.2119	-0.0144
488	SLE RA 3	0.72	-0.48	62.1	-0.0134	0.2149	-0.0151
488	SLE RA 4	0.72	-0.49	62.11	-0.0134	0.2152	-0.0148

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
488	SLE RA 5	0.72	-0.5	61.75	-0.0133	0.2132	-0.0146
488	SLE RA 6	0.73	-0.49	62.68	-0.0137	0.2162	-0.0152
488	SLE RA 7	0.73	-0.5	62.69	-0.0137	0.2165	-0.015
488	SLE RA 8	0.72	-0.49	62.32	-0.0137	0.2141	-0.0152
488	SLE RA 9	0.73	-0.51	62.33	-0.0136	0.2144	-0.0149
488	SLE RA 10	0.74	-0.47	65.99	-0.0129	0.2333	-0.0153
488	SLE RA 11	0.75	-0.45	66.92	-0.0133	0.2363	-0.016
488	SLE RA 12	0.75	-0.46	66.93	-0.0133	0.2366	-0.0157
488	SLE RA 13	0.75	-0.48	66.57	-0.0132	0.2347	-0.0155
488	SLE RA 14	0.76	-0.46	67.5	-0.0136	0.2376	-0.0162
488	SLE RA 15	0.76	-0.47	67.51	-0.0135	0.2379	-0.0159
488	SLE RA 16	0.75	-0.47	67.14	-0.0136	0.2355	-0.0161
488	SLE RA 17	0.75	-0.48	67.14	-0.0135	0.2358	-0.0159
488	SLE RA 18	0.75	-0.43	68.05	-0.013	0.242	-0.0162
488	SLE RA 19	0.75	-0.45	68.05	-0.0129	0.2423	-0.0159
488	SLE RA 20	0.76	-0.44	68.62	-0.0133	0.2433	-0.0163
488	SLE RA 21	0.76	-0.46	68.63	-0.0132	0.2436	-0.0161
488	SLE FR 1	0.71	-0.47	61.16	-0.0131	0.2114	-0.0149
488	SLE FR 2	0.71	-0.48	61.16	-0.0131	0.2115	-0.0148
488	SLE FR 3	0.71	-0.48	61.39	-0.0133	0.2119	-0.0149
488	SLE FR 4	0.72	-0.47	63.23	-0.0131	0.2207	-0.0152
488	SLE FR 5	0.72	-0.46	63.46	-0.0132	0.2211	-0.0153
488	SLE FR 6	0.73	-0.45	64.6	-0.0131	0.2267	-0.0155
488	SLE QP 1	0.71	-0.47	61.16	-0.0131	0.2114	-0.0149
488	SLE QP 2	0.72	-0.46	63.23	-0.0131	0.2206	-0.0153
488	SLD 1	5.82	0.64	58.38	-0.0135	0.3034	0.0036
488	SLD 2	5.97	1.05	58.45	-0.0155	0.2956	0.0152
488	SLD 3	5.73	-0.93	58.58	-0.0074	0.3369	0.0018
488	SLD 4	5.89	-0.53	58.65	-0.0094	0.3291	0.0134
488	SLD 5	2.35	2.18	61.46	-0.022	0.196	-0.009
488	SLD 6	2.45	2.45	61.51	-0.0234	0.1908	-0.0013
488	SLD 7	2.07	-3.06	62.12	-0.0019	0.3077	-0.0149
488	SLD 8	2.17	-2.79	62.17	-0.0032	0.3026	-0.0072
488	SLD 9	-0.73	1.87	64.28	-0.023	0.1386	-0.0233
488	SLD 10	-0.63	2.14	64.33	-0.0243	0.1335	-0.0156
488	SLD 11	-1.01	-3.37	64.95	-0.0028	0.2503	-0.0292
488	SLD 12	-0.91	-3.11	65	-0.0042	0.2452	-0.0215
488	SLD 13	-4.45	-0.39	67.8	-0.0168	0.1121	-0.0439
488	SLD 14	-4.29	0.01	67.88	-0.0188	0.1043	-0.0323
488	SLD 15	-4.53	-1.97	68	-0.0107	0.1456	-0.0457
488	SLD 16	-4.38	-1.57	68.08	-0.0127	0.1378	-0.0341
488	SLV 1	12.64	2.07	51.89	-0.0138	0.415	0.0288
488	SLV 2	13	3.01	52.06	-0.0185	0.3969	0.0559
488	SLV 3	12.44	-1.5	52.34	-0.0001	0.491	0.0247
488	SLV 4	12.8	-0.56	52.51	-0.0047	0.4729	0.0518
488	SLV 5	4.53	5.54	59.11	-0.0333	0.1669	-0.0006
488	SLV 6	4.77	6.15	59.22	-0.0364	0.155	0.0171
488	SLV 7	3.87	-6.35	60.62	0.0125	0.4201	-0.0143
488	SLV 8	4.11	-5.73	60.73	0.0094	0.4083	0.0034
488	SLV 9	-2.67	4.81	65.72	-0.0356	0.0328	-0.0339
488	SLV 10	-2.43	5.43	65.84	-0.0387	0.021	-0.0162
488	SLV 11	-3.33	-7.08	67.23	0.0102	0.2861	-0.0476
488	SLV 12	-3.09	-6.46	67.35	0.0071	0.2743	-0.0299
488	SLV 13	-11.36	-0.36	73.94	-0.0215	-0.0317	-0.0823
488	SLV 14	-11	0.58	74.11	-0.0261	-0.0498	-0.0552
488	SLV 15	-11.56	-3.93	74.39	-0.0077	0.0443	-0.0864
488	SLV 16	-11.2	-2.99	74.57	-0.0124	0.0261	-0.0593
488	CRTFP Ux+	0	0	0	0	0	0
488	CRTFP Ux-	0	0	0	0	0	0
488	CRTFP Uy+	0	0	0	0	0	0
488	CRTFP Uy-	0	0	0	0	0	0
489	SLU 1	0.7	0.2	39.38	0.0515	10.4817	-0.0735
489	SLU 2	0.71	0.18	39.39	0.0515	10.4848	-0.0669
489	SLU 3	0.72	0.21	40.33	0.0528	10.7261	-0.0747
489	SLU 4	0.73	0.19	40.34	0.0528	10.7279	-0.0707
489	SLU 5	0.72	0.18	39.98	0.0523	10.6363	-0.0654
489	SLU 6	0.73	0.2	40.93	0.0535	10.8777	-0.0733
489	SLU 7	0.74	0.19	40.93	0.0536	10.8795	-0.0692
489	SLU 8	0.73	0.19	40.57	0.053	10.7849	-0.0707
489	SLU 9	0.73	0.18	40.57	0.0531	10.7867	-0.0667
489	SLU 10	0.75	0.28	43.92	0.0585	11.691	-0.1016
489	SLU 11	0.76	0.3	44.87	0.0598	11.9324	-0.1094
489	SLU 12	0.77	0.29	44.87	0.0598	11.9342	-0.1054
489	SLU 13	0.76	0.28	44.52	0.0593	11.8426	-0.1002
489	SLU 14	0.78	0.3	45.46	0.0605	12.0839	-0.108
489	SLU 15	0.78	0.29	45.47	0.0605	12.0858	-0.104
489	SLU 16	0.77	0.29	45.1	0.06	11.9911	-0.1054
489	SLU 17	0.77	0.28	45.11	0.06	11.9929	-0.1014
489	SLU 18	0.76	0.34	45.86	0.0615	12.2049	-0.1231
489	SLU 19	0.77	0.33	45.86	0.0615	12.2068	-0.1191
489	SLU 20	0.78	0.34	46.45	0.0622	12.3565	-0.1217
489	SLU 21	0.78	0.33	46.46	0.0622	12.3583	-0.1177
489	SLU 22	0.77	0.3	43.92	0.0585	11.6795	-0.1075
489	SLU 23	0.77	0.28	43.93	0.0585	11.6826	-0.1008
489	SLU 24	0.79	0.3	44.87	0.0598	11.9239	-0.1086
489	SLU 25	0.79	0.29	44.87	0.0598	11.9258	-0.1046
489	SLU 26	0.79	0.28	44.52	0.0593	11.8342	-0.0994
489	SLU 27	0.8	0.3	45.46	0.0606	12.0755	-0.1072
489	SLU 28	0.8	0.29	45.47	0.0606	12.0773	-0.1032
489	SLU 29	0.79	0.29	45.11	0.0601	11.9827	-0.1047

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
489	SLU 30	0.8	0.28	45.11	0.0601	11.9845	-0.1006
489	SLU 31	0.81	0.38	48.46	0.0655	12.8888	-0.1355
489	SLU 32	0.83	0.4	49.4	0.0668	13.1302	-0.1433
489	SLU 33	0.83	0.39	49.41	0.0668	13.132	-0.1393
489	SLU 34	0.83	0.37	49.06	0.0663	13.0404	-0.1341
489	SLU 35	0.84	0.4	50	0.0676	13.2817	-0.1419
489	SLU 36	0.84	0.39	50	0.0676	13.2836	-0.1379
489	SLU 37	0.84	0.39	49.64	0.0671	13.1889	-0.1394
489	SLU 38	0.84	0.38	49.65	0.0671	13.1908	-0.1354
489	SLU 39	0.83	0.44	50.4	0.0685	13.4027	-0.1571
489	SLU 40	0.83	0.43	50.4	0.0685	13.4046	-0.1531
489	SLU 41	0.84	0.44	50.99	0.0693	13.5543	-0.1557
489	SLU 42	0.84	0.42	51	0.0693	13.5561	-0.1517
489	SLU 43	0.89	0.23	49.64	0.0645	13.2155	-0.084
489	SLU 44	0.9	0.21	49.65	0.0645	13.2186	-0.0773
489	SLU 45	0.91	0.23	50.59	0.0658	13.4599	-0.0851
489	SLU 46	0.91	0.22	50.59	0.0658	13.4618	-0.0811
489	SLU 47	0.91	0.21	50.24	0.0653	13.3702	-0.0759
489	SLU 48	0.92	0.23	51.18	0.0666	13.6115	-0.0837
489	SLU 49	0.93	0.22	51.19	0.0666	13.6134	-0.0797
489	SLU 50	0.92	0.22	50.83	0.0661	13.5187	-0.0811
489	SLU 51	0.92	0.21	50.83	0.0661	13.5205	-0.0771
489	SLU 52	0.94	0.31	54.18	0.0715	14.4249	-0.112
489	SLU 53	0.95	0.33	55.12	0.0728	14.6662	-0.1198
489	SLU 54	0.96	0.32	55.13	0.0728	14.668	-0.1158
489	SLU 55	0.95	0.31	54.78	0.0723	14.5764	-0.1106
489	SLU 56	0.97	0.33	55.72	0.0736	14.8178	-0.1184
489	SLU 57	0.97	0.32	55.72	0.0736	14.8196	-0.1144
489	SLU 58	0.96	0.32	55.36	0.0731	14.7249	-0.1158
489	SLU 59	0.96	0.31	55.37	0.0731	14.7268	-0.1118
489	SLU 60	0.95	0.37	56.12	0.0745	14.9388	-0.1336
489	SLU 61	0.95	0.36	56.12	0.0745	14.9406	-0.1296
489	SLU 62	0.96	0.37	56.71	0.0753	15.0903	-0.1321
489	SLU 63	0.97	0.36	56.72	0.0753	15.0922	-0.1281
489	SLU 64	0.96	0.33	54.17	0.0716	14.4134	-0.1179
489	SLU 65	0.96	0.31	54.18	0.0716	14.4164	-0.1112
489	SLU 66	0.98	0.33	55.13	0.0728	14.6578	-0.119
489	SLU 67	0.98	0.32	55.13	0.0729	14.6596	-0.115
489	SLU 68	0.97	0.3	54.78	0.0724	14.568	-0.1098
489	SLU 69	0.99	0.33	55.72	0.0736	14.8093	-0.1176
489	SLU 70	0.99	0.31	55.73	0.0736	14.8112	-0.1136
489	SLU 71	0.98	0.32	55.36	0.0731	14.7165	-0.1151
489	SLU 72	0.98	0.31	55.37	0.0731	14.7183	-0.1111
489	SLU 73	1	0.41	58.72	0.0786	15.6227	-0.146
489	SLU 74	1.02	0.43	59.66	0.0798	15.864	-0.1538
489	SLU 75	1.02	0.42	59.67	0.0798	15.8658	-0.1498
489	SLU 76	1.02	0.4	59.31	0.0793	15.7742	-0.1445
489	SLU 77	1.03	0.42	60.26	0.0806	16.0156	-0.1523
489	SLU 78	1.03	0.41	60.26	0.0806	16.0174	-0.1483
489	SLU 79	1.02	0.42	59.9	0.0801	15.9228	-0.1498
489	SLU 80	1.03	0.41	59.9	0.0801	15.9246	-0.1458
489	SLU 81	1.02	0.47	60.65	0.0815	16.1366	-0.1675
489	SLU 82	1.02	0.46	60.66	0.0815	16.1384	-0.1635
489	SLU 83	1.03	0.46	61.25	0.0823	16.2881	-0.1661
489	SLU 84	1.03	0.45	61.25	0.0823	16.29	-0.1621
489	SLE RA 1	0.72	0.23	40.68	0.0535	10.8239	-0.0832
489	SLE RA 2	0.73	0.22	40.68	0.0535	10.826	-0.0788
489	SLE RA 3	0.74	0.23	41.31	0.0544	10.9869	-0.084
489	SLE RA 4	0.74	0.22	41.31	0.0544	10.9881	-0.0813
489	SLE RA 5	0.73	0.21	41.08	0.054	10.927	-0.0778
489	SLE RA 6	0.74	0.23	41.71	0.0549	11.0879	-0.0831
489	SLE RA 7	0.74	0.22	41.71	0.0549	11.0891	-0.0804
489	SLE RA 8	0.74	0.22	41.47	0.0545	11.026	-0.0814
489	SLE RA 9	0.74	0.22	41.47	0.0545	11.0273	-0.0787
489	SLE RA 10	0.75	0.28	43.7	0.0582	11.6302	-0.1019
489	SLE RA 11	0.76	0.3	44.33	0.059	11.791	-0.1071
489	SLE RA 12	0.76	0.29	44.34	0.059	11.7923	-0.1045
489	SLE RA 13	0.76	0.28	44.1	0.0587	11.7312	-0.101
489	SLE RA 14	0.77	0.3	44.73	0.0595	11.8921	-0.1062
489	SLE RA 15	0.77	0.29	44.73	0.0595	11.8933	-0.1035
489	SLE RA 16	0.77	0.29	44.49	0.0592	11.8302	-0.1045
489	SLE RA 17	0.77	0.28	44.5	0.0592	11.8314	-0.1018
489	SLE RA 18	0.76	0.32	44.99	0.0601	11.9728	-0.1163
489	SLE RA 19	0.76	0.32	45	0.0602	11.974	-0.1136
489	SLE RA 20	0.77	0.32	45.39	0.0607	12.0738	-0.1154
489	SLE RA 21	0.77	0.31	45.39	0.0607	12.075	-0.1127
489	SLE FR 1	0.72	0.23	40.68	0.0535	10.8239	-0.0832
489	SLE FR 2	0.72	0.23	40.68	0.0535	10.8244	-0.0824
489	SLE FR 3	0.73	0.23	40.83	0.0537	10.8644	-0.0829
489	SLE FR 4	0.74	0.26	41.97	0.0555	11.169	-0.0923
489	SLE FR 5	0.74	0.26	42.13	0.0557	11.209	-0.0928
489	SLE FR 6	0.74	0.28	42.84	0.0568	11.3983	-0.0998
489	SLE QP 1	0.72	0.23	40.68	0.0535	10.8239	-0.0832
489	SLE QP 2	0.73	0.26	41.97	0.0555	11.1686	-0.0932
489	SLD 1	3.7	0.8	30.27	0.04	8.2834	-0.2831
489	SLD 2	3.81	1.44	30.4	0.0386	8.2867	-0.505
489	SLD 3	3.61	-0.52	30.08	0.0422	8.3376	0.1783
489	SLD 4	3.71	0.12	30.2	0.0408	8.3409	-0.0436
489	SLD 5	1.75	2.31	38.73	0.0477	10.2202	-0.8097
489	SLD 6	1.82	2.73	38.81	0.0468	10.2224	-0.9569

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
489	SLD 7	1.44	-2.09	38.09	0.0551	10.4009	0.7285
489	SLD 8	1.51	-1.67	38.17	0.0542	10.4031	0.5812
489	SLD 9	-0.04	2.18	45.77	0.0568	11.9341	-0.7676
489	SLD 10	0.03	2.61	45.85	0.0559	11.9362	-0.9148
489	SLD 11	-0.35	-2.21	45.13	0.0642	12.1148	0.7706
489	SLD 12	-0.28	-1.79	45.21	0.0632	12.1169	0.6233
489	SLD 13	-2.24	0.4	53.74	0.0701	13.9963	-0.1428
489	SLD 14	-2.14	1.03	53.86	0.0688	13.9995	-0.3646
489	SLD 15	-2.34	-0.92	53.55	0.0724	14.0505	0.3187
489	SLD 16	-2.23	-0.29	53.67	0.071	14.0537	0.0968
489	SLV 1	7.67	1.49	14.6	0.0193	4.419	-0.5224
489	SLV 2	7.91	2.97	14.89	0.0161	4.4265	-1.039
489	SLV 3	7.46	-1.5	14.16	0.0243	4.5444	0.5235
489	SLV 4	7.7	-0.02	14.44	0.0211	4.552	0.007
489	SLV 5	3.09	4.9	34.39	0.0376	8.9522	-1.7175
489	SLV 6	3.25	5.87	34.57	0.0355	8.9571	-2.054
489	SLV 7	2.39	-5.06	32.9	0.0543	9.3702	1.769
489	SLV 8	2.55	-4.1	33.08	0.0522	9.3752	1.4324
489	SLV 9	-1.08	4.62	50.86	0.0588	12.962	-1.6187
489	SLV 10	-0.92	5.58	51.04	0.0567	12.9669	-1.9553
489	SLV 11	-1.78	-5.35	49.37	0.0755	13.3801	1.8677
489	SLV 12	-1.62	-4.38	49.55	0.0734	13.385	1.5311
489	SLV 13	-6.23	0.54	69.5	0.0898	17.7852	-0.1933
489	SLV 14	-5.99	2.02	69.79	0.0867	17.7927	-0.7099
489	SLV 15	-6.44	-2.45	69.06	0.0949	17.9106	0.8526
489	SLV 16	-6.2	-0.97	69.34	0.0917	17.9182	0.3361
489	CRTFP Ux+	0	0	0	0	0	0
489	CRTFP Ux-	0	0	0	0	0	0
489	CRTFP Uy+	0	0	0	0	0	0
489	CRTFP Uy-	0	0	0	0	0	0
494	SLU 1	0.08	-0.07	32.83	-0.0097	11.0336	0.0214
494	SLU 2	0.08	-0.1	32.83	-0.0096	11.0352	0.032
494	SLU 3	0.08	-0.06	33.61	-0.0099	11.2961	0.0179
494	SLU 4	0.08	-0.07	33.62	-0.0098	11.297	0.0243
494	SLU 5	0.08	-0.1	33.31	-0.0097	11.1954	0.0317
494	SLU 6	0.08	-0.06	34.09	-0.01	11.4563	0.0176
494	SLU 7	0.08	-0.07	34.1	-0.01	11.4572	0.0239
494	SLU 8	0.08	-0.06	33.79	-0.01	11.354	0.0208
494	SLU 9	0.08	-0.08	33.79	-0.0099	11.355	0.0271
494	SLU 10	0.1	-0.05	37.14	-0.0106	12.4923	0.0156
494	SLU 11	0.1	-0.01	37.93	-0.011	12.7532	0.0015
494	SLU 12	0.1	-0.03	37.93	-0.0109	12.7542	0.0079
494	SLU 13	0.1	-0.05	37.62	-0.0108	12.6525	0.0153
494	SLU 14	0.1	-0.01	38.41	-0.0111	12.9134	0.0012
494	SLU 15	0.1	-0.03	38.41	-0.011	12.9144	0.0076
494	SLU 16	0.1	-0.02	38.1	-0.011	12.8112	0.0044
494	SLU 17	0.1	-0.04	38.1	-0.011	12.8121	0.0108
494	SLU 18	0.11	0	38.98	-0.0112	13.1152	-0.002
494	SLU 19	0.11	-0.02	38.99	-0.0111	13.1162	0.0044
494	SLU 20	0.11	0	39.46	-0.0113	13.2755	-0.0023
494	SLU 21	0.11	-0.02	39.47	-0.0113	13.2764	0.0041
494	SLU 22	0.09	0.02	36.52	-0.0101	12.2676	-0.0077
494	SLU 23	0.09	-0.01	36.53	-0.01	12.2692	0.003
494	SLU 24	0.09	0.03	37.31	-0.0104	12.5301	-0.0112
494	SLU 25	0.09	0.01	37.32	-0.0103	12.531	-0.0048
494	SLU 26	0.09	-0.01	37.01	-0.0102	12.4294	0.0027
494	SLU 27	0.09	0.03	37.79	-0.0105	12.6903	-0.0115
494	SLU 28	0.09	0.01	37.8	-0.0104	12.6912	-0.0051
494	SLU 29	0.09	0.02	37.49	-0.0104	12.588	-0.0083
494	SLU 30	0.09	0	37.49	-0.0104	12.589	-0.0019
494	SLU 31	0.11	0.03	40.84	-0.0111	13.7263	-0.0134
494	SLU 32	0.11	0.07	41.62	-0.0114	13.9872	-0.0275
494	SLU 33	0.11	0.05	41.63	-0.0114	13.9881	-0.0212
494	SLU 34	0.11	0.03	41.32	-0.0112	13.8865	-0.0137
494	SLU 35	0.11	0.07	42.11	-0.0116	14.1474	-0.0278
494	SLU 36	0.12	0.06	42.11	-0.0115	14.1484	-0.0215
494	SLU 37	0.11	0.06	41.8	-0.0115	14.0451	-0.0246
494	SLU 38	0.12	0.05	41.8	-0.0114	14.0461	-0.0183
494	SLU 39	0.12	0.08	42.68	-0.0117	14.3492	-0.031
494	SLU 40	0.12	0.06	42.69	-0.0116	14.3501	-0.0247
494	SLU 41	0.12	0.08	43.16	-0.0118	14.5094	-0.0313
494	SLU 42	0.12	0.07	43.17	-0.0118	14.5104	-0.025
494	SLU 43	0.09	-0.11	41.4	-0.0124	13.9206	0.0377
494	SLU 44	0.1	-0.14	41.41	-0.0123	13.9222	0.0484
494	SLU 45	0.1	-0.1	42.19	-0.0126	14.1831	0.0342
494	SLU 46	0.1	-0.12	42.2	-0.0126	14.184	0.0406
494	SLU 47	0.1	-0.14	41.89	-0.0124	14.0824	0.0481
494	SLU 48	0.1	-0.1	42.67	-0.0128	14.3433	0.0339
494	SLU 49	0.1	-0.12	42.68	-0.0127	14.3443	0.0403
494	SLU 50	0.1	-0.11	42.37	-0.0127	14.2411	0.0371
494	SLU 51	0.1	-0.13	42.37	-0.0126	14.242	0.0435
494	SLU 52	0.12	-0.1	45.72	-0.0134	15.3793	0.032
494	SLU 53	0.12	-0.06	46.5	-0.0137	15.6402	0.0179
494	SLU 54	0.12	-0.08	46.51	-0.0136	15.6412	0.0243
494	SLU 55	0.12	-0.1	46.2	-0.0135	15.5395	0.0317
494	SLU 56	0.12	-0.06	46.98	-0.0138	15.8005	0.0176
494	SLU 57	0.12	-0.08	46.99	-0.0138	15.8014	0.024
494	SLU 58	0.12	-0.07	46.68	-0.0138	15.6982	0.0208
494	SLU 59	0.12	-0.08	46.68	-0.0137	15.6991	0.0272
494	SLU 60	0.13	-0.05	47.56	-0.0139	16.0023	0.0144

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
494	SLU 61	0.13	-0.07	47.57	-0.0139	16.0032	0.0207
494	SLU 62	0.13	-0.05	48.04	-0.0141	16.1625	0.0141
494	SLU 63	0.13	-0.07	48.05	-0.014	16.1634	0.0204
494	SLU 64	0.11	-0.03	45.1	-0.0129	15.1546	0.0087
494	SLU 65	0.11	-0.06	45.11	-0.0128	15.1562	0.0193
494	SLU 66	0.11	-0.02	45.89	-0.0131	15.4171	0.0052
494	SLU 67	0.11	-0.04	45.9	-0.013	15.418	0.0116
494	SLU 68	0.11	-0.06	45.59	-0.0129	15.3164	0.019
494	SLU 69	0.11	-0.02	46.37	-0.0132	15.5773	0.0049
494	SLU 70	0.11	-0.04	46.38	-0.0132	15.5782	0.0113
494	SLU 71	0.11	-0.03	46.07	-0.0132	15.475	0.0081
494	SLU 72	0.11	-0.05	46.07	-0.0131	15.476	0.0145
494	SLU 73	0.13	-0.02	49.42	-0.0138	16.6133	0.003
494	SLU 74	0.13	0.02	50.2	-0.0142	16.8742	-0.0112
494	SLU 75	0.13	0.01	50.21	-0.0141	16.8752	-0.0048
494	SLU 76	0.13	-0.01	49.9	-0.014	16.7735	0.0027
494	SLU 77	0.13	0.03	50.68	-0.0143	17.0344	-0.0115
494	SLU 78	0.13	0.01	50.69	-0.0142	17.0354	-0.0051
494	SLU 79	0.13	0.02	50.38	-0.0142	16.9322	-0.0083
494	SLU 80	0.13	0	50.38	-0.0142	16.9331	-0.0019
494	SLU 81	0.14	0.03	51.26	-0.0144	17.2362	-0.0147
494	SLU 82	0.14	0.02	51.27	-0.0143	17.2372	-0.0083
494	SLU 83	0.14	0.04	51.74	-0.0146	17.3964	-0.015
494	SLU 84	0.14	0.02	51.75	-0.0145	17.3974	-0.0086
494	SLE RA 1	0.08	-0.04	33.88	-0.0098	11.3862	0.0131
494	SLE RA 2	0.08	-0.06	33.89	-0.0097	11.3872	0.0202
494	SLE RA 3	0.08	-0.04	34.41	-0.01	11.5612	0.0107
494	SLE RA 4	0.08	-0.05	34.41	-0.0099	11.5618	0.015
494	SLE RA 5	0.08	-0.06	34.21	-0.0098	11.494	0.02
494	SLE RA 6	0.08	-0.04	34.73	-0.01	11.668	0.0105
494	SLE RA 7	0.08	-0.05	34.73	-0.01	11.6686	0.0148
494	SLE RA 8	0.08	-0.04	34.52	-0.01	11.5998	0.0127
494	SLE RA 9	0.08	-0.05	34.53	-0.01	11.6004	0.0169
494	SLE RA 10	0.1	-0.03	36.76	-0.0104	12.3586	0.0093
494	SLE RA 11	0.1	0	37.28	-0.0107	12.5326	-0.0002
494	SLE RA 12	0.1	-0.02	37.28	-0.0106	12.5332	0.0041
494	SLE RA 13	0.1	-0.03	37.08	-0.0105	12.4655	0.0091
494	SLE RA 14	0.1	0	37.6	-0.0108	12.6394	-0.0004
494	SLE RA 15	0.1	-0.02	37.61	-0.0107	12.64	0.0039
494	SLE RA 16	0.1	-0.01	37.4	-0.0107	12.5712	0.0018
494	SLE RA 17	0.1	-0.02	37.4	-0.0107	12.5718	0.006
494	SLE RA 18	0.1	0	37.99	-0.0108	12.7739	-0.0025
494	SLE RA 19	0.1	-0.01	37.99	-0.0108	12.7746	0.0017
494	SLE RA 20	0.1	0	38.31	-0.0109	12.8807	-0.0027
494	SLE RA 21	0.1	-0.01	38.31	-0.0109	12.8814	0.0015
494	SLE FR 1	0.08	-0.04	33.88	-0.0098	11.3862	0.0131
494	SLE FR 2	0.08	-0.05	33.88	-0.0098	11.3864	0.0145
494	SLE FR 3	0.08	-0.04	34.01	-0.0098	11.4289	0.013
494	SLE FR 4	0.09	-0.03	35.11	-0.0101	11.8027	0.0098
494	SLE FR 5	0.09	-0.03	35.24	-0.0101	11.8452	0.0083
494	SLE FR 6	0.09	-0.02	35.93	-0.0103	12.0801	0.0053
494	SLE QP 1	0.08	-0.04	33.88	-0.0098	11.3862	0.0131
494	SLE QP 2	0.08	-0.03	35.11	-0.0101	11.8025	0.0084
494	SLD 1	2.67	0.5	35.29	-0.0103	11.7291	-0.1753
494	SLD 2	2.73	0.52	35.29	-0.0105	11.7247	-0.184
494	SLD 3	2.63	-0.41	35.52	-0.0073	11.7986	0.1411
494	SLD 4	2.69	-0.38	35.52	-0.0075	11.7942	0.1324
494	SLD 5	0.9	1.49	34.81	-0.0148	11.6759	-0.5251
494	SLD 6	0.95	1.51	34.81	-0.0149	11.673	-0.5308
494	SLD 7	0.78	-1.52	35.59	-0.0046	11.9075	0.5297
494	SLD 8	0.82	-1.5	35.59	-0.0047	11.9046	0.5239
494	SLD 9	-0.65	1.44	34.64	-0.0155	11.7004	-0.5071
494	SLD 10	-0.61	1.46	34.64	-0.0156	11.6975	-0.5129
494	SLD 11	-0.78	-1.57	35.42	-0.0053	11.9321	0.5476
494	SLD 12	-0.74	-1.55	35.42	-0.0054	11.9291	0.5418
494	SLD 13	-2.52	0.32	34.71	-0.0128	11.8109	-0.1156
494	SLD 14	-2.46	0.35	34.71	-0.013	11.8064	-0.1243
494	SLD 15	-2.56	-0.58	34.94	-0.0097	11.8804	0.2008
494	SLD 16	-2.5	-0.55	34.94	-0.0099	11.8759	0.1921
494	SLV 1	6.12	1.16	35.53	-0.0105	11.6326	-0.4096
494	SLV 2	6.27	1.22	35.53	-0.011	11.6223	-0.4299
494	SLV 3	6.04	-0.88	36.06	-0.0036	11.7897	0.307
494	SLV 4	6.19	-0.82	36.05	-0.004	11.7793	0.2868
494	SLV 5	2	3.42	34.44	-0.0207	11.5152	-1.2004
494	SLV 6	2.1	3.46	34.43	-0.021	11.5084	-1.2136
494	SLV 7	1.71	-3.4	36.2	0.0025	12.0387	1.1885
494	SLV 8	1.81	-3.36	36.2	0.0021	12.0319	1.1753
494	SLV 9	-1.64	3.3	34.03	-0.0224	11.5731	-1.1585
494	SLV 10	-1.54	3.34	34.03	-0.0227	11.5664	-1.1717
494	SLV 11	-1.93	-3.52	35.79	0.0008	12.0966	1.2304
494	SLV 12	-1.83	-3.48	35.79	0.0004	12.0898	1.2172
494	SLV 13	-6.02	0.76	34.17	-0.0162	11.8257	-0.27
494	SLV 14	-5.87	0.83	34.17	-0.0167	11.8153	-0.2902
494	SLV 15	-6.1	-1.28	34.7	-0.0092	11.9827	0.4467
494	SLV 16	-5.96	-1.22	34.7	-0.0097	11.9724	0.4264
494	CRTFP Ux+	0	0	0	0	0	0
494	CRTFP Ux-	0	0	0	0	0	0
494	CRTFP Uy+	0	0	0	0	0	0
494	CRTFP Uy-	0	0	0	0	0	0
495	SLU 1	-0.41	-0.03	34.82	0.0405	-5.7879	-0.0067

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
495	SLU 2	-0.4	-0.11	34.82	0.0407	-5.7907	-0.028
495	SLU 3	-0.42	-0.02	35.67	0.0415	-5.9204	-0.0054
495	SLU 4	-0.41	-0.08	35.66	0.0416	-5.9221	-0.0182
495	SLU 5	-0.41	-0.11	35.35	0.0413	-5.8735	-0.0268
495	SLU 6	-0.42	-0.02	36.2	0.0421	-6.0032	-0.0042
495	SLU 7	-0.42	-0.07	36.19	0.0422	-6.0049	-0.0169
495	SLU 8	-0.42	-0.02	35.88	0.0417	-5.9535	-0.0042
495	SLU 9	-0.42	-0.07	35.88	0.0419	-5.9552	-0.017
495	SLU 10	-0.41	-0.06	38.84	0.0464	-6.462	-0.0151
495	SLU 11	-0.42	0.03	39.69	0.0473	-6.5917	0.0075
495	SLU 12	-0.42	-0.02	39.69	0.0474	-6.5934	-0.0052
495	SLU 13	-0.42	-0.06	39.37	0.0471	-6.5448	-0.0138
495	SLU 14	-0.43	0.03	40.22	0.0479	-6.6745	0.0088
495	SLU 15	-0.43	-0.02	40.22	0.048	-6.6762	-0.004
495	SLU 16	-0.43	0.03	39.91	0.0475	-6.6248	0.0087
495	SLU 17	-0.43	-0.02	39.91	0.0476	-6.6265	-0.004
495	SLU 18	-0.42	0.04	40.57	0.0487	-6.7469	0.0118
495	SLU 19	-0.41	-0.01	40.57	0.0488	-6.7486	-0.001
495	SLU 20	-0.43	0.05	41.1	0.0493	-6.8297	0.013
495	SLU 21	-0.42	0	41.1	0.0495	-6.8314	0.0003
495	SLU 22	-0.44	0.03	38.87	0.0463	-6.456	0.0088
495	SLU 23	-0.43	-0.05	38.87	0.0465	-6.4588	-0.0125
495	SLU 24	-0.45	0.04	39.72	0.0473	-6.5885	0.0101
495	SLU 25	-0.45	-0.01	39.72	0.0475	-6.5902	-0.0027
495	SLU 26	-0.44	-0.05	39.4	0.0472	-6.5416	-0.0112
495	SLU 27	-0.46	0.04	40.25	0.048	-6.6713	0.0114
495	SLU 28	-0.45	-0.01	40.25	0.0481	-6.673	-0.0014
495	SLU 29	-0.46	0.04	39.93	0.0476	-6.6216	0.0113
495	SLU 30	-0.45	-0.01	39.93	0.0477	-6.6233	-0.0015
495	SLU 31	-0.44	0	42.9	0.0523	-7.1301	0.0005
495	SLU 32	-0.46	0.09	43.74	0.0531	-7.2598	0.023
495	SLU 33	-0.45	0.04	43.74	0.0532	-7.2615	0.0103
495	SLU 34	-0.45	0	43.43	0.0529	-7.2129	0.0017
495	SLU 35	-0.47	0.09	44.27	0.0538	-7.3427	0.0243
495	SLU 36	-0.46	0.04	44.27	0.0539	-7.3443	0.0115
495	SLU 37	-0.46	0.09	43.96	0.0534	-7.2929	0.0243
495	SLU 38	-0.46	0.04	43.96	0.0535	-7.2946	0.0115
495	SLU 39	-0.45	0.11	44.62	0.0546	-7.415	0.0273
495	SLU 40	-0.45	0.06	44.62	0.0547	-7.4167	0.0145
495	SLU 41	-0.46	0.11	45.15	0.0552	-7.4978	0.0286
495	SLU 42	-0.46	0.06	45.15	0.0553	-7.4995	0.0158
495	SLU 43	-0.52	-0.06	43.88	0.0506	-7.2951	-0.0141
495	SLU 44	-0.51	-0.15	43.88	0.0508	-7.298	-0.0354
495	SLU 45	-0.53	-0.05	44.72	0.0516	-7.4277	-0.0128
495	SLU 46	-0.52	-0.11	44.72	0.0517	-7.4294	-0.0255
495	SLU 47	-0.52	-0.14	44.41	0.0514	-7.3808	-0.0341
495	SLU 48	-0.53	-0.05	45.25	0.0523	-7.5105	-0.0115
495	SLU 49	-0.53	-0.1	45.25	0.0524	-7.5122	-0.0243
495	SLU 50	-0.53	-0.05	44.94	0.0519	-7.4608	-0.0116
495	SLU 51	-0.53	-0.1	44.94	0.052	-7.4625	-0.0243
495	SLU 52	-0.52	-0.09	47.9	0.0566	-7.9693	-0.0224
495	SLU 53	-0.53	0	48.75	0.0574	-8.099	0.0002
495	SLU 54	-0.53	-0.05	48.74	0.0575	-8.1007	-0.0126
495	SLU 55	-0.53	-0.09	48.43	0.0572	-8.0521	-0.0211
495	SLU 56	-0.54	0	49.28	0.058	-8.1818	0.0015
495	SLU 57	-0.54	-0.05	49.27	0.0582	-8.1835	-0.0113
495	SLU 58	-0.54	0	48.96	0.0576	-8.1321	0.0014
495	SLU 59	-0.54	-0.05	48.96	0.0578	-8.1338	-0.0114
495	SLU 60	-0.53	0.01	49.63	0.0588	-8.2542	0.0044
495	SLU 61	-0.52	-0.04	49.63	0.059	-8.2558	-0.0083
495	SLU 62	-0.54	0.02	50.16	0.0595	-8.337	0.0057
495	SLU 63	-0.53	-0.03	50.16	0.0596	-8.3387	-0.0071
495	SLU 64	-0.55	0	47.93	0.0565	-7.9633	0.0014
495	SLU 65	-0.54	-0.08	47.93	0.0567	-7.9661	-0.0199
495	SLU 66	-0.56	0.01	48.77	0.0575	-8.0958	0.0027
495	SLU 67	-0.56	-0.04	48.77	0.0576	-8.0975	-0.01
495	SLU 68	-0.55	-0.08	48.46	0.0573	-8.0489	-0.0186
495	SLU 69	-0.57	0.01	49.3	0.0581	-8.1786	0.004
495	SLU 70	-0.56	-0.04	49.3	0.0582	-8.1803	-0.0088
495	SLU 71	-0.57	0.01	48.99	0.0577	-8.1289	0.004
495	SLU 72	-0.56	-0.04	48.99	0.0578	-8.1306	-0.0088
495	SLU 73	-0.55	-0.03	51.95	0.0624	-8.6374	-0.0069
495	SLU 74	-0.57	0.06	52.8	0.0633	-8.7671	0.0157
495	SLU 75	-0.56	0.01	52.8	0.0634	-8.7688	0.0029
495	SLU 76	-0.56	-0.03	52.48	0.0631	-8.7202	-0.0056
495	SLU 77	-0.58	0.06	53.33	0.0639	-8.8499	0.017
495	SLU 78	-0.57	0.01	53.33	0.064	-8.8516	0.0042
495	SLU 79	-0.57	0.06	53.01	0.0635	-8.8002	0.0169
495	SLU 80	-0.57	0.01	53.01	0.0636	-8.8019	0.0042
495	SLU 81	-0.56	0.08	53.68	0.0647	-8.9223	0.0199
495	SLU 82	-0.56	0.03	53.68	0.0648	-8.924	0.0072
495	SLU 83	-0.57	0.08	54.21	0.0653	-9.0051	0.0212
495	SLU 84	-0.57	0.03	54.21	0.0655	-9.0068	0.0084
495	SLE RA 1	-0.42	-0.01	35.98	0.0421	-5.9787	-0.0023
495	SLE RA 2	-0.41	-0.07	35.98	0.0423	-5.9806	-0.0165
495	SLE RA 3	-0.42	-0.01	36.54	0.0428	-6.0671	-0.0014
495	SLE RA 4	-0.42	-0.04	36.54	0.0429	-6.0682	-0.0099
495	SLE RA 5	-0.42	-0.07	36.33	0.0427	-6.0358	-0.0157
495	SLE RA 6	-0.43	-0.01	36.9	0.0432	-6.1223	-0.0006
495	SLE RA 7	-0.43	-0.04	36.9	0.0433	-6.1235	-0.0091

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
495	SLE RA 8	-0.43	-0.01	36.69	0.043	-6.0892	-0.0006
495	SLE RA 9	-0.42	-0.04	36.69	0.0431	-6.0903	-0.0091
495	SLE RA 10	-0.42	-0.03	38.66	0.0461	-6.4282	-0.0079
495	SLE RA 11	-0.43	0.03	39.22	0.0467	-6.5147	0.0072
495	SLE RA 12	-0.43	-0.01	39.22	0.0468	-6.5158	-0.0013
495	SLE RA 13	-0.42	-0.03	39.02	0.0465	-6.4834	-0.007
495	SLE RA 14	-0.43	0.03	39.58	0.0471	-6.5699	0.0081
495	SLE RA 15	-0.43	0	39.58	0.0472	-6.571	-0.0005
495	SLE RA 16	-0.43	0.03	39.37	0.0468	-6.5367	0.008
495	SLE RA 17	-0.43	0	39.37	0.0469	-6.5378	-0.0005
495	SLE RA 18	-0.42	0.04	39.81	0.0476	-6.6181	0.01
495	SLE RA 19	-0.42	0	39.81	0.0477	-6.6192	0.0015
495	SLE RA 20	-0.43	0.04	40.16	0.0481	-6.6733	0.0109
495	SLE RA 21	-0.43	0.01	40.16	0.0481	-6.6744	0.0024
495	SLE FR 1	-0.42	-0.01	35.98	0.0421	-5.9787	-0.0023
495	SLE FR 2	-0.41	-0.02	35.98	0.0422	-5.9791	-0.0052
495	SLE FR 3	-0.42	-0.01	36.12	0.0423	-6.0008	-0.002
495	SLE FR 4	-0.42	-0.01	37.13	0.0438	-6.1709	-0.0014
495	SLE FR 5	-0.42	0	37.27	0.044	-6.1926	0.0017
495	SLE FR 6	-0.42	0.01	37.9	0.0449	-6.2984	0.0039
495	SLE QP 1	-0.42	-0.01	35.98	0.0421	-5.9787	-0.0023
495	SLE QP 2	-0.42	0	37.13	0.0438	-6.1706	0.0014
495	SLD 1	2.15	0.55	48.08	0.0552	-7.8298	0.1368
495	SLD 2	2.22	-0.01	48.04	0.0568	-7.8459	-0.0011
495	SLD 3	2.2	-0.71	47.91	0.0577	-7.8955	-0.1779
495	SLD 4	2.27	-1.27	47.86	0.0593	-7.9117	-0.3159
495	SLD 5	0.26	2.18	40.69	0.0431	-6.5657	0.5445
495	SLD 6	0.31	1.81	40.66	0.0442	-6.5764	0.4529
495	SLD 7	0.43	-2.02	40.1	0.0515	-6.7848	-0.5047
495	SLD 8	0.48	-2.39	40.07	0.0525	-6.7955	-0.5962
495	SLD 9	-1.32	2.4	34.19	0.035	-5.5456	0.599
495	SLD 10	-1.27	2.03	34.16	0.0361	-5.5563	0.5074
495	SLD 11	-1.14	-1.8	33.6	0.0434	-5.7647	-0.4501
495	SLD 12	-1.1	-2.17	33.57	0.0445	-5.7754	-0.5417
495	SLD 13	-3.11	1.27	26.4	0.0282	-4.4294	0.3186
495	SLD 14	-3.03	0.72	26.35	0.0299	-4.4456	0.1807
495	SLD 15	-3.05	0.01	26.22	0.0307	-4.4952	0.0039
495	SLD 16	-2.98	-0.54	26.18	0.0324	-4.5113	-0.1341
495	SLV 1	5.58	1.23	62.76	0.0706	-10.053	0.3052
495	SLV 2	5.75	-0.07	62.65	0.0744	-10.0907	-0.016
495	SLV 3	5.7	-1.62	62.34	0.0763	-10.2056	-0.4066
495	SLV 4	5.87	-2.92	62.24	0.0801	-10.2432	-0.7278
495	SLV 5	1.17	4.92	45.47	0.0425	-7.0973	1.2286
495	SLV 6	1.28	4.08	45.39	0.045	-7.1218	1.0193
495	SLV 7	1.57	-4.58	44.09	0.0615	-7.6058	-1.1442
495	SLV 8	1.68	-5.42	44.01	0.064	-7.6304	-1.3535
495	SLV 9	-2.51	5.43	30.24	0.0236	-4.7107	1.3563
495	SLV 10	-2.41	4.58	30.17	0.0261	-4.7353	1.147
495	SLV 11	-2.11	-4.07	28.87	0.0426	-5.2193	-1.0166
495	SLV 12	-2.01	-4.91	28.79	0.0451	-5.2438	-1.2259
495	SLV 13	-6.7	2.92	12.02	0.0075	-2.0979	0.7306
495	SLV 14	-6.53	1.63	11.91	0.0113	-2.1355	0.4094
495	SLV 15	-6.58	0.07	11.61	0.0132	-2.2504	0.0188
495	SLV 16	-6.41	-1.22	11.5	0.017	-2.2881	-0.3024
495	CRTFP Ux+	0	0	0	0	0	0
495	CRTFP Ux-	0	0	0	0	0	0
495	CRTFP Uy+	0	0	0	0	0	0
495	CRTFP Uy-	0	0	0	0	0	0
501	SLU 1	-0.47	-0.96	59.04	0.0006	-0.13	-0.0022
501	SLU 2	-0.46	-1.04	59.06	0.0008	-0.1308	-0.0016
501	SLU 3	-0.48	-0.97	60.47	0.0006	-0.1341	-0.0023
501	SLU 4	-0.47	-1.02	60.48	0.0008	-0.1346	-0.0019
501	SLU 5	-0.47	-1.05	59.95	0.0007	-0.1325	-0.0017
501	SLU 6	-0.49	-0.98	61.36	0.0006	-0.1358	-0.0024
501	SLU 7	-0.48	-1.03	61.37	0.0007	-0.1363	-0.002
501	SLU 8	-0.48	-0.98	60.82	0.0005	-0.1335	-0.0024
501	SLU 9	-0.48	-1.03	60.83	0.0006	-0.134	-0.002
501	SLU 10	-0.45	-1.07	66.32	0.0032	-0.1593	-0.0019
501	SLU 11	-0.47	-1	67.73	0.003	-0.1626	-0.0027
501	SLU 12	-0.46	-1.05	67.74	0.0032	-0.1631	-0.0023
501	SLU 13	-0.46	-1.08	67.21	0.0031	-0.1611	-0.002
501	SLU 14	-0.48	-1.02	68.62	0.003	-0.1644	-0.0028
501	SLU 15	-0.47	-1.06	68.63	0.0031	-0.1648	-0.0024
501	SLU 16	-0.48	-1.02	68.08	0.0029	-0.162	-0.0028
501	SLU 17	-0.47	-1.06	68.09	0.003	-0.1625	-0.0024
501	SLU 18	-0.45	-1.01	69.41	0.004	-0.1708	-0.0027
501	SLU 19	-0.45	-1.05	69.42	0.0041	-0.1712	-0.0023
501	SLU 20	-0.46	-1.02	70.3	0.0039	-0.1725	-0.0028
501	SLU 21	-0.46	-1.07	70.31	0.0041	-0.173	-0.0024
501	SLU 22	-0.5	-0.94	66.04	0.0032	-0.1441	-0.0028
501	SLU 23	-0.49	-1.02	66.06	0.0035	-0.145	-0.0021
501	SLU 24	-0.51	-0.96	67.47	0.0033	-0.1482	-0.0029
501	SLU 25	-0.51	-1	67.48	0.0034	-0.1487	-0.0025
501	SLU 26	-0.5	-1.04	66.95	0.0034	-0.1467	-0.0023
501	SLU 27	-0.52	-0.97	68.36	0.0032	-0.15	-0.003
501	SLU 28	-0.52	-1.01	68.37	0.0034	-0.1505	-0.0026
501	SLU 29	-0.52	-0.97	67.82	0.0031	-0.1476	-0.003
501	SLU 30	-0.52	-1.01	67.83	0.0033	-0.1481	-0.0026
501	SLU 31	-0.48	-1.06	73.32	0.0058	-0.1735	-0.0025
501	SLU 32	-0.5	-0.99	74.73	0.0057	-0.1768	-0.0033

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
501	SLU 33	-0.5	-1.04	74.74	0.0058	-0.1773	-0.0029
501	SLU 34	-0.49	-1.07	74.2	0.0058	-0.1752	-0.0026
501	SLU 35	-0.51	-1	75.62	0.0056	-0.1785	-0.0034
501	SLU 36	-0.51	-1.05	75.63	0.0058	-0.179	-0.003
501	SLU 37	-0.51	-1	75.08	0.0055	-0.1762	-0.0034
501	SLU 38	-0.51	-1.05	75.09	0.0057	-0.1767	-0.003
501	SLU 39	-0.48	-0.99	76.41	0.0066	-0.1849	-0.0033
501	SLU 40	-0.48	-1.04	76.42	0.0068	-0.1854	-0.0029
501	SLU 41	-0.49	-1	77.3	0.0066	-0.1867	-0.0034
501	SLU 42	-0.49	-1.05	77.31	0.0067	-0.1871	-0.003
501	SLU 43	-0.59	-1.25	74.36	-0.0002	-0.1641	-0.0027
501	SLU 44	-0.59	-1.33	74.38	0.0001	-0.1649	-0.002
501	SLU 45	-0.61	-1.27	75.79	-0.0001	-0.1682	-0.0028
501	SLU 46	-0.6	-1.31	75.8	0	-0.1687	-0.0024
501	SLU 47	-0.6	-1.35	75.26	0	-0.1667	-0.0021
501	SLU 48	-0.61	-1.28	76.68	-0.0002	-0.17	-0.0029
501	SLU 49	-0.61	-1.33	76.69	0	-0.1704	-0.0025
501	SLU 50	-0.61	-1.28	76.14	-0.0003	-0.1676	-0.0029
501	SLU 51	-0.61	-1.33	76.15	-0.0001	-0.1681	-0.0025
501	SLU 52	-0.58	-1.37	81.63	0.0024	-0.1935	-0.0024
501	SLU 53	-0.6	-1.3	83.05	0.0023	-0.1968	-0.0031
501	SLU 54	-0.59	-1.35	83.06	0.0024	-0.1972	-0.0027
501	SLU 55	-0.59	-1.38	82.52	0.0024	-0.1952	-0.0025
501	SLU 56	-0.61	-1.31	83.93	0.0022	-0.1985	-0.0032
501	SLU 57	-0.6	-1.36	83.94	0.0024	-0.199	-0.0028
501	SLU 58	-0.6	-1.31	83.39	0.0021	-0.1962	-0.0032
501	SLU 59	-0.6	-1.36	83.4	0.0023	-0.1966	-0.0028
501	SLU 60	-0.58	-1.3	84.72	0.0032	-0.2049	-0.0032
501	SLU 61	-0.58	-1.35	84.74	0.0034	-0.2054	-0.0028
501	SLU 62	-0.59	-1.31	85.61	0.0032	-0.2066	-0.0033
501	SLU 63	-0.59	-1.36	85.62	0.0033	-0.2071	-0.0029
501	SLU 64	-0.63	-1.24	81.36	0.0025	-0.1783	-0.0033
501	SLU 65	-0.62	-1.32	81.37	0.0027	-0.1791	-0.0026
501	SLU 66	-0.64	-1.25	82.79	0.0025	-0.1824	-0.0034
501	SLU 67	-0.64	-1.3	82.8	0.0027	-0.1829	-0.003
501	SLU 68	-0.63	-1.33	82.26	0.0027	-0.1808	-0.0027
501	SLU 69	-0.65	-1.26	83.68	0.0025	-0.1841	-0.0035
501	SLU 70	-0.65	-1.31	83.69	0.0026	-0.1846	-0.0031
501	SLU 71	-0.65	-1.26	83.13	0.0024	-0.1818	-0.0035
501	SLU 72	-0.64	-1.31	83.14	0.0025	-0.1823	-0.0031
501	SLU 73	-0.61	-1.35	88.63	0.0051	-0.2076	-0.003
501	SLU 74	-0.63	-1.28	90.04	0.0049	-0.2109	-0.0037
501	SLU 75	-0.63	-1.33	90.05	0.0051	-0.2114	-0.0033
501	SLU 76	-0.62	-1.36	89.52	0.0051	-0.2094	-0.0031
501	SLU 77	-0.64	-1.29	90.93	0.0049	-0.2127	-0.0038
501	SLU 78	-0.64	-1.34	90.94	0.005	-0.2131	-0.0034
501	SLU 79	-0.64	-1.29	90.39	0.0048	-0.2103	-0.0038
501	SLU 80	-0.63	-1.34	90.4	0.0049	-0.2108	-0.0034
501	SLU 81	-0.61	-1.28	91.72	0.0059	-0.2191	-0.0038
501	SLU 82	-0.61	-1.33	91.73	0.006	-0.2195	-0.0034
501	SLU 83	-0.62	-1.29	92.61	0.0058	-0.2208	-0.0039
501	SLU 84	-0.62	-1.34	92.62	0.006	-0.2213	-0.0035
501	SLE RA 1	-0.48	-0.96	61.04	0.0013	-0.134	-0.0024
501	SLE RA 2	-0.47	-1.01	61.06	0.0015	-0.1346	-0.0019
501	SLE RA 3	-0.48	-0.96	62	0.0014	-0.1368	-0.0024
501	SLE RA 4	-0.48	-1	62	0.0015	-0.1371	-0.0022
501	SLE RA 5	-0.48	-1.02	61.65	0.0014	-0.1357	-0.002
501	SLE RA 6	-0.49	-0.97	62.59	0.0013	-0.1379	-0.0025
501	SLE RA 7	-0.49	-1	62.6	0.0014	-0.1382	-0.0023
501	SLE RA 8	-0.49	-0.97	62.23	0.0013	-0.1364	-0.0025
501	SLE RA 9	-0.49	-1	62.24	0.0013	-0.1367	-0.0023
501	SLE RA 10	-0.47	-1.03	65.89	0.0031	-0.1536	-0.0022
501	SLE RA 11	-0.48	-0.98	66.83	0.003	-0.1558	-0.0027
501	SLE RA 12	-0.47	-1.02	66.84	0.0031	-0.1561	-0.0024
501	SLE RA 13	-0.47	-1.04	66.49	0.003	-0.1548	-0.0022
501	SLE RA 14	-0.48	-0.99	67.43	0.0029	-0.1569	-0.0028
501	SLE RA 15	-0.48	-1.02	67.43	0.003	-0.1573	-0.0025
501	SLE RA 16	-0.48	-0.99	67.07	0.0029	-0.1554	-0.0027
501	SLE RA 17	-0.48	-1.02	67.07	0.0029	-0.1557	-0.0025
501	SLE RA 18	-0.47	-0.99	67.95	0.0036	-0.1612	-0.0027
501	SLE RA 19	-0.46	-1.02	67.96	0.0037	-0.1615	-0.0024
501	SLE RA 20	-0.47	-0.99	68.55	0.0036	-0.1624	-0.0028
501	SLE RA 21	-0.47	-1.03	68.55	0.0037	-0.1627	-0.0025
501	SLE FR 1	-0.48	-0.96	61.04	0.0013	-0.134	-0.0024
501	SLE FR 2	-0.47	-0.97	61.05	0.0014	-0.1341	-0.0023
501	SLE FR 3	-0.48	-0.96	61.28	0.0013	-0.1345	-0.0024
501	SLE FR 4	-0.47	-0.98	63.12	0.002	-0.1423	-0.0024
501	SLE FR 5	-0.47	-0.97	63.35	0.002	-0.1427	-0.0025
501	SLE FR 6	-0.47	-0.97	64.5	0.0025	-0.1476	-0.0025
501	SLE QP 1	-0.48	-0.96	61.04	0.0013	-0.134	-0.0024
501	SLE QP 2	-0.47	-0.96	63.12	0.002	-0.1422	-0.0025
501	SLD 1	4.81	-0.53	68.47	-0.0033	0.0406	0.0039
501	SLD 2	4.89	-0.92	68.48	-0.0017	0.0374	0.0135
501	SLD 3	4.73	-2.15	68.79	-0.0006	0.0098	0.0063
501	SLD 4	4.81	-2.53	68.8	0.001	0.0066	0.0159
501	SLD 5	1.22	1.68	64.23	-0.004	-0.0401	-0.0059
501	SLD 6	1.27	1.43	64.24	-0.0029	-0.0422	0.0005
501	SLD 7	0.95	-3.7	65.31	0.0051	-0.1427	0.002
501	SLD 8	1.01	-3.95	65.31	0.0061	-0.1448	0.0083
501	SLD 9	-1.95	2.02	60.92	-0.0021	-0.1396	-0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
501	SLD 10	-1.9	1.77	60.93	-0.001	-0.1417	-0.0069
501	SLD 11	-2.22	-3.36	62	0.0069	-0.2422	-0.0055
501	SLD 12	-2.16	-3.61	62	0.008	-0.2443	0.0009
501	SLD 13	-5.76	0.6	57.43	0.003	-0.291	-0.0208
501	SLD 14	-5.68	0.22	57.44	0.0046	-0.2942	-0.0112
501	SLD 15	-5.84	-1.01	57.75	0.0057	-0.3218	-0.0185
501	SLD 16	-5.76	-1.4	57.77	0.0073	-0.325	-0.0089
501	SLV 1	11.88	-0.02	75.64	-0.0103	0.2845	0.0126
501	SLV 2	12.07	-0.92	75.67	-0.0066	0.2771	0.035
501	SLV 3	11.7	-3.67	76.38	-0.0041	0.2145	0.018
501	SLV 4	11.89	-4.57	76.41	-0.0004	0.2071	0.0403
501	SLV 5	3.48	5.02	65.75	-0.0118	0.0932	-0.01
501	SLV 6	3.6	4.43	65.77	-0.0093	0.0884	0.0046
501	SLV 7	2.87	-7.16	68.21	0.0089	-0.14	0.0078
501	SLV 8	2.99	-7.75	68.23	0.0113	-0.1448	0.0224
501	SLV 9	-3.94	5.82	58.01	-0.0073	-0.1396	-0.0273
501	SLV 10	-3.81	5.23	58.03	-0.0049	-0.1444	-0.0128
501	SLV 11	-4.55	-6.36	60.46	0.0133	-0.3728	-0.0095
501	SLV 12	-4.42	-6.95	60.48	0.0158	-0.3776	0.005
501	SLV 13	-12.83	2.64	49.83	0.0044	-0.4915	-0.0453
501	SLV 14	-12.64	1.74	49.85	0.0081	-0.4989	-0.0229
501	SLV 15	-13.02	-1.01	50.56	0.0106	-0.5615	-0.0399
501	SLV 16	-12.83	-1.91	50.59	0.0143	-0.5688	-0.0176
501	CRTFP Ux+	0	0	0	0	0	0
501	CRTFP Ux-	0	0	0	0	0	0
505	SLU 1	0.76	-0.45	58.85	-0.0079	0.1781	-0.0115
505	SLU 2	0.76	-0.48	58.87	-0.0077	0.1789	-0.0109
505	SLU 3	0.78	-0.45	60.25	-0.0082	0.1826	-0.0117
505	SLU 4	0.78	-0.47	60.26	-0.0081	0.1831	-0.0114
505	SLU 5	0.78	-0.5	59.73	-0.008	0.1804	-0.0111
505	SLU 6	0.79	-0.47	61.11	-0.0085	0.1841	-0.0119
505	SLU 7	0.8	-0.49	61.12	-0.0084	0.1846	-0.0116
505	SLU 8	0.79	-0.48	60.56	-0.0085	0.181	-0.0119
505	SLU 9	0.79	-0.5	60.58	-0.0084	0.1815	-0.0115
505	SLU 10	0.81	-0.44	66.12	-0.0068	0.2074	-0.0119
505	SLU 11	0.83	-0.41	67.5	-0.0073	0.2111	-0.0127
505	SLU 12	0.83	-0.43	67.51	-0.0072	0.2116	-0.0123
505	SLU 13	0.83	-0.45	66.97	-0.0071	0.2089	-0.012
505	SLU 14	0.84	-0.42	68.35	-0.0076	0.2126	-0.0128
505	SLU 15	0.84	-0.44	68.36	-0.0075	0.2131	-0.0125
505	SLU 16	0.83	-0.43	67.81	-0.0076	0.2095	-0.0128
505	SLU 17	0.84	-0.45	67.82	-0.0075	0.21	-0.0124
505	SLU 18	0.83	-0.39	69.2	-0.0065	0.2188	-0.0128
505	SLU 19	0.83	-0.41	69.21	-0.0064	0.2193	-0.0125
505	SLU 20	0.84	-0.4	70.06	-0.0069	0.2202	-0.013
505	SLU 21	0.85	-0.42	70.07	-0.0068	0.2207	-0.0127
505	SLU 22	0.83	-0.37	65.78	-0.0071	0.1845	-0.0121
505	SLU 23	0.84	-0.4	65.81	-0.007	0.1853	-0.0116
505	SLU 24	0.85	-0.37	67.18	-0.0075	0.189	-0.0124
505	SLU 25	0.86	-0.39	67.2	-0.0074	0.1895	-0.012
505	SLU 26	0.85	-0.41	66.66	-0.0073	0.1868	-0.0117
505	SLU 27	0.87	-0.38	68.04	-0.0078	0.1905	-0.0126
505	SLU 28	0.87	-0.4	68.05	-0.0077	0.191	-0.0122
505	SLU 29	0.86	-0.39	67.5	-0.0078	0.1874	-0.0125
505	SLU 30	0.86	-0.41	67.51	-0.0077	0.1879	-0.0121
505	SLU 31	0.89	-0.36	73.05	-0.006	0.2138	-0.0125
505	SLU 32	0.9	-0.33	74.43	-0.0065	0.2175	-0.0133
505	SLU 33	0.91	-0.35	74.44	-0.0064	0.218	-0.013
505	SLU 34	0.9	-0.37	73.91	-0.0063	0.2153	-0.0127
505	SLU 35	0.92	-0.34	75.28	-0.0069	0.219	-0.0135
505	SLU 36	0.92	-0.36	75.3	-0.0068	0.2195	-0.0131
505	SLU 37	0.91	-0.35	74.74	-0.0068	0.2159	-0.0134
505	SLU 38	0.91	-0.37	74.75	-0.0067	0.2164	-0.0131
505	SLU 39	0.9	-0.3	76.13	-0.0058	0.2252	-0.0134
505	SLU 40	0.91	-0.32	76.15	-0.0057	0.2257	-0.0131
505	SLU 41	0.92	-0.32	76.99	-0.0061	0.2266	-0.0136
505	SLU 42	0.92	-0.34	77	-0.006	0.2271	-0.0133
505	SLU 43	0.96	-0.61	74.13	-0.0105	0.2293	-0.0147
505	SLU 44	0.97	-0.65	74.15	-0.0103	0.2302	-0.0142
505	SLU 45	0.98	-0.62	75.53	-0.0108	0.2339	-0.015
505	SLU 46	0.99	-0.64	75.54	-0.0107	0.2344	-0.0146
505	SLU 47	0.98	-0.66	75.01	-0.0107	0.2316	-0.0143
505	SLU 48	1	-0.63	76.39	-0.0112	0.2353	-0.0152
505	SLU 49	1	-0.65	76.4	-0.0111	0.2358	-0.0148
505	SLU 50	0.99	-0.64	75.84	-0.0112	0.2322	-0.0151
505	SLU 51	0.99	-0.66	75.86	-0.0111	0.2327	-0.0148
505	SLU 52	1.02	-0.6	81.4	-0.0094	0.2586	-0.0151
505	SLU 53	1.03	-0.57	82.77	-0.0099	0.2623	-0.0159
505	SLU 54	1.03	-0.59	82.79	-0.0098	0.2628	-0.0156
505	SLU 55	1.03	-0.62	82.25	-0.0097	0.2601	-0.0153
505	SLU 56	1.04	-0.59	83.63	-0.0102	0.2638	-0.0161
505	SLU 57	1.05	-0.61	83.64	-0.0101	0.2643	-0.0157
505	SLU 58	1.04	-0.6	83.09	-0.0102	0.2607	-0.016
505	SLU 59	1.04	-0.62	83.1	-0.0101	0.2612	-0.0157
505	SLU 60	1.03	-0.55	84.48	-0.0092	0.27	-0.016
505	SLU 61	1.03	-0.57	84.49	-0.0091	0.2705	-0.0157
505	SLU 62	1.05	-0.56	85.34	-0.0095	0.2715	-0.0162
505	SLU 63	1.05	-0.58	85.35	-0.0094	0.272	-0.0159
505	SLU 64	1.04	-0.53	81.06	-0.0097	0.2357	-0.0153
505	SLU 65	1.04	-0.56	81.09	-0.0096	0.2366	-0.0148

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
505	SLU 66	1.06	-0.53	82.46	-0.0101	0.2403	-0.0156
505	SLU 67	1.06	-0.55	82.48	-0.01	0.2408	-0.0153
505	SLU 68	1.05	-0.58	81.94	-0.0099	0.238	-0.015
505	SLU 69	1.07	-0.55	83.32	-0.0104	0.2417	-0.0158
505	SLU 70	1.07	-0.57	83.33	-0.0103	0.2422	-0.0154
505	SLU 71	1.06	-0.56	82.78	-0.0104	0.2386	-0.0157
505	SLU 72	1.07	-0.58	82.79	-0.0103	0.2391	-0.0154
505	SLU 73	1.09	-0.52	88.33	-0.0086	0.265	-0.0157
505	SLU 74	1.11	-0.49	89.71	-0.0091	0.2687	-0.0165
505	SLU 75	1.11	-0.51	89.72	-0.009	0.2692	-0.0162
505	SLU 76	1.1	-0.53	89.19	-0.009	0.2665	-0.0159
505	SLU 77	1.12	-0.5	90.56	-0.0095	0.2702	-0.0167
505	SLU 78	1.12	-0.52	90.58	-0.0094	0.2707	-0.0164
505	SLU 79	1.11	-0.51	90.02	-0.0095	0.2671	-0.0166
505	SLU 80	1.11	-0.53	90.03	-0.0094	0.2676	-0.0163
505	SLU 81	1.11	-0.47	91.41	-0.0084	0.2764	-0.0167
505	SLU 82	1.11	-0.49	91.43	-0.0083	0.2769	-0.0163
505	SLU 83	1.12	-0.48	92.27	-0.0087	0.2779	-0.0168
505	SLU 84	1.12	-0.5	92.28	-0.0086	0.2784	-0.0165
505	SLE RA 1	0.78	-0.43	60.83	-0.0077	0.1799	-0.0117
505	SLE RA 2	0.78	-0.45	60.85	-0.0076	0.1805	-0.0113
505	SLE RA 3	0.79	-0.43	61.77	-0.0079	0.1829	-0.0118
505	SLE RA 4	0.8	-0.44	61.77	-0.0078	0.1833	-0.0116
505	SLE RA 5	0.79	-0.46	61.42	-0.0078	0.1814	-0.0114
505	SLE RA 6	0.8	-0.44	62.34	-0.0081	0.1839	-0.012
505	SLE RA 7	0.81	-0.45	62.34	-0.008	0.1843	-0.0117
505	SLE RA 8	0.8	-0.44	61.97	-0.0081	0.1819	-0.0119
505	SLE RA 9	0.8	-0.46	61.98	-0.008	0.1822	-0.0117
505	SLE RA 10	0.82	-0.42	65.68	-0.0069	0.1995	-0.0119
505	SLE RA 11	0.83	-0.4	66.59	-0.0073	0.2019	-0.0124
505	SLE RA 12	0.83	-0.41	66.6	-0.0072	0.2023	-0.0122
505	SLE RA 13	0.83	-0.43	66.25	-0.0071	0.2004	-0.012
505	SLE RA 14	0.84	-0.41	67.17	-0.0075	0.2029	-0.0126
505	SLE RA 15	0.84	-0.42	67.17	-0.0074	0.2032	-0.0124
505	SLE RA 16	0.83	-0.41	66.8	-0.0075	0.2008	-0.0125
505	SLE RA 17	0.83	-0.43	66.81	-0.0074	0.2012	-0.0123
505	SLE RA 18	0.83	-0.38	67.73	-0.0068	0.207	-0.0125
505	SLE RA 19	0.83	-0.4	67.74	-0.0067	0.2074	-0.0123
505	SLE RA 20	0.84	-0.39	68.3	-0.007	0.208	-0.0127
505	SLE RA 21	0.84	-0.41	68.31	-0.0069	0.2083	-0.0124
505	SLE FR 1	0.78	-0.43	60.83	-0.0077	0.1799	-0.0117
505	SLE FR 2	0.78	-0.43	60.84	-0.0076	0.18	-0.0116
505	SLE FR 3	0.78	-0.43	61.06	-0.0078	0.1803	-0.0117
505	SLE FR 4	0.8	-0.42	62.91	-0.0074	0.1882	-0.0119
505	SLE FR 5	0.8	-0.42	63.13	-0.0075	0.1884	-0.012
505	SLE FR 6	0.8	-0.4	64.28	-0.0072	0.1935	-0.0121
505	SLE QP 1	0.78	-0.43	60.83	-0.0077	0.1799	-0.0117
505	SLE QP 2	0.8	-0.41	62.9	-0.0074	0.188	-0.0119
505	SLD 1	5.81	0.67	58	-0.0107	0.2628	-0.0004
505	SLD 2	5.91	1.07	58.01	-0.0127	0.2552	0.0099
505	SLD 3	5.73	-0.9	58.38	-0.0045	0.2985	-0.0019
505	SLD 4	5.83	-0.5	58.4	-0.0065	0.2908	0.0084
505	SLD 5	2.41	2.22	60.85	-0.0174	0.1578	-0.0082
505	SLD 6	2.47	2.49	60.86	-0.0187	0.1527	-0.0013
505	SLD 7	2.13	-3.01	62.12	0.0032	0.2767	-0.013
505	SLD 8	2.2	-2.75	62.13	0.0019	0.2716	-0.0061
505	SLD 9	-0.61	1.92	63.68	-0.0167	0.1045	-0.0177
505	SLD 10	-0.54	2.19	63.68	-0.018	0.0994	-0.0109
505	SLD 11	-0.88	-3.31	64.94	0.0039	0.2234	-0.0225
505	SLD 12	-0.82	-3.04	64.95	0.0026	0.2183	-0.0157
505	SLD 13	-4.24	-0.32	67.41	-0.0083	0.0853	-0.0323
505	SLD 14	-4.14	0.08	67.42	-0.0103	0.0776	-0.022
505	SLD 15	-4.32	-1.89	67.79	-0.0021	0.1209	-0.0337
505	SLD 16	-4.22	-1.49	67.8	-0.0041	0.1133	-0.0234
505	SLV 1	12.53	2.06	51.45	-0.0149	0.3638	0.015
505	SLV 2	12.76	2.99	51.48	-0.0196	0.346	0.039
505	SLV 3	12.34	-1.5	52.32	-0.0008	0.4446	0.0116
505	SLV 4	12.57	-0.56	52.34	-0.0056	0.4268	0.0356
505	SLV 5	4.56	5.56	58.15	-0.0301	0.1213	-0.003
505	SLV 6	4.71	6.17	58.17	-0.0332	0.1097	0.0126
505	SLV 7	3.93	-6.3	61.03	0.0167	0.3907	-0.0142
505	SLV 8	4.08	-5.69	61.05	0.0136	0.3791	0.0015
505	SLV 9	-2.49	4.86	64.76	-0.0284	-0.003	-0.0253
505	SLV 10	-2.34	5.47	64.77	-0.0315	-0.0146	-0.0097
505	SLV 11	-3.12	-6.99	67.63	0.0184	0.2664	-0.0365
505	SLV 12	-2.97	-6.38	67.65	0.0153	0.2548	-0.0209
505	SLV 13	-10.98	-0.26	73.46	-0.0092	-0.0507	-0.0595
505	SLV 14	-10.75	0.67	73.49	-0.014	-0.0685	-0.0355
505	SLV 15	-11.17	-3.82	74.32	0.0048	0.0301	-0.0628
505	SLV 16	-10.94	-2.88	74.35	0.0001	0.0123	-0.0388
505	CRTFP Ux+	0	0	0	0	0	0
505	CRTFP Ux-	0	0	0	0	0	0
505	CRTFP Uy+	0	0	0	0	0	0
505	CRTFP Uy-	0	0	0	0	0	0
506	SLU 1	0.78	0.21	40.94	0.046	11.8423	-0.0741
506	SLU 2	0.78	0.19	40.95	0.046	11.8456	-0.0674
506	SLU 3	0.8	0.21	41.93	0.0471	12.1221	-0.0752
506	SLU 4	0.8	0.2	41.94	0.0472	12.124	-0.0712
506	SLU 5	0.79	0.18	41.57	0.0467	12.0192	-0.066
506	SLU 6	0.81	0.2	42.55	0.0478	12.2956	-0.0738

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
506	SLU 7	0.82	0.19	42.55	0.0478	12.2976	-0.0698
506	SLU 8	0.81	0.2	42.18	0.0474	12.1895	-0.0712
506	SLU 9	0.81	0.19	42.18	0.0474	12.1915	-0.0672
506	SLU 10	0.83	0.28	45.69	0.0522	13.2237	-0.1021
506	SLU 11	0.85	0.31	46.68	0.0533	13.5002	-0.1099
506	SLU 12	0.85	0.3	46.68	0.0533	13.5022	-0.1059
506	SLU 13	0.84	0.28	46.31	0.0529	13.3973	-0.1007
506	SLU 14	0.86	0.3	47.29	0.054	13.6738	-0.1085
506	SLU 15	0.86	0.29	47.3	0.054	13.6758	-0.1045
506	SLU 16	0.85	0.3	46.92	0.0536	13.5677	-0.1059
506	SLU 17	0.86	0.28	46.93	0.0536	13.5696	-0.1019
506	SLU 18	0.85	0.35	47.72	0.0548	13.8112	-0.1236
506	SLU 19	0.85	0.33	47.72	0.0548	13.8131	-0.1196
506	SLU 20	0.86	0.34	48.34	0.0555	13.9847	-0.1222
506	SLU 21	0.86	0.33	48.34	0.0555	13.9867	-0.1182
506	SLU 22	0.85	0.3	45.69	0.0523	13.2134	-0.108
506	SLU 23	0.85	0.28	45.7	0.0523	13.2166	-0.1013
506	SLU 24	0.87	0.3	46.68	0.0534	13.4931	-0.1091
506	SLU 25	0.87	0.29	46.69	0.0534	13.495	-0.1051
506	SLU 26	0.87	0.28	46.32	0.053	13.3902	-0.0999
506	SLU 27	0.89	0.3	47.3	0.0541	13.6667	-0.1077
506	SLU 28	0.89	0.29	47.31	0.0541	13.6686	-0.1037
506	SLU 29	0.88	0.29	46.93	0.0537	13.5605	-0.1052
506	SLU 30	0.88	0.28	46.93	0.0537	13.5625	-0.1012
506	SLU 31	0.9	0.38	50.45	0.0585	14.5948	-0.136
506	SLU 32	0.92	0.4	51.43	0.0596	14.8713	-0.1438
506	SLU 33	0.92	0.39	51.43	0.0596	14.8732	-0.1398
506	SLU 34	0.92	0.38	51.06	0.0592	14.7684	-0.1346
506	SLU 35	0.93	0.4	52.05	0.0603	15.0449	-0.1424
506	SLU 36	0.94	0.39	52.05	0.0603	15.0468	-0.1384
506	SLU 37	0.93	0.39	51.67	0.0598	14.9387	-0.1399
506	SLU 38	0.93	0.38	51.68	0.0598	14.9407	-0.1359
506	SLU 39	0.92	0.44	52.47	0.0611	15.1822	-0.1576
506	SLU 40	0.92	0.43	52.48	0.0611	15.1841	-0.1536
506	SLU 41	0.93	0.44	53.09	0.0618	15.3558	-0.1562
506	SLU 42	0.94	0.43	53.09	0.0618	15.3577	-0.1521
506	SLU 43	0.99	0.23	51.59	0.0577	14.925	-0.0847
506	SLU 44	0.99	0.21	51.6	0.0577	14.9282	-0.078
506	SLU 45	1.01	0.24	52.58	0.0588	15.2047	-0.0858
506	SLU 46	1.01	0.23	52.59	0.0588	15.2066	-0.0818
506	SLU 47	1	0.21	52.22	0.0584	15.1018	-0.0765
506	SLU 48	1.02	0.23	53.2	0.0595	15.3783	-0.0844
506	SLU 49	1.02	0.22	53.21	0.0595	15.3802	-0.0803
506	SLU 50	1.02	0.23	52.83	0.059	15.2721	-0.0818
506	SLU 51	1.02	0.21	52.83	0.0591	15.2741	-0.0778
506	SLU 52	1.04	0.31	56.35	0.0638	16.3064	-0.1127
506	SLU 53	1.06	0.34	57.33	0.065	16.5829	-0.1205
506	SLU 54	1.06	0.32	57.34	0.065	16.5848	-0.1165
506	SLU 55	1.05	0.31	56.97	0.0645	16.48	-0.1112
506	SLU 56	1.07	0.33	57.95	0.0657	16.7564	-0.1191
506	SLU 57	1.07	0.32	57.95	0.0657	16.7584	-0.115
506	SLU 58	1.06	0.32	57.58	0.0652	16.6503	-0.1165
506	SLU 59	1.07	0.31	57.58	0.0652	16.6523	-0.1125
506	SLU 60	1.06	0.37	58.37	0.0665	16.8938	-0.1342
506	SLU 61	1.06	0.36	58.38	0.0665	16.8957	-0.1302
506	SLU 62	1.07	0.37	58.99	0.0672	17.0674	-0.1328
506	SLU 63	1.07	0.36	59	0.0672	17.0693	-0.1288
506	SLU 64	1.06	0.33	56.34	0.0639	16.296	-0.1186
506	SLU 65	1.06	0.31	56.35	0.0639	16.2992	-0.1119
506	SLU 66	1.08	0.33	57.33	0.0651	16.5757	-0.1197
506	SLU 67	1.08	0.32	57.34	0.0651	16.5777	-0.1157
506	SLU 68	1.08	0.31	56.97	0.0646	16.4728	-0.1105
506	SLU 69	1.1	0.33	57.95	0.0658	16.7493	-0.1183
506	SLU 70	1.1	0.32	57.96	0.0658	16.7513	-0.1143
506	SLU 71	1.09	0.32	57.58	0.0653	16.6432	-0.1158
506	SLU 72	1.09	0.31	57.59	0.0653	16.6451	-0.1117
506	SLU 73	1.11	0.41	61.1	0.0701	17.6774	-0.1466
506	SLU 74	1.13	0.43	62.08	0.0713	17.9539	-0.1544
506	SLU 75	1.13	0.42	62.09	0.0713	17.9558	-0.1504
506	SLU 76	1.12	0.41	61.72	0.0708	17.851	-0.1452
506	SLU 77	1.14	0.43	62.7	0.0719	18.1275	-0.153
506	SLU 78	1.14	0.42	62.7	0.0719	18.1294	-0.149
506	SLU 79	1.14	0.42	62.33	0.0715	18.0213	-0.1505
506	SLU 80	1.14	0.41	62.33	0.0715	18.0233	-0.1464
506	SLU 81	1.13	0.47	63.12	0.0728	18.2648	-0.1682
506	SLU 82	1.13	0.46	63.13	0.0728	18.2668	-0.1641
506	SLU 83	1.14	0.47	63.74	0.0735	18.4384	-0.1667
506	SLU 84	1.14	0.46	63.75	0.0735	18.4404	-0.1627
506	SLE RA 1	0.8	0.23	42.3	0.0478	12.2341	-0.0838
506	SLE RA 2	0.8	0.22	42.3	0.0478	12.2362	-0.0793
506	SLE RA 3	0.81	0.23	42.96	0.0486	12.4205	-0.0845
506	SLE RA 4	0.81	0.23	42.96	0.0486	12.4218	-0.0818
506	SLE RA 5	0.81	0.22	42.72	0.0483	12.3519	-0.0784
506	SLE RA 6	0.82	0.23	43.37	0.049	12.5363	-0.0836
506	SLE RA 7	0.82	0.22	43.37	0.049	12.5376	-0.0809
506	SLE RA 8	0.82	0.23	43.12	0.0487	12.4655	-0.0819
506	SLE RA 9	0.82	0.22	43.13	0.0487	12.4668	-0.0792
506	SLE RA 10	0.83	0.29	45.47	0.0519	13.155	-0.1024
506	SLE RA 11	0.85	0.3	46.12	0.0527	13.3393	-0.1076
506	SLE RA 12	0.85	0.29	46.13	0.0527	13.3406	-0.105

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
506	SLE RA 13	0.84	0.28	45.88	0.0524	13.2707	-0.1015
506	SLE RA 14	0.86	0.3	46.53	0.0531	13.455	-0.1067
506	SLE RA 15	0.86	0.29	46.54	0.0531	13.4563	-0.104
506	SLE RA 16	0.85	0.29	46.29	0.0528	13.3843	-0.105
506	SLE RA 17	0.85	0.29	46.29	0.0528	13.3856	-0.1023
506	SLE RA 18	0.85	0.33	46.82	0.0537	13.5466	-0.1168
506	SLE RA 19	0.85	0.32	46.82	0.0537	13.5479	-0.1141
506	SLE RA 20	0.86	0.32	47.23	0.0541	13.6623	-0.1159
506	SLE RA 21	0.86	0.32	47.23	0.0541	13.6636	-0.1132
506	SLE FR 1	0.8	0.23	42.3	0.0478	12.2341	-0.0838
506	SLE FR 2	0.8	0.23	42.3	0.0478	12.2345	-0.0829
506	SLE FR 3	0.8	0.23	42.46	0.048	12.2804	-0.0834
506	SLE FR 4	0.81	0.26	43.65	0.0496	12.6283	-0.0928
506	SLE FR 5	0.82	0.26	43.82	0.0498	12.6741	-0.0933
506	SLE FR 6	0.82	0.28	44.56	0.0507	12.8903	-0.1003
506	SLE QP 1	0.8	0.23	42.3	0.0478	12.2341	-0.0838
506	SLE QP 2	0.81	0.26	43.65	0.0496	12.6278	-0.0937
506	SLD 1	3.73	0.8	31.51	0.0358	9.3393	-0.2831
506	SLD 2	3.81	1.44	31.59	0.0346	9.3396	-0.5049
506	SLD 3	3.65	-0.51	31.34	0.0374	9.3979	0.1778
506	SLD 4	3.72	0.12	31.42	0.0362	9.3982	-0.044
506	SLD 5	1.81	2.31	40.25	0.0432	11.5523	-0.8092
506	SLD 6	1.85	2.73	40.31	0.0424	11.5525	-0.9564
506	SLD 7	1.52	-2.09	39.68	0.0486	11.7477	0.7271
506	SLD 8	1.57	-1.66	39.74	0.0478	11.748	0.5799
506	SLD 9	0.06	2.19	47.57	0.0513	13.5077	-0.7673
506	SLD 10	0.11	2.61	47.62	0.0505	13.5079	-0.9145
506	SLD 11	-0.23	-2.21	47	0.0568	13.7032	0.7691
506	SLD 12	-0.18	-1.79	47.05	0.056	13.7034	0.6218
506	SLD 13	-2.09	0.4	55.89	0.0629	15.8574	-0.1433
506	SLD 14	-2.02	1.04	55.97	0.0617	15.8577	-0.3652
506	SLD 15	-2.18	-0.92	55.72	0.0646	15.916	0.3176
506	SLD 16	-2.11	-0.28	55.8	0.0634	15.9164	0.0957
506	SLV 1	7.64	1.49	15.24	0.0174	4.9346	-0.5217
506	SLV 2	7.81	2.97	15.43	0.0146	4.9354	-1.0381
506	SLV 3	7.44	-1.5	14.84	0.0211	5.0703	0.523
506	SLV 4	7.61	-0.02	15.03	0.0183	5.071	0.0066
506	SLV 5	3.13	4.9	35.7	0.0348	10.1141	-1.7157
506	SLV 6	3.24	5.87	35.83	0.033	10.1146	-2.0523
506	SLV 7	2.48	-5.06	34.37	0.0471	10.5661	1.7666
506	SLV 8	2.59	-4.09	34.49	0.0453	10.5666	1.43
506	SLV 9	-0.96	4.62	52.82	0.0538	14.6891	-1.6174
506	SLV 10	-0.85	5.58	52.94	0.052	14.6896	-1.9539
506	SLV 11	-1.61	-5.34	51.48	0.0662	15.1411	1.8649
506	SLV 12	-1.5	-4.38	51.6	0.0644	15.1416	1.5284
506	SLV 13	-5.98	0.54	72.28	0.0808	20.1847	-0.1939
506	SLV 14	-5.82	2.02	72.47	0.0781	20.1854	-0.7104
506	SLV 15	-6.18	-2.45	71.88	0.0846	20.3203	0.8508
506	SLV 16	-6.01	-0.97	72.07	0.0818	20.321	0.3343
506	CRTFP Ux+	0	0	0	0	0	0
506	CRTFP Ux-	0	0	0	0	0	0
506	CRTFP Uy+	0	0	0	0	0	0
506	CRTFP Uy-	0	0	0	0	0	0
510	SLU 1	0.14	-0.06	32.36	-0.0163	10.7405	0.0189
510	SLU 2	0.15	-0.09	32.37	-0.0162	10.7436	0.0295
510	SLU 3	0.15	-0.05	33.13	-0.0167	10.996	0.0153
510	SLU 4	0.15	-0.07	33.14	-0.0166	10.9978	0.0217
510	SLU 5	0.15	-0.09	32.84	-0.0165	10.8994	0.0292
510	SLU 6	0.15	-0.05	33.61	-0.017	11.1517	0.015
510	SLU 7	0.15	-0.07	33.61	-0.0169	11.1536	0.0214
510	SLU 8	0.15	-0.06	33.3	-0.0168	11.0519	0.0182
510	SLU 9	0.15	-0.08	33.31	-0.0167	11.0538	0.0246
510	SLU 10	0.17	-0.04	36.62	-0.0183	12.1592	0.0132
510	SLU 11	0.17	0	37.39	-0.0188	12.4116	-0.001
510	SLU 12	0.18	-0.02	37.39	-0.0187	12.4134	0.0054
510	SLU 13	0.17	-0.04	37.09	-0.0185	12.3149	0.0128
510	SLU 14	0.18	0	37.86	-0.019	12.5673	-0.0013
510	SLU 15	0.18	-0.02	37.87	-0.019	12.5692	0.005
510	SLU 16	0.18	-0.01	37.56	-0.0189	12.4675	0.0019
510	SLU 17	0.18	-0.03	37.56	-0.0188	12.4694	0.0082
510	SLU 18	0.18	0.01	38.43	-0.0193	12.7628	-0.0044
510	SLU 19	0.18	-0.01	38.44	-0.0192	12.7647	0.0019
510	SLU 20	0.18	0.01	38.91	-0.0195	12.9185	-0.0048
510	SLU 21	0.18	-0.01	38.91	-0.0195	12.9204	0.0016
510	SLU 22	0.16	0.02	36.02	-0.0176	11.947	-0.0103
510	SLU 23	0.16	-0.01	36.04	-0.0175	11.9502	0.0003
510	SLU 24	0.17	0.03	36.8	-0.018	12.2025	-0.0139
510	SLU 25	0.17	0.02	36.81	-0.0179	12.2044	-0.0075
510	SLU 26	0.17	-0.01	36.51	-0.0177	12.1059	-0.0001
510	SLU 27	0.17	0.03	37.28	-0.0182	12.3582	-0.0142
510	SLU 28	0.17	0.02	37.28	-0.0181	12.3601	-0.0079
510	SLU 29	0.17	0.03	36.97	-0.0181	12.2585	-0.011
510	SLU 30	0.17	0.01	36.98	-0.018	12.2604	-0.0047
510	SLU 31	0.19	0.04	40.29	-0.0195	13.3658	-0.016
510	SLU 32	0.19	0.08	41.06	-0.02	13.6181	-0.0302
510	SLU 33	0.19	0.06	41.06	-0.02	13.62	-0.0238
510	SLU 34	0.19	0.04	40.76	-0.0198	13.5215	-0.0164
510	SLU 35	0.19	0.08	41.53	-0.0203	13.7738	-0.0306
510	SLU 36	0.2	0.06	41.54	-0.0202	13.7757	-0.0242
510	SLU 37	0.19	0.07	41.23	-0.0201	13.6741	-0.0274

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
510	SLU 38	0.19	0.05	41.23	-0.0201	13.6759	-0.021
510	SLU 39	0.2	0.09	42.1	-0.0205	13.9693	-0.0336
510	SLU 40	0.2	0.07	42.11	-0.0205	13.9712	-0.0273
510	SLU 41	0.2	0.09	42.57	-0.0208	14.125	-0.034
510	SLU 42	0.2	0.07	42.58	-0.0207	14.1269	-0.0276
510	SLU 43	0.18	-0.11	40.8	-0.0208	13.549	0.0346
510	SLU 44	0.18	-0.14	40.82	-0.0207	13.5521	0.0452
510	SLU 45	0.19	-0.1	41.58	-0.0212	13.8044	0.031
510	SLU 46	0.19	-0.11	41.59	-0.0211	13.8063	0.0374
510	SLU 47	0.19	-0.14	41.29	-0.0209	13.7078	0.0448
510	SLU 48	0.19	-0.09	42.06	-0.0214	13.9602	0.0307
510	SLU 49	0.19	-0.11	42.06	-0.0214	13.962	0.037
510	SLU 50	0.19	-0.1	41.75	-0.0213	13.8604	0.0339
510	SLU 51	0.19	-0.12	41.76	-0.0212	13.8623	0.0402
510	SLU 52	0.21	-0.09	45.07	-0.0228	14.9677	0.0289
510	SLU 53	0.21	-0.05	45.84	-0.0233	15.22	0.0147
510	SLU 54	0.21	-0.07	45.84	-0.0232	15.2219	0.0211
510	SLU 55	0.21	-0.09	45.54	-0.023	15.1234	0.0285
510	SLU 56	0.21	-0.05	46.31	-0.0235	15.3758	0.0144
510	SLU 57	0.22	-0.07	46.32	-0.0234	15.3776	0.0207
510	SLU 58	0.21	-0.06	46.01	-0.0234	15.276	0.0176
510	SLU 59	0.21	-0.08	46.01	-0.0233	15.2779	0.0239
510	SLU 60	0.22	-0.04	46.88	-0.0238	15.5713	0.0113
510	SLU 61	0.22	-0.06	46.89	-0.0237	15.5731	0.0176
510	SLU 62	0.22	-0.04	47.36	-0.024	15.727	0.0109
510	SLU 63	0.22	-0.06	47.36	-0.0239	15.7289	0.0173
510	SLU 64	0.2	-0.02	44.47	-0.022	14.7555	0.0054
510	SLU 65	0.2	-0.05	44.48	-0.0219	14.7586	0.016
510	SLU 66	0.2	-0.01	45.25	-0.0224	15.011	0.0018
510	SLU 67	0.2	-0.03	45.26	-0.0224	15.0129	0.0082
510	SLU 68	0.2	-0.05	44.96	-0.0222	14.9144	0.0156
510	SLU 69	0.21	-0.01	45.73	-0.0227	15.1667	0.0015
510	SLU 70	0.21	-0.03	45.73	-0.0226	15.1686	0.0078
510	SLU 71	0.2	-0.02	45.42	-0.0225	15.067	0.0047
510	SLU 72	0.21	-0.04	45.43	-0.0225	15.0688	0.011
510	SLU 73	0.23	-0.01	48.74	-0.024	16.1742	-0.0004
510	SLU 74	0.23	0.03	49.51	-0.0245	16.4266	-0.0145
510	SLU 75	0.23	0.02	49.51	-0.0244	16.4284	-0.0082
510	SLU 76	0.23	-0.01	49.21	-0.0242	16.33	-0.0007
510	SLU 77	0.23	0.03	49.98	-0.0247	16.5823	-0.0149
510	SLU 78	0.23	0.02	49.99	-0.0247	16.5842	-0.0085
510	SLU 79	0.23	0.03	49.67	-0.0246	16.4826	-0.0117
510	SLU 80	0.23	0.01	49.68	-0.0245	16.4844	-0.0053
510	SLU 81	0.23	0.04	50.55	-0.025	16.7778	-0.018
510	SLU 82	0.24	0.03	50.56	-0.0249	16.7797	-0.0116
510	SLU 83	0.24	0.04	51.02	-0.0253	16.9335	-0.0183
510	SLU 84	0.24	0.03	51.03	-0.0252	16.9354	-0.0119
510	SLE RA 1	0.15	-0.04	33.4	-0.0167	11.0852	0.0105
510	SLE RA 2	0.15	-0.06	33.41	-0.0166	11.0873	0.0176
510	SLE RA 3	0.15	-0.03	33.92	-0.0169	11.2555	0.0082
510	SLE RA 4	0.15	-0.04	33.93	-0.0169	11.2568	0.0124
510	SLE RA 5	0.15	-0.06	33.73	-0.0168	11.1911	0.0174
510	SLE RA 6	0.15	-0.03	34.24	-0.0171	11.3593	0.0079
510	SLE RA 7	0.16	-0.04	34.24	-0.0171	11.3606	0.0122
510	SLE RA 8	0.15	-0.03	34.04	-0.017	11.2929	0.0101
510	SLE RA 9	0.15	-0.05	34.04	-0.017	11.2941	0.0143
510	SLE RA 10	0.17	-0.03	36.25	-0.018	12.031	0.0067
510	SLE RA 11	0.17	0	36.76	-0.0183	12.1993	-0.0027
510	SLE RA 12	0.17	-0.01	36.76	-0.0183	12.2005	0.0015
510	SLE RA 13	0.17	-0.02	36.56	-0.0182	12.1349	0.0065
510	SLE RA 14	0.17	0	37.07	-0.0185	12.3031	-0.0029
510	SLE RA 15	0.17	-0.01	37.08	-0.0184	12.3043	0.0013
510	SLE RA 16	0.17	0	36.87	-0.0184	12.2366	-0.0008
510	SLE RA 17	0.17	-0.02	36.88	-0.0183	12.2378	0.0034
510	SLE RA 18	0.17	0.01	37.46	-0.0187	12.4334	-0.005
510	SLE RA 19	0.17	0	37.46	-0.0186	12.4347	-0.0008
510	SLE RA 20	0.17	0.01	37.77	-0.0188	12.5372	-0.0052
510	SLE RA 21	0.18	0	37.78	-0.0188	12.5385	-0.001
510	SLE FR 1	0.15	-0.04	33.4	-0.0167	11.0852	0.0105
510	SLE FR 2	0.15	-0.04	33.41	-0.0167	11.0856	0.012
510	SLE FR 3	0.15	-0.04	33.53	-0.0168	11.1268	0.0105
510	SLE FR 4	0.16	-0.03	34.62	-0.0173	11.4901	0.0073
510	SLE FR 5	0.16	-0.02	34.75	-0.0173	11.5312	0.0058
510	SLE FR 6	0.16	-0.01	35.43	-0.0177	11.7593	0.0028
510	SLE QP 1	0.15	-0.04	33.4	-0.0167	11.0852	0.0105
510	SLE QP 2	0.16	-0.02	34.62	-0.0173	11.4897	0.0059
510	SLD 1	2.75	0.5	34.79	-0.0172	11.485	-0.1778
510	SLD 2	2.8	0.53	34.78	-0.0174	11.4793	-0.1866
510	SLD 3	2.71	-0.4	35.12	-0.014	11.588	0.1382
510	SLD 4	2.76	-0.38	35.12	-0.0142	11.5822	0.1294
510	SLD 5	0.98	1.5	34.16	-0.022	11.3332	-0.5269
510	SLD 6	1.01	1.52	34.16	-0.0222	11.3294	-0.5327
510	SLD 7	0.86	-1.51	35.28	-0.0115	11.6764	0.5264
510	SLD 8	0.89	-1.49	35.28	-0.0116	11.6725	0.5206
510	SLD 9	-0.58	1.45	33.96	-0.023	11.3068	-0.5089
510	SLD 10	-0.55	1.47	33.96	-0.0231	11.303	-0.5147
510	SLD 11	-0.7	-1.56	35.08	-0.0124	11.65	0.5445
510	SLD 12	-0.67	-1.54	35.08	-0.0125	11.6462	0.5387
510	SLD 13	-2.45	0.33	34.12	-0.0203	11.3971	-0.1177
510	SLD 14	-2.4	0.36	34.11	-0.0205	11.3914	-0.1264

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
510	SLD 15	-2.48	-0.57	34.46	-0.0172	11.5001	0.1983
510	SLD 16	-2.44	-0.55	34.45	-0.0173	11.4943	0.1896
510	SLV 1	6.22	1.17	35.03	-0.017	11.4834	-0.4121
510	SLV 2	6.33	1.23	35.01	-0.0174	11.47	-0.4325
510	SLV 3	6.14	-0.88	35.79	-0.0098	11.7158	0.3036
510	SLV 4	6.24	-0.81	35.77	-0.0102	11.7024	0.2832
510	SLV 5	2.09	3.43	33.59	-0.028	11.1378	-1.2013
510	SLV 6	2.16	3.47	33.58	-0.0283	11.1291	-1.2146
510	SLV 7	1.8	-3.39	36.12	-0.0041	11.9122	1.1842
510	SLV 8	1.87	-3.35	36.11	-0.0043	11.9035	1.1709
510	SLV 9	-1.56	3.31	33.13	-0.0302	11.0758	-1.1592
510	SLV 10	-1.49	3.35	33.11	-0.0305	11.0671	-1.1725
510	SLV 11	-1.84	-3.51	35.66	-0.0063	11.8503	1.2264
510	SLV 12	-1.78	-3.47	35.64	-0.0065	11.8416	1.2131
510	SLV 13	-5.93	0.77	33.47	-0.0243	11.277	-0.2714
510	SLV 14	-5.82	0.83	33.45	-0.0247	11.2636	-0.2918
510	SLV 15	-6.01	-1.28	34.23	-0.0171	11.5093	0.4442
510	SLV 16	-5.91	-1.21	34.21	-0.0175	11.4959	0.4238
510	CRTFP Ux+	0	0	0	0	0	0
510	CRTFP Ux-	0	0	0	0	0	0
510	CRTFP Uy+	0	0	0	0	0	0
510	CRTFP Uy-	0	0	0	0	0	0
511	SLU 1	-0.44	-0.04	35.97	0.0352	-6.8398	-0.0091
511	SLU 2	-0.43	-0.13	35.98	0.0353	-6.8426	-0.0303
511	SLU 3	-0.45	-0.04	36.84	0.0361	-6.9999	-0.0078
511	SLU 4	-0.45	-0.09	36.85	0.0362	-7.0016	-0.0206
511	SLU 5	-0.44	-0.12	36.53	0.0359	-6.9429	-0.0291
511	SLU 6	-0.46	-0.03	37.39	0.0366	-7.1001	-0.0066
511	SLU 7	-0.46	-0.08	37.4	0.0367	-7.1018	-0.0194
511	SLU 8	-0.45	-0.03	37.07	0.0363	-7.0402	-0.0066
511	SLU 9	-0.45	-0.08	37.07	0.0364	-7.042	-0.0194
511	SLU 10	-0.44	-0.08	40.16	0.0403	-7.6457	-0.0177
511	SLU 11	-0.46	0.01	41.03	0.041	-7.8029	0.0048
511	SLU 12	-0.46	-0.04	41.03	0.0411	-7.8047	-0.0079
511	SLU 13	-0.45	-0.07	40.71	0.0408	-7.7459	-0.0165
511	SLU 14	-0.47	0.02	41.58	0.0416	-7.9032	0.006
511	SLU 15	-0.46	-0.03	41.58	0.0417	-7.9049	-0.0067
511	SLU 16	-0.46	0.02	41.25	0.0412	-7.8433	0.006
511	SLU 17	-0.46	-0.03	41.26	0.0413	-7.845	-0.0067
511	SLU 18	-0.45	0.03	41.95	0.0422	-7.987	0.009
511	SLU 19	-0.45	-0.02	41.95	0.0423	-7.9887	-0.0038
511	SLU 20	-0.46	0.03	42.5	0.0428	-8.0872	0.0102
511	SLU 21	-0.46	-0.02	42.5	0.0429	-8.089	-0.0025
511	SLU 22	-0.47	0.02	40.19	0.0403	-7.6416	0.0061
511	SLU 23	-0.47	-0.07	40.2	0.0404	-7.6445	-0.0151
511	SLU 24	-0.48	0.02	41.06	0.0412	-7.8018	0.0074
511	SLU 25	-0.48	-0.03	41.07	0.0413	-7.8035	-0.0054
511	SLU 26	-0.48	-0.06	40.74	0.041	-7.7447	-0.0139
511	SLU 27	-0.49	0.03	41.61	0.0417	-7.902	0.0086
511	SLU 28	-0.49	-0.02	41.61	0.0418	-7.9037	-0.0042
511	SLU 29	-0.49	0.03	41.29	0.0414	-7.8421	0.0085
511	SLU 30	-0.49	-0.02	41.29	0.0415	-7.8438	-0.0042
511	SLU 31	-0.48	-0.02	44.38	0.0454	-8.4476	-0.0025
511	SLU 32	-0.49	0.07	45.25	0.0461	-8.6048	0.02
511	SLU 33	-0.49	0.02	45.25	0.0462	-8.6065	0.0072
511	SLU 34	-0.49	-0.01	44.93	0.0459	-8.5478	-0.0013
511	SLU 35	-0.5	0.08	45.8	0.0467	-8.7051	0.0212
511	SLU 36	-0.5	0.03	45.8	0.0468	-8.7068	0.0084
511	SLU 37	-0.5	0.08	45.47	0.0463	-8.6452	0.0212
511	SLU 38	-0.5	0.03	45.48	0.0464	-8.6469	0.0084
511	SLU 39	-0.49	0.09	46.17	0.0473	-8.7889	0.0242
511	SLU 40	-0.48	0.04	46.17	0.0474	-8.7906	0.0114
511	SLU 41	-0.49	0.09	46.72	0.0479	-8.8891	0.0254
511	SLU 42	-0.49	0.04	46.72	0.048	-8.8908	0.0126
511	SLU 43	-0.56	-0.08	45.32	0.044	-8.6168	-0.017
511	SLU 44	-0.55	-0.16	45.32	0.0441	-8.6196	-0.0382
511	SLU 45	-0.57	-0.07	46.19	0.0449	-8.7769	-0.0157
511	SLU 46	-0.57	-0.12	46.19	0.045	-8.7786	-0.0285
511	SLU 47	-0.56	-0.16	45.87	0.0447	-8.7199	-0.037
511	SLU 48	-0.58	-0.07	46.74	0.0454	-8.8771	-0.0145
511	SLU 49	-0.58	-0.12	46.74	0.0455	-8.8788	-0.0273
511	SLU 50	-0.57	-0.07	46.42	0.0451	-8.8172	-0.0145
511	SLU 51	-0.57	-0.12	46.42	0.0452	-8.819	-0.0273
511	SLU 52	-0.56	-0.11	49.51	0.0491	-9.4227	-0.0256
511	SLU 53	-0.58	-0.02	50.38	0.0498	-9.5799	-0.0031
511	SLU 54	-0.58	-0.07	50.38	0.0499	-9.5817	-0.0159
511	SLU 55	-0.57	-0.11	50.06	0.0496	-9.5229	-0.0244
511	SLU 56	-0.59	-0.02	50.92	0.0504	-9.6802	-0.0019
511	SLU 57	-0.58	-0.07	50.93	0.0505	-9.6819	-0.0146
511	SLU 58	-0.58	-0.02	50.6	0.05	-9.6203	-0.0019
511	SLU 59	-0.58	-0.07	50.6	0.0501	-9.622	-0.0147
511	SLU 60	-0.57	0	51.3	0.051	-9.764	0.0011
511	SLU 61	-0.57	-0.05	51.3	0.0511	-9.7657	-0.0117
511	SLU 62	-0.58	0	51.85	0.0516	-9.8642	0.0023
511	SLU 63	-0.58	-0.05	51.85	0.0517	-9.866	-0.0105
511	SLU 64	-0.59	-0.01	49.54	0.049	-9.4186	-0.0018
511	SLU 65	-0.59	-0.1	49.54	0.0492	-9.4215	-0.023
511	SLU 66	-0.6	-0.01	50.41	0.05	-9.5788	-0.0006
511	SLU 67	-0.6	-0.06	50.41	0.05	-9.5805	-0.0133
511	SLU 68	-0.6	-0.1	50.09	0.0498	-9.5217	-0.0218

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
511	SLU 69	-0.61	-0.01	50.96	0.0505	-9.679	0.0006
511	SLU 70	-0.61	-0.06	50.96	0.0506	-9.6807	-0.0121
511	SLU 71	-0.61	-0.01	50.63	0.0502	-9.6191	0.0006
511	SLU 72	-0.61	-0.06	50.64	0.0503	-9.6208	-0.0121
511	SLU 73	-0.6	-0.05	53.73	0.0542	-10.2246	-0.0104
511	SLU 74	-0.61	0.04	54.59	0.0549	-10.3818	0.0121
511	SLU 75	-0.61	-0.01	54.6	0.055	-10.3835	-0.0007
511	SLU 76	-0.61	-0.05	54.28	0.0547	-10.3248	-0.0092
511	SLU 77	-0.62	0.04	55.14	0.0555	-10.4821	0.0133
511	SLU 78	-0.62	-0.01	55.14	0.0556	-10.4838	0.0005
511	SLU 79	-0.62	0.04	54.82	0.0551	-10.4222	0.0133
511	SLU 80	-0.62	-0.01	54.82	0.0552	-10.4239	0.0005
511	SLU 81	-0.61	0.06	55.52	0.0561	-10.5659	0.0162
511	SLU 82	-0.6	0.01	55.52	0.0562	-10.5676	0.0035
511	SLU 83	-0.61	0.06	56.06	0.0567	-10.6661	0.0175
511	SLU 84	-0.61	0.01	56.07	0.0568	-10.6678	0.0047
511	SLE RA 1	-0.45	-0.02	37.18	0.0366	-7.0689	-0.0047
511	SLE RA 2	-0.45	-0.08	37.18	0.0367	-7.0708	-0.0189
511	SLE RA 3	-0.46	-0.02	37.76	0.0372	-7.1756	-0.0039
511	SLE RA 4	-0.45	-0.06	37.76	0.0373	-7.1768	-0.0124
511	SLE RA 5	-0.45	-0.08	37.55	0.0371	-7.1376	-0.0181
511	SLE RA 6	-0.46	-0.02	38.12	0.0376	-7.2424	-0.0031
511	SLE RA 7	-0.46	-0.05	38.13	0.0377	-7.2436	-0.0116
511	SLE RA 8	-0.46	-0.02	37.91	0.0374	-7.2025	-0.0031
511	SLE RA 9	-0.46	-0.05	37.91	0.0374	-7.2037	-0.0116
511	SLE RA 10	-0.45	-0.05	39.97	0.04	-7.6062	-0.0105
511	SLE RA 11	-0.46	0.01	40.55	0.0405	-7.711	0.0045
511	SLE RA 12	-0.46	-0.02	40.55	0.0406	-7.7121	-0.004
511	SLE RA 13	-0.46	-0.05	40.34	0.0404	-7.673	-0.0097
511	SLE RA 14	-0.47	0.02	40.91	0.0409	-7.7778	0.0053
511	SLE RA 15	-0.47	-0.02	40.92	0.041	-7.779	-0.0032
511	SLE RA 16	-0.47	0.02	40.7	0.0407	-7.7379	0.0053
511	SLE RA 17	-0.46	-0.02	40.7	0.0407	-7.739	-0.0032
511	SLE RA 18	-0.46	0.02	41.16	0.0413	-7.8337	0.0073
511	SLE RA 19	-0.46	-0.01	41.17	0.0414	-7.8348	-0.0012
511	SLE RA 20	-0.46	0.03	41.53	0.0417	-7.9005	0.0081
511	SLE RA 21	-0.46	-0.01	41.53	0.0418	-7.9017	-0.0004
511	SLE FR 1	-0.45	-0.02	37.18	0.0366	-7.0689	-0.0047
511	SLE FR 2	-0.45	-0.04	37.18	0.0366	-7.0693	-0.0076
511	SLE FR 3	-0.45	-0.02	37.32	0.0368	-7.0956	-0.0044
511	SLE FR 4	-0.45	-0.02	38.37	0.038	-7.2987	-0.0039
511	SLE FR 5	-0.45	-0.01	38.52	0.0382	-7.325	-0.0008
511	SLE FR 6	-0.45	0	39.17	0.039	-7.4513	0.0013
511	SLE QP 1	-0.45	-0.02	37.18	0.0366	-7.0689	-0.0047
511	SLE QP 2	-0.45	-0.01	38.37	0.038	-7.2983	-0.0011
511	SLD 1	2.14	0.53	49.68	0.0476	-9.2788	0.1329
511	SLD 2	2.19	-0.02	49.68	0.049	-9.2949	-0.0047
511	SLD 3	2.19	-0.73	49.5	0.0494	-9.3423	-0.1805
511	SLD 4	2.23	-1.28	49.5	0.0508	-9.3584	-0.3181
511	SLD 5	0.25	2.16	42.03	0.038	-7.7932	0.5395
511	SLD 6	0.28	1.79	42.03	0.0389	-7.8039	0.4482
511	SLD 7	0.4	-2.03	41.45	0.0438	-8.0049	-0.5053
511	SLD 8	0.43	-2.4	41.45	0.0447	-8.0156	-0.5966
511	SLD 9	-1.33	2.38	35.3	0.0313	-6.5811	0.5944
511	SLD 10	-1.3	2.01	35.3	0.0322	-6.5917	0.503
511	SLD 11	-1.18	-1.81	34.72	0.0371	-6.7927	-0.4504
511	SLD 12	-1.15	-2.18	34.72	0.038	-6.8034	-0.5417
511	SLD 13	-3.14	1.26	27.25	0.0253	-5.2383	0.3159
511	SLD 14	-3.09	0.71	27.24	0.0267	-5.2543	0.1783
511	SLD 15	-3.09	0	27.07	0.027	-5.3017	0.0025
511	SLD 16	-3.05	-0.55	27.07	0.0284	-5.3178	-0.1352
511	SLV 1	5.62	1.2	64.82	0.0605	-11.9321	0.2995
511	SLV 2	5.72	-0.09	64.82	0.0638	-11.9695	-0.0209
511	SLV 3	5.73	-1.64	64.41	0.0645	-12.0799	-0.4094
511	SLV 4	5.83	-2.93	64.41	0.0677	-12.1173	-0.7298
511	SLV 5	1.19	4.89	46.93	0.0382	-8.4577	1.2205
511	SLV 6	1.26	4.05	46.92	0.0403	-8.4821	1.0118
511	SLV 7	1.55	-4.58	45.57	0.0514	-8.9504	-1.1424
511	SLV 8	1.61	-5.42	45.57	0.0535	-8.9748	-1.3512
511	SLV 9	-2.51	5.4	31.18	0.0225	-5.6218	1.3489
511	SLV 10	-2.45	4.56	31.18	0.0246	-5.6462	1.1402
511	SLV 11	-2.16	-4.07	29.83	0.0358	-6.1146	-1.014
511	SLV 12	-2.09	-4.91	29.82	0.0379	-6.139	-1.2228
511	SLV 13	-6.73	2.91	12.34	0.0083	-2.4793	0.7276
511	SLV 14	-6.63	1.62	12.34	0.0116	-2.5167	0.4071
511	SLV 15	-6.62	0.07	11.93	0.0123	-2.6271	0.0187
511	SLV 16	-6.52	-1.22	11.93	0.0155	-2.6645	-0.3017
511	CRTFP Ux+	0	0	0	0	0	0
511	CRTFP Ux-	0	0	0	0	0	0
511	CRTFP Uy+	0	0	0	0	0	0
511	CRTFP Uy-	0	0	0	0	0	0
518	SLU 1	-0.4	-0.79	50.6	-1.4136	-0.0902	-0.0087
518	SLU 2	-0.4	-0.86	50.62	-1.414	-0.0909	-0.0083
518	SLU 3	-0.41	-0.8	51.83	-1.4478	-0.0933	-0.0089
518	SLU 4	-0.41	-0.84	51.84	-1.4481	-0.0937	-0.0087
518	SLU 5	-0.41	-0.87	51.38	-1.4353	-0.0921	-0.0085
518	SLU 6	-0.42	-0.81	52.59	-1.4691	-0.0944	-0.0092
518	SLU 7	-0.42	-0.85	52.6	-1.4694	-0.0949	-0.0089
518	SLU 8	-0.42	-0.81	52.12	-1.4561	-0.0925	-0.0092
518	SLU 9	-0.42	-0.85	52.13	-1.4564	-0.0929	-0.009

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
518	SLU 10	-0.39	-0.89	56.9	-1.588	-0.1131	-0.0078
518	SLU 11	-0.4	-0.83	58.1	-1.6218	-0.1155	-0.0085
518	SLU 12	-0.4	-0.87	58.11	-1.622	-0.1159	-0.0082
518	SLU 13	-0.4	-0.9	57.66	-1.6092	-0.1143	-0.0081
518	SLU 14	-0.41	-0.84	58.86	-1.643	-0.1167	-0.0087
518	SLU 15	-0.41	-0.88	58.87	-1.6433	-0.1171	-0.0084
518	SLU 16	-0.41	-0.84	58.4	-1.6301	-0.1148	-0.0087
518	SLU 17	-0.41	-0.88	58.41	-1.6303	-0.1152	-0.0085
518	SLU 18	-0.39	-0.83	59.57	-1.6621	-0.122	-0.0081
518	SLU 19	-0.39	-0.87	59.58	-1.6623	-0.1224	-0.0078
518	SLU 20	-0.4	-0.84	60.33	-1.6833	-0.1231	-0.0083
518	SLU 21	-0.4	-0.88	60.34	-1.6836	-0.1235	-0.008
518	SLU 22	-0.43	-0.78	56.66	-1.5813	-0.1001	-0.0092
518	SLU 23	-0.43	-0.85	56.68	-1.5817	-0.1008	-0.0087
518	SLU 24	-0.44	-0.79	57.89	-1.6155	-0.1032	-0.0094
518	SLU 25	-0.44	-0.83	57.9	-1.6158	-0.1036	-0.0091
518	SLU 26	-0.43	-0.86	57.44	-1.603	-0.102	-0.009
518	SLU 27	-0.45	-0.8	58.65	-1.6368	-0.1043	-0.0096
518	SLU 28	-0.44	-0.84	58.66	-1.6371	-0.1048	-0.0094
518	SLU 29	-0.44	-0.8	58.18	-1.6238	-0.1024	-0.0097
518	SLU 30	-0.44	-0.84	58.2	-1.6241	-0.1028	-0.0094
518	SLU 31	-0.42	-0.87	62.96	-1.7557	-0.123	-0.0083
518	SLU 32	-0.43	-0.81	64.16	-1.7895	-0.1254	-0.0089
518	SLU 33	-0.43	-0.85	64.18	-1.7898	-0.1258	-0.0086
518	SLU 34	-0.43	-0.88	63.72	-1.777	-0.1242	-0.0085
518	SLU 35	-0.44	-0.82	64.92	-1.8108	-0.1266	-0.0091
518	SLU 36	-0.44	-0.86	64.94	-1.811	-0.127	-0.0089
518	SLU 37	-0.44	-0.82	64.46	-1.7978	-0.1247	-0.0092
518	SLU 38	-0.43	-0.86	64.47	-1.7981	-0.1251	-0.0089
518	SLU 39	-0.42	-0.81	65.63	-1.8298	-0.1319	-0.0085
518	SLU 40	-0.42	-0.85	65.64	-1.8301	-0.1323	-0.0082
518	SLU 41	-0.42	-0.82	66.39	-1.8511	-0.133	-0.0087
518	SLU 42	-0.42	-0.86	66.4	-1.8513	-0.1335	-0.0085
518	SLU 43	-0.51	-1.04	63.7	-1.7801	-0.1139	-0.0112
518	SLU 44	-0.51	-1.11	63.72	-1.7806	-0.1146	-0.0108
518	SLU 45	-0.52	-1.05	64.93	-1.8144	-0.117	-0.0114
518	SLU 46	-0.52	-1.09	64.94	-1.8146	-0.1174	-0.0111
518	SLU 47	-0.52	-1.12	64.48	-1.8019	-0.1157	-0.011
518	SLU 48	-0.53	-1.06	65.69	-1.8357	-0.1181	-0.0117
518	SLU 49	-0.53	-1.1	65.7	-1.8359	-0.1185	-0.0114
518	SLU 50	-0.53	-1.06	65.22	-1.8227	-0.1162	-0.0117
518	SLU 51	-0.53	-1.1	65.24	-1.823	-0.1166	-0.0114
518	SLU 52	-0.5	-1.13	70	-1.9545	-0.1368	-0.0103
518	SLU 53	-0.51	-1.07	71.21	-1.9883	-0.1392	-0.0109
518	SLU 54	-0.51	-1.11	71.22	-1.9886	-0.1396	-0.0107
518	SLU 55	-0.51	-1.14	70.76	-1.9758	-0.138	-0.0105
518	SLU 56	-0.52	-1.08	71.97	-2.0096	-0.1403	-0.0112
518	SLU 57	-0.52	-1.12	71.98	-2.0099	-0.1408	-0.0109
518	SLU 58	-0.52	-1.08	71.5	-1.9966	-0.1384	-0.0112
518	SLU 59	-0.52	-1.12	71.51	-1.9969	-0.1388	-0.0109
518	SLU 60	-0.5	-1.07	72.67	-2.0286	-0.1457	-0.0105
518	SLU 61	-0.5	-1.11	72.68	-2.0289	-0.1461	-0.0103
518	SLU 62	-0.51	-1.08	73.43	-2.0499	-0.1468	-0.0108
518	SLU 63	-0.51	-1.12	73.44	-2.0502	-0.1472	-0.0105
518	SLU 64	-0.54	-1.02	69.77	-1.9478	-0.1238	-0.0116
518	SLU 65	-0.54	-1.09	69.78	-1.9483	-0.1245	-0.0112
518	SLU 66	-0.55	-1.03	70.99	-1.9821	-0.1269	-0.0118
518	SLU 67	-0.55	-1.07	71	-1.9824	-0.1273	-0.0116
518	SLU 68	-0.55	-1.1	70.54	-1.9696	-0.1256	-0.0114
518	SLU 69	-0.56	-1.04	71.75	-2.0034	-0.128	-0.0121
518	SLU 70	-0.56	-1.08	71.76	-2.0037	-0.1284	-0.0118
518	SLU 71	-0.55	-1.04	71.29	-1.9904	-0.1261	-0.0121
518	SLU 72	-0.55	-1.08	71.3	-1.9907	-0.1265	-0.0119
518	SLU 73	-0.53	-1.11	76.06	-2.1223	-0.1467	-0.0107
518	SLU 74	-0.54	-1.06	77.27	-2.1561	-0.1491	-0.0114
518	SLU 75	-0.54	-1.1	77.28	-2.1563	-0.1495	-0.0111
518	SLU 76	-0.54	-1.12	76.82	-2.1435	-0.1479	-0.011
518	SLU 77	-0.55	-1.06	78.03	-2.1773	-0.1503	-0.0116
518	SLU 78	-0.55	-1.11	78.04	-2.1776	-0.1507	-0.0114
518	SLU 79	-0.55	-1.06	77.56	-2.1644	-0.1483	-0.0117
518	SLU 80	-0.55	-1.11	77.57	-2.1646	-0.1488	-0.0114
518	SLU 81	-0.53	-1.06	78.73	-2.1963	-0.1556	-0.011
518	SLU 82	-0.53	-1.1	78.74	-2.1966	-0.156	-0.0107
518	SLU 83	-0.53	-1.07	79.49	-2.2176	-0.1567	-0.0112
518	SLU 84	-0.53	-1.11	79.5	-2.2179	-0.1571	-0.0109
518	SLE RA 1	-0.41	-0.79	52.33	-1.4615	-0.093	-0.0089
518	SLE RA 2	-0.41	-0.83	52.35	-1.4618	-0.0935	-0.0086
518	SLE RA 3	-0.41	-0.8	53.15	-1.4843	-0.0951	-0.009
518	SLE RA 4	-0.41	-0.82	53.16	-1.4845	-0.0954	-0.0088
518	SLE RA 5	-0.41	-0.84	52.85	-1.476	-0.0943	-0.0087
518	SLE RA 6	-0.42	-0.8	53.66	-1.4985	-0.0959	-0.0092
518	SLE RA 7	-0.42	-0.83	53.67	-1.4987	-0.0961	-0.009
518	SLE RA 8	-0.42	-0.8	53.35	-1.4899	-0.0946	-0.0092
518	SLE RA 9	-0.42	-0.83	53.35	-1.49	-0.0949	-0.009
518	SLE RA 10	-0.4	-0.85	56.53	-1.5777	-0.1083	-0.0082
518	SLE RA 11	-0.41	-0.81	57.33	-1.6003	-0.1099	-0.0087
518	SLE RA 12	-0.41	-0.84	57.34	-1.6005	-0.1102	-0.0085
518	SLE RA 13	-0.41	-0.86	57.04	-1.5919	-0.1091	-0.0084
518	SLE RA 14	-0.41	-0.82	57.84	-1.6145	-0.1107	-0.0088
518	SLE RA 15	-0.41	-0.85	57.85	-1.6147	-0.111	-0.0087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
518	SLE RA 16	-0.41	-0.82	57.53	-1.6058	-0.1094	-0.0089
518	SLE RA 17	-0.41	-0.85	57.54	-1.606	-0.1097	-0.0087
518	SLE RA 18	-0.4	-0.81	58.31	-1.6271	-0.1142	-0.0084
518	SLE RA 19	-0.4	-0.84	58.32	-1.6273	-0.1145	-0.0082
518	SLE RA 20	-0.41	-0.82	58.82	-1.6413	-0.115	-0.0086
518	SLE RA 21	-0.41	-0.85	58.82	-1.6415	-0.1153	-0.0084
518	SLE FR 1	-0.41	-0.79	52.33	-1.4615	-0.093	-0.0089
518	SLE FR 2	-0.41	-0.8	52.34	-1.4615	-0.0931	-0.0088
518	SLE FR 3	-0.41	-0.79	52.54	-1.4672	-0.0934	-0.0089
518	SLE FR 4	-0.41	-0.81	54.13	-1.5112	-0.0995	-0.0087
518	SLE FR 5	-0.41	-0.8	54.33	-1.5169	-0.0997	-0.0088
518	SLE FR 6	-0.4	-0.8	55.32	-1.5443	-0.1036	-0.0086
518	SLE QP 1	-0.41	-0.79	52.33	-1.4615	-0.093	-0.0089
518	SLE QP 2	-0.41	-0.8	54.13	-1.5112	-0.0994	-0.0087
518	SLD 1	4.1	-0.42	58.61	-1.6386	0.0576	0.1228
518	SLD 2	4.13	-0.75	58.65	-1.6391	0.0552	0.1299
518	SLD 3	4.03	-1.8	58.93	-1.647	0.03	0.1207
518	SLD 4	4.06	-2.13	58.97	-1.6475	0.0276	0.1278
518	SLD 5	1.04	1.47	54.98	-1.5365	-0.01	0.0326
518	SLD 6	1.07	1.25	55.01	-1.5368	-0.0116	0.0374
518	SLD 7	0.81	-3.13	56.04	-1.5647	-0.102	0.0256
518	SLD 8	0.84	-3.35	56.07	-1.565	-0.1036	0.0303
518	SLD 9	-1.65	1.75	52.18	-1.4574	-0.0952	-0.0478
518	SLD 10	-1.63	1.53	52.21	-1.4577	-0.0968	-0.043
518	SLD 11	-1.88	-2.84	53.24	-1.4855	-0.1872	-0.0548
518	SLD 12	-1.86	-3.06	53.27	-1.4859	-0.1888	-0.0501
518	SLD 13	-4.87	0.53	49.28	-1.3748	-0.2264	-0.1453
518	SLD 14	-4.84	0.2	49.33	-1.3753	-0.2288	-0.1381
518	SLD 15	-4.94	-0.84	49.6	-1.3833	-0.254	-0.1474
518	SLD 16	-4.91	-1.18	49.64	-1.3838	-0.2564	-0.1402
518	SLV 1	10.12	0.03	64.62	-1.8094	0.267	0.2988
518	SLV 2	10.2	-0.74	64.72	-1.8105	0.2614	0.3154
518	SLV 3	9.96	-3.08	65.34	-1.8287	0.2043	0.2939
518	SLV 4	10.04	-3.86	65.45	-1.8298	0.1987	0.3105
518	SLV 5	2.98	4.32	56.15	-1.5712	0.1066	0.0881
518	SLV 6	3.03	3.82	56.22	-1.5719	0.103	0.0989
518	SLV 7	2.45	-6.08	58.57	-1.6355	-0.1024	0.0716
518	SLV 8	2.5	-6.58	58.64	-1.6362	-0.106	0.0825
518	SLV 9	-3.31	4.99	49.61	-1.3861	-0.0928	-0.0999
518	SLV 10	-3.26	4.49	49.68	-1.3869	-0.0964	-0.0891
518	SLV 11	-3.84	-5.41	52.03	-1.4504	-0.3018	-0.1164
518	SLV 12	-3.79	-5.91	52.1	-1.4512	-0.3054	-0.1056
518	SLV 13	-10.85	2.26	42.8	-1.1925	-0.3975	-0.3279
518	SLV 14	-10.77	1.49	42.91	-1.1937	-0.4031	-0.3113
518	SLV 15	-11.01	-0.86	43.53	-1.2118	-0.4602	-0.3329
518	SLV 16	-10.93	-1.63	43.64	-1.213	-0.4658	-0.3162
518	CRTFP Ux+	0	0	0	0	0	0
518	CRTFP Ux-	0	0	0	0	0	0
521	SLU 1	0.69	-0.35	50.33	-1.4051	0.13	0.0139
521	SLU 2	0.7	-0.38	50.36	-1.4056	0.1308	0.0143
521	SLU 3	0.71	-0.35	51.53	-1.4385	0.1335	0.0143
521	SLU 4	0.71	-0.37	51.54	-1.4388	0.134	0.0145
521	SLU 5	0.71	-0.39	51.08	-1.426	0.1317	0.0146
521	SLU 6	0.72	-0.36	52.25	-1.4589	0.1343	0.0146
521	SLU 7	0.72	-0.38	52.27	-1.4592	0.1348	0.0148
521	SLU 8	0.72	-0.37	51.79	-1.4459	0.1317	0.0144
521	SLU 9	0.72	-0.39	51.8	-1.4463	0.1322	0.0147
521	SLU 10	0.74	-0.34	56.6	-1.5787	0.1526	0.0153
521	SLU 11	0.76	-0.31	57.77	-1.6115	0.1552	0.0153
521	SLU 12	0.76	-0.33	57.79	-1.6118	0.1557	0.0155
521	SLU 13	0.75	-0.35	57.33	-1.5991	0.1534	0.0156
521	SLU 14	0.77	-0.32	58.5	-1.6319	0.156	0.0155
521	SLU 15	0.77	-0.34	58.51	-1.6323	0.1565	0.0158
521	SLU 16	0.76	-0.33	58.03	-1.619	0.1534	0.0154
521	SLU 17	0.76	-0.35	58.05	-1.6193	0.1539	0.0157
521	SLU 18	0.76	-0.29	59.25	-1.6523	0.1611	0.0153
521	SLU 19	0.76	-0.31	59.27	-1.6526	0.1615	0.0156
521	SLU 20	0.77	-0.3	59.98	-1.6727	0.1619	0.0156
521	SLU 21	0.77	-0.32	60	-1.6731	0.1624	0.0158
521	SLU 22	0.76	-0.27	56.31	-1.5707	0.1324	0.0155
521	SLU 23	0.76	-0.3	56.33	-1.5712	0.1332	0.0159
521	SLU 24	0.78	-0.28	57.5	-1.6041	0.1358	0.0159
521	SLU 25	0.78	-0.29	57.51	-1.6044	0.1363	0.0161
521	SLU 26	0.77	-0.31	57.06	-1.5917	0.134	0.0162
521	SLU 27	0.79	-0.29	58.23	-1.6245	0.1366	0.0161
521	SLU 28	0.79	-0.3	58.24	-1.6248	0.1371	0.0164
521	SLU 29	0.78	-0.29	57.76	-1.6116	0.134	0.016
521	SLU 30	0.78	-0.31	57.77	-1.6119	0.1345	0.0162
521	SLU 31	0.81	-0.26	62.57	-1.7443	0.1549	0.0169
521	SLU 32	0.82	-0.23	63.74	-1.7771	0.1575	0.0168
521	SLU 33	0.82	-0.25	63.76	-1.7775	0.158	0.0171
521	SLU 34	0.82	-0.27	63.3	-1.7647	0.1557	0.0171
521	SLU 35	0.83	-0.25	64.47	-1.7976	0.1584	0.0171
521	SLU 36	0.83	-0.26	64.48	-1.7979	0.1588	0.0174
521	SLU 37	0.83	-0.25	64	-1.7846	0.1558	0.017
521	SLU 38	0.83	-0.27	64.02	-1.7849	0.1562	0.0172
521	SLU 39	0.82	-0.21	65.23	-1.8179	0.1634	0.0169
521	SLU 40	0.82	-0.23	65.24	-1.8182	0.1639	0.0171
521	SLU 41	0.83	-0.23	65.95	-1.8384	0.1642	0.0171
521	SLU 42	0.84	-0.24	65.97	-1.8387	0.1647	0.0174

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
521	SLU 43	0.88	-0.48	63.39	-1.7698	0.1683	0.0176
521	SLU 44	0.88	-0.51	63.41	-1.7703	0.1691	0.018
521	SLU 45	0.9	-0.48	64.58	-1.8032	0.1717	0.0179
521	SLU 46	0.9	-0.5	64.59	-1.8035	0.1722	0.0182
521	SLU 47	0.89	-0.52	64.14	-1.7908	0.1699	0.0182
521	SLU 48	0.91	-0.49	65.31	-1.8236	0.1725	0.0182
521	SLU 49	0.91	-0.51	65.32	-1.8239	0.173	0.0184
521	SLU 50	0.9	-0.5	64.84	-1.8107	0.1699	0.0181
521	SLU 51	0.9	-0.52	64.86	-1.811	0.1704	0.0183
521	SLU 52	0.92	-0.46	69.65	-1.9434	0.1908	0.019
521	SLU 53	0.94	-0.44	70.82	-1.9763	0.1934	0.0189
521	SLU 54	0.94	-0.46	70.84	-1.9766	0.1939	0.0192
521	SLU 55	0.94	-0.48	70.38	-1.9638	0.1916	0.0192
521	SLU 56	0.95	-0.45	71.55	-1.9967	0.1942	0.0192
521	SLU 57	0.95	-0.47	71.57	-1.997	0.1947	0.0194
521	SLU 58	0.95	-0.46	71.09	-1.9837	0.1917	0.0191
521	SLU 59	0.95	-0.48	71.1	-1.9841	0.1921	0.0193
521	SLU 60	0.94	-0.42	72.31	-2.017	0.1993	0.019
521	SLU 61	0.94	-0.44	72.32	-2.0174	0.1998	0.0192
521	SLU 62	0.95	-0.43	73.04	-2.0375	0.2001	0.0192
521	SLU 63	0.96	-0.45	73.05	-2.0378	0.2006	0.0195
521	SLU 64	0.94	-0.4	69.36	-1.9354	0.1706	0.0191
521	SLU 65	0.95	-0.43	69.38	-1.936	0.1714	0.0195
521	SLU 66	0.96	-0.4	70.55	-1.9688	0.174	0.0195
521	SLU 67	0.96	-0.42	70.57	-1.9691	0.1745	0.0197
521	SLU 68	0.96	-0.44	70.11	-1.9564	0.1722	0.0198
521	SLU 69	0.97	-0.42	71.28	-1.9892	0.1749	0.0198
521	SLU 70	0.98	-0.43	71.29	-1.9896	0.1753	0.02
521	SLU 71	0.97	-0.42	70.81	-1.9763	0.1723	0.0196
521	SLU 72	0.97	-0.44	70.83	-1.9766	0.1727	0.0199
521	SLU 73	0.99	-0.39	75.63	-2.109	0.1931	0.0205
521	SLU 74	1.01	-0.36	76.8	-2.1419	0.1957	0.0205
521	SLU 75	1.01	-0.38	76.81	-2.1422	0.1962	0.0207
521	SLU 76	1	-0.4	76.35	-2.1295	0.1939	0.0208
521	SLU 77	1.02	-0.38	77.52	-2.1623	0.1966	0.0207
521	SLU 78	1.02	-0.39	77.54	-2.1626	0.197	0.021
521	SLU 79	1.01	-0.38	77.06	-2.1494	0.194	0.0206
521	SLU 80	1.01	-0.4	77.07	-2.1497	0.1945	0.0209
521	SLU 81	1.01	-0.34	78.28	-2.1827	0.2016	0.0205
521	SLU 82	1.01	-0.36	78.29	-2.183	0.2021	0.0208
521	SLU 83	1.02	-0.36	79.01	-2.2031	0.2024	0.0208
521	SLU 84	1.02	-0.37	79.02	-2.2034	0.2029	0.021
521	SLE RA 1	0.71	-0.33	52.04	-1.4524	0.1307	0.0144
521	SLE RA 2	0.71	-0.34	52.06	-1.4528	0.1312	0.0146
521	SLE RA 3	0.72	-0.33	52.84	-1.4746	0.133	0.0146
521	SLE RA 4	0.72	-0.34	52.84	-1.4749	0.1333	0.0148
521	SLE RA 5	0.72	-0.35	52.54	-1.4664	0.1318	0.0148
521	SLE RA 6	0.73	-0.33	53.32	-1.4883	0.1336	0.0148
521	SLE RA 7	0.73	-0.35	53.33	-1.4885	0.1339	0.015
521	SLE RA 8	0.73	-0.34	53.01	-1.4796	0.1318	0.0147
521	SLE RA 9	0.73	-0.35	53.02	-1.4798	0.1321	0.0149
521	SLE RA 10	0.74	-0.32	56.22	-1.5681	0.1457	0.0153
521	SLE RA 11	0.75	-0.3	57	-1.59	0.1475	0.0153
521	SLE RA 12	0.75	-0.31	57.01	-1.5902	0.1478	0.0154
521	SLE RA 13	0.75	-0.33	56.7	-1.5817	0.1463	0.0155
521	SLE RA 14	0.76	-0.31	57.48	-1.6036	0.148	0.0154
521	SLE RA 15	0.76	-0.32	57.49	-1.6039	0.1483	0.0156
521	SLE RA 16	0.76	-0.31	57.17	-1.595	0.1463	0.0154
521	SLE RA 17	0.76	-0.33	57.18	-1.5952	0.1466	0.0155
521	SLE RA 18	0.75	-0.29	57.99	-1.6172	0.1514	0.0153
521	SLE RA 19	0.75	-0.3	58	-1.6174	0.1517	0.0155
521	SLE RA 20	0.76	-0.29	58.47	-1.6308	0.1519	0.0155
521	SLE RA 21	0.76	-0.31	58.48	-1.631	0.1523	0.0156
521	SLE FR 1	0.71	-0.33	52.04	-1.4524	0.1307	0.0144
521	SLE FR 2	0.71	-0.33	52.04	-1.4525	0.1308	0.0144
521	SLE FR 3	0.72	-0.33	52.23	-1.4578	0.1309	0.0144
521	SLE FR 4	0.72	-0.32	53.83	-1.5019	0.137	0.0147
521	SLE FR 5	0.73	-0.32	54.02	-1.5073	0.1371	0.0147
521	SLE FR 6	0.73	-0.31	55.01	-1.5348	0.141	0.0148
521	SLE QP 1	0.71	-0.33	52.04	-1.4524	0.1307	0.0144
521	SLE QP 2	0.72	-0.31	53.82	-1.5018	0.1369	0.0146
521	SLD 1	4.99	0.59	49.52	-1.3852	0.1955	0.1371
521	SLD 2	5.04	0.93	49.48	-1.3854	0.189	0.1455
521	SLD 3	4.93	-0.75	50	-1.3946	0.2279	0.135
521	SLD 4	4.97	-0.41	49.96	-1.3948	0.2214	0.1434
521	SLD 5	2.1	1.93	51.81	-1.4526	0.1064	0.0531
521	SLD 6	2.13	2.16	51.78	-1.4527	0.1021	0.0586
521	SLD 7	1.87	-2.54	53.41	-1.4839	0.2147	0.046
521	SLD 8	1.9	-2.31	53.39	-1.484	0.2103	0.0516
521	SLD 9	-0.45	1.69	54.26	-1.5197	0.0635	-0.0223
521	SLD 10	-0.42	1.91	54.24	-1.5198	0.0592	-0.0167
521	SLD 11	-0.68	-2.79	55.86	-1.551	0.1717	-0.0293
521	SLD 12	-0.65	-2.56	55.84	-1.5511	0.1674	-0.0238
521	SLD 13	-3.52	-0.22	57.69	-1.6089	0.0524	-0.1141
521	SLD 14	-3.48	0.12	57.65	-1.6091	0.0459	-0.1057
521	SLD 15	-3.59	-1.56	58.17	-1.6183	0.0848	-0.1162
521	SLD 16	-3.55	-1.22	58.13	-1.6185	0.0783	-0.1078
521	SLV 1	10.71	1.76	43.77	-1.2293	0.2745	0.301
521	SLV 2	10.81	2.56	43.67	-1.2297	0.2594	0.3205
521	SLV 3	10.55	-1.28	44.86	-1.2506	0.3481	0.2961

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
521	SLV 4	10.65	-0.48	44.76	-1.251	0.333	0.3156
521	SLV 5	3.94	4.78	49.17	-1.3878	0.0693	0.1046
521	SLV 6	4.01	5.3	49.11	-1.388	0.0594	0.1173
521	SLV 7	3.41	-5.35	52.8	-1.4586	0.3145	0.0882
521	SLV 8	3.48	-4.83	52.74	-1.4589	0.3047	0.1009
521	SLV 9	-2.03	4.21	54.91	-1.5448	-0.0308	-0.0716
521	SLV 10	-1.96	4.73	54.84	-1.545	-0.0407	-0.0589
521	SLV 11	-2.56	-5.92	58.54	-1.6157	0.2144	-0.088
521	SLV 12	-2.49	-5.4	58.48	-1.6159	0.2045	-0.0753
521	SLV 13	-9.2	-0.15	62.89	-1.7527	-0.0592	-0.2863
521	SLV 14	-9.1	0.65	62.79	-1.7531	-0.0743	-0.2668
521	SLV 15	-9.36	-3.18	63.98	-1.774	0.0144	-0.2912
521	SLV 16	-9.26	-2.39	63.88	-1.7744	-0.0007	-0.2718
521	CRTFP Ux+	0	0	0	0	0	0
521	CRTFP Ux-	0	0	0	0	0	0
521	CRTFP Uy+	0	0	0	0	0	0
521	CRTFP Uy-	0	0	0	0	0	0
522	SLU 1	0.71	0.18	36.03	-0.9893	11.1487	-0.0446
522	SLU 2	0.71	0.17	36.04	-0.9895	11.1514	-0.0388
522	SLU 3	0.73	0.18	36.9	-1.0133	11.4144	-0.045
522	SLU 4	0.73	0.17	36.91	-1.0134	11.4161	-0.0416
522	SLU 5	0.73	0.16	36.58	-1.0045	11.3165	-0.0373
522	SLU 6	0.74	0.18	37.45	-1.0282	11.5796	-0.0435
522	SLU 7	0.74	0.17	37.45	-1.0283	11.5812	-0.04
522	SLU 8	0.74	0.18	37.12	-1.0192	11.4789	-0.0415
522	SLU 9	0.74	0.17	37.12	-1.0193	11.4806	-0.038
522	SLU 10	0.76	0.25	40.23	-1.1044	12.456	-0.0673
522	SLU 11	0.78	0.27	41.1	-1.1281	12.719	-0.0735
522	SLU 12	0.78	0.26	41.1	-1.1283	12.7206	-0.0701
522	SLU 13	0.77	0.25	40.77	-1.1193	12.6211	-0.0658
522	SLU 14	0.79	0.27	41.64	-1.1431	12.8841	-0.072
522	SLU 15	0.79	0.26	41.64	-1.1432	12.8857	-0.0685
522	SLU 16	0.78	0.26	41.31	-1.1341	12.7835	-0.07
522	SLU 17	0.78	0.25	41.32	-1.1342	12.7851	-0.0666
522	SLU 18	0.78	0.3	42.02	-1.1534	13.0123	-0.0853
522	SLU 19	0.78	0.29	42.02	-1.1535	13.014	-0.0819
522	SLU 20	0.79	0.3	42.56	-1.1683	13.1775	-0.0838
522	SLU 21	0.79	0.29	42.57	-1.1685	13.1791	-0.0803
522	SLU 22	0.78	0.27	40.23	-1.1043	12.4493	-0.0719
522	SLU 23	0.78	0.25	40.24	-1.1045	12.452	-0.0662
522	SLU 24	0.8	0.27	41.1	-1.1282	12.715	-0.0724
522	SLU 25	0.8	0.26	41.11	-1.1284	12.7167	-0.0689
522	SLU 26	0.79	0.25	40.78	-1.1194	12.6171	-0.0646
522	SLU 27	0.81	0.26	41.65	-1.1432	12.8802	-0.0708
522	SLU 28	0.81	0.25	41.65	-1.1433	12.8818	-0.0674
522	SLU 29	0.8	0.26	41.32	-1.1342	12.7796	-0.0688
522	SLU 30	0.8	0.25	41.32	-1.1343	12.7812	-0.0654
522	SLU 31	0.82	0.33	44.43	-1.2194	13.7566	-0.0947
522	SLU 32	0.84	0.35	45.3	-1.2431	14.0196	-0.1009
522	SLU 33	0.84	0.34	45.3	-1.2432	14.0212	-0.0974
522	SLU 34	0.84	0.33	44.98	-1.2343	13.9217	-0.0931
522	SLU 35	0.85	0.35	45.84	-1.258	14.1847	-0.0993
522	SLU 36	0.85	0.34	45.84	-1.2582	14.1863	-0.0959
522	SLU 37	0.85	0.34	45.51	-1.249	14.0841	-0.0974
522	SLU 38	0.85	0.33	45.52	-1.2492	14.0857	-0.0939
522	SLU 39	0.84	0.39	46.22	-1.2684	14.313	-0.1127
522	SLU 40	0.84	0.38	46.23	-1.2685	14.3146	-0.1092
522	SLU 41	0.85	0.38	46.77	-1.2833	14.4781	-0.1111
522	SLU 42	0.85	0.37	46.77	-1.2834	14.4797	-0.1077
522	SLU 43	0.9	0.21	45.4	-1.2467	14.0474	-0.0486
522	SLU 44	0.9	0.19	45.41	-1.2469	14.0501	-0.0428
522	SLU 45	0.92	0.21	46.27	-1.2706	14.3131	-0.049
522	SLU 46	0.92	0.2	46.27	-1.2708	14.3147	-0.0456
522	SLU 47	0.92	0.19	45.95	-1.2619	14.2152	-0.0413
522	SLU 48	0.94	0.21	46.81	-1.2856	14.4782	-0.0475
522	SLU 49	0.94	0.2	46.82	-1.2857	14.4799	-0.044
522	SLU 50	0.93	0.2	46.49	-1.2766	14.3776	-0.0455
522	SLU 51	0.93	0.19	46.49	-1.2767	14.3792	-0.042
522	SLU 52	0.95	0.28	49.6	-1.3618	15.3546	-0.0714
522	SLU 53	0.97	0.3	50.46	-1.3855	15.6177	-0.0776
522	SLU 54	0.97	0.29	50.47	-1.3856	15.6193	-0.0741
522	SLU 55	0.96	0.27	50.14	-1.3767	15.5198	-0.0698
522	SLU 56	0.98	0.29	51.01	-1.4004	15.7828	-0.076
522	SLU 57	0.98	0.28	51.01	-1.4006	15.7844	-0.0725
522	SLU 58	0.97	0.29	50.68	-1.3914	15.6822	-0.074
522	SLU 59	0.97	0.28	50.68	-1.3916	15.6838	-0.0706
522	SLU 60	0.97	0.33	51.39	-1.4108	15.911	-0.0894
522	SLU 61	0.97	0.32	51.39	-1.4109	15.9126	-0.0859
522	SLU 62	0.98	0.33	51.93	-1.4257	16.0761	-0.0878
522	SLU 63	0.98	0.32	51.94	-1.4258	16.0778	-0.0843
522	SLU 64	0.97	0.29	49.6	-1.3617	15.348	-0.076
522	SLU 65	0.97	0.27	49.61	-1.3619	15.3507	-0.0702
522	SLU 66	0.99	0.29	50.47	-1.3856	15.6137	-0.0764
522	SLU 67	0.99	0.28	50.48	-1.3857	15.6154	-0.0729
522	SLU 68	0.98	0.27	50.15	-1.3768	15.5158	-0.0686
522	SLU 69	1	0.29	51.02	-1.4006	15.7789	-0.0748
522	SLU 70	1	0.28	51.02	-1.4007	15.7805	-0.0714
522	SLU 71	0.99	0.28	50.69	-1.3915	15.6782	-0.0728
522	SLU 72	0.99	0.27	50.69	-1.3917	15.6799	-0.0694
522	SLU 73	1.01	0.36	53.8	-1.4767	16.6553	-0.0987

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
522	SLU 74	1.03	0.38	54.66	-1.5005	16.9183	-0.1049
522	SLU 75	1.03	0.37	54.67	-1.5006	16.9199	-0.1014
522	SLU 76	1.03	0.36	54.34	-1.4917	16.8204	-0.0971
522	SLU 77	1.05	0.38	55.21	-1.5154	17.0834	-0.1033
522	SLU 78	1.05	0.37	55.21	-1.5155	17.085	-0.0999
522	SLU 79	1.04	0.37	54.88	-1.5064	16.9828	-0.1014
522	SLU 80	1.04	0.36	54.88	-1.5065	16.9844	-0.0979
522	SLU 81	1.03	0.41	55.59	-1.5257	17.2116	-0.1167
522	SLU 82	1.03	0.4	55.59	-1.5259	17.2133	-0.1132
522	SLU 83	1.05	0.41	56.13	-1.5407	17.3768	-0.1151
522	SLU 84	1.05	0.4	56.14	-1.5408	17.3784	-0.1117
522	SLE RA 1	0.73	0.21	37.23	-1.0222	11.5203	-0.0524
522	SLE RA 2	0.73	0.19	37.23	-1.0223	11.5221	-0.0486
522	SLE RA 3	0.74	0.21	37.81	-1.0381	11.6975	-0.0527
522	SLE RA 4	0.74	0.2	37.81	-1.0382	11.6985	-0.0504
522	SLE RA 5	0.74	0.19	37.6	-1.0323	11.6322	-0.0475
522	SLE RA 6	0.75	0.21	38.17	-1.0481	11.8075	-0.0517
522	SLE RA 7	0.75	0.2	38.18	-1.0482	11.8086	-0.0494
522	SLE RA 8	0.75	0.2	37.95	-1.0421	11.7405	-0.0503
522	SLE RA 9	0.75	0.19	37.96	-1.0422	11.7415	-0.048
522	SLE RA 10	0.76	0.25	40.03	-1.0989	12.3918	-0.0676
522	SLE RA 11	0.77	0.26	40.61	-1.1147	12.5672	-0.0717
522	SLE RA 12	0.77	0.26	40.61	-1.1148	12.5682	-0.0694
522	SLE RA 13	0.77	0.25	40.39	-1.1088	12.5019	-0.0665
522	SLE RA 14	0.78	0.26	40.97	-1.1247	12.6772	-0.0707
522	SLE RA 15	0.78	0.26	40.97	-1.1248	12.6783	-0.0684
522	SLE RA 16	0.78	0.26	40.75	-1.1187	12.6102	-0.0694
522	SLE RA 17	0.78	0.25	40.75	-1.1187	12.6112	-0.067
522	SLE RA 18	0.77	0.29	41.22	-1.1315	12.7627	-0.0796
522	SLE RA 19	0.77	0.28	41.23	-1.1316	12.7638	-0.0773
522	SLE RA 20	0.78	0.28	41.59	-1.1415	12.8728	-0.0785
522	SLE RA 21	0.78	0.28	41.59	-1.1416	12.8739	-0.0762
522	SLE FR 1	0.73	0.21	37.23	-1.0222	11.5203	-0.0524
522	SLE FR 2	0.73	0.2	37.23	-1.0222	11.5207	-0.0516
522	SLE FR 3	0.73	0.2	37.37	-1.0261	11.5643	-0.052
522	SLE FR 4	0.74	0.23	38.43	-1.055	11.8934	-0.0598
522	SLE FR 5	0.75	0.23	38.57	-1.059	11.9371	-0.0602
522	SLE FR 6	0.75	0.25	39.23	-1.0769	12.1415	-0.066
522	SLE QP 1	0.73	0.21	37.23	-1.0222	11.5203	-0.0524
522	SLE QP 2	0.74	0.23	38.43	-1.055	11.893	-0.0606
522	SLD 1	3.21	0.69	27.76	-0.7615	8.7839	-0.0939
522	SLD 2	3.24	1.24	27.8	-0.7633	8.7848	-0.2832
522	SLD 3	3.15	-0.44	27.61	-0.7574	8.8312	0.2994
522	SLD 4	3.18	0.11	27.65	-0.7593	8.8322	0.1101
522	SLD 5	1.57	1.98	35.44	-0.9727	10.8883	-0.6327
522	SLD 6	1.59	2.34	35.47	-0.974	10.8889	-0.7584
522	SLD 7	1.37	-1.78	34.96	-0.9592	11.0462	0.6784
522	SLD 8	1.39	-1.42	34.98	-0.9605	11.0468	0.5528
522	SLD 9	0.1	1.88	41.87	-1.1495	12.7393	-0.6739
522	SLD 10	0.12	2.24	41.9	-1.1507	12.7399	-0.7996
522	SLD 11	-0.1	-1.88	41.39	-1.136	12.8972	0.6372
522	SLD 12	-0.08	-1.52	41.42	-1.1372	12.8978	0.5116
522	SLD 13	-1.7	0.35	49.2	-1.3507	14.9539	-0.2312
522	SLD 14	-1.66	0.9	49.24	-1.3525	14.9548	-0.4205
522	SLD 15	-1.76	-0.78	49.06	-1.3466	15.0013	0.1621
522	SLD 16	-1.72	-0.23	49.1	-1.3485	15.0022	-0.0272
522	SLV 1	6.5	1.28	13.46	-0.3683	4.6192	-0.1255
522	SLV 2	6.59	2.55	13.56	-0.3726	4.6213	-0.5662
522	SLV 3	6.37	-1.28	13.12	-0.3588	4.7291	0.7661
522	SLV 4	6.45	-0.01	13.22	-0.3631	4.7313	0.3254
522	SLV 5	2.66	4.2	31.44	-0.8626	9.5437	-1.3548
522	SLV 6	2.72	5.03	31.5	-0.8654	9.5451	-1.642
522	SLV 7	2.21	-4.33	30.3	-0.831	9.9103	1.6171
522	SLV 8	2.26	-3.5	30.37	-0.8338	9.9117	1.33
522	SLV 9	-0.77	3.96	46.49	-1.2762	13.8744	-1.4511
522	SLV 10	-0.72	4.79	46.55	-1.2789	13.8758	-1.7383
522	SLV 11	-1.23	-4.57	45.36	-1.2446	14.241	1.5208
522	SLV 12	-1.18	-3.74	45.42	-1.2473	14.2423	1.2337
522	SLV 13	-4.96	0.47	63.64	-1.7468	19.0548	-0.4465
522	SLV 14	-4.88	1.74	63.73	-1.7511	19.0569	-0.8872
522	SLV 15	-5.1	-2.09	63.3	-1.7374	19.1648	0.4451
522	SLV 16	-5.02	-0.82	63.39	-1.7416	19.1669	0.0044
522	CRTFP Ux+	0	0	0	0	0	0
522	CRTFP Ux-	0	0	0	0	0	0
522	CRTFP Uy+	0	0	0	0	0	0
522	CRTFP Uy-	0	0	0	0	0	0
526	SLU 1	0.16	-0.04	26.54	-0.7535	8.8627	0.0192
526	SLU 2	0.16	-0.07	26.56	-0.7538	8.8668	0.0281
526	SLU 3	0.17	-0.04	27.18	-0.7716	9.0743	0.0164
526	SLU 4	0.17	-0.05	27.19	-0.7718	9.0768	0.0217
526	SLU 5	0.17	-0.07	26.94	-0.7648	8.9957	0.0279
526	SLU 6	0.17	-0.03	27.57	-0.7827	9.2032	0.0161
526	SLU 7	0.17	-0.05	27.58	-0.7829	9.2056	0.0214
526	SLU 8	0.17	-0.04	27.32	-0.7756	9.1205	0.0187
526	SLU 9	0.17	-0.06	27.33	-0.7758	9.1229	0.0241
526	SLU 10	0.19	-0.03	30.05	-0.8529	10.034	0.0152
526	SLU 11	0.19	0	30.67	-0.8707	10.2415	0.0034
526	SLU 12	0.19	-0.01	30.68	-0.8709	10.2439	0.0087
526	SLU 13	0.19	-0.03	30.44	-0.8639	10.1629	0.0149
526	SLU 14	0.19	0	31.06	-0.8818	10.3704	0.0032

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
526	SLU 15	0.19	-0.01	31.07	-0.882	10.3728	0.0085
526	SLU 16	0.19	0	30.81	-0.8747	10.2877	0.0058
526	SLU 17	0.19	-0.02	30.82	-0.8749	10.2901	0.0111
526	SLU 18	0.2	0.01	31.53	-0.8951	10.5302	0.0007
526	SLU 19	0.2	0	31.54	-0.8953	10.5326	0.006
526	SLU 20	0.2	0.01	31.92	-0.9061	10.659	0.0005
526	SLU 21	0.2	0	31.93	-0.9063	10.6615	0.0058
526	SLU 22	0.18	0.03	29.57	-0.8391	9.8653	-0.0048
526	SLU 23	0.18	0	29.58	-0.8393	9.8693	0.0041
526	SLU 24	0.19	0.03	30.21	-0.8572	10.0768	-0.0076
526	SLU 25	0.19	0.02	30.22	-0.8574	10.0793	-0.0023
526	SLU 26	0.19	0	29.97	-0.8504	9.9982	0.0039
526	SLU 27	0.19	0.04	30.6	-0.8682	10.2057	-0.0079
526	SLU 28	0.19	0.02	30.6	-0.8684	10.2082	-0.0026
526	SLU 29	0.19	0.03	30.35	-0.8611	10.123	-0.0053
526	SLU 30	0.19	0.01	30.35	-0.8613	10.1255	0.0001
526	SLU 31	0.21	0.04	33.07	-0.9384	11.0365	-0.0088
526	SLU 32	0.21	0.07	33.7	-0.9563	11.244	-0.0206
526	SLU 33	0.21	0.06	33.71	-0.9565	11.2465	-0.0153
526	SLU 34	0.21	0.04	33.46	-0.9495	11.1654	-0.0091
526	SLU 35	0.21	0.07	34.09	-0.9673	11.3729	-0.0208
526	SLU 36	0.21	0.06	34.09	-0.9675	11.3753	-0.0155
526	SLU 37	0.21	0.07	33.84	-0.9602	11.2902	-0.0182
526	SLU 38	0.21	0.05	33.84	-0.9604	11.2926	-0.0129
526	SLU 39	0.21	0.08	34.56	-0.9806	11.5327	-0.0233
526	SLU 40	0.22	0.07	34.56	-0.9808	11.5351	-0.018
526	SLU 41	0.22	0.08	34.94	-0.9917	11.6616	-0.0235
526	SLU 42	0.22	0.07	34.95	-0.9918	11.664	-0.0182
526	SLU 43	0.21	-0.08	33.47	-0.9502	11.1779	0.0332
526	SLU 44	0.21	-0.11	33.48	-0.9505	11.1819	0.0421
526	SLU 45	0.21	-0.07	34.11	-0.9684	11.3894	0.0303
526	SLU 46	0.21	-0.09	34.12	-0.9685	11.3919	0.0357
526	SLU 47	0.21	-0.1	33.87	-0.9616	11.3108	0.0419
526	SLU 48	0.21	-0.07	34.5	-0.9794	11.5183	0.0301
526	SLU 49	0.21	-0.09	34.5	-0.9796	11.5207	0.0354
526	SLU 50	0.21	-0.08	34.25	-0.9723	11.4356	0.0327
526	SLU 51	0.21	-0.09	34.25	-0.9725	11.4381	0.0381
526	SLU 52	0.23	-0.07	36.97	-1.0496	12.3491	0.0291
526	SLU 53	0.23	-0.03	37.6	-1.0675	12.5566	0.0174
526	SLU 54	0.23	-0.05	37.61	-1.0676	12.5591	0.0227
526	SLU 55	0.23	-0.07	37.36	-1.0607	12.478	0.0289
526	SLU 56	0.24	-0.03	37.99	-1.0785	12.6855	0.0171
526	SLU 57	0.24	-0.05	37.99	-1.0787	12.6879	0.0225
526	SLU 58	0.23	-0.04	37.74	-1.0714	12.6028	0.0198
526	SLU 59	0.24	-0.06	37.74	-1.0716	12.6052	0.0251
526	SLU 60	0.24	-0.03	38.46	-1.0918	12.8453	0.0147
526	SLU 61	0.24	-0.04	38.46	-1.092	12.8477	0.02
526	SLU 62	0.24	-0.02	38.84	-1.1028	12.9741	0.0145
526	SLU 63	0.24	-0.04	38.85	-1.103	12.9766	0.0198
526	SLU 64	0.22	-0.01	36.49	-1.0358	12.1804	0.0092
526	SLU 65	0.23	-0.04	36.51	-1.0361	12.1844	0.0181
526	SLU 66	0.23	0	37.13	-1.0539	12.3919	0.0064
526	SLU 67	0.23	-0.02	37.14	-1.0541	12.3944	0.0117
526	SLU 68	0.23	-0.03	36.9	-1.0471	12.3133	0.0179
526	SLU 69	0.23	0	37.52	-1.065	12.5208	0.0061
526	SLU 70	0.23	-0.02	37.53	-1.0651	12.5233	0.0114
526	SLU 71	0.23	-0.01	37.27	-1.0579	12.4381	0.0087
526	SLU 72	0.23	-0.02	37.28	-1.058	12.4406	0.0141
526	SLU 73	0.25	0	40	-1.1352	13.3516	0.0051
526	SLU 74	0.25	0.04	40.62	-1.153	13.5591	-0.0066
526	SLU 75	0.25	0.02	40.63	-1.1532	13.5616	-0.0013
526	SLU 76	0.25	0	40.39	-1.1462	13.4805	0.0049
526	SLU 77	0.25	0.04	41.01	-1.164	13.688	-0.0069
526	SLU 78	0.26	0.02	41.02	-1.1642	13.6904	-0.0015
526	SLU 79	0.25	0.03	40.76	-1.157	13.6053	-0.0042
526	SLU 80	0.25	0.01	40.77	-1.1571	13.6078	0.0011
526	SLU 81	0.26	0.04	41.48	-1.1773	13.8478	-0.0093
526	SLU 82	0.26	0.03	41.49	-1.1775	13.8502	-0.004
526	SLU 83	0.26	0.05	41.87	-1.1884	13.9767	-0.0095
526	SLU 84	0.26	0.03	41.88	-1.1886	13.9791	-0.0042
526	SLE RA 1	0.17	-0.02	27.41	-0.778	9.1492	0.0124
526	SLE RA 2	0.17	-0.04	27.42	-0.7782	9.1519	0.0183
526	SLE RA 3	0.17	-0.02	27.83	-0.79	9.2902	0.0105
526	SLE RA 4	0.17	-0.03	27.84	-0.7902	9.2919	0.014
526	SLE RA 5	0.17	-0.04	27.68	-0.7855	9.2378	0.0181
526	SLE RA 6	0.17	-0.02	28.09	-0.7974	9.3762	0.0103
526	SLE RA 7	0.17	-0.03	28.1	-0.7975	9.3778	0.0138
526	SLE RA 8	0.17	-0.02	27.93	-0.7927	9.321	0.012
526	SLE RA 9	0.17	-0.03	27.93	-0.7928	9.3226	0.0156
526	SLE RA 10	0.18	-0.01	29.74	-0.8442	9.93	0.0097
526	SLE RA 11	0.19	0.01	30.16	-0.8561	10.0684	0.0018
526	SLE RA 12	0.19	0	30.17	-0.8562	10.07	0.0054
526	SLE RA 13	0.19	-0.01	30	-0.8516	10.0159	0.0095
526	SLE RA 14	0.19	0.01	30.42	-0.8635	10.1543	0.0017
526	SLE RA 15	0.19	0	30.42	-0.8636	10.1559	0.0052
526	SLE RA 16	0.19	0	30.25	-0.8587	10.0991	0.0034
526	SLE RA 17	0.19	-0.01	30.26	-0.8589	10.1008	0.007
526	SLE RA 18	0.19	0.01	30.73	-0.8723	10.2608	0
526	SLE RA 19	0.19	0	30.74	-0.8724	10.2624	0.0036
526	SLE RA 20	0.19	0.01	30.99	-0.8797	10.3467	-0.0001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
526	SLE RA 21	0.19	0	31	-0.8798	10.3483	0.0034
526	SLE FR 1	0.17	-0.02	27.41	-0.778	9.1492	0.0124
526	SLE FR 2	0.17	-0.03	27.41	-0.778	9.1497	0.0136
526	SLE FR 3	0.17	-0.02	27.51	-0.7809	9.1835	0.0123
526	SLE FR 4	0.18	-0.02	28.41	-0.8063	9.4832	0.0099
526	SLE FR 5	0.18	-0.01	28.51	-0.8092	9.517	0.0086
526	SLE FR 6	0.18	-0.01	29.07	-0.8251	9.705	0.0062
526	SLE QP 1	0.17	-0.02	27.41	-0.778	9.1492	0.0124
526	SLE QP 2	0.18	-0.01	28.41	-0.8063	9.4827	0.0087
526	SLD 1	2.36	0.43	28.54	-0.8104	9.4947	-0.0763
526	SLD 2	2.38	0.45	28.53	-0.8102	9.4894	-0.0832
526	SLD 3	2.33	-0.33	28.9	-0.8188	9.6138	0.1874
526	SLD 4	2.35	-0.31	28.89	-0.8186	9.6085	0.1806
526	SLD 5	0.87	1.26	27.9	-0.7948	9.3066	-0.4156
526	SLD 6	0.89	1.27	27.89	-0.7946	9.3031	-0.4202
526	SLD 7	0.77	-1.26	29.11	-0.8228	9.7036	0.4636
526	SLD 8	0.78	-1.24	29.1	-0.8227	9.7001	0.459
526	SLD 9	-0.43	1.22	27.71	-0.7898	9.2652	-0.4417
526	SLD 10	-0.42	1.23	27.7	-0.7897	9.2617	-0.4463
526	SLD 11	-0.54	-1.3	28.92	-0.8179	9.6622	0.4375
526	SLD 12	-0.52	-1.28	28.91	-0.8178	9.6587	0.433
526	SLD 13	-2	0.28	27.92	-0.794	9.3568	-0.1632
526	SLD 14	-1.98	0.3	27.91	-0.7937	9.3515	-0.1701
526	SLD 15	-2.03	-0.47	28.28	-0.8024	9.4759	0.1005
526	SLD 16	-2.01	-0.45	28.27	-0.8022	9.4706	0.0937
526	SLV 1	5.28	0.98	28.73	-0.8163	9.5158	-0.1804
526	SLV 2	5.33	1.04	28.71	-0.8157	9.5035	-0.1964
526	SLV 3	5.2	-0.72	29.55	-0.8352	9.7846	0.417
526	SLV 4	5.26	-0.67	29.53	-0.8347	9.7723	0.401
526	SLV 5	1.81	2.87	27.26	-0.7805	9.0871	-0.9513
526	SLV 6	1.84	2.9	27.25	-0.7802	9.0791	-0.9617
526	SLV 7	1.57	-2.83	30	-0.8439	9.9831	1.04
526	SLV 8	1.6	-2.79	29.98	-0.8435	9.975	1.0296
526	SLV 9	-1.25	2.77	26.83	-0.769	8.9903	-1.0122
526	SLV 10	-1.22	2.8	26.81	-0.7687	8.9822	-1.0227
526	SLV 11	-1.49	-2.93	29.56	-0.8323	9.8863	0.979
526	SLV 12	-1.46	-2.89	29.55	-0.832	9.8782	0.9686
526	SLV 13	-4.91	0.65	27.28	-0.7778	9.1931	-0.3836
526	SLV 14	-4.85	0.7	27.26	-0.7773	9.1807	-0.3997
526	SLV 15	-4.98	-1.06	28.1	-0.7968	9.4619	0.2138
526	SLV 16	-4.93	-1.01	28.08	-0.7963	9.4495	0.1977
526	CRTFP Ux+	0	0	0	0	0	0
526	CRTFP Ux-	0	0	0	0	0	0
526	CRTFP Uy+	0	0	0	0	0	0
526	CRTFP Uy-	0	0	0	0	0	0
576	SLU 1	-0.35	-0.04	26.72	-1.485	-5.656	-0.0277
576	SLU 2	-0.35	-0.1	26.73	-1.4853	-5.6577	-0.0432
576	SLU 3	-0.36	-0.03	27.37	-1.521	-5.7906	-0.0274
576	SLU 4	-0.36	-0.07	27.37	-1.5212	-5.7916	-0.0367
576	SLU 5	-0.35	-0.09	27.13	-1.5079	-5.7422	-0.0427
576	SLU 6	-0.36	-0.03	27.78	-1.5436	-5.8751	-0.0269
576	SLU 7	-0.36	-0.07	27.78	-1.5438	-5.8761	-0.0362
576	SLU 8	-0.36	-0.03	27.54	-1.5303	-5.8249	-0.0268
576	SLU 9	-0.36	-0.07	27.54	-1.5305	-5.826	-0.0361
576	SLU 10	-0.35	-0.06	29.85	-1.6586	-6.3243	-0.0347
576	SLU 11	-0.36	0	30.49	-1.6943	-6.4572	-0.0189
576	SLU 12	-0.36	-0.03	30.49	-1.6945	-6.4582	-0.0282
576	SLU 13	-0.36	-0.06	30.26	-1.6813	-6.4087	-0.0342
576	SLU 14	-0.37	0.01	30.9	-1.717	-6.5416	-0.0184
576	SLU 15	-0.37	-0.03	30.9	-1.7171	-6.5427	-0.0277
576	SLU 16	-0.37	0.01	30.66	-1.7036	-6.4915	-0.0183
576	SLU 17	-0.37	-0.03	30.66	-1.7038	-6.4925	-0.0275
576	SLU 18	-0.36	0.02	31.18	-1.7326	-6.6083	-0.0156
576	SLU 19	-0.36	-0.02	31.18	-1.7328	-6.6093	-0.0248
576	SLU 20	-0.37	0.02	31.59	-1.7552	-6.6927	-0.0151
576	SLU 21	-0.36	-0.02	31.59	-1.7554	-6.6937	-0.0244
576	SLU 22	-0.37	0.01	29.87	-1.6597	-6.3241	-0.0184
576	SLU 23	-0.37	-0.05	29.88	-1.66	-6.3259	-0.0338
576	SLU 24	-0.38	0.01	30.52	-1.6957	-6.4587	-0.0181
576	SLU 25	-0.38	-0.03	30.52	-1.6959	-6.4598	-0.0273
576	SLU 26	-0.38	-0.05	30.28	-1.6827	-6.4103	-0.0334
576	SLU 27	-0.39	0.01	30.92	-1.7184	-6.5432	-0.0176
576	SLU 28	-0.39	-0.02	30.93	-1.7186	-6.5442	-0.0269
576	SLU 29	-0.39	0.01	30.68	-1.705	-6.493	-0.0174
576	SLU 30	-0.39	-0.02	30.69	-1.7052	-6.4941	-0.0267
576	SLU 31	-0.38	-0.02	33	-1.8333	-6.9924	-0.0253
576	SLU 32	-0.39	0.05	33.64	-1.869	-7.1253	-0.0096
576	SLU 33	-0.39	0.01	33.64	-1.8692	-7.1263	-0.0188
576	SLU 34	-0.39	-0.02	33.4	-1.856	-7.0769	-0.0248
576	SLU 35	-0.4	0.05	34.05	-1.8917	-7.2097	-0.0091
576	SLU 36	-0.4	0.01	34.05	-1.8919	-7.2108	-0.0183
576	SLU 37	-0.4	0.05	33.81	-1.8783	-7.1596	-0.0089
576	SLU 38	-0.39	0.01	33.81	-1.8785	-7.1606	-0.0182
576	SLU 39	-0.39	0.06	34.33	-1.9073	-7.2764	-0.0062
576	SLU 40	-0.38	0.02	34.33	-1.9075	-7.2774	-0.0155
576	SLU 41	-0.39	0.06	34.74	-1.93	-7.3608	-0.0058
576	SLU 42	-0.39	0.02	34.74	-1.9302	-7.3618	-0.015
576	SLU 43	-0.44	-0.06	33.66	-1.8706	-7.1238	-0.0393
576	SLU 44	-0.44	-0.12	33.66	-1.8709	-7.1255	-0.0547
576	SLU 45	-0.45	-0.06	34.3	-1.9066	-7.2584	-0.039

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
576	SLU 46	-0.45	-0.1	34.31	-1.9068	-7.2594	-0.0482
576	SLU 47	-0.45	-0.12	34.07	-1.8935	-7.2099	-0.0542
576	SLU 48	-0.46	-0.05	34.71	-1.9292	-7.3428	-0.0385
576	SLU 49	-0.46	-0.09	34.72	-1.9294	-7.3438	-0.0477
576	SLU 50	-0.46	-0.05	34.47	-1.9159	-7.2927	-0.0383
576	SLU 51	-0.46	-0.09	34.48	-1.9161	-7.2937	-0.0476
576	SLU 52	-0.45	-0.09	36.78	-2.0442	-7.792	-0.0462
576	SLU 53	-0.46	-0.02	37.43	-2.0799	-7.9249	-0.0304
576	SLU 54	-0.46	-0.06	37.43	-2.0801	-7.9259	-0.0397
576	SLU 55	-0.46	-0.08	37.19	-2.0668	-7.8765	-0.0457
576	SLU 56	-0.47	-0.02	37.83	-2.1025	-8.0094	-0.03
576	SLU 57	-0.47	-0.06	37.84	-2.1027	-8.0104	-0.0392
576	SLU 58	-0.46	-0.02	37.59	-2.0892	-7.9592	-0.0298
576	SLU 59	-0.46	-0.06	37.6	-2.0894	-7.9603	-0.0391
576	SLU 60	-0.45	-0.01	38.12	-2.1182	-8.076	-0.0271
576	SLU 61	-0.45	-0.05	38.12	-2.1184	-8.077	-0.0364
576	SLU 62	-0.46	-0.01	38.52	-2.1408	-8.1604	-0.0266
576	SLU 63	-0.46	-0.04	38.53	-2.141	-8.1615	-0.0359
576	SLU 64	-0.47	-0.02	36.81	-2.0453	-7.7919	-0.0299
576	SLU 65	-0.47	-0.08	36.81	-2.0456	-7.7936	-0.0454
576	SLU 66	-0.48	-0.01	37.45	-2.0813	-7.9265	-0.0296
576	SLU 67	-0.48	-0.05	37.46	-2.0815	-7.9275	-0.0389
576	SLU 68	-0.47	-0.08	37.22	-2.0683	-7.878	-0.0449
576	SLU 69	-0.48	-0.01	37.86	-2.104	-8.0109	-0.0291
576	SLU 70	-0.48	-0.05	37.87	-2.1041	-8.012	-0.0384
576	SLU 71	-0.48	-0.01	37.62	-2.0906	-7.9608	-0.029
576	SLU 72	-0.48	-0.05	37.62	-2.0908	-7.9618	-0.0382
576	SLU 73	-0.48	-0.04	39.93	-2.2189	-8.4601	-0.0368
576	SLU 74	-0.49	0.02	40.58	-2.2546	-8.593	-0.0211
576	SLU 75	-0.49	-0.02	40.58	-2.2548	-8.5941	-0.0303
576	SLU 76	-0.48	-0.04	40.34	-2.2416	-8.5446	-0.0364
576	SLU 77	-0.49	0.02	40.98	-2.2773	-8.6775	-0.0206
576	SLU 78	-0.49	-0.01	40.99	-2.2775	-8.6785	-0.0299
576	SLU 79	-0.49	0.02	40.74	-2.2639	-8.6273	-0.0205
576	SLU 80	-0.49	-0.01	40.75	-2.2641	-8.6284	-0.0297
576	SLU 81	-0.48	0.03	41.27	-2.2929	-8.7441	-0.0178
576	SLU 82	-0.48	0	41.27	-2.2931	-8.7451	-0.027
576	SLU 83	-0.49	0.04	41.67	-2.3156	-8.8286	-0.0173
576	SLU 84	-0.49	0	41.68	-2.3157	-8.8296	-0.0265
576	SLE RA 1	-0.35	-0.02	27.62	-1.5349	-5.8469	-0.0251
576	SLE RA 2	-0.35	-0.06	27.62	-1.5351	-5.8481	-0.0354
576	SLE RA 3	-0.36	-0.02	28.05	-1.5589	-5.9366	-0.0249
576	SLE RA 4	-0.36	-0.05	28.05	-1.559	-5.9373	-0.031
576	SLE RA 5	-0.36	-0.06	27.9	-1.5502	-5.9044	-0.035
576	SLE RA 6	-0.37	-0.02	28.32	-1.574	-5.9929	-0.0245
576	SLE RA 7	-0.36	-0.04	28.33	-1.5741	-5.9936	-0.0307
576	SLE RA 8	-0.36	-0.02	28.16	-1.5651	-5.9595	-0.0244
576	SLE RA 9	-0.36	-0.04	28.17	-1.5652	-5.9602	-0.0306
576	SLE RA 10	-0.36	-0.04	29.71	-1.6507	-6.2924	-0.0297
576	SLE RA 11	-0.37	0	30.13	-1.6745	-6.381	-0.0192
576	SLE RA 12	-0.37	-0.02	30.14	-1.6746	-6.3817	-0.0254
576	SLE RA 13	-0.36	-0.04	29.98	-1.6658	-6.3487	-0.0294
576	SLE RA 14	-0.37	0	30.41	-1.6896	-6.4373	-0.0189
576	SLE RA 15	-0.37	-0.02	30.41	-1.6897	-6.438	-0.025
576	SLE RA 16	-0.37	0	30.24	-1.6807	-6.4039	-0.0188
576	SLE RA 17	-0.37	-0.02	30.25	-1.6808	-6.4046	-0.0249
576	SLE RA 18	-0.36	0.01	30.59	-1.7	-6.4817	-0.017
576	SLE RA 19	-0.36	-0.01	30.6	-1.7001	-6.4824	-0.0231
576	SLE RA 20	-0.37	0.01	30.86	-1.7151	-6.538	-0.0166
576	SLE RA 21	-0.37	-0.01	30.87	-1.7152	-6.5387	-0.0228
576	SLE FR 1	-0.35	-0.02	27.62	-1.5349	-5.8469	-0.0251
576	SLE FR 2	-0.35	-0.03	27.62	-1.535	-5.8471	-0.0271
576	SLE FR 3	-0.36	-0.02	27.73	-1.541	-5.8694	-0.025
576	SLE FR 4	-0.36	-0.02	28.51	-1.5845	-6.0376	-0.0247
576	SLE FR 5	-0.36	-0.01	28.62	-1.5905	-6.0599	-0.0225
576	SLE FR 6	-0.36	-0.01	29.11	-1.6174	-6.1643	-0.021
576	SLE QP 1	-0.35	-0.02	27.62	-1.5349	-5.8469	-0.0251
576	SLE QP 2	-0.36	-0.01	28.51	-1.5844	-6.0374	-0.0226
576	SLD 1	1.55	0.38	36.76	-2.0434	-7.6751	0.1974
576	SLD 2	1.56	-0.02	36.78	-2.0442	-7.6834	0.0978
576	SLD 3	1.58	-0.53	36.89	-2.0506	-7.7138	-0.0303
576	SLD 4	1.59	-0.94	36.91	-2.0514	-7.7221	-0.1299
576	SLD 5	0.17	1.56	30.78	-1.711	-6.4684	0.4068
576	SLD 6	0.18	1.29	30.8	-1.7115	-6.4739	0.3407
576	SLD 7	0.27	-1.48	31.22	-1.7351	-6.5976	-0.3522
576	SLD 8	0.28	-1.75	31.23	-1.7357	-6.6031	-0.4183
576	SLD 9	-0.99	1.72	25.79	-1.4332	-5.4717	0.373
576	SLD 10	-0.98	1.45	25.81	-1.4337	-5.4772	0.3069
576	SLD 11	-0.89	-1.32	26.22	-1.4574	-5.6008	-0.386
576	SLD 12	-0.88	-1.59	26.24	-1.4579	-5.6063	-0.4521
576	SLD 13	-2.31	0.91	20.11	-1.1174	-4.3526	0.0846
576	SLD 14	-2.29	0.51	20.14	-1.1183	-4.3609	-0.015
576	SLD 15	-2.28	0	20.24	-1.1247	-4.3913	-0.1431
576	SLD 16	-2.26	-0.4	20.27	-1.1255	-4.3996	-0.2427
576	SLV 1	4.1	0.87	47.8	-2.6581	-9.8689	0.4823
576	SLV 2	4.13	-0.07	47.86	-2.66	-9.8882	0.2504
576	SLV 3	4.17	-1.2	48.11	-2.6751	-9.9594	-0.0326
576	SLV 4	4.2	-2.14	48.16	-2.677	-9.9787	-0.2645
576	SLV 5	0.87	3.55	33.83	-1.8805	-7.0461	0.9506
576	SLV 6	0.89	2.93	33.86	-1.8817	-7.0587	0.7995

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
576	SLV 7	1.1	-3.33	34.84	-1.937	-7.3479	-0.7659
576	SLV 8	1.12	-3.94	34.88	-1.9383	-7.3605	-0.917
576	SLV 9	-1.84	3.92	22.15	-1.2306	-4.7142	0.8717
576	SLV 10	-1.82	3.31	22.18	-1.2318	-4.7268	0.7206
576	SLV 11	-1.6	-2.96	23.16	-1.2871	-5.016	-0.8448
576	SLV 12	-1.58	-3.57	23.2	-1.2884	-5.0286	-0.9959
576	SLV 13	-4.92	2.11	8.86	-0.4919	-2.096	0.2192
576	SLV 14	-4.89	1.17	8.91	-0.4938	-2.1153	-0.0127
576	SLV 15	-4.85	0.05	9.17	-0.5088	-2.1865	-0.2957
576	SLV 16	-4.82	-0.89	9.22	-0.5107	-2.2058	-0.5276
576	CRTFP Ux+	0	0	0	0	0	0
576	CRTFP Ux-	0	0	0	0	0	0
576	CRTFP Uy+	0	0	0	0	0	0
576	CRTFP Uy-	0	0	0	0	0	0
586	SLU 1	-0.73	-0.07	53.51	-0.0546	-1.4799	-0.0006
586	SLU 2	-0.73	-0.19	53.52	-0.0533	-1.4802	-0.0029
586	SLU 3	-0.75	-0.06	54.81	-0.0555	-1.5157	-0.0005
586	SLU 4	-0.75	-0.14	54.82	-0.0547	-1.5159	-0.0018
586	SLU 5	-0.74	-0.18	54.34	-0.0536	-1.5028	-0.0027
586	SLU 6	-0.76	-0.06	55.62	-0.0557	-1.5382	-0.0003
586	SLU 7	-0.76	-0.13	55.63	-0.0549	-1.5385	-0.0017
586	SLU 8	-0.75	-0.06	55.14	-0.0552	-1.5249	-0.0004
586	SLU 9	-0.75	-0.13	55.15	-0.0544	-1.5252	-0.0017
586	SLU 10	-0.75	-0.12	59.8	-0.0585	-1.6547	-0.0015
586	SLU 11	-0.76	0.01	61.08	-0.0606	-1.6902	0.0009
586	SLU 12	-0.76	-0.07	61.09	-0.0598	-1.6904	-0.0004
586	SLU 13	-0.76	-0.11	60.62	-0.0587	-1.6773	-0.0013
586	SLU 14	-0.78	0.01	61.9	-0.0609	-1.7127	0.0011
586	SLU 15	-0.78	-0.06	61.91	-0.0601	-1.713	-0.0003
586	SLU 16	-0.77	0.01	61.42	-0.0603	-1.6994	0.001
586	SLU 17	-0.77	-0.06	61.43	-0.0595	-1.6996	-0.0003
586	SLU 18	-0.75	0.03	62.48	-0.062	-1.7292	0.0014
586	SLU 19	-0.75	-0.04	62.48	-0.0612	-1.7294	0
586	SLU 20	-0.77	0.04	63.29	-0.0623	-1.7517	0.0015
586	SLU 21	-0.77	-0.04	63.3	-0.0615	-1.7519	0.0002
586	SLU 22	-0.78	0.02	59.84	-0.0547	-1.6555	0.0013
586	SLU 23	-0.78	-0.11	59.85	-0.0533	-1.6559	-0.001
586	SLU 24	-0.8	0.02	61.14	-0.0555	-1.6914	0.0014
586	SLU 25	-0.8	-0.05	61.15	-0.0547	-1.6916	0.0001
586	SLU 26	-0.8	-0.1	60.67	-0.0536	-1.6784	-0.0008
586	SLU 27	-0.81	0.03	61.95	-0.0557	-1.7139	0.0016
586	SLU 28	-0.81	-0.04	61.96	-0.055	-1.7141	0.0002
586	SLU 29	-0.81	0.03	61.47	-0.0552	-1.7006	0.0015
586	SLU 30	-0.81	-0.04	61.48	-0.0544	-1.7008	0.0002
586	SLU 31	-0.8	-0.04	66.13	-0.0585	-1.8304	0.0004
586	SLU 32	-0.82	0.09	67.41	-0.0606	-1.8659	0.0028
586	SLU 33	-0.82	0.02	67.42	-0.0599	-1.8661	0.0015
586	SLU 34	-0.81	-0.03	66.95	-0.0588	-1.8529	0.0006
586	SLU 35	-0.83	0.1	68.23	-0.0609	-1.8884	0.003
586	SLU 36	-0.83	0.03	68.24	-0.0601	-1.8886	0.0016
586	SLU 37	-0.83	0.1	67.75	-0.0604	-1.8751	0.0029
586	SLU 38	-0.83	0.03	67.76	-0.0596	-1.8753	0.0016
586	SLU 39	-0.81	0.12	68.81	-0.0621	-1.9048	0.0033
586	SLU 40	-0.81	0.04	68.81	-0.0613	-1.905	0.0019
586	SLU 41	-0.82	0.12	69.62	-0.0623	-1.9274	0.0034
586	SLU 42	-0.82	0.05	69.63	-0.0615	-1.9276	0.0021
586	SLU 43	-0.93	-0.12	67.39	-0.071	-1.8636	-0.0015
586	SLU 44	-0.93	-0.24	67.4	-0.0697	-1.864	-0.0037
586	SLU 45	-0.94	-0.11	68.69	-0.0718	-1.8994	-0.0013
586	SLU 46	-0.95	-0.19	68.7	-0.071	-1.8996	-0.0026
586	SLU 47	-0.94	-0.23	68.22	-0.07	-1.8865	-0.0036
586	SLU 48	-0.96	-0.11	69.51	-0.0721	-1.922	-0.0012
586	SLU 49	-0.96	-0.18	69.51	-0.0713	-1.9222	-0.0025
586	SLU 50	-0.95	-0.11	69.02	-0.0715	-1.9087	-0.0012
586	SLU 51	-0.95	-0.18	69.03	-0.0707	-1.9089	-0.0025
586	SLU 52	-0.95	-0.17	73.68	-0.0749	-2.0385	-0.0023
586	SLU 53	-0.96	-0.04	74.97	-0.077	-2.0739	0.0001
586	SLU 54	-0.96	-0.12	74.97	-0.0762	-2.0741	-0.0012
586	SLU 55	-0.96	-0.16	74.5	-0.0751	-2.061	-0.0022
586	SLU 56	-0.98	-0.04	75.78	-0.0773	-2.0965	0.0002
586	SLU 57	-0.98	-0.11	75.79	-0.0765	-2.0967	-0.0011
586	SLU 58	-0.97	-0.04	75.3	-0.0767	-2.0832	0.0002
586	SLU 59	-0.97	-0.11	75.31	-0.0759	-2.0834	-0.0011
586	SLU 60	-0.95	-0.02	76.36	-0.0784	-2.1129	0.0005
586	SLU 61	-0.95	-0.09	76.37	-0.0776	-2.1131	-0.0008
586	SLU 62	-0.96	-0.01	77.17	-0.0787	-2.1354	0.0007
586	SLU 63	-0.97	-0.09	77.18	-0.0779	-2.1356	-0.0007
586	SLU 64	-0.98	-0.03	73.72	-0.0711	-2.0393	0.0004
586	SLU 65	-0.98	-0.16	73.74	-0.0697	-2.0396	-0.0018
586	SLU 66	-1	-0.03	75.02	-0.0719	-2.0751	0.0006
586	SLU 67	-1	-0.1	75.03	-0.0711	-2.0753	-0.0007
586	SLU 68	-1	-0.15	74.55	-0.07	-2.0622	-0.0017
586	SLU 69	-1.01	-0.02	75.84	-0.0721	-2.0976	0.0007
586	SLU 70	-1.01	-0.09	75.84	-0.0713	-2.0979	-0.0006
586	SLU 71	-1.01	-0.02	75.35	-0.0716	-2.0843	0.0007
586	SLU 72	-1.01	-0.09	75.36	-0.0708	-2.0846	-0.0007
586	SLU 73	-1	-0.09	80.01	-0.0749	-2.2141	-0.0004
586	SLU 74	-1.02	0.04	81.3	-0.077	-2.2496	0.002
586	SLU 75	-1.02	-0.03	81.3	-0.0762	-2.2498	0.0007
586	SLU 76	-1.01	-0.08	80.83	-0.0752	-2.2367	-0.0003

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
586	SLU 77	-1.03	0.05	82.11	-0.0773	-2.2721	0.0021
586	SLU 78	-1.03	-0.02	82.12	-0.0765	-2.2724	0.0008
586	SLU 79	-1.02	0.05	81.63	-0.0767	-2.2588	0.0021
586	SLU 80	-1.03	-0.02	81.64	-0.0759	-2.259	0.0007
586	SLU 81	-1.01	0.07	82.69	-0.0784	-2.2886	0.0024
586	SLU 82	-1.01	-0.01	82.7	-0.0776	-2.2888	0.0011
586	SLU 83	-1.02	0.07	83.5	-0.0787	-2.3111	0.0025
586	SLU 84	-1.02	0	83.51	-0.0779	-2.3113	0.0012
586	SLE RA 1	-0.74	-0.04	55.32	-0.0547	-1.5301	-0.0001
586	SLE RA 2	-0.74	-0.13	55.33	-0.0538	-1.5303	-0.0016
586	SLE RA 3	-0.75	-0.04	56.18	-0.0552	-1.5539	0
586	SLE RA 4	-0.76	-0.09	56.19	-0.0547	-1.5541	-0.0009
586	SLE RA 5	-0.75	-0.12	55.87	-0.0539	-1.5453	-0.0015
586	SLE RA 6	-0.76	-0.04	56.73	-0.0554	-1.569	0.0001
586	SLE RA 7	-0.76	-0.08	56.73	-0.0548	-1.5691	-0.0008
586	SLE RA 8	-0.76	-0.04	56.41	-0.055	-1.5601	0.0001
586	SLE RA 9	-0.76	-0.08	56.41	-0.0545	-1.5602	-0.0008
586	SLE RA 10	-0.75	-0.08	59.51	-0.0572	-1.6466	-0.0006
586	SLE RA 11	-0.77	0.01	60.37	-0.0586	-1.6703	0.0009
586	SLE RA 12	-0.77	-0.04	60.37	-0.0581	-1.6704	0.0001
586	SLE RA 13	-0.76	-0.08	60.06	-0.0574	-1.6617	-0.0006
586	SLE RA 14	-0.78	0.01	60.91	-0.0588	-1.6853	0.001
586	SLE RA 15	-0.78	-0.04	60.92	-0.0583	-1.6854	0.0002
586	SLE RA 16	-0.77	0.01	60.59	-0.0584	-1.6764	0.001
586	SLE RA 17	-0.77	-0.04	60.6	-0.0579	-1.6766	0.0001
586	SLE RA 18	-0.76	0.02	61.3	-0.0596	-1.6962	0.0012
586	SLE RA 19	-0.76	-0.03	61.3	-0.059	-1.6964	0.0003
586	SLE RA 20	-0.77	0.03	61.84	-0.0597	-1.7113	0.0013
586	SLE RA 21	-0.77	-0.02	61.85	-0.0592	-1.7114	0.0004
586	SLE FR 1	-0.74	-0.04	55.32	-0.0547	-1.5301	-0.0001
586	SLE FR 2	-0.74	-0.06	55.32	-0.0545	-1.5301	-0.0004
586	SLE FR 3	-0.75	-0.04	55.54	-0.0547	-1.5361	-0.0001
586	SLE FR 4	-0.75	-0.04	57.11	-0.0559	-1.58	0
586	SLE FR 5	-0.75	-0.02	57.33	-0.0562	-1.5859	0.0003
586	SLE FR 6	-0.75	-0.01	58.31	-0.0571	-1.6132	0.0006
586	SLE QP 1	-0.74	-0.04	55.32	-0.0547	-1.5301	-0.0001
586	SLE QP 2	-0.75	-0.02	57.11	-0.0561	-1.5799	0.0003
586	SLD 1	3.15	0.74	73.23	-0.133	-2.0071	0.0136
586	SLD 2	3.15	-0.05	73.3	-0.1185	-2.0087	0.0008
586	SLD 3	3.08	-1.05	73.49	-0.122	-2.0146	-0.0223
586	SLD 4	3.08	-1.84	73.56	-0.1076	-2.0162	-0.0351
586	SLD 5	0.53	3.07	61.54	-0.0984	-1.6965	0.0611
586	SLD 6	0.53	2.55	61.58	-0.0889	-1.6976	0.0526
586	SLD 7	0.29	-2.91	62.41	-0.0619	-1.7213	-0.0586
586	SLD 8	0.29	-3.43	62.45	-0.0523	-1.7224	-0.0671
586	SLD 9	-1.78	3.38	51.77	-0.0599	-1.4374	0.0677
586	SLD 10	-1.79	2.86	51.81	-0.0504	-1.4385	0.0592
586	SLD 11	-2.02	-2.6	52.64	-0.0234	-1.4623	-0.052
586	SLD 12	-2.03	-3.12	52.68	-0.0138	-1.4633	-0.0605
586	SLD 13	-4.57	1.79	40.66	-0.0047	-1.1436	0.0357
586	SLD 14	-4.57	1	40.73	0.0098	-1.1452	0.0229
586	SLD 15	-4.64	0	40.92	0.0063	-1.1511	-0.0002
586	SLD 16	-4.65	-0.79	40.99	0.0207	-1.1527	-0.013
586	SLV 1	8.37	1.7	94.82	-0.2357	-2.5794	0.03
586	SLV 2	8.36	-0.14	94.98	-0.2021	-2.5832	0.0001
586	SLV 3	8.2	-2.36	95.43	-0.2103	-2.5969	-0.0512
586	SLV 4	8.19	-4.2	95.59	-0.1767	-2.6006	-0.0811
586	SLV 5	2.24	6.97	67.47	-0.1544	-1.8527	0.1376
586	SLV 6	2.23	5.77	67.57	-0.1325	-1.8551	0.1181
586	SLV 7	1.69	-6.56	69.5	-0.0698	-1.9108	-0.133
586	SLV 8	1.68	-7.75	69.6	-0.0479	-1.9132	-0.1525
586	SLV 9	-3.18	7.7	44.62	-0.0643	-1.2467	0.1531
586	SLV 10	-3.18	6.51	44.72	-0.0425	-1.2491	0.1336
586	SLV 11	-3.73	-5.82	46.65	0.0203	-1.3047	-0.1175
586	SLV 12	-3.73	-7.02	46.75	0.0421	-1.3071	-0.137
586	SLV 13	-9.69	4.15	18.63	0.0645	-0.5593	0.0817
586	SLV 14	-9.69	2.31	18.79	0.0981	-0.563	0.0518
586	SLV 15	-9.85	0.09	19.24	0.0899	-0.5767	0.0005
586	SLV 16	-9.86	-1.74	19.4	0.1234	-0.5804	-0.0294
586	CRTFP Ux+	0	0	0	0	0	0
586	CRTFP Ux-	0	0	0	0	0	0
586	CRTFP Uy+	0	0	0	0	0	0
586	CRTFP Uy-	0	0	0	0	0	0
587	SLU 1	-0.86	-0.08	62.88	-0.0687	0.016	-0.0022
587	SLU 2	-0.86	-0.22	62.89	-0.0672	0.0161	-0.0006
587	SLU 3	-0.88	-0.08	64.4	-0.0697	0.0165	-0.0023
587	SLU 4	-0.88	-0.16	64.41	-0.0688	0.0165	-0.0013
587	SLU 5	-0.88	-0.21	63.85	-0.0675	0.0164	-0.0007
587	SLU 6	-0.9	-0.07	65.36	-0.0701	0.0168	-0.0024
587	SLU 7	-0.9	-0.15	65.36	-0.0691	0.0168	-0.0015
587	SLU 8	-0.89	-0.07	64.79	-0.0694	0.0167	-0.0024
587	SLU 9	-0.89	-0.15	64.8	-0.0685	0.0167	-0.0015
587	SLU 10	-0.88	-0.14	70.32	-0.0736	0.0164	-0.0018
587	SLU 11	-0.9	0	71.82	-0.0762	0.0168	-0.0035
587	SLU 12	-0.9	-0.08	71.83	-0.0753	0.0168	-0.0026
587	SLU 13	-0.9	-0.14	71.27	-0.074	0.0167	-0.002
587	SLU 14	-0.92	0.01	72.78	-0.0765	0.0171	-0.0036
587	SLU 15	-0.92	-0.07	72.79	-0.0756	0.0172	-0.0027
587	SLU 16	-0.91	0.01	72.21	-0.0758	0.017	-0.0036
587	SLU 17	-0.91	-0.07	72.22	-0.0749	0.017	-0.0027

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
587	SLU 18	-0.89	0.03	73.48	-0.0779	0.0165	-0.0039
587	SLU 19	-0.89	-0.05	73.49	-0.077	0.0165	-0.003
587	SLU 20	-0.91	0.04	74.44	-0.0783	0.0168	-0.004
587	SLU 21	-0.91	-0.05	74.45	-0.0774	0.0168	-0.0031
587	SLU 22	-0.92	0.01	70.35	-0.0689	0.0169	-0.0032
587	SLU 23	-0.93	-0.13	70.36	-0.0673	0.0169	-0.0017
587	SLU 24	-0.95	0.02	71.87	-0.0699	0.0174	-0.0033
587	SLU 25	-0.95	-0.06	71.88	-0.069	0.0174	-0.0024
587	SLU 26	-0.94	-0.12	71.32	-0.0677	0.0173	-0.0018
587	SLU 27	-0.96	0.03	72.83	-0.0702	0.0177	-0.0035
587	SLU 28	-0.96	-0.06	72.84	-0.0693	0.0177	-0.0025
587	SLU 29	-0.96	0.03	72.26	-0.0695	0.0175	-0.0035
587	SLU 30	-0.96	-0.06	72.27	-0.0686	0.0176	-0.0026
587	SLU 31	-0.95	-0.05	77.79	-0.0738	0.0173	-0.0029
587	SLU 32	-0.97	0.1	79.29	-0.0764	0.0177	-0.0046
587	SLU 33	-0.97	0.02	79.3	-0.0754	0.0177	-0.0036
587	SLU 34	-0.96	-0.04	78.74	-0.0741	0.0176	-0.003
587	SLU 35	-0.98	0.11	80.25	-0.0767	0.018	-0.0047
587	SLU 36	-0.98	0.02	80.26	-0.0758	0.018	-0.0037
587	SLU 37	-0.98	0.11	79.69	-0.076	0.0179	-0.0047
587	SLU 38	-0.98	0.02	79.69	-0.0751	0.0179	-0.0038
587	SLU 39	-0.95	0.12	80.95	-0.0781	0.0173	-0.005
587	SLU 40	-0.96	0.04	80.96	-0.0772	0.0174	-0.004
587	SLU 41	-0.97	0.13	81.91	-0.0784	0.0177	-0.0051
587	SLU 42	-0.97	0.05	81.92	-0.0775	0.0177	-0.0042
587	SLU 43	-1.1	-0.14	79.18	-0.0893	0.0205	-0.0025
587	SLU 44	-1.1	-0.28	79.19	-0.0877	0.0206	-0.0009
587	SLU 45	-1.12	-0.14	80.7	-0.0903	0.021	-0.0026
587	SLU 46	-1.12	-0.22	80.71	-0.0894	0.021	-0.0016
587	SLU 47	-1.11	-0.27	80.15	-0.0881	0.0209	-0.001
587	SLU 48	-1.13	-0.13	81.66	-0.0906	0.0213	-0.0027
587	SLU 49	-1.13	-0.21	81.67	-0.0897	0.0213	-0.0018
587	SLU 50	-1.13	-0.13	81.09	-0.0899	0.0212	-0.0027
587	SLU 51	-1.13	-0.21	81.1	-0.089	0.0212	-0.0018
587	SLU 52	-1.12	-0.2	86.62	-0.0942	0.0209	-0.0021
587	SLU 53	-1.14	-0.06	88.12	-0.0968	0.0213	-0.0038
587	SLU 54	-1.14	-0.14	88.13	-0.0958	0.0213	-0.0028
587	SLU 55	-1.13	-0.19	87.57	-0.0945	0.0212	-0.0022
587	SLU 56	-1.15	-0.05	89.08	-0.0971	0.0216	-0.0039
587	SLU 57	-1.16	-0.13	89.09	-0.0962	0.0217	-0.003
587	SLU 58	-1.15	-0.05	88.52	-0.0964	0.0215	-0.0039
587	SLU 59	-1.15	-0.13	88.52	-0.0955	0.0215	-0.003
587	SLU 60	-1.13	-0.03	89.78	-0.0985	0.021	-0.0042
587	SLU 61	-1.13	-0.11	89.79	-0.0976	0.021	-0.0033
587	SLU 62	-1.14	-0.02	90.74	-0.0988	0.0213	-0.0043
587	SLU 63	-1.14	-0.11	90.75	-0.0979	0.0213	-0.0034
587	SLU 64	-1.16	-0.05	86.65	-0.0894	0.0214	-0.0035
587	SLU 65	-1.16	-0.18	86.66	-0.0879	0.0215	-0.002
587	SLU 66	-1.18	-0.04	88.17	-0.0904	0.0219	-0.0036
587	SLU 67	-1.18	-0.12	88.18	-0.0895	0.0219	-0.0027
587	SLU 68	-1.18	-0.18	87.62	-0.0882	0.0218	-0.0021
587	SLU 69	-1.2	-0.03	89.13	-0.0908	0.0222	-0.0038
587	SLU 70	-1.2	-0.11	89.14	-0.0899	0.0222	-0.0028
587	SLU 71	-1.19	-0.03	88.56	-0.0901	0.022	-0.0038
587	SLU 72	-1.19	-0.11	88.57	-0.0892	0.0221	-0.0028
587	SLU 73	-1.18	-0.11	94.09	-0.0944	0.0218	-0.0032
587	SLU 74	-1.2	0.04	95.59	-0.0969	0.0222	-0.0048
587	SLU 75	-1.2	-0.04	95.6	-0.096	0.0222	-0.0039
587	SLU 76	-1.2	-0.1	95.04	-0.0947	0.0221	-0.0033
587	SLU 77	-1.22	0.05	96.55	-0.0973	0.0225	-0.005
587	SLU 78	-1.22	-0.04	96.56	-0.0963	0.0225	-0.004
587	SLU 79	-1.21	0.05	95.99	-0.0966	0.0224	-0.005
587	SLU 80	-1.21	-0.04	96	-0.0956	0.0224	-0.0041
587	SLU 81	-1.19	0.07	97.25	-0.0987	0.0219	-0.0053
587	SLU 82	-1.19	-0.02	97.26	-0.0977	0.0219	-0.0043
587	SLU 83	-1.21	0.07	98.21	-0.099	0.0222	-0.0054
587	SLU 84	-1.21	-0.01	98.22	-0.0981	0.0222	-0.0044
587	SLE RA 1	-0.88	-0.06	65.01	-0.0687	0.0163	-0.0025
587	SLE RA 2	-0.88	-0.15	65.02	-0.0677	0.0163	-0.0014
587	SLE RA 3	-0.89	-0.05	66.03	-0.0694	0.0166	-0.0025
587	SLE RA 4	-0.89	-0.11	66.03	-0.0688	0.0166	-0.0019
587	SLE RA 5	-0.89	-0.14	65.66	-0.0679	0.0165	-0.0015
587	SLE RA 6	-0.9	-0.05	66.66	-0.0697	0.0168	-0.0026
587	SLE RA 7	-0.9	-0.1	66.67	-0.069	0.0168	-0.002
587	SLE RA 8	-0.9	-0.05	66.29	-0.0692	0.0167	-0.0026
587	SLE RA 9	-0.9	-0.1	66.29	-0.0686	0.0167	-0.002
587	SLE RA 10	-0.89	-0.1	69.97	-0.072	0.0165	-0.0022
587	SLE RA 11	-0.91	0	70.97	-0.0737	0.0168	-0.0034
587	SLE RA 12	-0.91	-0.05	70.98	-0.0731	0.0168	-0.0027
587	SLE RA 13	-0.9	-0.09	70.61	-0.0723	0.0167	-0.0023
587	SLE RA 14	-0.92	0.01	71.61	-0.074	0.017	-0.0034
587	SLE RA 15	-0.92	-0.05	71.62	-0.0734	0.017	-0.0028
587	SLE RA 16	-0.91	0.01	71.24	-0.0735	0.0169	-0.0035
587	SLE RA 17	-0.91	-0.05	71.24	-0.0729	0.0169	-0.0028
587	SLE RA 18	-0.9	0.02	72.08	-0.0749	0.0166	-0.0036
587	SLE RA 19	-0.9	-0.04	72.09	-0.0743	0.0166	-0.003
587	SLE RA 20	-0.91	0.02	72.72	-0.0751	0.0168	-0.0037
587	SLE RA 21	-0.91	-0.03	72.73	-0.0745	0.0168	-0.0031
587	SLE FR 1	-0.88	-0.06	65.01	-0.0687	0.0163	-0.0025
587	SLE FR 2	-0.88	-0.08	65.01	-0.0685	0.0163	-0.0023

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
587	SLE FR 3	-0.88	-0.05	65.27	-0.0688	0.0164	-0.0025
587	SLE FR 4	-0.88	-0.05	67.13	-0.0704	0.0164	-0.0026
587	SLE FR 5	-0.89	-0.03	67.39	-0.0707	0.0164	-0.0029
587	SLE FR 6	-0.89	-0.02	68.55	-0.0718	0.0164	-0.0031
587	SLE QP 1	-0.88	-0.06	65.01	-0.0687	0.0163	-0.0025
587	SLE QP 2	-0.88	-0.03	67.13	-0.0706	0.0164	-0.0028
587	SLD 1	3.75	0.82	85.1	-0.1641	0.0508	-0.0143
587	SLD 2	3.74	-0.06	85.16	-0.1471	0.0511	-0.0028
587	SLD 3	3.66	-1.22	85.42	-0.1505	0.0526	0.0044
587	SLD 4	3.66	-2.1	85.48	-0.1336	0.053	0.0159
587	SLD 5	0.63	3.48	72.02	-0.1223	0.0238	-0.0368
587	SLD 6	0.63	2.9	72.07	-0.1111	0.024	-0.0292
587	SLD 7	0.35	-3.33	73.09	-0.0771	0.03	0.0257
587	SLD 8	0.35	-3.92	73.14	-0.0658	0.0302	0.0333
587	SLD 9	-2.12	3.85	61.13	-0.0754	0.0025	-0.039
587	SLD 10	-2.12	3.26	61.17	-0.0641	0.0027	-0.0314
587	SLD 11	-2.4	-2.97	62.2	-0.0301	0.0087	0.0235
587	SLD 12	-2.4	-3.55	62.24	-0.0189	0.0089	0.0312
587	SLD 13	-5.43	2.03	48.78	-0.0076	-0.0202	-0.0216
587	SLD 14	-5.43	1.15	48.85	0.0093	-0.0199	-0.0101
587	SLD 15	-5.51	-0.01	49.1	0.0059	-0.0184	-0.0028
587	SLD 16	-5.52	-0.89	49.17	0.0229	-0.0181	0.0087
587	SLV 1	9.94	1.89	109.17	-0.2891	0.097	-0.029
587	SLV 2	9.93	-0.16	109.32	-0.2496	0.0977	-0.0022
587	SLV 3	9.75	-2.74	109.91	-0.2576	0.1012	0.0134
587	SLV 4	9.74	-4.79	110.07	-0.2181	0.102	0.0402
587	SLV 5	2.66	7.92	78.58	-0.1908	0.034	-0.0797
587	SLV 6	2.65	6.58	78.68	-0.1651	0.0344	-0.0623
587	SLV 7	2.01	-7.5	81.07	-0.0859	0.0481	0.0617
587	SLV 8	2	-8.84	81.18	-0.0602	0.0486	0.0792
587	SLV 9	-3.77	8.77	53.09	-0.081	-0.0159	-0.0848
587	SLV 10	-3.78	7.43	53.19	-0.0553	-0.0154	-0.0673
587	SLV 11	-4.42	-6.65	55.58	0.0239	-0.0017	0.0566
587	SLV 12	-4.43	-7.99	55.68	0.0496	-0.0012	0.0741
587	SLV 13	-11.5	4.72	24.19	0.077	-0.0692	-0.0459
587	SLV 14	-11.52	2.67	24.35	0.1164	-0.0685	-0.0191
587	SLV 15	-11.7	0.09	24.94	0.1084	-0.065	-0.0034
587	SLV 16	-11.71	-1.96	25.1	0.1479	-0.0642	0.0234
587	CRTFP Ux+	0	0	0	0	0	0
587	CRTFP Ux-	0	0	0	0	0	0
587	CRTFP Uy+	0	0	0	0	0	0
587	CRTFP Uy-	0	0	0	0	0	0
588	SLU 1	-0.85	-0.1	62.38	-0.0735	0.0135	-0.0057
588	SLU 2	-0.86	-0.23	62.39	-0.072	0.0136	-0.0041
588	SLU 3	-0.88	-0.1	63.89	-0.0746	0.0139	-0.0059
588	SLU 4	-0.88	-0.18	63.89	-0.0737	0.0139	-0.0049
588	SLU 5	-0.87	-0.23	63.34	-0.0724	0.0138	-0.0043
588	SLU 6	-0.89	-0.09	64.83	-0.075	0.0142	-0.0061
588	SLU 7	-0.89	-0.17	64.84	-0.0741	0.0142	-0.0051
588	SLU 8	-0.89	-0.09	64.27	-0.0742	0.0141	-0.0061
588	SLU 9	-0.89	-0.17	64.28	-0.0733	0.0141	-0.0051
588	SLU 10	-0.88	-0.16	69.81	-0.0789	0.0136	-0.0057
588	SLU 11	-0.9	-0.03	71.3	-0.0815	0.014	-0.0075
588	SLU 12	-0.9	-0.1	71.31	-0.0806	0.014	-0.0066
588	SLU 13	-0.89	-0.16	70.76	-0.0793	0.0139	-0.0059
588	SLU 14	-0.91	-0.02	72.25	-0.0819	0.0143	-0.0077
588	SLU 15	-0.91	-0.1	72.26	-0.081	0.0143	-0.0068
588	SLU 16	-0.91	-0.02	71.69	-0.0811	0.0141	-0.0077
588	SLU 17	-0.91	-0.1	71.7	-0.0802	0.0142	-0.0068
588	SLU 18	-0.88	0	72.98	-0.0833	0.0136	-0.008
588	SLU 19	-0.89	-0.08	72.98	-0.0824	0.0136	-0.0071
588	SLU 20	-0.9	0	73.92	-0.0837	0.0139	-0.0082
588	SLU 21	-0.9	-0.07	73.93	-0.0828	0.0139	-0.0073
588	SLU 22	-0.92	-0.01	69.82	-0.0738	0.0141	-0.0071
588	SLU 23	-0.92	-0.14	69.84	-0.0723	0.0142	-0.0055
588	SLU 24	-0.94	-0.01	71.33	-0.0749	0.0145	-0.0073
588	SLU 25	-0.94	-0.09	71.34	-0.074	0.0146	-0.0064
588	SLU 26	-0.94	-0.14	70.79	-0.0727	0.0144	-0.0057
588	SLU 27	-0.96	0	72.28	-0.0753	0.0148	-0.0075
588	SLU 28	-0.96	-0.08	72.29	-0.0744	0.0148	-0.0066
588	SLU 29	-0.95	0	71.72	-0.0745	0.0147	-0.0075
588	SLU 30	-0.95	-0.08	71.73	-0.0736	0.0147	-0.0065
588	SLU 31	-0.94	-0.07	77.26	-0.0792	0.0142	-0.0072
588	SLU 32	-0.96	0.06	78.75	-0.0818	0.0146	-0.009
588	SLU 33	-0.96	-0.01	78.76	-0.0809	0.0146	-0.008
588	SLU 34	-0.96	-0.07	78.2	-0.0796	0.0145	-0.0074
588	SLU 35	-0.98	0.07	79.7	-0.0822	0.0149	-0.0092
588	SLU 36	-0.98	-0.01	79.71	-0.0813	0.0149	-0.0082
588	SLU 37	-0.97	0.07	79.14	-0.0814	0.0147	-0.0092
588	SLU 38	-0.97	-0.01	79.15	-0.0805	0.0148	-0.0082
588	SLU 39	-0.95	0.09	80.42	-0.0837	0.0142	-0.0095
588	SLU 40	-0.95	0.01	80.43	-0.0828	0.0142	-0.0085
588	SLU 41	-0.96	0.09	81.37	-0.084	0.0145	-0.0097
588	SLU 42	-0.97	0.02	81.38	-0.0831	0.0145	-0.0087
588	SLU 43	-1.09	-0.17	78.54	-0.0954	0.0174	-0.0069
588	SLU 44	-1.09	-0.3	78.55	-0.0939	0.0174	-0.0053
588	SLU 45	-1.11	-0.16	80.05	-0.0965	0.0178	-0.0071
588	SLU 46	-1.11	-0.24	80.05	-0.0956	0.0178	-0.0061
588	SLU 47	-1.11	-0.29	79.5	-0.0943	0.0177	-0.0055
588	SLU 48	-1.13	-0.15	80.99	-0.0969	0.018	-0.0073

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
588	SLU 49	-1.13	-0.23	81	-0.096	0.0181	-0.0063
588	SLU 50	-1.12	-0.15	80.43	-0.0962	0.0179	-0.0073
588	SLU 51	-1.12	-0.23	80.44	-0.0953	0.0179	-0.0063
588	SLU 52	-1.11	-0.23	85.97	-0.1008	0.0175	-0.007
588	SLU 53	-1.13	-0.09	87.46	-0.1034	0.0178	-0.0087
588	SLU 54	-1.13	-0.17	87.47	-0.1025	0.0179	-0.0078
588	SLU 55	-1.13	-0.22	86.92	-0.1012	0.0177	-0.0071
588	SLU 56	-1.15	-0.08	88.41	-0.1038	0.0181	-0.0089
588	SLU 57	-1.15	-0.16	88.42	-0.1029	0.0181	-0.008
588	SLU 58	-1.14	-0.08	87.85	-0.1031	0.018	-0.0089
588	SLU 59	-1.14	-0.16	87.86	-0.1022	0.018	-0.008
588	SLU 60	-1.12	-0.07	89.14	-0.1053	0.0175	-0.0093
588	SLU 61	-1.12	-0.14	89.15	-0.1044	0.0175	-0.0083
588	SLU 62	-1.13	-0.06	90.08	-0.1057	0.0177	-0.0094
588	SLU 63	-1.14	-0.14	90.09	-0.1048	0.0178	-0.0085
588	SLU 64	-1.15	-0.08	85.99	-0.0957	0.018	-0.0083
588	SLU 65	-1.15	-0.21	86	-0.0942	0.018	-0.0068
588	SLU 66	-1.18	-0.07	87.49	-0.0968	0.0184	-0.0085
588	SLU 67	-1.18	-0.15	87.5	-0.0959	0.0184	-0.0076
588	SLU 68	-1.17	-0.2	86.95	-0.0946	0.0183	-0.0069
588	SLU 69	-1.19	-0.06	88.44	-0.0972	0.0187	-0.0087
588	SLU 70	-1.19	-0.14	88.45	-0.0963	0.0187	-0.0078
588	SLU 71	-1.18	-0.06	87.88	-0.0965	0.0185	-0.0087
588	SLU 72	-1.19	-0.14	87.89	-0.0956	0.0186	-0.0078
588	SLU 73	-1.18	-0.14	93.42	-0.1011	0.0181	-0.0084
588	SLU 74	-1.2	0	94.91	-0.1037	0.0184	-0.0102
588	SLU 75	-1.2	-0.08	94.92	-0.1028	0.0185	-0.0092
588	SLU 76	-1.19	-0.13	94.36	-0.1015	0.0184	-0.0086
588	SLU 77	-1.21	0.01	95.86	-0.1041	0.0187	-0.0104
588	SLU 78	-1.21	-0.07	95.87	-0.1032	0.0187	-0.0094
588	SLU 79	-1.21	0.01	95.3	-0.1034	0.0186	-0.0104
588	SLU 80	-1.21	-0.07	95.31	-0.1025	0.0186	-0.0094
588	SLU 81	-1.18	0.03	96.58	-0.1056	0.0181	-0.0107
588	SLU 82	-1.18	-0.05	96.59	-0.1047	0.0181	-0.0097
588	SLU 83	-1.2	0.03	97.53	-0.106	0.0183	-0.0109
588	SLU 84	-1.2	-0.05	97.54	-0.1051	0.0184	-0.0099
588	SLE RA 1	-0.87	-0.08	64.51	-0.0736	0.0137	-0.0061
588	SLE RA 2	-0.87	-0.17	64.51	-0.0726	0.0137	-0.005
588	SLE RA 3	-0.89	-0.07	65.51	-0.0743	0.014	-0.0062
588	SLE RA 4	-0.89	-0.13	65.52	-0.0737	0.014	-0.0056
588	SLE RA 5	-0.88	-0.16	65.15	-0.0728	0.0139	-0.0052
588	SLE RA 6	-0.9	-0.07	66.14	-0.0746	0.0141	-0.0063
588	SLE RA 7	-0.9	-0.12	66.15	-0.074	0.0142	-0.0057
588	SLE RA 8	-0.89	-0.07	65.77	-0.0741	0.0141	-0.0063
588	SLE RA 9	-0.89	-0.12	65.77	-0.0735	0.0141	-0.0057
588	SLE RA 10	-0.89	-0.12	69.46	-0.0772	0.0138	-0.0061
588	SLE RA 11	-0.9	-0.03	70.46	-0.0789	0.014	-0.0073
588	SLE RA 12	-0.9	-0.08	70.46	-0.0783	0.014	-0.0067
588	SLE RA 13	-0.9	-0.11	70.09	-0.0774	0.0139	-0.0063
588	SLE RA 14	-0.91	-0.02	71.09	-0.0792	0.0142	-0.0074
588	SLE RA 15	-0.91	-0.07	71.09	-0.0786	0.0142	-0.0068
588	SLE RA 16	-0.91	-0.02	70.71	-0.0787	0.0141	-0.0074
588	SLE RA 17	-0.91	-0.07	70.72	-0.0781	0.0141	-0.0068
588	SLE RA 18	-0.89	-0.01	71.57	-0.0801	0.0138	-0.0077
588	SLE RA 19	-0.89	-0.06	71.58	-0.0795	0.0138	-0.007
588	SLE RA 20	-0.9	-0.01	72.2	-0.0804	0.0139	-0.0078
588	SLE RA 21	-0.9	-0.06	72.21	-0.0798	0.014	-0.0072
588	SLE FR 1	-0.87	-0.08	64.51	-0.0736	0.0137	-0.0061
588	SLE FR 2	-0.87	-0.1	64.51	-0.0734	0.0137	-0.0059
588	SLE FR 3	-0.88	-0.08	64.76	-0.0737	0.0138	-0.0061
588	SLE FR 4	-0.88	-0.08	66.63	-0.0753	0.0137	-0.0064
588	SLE FR 5	-0.88	-0.06	66.88	-0.0756	0.0138	-0.0066
588	SLE FR 6	-0.88	-0.05	68.04	-0.0769	0.0137	-0.0069
588	SLE QP 1	-0.87	-0.08	64.51	-0.0736	0.0137	-0.0061
588	SLE QP 2	-0.88	-0.06	66.63	-0.0755	0.0137	-0.0066
588	SLD 1	3.76	0.74	83.39	-0.1723	0.047	-0.0188
588	SLD 2	3.76	-0.09	83.45	-0.1555	0.0473	-0.0074
588	SLD 3	3.68	-1.22	83.74	-0.158	0.0487	0.0003
588	SLD 4	3.67	-2.04	83.79	-0.1411	0.0489	0.0116
588	SLD 5	0.64	3.29	71.13	-0.1294	0.0212	-0.0412
588	SLD 6	0.64	2.74	71.16	-0.1182	0.0213	-0.0337
588	SLD 7	0.36	-3.21	72.27	-0.0816	0.0266	0.0223
588	SLD 8	0.36	-3.76	72.31	-0.0704	0.0268	0.0299
588	SLD 9	-2.12	3.64	60.94	-0.0807	0.0006	-0.043
588	SLD 10	-2.12	3.1	60.98	-0.0695	0.0008	-0.0355
588	SLD 11	-2.4	-2.86	62.09	-0.0329	0.0061	0.0205
588	SLD 12	-2.4	-3.4	62.13	-0.0217	0.0062	0.0281
588	SLD 13	-5.43	1.92	49.46	-0.0099	-0.0215	-0.0248
588	SLD 14	-5.43	1.1	49.51	0.0069	-0.0213	-0.0134
588	SLD 15	-5.51	-0.03	49.8	0.0044	-0.0199	-0.0057
588	SLD 16	-5.52	-0.85	49.86	0.0212	-0.0196	0.0057
588	SLV 1	9.97	1.72	105.86	-0.3017	0.0917	-0.0344
588	SLV 2	9.96	-0.2	105.99	-0.2624	0.0923	-0.0079
588	SLV 3	9.77	-2.69	106.66	-0.2685	0.0955	0.0087
588	SLV 4	9.76	-4.61	106.79	-0.2292	0.0961	0.0352
588	SLV 5	2.67	7.5	77.16	-0.2007	0.0313	-0.085
588	SLV 6	2.66	6.25	77.24	-0.1751	0.0317	-0.0677
588	SLV 7	2.02	-7.2	79.82	-0.09	0.0439	0.0588
588	SLV 8	2.02	-8.45	79.91	-0.0644	0.0442	0.076
588	SLV 9	-3.78	8.34	53.34	-0.0867	-0.0168	-0.0892

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
588	SLV 10	-3.78	7.08	53.43	-0.0611	-0.0164	-0.0719
588	SLV 11	-4.42	-6.37	56.01	0.024	-0.0042	0.0546
588	SLV 12	-4.43	-7.62	56.09	0.0496	-0.0039	0.0719
588	SLV 13	-11.52	4.5	26.46	0.0781	-0.0686	-0.0484
588	SLV 14	-11.53	2.58	26.6	0.1174	-0.0681	-0.0218
588	SLV 15	-11.71	0.09	27.26	0.1114	-0.0649	-0.0052
588	SLV 16	-11.72	-1.83	27.4	0.1506	-0.0643	0.0213
588	CRTFP Ux+	0	0	0	0	0	0
588	CRTFP Ux-	0	0	0	0	0	0
588	CRTFP Uy+	0	0	0	0	0	0
588	CRTFP Uy-	0	0	0	0	0	0
589	SLU 1	-0.85	-0.14	61.92	-0.0785	0.0136	-0.0086
589	SLU 2	-0.85	-0.26	61.93	-0.077	0.0137	-0.007
589	SLU 3	-0.87	-0.14	63.41	-0.0797	0.014	-0.0088
589	SLU 4	-0.87	-0.21	63.42	-0.0788	0.014	-0.0079
589	SLU 5	-0.86	-0.26	62.87	-0.0774	0.0139	-0.0073
589	SLU 6	-0.88	-0.13	64.35	-0.0801	0.0143	-0.0091
589	SLU 7	-0.88	-0.2	64.36	-0.0792	0.0143	-0.0081
589	SLU 8	-0.88	-0.13	63.79	-0.0793	0.0142	-0.009
589	SLU 9	-0.88	-0.2	63.8	-0.0784	0.0142	-0.0081
589	SLU 10	-0.87	-0.2	69.34	-0.0844	0.0138	-0.009
589	SLU 11	-0.89	-0.07	70.83	-0.087	0.0142	-0.0108
589	SLU 12	-0.89	-0.15	70.83	-0.0862	0.0142	-0.0099
589	SLU 13	-0.88	-0.2	70.28	-0.0848	0.0141	-0.0092
589	SLU 14	-0.9	-0.07	71.76	-0.0875	0.0144	-0.011
589	SLU 15	-0.91	-0.14	71.77	-0.0866	0.0145	-0.0101
589	SLU 16	-0.9	-0.07	71.21	-0.0867	0.0143	-0.011
589	SLU 17	-0.9	-0.14	71.21	-0.0858	0.0143	-0.0101
589	SLU 18	-0.88	-0.05	72.51	-0.089	0.0139	-0.0114
589	SLU 19	-0.88	-0.13	72.52	-0.0881	0.0139	-0.0105
589	SLU 20	-0.89	-0.05	73.45	-0.0894	0.0141	-0.0116
589	SLU 21	-0.89	-0.12	73.46	-0.0885	0.0141	-0.0107
589	SLU 22	-0.91	-0.06	69.34	-0.0789	0.0143	-0.0103
589	SLU 23	-0.91	-0.18	69.35	-0.0775	0.0143	-0.0087
589	SLU 24	-0.93	-0.05	70.84	-0.0801	0.0147	-0.0106
589	SLU 25	-0.93	-0.13	70.84	-0.0793	0.0147	-0.0096
589	SLU 26	-0.93	-0.18	70.29	-0.0779	0.0146	-0.009
589	SLU 27	-0.95	-0.05	71.77	-0.0806	0.015	-0.0108
589	SLU 28	-0.95	-0.12	71.78	-0.0797	0.015	-0.0098
589	SLU 29	-0.94	-0.05	71.22	-0.0798	0.0148	-0.0108
589	SLU 30	-0.94	-0.12	71.22	-0.0789	0.0149	-0.0098
589	SLU 31	-0.93	-0.12	76.77	-0.0848	0.0145	-0.0107
589	SLU 32	-0.95	0.01	78.25	-0.0875	0.0149	-0.0125
589	SLU 33	-0.95	-0.06	78.26	-0.0866	0.0149	-0.0116
589	SLU 34	-0.95	-0.11	77.71	-0.0853	0.0148	-0.0109
589	SLU 35	-0.97	0.01	79.19	-0.0879	0.0151	-0.0128
589	SLU 36	-0.97	-0.06	79.2	-0.087	0.0151	-0.0118
589	SLU 37	-0.96	0.01	78.63	-0.0871	0.015	-0.0127
589	SLU 38	-0.96	-0.06	78.64	-0.0863	0.015	-0.0118
589	SLU 39	-0.94	0.03	79.94	-0.0895	0.0145	-0.0131
589	SLU 40	-0.94	-0.04	79.94	-0.0886	0.0146	-0.0122
589	SLU 41	-0.96	0.04	80.87	-0.0899	0.0148	-0.0133
589	SLU 42	-0.96	-0.04	80.88	-0.089	0.0148	-0.0124
589	SLU 43	-1.08	-0.21	77.95	-0.1019	0.0175	-0.0106
589	SLU 44	-1.08	-0.33	77.96	-0.1004	0.0175	-0.009
589	SLU 45	-1.1	-0.21	79.44	-0.1031	0.0179	-0.0108
589	SLU 46	-1.1	-0.28	79.45	-0.1022	0.0179	-0.0099
589	SLU 47	-1.1	-0.33	78.9	-0.1008	0.0178	-0.0092
589	SLU 48	-1.12	-0.2	80.38	-0.1035	0.0181	-0.0111
589	SLU 49	-1.12	-0.27	80.38	-0.1026	0.0182	-0.0101
589	SLU 50	-1.11	-0.2	79.82	-0.1027	0.018	-0.011
589	SLU 51	-1.11	-0.27	79.83	-0.1018	0.018	-0.0101
589	SLU 52	-1.1	-0.27	85.37	-0.1078	0.0177	-0.011
589	SLU 53	-1.12	-0.14	86.86	-0.1104	0.018	-0.0128
589	SLU 54	-1.12	-0.22	86.86	-0.1095	0.0181	-0.0119
589	SLU 55	-1.12	-0.27	86.31	-0.1082	0.0179	-0.0112
589	SLU 56	-1.14	-0.14	87.79	-0.1108	0.0183	-0.013
589	SLU 57	-1.14	-0.21	87.8	-0.11	0.0183	-0.0121
589	SLU 58	-1.13	-0.14	87.24	-0.1101	0.0182	-0.013
589	SLU 59	-1.13	-0.21	87.24	-0.1092	0.0182	-0.0121
589	SLU 60	-1.11	-0.12	88.54	-0.1124	0.0177	-0.0134
589	SLU 61	-1.11	-0.2	88.55	-0.1115	0.0177	-0.0125
589	SLU 62	-1.12	-0.12	89.48	-0.1128	0.018	-0.0136
589	SLU 63	-1.12	-0.19	89.48	-0.1119	0.018	-0.0127
589	SLU 64	-1.14	-0.13	85.37	-0.1023	0.0182	-0.0123
589	SLU 65	-1.14	-0.25	85.38	-0.1009	0.0182	-0.0107
589	SLU 66	-1.16	-0.12	86.86	-0.1035	0.0186	-0.0125
589	SLU 67	-1.16	-0.2	86.87	-0.1027	0.0186	-0.0116
589	SLU 68	-1.16	-0.25	86.32	-0.1013	0.0185	-0.011
589	SLU 69	-1.18	-0.12	87.8	-0.1039	0.0188	-0.0128
589	SLU 70	-1.18	-0.19	87.81	-0.1031	0.0188	-0.0118
589	SLU 71	-1.17	-0.12	87.25	-0.1032	0.0187	-0.0127
589	SLU 72	-1.17	-0.19	87.25	-0.1023	0.0187	-0.0118
589	SLU 73	-1.16	-0.19	92.8	-0.1082	0.0184	-0.0127
589	SLU 74	-1.18	-0.06	94.28	-0.1109	0.0187	-0.0145
589	SLU 75	-1.19	-0.13	94.29	-0.11	0.0187	-0.0136
589	SLU 76	-1.18	-0.18	93.74	-0.1086	0.0186	-0.0129
589	SLU 77	-1.2	-0.06	95.22	-0.1113	0.019	-0.0147
589	SLU 78	-1.2	-0.13	95.23	-0.1104	0.019	-0.0138
589	SLU 79	-1.19	-0.06	94.66	-0.1105	0.0189	-0.0147

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
589	SLU 80	-1.19	-0.13	94.67	-0.1096	0.0189	-0.0138
589	SLU 81	-1.17	-0.04	95.96	-0.1128	0.0184	-0.0151
589	SLU 82	-1.17	-0.11	95.97	-0.112	0.0184	-0.0142
589	SLU 83	-1.19	-0.03	96.9	-0.1133	0.0187	-0.0153
589	SLU 84	-1.19	-0.11	96.91	-0.1124	0.0187	-0.0144
589	SLE RA 1	-0.86	-0.12	64.04	-0.0786	0.0138	-0.0091
589	SLE RA 2	-0.87	-0.2	64.05	-0.0776	0.0138	-0.008
589	SLE RA 3	-0.88	-0.11	65.03	-0.0794	0.0141	-0.0092
589	SLE RA 4	-0.88	-0.16	65.04	-0.0788	0.0141	-0.0086
589	SLE RA 5	-0.88	-0.2	64.67	-0.0779	0.014	-0.0082
589	SLE RA 6	-0.89	-0.11	65.66	-0.0797	0.0143	-0.0094
589	SLE RA 7	-0.89	-0.16	65.66	-0.0791	0.0143	-0.0088
589	SLE RA 8	-0.89	-0.11	65.29	-0.0792	0.0142	-0.0094
589	SLE RA 9	-0.89	-0.16	65.29	-0.0786	0.0142	-0.0088
589	SLE RA 10	-0.88	-0.16	68.99	-0.0825	0.014	-0.0093
589	SLE RA 11	-0.89	-0.07	69.98	-0.0843	0.0142	-0.0106
589	SLE RA 12	-0.89	-0.12	69.98	-0.0837	0.0142	-0.0099
589	SLE RA 13	-0.89	-0.15	69.61	-0.0828	0.0141	-0.0095
589	SLE RA 14	-0.9	-0.07	70.6	-0.0846	0.0144	-0.0107
589	SLE RA 15	-0.9	-0.12	70.61	-0.084	0.0144	-0.0101
589	SLE RA 16	-0.9	-0.07	70.23	-0.0841	0.0143	-0.0107
589	SLE RA 17	-0.9	-0.12	70.24	-0.0835	0.0143	-0.0101
589	SLE RA 18	-0.88	-0.06	71.1	-0.0856	0.014	-0.011
589	SLE RA 19	-0.88	-0.11	71.11	-0.085	0.014	-0.0103
589	SLE RA 20	-0.89	-0.05	71.73	-0.0859	0.0142	-0.0111
589	SLE RA 21	-0.9	-0.1	71.73	-0.0853	0.0142	-0.0105
589	SLE FR 1	-0.86	-0.12	64.04	-0.0786	0.0138	-0.0091
589	SLE FR 2	-0.86	-0.13	64.04	-0.0784	0.0138	-0.0089
589	SLE FR 3	-0.87	-0.12	64.29	-0.0787	0.0139	-0.0091
589	SLE FR 4	-0.87	-0.12	66.16	-0.0805	0.0139	-0.0094
589	SLE FR 5	-0.87	-0.1	66.41	-0.0808	0.0139	-0.0097
589	SLE FR 6	-0.87	-0.09	67.57	-0.0821	0.0139	-0.01
589	SLE QP 1	-0.86	-0.12	64.04	-0.0786	0.0138	-0.0091
589	SLE QP 2	-0.87	-0.1	66.16	-0.0807	0.0139	-0.0096
589	SLD 1	3.78	0.62	82.12	-0.181	0.0469	-0.0274
589	SLD 2	3.77	-0.15	82.17	-0.1642	0.0471	-0.0164
589	SLD 3	3.69	-1.23	81.75	-0.1659	0.0483	-0.0088
589	SLD 4	3.69	-2	81.8	-0.1491	0.0485	0.0021
589	SLD 5	0.65	3.07	71.5	-0.1368	0.0216	-0.045
589	SLD 6	0.65	2.56	71.53	-0.1256	0.0217	-0.0378
589	SLD 7	0.37	-3.12	70.27	-0.0865	0.0263	0.0167
589	SLD 8	0.37	-3.63	70.3	-0.0753	0.0264	0.024
589	SLD 9	-2.11	3.43	62.01	-0.0861	0.0013	-0.0433
589	SLD 10	-2.11	2.92	62.05	-0.075	0.0014	-0.036
589	SLD 11	-2.39	-2.76	60.78	-0.0358	0.006	0.0185
589	SLD 12	-2.39	-3.27	60.82	-0.0247	0.0061	0.0258
589	SLD 13	-5.43	1.8	50.51	-0.0123	-0.0207	-0.0214
589	SLD 14	-5.43	1.03	50.56	0.0045	-0.0206	-0.0104
589	SLD 15	-5.51	-0.05	50.14	0.0028	-0.0193	-0.0029
589	SLD 16	-5.52	-0.82	50.19	0.0196	-0.0192	0.0081
589	SLV 1	9.99	1.52	103.5	-0.3152	0.0912	-0.0503
589	SLV 2	9.98	-0.28	103.62	-0.276	0.0916	-0.0248
589	SLV 3	9.8	-2.68	102.64	-0.2801	0.0944	-0.0084
589	SLV 4	9.79	-4.48	102.76	-0.241	0.0948	0.0171
589	SLV 5	2.68	7.07	78.64	-0.2111	0.0321	-0.0899
589	SLV 6	2.68	5.9	78.72	-0.1856	0.0324	-0.0732
589	SLV 7	2.04	-6.93	75.78	-0.0943	0.0428	0.0498
589	SLV 8	2.04	-8.1	75.85	-0.0688	0.0431	0.0664
589	SLV 9	-3.78	7.9	56.46	-0.0927	-0.0154	-0.0857
589	SLV 10	-3.78	6.73	56.54	-0.0671	-0.0151	-0.0691
589	SLV 11	-4.42	-6.1	53.59	0.0241	-0.0046	0.054
589	SLV 12	-4.42	-7.27	53.67	0.0496	-0.0044	0.0706
589	SLV 13	-11.53	4.28	29.56	0.0795	-0.0671	-0.0364
589	SLV 14	-11.54	2.48	29.67	0.1187	-0.0667	-0.0108
589	SLV 15	-11.72	0.08	28.7	0.1146	-0.0638	0.0055
589	SLV 16	-11.73	-1.71	28.81	0.1537	-0.0635	0.0311
589	CRTFP Ux+	0	0	0	0	0	0
589	CRTFP Ux-	0	0	0	0	0	0
589	CRTFP Uy+	0	0	0	0	0	0
589	CRTFP Uy-	0	0	0	0	0	0
590	SLU 1	-0.83	-0.19	61.43	-0.0837	0.0148	-0.0109
590	SLU 2	-0.84	-0.3	61.44	-0.0823	0.0148	-0.0094
590	SLU 3	-0.86	-0.19	62.91	-0.085	0.0152	-0.0112
590	SLU 4	-0.86	-0.25	62.92	-0.0842	0.0152	-0.0103
590	SLU 5	-0.85	-0.3	62.37	-0.0828	0.0151	-0.0097
590	SLU 6	-0.87	-0.18	63.84	-0.0855	0.0155	-0.0114
590	SLU 7	-0.87	-0.25	63.85	-0.0846	0.0155	-0.0106
590	SLU 8	-0.87	-0.18	63.29	-0.0847	0.0153	-0.0114
590	SLU 9	-0.87	-0.25	63.29	-0.0838	0.0154	-0.0105
590	SLU 10	-0.86	-0.25	68.85	-0.0902	0.0152	-0.0116
590	SLU 11	-0.88	-0.13	70.32	-0.0929	0.0156	-0.0134
590	SLU 12	-0.88	-0.2	70.32	-0.092	0.0156	-0.0125
590	SLU 13	-0.87	-0.25	69.78	-0.0906	0.0155	-0.0118
590	SLU 14	-0.89	-0.13	71.25	-0.0934	0.0159	-0.0136
590	SLU 15	-0.89	-0.2	71.25	-0.0925	0.0159	-0.0127
590	SLU 16	-0.89	-0.13	70.69	-0.0925	0.0157	-0.0136
590	SLU 17	-0.89	-0.2	70.7	-0.0917	0.0158	-0.0127
590	SLU 18	-0.86	-0.12	72.01	-0.095	0.0154	-0.014
590	SLU 19	-0.86	-0.18	72.02	-0.0941	0.0154	-0.0131
590	SLU 20	-0.88	-0.11	72.94	-0.0954	0.0156	-0.0143

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
590	SLU 21	-0.88	-0.18	72.95	-0.0946	0.0157	-0.0134
590	SLU 22	-0.9	-0.12	68.83	-0.0844	0.0157	-0.0127
590	SLU 23	-0.9	-0.23	68.84	-0.083	0.0157	-0.0113
590	SLU 24	-0.92	-0.11	70.31	-0.0857	0.0161	-0.0131
590	SLU 25	-0.92	-0.18	70.32	-0.0848	0.0161	-0.0122
590	SLU 26	-0.91	-0.23	69.77	-0.0834	0.016	-0.0115
590	SLU 27	-0.93	-0.11	71.24	-0.0862	0.0164	-0.0133
590	SLU 28	-0.94	-0.18	71.24	-0.0853	0.0164	-0.0124
590	SLU 29	-0.93	-0.11	70.69	-0.0853	0.0162	-0.0133
590	SLU 30	-0.93	-0.18	70.69	-0.0845	0.0162	-0.0124
590	SLU 31	-0.92	-0.18	76.25	-0.0908	0.0161	-0.0134
590	SLU 32	-0.94	-0.06	77.72	-0.0936	0.0165	-0.0152
590	SLU 33	-0.94	-0.13	77.72	-0.0927	0.0165	-0.0143
590	SLU 34	-0.94	-0.17	77.17	-0.0913	0.0164	-0.0137
590	SLU 35	-0.96	-0.06	78.64	-0.094	0.0168	-0.0155
590	SLU 36	-0.96	-0.13	78.65	-0.0932	0.0168	-0.0146
590	SLU 37	-0.95	-0.06	78.09	-0.0932	0.0166	-0.0155
590	SLU 38	-0.95	-0.12	78.1	-0.0923	0.0167	-0.0146
590	SLU 39	-0.93	-0.04	79.41	-0.0956	0.0163	-0.0159
590	SLU 40	-0.93	-0.11	79.42	-0.0948	0.0163	-0.015
590	SLU 41	-0.94	-0.04	80.34	-0.0961	0.0165	-0.0161
590	SLU 42	-0.94	-0.11	80.34	-0.0952	0.0166	-0.0152
590	SLU 43	-1.06	-0.27	77.32	-0.1086	0.0189	-0.0135
590	SLU 44	-1.06	-0.39	77.33	-0.1072	0.0189	-0.012
590	SLU 45	-1.08	-0.27	78.8	-0.1099	0.0193	-0.0138
590	SLU 46	-1.09	-0.34	78.81	-0.1091	0.0193	-0.0129
590	SLU 47	-1.08	-0.38	78.26	-0.1077	0.0192	-0.0123
590	SLU 48	-1.1	-0.26	79.73	-0.1104	0.0196	-0.0141
590	SLU 49	-1.1	-0.33	79.74	-0.1095	0.0196	-0.0132
590	SLU 50	-1.09	-0.26	79.18	-0.1096	0.0195	-0.014
590	SLU 51	-1.09	-0.33	79.19	-0.1087	0.0195	-0.0131
590	SLU 52	-1.09	-0.33	84.74	-0.1151	0.0193	-0.0142
590	SLU 53	-1.1	-0.22	86.21	-0.1178	0.0197	-0.016
590	SLU 54	-1.11	-0.29	86.22	-0.1169	0.0197	-0.0151
590	SLU 55	-1.1	-0.33	85.67	-0.1155	0.0196	-0.0145
590	SLU 56	-1.12	-0.21	87.14	-0.1183	0.02	-0.0163
590	SLU 57	-1.12	-0.28	87.14	-0.1174	0.02	-0.0154
590	SLU 58	-1.11	-0.21	86.59	-0.1174	0.0199	-0.0162
590	SLU 59	-1.12	-0.28	86.59	-0.1165	0.0199	-0.0153
590	SLU 60	-1.09	-0.2	87.9	-0.1199	0.0195	-0.0166
590	SLU 61	-1.09	-0.27	87.91	-0.119	0.0195	-0.0157
590	SLU 62	-1.11	-0.19	88.83	-0.1203	0.0198	-0.0169
590	SLU 63	-1.11	-0.26	88.84	-0.1195	0.0198	-0.016
590	SLU 64	-1.13	-0.2	84.72	-0.1093	0.0198	-0.0154
590	SLU 65	-1.13	-0.31	84.73	-0.1079	0.0198	-0.0139
590	SLU 66	-1.15	-0.19	86.2	-0.1106	0.0202	-0.0157
590	SLU 67	-1.15	-0.26	86.21	-0.1097	0.0202	-0.0148
590	SLU 68	-1.14	-0.31	85.66	-0.1083	0.0201	-0.0142
590	SLU 69	-1.16	-0.19	87.13	-0.1111	0.0205	-0.0159
590	SLU 70	-1.16	-0.26	87.14	-0.1102	0.0205	-0.015
590	SLU 71	-1.16	-0.19	86.58	-0.1102	0.0204	-0.0159
590	SLU 72	-1.16	-0.26	86.59	-0.1094	0.0204	-0.015
590	SLU 73	-1.15	-0.26	92.14	-0.1157	0.0202	-0.0161
590	SLU 74	-1.17	-0.14	93.61	-0.1185	0.0206	-0.0179
590	SLU 75	-1.17	-0.21	93.61	-0.1176	0.0206	-0.017
590	SLU 76	-1.16	-0.26	93.07	-0.1162	0.0205	-0.0163
590	SLU 77	-1.18	-0.14	94.54	-0.1189	0.0209	-0.0181
590	SLU 78	-1.18	-0.21	94.54	-0.1181	0.0209	-0.0172
590	SLU 79	-1.18	-0.14	93.98	-0.1181	0.0208	-0.0181
590	SLU 80	-1.18	-0.21	93.99	-0.1172	0.0208	-0.0172
590	SLU 81	-1.16	-0.12	95.3	-0.1205	0.0204	-0.0185
590	SLU 82	-1.16	-0.19	95.31	-0.1197	0.0204	-0.0176
590	SLU 83	-1.17	-0.12	96.23	-0.121	0.0207	-0.0187
590	SLU 84	-1.17	-0.19	96.24	-0.1201	0.0207	-0.0179
590	SLE RA 1	-0.85	-0.17	63.54	-0.0839	0.015	-0.0114
590	SLE RA 2	-0.85	-0.25	63.55	-0.083	0.0151	-0.0104
590	SLE RA 3	-0.87	-0.17	64.53	-0.0848	0.0153	-0.0116
590	SLE RA 4	-0.87	-0.21	64.54	-0.0842	0.0153	-0.011
590	SLE RA 5	-0.86	-0.24	64.17	-0.0833	0.0152	-0.0106
590	SLE RA 6	-0.88	-0.16	65.15	-0.0851	0.0155	-0.0118
590	SLE RA 7	-0.88	-0.21	65.15	-0.0845	0.0155	-0.0112
590	SLE RA 8	-0.87	-0.16	64.78	-0.0845	0.0154	-0.0118
590	SLE RA 9	-0.87	-0.21	64.79	-0.084	0.0154	-0.0112
590	SLE RA 10	-0.87	-0.21	68.49	-0.0882	0.0153	-0.0119
590	SLE RA 11	-0.88	-0.13	69.47	-0.09	0.0156	-0.0131
590	SLE RA 12	-0.88	-0.18	69.47	-0.0895	0.0156	-0.0125
590	SLE RA 13	-0.88	-0.21	69.11	-0.0885	0.0155	-0.0121
590	SLE RA 14	-0.89	-0.13	70.09	-0.0903	0.0158	-0.0132
590	SLE RA 15	-0.89	-0.17	70.09	-0.0898	0.0158	-0.0127
590	SLE RA 16	-0.89	-0.13	69.72	-0.0898	0.0157	-0.0132
590	SLE RA 17	-0.89	-0.17	69.72	-0.0892	0.0157	-0.0126
590	SLE RA 18	-0.87	-0.12	70.6	-0.0914	0.0154	-0.0135
590	SLE RA 19	-0.87	-0.17	70.6	-0.0908	0.0154	-0.0129
590	SLE RA 20	-0.88	-0.12	71.22	-0.0917	0.0156	-0.0137
590	SLE RA 21	-0.88	-0.16	71.22	-0.0911	0.0156	-0.0131
590	SLE FR 1	-0.85	-0.17	63.54	-0.0839	0.015	-0.0114
590	SLE FR 2	-0.85	-0.18	63.55	-0.0837	0.015	-0.0112
590	SLE FR 3	-0.86	-0.17	63.79	-0.0841	0.0151	-0.0115
590	SLE FR 4	-0.86	-0.17	65.66	-0.086	0.0152	-0.0118
590	SLE FR 5	-0.86	-0.15	65.91	-0.0863	0.0152	-0.0121

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
590	SLE FR 6	-0.86	-0.14	67.07	-0.0877	0.0152	-0.0125
590	SLE QP 1	-0.85	-0.17	63.54	-0.0839	0.015	-0.0114
590	SLE QP 2	-0.86	-0.15	65.66	-0.0862	0.0151	-0.012
590	SLD 1	3.8	0.5	80.48	-0.1903	0.0482	-0.0292
590	SLD 2	3.79	-0.22	80.53	-0.1735	0.0483	-0.0188
590	SLD 3	3.71	-1.27	80.09	-0.1744	0.0493	-0.0119
590	SLD 4	3.71	-1.99	80.14	-0.1576	0.0494	-0.0015
590	SLD 5	0.66	2.85	70.7	-0.1445	0.0233	-0.0453
590	SLD 6	0.66	2.38	70.73	-0.1334	0.0234	-0.0384
590	SLD 7	0.39	-3.04	69.38	-0.0916	0.0271	0.0124
590	SLD 8	0.39	-3.52	69.42	-0.0805	0.0272	0.0192
590	SLD 9	-2.1	3.21	61.91	-0.0919	0.0031	-0.0433
590	SLD 10	-2.11	2.73	61.94	-0.0807	0.0032	-0.0364
590	SLD 11	-2.38	-2.68	60.6	-0.039	0.0069	0.0144
590	SLD 12	-2.38	-3.16	60.63	-0.0278	0.007	0.0212
590	SLD 13	-5.43	1.68	51.19	-0.0147	-0.0192	-0.0225
590	SLD 14	-5.43	0.96	51.23	0.002	-0.019	-0.0122
590	SLD 15	-5.51	-0.09	50.79	0.0011	-0.018	-0.0052
590	SLD 16	-5.51	-0.8	50.84	0.0179	-0.0179	0.0051
590	SLV 1	10.02	1.29	100.34	-0.3294	0.0925	-0.0514
590	SLV 2	10.02	-0.38	100.44	-0.2904	0.0928	-0.0273
590	SLV 3	9.83	-2.7	99.42	-0.2926	0.0951	-0.0123
590	SLV 4	9.83	-4.37	99.53	-0.2535	0.0954	0.0118
590	SLV 5	2.7	6.64	77.43	-0.2219	0.0343	-0.0875
590	SLV 6	2.69	5.55	77.5	-0.1965	0.0345	-0.0718
590	SLV 7	2.06	-6.69	74.38	-0.0991	0.0431	0.043
590	SLV 8	2.06	-7.78	74.45	-0.0736	0.0432	0.0587
590	SLV 9	-3.77	7.47	56.87	-0.0987	-0.013	-0.0828
590	SLV 10	-3.78	6.38	56.94	-0.0733	-0.0128	-0.0671
590	SLV 11	-4.41	-5.86	53.82	0.0241	-0.0042	0.0477
590	SLV 12	-4.41	-6.95	53.89	0.0496	-0.004	0.0634
590	SLV 13	-11.54	4.07	31.79	0.0812	-0.0651	-0.0359
590	SLV 14	-11.55	2.4	31.9	0.1202	-0.0648	-0.0118
590	SLV 15	-11.73	0.07	30.88	0.118	-0.0625	0.0033
590	SLV 16	-11.74	-1.6	30.99	0.1571	-0.0622	0.0274
590	CRTFP Ux+	0	0	0	0	0	0
590	CRTFP Ux-	0	0	0	0	0	0
590	CRTFP Uy+	0	0	0	0	0	0
590	CRTFP Uy-	0	0	0	0	0	0
591	SLU 1	-0.82	-0.25	60.9	-0.0893	0.0163	-0.0126
591	SLU 2	-0.82	-0.36	60.91	-0.0879	0.0163	-0.0112
591	SLU 3	-0.84	-0.25	62.37	-0.0908	0.0167	-0.0129
591	SLU 4	-0.84	-0.31	62.37	-0.0899	0.0167	-0.0121
591	SLU 5	-0.84	-0.35	61.83	-0.0884	0.0166	-0.0115
591	SLU 6	-0.86	-0.24	63.28	-0.0913	0.017	-0.0132
591	SLU 7	-0.86	-0.31	63.29	-0.0904	0.017	-0.0124
591	SLU 8	-0.85	-0.24	62.74	-0.0904	0.0168	-0.0132
591	SLU 9	-0.85	-0.31	62.74	-0.0895	0.0169	-0.0123
591	SLU 10	-0.84	-0.32	68.3	-0.0963	0.017	-0.0135
591	SLU 11	-0.86	-0.21	69.75	-0.0991	0.0174	-0.0152
591	SLU 12	-0.86	-0.27	69.76	-0.0983	0.0174	-0.0144
591	SLU 13	-0.86	-0.31	69.21	-0.0968	0.0173	-0.0138
591	SLU 14	-0.88	-0.2	70.67	-0.0996	0.0177	-0.0155
591	SLU 15	-0.88	-0.27	70.68	-0.0988	0.0177	-0.0147
591	SLU 16	-0.87	-0.2	70.12	-0.0987	0.0176	-0.0154
591	SLU 17	-0.87	-0.27	70.13	-0.0979	0.0176	-0.0146
591	SLU 18	-0.85	-0.19	71.45	-0.1013	0.0173	-0.0159
591	SLU 19	-0.85	-0.26	71.46	-0.1005	0.0173	-0.015
591	SLU 20	-0.86	-0.19	72.37	-0.1018	0.0176	-0.0161
591	SLU 21	-0.86	-0.25	72.38	-0.101	0.0176	-0.0153
591	SLU 22	-0.88	-0.18	68.26	-0.0902	0.0174	-0.0145
591	SLU 23	-0.88	-0.29	68.27	-0.0888	0.0175	-0.0131
591	SLU 24	-0.9	-0.18	69.73	-0.0916	0.0179	-0.0148
591	SLU 25	-0.9	-0.25	69.73	-0.0908	0.0179	-0.014
591	SLU 26	-0.9	-0.29	69.19	-0.0893	0.0178	-0.0134
591	SLU 27	-0.92	-0.18	70.65	-0.0921	0.0182	-0.0151
591	SLU 28	-0.92	-0.24	70.65	-0.0913	0.0182	-0.0143
591	SLU 29	-0.91	-0.18	70.1	-0.0912	0.018	-0.0151
591	SLU 30	-0.91	-0.24	70.11	-0.0904	0.018	-0.0143
591	SLU 31	-0.9	-0.25	75.66	-0.0972	0.0182	-0.0154
591	SLU 32	-0.92	-0.14	77.11	-0.1	0.0186	-0.0171
591	SLU 33	-0.92	-0.21	77.12	-0.0992	0.0186	-0.0163
591	SLU 34	-0.92	-0.25	76.58	-0.0977	0.0185	-0.0157
591	SLU 35	-0.94	-0.14	78.03	-0.1005	0.0189	-0.0174
591	SLU 36	-0.94	-0.2	78.04	-0.0997	0.0189	-0.0166
591	SLU 37	-0.93	-0.14	77.49	-0.0996	0.0187	-0.0174
591	SLU 38	-0.93	-0.2	77.49	-0.0988	0.0187	-0.0165
591	SLU 39	-0.91	-0.13	78.81	-0.1022	0.0185	-0.0178
591	SLU 40	-0.91	-0.19	78.82	-0.1013	0.0185	-0.017
591	SLU 41	-0.93	-0.12	79.73	-0.1027	0.0187	-0.0181
591	SLU 42	-0.93	-0.19	79.74	-0.1019	0.0188	-0.0172
591	SLU 43	-1.04	-0.35	76.65	-0.1158	0.0207	-0.0157
591	SLU 44	-1.05	-0.45	76.65	-0.1144	0.0208	-0.0143
591	SLU 45	-1.06	-0.34	78.11	-0.1173	0.0212	-0.016
591	SLU 46	-1.07	-0.41	78.12	-0.1164	0.0212	-0.0152
591	SLU 47	-1.06	-0.45	77.57	-0.1149	0.0211	-0.0146
591	SLU 48	-1.08	-0.34	79.03	-0.1178	0.0215	-0.0163
591	SLU 49	-1.08	-0.4	79.04	-0.1169	0.0215	-0.0155
591	SLU 50	-1.07	-0.34	78.48	-0.1169	0.0213	-0.0163
591	SLU 51	-1.08	-0.4	78.49	-0.116	0.0213	-0.0155

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
591	SLU 52	-1.07	-0.41	84.04	-0.1228	0.0215	-0.0166
591	SLU 53	-1.08	-0.3	85.5	-0.1256	0.0219	-0.0183
591	SLU 54	-1.09	-0.37	85.5	-0.1248	0.0219	-0.0175
591	SLU 55	-1.08	-0.41	84.96	-0.1233	0.0218	-0.0169
591	SLU 56	-1.1	-0.3	86.42	-0.1261	0.0222	-0.0186
591	SLU 57	-1.1	-0.36	86.42	-0.1253	0.0222	-0.0178
591	SLU 58	-1.09	-0.3	85.87	-0.1252	0.022	-0.0186
591	SLU 59	-1.1	-0.36	85.88	-0.1244	0.0221	-0.0177
591	SLU 60	-1.07	-0.29	87.2	-0.1278	0.0218	-0.019
591	SLU 61	-1.07	-0.35	87.2	-0.127	0.0218	-0.0181
591	SLU 62	-1.09	-0.28	88.12	-0.1283	0.0221	-0.0193
591	SLU 63	-1.09	-0.35	88.12	-0.1275	0.0221	-0.0184
591	SLU 64	-1.11	-0.28	84.01	-0.1167	0.0219	-0.0176
591	SLU 65	-1.11	-0.39	84.02	-0.1153	0.0219	-0.0163
591	SLU 66	-1.13	-0.28	85.47	-0.1181	0.0223	-0.018
591	SLU 67	-1.13	-0.34	85.48	-0.1173	0.0224	-0.0171
591	SLU 68	-1.12	-0.39	84.94	-0.1158	0.0222	-0.0165
591	SLU 69	-1.14	-0.28	86.39	-0.1186	0.0226	-0.0182
591	SLU 70	-1.14	-0.34	86.4	-0.1178	0.0227	-0.0174
591	SLU 71	-1.14	-0.28	85.84	-0.1177	0.0225	-0.0182
591	SLU 72	-1.14	-0.34	85.85	-0.1169	0.0225	-0.0174
591	SLU 73	-1.13	-0.35	91.4	-0.1237	0.0227	-0.0185
591	SLU 74	-1.15	-0.24	92.86	-0.1265	0.0231	-0.0202
591	SLU 75	-1.15	-0.3	92.87	-0.1257	0.0231	-0.0194
591	SLU 76	-1.14	-0.35	92.32	-0.1242	0.0229	-0.0188
591	SLU 77	-1.16	-0.24	93.78	-0.127	0.0234	-0.0205
591	SLU 78	-1.16	-0.3	93.78	-0.1262	0.0234	-0.0197
591	SLU 79	-1.16	-0.23	93.23	-0.1261	0.0232	-0.0205
591	SLU 80	-1.16	-0.3	93.24	-0.1253	0.0232	-0.0197
591	SLU 81	-1.14	-0.22	94.56	-0.1287	0.0229	-0.0209
591	SLU 82	-1.14	-0.29	94.57	-0.1278	0.0229	-0.0201
591	SLU 83	-1.15	-0.22	95.48	-0.1292	0.0232	-0.0212
591	SLU 84	-1.15	-0.28	95.48	-0.1284	0.0232	-0.0204
591	SLE RA 1	-0.84	-0.23	63	-0.0896	0.0166	-0.0131
591	SLE RA 2	-0.84	-0.3	63.01	-0.0887	0.0166	-0.0122
591	SLE RA 3	-0.85	-0.23	63.98	-0.0905	0.0169	-0.0134
591	SLE RA 4	-0.85	-0.27	63.98	-0.09	0.0169	-0.0128
591	SLE RA 5	-0.85	-0.3	63.62	-0.089	0.0168	-0.0124
591	SLE RA 6	-0.86	-0.23	64.59	-0.0909	0.0171	-0.0136
591	SLE RA 7	-0.86	-0.27	64.6	-0.0903	0.0171	-0.013
591	SLE RA 8	-0.86	-0.23	64.23	-0.0903	0.017	-0.0135
591	SLE RA 9	-0.86	-0.27	64.23	-0.0897	0.017	-0.013
591	SLE RA 10	-0.85	-0.27	67.93	-0.0942	0.0171	-0.0137
591	SLE RA 11	-0.86	-0.2	68.9	-0.0961	0.0174	-0.0149
591	SLE RA 12	-0.87	-0.24	68.91	-0.0956	0.0174	-0.0143
591	SLE RA 13	-0.86	-0.27	68.55	-0.0946	0.0173	-0.0139
591	SLE RA 14	-0.87	-0.2	69.52	-0.0965	0.0176	-0.0151
591	SLE RA 15	-0.88	-0.24	69.52	-0.0959	0.0176	-0.0145
591	SLE RA 16	-0.87	-0.2	69.15	-0.0959	0.0175	-0.015
591	SLE RA 17	-0.87	-0.24	69.16	-0.0953	0.0175	-0.0145
591	SLE RA 18	-0.86	-0.19	70.04	-0.0976	0.0173	-0.0153
591	SLE RA 19	-0.86	-0.23	70.04	-0.097	0.0173	-0.0148
591	SLE RA 20	-0.87	-0.19	70.65	-0.0979	0.0175	-0.0155
591	SLE RA 21	-0.87	-0.23	70.65	-0.0973	0.0175	-0.015
591	SLE FR 1	-0.84	-0.23	63	-0.0896	0.0166	-0.0131
591	SLE FR 2	-0.84	-0.24	63	-0.0894	0.0166	-0.013
591	SLE FR 3	-0.84	-0.23	63.25	-0.0897	0.0167	-0.0132
591	SLE FR 4	-0.84	-0.23	65.11	-0.0918	0.0168	-0.0136
591	SLE FR 5	-0.85	-0.22	65.36	-0.0921	0.0169	-0.0139
591	SLE FR 6	-0.85	-0.21	66.52	-0.0936	0.0169	-0.0142
591	SLE QP 1	-0.84	-0.23	63	-0.0896	0.0166	-0.0131
591	SLE QP 2	-0.84	-0.22	65.11	-0.092	0.0168	-0.0138
591	SLD 1	3.82	0.36	78.8	-0.2001	0.0499	-0.0301
591	SLD 2	3.82	-0.31	78.84	-0.1833	0.05	-0.0205
591	SLD 3	3.74	-1.33	78.38	-0.1834	0.0508	-0.0145
591	SLD 4	3.74	-2	78.43	-0.1667	0.0509	-0.0049
591	SLD 5	0.68	2.63	69.83	-0.1527	0.0254	-0.044
591	SLD 6	0.68	2.19	69.86	-0.1416	0.0254	-0.0377
591	SLD 7	0.41	-2.99	68.46	-0.0972	0.0283	0.0079
591	SLD 8	0.41	-3.43	68.49	-0.0861	0.0284	0.0142
591	SLD 9	-2.09	2.99	61.74	-0.0979	0.0052	-0.0418
591	SLD 10	-2.1	2.55	61.76	-0.0867	0.0053	-0.0354
591	SLD 11	-2.36	-2.63	60.36	-0.0424	0.0082	0.0101
591	SLD 12	-2.37	-3.07	60.39	-0.0313	0.0082	0.0164
591	SLD 13	-5.42	1.56	51.8	-0.0173	-0.0173	-0.0227
591	SLD 14	-5.43	0.89	51.84	-0.0006	-0.0172	-0.0131
591	SLD 15	-5.5	-0.13	51.39	-0.0007	-0.0164	-0.0071
591	SLD 16	-5.51	-0.8	51.43	0.0161	-0.0163	0.0025
591	SLV 1	10.06	1.06	97.12	-0.3446	0.0943	-0.0512
591	SLV 2	10.05	-0.49	97.22	-0.3056	0.0945	-0.0289
591	SLV 3	9.87	-2.75	96.16	-0.3059	0.0964	-0.016
591	SLV 4	9.86	-4.31	96.26	-0.2669	0.0965	0.0063
591	SLV 5	2.71	6.22	76.15	-0.2333	0.037	-0.0823
591	SLV 6	2.71	5.21	76.21	-0.2079	0.0371	-0.0678
591	SLV 7	2.09	-6.49	72.96	-0.1044	0.0437	0.035
591	SLV 8	2.08	-7.5	73.03	-0.079	0.0438	0.0496
591	SLV 9	-3.77	7.07	57.2	-0.105	-0.0102	-0.0771
591	SLV 10	-3.78	6.05	57.27	-0.0796	-0.0101	-0.0626
591	SLV 11	-4.39	-5.65	54.02	0.0239	-0.0035	0.0402
591	SLV 12	-4.4	-6.66	54.08	0.0493	-0.0034	0.0547

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
591	SLV 13	-11.55	3.87	33.97	0.0829	-0.0629	-0.0339
591	SLV 14	-11.56	2.31	34.07	0.1219	-0.0628	-0.0116
591	SLV 15	-11.74	0.05	33.01	0.1216	-0.0609	0.0013
591	SLV 16	-11.74	-1.5	33.11	0.1606	-0.0607	0.0236
591	CRTFP Ux+	0	0	0	0	0	0
591	CRTFP Ux-	0	0	0	0	0	0
591	CRTFP Uy+	0	0	0	0	0	0
591	CRTFP Uy-	0	0	0	0	0	0
592	SLU 1	-0.8	-0.31	60.31	-0.0953	0.0179	-0.0137
592	SLU 2	-0.8	-0.42	60.32	-0.0939	0.0179	-0.0125
592	SLU 3	-0.82	-0.31	61.76	-0.0968	0.0184	-0.0141
592	SLU 4	-0.82	-0.37	61.77	-0.096	0.0184	-0.0133
592	SLU 5	-0.82	-0.41	61.23	-0.0945	0.0183	-0.0128
592	SLU 6	-0.84	-0.31	62.67	-0.0974	0.0187	-0.0144
592	SLU 7	-0.84	-0.37	62.68	-0.0966	0.0187	-0.0136
592	SLU 8	-0.83	-0.31	62.13	-0.0964	0.0185	-0.0143
592	SLU 9	-0.83	-0.37	62.14	-0.0956	0.0185	-0.0136
592	SLU 10	-0.82	-0.39	67.68	-0.1029	0.019	-0.0148
592	SLU 11	-0.84	-0.28	69.12	-0.1058	0.0194	-0.0164
592	SLU 12	-0.84	-0.34	69.13	-0.1049	0.0195	-0.0156
592	SLU 13	-0.84	-0.38	68.59	-0.1034	0.0193	-0.0151
592	SLU 14	-0.86	-0.28	70.03	-0.1063	0.0197	-0.0167
592	SLU 15	-0.86	-0.34	70.03	-0.1055	0.0198	-0.0159
592	SLU 16	-0.85	-0.28	69.49	-0.1054	0.0196	-0.0166
592	SLU 17	-0.85	-0.34	69.49	-0.1045	0.0196	-0.0159
592	SLU 18	-0.83	-0.27	70.82	-0.1081	0.0194	-0.017
592	SLU 19	-0.83	-0.33	70.83	-0.1073	0.0195	-0.0163
592	SLU 20	-0.84	-0.27	71.73	-0.1086	0.0197	-0.0173
592	SLU 21	-0.85	-0.33	71.74	-0.1078	0.0198	-0.0165
592	SLU 22	-0.86	-0.26	67.63	-0.0964	0.0194	-0.0156
592	SLU 23	-0.87	-0.36	67.64	-0.0951	0.0194	-0.0144
592	SLU 24	-0.88	-0.26	69.08	-0.098	0.0199	-0.016
592	SLU 25	-0.89	-0.32	69.09	-0.0971	0.0199	-0.0152
592	SLU 26	-0.88	-0.36	68.55	-0.0956	0.0197	-0.0147
592	SLU 27	-0.9	-0.26	69.99	-0.0985	0.0202	-0.0163
592	SLU 28	-0.9	-0.32	70	-0.0977	0.0202	-0.0155
592	SLU 29	-0.89	-0.26	69.45	-0.0976	0.02	-0.0162
592	SLU 30	-0.89	-0.32	69.45	-0.0967	0.02	-0.0155
592	SLU 31	-0.88	-0.33	75	-0.104	0.0205	-0.0167
592	SLU 32	-0.9	-0.23	76.44	-0.1069	0.0209	-0.0182
592	SLU 33	-0.9	-0.29	76.44	-0.1061	0.0209	-0.0175
592	SLU 34	-0.9	-0.33	75.91	-0.1046	0.0208	-0.017
592	SLU 35	-0.92	-0.23	77.35	-0.1075	0.0212	-0.0185
592	SLU 36	-0.92	-0.29	77.35	-0.1067	0.0212	-0.0178
592	SLU 37	-0.91	-0.23	76.8	-0.1065	0.0211	-0.0185
592	SLU 38	-0.91	-0.29	76.81	-0.1057	0.0211	-0.0177
592	SLU 39	-0.89	-0.22	78.14	-0.1092	0.0209	-0.0189
592	SLU 40	-0.89	-0.28	78.15	-0.1084	0.0209	-0.0181
592	SLU 41	-0.91	-0.22	79.05	-0.1098	0.0212	-0.0192
592	SLU 42	-0.91	-0.28	79.05	-0.109	0.0212	-0.0184
592	SLU 43	-1.02	-0.43	75.9	-0.1235	0.0228	-0.0172
592	SLU 44	-1.02	-0.53	75.91	-0.1221	0.0228	-0.016
592	SLU 45	-1.04	-0.43	77.35	-0.125	0.0232	-0.0175
592	SLU 46	-1.04	-0.49	77.36	-0.1242	0.0233	-0.0168
592	SLU 47	-1.04	-0.53	76.82	-0.1227	0.0231	-0.0162
592	SLU 48	-1.06	-0.43	78.26	-0.1256	0.0236	-0.0178
592	SLU 49	-1.06	-0.49	78.26	-0.1248	0.0236	-0.0171
592	SLU 50	-1.05	-0.42	77.72	-0.1246	0.0234	-0.0178
592	SLU 51	-1.05	-0.48	77.72	-0.1238	0.0234	-0.017
592	SLU 52	-1.04	-0.5	83.27	-0.1311	0.0239	-0.0182
592	SLU 53	-1.06	-0.4	84.71	-0.134	0.0243	-0.0198
592	SLU 54	-1.06	-0.46	84.71	-0.1331	0.0243	-0.0191
592	SLU 55	-1.06	-0.5	84.17	-0.1316	0.0242	-0.0185
592	SLU 56	-1.08	-0.4	85.61	-0.1345	0.0246	-0.0201
592	SLU 57	-1.08	-0.46	85.62	-0.1337	0.0246	-0.0194
592	SLU 58	-1.07	-0.39	85.07	-0.1336	0.0245	-0.0201
592	SLU 59	-1.07	-0.46	85.08	-0.1327	0.0245	-0.0193
592	SLU 60	-1.05	-0.39	86.41	-0.1363	0.0243	-0.0205
592	SLU 61	-1.05	-0.45	86.41	-0.1355	0.0243	-0.0197
592	SLU 62	-1.06	-0.38	87.32	-0.1368	0.0246	-0.0208
592	SLU 63	-1.06	-0.44	87.32	-0.136	0.0246	-0.02
592	SLU 64	-1.08	-0.37	83.22	-0.1246	0.0243	-0.0191
592	SLU 65	-1.08	-0.47	83.23	-0.1233	0.0243	-0.0178
592	SLU 66	-1.1	-0.37	84.67	-0.1262	0.0247	-0.0194
592	SLU 67	-1.1	-0.43	84.67	-0.1253	0.0247	-0.0187
592	SLU 68	-1.1	-0.47	84.13	-0.1238	0.0246	-0.0181
592	SLU 69	-1.12	-0.37	85.58	-0.1267	0.025	-0.0197
592	SLU 70	-1.12	-0.43	85.58	-0.1259	0.025	-0.019
592	SLU 71	-1.11	-0.37	85.03	-0.1258	0.0249	-0.0197
592	SLU 72	-1.11	-0.43	85.04	-0.1249	0.0249	-0.0189
592	SLU 73	-1.1	-0.44	90.58	-0.1322	0.0254	-0.0201
592	SLU 74	-1.12	-0.34	92.02	-0.1351	0.0258	-0.0217
592	SLU 75	-1.12	-0.4	92.03	-0.1343	0.0258	-0.021
592	SLU 76	-1.12	-0.44	91.49	-0.1328	0.0257	-0.0204
592	SLU 77	-1.14	-0.34	92.93	-0.1357	0.0261	-0.022
592	SLU 78	-1.14	-0.4	92.94	-0.1349	0.0261	-0.0213
592	SLU 79	-1.13	-0.34	92.39	-0.1347	0.0259	-0.022
592	SLU 80	-1.13	-0.4	92.4	-0.1339	0.026	-0.0212
592	SLU 81	-1.11	-0.33	93.73	-0.1374	0.0258	-0.0224
592	SLU 82	-1.11	-0.39	93.73	-0.1366	0.0258	-0.0216

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
592	SLU 83	-1.13	-0.33	94.63	-0.138	0.0261	-0.0226
592	SLU 84	-1.13	-0.39	94.64	-0.1372	0.0261	-0.0219
592	SLE RA 1	-0.82	-0.3	62.4	-0.0956	0.0183	-0.0143
592	SLE RA 2	-0.82	-0.37	62.41	-0.0947	0.0184	-0.0134
592	SLE RA 3	-0.83	-0.3	63.37	-0.0966	0.0186	-0.0145
592	SLE RA 4	-0.83	-0.34	63.38	-0.0961	0.0187	-0.014
592	SLE RA 5	-0.83	-0.37	63.02	-0.0951	0.0186	-0.0136
592	SLE RA 6	-0.84	-0.3	63.98	-0.097	0.0189	-0.0147
592	SLE RA 7	-0.84	-0.34	63.98	-0.0965	0.0189	-0.0142
592	SLE RA 8	-0.84	-0.3	63.62	-0.0964	0.0187	-0.0147
592	SLE RA 9	-0.84	-0.34	63.62	-0.0958	0.0188	-0.0142
592	SLE RA 10	-0.83	-0.35	67.32	-0.1007	0.0191	-0.015
592	SLE RA 11	-0.85	-0.28	68.28	-0.1026	0.0194	-0.016
592	SLE RA 12	-0.85	-0.32	68.28	-0.1021	0.0194	-0.0155
592	SLE RA 13	-0.84	-0.35	67.92	-0.1011	0.0193	-0.0152
592	SLE RA 14	-0.86	-0.28	68.88	-0.103	0.0196	-0.0162
592	SLE RA 15	-0.86	-0.32	68.89	-0.1024	0.0196	-0.0157
592	SLE RA 16	-0.85	-0.28	68.52	-0.1023	0.0195	-0.0162
592	SLE RA 17	-0.85	-0.32	68.52	-0.1018	0.0195	-0.0157
592	SLE RA 18	-0.84	-0.27	69.41	-0.1041	0.0194	-0.0164
592	SLE RA 19	-0.84	-0.31	69.41	-0.1036	0.0194	-0.0159
592	SLE RA 20	-0.85	-0.27	70.02	-0.1045	0.0196	-0.0166
592	SLE RA 21	-0.85	-0.31	70.02	-0.104	0.0196	-0.0161
592	SLE FR 1	-0.82	-0.3	62.4	-0.0956	0.0183	-0.0143
592	SLE FR 2	-0.82	-0.31	62.41	-0.0954	0.0183	-0.0141
592	SLE FR 3	-0.82	-0.3	62.65	-0.0958	0.0184	-0.0143
592	SLE FR 4	-0.83	-0.3	64.51	-0.098	0.0186	-0.0148
592	SLE FR 5	-0.83	-0.29	64.75	-0.0983	0.0187	-0.015
592	SLE FR 6	-0.83	-0.28	65.91	-0.0999	0.0188	-0.0154
592	SLE QP 1	-0.82	-0.3	62.4	-0.0956	0.0183	-0.0143
592	SLE QP 2	-0.83	-0.29	64.51	-0.0982	0.0186	-0.0149
592	SLD 1	3.85	0.22	77.05	-0.2105	0.0518	-0.0299
592	SLD 2	3.84	-0.4	77.09	-0.1938	0.0518	-0.0211
592	SLD 3	3.77	-1.4	76.62	-0.1931	0.0524	-0.0164
592	SLD 4	3.76	-2.02	76.66	-0.1764	0.0525	-0.0077
592	SLD 5	0.7	2.42	68.9	-0.1613	0.0276	-0.0414
592	SLD 6	0.7	2.01	68.93	-0.1502	0.0276	-0.0356
592	SLD 7	0.43	-2.96	67.49	-0.1033	0.0298	0.0035
592	SLD 8	0.43	-3.37	67.52	-0.0922	0.0298	0.0092
592	SLD 9	-2.08	2.79	61.49	-0.1042	0.0075	-0.0391
592	SLD 10	-2.08	2.38	61.52	-0.0931	0.0075	-0.0333
592	SLD 11	-2.35	-2.59	60.09	-0.0462	0.0097	0.0058
592	SLD 12	-2.35	-3	60.11	-0.0351	0.0097	0.0116
592	SLD 13	-5.41	1.44	52.35	-0.02	-0.0152	-0.0221
592	SLD 14	-5.42	0.82	52.39	-0.0033	-0.0152	-0.0134
592	SLD 15	-5.49	-0.18	51.93	-0.0026	-0.0145	-0.0087
592	SLD 16	-5.5	-0.8	51.97	0.0141	-0.0145	0
592	SLV 1	10.09	0.83	93.84	-0.3606	0.0962	-0.0493
592	SLV 2	10.09	-0.62	93.93	-0.3217	0.0963	-0.029
592	SLV 3	9.91	-2.82	92.86	-0.3202	0.0977	-0.0188
592	SLV 4	9.9	-4.27	92.95	-0.2812	0.0978	0.0014
592	SLV 5	2.73	5.84	74.77	-0.2451	0.0396	-0.0749
592	SLV 6	2.73	4.9	74.83	-0.2198	0.0397	-0.0617
592	SLV 7	2.12	-6.33	71.51	-0.1102	0.0446	0.0265
592	SLV 8	2.11	-7.28	71.57	-0.0849	0.0447	0.0397
592	SLV 9	-3.76	6.7	57.44	-0.1115	-0.0074	-0.0695
592	SLV 10	-3.77	5.75	57.5	-0.0861	-0.0073	-0.0563
592	SLV 11	-4.38	-5.48	54.18	0.0234	-0.0024	0.0319
592	SLV 12	-4.38	-6.42	54.24	0.0488	-0.0023	0.0451
592	SLV 13	-11.55	3.69	36.06	0.0849	-0.0605	-0.0313
592	SLV 14	-11.56	2.24	36.16	0.1238	-0.0604	-0.011
592	SLV 15	-11.74	0.04	35.08	0.1253	-0.059	-0.0008
592	SLV 16	-11.74	-1.41	35.18	0.1643	-0.0589	0.0194
592	CRTFP Ux+	0	0	0	0	0	0
592	CRTFP Ux-	0	0	0	0	0	0
592	CRTFP Uy+	0	0	0	0	0	0
592	CRTFP Uy-	0	0	0	0	0	0
593	SLU 1	-0.78	-0.38	59.67	-0.1016	0.0199	-0.0143
593	SLU 2	-0.78	-0.48	59.68	-0.1003	0.0199	-0.0132
593	SLU 3	-0.8	-0.39	61.1	-0.1033	0.0204	-0.0146
593	SLU 4	-0.8	-0.44	61.11	-0.1025	0.0204	-0.014
593	SLU 5	-0.8	-0.48	60.57	-0.1009	0.0202	-0.0135
593	SLU 6	-0.82	-0.39	62	-0.1039	0.0207	-0.0149
593	SLU 7	-0.82	-0.44	62	-0.1031	0.0207	-0.0143
593	SLU 8	-0.81	-0.38	61.46	-0.1029	0.0205	-0.0149
593	SLU 9	-0.81	-0.44	61.47	-0.1021	0.0205	-0.0142
593	SLU 10	-0.8	-0.46	66.99	-0.1099	0.0213	-0.0154
593	SLU 11	-0.82	-0.37	68.41	-0.1129	0.0218	-0.0168
593	SLU 12	-0.82	-0.42	68.42	-0.1121	0.0218	-0.0162
593	SLU 13	-0.82	-0.46	67.89	-0.1105	0.0217	-0.0157
593	SLU 14	-0.83	-0.37	69.31	-0.1135	0.0221	-0.0171
593	SLU 15	-0.83	-0.42	69.32	-0.1127	0.0222	-0.0165
593	SLU 16	-0.83	-0.37	68.78	-0.1125	0.022	-0.0171
593	SLU 17	-0.83	-0.42	68.78	-0.1116	0.022	-0.0164
593	SLU 18	-0.81	-0.36	70.12	-0.1153	0.0219	-0.0174
593	SLU 19	-0.81	-0.42	70.12	-0.1145	0.022	-0.0168
593	SLU 20	-0.82	-0.36	71.01	-0.1159	0.0223	-0.0177
593	SLU 21	-0.82	-0.42	71.02	-0.1151	0.0223	-0.0171
593	SLU 22	-0.84	-0.34	66.93	-0.1031	0.0217	-0.0161
593	SLU 23	-0.84	-0.43	66.94	-0.1017	0.0217	-0.015

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
593	SLU 24	-0.86	-0.34	68.36	-0.1047	0.0222	-0.0164
593	SLU 25	-0.86	-0.4	68.37	-0.1039	0.0222	-0.0158
593	SLU 26	-0.86	-0.43	67.83	-0.1024	0.0221	-0.0153
593	SLU 27	-0.88	-0.34	69.26	-0.1054	0.0225	-0.0167
593	SLU 28	-0.88	-0.4	69.26	-0.1046	0.0225	-0.016
593	SLU 29	-0.87	-0.34	68.72	-0.1043	0.0224	-0.0167
593	SLU 30	-0.87	-0.4	68.73	-0.1035	0.0224	-0.016
593	SLU 31	-0.86	-0.42	74.25	-0.1113	0.0232	-0.0172
593	SLU 32	-0.88	-0.32	75.68	-0.1143	0.0237	-0.0186
593	SLU 33	-0.88	-0.38	75.68	-0.1135	0.0237	-0.018
593	SLU 34	-0.88	-0.42	75.15	-0.1119	0.0235	-0.0175
593	SLU 35	-0.89	-0.32	76.57	-0.1149	0.024	-0.0189
593	SLU 36	-0.9	-0.38	76.58	-0.1141	0.024	-0.0183
593	SLU 37	-0.89	-0.32	76.04	-0.1139	0.0238	-0.0189
593	SLU 38	-0.89	-0.38	76.04	-0.1131	0.0238	-0.0182
593	SLU 39	-0.87	-0.31	77.38	-0.1167	0.0238	-0.0192
593	SLU 40	-0.87	-0.37	77.38	-0.1159	0.0238	-0.0186
593	SLU 41	-0.88	-0.31	78.27	-0.1174	0.0241	-0.0195
593	SLU 42	-0.88	-0.37	78.28	-0.1166	0.0241	-0.0189
593	SLU 43	-0.99	-0.51	75.08	-0.1316	0.0252	-0.018
593	SLU 44	-1	-0.61	75.09	-0.1303	0.0252	-0.0169
593	SLU 45	-1.01	-0.52	76.51	-0.1333	0.0257	-0.0183
593	SLU 46	-1.02	-0.57	76.52	-0.1325	0.0257	-0.0176
593	SLU 47	-1.01	-0.61	75.98	-0.1309	0.0255	-0.0172
593	SLU 48	-1.03	-0.52	77.41	-0.1339	0.026	-0.0186
593	SLU 49	-1.03	-0.57	77.41	-0.1331	0.026	-0.0179
593	SLU 50	-1.02	-0.51	76.87	-0.1329	0.0258	-0.0185
593	SLU 51	-1.02	-0.57	76.88	-0.1321	0.0258	-0.0179
593	SLU 52	-1.01	-0.59	82.4	-0.1399	0.0267	-0.0191
593	SLU 53	-1.03	-0.5	83.83	-0.1429	0.0271	-0.0205
593	SLU 54	-1.03	-0.56	83.83	-0.1421	0.0272	-0.0199
593	SLU 55	-1.03	-0.59	83.3	-0.1405	0.027	-0.0194
593	SLU 56	-1.05	-0.5	84.72	-0.1435	0.0275	-0.0208
593	SLU 57	-1.05	-0.55	84.73	-0.1427	0.0275	-0.0201
593	SLU 58	-1.04	-0.5	84.19	-0.1425	0.0273	-0.0208
593	SLU 59	-1.04	-0.55	84.19	-0.1416	0.0273	-0.0201
593	SLU 60	-1.02	-0.49	85.53	-0.1453	0.0273	-0.0211
593	SLU 61	-1.02	-0.55	85.53	-0.1445	0.0273	-0.0205
593	SLU 62	-1.04	-0.49	86.42	-0.1459	0.0276	-0.0214
593	SLU 63	-1.04	-0.55	86.43	-0.1451	0.0276	-0.0208
593	SLU 64	-1.06	-0.47	82.34	-0.1331	0.027	-0.0197
593	SLU 65	-1.06	-0.56	82.35	-0.1317	0.0271	-0.0187
593	SLU 66	-1.08	-0.47	83.77	-0.1347	0.0275	-0.0201
593	SLU 67	-1.08	-0.53	83.78	-0.1339	0.0275	-0.0194
593	SLU 68	-1.07	-0.56	83.24	-0.1324	0.0274	-0.0189
593	SLU 69	-1.09	-0.47	84.67	-0.1354	0.0279	-0.0204
593	SLU 70	-1.09	-0.53	84.68	-0.1346	0.0279	-0.0197
593	SLU 71	-1.08	-0.47	84.13	-0.1343	0.0277	-0.0203
593	SLU 72	-1.08	-0.53	84.14	-0.1335	0.0277	-0.0197
593	SLU 73	-1.08	-0.55	89.66	-0.1413	0.0285	-0.0209
593	SLU 74	-1.09	-0.45	91.09	-0.1443	0.029	-0.0223
593	SLU 75	-1.09	-0.51	91.09	-0.1435	0.029	-0.0216
593	SLU 76	-1.09	-0.55	90.56	-0.1419	0.0288	-0.0212
593	SLU 77	-1.11	-0.45	91.98	-0.1449	0.0293	-0.0226
593	SLU 78	-1.11	-0.51	91.99	-0.1441	0.0293	-0.0219
593	SLU 79	-1.1	-0.45	91.45	-0.1439	0.0291	-0.0225
593	SLU 80	-1.1	-0.51	91.45	-0.1431	0.0292	-0.0219
593	SLU 81	-1.08	-0.44	92.79	-0.1467	0.0291	-0.0229
593	SLU 82	-1.08	-0.5	92.79	-0.1459	0.0291	-0.0222
593	SLU 83	-1.1	-0.44	93.68	-0.1474	0.0294	-0.0232
593	SLU 84	-1.1	-0.5	93.69	-0.1466	0.0295	-0.0225
593	SLE RA 1	-0.8	-0.37	61.74	-0.1021	0.0204	-0.0148
593	SLE RA 2	-0.8	-0.43	61.75	-0.1012	0.0204	-0.0141
593	SLE RA 3	-0.81	-0.37	62.7	-0.1032	0.0207	-0.015
593	SLE RA 4	-0.81	-0.41	62.7	-0.1026	0.0207	-0.0146
593	SLE RA 5	-0.81	-0.43	62.35	-0.1016	0.0206	-0.0143
593	SLE RA 6	-0.82	-0.37	63.3	-0.1036	0.0209	-0.0152
593	SLE RA 7	-0.82	-0.41	63.3	-0.103	0.0209	-0.0148
593	SLE RA 8	-0.82	-0.37	62.94	-0.1029	0.0208	-0.0152
593	SLE RA 9	-0.82	-0.41	62.94	-0.1024	0.0208	-0.0147
593	SLE RA 10	-0.81	-0.42	66.62	-0.1075	0.0214	-0.0155
593	SLE RA 11	-0.82	-0.36	67.57	-0.1095	0.0217	-0.0165
593	SLE RA 12	-0.82	-0.4	67.58	-0.109	0.0217	-0.0161
593	SLE RA 13	-0.82	-0.42	67.22	-0.108	0.0216	-0.0157
593	SLE RA 14	-0.83	-0.36	68.17	-0.11	0.0219	-0.0167
593	SLE RA 15	-0.83	-0.4	68.18	-0.1094	0.0219	-0.0163
593	SLE RA 16	-0.83	-0.36	67.81	-0.1093	0.0218	-0.0167
593	SLE RA 17	-0.83	-0.4	67.82	-0.1087	0.0218	-0.0162
593	SLE RA 18	-0.82	-0.35	68.71	-0.1112	0.0218	-0.0169
593	SLE RA 19	-0.82	-0.39	68.71	-0.1106	0.0218	-0.0165
593	SLE RA 20	-0.83	-0.35	69.31	-0.1116	0.022	-0.0171
593	SLE RA 21	-0.83	-0.39	69.31	-0.111	0.022	-0.0167
593	SLE FR 1	-0.8	-0.37	61.74	-0.1021	0.0204	-0.0148
593	SLE FR 2	-0.8	-0.38	61.74	-0.1019	0.0204	-0.0146
593	SLE FR 3	-0.8	-0.37	61.98	-0.1022	0.0205	-0.0149
593	SLE FR 4	-0.8	-0.38	63.83	-0.1046	0.0208	-0.0153
593	SLE FR 5	-0.81	-0.37	64.07	-0.105	0.0209	-0.0155
593	SLE FR 6	-0.81	-0.36	65.22	-0.1066	0.0211	-0.0158
593	SLE QP 1	-0.8	-0.37	61.74	-0.1021	0.0204	-0.0148
593	SLE QP 2	-0.8	-0.37	63.83	-0.1048	0.0208	-0.0154

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
593	SLD 1	3.87	0.08	75.23	-0.2215	0.0537	-0.0286
593	SLD 2	3.87	-0.5	75.27	-0.2048	0.0538	-0.0208
593	SLD 3	3.8	-1.48	74.81	-0.2034	0.0543	-0.0175
593	SLD 4	3.79	-2.06	74.85	-0.1866	0.0543	-0.0097
593	SLD 5	0.72	2.23	67.88	-0.1704	0.0298	-0.0377
593	SLD 6	0.72	1.84	67.91	-0.1593	0.0299	-0.0325
593	SLD 7	0.46	-2.95	66.48	-0.1098	0.0317	-0.0006
593	SLD 8	0.46	-3.34	66.5	-0.0987	0.0317	0.0046
593	SLD 9	-2.06	2.6	61.16	-0.1108	0.0099	-0.0354
593	SLD 10	-2.06	2.22	61.19	-0.0997	0.0099	-0.0302
593	SLD 11	-2.33	-2.58	59.75	-0.0503	0.0118	0.0016
593	SLD 12	-2.33	-2.96	59.78	-0.0392	0.0118	0.0068
593	SLD 13	-5.4	1.33	52.82	-0.023	-0.0127	-0.0212
593	SLD 14	-5.4	0.74	52.86	-0.0062	-0.0127	-0.0134
593	SLD 15	-5.48	-0.23	52.39	-0.0048	-0.0121	-0.0101
593	SLD 16	-5.48	-0.81	52.43	0.0119	-0.0121	-0.0023
593	SLV 1	10.13	0.61	90.49	-0.3776	0.0978	-0.0458
593	SLV 2	10.13	-0.74	90.58	-0.3387	0.0979	-0.0275
593	SLV 3	9.95	-2.9	89.51	-0.3354	0.0991	-0.0206
593	SLV 4	9.94	-4.26	89.6	-0.2964	0.0992	-0.0024
593	SLV 5	2.75	5.5	73.3	-0.2576	0.042	-0.0659
593	SLV 6	2.75	4.61	73.36	-0.2322	0.042	-0.054
593	SLV 7	2.15	-6.22	70.03	-0.1167	0.0462	0.0179
593	SLV 8	2.14	-7.1	70.09	-0.0913	0.0463	0.0298
593	SLV 9	-3.75	6.37	57.57	-0.1183	-0.0047	-0.0607
593	SLV 10	-3.76	5.49	57.63	-0.0929	-0.0046	-0.0488
593	SLV 11	-4.36	-5.35	54.31	0.0227	-0.0004	0.0231
593	SLV 12	-4.36	-6.23	54.37	0.048	-0.0004	0.035
593	SLV 13	-11.55	3.53	38.06	0.0868	-0.0576	-0.0285
593	SLV 14	-11.56	2.17	38.15	0.1258	-0.0575	-0.0102
593	SLV 15	-11.73	0.01	37.08	0.1291	-0.0563	-0.0033
593	SLV 16	-11.74	-1.34	37.17	0.1681	-0.0562	0.0149
593	CRTFP Ux+	0	0	0	0	0	0
593	CRTFP Ux-	0	0	0	0	0	0
593	CRTFP Uy+	0	0	0	0	0	0
593	CRTFP Uy-	0	0	0	0	0	0
594	SLU 1	-0.76	-0.46	58.95	-0.1084	0.0223	-0.0143
594	SLU 2	-0.76	-0.55	58.95	-0.1071	0.0223	-0.0133
594	SLU 3	-0.78	-0.46	60.36	-0.1102	0.0228	-0.0146
594	SLU 4	-0.78	-0.51	60.37	-0.1094	0.0228	-0.014
594	SLU 5	-0.77	-0.55	59.84	-0.1078	0.0226	-0.0136
594	SLU 6	-0.79	-0.46	61.25	-0.1109	0.0232	-0.0149
594	SLU 7	-0.79	-0.51	61.25	-0.1101	0.0232	-0.0143
594	SLU 8	-0.78	-0.46	60.72	-0.1098	0.023	-0.0148
594	SLU 9	-0.79	-0.51	60.72	-0.109	0.023	-0.0143
594	SLU 10	-0.78	-0.54	66.21	-0.1173	0.0242	-0.0154
594	SLU 11	-0.79	-0.45	67.62	-0.1204	0.0247	-0.0166
594	SLU 12	-0.79	-0.5	67.62	-0.1196	0.0248	-0.0161
594	SLU 13	-0.79	-0.54	67.1	-0.118	0.0246	-0.0157
594	SLU 14	-0.81	-0.45	68.5	-0.1211	0.0251	-0.0169
594	SLU 15	-0.81	-0.51	68.51	-0.1203	0.0251	-0.0164
594	SLU 16	-0.8	-0.45	67.97	-0.12	0.0249	-0.0169
594	SLU 17	-0.8	-0.5	67.98	-0.1192	0.0249	-0.0163
594	SLU 18	-0.78	-0.44	69.31	-0.123	0.025	-0.0172
594	SLU 19	-0.78	-0.5	69.32	-0.1222	0.025	-0.0166
594	SLU 20	-0.8	-0.45	70.2	-0.1237	0.0254	-0.0175
594	SLU 21	-0.8	-0.5	70.2	-0.1229	0.0254	-0.0169
594	SLU 22	-0.82	-0.42	66.14	-0.1102	0.0246	-0.0159
594	SLU 23	-0.82	-0.51	66.14	-0.1089	0.0246	-0.015
594	SLU 24	-0.84	-0.42	67.55	-0.112	0.0251	-0.0162
594	SLU 25	-0.84	-0.48	67.56	-0.1112	0.0251	-0.0157
594	SLU 26	-0.83	-0.51	67.03	-0.1095	0.0249	-0.0152
594	SLU 27	-0.85	-0.42	68.44	-0.1127	0.0255	-0.0165
594	SLU 28	-0.85	-0.48	68.44	-0.1119	0.0255	-0.0159
594	SLU 29	-0.84	-0.42	67.91	-0.1116	0.0253	-0.0165
594	SLU 30	-0.85	-0.48	67.91	-0.1108	0.0253	-0.0159
594	SLU 31	-0.84	-0.5	73.4	-0.1191	0.0265	-0.017
594	SLU 32	-0.85	-0.41	74.81	-0.1222	0.027	-0.0183
594	SLU 33	-0.85	-0.47	74.81	-0.1214	0.027	-0.0177
594	SLU 34	-0.85	-0.5	74.29	-0.1198	0.0269	-0.0173
594	SLU 35	-0.87	-0.41	75.69	-0.1229	0.0274	-0.0185
594	SLU 36	-0.87	-0.47	75.7	-0.1221	0.0274	-0.018
594	SLU 37	-0.86	-0.41	75.16	-0.1218	0.0272	-0.0185
594	SLU 38	-0.86	-0.47	75.17	-0.121	0.0272	-0.0179
594	SLU 39	-0.84	-0.41	76.5	-0.1248	0.0273	-0.0188
594	SLU 40	-0.84	-0.46	76.51	-0.124	0.0273	-0.0182
594	SLU 41	-0.86	-0.41	77.39	-0.1255	0.0277	-0.0191
594	SLU 42	-0.86	-0.46	77.39	-0.1247	0.0277	-0.0185
594	SLU 43	-0.96	-0.6	74.17	-0.1403	0.0282	-0.018
594	SLU 44	-0.97	-0.69	74.17	-0.139	0.0282	-0.0171
594	SLU 45	-0.98	-0.61	75.58	-0.1421	0.0287	-0.0183
594	SLU 46	-0.98	-0.66	75.59	-0.1413	0.0287	-0.0178
594	SLU 47	-0.98	-0.7	75.06	-0.1397	0.0285	-0.0174
594	SLU 48	-1	-0.61	76.47	-0.1428	0.0291	-0.0186
594	SLU 49	-1	-0.66	76.47	-0.142	0.0291	-0.0181
594	SLU 50	-0.99	-0.61	75.94	-0.1417	0.0289	-0.0186
594	SLU 51	-0.99	-0.66	75.94	-0.1409	0.0289	-0.018
594	SLU 52	-0.98	-0.69	81.43	-0.1492	0.0301	-0.0191
594	SLU 53	-1	-0.6	82.84	-0.1523	0.0306	-0.0204
594	SLU 54	-1	-0.65	82.84	-0.1515	0.0307	-0.0198

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
594	SLU 55	-1	-0.69	82.31	-0.1499	0.0305	-0.0194
594	SLU 56	-1.01	-0.6	83.72	-0.153	0.031	-0.0207
594	SLU 57	-1.02	-0.66	83.73	-0.1522	0.031	-0.0201
594	SLU 58	-1.01	-0.6	83.19	-0.1519	0.0308	-0.0206
594	SLU 59	-1.01	-0.65	83.2	-0.1511	0.0308	-0.0201
594	SLU 60	-0.99	-0.59	84.53	-0.1549	0.0309	-0.0209
594	SLU 61	-0.99	-0.65	84.53	-0.1541	0.0309	-0.0204
594	SLU 62	-1	-0.6	85.42	-0.1556	0.0313	-0.0212
594	SLU 63	-1	-0.65	85.42	-0.1548	0.0313	-0.0207
594	SLU 64	-1.02	-0.57	81.36	-0.1421	0.0305	-0.0196
594	SLU 65	-1.02	-0.66	81.36	-0.1408	0.0305	-0.0187
594	SLU 66	-1.04	-0.57	82.77	-0.1439	0.031	-0.0199
594	SLU 67	-1.04	-0.62	82.78	-0.1431	0.031	-0.0194
594	SLU 68	-1.04	-0.66	82.25	-0.1414	0.0308	-0.019
594	SLU 69	-1.06	-0.57	83.66	-0.1446	0.0313	-0.0202
594	SLU 70	-1.06	-0.63	83.66	-0.1438	0.0314	-0.0197
594	SLU 71	-1.05	-0.57	83.13	-0.1435	0.0312	-0.0202
594	SLU 72	-1.05	-0.62	83.13	-0.1427	0.0312	-0.0196
594	SLU 73	-1.04	-0.65	88.62	-0.151	0.0324	-0.0207
594	SLU 74	-1.06	-0.56	90.03	-0.1541	0.0329	-0.022
594	SLU 75	-1.06	-0.62	90.03	-0.1533	0.0329	-0.0214
594	SLU 76	-1.06	-0.65	89.5	-0.1517	0.0328	-0.021
594	SLU 77	-1.07	-0.56	90.91	-0.1548	0.0333	-0.0223
594	SLU 78	-1.07	-0.62	90.92	-0.154	0.0333	-0.0217
594	SLU 79	-1.07	-0.56	90.38	-0.1537	0.0331	-0.0222
594	SLU 80	-1.07	-0.62	90.39	-0.1529	0.0331	-0.0217
594	SLU 81	-1.05	-0.56	91.72	-0.1567	0.0332	-0.0225
594	SLU 82	-1.05	-0.61	91.72	-0.1559	0.0332	-0.022
594	SLU 83	-1.06	-0.56	92.61	-0.1574	0.0336	-0.0228
594	SLU 84	-1.06	-0.61	92.61	-0.1566	0.0336	-0.0223
594	SLE RA 1	-0.77	-0.44	61	-0.1089	0.0229	-0.0147
594	SLE RA 2	-0.78	-0.5	61.01	-0.108	0.0229	-0.0141
594	SLE RA 3	-0.79	-0.45	61.95	-0.1101	0.0233	-0.015
594	SLE RA 4	-0.79	-0.48	61.95	-0.1096	0.0233	-0.0146
594	SLE RA 5	-0.78	-0.51	61.6	-0.1085	0.0232	-0.0143
594	SLE RA 6	-0.8	-0.45	62.54	-0.1106	0.0235	-0.0151
594	SLE RA 7	-0.8	-0.48	62.54	-0.11	0.0235	-0.0148
594	SLE RA 8	-0.79	-0.45	62.18	-0.1098	0.0234	-0.0151
594	SLE RA 9	-0.79	-0.48	62.19	-0.1093	0.0234	-0.0147
594	SLE RA 10	-0.79	-0.5	65.84	-0.1148	0.0242	-0.0155
594	SLE RA 11	-0.8	-0.44	66.78	-0.1169	0.0246	-0.0163
594	SLE RA 12	-0.8	-0.48	66.78	-0.1164	0.0246	-0.0159
594	SLE RA 13	-0.8	-0.5	66.43	-0.1153	0.0245	-0.0157
594	SLE RA 14	-0.81	-0.44	67.37	-0.1174	0.0248	-0.0165
594	SLE RA 15	-0.81	-0.48	67.38	-0.1168	0.0248	-0.0161
594	SLE RA 16	-0.8	-0.44	67.02	-0.1166	0.0247	-0.0165
594	SLE RA 17	-0.8	-0.48	67.02	-0.1161	0.0247	-0.0161
594	SLE RA 18	-0.79	-0.44	67.91	-0.1186	0.0248	-0.0167
594	SLE RA 19	-0.79	-0.47	67.91	-0.1181	0.0248	-0.0163
594	SLE RA 20	-0.8	-0.44	68.5	-0.1191	0.025	-0.0169
594	SLE RA 21	-0.8	-0.47	68.5	-0.1186	0.025	-0.0165
594	SLE FR 1	-0.77	-0.44	61	-0.1089	0.0229	-0.0147
594	SLE FR 2	-0.77	-0.46	61	-0.1087	0.0229	-0.0146
594	SLE FR 3	-0.78	-0.45	61.24	-0.1091	0.023	-0.0148
594	SLE FR 4	-0.78	-0.45	63.07	-0.1116	0.0235	-0.0152
594	SLE FR 5	-0.78	-0.44	63.31	-0.112	0.0236	-0.0154
594	SLE FR 6	-0.78	-0.44	64.46	-0.1138	0.0238	-0.0157
594	SLE QP 1	-0.77	-0.44	61	-0.1089	0.0229	-0.0147
594	SLE QP 2	-0.78	-0.44	63.07	-0.1118	0.0235	-0.0153
594	SLD 1	3.91	-0.05	73.34	-0.2332	0.0557	-0.0263
594	SLD 2	3.9	-0.6	73.38	-0.2165	0.0557	-0.0194
594	SLD 3	3.83	-1.56	72.93	-0.2142	0.0564	-0.0176
594	SLD 4	3.83	-2.1	72.97	-0.1975	0.0564	-0.0107
594	SLD 5	0.75	2.06	66.77	-0.1801	0.0322	-0.0331
594	SLD 6	0.74	1.7	66.8	-0.169	0.0322	-0.0284
594	SLD 7	0.49	-2.96	65.4	-0.1168	0.0343	-0.0041
594	SLD 8	0.48	-3.32	65.42	-0.1057	0.0343	0.0005
594	SLD 9	-2.04	2.44	60.73	-0.1179	0.0127	-0.0312
594	SLD 10	-2.04	2.08	60.75	-0.1068	0.0127	-0.0265
594	SLD 11	-2.3	-2.58	59.35	-0.0547	0.0147	-0.0022
594	SLD 12	-2.3	-2.94	59.38	-0.0436	0.0147	0.0024
594	SLD 13	-5.38	1.22	53.18	-0.0261	-0.0094	-0.02
594	SLD 14	-5.39	0.67	53.22	-0.0094	-0.0094	-0.013
594	SLD 15	-5.46	-0.29	52.77	-0.0071	-0.0088	-0.0113
594	SLD 16	-5.46	-0.83	52.81	0.0096	-0.0088	-0.0043
594	SLV 1	10.17	0.41	87.08	-0.3956	0.099	-0.0407
594	SLV 2	10.17	-0.86	87.17	-0.3566	0.099	-0.0245
594	SLV 3	9.99	-3	86.13	-0.3515	0.1004	-0.021
594	SLV 4	9.99	-4.27	86.22	-0.3125	0.1004	-0.0048
594	SLV 5	2.78	5.2	71.71	-0.2708	0.0439	-0.0556
594	SLV 6	2.78	4.37	71.77	-0.2454	0.0439	-0.045
594	SLV 7	2.18	-6.15	68.53	-0.1236	0.0488	0.0099
594	SLV 8	2.18	-6.98	68.58	-0.0982	0.0488	0.0205
594	SLV 9	-3.74	6.09	57.56	-0.1254	-0.0018	-0.0511
594	SLV 10	-3.74	5.27	57.62	-0.1	-0.0018	-0.0405
594	SLV 11	-4.34	-5.26	54.38	0.0217	0.003	0.0144
594	SLV 12	-4.34	-6.09	54.44	0.0471	0.003	0.0249
594	SLV 13	-11.55	3.38	39.93	0.0889	-0.0535	-0.0258
594	SLV 14	-11.55	2.11	40.02	0.1278	-0.0535	-0.0096
594	SLV 15	-11.73	-0.02	38.97	0.133	-0.052	-0.0062

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
594	SLV 16	-11.73	-1.29	39.06	0.172	-0.052	0.01
594	CRTFP Ux+	0	0	0	0	0	0
594	CRTFP Ux-	0	0	0	0	0	0
594	CRTFP Uy+	0	0	0	0	0	0
594	CRTFP Uy-	0	0	0	0	0	0
595	SLU 1	-0.73	-0.52	58.13	-0.1155	0.0252	-0.0137
595	SLU 2	-0.73	-0.61	58.14	-0.1142	0.0252	-0.0129
595	SLU 3	-0.75	-0.53	59.53	-0.1174	0.0258	-0.014
595	SLU 4	-0.75	-0.58	59.54	-0.1167	0.0258	-0.0135
595	SLU 5	-0.74	-0.61	59.01	-0.115	0.0256	-0.0132
595	SLU 6	-0.76	-0.53	60.4	-0.1182	0.0262	-0.0143
595	SLU 7	-0.76	-0.58	60.41	-0.1174	0.0262	-0.0138
595	SLU 8	-0.76	-0.53	59.88	-0.117	0.0259	-0.0142
595	SLU 9	-0.76	-0.58	59.89	-0.1163	0.0259	-0.0138
595	SLU 10	-0.75	-0.61	65.32	-0.1251	0.0277	-0.0147
595	SLU 11	-0.76	-0.53	66.71	-0.1284	0.0282	-0.0158
595	SLU 12	-0.76	-0.58	66.72	-0.1276	0.0283	-0.0153
595	SLU 13	-0.76	-0.62	66.19	-0.1259	0.028	-0.015
595	SLU 14	-0.78	-0.53	67.58	-0.1291	0.0286	-0.0161
595	SLU 15	-0.78	-0.59	67.59	-0.1283	0.0286	-0.0156
595	SLU 16	-0.77	-0.53	67.06	-0.1279	0.0284	-0.016
595	SLU 17	-0.77	-0.58	67.07	-0.1272	0.0284	-0.0156
595	SLU 18	-0.75	-0.53	68.39	-0.1311	0.0287	-0.0163
595	SLU 19	-0.75	-0.58	68.4	-0.1303	0.0287	-0.0158
595	SLU 20	-0.77	-0.53	69.26	-0.1318	0.0291	-0.0165
595	SLU 21	-0.77	-0.58	69.27	-0.1311	0.0291	-0.0161
595	SLU 22	-0.79	-0.5	65.24	-0.1177	0.028	-0.0151
595	SLU 23	-0.79	-0.58	65.24	-0.1164	0.028	-0.0143
595	SLU 24	-0.81	-0.5	66.63	-0.1196	0.0286	-0.0154
595	SLU 25	-0.81	-0.55	66.64	-0.1188	0.0286	-0.0149
595	SLU 26	-0.8	-0.58	66.12	-0.1171	0.0284	-0.0146
595	SLU 27	-0.82	-0.5	67.51	-0.1204	0.029	-0.0156
595	SLU 28	-0.82	-0.55	67.51	-0.1196	0.029	-0.0152
595	SLU 29	-0.81	-0.5	66.98	-0.1192	0.0288	-0.0156
595	SLU 30	-0.81	-0.55	66.99	-0.1184	0.0288	-0.0151
595	SLU 31	-0.8	-0.58	72.42	-0.1273	0.0305	-0.0161
595	SLU 32	-0.82	-0.5	73.81	-0.1305	0.0311	-0.0172
595	SLU 33	-0.82	-0.55	73.82	-0.1297	0.0311	-0.0167
595	SLU 34	-0.82	-0.59	73.3	-0.128	0.0309	-0.0164
595	SLU 35	-0.83	-0.5	74.69	-0.1313	0.0314	-0.0174
595	SLU 36	-0.84	-0.56	74.69	-0.1305	0.0315	-0.017
595	SLU 37	-0.83	-0.5	74.16	-0.1301	0.0312	-0.0174
595	SLU 38	-0.83	-0.55	74.17	-0.1293	0.0312	-0.0169
595	SLU 39	-0.81	-0.5	75.49	-0.1332	0.0315	-0.0176
595	SLU 40	-0.81	-0.55	75.5	-0.1325	0.0315	-0.0172
595	SLU 41	-0.82	-0.5	76.37	-0.134	0.0319	-0.0179
595	SLU 42	-0.82	-0.55	76.37	-0.1332	0.0319	-0.0174
595	SLU 43	-0.93	-0.69	73.14	-0.1494	0.0318	-0.0173
595	SLU 44	-0.93	-0.78	73.15	-0.1481	0.0318	-0.0166
595	SLU 45	-0.95	-0.7	74.54	-0.1513	0.0324	-0.0176
595	SLU 46	-0.95	-0.75	74.54	-0.1506	0.0324	-0.0172
595	SLU 47	-0.94	-0.78	74.02	-0.1489	0.0321	-0.0168
595	SLU 48	-0.96	-0.7	75.41	-0.1521	0.0327	-0.0179
595	SLU 49	-0.96	-0.75	75.41	-0.1513	0.0327	-0.0174
595	SLU 50	-0.96	-0.7	74.89	-0.1509	0.0325	-0.0179
595	SLU 51	-0.96	-0.75	74.89	-0.1502	0.0325	-0.0174
595	SLU 52	-0.95	-0.78	80.33	-0.159	0.0342	-0.0184
595	SLU 53	-0.96	-0.7	81.72	-0.1623	0.0348	-0.0194
595	SLU 54	-0.96	-0.75	81.72	-0.1615	0.0348	-0.019
595	SLU 55	-0.96	-0.78	81.2	-0.1598	0.0346	-0.0186
595	SLU 56	-0.98	-0.7	82.59	-0.163	0.0352	-0.0197
595	SLU 57	-0.98	-0.75	82.59	-0.1623	0.0352	-0.0192
595	SLU 58	-0.97	-0.7	82.07	-0.1618	0.035	-0.0197
595	SLU 59	-0.97	-0.75	82.07	-0.1611	0.035	-0.0192
595	SLU 60	-0.95	-0.7	83.4	-0.165	0.0353	-0.0199
595	SLU 61	-0.95	-0.75	83.4	-0.1642	0.0353	-0.0194
595	SLU 62	-0.97	-0.7	84.27	-0.1658	0.0357	-0.0202
595	SLU 63	-0.97	-0.75	84.27	-0.165	0.0357	-0.0197
595	SLU 64	-0.99	-0.66	80.24	-0.1516	0.0346	-0.0187
595	SLU 65	-0.99	-0.75	80.25	-0.1503	0.0346	-0.0179
595	SLU 66	-1	-0.67	81.64	-0.1535	0.0352	-0.019
595	SLU 67	-1.01	-0.72	81.64	-0.1527	0.0352	-0.0185
595	SLU 68	-1	-0.75	81.12	-0.151	0.035	-0.0182
595	SLU 69	-1.02	-0.67	82.51	-0.1543	0.0356	-0.0193
595	SLU 70	-1.02	-0.72	82.52	-0.1535	0.0356	-0.0188
595	SLU 71	-1.01	-0.67	81.99	-0.1531	0.0353	-0.0193
595	SLU 72	-1.01	-0.72	81.99	-0.1523	0.0353	-0.0188
595	SLU 73	-1	-0.75	87.43	-0.1612	0.0371	-0.0197
595	SLU 74	-1.02	-0.67	88.82	-0.1644	0.0376	-0.0208
595	SLU 75	-1.02	-0.72	88.82	-0.1636	0.0377	-0.0203
595	SLU 76	-1.02	-0.75	88.3	-0.162	0.0374	-0.02
595	SLU 77	-1.03	-0.67	89.69	-0.1652	0.038	-0.0211
595	SLU 78	-1.03	-0.72	89.7	-0.1644	0.038	-0.0206
595	SLU 79	-1.03	-0.67	89.17	-0.164	0.0378	-0.0211
595	SLU 80	-1.03	-0.72	89.17	-0.1632	0.0378	-0.0206
595	SLU 81	-1.01	-0.67	90.5	-0.1671	0.0381	-0.0213
595	SLU 82	-1.01	-0.72	90.5	-0.1664	0.0381	-0.0208
595	SLU 83	-1.02	-0.67	91.37	-0.1679	0.0385	-0.0216
595	SLU 84	-1.02	-0.72	91.38	-0.1671	0.0385	-0.0211
595	SLE RA 1	-0.75	-0.52	60.16	-0.1161	0.026	-0.0141

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
595	SLE RA 2	-0.75	-0.57	60.17	-0.1152	0.026	-0.0136
595	SLE RA 3	-0.76	-0.52	61.1	-0.1174	0.0264	-0.0143
595	SLE RA 4	-0.76	-0.55	61.1	-0.1169	0.0264	-0.014
595	SLE RA 5	-0.76	-0.58	60.75	-0.1158	0.0262	-0.0138
595	SLE RA 6	-0.77	-0.52	61.68	-0.1179	0.0266	-0.0145
595	SLE RA 7	-0.77	-0.56	61.68	-0.1174	0.0266	-0.0142
595	SLE RA 8	-0.76	-0.52	61.33	-0.1171	0.0265	-0.0145
595	SLE RA 9	-0.76	-0.55	61.33	-0.1166	0.0265	-0.0141
595	SLE RA 10	-0.76	-0.58	64.96	-0.1225	0.0276	-0.0148
595	SLE RA 11	-0.77	-0.52	65.88	-0.1247	0.028	-0.0155
595	SLE RA 12	-0.77	-0.56	65.88	-0.1242	0.028	-0.0152
595	SLE RA 13	-0.77	-0.58	65.54	-0.123	0.0279	-0.015
595	SLE RA 14	-0.78	-0.52	66.46	-0.1252	0.0283	-0.0157
595	SLE RA 15	-0.78	-0.56	66.47	-0.1247	0.0283	-0.0154
595	SLE RA 16	-0.77	-0.52	66.11	-0.1244	0.0281	-0.0157
595	SLE RA 17	-0.78	-0.56	66.12	-0.1239	0.0281	-0.0153
595	SLE RA 18	-0.76	-0.52	67	-0.1265	0.0283	-0.0158
595	SLE RA 19	-0.76	-0.55	67	-0.126	0.0283	-0.0155
595	SLE RA 20	-0.77	-0.52	67.58	-0.127	0.0286	-0.016
595	SLE RA 21	-0.77	-0.55	67.59	-0.1265	0.0286	-0.0157
595	SLE FR 1	-0.75	-0.52	60.16	-0.1161	0.026	-0.0141
595	SLE FR 2	-0.75	-0.53	60.16	-0.1159	0.026	-0.014
595	SLE FR 3	-0.75	-0.52	60.4	-0.1163	0.0261	-0.0142
595	SLE FR 4	-0.75	-0.53	62.22	-0.1191	0.0267	-0.0145
595	SLE FR 5	-0.75	-0.52	62.45	-0.1194	0.0268	-0.0147
595	SLE FR 6	-0.75	-0.52	63.58	-0.1213	0.0272	-0.015
595	SLE QP 1	-0.75	-0.52	60.16	-0.1161	0.026	-0.0141
595	SLE QP 2	-0.75	-0.52	62.22	-0.1192	0.0267	-0.0146
595	SLD 1	3.94	-0.17	71.38	-0.2456	0.0576	-0.0232
595	SLD 2	3.94	-0.68	71.42	-0.2288	0.0575	-0.0169
595	SLD 3	3.86	-1.64	70.98	-0.2257	0.0584	-0.0168
595	SLD 4	3.86	-2.15	71.02	-0.209	0.0583	-0.0106
595	SLD 5	0.77	1.91	65.55	-0.1903	0.0347	-0.0279
595	SLD 6	0.77	1.57	65.58	-0.1791	0.0347	-0.0238
595	SLD 7	0.52	-2.99	64.24	-0.1241	0.0374	-0.0068
595	SLD 8	0.52	-3.33	64.27	-0.113	0.0374	-0.0027
595	SLD 9	-2.02	2.3	60.16	-0.1254	0.0159	-0.0265
595	SLD 10	-2.02	1.96	60.19	-0.1143	0.0159	-0.0224
595	SLD 11	-2.27	-2.6	58.85	-0.0593	0.0187	-0.0055
595	SLD 12	-2.28	-2.94	58.88	-0.0482	0.0187	-0.0013
595	SLD 13	-5.36	1.12	53.41	-0.0295	-0.005	-0.0186
595	SLD 14	-5.37	0.61	53.45	-0.0127	-0.005	-0.0124
595	SLD 15	-5.44	-0.35	53.01	-0.0097	-0.0042	-0.0123
595	SLD 16	-5.44	-0.86	53.05	0.0071	-0.0042	-0.0061
595	SLV 1	10.22	0.24	83.64	-0.4145	0.0989	-0.0343
595	SLV 2	10.21	-0.96	83.73	-0.3755	0.0988	-0.0199
595	SLV 3	10.04	-3.09	82.73	-0.3684	0.1008	-0.0201
595	SLV 4	10.04	-4.28	82.82	-0.3294	0.1008	-0.0056
595	SLV 5	2.81	4.96	70	-0.2847	0.0455	-0.0447
595	SLV 6	2.81	4.18	70.06	-0.2592	0.0454	-0.0353
595	SLV 7	2.22	-6.12	66.98	-0.1309	0.0518	0.0028
595	SLV 8	2.22	-6.9	67.04	-0.1054	0.0518	0.0123
595	SLV 9	-3.72	5.86	57.39	-0.133	0.0016	-0.0415
595	SLV 10	-3.72	5.09	57.45	-0.1076	0.0015	-0.0321
595	SLV 11	-4.31	-5.22	54.37	0.0208	0.008	0.0061
595	SLV 12	-4.31	-5.99	54.43	0.0462	0.0079	0.0155
595	SLV 13	-11.54	3.25	41.61	0.0909	-0.0474	-0.0236
595	SLV 14	-11.54	2.05	41.7	0.13	-0.0475	-0.0092
595	SLV 15	-11.72	-0.07	40.7	0.1371	-0.0455	-0.0094
595	SLV 16	-11.72	-1.27	40.79	0.1761	-0.0456	0.0051
595	CRTFP Ux+	0	0	0	0	0	0
595	CRTFP Ux-	0	0	0	0	0	0
595	CRTFP Uy+	0	0	0	0	0	0
595	CRTFP Uy-	0	0	0	0	0	0
596	SLU 1	-0.7	-0.59	57.22	-0.1229	0.0282	-0.0125
596	SLU 2	-0.7	-0.67	57.23	-0.1217	0.0282	-0.0119
596	SLU 3	-0.72	-0.6	58.59	-0.1251	0.0289	-0.0128
596	SLU 4	-0.72	-0.65	58.6	-0.1243	0.0289	-0.0124
596	SLU 5	-0.71	-0.68	58.09	-0.1225	0.0286	-0.0121
596	SLU 6	-0.73	-0.6	59.45	-0.1259	0.0293	-0.013
596	SLU 7	-0.73	-0.65	59.46	-0.1252	0.0293	-0.0127
596	SLU 8	-0.72	-0.6	58.94	-0.1247	0.0291	-0.013
596	SLU 9	-0.73	-0.65	58.94	-0.1239	0.0291	-0.0126
596	SLU 10	-0.71	-0.68	64.31	-0.1333	0.0312	-0.0134
596	SLU 11	-0.73	-0.61	65.68	-0.1367	0.0319	-0.0143
596	SLU 12	-0.73	-0.66	65.68	-0.136	0.0319	-0.0139
596	SLU 13	-0.73	-0.69	65.17	-0.1342	0.0317	-0.0136
596	SLU 14	-0.74	-0.61	66.54	-0.1376	0.0323	-0.0145
596	SLU 15	-0.74	-0.66	66.54	-0.1368	0.0323	-0.0141
596	SLU 16	-0.74	-0.61	66.02	-0.1363	0.0321	-0.0145
596	SLU 17	-0.74	-0.66	66.03	-0.1355	0.0321	-0.0141
596	SLU 18	-0.72	-0.61	67.34	-0.1396	0.0326	-0.0147
596	SLU 19	-0.72	-0.65	67.35	-0.1388	0.0325	-0.0143
596	SLU 20	-0.73	-0.61	68.2	-0.1404	0.033	-0.0149
596	SLU 21	-0.73	-0.66	68.2	-0.1397	0.033	-0.0145
596	SLU 22	-0.75	-0.57	64.22	-0.1255	0.0316	-0.0136
596	SLU 23	-0.76	-0.65	64.22	-0.1243	0.0316	-0.013
596	SLU 24	-0.77	-0.57	65.59	-0.1276	0.0322	-0.0139
596	SLU 25	-0.77	-0.62	65.59	-0.1269	0.0322	-0.0135
596	SLU 26	-0.77	-0.65	65.08	-0.1251	0.032	-0.0132

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
596	SLU 27	-0.78	-0.58	66.45	-0.1285	0.0327	-0.0141
596	SLU 28	-0.79	-0.63	66.45	-0.1277	0.0327	-0.0137
596	SLU 29	-0.78	-0.58	65.93	-0.1272	0.0324	-0.0141
596	SLU 30	-0.78	-0.62	65.94	-0.1265	0.0324	-0.0137
596	SLU 31	-0.77	-0.66	71.31	-0.1359	0.0346	-0.0145
596	SLU 32	-0.79	-0.58	72.68	-0.1393	0.0353	-0.0154
596	SLU 33	-0.79	-0.63	72.68	-0.1385	0.0353	-0.015
596	SLU 34	-0.78	-0.66	72.17	-0.1368	0.035	-0.0147
596	SLU 35	-0.8	-0.59	73.54	-0.1401	0.0357	-0.0156
596	SLU 36	-0.8	-0.64	73.54	-0.1394	0.0357	-0.0152
596	SLU 37	-0.79	-0.59	73.02	-0.1389	0.0355	-0.0156
596	SLU 38	-0.79	-0.64	73.02	-0.1381	0.0355	-0.0152
596	SLU 39	-0.77	-0.58	74.34	-0.1422	0.0359	-0.0158
596	SLU 40	-0.78	-0.63	74.34	-0.1414	0.0359	-0.0154
596	SLU 41	-0.79	-0.59	75.2	-0.143	0.0364	-0.016
596	SLU 42	-0.79	-0.64	75.2	-0.1423	0.0364	-0.0156
596	SLU 43	-0.89	-0.78	71.99	-0.1589	0.0355	-0.0159
596	SLU 44	-0.89	-0.86	71.99	-0.1577	0.0355	-0.0153
596	SLU 45	-0.91	-0.78	73.36	-0.1611	0.0362	-0.0162
596	SLU 46	-0.91	-0.83	73.37	-0.1603	0.0362	-0.0158
596	SLU 47	-0.9	-0.86	72.85	-0.1585	0.0359	-0.0155
596	SLU 48	-0.92	-0.79	74.22	-0.1619	0.0366	-0.0164
596	SLU 49	-0.92	-0.84	74.23	-0.1611	0.0366	-0.016
596	SLU 50	-0.92	-0.78	73.71	-0.1606	0.0364	-0.0164
596	SLU 51	-0.92	-0.83	73.71	-0.1599	0.0364	-0.016
596	SLU 52	-0.91	-0.87	79.08	-0.1693	0.0385	-0.0168
596	SLU 53	-0.92	-0.79	80.45	-0.1727	0.0392	-0.0177
596	SLU 54	-0.92	-0.84	80.45	-0.1719	0.0392	-0.0173
596	SLU 55	-0.92	-0.87	79.94	-0.1702	0.039	-0.017
596	SLU 56	-0.93	-0.8	81.31	-0.1736	0.0396	-0.0179
596	SLU 57	-0.93	-0.85	81.31	-0.1728	0.0396	-0.0175
596	SLU 58	-0.93	-0.79	80.79	-0.1723	0.0394	-0.0179
596	SLU 59	-0.93	-0.84	80.79	-0.1715	0.0394	-0.0175
596	SLU 60	-0.91	-0.79	82.11	-0.1756	0.0399	-0.0181
596	SLU 61	-0.91	-0.84	82.11	-0.1748	0.0398	-0.0177
596	SLU 62	-0.92	-0.79	82.97	-0.1764	0.0403	-0.0183
596	SLU 63	-0.92	-0.84	82.97	-0.1757	0.0403	-0.0179
596	SLU 64	-0.95	-0.75	78.98	-0.1615	0.0389	-0.017
596	SLU 65	-0.95	-0.84	78.99	-0.1603	0.0389	-0.0164
596	SLU 66	-0.96	-0.76	80.36	-0.1636	0.0395	-0.0173
596	SLU 67	-0.96	-0.81	80.36	-0.1629	0.0395	-0.0169
596	SLU 68	-0.96	-0.84	79.85	-0.1611	0.0393	-0.0166
596	SLU 69	-0.97	-0.76	81.22	-0.1645	0.04	-0.0175
596	SLU 70	-0.98	-0.81	81.22	-0.1637	0.04	-0.0171
596	SLU 71	-0.97	-0.76	80.7	-0.1632	0.0397	-0.0175
596	SLU 72	-0.97	-0.81	80.71	-0.1625	0.0397	-0.0171
596	SLU 73	-0.96	-0.85	86.07	-0.1719	0.0419	-0.0179
596	SLU 74	-0.98	-0.77	87.44	-0.1753	0.0426	-0.0188
596	SLU 75	-0.98	-0.82	87.45	-0.1745	0.0426	-0.0184
596	SLU 76	-0.97	-0.85	86.93	-0.1728	0.0423	-0.0181
596	SLU 77	-0.99	-0.77	88.3	-0.1761	0.043	-0.019
596	SLU 78	-0.99	-0.82	88.31	-0.1754	0.043	-0.0186
596	SLU 79	-0.98	-0.77	87.79	-0.1749	0.0428	-0.019
596	SLU 80	-0.99	-0.82	87.79	-0.1741	0.0428	-0.0186
596	SLU 81	-0.97	-0.77	89.1	-0.1782	0.0432	-0.0191
596	SLU 82	-0.97	-0.82	89.11	-0.1774	0.0432	-0.0188
596	SLU 83	-0.98	-0.77	89.96	-0.179	0.0437	-0.0194
596	SLU 84	-0.98	-0.82	89.97	-0.1783	0.0437	-0.019
596	SLE RA 1	-0.71	-0.58	59.22	-0.1237	0.0292	-0.0129
596	SLE RA 2	-0.72	-0.64	59.22	-0.1228	0.0292	-0.0124
596	SLE RA 3	-0.73	-0.59	60.14	-0.1251	0.0296	-0.013
596	SLE RA 4	-0.73	-0.62	60.14	-0.1246	0.0296	-0.0128
596	SLE RA 5	-0.72	-0.64	59.8	-0.1234	0.0294	-0.0126
596	SLE RA 6	-0.73	-0.59	60.71	-0.1257	0.0299	-0.0132
596	SLE RA 7	-0.74	-0.62	60.71	-0.1252	0.0299	-0.0129
596	SLE RA 8	-0.73	-0.59	60.36	-0.1248	0.0297	-0.0132
596	SLE RA 9	-0.73	-0.62	60.37	-0.1243	0.0297	-0.0129
596	SLE RA 10	-0.73	-0.65	63.95	-0.1306	0.0312	-0.0134
596	SLE RA 11	-0.74	-0.59	64.86	-0.1329	0.0316	-0.014
596	SLE RA 12	-0.74	-0.63	64.86	-0.1324	0.0316	-0.0138
596	SLE RA 13	-0.73	-0.65	64.52	-0.1312	0.0315	-0.0136
596	SLE RA 14	-0.74	-0.6	65.43	-0.1334	0.0319	-0.0142
596	SLE RA 15	-0.74	-0.63	65.43	-0.1329	0.0319	-0.0139
596	SLE RA 16	-0.74	-0.6	65.09	-0.1326	0.0318	-0.0142
596	SLE RA 17	-0.74	-0.63	65.09	-0.1321	0.0318	-0.0139
596	SLE RA 18	-0.73	-0.59	65.97	-0.1348	0.0321	-0.0143
596	SLE RA 19	-0.73	-0.63	65.97	-0.1343	0.0321	-0.014
596	SLE RA 20	-0.74	-0.6	66.54	-0.1353	0.0324	-0.0144
596	SLE RA 21	-0.74	-0.63	66.54	-0.1348	0.0323	-0.0142
596	SLE FR 1	-0.71	-0.58	59.22	-0.1237	0.0292	-0.0129
596	SLE FR 2	-0.71	-0.59	59.22	-0.1235	0.0292	-0.0128
596	SLE FR 3	-0.72	-0.58	59.45	-0.1239	0.0293	-0.0129
596	SLE FR 4	-0.72	-0.6	61.24	-0.1268	0.03	-0.0132
596	SLE FR 5	-0.72	-0.59	61.47	-0.1272	0.0301	-0.0133
596	SLE FR 6	-0.72	-0.59	62.59	-0.1292	0.0306	-0.0136
596	SLE QP 1	-0.71	-0.58	59.22	-0.1237	0.0292	-0.0129
596	SLE QP 2	-0.72	-0.59	61.24	-0.127	0.03	-0.0133
596	SLD 1	3.98	-0.27	69.36	-0.2585	0.0594	-0.0196
596	SLD 2	3.98	-0.75	69.4	-0.2417	0.0593	-0.014
596	SLD 3	3.9	-1.71	69	-0.2377	0.0583	-0.0154

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
596	SLD 4	3.9	-2.2	69.04	-0.2209	0.0582	-0.0099
596	SLD 5	0.81	1.79	64.21	-0.201	0.0406	-0.0224
596	SLD 6	0.81	1.47	64.24	-0.1899	0.0405	-0.0187
596	SLD 7	0.55	-3.03	63.02	-0.1318	0.0368	-0.0087
596	SLD 8	0.55	-3.35	63.04	-0.1206	0.0367	-0.005
596	SLD 9	-1.99	2.18	59.44	-0.1334	0.0233	-0.0216
596	SLD 10	-1.99	1.86	59.47	-0.1222	0.0233	-0.0179
596	SLD 11	-2.24	-2.64	58.24	-0.0642	0.0195	-0.0078
596	SLD 12	-2.24	-2.96	58.27	-0.053	0.0195	-0.0041
596	SLD 13	-5.34	1.03	53.45	-0.0331	0.0019	-0.0167
596	SLD 14	-5.34	0.54	53.49	-0.0163	0.0018	-0.0111
596	SLD 15	-5.42	-0.42	53.09	-0.0123	0.0007	-0.0126
596	SLD 16	-5.42	-0.9	53.13	0.0045	0.0007	-0.007
596	SLV 1	10.26	0.1	80.22	-0.4344	0.0987	-0.0278
596	SLV 2	10.26	-1.03	80.31	-0.3953	0.0986	-0.0148
596	SLV 3	10.09	-3.17	79.38	-0.3861	0.0961	-0.0185
596	SLV 4	10.09	-4.3	79.48	-0.347	0.0959	-0.0055
596	SLV 5	2.84	4.77	68.18	-0.2994	0.0547	-0.034
596	SLV 6	2.84	4.04	68.24	-0.2739	0.0546	-0.0256
596	SLV 7	2.26	-6.12	65.41	-0.1384	0.0459	-0.003
596	SLV 8	2.26	-6.86	65.47	-0.1129	0.0458	0.0055
596	SLV 9	-3.69	5.68	57.02	-0.1412	0.0143	-0.032
596	SLV 10	-3.7	4.95	57.08	-0.1157	0.0142	-0.0235
596	SLV 11	-4.28	-5.21	54.24	0.0198	0.0055	-0.001
596	SLV 12	-4.28	-5.95	54.31	0.0453	0.0054	0.0075
596	SLV 13	-11.52	3.13	43.01	0.093	-0.0359	-0.021
596	SLV 14	-11.53	2	43.1	0.1321	-0.036	-0.008
596	SLV 15	-11.7	-0.14	42.17	0.1413	-0.0385	-0.0117
596	SLV 16	-11.7	-1.27	42.27	0.1804	-0.0387	0.0013
596	CRTFP Ux+	0	0	0	0	0	0
596	CRTFP Ux-	0	0	0	0	0	0
596	CRTFP Uy+	0	0	0	0	0	0
596	CRTFP Uy-	0	0	0	0	0	0
597	SLU 1	-0.66	-0.65	56.21	-0.1307	0.0302	-0.0108
597	SLU 2	-0.67	-0.73	56.22	-0.1295	0.0302	-0.0102
597	SLU 3	-0.68	-0.66	57.57	-0.133	0.0309	-0.011
597	SLU 4	-0.68	-0.7	57.57	-0.1323	0.0309	-0.0107
597	SLU 5	-0.68	-0.73	57.07	-0.1304	0.0306	-0.0105
597	SLU 6	-0.69	-0.66	58.41	-0.1339	0.0314	-0.0112
597	SLU 7	-0.69	-0.71	58.41	-0.1332	0.0313	-0.0109
597	SLU 8	-0.69	-0.66	57.9	-0.1326	0.0311	-0.0112
597	SLU 9	-0.69	-0.71	57.91	-0.1319	0.0311	-0.0109
597	SLU 10	-0.68	-0.75	63.19	-0.1419	0.0336	-0.0113
597	SLU 11	-0.69	-0.67	64.54	-0.1454	0.0344	-0.0121
597	SLU 12	-0.69	-0.72	64.54	-0.1447	0.0343	-0.0118
597	SLU 13	-0.69	-0.75	64.04	-0.1428	0.0341	-0.0116
597	SLU 14	-0.7	-0.68	65.38	-0.1464	0.0348	-0.0123
597	SLU 15	-0.71	-0.73	65.39	-0.1456	0.0348	-0.012
597	SLU 16	-0.7	-0.68	64.87	-0.145	0.0346	-0.0123
597	SLU 17	-0.7	-0.72	64.88	-0.1443	0.0346	-0.012
597	SLU 18	-0.68	-0.67	66.18	-0.1485	0.0352	-0.0123
597	SLU 19	-0.68	-0.72	66.18	-0.1477	0.0351	-0.012
597	SLU 20	-0.69	-0.68	67.02	-0.1494	0.0356	-0.0126
597	SLU 21	-0.69	-0.73	67.02	-0.1487	0.0356	-0.0122
597	SLU 22	-0.72	-0.63	63.09	-0.1337	0.034	-0.0115
597	SLU 23	-0.72	-0.71	63.09	-0.1325	0.034	-0.011
597	SLU 24	-0.73	-0.64	64.44	-0.136	0.0347	-0.0117
597	SLU 25	-0.73	-0.68	64.44	-0.1353	0.0347	-0.0114
597	SLU 26	-0.73	-0.72	63.94	-0.1334	0.0345	-0.0112
597	SLU 27	-0.75	-0.64	65.28	-0.137	0.0352	-0.0119
597	SLU 28	-0.75	-0.69	65.29	-0.1362	0.0352	-0.0116
597	SLU 29	-0.74	-0.64	64.77	-0.1356	0.0349	-0.0119
597	SLU 30	-0.74	-0.69	64.78	-0.1349	0.0349	-0.0116
597	SLU 31	-0.73	-0.73	70.07	-0.1449	0.0375	-0.0121
597	SLU 32	-0.74	-0.65	71.41	-0.1485	0.0382	-0.0128
597	SLU 33	-0.75	-0.7	71.42	-0.1477	0.0382	-0.0125
597	SLU 34	-0.74	-0.73	70.91	-0.1459	0.0379	-0.0123
597	SLU 35	-0.76	-0.66	72.25	-0.1494	0.0387	-0.013
597	SLU 36	-0.76	-0.71	72.26	-0.1486	0.0386	-0.0127
597	SLU 37	-0.75	-0.66	71.75	-0.148	0.0384	-0.0131
597	SLU 38	-0.75	-0.71	71.75	-0.1473	0.0384	-0.0127
597	SLU 39	-0.73	-0.65	73.05	-0.1515	0.039	-0.0131
597	SLU 40	-0.73	-0.7	73.05	-0.1508	0.039	-0.0128
597	SLU 41	-0.75	-0.66	73.89	-0.1524	0.0394	-0.0133
597	SLU 42	-0.75	-0.71	73.9	-0.1517	0.0394	-0.013
597	SLU 43	-0.85	-0.85	70.72	-0.1689	0.0379	-0.0137
597	SLU 44	-0.85	-0.93	70.73	-0.1677	0.0379	-0.0132
597	SLU 45	-0.86	-0.86	72.07	-0.1712	0.0386	-0.0139
597	SLU 46	-0.86	-0.9	72.08	-0.1704	0.0386	-0.0136
597	SLU 47	-0.86	-0.94	71.57	-0.1686	0.0384	-0.0134
597	SLU 48	-0.87	-0.86	72.92	-0.1721	0.0391	-0.0142
597	SLU 49	-0.87	-0.91	72.92	-0.1714	0.0391	-0.0138
597	SLU 50	-0.87	-0.86	72.41	-0.1708	0.0389	-0.0142
597	SLU 51	-0.87	-0.91	72.41	-0.17	0.0388	-0.0139
597	SLU 52	-0.86	-0.95	77.7	-0.1801	0.0414	-0.0143
597	SLU 53	-0.87	-0.87	79.05	-0.1836	0.0421	-0.015
597	SLU 54	-0.87	-0.92	79.05	-0.1829	0.0421	-0.0147
597	SLU 55	-0.87	-0.95	78.55	-0.181	0.0418	-0.0145
597	SLU 56	-0.89	-0.88	79.89	-0.1845	0.0426	-0.0153
597	SLU 57	-0.89	-0.93	79.9	-0.1838	0.0426	-0.0149

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
597	SLU 58	-0.88	-0.88	79.38	-0.1832	0.0423	-0.0153
597	SLU 59	-0.88	-0.93	79.39	-0.1825	0.0423	-0.015
597	SLU 60	-0.86	-0.87	80.68	-0.1866	0.0429	-0.0153
597	SLU 61	-0.86	-0.92	80.69	-0.1859	0.0429	-0.015
597	SLU 62	-0.87	-0.88	81.53	-0.1876	0.0434	-0.0155
597	SLU 63	-0.88	-0.93	81.53	-0.1868	0.0433	-0.0152
597	SLU 64	-0.9	-0.83	77.59	-0.1719	0.0418	-0.0145
597	SLU 65	-0.9	-0.91	77.6	-0.1707	0.0417	-0.014
597	SLU 66	-0.91	-0.84	78.95	-0.1742	0.0425	-0.0147
597	SLU 67	-0.92	-0.89	78.95	-0.1735	0.0425	-0.0144
597	SLU 68	-0.91	-0.92	78.45	-0.1716	0.0422	-0.0142
597	SLU 69	-0.93	-0.84	79.79	-0.1751	0.0429	-0.0149
597	SLU 70	-0.93	-0.89	79.79	-0.1744	0.0429	-0.0146
597	SLU 71	-0.92	-0.84	79.28	-0.1738	0.0427	-0.0149
597	SLU 72	-0.92	-0.89	79.29	-0.1731	0.0427	-0.0146
597	SLU 73	-0.91	-0.93	84.57	-0.1831	0.0452	-0.0151
597	SLU 74	-0.93	-0.85	85.92	-0.1866	0.0459	-0.0158
597	SLU 75	-0.93	-0.9	85.92	-0.1859	0.0459	-0.0155
597	SLU 76	-0.92	-0.93	85.42	-0.184	0.0457	-0.0153
597	SLU 77	-0.94	-0.86	86.76	-0.1876	0.0464	-0.016
597	SLU 78	-0.94	-0.91	86.77	-0.1868	0.0464	-0.0157
597	SLU 79	-0.93	-0.86	86.26	-0.1862	0.0462	-0.016
597	SLU 80	-0.93	-0.91	86.26	-0.1855	0.0461	-0.0157
597	SLU 81	-0.91	-0.86	87.56	-0.1897	0.0467	-0.0161
597	SLU 82	-0.92	-0.9	87.56	-0.1889	0.0467	-0.0158
597	SLU 83	-0.93	-0.86	88.4	-0.1906	0.0472	-0.0163
597	SLU 84	-0.93	-0.91	88.4	-0.1899	0.0472	-0.016
597	SLE RA 1	-0.68	-0.64	58.18	-0.1316	0.0313	-0.011
597	SLE RA 2	-0.68	-0.7	58.18	-0.1308	0.0313	-0.0106
597	SLE RA 3	-0.69	-0.65	59.08	-0.1331	0.0318	-0.0111
597	SLE RA 4	-0.69	-0.68	59.08	-0.1326	0.0317	-0.0109
597	SLE RA 5	-0.69	-0.7	58.75	-0.1314	0.0316	-0.0108
597	SLE RA 6	-0.7	-0.65	59.64	-0.1337	0.0321	-0.0113
597	SLE RA 7	-0.7	-0.68	59.64	-0.1332	0.0321	-0.011
597	SLE RA 8	-0.7	-0.65	59.3	-0.1328	0.0319	-0.0113
597	SLE RA 9	-0.7	-0.68	59.31	-0.1323	0.0319	-0.0111
597	SLE RA 10	-0.69	-0.71	62.83	-0.139	0.0336	-0.0114
597	SLE RA 11	-0.7	-0.66	63.73	-0.1414	0.0341	-0.0119
597	SLE RA 12	-0.7	-0.69	63.73	-0.1409	0.0341	-0.0116
597	SLE RA 13	-0.7	-0.71	63.39	-0.1397	0.0339	-0.0115
597	SLE RA 14	-0.71	-0.66	64.29	-0.142	0.0344	-0.012
597	SLE RA 15	-0.71	-0.69	64.29	-0.1415	0.0344	-0.0118
597	SLE RA 16	-0.7	-0.66	63.95	-0.1411	0.0342	-0.012
597	SLE RA 17	-0.7	-0.69	63.95	-0.1406	0.0342	-0.0118
597	SLE RA 18	-0.69	-0.66	64.82	-0.1434	0.0346	-0.012
597	SLE RA 19	-0.69	-0.69	64.82	-0.1429	0.0346	-0.0118
597	SLE RA 20	-0.7	-0.66	65.38	-0.144	0.0349	-0.0122
597	SLE RA 21	-0.7	-0.69	65.38	-0.1435	0.0349	-0.012
597	SLE FR 1	-0.68	-0.64	58.18	-0.1316	0.0313	-0.011
597	SLE FR 2	-0.68	-0.65	58.18	-0.1314	0.0313	-0.0109
597	SLE FR 3	-0.68	-0.64	58.4	-0.1318	0.0314	-0.011
597	SLE FR 4	-0.68	-0.66	60.17	-0.135	0.0323	-0.0112
597	SLE FR 5	-0.69	-0.65	60.4	-0.1354	0.0324	-0.0114
597	SLE FR 6	-0.68	-0.65	61.5	-0.1375	0.0329	-0.0115
597	SLE QP 1	-0.68	-0.64	58.18	-0.1316	0.0313	-0.011
597	SLE QP 2	-0.68	-0.65	60.17	-0.1351	0.0323	-0.0113
597	SLD 1	4.02	-0.35	67.34	-0.272	0.0577	-0.0126
597	SLD 2	4.02	-0.81	67.39	-0.2552	0.0575	-0.0074
597	SLD 3	3.95	-1.78	67.03	-0.2502	0.056	-0.0102
597	SLD 4	3.94	-2.24	67.07	-0.2334	0.0559	-0.0051
597	SLD 5	0.84	1.7	62.79	-0.2124	0.0424	-0.0161
597	SLD 6	0.84	1.39	62.82	-0.2012	0.0423	-0.0127
597	SLD 7	0.59	-3.07	61.74	-0.1396	0.0369	-0.0084
597	SLD 8	0.59	-3.38	61.77	-0.1284	0.0369	-0.005
597	SLD 9	-1.96	2.08	58.57	-0.1418	0.0277	-0.0176
597	SLD 10	-1.96	1.78	58.6	-0.1306	0.0276	-0.0142
597	SLD 11	-2.21	-2.69	57.52	-0.0691	0.0222	-0.0099
597	SLD 12	-2.21	-2.99	57.55	-0.0579	0.0222	-0.0065
597	SLD 13	-5.31	0.94	53.27	-0.0369	0.0087	-0.0175
597	SLD 14	-5.31	0.48	53.31	-0.02	0.0086	-0.0123
597	SLD 15	-5.38	-0.49	52.95	-0.0151	0.007	-0.0152
597	SLD 16	-5.39	-0.95	53	0.0018	0.0069	-0.01
597	SLV 1	10.31	0	76.94	-0.4552	0.0916	-0.0141
597	SLV 2	10.31	-1.07	77.05	-0.4159	0.0913	-0.0022
597	SLV 3	10.14	-3.24	76.22	-0.4045	0.0878	-0.0089
597	SLV 4	10.14	-4.31	76.32	-0.3652	0.0876	0.0031
597	SLV 5	2.88	4.64	66.29	-0.3149	0.0558	-0.0222
597	SLV 6	2.88	3.95	66.36	-0.2894	0.0556	-0.0144
597	SLV 7	2.3	-6.15	63.86	-0.1459	0.0433	-0.0048
597	SLV 8	2.3	-6.84	63.93	-0.1204	0.0431	0.003
597	SLV 9	-3.66	5.55	56.41	-0.1499	0.0214	-0.0256
597	SLV 10	-3.67	4.85	56.48	-0.1243	0.0213	-0.0178
597	SLV 11	-4.24	-5.24	53.98	0.0191	0.0089	-0.0082
597	SLV 12	-4.25	-5.94	54.05	0.0447	0.0088	-0.0004
597	SLV 13	-11.5	3.01	44.02	0.095	-0.023	-0.0257
597	SLV 14	-11.5	1.94	44.12	0.1342	-0.0233	-0.0137
597	SLV 15	-11.68	-0.23	43.29	0.1456	-0.0268	-0.0204
597	SLV 16	-11.68	-1.3	43.4	0.1849	-0.027	-0.0085
597	CRTFP Ux+	0	0	0	0	0	0
597	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
597	CRTFP Uy+	0	0	0	0	0	0
597	CRTFP Uy-	0	0	0	0	0	0
598	SLU 1	-0.58	-0.64	50.99	-0.128	0.7185	0.0011
598	SLU 2	-0.58	-0.71	51	-0.1269	0.7186	0.0025
598	SLU 3	-0.59	-0.65	52.22	-0.1303	0.7358	0.0011
598	SLU 4	-0.59	-0.69	52.22	-0.1296	0.7358	0.0019
598	SLU 5	-0.59	-0.72	51.76	-0.1278	0.7293	0.0024
598	SLU 6	-0.6	-0.65	52.98	-0.1312	0.7465	0.001
598	SLU 7	-0.6	-0.7	52.99	-0.1306	0.7466	0.0018
598	SLU 8	-0.6	-0.65	52.52	-0.1299	0.7401	0.001
598	SLU 9	-0.6	-0.7	52.53	-0.1292	0.7401	0.0018
598	SLU 10	-0.59	-0.73	57.33	-0.1391	0.8076	0.0022
598	SLU 11	-0.6	-0.67	58.55	-0.1425	0.8248	0.0008
598	SLU 12	-0.6	-0.71	58.55	-0.1418	0.8249	0.0016
598	SLU 13	-0.6	-0.74	58.1	-0.1401	0.8184	0.0021
598	SLU 14	-0.61	-0.67	59.31	-0.1434	0.8356	0.0007
598	SLU 15	-0.61	-0.72	59.32	-0.1428	0.8357	0.0015
598	SLU 16	-0.61	-0.67	58.85	-0.1421	0.8292	0.0006
598	SLU 17	-0.61	-0.72	58.86	-0.1415	0.8292	0.0014
598	SLU 18	-0.59	-0.67	60.04	-0.1455	0.8458	0.0006
598	SLU 19	-0.59	-0.71	60.04	-0.1448	0.8458	0.0015
598	SLU 20	-0.6	-0.68	60.8	-0.1464	0.8565	0.0006
598	SLU 21	-0.6	-0.72	60.81	-0.1457	0.8566	0.0014
598	SLU 22	-0.62	-0.63	57.22	-0.1312	0.8065	0.0006
598	SLU 23	-0.62	-0.7	57.23	-0.1301	0.8065	0.0019
598	SLU 24	-0.64	-0.63	58.44	-0.1335	0.8237	0.0005
598	SLU 25	-0.64	-0.68	58.45	-0.1328	0.8238	0.0014
598	SLU 26	-0.64	-0.7	57.99	-0.1311	0.8173	0.0019
598	SLU 27	-0.65	-0.64	59.21	-0.1344	0.8345	0.0005
598	SLU 28	-0.65	-0.68	59.21	-0.1338	0.8346	0.0013
598	SLU 29	-0.64	-0.64	58.75	-0.1331	0.8281	0.0004
598	SLU 30	-0.65	-0.68	58.75	-0.1324	0.8281	0.0012
598	SLU 31	-0.63	-0.72	63.56	-0.1423	0.8956	0.0016
598	SLU 32	-0.65	-0.65	64.78	-0.1457	0.9128	0.0002
598	SLU 33	-0.65	-0.7	64.78	-0.145	0.9129	0.001
598	SLU 34	-0.64	-0.72	64.32	-0.1433	0.9064	0.0015
598	SLU 35	-0.66	-0.66	65.54	-0.1467	0.9236	0.0001
598	SLU 36	-0.66	-0.7	65.55	-0.146	0.9236	0.0009
598	SLU 37	-0.65	-0.66	65.08	-0.1453	0.9171	0.0001
598	SLU 38	-0.65	-0.7	65.08	-0.1447	0.9172	0.0009
598	SLU 39	-0.64	-0.66	66.26	-0.1487	0.9337	0.0001
598	SLU 40	-0.64	-0.7	66.27	-0.148	0.9338	0.0009
598	SLU 41	-0.65	-0.66	67.03	-0.1496	0.9445	0
598	SLU 42	-0.65	-0.7	67.03	-0.1489	0.9446	0.0008
598	SLU 43	-0.74	-0.84	64.15	-0.1653	0.9039	0.0017
598	SLU 44	-0.74	-0.91	64.16	-0.1642	0.9039	0.003
598	SLU 45	-0.75	-0.85	65.38	-0.1676	0.9211	0.0016
598	SLU 46	-0.75	-0.89	65.39	-0.1669	0.9212	0.0024
598	SLU 47	-0.75	-0.92	64.93	-0.1652	0.9147	0.0029
598	SLU 48	-0.76	-0.85	66.15	-0.1686	0.9319	0.0015
598	SLU 49	-0.76	-0.9	66.15	-0.1679	0.932	0.0024
598	SLU 50	-0.76	-0.85	65.68	-0.1672	0.9255	0.0015
598	SLU 51	-0.76	-0.89	65.69	-0.1666	0.9255	0.0023
598	SLU 52	-0.75	-0.93	70.49	-0.1764	0.993	0.0027
598	SLU 53	-0.76	-0.87	71.71	-0.1798	1.0102	0.0013
598	SLU 54	-0.76	-0.91	71.72	-0.1791	1.0102	0.0021
598	SLU 55	-0.76	-0.94	71.26	-0.1774	1.0038	0.0026
598	SLU 56	-0.77	-0.87	72.48	-0.1808	1.021	0.0012
598	SLU 57	-0.77	-0.91	72.48	-0.1801	1.021	0.002
598	SLU 58	-0.76	-0.87	72.02	-0.1794	1.0145	0.0012
598	SLU 59	-0.77	-0.91	72.02	-0.1788	1.0146	0.002
598	SLU 60	-0.75	-0.87	73.2	-0.1828	1.0311	0.0012
598	SLU 61	-0.75	-0.91	73.2	-0.1821	1.0312	0.002
598	SLU 62	-0.76	-0.87	73.96	-0.1837	1.0419	0.0011
598	SLU 63	-0.76	-0.92	73.97	-0.183	1.042	0.0019
598	SLU 64	-0.78	-0.83	70.38	-0.1685	0.9919	0.0011
598	SLU 65	-0.78	-0.9	70.39	-0.1674	0.9919	0.0025
598	SLU 66	-0.8	-0.83	71.61	-0.1708	1.0091	0.0011
598	SLU 67	-0.8	-0.88	71.61	-0.1701	1.0092	0.0019
598	SLU 68	-0.79	-0.9	71.15	-0.1684	1.0027	0.0024
598	SLU 69	-0.81	-0.84	72.37	-0.1718	1.0199	0.001
598	SLU 70	-0.81	-0.88	72.38	-0.1711	1.02	0.0018
598	SLU 71	-0.8	-0.84	71.91	-0.1704	1.0135	0.0009
598	SLU 72	-0.8	-0.88	71.92	-0.1698	1.0135	0.0018
598	SLU 73	-0.79	-0.92	76.72	-0.1796	1.081	0.0021
598	SLU 74	-0.8	-0.85	77.94	-0.183	1.0982	0.0007
598	SLU 75	-0.8	-0.89	77.94	-0.1823	1.0982	0.0016
598	SLU 76	-0.8	-0.92	77.49	-0.1806	1.0918	0.002
598	SLU 77	-0.81	-0.86	78.7	-0.184	1.109	0.0006
598	SLU 78	-0.81	-0.9	78.71	-0.1833	1.109	0.0015
598	SLU 79	-0.81	-0.86	78.24	-0.1826	1.1025	0.0006
598	SLU 80	-0.81	-0.9	78.25	-0.182	1.1026	0.0014
598	SLU 81	-0.79	-0.85	79.42	-0.186	1.1191	0.0006
598	SLU 82	-0.79	-0.9	79.43	-0.1853	1.1192	0.0014
598	SLU 83	-0.8	-0.86	80.19	-0.1869	1.1299	0.0005
598	SLU 84	-0.8	-0.9	80.2	-0.1862	1.13	0.0014
598	SLE RA 1	-0.59	-0.64	52.77	-0.1289	0.7436	0.001
598	SLE RA 2	-0.59	-0.69	52.78	-0.1282	0.7437	0.0019
598	SLE RA 3	-0.6	-0.64	53.59	-0.1305	0.7551	0.0009
598	SLE RA 4	-0.6	-0.67	53.59	-0.13	0.7552	0.0015

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
598	SLE RA 5	-0.6	-0.69	53.29	-0.1288	0.7509	0.0018
598	SLE RA 6	-0.61	-0.65	54.1	-0.1311	0.7623	0.0009
598	SLE RA 7	-0.61	-0.68	54.1	-0.1306	0.7624	0.0014
598	SLE RA 8	-0.6	-0.65	53.79	-0.1302	0.758	0.0009
598	SLE RA 9	-0.61	-0.67	53.79	-0.1298	0.758	0.0014
598	SLE RA 10	-0.6	-0.7	57	-0.1363	0.8031	0.0017
598	SLE RA 11	-0.61	-0.66	57.81	-0.1386	0.8145	0.0007
598	SLE RA 12	-0.61	-0.68	57.81	-0.1381	0.8146	0.0013
598	SLE RA 13	-0.6	-0.7	57.51	-0.137	0.8103	0.0016
598	SLE RA 14	-0.61	-0.66	58.32	-0.1392	0.8217	0.0007
598	SLE RA 15	-0.61	-0.69	58.32	-0.1388	0.8217	0.0012
598	SLE RA 16	-0.61	-0.66	58.01	-0.1383	0.8174	0.0006
598	SLE RA 17	-0.61	-0.69	58.01	-0.1379	0.8174	0.0012
598	SLE RA 18	-0.6	-0.66	58.8	-0.1406	0.8285	0.0006
598	SLE RA 19	-0.6	-0.69	58.8	-0.1401	0.8285	0.0012
598	SLE RA 20	-0.61	-0.66	59.31	-0.1412	0.8357	0.0006
598	SLE RA 21	-0.61	-0.69	59.31	-0.1407	0.8357	0.0011
598	SLE FR 1	-0.59	-0.64	52.77	-0.1289	0.7436	0.001
598	SLE FR 2	-0.59	-0.65	52.77	-0.1288	0.7436	0.0012
598	SLE FR 3	-0.59	-0.64	52.97	-0.1292	0.7465	0.0009
598	SLE FR 4	-0.59	-0.65	54.58	-0.1323	0.7691	0.0011
598	SLE FR 5	-0.6	-0.64	54.78	-0.1327	0.772	0.0008
598	SLE FR 6	-0.59	-0.65	55.78	-0.1348	0.7861	0.0008
598	SLE QP 1	-0.59	-0.64	52.77	-0.1289	0.7436	0.001
598	SLE QP 2	-0.59	-0.64	54.58	-0.1324	0.7691	0.0009
598	SLD 1	3.75	-0.36	60.52	-0.2641	0.8653	-0.001
598	SLD 2	3.75	-0.77	60.56	-0.2484	0.8658	0.009
598	SLD 3	3.68	-1.68	60.28	-0.2429	0.8605	0.0174
598	SLD 4	3.68	-2.08	60.32	-0.2272	0.861	0.0274
598	SLD 5	0.81	1.51	56.72	-0.207	0.8051	-0.0294
598	SLD 6	0.81	1.24	56.75	-0.1966	0.8055	-0.0228
598	SLD 7	0.59	-2.88	55.92	-0.1362	0.7891	0.0319
598	SLD 8	0.59	-3.15	55.95	-0.1258	0.7895	0.0385
598	SLD 9	-1.77	1.86	53.21	-0.139	0.7487	-0.0368
598	SLD 10	-1.77	1.59	53.24	-0.1286	0.749	-0.0302
598	SLD 11	-2	-2.53	52.41	-0.0683	0.7327	0.0245
598	SLD 12	-2	-2.8	52.44	-0.0579	0.733	0.0311
598	SLD 13	-4.87	0.8	48.83	-0.0376	0.6772	-0.0256
598	SLD 14	-4.87	0.39	48.88	-0.022	0.6777	-0.0157
598	SLD 15	-4.94	-0.52	48.59	-0.0164	0.6724	-0.0072
598	SLD 16	-4.94	-0.92	48.64	-0.0007	0.6729	0.0027
598	SLV 1	9.57	-0.04	68.47	-0.4403	0.994	-0.0027
598	SLV 2	9.57	-0.98	68.58	-0.4038	0.9951	0.0205
598	SLV 3	9.41	-3.02	67.91	-0.391	0.9829	0.0389
598	SLV 4	9.41	-3.96	68.02	-0.3545	0.9841	0.062
598	SLV 5	2.7	4.22	59.57	-0.3059	0.8531	-0.0673
598	SLV 6	2.7	3.61	59.64	-0.2821	0.8539	-0.0522
598	SLV 7	2.17	-5.71	57.71	-0.1417	0.8163	0.0713
598	SLV 8	2.17	-6.32	57.78	-0.1179	0.817	0.0864
598	SLV 9	-3.35	5.03	51.37	-0.1469	0.7212	-0.0846
598	SLV 10	-3.35	4.42	51.44	-0.1232	0.7219	-0.0695
598	SLV 11	-3.88	-4.9	49.51	0.0173	0.6843	0.054
598	SLV 12	-3.88	-5.51	49.58	0.0411	0.685	0.0691
598	SLV 13	-10.59	2.67	41.14	0.0896	0.5541	-0.0603
598	SLV 14	-10.59	1.73	41.24	0.1261	0.5553	-0.0372
598	SLV 15	-10.75	-0.31	40.58	0.1389	0.5431	-0.0187
598	SLV 16	-10.75	-1.25	40.69	0.1754	0.5442	0.0044
598	CRTFP Ux+	0	0	0	0	0	0
598	CRTFP Ux-	0	0	0	0	0	0
598	CRTFP Uy+	0	0	0	0	0	0
598	CRTFP Uy-	0	0	0	0	0	0
603	SLU 1	-1.25	-2.23	145.14	-8.6391	-9.8568	-0.2028
603	SLU 2	-1.25	-2.43	145.2	-8.6419	-9.8619	-0.2149
603	SLU 3	-1.28	-2.26	148.66	-8.8493	-10.0973	-0.2056
603	SLU 4	-1.28	-2.38	148.69	-8.851	-10.1003	-0.2128
603	SLU 5	-1.28	-2.45	147.38	-8.7726	-10.0097	-0.2179
603	SLU 6	-1.3	-2.28	150.83	-8.98	-10.2451	-0.2087
603	SLU 7	-1.31	-2.4	150.87	-8.9817	-10.2482	-0.2159
603	SLU 8	-1.3	-2.28	149.5	-8.9005	-10.1525	-0.209
603	SLU 9	-1.3	-2.4	149.53	-8.9022	-10.1556	-0.2162
603	SLU 10	-1.24	-2.5	163.3	-9.6895	-11.1011	-0.216
603	SLU 11	-1.27	-2.33	166.76	-9.8969	-11.3365	-0.2068
603	SLU 12	-1.27	-2.45	166.8	-9.8985	-11.3395	-0.214
603	SLU 13	-1.26	-2.52	165.48	-9.8202	-11.2489	-0.2191
603	SLU 14	-1.29	-2.35	168.94	-10.0276	-11.4844	-0.2098
603	SLU 15	-1.29	-2.47	168.97	-10.0292	-11.4874	-0.2171
603	SLU 16	-1.28	-2.35	167.6	-9.9481	-11.3917	-0.2101
603	SLU 17	-1.29	-2.47	167.63	-9.9497	-11.3948	-0.2173
603	SLU 18	-1.23	-2.33	171	-10.1356	-11.6271	-0.2045
603	SLU 19	-1.23	-2.45	171.04	-10.1373	-11.6302	-0.2117
603	SLU 20	-1.25	-2.36	173.18	-10.2663	-11.775	-0.2075
603	SLU 21	-1.26	-2.47	173.22	-10.268	-11.778	-0.2148
603	SLU 22	-1.34	-2.18	162.71	-9.6349	-11.0359	-0.2006
603	SLU 23	-1.35	-2.38	162.77	-9.6377	-11.041	-0.2126
603	SLU 24	-1.37	-2.21	166.22	-9.8451	-11.2764	-0.2034
603	SLU 25	-1.38	-2.33	166.26	-9.8468	-11.2795	-0.2106
603	SLU 26	-1.37	-2.41	164.94	-9.7684	-11.1889	-0.2157
603	SLU 27	-1.4	-2.23	168.4	-9.9758	-11.4243	-0.2065
603	SLU 28	-1.4	-2.35	168.43	-9.9775	-11.4273	-0.2137
603	SLU 29	-1.39	-2.23	167.06	-9.8963	-11.3316	-0.2067

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
603	SLU 30	-1.39	-2.35	167.1	-9.898	-11.3347	-0.214
603	SLU 31	-1.33	-2.45	180.87	-10.6853	-12.2802	-0.2138
603	SLU 32	-1.36	-2.28	184.33	-10.8927	-12.5156	-0.2045
603	SLU 33	-1.36	-2.4	184.36	-10.8944	-12.5187	-0.2118
603	SLU 34	-1.36	-2.48	183.05	-10.816	-12.4281	-0.2169
603	SLU 35	-1.38	-2.3	186.5	-11.0234	-12.6635	-0.2076
603	SLU 36	-1.38	-2.42	186.54	-11.0251	-12.6665	-0.2148
603	SLU 37	-1.38	-2.3	185.17	-10.9439	-12.5709	-0.2079
603	SLU 38	-1.38	-2.42	185.2	-10.9456	-12.5739	-0.2151
603	SLU 39	-1.32	-2.28	188.57	-11.1315	-12.8062	-0.2022
603	SLU 40	-1.33	-2.4	188.61	-11.1332	-12.8093	-0.2095
603	SLU 41	-1.35	-2.31	190.75	-11.2622	-12.9541	-0.2053
603	SLU 42	-1.35	-2.43	190.78	-11.2639	-12.9571	-0.2125
603	SLU 43	-1.6	-2.92	182.66	-10.8894	-12.4096	-0.2644
603	SLU 44	-1.6	-3.11	182.72	-10.8922	-12.4146	-0.2765
603	SLU 45	-1.63	-2.94	186.18	-11.0995	-12.6501	-0.2672
603	SLU 46	-1.63	-3.06	186.21	-11.1012	-12.6531	-0.2744
603	SLU 47	-1.62	-3.14	184.9	-11.0229	-12.5625	-0.2795
603	SLU 48	-1.65	-2.97	188.35	-11.2302	-12.7979	-0.2703
603	SLU 49	-1.65	-3.09	188.39	-11.2319	-12.801	-0.2775
603	SLU 50	-1.64	-2.97	187.02	-11.1507	-12.7053	-0.2706
603	SLU 51	-1.64	-3.09	187.05	-11.1524	-12.7083	-0.2778
603	SLU 52	-1.58	-3.18	200.82	-11.9398	-13.6539	-0.2776
603	SLU 53	-1.61	-3.01	204.28	-12.1471	-13.8893	-0.2684
603	SLU 54	-1.61	-3.13	204.32	-12.1488	-13.8923	-0.2756
603	SLU 55	-1.61	-3.21	203	-12.0705	-13.8017	-0.2807
603	SLU 56	-1.63	-3.04	206.46	-12.2778	-14.0371	-0.2714
603	SLU 57	-1.64	-3.16	206.49	-12.2795	-14.0402	-0.2787
603	SLU 58	-1.63	-3.04	205.12	-12.1983	-13.9445	-0.2717
603	SLU 59	-1.63	-3.16	205.15	-12.2	-13.9475	-0.2789
603	SLU 60	-1.58	-3.02	208.52	-12.3859	-14.1799	-0.2661
603	SLU 61	-1.58	-3.13	208.56	-12.3876	-14.1829	-0.2733
603	SLU 62	-1.6	-3.04	210.7	-12.5166	-14.3277	-0.2692
603	SLU 63	-1.6	-3.16	210.74	-12.5183	-14.3308	-0.2764
603	SLU 64	-1.69	-2.87	200.23	-11.8852	-13.5887	-0.2622
603	SLU 65	-1.69	-3.07	200.29	-11.888	-13.5938	-0.2742
603	SLU 66	-1.72	-2.89	203.74	-12.0954	-13.8292	-0.265
603	SLU 67	-1.72	-3.01	203.78	-12.0971	-13.8322	-0.2722
603	SLU 68	-1.71	-3.09	202.46	-12.0187	-13.7416	-0.2773
603	SLU 69	-1.74	-2.92	205.92	-12.2261	-13.977	-0.2681
603	SLU 70	-1.74	-3.04	205.95	-12.2278	-13.9801	-0.2753
603	SLU 71	-1.74	-2.92	204.58	-12.1466	-13.8844	-0.2684
603	SLU 72	-1.74	-3.04	204.62	-12.1483	-13.8875	-0.2756
603	SLU 73	-1.68	-3.14	218.39	-12.9356	-14.833	-0.2754
603	SLU 74	-1.7	-2.96	221.85	-13.143	-15.0684	-0.2661
603	SLU 75	-1.7	-3.08	221.88	-13.1447	-15.0714	-0.2734
603	SLU 76	-1.7	-3.16	220.57	-13.0663	-14.9808	-0.2785
603	SLU 77	-1.73	-2.99	224.02	-13.2737	-15.2163	-0.2692
603	SLU 78	-1.73	-3.11	224.06	-13.2754	-15.2193	-0.2764
603	SLU 79	-1.72	-2.99	222.69	-13.1942	-15.1236	-0.2695
603	SLU 80	-1.72	-3.11	222.72	-13.1959	-15.1267	-0.2767
603	SLU 81	-1.67	-2.97	226.09	-13.3818	-15.359	-0.2639
603	SLU 82	-1.67	-3.09	226.13	-13.3835	-15.3621	-0.2711
603	SLU 83	-1.69	-2.99	228.27	-13.5125	-15.5069	-0.2669
603	SLU 84	-1.69	-3.11	228.3	-13.5142	-15.5099	-0.2741
603	SLE RA 1	-1.28	-2.22	150.16	-8.9236	-10.1937	-0.2022
603	SLE RA 2	-1.28	-2.35	150.2	-8.9255	-10.1971	-0.2102
603	SLE RA 3	-1.3	-2.23	152.5	-9.0637	-10.354	-0.204
603	SLE RA 4	-1.3	-2.31	152.53	-9.0649	-10.356	-0.2089
603	SLE RA 5	-1.3	-2.37	151.65	-9.0126	-10.2957	-0.2123
603	SLE RA 6	-1.31	-2.25	153.96	-9.1509	-10.4526	-0.2061
603	SLE RA 7	-1.31	-2.33	153.98	-9.152	-10.4546	-0.2109
603	SLE RA 8	-1.31	-2.25	153.06	-9.0979	-10.3908	-0.2063
603	SLE RA 9	-1.31	-2.33	153.09	-9.099	-10.3929	-0.2111
603	SLE RA 10	-1.27	-2.4	162.27	-9.6239	-11.0232	-0.211
603	SLE RA 11	-1.29	-2.28	164.57	-9.7621	-11.1802	-0.2048
603	SLE RA 12	-1.29	-2.36	164.6	-9.7632	-11.1822	-0.2096
603	SLE RA 13	-1.29	-2.41	163.72	-9.711	-11.1218	-0.213
603	SLE RA 14	-1.3	-2.3	166.02	-9.8493	-11.2787	-0.2069
603	SLE RA 15	-1.31	-2.38	166.05	-9.8504	-11.2808	-0.2117
603	SLE RA 16	-1.3	-2.3	165.13	-9.7963	-11.217	-0.2071
603	SLE RA 17	-1.3	-2.38	165.16	-9.7974	-11.219	-0.2119
603	SLE RA 18	-1.26	-2.28	167.4	-9.9213	-11.3739	-0.2033
603	SLE RA 19	-1.27	-2.36	167.43	-9.9224	-11.3759	-0.2081
603	SLE RA 20	-1.28	-2.3	168.85	-10.0084	-11.4725	-0.2053
603	SLE RA 21	-1.28	-2.38	168.88	-10.0096	-11.4745	-0.2101
603	SLE FR 1	-1.28	-2.22	150.16	-8.9236	-10.1937	-0.2022
603	SLE FR 2	-1.28	-2.24	150.17	-8.924	-10.1944	-0.2038
603	SLE FR 3	-1.28	-2.22	150.74	-8.9585	-10.2331	-0.203
603	SLE FR 4	-1.27	-2.26	155.34	-9.2233	-10.5484	-0.2041
603	SLE FR 5	-1.28	-2.24	155.91	-9.2578	-10.5872	-0.2033
603	SLE FR 6	-1.27	-2.25	158.78	-9.4225	-10.7838	-0.2027
603	SLE QP 1	-1.28	-2.22	150.16	-8.9236	-10.1937	-0.2022
603	SLE QP 2	-1.27	-2.24	155.33	-9.2229	-10.5478	-0.2025
603	SLD 1	11.59	-1.18	168.5	-9.998	-11.1834	0.6427
603	SLD 2	11.61	-2.15	168.7	-9.9885	-11.1965	0.599
603	SLD 3	11.39	-5.12	169.31	-10.0831	-11.2899	0.3702
603	SLD 4	11.41	-6.1	169.51	-10.0737	-11.3031	0.3265
603	SLD 5	2.88	4.24	158.02	-9.328	-10.5745	0.4723
603	SLD 6	2.89	3.6	158.15	-9.3217	-10.5832	0.4433

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
603	SLD 7	2.22	-8.91	160.72	-9.6118	-10.9296	-0.4361
603	SLD 8	2.23	-9.56	160.85	-9.6056	-10.9383	-0.4651
603	SLD 9	-4.78	5.09	149.81	-8.8402	-10.1572	0.06
603	SLD 10	-4.77	4.44	149.95	-8.834	-10.1659	0.031
603	SLD 11	-5.44	-8.07	152.52	-9.1241	-10.5123	-0.8483
603	SLD 12	-5.43	-8.72	152.65	-9.1178	-10.521	-0.8773
603	SLD 13	-13.96	1.63	141.16	-8.3721	-9.7925	-0.7315
603	SLD 14	-13.94	0.65	141.36	-8.3627	-9.8056	-0.7752
603	SLD 15	-14.16	-2.32	141.97	-8.4573	-9.899	-1.004
603	SLD 16	-14.14	-3.3	142.17	-8.4479	-9.9121	-1.0478
603	SLV 1	28.8	0.09	186.14	-11.0381	-12.0379	1.763
603	SLV 2	28.84	-2.19	186.61	-11.0161	-12.0685	1.6612
603	SLV 3	28.34	-8.84	188	-11.232	-12.2801	1.1465
603	SLV 4	28.38	-11.12	188.47	-11.21	-12.3107	1.0447
603	SLV 5	8.44	12.4	161.68	-9.4773	-10.622	1.3401
603	SLV 6	8.46	10.92	161.98	-9.4629	-10.642	1.2738
603	SLV 7	6.91	-17.36	167.87	-10.1236	-11.4295	-0.715
603	SLV 8	6.93	-18.84	168.17	-10.1092	-11.4494	-0.7813
603	SLV 9	-9.48	14.37	142.49	-8.3366	-9.6461	0.3763
603	SLV 10	-9.45	12.89	142.8	-8.3223	-9.666	0.31
603	SLV 11	-11.01	-15.4	148.69	-8.9829	-10.4536	-1.6788
603	SLV 12	-10.99	-16.88	148.99	-8.9686	-10.4735	-1.7452
603	SLV 13	-30.93	6.64	122.2	-7.2358	-8.7848	-1.4497
603	SLV 14	-30.89	4.37	122.67	-7.2138	-8.8154	-1.5515
603	SLV 15	-31.39	-2.29	124.06	-7.4297	-9.0271	-2.0663
603	SLV 16	-31.35	-4.56	124.52	-7.4077	-9.0576	-2.1681
603	CRTFP Ux+	0	0	0	0	0	0
603	CRTFP Ux-	0	0	0	0	0	0
603	CRTFP Uy+	0	0	0	0	0	0
603	CRTFP Uy-	0	0	0	0	0	0
605	SLU 1	-0.2	-0.34	22.74	5.5087	-0.9318	0.0378
605	SLU 2	-0.21	-0.37	22.75	5.5109	-0.9322	0.0369
605	SLU 3	-0.21	-0.34	23.29	5.6415	-0.9544	0.0389
605	SLU 4	-0.21	-0.36	23.29	5.6429	-0.9546	0.0383
605	SLU 5	-0.21	-0.37	23.09	5.5929	-0.9461	0.0376
605	SLU 6	-0.21	-0.35	23.63	5.7235	-0.9683	0.0397
605	SLU 7	-0.21	-0.37	23.63	5.7249	-0.9686	0.0391
605	SLU 8	-0.21	-0.35	23.42	5.6727	-0.9597	0.0393
605	SLU 9	-0.21	-0.37	23.42	5.674	-0.9599	0.0388
605	SLU 10	-0.2	-0.38	25.61	6.2067	-1.0497	0.0362
605	SLU 11	-0.21	-0.35	26.15	6.3374	-1.0719	0.0383
605	SLU 12	-0.21	-0.37	26.15	6.3387	-1.0722	0.0377
605	SLU 13	-0.21	-0.38	25.95	6.2887	-1.0637	0.037
605	SLU 14	-0.21	-0.36	26.49	6.4194	-1.0859	0.039
605	SLU 15	-0.21	-0.38	26.49	6.4207	-1.0861	0.0384
605	SLU 16	-0.21	-0.36	26.28	6.3685	-1.0772	0.0387
605	SLU 17	-0.21	-0.38	26.28	6.3698	-1.0774	0.0381
605	SLU 18	-0.2	-0.35	26.82	6.5027	-1.0997	0.0369
605	SLU 19	-0.2	-0.37	26.83	6.5041	-1.1	0.0363
605	SLU 20	-0.21	-0.36	27.16	6.5847	-1.1137	0.0377
605	SLU 21	-0.21	-0.38	27.17	6.5861	-1.1139	0.0371
605	SLU 22	-0.22	-0.33	25.51	6.1863	-1.0456	0.0424
605	SLU 23	-0.22	-0.36	25.52	6.1886	-1.0459	0.0414
605	SLU 24	-0.23	-0.33	26.06	6.3192	-1.0682	0.0435
605	SLU 25	-0.23	-0.35	26.07	6.3205	-1.0684	0.0429
605	SLU 26	-0.23	-0.37	25.86	6.2705	-1.0599	0.0422
605	SLU 27	-0.23	-0.34	26.4	6.4012	-1.0821	0.0443
605	SLU 28	-0.23	-0.36	26.41	6.4025	-1.0823	0.0437
605	SLU 29	-0.23	-0.34	26.19	6.3503	-1.0734	0.0439
605	SLU 30	-0.23	-0.36	26.2	6.3517	-1.0736	0.0433
605	SLU 31	-0.22	-0.37	28.38	6.8844	-1.1635	0.0408
605	SLU 32	-0.23	-0.34	28.92	7.0151	-1.1857	0.0428
605	SLU 33	-0.23	-0.36	28.93	7.0164	-1.1859	0.0423
605	SLU 34	-0.22	-0.37	28.72	6.9664	-1.1774	0.0415
605	SLU 35	-0.23	-0.35	29.26	7.0971	-1.1996	0.0436
605	SLU 36	-0.23	-0.37	29.27	7.0984	-1.1998	0.043
605	SLU 37	-0.23	-0.35	29.05	7.0462	-1.1909	0.0433
605	SLU 38	-0.23	-0.37	29.06	7.0475	-1.1912	0.0427
605	SLU 39	-0.22	-0.34	29.6	7.1804	-1.2135	0.0415
605	SLU 40	-0.22	-0.36	29.6	7.1817	-1.2137	0.0409
605	SLU 41	-0.22	-0.35	29.94	7.2624	-1.2274	0.0422
605	SLU 42	-0.22	-0.37	29.94	7.2637	-1.2276	0.0416
605	SLU 43	-0.26	-0.45	28.61	6.9289	-1.1724	0.0476
605	SLU 44	-0.26	-0.48	28.62	6.9311	-1.1728	0.0466
605	SLU 45	-0.27	-0.45	29.16	7.0618	-1.195	0.0487
605	SLU 46	-0.27	-0.47	29.16	7.0631	-1.1952	0.0481
605	SLU 47	-0.27	-0.48	28.96	7.0131	-1.1867	0.0474
605	SLU 48	-0.27	-0.45	29.5	7.1438	-1.2089	0.0495
605	SLU 49	-0.27	-0.47	29.5	7.1451	-1.2091	0.0489
605	SLU 50	-0.27	-0.45	29.29	7.0929	-1.2003	0.0491
605	SLU 51	-0.27	-0.47	29.29	7.0943	-1.2005	0.0485
605	SLU 52	-0.26	-0.49	31.48	7.627	-1.2903	0.046
605	SLU 53	-0.26	-0.46	32.02	7.7577	-1.3125	0.0481
605	SLU 54	-0.27	-0.48	32.03	7.759	-1.3127	0.0475
605	SLU 55	-0.26	-0.49	31.82	7.709	-1.3042	0.0467
605	SLU 56	-0.27	-0.46	32.36	7.8396	-1.3264	0.0488
605	SLU 57	-0.27	-0.48	32.37	7.841	-1.3266	0.0482
605	SLU 58	-0.27	-0.46	32.15	7.7888	-1.3178	0.0485
605	SLU 59	-0.27	-0.48	32.15	7.7901	-1.318	0.0479
605	SLU 60	-0.26	-0.46	32.69	7.923	-1.3403	0.0467

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
605	SLU 61	-0.26	-0.48	32.7	7.9243	-1.3405	0.0461
605	SLU 62	-0.26	-0.46	33.03	8.005	-1.3542	0.0474
605	SLU 63	-0.26	-0.48	33.04	8.0063	-1.3544	0.0468
605	SLU 64	-0.28	-0.44	31.38	7.6066	-1.2861	0.0522
605	SLU 65	-0.28	-0.47	31.39	7.6088	-1.2865	0.0512
605	SLU 66	-0.28	-0.44	31.93	7.7395	-1.3087	0.0533
605	SLU 67	-0.28	-0.46	31.94	7.7408	-1.3089	0.0527
605	SLU 68	-0.28	-0.47	31.73	7.6908	-1.3004	0.052
605	SLU 69	-0.29	-0.44	32.27	7.8215	-1.3226	0.054
605	SLU 70	-0.29	-0.46	32.28	7.8228	-1.3229	0.0534
605	SLU 71	-0.28	-0.44	32.06	7.7706	-1.314	0.0537
605	SLU 72	-0.29	-0.46	32.07	7.7719	-1.3142	0.0531
605	SLU 73	-0.28	-0.48	34.25	8.3047	-1.404	0.0506
605	SLU 74	-0.28	-0.45	34.79	8.4353	-1.4262	0.0526
605	SLU 75	-0.28	-0.47	34.8	8.4366	-1.4265	0.052
605	SLU 76	-0.28	-0.48	34.59	8.3867	-1.418	0.0513
605	SLU 77	-0.28	-0.45	35.13	8.5173	-1.4402	0.0534
605	SLU 78	-0.29	-0.47	35.14	8.5186	-1.4404	0.0528
605	SLU 79	-0.28	-0.45	34.92	8.4664	-1.4315	0.0531
605	SLU 80	-0.28	-0.47	34.93	8.4678	-1.4317	0.0525
605	SLU 81	-0.28	-0.45	35.47	8.6007	-1.454	0.0513
605	SLU 82	-0.28	-0.47	35.47	8.602	-1.4543	0.0507
605	SLU 83	-0.28	-0.45	35.81	8.6827	-1.4679	0.052
605	SLU 84	-0.28	-0.47	35.81	8.684	-1.4682	0.0514
605	SLE RA 1	-0.21	-0.34	23.53	5.7023	-0.9643	0.0391
605	SLE RA 2	-0.21	-0.36	23.54	5.7038	-0.9646	0.0385
605	SLE RA 3	-0.21	-0.34	23.9	5.7909	-0.9794	0.0399
605	SLE RA 4	-0.21	-0.35	23.9	5.7918	-0.9795	0.0395
605	SLE RA 5	-0.21	-0.36	23.76	5.7584	-0.9739	0.039
605	SLE RA 6	-0.22	-0.34	24.12	5.8455	-0.9887	0.0404
605	SLE RA 7	-0.22	-0.35	24.13	5.8464	-0.9888	0.04
605	SLE RA 8	-0.21	-0.34	23.98	5.8116	-0.9829	0.0401
605	SLE RA 9	-0.21	-0.35	23.99	5.8125	-0.9831	0.0398
605	SLE RA 10	-0.21	-0.36	25.44	6.1677	-1.0429	0.0381
605	SLE RA 11	-0.21	-0.35	25.8	6.2548	-1.0577	0.0394
605	SLE RA 12	-0.21	-0.36	25.81	6.2557	-1.0579	0.039
605	SLE RA 13	-0.21	-0.37	25.67	6.2223	-1.0522	0.0386
605	SLE RA 14	-0.21	-0.35	26.03	6.3094	-1.067	0.0399
605	SLE RA 15	-0.21	-0.36	26.03	6.3103	-1.0672	0.0395
605	SLE RA 16	-0.21	-0.35	25.89	6.2755	-1.0613	0.0397
605	SLE RA 17	-0.21	-0.36	25.89	6.2764	-1.0614	0.0393
605	SLE RA 18	-0.21	-0.35	26.25	6.365	-1.0763	0.0385
605	SLE RA 19	-0.21	-0.36	26.26	6.3659	-1.0764	0.0381
605	SLE RA 20	-0.21	-0.35	26.48	6.4197	-1.0855	0.039
605	SLE RA 21	-0.21	-0.36	26.49	6.4206	-1.0857	0.0386
605	SLE FR 1	-0.21	-0.34	23.53	5.7023	-0.9643	0.0391
605	SLE FR 2	-0.21	-0.34	23.53	5.7026	-0.9644	0.039
605	SLE FR 3	-0.21	-0.34	23.62	5.7242	-0.9681	0.0393
605	SLE FR 4	-0.21	-0.34	24.35	5.9014	-0.998	0.0388
605	SLE FR 5	-0.21	-0.34	24.44	5.923	-1.0016	0.0392
605	SLE FR 6	-0.21	-0.34	24.89	6.0336	-1.0203	0.0388
605	SLE QP 1	-0.21	-0.34	23.53	5.7023	-0.9643	0.0391
605	SLE QP 2	-0.21	-0.34	24.35	5.9011	-0.9979	0.039
605	SLD 1	1.8	-0.16	26.28	6.3339	-1.0741	-0.4524
605	SLD 2	1.79	-0.31	26.32	6.3459	-1.0756	-0.4568
605	SLD 3	1.77	-0.78	26.41	6.3572	-1.0794	-0.4755
605	SLD 4	1.76	-0.93	26.45	6.3692	-1.0809	-0.4799
605	SLD 5	0.44	0.68	24.73	5.9935	-1.0125	-0.0726
605	SLD 6	0.44	0.58	24.75	6.0014	-1.0135	-0.0755
605	SLD 7	0.34	-1.39	25.15	6.0711	-1.0301	-0.1497
605	SLD 8	0.33	-1.48	25.18	6.079	-1.0311	-0.1526
605	SLD 9	-0.75	0.8	23.52	5.7232	-0.9647	0.2305
605	SLD 10	-0.76	0.71	23.54	5.7311	-0.9657	0.2276
605	SLD 11	-0.86	-1.26	23.94	5.8008	-0.9823	0.1534
605	SLD 12	-0.86	-1.36	23.97	5.8087	-0.9834	0.1505
605	SLD 13	-2.18	0.25	22.24	5.433	-0.9149	0.5578
605	SLD 14	-2.19	0.1	22.28	5.445	-0.9165	0.5535
605	SLD 15	-2.21	-0.37	22.37	5.4563	-0.9202	0.5347
605	SLD 16	-2.22	-0.52	22.41	5.4683	-0.9217	0.5303
605	SLV 1	4.49	0.05	28.88	6.9142	-1.1762	-1.1107
605	SLV 2	4.47	-0.29	28.97	6.942	-1.1798	-1.1209
605	SLV 3	4.41	-1.35	29.17	6.9677	-1.1883	-1.1633
605	SLV 4	4.4	-1.69	29.26	6.9956	-1.1919	-1.1735
605	SLV 5	1.31	1.97	25.25	6.1188	-1.0324	-0.2244
605	SLV 6	1.3	1.75	25.31	6.137	-1.0348	-0.2311
605	SLV 7	1.07	-2.71	26.22	6.2974	-1.0728	-0.3997
605	SLV 8	1.06	-2.94	26.28	6.3156	-1.0751	-0.4063
605	SLV 9	-1.48	2.26	22.41	5.4866	-0.9207	0.4842
605	SLV 10	-1.49	2.03	22.47	5.5048	-0.9231	0.4776
605	SLV 11	-1.72	-2.43	23.39	5.6652	-0.9611	0.309
605	SLV 12	-1.73	-2.65	23.45	5.6834	-0.9634	0.3024
605	SLV 13	-4.82	1.01	19.43	4.8066	-0.8039	1.2514
605	SLV 14	-4.83	0.67	19.52	4.8345	-0.8075	1.2412
605	SLV 15	-4.89	-0.39	19.72	4.8602	-0.816	1.1989
605	SLV 16	-4.91	-0.73	19.82	4.888	-0.8196	1.1887
605	CRTFP Ux+	0	0	0	0	0	0
605	CRTFP Ux-	0	0	0	0	0	0
605	CRTFP Uy+	0	0	0	0	0	0
605	CRTFP Uy-	0	0	0	0	0	0
607	SLU 1	-0.44	-0.76	57.2	0.0625	-0.203	0.0237

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
607	SLU 2	-0.44	-0.84	57.22	0.0617	-0.203	0.0238
607	SLU 3	-0.45	-0.77	58.58	0.0628	-0.208	0.0244
607	SLU 4	-0.45	-0.81	58.6	0.0623	-0.208	0.0245
607	SLU 5	-0.45	-0.84	58.07	0.0612	-0.206	0.0241
607	SLU 6	-0.46	-0.78	59.44	0.0623	-0.211	0.0247
607	SLU 7	-0.46	-0.82	59.45	0.0618	-0.211	0.0248
607	SLU 8	-0.45	-0.78	58.91	0.0615	-0.209	0.0243
607	SLU 9	-0.45	-0.82	58.92	0.061	-0.209	0.0244
607	SLU 10	-0.43	-0.85	64.42	0.0904	-0.2298	0.026
607	SLU 11	-0.44	-0.78	65.78	0.0914	-0.2348	0.0266
607	SLU 12	-0.44	-0.83	65.8	0.091	-0.2348	0.0267
607	SLU 13	-0.44	-0.86	65.27	0.0899	-0.2328	0.0263
607	SLU 14	-0.45	-0.79	66.64	0.091	-0.2378	0.0269
607	SLU 15	-0.45	-0.84	66.65	0.0905	-0.2378	0.027
607	SLU 16	-0.44	-0.79	66.11	0.0902	-0.2358	0.0265
607	SLU 17	-0.44	-0.84	66.12	0.0897	-0.2358	0.0266
607	SLU 18	-0.42	-0.78	67.48	0.1034	-0.2413	0.0269
607	SLU 19	-0.42	-0.83	67.5	0.103	-0.2413	0.0269
607	SLU 20	-0.43	-0.79	68.34	0.1029	-0.2443	0.0272
607	SLU 21	-0.43	-0.84	68.35	0.1025	-0.2443	0.0272
607	SLU 22	-0.47	-0.73	64.14	0.0999	-0.2279	0.0271
607	SLU 23	-0.47	-0.8	64.16	0.0992	-0.2279	0.0272
607	SLU 24	-0.48	-0.73	65.52	0.1002	-0.2329	0.0278
607	SLU 25	-0.48	-0.78	65.54	0.0998	-0.2329	0.0278
607	SLU 26	-0.48	-0.81	65.02	0.0987	-0.2309	0.0275
607	SLU 27	-0.49	-0.74	66.38	0.0997	-0.2359	0.0281
607	SLU 28	-0.49	-0.79	66.39	0.0993	-0.2359	0.0281
607	SLU 29	-0.49	-0.74	65.85	0.099	-0.2339	0.0277
607	SLU 30	-0.49	-0.79	65.86	0.0985	-0.2339	0.0278
607	SLU 31	-0.46	-0.82	71.36	0.1279	-0.2547	0.0294
607	SLU 32	-0.47	-0.75	72.72	0.1289	-0.2597	0.03
607	SLU 33	-0.47	-0.79	72.74	0.1285	-0.2597	0.03
607	SLU 34	-0.47	-0.83	72.21	0.1274	-0.2577	0.0297
607	SLU 35	-0.48	-0.76	73.58	0.1284	-0.2627	0.0303
607	SLU 36	-0.48	-0.8	73.59	0.128	-0.2627	0.0303
607	SLU 37	-0.48	-0.76	73.05	0.1276	-0.2607	0.0299
607	SLU 38	-0.48	-0.8	73.06	0.1272	-0.2607	0.03
607	SLU 39	-0.46	-0.75	74.42	0.1409	-0.2662	0.0302
607	SLU 40	-0.46	-0.79	74.44	0.1405	-0.2662	0.0303
607	SLU 41	-0.46	-0.76	75.28	0.1404	-0.2692	0.0305
607	SLU 42	-0.46	-0.8	75.29	0.14	-0.2692	0.0306
607	SLU 43	-0.56	-1	71.98	0.0683	-0.2553	0.0297
607	SLU 44	-0.56	-1.08	72	0.0676	-0.2553	0.0298
607	SLU 45	-0.57	-1.01	73.36	0.0686	-0.2603	0.0304
607	SLU 46	-0.57	-1.05	73.38	0.0682	-0.2603	0.0304
607	SLU 47	-0.57	-1.08	72.85	0.0671	-0.2583	0.0301
607	SLU 48	-0.58	-1.02	74.22	0.0682	-0.2634	0.0307
607	SLU 49	-0.58	-1.06	74.23	0.0677	-0.2634	0.0307
607	SLU 50	-0.57	-1.02	73.69	0.0674	-0.2614	0.0303
607	SLU 51	-0.58	-1.06	73.7	0.0669	-0.2614	0.0304
607	SLU 52	-0.55	-1.09	79.2	0.0963	-0.2821	0.032
607	SLU 53	-0.56	-1.02	80.56	0.0973	-0.2872	0.0326
607	SLU 54	-0.56	-1.07	80.58	0.0969	-0.2872	0.0326
607	SLU 55	-0.56	-1.1	80.05	0.0958	-0.2852	0.0323
607	SLU 56	-0.57	-1.03	81.42	0.0968	-0.2902	0.0329
607	SLU 57	-0.57	-1.08	81.43	0.0964	-0.2902	0.0329
607	SLU 58	-0.56	-1.03	80.89	0.0961	-0.2882	0.0325
607	SLU 59	-0.57	-1.08	80.9	0.0956	-0.2882	0.0326
607	SLU 60	-0.54	-1.02	82.26	0.1093	-0.2936	0.0328
607	SLU 61	-0.54	-1.07	82.27	0.1089	-0.2936	0.0329
607	SLU 62	-0.55	-1.03	83.12	0.1088	-0.2967	0.0331
607	SLU 63	-0.55	-1.08	83.13	0.1084	-0.2967	0.0332
607	SLU 64	-0.59	-0.97	78.92	0.1058	-0.2802	0.0331
607	SLU 65	-0.59	-1.04	78.94	0.1051	-0.2802	0.0332
607	SLU 66	-0.6	-0.97	80.3	0.1061	-0.2852	0.0337
607	SLU 67	-0.6	-1.02	80.32	0.1057	-0.2852	0.0338
607	SLU 68	-0.6	-1.05	79.79	0.1046	-0.2832	0.0335
607	SLU 69	-0.61	-0.98	81.16	0.1056	-0.2883	0.034
607	SLU 70	-0.61	-1.03	81.17	0.1052	-0.2883	0.0341
607	SLU 71	-0.61	-0.98	80.63	0.1049	-0.2863	0.0337
607	SLU 72	-0.61	-1.03	80.64	0.1044	-0.2863	0.0337
607	SLU 73	-0.58	-1.06	86.14	0.1338	-0.307	0.0354
607	SLU 74	-0.59	-0.99	87.5	0.1348	-0.3121	0.0359
607	SLU 75	-0.59	-1.03	87.52	0.1344	-0.3121	0.036
607	SLU 76	-0.59	-1.07	86.99	0.1333	-0.3101	0.0357
607	SLU 77	-0.6	-1	88.36	0.1343	-0.3151	0.0362
607	SLU 78	-0.6	-1.04	88.37	0.1339	-0.3151	0.0363
607	SLU 79	-0.6	-1	87.83	0.1335	-0.3131	0.0359
607	SLU 80	-0.6	-1.04	87.84	0.1331	-0.3131	0.0359
607	SLU 81	-0.58	-0.99	89.2	0.1468	-0.3185	0.0362
607	SLU 82	-0.58	-1.03	89.21	0.1463	-0.3185	0.0363
607	SLU 83	-0.58	-1	90.06	0.1463	-0.3216	0.0365
607	SLU 84	-0.59	-1.04	90.07	0.1459	-0.3216	0.0366
607	SLE RA 1	-0.45	-0.75	59.18	0.0732	-0.2101	0.0247
607	SLE RA 2	-0.45	-0.8	59.19	0.0727	-0.2101	0.0248
607	SLE RA 3	-0.45	-0.76	60.1	0.0734	-0.2134	0.0251
607	SLE RA 4	-0.45	-0.79	60.11	0.0731	-0.2134	0.0252
607	SLE RA 5	-0.45	-0.81	59.76	0.0723	-0.2121	0.025
607	SLE RA 6	-0.46	-0.76	60.68	0.073	-0.2154	0.0253
607	SLE RA 7	-0.46	-0.79	60.68	0.0727	-0.2154	0.0254

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
607	SLE RA 8	-0.46	-0.76	60.32	0.0725	-0.2141	0.0251
607	SLE RA 9	-0.46	-0.79	60.33	0.0722	-0.2141	0.0251
607	SLE RA 10	-0.44	-0.81	63.99	0.0918	-0.228	0.0262
607	SLE RA 11	-0.45	-0.77	64.9	0.0925	-0.2313	0.0266
607	SLE RA 12	-0.45	-0.8	64.91	0.0922	-0.2313	0.0267
607	SLE RA 13	-0.45	-0.82	64.56	0.0915	-0.23	0.0264
607	SLE RA 14	-0.45	-0.77	65.48	0.0922	-0.2333	0.0268
607	SLE RA 15	-0.45	-0.8	65.48	0.0919	-0.2333	0.0269
607	SLE RA 16	-0.45	-0.77	65.12	0.0916	-0.232	0.0266
607	SLE RA 17	-0.45	-0.8	65.13	0.0913	-0.232	0.0266
607	SLE RA 18	-0.44	-0.77	66.04	0.1005	-0.2356	0.0268
607	SLE RA 19	-0.44	-0.8	66.05	0.1002	-0.2356	0.0268
607	SLE RA 20	-0.44	-0.77	66.61	0.1002	-0.2376	0.027
607	SLE RA 21	-0.44	-0.8	66.62	0.0999	-0.2376	0.027
607	SLE FR 1	-0.45	-0.75	59.18	0.0732	-0.2101	0.0247
607	SLE FR 2	-0.45	-0.76	59.18	0.0731	-0.2101	0.0247
607	SLE FR 3	-0.45	-0.75	59.41	0.073	-0.2109	0.0248
607	SLE FR 4	-0.44	-0.77	61.24	0.0813	-0.2177	0.0253
607	SLE FR 5	-0.45	-0.76	61.46	0.0812	-0.2186	0.0254
607	SLE FR 6	-0.44	-0.76	62.61	0.0868	-0.2229	0.0257
607	SLE QP 1	-0.45	-0.75	59.18	0.0732	-0.2101	0.0247
607	SLE QP 2	-0.44	-0.76	61.24	0.0814	-0.2177	0.0253
607	SLD 1	4.61	-0.26	65.65	0.1282	-0.2142	0.0166
607	SLD 2	4.61	-0.6	65.73	0.1348	-0.2142	0.0197
607	SLD 3	4.53	-1.8	66.01	0.0965	-0.2156	0.0119
607	SLD 4	4.53	-2.15	66.09	0.1031	-0.2155	0.0151
607	SLD 5	1.19	1.8	62	0.1424	-0.2147	0.0292
607	SLD 6	1.19	1.58	62.05	0.1467	-0.2146	0.0313
607	SLD 7	0.93	-3.36	63.2	0.0365	-0.2191	0.0136
607	SLD 8	0.93	-3.58	63.25	0.0409	-0.2191	0.0158
607	SLD 9	-1.82	2.07	59.22	0.1218	-0.2164	0.0349
607	SLD 10	-1.82	1.84	59.27	0.1262	-0.2164	0.037
607	SLD 11	-2.08	-3.09	60.42	0.016	-0.2209	0.0193
607	SLD 12	-2.08	-3.32	60.47	0.0203	-0.2208	0.0214
607	SLD 13	-5.42	0.64	56.38	0.0596	-0.22	0.0356
607	SLD 14	-5.42	0.29	56.46	0.0662	-0.2199	0.0387
607	SLD 15	-5.5	-0.91	56.74	0.0279	-0.2213	0.0309
607	SLD 16	-5.5	-1.26	56.82	0.0345	-0.2213	0.0341
607	SLV 1	11.37	0.35	71.58	0.1937	-0.2095	0.0047
607	SLV 2	11.38	-0.45	71.76	0.209	-0.2094	0.0121
607	SLV 3	11.19	-3.15	72.4	0.1218	-0.2126	-0.0059
607	SLV 4	11.19	-3.95	72.58	0.1371	-0.2125	0.0015
607	SLV 5	3.37	5.03	63.06	0.2214	-0.2106	0.0339
607	SLV 6	3.38	4.51	63.18	0.2314	-0.2105	0.0387
607	SLV 7	2.77	-6.65	65.8	-0.0183	-0.2209	-0.0014
607	SLV 8	2.77	-7.17	65.92	-0.0083	-0.2208	0.0034
607	SLV 9	-3.66	5.65	56.55	0.171	-0.2146	0.0472
607	SLV 10	-3.66	5.13	56.67	0.181	-0.2146	0.052
607	SLV 11	-4.27	-6.02	59.3	-0.0687	-0.225	0.0119
607	SLV 12	-4.26	-6.54	59.42	-0.0587	-0.2249	0.0167
607	SLV 13	-12.08	2.44	49.89	0.0256	-0.223	0.0491
607	SLV 14	-12.08	1.64	50.07	0.0409	-0.2229	0.0565
607	SLV 15	-12.26	-1.06	50.71	-0.0463	-0.2261	0.0385
607	SLV 16	-12.26	-1.86	50.9	-0.031	-0.226	0.0459
607	CRTFP Ux+	0	0	0	0	0	0
607	CRTFP Ux-	0	0	0	0	0	0
607	CRTFP Uy+	0	0	0	0	0	0
607	CRTFP Uy-	0	0	0	0	0	0
608	SLU 1	-0.4	-0.61	58.58	-0.2142	-0.01	0.0369
608	SLU 2	-0.4	-0.68	58.6	-0.2154	-0.0099	0.0372
608	SLU 3	-0.4	-0.61	60	-0.221	-0.0104	0.0379
608	SLU 4	-0.41	-0.65	60.01	-0.2217	-0.0103	0.0381
608	SLU 5	-0.4	-0.69	59.47	-0.2203	-0.01	0.0377
608	SLU 6	-0.41	-0.61	60.88	-0.2259	-0.0105	0.0384
608	SLU 7	-0.41	-0.66	60.89	-0.2266	-0.0104	0.0386
608	SLU 8	-0.41	-0.62	60.33	-0.224	-0.0103	0.0379
608	SLU 9	-0.41	-0.66	60.34	-0.2247	-0.0102	0.0381
608	SLU 10	-0.38	-0.68	66.02	-0.2214	-0.0128	0.0406
608	SLU 11	-0.39	-0.61	67.42	-0.227	-0.0132	0.0413
608	SLU 12	-0.39	-0.65	67.43	-0.2277	-0.0131	0.0415
608	SLU 13	-0.39	-0.69	66.89	-0.2263	-0.0129	0.0411
608	SLU 14	-0.4	-0.61	68.3	-0.2319	-0.0133	0.0418
608	SLU 15	-0.4	-0.66	68.31	-0.2326	-0.0133	0.042
608	SLU 16	-0.4	-0.62	67.75	-0.23	-0.0131	0.0413
608	SLU 17	-0.4	-0.66	67.76	-0.2307	-0.0131	0.0415
608	SLU 18	-0.38	-0.61	69.18	-0.2228	-0.0141	0.0417
608	SLU 19	-0.38	-0.65	69.19	-0.2235	-0.014	0.0419
608	SLU 20	-0.38	-0.61	70.05	-0.2277	-0.0142	0.0422
608	SLU 21	-0.38	-0.66	70.07	-0.2284	-0.0142	0.0424
608	SLU 22	-0.42	-0.55	65.7	-0.2095	-0.0119	0.0414
608	SLU 23	-0.43	-0.62	65.72	-0.2107	-0.0117	0.0417
608	SLU 24	-0.43	-0.55	67.12	-0.2163	-0.0122	0.0424
608	SLU 25	-0.43	-0.6	67.14	-0.217	-0.0121	0.0426
608	SLU 26	-0.43	-0.63	66.6	-0.2156	-0.0119	0.0422
608	SLU 27	-0.44	-0.56	68	-0.2212	-0.0123	0.0429
608	SLU 28	-0.44	-0.6	68.01	-0.2219	-0.0122	0.0431
608	SLU 29	-0.44	-0.56	67.45	-0.2193	-0.0121	0.0424
608	SLU 30	-0.44	-0.61	67.46	-0.22	-0.0121	0.0426
608	SLU 31	-0.41	-0.62	73.14	-0.2167	-0.0146	0.0451
608	SLU 32	-0.42	-0.55	74.55	-0.2222	-0.015	0.0457

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
608	SLU 33	-0.42	-0.6	74.56	-0.223	-0.0149	0.0459
608	SLU 34	-0.42	-0.63	74.02	-0.2216	-0.0147	0.0456
608	SLU 35	-0.43	-0.56	75.42	-0.2271	-0.0152	0.0462
608	SLU 36	-0.43	-0.6	75.43	-0.2279	-0.0151	0.0464
608	SLU 37	-0.42	-0.56	74.87	-0.2253	-0.015	0.0457
608	SLU 38	-0.43	-0.61	74.88	-0.226	-0.0149	0.0459
608	SLU 39	-0.4	-0.55	76.3	-0.2181	-0.0159	0.0462
608	SLU 40	-0.4	-0.59	76.31	-0.2188	-0.0158	0.0464
608	SLU 41	-0.41	-0.56	77.18	-0.223	-0.016	0.0467
608	SLU 42	-0.41	-0.6	77.19	-0.2237	-0.016	0.0469
608	SLU 43	-0.51	-0.81	73.71	-0.2801	-0.0124	0.0464
608	SLU 44	-0.51	-0.88	73.73	-0.2813	-0.0123	0.0468
608	SLU 45	-0.51	-0.81	75.13	-0.2869	-0.0128	0.0474
608	SLU 46	-0.51	-0.85	75.14	-0.2876	-0.0127	0.0476
608	SLU 47	-0.51	-0.89	74.6	-0.2862	-0.0124	0.0473
608	SLU 48	-0.52	-0.82	76.01	-0.2918	-0.0129	0.0479
608	SLU 49	-0.52	-0.86	76.02	-0.2925	-0.0128	0.0481
608	SLU 50	-0.52	-0.82	75.46	-0.2899	-0.0127	0.0474
608	SLU 51	-0.52	-0.86	75.47	-0.2906	-0.0126	0.0476
608	SLU 52	-0.49	-0.88	81.15	-0.2873	-0.0151	0.0501
608	SLU 53	-0.5	-0.81	82.55	-0.2929	-0.0156	0.0508
608	SLU 54	-0.5	-0.85	82.56	-0.2936	-0.0155	0.051
608	SLU 55	-0.5	-0.89	82.02	-0.2922	-0.0153	0.0506
608	SLU 56	-0.51	-0.82	83.43	-0.2977	-0.0157	0.0513
608	SLU 57	-0.51	-0.86	83.44	-0.2985	-0.0157	0.0515
608	SLU 58	-0.51	-0.82	82.88	-0.2959	-0.0155	0.0508
608	SLU 59	-0.51	-0.86	82.89	-0.2966	-0.0155	0.051
608	SLU 60	-0.49	-0.81	84.31	-0.2887	-0.0165	0.0513
608	SLU 61	-0.49	-0.85	84.32	-0.2894	-0.0164	0.0515
608	SLU 62	-0.49	-0.81	85.18	-0.2936	-0.0166	0.0518
608	SLU 63	-0.49	-0.86	85.2	-0.2943	-0.0165	0.052
608	SLU 64	-0.53	-0.75	80.83	-0.2754	-0.0142	0.0509
608	SLU 65	-0.53	-0.82	80.85	-0.2766	-0.0141	0.0512
608	SLU 66	-0.54	-0.75	82.25	-0.2821	-0.0146	0.0519
608	SLU 67	-0.54	-0.8	82.27	-0.2829	-0.0145	0.0521
608	SLU 68	-0.54	-0.83	81.73	-0.2815	-0.0143	0.0517
608	SLU 69	-0.55	-0.76	83.13	-0.287	-0.0147	0.0524
608	SLU 70	-0.55	-0.8	83.14	-0.2878	-0.0146	0.0526
608	SLU 71	-0.55	-0.76	82.58	-0.2852	-0.0145	0.0519
608	SLU 72	-0.55	-0.81	82.59	-0.2859	-0.0144	0.0521
608	SLU 73	-0.52	-0.82	88.27	-0.2826	-0.017	0.0546
608	SLU 74	-0.53	-0.75	89.68	-0.2881	-0.0174	0.0553
608	SLU 75	-0.53	-0.8	89.69	-0.2889	-0.0173	0.0555
608	SLU 76	-0.53	-0.83	89.15	-0.2875	-0.0171	0.0551
608	SLU 77	-0.54	-0.76	90.55	-0.293	-0.0175	0.0558
608	SLU 78	-0.54	-0.8	90.56	-0.2938	-0.0175	0.056
608	SLU 79	-0.53	-0.76	90	-0.2912	-0.0174	0.0553
608	SLU 80	-0.53	-0.81	90.02	-0.2919	-0.0173	0.0555
608	SLU 81	-0.51	-0.75	91.43	-0.284	-0.0183	0.0557
608	SLU 82	-0.51	-0.79	91.44	-0.2847	-0.0182	0.0559
608	SLU 83	-0.52	-0.76	92.31	-0.2888	-0.0184	0.0562
608	SLU 84	-0.52	-0.8	92.32	-0.2896	-0.0184	0.0564
608	SLE RA 1	-0.4	-0.59	60.61	-0.2129	-0.0106	0.0382
608	SLE RA 2	-0.4	-0.64	60.62	-0.2137	-0.0105	0.0384
608	SLE RA 3	-0.41	-0.59	61.56	-0.2174	-0.0108	0.0388
608	SLE RA 4	-0.41	-0.62	61.57	-0.2179	-0.0107	0.039
608	SLE RA 5	-0.41	-0.64	61.21	-0.217	-0.0106	0.0387
608	SLE RA 6	-0.41	-0.6	62.15	-0.2206	-0.0109	0.0392
608	SLE RA 7	-0.42	-0.62	62.15	-0.2211	-0.0108	0.0393
608	SLE RA 8	-0.41	-0.6	61.78	-0.2194	-0.0107	0.0388
608	SLE RA 9	-0.41	-0.63	61.79	-0.2199	-0.0107	0.039
608	SLE RA 10	-0.4	-0.64	65.57	-0.2177	-0.0124	0.0406
608	SLE RA 11	-0.4	-0.59	66.51	-0.2214	-0.0127	0.0411
608	SLE RA 12	-0.4	-0.62	66.52	-0.2219	-0.0126	0.0412
608	SLE RA 13	-0.4	-0.64	66.16	-0.2209	-0.0125	0.041
608	SLE RA 14	-0.41	-0.6	67.09	-0.2246	-0.0128	0.0414
608	SLE RA 15	-0.41	-0.63	67.1	-0.2251	-0.0127	0.0416
608	SLE RA 16	-0.4	-0.6	66.73	-0.2234	-0.0126	0.0411
608	SLE RA 17	-0.4	-0.63	66.73	-0.2239	-0.0126	0.0412
608	SLE RA 18	-0.39	-0.59	67.68	-0.2186	-0.0133	0.0414
608	SLE RA 19	-0.39	-0.62	67.69	-0.2191	-0.0132	0.0415
608	SLE RA 20	-0.4	-0.59	68.26	-0.2218	-0.0134	0.0417
608	SLE RA 21	-0.4	-0.62	68.27	-0.2223	-0.0133	0.0419
608	SLE FR 1	-0.4	-0.59	60.61	-0.2129	-0.0106	0.0382
608	SLE FR 2	-0.4	-0.6	60.61	-0.213	-0.0105	0.0382
608	SLE FR 3	-0.41	-0.59	60.84	-0.2142	-0.0106	0.0383
608	SLE FR 4	-0.4	-0.6	62.73	-0.2148	-0.0114	0.0392
608	SLE FR 5	-0.4	-0.59	62.97	-0.2159	-0.0114	0.0393
608	SLE FR 6	-0.4	-0.59	64.15	-0.2157	-0.0119	0.0398
608	SLE QP 1	-0.4	-0.59	60.61	-0.2129	-0.0106	0.0382
608	SLE QP 2	-0.4	-0.59	62.73	-0.2146	-0.0114	0.0391
608	SLD 1	4.76	0	66.55	-0.1597	0.0123	0.0565
608	SLD 2	4.76	-0.33	66.62	-0.1551	0.0128	0.0602
608	SLD 3	4.68	-1.57	66.9	-0.1971	0.014	0.0577
608	SLD 4	4.68	-1.9	66.97	-0.1925	0.0144	0.0614
608	SLD 5	1.27	2.03	63.34	-0.1422	-0.0068	0.0418
608	SLD 6	1.27	1.81	63.39	-0.1392	-0.0065	0.0443
608	SLD 7	1	-3.21	64.49	-0.2669	-0.0014	0.0459
608	SLD 8	1	-3.43	64.54	-0.2639	-0.0011	0.0483
608	SLD 9	-1.8	2.25	60.93	-0.1653	-0.0216	0.0299

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
608	SLD 10	-1.8	2.03	60.97	-0.1623	-0.0213	0.0324
608	SLD 11	-2.07	-2.99	62.07	-0.29	-0.0162	0.034
608	SLD 12	-2.07	-3.21	62.12	-0.2869	-0.016	0.0365
608	SLD 13	-5.48	0.72	58.5	-0.2367	-0.0371	0.0169
608	SLD 14	-5.48	0.39	58.57	-0.232	-0.0367	0.0206
608	SLD 15	-5.56	-0.85	58.84	-0.2741	-0.0355	0.0181
608	SLD 16	-5.56	-1.18	58.91	-0.2695	-0.0351	0.0218
608	SLV 1	11.66	0.73	71.68	-0.0829	0.0442	0.0797
608	SLV 2	11.66	-0.04	71.84	-0.0721	0.0451	0.0883
608	SLV 3	11.47	-2.83	72.47	-0.1676	0.0478	0.0825
608	SLV 4	11.48	-3.6	72.63	-0.1568	0.0488	0.0911
608	SLV 5	3.5	5.33	64.19	-0.0485	-0.0004	0.0455
608	SLV 6	3.5	4.84	64.3	-0.0414	0.0002	0.0511
608	SLV 7	2.88	-6.52	66.82	-0.3309	0.0118	0.0549
608	SLV 8	2.89	-7.02	66.92	-0.3239	0.0124	0.0605
608	SLV 9	-3.69	5.84	58.54	-0.1053	-0.0351	0.0178
608	SLV 10	-3.68	5.34	58.65	-0.0983	-0.0345	0.0234
608	SLV 11	-4.3	-6.01	61.16	-0.3878	-0.023	0.0271
608	SLV 12	-4.3	-6.51	61.27	-0.3807	-0.0223	0.0327
608	SLV 13	-12.28	2.42	52.83	-0.2724	-0.0715	-0.0128
608	SLV 14	-12.27	1.65	52.99	-0.2616	-0.0706	-0.0043
608	SLV 15	-12.46	-1.14	53.62	-0.3571	-0.0679	-0.01
608	SLV 16	-12.46	-1.9	53.78	-0.3463	-0.0669	-0.0014
608	CRTFP Ux+	0	0	0	0	0	0
608	CRTFP Ux-	0	0	0	0	0	0
608	CRTFP Uy+	0	0	0	0	0	0
608	CRTFP Uy-	0	0	0	0	0	0
609	SLU 1	-0.35	-0.39	58.83	-0.259	-0.0055	0.0433
609	SLU 2	-0.35	-0.46	58.84	-0.2606	-0.0054	0.0436
609	SLU 3	-0.36	-0.38	60.26	-0.2672	-0.0057	0.0445
609	SLU 4	-0.36	-0.43	60.27	-0.2682	-0.0056	0.0447
609	SLU 5	-0.36	-0.46	59.72	-0.2664	-0.0054	0.0442
609	SLU 6	-0.36	-0.39	61.14	-0.2731	-0.0058	0.0451
609	SLU 7	-0.36	-0.43	61.15	-0.274	-0.0057	0.0453
609	SLU 8	-0.36	-0.39	60.59	-0.2707	-0.0056	0.0445
609	SLU 9	-0.36	-0.44	60.6	-0.2716	-0.0056	0.0447
609	SLU 10	-0.33	-0.44	66.34	-0.2731	-0.0076	0.0475
609	SLU 11	-0.34	-0.36	67.76	-0.2798	-0.0079	0.0484
609	SLU 12	-0.34	-0.41	67.77	-0.2807	-0.0078	0.0486
609	SLU 13	-0.34	-0.44	67.22	-0.2789	-0.0076	0.0481
609	SLU 14	-0.35	-0.37	68.64	-0.2856	-0.008	0.0491
609	SLU 15	-0.35	-0.41	68.65	-0.2865	-0.0079	0.0492
609	SLU 16	-0.35	-0.37	68.09	-0.2832	-0.0079	0.0485
609	SLU 17	-0.35	-0.42	68.1	-0.2841	-0.0078	0.0486
609	SLU 18	-0.32	-0.36	69.54	-0.2769	-0.0087	0.049
609	SLU 19	-0.33	-0.4	69.55	-0.2778	-0.0086	0.0491
609	SLU 20	-0.33	-0.36	70.42	-0.2827	-0.0087	0.0496
609	SLU 21	-0.33	-0.41	70.43	-0.2836	-0.0086	0.0497
609	SLU 22	-0.37	-0.3	66	-0.2599	-0.0067	0.0485
609	SLU 23	-0.37	-0.38	66.02	-0.2615	-0.0066	0.0488
609	SLU 24	-0.38	-0.3	67.43	-0.2681	-0.0069	0.0497
609	SLU 25	-0.38	-0.34	67.44	-0.2691	-0.0069	0.0499
609	SLU 26	-0.38	-0.38	66.89	-0.2673	-0.0067	0.0494
609	SLU 27	-0.39	-0.3	68.31	-0.274	-0.007	0.0503
609	SLU 28	-0.39	-0.35	68.32	-0.2749	-0.0069	0.0505
609	SLU 29	-0.39	-0.31	67.76	-0.2716	-0.0069	0.0497
609	SLU 30	-0.39	-0.35	67.77	-0.2725	-0.0068	0.0499
609	SLU 31	-0.36	-0.36	73.52	-0.274	-0.0088	0.0527
609	SLU 32	-0.36	-0.28	74.94	-0.2807	-0.0092	0.0537
609	SLU 33	-0.36	-0.32	74.94	-0.2816	-0.0091	0.0538
609	SLU 34	-0.36	-0.36	74.4	-0.2798	-0.0089	0.0534
609	SLU 35	-0.37	-0.28	75.81	-0.2865	-0.0092	0.0543
609	SLU 36	-0.37	-0.33	75.82	-0.2874	-0.0091	0.0544
609	SLU 37	-0.37	-0.29	75.26	-0.2841	-0.0091	0.0537
609	SLU 38	-0.37	-0.34	75.27	-0.285	-0.009	0.0539
609	SLU 39	-0.35	-0.28	76.72	-0.2778	-0.0099	0.0542
609	SLU 40	-0.35	-0.32	76.73	-0.2787	-0.0098	0.0543
609	SLU 41	-0.36	-0.28	77.6	-0.2836	-0.01	0.0548
609	SLU 42	-0.36	-0.32	77.61	-0.2846	-0.0099	0.0549
609	SLU 43	-0.45	-0.53	74.02	-0.3364	-0.0067	0.0545
609	SLU 44	-0.45	-0.6	74.03	-0.338	-0.0066	0.0548
609	SLU 45	-0.45	-0.53	75.45	-0.3446	-0.0069	0.0557
609	SLU 46	-0.45	-0.57	75.46	-0.3456	-0.0069	0.0559
609	SLU 47	-0.45	-0.61	74.91	-0.3438	-0.0067	0.0554
609	SLU 48	-0.46	-0.53	76.33	-0.3505	-0.007	0.0563
609	SLU 49	-0.46	-0.57	76.34	-0.3514	-0.0069	0.0565
609	SLU 50	-0.46	-0.54	75.77	-0.3481	-0.0069	0.0557
609	SLU 51	-0.46	-0.58	75.78	-0.349	-0.0068	0.0559
609	SLU 52	-0.43	-0.58	81.53	-0.3505	-0.0088	0.0588
609	SLU 53	-0.44	-0.51	82.95	-0.3572	-0.0092	0.0597
609	SLU 54	-0.44	-0.55	82.96	-0.3581	-0.0091	0.0598
609	SLU 55	-0.44	-0.59	82.41	-0.3563	-0.0089	0.0594
609	SLU 56	-0.44	-0.51	83.83	-0.363	-0.0092	0.0603
609	SLU 57	-0.44	-0.55	83.84	-0.3639	-0.0091	0.0604
609	SLU 58	-0.44	-0.52	83.28	-0.3606	-0.0091	0.0597
609	SLU 59	-0.44	-0.56	83.29	-0.3615	-0.009	0.0599
609	SLU 60	-0.42	-0.5	84.73	-0.3543	-0.0099	0.0602
609	SLU 61	-0.42	-0.55	84.74	-0.3552	-0.0098	0.0603
609	SLU 62	-0.43	-0.51	85.61	-0.3601	-0.01	0.0608
609	SLU 63	-0.43	-0.55	85.62	-0.361	-0.0099	0.0609

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
609	SLU 64	-0.47	-0.45	81.19	-0.3373	-0.008	0.0597
609	SLU 65	-0.47	-0.52	81.2	-0.3389	-0.0078	0.06
609	SLU 66	-0.48	-0.44	82.62	-0.3455	-0.0082	0.0609
609	SLU 67	-0.48	-0.49	82.63	-0.3465	-0.0081	0.0611
609	SLU 68	-0.48	-0.52	82.08	-0.3447	-0.0079	0.0606
609	SLU 69	-0.48	-0.45	83.5	-0.3514	-0.0082	0.0615
609	SLU 70	-0.49	-0.49	83.51	-0.3523	-0.0082	0.0617
609	SLU 71	-0.48	-0.46	82.95	-0.349	-0.0081	0.0609
609	SLU 72	-0.48	-0.5	82.96	-0.3499	-0.008	0.0611
609	SLU 73	-0.45	-0.5	88.71	-0.3514	-0.01	0.064
609	SLU 74	-0.46	-0.42	90.12	-0.3581	-0.0104	0.0649
609	SLU 75	-0.46	-0.47	90.13	-0.359	-0.0103	0.065
609	SLU 76	-0.46	-0.5	89.59	-0.3572	-0.0101	0.0646
609	SLU 77	-0.47	-0.43	91	-0.3639	-0.0105	0.0655
609	SLU 78	-0.47	-0.47	91.01	-0.3648	-0.0104	0.0656
609	SLU 79	-0.47	-0.44	90.45	-0.3615	-0.0103	0.0649
609	SLU 80	-0.47	-0.48	90.46	-0.3624	-0.0102	0.0651
609	SLU 81	-0.45	-0.42	91.91	-0.3552	-0.0111	0.0654
609	SLU 82	-0.45	-0.46	91.92	-0.3561	-0.011	0.0655
609	SLU 83	-0.45	-0.42	92.79	-0.361	-0.0112	0.066
609	SLU 84	-0.45	-0.47	92.79	-0.362	-0.0111	0.0661
609	SLE RA 1	-0.36	-0.36	60.88	-0.2593	-0.0059	0.0448
609	SLE RA 2	-0.36	-0.41	60.89	-0.2603	-0.0058	0.045
609	SLE RA 3	-0.36	-0.36	61.83	-0.2648	-0.006	0.0456
609	SLE RA 4	-0.36	-0.39	61.84	-0.2654	-0.0059	0.0457
609	SLE RA 5	-0.36	-0.41	61.47	-0.2642	-0.0058	0.0454
609	SLE RA 6	-0.37	-0.36	62.42	-0.2686	-0.006	0.046
609	SLE RA 7	-0.37	-0.39	62.42	-0.2693	-0.006	0.0461
609	SLE RA 8	-0.36	-0.37	62.05	-0.267	-0.0059	0.0456
609	SLE RA 9	-0.37	-0.4	62.06	-0.2677	-0.0059	0.0457
609	SLE RA 10	-0.35	-0.4	65.89	-0.2687	-0.0072	0.0476
609	SLE RA 11	-0.35	-0.35	66.83	-0.2731	-0.0075	0.0482
609	SLE RA 12	-0.35	-0.38	66.84	-0.2737	-0.0074	0.0483
609	SLE RA 13	-0.35	-0.4	66.47	-0.2725	-0.0073	0.048
609	SLE RA 14	-0.35	-0.35	67.42	-0.277	-0.0075	0.0486
609	SLE RA 15	-0.35	-0.38	67.43	-0.2776	-0.0075	0.0487
609	SLE RA 16	-0.35	-0.35	67.05	-0.2754	-0.0074	0.0482
609	SLE RA 17	-0.35	-0.38	67.06	-0.276	-0.0074	0.0484
609	SLE RA 18	-0.34	-0.34	68.02	-0.2712	-0.008	0.0486
609	SLE RA 19	-0.34	-0.37	68.03	-0.2718	-0.0079	0.0487
609	SLE RA 20	-0.34	-0.35	68.61	-0.2751	-0.008	0.049
609	SLE RA 21	-0.34	-0.38	68.61	-0.2757	-0.008	0.0491
609	SLE FR 1	-0.36	-0.36	60.88	-0.2593	-0.0059	0.0448
609	SLE FR 2	-0.36	-0.37	60.88	-0.2595	-0.0058	0.0448
609	SLE FR 3	-0.36	-0.36	61.11	-0.2608	-0.0059	0.045
609	SLE FR 4	-0.35	-0.37	63.02	-0.2631	-0.0065	0.046
609	SLE FR 5	-0.35	-0.36	63.25	-0.2644	-0.0065	0.0461
609	SLE FR 6	-0.35	-0.35	64.45	-0.2652	-0.0069	0.0467
609	SLE QP 1	-0.36	-0.36	60.88	-0.2593	-0.0059	0.0448
609	SLE QP 2	-0.35	-0.36	63.02	-0.2629	-0.0065	0.0459
609	SLD 1	4.81	0.33	66.03	-0.1998	0.0203	0.0668
609	SLD 2	4.82	0.02	66.09	-0.1966	0.0208	0.0699
609	SLD 3	4.73	-1.24	66.33	-0.2408	0.0224	0.0656
609	SLD 4	4.74	-1.55	66.39	-0.2376	0.0229	0.0688
609	SLD 5	1.32	2.28	63.46	-0.1824	-0.0016	0.0533
609	SLD 6	1.32	2.08	63.5	-0.1803	-0.0013	0.0554
609	SLD 7	1.05	-2.95	64.46	-0.3189	0.0052	0.0495
609	SLD 8	1.06	-3.15	64.49	-0.3168	0.0055	0.0516
609	SLD 9	-1.76	2.44	61.55	-0.2089	-0.0185	0.0402
609	SLD 10	-1.76	2.23	61.58	-0.2068	-0.0182	0.0423
609	SLD 11	-2.02	-2.79	62.54	-0.3454	-0.0117	0.0364
609	SLD 12	-2.02	-3	62.58	-0.3433	-0.0113	0.0385
609	SLD 13	-5.44	0.84	59.65	-0.2882	-0.0358	0.0231
609	SLD 14	-5.44	0.53	59.71	-0.285	-0.0354	0.0262
609	SLD 15	-5.52	-0.73	59.95	-0.3291	-0.0338	0.022
609	SLD 16	-5.52	-1.04	60.01	-0.3259	-0.0333	0.0251
609	SLV 1	11.73	1.18	70.08	-0.1114	0.0564	0.0947
609	SLV 2	11.73	0.45	70.21	-0.104	0.0574	0.102
609	SLV 3	11.54	-2.37	70.76	-0.2042	0.061	0.092
609	SLV 4	11.55	-3.1	70.89	-0.1968	0.0621	0.0993
609	SLV 5	3.55	5.62	64.07	-0.0781	0.0051	0.0633
609	SLV 6	3.55	5.14	64.16	-0.0732	0.0058	0.068
609	SLV 7	2.94	-6.22	66.36	-0.3873	0.0206	0.0545
609	SLV 8	2.94	-6.69	66.45	-0.3824	0.0213	0.0592
609	SLV 9	-3.64	5.98	59.59	-0.1433	-0.0343	0.0326
609	SLV 10	-3.64	5.51	59.68	-0.1385	-0.0336	0.0374
609	SLV 11	-4.26	-5.86	61.88	-0.4525	-0.0188	0.0238
609	SLV 12	-4.25	-6.33	61.97	-0.4477	-0.0181	0.0286
609	SLV 13	-12.25	2.38	55.15	-0.3289	-0.0751	-0.0075
609	SLV 14	-12.24	1.66	55.28	-0.3215	-0.074	-0.0002
609	SLV 15	-12.44	-1.17	55.83	-0.4217	-0.0704	-0.0101
609	SLV 16	-12.43	-1.89	55.96	-0.4143	-0.0693	-0.0028
609	CRTFP Ux+	0	0	0	0	0	0
609	CRTFP Ux-	0	0	0	0	0	0
609	CRTFP Uy+	0	0	0	0	0	0
609	CRTFP Uy-	0	0	0	0	0	0
610	SLU 1	-0.31	-0.15	58.91	-0.3045	0.0007	0.044
610	SLU 2	-0.31	-0.22	58.92	-0.3063	0.0009	0.0442
610	SLU 3	-0.31	-0.14	60.34	-0.3141	0.0007	0.0452
610	SLU 4	-0.31	-0.18	60.35	-0.3153	0.0008	0.0453

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
610	SLU 5	-0.31	-0.22	59.8	-0.3131	0.0009	0.0448
610	SLU 6	-0.32	-0.14	61.22	-0.3209	0.0007	0.0458
610	SLU 7	-0.32	-0.18	61.23	-0.322	0.0008	0.0459
610	SLU 8	-0.32	-0.15	60.67	-0.318	0.0008	0.0452
610	SLU 9	-0.32	-0.19	60.67	-0.3191	0.0009	0.0453
610	SLU 10	-0.29	-0.18	66.47	-0.3254	-0.0004	0.0482
610	SLU 11	-0.29	-0.1	67.9	-0.3332	-0.0006	0.0492
610	SLU 12	-0.29	-0.14	67.91	-0.3344	-0.0005	0.0493
610	SLU 13	-0.29	-0.18	67.35	-0.3322	-0.0004	0.0488
610	SLU 14	-0.3	-0.1	68.78	-0.34	-0.0005	0.0498
610	SLU 15	-0.3	-0.14	68.79	-0.3411	-0.0005	0.05
610	SLU 16	-0.3	-0.11	68.22	-0.3371	-0.0005	0.0492
610	SLU 17	-0.3	-0.15	68.23	-0.3382	-0.0004	0.0494
610	SLU 18	-0.28	-0.09	69.7	-0.3317	-0.0011	0.0497
610	SLU 19	-0.28	-0.13	69.71	-0.3329	-0.001	0.0498
610	SLU 20	-0.28	-0.09	70.58	-0.3385	-0.0011	0.0503
610	SLU 21	-0.28	-0.13	70.59	-0.3396	-0.001	0.0505
610	SLU 22	-0.33	-0.04	66.1	-0.311	0.0004	0.0493
610	SLU 23	-0.33	-0.11	66.11	-0.3129	0.0006	0.0495
610	SLU 24	-0.33	-0.03	67.54	-0.3207	0.0004	0.0505
610	SLU 25	-0.33	-0.07	67.55	-0.3218	0.0005	0.0507
610	SLU 26	-0.33	-0.11	66.99	-0.3196	0.0006	0.0502
610	SLU 27	-0.34	-0.03	68.42	-0.3275	0.0004	0.0512
610	SLU 28	-0.34	-0.07	68.43	-0.3286	0.0005	0.0513
610	SLU 29	-0.34	-0.04	67.86	-0.3245	0.0005	0.0506
610	SLU 30	-0.34	-0.08	67.87	-0.3257	0.0006	0.0507
610	SLU 31	-0.31	-0.07	73.67	-0.332	-0.0007	0.0536
610	SLU 32	-0.31	0.01	75.1	-0.3398	-0.0009	0.0546
610	SLU 33	-0.31	-0.03	75.1	-0.3409	-0.0008	0.0547
610	SLU 34	-0.31	-0.07	74.55	-0.3387	-0.0007	0.0542
610	SLU 35	-0.32	0.01	75.98	-0.3466	-0.0009	0.0552
610	SLU 36	-0.32	-0.03	75.98	-0.3477	-0.0008	0.0553
610	SLU 37	-0.32	0	75.42	-0.3436	-0.0008	0.0546
610	SLU 38	-0.32	-0.04	75.43	-0.3448	-0.0007	0.0547
610	SLU 39	-0.3	0.02	76.9	-0.3383	-0.0014	0.0551
610	SLU 40	-0.3	-0.02	76.91	-0.3394	-0.0013	0.0552
610	SLU 41	-0.3	0.02	77.78	-0.3451	-0.0014	0.0557
610	SLU 42	-0.3	-0.02	77.79	-0.3462	-0.0013	0.0558
610	SLU 43	-0.39	-0.23	74.11	-0.3935	0.0011	0.0553
610	SLU 44	-0.39	-0.3	74.12	-0.3954	0.0012	0.0555
610	SLU 45	-0.4	-0.22	75.55	-0.4032	0.001	0.0565
610	SLU 46	-0.4	-0.26	75.55	-0.4043	0.0011	0.0567
610	SLU 47	-0.4	-0.3	75	-0.4021	0.0012	0.0562
610	SLU 48	-0.4	-0.22	76.43	-0.41	0.0011	0.0572
610	SLU 49	-0.4	-0.26	76.43	-0.4111	0.0012	0.0573
610	SLU 50	-0.4	-0.23	75.87	-0.407	0.0011	0.0566
610	SLU 51	-0.4	-0.28	75.88	-0.4082	0.0012	0.0567
610	SLU 52	-0.37	-0.26	81.68	-0.4145	-0.0001	0.0596
610	SLU 53	-0.38	-0.18	83.1	-0.4223	-0.0002	0.0606
610	SLU 54	-0.38	-0.22	83.11	-0.4234	-0.0002	0.0607
610	SLU 55	-0.38	-0.26	82.56	-0.4212	0	0.0602
610	SLU 56	-0.38	-0.18	83.98	-0.4291	-0.0002	0.0612
610	SLU 57	-0.38	-0.22	83.99	-0.4302	-0.0001	0.0613
610	SLU 58	-0.38	-0.19	83.43	-0.4261	-0.0002	0.0606
610	SLU 59	-0.38	-0.23	83.43	-0.4273	-0.0001	0.0607
610	SLU 60	-0.36	-0.17	84.91	-0.4208	-0.0008	0.0611
610	SLU 61	-0.36	-0.22	84.91	-0.4219	-0.0007	0.0612
610	SLU 62	-0.37	-0.17	85.79	-0.4276	-0.0007	0.0617
610	SLU 63	-0.37	-0.22	85.79	-0.4287	-0.0006	0.0618
610	SLU 64	-0.41	-0.12	81.31	-0.4001	0.0007	0.0607
610	SLU 65	-0.41	-0.19	81.32	-0.402	0.0009	0.0609
610	SLU 66	-0.42	-0.11	82.74	-0.4098	0.0007	0.0619
610	SLU 67	-0.42	-0.15	82.75	-0.4109	0.0008	0.062
610	SLU 68	-0.42	-0.19	82.2	-0.4087	0.0009	0.0615
610	SLU 69	-0.42	-0.11	83.62	-0.4165	0.0008	0.0625
610	SLU 70	-0.42	-0.15	83.63	-0.4177	0.0008	0.0626
610	SLU 71	-0.42	-0.12	83.07	-0.4136	0.0008	0.0619
610	SLU 72	-0.42	-0.16	83.07	-0.4147	0.0009	0.0621
610	SLU 73	-0.39	-0.15	88.88	-0.4211	-0.0004	0.0649
610	SLU 74	-0.4	-0.07	90.3	-0.4289	-0.0006	0.0659
610	SLU 75	-0.4	-0.11	90.31	-0.43	-0.0005	0.066
610	SLU 76	-0.4	-0.15	89.76	-0.4278	-0.0004	0.0655
610	SLU 77	-0.4	-0.07	91.18	-0.4357	-0.0005	0.0665
610	SLU 78	-0.4	-0.11	91.19	-0.4368	-0.0004	0.0667
610	SLU 79	-0.4	-0.08	90.62	-0.4327	-0.0005	0.0659
610	SLU 80	-0.4	-0.12	90.63	-0.4338	-0.0004	0.0661
610	SLU 81	-0.38	-0.06	92.1	-0.4274	-0.0011	0.0664
610	SLU 82	-0.38	-0.1	92.11	-0.4285	-0.001	0.0665
610	SLU 83	-0.39	-0.06	92.98	-0.4342	-0.0011	0.067
610	SLU 84	-0.39	-0.1	92.99	-0.4353	-0.001	0.0672
610	SLE RA 1	-0.31	-0.12	60.96	-0.3063	0.0006	0.0455
610	SLE RA 2	-0.31	-0.16	60.97	-0.3076	0.0007	0.0456
610	SLE RA 3	-0.32	-0.11	61.92	-0.3128	0.0006	0.0463
610	SLE RA 4	-0.32	-0.14	61.92	-0.3135	0.0007	0.0464
610	SLE RA 5	-0.32	-0.17	61.56	-0.3121	0.0008	0.0461
610	SLE RA 6	-0.32	-0.11	62.51	-0.3173	0.0006	0.0467
610	SLE RA 7	-0.32	-0.14	62.51	-0.318	0.0007	0.0468
610	SLE RA 8	-0.32	-0.12	62.14	-0.3153	0.0007	0.0463
610	SLE RA 9	-0.32	-0.15	62.14	-0.3161	0.0007	0.0464
610	SLE RA 10	-0.3	-0.14	66.01	-0.3203	-0.0001	0.0483

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
610	SLE RA 11	-0.3	-0.08	66.96	-0.3255	-0.0002	0.049
610	SLE RA 12	-0.3	-0.11	66.96	-0.3263	-0.0002	0.0491
610	SLE RA 13	-0.3	-0.14	66.59	-0.3248	-0.0001	0.0487
610	SLE RA 14	-0.31	-0.08	67.54	-0.33	-0.0002	0.0494
610	SLE RA 15	-0.31	-0.11	67.55	-0.3308	-0.0001	0.0495
610	SLE RA 16	-0.31	-0.09	67.17	-0.3281	-0.0002	0.049
610	SLE RA 17	-0.31	-0.12	67.18	-0.3288	-0.0001	0.0491
610	SLE RA 18	-0.29	-0.08	68.16	-0.3245	-0.0006	0.0493
610	SLE RA 19	-0.29	-0.11	68.16	-0.3253	-0.0005	0.0494
610	SLE RA 20	-0.3	-0.08	68.75	-0.329	-0.0006	0.0497
610	SLE RA 21	-0.3	-0.11	68.75	-0.3298	-0.0005	0.0498
610	SLE FR 1	-0.31	-0.12	60.96	-0.3063	0.0006	0.0455
610	SLE FR 2	-0.31	-0.13	60.96	-0.3066	0.0007	0.0455
610	SLE FR 3	-0.31	-0.12	61.2	-0.3081	0.0007	0.0457
610	SLE FR 4	-0.31	-0.12	63.12	-0.312	0.0003	0.0467
610	SLE FR 5	-0.31	-0.11	63.36	-0.3136	0.0003	0.0468
610	SLE FR 6	-0.3	-0.1	64.56	-0.3154	0	0.0474
610	SLE QP 1	-0.31	-0.12	60.96	-0.3063	0.0006	0.0455
610	SLE QP 2	-0.31	-0.11	63.12	-0.3118	0.0003	0.0466
610	SLD 1	4.86	0.67	65.26	-0.2356	0.0282	0.0681
610	SLD 2	4.87	0.38	65.3	-0.2339	0.0287	0.0709
610	SLD 3	4.79	-0.9	65.51	-0.2803	0.0303	0.0667
610	SLD 4	4.79	-1.2	65.55	-0.2786	0.0308	0.0695
610	SLD 5	1.36	2.56	63.38	-0.2215	0.0054	0.0547
610	SLD 6	1.37	2.37	63.4	-0.2203	0.0058	0.0566
610	SLD 7	1.1	-2.67	64.21	-0.3704	0.0124	0.05
610	SLD 8	1.1	-2.87	64.24	-0.3693	0.0127	0.0519
610	SLD 9	-1.71	2.66	62.01	-0.2543	-0.0121	0.0414
610	SLD 10	-1.71	2.46	62.03	-0.2532	-0.0118	0.0432
610	SLD 11	-1.98	-2.58	62.84	-0.4032	-0.0052	0.0367
610	SLD 12	-1.97	-2.77	62.86	-0.4021	-0.0049	0.0386
610	SLD 13	-5.4	0.98	60.69	-0.345	-0.0302	0.0237
610	SLD 14	-5.4	0.69	60.73	-0.3433	-0.0298	0.0265
610	SLD 15	-5.48	-0.59	60.94	-0.3897	-0.0282	0.0223
610	SLD 16	-5.47	-0.88	60.98	-0.388	-0.0277	0.0251
610	SLV 1	11.78	1.65	68.13	-0.1296	0.0658	0.0969
610	SLV 2	11.79	0.96	68.23	-0.1256	0.0669	0.1035
610	SLV 3	11.6	-1.91	68.71	-0.2309	0.0705	0.0937
610	SLV 4	11.61	-2.59	68.8	-0.2269	0.0716	0.1002
610	SLV 5	3.6	5.93	63.73	-0.1043	0.0126	0.0655
610	SLV 6	3.6	5.48	63.79	-0.1017	0.0133	0.0698
610	SLV 7	2.99	-5.91	65.66	-0.4418	0.0283	0.0547
610	SLV 8	2.99	-6.36	65.72	-0.4391	0.029	0.0589
610	SLV 9	-3.6	6.15	60.52	-0.1844	-0.0284	0.0344
610	SLV 10	-3.6	5.7	60.59	-0.1818	-0.0277	0.0386
610	SLV 11	-4.21	-5.69	62.45	-0.5219	-0.0128	0.0235
610	SLV 12	-4.21	-6.14	62.51	-0.5193	-0.012	0.0278
610	SLV 13	-12.22	2.38	57.44	-0.3967	-0.071	-0.0069
610	SLV 14	-12.21	1.69	57.53	-0.3927	-0.0699	-0.0004
610	SLV 15	-12.4	-1.17	58.02	-0.498	-0.0663	-0.0102
610	SLV 16	-12.39	-1.86	58.11	-0.4939	-0.0652	-0.0037
610	CRTFP Ux+	0	0	0	0	0	0
610	CRTFP Ux-	0	0	0	0	0	0
610	CRTFP Uy+	0	0	0	0	0	0
610	CRTFP Uy-	0	0	0	0	0	0
611	SLU 1	-0.26	0.08	58.77	-0.3506	0.0077	0.0388
611	SLU 2	-0.26	0.01	58.78	-0.3528	0.0078	0.039
611	SLU 3	-0.27	0.09	60.21	-0.3618	0.0079	0.0399
611	SLU 4	-0.27	0.05	60.21	-0.3631	0.0079	0.04
611	SLU 5	-0.27	0.01	59.66	-0.3605	0.008	0.0396
611	SLU 6	-0.27	0.1	61.08	-0.3695	0.008	0.0405
611	SLU 7	-0.27	0.05	61.09	-0.3708	0.0081	0.0406
611	SLU 8	-0.27	0.08	60.53	-0.366	0.008	0.0399
611	SLU 9	-0.27	0.04	60.53	-0.3673	0.0081	0.04
611	SLU 10	-0.24	0.07	66.36	-0.3785	0.0076	0.0426
611	SLU 11	-0.25	0.15	67.79	-0.3875	0.0076	0.0435
611	SLU 12	-0.25	0.11	67.79	-0.3889	0.0077	0.0436
611	SLU 13	-0.25	0.07	67.24	-0.3862	0.0078	0.0432
611	SLU 14	-0.25	0.16	68.67	-0.3953	0.0078	0.0441
611	SLU 15	-0.25	0.12	68.67	-0.3966	0.0079	0.0442
611	SLU 16	-0.25	0.14	68.11	-0.3918	0.0078	0.0435
611	SLU 17	-0.25	0.1	68.11	-0.3931	0.0079	0.0436
611	SLU 18	-0.23	0.17	69.6	-0.3874	0.0074	0.044
611	SLU 19	-0.23	0.12	69.61	-0.3887	0.0075	0.0441
611	SLU 20	-0.24	0.17	70.48	-0.3951	0.0075	0.0445
611	SLU 21	-0.24	0.13	70.48	-0.3964	0.0076	0.0446
611	SLU 22	-0.28	0.22	65.96	-0.3629	0.0085	0.0437
611	SLU 23	-0.28	0.15	65.97	-0.3651	0.0086	0.0439
611	SLU 24	-0.28	0.23	67.4	-0.3741	0.0087	0.0448
611	SLU 25	-0.29	0.19	67.4	-0.3754	0.0087	0.0449
611	SLU 26	-0.28	0.15	66.85	-0.3728	0.0088	0.0444
611	SLU 27	-0.29	0.23	68.27	-0.3818	0.0088	0.0454
611	SLU 28	-0.29	0.19	68.28	-0.3831	0.0089	0.0455
611	SLU 29	-0.29	0.22	67.72	-0.3783	0.0088	0.0448
611	SLU 30	-0.29	0.18	67.72	-0.3796	0.0089	0.0449
611	SLU 31	-0.26	0.21	73.55	-0.3908	0.0084	0.0475
611	SLU 32	-0.26	0.29	74.98	-0.3998	0.0084	0.0484
611	SLU 33	-0.26	0.25	74.98	-0.4011	0.0085	0.0485
611	SLU 34	-0.26	0.21	74.43	-0.3985	0.0086	0.048
611	SLU 35	-0.27	0.3	75.86	-0.4075	0.0086	0.049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
611	SLU 36	-0.27	0.25	75.86	-0.4089	0.0087	0.0491
611	SLU 37	-0.27	0.28	75.3	-0.4041	0.0086	0.0484
611	SLU 38	-0.27	0.24	75.3	-0.4054	0.0086	0.0485
611	SLU 39	-0.25	0.3	76.79	-0.3997	0.0082	0.0488
611	SLU 40	-0.25	0.26	76.8	-0.401	0.0083	0.049
611	SLU 41	-0.25	0.31	77.67	-0.4074	0.0083	0.0494
611	SLU 42	-0.25	0.26	77.67	-0.4087	0.0084	0.0495
611	SLU 43	-0.34	0.05	73.94	-0.4516	0.0097	0.0488
611	SLU 44	-0.34	-0.02	73.94	-0.4537	0.0099	0.049
611	SLU 45	-0.34	0.07	75.37	-0.4627	0.0099	0.0499
611	SLU 46	-0.34	0.03	75.38	-0.4641	0.01	0.05
611	SLU 47	-0.34	-0.02	74.82	-0.4614	0.01	0.0495
611	SLU 48	-0.35	0.07	76.25	-0.4705	0.0101	0.0505
611	SLU 49	-0.35	0.03	76.25	-0.4718	0.0101	0.0506
611	SLU 50	-0.34	0.06	75.69	-0.467	0.01	0.0499
611	SLU 51	-0.35	0.02	75.7	-0.4683	0.0101	0.05
611	SLU 52	-0.31	0.04	81.53	-0.4795	0.0096	0.0526
611	SLU 53	-0.32	0.13	82.95	-0.4885	0.0097	0.0535
611	SLU 54	-0.32	0.09	82.96	-0.4898	0.0098	0.0536
611	SLU 55	-0.32	0.05	82.4	-0.4872	0.0098	0.0531
611	SLU 56	-0.32	0.13	83.83	-0.4962	0.0098	0.0541
611	SLU 57	-0.32	0.09	83.84	-0.4975	0.0099	0.0542
611	SLU 58	-0.32	0.12	83.27	-0.4927	0.0098	0.0535
611	SLU 59	-0.32	0.08	83.28	-0.494	0.0099	0.0536
611	SLU 60	-0.3	0.14	84.77	-0.4884	0.0094	0.0539
611	SLU 61	-0.3	0.1	84.77	-0.4897	0.0095	0.054
611	SLU 62	-0.31	0.14	85.65	-0.4961	0.0096	0.0545
611	SLU 63	-0.31	0.1	85.65	-0.4974	0.0096	0.0546
611	SLU 64	-0.35	0.19	81.13	-0.4639	0.0105	0.0537
611	SLU 65	-0.35	0.12	81.14	-0.466	0.0107	0.0539
611	SLU 66	-0.36	0.21	82.56	-0.475	0.0107	0.0548
611	SLU 67	-0.36	0.17	82.57	-0.4764	0.0108	0.0549
611	SLU 68	-0.36	0.12	82.01	-0.4737	0.0108	0.0544
611	SLU 69	-0.36	0.21	83.44	-0.4828	0.0109	0.0554
611	SLU 70	-0.36	0.17	83.44	-0.4841	0.0109	0.0555
611	SLU 71	-0.36	0.2	82.88	-0.4793	0.0108	0.0548
611	SLU 72	-0.36	0.15	82.89	-0.4806	0.0109	0.0549
611	SLU 73	-0.33	0.18	88.72	-0.4918	0.0104	0.0575
611	SLU 74	-0.33	0.27	90.15	-0.5008	0.0105	0.0584
611	SLU 75	-0.34	0.23	90.15	-0.5021	0.0106	0.0585
611	SLU 76	-0.34	0.19	89.59	-0.4995	0.0106	0.058
611	SLU 77	-0.34	0.27	91.02	-0.5085	0.0106	0.0589
611	SLU 78	-0.34	0.23	91.03	-0.5098	0.0107	0.059
611	SLU 79	-0.34	0.26	90.47	-0.505	0.0106	0.0584
611	SLU 80	-0.34	0.22	90.47	-0.5063	0.0107	0.0585
611	SLU 81	-0.32	0.28	91.96	-0.5007	0.0102	0.0588
611	SLU 82	-0.32	0.24	91.96	-0.502	0.0103	0.0589
611	SLU 83	-0.32	0.28	92.84	-0.5084	0.0104	0.0594
611	SLU 84	-0.33	0.24	92.84	-0.5097	0.0104	0.0595
611	SLE RA 1	-0.27	0.12	60.83	-0.3541	0.0079	0.0402
611	SLE RA 2	-0.27	0.07	60.83	-0.3556	0.008	0.0403
611	SLE RA 3	-0.27	0.13	61.78	-0.3616	0.008	0.041
611	SLE RA 4	-0.27	0.1	61.79	-0.3624	0.0081	0.041
611	SLE RA 5	-0.27	0.07	61.42	-0.3607	0.0081	0.0407
611	SLE RA 6	-0.27	0.13	62.37	-0.3667	0.0081	0.0413
611	SLE RA 7	-0.27	0.1	62.37	-0.3676	0.0082	0.0414
611	SLE RA 8	-0.27	0.12	62	-0.3644	0.0081	0.041
611	SLE RA 9	-0.27	0.09	62	-0.3653	0.0082	0.041
611	SLE RA 10	-0.25	0.11	65.89	-0.3727	0.0079	0.0427
611	SLE RA 11	-0.26	0.17	66.84	-0.3787	0.0079	0.0434
611	SLE RA 12	-0.26	0.14	66.84	-0.3796	0.0079	0.0434
611	SLE RA 13	-0.26	0.11	66.47	-0.3779	0.008	0.0431
611	SLE RA 14	-0.26	0.17	67.42	-0.3839	0.008	0.0437
611	SLE RA 15	-0.26	0.14	67.42	-0.3848	0.008	0.0438
611	SLE RA 16	-0.26	0.16	67.05	-0.3816	0.008	0.0434
611	SLE RA 17	-0.26	0.13	67.05	-0.3824	0.008	0.0434
611	SLE RA 18	-0.25	0.18	68.05	-0.3786	0.0077	0.0437
611	SLE RA 19	-0.25	0.15	68.05	-0.3795	0.0078	0.0437
611	SLE RA 20	-0.25	0.18	68.63	-0.3838	0.0078	0.044
611	SLE RA 21	-0.25	0.15	68.63	-0.3847	0.0079	0.0441
611	SLE FR 1	-0.27	0.12	60.83	-0.3541	0.0079	0.0402
611	SLE FR 2	-0.27	0.11	60.83	-0.3544	0.0079	0.0403
611	SLE FR 3	-0.27	0.12	61.06	-0.3562	0.008	0.0404
611	SLE FR 4	-0.26	0.12	62.99	-0.3618	0.0079	0.0413
611	SLE FR 5	-0.26	0.13	63.23	-0.3635	0.0079	0.0414
611	SLE FR 6	-0.26	0.15	64.44	-0.3664	0.0078	0.0419
611	SLE QP 1	-0.27	0.12	60.83	-0.3541	0.0079	0.0402
611	SLE QP 2	-0.26	0.13	62.99	-0.3615	0.0079	0.0413
611	SLD 1	4.91	1.17	64.26	-0.2694	0.035	0.0619
611	SLD 2	4.91	0.88	64.29	-0.2692	0.0355	0.0646
611	SLD 3	4.83	-0.41	64.47	-0.3181	0.0368	0.0597
611	SLD 4	4.84	-0.69	64.49	-0.3178	0.0372	0.0625
611	SLD 5	1.41	2.89	63.06	-0.2602	0.0133	0.0502
611	SLD 6	1.41	2.7	63.07	-0.26	0.0136	0.052
611	SLD 7	1.15	-2.37	63.74	-0.4222	0.0191	0.043
611	SLD 8	1.15	-2.56	63.76	-0.4221	0.0194	0.0449
611	SLD 9	-1.67	2.82	62.22	-0.3009	-0.0037	0.0377
611	SLD 10	-1.67	2.64	62.24	-0.3007	-0.0034	0.0395
611	SLD 11	-1.93	-2.43	62.91	-0.4629	0.0021	0.0305
611	SLD 12	-1.93	-2.62	62.93	-0.4628	0.0024	0.0323

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
611	SLD 13	-5.36	0.96	61.49	-0.4051	-0.0215	0.0201
611	SLD 14	-5.35	0.68	61.52	-0.4049	-0.0211	0.0228
611	SLD 15	-5.43	-0.62	61.7	-0.4538	-0.0198	0.0179
611	SLD 16	-5.43	-0.9	61.72	-0.4535	-0.0193	0.0207
611	SLV 1	11.83	2.49	65.96	-0.1423	0.0715	0.0894
611	SLV 2	11.84	1.83	66.02	-0.1417	0.0726	0.0958
611	SLV 3	11.65	-1.08	66.44	-0.2525	0.0755	0.0845
611	SLV 4	11.66	-1.74	66.5	-0.2519	0.0765	0.0909
611	SLV 5	3.64	6.37	63.15	-0.1287	0.0207	0.0621
611	SLV 6	3.65	5.94	63.18	-0.1283	0.0214	0.0662
611	SLV 7	3.04	-5.53	64.75	-0.496	0.034	0.0456
611	SLV 8	3.04	-5.95	64.78	-0.4956	0.0347	0.0498
611	SLV 9	-3.56	6.22	61.2	-0.2274	-0.0189	0.0327
611	SLV 10	-3.56	5.79	61.24	-0.227	-0.0183	0.0369
611	SLV 11	-4.17	-5.67	62.8	-0.5946	-0.0057	0.0163
611	SLV 12	-4.16	-6.1	62.84	-0.5942	-0.005	0.0204
611	SLV 13	-12.18	2	59.48	-0.4711	-0.0608	-0.0084
611	SLV 14	-12.17	1.35	59.54	-0.4704	-0.0597	-0.002
611	SLV 15	-12.36	-1.56	59.96	-0.5812	-0.0568	-0.0133
611	SLV 16	-12.35	-2.22	60.02	-0.5806	-0.0558	-0.0069
611	CRTFP Ux+	0	0	0	0	0	0
611	CRTFP Ux-	0	0	0	0	0	0
611	CRTFP Uy+	0	0	0	0	0	0
611	CRTFP Uy-	0	0	0	0	0	0
612	SLU 1	-0.22	0.26	58.42	-0.3975	0.0141	0.0279
612	SLU 2	-0.22	0.19	58.43	-0.4	0.0142	0.028
612	SLU 3	-0.22	0.28	59.85	-0.4102	0.0145	0.0287
612	SLU 4	-0.22	0.24	59.85	-0.4117	0.0145	0.0288
612	SLU 5	-0.22	0.2	59.3	-0.4087	0.0145	0.0284
612	SLU 6	-0.23	0.29	60.72	-0.4189	0.0147	0.0291
612	SLU 7	-0.23	0.25	60.72	-0.4204	0.0148	0.0292
612	SLU 8	-0.23	0.27	60.17	-0.4149	0.0146	0.0287
612	SLU 9	-0.23	0.23	60.17	-0.4164	0.0147	0.0288
612	SLU 10	-0.2	0.27	66	-0.4325	0.015	0.0307
612	SLU 11	-0.2	0.36	67.42	-0.4427	0.0152	0.0314
612	SLU 12	-0.2	0.32	67.42	-0.4442	0.0153	0.0315
612	SLU 13	-0.2	0.28	66.87	-0.4412	0.0152	0.0311
612	SLU 14	-0.2	0.37	68.29	-0.4514	0.0155	0.0318
612	SLU 15	-0.2	0.33	68.29	-0.4529	0.0155	0.0319
612	SLU 16	-0.2	0.35	67.74	-0.4474	0.0154	0.0313
612	SLU 17	-0.2	0.31	67.74	-0.4489	0.0154	0.0314
612	SLU 18	-0.18	0.37	69.24	-0.4439	0.0152	0.0317
612	SLU 19	-0.19	0.33	69.24	-0.4454	0.0153	0.0318
612	SLU 20	-0.19	0.38	70.11	-0.4526	0.0155	0.0321
612	SLU 21	-0.19	0.34	70.11	-0.4541	0.0155	0.0321
612	SLU 22	-0.23	0.42	65.57	-0.4156	0.0161	0.0317
612	SLU 23	-0.23	0.35	65.57	-0.4181	0.0162	0.0318
612	SLU 24	-0.24	0.44	67	-0.4283	0.0164	0.0325
612	SLU 25	-0.24	0.4	67	-0.4298	0.0165	0.0326
612	SLU 26	-0.24	0.36	66.44	-0.4268	0.0164	0.0322
612	SLU 27	-0.24	0.45	67.87	-0.437	0.0167	0.0329
612	SLU 28	-0.24	0.41	67.87	-0.4385	0.0167	0.033
612	SLU 29	-0.24	0.43	67.31	-0.433	0.0166	0.0325
612	SLU 30	-0.24	0.39	67.31	-0.4345	0.0166	0.0325
612	SLU 31	-0.21	0.43	73.15	-0.4506	0.017	0.0345
612	SLU 32	-0.21	0.52	74.57	-0.4608	0.0172	0.0352
612	SLU 33	-0.21	0.48	74.57	-0.4623	0.0173	0.0352
612	SLU 34	-0.21	0.44	74.02	-0.4593	0.0172	0.0348
612	SLU 35	-0.22	0.53	75.44	-0.4695	0.0175	0.0356
612	SLU 36	-0.22	0.49	75.44	-0.471	0.0175	0.0356
612	SLU 37	-0.22	0.51	74.88	-0.4654	0.0174	0.0351
612	SLU 38	-0.22	0.47	74.89	-0.4669	0.0174	0.0352
612	SLU 39	-0.2	0.54	76.39	-0.462	0.0172	0.0355
612	SLU 40	-0.2	0.49	76.39	-0.4635	0.0172	0.0355
612	SLU 41	-0.2	0.54	77.26	-0.4707	0.0174	0.0358
612	SLU 42	-0.2	0.5	77.26	-0.4722	0.0175	0.0359
612	SLU 43	-0.28	0.28	73.5	-0.5106	0.0177	0.035
612	SLU 44	-0.28	0.21	73.5	-0.5131	0.0178	0.0351
612	SLU 45	-0.29	0.31	74.93	-0.5233	0.018	0.0358
612	SLU 46	-0.29	0.26	74.93	-0.5248	0.0181	0.0359
612	SLU 47	-0.29	0.22	74.37	-0.5218	0.018	0.0355
612	SLU 48	-0.29	0.31	75.8	-0.532	0.0183	0.0362
612	SLU 49	-0.29	0.27	75.8	-0.5335	0.0183	0.0363
612	SLU 50	-0.29	0.29	75.24	-0.5279	0.0182	0.0357
612	SLU 51	-0.29	0.25	75.24	-0.5294	0.0182	0.0358
612	SLU 52	-0.26	0.29	81.08	-0.5456	0.0185	0.0377
612	SLU 53	-0.26	0.38	82.5	-0.5558	0.0188	0.0385
612	SLU 54	-0.26	0.34	82.5	-0.5573	0.0189	0.0385
612	SLU 55	-0.26	0.3	81.95	-0.5543	0.0188	0.0381
612	SLU 56	-0.27	0.39	83.37	-0.5645	0.0191	0.0388
612	SLU 57	-0.27	0.35	83.37	-0.566	0.0191	0.0389
612	SLU 58	-0.26	0.37	82.81	-0.5604	0.019	0.0384
612	SLU 59	-0.27	0.33	82.82	-0.5619	0.019	0.0385
612	SLU 60	-0.25	0.4	84.32	-0.557	0.0188	0.0387
612	SLU 61	-0.25	0.35	84.32	-0.5585	0.0188	0.0388
612	SLU 62	-0.25	0.4	85.19	-0.5657	0.019	0.0391
612	SLU 63	-0.25	0.36	85.19	-0.5672	0.0191	0.0392
612	SLU 64	-0.29	0.45	80.65	-0.5287	0.0196	0.0388
612	SLU 65	-0.3	0.38	80.65	-0.5312	0.0197	0.0389
612	SLU 66	-0.3	0.47	82.07	-0.5414	0.02	0.0396

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
612	SLU 67	-0.3	0.43	82.08	-0.5429	0.02	0.0397
612	SLU 68	-0.3	0.38	81.52	-0.5398	0.02	0.0393
612	SLU 69	-0.3	0.47	82.94	-0.55	0.0202	0.04
612	SLU 70	-0.3	0.43	82.95	-0.5516	0.0203	0.0401
612	SLU 71	-0.3	0.46	82.39	-0.546	0.0201	0.0395
612	SLU 72	-0.3	0.42	82.39	-0.5475	0.0202	0.0396
612	SLU 73	-0.27	0.46	88.22	-0.5637	0.0205	0.0415
612	SLU 74	-0.27	0.55	89.65	-0.5739	0.0208	0.0422
612	SLU 75	-0.27	0.5	89.65	-0.5754	0.0208	0.0423
612	SLU 76	-0.27	0.46	89.09	-0.5723	0.0208	0.0419
612	SLU 77	-0.28	0.55	90.52	-0.5825	0.021	0.0426
612	SLU 78	-0.28	0.51	90.52	-0.584	0.0211	0.0427
612	SLU 79	-0.28	0.54	89.96	-0.5785	0.0209	0.0422
612	SLU 80	-0.28	0.49	89.96	-0.58	0.021	0.0422
612	SLU 81	-0.26	0.56	91.47	-0.5751	0.0208	0.0425
612	SLU 82	-0.26	0.52	91.47	-0.5766	0.0208	0.0426
612	SLU 83	-0.26	0.56	92.34	-0.5837	0.021	0.0429
612	SLU 84	-0.26	0.52	92.34	-0.5853	0.0211	0.043
612	SLE RA 1	-0.22	0.31	60.47	-0.4027	0.0147	0.029
612	SLE RA 2	-0.22	0.26	60.47	-0.4044	0.0147	0.0291
612	SLE RA 3	-0.23	0.32	61.42	-0.4112	0.0149	0.0295
612	SLE RA 4	-0.23	0.29	61.42	-0.4122	0.0149	0.0296
612	SLE RA 5	-0.23	0.26	61.05	-0.4101	0.0149	0.0293
612	SLE RA 6	-0.23	0.33	62	-0.4169	0.0151	0.0298
612	SLE RA 7	-0.23	0.3	62	-0.4179	0.0151	0.0299
612	SLE RA 8	-0.23	0.31	61.63	-0.4143	0.015	0.0295
612	SLE RA 9	-0.23	0.29	61.63	-0.4153	0.015	0.0295
612	SLE RA 10	-0.21	0.31	65.52	-0.426	0.0153	0.0308
612	SLE RA 11	-0.21	0.37	66.46	-0.4328	0.0154	0.0313
612	SLE RA 12	-0.21	0.35	66.47	-0.4338	0.0155	0.0314
612	SLE RA 13	-0.21	0.32	66.1	-0.4318	0.0154	0.0311
612	SLE RA 14	-0.21	0.38	67.05	-0.4386	0.0156	0.0316
612	SLE RA 15	-0.21	0.35	67.05	-0.4396	0.0156	0.0316
612	SLE RA 16	-0.21	0.37	66.67	-0.4359	0.0155	0.0313
612	SLE RA 17	-0.21	0.34	66.68	-0.4369	0.0156	0.0313
612	SLE RA 18	-0.2	0.38	67.68	-0.4336	0.0154	0.0315
612	SLE RA 19	-0.2	0.35	67.68	-0.4346	0.0155	0.0315
612	SLE RA 20	-0.2	0.39	68.26	-0.4394	0.0156	0.0318
612	SLE RA 21	-0.2	0.36	68.26	-0.4404	0.0156	0.0318
612	SLE FR 1	-0.22	0.31	60.47	-0.4027	0.0147	0.029
612	SLE FR 2	-0.22	0.3	60.47	-0.403	0.0147	0.029
612	SLE FR 3	-0.22	0.31	60.7	-0.405	0.0147	0.0291
612	SLE FR 4	-0.22	0.32	62.63	-0.4123	0.0149	0.0298
612	SLE FR 5	-0.22	0.33	62.86	-0.4143	0.015	0.0298
612	SLE FR 6	-0.21	0.34	64.07	-0.4182	0.015	0.0302
612	SLE QP 1	-0.22	0.31	60.47	-0.4027	0.0147	0.029
612	SLE QP 2	-0.22	0.33	62.63	-0.412	0.0149	0.0297
612	SLD 1	4.95	1.4	63.13	-0.3026	0.039	0.0477
612	SLD 2	4.96	1.13	63.14	-0.3038	0.0395	0.0507
612	SLD 3	4.87	-0.19	63.3	-0.3553	0.0401	0.0446
612	SLD 4	4.88	-0.45	63.31	-0.3565	0.0405	0.0476
612	SLD 5	1.45	3.11	62.51	-0.2989	0.0204	0.0392
612	SLD 6	1.45	2.93	62.52	-0.2997	0.0207	0.0412
612	SLD 7	1.19	-2.19	63.09	-0.4748	0.024	0.029
612	SLD 8	1.2	-2.36	63.1	-0.4756	0.0243	0.031
612	SLD 9	-1.63	3.02	62.16	-0.3484	0.0055	0.0285
612	SLD 10	-1.63	2.85	62.16	-0.3492	0.0058	0.0304
612	SLD 11	-1.89	-2.27	62.74	-0.5242	0.0091	0.0183
612	SLD 12	-1.88	-2.45	62.75	-0.525	0.0094	0.0203
612	SLD 13	-5.31	1.11	61.95	-0.4674	-0.0107	0.0118
612	SLD 14	-5.31	0.85	61.96	-0.4686	-0.0103	0.0148
612	SLD 15	-5.39	-0.47	62.12	-0.5202	-0.0096	0.0088
612	SLD 16	-5.38	-0.74	62.13	-0.5214	-0.0092	0.0118
612	SLV 1	11.86	2.78	63.79	-0.1523	0.0714	0.0717
612	SLV 2	11.87	2.15	63.82	-0.155	0.0723	0.0787
612	SLV 3	11.68	-0.82	64.2	-0.2718	0.0739	0.0647
612	SLV 4	11.7	-1.44	64.23	-0.2746	0.0748	0.0717
612	SLV 5	3.68	6.63	62.35	-0.1522	0.0279	0.0517
612	SLV 6	3.69	6.22	62.37	-0.154	0.0285	0.0562
612	SLV 7	3.08	-5.36	63.71	-0.5508	0.0362	0.0284
612	SLV 8	3.09	-5.76	63.73	-0.5526	0.0368	0.0329
612	SLV 9	-3.52	6.42	61.53	-0.2713	-0.007	0.0265
612	SLV 10	-3.51	6.02	61.54	-0.2731	-0.0064	0.0311
612	SLV 11	-4.12	-5.56	62.89	-0.6699	0.0013	0.0032
612	SLV 12	-4.11	-5.97	62.9	-0.6717	0.0019	0.0078
612	SLV 13	-12.13	2.1	61.03	-0.5493	-0.045	-0.0122
612	SLV 14	-12.12	1.48	61.06	-0.5521	-0.0441	-0.0052
612	SLV 15	-12.31	-1.49	61.44	-0.6689	-0.0425	-0.0192
612	SLV 16	-12.3	-2.12	61.47	-0.6717	-0.0416	-0.0122
612	CRTFP Ux+	0	0	0	0	0	0
612	CRTFP Ux-	0	0	0	0	0	0
612	CRTFP Uy+	0	0	0	0	0	0
612	CRTFP Uy-	0	0	0	0	0	0
613	SLU 1	-0.18	0.38	59.47	-0.0284	-0.2991	0.0144
613	SLU 2	-0.18	0.31	59.48	-0.0313	-0.299	0.0141
613	SLU 3	-0.18	0.41	60.93	-0.0326	-0.3063	0.015
613	SLU 4	-0.19	0.37	60.93	-0.0343	-0.3063	0.0148
613	SLU 5	-0.19	0.32	60.36	-0.0349	-0.3034	0.0143
613	SLU 6	-0.19	0.42	61.81	-0.0361	-0.3107	0.0152
613	SLU 7	-0.19	0.37	61.81	-0.0378	-0.3107	0.015

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
613	SLU 8	-0.19	0.4	61.24	-0.0355	-0.3078	0.0148
613	SLU 9	-0.19	0.36	61.25	-0.0372	-0.3078	0.0146
613	SLU 10	-0.15	0.41	67.22	-0.0158	-0.3391	0.0156
613	SLU 11	-0.16	0.5	68.67	-0.017	-0.3464	0.0165
613	SLU 12	-0.16	0.46	68.67	-0.0188	-0.3464	0.0163
613	SLU 13	-0.16	0.41	68.1	-0.0193	-0.3435	0.0158
613	SLU 14	-0.16	0.51	69.55	-0.0206	-0.3508	0.0167
613	SLU 15	-0.16	0.47	69.55	-0.0223	-0.3507	0.0165
613	SLU 16	-0.16	0.49	68.99	-0.0199	-0.3479	0.0163
613	SLU 17	-0.16	0.45	68.99	-0.0217	-0.3479	0.0161
613	SLU 18	-0.14	0.52	70.53	-0.0062	-0.3563	0.0165
613	SLU 19	-0.14	0.47	70.53	-0.008	-0.3563	0.0164
613	SLU 20	-0.15	0.52	71.42	-0.0097	-0.3607	0.0167
613	SLU 21	-0.15	0.48	71.42	-0.0115	-0.3606	0.0166
613	SLU 22	-0.19	0.57	66.74	-0.0005	-0.335	0.0175
613	SLU 23	-0.19	0.5	66.74	-0.0034	-0.3349	0.0172
613	SLU 24	-0.19	0.59	68.19	-0.0046	-0.3422	0.0181
613	SLU 25	-0.2	0.55	68.19	-0.0064	-0.3422	0.0179
613	SLU 26	-0.2	0.5	67.62	-0.0069	-0.3393	0.0174
613	SLU 27	-0.2	0.6	69.07	-0.0082	-0.3466	0.0183
613	SLU 28	-0.2	0.56	69.07	-0.0099	-0.3466	0.0181
613	SLU 29	-0.2	0.58	68.51	-0.0075	-0.3437	0.0179
613	SLU 30	-0.2	0.54	68.51	-0.0093	-0.3437	0.0177
613	SLU 31	-0.16	0.59	74.48	0.0122	-0.375	0.0187
613	SLU 32	-0.17	0.69	75.93	0.0109	-0.3823	0.0196
613	SLU 33	-0.17	0.64	75.93	0.0092	-0.3823	0.0194
613	SLU 34	-0.17	0.6	75.36	0.0086	-0.3794	0.0189
613	SLU 35	-0.17	0.69	76.81	0.0074	-0.3867	0.0198
613	SLU 36	-0.17	0.65	76.81	0.0056	-0.3866	0.0196
613	SLU 37	-0.17	0.68	76.25	0.008	-0.3838	0.0194
613	SLU 38	-0.17	0.63	76.25	0.0063	-0.3838	0.0192
613	SLU 39	-0.15	0.7	77.79	0.0217	-0.3922	0.0196
613	SLU 40	-0.15	0.66	77.79	0.02	-0.3922	0.0195
613	SLU 41	-0.16	0.71	78.68	0.0182	-0.3966	0.0198
613	SLU 42	-0.16	0.66	78.68	0.0165	-0.3965	0.0197
613	SLU 43	-0.23	0.44	74.83	-0.0465	-0.3765	0.0176
613	SLU 44	-0.23	0.37	74.83	-0.0494	-0.3764	0.0174
613	SLU 45	-0.24	0.46	76.28	-0.0507	-0.3837	0.0182
613	SLU 46	-0.24	0.42	76.28	-0.0524	-0.3837	0.0181
613	SLU 47	-0.24	0.37	75.71	-0.053	-0.3808	0.0175
613	SLU 48	-0.24	0.47	77.16	-0.0542	-0.3881	0.0184
613	SLU 49	-0.24	0.43	77.16	-0.0559	-0.3881	0.0182
613	SLU 50	-0.24	0.45	76.6	-0.0536	-0.3852	0.018
613	SLU 51	-0.24	0.41	76.6	-0.0553	-0.3852	0.0178
613	SLU 52	-0.21	0.46	82.57	-0.0339	-0.4165	0.0189
613	SLU 53	-0.21	0.56	84.02	-0.0351	-0.4238	0.0197
613	SLU 54	-0.21	0.51	84.02	-0.0369	-0.4238	0.0196
613	SLU 55	-0.21	0.47	83.45	-0.0374	-0.4209	0.0191
613	SLU 56	-0.21	0.56	84.91	-0.0387	-0.4282	0.0199
613	SLU 57	-0.21	0.52	84.91	-0.0404	-0.4281	0.0198
613	SLU 58	-0.21	0.54	84.34	-0.038	-0.4253	0.0195
613	SLU 59	-0.21	0.5	84.34	-0.0398	-0.4253	0.0193
613	SLU 60	-0.19	0.57	85.89	-0.0243	-0.4337	0.0198
613	SLU 61	-0.19	0.53	85.89	-0.0261	-0.4337	0.0196
613	SLU 62	-0.2	0.58	86.77	-0.0278	-0.4381	0.02
613	SLU 63	-0.2	0.53	86.77	-0.0296	-0.438	0.0198
613	SLU 64	-0.24	0.62	82.09	-0.0186	-0.4124	0.0207
613	SLU 65	-0.24	0.55	82.09	-0.0215	-0.4123	0.0205
613	SLU 66	-0.25	0.65	83.54	-0.0227	-0.4196	0.0213
613	SLU 67	-0.25	0.6	83.54	-0.0245	-0.4196	0.0212
613	SLU 68	-0.25	0.56	82.97	-0.025	-0.4167	0.0207
613	SLU 69	-0.25	0.65	84.42	-0.0263	-0.424	0.0215
613	SLU 70	-0.25	0.61	84.43	-0.028	-0.424	0.0214
613	SLU 71	-0.25	0.63	83.86	-0.0256	-0.4211	0.0211
613	SLU 72	-0.25	0.59	83.86	-0.0274	-0.4211	0.021
613	SLU 73	-0.22	0.64	89.83	-0.006	-0.4524	0.022
613	SLU 74	-0.22	0.74	91.28	-0.0072	-0.4597	0.0228
613	SLU 75	-0.22	0.7	91.28	-0.0089	-0.4597	0.0227
613	SLU 76	-0.22	0.65	90.72	-0.0095	-0.4568	0.0222
613	SLU 77	-0.22	0.75	92.17	-0.0107	-0.4641	0.023
613	SLU 78	-0.22	0.7	92.17	-0.0125	-0.464	0.0229
613	SLU 79	-0.22	0.73	91.6	-0.0101	-0.4612	0.0226
613	SLU 80	-0.22	0.68	91.6	-0.0118	-0.4612	0.0225
613	SLU 81	-0.2	0.75	93.15	0.0036	-0.4696	0.0229
613	SLU 82	-0.2	0.71	93.15	0.0019	-0.4696	0.0227
613	SLU 83	-0.21	0.76	94.03	0.0001	-0.474	0.0231
613	SLU 84	-0.21	0.72	94.03	-0.0016	-0.474	0.0229
613	SLE RA 1	-0.18	0.44	61.55	-0.0204	-0.3093	0.0153
613	SLE RA 2	-0.18	0.39	61.55	-0.0224	-0.3093	0.0151
613	SLE RA 3	-0.19	0.45	62.52	-0.0232	-0.3142	0.0157
613	SLE RA 4	-0.19	0.43	62.52	-0.0244	-0.3141	0.0156
613	SLE RA 5	-0.19	0.39	62.14	-0.0247	-0.3122	0.0152
613	SLE RA 6	-0.19	0.46	63.11	-0.0256	-0.3171	0.0158
613	SLE RA 7	-0.19	0.43	63.11	-0.0267	-0.3171	0.0157
613	SLE RA 8	-0.19	0.45	62.73	-0.0251	-0.3152	0.0155
613	SLE RA 9	-0.19	0.42	62.73	-0.0263	-0.3152	0.0154
613	SLE RA 10	-0.17	0.45	66.71	-0.012	-0.336	0.0161
613	SLE RA 11	-0.17	0.52	67.68	-0.0128	-0.3409	0.0167
613	SLE RA 12	-0.17	0.49	67.68	-0.014	-0.3408	0.0166
613	SLE RA 13	-0.17	0.46	67.3	-0.0144	-0.3389	0.0162

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
613	SLE RA 14	-0.17	0.52	68.27	-0.0152	-0.3438	0.0168
613	SLE RA 15	-0.17	0.49	68.27	-0.0164	-0.3438	0.0167
613	SLE RA 16	-0.17	0.51	67.89	-0.0148	-0.3419	0.0165
613	SLE RA 17	-0.17	0.48	67.89	-0.0159	-0.3419	0.0164
613	SLE RA 18	-0.16	0.52	68.92	-0.0056	-0.3475	0.0167
613	SLE RA 19	-0.16	0.5	68.92	-0.0068	-0.3475	0.0166
613	SLE RA 20	-0.16	0.53	69.51	-0.008	-0.3504	0.0168
613	SLE RA 21	-0.16	0.5	69.51	-0.0091	-0.3504	0.0167
613	SLE FR 1	-0.18	0.44	61.55	-0.0204	-0.3093	0.0153
613	SLE FR 2	-0.18	0.43	61.55	-0.0208	-0.3093	0.0152
613	SLE FR 3	-0.18	0.44	61.79	-0.0214	-0.3105	0.0153
613	SLE FR 4	-0.18	0.45	63.76	-0.0164	-0.3208	0.0157
613	SLE FR 5	-0.18	0.47	64	-0.0169	-0.3219	0.0157
613	SLE FR 6	-0.17	0.48	65.24	-0.013	-0.3284	0.016
613	SLE QP 1	-0.18	0.44	61.55	-0.0204	-0.3093	0.0153
613	SLE QP 2	-0.18	0.46	63.76	-0.016	-0.3208	0.0157
613	SLD 1	5.12	1.63	63.32	0.1121	-0.3001	0.0002
613	SLD 2	5.13	1.38	63.32	0.1092	-0.2997	0.0025
613	SLD 3	5.05	-0.02	63.48	0.0548	-0.301	-0.0124
613	SLD 4	5.05	-0.27	63.48	0.0518	-0.3007	-0.0101
613	SLD 5	1.53	3.36	63.38	0.11	-0.3132	0.0297
613	SLD 6	1.54	3.19	63.38	0.108	-0.3129	0.0312
613	SLD 7	1.27	-2.14	63.92	-0.0812	-0.3164	-0.0123
613	SLD 8	1.27	-2.31	63.92	-0.0832	-0.3161	-0.0107
613	SLD 9	-1.63	3.23	63.6	0.0512	-0.3254	0.0421
613	SLD 10	-1.62	3.06	63.6	0.0492	-0.3251	0.0437
613	SLD 11	-1.89	-2.27	64.14	-0.14	-0.3286	0.0002
613	SLD 12	-1.88	-2.44	64.14	-0.142	-0.3284	0.0017
613	SLD 13	-5.4	1.2	64.04	-0.0839	-0.3409	0.0415
613	SLD 14	-5.4	0.94	64.04	-0.0868	-0.3405	0.0438
613	SLD 15	-5.48	-0.45	64.2	-0.1412	-0.3419	0.0289
613	SLD 16	-5.48	-0.71	64.2	-0.1441	-0.3415	0.0312
613	SLV 1	12.22	3.14	62.72	0.2876	-0.2724	-0.021
613	SLV 2	12.23	2.54	62.72	0.2808	-0.2715	-0.0157
613	SLV 3	12.03	-0.59	63.1	0.1576	-0.2746	-0.0496
613	SLV 4	12.05	-1.2	63.1	0.1508	-0.2737	-0.0443
613	SLV 5	3.82	7.04	62.88	0.2734	-0.303	0.0471
613	SLV 6	3.82	6.64	62.88	0.269	-0.3025	0.0505
613	SLV 7	3.21	-5.41	64.13	-0.1599	-0.3104	-0.0481
613	SLV 8	3.22	-5.8	64.13	-0.1643	-0.3099	-0.0447
613	SLV 9	-3.57	6.73	63.39	0.1323	-0.3317	0.0761
613	SLV 10	-3.56	6.34	63.39	0.1279	-0.3311	0.0795
613	SLV 11	-4.18	-5.72	64.64	-0.301	-0.3391	-0.0191
613	SLV 12	-4.17	-6.11	64.64	-0.3054	-0.3385	-0.0157
613	SLV 13	-12.4	2.12	64.43	-0.1828	-0.3678	0.0757
613	SLV 14	-12.39	1.52	64.42	-0.1896	-0.3669	0.081
613	SLV 15	-12.58	-1.61	64.8	-0.3128	-0.3701	0.0471
613	SLV 16	-12.57	-2.21	64.8	-0.3196	-0.3692	0.0524
613	CRTFP Ux+	0	0	0	0	0	0
613	CRTFP Ux-	0	0	0	0	0	0
613	CRTFP Uy+	0	0	0	0	0	0
613	CRTFP Uy-	0	0	0	0	0	0
614	SLU 1	-0.09	0.19	29.14	-7.1952	0.0032	-0.0223
614	SLU 2	-0.09	0.15	29.14	-7.197	0.0032	-0.0223
614	SLU 3	-0.09	0.2	29.86	-7.3723	0.0033	-0.0226
614	SLU 4	-0.09	0.18	29.86	-7.3734	0.0032	-0.0227
614	SLU 5	-0.09	0.16	29.58	-7.3054	0.0032	-0.0228
614	SLU 6	-0.09	0.2	30.29	-7.4806	0.0033	-0.0231
614	SLU 7	-0.09	0.18	30.29	-7.4817	0.0033	-0.0231
614	SLU 8	-0.09	0.2	30.01	-7.4119	0.0033	-0.0232
614	SLU 9	-0.09	0.17	30.02	-7.413	0.0033	-0.0232
614	SLU 10	-0.07	0.2	32.94	-8.1268	0.0031	-0.0192
614	SLU 11	-0.07	0.25	33.65	-8.3021	0.0032	-0.0195
614	SLU 12	-0.07	0.23	33.65	-8.3032	0.0032	-0.0195
614	SLU 13	-0.08	0.2	33.37	-8.2352	0.0032	-0.0196
614	SLU 14	-0.08	0.25	34.08	-8.4104	0.0033	-0.0199
614	SLU 15	-0.08	0.23	34.09	-8.4115	0.0032	-0.0199
614	SLU 16	-0.08	0.24	33.81	-8.3417	0.0033	-0.02
614	SLU 17	-0.08	0.22	33.81	-8.3428	0.0032	-0.02
614	SLU 18	-0.07	0.25	34.56	-8.5235	0.0032	-0.0178
614	SLU 19	-0.07	0.23	34.56	-8.5246	0.0031	-0.0178
614	SLU 20	-0.07	0.26	34.99	-8.6319	0.0032	-0.0182
614	SLU 21	-0.07	0.24	35	-8.6329	0.0032	-0.0182
614	SLU 22	-0.09	0.28	32.66	-8.0512	0.0042	-0.0232
614	SLU 23	-0.09	0.25	32.66	-8.053	0.0042	-0.0233
614	SLU 24	-0.09	0.29	33.37	-8.2283	0.0043	-0.0236
614	SLU 25	-0.09	0.27	33.38	-8.2294	0.0042	-0.0236
614	SLU 26	-0.09	0.25	33.1	-8.1614	0.0042	-0.0237
614	SLU 27	-0.09	0.3	33.81	-8.3366	0.0043	-0.024
614	SLU 28	-0.09	0.28	33.81	-8.3377	0.0043	-0.024
614	SLU 29	-0.09	0.29	33.53	-8.2679	0.0043	-0.0241
614	SLU 30	-0.09	0.27	33.53	-8.269	0.0043	-0.0241
614	SLU 31	-0.08	0.29	36.45	-8.9828	0.0041	-0.0201
614	SLU 32	-0.08	0.34	37.17	-9.1581	0.0042	-0.0204
614	SLU 33	-0.08	0.32	37.17	-9.1592	0.0042	-0.0204
614	SLU 34	-0.08	0.29	36.89	-9.0912	0.0042	-0.0205
614	SLU 35	-0.08	0.34	37.6	-9.2664	0.0043	-0.0208
614	SLU 36	-0.08	0.32	37.6	-9.2675	0.0042	-0.0209
614	SLU 37	-0.08	0.33	37.32	-9.1977	0.0043	-0.0209
614	SLU 38	-0.08	0.31	37.32	-9.1988	0.0042	-0.0209

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
614	SLU 39	-0.07	0.34	38.08	-9.3795	0.0042	-0.0187
614	SLU 40	-0.07	0.32	38.08	-9.3806	0.0041	-0.0187
614	SLU 41	-0.07	0.35	38.51	-9.4879	0.0042	-0.0191
614	SLU 42	-0.07	0.33	38.51	-9.4889	0.0042	-0.0192
614	SLU 43	-0.11	0.21	36.68	-9.0603	0.0038	-0.0287
614	SLU 44	-0.11	0.18	36.68	-9.0621	0.0038	-0.0287
614	SLU 45	-0.11	0.23	37.39	-9.2374	0.0039	-0.029
614	SLU 46	-0.11	0.21	37.39	-9.2385	0.0039	-0.029
614	SLU 47	-0.11	0.18	37.12	-9.1704	0.0038	-0.0291
614	SLU 48	-0.11	0.23	37.83	-9.3457	0.0039	-0.0294
614	SLU 49	-0.11	0.21	37.83	-9.3468	0.0039	-0.0295
614	SLU 50	-0.11	0.22	37.55	-9.277	0.0039	-0.0295
614	SLU 51	-0.11	0.2	37.55	-9.2781	0.0039	-0.0295
614	SLU 52	-0.1	0.22	40.47	-9.9919	0.0038	-0.0255
614	SLU 53	-0.1	0.27	41.18	-10.1672	0.0039	-0.0259
614	SLU 54	-0.1	0.25	41.19	-10.1683	0.0038	-0.0259
614	SLU 55	-0.1	0.23	40.91	-10.1002	0.0038	-0.026
614	SLU 56	-0.1	0.28	41.62	-10.2755	0.0039	-0.0263
614	SLU 57	-0.1	0.25	41.62	-10.2766	0.0039	-0.0263
614	SLU 58	-0.1	0.27	41.34	-10.2068	0.0039	-0.0264
614	SLU 59	-0.1	0.24	41.34	-10.2079	0.0039	-0.0264
614	SLU 60	-0.09	0.28	42.09	-10.3886	0.0038	-0.0242
614	SLU 61	-0.09	0.26	42.1	-10.3897	0.0038	-0.0242
614	SLU 62	-0.09	0.28	42.53	-10.4969	0.0038	-0.0246
614	SLU 63	-0.09	0.26	42.53	-10.498	0.0038	-0.0246
614	SLU 64	-0.11	0.3	40.19	-9.9163	0.0048	-0.0296
614	SLU 65	-0.11	0.27	40.2	-9.9181	0.0048	-0.0296
614	SLU 66	-0.12	0.32	40.91	-10.0934	0.0049	-0.0299
614	SLU 67	-0.12	0.3	40.91	-10.0945	0.0049	-0.03
614	SLU 68	-0.12	0.27	40.63	-10.0264	0.0048	-0.0301
614	SLU 69	-0.12	0.32	41.35	-10.2017	0.0049	-0.0304
614	SLU 70	-0.12	0.3	41.35	-10.2028	0.0049	-0.0304
614	SLU 71	-0.12	0.31	41.07	-10.133	0.0049	-0.0304
614	SLU 72	-0.12	0.29	41.07	-10.1341	0.0049	-0.0305
614	SLU 73	-0.1	0.32	43.99	-10.8479	0.0048	-0.0265
614	SLU 74	-0.1	0.36	44.7	-11.0232	0.0049	-0.0268
614	SLU 75	-0.1	0.34	44.7	-11.0243	0.0048	-0.0268
614	SLU 76	-0.1	0.32	44.43	-10.9562	0.0048	-0.0269
614	SLU 77	-0.1	0.37	45.14	-11.1315	0.0049	-0.0272
614	SLU 78	-0.1	0.35	45.14	-11.1326	0.0049	-0.0272
614	SLU 79	-0.11	0.36	44.86	-11.0628	0.0049	-0.0273
614	SLU 80	-0.11	0.34	44.86	-11.0639	0.0049	-0.0273
614	SLU 81	-0.1	0.37	45.61	-11.2446	0.0048	-0.0251
614	SLU 82	-0.1	0.35	45.61	-11.2457	0.0048	-0.0251
614	SLU 83	-0.1	0.37	46.05	-11.3529	0.0048	-0.0255
614	SLU 84	-0.1	0.35	46.05	-11.354	0.0048	-0.0255
614	SLE RA 1	-0.09	0.21	30.15	-7.4398	0.0035	-0.0226
614	SLE RA 2	-0.09	0.19	30.15	-7.441	0.0035	-0.0226
614	SLE RA 3	-0.09	0.22	30.62	-7.5579	0.0035	-0.0228
614	SLE RA 4	-0.09	0.21	30.62	-7.5586	0.0035	-0.0228
614	SLE RA 5	-0.09	0.19	30.44	-7.5132	0.0035	-0.0229
614	SLE RA 6	-0.09	0.23	30.91	-7.6301	0.0036	-0.0231
614	SLE RA 7	-0.09	0.21	30.91	-7.6308	0.0035	-0.0231
614	SLE RA 8	-0.09	0.22	30.73	-7.5842	0.0036	-0.0231
614	SLE RA 9	-0.09	0.21	30.73	-7.585	0.0035	-0.0231
614	SLE RA 10	-0.08	0.22	32.68	-8.0609	0.0034	-0.0205
614	SLE RA 11	-0.08	0.25	33.15	-8.1777	0.0035	-0.0207
614	SLE RA 12	-0.08	0.24	33.15	-8.1784	0.0035	-0.0207
614	SLE RA 13	-0.08	0.22	32.97	-8.1331	0.0035	-0.0208
614	SLE RA 14	-0.08	0.26	33.44	-8.25	0.0035	-0.021
614	SLE RA 15	-0.08	0.24	33.44	-8.2507	0.0035	-0.021
614	SLE RA 16	-0.08	0.25	33.26	-8.2041	0.0035	-0.021
614	SLE RA 17	-0.08	0.24	33.26	-8.2048	0.0035	-0.021
614	SLE RA 18	-0.08	0.26	33.76	-8.3253	0.0035	-0.0196
614	SLE RA 19	-0.08	0.24	33.76	-8.3261	0.0035	-0.0196
614	SLE RA 20	-0.08	0.26	34.05	-8.3976	0.0035	-0.0198
614	SLE RA 21	-0.08	0.25	34.05	-8.3983	0.0035	-0.0199
614	SLE FR 1	-0.09	0.21	30.15	-7.4398	0.0035	-0.0226
614	SLE FR 2	-0.09	0.21	30.15	-7.4401	0.0035	-0.0226
614	SLE FR 3	-0.09	0.22	30.26	-7.4687	0.0035	-0.0227
614	SLE FR 4	-0.08	0.22	31.23	-7.7057	0.0035	-0.0217
614	SLE FR 5	-0.08	0.23	31.35	-7.7344	0.0035	-0.0218
614	SLE FR 6	-0.08	0.24	31.95	-7.8826	0.0035	-0.0211
614	SLE QP 1	-0.09	0.21	30.15	-7.4398	0.0035	-0.0226
614	SLE QP 2	-0.08	0.23	31.23	-7.7055	0.0035	-0.0217
614	SLD 1	2.5	0.82	30.68	-7.5562	0.0124	0.6252
614	SLD 2	2.51	0.7	30.68	-7.5574	0.0124	0.6282
614	SLD 3	2.46	0	30.81	-7.6043	0.0109	0.6148
614	SLD 4	2.47	-0.11	30.81	-7.6055	0.0109	0.6178
614	SLD 5	0.75	1.66	30.86	-7.5876	0.0085	0.1877
614	SLD 6	0.76	1.58	30.86	-7.5884	0.0085	0.1897
614	SLD 7	0.62	-1.05	31.3	-7.7478	0.0034	0.1529
614	SLD 8	0.62	-1.13	31.3	-7.7486	0.0034	0.1549
614	SLD 9	-0.79	1.58	31.15	-7.6624	0.0036	-0.1982
614	SLD 10	-0.78	1.51	31.16	-7.6632	0.0036	-0.1962
614	SLD 11	-0.93	-1.13	31.59	-7.8226	-0.0015	-0.233
614	SLD 12	-0.92	-1.2	31.59	-7.8234	-0.0015	-0.231
614	SLD 13	-2.64	0.57	31.65	-7.8055	-0.0039	-0.6611
614	SLD 14	-2.63	0.45	31.65	-7.8067	-0.0039	-0.6581
614	SLD 15	-2.68	-0.25	31.78	-7.8535	-0.0054	-0.6715

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
614	SLD 16	-2.67	-0.36	31.78	-7.8547	-0.0054	-0.6686
614	SLV 1	5.96	1.58	29.94	-7.3552	0.0243	1.4908
614	SLV 2	5.99	1.31	29.94	-7.358	0.0243	1.4977
614	SLV 3	5.87	-0.26	30.24	-7.4647	0.0208	1.4667
614	SLV 4	5.89	-0.53	30.24	-7.4675	0.0208	1.4736
614	SLV 5	1.87	3.47	30.38	-7.4338	0.015	0.4674
614	SLV 6	1.89	3.3	30.38	-7.4357	0.015	0.4719
614	SLV 7	1.55	-2.66	31.39	-7.7988	0.0034	0.387
614	SLV 8	1.57	-2.84	31.39	-7.8006	0.0034	0.3915
614	SLV 9	-1.74	3.29	31.07	-7.6103	0.0036	-0.4349
614	SLV 10	-1.72	3.12	31.07	-7.6121	0.0035	-0.4304
614	SLV 11	-2.05	-2.84	32.07	-7.9753	-0.008	-0.5153
614	SLV 12	-2.04	-3.02	32.07	-7.9771	-0.008	-0.5108
614	SLV 13	-6.06	0.99	32.22	-7.9434	-0.0138	-1.5169
614	SLV 14	-6.03	0.72	32.22	-7.9462	-0.0138	-1.51
614	SLV 15	-6.15	-0.86	32.52	-8.0529	-0.0173	-1.541
614	SLV 16	-6.13	-1.12	32.52	-8.0557	-0.0173	-1.5341
614	CRTFP Ux+	0	0	0	0	0	0
614	CRTFP Ux-	0	0	0	0	0	0
616	SLU 1	-0.34	1	186.15	23.5593	-1.1002	-0.1053
616	SLU 2	-0.34	0.78	186.16	23.5507	-1.107	-0.1051
616	SLU 3	-0.35	1.08	190.68	24.1198	-1.1289	-0.107
616	SLU 4	-0.35	0.95	190.69	24.1147	-1.133	-0.107
616	SLU 5	-0.35	0.79	188.91	23.8888	-1.1245	-0.1068
616	SLU 6	-0.35	1.1	193.43	24.4579	-1.1464	-0.1088
616	SLU 7	-0.35	0.96	193.44	24.4528	-1.1505	-0.1087
616	SLU 8	-0.35	1.03	191.66	24.2354	-1.1352	-0.1087
616	SLU 9	-0.36	0.9	191.66	24.2303	-1.1393	-0.1086
616	SLU 10	-0.25	1.05	210.59	26.6738	-1.2592	-0.1307
616	SLU 11	-0.25	1.36	215.11	27.2429	-1.2811	-0.1326
616	SLU 12	-0.25	1.22	215.12	27.2378	-1.2852	-0.1325
616	SLU 13	-0.25	1.07	213.34	27.0119	-1.2767	-0.1324
616	SLU 14	-0.26	1.38	217.86	27.581	-1.2986	-0.1343
616	SLU 15	-0.26	1.24	217.87	27.5759	-1.3027	-0.1342
616	SLU 16	-0.26	1.31	216.09	27.3585	-1.2874	-0.1343
616	SLU 17	-0.26	1.18	216.09	27.3534	-1.2914	-0.1342
616	SLU 18	-0.2	1.39	221.05	28.0208	-1.3176	-0.1418
616	SLU 19	-0.2	1.26	221.06	28.0157	-1.3217	-0.1417
616	SLU 20	-0.21	1.41	223.8	28.3589	-1.3351	-0.1435
616	SLU 21	-0.21	1.28	223.81	28.3538	-1.3392	-0.1434
616	SLU 22	-0.35	1.59	208.66	26.4883	-1.1552	-0.1117
616	SLU 23	-0.36	1.37	208.67	26.4798	-1.162	-0.1116
616	SLU 24	-0.36	1.67	213.19	27.0489	-1.1839	-0.1135
616	SLU 25	-0.36	1.54	213.2	27.0438	-1.188	-0.1134
616	SLU 26	-0.36	1.38	211.43	26.8178	-1.1795	-0.1133
616	SLU 27	-0.37	1.69	215.94	27.3869	-1.2014	-0.1152
616	SLU 28	-0.37	1.56	215.95	27.3818	-1.2055	-0.1151
616	SLU 29	-0.37	1.63	214.17	27.1644	-1.1902	-0.1152
616	SLU 30	-0.37	1.49	214.17	27.1593	-1.1943	-0.1151
616	SLU 31	-0.26	1.64	233.1	29.6029	-1.3142	-0.1371
616	SLU 32	-0.26	1.95	237.62	30.172	-1.3361	-0.139
616	SLU 33	-0.26	1.81	237.63	30.1669	-1.3402	-0.139
616	SLU 34	-0.27	1.66	235.85	29.9409	-1.3317	-0.1388
616	SLU 35	-0.27	1.97	240.37	30.51	-1.3536	-0.1408
616	SLU 36	-0.27	1.83	240.38	30.5049	-1.3577	-0.1407
616	SLU 37	-0.27	1.9	238.6	30.2875	-1.3424	-0.1407
616	SLU 38	-0.27	1.77	238.6	30.2824	-1.3465	-0.1406
616	SLU 39	-0.22	1.98	243.56	30.9499	-1.3726	-0.1482
616	SLU 40	-0.22	1.85	243.57	30.9448	-1.3767	-0.1481
616	SLU 41	-0.22	2	246.31	31.2879	-1.3901	-0.1499
616	SLU 42	-0.22	1.87	246.32	31.2828	-1.3942	-0.1499
616	SLU 43	-0.44	1.1	234.28	29.6228	-1.4114	-0.1346
616	SLU 44	-0.44	0.87	234.29	29.6142	-1.4182	-0.1345
616	SLU 45	-0.44	1.18	238.81	30.1833	-1.4401	-0.1364
616	SLU 46	-0.45	1.04	238.81	30.1782	-1.4442	-0.1363
616	SLU 47	-0.45	0.89	237.04	29.9523	-1.4357	-0.1362
616	SLU 48	-0.45	1.2	241.56	30.5214	-1.4576	-0.1381
616	SLU 49	-0.45	1.06	241.57	30.5163	-1.4617	-0.1381
616	SLU 50	-0.45	1.13	239.78	30.2989	-1.4464	-0.1381
616	SLU 51	-0.45	1	239.79	30.2938	-1.4504	-0.138
616	SLU 52	-0.34	1.15	258.72	32.7373	-1.5703	-0.1601
616	SLU 53	-0.35	1.45	263.24	33.3064	-1.5923	-0.162
616	SLU 54	-0.35	1.32	263.24	33.3013	-1.5964	-0.1619
616	SLU 55	-0.35	1.17	261.47	33.0754	-1.5879	-0.1618
616	SLU 56	-0.35	1.47	265.99	33.6445	-1.6098	-0.1637
616	SLU 57	-0.35	1.34	265.99	33.6394	-1.6139	-0.1636
616	SLU 58	-0.35	1.41	264.21	33.422	-1.5986	-0.1637
616	SLU 59	-0.36	1.27	264.22	33.4169	-1.6026	-0.1636
616	SLU 60	-0.3	1.49	269.18	34.0844	-1.6288	-0.1712
616	SLU 61	-0.3	1.36	269.18	34.0792	-1.6329	-0.1711
616	SLU 62	-0.31	1.51	271.93	34.4224	-1.6463	-0.1729
616	SLU 63	-0.31	1.37	271.94	34.4173	-1.6504	-0.1728
616	SLU 64	-0.45	1.69	256.79	32.5518	-1.4664	-0.1411
616	SLU 65	-0.46	1.46	256.8	32.5433	-1.4732	-0.1409
616	SLU 66	-0.46	1.77	261.32	33.1124	-1.4951	-0.1429
616	SLU 67	-0.46	1.63	261.33	33.1073	-1.4992	-0.1428
616	SLU 68	-0.46	1.48	259.55	32.8814	-1.4907	-0.1427
616	SLU 69	-0.46	1.79	264.07	33.4505	-1.5126	-0.1446
616	SLU 70	-0.47	1.65	264.08	33.4453	-1.5167	-0.1445
616	SLU 71	-0.46	1.72	262.3	33.228	-1.5014	-0.1445

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
616	SLU 72	-0.47	1.59	262.3	33.2228	-1.5055	-0.1444
616	SLU 73	-0.36	1.74	281.23	35.6664	-1.6254	-0.1665
616	SLU 74	-0.36	2.04	285.75	36.2355	-1.6473	-0.1684
616	SLU 75	-0.36	1.91	285.75	36.2304	-1.6514	-0.1683
616	SLU 76	-0.36	1.76	283.98	36.0045	-1.6429	-0.1682
616	SLU 77	-0.37	2.06	288.5	36.5736	-1.6648	-0.1701
616	SLU 78	-0.37	1.93	288.51	36.5684	-1.6689	-0.1701
616	SLU 79	-0.37	2	286.72	36.3511	-1.6536	-0.1701
616	SLU 80	-0.37	1.87	286.73	36.3459	-1.6576	-0.17
616	SLU 81	-0.31	2.08	291.69	37.0134	-1.6838	-0.1776
616	SLU 82	-0.32	1.95	291.69	37.0083	-1.6879	-0.1775
616	SLU 83	-0.32	2.1	294.44	37.3515	-1.7013	-0.1793
616	SLU 84	-0.32	1.97	294.45	37.3464	-1.7054	-0.1792
616	SLE RA 1	-0.35	1.17	192.58	24.3961	-1.1159	-0.1071
616	SLE RA 2	-0.35	1.02	192.59	24.3904	-1.1204	-0.107
616	SLE RA 3	-0.35	1.22	195.6	24.7698	-1.135	-0.1083
616	SLE RA 4	-0.35	1.13	195.61	24.7664	-1.1378	-0.1082
616	SLE RA 5	-0.35	1.03	194.43	24.6158	-1.1321	-0.1082
616	SLE RA 6	-0.35	1.23	197.44	24.9952	-1.1467	-0.1094
616	SLE RA 7	-0.35	1.14	197.44	24.9918	-1.1494	-0.1094
616	SLE RA 8	-0.35	1.19	196.25	24.8469	-1.1392	-0.1094
616	SLE RA 9	-0.35	1.1	196.26	24.8435	-1.1419	-0.1093
616	SLE RA 10	-0.28	1.2	208.88	26.4725	-1.2219	-0.124
616	SLE RA 11	-0.28	1.41	211.89	26.8519	-1.2365	-0.1253
616	SLE RA 12	-0.28	1.32	211.89	26.8485	-1.2392	-0.1253
616	SLE RA 13	-0.29	1.21	210.71	26.6979	-1.2335	-0.1252
616	SLE RA 14	-0.29	1.42	213.72	27.0773	-1.2482	-0.1265
616	SLE RA 15	-0.29	1.33	213.73	27.0739	-1.2509	-0.1264
616	SLE RA 16	-0.29	1.38	212.54	26.9289	-1.2407	-0.1264
616	SLE RA 17	-0.29	1.29	212.54	26.9255	-1.2434	-0.1264
616	SLE RA 18	-0.25	1.43	215.85	27.3705	-1.2608	-0.1314
616	SLE RA 19	-0.25	1.34	215.85	27.3671	-1.2636	-0.1314
616	SLE RA 20	-0.26	1.44	217.68	27.5959	-1.2725	-0.1326
616	SLE RA 21	-0.26	1.35	217.69	27.5925	-1.2752	-0.1325
616	SLE FR 1	-0.35	1.17	192.58	24.3961	-1.1159	-0.1071
616	SLE FR 2	-0.35	1.14	192.58	24.395	-1.1168	-0.1071
616	SLE FR 3	-0.35	1.17	193.32	24.4863	-1.1206	-0.1076
616	SLE FR 4	-0.32	1.22	199.56	25.2873	-1.1603	-0.1144
616	SLE FR 5	-0.32	1.25	200.3	25.3786	-1.164	-0.1149
616	SLE FR 6	-0.3	1.3	204.22	25.8833	-1.1884	-0.1193
616	SLE QP 1	-0.35	1.17	192.58	24.3961	-1.1159	-0.1071
616	SLE QP 2	-0.32	1.25	199.56	25.2884	-1.1594	-0.1144
616	SLD 1	16.55	5.2	197.09	25.6857	-0.8411	-2.3247
616	SLD 2	16.54	4.52	197.01	25.6553	-0.8373	-2.2884
616	SLD 3	16.3	-0.23	197.81	25.5904	-1.0148	-2.389
616	SLD 4	16.3	-0.91	197.73	25.56	-1.011	-2.3528
616	SLD 5	5.11	10.79	197.75	25.5577	-0.8012	-0.6865
616	SLD 6	5.11	10.34	197.7	25.5375	-0.7987	-0.6624
616	SLD 7	4.3	-7.31	200.14	25.24	-1.3801	-0.901
616	SLD 8	4.3	-7.76	200.09	25.2198	-1.3776	-0.8769
616	SLD 9	-4.93	10.25	199.04	25.3571	-0.9412	0.6481
616	SLD 10	-4.94	9.8	198.99	25.3369	-0.9387	0.6722
616	SLD 11	-5.74	-7.85	201.43	25.0394	-1.5201	0.4336
616	SLD 12	-5.74	-8.29	201.38	25.0192	-1.5176	0.4577
616	SLD 13	-16.93	3.4	201.4	25.0169	-1.3077	2.124
616	SLD 14	-16.94	2.72	201.32	24.9864	-1.304	2.1602
616	SLD 15	-17.17	-2.03	202.11	24.9216	-1.4814	2.0596
616	SLD 16	-17.18	-2.7	202.04	24.8911	-1.4776	2.0959
616	SLV 1	39.11	10.28	193.79	26.23	-0.4209	-5.2838
616	SLV 2	39.1	8.71	193.62	26.1591	-0.4121	-5.1995
616	SLV 3	38.54	-2.01	195.43	26.0131	-0.8123	-5.4312
616	SLV 4	38.53	-3.58	195.26	25.9422	-0.8035	-5.3468
616	SLV 5	12.37	22.87	195.38	25.9122	-0.3458	-1.4566
616	SLV 6	12.36	21.84	195.27	25.866	-0.34	-1.4016
616	SLV 7	10.49	-18.09	200.83	25.1894	-1.6504	-1.9478
616	SLV 8	10.48	-19.11	200.72	25.1433	-1.6447	-1.8928
616	SLV 9	-11.11	21.6	198.41	25.4336	-0.6741	1.664
616	SLV 10	-11.12	20.58	198.29	25.3874	-0.6684	1.719
616	SLV 11	-12.99	-19.35	203.86	24.7109	-1.9787	1.1728
616	SLV 12	-13	-20.37	203.74	24.6647	-1.973	1.2278
616	SLV 13	-39.17	6.07	203.87	24.6347	-1.5153	5.118
616	SLV 14	-39.18	4.5	203.7	24.5638	-1.5065	5.2024
616	SLV 15	-39.73	-6.21	205.51	24.4178	-1.9067	4.9706
616	SLV 16	-39.74	-7.79	205.33	24.3469	-1.8979	5.055
616	CRTFP Ux+	0	0	0	0	0	0
616	CRTFP Ux-	0	0	0	0	0	0
616	CRTFP Uy+	0	0	0	0	0	0
616	CRTFP Uy-	0	0	0	0	0	0
619	SLU 1	-0.26	-0.36	163.93	-24.2707	0.0655	-0.1305
619	SLU 2	-0.25	-0.55	163.99	-24.2813	0.0613	-0.1286
619	SLU 3	-0.26	-0.31	167.94	-24.8709	0.0663	-0.133
619	SLU 4	-0.26	-0.43	167.97	-24.8772	0.0638	-0.1318
619	SLU 5	-0.26	-0.55	166.42	-24.6482	0.0619	-0.1304
619	SLU 6	-0.26	-0.32	170.37	-25.2378	0.0668	-0.1347
619	SLU 7	-0.26	-0.43	170.41	-25.2441	0.0643	-0.1336
619	SLU 8	-0.26	-0.36	168.8	-25.0046	0.0666	-0.1339
619	SLU 9	-0.26	-0.48	168.84	-25.0109	0.0641	-0.1328
619	SLU 10	-0.17	-0.43	185.61	-27.4679	0.0559	-0.126
619	SLU 11	-0.18	-0.19	189.56	-28.0575	0.0609	-0.1303
619	SLU 12	-0.18	-0.31	189.59	-28.0638	0.0584	-0.1292

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
619	SLU 13	-0.18	-0.43	188.05	-27.8348	0.0565	-0.1277
619	SLU 14	-0.18	-0.19	192	-28.4244	0.0615	-0.132
619	SLU 15	-0.18	-0.31	192.03	-28.4307	0.0589	-0.1309
619	SLU 16	-0.18	-0.24	190.42	-28.1912	0.0612	-0.1313
619	SLU 17	-0.18	-0.35	190.46	-28.1975	0.0587	-0.1302
619	SLU 18	-0.14	-0.18	194.81	-28.823	0.0578	-0.1267
619	SLU 19	-0.14	-0.3	194.85	-28.8293	0.0553	-0.1256
619	SLU 20	-0.14	-0.19	197.25	-29.19	0.0584	-0.1284
619	SLU 21	-0.14	-0.3	197.29	-29.1963	0.0559	-0.1273
619	SLU 22	-0.26	0.05	183.23	-27.0608	0.1053	-0.1405
619	SLU 23	-0.26	-0.14	183.29	-27.0713	0.1011	-0.1387
619	SLU 24	-0.27	0.1	187.24	-27.6609	0.1061	-0.143
619	SLU 25	-0.26	-0.01	187.28	-27.6672	0.1036	-0.1419
619	SLU 26	-0.26	-0.14	185.73	-27.4383	0.1017	-0.1404
619	SLU 27	-0.27	0.1	189.68	-28.0279	0.1066	-0.1447
619	SLU 28	-0.27	-0.02	189.72	-28.0342	0.1041	-0.1436
619	SLU 29	-0.27	0.05	188.11	-27.7947	0.1064	-0.1439
619	SLU 30	-0.27	-0.06	188.14	-27.801	0.1039	-0.1428
619	SLU 31	-0.18	-0.01	204.91	-30.2579	0.0958	-0.136
619	SLU 32	-0.18	0.22	208.86	-30.8475	0.1007	-0.1403
619	SLU 33	-0.18	0.11	208.9	-30.8538	0.0982	-0.1392
619	SLU 34	-0.18	-0.02	207.35	-30.6249	0.0963	-0.1377
619	SLU 35	-0.19	0.22	211.3	-31.2144	0.1013	-0.1421
619	SLU 36	-0.19	0.11	211.34	-31.2208	0.0988	-0.141
619	SLU 37	-0.19	0.17	209.73	-30.9812	0.1011	-0.1413
619	SLU 38	-0.19	0.06	209.76	-30.9876	0.0986	-0.1402
619	SLU 39	-0.15	0.23	214.12	-31.6131	0.0976	-0.1368
619	SLU 40	-0.15	0.11	214.16	-31.6194	0.0951	-0.1356
619	SLU 41	-0.15	0.23	216.56	-31.98	0.0982	-0.1385
619	SLU 42	-0.15	0.11	216.59	-31.9863	0.0957	-0.1374
619	SLU 43	-0.33	-0.61	206.49	-30.5954	0.0715	-0.1662
619	SLU 44	-0.33	-0.8	206.55	-30.6059	0.0673	-0.1643
619	SLU 45	-0.33	-0.56	210.5	-31.1955	0.0722	-0.1687
619	SLU 46	-0.33	-0.68	210.53	-31.2018	0.0697	-0.1676
619	SLU 47	-0.33	-0.8	208.98	-30.9729	0.0679	-0.1661
619	SLU 48	-0.34	-0.56	212.93	-31.5625	0.0728	-0.1704
619	SLU 49	-0.34	-0.68	212.97	-31.5688	0.0703	-0.1693
619	SLU 50	-0.34	-0.61	211.36	-31.3293	0.0726	-0.1696
619	SLU 51	-0.34	-0.73	211.4	-31.3356	0.0701	-0.1685
619	SLU 52	-0.25	-0.68	228.17	-33.7925	0.0619	-0.1617
619	SLU 53	-0.25	-0.44	232.12	-34.3821	0.0669	-0.166
619	SLU 54	-0.25	-0.55	232.15	-34.3884	0.0644	-0.1649
619	SLU 55	-0.25	-0.68	230.6	-34.1595	0.0625	-0.1634
619	SLU 56	-0.26	-0.44	234.55	-34.749	0.0674	-0.1677
619	SLU 57	-0.26	-0.56	234.59	-34.7554	0.0649	-0.1666
619	SLU 58	-0.26	-0.49	232.98	-34.5158	0.0672	-0.167
619	SLU 59	-0.26	-0.6	233.02	-34.5222	0.0647	-0.1659
619	SLU 60	-0.21	-0.43	237.37	-35.1477	0.0638	-0.1624
619	SLU 61	-0.21	-0.55	237.41	-35.154	0.0613	-0.1613
619	SLU 62	-0.22	-0.44	239.81	-35.5146	0.0644	-0.1641
619	SLU 63	-0.22	-0.55	239.85	-35.5209	0.0619	-0.163
619	SLU 64	-0.34	-0.2	225.79	-33.3854	0.1113	-0.1762
619	SLU 65	-0.34	-0.39	225.85	-33.396	0.1071	-0.1744
619	SLU 66	-0.34	-0.15	229.8	-33.9856	0.1121	-0.1787
619	SLU 67	-0.34	-0.26	229.84	-33.9919	0.1096	-0.1776
619	SLU 68	-0.34	-0.39	228.29	-33.7629	0.1077	-0.1761
619	SLU 69	-0.34	-0.15	232.24	-34.3525	0.1126	-0.1804
619	SLU 70	-0.34	-0.27	232.28	-34.3588	0.1101	-0.1793
619	SLU 71	-0.34	-0.2	230.67	-34.1193	0.1124	-0.1796
619	SLU 72	-0.34	-0.31	230.7	-34.1256	0.1099	-0.1785
619	SLU 73	-0.25	-0.26	247.47	-36.5826	0.1018	-0.1717
619	SLU 74	-0.26	-0.03	251.42	-37.1721	0.1067	-0.1761
619	SLU 75	-0.26	-0.14	251.46	-37.1785	0.1042	-0.1749
619	SLU 76	-0.26	-0.27	249.91	-36.9495	0.1023	-0.1735
619	SLU 77	-0.26	-0.03	253.86	-37.5391	0.1073	-0.1778
619	SLU 78	-0.26	-0.14	253.9	-37.5454	0.1048	-0.1767
619	SLU 79	-0.26	-0.08	252.29	-37.3059	0.1071	-0.177
619	SLU 80	-0.26	-0.19	252.32	-37.3122	0.1046	-0.1759
619	SLU 81	-0.22	-0.02	256.68	-37.9377	0.1036	-0.1725
619	SLU 82	-0.22	-0.14	256.72	-37.944	0.1011	-0.1714
619	SLU 83	-0.23	-0.02	259.12	-38.3046	0.1042	-0.1742
619	SLU 84	-0.22	-0.14	259.15	-38.311	0.1017	-0.1731
619	SLE RA 1	-0.26	-0.24	169.44	-25.0679	0.0769	-0.1333
619	SLE RA 2	-0.26	-0.37	169.48	-25.0749	0.0741	-0.1321
619	SLE RA 3	-0.26	-0.21	172.12	-25.468	0.0774	-0.135
619	SLE RA 4	-0.26	-0.29	172.14	-25.4722	0.0757	-0.1343
619	SLE RA 5	-0.26	-0.37	171.11	-25.3196	0.0745	-0.1333
619	SLE RA 6	-0.26	-0.21	173.74	-25.7126	0.0778	-0.1361
619	SLE RA 7	-0.26	-0.29	173.77	-25.7168	0.0761	-0.1354
619	SLE RA 8	-0.26	-0.24	172.69	-25.5571	0.0776	-0.1356
619	SLE RA 9	-0.26	-0.32	172.72	-25.5614	0.0759	-0.1349
619	SLE RA 10	-0.2	-0.29	183.9	-27.1993	0.0705	-0.1304
619	SLE RA 11	-0.21	-0.13	186.53	-27.5924	0.0738	-0.1332
619	SLE RA 12	-0.21	-0.21	186.55	-27.5966	0.0721	-0.1325
619	SLE RA 13	-0.21	-0.29	185.52	-27.4439	0.0709	-0.1315
619	SLE RA 14	-0.21	-0.13	188.16	-27.837	0.0742	-0.1344
619	SLE RA 15	-0.21	-0.21	188.18	-27.8412	0.0725	-0.1336
619	SLE RA 16	-0.21	-0.16	187.11	-27.6815	0.074	-0.1339
619	SLE RA 17	-0.21	-0.24	187.13	-27.6858	0.0724	-0.1331
619	SLE RA 18	-0.18	-0.12	190.04	-28.1027	0.0717	-0.1308

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
619	SLE RA 19	-0.18	-0.2	190.06	-28.107	0.0701	-0.1301
619	SLE RA 20	-0.18	-0.13	191.66	-28.3474	0.0721	-0.132
619	SLE RA 21	-0.18	-0.2	191.68	-28.3516	0.0705	-0.1312
619	SLE FR 1	-0.26	-0.24	169.44	-25.0679	0.0769	-0.1333
619	SLE FR 2	-0.26	-0.27	169.45	-25.0693	0.0763	-0.1331
619	SLE FR 3	-0.26	-0.24	170.09	-25.1657	0.077	-0.1338
619	SLE FR 4	-0.23	-0.23	175.63	-25.9798	0.0748	-0.1323
619	SLE FR 5	-0.24	-0.21	176.27	-26.0762	0.0755	-0.1331
619	SLE FR 6	-0.22	-0.18	179.74	-26.5853	0.0743	-0.1321
619	SLE QP 1	-0.26	-0.24	169.44	-25.0679	0.0769	-0.1333
619	SLE QP 2	-0.23	-0.21	175.62	-25.9784	0.0753	-0.1326
619	SLD 1	14.24	3.04	172.67	-25.3128	0.083	1.8766
619	SLD 2	14.31	2.64	172.6	-25.3147	0.0831	1.9165
619	SLD 3	14.02	-1.83	174.48	-25.595	-0.016	1.8475
619	SLD 4	14.09	-2.23	174.41	-25.5969	-0.0159	1.8874
619	SLD 5	4.42	8.23	172.01	-25.3504	0.2278	0.507
619	SLD 6	4.47	7.96	171.97	-25.3517	0.2279	0.5334
619	SLD 7	3.7	-8	178.03	-26.2909	-0.1023	0.4101
619	SLD 8	3.75	-8.27	177.98	-26.2922	-0.1022	0.4366
619	SLD 9	-4.22	7.86	173.26	-25.6645	0.2528	-0.7018
619	SLD 10	-4.17	7.59	173.22	-25.6658	0.253	-0.6753
619	SLD 11	-4.94	-8.37	179.28	-26.605	-0.0772	-0.7986
619	SLD 12	-4.89	-8.64	179.23	-26.6063	-0.0771	-0.7722
619	SLD 13	-14.56	1.82	176.84	-26.3598	0.1665	-2.1526
619	SLD 14	-14.49	1.41	176.77	-26.3617	0.1667	-2.1127
619	SLD 15	-14.78	-3.05	178.64	-26.642	0.0675	-2.1817
619	SLD 16	-14.71	-3.46	178.57	-26.6439	0.0677	-2.1418
619	SLV 1	33.6	7.21	168.78	-24.4248	0.0889	4.5654
619	SLV 2	33.76	6.27	168.62	-24.4293	0.0893	4.6582
619	SLV 3	33.1	-3.81	172.85	-25.0613	-0.1344	4.4977
619	SLV 4	33.26	-4.75	172.69	-25.0658	-0.134	4.5905
619	SLV 5	10.65	18.9	167.42	-24.5461	0.418	1.3632
619	SLV 6	10.75	18.29	167.32	-24.5491	0.4183	1.4237
619	SLV 7	8.98	-17.84	180.99	-26.6678	-0.3263	1.1375
619	SLV 8	9.09	-18.45	180.89	-26.6708	-0.3261	1.198
619	SLV 9	-9.55	18.04	170.36	-25.2859	0.4767	-1.4632
619	SLV 10	-9.45	17.43	170.25	-25.2889	0.477	-1.4027
619	SLV 11	-11.22	-18.7	183.93	-27.4077	-0.2676	-1.6889
619	SLV 12	-11.12	-19.31	183.82	-27.4106	-0.2674	-1.6284
619	SLV 13	-33.73	4.34	178.55	-26.8909	0.2846	-4.8557
619	SLV 14	-33.57	3.4	178.39	-26.8954	0.285	-4.7629
619	SLV 15	-34.23	-6.69	182.62	-27.5274	0.0613	-4.9234
619	SLV 16	-34.07	-7.63	182.46	-27.5319	0.0617	-4.8306
619	CRTFP Ux+	0	0	0	0	0	0
619	CRTFP Ux-	0	0	0	0	0	0
619	CRTFP Uy+	0	0	0	0	0	0
619	CRTFP Uy-	0	0	0	0	0	0
621	SLU 1	0.09	-0.26	49.91	10.9834	-5.4545	-0.0558
621	SLU 2	0.09	-0.32	49.94	10.9919	-5.4585	-0.0618
621	SLU 3	0.09	-0.25	51.13	11.2457	-5.5873	-0.0553
621	SLU 4	0.09	-0.29	51.15	11.2508	-5.5897	-0.0588
621	SLU 5	0.09	-0.32	50.68	11.1506	-5.539	-0.0623
621	SLU 6	0.09	-0.25	51.87	11.4045	-5.6678	-0.0558
621	SLU 7	0.09	-0.29	51.89	11.4096	-5.6702	-0.0593
621	SLU 8	0.09	-0.27	51.39	11.3009	-5.6155	-0.0568
621	SLU 9	0.09	-0.3	51.41	11.306	-5.6179	-0.0604
621	SLU 10	0.12	-0.3	56.56	12.4374	-6.1825	-0.0682
621	SLU 11	0.12	-0.23	57.75	12.6912	-6.3113	-0.0616
621	SLU 12	0.12	-0.26	57.77	12.6963	-6.3137	-0.0652
621	SLU 13	0.12	-0.3	57.3	12.5961	-6.263	-0.0687
621	SLU 14	0.12	-0.23	58.49	12.85	-6.3918	-0.0622
621	SLU 15	0.12	-0.26	58.5	12.8551	-6.3942	-0.0657
621	SLU 16	0.12	-0.24	58.01	12.7464	-6.3395	-0.0632
621	SLU 17	0.12	-0.28	58.02	12.7515	-6.3419	-0.0668
621	SLU 18	0.14	-0.23	59.37	13.0484	-6.4888	-0.065
621	SLU 19	0.13	-0.26	59.39	13.0535	-6.4912	-0.0685
621	SLU 20	0.14	-0.23	60.11	13.2072	-6.5693	-0.0655
621	SLU 21	0.14	-0.27	60.12	13.2122	-6.5717	-0.069
621	SLU 22	0.1	-0.15	55.76	12.2501	-6.0892	-0.0465
621	SLU 23	0.1	-0.2	55.79	12.2585	-6.0932	-0.0525
621	SLU 24	0.1	-0.14	56.98	12.5124	-6.222	-0.046
621	SLU 25	0.1	-0.17	57	12.5175	-6.2243	-0.0495
621	SLU 26	0.1	-0.21	56.53	12.4173	-6.1737	-0.053
621	SLU 27	0.1	-0.14	57.72	12.6712	-6.3025	-0.0465
621	SLU 28	0.1	-0.17	57.74	12.6762	-6.3048	-0.05
621	SLU 29	0.1	-0.15	57.24	12.5676	-6.2502	-0.0475
621	SLU 30	0.1	-0.19	57.26	12.5727	-6.2526	-0.0511
621	SLU 31	0.13	-0.18	62.41	13.704	-6.8172	-0.0589
621	SLU 32	0.14	-0.11	63.6	13.9579	-6.9459	-0.0523
621	SLU 33	0.14	-0.15	63.62	13.963	-6.9483	-0.0559
621	SLU 34	0.13	-0.18	63.15	13.8628	-6.8976	-0.0594
621	SLU 35	0.14	-0.11	64.34	14.1167	-7.0264	-0.0529
621	SLU 36	0.14	-0.15	64.35	14.1217	-7.0288	-0.0564
621	SLU 37	0.14	-0.13	63.86	14.0131	-6.9742	-0.0539
621	SLU 38	0.13	-0.16	63.87	14.0182	-6.9765	-0.0575
621	SLU 39	0.15	-0.11	65.22	14.3151	-7.1234	-0.0557
621	SLU 40	0.15	-0.15	65.24	14.3202	-7.1258	-0.0592
621	SLU 41	0.15	-0.12	65.96	14.4738	-7.2039	-0.0562
621	SLU 42	0.15	-0.15	65.97	14.4789	-7.2063	-0.0597
621	SLU 43	0.11	-0.38	62.88	13.8441	-6.8733	-0.0758

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
621	SLU 44	0.11	-0.44	62.91	13.8526	-6.8773	-0.0817
621	SLU 45	0.11	-0.37	64.1	14.1065	-7.0061	-0.0752
621	SLU 46	0.11	-0.4	64.12	14.1115	-7.0085	-0.0788
621	SLU 47	0.11	-0.44	63.65	14.0113	-6.9578	-0.0822
621	SLU 48	0.11	-0.37	64.83	14.2652	-7.0866	-0.0757
621	SLU 49	0.11	-0.41	64.85	14.2703	-7.0889	-0.0793
621	SLU 50	0.11	-0.39	64.36	14.1617	-7.0343	-0.0768
621	SLU 51	0.11	-0.42	64.37	14.1667	-7.0367	-0.0804
621	SLU 52	0.14	-0.42	69.53	15.2981	-7.6013	-0.0881
621	SLU 53	0.15	-0.35	70.72	15.552	-7.73	-0.0816
621	SLU 54	0.14	-0.38	70.73	15.557	-7.7324	-0.0852
621	SLU 55	0.14	-0.42	70.27	15.4568	-7.6818	-0.0886
621	SLU 56	0.15	-0.35	71.45	15.7107	-7.8105	-0.0821
621	SLU 57	0.15	-0.38	71.47	15.7158	-7.8129	-0.0857
621	SLU 58	0.14	-0.36	70.97	15.6072	-7.7583	-0.0832
621	SLU 59	0.14	-0.4	70.99	15.6122	-7.7607	-0.0867
621	SLU 60	0.16	-0.35	72.34	15.9091	-7.9075	-0.0849
621	SLU 61	0.16	-0.38	72.35	15.9142	-7.9099	-0.0885
621	SLU 62	0.16	-0.35	73.07	16.0679	-7.988	-0.0854
621	SLU 63	0.16	-0.38	73.09	16.073	-7.9904	-0.089
621	SLU 64	0.12	-0.27	68.73	15.1108	-7.5079	-0.0665
621	SLU 65	0.12	-0.32	68.76	15.1193	-7.5119	-0.0724
621	SLU 66	0.12	-0.25	69.95	15.3731	-7.6407	-0.0659
621	SLU 67	0.12	-0.29	69.97	15.3782	-7.6431	-0.0695
621	SLU 68	0.12	-0.33	69.5	15.278	-7.5924	-0.0729
621	SLU 69	0.12	-0.26	70.69	15.5319	-7.7212	-0.0664
621	SLU 70	0.12	-0.29	70.7	15.537	-7.7236	-0.07
621	SLU 71	0.12	-0.27	70.21	15.4283	-7.6689	-0.0675
621	SLU 72	0.12	-0.3	70.22	15.4334	-7.6713	-0.0711
621	SLU 73	0.15	-0.3	75.38	16.5648	-8.2359	-0.0788
621	SLU 74	0.16	-0.23	76.57	16.8186	-8.3647	-0.0723
621	SLU 75	0.16	-0.27	76.58	16.8237	-8.3671	-0.0759
621	SLU 76	0.16	-0.3	76.12	16.7235	-8.3164	-0.0793
621	SLU 77	0.16	-0.23	77.3	16.9774	-8.4452	-0.0728
621	SLU 78	0.16	-0.27	77.32	16.9825	-8.4476	-0.0764
621	SLU 79	0.16	-0.25	76.82	16.8738	-8.3929	-0.0739
621	SLU 80	0.16	-0.28	76.84	16.8789	-8.3953	-0.0774
621	SLU 81	0.17	-0.23	78.19	17.1758	-8.5422	-0.0756
621	SLU 82	0.17	-0.27	78.2	17.1809	-8.5446	-0.0792
621	SLU 83	0.17	-0.24	78.92	17.3346	-8.6227	-0.0761
621	SLU 84	0.17	-0.27	78.94	17.3396	-8.6251	-0.0797
621	SLE RA 1	0.09	-0.23	51.58	11.3453	-5.6359	-0.0532
621	SLE RA 2	0.09	-0.27	51.6	11.3509	-5.6385	-0.0571
621	SLE RA 3	0.09	-0.22	52.4	11.5202	-5.7244	-0.0528
621	SLE RA 4	0.09	-0.25	52.41	11.5236	-5.726	-0.0552
621	SLE RA 5	0.09	-0.27	52.1	11.4568	-5.6922	-0.0575
621	SLE RA 6	0.09	-0.22	52.89	11.626	-5.778	-0.0531
621	SLE RA 7	0.09	-0.25	52.9	11.6294	-5.7796	-0.0555
621	SLE RA 8	0.09	-0.23	52.57	11.557	-5.7432	-0.0538
621	SLE RA 9	0.09	-0.26	52.58	11.5604	-5.7448	-0.0562
621	SLE RA 10	0.11	-0.25	56.02	12.3146	-6.1212	-0.0614
621	SLE RA 11	0.11	-0.21	56.81	12.4839	-6.207	-0.057
621	SLE RA 12	0.11	-0.23	56.82	12.4872	-6.2086	-0.0594
621	SLE RA 13	0.11	-0.25	56.51	12.4205	-6.1748	-0.0617
621	SLE RA 14	0.12	-0.21	57.3	12.5897	-6.2607	-0.0574
621	SLE RA 15	0.12	-0.23	57.31	12.5931	-6.2623	-0.0598
621	SLE RA 16	0.11	-0.22	56.98	12.5207	-6.2258	-0.0581
621	SLE RA 17	0.11	-0.24	56.99	12.524	-6.2274	-0.0605
621	SLE RA 18	0.12	-0.21	57.89	12.722	-6.3254	-0.0593
621	SLE RA 19	0.12	-0.23	57.9	12.7254	-6.327	-0.0616
621	SLE RA 20	0.12	-0.21	58.38	12.8278	-6.379	-0.0596
621	SLE RA 21	0.12	-0.23	58.39	12.8312	-6.3806	-0.062
621	SLE FR 1	0.09	-0.23	51.58	11.3453	-5.6359	-0.0532
621	SLE FR 2	0.09	-0.24	51.59	11.3464	-5.6364	-0.054
621	SLE FR 3	0.09	-0.23	51.78	11.3877	-5.6573	-0.0533
621	SLE FR 4	0.1	-0.23	53.48	11.7594	-5.8432	-0.0558
621	SLE FR 5	0.1	-0.22	53.67	11.8007	-5.8642	-0.0551
621	SLE FR 6	0.11	-0.22	54.74	12.0337	-5.9806	-0.0562
621	SLE QP 1	0.09	-0.23	51.58	11.3453	-5.6359	-0.0532
621	SLE QP 2	0.1	-0.22	53.48	11.7583	-5.8427	-0.055
621	SLD 1	4.5	0.76	52.71	12.1553	-5.7631	-1.0575
621	SLD 2	4.49	0.68	52.68	12.1417	-5.7594	-1.0618
621	SLD 3	4.56	-0.75	53.57	12.3943	-5.8727	-1.2205
621	SLD 4	4.55	-0.83	53.54	12.3807	-5.8689	-1.2247
621	SLD 5	1.32	2.38	51.95	11.5174	-5.6533	-0.1078
621	SLD 6	1.32	2.33	51.93	11.5084	-5.6508	-0.1106
621	SLD 7	1.54	-2.66	54.81	12.314	-6.0186	-0.651
621	SLD 8	1.53	-2.72	54.79	12.305	-6.0161	-0.6538
621	SLD 9	-1.33	2.27	52.16	11.2116	-5.6693	0.5439
621	SLD 10	-1.34	2.22	52.14	11.2026	-5.6668	0.541
621	SLD 11	-1.12	-2.78	55.02	12.0082	-6.0346	0.0006
621	SLD 12	-1.12	-2.83	55	11.9992	-6.0321	-0.0022
621	SLD 13	-4.35	0.38	53.41	11.1359	-5.8165	1.1147
621	SLD 14	-4.36	0.31	53.38	11.1224	-5.8127	1.1105
621	SLD 15	-4.29	-1.13	54.27	11.3749	-5.9261	0.9518
621	SLD 16	-4.3	-1.21	54.24	11.3614	-5.9223	0.9475
621	SLV 1	10.38	2.02	51.72	12.6969	-5.6604	-2.405
621	SLV 2	10.36	1.84	51.65	12.6653	-5.6517	-2.4149
621	SLV 3	10.53	-1.41	53.66	13.2365	-5.9078	-2.7743
621	SLV 4	10.51	-1.59	53.58	13.205	-5.899	-2.7842

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
621	SLV 5	2.96	5.68	50.03	11.227	-5.4145	-0.1982
621	SLV 6	2.95	5.56	49.98	11.2064	-5.4087	-0.2046
621	SLV 7	3.46	-5.74	56.48	13.0258	-6.2389	-1.4291
621	SLV 8	3.44	-5.86	56.43	13.0052	-6.2332	-1.4355
621	SLV 9	-3.24	5.41	50.52	10.5114	-5.4522	1.3255
621	SLV 10	-3.26	5.29	50.47	10.4909	-5.4465	1.3191
621	SLV 11	-2.75	-6	56.97	12.3102	-6.2767	0.0947
621	SLV 12	-2.76	-6.12	56.92	12.2897	-6.271	0.0882
621	SLV 13	-10.31	1.14	53.37	10.3117	-5.7864	2.6742
621	SLV 14	-10.33	0.96	53.29	10.2801	-5.7776	2.6643
621	SLV 15	-10.16	-2.28	55.3	10.8513	-6.0338	2.3049
621	SLV 16	-10.18	-2.47	55.23	10.8198	-6.025	2.295
621	CRTFP Ux+	0	0	0	0	0	0
621	CRTFP Ux-	0	0	0	0	0	0
621	CRTFP Uy+	0	0	0	0	0	0
621	CRTFP Uy-	0	0	0	0	0	0
622	SLU 1	0.16	-0.33	55.35	11.7485	8.1751	0.0096
622	SLU 2	0.16	-0.39	55.4	11.7579	8.1812	0.019
622	SLU 3	0.17	-0.31	56.69	12.0341	8.3739	0.0064
622	SLU 4	0.17	-0.35	56.72	12.0397	8.3776	0.0121
622	SLU 5	0.17	-0.39	56.21	11.9315	8.3018	0.0187
622	SLU 6	0.17	-0.31	57.51	12.2077	8.4945	0.0061
622	SLU 7	0.17	-0.35	57.54	12.2133	8.4982	0.0117
622	SLU 8	0.17	-0.33	56.98	12.0958	8.4162	0.0089
622	SLU 9	0.17	-0.37	57.01	12.1014	8.4199	0.0146
622	SLU 10	0.2	-0.36	62.74	13.2934	9.2663	0.0069
622	SLU 11	0.2	-0.29	64.04	13.5696	9.459	-0.0057
622	SLU 12	0.2	-0.32	64.06	13.5752	9.4626	-0.0001
622	SLU 13	0.2	-0.36	63.55	13.467	9.3868	0.0066
622	SLU 14	0.21	-0.29	64.85	13.7432	9.5795	-0.006
622	SLU 15	0.21	-0.32	64.88	13.7488	9.5832	-0.0004
622	SLU 16	0.2	-0.3	64.33	13.6313	9.5013	-0.0032
622	SLU 17	0.2	-0.34	64.35	13.6369	9.5049	0.0025
622	SLU 18	0.22	-0.29	65.84	13.9421	9.7252	-0.0077
622	SLU 19	0.21	-0.33	65.87	13.9477	9.7288	-0.0021
622	SLU 20	0.22	-0.29	66.66	14.1157	9.8457	-0.0081
622	SLU 21	0.22	-0.33	66.68	14.1213	9.8494	-0.0024
622	SLU 22	0.18	-0.2	61.76	13.1167	9.1251	-0.0142
622	SLU 23	0.18	-0.26	61.8	13.1261	9.1312	-0.0048
622	SLU 24	0.19	-0.18	63.1	13.4023	9.3239	-0.0174
622	SLU 25	0.19	-0.22	63.13	13.4079	9.3276	-0.0117
622	SLU 26	0.19	-0.26	62.62	13.2997	9.2518	-0.0051
622	SLU 27	0.19	-0.18	63.92	13.5759	9.4445	-0.0177
622	SLU 28	0.19	-0.22	63.94	13.5815	9.4482	-0.0121
622	SLU 29	0.19	-0.2	63.39	13.464	9.3662	-0.0149
622	SLU 30	0.19	-0.24	63.42	13.4696	9.3699	-0.0092
622	SLU 31	0.22	-0.23	69.15	14.6616	10.2163	-0.0169
622	SLU 32	0.22	-0.16	70.45	14.9378	10.409	-0.0295
622	SLU 33	0.22	-0.19	70.47	14.9434	10.4126	-0.0238
622	SLU 34	0.22	-0.23	69.96	14.8352	10.3368	-0.0172
622	SLU 35	0.23	-0.16	71.26	15.1114	10.5295	-0.0298
622	SLU 36	0.23	-0.19	71.29	15.117	10.5332	-0.0242
622	SLU 37	0.22	-0.17	70.73	14.9995	10.4513	-0.027
622	SLU 38	0.22	-0.21	70.76	15.0051	10.455	-0.0213
622	SLU 39	0.24	-0.16	72.25	15.3103	10.6752	-0.0315
622	SLU 40	0.23	-0.2	72.28	15.3159	10.6788	-0.0259
622	SLU 41	0.24	-0.16	73.06	15.4839	10.7957	-0.0318
622	SLU 42	0.24	-0.2	73.09	15.4895	10.7994	-0.0262
622	SLU 43	0.21	-0.47	69.76	14.8039	10.3019	0.0206
622	SLU 44	0.2	-0.53	69.8	14.8133	10.308	0.0301
622	SLU 45	0.21	-0.45	71.1	15.0895	10.5007	0.0175
622	SLU 46	0.21	-0.49	71.13	15.0951	10.5044	0.0231
622	SLU 47	0.21	-0.53	70.62	14.987	10.4286	0.0297
622	SLU 48	0.21	-0.46	71.92	15.2631	10.6213	0.0171
622	SLU 49	0.21	-0.49	71.95	15.2688	10.625	0.0228
622	SLU 50	0.21	-0.47	71.39	15.1512	10.5431	0.02
622	SLU 51	0.21	-0.51	71.42	15.1568	10.5467	0.0256
622	SLU 52	0.24	-0.5	77.15	16.3488	11.3931	0.0179
622	SLU 53	0.25	-0.43	78.45	16.625	11.5858	0.0053
622	SLU 54	0.25	-0.46	78.47	16.6306	11.5895	0.011
622	SLU 55	0.24	-0.5	77.96	16.5225	11.5136	0.0176
622	SLU 56	0.25	-0.43	79.26	16.7986	11.7064	0.005
622	SLU 57	0.25	-0.47	79.29	16.8043	11.71	0.0107
622	SLU 58	0.25	-0.44	78.73	16.6867	11.6281	0.0078
622	SLU 59	0.25	-0.48	78.76	16.6923	11.6318	0.0135
622	SLU 60	0.26	-0.43	80.25	16.9975	11.852	0.0033
622	SLU 61	0.26	-0.47	80.28	17.0032	11.8557	0.009
622	SLU 62	0.26	-0.43	81.07	17.1712	11.9725	0.003
622	SLU 63	0.26	-0.47	81.09	17.1768	11.9762	0.0086
622	SLU 64	0.23	-0.34	76.17	16.1722	11.2519	-0.0032
622	SLU 65	0.23	-0.4	76.21	16.1815	11.258	0.0063
622	SLU 66	0.23	-0.32	77.51	16.4577	11.4507	-0.0063
622	SLU 67	0.23	-0.36	77.54	16.4633	11.4544	-0.0007
622	SLU 68	0.23	-0.4	77.03	16.3552	11.3786	0.0059
622	SLU 69	0.23	-0.33	78.33	16.6313	11.5713	-0.0067
622	SLU 70	0.23	-0.36	78.35	16.637	11.575	-0.001
622	SLU 71	0.23	-0.34	77.8	16.5194	11.4931	-0.0038
622	SLU 72	0.23	-0.38	77.82	16.525	11.4967	0.0018
622	SLU 73	0.26	-0.37	83.56	17.717	12.3431	-0.0059
622	SLU 74	0.27	-0.3	84.85	17.9932	12.5358	-0.0185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
622	SLU 75	0.27	-0.33	84.88	17.9988	12.5395	-0.0128
622	SLU 76	0.26	-0.37	84.37	17.8907	12.4637	-0.0062
622	SLU 77	0.27	-0.3	85.67	18.1669	12.6564	-0.0188
622	SLU 78	0.27	-0.34	85.7	18.1725	12.66	-0.0131
622	SLU 79	0.27	-0.31	85.14	18.0549	12.5781	-0.0159
622	SLU 80	0.27	-0.35	85.17	18.0606	12.5818	-0.0103
622	SLU 81	0.28	-0.3	86.66	18.3657	12.802	-0.0205
622	SLU 82	0.28	-0.34	86.68	18.3714	12.8057	-0.0148
622	SLU 83	0.28	-0.3	87.47	18.5394	12.9226	-0.0208
622	SLU 84	0.28	-0.34	87.5	18.545	12.9262	-0.0152
622	SLE RA 1	0.17	-0.29	57.18	12.1394	8.4465	0.0028
622	SLE RA 2	0.17	-0.33	57.21	12.1457	8.4506	0.0091
622	SLE RA 3	0.17	-0.28	58.08	12.3298	8.5791	0.0007
622	SLE RA 4	0.17	-0.3	58.1	12.3335	8.5815	0.0044
622	SLE RA 5	0.17	-0.33	57.75	12.2614	8.531	0.0089
622	SLE RA 6	0.17	-0.28	58.62	12.4455	8.6595	0.0005
622	SLE RA 7	0.17	-0.3	58.64	12.4493	8.6619	0.0042
622	SLE RA 8	0.17	-0.29	58.27	12.3709	8.6073	0.0024
622	SLE RA 9	0.17	-0.32	58.29	12.3747	8.6097	0.0061
622	SLE RA 10	0.19	-0.31	62.11	13.1693	9.174	0.001
622	SLE RA 11	0.2	-0.26	62.97	13.3535	9.3024	-0.0074
622	SLE RA 12	0.2	-0.29	62.99	13.3572	9.3049	-0.0036
622	SLE RA 13	0.19	-0.31	62.65	13.2851	9.2544	0.0008
622	SLE RA 14	0.2	-0.26	63.52	13.4692	9.3828	-0.0076
622	SLE RA 15	0.2	-0.29	63.53	13.473	9.3853	-0.0039
622	SLE RA 16	0.2	-0.27	63.16	13.3946	9.3306	-0.0057
622	SLE RA 17	0.2	-0.3	63.18	13.3983	9.3331	-0.002
622	SLE RA 18	0.2	-0.26	64.18	13.6018	9.4799	-0.0087
622	SLE RA 19	0.2	-0.29	64.19	13.6056	9.4824	-0.005
622	SLE RA 20	0.21	-0.26	64.72	13.7176	9.5603	-0.009
622	SLE RA 21	0.21	-0.29	64.74	13.7213	9.5627	-0.0052
622	SLE FR 1	0.17	-0.29	57.18	12.1394	8.4465	0.0028
622	SLE FR 2	0.17	-0.3	57.19	12.1407	8.4474	0.0041
622	SLE FR 3	0.17	-0.29	57.4	12.1857	8.4787	0.0027
622	SLE FR 4	0.18	-0.29	59.29	12.5794	8.7574	0.0006
622	SLE FR 5	0.18	-0.28	59.5	12.6244	8.7887	-0.0008
622	SLE FR 6	0.19	-0.28	60.68	12.8706	8.9632	-0.003
622	SLE QP 1	0.17	-0.29	57.18	12.1394	8.4465	0.0028
622	SLE QP 2	0.18	-0.28	59.28	12.5781	8.7565	-0.0007
622	SLD 1	5.1	0.82	58.53	12.7795	8.6429	-1.3852
622	SLD 2	5.09	0.78	58.49	12.7691	8.6372	-1.3746
622	SLD 3	5.03	-0.87	59.73	13.0392	8.8104	-1.129
622	SLD 4	5.02	-0.91	59.69	13.0289	8.8047	-1.1184
622	SLD 5	1.77	2.62	57.24	12.2465	8.4695	-0.8065
622	SLD 6	1.76	2.6	57.21	12.2396	8.4657	-0.7995
622	SLD 7	1.53	-3.02	61.25	13.1122	9.0278	0.0474
622	SLD 8	1.52	-3.04	61.22	13.1054	9.0239	0.0545
622	SLD 9	-1.16	2.48	57.34	12.0509	8.4892	-0.0559
622	SLD 10	-1.17	2.45	57.32	12.044	8.4853	-0.0488
622	SLD 11	-1.4	-3.16	61.35	12.9166	9.0474	0.7981
622	SLD 12	-1.41	-3.19	61.32	12.9098	9.0436	0.8052
622	SLD 13	-4.66	0.35	58.87	12.1274	8.7084	1.117
622	SLD 14	-4.67	0.31	58.83	12.1171	8.7027	1.1277
622	SLD 15	-4.73	-1.35	60.07	12.3871	8.8759	1.3732
622	SLD 16	-4.74	-1.39	60.03	12.3768	8.8702	1.3839
622	SLV 1	11.68	2.24	57.57	13.0599	8.4966	-3.2285
622	SLV 2	11.67	2.14	57.48	13.0359	8.4832	-3.2037
622	SLV 3	11.52	-1.59	60.28	13.6459	8.8747	-2.6485
622	SLV 4	11.5	-1.69	60.19	13.6218	8.8613	-2.6237
622	SLV 5	3.89	6.3	54.67	11.8382	8.1075	-1.8531
622	SLV 6	3.88	6.24	54.61	11.8225	8.0988	-1.8369
622	SLV 7	3.33	-6.47	63.71	13.7914	9.3678	0.0803
622	SLV 8	3.32	-6.53	63.65	13.7757	9.359	0.0965
622	SLV 9	-2.96	5.97	54.91	11.3805	8.1541	-0.0978
622	SLV 10	-2.97	5.91	54.85	11.3648	8.1453	-0.0816
622	SLV 11	-3.52	-6.8	63.95	13.3338	9.4143	1.8356
622	SLV 12	-3.53	-6.86	63.89	13.3181	9.4056	1.8518
622	SLV 13	-11.14	1.12	58.37	11.5344	8.6518	2.6223
622	SLV 14	-11.16	1.03	58.28	11.5104	8.6384	2.6472
622	SLV 15	-11.31	-2.71	61.08	12.1204	9.0299	3.2024
622	SLV 16	-11.33	-2.8	60.99	12.0963	9.0165	3.2272
622	CRTFP Ux+	0	0	0	0	0	0
622	CRTFP Ux-	0	0	0	0	0	0
622	CRTFP Uy+	0	0	0	0	0	0
622	CRTFP Uy-	0	0	0	0	0	0
624	SLU 1	0.18	-0.2	45.42	9.8099	-7.0447	-0.0714
624	SLU 2	0.18	-0.25	45.46	9.8184	-7.0507	-0.0786
624	SLU 3	0.19	-0.18	46.52	10.0472	-7.2149	-0.0706
624	SLU 4	0.19	-0.21	46.55	10.0523	-7.2184	-0.0749
624	SLU 5	0.19	-0.25	46.13	9.963	-7.1541	-0.0793
624	SLU 6	0.19	-0.18	47.19	10.1919	-7.3184	-0.0712
624	SLU 7	0.19	-0.21	47.21	10.197	-7.3219	-0.0756
624	SLU 8	0.19	-0.2	46.76	10.0992	-7.2517	-0.0727
624	SLU 9	0.19	-0.23	46.78	10.1043	-7.2552	-0.0771
624	SLU 10	0.21	-0.21	51.47	11.0975	-7.9816	-0.0784
624	SLU 11	0.22	-0.14	52.53	11.3263	-8.1459	-0.0703
624	SLU 12	0.22	-0.17	52.56	11.3314	-8.1494	-0.0746
624	SLU 13	0.22	-0.21	52.14	11.2421	-8.0851	-0.079
624	SLU 14	0.22	-0.14	53.2	11.471	-8.2493	-0.071
624	SLU 15	0.22	-0.17	53.22	11.4761	-8.2529	-0.0753

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
624	SLU 16	0.22	-0.16	52.77	11.3783	-8.1827	-0.0725
624	SLU 17	0.22	-0.19	52.79	11.3834	-8.1862	-0.0768
624	SLU 18	0.23	-0.14	54.01	11.6372	-8.3747	-0.071
624	SLU 19	0.22	-0.17	54.03	11.6423	-8.3783	-0.0754
624	SLU 20	0.23	-0.14	54.68	11.7818	-8.4782	-0.0717
624	SLU 21	0.23	-0.17	54.7	11.7869	-8.4817	-0.076
624	SLU 22	0.21	-0.08	50.65	10.9456	-7.8553	-0.0586
624	SLU 23	0.2	-0.13	50.69	10.9541	-7.8612	-0.0658
624	SLU 24	0.21	-0.07	51.75	11.183	-8.0254	-0.0577
624	SLU 25	0.21	-0.1	51.77	11.1881	-8.029	-0.0621
624	SLU 26	0.21	-0.13	51.36	11.0988	-7.9647	-0.0664
624	SLU 27	0.21	-0.07	52.42	11.3276	-8.1289	-0.0584
624	SLU 28	0.21	-0.1	52.44	11.3327	-8.1325	-0.0627
624	SLU 29	0.21	-0.08	51.99	11.235	-8.0622	-0.0599
624	SLU 30	0.21	-0.11	52.01	11.2401	-8.0658	-0.0642
624	SLU 31	0.23	-0.09	56.7	12.2332	-8.7922	-0.0655
624	SLU 32	0.24	-0.03	57.76	12.4621	-8.9564	-0.0575
624	SLU 33	0.24	-0.06	57.79	12.4672	-8.96	-0.0618
624	SLU 34	0.24	-0.09	57.37	12.3779	-8.8957	-0.0662
624	SLU 35	0.24	-0.03	58.43	12.6067	-9.0599	-0.0581
624	SLU 36	0.24	-0.06	58.45	12.6118	-9.0635	-0.0624
624	SLU 37	0.24	-0.04	58	12.5141	-8.9932	-0.0596
624	SLU 38	0.24	-0.07	58.02	12.5192	-8.9968	-0.0639
624	SLU 39	0.25	-0.03	59.24	12.7729	-9.1852	-0.0582
624	SLU 40	0.25	-0.05	59.26	12.778	-9.1888	-0.0625
624	SLU 41	0.25	-0.03	59.91	12.9176	-9.2887	-0.0588
624	SLU 42	0.25	-0.05	59.93	12.9227	-9.2923	-0.0632
624	SLU 43	0.23	-0.3	57.26	12.3634	-8.8802	-0.0972
624	SLU 44	0.23	-0.34	57.3	12.3719	-8.8862	-0.1045
624	SLU 45	0.24	-0.28	58.36	12.6008	-9.0504	-0.0964
624	SLU 46	0.24	-0.31	58.38	12.6059	-9.054	-0.1008
624	SLU 47	0.23	-0.34	57.96	12.5166	-8.9896	-0.1051
624	SLU 48	0.24	-0.28	59.02	12.7454	-9.1539	-0.0971
624	SLU 49	0.24	-0.31	59.05	12.7505	-9.1574	-0.1014
624	SLU 50	0.24	-0.3	58.59	12.6528	-9.0872	-0.0986
624	SLU 51	0.24	-0.33	58.62	12.6579	-9.0907	-0.1029
624	SLU 52	0.26	-0.3	63.31	13.651	-9.8171	-0.1042
624	SLU 53	0.27	-0.24	64.37	13.8799	-9.9814	-0.0961
624	SLU 54	0.27	-0.27	64.39	13.885	-9.9849	-0.1005
624	SLU 55	0.26	-0.3	63.98	13.7957	-9.9206	-0.1049
624	SLU 56	0.27	-0.24	65.03	14.0245	-10.0848	-0.0968
624	SLU 57	0.27	-0.27	65.06	14.0296	-10.0884	-0.1011
624	SLU 58	0.27	-0.26	64.6	13.9319	-10.0182	-0.0983
624	SLU 59	0.27	-0.29	64.63	13.937	-10.0217	-0.1026
624	SLU 60	0.27	-0.24	65.84	14.1907	-10.2102	-0.0969
624	SLU 61	0.27	-0.27	65.87	14.1958	-10.2138	-0.1012
624	SLU 62	0.28	-0.24	66.51	14.3354	-10.3137	-0.0975
624	SLU 63	0.28	-0.27	66.54	14.3405	-10.3172	-0.1018
624	SLU 64	0.25	-0.18	62.49	13.4992	-9.6908	-0.0844
624	SLU 65	0.25	-0.23	62.53	13.5077	-9.6967	-0.0916
624	SLU 66	0.26	-0.17	63.59	13.7365	-9.8609	-0.0836
624	SLU 67	0.26	-0.2	63.61	13.7416	-9.8645	-0.0879
624	SLU 68	0.26	-0.23	63.19	13.6524	-9.8002	-0.0923
624	SLU 69	0.26	-0.17	64.25	13.8812	-9.9644	-0.0842
624	SLU 70	0.26	-0.2	64.28	13.8863	-9.968	-0.0886
624	SLU 71	0.26	-0.18	63.82	13.7885	-9.8977	-0.0857
624	SLU 72	0.26	-0.21	63.85	13.7936	-9.9013	-0.09
624	SLU 73	0.28	-0.19	68.54	14.7868	-10.6277	-0.0913
624	SLU 74	0.29	-0.13	69.6	15.0156	-10.7919	-0.0833
624	SLU 75	0.29	-0.16	69.62	15.0207	-10.7955	-0.0876
624	SLU 76	0.28	-0.19	69.2	14.9314	-10.7312	-0.092
624	SLU 77	0.29	-0.13	70.26	15.1603	-10.8954	-0.0839
624	SLU 78	0.29	-0.16	70.29	15.1654	-10.899	-0.0883
624	SLU 79	0.29	-0.14	69.83	15.0676	-10.8287	-0.0854
624	SLU 80	0.29	-0.17	69.86	15.0727	-10.8323	-0.0898
624	SLU 81	0.29	-0.12	71.07	15.3265	-11.0208	-0.084
624	SLU 82	0.29	-0.15	71.1	15.3316	-11.0243	-0.0883
624	SLU 83	0.3	-0.12	71.74	15.4711	-11.1242	-0.0846
624	SLU 84	0.3	-0.15	71.77	15.4762	-11.1278	-0.089
624	SLE RA 1	0.19	-0.16	46.92	10.1344	-7.2763	-0.0677
624	SLE RA 2	0.19	-0.2	46.94	10.14	-7.2803	-0.0726
624	SLE RA 3	0.19	-0.16	47.65	10.2926	-7.3897	-0.0672
624	SLE RA 4	0.19	-0.18	47.67	10.296	-7.3921	-0.0701
624	SLE RA 5	0.19	-0.2	47.39	10.2365	-7.3492	-0.073
624	SLE RA 6	0.2	-0.16	48.1	10.389	-7.4587	-0.0676
624	SLE RA 7	0.2	-0.18	48.11	10.3924	-7.4611	-0.0705
624	SLE RA 8	0.19	-0.16	47.81	10.3273	-7.4143	-0.0686
624	SLE RA 9	0.19	-0.18	47.82	10.3307	-7.4167	-0.0715
624	SLE RA 10	0.21	-0.17	50.95	10.9928	-7.9009	-0.0724
624	SLE RA 11	0.21	-0.13	51.66	11.1453	-8.0104	-0.067
624	SLE RA 12	0.21	-0.15	51.67	11.1487	-8.0128	-0.0699
624	SLE RA 13	0.21	-0.17	51.4	11.0892	-7.9699	-0.0728
624	SLE RA 14	0.22	-0.13	52.1	11.2418	-8.0794	-0.0674
624	SLE RA 15	0.21	-0.15	52.12	11.2452	-8.0818	-0.0703
624	SLE RA 16	0.21	-0.14	51.82	11.18	-8.0349	-0.0684
624	SLE RA 17	0.21	-0.16	51.83	11.1834	-8.0373	-0.0713
624	SLE RA 18	0.22	-0.13	52.64	11.3526	-8.1629	-0.0675
624	SLE RA 19	0.22	-0.15	52.66	11.356	-8.1653	-0.0704
624	SLE RA 20	0.22	-0.13	53.09	11.449	-8.2319	-0.0679
624	SLE RA 21	0.22	-0.15	53.1	11.4524	-8.2343	-0.0708

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
624	SLE FR 1	0.19	-0.16	46.92	10.1344	-7.2763	-0.0677
624	SLE FR 2	0.19	-0.17	46.92	10.1355	-7.2771	-0.0687
624	SLE FR 3	0.19	-0.16	47.1	10.173	-7.3039	-0.0679
624	SLE FR 4	0.2	-0.16	48.64	10.501	-7.5431	-0.0686
624	SLE FR 5	0.2	-0.15	48.81	10.5384	-7.5699	-0.0678
624	SLE FR 6	0.2	-0.15	49.78	10.7435	-7.7196	-0.0676
624	SLE QP 1	0.19	-0.16	46.92	10.1344	-7.2763	-0.0677
624	SLE QP 2	0.2	-0.15	48.64	10.4998	-7.5423	-0.0677
624	SLD 1	4.21	0.72	48.4	10.852	-7.5216	-0.9374
624	SLD 2	4.21	0.72	48.37	10.8426	-7.5164	-0.9345
624	SLD 3	4.15	-0.66	49.44	11.085	-7.6817	-1.1451
624	SLD 4	4.15	-0.66	49.4	11.0755	-7.6764	-1.1422
624	SLD 5	1.5	2.2	46.99	10.2539	-7.2943	-0.0141
624	SLD 6	1.49	2.2	46.97	10.2476	-7.2908	-0.0121
624	SLD 7	1.29	-2.4	50.46	11.0304	-7.8278	-0.7065
624	SLD 8	1.29	-2.4	50.44	11.0241	-7.8243	-0.7045
624	SLD 9	-0.89	2.09	46.83	9.9755	-7.2603	0.5692
624	SLD 10	-0.9	2.09	46.81	9.9693	-7.2568	0.5711
624	SLD 11	-1.1	-2.51	50.3	10.752	-7.7938	-0.1232
624	SLD 12	-1.1	-2.51	50.28	10.7458	-7.7903	-0.1213
624	SLD 13	-3.75	0.35	47.87	9.9241	-7.4082	1.0069
624	SLD 14	-3.76	0.35	47.83	9.9147	-7.4029	1.0098
624	SLD 15	-3.81	-1.03	48.91	10.1571	-7.5682	0.7991
624	SLD 16	-3.82	-1.03	48.87	10.1476	-7.563	0.8021
624	SLV 1	9.59	1.84	48.13	11.3333	-7.5005	-2.1088
624	SLV 2	9.57	1.84	48.05	11.3113	-7.4882	-2.102
624	SLV 3	9.45	-1.29	50.47	11.8591	-7.8619	-2.5794
624	SLV 4	9.43	-1.28	50.39	11.8371	-7.8496	-2.5726
624	SLV 5	3.23	5.19	44.94	9.9563	-6.9837	0.0326
624	SLV 6	3.22	5.19	44.89	9.9419	-6.9757	0.037
624	SLV 7	2.76	-5.24	52.76	11.7089	-8.1885	-1.5362
624	SLV 8	2.75	-5.24	52.71	11.6946	-8.1805	-1.5317
624	SLV 9	-2.36	4.93	44.56	9.305	-6.9041	1.3964
624	SLV 10	-2.36	4.93	44.51	9.2907	-6.8961	1.4009
624	SLV 11	-2.83	-5.5	52.38	11.0577	-8.1089	-0.1723
624	SLV 12	-2.83	-5.5	52.33	11.0434	-8.1008	-0.1679
624	SLV 13	-9.04	0.98	46.88	9.1626	-7.235	2.4373
624	SLV 14	-9.05	0.98	46.8	9.1406	-7.2227	2.4441
624	SLV 15	-9.18	-2.15	49.22	9.6884	-7.5964	1.9667
624	SLV 16	-9.19	-2.15	49.14	9.6664	-7.5841	1.9735
624	CRTFP Ux+	0	0	0	0	0	0
624	CRTFP Ux-	0	0	0	0	0	0
624	CRTFP Uy+	0	0	0	0	0	0
624	CRTFP Uy-	0	0	0	0	0	0
626	SLU 1	0.45	-0.12	78.98	11.5345	10.91	-0.036
626	SLU 2	0.45	-0.19	79.04	11.5455	10.919	-0.0244
626	SLU 3	0.46	-0.09	80.88	11.8114	11.1737	-0.0413
626	SLU 4	0.46	-0.14	80.91	11.818	11.1791	-0.0344
626	SLU 5	0.46	-0.19	80.19	11.7137	11.0796	-0.0257
626	SLU 6	0.47	-0.09	82.04	11.9796	11.3343	-0.0426
626	SLU 7	0.47	-0.13	82.07	11.9862	11.3397	-0.0357
626	SLU 8	0.47	-0.11	81.29	11.8709	11.2311	-0.0386
626	SLU 9	0.46	-0.16	81.32	11.8775	11.2365	-0.0317
626	SLU 10	0.5	-0.07	89.42	13.0571	12.3619	-0.0461
626	SLU 11	0.52	0.03	91.26	13.323	12.6166	-0.063
626	SLU 12	0.52	-0.02	91.3	13.3295	12.622	-0.0561
626	SLU 13	0.51	-0.07	90.57	13.2252	12.5224	-0.0474
626	SLU 14	0.52	0.03	92.42	13.4911	12.7771	-0.0643
626	SLU 15	0.52	-0.01	92.45	13.4977	12.7825	-0.0574
626	SLU 16	0.52	0.01	91.67	13.3825	12.6739	-0.0603
626	SLU 17	0.52	-0.04	91.71	13.3891	12.6794	-0.0534
626	SLU 18	0.53	0.06	93.81	13.6939	12.9712	-0.067
626	SLU 19	0.53	0.01	93.85	13.7005	12.9766	-0.06
626	SLU 20	0.53	0.06	94.97	13.8621	13.1317	-0.0683
626	SLU 21	0.53	0.01	95	13.8687	13.1372	-0.0613
626	SLU 22	0.5	0.1	88.07	12.8757	12.1617	-0.0726
626	SLU 23	0.5	0.02	88.12	12.8867	12.1708	-0.061
626	SLU 24	0.51	0.13	89.97	13.1526	12.4254	-0.0779
626	SLU 25	0.51	0.08	90	13.1592	12.4309	-0.071
626	SLU 26	0.51	0.03	89.28	13.0549	12.3313	-0.0623
626	SLU 27	0.52	0.13	91.12	13.3208	12.586	-0.0792
626	SLU 28	0.52	0.09	91.15	13.3274	12.5914	-0.0723
626	SLU 29	0.52	0.11	90.38	13.2121	12.4828	-0.0752
626	SLU 30	0.52	0.06	90.41	13.2187	12.4882	-0.0683
626	SLU 31	0.56	0.15	98.5	14.3983	13.6136	-0.0827
626	SLU 32	0.57	0.25	100.35	14.6641	13.8683	-0.0996
626	SLU 33	0.57	0.2	100.38	14.6707	13.8737	-0.0927
626	SLU 34	0.56	0.15	99.66	14.5664	13.7742	-0.084
626	SLU 35	0.58	0.25	101.5	14.8323	14.0288	-0.1009
626	SLU 36	0.58	0.21	101.54	14.8389	14.0343	-0.094
626	SLU 37	0.57	0.23	100.76	14.7237	13.9257	-0.0969
626	SLU 38	0.57	0.18	100.79	14.7303	13.9311	-0.09
626	SLU 39	0.58	0.27	102.9	15.0351	14.2229	-0.1036
626	SLU 40	0.58	0.23	102.93	15.0417	14.2283	-0.0966
626	SLU 41	0.59	0.28	104.05	15.2033	14.3835	-0.1049
626	SLU 42	0.59	0.23	104.09	15.2099	14.3889	-0.0979
626	SLU 43	0.57	-0.23	99.56	14.5351	13.7538	-0.0342
626	SLU 44	0.57	-0.3	99.62	14.546	13.7629	-0.0227
626	SLU 45	0.58	-0.2	101.46	14.8119	14.0175	-0.0395
626	SLU 46	0.58	-0.25	101.49	14.8185	14.023	-0.0326

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
626	SLU 47	0.57	-0.3	100.77	14.7142	13.9234	-0.024
626	SLU 48	0.59	-0.2	102.62	14.9801	14.1781	-0.0409
626	SLU 49	0.59	-0.24	102.65	14.9867	14.1835	-0.0339
626	SLU 50	0.58	-0.22	101.87	14.8715	14.0749	-0.0369
626	SLU 51	0.58	-0.27	101.9	14.878	14.0803	-0.0299
626	SLU 52	0.62	-0.18	110	16.0576	15.2057	-0.0443
626	SLU 53	0.63	-0.08	111.84	16.3235	15.4604	-0.0612
626	SLU 54	0.63	-0.13	111.88	16.33	15.4658	-0.0543
626	SLU 55	0.63	-0.18	111.15	16.2258	15.3663	-0.0457
626	SLU 56	0.64	-0.08	113	16.4917	15.6209	-0.0626
626	SLU 57	0.64	-0.12	113.03	16.4982	15.6264	-0.0556
626	SLU 58	0.64	-0.1	112.25	16.383	15.5178	-0.0585
626	SLU 59	0.64	-0.15	112.29	16.3896	15.5232	-0.0516
626	SLU 60	0.64	-0.05	114.39	16.6944	15.815	-0.0652
626	SLU 61	0.64	-0.1	114.43	16.701	15.8205	-0.0583
626	SLU 62	0.65	-0.05	115.55	16.8626	15.9756	-0.0665
626	SLU 63	0.65	-0.1	115.58	16.8692	15.981	-0.0596
626	SLU 64	0.62	-0.01	108.65	15.8763	15.0055	-0.0708
626	SLU 65	0.62	-0.09	108.7	15.8872	15.0146	-0.0593
626	SLU 66	0.63	0.02	110.54	16.1531	15.2693	-0.0762
626	SLU 67	0.63	-0.03	110.58	16.1597	15.2747	-0.0692
626	SLU 68	0.63	-0.08	109.86	16.0554	15.1751	-0.0606
626	SLU 69	0.64	0.02	111.7	16.3213	15.4298	-0.0775
626	SLU 70	0.64	-0.02	111.73	16.3279	15.4353	-0.0705
626	SLU 71	0.63	0	110.96	16.2127	15.3266	-0.0735
626	SLU 72	0.63	-0.05	110.99	16.2192	15.3321	-0.0665
626	SLU 73	0.67	0.04	119.08	17.3988	16.4574	-0.081
626	SLU 74	0.69	0.14	120.93	17.6647	16.7121	-0.0978
626	SLU 75	0.69	0.09	120.96	17.6712	16.7175	-0.0909
626	SLU 76	0.68	0.04	120.24	17.567	16.618	-0.0823
626	SLU 77	0.69	0.14	122.08	17.8329	16.8727	-0.0992
626	SLU 78	0.69	0.1	122.12	17.8394	16.8781	-0.0922
626	SLU 79	0.69	0.12	121.34	17.7242	16.7695	-0.0951
626	SLU 80	0.69	0.07	121.37	17.7308	16.7749	-0.0882
626	SLU 81	0.7	0.16	123.48	18.0356	17.0668	-0.1018
626	SLU 82	0.7	0.12	123.51	18.0422	17.0722	-0.0949
626	SLU 83	0.7	0.17	124.63	18.2038	17.2273	-0.1031
626	SLU 84	0.7	0.12	124.67	18.2104	17.2327	-0.0962
626	SLE RA 1	0.46	-0.05	81.58	11.9177	11.2676	-0.0464
626	SLE RA 2	0.46	-0.11	81.61	11.925	11.2737	-0.0387
626	SLE RA 3	0.47	-0.04	82.84	12.1023	11.4434	-0.05
626	SLE RA 4	0.47	-0.07	82.87	12.1067	11.4471	-0.0454
626	SLE RA 5	0.47	-0.1	82.38	12.0372	11.3807	-0.0396
626	SLE RA 6	0.48	-0.03	83.61	12.2144	11.5505	-0.0509
626	SLE RA 7	0.48	-0.06	83.64	12.2188	11.5541	-0.0462
626	SLE RA 8	0.47	-0.05	83.12	12.142	11.4817	-0.0482
626	SLE RA 9	0.47	-0.08	83.14	12.1464	11.4853	-0.0436
626	SLE RA 10	0.5	-0.03	88.54	12.9327	12.2356	-0.0532
626	SLE RA 11	0.51	0.04	89.76	13.11	12.4053	-0.0644
626	SLE RA 12	0.51	0.01	89.79	13.1144	12.409	-0.0598
626	SLE RA 13	0.51	-0.02	89.31	13.0449	12.3426	-0.0541
626	SLE RA 14	0.51	0.05	90.53	13.2221	12.5124	-0.0653
626	SLE RA 15	0.51	0.02	90.56	13.2265	12.516	-0.0607
626	SLE RA 16	0.51	0.03	90.04	13.1497	12.4436	-0.0626
626	SLE RA 17	0.51	0	90.06	13.1541	12.4472	-0.058
626	SLE RA 18	0.52	0.06	91.46	13.3573	12.6418	-0.0671
626	SLE RA 19	0.52	0.03	91.49	13.3617	12.6454	-0.0625
626	SLE RA 20	0.52	0.06	92.23	13.4695	12.7488	-0.068
626	SLE RA 21	0.52	0.03	92.26	13.4738	12.7524	-0.0633
626	SLE FR 1	0.46	-0.05	81.58	11.9177	11.2676	-0.0464
626	SLE FR 2	0.46	-0.06	81.58	11.9192	11.2688	-0.0449
626	SLE FR 3	0.47	-0.05	81.88	11.9626	11.3104	-0.0468
626	SLE FR 4	0.48	-0.03	84.55	12.3511	11.6811	-0.0511
626	SLE FR 5	0.48	-0.02	84.85	12.3945	11.7227	-0.053
626	SLE FR 6	0.49	0	86.52	12.6375	11.9547	-0.0568
626	SLE QP 1	0.46	-0.05	81.58	11.9177	11.2676	-0.0464
626	SLE QP 2	0.48	-0.02	84.54	12.3496	11.6799	-0.0526
626	SLD 1	7.36	1.35	84.7	12.4081	11.6888	-1.3258
626	SLD 2	7.36	1.42	84.65	12.3978	11.6804	-1.3281
626	SLD 3	7.25	-1	86.24	12.7066	11.9323	-0.9899
626	SLD 4	7.26	-0.93	86.19	12.6963	11.9239	-0.9923
626	SLD 5	2.7	3.93	82.26	11.9163	11.3148	-0.9435
626	SLD 6	2.71	3.98	82.23	11.9095	11.3092	-0.9451
626	SLD 7	2.35	-3.88	87.4	12.9113	12.1265	0.176
626	SLD 8	2.35	-3.83	87.37	12.9045	12.1209	0.1744
626	SLD 9	-1.39	3.79	81.72	11.7948	11.2389	-0.2797
626	SLD 10	-1.39	3.84	81.69	11.7879	11.2333	-0.2813
626	SLD 11	-1.75	-4.02	86.86	12.7898	12.0506	0.8399
626	SLD 12	-1.74	-3.97	86.82	12.7829	12.045	0.8383
626	SLD 13	-6.29	0.89	82.89	12.0029	11.4358	0.887
626	SLD 14	-6.29	0.96	82.84	11.9926	11.4274	0.8846
626	SLD 15	-6.4	-1.45	84.44	12.3014	11.6793	1.2229
626	SLD 16	-6.4	-1.38	84.39	12.2911	11.6709	1.2205
626	SLV 1	16.56	3.09	84.97	12.4983	11.7106	-3.0171
626	SLV 2	16.57	3.25	84.86	12.4744	11.691	-3.0227
626	SLV 3	16.31	-2.22	88.45	13.1727	12.2605	-2.2565
626	SLV 4	16.32	-2.05	88.34	13.1487	12.2409	-2.2621
626	SLV 5	5.68	8.93	79.42	11.3757	10.8586	-2.0945
626	SLV 6	5.68	9.04	79.34	11.3601	10.8458	-2.0981
626	SLV 7	4.86	-8.75	91.01	13.6235	12.6915	0.4407

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
626	SLV 8	4.86	-8.65	90.94	13.6079	12.6787	0.437
626	SLV 9	-3.9	8.61	78.15	11.0913	10.6811	-0.5423
626	SLV 10	-3.9	8.72	78.07	11.0757	10.6683	-0.5459
626	SLV 11	-4.72	-9.08	89.75	13.3392	12.5139	1.9929
626	SLV 12	-4.72	-8.97	89.67	13.3236	12.5011	1.9892
626	SLV 13	-15.36	2.02	80.75	11.5505	11.1189	2.1569
626	SLV 14	-15.35	2.18	80.63	11.5266	11.0992	2.1513
626	SLV 15	-15.61	-3.29	84.23	12.2249	11.6687	2.9174
626	SLV 16	-15.6	-3.13	84.11	12.2009	11.6491	2.9118
626	CRTFP Ux+	0	0	0	0	0	0
626	CRTFP Ux-	0	0	0	0	0	0
626	CRTFP Uy+	0	0	0	0	0	0
626	CRTFP Uy-	0	0	0	0	0	0
628	SLU 1	0.19	0.13	28.71	6.7689	0.8385	-0.0437
628	SLU 2	0.19	0.11	28.73	6.7728	0.8391	-0.0427
628	SLU 3	0.2	0.15	29.39	6.9278	0.8587	-0.0453
628	SLU 4	0.2	0.13	29.41	6.9301	0.8591	-0.0447
628	SLU 5	0.19	0.11	29.14	6.8681	0.8514	-0.0435
628	SLU 6	0.2	0.15	29.81	7.0231	0.871	-0.0461
628	SLU 7	0.2	0.13	29.82	7.0254	0.8713	-0.0455
628	SLU 8	0.2	0.14	29.54	6.9595	0.8631	-0.0453
628	SLU 9	0.2	0.12	29.55	6.9618	0.8634	-0.0447
628	SLU 10	0.21	0.17	32.47	7.6547	0.9492	-0.0486
628	SLU 11	0.21	0.21	33.14	7.8096	0.9688	-0.0511
628	SLU 12	0.21	0.2	33.15	7.812	0.9692	-0.0505
628	SLU 13	0.21	0.17	32.89	7.75	0.9615	-0.0494
628	SLU 14	0.22	0.21	33.55	7.9049	0.9811	-0.0519
628	SLU 15	0.22	0.2	33.56	7.9073	0.9814	-0.0513
628	SLU 16	0.22	0.2	33.28	7.8413	0.9732	-0.0512
628	SLU 17	0.22	0.19	33.29	7.8437	0.9735	-0.0506
628	SLU 18	0.22	0.22	34.06	8.0287	0.9958	-0.0521
628	SLU 19	0.22	0.21	34.07	8.0311	0.9962	-0.0515
628	SLU 20	0.22	0.23	34.47	8.124	1.0081	-0.0529
628	SLU 21	0.22	0.21	34.48	8.1263	1.0085	-0.0523
628	SLU 22	0.21	0.23	32.03	7.5576	0.9352	-0.0511
628	SLU 23	0.21	0.2	32.04	7.5615	0.9358	-0.0501
628	SLU 24	0.22	0.24	32.71	7.7165	0.9554	-0.0527
628	SLU 25	0.22	0.23	32.72	7.7188	0.9557	-0.0521
628	SLU 26	0.21	0.21	32.46	7.6568	0.9481	-0.0509
628	SLU 27	0.22	0.25	33.13	7.8118	0.9676	-0.0535
628	SLU 28	0.22	0.23	33.14	7.8141	0.968	-0.0529
628	SLU 29	0.22	0.24	32.86	7.7482	0.9598	-0.0527
628	SLU 30	0.22	0.22	32.87	7.7505	0.9601	-0.0521
628	SLU 31	0.23	0.27	35.79	8.4434	1.0459	-0.056
628	SLU 32	0.24	0.31	36.45	8.5983	1.0655	-0.0585
628	SLU 33	0.24	0.29	36.46	8.6007	1.0658	-0.058
628	SLU 34	0.23	0.27	36.2	8.5387	1.0582	-0.0568
628	SLU 35	0.24	0.31	36.87	8.6936	1.0778	-0.0594
628	SLU 36	0.24	0.3	36.88	8.696	1.0781	-0.0588
628	SLU 37	0.24	0.3	36.6	8.63	1.0699	-0.0586
628	SLU 38	0.24	0.29	36.61	8.6324	1.0702	-0.058
628	SLU 39	0.24	0.32	37.37	8.8174	1.0925	-0.0595
628	SLU 40	0.24	0.31	37.38	8.8198	1.0929	-0.0589
628	SLU 41	0.24	0.33	37.79	8.9127	1.1048	-0.0603
628	SLU 42	0.24	0.31	37.8	8.915	1.1051	-0.0597
628	SLU 43	0.24	0.14	36.19	8.5292	1.0569	-0.0542
628	SLU 44	0.24	0.11	36.2	8.5331	1.0575	-0.0533
628	SLU 45	0.25	0.15	36.87	8.688	1.0771	-0.0558
628	SLU 46	0.25	0.14	36.88	8.6904	1.0775	-0.0552
628	SLU 47	0.24	0.11	36.62	8.6284	1.0698	-0.0541
628	SLU 48	0.25	0.16	37.29	8.7833	1.0894	-0.0566
628	SLU 49	0.25	0.14	37.3	8.7857	1.0897	-0.056
628	SLU 50	0.25	0.14	37.02	8.7197	1.0815	-0.0559
628	SLU 51	0.25	0.13	37.03	8.7221	1.0818	-0.0553
628	SLU 52	0.26	0.18	39.95	9.4149	1.1676	-0.0591
628	SLU 53	0.26	0.22	40.61	9.5699	1.1872	-0.0617
628	SLU 54	0.26	0.2	40.62	9.5722	1.1876	-0.0611
628	SLU 55	0.26	0.18	40.36	9.5102	1.1799	-0.0599
628	SLU 56	0.27	0.22	41.03	9.6652	1.1995	-0.0625
628	SLU 57	0.27	0.2	41.04	9.6675	1.1998	-0.0619
628	SLU 58	0.27	0.21	40.76	9.6016	1.1916	-0.0617
628	SLU 59	0.27	0.19	40.77	9.6039	1.192	-0.0611
628	SLU 60	0.27	0.23	41.53	9.789	1.2142	-0.0626
628	SLU 61	0.27	0.21	41.54	9.7913	1.2146	-0.0621
628	SLU 62	0.27	0.23	41.95	9.8843	1.2265	-0.0634
628	SLU 63	0.27	0.22	41.96	9.8866	1.2269	-0.0629
628	SLU 64	0.26	0.24	39.5	9.3179	1.1536	-0.0617
628	SLU 65	0.26	0.21	39.52	9.3218	1.1542	-0.0607
628	SLU 66	0.27	0.25	40.19	9.4767	1.1738	-0.0632
628	SLU 67	0.27	0.23	40.2	9.4791	1.1741	-0.0627
628	SLU 68	0.26	0.21	39.94	9.4171	1.1665	-0.0615
628	SLU 69	0.27	0.25	40.6	9.572	1.1861	-0.064
628	SLU 70	0.27	0.24	40.61	9.5744	1.1864	-0.0635
628	SLU 71	0.27	0.24	40.33	9.5084	1.1782	-0.0633
628	SLU 72	0.27	0.23	40.34	9.5108	1.1785	-0.0627
628	SLU 73	0.28	0.27	43.26	10.2036	1.2643	-0.0666
628	SLU 74	0.29	0.31	43.93	10.3586	1.2839	-0.0691
628	SLU 75	0.29	0.3	43.94	10.3609	1.2842	-0.0685
628	SLU 76	0.28	0.28	43.68	10.2989	1.2766	-0.0674
628	SLU 77	0.29	0.32	44.35	10.4539	1.2962	-0.0699

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
628	SLU 78	0.29	0.3	44.36	10.4562	1.2965	-0.0693
628	SLU 79	0.29	0.31	44.08	10.3903	1.2883	-0.0692
628	SLU 80	0.29	0.29	44.09	10.3926	1.2886	-0.0686
628	SLU 81	0.29	0.33	44.85	10.5777	1.3109	-0.0701
628	SLU 82	0.29	0.31	44.86	10.58	1.3113	-0.0695
628	SLU 83	0.29	0.33	45.27	10.673	1.3232	-0.0709
628	SLU 84	0.29	0.32	45.28	10.6753	1.3235	-0.0703
628	SLE RA 1	0.2	0.16	29.66	6.9943	0.8661	-0.0458
628	SLE RA 2	0.2	0.14	29.67	6.9969	0.8665	-0.0452
628	SLE RA 3	0.2	0.17	30.11	7.1002	0.8796	-0.0469
628	SLE RA 4	0.2	0.16	30.12	7.1017	0.8798	-0.0465
628	SLE RA 5	0.2	0.14	29.95	7.0604	0.8747	-0.0457
628	SLE RA 6	0.2	0.17	30.39	7.1637	0.8878	-0.0474
628	SLE RA 7	0.2	0.16	30.4	7.1652	0.888	-0.047
628	SLE RA 8	0.2	0.16	30.21	7.1213	0.8825	-0.0469
628	SLE RA 9	0.2	0.15	30.22	7.1229	0.8828	-0.0465
628	SLE RA 10	0.21	0.19	32.17	7.5848	0.9399	-0.0491
628	SLE RA 11	0.21	0.21	32.61	7.6881	0.953	-0.0508
628	SLE RA 12	0.21	0.2	32.62	7.6896	0.9532	-0.0504
628	SLE RA 13	0.21	0.19	32.44	7.6483	0.9481	-0.0496
628	SLE RA 14	0.21	0.21	32.89	7.7516	0.9612	-0.0513
628	SLE RA 15	0.21	0.2	32.89	7.7532	0.9614	-0.0509
628	SLE RA 16	0.21	0.21	32.71	7.7092	0.9559	-0.0508
628	SLE RA 17	0.21	0.2	32.71	7.7108	0.9562	-0.0504
628	SLE RA 18	0.21	0.22	33.22	7.8341	0.971	-0.0514
628	SLE RA 19	0.21	0.21	33.23	7.8357	0.9712	-0.051
628	SLE RA 20	0.22	0.22	33.5	7.8976	0.9792	-0.0519
628	SLE RA 21	0.22	0.21	33.51	7.8992	0.9794	-0.0515
628	SLE FR 1	0.2	0.16	29.66	6.9943	0.8661	-0.0458
628	SLE FR 2	0.2	0.16	29.66	6.9948	0.8662	-0.0457
628	SLE FR 3	0.2	0.16	29.77	7.0197	0.8694	-0.046
628	SLE FR 4	0.2	0.17	30.73	7.2467	0.8977	-0.0474
628	SLE FR 5	0.2	0.18	30.84	7.2716	0.9009	-0.0477
628	SLE FR 6	0.21	0.19	31.44	7.4142	0.9186	-0.0486
628	SLE QP 1	0.2	0.16	29.66	6.9943	0.8661	-0.0458
628	SLE QP 2	0.2	0.18	30.73	7.2462	0.8976	-0.0475
628	SLD 1	2.75	0.64	30.7	7.25	0.9017	-0.6965
628	SLD 2	2.75	0.69	30.68	7.2472	0.9012	-0.6967
628	SLD 3	2.71	-0.21	31.18	7.3658	0.9187	-0.6648
628	SLD 4	2.7	-0.16	31.16	7.363	0.9182	-0.665
628	SLD 5	1.03	1.59	29.99	7.0722	0.8731	-0.2901
628	SLD 6	1.03	1.62	29.98	7.0704	0.8727	-0.2903
628	SLD 7	0.89	-1.23	31.6	7.4582	0.9299	-0.1846
628	SLD 8	0.89	-1.19	31.59	7.4564	0.9295	-0.1848
628	SLD 9	-0.49	1.55	29.87	7.036	0.8657	0.0898
628	SLD 10	-0.49	1.58	29.86	7.0342	0.8653	0.0897
628	SLD 11	-0.62	-1.27	31.48	7.4221	0.9225	0.1953
628	SLD 12	-0.63	-1.23	31.47	7.4202	0.9221	0.1952
628	SLD 13	-2.3	0.51	30.29	7.1294	0.877	0.57
628	SLD 14	-2.3	0.56	30.28	7.1266	0.8764	0.5698
628	SLD 15	-2.34	-0.33	30.77	7.2452	0.894	0.6017
628	SLD 16	-2.35	-0.28	30.76	7.2424	0.8935	0.6015
628	SLV 1	6.16	1.22	30.67	7.2603	0.9079	-1.5638
628	SLV 2	6.15	1.34	30.64	7.2538	0.9066	-1.5643
628	SLV 3	6.06	-0.69	31.76	7.522	0.9464	-1.492
628	SLV 4	6.05	-0.57	31.73	7.5155	0.9451	-1.4925
628	SLV 5	2.13	3.37	29.07	6.8547	0.8426	-0.6111
628	SLV 6	2.13	3.45	29.05	6.8504	0.8417	-0.6114
628	SLV 7	1.82	-3.01	32.7	7.727	0.9708	-0.3719
628	SLV 8	1.81	-2.93	32.67	7.7228	0.97	-0.3722
628	SLV 9	-1.41	3.28	28.78	6.7696	0.8252	0.2773
628	SLV 10	-1.41	3.36	28.76	6.7654	0.8244	0.277
628	SLV 11	-1.73	-3.09	32.41	7.642	0.9534	0.5165
628	SLV 12	-1.73	-3.02	32.39	7.6378	0.9526	0.5162
628	SLV 13	-5.65	0.93	29.73	6.9769	0.8501	1.3975
628	SLV 14	-5.66	1.05	29.69	6.9704	0.8488	1.3971
628	SLV 15	-5.75	-0.98	30.82	7.2386	0.8886	1.4693
628	SLV 16	-5.75	-0.86	30.78	7.2321	0.8873	1.4688
628	CRTFP Ux+	0	0	0	0	0	0
628	CRTFP Ux-	0	0	0	0	0	0
628	CRTFP Uy+	0	0	0	0	0	0
628	CRTFP Uy-	0	0	0	0	0	0
629	SLU 1	0.21	0.35	26.4	6.1812	-1.7249	-0.0235
629	SLU 2	0.21	0.32	26.41	6.1832	-1.7255	-0.0248
629	SLU 3	0.22	0.36	27.02	6.3246	-1.7653	-0.0237
629	SLU 4	0.22	0.35	27.03	6.3257	-1.7657	-0.0244
629	SLU 5	0.21	0.33	26.79	6.2692	-1.7499	-0.0252
629	SLU 6	0.22	0.37	27.4	6.4105	-1.7897	-0.024
629	SLU 7	0.22	0.36	27.41	6.4117	-1.7901	-0.0248
629	SLU 8	0.22	0.36	27.15	6.3531	-1.7737	-0.0243
629	SLU 9	0.22	0.34	27.16	6.3543	-1.7741	-0.0251
629	SLU 10	0.23	0.41	29.83	6.9845	-1.9482	-0.0237
629	SLU 11	0.24	0.45	30.44	7.1258	-1.988	-0.0225
629	SLU 12	0.24	0.43	30.45	7.127	-1.9884	-0.0233
629	SLU 13	0.23	0.41	30.21	7.0704	-1.9726	-0.0241
629	SLU 14	0.24	0.45	30.82	7.2118	-2.0124	-0.0229
629	SLU 15	0.24	0.44	30.83	7.213	-2.0128	-0.0237
629	SLU 16	0.24	0.44	30.57	7.1544	-1.9964	-0.0232
629	SLU 17	0.24	0.43	30.58	7.1556	-1.9968	-0.024
629	SLU 18	0.24	0.46	31.29	7.3259	-2.043	-0.0219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
629	SLU 19	0.24	0.45	31.29	7.3271	-2.0434	-0.0227
629	SLU 20	0.24	0.47	31.66	7.4118	-2.0674	-0.0223
629	SLU 21	0.24	0.46	31.67	7.413	-2.0678	-0.0231
629	SLU 22	0.23	0.46	29.46	6.904	-1.9246	-0.0213
629	SLU 23	0.23	0.44	29.47	6.906	-1.9253	-0.0226
629	SLU 24	0.24	0.48	30.08	7.0473	-1.9651	-0.0215
629	SLU 25	0.24	0.46	30.09	7.0485	-1.9655	-0.0222
629	SLU 26	0.24	0.44	29.84	6.992	-1.9497	-0.023
629	SLU 27	0.24	0.48	30.46	7.1333	-1.9895	-0.0219
629	SLU 28	0.24	0.47	30.46	7.1345	-1.9899	-0.0226
629	SLU 29	0.24	0.47	30.21	7.0759	-1.9734	-0.0221
629	SLU 30	0.24	0.46	30.22	7.0771	-1.9738	-0.0229
629	SLU 31	0.25	0.52	32.89	7.7072	-2.148	-0.0215
629	SLU 32	0.26	0.56	33.5	7.8486	-2.1878	-0.0203
629	SLU 33	0.26	0.54	33.51	7.8498	-2.1882	-0.0211
629	SLU 34	0.26	0.52	33.26	7.7932	-2.1724	-0.0219
629	SLU 35	0.26	0.56	33.87	7.9346	-2.2122	-0.0207
629	SLU 36	0.26	0.55	33.88	7.9358	-2.2126	-0.0215
629	SLU 37	0.26	0.55	33.63	7.8772	-2.1961	-0.021
629	SLU 38	0.26	0.54	33.64	7.8784	-2.1965	-0.0218
629	SLU 39	0.26	0.58	34.34	8.0486	-2.2428	-0.0197
629	SLU 40	0.26	0.56	34.35	8.0498	-2.2431	-0.0205
629	SLU 41	0.26	0.58	34.72	8.1346	-2.2672	-0.0201
629	SLU 42	0.26	0.57	34.72	8.1358	-2.2675	-0.0209
629	SLU 43	0.27	0.41	33.28	7.7877	-2.1738	-0.0313
629	SLU 44	0.27	0.39	33.29	7.7897	-2.1745	-0.0326
629	SLU 45	0.27	0.43	33.9	7.9311	-2.2143	-0.0315
629	SLU 46	0.27	0.42	33.91	7.9323	-2.2147	-0.0322
629	SLU 47	0.27	0.39	33.66	7.8757	-2.1989	-0.033
629	SLU 48	0.27	0.44	34.27	8.0171	-2.2387	-0.0319
629	SLU 49	0.27	0.42	34.28	8.0183	-2.2391	-0.0326
629	SLU 50	0.27	0.42	34.03	7.9597	-2.2226	-0.0321
629	SLU 51	0.27	0.41	34.04	7.9609	-2.223	-0.0329
629	SLU 52	0.28	0.47	36.71	8.591	-2.3972	-0.0315
629	SLU 53	0.29	0.51	37.32	8.7324	-2.437	-0.0303
629	SLU 54	0.29	0.5	37.32	8.7336	-2.4374	-0.0311
629	SLU 55	0.29	0.48	37.08	8.677	-2.4216	-0.0319
629	SLU 56	0.29	0.52	37.69	8.8183	-2.4614	-0.0307
629	SLU 57	0.29	0.5	37.7	8.8195	-2.4618	-0.0315
629	SLU 58	0.29	0.51	37.45	8.761	-2.4453	-0.031
629	SLU 59	0.29	0.49	37.45	8.7621	-2.4457	-0.0318
629	SLU 60	0.29	0.53	38.16	8.9324	-2.492	-0.0297
629	SLU 61	0.29	0.51	38.17	8.9336	-2.4924	-0.0305
629	SLU 62	0.3	0.53	38.54	9.0184	-2.5164	-0.0301
629	SLU 63	0.3	0.52	38.54	9.0196	-2.5168	-0.0309
629	SLU 64	0.29	0.52	36.33	8.5105	-2.3736	-0.0292
629	SLU 65	0.29	0.5	36.34	8.5125	-2.3742	-0.0305
629	SLU 66	0.29	0.54	36.95	8.6539	-2.414	-0.0293
629	SLU 67	0.29	0.53	36.96	8.6551	-2.4144	-0.0301
629	SLU 68	0.29	0.51	36.72	8.5985	-2.3986	-0.0308
629	SLU 69	0.3	0.55	37.33	8.7399	-2.4384	-0.0297
629	SLU 70	0.3	0.53	37.34	8.7411	-2.4388	-0.0305
629	SLU 71	0.3	0.54	37.08	8.6825	-2.4224	-0.0299
629	SLU 72	0.3	0.52	37.09	8.6837	-2.4228	-0.0307
629	SLU 73	0.31	0.58	39.76	9.3138	-2.5969	-0.0293
629	SLU 74	0.31	0.62	40.37	9.4551	-2.6368	-0.0281
629	SLU 75	0.31	0.61	40.38	9.4563	-2.6371	-0.0289
629	SLU 76	0.31	0.59	40.14	9.3998	-2.6213	-0.0297
629	SLU 77	0.32	0.63	40.75	9.5411	-2.6612	-0.0285
629	SLU 78	0.32	0.62	40.76	9.5423	-2.6615	-0.0293
629	SLU 79	0.32	0.62	40.5	9.4837	-2.6451	-0.0288
629	SLU 80	0.31	0.6	40.51	9.4849	-2.6455	-0.0296
629	SLU 81	0.32	0.64	41.21	9.6552	-2.6917	-0.0275
629	SLU 82	0.32	0.63	41.22	9.6564	-2.6921	-0.0283
629	SLU 83	0.32	0.65	41.59	9.7412	-2.7161	-0.0279
629	SLU 84	0.32	0.63	41.6	9.7424	-2.7165	-0.0287
629	SLE RA 1	0.22	0.38	27.28	6.3877	-1.7819	-0.0229
629	SLE RA 2	0.22	0.36	27.28	6.389	-1.7824	-0.0238
629	SLE RA 3	0.22	0.39	27.69	6.4833	-1.8089	-0.023
629	SLE RA 4	0.22	0.38	27.69	6.4841	-1.8092	-0.0235
629	SLE RA 5	0.22	0.37	27.53	6.4464	-1.7986	-0.024
629	SLE RA 6	0.22	0.39	27.94	6.5406	-1.8252	-0.0233
629	SLE RA 7	0.22	0.39	27.95	6.5414	-1.8254	-0.0238
629	SLE RA 8	0.22	0.39	27.78	6.5023	-1.8145	-0.0234
629	SLE RA 9	0.22	0.38	27.78	6.5031	-1.8147	-0.024
629	SLE RA 10	0.23	0.42	29.56	6.9232	-1.9308	-0.023
629	SLE RA 11	0.23	0.44	29.97	7.0174	-1.9574	-0.0222
629	SLE RA 12	0.23	0.44	29.97	7.0182	-1.9576	-0.0228
629	SLE RA 13	0.23	0.42	29.81	6.9805	-1.9471	-0.0233
629	SLE RA 14	0.24	0.45	30.22	7.0748	-1.9736	-0.0225
629	SLE RA 15	0.24	0.44	30.22	7.0756	-1.9739	-0.023
629	SLE RA 16	0.23	0.44	30.06	7.0365	-1.9629	-0.0227
629	SLE RA 17	0.23	0.43	30.06	7.0373	-1.9632	-0.0232
629	SLE RA 18	0.24	0.46	30.53	7.1508	-1.994	-0.0218
629	SLE RA 19	0.24	0.45	30.54	7.1516	-1.9943	-0.0223
629	SLE RA 20	0.24	0.46	30.78	7.2081	-2.0103	-0.0221
629	SLE RA 21	0.24	0.45	30.79	7.2089	-2.0106	-0.0226
629	SLE FR 1	0.22	0.38	27.28	6.3877	-1.7819	-0.0229
629	SLE FR 2	0.22	0.37	27.28	6.388	-1.782	-0.0231
629	SLE FR 3	0.22	0.38	27.38	6.4106	-1.7884	-0.023

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
629	SLE FR 4	0.22	0.4	28.25	6.6169	-1.8457	-0.0228
629	SLE FR 5	0.22	0.4	28.35	6.6396	-1.8521	-0.0227
629	SLE FR 6	0.23	0.42	28.9	6.7693	-1.888	-0.0224
629	SLE QP 1	0.22	0.38	27.28	6.3877	-1.7819	-0.0229
629	SLE QP 2	0.22	0.4	28.25	6.6166	-1.8456	-0.0226
629	SLD 1	2.6	0.8	27.97	6.5512	-1.8229	-0.5918
629	SLD 2	2.6	0.86	27.96	6.5513	-1.8223	-0.5867
629	SLD 3	2.56	0.04	28.33	6.6218	-1.8436	-0.6374
629	SLD 4	2.56	0.1	28.32	6.6219	-1.843	-0.6322
629	SLD 5	1	1.67	27.63	6.4899	-1.8075	-0.1253
629	SLD 6	0.99	1.71	27.62	6.49	-1.8071	-0.1219
629	SLD 7	0.87	-0.88	28.82	6.7252	-1.8765	-0.277
629	SLD 8	0.86	-0.84	28.81	6.7253	-1.8761	-0.2736
629	SLD 9	-0.42	1.64	27.69	6.508	-1.815	0.2284
629	SLD 10	-0.42	1.68	27.69	6.5081	-1.8147	0.2318
629	SLD 11	-0.55	-0.91	28.88	6.7433	-1.884	0.0767
629	SLD 12	-0.55	-0.87	28.87	6.7434	-1.8837	0.0801
629	SLD 13	-2.11	0.71	28.18	6.6114	-1.8481	0.5871
629	SLD 14	-2.12	0.77	28.17	6.6115	-1.8476	0.5922
629	SLD 15	-2.15	-0.06	28.54	6.682	-1.8688	0.5416
629	SLD 16	-2.16	0	28.53	6.6821	-1.8683	0.5467
629	SLV 1	5.78	1.31	27.61	6.4643	-1.7932	-1.3552
629	SLV 2	5.78	1.45	27.59	6.4645	-1.7919	-1.3433
629	SLV 3	5.69	-0.42	28.42	6.624	-1.84	-1.4585
629	SLV 4	5.69	-0.28	28.39	6.6242	-1.8387	-1.4466
629	SLV 5	2.03	3.28	26.84	6.3287	-1.7591	-0.2678
629	SLV 6	2.02	3.37	26.83	6.3288	-1.7583	-0.2601
629	SLV 7	1.73	-2.5	29.53	6.861	-1.9151	-0.6121
629	SLV 8	1.72	-2.41	29.51	6.8611	-1.9143	-0.6043
629	SLV 9	-1.28	3.21	26.99	6.3721	-1.7768	0.5592
629	SLV 10	-1.28	3.31	26.98	6.3723	-1.776	0.5669
629	SLV 11	-1.58	-2.57	29.68	6.9044	-1.9329	0.2149
629	SLV 12	-1.58	-2.48	29.66	6.9046	-1.9321	0.2227
629	SLV 13	-5.24	1.09	28.11	6.609	-1.8524	1.4014
629	SLV 14	-5.25	1.23	28.09	6.6092	-1.8512	1.4133
629	SLV 15	-5.33	-0.65	28.92	6.7687	-1.8992	1.2982
629	SLV 16	-5.34	-0.51	28.89	6.7689	-1.898	1.31
629	CRTFP Ux+	0	0	0	0	0	0
629	CRTFP Ux-	0	0	0	0	0	0
629	CRTFP Uy+	0	0	0	0	0	0
629	CRTFP Uy-	0	0	0	0	0	0
631	SLU 1	1.06	2.24	102.96	36.5594	36.1936	-1.1301
631	SLU 2	1.05	2.16	102.97	36.5614	36.2017	-1.0993
631	SLU 3	1.09	2.33	105.34	37.4025	37.0359	-1.1718
631	SLU 4	1.08	2.28	105.35	37.4037	37.0408	-1.1533
631	SLU 5	1.07	2.19	104.41	37.0699	36.7105	-1.1178
631	SLU 6	1.1	2.36	106.78	37.911	37.5447	-1.1903
631	SLU 7	1.1	2.31	106.79	37.9122	37.5495	-1.1718
631	SLU 8	1.09	2.31	105.83	37.5764	37.211	-1.1671
631	SLU 9	1.09	2.26	105.84	37.5776	37.2159	-1.1486
631	SLU 10	1.15	2.55	116.23	41.2802	40.8772	-1.272
631	SLU 11	1.18	2.72	118.59	42.1213	41.7114	-1.3445
631	SLU 12	1.18	2.67	118.6	42.1225	41.7163	-1.3261
631	SLU 13	1.17	2.58	117.66	41.7887	41.386	-1.2906
631	SLU 14	1.2	2.75	120.03	42.6298	42.2202	-1.363
631	SLU 15	1.2	2.7	120.04	42.631	42.225	-1.3446
631	SLU 16	1.19	2.7	119.08	42.2952	41.8865	-1.3399
631	SLU 17	1.19	2.65	119.09	42.2964	41.8914	-1.3214
631	SLU 18	1.19	2.8	121.89	43.3005	42.8729	-1.3768
631	SLU 19	1.19	2.75	121.9	43.3017	42.8778	-1.3584
631	SLU 20	1.21	2.83	123.32	43.8091	43.3816	-1.3954
631	SLU 21	1.21	2.78	123.33	43.8103	43.3865	-1.3769
631	SLU 22	1.17	2.76	115	40.8581	40.4112	-1.3549
631	SLU 23	1.17	2.68	115.01	40.8601	40.4194	-1.3241
631	SLU 24	1.2	2.85	117.38	41.7012	41.2536	-1.3966
631	SLU 25	1.2	2.8	117.39	41.7024	41.2584	-1.3782
631	SLU 26	1.19	2.71	116.45	41.3686	40.9281	-1.3427
631	SLU 27	1.22	2.88	118.82	42.2097	41.7623	-1.4151
631	SLU 28	1.22	2.83	118.83	42.2109	41.7672	-1.3967
631	SLU 29	1.21	2.82	117.87	41.8751	41.4287	-1.392
631	SLU 30	1.21	2.77	117.87	41.8763	41.4336	-1.3735
631	SLU 31	1.27	3.07	128.27	45.5789	45.0949	-1.4969
631	SLU 32	1.3	3.24	130.63	46.42	45.9291	-1.5694
631	SLU 33	1.3	3.19	130.64	46.4212	45.9339	-1.5509
631	SLU 34	1.29	3.1	129.7	46.0874	45.6036	-1.5154
631	SLU 35	1.32	3.27	132.07	46.9285	46.4378	-1.5879
631	SLU 36	1.32	3.22	132.08	46.9297	46.4427	-1.5694
631	SLU 37	1.31	3.21	131.12	46.5939	46.1042	-1.5647
631	SLU 38	1.31	3.17	131.13	46.5951	46.109	-1.5462
631	SLU 39	1.31	3.32	133.93	47.5992	47.0905	-1.6017
631	SLU 40	1.31	3.27	133.94	47.6004	47.0954	-1.5832
631	SLU 41	1.33	3.35	135.36	48.1077	47.5992	-1.6202
631	SLU 42	1.33	3.3	135.37	48.1089	47.6041	-1.6018
631	SLU 43	1.33	2.73	129.72	46.0534	45.6057	-1.392
631	SLU 44	1.33	2.65	129.73	46.0554	45.6138	-1.3612
631	SLU 45	1.36	2.82	132.1	46.8965	46.448	-1.4337
631	SLU 46	1.36	2.78	132.11	46.8977	46.4529	-1.4152
631	SLU 47	1.35	2.69	131.17	46.5639	46.1225	-1.3797
631	SLU 48	1.38	2.86	133.54	47.405	46.9567	-1.4522
631	SLU 49	1.38	2.81	133.55	47.4062	46.9616	-1.4338

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
631	SLU 50	1.37	2.8	132.59	47.0704	46.6231	-1.429
631	SLU 51	1.37	2.75	132.59	47.0716	46.628	-1.4106
631	SLU 52	1.42	3.05	142.99	50.7742	50.2893	-1.534
631	SLU 53	1.46	3.21	145.35	51.6153	51.1235	-1.6065
631	SLU 54	1.46	3.17	145.36	51.6165	51.1284	-1.588
631	SLU 55	1.44	3.08	144.42	51.2827	50.798	-1.5525
631	SLU 56	1.48	3.25	146.79	52.1238	51.6322	-1.625
631	SLU 57	1.47	3.2	146.8	52.125	51.6371	-1.6065
631	SLU 58	1.47	3.19	145.84	51.7892	51.2986	-1.6018
631	SLU 59	1.46	3.14	145.85	51.7904	51.3035	-1.5833
631	SLU 60	1.47	3.29	148.65	52.7945	52.2849	-1.6388
631	SLU 61	1.47	3.24	148.66	52.7957	52.2898	-1.6203
631	SLU 62	1.49	3.33	150.08	53.303	52.7936	-1.6573
631	SLU 63	1.49	3.28	150.09	53.3042	52.7985	-1.6388
631	SLU 64	1.45	3.25	141.76	50.352	49.8233	-1.6168
631	SLU 65	1.45	3.17	141.77	50.354	49.8314	-1.5861
631	SLU 66	1.48	3.34	144.14	51.1952	50.6656	-1.6586
631	SLU 67	1.48	3.29	144.15	51.1964	50.6705	-1.6401
631	SLU 68	1.47	3.2	143.21	50.8626	50.3401	-1.6046
631	SLU 69	1.5	3.37	145.58	51.7037	51.1743	-1.6771
631	SLU 70	1.5	3.33	145.59	51.7049	51.1792	-1.6586
631	SLU 71	1.49	3.32	144.62	51.3691	50.8407	-1.6539
631	SLU 72	1.49	3.27	144.63	51.3703	50.8456	-1.6354
631	SLU 73	1.54	3.56	155.03	55.0728	54.5069	-1.7588
631	SLU 74	1.58	3.73	157.39	55.914	55.3411	-1.8313
631	SLU 75	1.57	3.68	157.4	55.9152	55.346	-1.8128
631	SLU 76	1.56	3.6	156.46	55.5814	55.0156	-1.7773
631	SLU 77	1.59	3.76	158.83	56.4225	55.8498	-1.8498
631	SLU 78	1.59	3.72	158.84	56.4237	55.8547	-1.8314
631	SLU 79	1.58	3.71	157.88	56.0879	55.5162	-1.8266
631	SLU 80	1.58	3.66	157.89	56.0891	55.5211	-1.8082
631	SLU 81	1.59	3.81	160.69	57.0932	56.5026	-1.8636
631	SLU 82	1.59	3.76	160.7	57.0944	56.5074	-1.8452
631	SLU 83	1.61	3.84	162.12	57.6017	57.0113	-1.8821
631	SLU 84	1.6	3.79	162.13	57.6029	57.0162	-1.8637
631	SLE RA 1	1.09	2.39	106.4	37.7876	37.3986	-1.1943
631	SLE RA 2	1.09	2.33	106.41	37.7889	37.4041	-1.1738
631	SLE RA 3	1.11	2.45	107.99	38.3497	37.9602	-1.2221
631	SLE RA 4	1.11	2.41	107.99	38.3505	37.9635	-1.2098
631	SLE RA 5	1.1	2.36	107.36	38.1279	37.7432	-1.1861
631	SLE RA 6	1.12	2.47	108.94	38.6887	38.2993	-1.2345
631	SLE RA 7	1.12	2.44	108.95	38.6895	38.3026	-1.2221
631	SLE RA 8	1.11	2.43	108.31	38.4656	38.0769	-1.219
631	SLE RA 9	1.11	2.4	108.32	38.4664	38.0802	-1.2067
631	SLE RA 10	1.15	2.6	115.24	40.9348	40.5211	-1.2889
631	SLE RA 11	1.17	2.71	116.82	41.4955	41.0772	-1.3373
631	SLE RA 12	1.17	2.68	116.83	41.4963	41.0804	-1.325
631	SLE RA 13	1.16	2.62	116.2	41.2738	40.8602	-1.3013
631	SLE RA 14	1.19	2.73	117.78	41.8345	41.4163	-1.3496
631	SLE RA 15	1.18	2.7	117.78	41.8353	41.4196	-1.3373
631	SLE RA 16	1.18	2.69	117.14	41.6115	41.1939	-1.3342
631	SLE RA 17	1.18	2.66	117.15	41.6123	41.1972	-1.3219
631	SLE RA 18	1.18	2.76	119.02	42.2817	41.8515	-1.3588
631	SLE RA 19	1.18	2.73	119.03	42.2825	41.8548	-1.3465
631	SLE RA 20	1.19	2.78	119.97	42.6207	42.1906	-1.3712
631	SLE RA 21	1.19	2.75	119.98	42.6215	42.1939	-1.3589
631	SLE FR 1	1.09	2.39	106.4	37.7876	37.3986	-1.1943
631	SLE FR 2	1.09	2.38	106.4	37.7878	37.3997	-1.1902
631	SLE FR 3	1.09	2.4	106.78	37.9232	37.5343	-1.1992
631	SLE FR 4	1.12	2.49	110.19	39.1361	38.7356	-1.2396
631	SLE FR 5	1.12	2.51	110.57	39.2714	38.8702	-1.2486
631	SLE FR 6	1.14	2.57	112.71	40.0346	39.6251	-1.2766
631	SLE QP 1	1.09	2.39	106.4	37.7876	37.3986	-1.1943
631	SLE QP 2	1.12	2.5	110.19	39.1358	38.7345	-1.2437
631	SLD 1	10.73	3.62	107.08	37.8785	38.0183	-5.1985
631	SLD 2	10.7	3.95	107.09	37.8938	38.0205	-5.2904
631	SLD 3	10.57	0.63	107.84	38.0818	38.34	-4.1019
631	SLD 4	10.54	0.97	107.85	38.0971	38.3423	-4.1938
631	SLD 5	4.25	7.3	108.1	38.4474	38.0313	-4.0766
631	SLD 6	4.23	7.53	108.1	38.4576	38.0328	-4.1376
631	SLD 7	3.71	-2.65	110.63	39.1252	39.1037	-0.4212
631	SLD 8	3.69	-2.43	110.64	39.1354	39.1052	-0.4822
631	SLD 9	-1.46	7.43	109.73	39.1363	38.3638	-2.0051
631	SLD 10	-1.48	7.65	109.74	39.1464	38.3653	-2.0661
631	SLD 11	-2	-2.53	112.27	39.814	39.4362	1.6503
631	SLD 12	-2.02	-2.3	112.27	39.8242	39.4377	1.5893
631	SLD 13	-8.3	4.03	112.52	40.1745	39.1267	1.7065
631	SLD 14	-8.33	4.37	112.53	40.1898	39.129	1.6145
631	SLD 15	-8.46	1.04	113.28	40.3779	39.4485	2.8031
631	SLD 16	-8.49	1.38	113.29	40.3931	39.4507	2.7112
631	SLV 1	23.58	4.99	102.94	36.1998	37.0693	-10.45
631	SLV 2	23.51	5.78	102.96	36.2353	37.0745	-10.664
631	SLV 3	23.21	-1.77	104.67	36.6633	37.7976	-7.9668
631	SLV 4	23.14	-0.98	104.68	36.6988	37.8029	-8.1808
631	SLV 5	8.43	13.37	105.39	37.5458	37.1293	-7.7341
631	SLV 6	8.39	13.88	105.4	37.5689	37.1327	-7.8735
631	SLV 7	7.19	-9.17	111.15	39.0908	39.5573	0.5432
631	SLV 8	7.15	-8.66	111.16	39.1139	39.5607	0.4038
631	SLV 9	-4.91	13.66	109.21	39.1577	37.9083	-2.8911
631	SLV 10	-4.96	14.17	109.22	39.1808	37.9117	-3.0305

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
631	SLV 11	-6.15	-8.88	114.97	40.7027	40.3363	5.3862
631	SLV 12	-6.2	-8.37	114.98	40.7258	40.3397	5.2468
631	SLV 13	-20.91	5.98	115.69	41.5728	39.6661	5.6935
631	SLV 14	-20.98	6.77	115.7	41.6083	39.6714	5.4795
631	SLV 15	-21.28	-0.78	117.41	42.0363	40.3945	8.1767
631	SLV 16	-21.35	0.01	117.43	42.0718	40.3998	7.9627
631	CRTFP Ux+	0	0	0	0	0	0
631	CRTFP Ux-	0	0	0	0	0	0
631	CRTFP Uy+	0	0	0	0	0	0
631	CRTFP Uy-	0	0	0	0	0	0
632	SLU 1	0.42	0.84	40.35	1.5857	-2.3129	0.0063
632	SLU 2	0.42	0.82	40.36	1.5823	-2.3136	0.0049
632	SLU 3	0.43	0.87	41.28	1.6197	-2.3666	0.0068
632	SLU 4	0.43	0.86	41.29	1.6177	-2.3671	0.006
632	SLU 5	0.43	0.83	40.92	1.6048	-2.3454	0.0047
632	SLU 6	0.44	0.88	41.84	1.6422	-2.3984	0.0066
632	SLU 7	0.44	0.87	41.85	1.6401	-2.3989	0.0058
632	SLU 8	0.43	0.86	41.46	1.6307	-2.3765	0.0059
632	SLU 9	0.43	0.85	41.47	1.6286	-2.3769	0.0051
632	SLU 10	0.45	0.95	45.5	1.8015	-2.6075	0.0084
632	SLU 11	0.46	1.01	46.43	1.8389	-2.6605	0.0102
632	SLU 12	0.46	1	46.44	1.8369	-2.661	0.0094
632	SLU 13	0.46	0.96	46.06	1.824	-2.6393	0.0082
632	SLU 14	0.47	1.02	46.98	1.8614	-2.6923	0.01
632	SLU 15	0.47	1.01	46.99	1.8593	-2.6928	0.0092
632	SLU 16	0.47	1	46.61	1.8499	-2.6704	0.0093
632	SLU 17	0.47	0.99	46.61	1.8478	-2.6708	0.0085
632	SLU 18	0.47	1.04	47.7	1.8989	-2.7327	0.0112
632	SLU 19	0.47	1.02	47.7	1.8968	-2.7332	0.0104
632	SLU 20	0.47	1.05	48.25	1.9213	-2.7645	0.011
632	SLU 21	0.47	1.03	48.26	1.9193	-2.765	0.0102
632	SLU 22	0.46	1.03	45.05	1.797	-2.5813	0.0117
632	SLU 23	0.46	1	45.06	1.7936	-2.5821	0.0104
632	SLU 24	0.47	1.06	45.98	1.831	-2.635	0.0122
632	SLU 25	0.47	1.04	45.99	1.8289	-2.6355	0.0114
632	SLU 26	0.47	1.01	45.61	1.8161	-2.6139	0.0102
632	SLU 27	0.48	1.07	46.54	1.8535	-2.6668	0.012
632	SLU 28	0.48	1.05	46.54	1.8514	-2.6673	0.0112
632	SLU 29	0.48	1.05	46.16	1.8419	-2.6449	0.0113
632	SLU 30	0.48	1.03	46.17	1.8399	-2.6454	0.0105
632	SLU 31	0.5	1.14	50.2	2.0128	-2.876	0.0138
632	SLU 32	0.51	1.2	51.13	2.0502	-2.9289	0.0157
632	SLU 33	0.51	1.18	51.13	2.0481	-2.9294	0.0149
632	SLU 34	0.5	1.15	50.76	2.0352	-2.9078	0.0136
632	SLU 35	0.51	1.21	51.68	2.0727	-2.9607	0.0155
632	SLU 36	0.51	1.19	51.69	2.0706	-2.9612	0.0147
632	SLU 37	0.51	1.19	51.3	2.0611	-2.9388	0.0148
632	SLU 38	0.51	1.17	51.31	2.0591	-2.9393	0.014
632	SLU 39	0.51	1.23	52.4	2.1101	-3.0012	0.0167
632	SLU 40	0.51	1.21	52.4	2.1081	-3.0016	0.0159
632	SLU 41	0.52	1.24	52.95	2.1326	-3.033	0.0165
632	SLU 42	0.52	1.22	52.96	2.1306	-3.0334	0.0156
632	SLU 43	0.53	1.03	50.84	1.989	-2.9147	0.0063
632	SLU 44	0.53	1	50.85	1.9856	-2.9155	0.005
632	SLU 45	0.54	1.06	51.78	2.023	-2.9684	0.0068
632	SLU 46	0.54	1.05	51.79	2.0209	-2.9689	0.006
632	SLU 47	0.54	1.01	51.41	2.0081	-2.9473	0.0048
632	SLU 48	0.55	1.07	52.33	2.0455	-3.0002	0.0066
632	SLU 49	0.55	1.06	52.34	2.0434	-3.0007	0.0058
632	SLU 50	0.55	1.05	51.96	2.034	-2.9783	0.0059
632	SLU 51	0.55	1.04	51.96	2.0319	-2.9788	0.0051
632	SLU 52	0.56	1.14	56	2.2048	-3.2094	0.0084
632	SLU 53	0.58	1.2	56.92	2.2422	-3.2623	0.0103
632	SLU 54	0.58	1.18	56.93	2.2401	-3.2628	0.0095
632	SLU 55	0.57	1.15	56.55	2.2273	-3.2412	0.0082
632	SLU 56	0.58	1.21	57.48	2.2647	-3.2941	0.0101
632	SLU 57	0.58	1.2	57.48	2.2626	-3.2946	0.0093
632	SLU 58	0.58	1.19	57.1	2.2532	-3.2722	0.0094
632	SLU 59	0.58	1.17	57.11	2.2511	-3.2727	0.0085
632	SLU 60	0.58	1.23	58.19	2.3021	-3.3346	0.0113
632	SLU 61	0.58	1.21	58.2	2.3001	-3.335	0.0104
632	SLU 62	0.59	1.24	58.75	2.3246	-3.3664	0.011
632	SLU 63	0.59	1.22	58.75	2.3226	-3.3668	0.0102
632	SLU 64	0.58	1.22	55.54	2.2003	-3.1831	0.0117
632	SLU 65	0.58	1.19	55.55	2.1969	-3.1839	0.0104
632	SLU 66	0.59	1.25	56.48	2.2343	-3.2369	0.0122
632	SLU 67	0.59	1.23	56.48	2.2322	-3.2373	0.0114
632	SLU 68	0.58	1.2	56.11	2.2193	-3.2157	0.0102
632	SLU 69	0.59	1.26	57.03	2.2567	-3.2687	0.012
632	SLU 70	0.59	1.24	57.04	2.2547	-3.2691	0.0112
632	SLU 71	0.59	1.24	56.65	2.2452	-3.2467	0.0113
632	SLU 72	0.59	1.22	56.66	2.2432	-3.2472	0.0105
632	SLU 73	0.61	1.33	60.7	2.4161	-3.4778	0.0139
632	SLU 74	0.62	1.39	61.62	2.4535	-3.5308	0.0157
632	SLU 75	0.62	1.37	61.63	2.4514	-3.5312	0.0149
632	SLU 76	0.61	1.34	61.25	2.4385	-3.5096	0.0136
632	SLU 77	0.62	1.4	62.18	2.4759	-3.5626	0.0155
632	SLU 78	0.62	1.38	62.18	2.4739	-3.563	0.0147
632	SLU 79	0.62	1.38	61.8	2.4644	-3.5406	0.0148
632	SLU 80	0.62	1.36	61.8	2.4624	-3.5411	0.014

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
632	SLU 81	0.62	1.41	62.89	2.5134	-3.603	0.0167
632	SLU 82	0.62	1.4	62.9	2.5114	-3.6035	0.0159
632	SLU 83	0.63	1.43	63.45	2.5359	-3.6348	0.0165
632	SLU 84	0.63	1.41	63.45	2.5338	-3.6353	0.0157
632	SLE RA 1	0.43	0.9	41.69	1.6461	-2.3896	0.0078
632	SLE RA 2	0.43	0.88	41.7	1.6438	-2.3901	0.0069
632	SLE RA 3	0.44	0.92	42.32	1.6687	-2.4254	0.0082
632	SLE RA 4	0.44	0.91	42.32	1.6674	-2.4257	0.0076
632	SLE RA 5	0.44	0.88	42.07	1.6588	-2.4113	0.0068
632	SLE RA 6	0.45	0.92	42.69	1.6837	-2.4466	0.008
632	SLE RA 7	0.45	0.91	42.69	1.6824	-2.4469	0.0075
632	SLE RA 8	0.44	0.91	42.43	1.6761	-2.432	0.0076
632	SLE RA 9	0.44	0.9	42.44	1.6747	-2.4323	0.007
632	SLE RA 10	0.45	0.97	45.13	1.7899	-2.586	0.0092
632	SLE RA 11	0.46	1.01	45.75	1.8149	-2.6213	0.0105
632	SLE RA 12	0.46	1	45.75	1.8135	-2.6216	0.0099
632	SLE RA 13	0.46	0.98	45.5	1.8049	-2.6072	0.0091
632	SLE RA 14	0.47	1.02	46.12	1.8299	-2.6425	0.0103
632	SLE RA 15	0.47	1	46.12	1.8285	-2.6428	0.0098
632	SLE RA 16	0.46	1	45.86	1.8222	-2.6279	0.0099
632	SLE RA 17	0.46	0.99	45.87	1.8208	-2.6282	0.0093
632	SLE RA 18	0.46	1.03	46.59	1.8548	-2.6695	0.0111
632	SLE RA 19	0.46	1.02	46.6	1.8535	-2.6698	0.0106
632	SLE RA 20	0.47	1.03	46.96	1.8698	-2.6907	0.011
632	SLE RA 21	0.47	1.02	46.97	1.8685	-2.691	0.0105
632	SLE FR 1	0.43	0.9	41.69	1.6461	-2.3896	0.0078
632	SLE FR 2	0.43	0.89	41.69	1.6456	-2.3897	0.0076
632	SLE FR 3	0.44	0.9	41.84	1.6521	-2.3981	0.0078
632	SLE FR 4	0.44	0.93	43.16	1.7083	-2.4736	0.0086
632	SLE FR 5	0.44	0.94	43.31	1.7147	-2.482	0.0088
632	SLE FR 6	0.45	0.96	44.14	1.7505	-2.5295	0.0095
632	SLE QP 1	0.43	0.9	41.69	1.6461	-2.3896	0.0078
632	SLE QP 2	0.44	0.94	43.16	1.7087	-2.4735	0.0088
632	SLD 1	4.04	1.48	41.68	1.4506	-2.3885	-0.1985
632	SLD 2	4.04	1.63	41.66	1.4633	-2.3864	-0.1876
632	SLD 3	3.98	0.39	42.05	1.3861	-2.4129	-0.2563
632	SLD 4	3.99	0.54	42.03	1.3987	-2.4109	-0.2454
632	SLD 5	1.61	2.73	42.16	1.7269	-2.4113	0.0323
632	SLD 6	1.61	2.83	42.15	1.7353	-2.4099	0.0395
632	SLD 7	1.42	-0.92	43.39	1.5117	-2.4929	-0.1603
632	SLD 8	1.42	-0.82	43.38	1.5201	-2.4915	-0.1531
632	SLD 9	-0.54	2.69	42.95	1.8973	-2.4556	0.1707
632	SLD 10	-0.54	2.79	42.93	1.9057	-2.4542	0.178
632	SLD 11	-0.72	-0.96	44.17	1.6821	-2.5372	-0.0219
632	SLD 12	-0.72	-0.86	44.16	1.6906	-2.5358	-0.0146
632	SLD 13	-3.1	1.33	44.3	2.0187	-2.5362	0.263
632	SLD 14	-3.1	1.48	44.27	2.0314	-2.5341	0.2739
632	SLD 15	-3.16	0.24	44.66	1.9541	-2.5606	0.2052
632	SLD 16	-3.16	0.39	44.64	1.9668	-2.5586	0.2162
632	SLV 1	8.85	2.18	39.71	1.1024	-2.2752	-0.4781
632	SLV 2	8.86	2.53	39.66	1.1319	-2.2705	-0.4526
632	SLV 3	8.73	-0.3	40.55	0.9563	-2.331	-0.609
632	SLV 4	8.73	0.05	40.5	0.9858	-2.3263	-0.5835
632	SLV 5	3.16	5.01	40.86	1.7432	-2.3302	0.0568
632	SLV 6	3.16	5.24	40.83	1.7624	-2.3272	0.0734
632	SLV 7	2.73	-3.26	43.66	1.2563	-2.5163	-0.3796
632	SLV 8	2.74	-3.03	43.63	1.2755	-2.5132	-0.363
632	SLV 9	-1.85	4.9	42.7	2.1419	-2.4339	0.3806
632	SLV 10	-1.85	5.13	42.66	2.1612	-2.4308	0.3972
632	SLV 11	-2.28	-3.37	45.5	1.655	-2.6199	-0.0558
632	SLV 12	-2.28	-3.14	45.46	1.6743	-2.6169	-0.0392
632	SLV 13	-7.85	1.82	45.82	2.4316	-2.6208	0.6012
632	SLV 14	-7.84	2.17	45.77	2.4611	-2.616	0.6266
632	SLV 15	-7.98	-0.66	46.66	2.2856	-2.6766	0.4702
632	SLV 16	-7.97	-0.31	46.61	2.3151	-2.6719	0.4957
632	CRTFP Ux+	0	0	0	0	0	0
632	CRTFP Ux-	0	0	0	0	0	0
632	CRTFP Uy+	0	0	0	0	0	0
632	CRTFP Uy-	0	0	0	0	0	0
633	SLU 1	0.52	0.91	49.12	-1.3217	-0.6109	-0.0161
633	SLU 2	0.52	0.88	49.14	-1.3267	-0.6111	-0.0163
633	SLU 3	0.53	0.95	50.27	-1.3557	-0.6251	-0.0167
633	SLU 4	0.53	0.93	50.27	-1.3587	-0.6252	-0.0168
633	SLU 5	0.53	0.89	49.82	-1.3441	-0.6196	-0.0168
633	SLU 6	0.54	0.96	50.94	-1.3731	-0.6336	-0.0171
633	SLU 7	0.54	0.94	50.95	-1.3761	-0.6337	-0.0173
633	SLU 8	0.54	0.93	50.48	-1.3565	-0.6279	-0.0171
633	SLU 9	0.54	0.91	50.49	-1.3595	-0.628	-0.0172
633	SLU 10	0.56	1.03	55.39	-1.4743	-0.6889	-0.0179
633	SLU 11	0.57	1.1	56.52	-1.5033	-0.703	-0.0182
633	SLU 12	0.57	1.08	56.53	-1.5063	-0.7031	-0.0183
633	SLU 13	0.57	1.04	56.07	-1.4917	-0.6974	-0.0183
633	SLU 14	0.58	1.11	57.2	-1.5207	-0.7115	-0.0187
633	SLU 15	0.58	1.09	57.21	-1.5237	-0.7116	-0.0188
633	SLU 16	0.57	1.08	56.73	-1.5041	-0.7058	-0.0186
633	SLU 17	0.57	1.07	56.74	-1.5071	-0.7059	-0.0187
633	SLU 18	0.57	1.13	58.06	-1.5325	-0.7221	-0.0183
633	SLU 19	0.57	1.11	58.07	-1.5355	-0.7222	-0.0184
633	SLU 20	0.58	1.14	58.74	-1.55	-0.7306	-0.0188
633	SLU 21	0.58	1.12	58.75	-1.553	-0.7307	-0.0189

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
633	SLU 22	0.57	1.12	54.86	-1.4426	-0.6829	-0.0172
633	SLU 23	0.57	1.09	54.87	-1.4476	-0.6831	-0.0175
633	SLU 24	0.58	1.15	56	-1.4765	-0.6972	-0.0178
633	SLU 25	0.59	1.14	56.01	-1.4795	-0.6973	-0.0179
633	SLU 26	0.58	1.1	55.55	-1.465	-0.6916	-0.0179
633	SLU 27	0.59	1.17	56.67	-1.494	-0.7057	-0.0182
633	SLU 28	0.59	1.15	56.68	-1.4969	-0.7058	-0.0184
633	SLU 29	0.59	1.14	56.21	-1.4774	-0.6999	-0.0182
633	SLU 30	0.59	1.12	56.22	-1.4804	-0.7	-0.0183
633	SLU 31	0.61	1.24	61.13	-1.5952	-0.761	-0.019
633	SLU 32	0.62	1.31	62.25	-1.6241	-0.7751	-0.0193
633	SLU 33	0.62	1.29	62.26	-1.6271	-0.7752	-0.0194
633	SLU 34	0.62	1.25	61.8	-1.6126	-0.7695	-0.0194
633	SLU 35	0.63	1.32	62.93	-1.6416	-0.7836	-0.0198
633	SLU 36	0.63	1.3	62.94	-1.6445	-0.7837	-0.0199
633	SLU 37	0.62	1.29	62.47	-1.625	-0.7778	-0.0197
633	SLU 38	0.63	1.27	62.48	-1.628	-0.7779	-0.0198
633	SLU 39	0.62	1.34	63.79	-1.6534	-0.7942	-0.0194
633	SLU 40	0.62	1.32	63.8	-1.6564	-0.7943	-0.0195
633	SLU 41	0.63	1.35	64.47	-1.6708	-0.8027	-0.0199
633	SLU 42	0.63	1.33	64.48	-1.6738	-0.8028	-0.02
633	SLU 43	0.66	1.11	61.9	-1.6768	-0.7694	-0.0206
633	SLU 44	0.66	1.08	61.91	-1.6817	-0.7696	-0.0208
633	SLU 45	0.67	1.15	63.04	-1.7107	-0.7837	-0.0211
633	SLU 46	0.67	1.13	63.05	-1.7137	-0.7838	-0.0213
633	SLU 47	0.67	1.09	62.59	-1.6992	-0.7781	-0.0213
633	SLU 48	0.68	1.16	63.71	-1.7281	-0.7922	-0.0216
633	SLU 49	0.68	1.14	63.72	-1.7311	-0.7923	-0.0217
633	SLU 50	0.68	1.13	63.25	-1.7116	-0.7864	-0.0215
633	SLU 51	0.68	1.12	63.26	-1.7146	-0.7865	-0.0217
633	SLU 52	0.7	1.23	68.17	-1.8293	-0.8475	-0.0223
633	SLU 53	0.71	1.3	69.29	-1.8583	-0.8616	-0.0227
633	SLU 54	0.71	1.28	69.3	-1.8613	-0.8617	-0.0228
633	SLU 55	0.7	1.24	68.84	-1.8468	-0.856	-0.0228
633	SLU 56	0.72	1.31	69.97	-1.8757	-0.8701	-0.0231
633	SLU 57	0.72	1.29	69.98	-1.8787	-0.8702	-0.0232
633	SLU 58	0.71	1.29	69.51	-1.8592	-0.8643	-0.0231
633	SLU 59	0.71	1.27	69.51	-1.8622	-0.8644	-0.0232
633	SLU 60	0.71	1.33	70.83	-1.8876	-0.8807	-0.0228
633	SLU 61	0.71	1.31	70.84	-1.8906	-0.8808	-0.0229
633	SLU 62	0.72	1.34	71.51	-1.905	-0.8892	-0.0233
633	SLU 63	0.72	1.32	71.52	-1.908	-0.8893	-0.0234
633	SLU 64	0.71	1.32	67.63	-1.7976	-0.8415	-0.0217
633	SLU 65	0.71	1.29	67.64	-1.8026	-0.8417	-0.0219
633	SLU 66	0.72	1.36	68.77	-1.8316	-0.8557	-0.0222
633	SLU 67	0.72	1.34	68.78	-1.8346	-0.8559	-0.0224
633	SLU 68	0.72	1.3	68.32	-1.82	-0.8502	-0.0224
633	SLU 69	0.73	1.37	69.45	-1.849	-0.8642	-0.0227
633	SLU 70	0.73	1.35	69.46	-1.852	-0.8643	-0.0228
633	SLU 71	0.73	1.34	68.98	-1.8325	-0.8585	-0.0226
633	SLU 72	0.73	1.32	68.99	-1.8355	-0.8586	-0.0228
633	SLU 73	0.75	1.44	73.9	-1.9502	-0.9195	-0.0234
633	SLU 74	0.76	1.51	75.03	-1.9792	-0.9336	-0.0238
633	SLU 75	0.76	1.49	75.03	-1.9822	-0.9337	-0.0239
633	SLU 76	0.76	1.45	74.58	-1.9676	-0.928	-0.0239
633	SLU 77	0.77	1.52	75.7	-1.9966	-0.9421	-0.0242
633	SLU 78	0.77	1.5	75.71	-1.9996	-0.9422	-0.0243
633	SLU 79	0.76	1.5	75.24	-1.9801	-0.9364	-0.0242
633	SLU 80	0.76	1.48	75.25	-1.9831	-0.9365	-0.0243
633	SLU 81	0.76	1.54	76.57	-2.0085	-0.9527	-0.0239
633	SLU 82	0.76	1.52	76.57	-2.0115	-0.9529	-0.024
633	SLU 83	0.77	1.55	77.24	-2.0259	-0.9612	-0.0244
633	SLU 84	0.77	1.53	77.25	-2.0289	-0.9613	-0.0245
633	SLE RA 1	0.53	0.97	50.76	-1.3562	-0.6315	-0.0165
633	SLE RA 2	0.54	0.95	50.77	-1.3596	-0.6316	-0.0166
633	SLE RA 3	0.54	0.99	51.52	-1.3789	-0.641	-0.0168
633	SLE RA 4	0.54	0.98	51.53	-1.3809	-0.641	-0.0169
633	SLE RA 5	0.54	0.96	51.22	-1.3712	-0.6372	-0.0169
633	SLE RA 6	0.55	1	51.97	-1.3905	-0.6466	-0.0171
633	SLE RA 7	0.55	0.99	51.98	-1.3925	-0.6467	-0.0172
633	SLE RA 8	0.55	0.99	51.67	-1.3794	-0.6428	-0.0171
633	SLE RA 9	0.55	0.97	51.67	-1.3814	-0.6429	-0.0172
633	SLE RA 10	0.56	1.05	54.94	-1.458	-0.6835	-0.0176
633	SLE RA 11	0.57	1.1	55.69	-1.4773	-0.6929	-0.0178
633	SLE RA 12	0.57	1.08	55.7	-1.4793	-0.693	-0.0179
633	SLE RA 13	0.57	1.06	55.39	-1.4696	-0.6892	-0.0179
633	SLE RA 14	0.57	1.1	56.14	-1.4889	-0.6986	-0.0181
633	SLE RA 15	0.57	1.09	56.15	-1.4909	-0.6986	-0.0182
633	SLE RA 16	0.57	1.09	55.84	-1.4778	-0.6947	-0.0181
633	SLE RA 17	0.57	1.07	55.84	-1.4798	-0.6948	-0.0182
633	SLE RA 18	0.57	1.12	56.72	-1.4968	-0.7056	-0.0179
633	SLE RA 19	0.57	1.1	56.73	-1.4988	-0.7057	-0.018
633	SLE RA 20	0.58	1.12	57.17	-1.5084	-0.7113	-0.0182
633	SLE RA 21	0.58	1.11	57.18	-1.5104	-0.7114	-0.0183
633	SLE FR 1	0.53	0.97	50.76	-1.3562	-0.6315	-0.0165
633	SLE FR 2	0.54	0.97	50.76	-1.3569	-0.6315	-0.0165
633	SLE FR 3	0.54	0.97	50.94	-1.3609	-0.6337	-0.0166
633	SLE FR 4	0.55	1.01	52.55	-1.3991	-0.6537	-0.0169
633	SLE FR 5	0.55	1.02	52.73	-1.403	-0.656	-0.017
633	SLE FR 6	0.55	1.04	53.74	-1.4265	-0.6686	-0.0172

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
633	SLE QP 1	0.53	0.97	50.76	-1.3562	-0.6315	-0.0165
633	SLE QP 2	0.55	1.01	52.55	-1.3984	-0.6537	-0.0169
633	SLD 1	4.87	1.66	50.32	-1.6084	-0.6094	-0.0031
633	SLD 2	4.88	1.86	50.28	-1.5911	-0.6089	0.0025
633	SLD 3	4.81	0.36	50.79	-1.7142	-0.6154	-0.0174
633	SLD 4	4.81	0.56	50.76	-1.6969	-0.6149	-0.0118
633	SLD 5	1.94	3.16	51.16	-1.3041	-0.6314	0.0078
633	SLD 6	1.95	3.29	51.14	-1.2927	-0.6311	0.0116
633	SLD 7	1.72	-1.2	52.75	-1.6567	-0.6514	-0.0397
633	SLD 8	1.73	-1.07	52.73	-1.6452	-0.6511	-0.036
633	SLD 9	-0.64	3.1	52.37	-1.1516	-0.6563	0.0022
633	SLD 10	-0.63	3.23	52.35	-1.1401	-0.656	0.0059
633	SLD 11	-0.86	-1.26	53.96	-1.5041	-0.6764	-0.0453
633	SLD 12	-0.85	-1.13	53.93	-1.4927	-0.676	-0.0416
633	SLD 13	-3.72	1.47	54.34	-1.0999	-0.6925	-0.022
633	SLD 14	-3.72	1.67	54.31	-1.0826	-0.692	-0.0164
633	SLD 15	-3.79	0.17	54.82	-1.2057	-0.6986	-0.0363
633	SLD 16	-3.78	0.37	54.78	-1.1884	-0.6981	-0.0307
633	SLV 1	10.66	2.49	47.34	-1.8939	-0.5501	0.0149
633	SLV 2	10.68	2.95	47.26	-1.8536	-0.549	0.0279
633	SLV 3	10.51	-0.47	48.43	-2.1334	-0.5639	-0.0174
633	SLV 4	10.53	-0.01	48.34	-2.0931	-0.5627	-0.0044
633	SLV 5	3.81	5.87	49.35	-1.1908	-0.6019	0.0393
633	SLV 6	3.82	6.17	49.3	-1.1646	-0.6012	0.0478
633	SLV 7	3.3	-4	52.98	-1.9893	-0.6479	-0.0683
633	SLV 8	3.31	-3.7	52.92	-1.963	-0.6471	-0.0598
633	SLV 9	-2.22	5.73	52.18	-0.8338	-0.6603	0.0261
633	SLV 10	-2.21	6.03	52.12	-0.8075	-0.6595	0.0345
633	SLV 11	-2.73	-4.14	55.8	-1.6322	-0.7063	-0.0816
633	SLV 12	-2.72	-3.84	55.75	-1.606	-0.7055	-0.0731
633	SLV 13	-9.44	2.04	56.76	-0.7037	-0.7447	-0.0294
633	SLV 14	-9.42	2.5	56.67	-0.6634	-0.7435	-0.0164
633	SLV 15	-9.59	-0.92	57.84	-0.9432	-0.7585	-0.0617
633	SLV 16	-9.57	-0.46	57.76	-0.9029	-0.7573	-0.0487
633	CRTFP Ux+	0	0	0	0	0	0
633	CRTFP Ux-	0	0	0	0	0	0
633	CRTFP Uy+	0	0	0	0	0	0
633	CRTFP Uy-	0	0	0	0	0	0
634	SLU 1	0.59	0.8	52.82	-1.4174	-0.0005	-0.0398
634	SLU 2	0.59	0.77	52.84	-1.4227	-0.0006	-0.0397
634	SLU 3	0.61	0.84	54.05	-1.4538	-0.0007	-0.0411
634	SLU 4	0.61	0.82	54.06	-1.457	-0.0007	-0.041
634	SLU 5	0.6	0.78	53.57	-1.4414	-0.0007	-0.0405
634	SLU 6	0.62	0.84	54.79	-1.4726	-0.0008	-0.0419
634	SLU 7	0.62	0.82	54.8	-1.4758	-0.0008	-0.0418
634	SLU 8	0.61	0.82	54.29	-1.4549	-0.0008	-0.0414
634	SLU 9	0.61	0.8	54.3	-1.4581	-0.0009	-0.0413
634	SLU 10	0.63	0.91	59.57	-1.581	-0.0006	-0.0439
634	SLU 11	0.65	0.98	60.78	-1.6122	-0.0007	-0.0454
634	SLU 12	0.65	0.96	60.79	-1.6154	-0.0008	-0.0453
634	SLU 13	0.64	0.92	60.3	-1.5998	-0.0008	-0.0447
634	SLU 14	0.66	0.99	61.52	-1.6309	-0.0009	-0.0461
634	SLU 15	0.66	0.97	61.53	-1.6341	-0.0009	-0.046
634	SLU 16	0.65	0.96	61.02	-1.6132	-0.0009	-0.0456
634	SLU 17	0.65	0.94	61.03	-1.6164	-0.0009	-0.0455
634	SLU 18	0.65	1.01	62.44	-1.6436	-0.0006	-0.0459
634	SLU 19	0.65	0.99	62.45	-1.6468	-0.0007	-0.0458
634	SLU 20	0.66	1.02	63.17	-1.6623	-0.0008	-0.0467
634	SLU 21	0.66	1	63.18	-1.6655	-0.0008	-0.0466
634	SLU 22	0.65	1.01	59.02	-1.5475	-0.0014	-0.0447
634	SLU 23	0.65	0.97	59.03	-1.5528	-0.0014	-0.0445
634	SLU 24	0.67	1.04	60.25	-1.5839	-0.0015	-0.0459
634	SLU 25	0.67	1.02	60.26	-1.5871	-0.0015	-0.0458
634	SLU 26	0.66	0.98	59.76	-1.5715	-0.0016	-0.0453
634	SLU 27	0.68	1.05	60.98	-1.6027	-0.0017	-0.0467
634	SLU 28	0.68	1.03	60.99	-1.6059	-0.0017	-0.0466
634	SLU 29	0.67	1.02	60.48	-1.585	-0.0017	-0.0462
634	SLU 30	0.67	1	60.49	-1.5882	-0.0017	-0.0461
634	SLU 31	0.69	1.12	65.76	-1.7111	-0.0015	-0.0488
634	SLU 32	0.71	1.18	66.98	-1.7423	-0.0016	-0.0502
634	SLU 33	0.71	1.16	66.99	-1.7454	-0.0016	-0.0501
634	SLU 34	0.7	1.12	66.49	-1.7299	-0.0017	-0.0495
634	SLU 35	0.72	1.19	67.71	-1.761	-0.0018	-0.0509
634	SLU 36	0.72	1.17	67.72	-1.7642	-0.0018	-0.0508
634	SLU 37	0.71	1.17	67.21	-1.7433	-0.0018	-0.0504
634	SLU 38	0.71	1.15	67.22	-1.7465	-0.0018	-0.0503
634	SLU 39	0.71	1.21	68.63	-1.7737	-0.0015	-0.0507
634	SLU 40	0.71	1.19	68.64	-1.7768	-0.0015	-0.0506
634	SLU 41	0.72	1.22	69.36	-1.7924	-0.0017	-0.0515
634	SLU 42	0.72	1.2	69.37	-1.7956	-0.0017	-0.0514
634	SLU 43	0.75	0.98	66.55	-1.798	-0.0004	-0.0501
634	SLU 44	0.75	0.94	66.56	-1.8033	-0.0004	-0.05
634	SLU 45	0.77	1.01	67.78	-1.8344	-0.0005	-0.0514
634	SLU 46	0.77	0.99	67.79	-1.8376	-0.0005	-0.0513
634	SLU 47	0.76	0.95	67.3	-1.8221	-0.0006	-0.0508
634	SLU 48	0.78	1.01	68.51	-1.8532	-0.0007	-0.0522
634	SLU 49	0.78	0.99	68.52	-1.8564	-0.0007	-0.0521
634	SLU 50	0.77	0.99	68.01	-1.8355	-0.0007	-0.0517
634	SLU 51	0.77	0.97	68.02	-1.8387	-0.0007	-0.0516
634	SLU 52	0.79	1.09	73.29	-1.9616	-0.0005	-0.0542

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
634	SLU 53	0.81	1.15	74.51	-1.9928	-0.0006	-0.0557
634	SLU 54	0.81	1.13	74.52	-1.996	-0.0006	-0.0556
634	SLU 55	0.8	1.09	74.02	-1.9804	-0.0006	-0.055
634	SLU 56	0.82	1.16	75.24	-2.0115	-0.0008	-0.0564
634	SLU 57	0.82	1.14	75.25	-2.0147	-0.0008	-0.0563
634	SLU 58	0.81	1.14	74.74	-1.9938	-0.0008	-0.0559
634	SLU 59	0.81	1.11	74.75	-1.997	-0.0008	-0.0558
634	SLU 60	0.81	1.18	76.16	-2.0242	-0.0005	-0.0562
634	SLU 61	0.81	1.16	76.17	-2.0274	-0.0005	-0.0561
634	SLU 62	0.82	1.19	76.89	-2.0429	-0.0006	-0.057
634	SLU 63	0.82	1.17	76.9	-2.0461	-0.0007	-0.0569
634	SLU 64	0.81	1.18	72.74	-1.9281	-0.0012	-0.055
634	SLU 65	0.81	1.15	72.76	-1.9334	-0.0013	-0.0548
634	SLU 66	0.83	1.21	73.97	-1.9645	-0.0014	-0.0562
634	SLU 67	0.83	1.19	73.98	-1.9677	-0.0014	-0.0561
634	SLU 68	0.82	1.15	73.49	-1.9521	-0.0014	-0.0556
634	SLU 69	0.83	1.22	74.7	-1.9833	-0.0015	-0.057
634	SLU 70	0.84	1.2	74.71	-1.9865	-0.0016	-0.0569
634	SLU 71	0.83	1.19	74.2	-1.9656	-0.0016	-0.0565
634	SLU 72	0.83	1.17	74.21	-1.9688	-0.0016	-0.0564
634	SLU 73	0.85	1.29	79.49	-2.0917	-0.0014	-0.0591
634	SLU 74	0.87	1.35	80.7	-2.1229	-0.0015	-0.0605
634	SLU 75	0.87	1.33	80.71	-2.1261	-0.0015	-0.0604
634	SLU 76	0.86	1.3	80.22	-2.1105	-0.0015	-0.0598
634	SLU 77	0.88	1.36	81.43	-2.1416	-0.0016	-0.0612
634	SLU 78	0.88	1.34	81.44	-2.1448	-0.0016	-0.0611
634	SLU 79	0.87	1.34	80.93	-2.1239	-0.0016	-0.0607
634	SLU 80	0.87	1.32	80.94	-2.1271	-0.0017	-0.0606
634	SLU 81	0.87	1.38	82.35	-2.1543	-0.0014	-0.061
634	SLU 82	0.87	1.36	82.36	-2.1575	-0.0014	-0.0609
634	SLU 83	0.88	1.39	83.09	-2.173	-0.0015	-0.0618
634	SLU 84	0.88	1.37	83.1	-2.1762	-0.0015	-0.0617
634	SLE RA 1	0.61	0.86	54.59	-1.4545	-0.0008	-0.0412
634	SLE RA 2	0.61	0.84	54.6	-1.4581	-0.0008	-0.0411
634	SLE RA 3	0.62	0.88	55.41	-1.4788	-0.0009	-0.0421
634	SLE RA 4	0.62	0.87	55.42	-1.481	-0.0009	-0.042
634	SLE RA 5	0.62	0.84	55.09	-1.4706	-0.0009	-0.0416
634	SLE RA 6	0.63	0.89	55.9	-1.4913	-0.001	-0.0426
634	SLE RA 7	0.63	0.87	55.91	-1.4935	-0.001	-0.0425
634	SLE RA 8	0.62	0.87	55.57	-1.4795	-0.001	-0.0422
634	SLE RA 9	0.62	0.86	55.58	-1.4817	-0.001	-0.0422
634	SLE RA 10	0.64	0.94	59.09	-1.5636	-0.0008	-0.044
634	SLE RA 11	0.65	0.98	59.9	-1.5844	-0.0009	-0.0449
634	SLE RA 12	0.65	0.97	59.91	-1.5865	-0.0009	-0.0448
634	SLE RA 13	0.64	0.94	59.58	-1.5761	-0.0009	-0.0445
634	SLE RA 14	0.65	0.98	60.39	-1.5969	-0.001	-0.0454
634	SLE RA 15	0.65	0.97	60.39	-1.599	-0.001	-0.0453
634	SLE RA 16	0.65	0.97	60.06	-1.5851	-0.001	-0.0451
634	SLE RA 17	0.65	0.95	60.06	-1.5872	-0.001	-0.045
634	SLE RA 18	0.65	1	61	-1.6053	-0.0008	-0.0453
634	SLE RA 19	0.65	0.99	61.01	-1.6075	-0.0009	-0.0452
634	SLE RA 20	0.66	1	61.49	-1.6178	-0.0009	-0.0458
634	SLE RA 21	0.66	0.99	61.5	-1.62	-0.001	-0.0457
634	SLE FR 1	0.61	0.86	54.59	-1.4545	-0.0008	-0.0412
634	SLE FR 2	0.61	0.86	54.6	-1.4552	-0.0008	-0.0412
634	SLE FR 3	0.61	0.86	54.79	-1.4595	-0.0008	-0.0414
634	SLE FR 4	0.62	0.9	56.52	-1.5005	-0.0008	-0.0424
634	SLE FR 5	0.62	0.91	56.71	-1.5048	-0.0008	-0.0426
634	SLE FR 6	0.63	0.93	57.8	-1.5299	-0.0008	-0.0432
634	SLE QP 1	0.61	0.86	54.59	-1.4545	-0.0008	-0.0412
634	SLE QP 2	0.62	0.9	56.52	-1.4998	-0.0008	-0.0424
634	SLD 1	5.26	1.62	53.42	-1.7213	0.0206	-0.0331
634	SLD 2	5.27	1.84	53.38	-1.7028	0.0207	-0.0298
634	SLD 3	5.19	0.22	53.94	-1.8344	0.02	-0.0315
634	SLD 4	5.2	0.45	53.9	-1.8158	0.0202	-0.0282
634	SLD 5	2.12	3.19	54.8	-1.3982	0.0064	-0.0426
634	SLD 6	2.13	3.34	54.78	-1.3858	0.0065	-0.0404
634	SLD 7	1.88	-1.46	56.54	-1.775	0.0046	-0.0374
634	SLD 8	1.89	-1.31	56.52	-1.7627	0.0047	-0.0352
634	SLD 9	-0.65	3.12	56.52	-1.2369	-0.0063	-0.0497
634	SLD 10	-0.64	3.27	56.49	-1.2246	-0.0062	-0.0475
634	SLD 11	-0.88	-1.54	58.25	-1.6137	-0.0081	-0.0444
634	SLD 12	-0.88	-1.39	58.23	-1.6014	-0.008	-0.0422
634	SLD 13	-3.96	1.36	59.13	-1.1837	-0.0217	-0.0567
634	SLD 14	-3.95	1.59	59.09	-1.1652	-0.0216	-0.0533
634	SLD 15	-4.03	-0.04	59.65	-1.2968	-0.0223	-0.0551
634	SLD 16	-4.02	0.19	59.61	-1.2782	-0.0222	-0.0518
634	SLV 1	11.48	2.52	49.29	-2.0225	0.0492	-0.0205
634	SLV 2	11.49	3.05	49.2	-1.9793	0.0495	-0.0127
634	SLV 3	11.31	-0.64	50.49	-2.2785	0.0479	-0.0169
634	SLV 4	11.33	-0.11	50.39	-2.2353	0.0482	-0.0091
634	SLV 5	4.12	6.09	52.56	-1.2759	0.0161	-0.0427
634	SLV 6	4.14	6.44	52.5	-1.2477	0.0163	-0.0376
634	SLV 7	3.58	-4.45	56.53	-2.1293	0.0118	-0.0307
634	SLV 8	3.59	-4.1	56.47	-2.1011	0.012	-0.0256
634	SLV 9	-2.34	5.91	56.56	-0.8984	-0.0136	-0.0592
634	SLV 10	-2.33	6.26	56.5	-0.8703	-0.0134	-0.0542
634	SLV 11	-2.89	-4.63	60.54	-1.7518	-0.0179	-0.0472
634	SLV 12	-2.88	-4.28	60.47	-1.7237	-0.0177	-0.0422
634	SLV 13	-10.09	1.92	62.64	-0.7643	-0.0498	-0.0757

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
634	SLV 14	-10.07	2.45	62.54	-0.7211	-0.0495	-0.068
634	SLV 15	-10.25	-1.25	63.83	-1.0203	-0.0511	-0.0721
634	SLV 16	-10.23	-0.71	63.74	-0.9771	-0.0508	-0.0644
634	CRTFP Ux+	0	0	0	0	0	0
634	CRTFP Ux-	0	0	0	0	0	0
634	CRTFP Uy+	0	0	0	0	0	0
634	CRTFP Uy-	0	0	0	0	0	0
635	SLU 1	0.63	0.59	52.78	-1.4201	0.003	-0.0453
635	SLU 2	0.63	0.55	52.8	-1.4254	0.0029	-0.0452
635	SLU 3	0.65	0.61	54.02	-1.4567	0.0029	-0.0467
635	SLU 4	0.65	0.59	54.03	-1.4599	0.0029	-0.0466
635	SLU 5	0.64	0.56	53.54	-1.4443	0.0028	-0.046
635	SLU 6	0.66	0.61	54.76	-1.4756	0.0028	-0.0475
635	SLU 7	0.66	0.59	54.77	-1.4787	0.0028	-0.0474
635	SLU 8	0.65	0.59	54.26	-1.4579	0.0027	-0.0469
635	SLU 9	0.65	0.57	54.27	-1.4611	0.0027	-0.0469
635	SLU 10	0.67	0.67	59.52	-1.5841	0.0036	-0.0496
635	SLU 11	0.69	0.73	60.74	-1.6154	0.0036	-0.0511
635	SLU 12	0.69	0.71	60.75	-1.6186	0.0035	-0.0511
635	SLU 13	0.68	0.68	60.26	-1.603	0.0035	-0.0505
635	SLU 14	0.7	0.73	61.48	-1.6343	0.0034	-0.0519
635	SLU 15	0.7	0.72	61.49	-1.6375	0.0034	-0.0519
635	SLU 16	0.69	0.71	60.98	-1.6166	0.0034	-0.0514
635	SLU 17	0.69	0.69	60.99	-1.6198	0.0034	-0.0513
635	SLU 18	0.69	0.76	62.38	-1.6469	0.0039	-0.0516
635	SLU 19	0.69	0.74	62.39	-1.65	0.0039	-0.0516
635	SLU 20	0.7	0.76	63.12	-1.6657	0.0038	-0.0525
635	SLU 21	0.7	0.74	63.13	-1.6689	0.0038	-0.0524
635	SLU 22	0.69	0.76	59	-1.551	0.0027	-0.0505
635	SLU 23	0.69	0.73	59.01	-1.5562	0.0026	-0.0504
635	SLU 24	0.71	0.79	60.23	-1.5875	0.0026	-0.0518
635	SLU 25	0.71	0.77	60.24	-1.5907	0.0026	-0.0518
635	SLU 26	0.7	0.73	59.75	-1.5751	0.0025	-0.0512
635	SLU 27	0.72	0.79	60.97	-1.6064	0.0025	-0.0527
635	SLU 28	0.72	0.77	60.98	-1.6096	0.0025	-0.0526
635	SLU 29	0.71	0.77	60.47	-1.5887	0.0024	-0.0521
635	SLU 30	0.71	0.75	60.48	-1.5919	0.0024	-0.052
635	SLU 31	0.73	0.85	65.73	-1.715	0.0033	-0.0548
635	SLU 32	0.75	0.91	66.95	-1.7462	0.0033	-0.0563
635	SLU 33	0.75	0.89	66.96	-1.7494	0.0033	-0.0562
635	SLU 34	0.75	0.85	66.47	-1.7338	0.0032	-0.0556
635	SLU 35	0.76	0.91	67.69	-1.7651	0.0032	-0.0571
635	SLU 36	0.76	0.89	67.7	-1.7683	0.0031	-0.057
635	SLU 37	0.75	0.89	67.19	-1.7474	0.0031	-0.0565
635	SLU 38	0.76	0.87	67.2	-1.7506	0.0031	-0.0565
635	SLU 39	0.75	0.94	68.6	-1.7777	0.0036	-0.0568
635	SLU 40	0.75	0.92	68.61	-1.7809	0.0036	-0.0568
635	SLU 41	0.76	0.94	69.33	-1.7966	0.0035	-0.0576
635	SLU 42	0.76	0.92	69.34	-1.7997	0.0035	-0.0576
635	SLU 43	0.8	0.7	66.49	-1.8013	0.004	-0.0571
635	SLU 44	0.8	0.67	66.51	-1.8066	0.0039	-0.057
635	SLU 45	0.82	0.72	67.72	-1.8379	0.0039	-0.0585
635	SLU 46	0.82	0.7	67.73	-1.841	0.0039	-0.0584
635	SLU 47	0.81	0.67	67.24	-1.8255	0.0038	-0.0579
635	SLU 48	0.83	0.73	68.46	-1.8568	0.0038	-0.0593
635	SLU 49	0.83	0.71	68.47	-1.8599	0.0038	-0.0593
635	SLU 50	0.82	0.71	67.96	-1.8391	0.0037	-0.0588
635	SLU 51	0.82	0.69	67.97	-1.8422	0.0037	-0.0587
635	SLU 52	0.84	0.79	73.23	-1.9653	0.0046	-0.0615
635	SLU 53	0.86	0.85	74.44	-1.9966	0.0046	-0.0629
635	SLU 54	0.86	0.83	74.45	-1.9998	0.0045	-0.0629
635	SLU 55	0.85	0.79	73.96	-1.9842	0.0045	-0.0623
635	SLU 56	0.87	0.85	75.18	-2.0155	0.0044	-0.0637
635	SLU 57	0.87	0.83	75.19	-2.0186	0.0044	-0.0637
635	SLU 58	0.86	0.83	74.68	-1.9978	0.0044	-0.0632
635	SLU 59	0.86	0.81	74.69	-2.001	0.0043	-0.0631
635	SLU 60	0.86	0.87	76.09	-2.0281	0.0049	-0.0635
635	SLU 61	0.86	0.85	76.1	-2.0312	0.0049	-0.0634
635	SLU 62	0.87	0.88	76.83	-2.0469	0.0048	-0.0643
635	SLU 63	0.87	0.86	76.84	-2.0501	0.0048	-0.0642
635	SLU 64	0.86	0.88	72.7	-1.9321	0.0037	-0.0623
635	SLU 65	0.86	0.84	72.72	-1.9374	0.0036	-0.0622
635	SLU 66	0.88	0.9	73.94	-1.9687	0.0036	-0.0637
635	SLU 67	0.88	0.88	73.95	-1.9719	0.0036	-0.0636
635	SLU 68	0.87	0.85	73.46	-1.9563	0.0035	-0.063
635	SLU 69	0.89	0.91	74.67	-1.9876	0.0035	-0.0645
635	SLU 70	0.89	0.89	74.68	-1.9907	0.0035	-0.0644
635	SLU 71	0.88	0.88	74.18	-1.9699	0.0034	-0.0639
635	SLU 72	0.88	0.86	74.19	-1.9731	0.0034	-0.0639
635	SLU 73	0.9	0.97	79.44	-2.0961	0.0043	-0.0666
635	SLU 74	0.92	1.02	80.66	-2.1274	0.0043	-0.0681
635	SLU 75	0.92	1	80.67	-2.1306	0.0042	-0.068
635	SLU 76	0.91	0.97	80.18	-2.115	0.0042	-0.0675
635	SLU 77	0.93	1.03	81.39	-2.1463	0.0042	-0.0689
635	SLU 78	0.93	1.01	81.4	-2.1495	0.0041	-0.0689
635	SLU 79	0.92	1.01	80.9	-2.1286	0.0041	-0.0684
635	SLU 80	0.92	0.99	80.91	-2.1318	0.0041	-0.0683
635	SLU 81	0.92	1.05	82.3	-2.1589	0.0046	-0.0686
635	SLU 82	0.92	1.03	82.31	-2.1621	0.0046	-0.0686
635	SLU 83	0.93	1.05	83.04	-2.1778	0.0045	-0.0694

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
635	SLU 84	0.93	1.04	83.05	-2.1809	0.0045	-0.0694
635	SLE RA 1	0.65	0.64	54.56	-1.4575	0.0029	-0.0468
635	SLE RA 2	0.65	0.61	54.57	-1.461	0.0029	-0.0467
635	SLE RA 3	0.66	0.65	55.38	-1.4819	0.0029	-0.0477
635	SLE RA 4	0.66	0.64	55.39	-1.484	0.0028	-0.0477
635	SLE RA 5	0.66	0.62	55.06	-1.4736	0.0028	-0.0473
635	SLE RA 6	0.67	0.65	55.87	-1.4945	0.0028	-0.0482
635	SLE RA 7	0.67	0.64	55.88	-1.4966	0.0028	-0.0482
635	SLE RA 8	0.66	0.64	55.54	-1.4827	0.0027	-0.0479
635	SLE RA 9	0.66	0.63	55.55	-1.4848	0.0027	-0.0478
635	SLE RA 10	0.68	0.7	59.05	-1.5668	0.0033	-0.0497
635	SLE RA 11	0.69	0.73	59.86	-1.5877	0.0033	-0.0507
635	SLE RA 12	0.69	0.72	59.87	-1.5898	0.0033	-0.0506
635	SLE RA 13	0.68	0.7	59.54	-1.5794	0.0032	-0.0502
635	SLE RA 14	0.69	0.74	60.35	-1.6003	0.0032	-0.0512
635	SLE RA 15	0.69	0.72	60.36	-1.6024	0.0032	-0.0512
635	SLE RA 16	0.69	0.72	60.02	-1.5885	0.0032	-0.0508
635	SLE RA 17	0.69	0.71	60.03	-1.5906	0.0031	-0.0508
635	SLE RA 18	0.69	0.75	60.96	-1.6087	0.0035	-0.051
635	SLE RA 19	0.69	0.74	60.97	-1.6108	0.0035	-0.051
635	SLE RA 20	0.7	0.75	61.45	-1.6213	0.0034	-0.0516
635	SLE RA 21	0.7	0.74	61.46	-1.6234	0.0034	-0.0515
635	SLE FR 1	0.65	0.64	54.56	-1.4575	0.0029	-0.0468
635	SLE FR 2	0.65	0.63	54.56	-1.4582	0.0029	-0.0468
635	SLE FR 3	0.65	0.64	54.76	-1.4625	0.0029	-0.047
635	SLE FR 4	0.66	0.67	56.48	-1.5036	0.0031	-0.048
635	SLE FR 5	0.66	0.67	56.68	-1.5079	0.003	-0.0483
635	SLE FR 6	0.67	0.69	57.76	-1.5331	0.0032	-0.0489
635	SLE QP 1	0.65	0.64	54.56	-1.4575	0.0029	-0.0468
635	SLE QP 2	0.66	0.67	56.48	-1.5029	0.0031	-0.0481
635	SLD 1	5.29	1.42	52.7	-1.7208	0.0221	-0.0377
635	SLD 2	5.3	1.66	52.65	-1.7022	0.0222	-0.0343
635	SLD 3	5.22	0.03	53.24	-1.8338	0.0212	-0.0367
635	SLD 4	5.23	0.27	53.19	-1.8152	0.0214	-0.0333
635	SLD 5	2.16	2.96	54.54	-1.4003	0.01	-0.0472
635	SLD 6	2.16	3.12	54.51	-1.388	0.0101	-0.0449
635	SLD 7	1.92	-1.68	56.33	-1.7768	0.0072	-0.0437
635	SLD 8	1.92	-1.52	56.3	-1.7645	0.0073	-0.0414
635	SLD 9	-0.6	2.86	56.66	-1.2412	-0.0012	-0.0547
635	SLD 10	-0.6	3.02	56.63	-1.2289	-0.0011	-0.0524
635	SLD 11	-0.84	-1.78	58.45	-1.6177	-0.0039	-0.0512
635	SLD 12	-0.84	-1.62	58.42	-1.6054	-0.0038	-0.049
635	SLD 13	-3.91	1.07	59.77	-1.1905	-0.0152	-0.0628
635	SLD 14	-3.9	1.31	59.72	-1.1719	-0.0151	-0.0595
635	SLD 15	-3.98	-0.32	60.31	-1.3035	-0.0161	-0.0618
635	SLD 16	-3.97	-0.08	60.26	-1.2849	-0.0159	-0.0584
635	SLV 1	11.49	2.37	47.65	-2.0172	0.0475	-0.0237
635	SLV 2	11.51	2.94	47.54	-1.9739	0.0479	-0.0159
635	SLV 3	11.32	-0.78	48.88	-2.273	0.0456	-0.0213
635	SLV 4	11.34	-0.21	48.77	-2.2297	0.046	-0.0134
635	SLV 5	4.16	5.86	51.99	-1.2768	0.0192	-0.0459
635	SLV 6	4.17	6.23	51.92	-1.2486	0.0194	-0.0407
635	SLV 7	3.61	-4.65	56.08	-2.1294	0.0129	-0.0377
635	SLV 8	3.62	-4.28	56.01	-2.1013	0.0132	-0.0326
635	SLV 9	-2.3	5.62	56.95	-0.9045	-0.007	-0.0635
635	SLV 10	-2.29	5.99	56.88	-0.8763	-0.0068	-0.0584
635	SLV 11	-2.85	-4.89	61.04	-1.7571	-0.0133	-0.0554
635	SLV 12	-2.84	-4.52	60.97	-1.7289	-0.013	-0.0503
635	SLV 13	-10.02	1.55	64.19	-0.776	-0.0398	-0.0827
635	SLV 14	-10	2.12	64.08	-0.7327	-0.0395	-0.0748
635	SLV 15	-10.19	-1.6	65.42	-1.0318	-0.0417	-0.0802
635	SLV 16	-10.17	-1.03	65.31	-0.9885	-0.0413	-0.0724
635	CRTFP Ux+	0	0	0	0	0	0
635	CRTFP Ux-	0	0	0	0	0	0
635	CRTFP Uy+	0	0	0	0	0	0
635	CRTFP Uy-	0	0	0	0	0	0
636	SLU 1	0.67	0.35	52.62	-1.4246	0.0067	-0.0461
636	SLU 2	0.67	0.32	52.64	-1.4298	0.0066	-0.0461
636	SLU 3	0.69	0.37	53.85	-1.4613	0.0067	-0.0475
636	SLU 4	0.69	0.35	53.86	-1.4644	0.0067	-0.0474
636	SLU 5	0.68	0.32	53.38	-1.4488	0.0066	-0.0469
636	SLU 6	0.7	0.37	54.59	-1.4803	0.0067	-0.0483
636	SLU 7	0.7	0.35	54.6	-1.4834	0.0066	-0.0482
636	SLU 8	0.69	0.35	54.1	-1.4626	0.0065	-0.0477
636	SLU 9	0.69	0.33	54.11	-1.4658	0.0065	-0.0477
636	SLU 10	0.72	0.42	59.32	-1.5891	0.0081	-0.0503
636	SLU 11	0.73	0.47	60.54	-1.6205	0.0082	-0.0517
636	SLU 12	0.73	0.45	60.55	-1.6237	0.0082	-0.0517
636	SLU 13	0.73	0.42	60.06	-1.6081	0.008	-0.0511
636	SLU 14	0.74	0.47	61.28	-1.6396	0.0081	-0.0525
636	SLU 15	0.74	0.45	61.29	-1.6427	0.0081	-0.0525
636	SLU 16	0.74	0.45	60.78	-1.6219	0.008	-0.052
636	SLU 17	0.74	0.43	60.79	-1.625	0.008	-0.0519
636	SLU 18	0.73	0.49	62.17	-1.6521	0.0088	-0.0522
636	SLU 19	0.73	0.47	62.18	-1.6553	0.0088	-0.0522
636	SLU 20	0.74	0.49	62.91	-1.6711	0.0087	-0.053
636	SLU 21	0.74	0.47	62.92	-1.6743	0.0087	-0.053
636	SLU 22	0.73	0.5	58.83	-1.5563	0.0069	-0.0512
636	SLU 23	0.74	0.47	58.85	-1.5615	0.0069	-0.0511
636	SLU 24	0.75	0.52	60.07	-1.593	0.007	-0.0526

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
636	SLU 25	0.75	0.5	60.08	-1.5961	0.007	-0.0525
636	SLU 26	0.75	0.47	59.59	-1.5806	0.0068	-0.0519
636	SLU 27	0.76	0.52	60.81	-1.612	0.0069	-0.0534
636	SLU 28	0.76	0.5	60.82	-1.6152	0.0069	-0.0533
636	SLU 29	0.76	0.5	60.31	-1.5943	0.0068	-0.0528
636	SLU 30	0.76	0.48	60.32	-1.5975	0.0068	-0.0528
636	SLU 31	0.78	0.57	65.53	-1.7208	0.0084	-0.0554
636	SLU 32	0.8	0.62	66.75	-1.7523	0.0085	-0.0568
636	SLU 33	0.8	0.6	66.76	-1.7554	0.0085	-0.0568
636	SLU 34	0.79	0.57	66.27	-1.7399	0.0083	-0.0562
636	SLU 35	0.81	0.62	67.49	-1.7713	0.0084	-0.0576
636	SLU 36	0.81	0.6	67.5	-1.7744	0.0084	-0.0576
636	SLU 37	0.8	0.6	67	-1.7536	0.0083	-0.0571
636	SLU 38	0.8	0.58	67.01	-1.7568	0.0083	-0.057
636	SLU 39	0.8	0.64	68.38	-1.7838	0.0091	-0.0573
636	SLU 40	0.8	0.62	68.39	-1.787	0.009	-0.0573
636	SLU 41	0.81	0.64	69.12	-1.8029	0.009	-0.0581
636	SLU 42	0.81	0.62	69.13	-1.806	0.009	-0.058
636	SLU 43	0.85	0.4	66.27	-1.8068	0.0086	-0.0582
636	SLU 44	0.85	0.37	66.29	-1.812	0.0085	-0.0582
636	SLU 45	0.87	0.42	67.51	-1.8435	0.0086	-0.0596
636	SLU 46	0.87	0.4	67.52	-1.8466	0.0086	-0.0595
636	SLU 47	0.86	0.37	67.03	-1.831	0.0085	-0.059
636	SLU 48	0.88	0.42	68.25	-1.8625	0.0086	-0.0604
636	SLU 49	0.88	0.4	68.26	-1.8656	0.0085	-0.0603
636	SLU 50	0.87	0.4	67.75	-1.8448	0.0084	-0.0598
636	SLU 51	0.87	0.38	67.77	-1.848	0.0084	-0.0598
636	SLU 52	0.89	0.47	72.98	-1.9713	0.01	-0.0624
636	SLU 53	0.91	0.52	74.19	-2.0027	0.0101	-0.0638
636	SLU 54	0.91	0.5	74.2	-2.0059	0.0101	-0.0638
636	SLU 55	0.91	0.47	73.72	-1.9903	0.01	-0.0632
636	SLU 56	0.92	0.52	74.93	-2.0218	0.0101	-0.0646
636	SLU 57	0.92	0.5	74.94	-2.0249	0.01	-0.0646
636	SLU 58	0.92	0.5	74.44	-2.0041	0.0099	-0.0641
636	SLU 59	0.92	0.48	74.45	-2.0072	0.0099	-0.064
636	SLU 60	0.91	0.55	75.82	-2.0343	0.0107	-0.0643
636	SLU 61	0.91	0.53	75.83	-2.0375	0.0107	-0.0643
636	SLU 62	0.92	0.55	76.56	-2.0533	0.0106	-0.0651
636	SLU 63	0.92	0.53	76.57	-2.0565	0.0106	-0.0651
636	SLU 64	0.91	0.56	72.49	-1.9385	0.0089	-0.0633
636	SLU 65	0.91	0.52	72.51	-1.9437	0.0088	-0.0632
636	SLU 66	0.93	0.57	73.72	-1.9752	0.0089	-0.0647
636	SLU 67	0.93	0.55	73.73	-1.9783	0.0089	-0.0646
636	SLU 68	0.93	0.52	73.25	-1.9628	0.0087	-0.064
636	SLU 69	0.94	0.57	74.46	-1.9942	0.0088	-0.0655
636	SLU 70	0.94	0.55	74.47	-1.9974	0.0088	-0.0654
636	SLU 71	0.94	0.55	73.97	-1.9765	0.0087	-0.0649
636	SLU 72	0.94	0.54	73.98	-1.9797	0.0087	-0.0649
636	SLU 73	0.96	0.62	79.19	-2.103	0.0103	-0.0675
636	SLU 74	0.98	0.67	80.4	-2.1345	0.0104	-0.0689
636	SLU 75	0.98	0.65	80.42	-2.1376	0.0104	-0.0689
636	SLU 76	0.97	0.62	79.93	-2.1221	0.0102	-0.0683
636	SLU 77	0.99	0.67	81.14	-2.1535	0.0103	-0.0697
636	SLU 78	0.99	0.65	81.16	-2.1567	0.0103	-0.0697
636	SLU 79	0.98	0.65	80.65	-2.1358	0.0102	-0.0692
636	SLU 80	0.98	0.63	80.66	-2.139	0.0102	-0.0691
636	SLU 81	0.98	0.7	82.03	-2.166	0.011	-0.0694
636	SLU 82	0.98	0.68	82.05	-2.1692	0.011	-0.0694
636	SLU 83	0.99	0.7	82.77	-2.1851	0.0109	-0.0702
636	SLU 84	0.99	0.68	82.79	-2.1882	0.0109	-0.0701
636	SLE RA 1	0.69	0.39	54.39	-1.4622	0.0068	-0.0476
636	SLE RA 2	0.69	0.37	54.41	-1.4657	0.0067	-0.0475
636	SLE RA 3	0.7	0.41	55.22	-1.4867	0.0068	-0.0485
636	SLE RA 4	0.7	0.39	55.22	-1.4888	0.0068	-0.0485
636	SLE RA 5	0.7	0.37	54.9	-1.4784	0.0067	-0.0481
636	SLE RA 6	0.71	0.41	55.71	-1.4993	0.0067	-0.049
636	SLE RA 7	0.71	0.39	55.72	-1.5014	0.0067	-0.049
636	SLE RA 8	0.7	0.39	55.38	-1.4875	0.0067	-0.0486
636	SLE RA 9	0.7	0.38	55.39	-1.4897	0.0066	-0.0486
636	SLE RA 10	0.72	0.44	58.86	-1.5719	0.0077	-0.0504
636	SLE RA 11	0.73	0.47	59.67	-1.5928	0.0078	-0.0513
636	SLE RA 12	0.73	0.46	59.68	-1.595	0.0078	-0.0513
636	SLE RA 13	0.73	0.44	59.36	-1.5846	0.0077	-0.0509
636	SLE RA 14	0.74	0.47	60.17	-1.6055	0.0077	-0.0519
636	SLE RA 15	0.74	0.46	60.17	-1.6076	0.0077	-0.0518
636	SLE RA 16	0.73	0.46	59.84	-1.5937	0.0077	-0.0515
636	SLE RA 17	0.73	0.45	59.84	-1.5958	0.0076	-0.0515
636	SLE RA 18	0.73	0.49	60.76	-1.6139	0.0082	-0.0516
636	SLE RA 19	0.73	0.48	60.77	-1.616	0.0082	-0.0516
636	SLE RA 20	0.74	0.49	61.25	-1.6266	0.0081	-0.0522
636	SLE RA 21	0.74	0.48	61.26	-1.6287	0.0081	-0.0521
636	SLE FR 1	0.69	0.39	54.39	-1.4622	0.0068	-0.0476
636	SLE FR 2	0.69	0.39	54.4	-1.4629	0.0067	-0.0476
636	SLE FR 3	0.69	0.39	54.59	-1.4673	0.0067	-0.0478
636	SLE FR 4	0.7	0.42	56.31	-1.5084	0.0072	-0.0488
636	SLE FR 5	0.7	0.42	56.5	-1.5128	0.0072	-0.049
636	SLE FR 6	0.71	0.44	57.58	-1.538	0.0075	-0.0496
636	SLE QP 1	0.69	0.39	54.39	-1.4622	0.0068	-0.0476
636	SLE QP 2	0.7	0.42	56.3	-1.5077	0.0072	-0.0488
636	SLD 1	5.32	1.22	51.97	-1.7222	0.0206	-0.0379

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
636	SLD 2	5.33	1.48	51.92	-1.7036	0.0208	-0.0343
636	SLD 3	5.25	-0.17	52.53	-1.8353	0.0195	-0.039
636	SLD 4	5.26	0.09	52.47	-1.8167	0.0197	-0.0354
636	SLD 5	2.19	2.73	54.18	-1.404	0.0129	-0.0445
636	SLD 6	2.2	2.9	54.14	-1.3916	0.013	-0.0421
636	SLD 7	1.96	-1.92	56.02	-1.7809	0.0092	-0.0482
636	SLD 8	1.96	-1.74	55.98	-1.7685	0.0093	-0.0458
636	SLD 9	-0.56	2.59	56.63	-1.2469	0.005	-0.0518
636	SLD 10	-0.55	2.76	56.59	-1.2345	0.0052	-0.0494
636	SLD 11	-0.8	-2.05	58.46	-1.6238	0.0014	-0.0555
636	SLD 12	-0.79	-1.88	58.43	-1.6114	0.0015	-0.0531
636	SLD 13	-3.85	0.76	60.13	-1.1987	-0.0054	-0.0622
636	SLD 14	-3.85	1.02	60.08	-1.1801	-0.0052	-0.0586
636	SLD 15	-3.93	-0.63	60.68	-1.3118	-0.0065	-0.0633
636	SLD 16	-3.92	-0.37	60.63	-1.2932	-0.0063	-0.0597
636	SLV 1	11.5	2.23	46.19	-2.014	0.0387	-0.0232
636	SLV 2	11.52	2.84	46.07	-1.9706	0.0391	-0.0147
636	SLV 3	11.33	-0.92	47.45	-2.27	0.0362	-0.0258
636	SLV 4	11.35	-0.31	47.33	-2.2267	0.0366	-0.0173
636	SLV 5	4.19	5.64	51.38	-1.2789	0.0204	-0.0387
636	SLV 6	4.2	6.04	51.3	-1.2506	0.0207	-0.0332
636	SLV 7	3.64	-4.87	55.58	-2.1324	0.012	-0.0473
636	SLV 8	3.65	-4.47	55.5	-2.1041	0.0123	-0.0418
636	SLV 9	-2.25	5.32	57.11	-0.9113	0.0021	-0.0558
636	SLV 10	-2.23	5.72	57.03	-0.883	0.0024	-0.0503
636	SLV 11	-2.8	-5.2	61.3	-1.7648	-0.0063	-0.0644
636	SLV 12	-2.79	-4.8	61.22	-1.7365	-0.006	-0.0589
636	SLV 13	-9.95	1.16	65.28	-0.7887	-0.0222	-0.0803
636	SLV 14	-9.93	1.77	65.16	-0.7454	-0.0218	-0.0718
636	SLV 15	-10.12	-2	66.54	-1.0448	-0.0247	-0.0829
636	SLV 16	-10.1	-1.39	66.42	-1.0014	-0.0243	-0.0744
636	CRTFP Ux+	0	0	0	0	0	0
636	CRTFP Ux-	0	0	0	0	0	0
636	CRTFP Uy+	0	0	0	0	0	0
636	CRTFP Uy-	0	0	0	0	0	0
637	SLU 1	1.25	0.09	88.83	-1.7571	-11.1137	-0.0838
637	SLU 2	1.25	0.03	88.87	-1.7649	-11.1182	-0.0906
637	SLU 3	1.28	0.1	90.92	-1.8039	-11.3755	-0.0847
637	SLU 4	1.28	0.07	90.94	-1.8086	-11.3782	-0.0888
637	SLU 5	1.27	0.03	90.13	-1.7887	-11.2769	-0.0933
637	SLU 6	1.3	0.1	92.18	-1.8277	-11.5342	-0.0875
637	SLU 7	1.3	0.06	92.21	-1.8324	-11.5369	-0.0915
637	SLU 8	1.29	0.07	91.36	-1.8046	-11.431	-0.0893
637	SLU 9	1.29	0.04	91.38	-1.8093	-11.4337	-0.0934
637	SLU 10	1.33	0.16	100.08	-1.9567	-12.5171	-0.083
637	SLU 11	1.36	0.23	102.14	-1.9957	-12.7744	-0.0771
637	SLU 12	1.36	0.2	102.16	-2.0003	-12.7771	-0.0812
637	SLU 13	1.35	0.15	101.35	-1.9804	-12.6758	-0.0858
637	SLU 14	1.38	0.22	103.4	-2.0194	-12.9331	-0.0799
637	SLU 15	1.38	0.19	103.42	-2.0241	-12.9358	-0.084
637	SLU 16	1.37	0.2	102.57	-1.9964	-12.8299	-0.0817
637	SLU 17	1.37	0.16	102.6	-2.001	-12.8326	-0.0858
637	SLU 18	1.36	0.27	104.86	-2.0311	-13.1121	-0.073
637	SLU 19	1.36	0.23	104.88	-2.0357	-13.1148	-0.0771
637	SLU 20	1.39	0.26	106.12	-2.0548	-13.2708	-0.0757
637	SLU 21	1.39	0.23	106.14	-2.0595	-13.2735	-0.0798
637	SLU 22	1.37	0.29	99.36	-1.9128	-12.4343	-0.0684
637	SLU 23	1.37	0.24	99.4	-1.9205	-12.4388	-0.0752
637	SLU 24	1.4	0.31	101.45	-1.9596	-12.6961	-0.0693
637	SLU 25	1.4	0.27	101.47	-1.9642	-12.6988	-0.0734
637	SLU 26	1.39	0.23	100.66	-1.9443	-12.5974	-0.0779
637	SLU 27	1.42	0.3	102.71	-1.9833	-12.8547	-0.0721
637	SLU 28	1.42	0.26	102.74	-1.988	-12.8575	-0.0761
637	SLU 29	1.41	0.27	101.89	-1.9603	-12.7516	-0.0739
637	SLU 30	1.41	0.24	101.91	-1.9649	-12.7543	-0.078
637	SLU 31	1.45	0.36	110.61	-2.1123	-13.8377	-0.0676
637	SLU 32	1.48	0.43	112.67	-2.1513	-14.095	-0.0617
637	SLU 33	1.48	0.4	112.69	-2.156	-14.0977	-0.0658
637	SLU 34	1.47	0.35	111.88	-2.136	-13.9963	-0.0704
637	SLU 35	1.5	0.42	113.93	-2.1751	-14.2536	-0.0645
637	SLU 36	1.5	0.39	113.95	-2.1797	-14.2563	-0.0686
637	SLU 37	1.49	0.4	113.1	-2.152	-14.1505	-0.0663
637	SLU 38	1.49	0.37	113.12	-2.1567	-14.1532	-0.0704
637	SLU 39	1.48	0.47	115.39	-2.1867	-14.4327	-0.0576
637	SLU 40	1.48	0.44	115.41	-2.1914	-14.4354	-0.0617
637	SLU 41	1.51	0.46	116.65	-2.2104	-14.5914	-0.0603
637	SLU 42	1.51	0.43	116.67	-2.2151	-14.5941	-0.0644
637	SLU 43	1.58	0.05	111.87	-2.2309	-13.995	-0.1142
637	SLU 44	1.58	-0.01	111.91	-2.2387	-13.9995	-0.121
637	SLU 45	1.61	0.06	113.96	-2.2777	-14.2568	-0.1151
637	SLU 46	1.61	0.03	113.98	-2.2824	-14.2596	-0.1192
637	SLU 47	1.6	-0.02	113.17	-2.2624	-14.1582	-0.1238
637	SLU 48	1.63	0.05	115.22	-2.3015	-14.4155	-0.1179
637	SLU 49	1.64	0.02	115.25	-2.3061	-14.4182	-0.1219
637	SLU 50	1.62	0.03	114.4	-2.2784	-14.3123	-0.1197
637	SLU 51	1.62	0	114.42	-2.2831	-14.315	-0.1238
637	SLU 52	1.66	0.12	123.12	-2.4304	-15.3984	-0.1134
637	SLU 53	1.7	0.19	125.18	-2.4695	-15.6557	-0.1076
637	SLU 54	1.7	0.15	125.2	-2.4741	-15.6585	-0.1116
637	SLU 55	1.68	0.11	124.39	-2.4542	-15.5571	-0.1162

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
637	SLU 56	1.72	0.18	126.44	-2.4932	-15.8144	-0.1103
637	SLU 57	1.72	0.14	126.46	-2.4979	-15.8171	-0.1144
637	SLU 58	1.7	0.15	125.61	-2.4702	-15.7112	-0.1122
637	SLU 59	1.7	0.12	125.63	-2.4748	-15.7139	-0.1162
637	SLU 60	1.7	0.23	127.9	-2.5049	-15.9935	-0.1034
637	SLU 61	1.7	0.19	127.92	-2.5095	-15.9962	-0.1075
637	SLU 62	1.72	0.22	129.16	-2.5286	-16.1521	-0.1062
637	SLU 63	1.72	0.18	129.18	-2.5333	-16.1548	-0.1102
637	SLU 64	1.7	0.25	122.4	-2.3866	-15.3156	-0.0988
637	SLU 65	1.7	0.19	122.44	-2.3943	-15.3201	-0.1056
637	SLU 66	1.73	0.26	124.49	-2.4334	-15.5774	-0.0997
637	SLU 67	1.73	0.23	124.51	-2.438	-15.5801	-0.1038
637	SLU 68	1.72	0.19	123.7	-2.4181	-15.4788	-0.1084
637	SLU 69	1.75	0.26	125.75	-2.4571	-15.7361	-0.1025
637	SLU 70	1.76	0.22	125.78	-2.4618	-15.7388	-0.1065
637	SLU 71	1.74	0.23	124.93	-2.4341	-15.6329	-0.1043
637	SLU 72	1.74	0.2	124.95	-2.4387	-15.6356	-0.1084
637	SLU 73	1.78	0.32	133.65	-2.5861	-16.719	-0.098
637	SLU 74	1.82	0.39	135.71	-2.6251	-16.9763	-0.0922
637	SLU 75	1.82	0.36	135.73	-2.6298	-16.979	-0.0962
637	SLU 76	1.8	0.31	134.92	-2.6098	-16.8777	-0.1008
637	SLU 77	1.84	0.38	136.97	-2.6488	-17.135	-0.0949
637	SLU 78	1.84	0.35	136.99	-2.6535	-17.1377	-0.099
637	SLU 79	1.82	0.36	136.14	-2.6258	-17.0318	-0.0968
637	SLU 80	1.82	0.32	136.16	-2.6305	-17.0345	-0.1008
637	SLU 81	1.82	0.43	138.43	-2.6605	-17.314	-0.088
637	SLU 82	1.82	0.39	138.45	-2.6651	-17.3168	-0.0921
637	SLU 83	1.84	0.42	139.69	-2.6842	-17.4727	-0.0908
637	SLU 84	1.84	0.39	139.71	-2.6889	-17.4754	-0.0948
637	SLE RA 1	1.28	0.15	91.84	-1.8016	-11.491	-0.0794
637	SLE RA 2	1.28	0.11	91.86	-1.8068	-11.494	-0.0839
637	SLE RA 3	1.3	0.16	93.23	-1.8328	-11.6655	-0.08
637	SLE RA 4	1.3	0.14	93.25	-1.8359	-11.6674	-0.0827
637	SLE RA 5	1.3	0.1	92.71	-1.8226	-11.5998	-0.0858
637	SLE RA 6	1.32	0.15	94.08	-1.8486	-11.7713	-0.0818
637	SLE RA 7	1.32	0.13	94.09	-1.8517	-11.7731	-0.0845
637	SLE RA 8	1.31	0.14	93.52	-1.8333	-11.7025	-0.0831
637	SLE RA 9	1.31	0.11	93.54	-1.8364	-11.7043	-0.0858
637	SLE RA 10	1.34	0.19	99.34	-1.9346	-12.4266	-0.0789
637	SLE RA 11	1.36	0.24	100.71	-1.9606	-12.5981	-0.075
637	SLE RA 12	1.36	0.22	100.73	-1.9637	-12.6	-0.0777
637	SLE RA 13	1.35	0.19	100.18	-1.9505	-12.5324	-0.0807
637	SLE RA 14	1.37	0.23	101.55	-1.9765	-12.7039	-0.0768
637	SLE RA 15	1.37	0.21	101.57	-1.9796	-12.7057	-0.0795
637	SLE RA 16	1.36	0.22	101	-1.9611	-12.6351	-0.078
637	SLE RA 17	1.36	0.2	101.02	-1.9642	-12.6369	-0.0807
637	SLE RA 18	1.36	0.27	102.52	-1.9842	-12.8233	-0.0722
637	SLE RA 19	1.36	0.24	102.54	-1.9873	-12.8251	-0.0749
637	SLE RA 20	1.37	0.26	103.37	-2.0001	-12.9291	-0.074
637	SLE RA 21	1.37	0.24	103.38	-2.0032	-12.9309	-0.0767
637	SLE FR 1	1.28	0.15	91.84	-1.8016	-11.491	-0.0794
637	SLE FR 2	1.28	0.14	91.85	-1.8026	-11.4916	-0.0803
637	SLE FR 3	1.29	0.15	92.18	-1.8079	-11.5333	-0.0801
637	SLE FR 4	1.31	0.18	95.05	-1.8574	-11.8913	-0.0781
637	SLE FR 5	1.31	0.18	95.38	-1.8627	-11.933	-0.078
637	SLE FR 6	1.32	0.21	97.18	-1.8929	-12.1571	-0.0758
637	SLE QP 1	1.28	0.15	91.84	-1.8016	-11.491	-0.0794
637	SLE QP 2	1.31	0.18	95.05	-1.8564	-11.8907	-0.0772
637	SLD 1	9.13	1.64	87.08	-2.2779	-10.8704	0.0767
637	SLD 2	9.14	2.13	86.98	-2.2501	-10.857	0.1472
637	SLD 3	9.01	-0.74	88.02	-2.4482	-10.9858	-0.2254
637	SLD 4	9.02	-0.25	87.92	-2.4204	-10.9725	-0.1549
637	SLD 5	3.83	4.14	91.25	-1.7296	-11.4119	0.4143
637	SLD 6	3.84	4.47	91.18	-1.7112	-11.4031	0.4611
637	SLD 7	3.43	-3.79	94.38	-2.2973	-11.7968	-0.5926
637	SLD 8	3.44	-3.47	94.31	-2.2788	-11.7879	-0.5459
637	SLD 9	-0.83	3.84	95.78	-1.434	-11.9935	0.3914
637	SLD 10	-0.82	4.16	95.71	-1.4155	-11.9846	0.4382
637	SLD 11	-1.23	-4.1	98.91	-2.0016	-12.3783	-0.6155
637	SLD 12	-1.22	-3.78	98.84	-1.9831	-12.3695	-0.5688
637	SLD 13	-6.41	0.62	102.17	-1.2924	-12.8089	0.0004
637	SLD 14	-6.4	1.11	102.07	-1.2646	-12.7956	0.0709
637	SLD 15	-6.53	-1.76	103.11	-1.4627	-12.9244	-0.3017
637	SLD 16	-6.52	-1.28	103.01	-1.4349	-12.911	-0.2312
637	SLV 1	19.59	3.51	76.45	-2.849	-9.5072	0.2722
637	SLV 2	19.63	4.65	76.21	-2.7842	-9.4761	0.4363
637	SLV 3	19.31	-1.88	78.58	-3.2345	-9.7696	-0.4122
637	SLV 4	19.34	-0.74	78.35	-3.1697	-9.7386	-0.248
637	SLV 5	7.21	9.16	86.27	-1.5808	-10.783	1.0367
637	SLV 6	7.23	9.91	86.11	-1.5386	-10.7628	1.1436
637	SLV 7	6.27	-8.82	93.39	-2.8659	-11.6579	-1.2445
637	SLV 8	6.3	-8.08	93.23	-2.8237	-11.6377	-1.1375
637	SLV 9	-3.68	8.44	96.86	-0.8891	-12.1437	0.9831
637	SLV 10	-3.66	9.19	96.7	-0.8469	-12.1235	1.09
637	SLV 11	-4.62	-9.54	103.98	-2.1742	-13.0186	-1.2981
637	SLV 12	-4.6	-8.8	103.82	-2.1319	-12.9983	-1.1911
637	SLV 13	-16.73	1.11	111.75	-0.5431	-14.0428	0.0936
637	SLV 14	-16.7	2.25	111.51	-0.4783	-14.0117	0.2577
637	SLV 15	-17.02	-4.28	113.88	-0.9286	-14.3053	-0.5908
637	SLV 16	-16.98	-3.15	113.64	-0.8638	-14.2742	-0.4267

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
637	CRTFP Ux+	0	0	0	0	0	0
637	CRTFP Ux-	0	0	0	0	0	0
637	CRTFP Uy+	0	0	0	0	0	0
637	CRTFP Uy-	0	0	0	0	0	0
638	SLU 1	1.22	-0.17	67.6	14.7178	-2.5571	-0.3169
638	SLU 2	1.22	-0.21	67.62	14.7185	-2.5582	-0.3183
638	SLU 3	1.25	-0.17	69.18	15.0575	-2.617	-0.3252
638	SLU 4	1.25	-0.19	69.2	15.0579	-2.6176	-0.326
638	SLU 5	1.24	-0.22	68.59	14.9281	-2.5953	-0.3239
638	SLU 6	1.27	-0.18	70.15	15.267	-2.6541	-0.3308
638	SLU 7	1.27	-0.2	70.17	15.2675	-2.6548	-0.3316
638	SLU 8	1.26	-0.19	69.54	15.1369	-2.6314	-0.3281
638	SLU 9	1.26	-0.22	69.55	15.1374	-2.632	-0.3289
638	SLU 10	1.3	-0.13	76.08	16.5526	-2.8674	-0.3355
638	SLU 11	1.34	-0.08	77.64	16.8915	-2.9262	-0.3425
638	SLU 12	1.34	-0.11	77.66	16.892	-2.9269	-0.3433
638	SLU 13	1.32	-0.14	77.05	16.7622	-2.9045	-0.3411
638	SLU 14	1.36	-0.09	78.61	17.1011	-2.9634	-0.3481
638	SLU 15	1.36	-0.12	78.63	17.1015	-2.964	-0.3489
638	SLU 16	1.34	-0.11	78	16.971	-2.9406	-0.3454
638	SLU 17	1.34	-0.13	78.01	16.9714	-2.9413	-0.3462
638	SLU 18	1.34	-0.05	79.68	17.3379	-2.9989	-0.3416
638	SLU 19	1.34	-0.08	79.69	17.3383	-2.9995	-0.3424
638	SLU 20	1.36	-0.06	80.65	17.5474	-3.036	-0.3472
638	SLU 21	1.36	-0.09	80.66	17.5479	-3.0366	-0.348
638	SLU 22	1.34	-0.04	75.71	16.4745	-2.8662	-0.3421
638	SLU 23	1.34	-0.08	75.73	16.4752	-2.8673	-0.3434
638	SLU 24	1.37	-0.03	77.3	16.8142	-2.9261	-0.3504
638	SLU 25	1.37	-0.06	77.31	16.8146	-2.9268	-0.3512
638	SLU 26	1.36	-0.09	76.71	16.6848	-2.9045	-0.349
638	SLU 27	1.39	-0.04	78.27	17.0237	-2.9633	-0.356
638	SLU 28	1.39	-0.07	78.28	17.0242	-2.9639	-0.3568
638	SLU 29	1.38	-0.06	77.65	16.8936	-2.9405	-0.3533
638	SLU 30	1.38	-0.08	77.67	16.894	-2.9412	-0.3541
638	SLU 31	1.42	0.01	84.19	18.3093	-3.1765	-0.3607
638	SLU 32	1.45	0.05	85.76	18.6482	-3.2354	-0.3677
638	SLU 33	1.45	0.03	85.77	18.6487	-3.236	-0.3685
638	SLU 34	1.44	0	85.16	18.5188	-3.2137	-0.3663
638	SLU 35	1.47	0.04	86.73	18.8578	-3.2725	-0.3733
638	SLU 36	1.47	0.02	86.74	18.8582	-3.2732	-0.3741
638	SLU 37	1.46	0.03	86.11	18.7277	-3.2498	-0.3706
638	SLU 38	1.46	0	86.13	18.7281	-3.2504	-0.3714
638	SLU 39	1.46	0.08	87.8	19.0946	-3.308	-0.3668
638	SLU 40	1.46	0.06	87.81	19.095	-3.3086	-0.3676
638	SLU 41	1.48	0.07	88.77	19.3041	-3.3452	-0.3724
638	SLU 42	1.48	0.05	88.78	19.3046	-3.3458	-0.3732
638	SLU 43	1.55	-0.27	85.1	18.5309	-3.2182	-0.4034
638	SLU 44	1.55	-0.31	85.12	18.5316	-3.2193	-0.4047
638	SLU 45	1.58	-0.26	86.68	18.8705	-3.2781	-0.4117
638	SLU 46	1.58	-0.29	86.69	18.871	-3.2788	-0.4124
638	SLU 47	1.57	-0.32	86.09	18.7412	-3.2564	-0.4103
638	SLU 48	1.6	-0.27	87.65	19.0801	-3.3153	-0.4173
638	SLU 49	1.6	-0.3	87.66	19.0805	-3.3159	-0.418
638	SLU 50	1.59	-0.29	87.04	18.95	-3.2925	-0.4146
638	SLU 51	1.59	-0.31	87.05	18.9504	-3.2932	-0.4154
638	SLU 52	1.63	-0.23	93.58	20.3656	-3.5285	-0.422
638	SLU 53	1.66	-0.18	95.14	20.7046	-3.5874	-0.4289
638	SLU 54	1.66	-0.21	95.15	20.705	-3.588	-0.4297
638	SLU 55	1.65	-0.24	94.55	20.5752	-3.5657	-0.4276
638	SLU 56	1.68	-0.19	96.11	20.9141	-3.6245	-0.4345
638	SLU 57	1.68	-0.22	96.12	20.9146	-3.6251	-0.4353
638	SLU 58	1.67	-0.21	95.49	20.784	-3.6018	-0.4319
638	SLU 59	1.67	-0.23	95.51	20.7845	-3.6024	-0.4327
638	SLU 60	1.66	-0.15	97.18	21.1509	-3.66	-0.4281
638	SLU 61	1.66	-0.17	97.19	21.1514	-3.6606	-0.4289
638	SLU 62	1.68	-0.16	98.15	21.3605	-3.6971	-0.4337
638	SLU 63	1.68	-0.19	98.16	21.3609	-3.6978	-0.4345
638	SLU 64	1.66	-0.13	93.21	20.2875	-3.5274	-0.4286
638	SLU 65	1.66	-0.17	93.23	20.2883	-3.5284	-0.4299
638	SLU 66	1.7	-0.13	94.8	20.6272	-3.5873	-0.4368
638	SLU 67	1.7	-0.15	94.81	20.6277	-3.5879	-0.4376
638	SLU 68	1.68	-0.19	94.2	20.4978	-3.5656	-0.4355
638	SLU 69	1.72	-0.14	95.77	20.8368	-3.6244	-0.4424
638	SLU 70	1.72	-0.16	95.78	20.8372	-3.6251	-0.4432
638	SLU 71	1.71	-0.15	95.15	20.7067	-3.6017	-0.4398
638	SLU 72	1.71	-0.18	95.16	20.7071	-3.6023	-0.4406
638	SLU 73	1.75	-0.09	101.69	22.1223	-3.8377	-0.4472
638	SLU 74	1.78	-0.05	103.25	22.4613	-3.8965	-0.4541
638	SLU 75	1.78	-0.07	103.27	22.4617	-3.8971	-0.4549
638	SLU 76	1.77	-0.1	102.66	22.3319	-3.8748	-0.4528
638	SLU 77	1.8	-0.06	104.22	22.6708	-3.9337	-0.4597
638	SLU 78	1.8	-0.08	104.24	22.6713	-3.9343	-0.4605
638	SLU 79	1.79	-0.07	103.61	22.5407	-3.9109	-0.4571
638	SLU 80	1.79	-0.1	103.62	22.5412	-3.9115	-0.4578
638	SLU 81	1.78	-0.02	105.29	22.9076	-3.9691	-0.4533
638	SLU 82	1.78	-0.04	105.31	22.9081	-3.9698	-0.454
638	SLU 83	1.8	-0.03	106.26	23.1172	-4.0063	-0.4589
638	SLU 84	1.8	-0.05	106.28	23.1176	-4.0069	-0.4596
638	SLE RA 1	1.25	-0.13	69.92	15.2197	-2.6454	-0.3241
638	SLE RA 2	1.25	-0.16	69.93	15.2202	-2.6461	-0.325

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
638	SLE RA 3	1.28	-0.13	70.97	15.4462	-2.6854	-0.3297
638	SLE RA 4	1.28	-0.15	70.98	15.4465	-2.6858	-0.3302
638	SLE RA 5	1.27	-0.17	70.58	15.3599	-2.6709	-0.3288
638	SLE RA 6	1.29	-0.14	71.62	15.5859	-2.7101	-0.3334
638	SLE RA 7	1.29	-0.15	71.63	15.5862	-2.7105	-0.3339
638	SLE RA 8	1.28	-0.15	71.21	15.4991	-2.695	-0.3316
638	SLE RA 9	1.28	-0.16	71.22	15.4994	-2.6954	-0.3321
638	SLE RA 10	1.31	-0.1	75.57	16.4429	-2.8523	-0.3365
638	SLE RA 11	1.33	-0.07	76.61	16.6689	-2.8915	-0.3412
638	SLE RA 12	1.33	-0.09	76.62	16.6692	-2.8919	-0.3417
638	SLE RA 13	1.32	-0.11	76.22	16.5826	-2.8771	-0.3403
638	SLE RA 14	1.34	-0.08	77.26	16.8086	-2.9163	-0.3449
638	SLE RA 15	1.34	-0.1	77.27	16.8089	-2.9167	-0.3454
638	SLE RA 16	1.34	-0.09	76.85	16.7218	-2.9011	-0.3431
638	SLE RA 17	1.34	-0.11	76.86	16.7221	-2.9015	-0.3437
638	SLE RA 18	1.33	-0.05	77.97	16.9664	-2.9399	-0.3406
638	SLE RA 19	1.33	-0.07	77.98	16.9667	-2.9404	-0.3411
638	SLE RA 20	1.35	-0.06	78.62	17.1061	-2.9647	-0.3443
638	SLE RA 21	1.35	-0.08	78.63	17.1064	-2.9651	-0.3449
638	SLE FR 1	1.25	-0.13	69.92	15.2197	-2.6454	-0.3241
638	SLE FR 2	1.25	-0.14	69.92	15.2198	-2.6456	-0.3243
638	SLE FR 3	1.26	-0.14	70.18	15.2756	-2.6553	-0.3256
638	SLE FR 4	1.28	-0.11	72.34	15.7438	-2.7339	-0.3293
638	SLE FR 5	1.28	-0.11	72.59	15.7996	-2.7437	-0.3306
638	SLE FR 6	1.29	-0.09	73.94	16.0931	-2.7927	-0.3324
638	SLE QP 1	1.25	-0.13	69.92	15.2197	-2.6454	-0.3241
638	SLE QP 2	1.28	-0.11	72.33	15.7437	-2.7338	-0.3291
638	SLD 1	7.42	1.06	66.08	13.6884	-2.5684	-1.8165
638	SLD 2	7.41	1.52	66.02	13.6977	-2.5642	-1.7899
638	SLD 3	7.33	-0.82	66.55	13.6307	-2.5773	-1.8812
638	SLD 4	7.31	-0.37	66.49	13.64	-2.5731	-1.8546
638	SLD 5	3.27	3.02	69.76	15.213	-2.6714	-0.6821
638	SLD 6	3.26	3.32	69.71	15.2192	-2.6687	-0.6644
638	SLD 7	2.95	-3.27	71.32	15.0205	-2.7011	-0.8977
638	SLD 8	2.94	-2.96	71.28	15.0267	-2.6983	-0.88
638	SLD 9	-0.39	2.75	73.39	16.4608	-2.7692	0.2218
638	SLD 10	-0.4	3.05	73.34	16.4669	-2.7665	0.2395
638	SLD 11	-0.71	-3.54	74.95	16.2683	-2.7989	0.0062
638	SLD 12	-0.71	-3.24	74.91	16.2744	-2.7961	0.0239
638	SLD 13	-4.76	0.15	78.18	17.8475	-2.8944	1.1964
638	SLD 14	-4.77	0.61	78.11	17.8568	-2.8903	1.223
638	SLD 15	-4.86	-1.74	78.65	17.7898	-2.9033	1.1317
638	SLD 16	-4.87	-1.28	78.58	17.799	-2.8992	1.1584
638	SLV 1	15.64	2.56	57.72	10.9341	-2.3471	-3.8086
638	SLV 2	15.62	3.63	57.57	10.9558	-2.3375	-3.7466
638	SLV 3	15.42	-1.71	58.79	10.8006	-2.3672	-3.9559
638	SLV 4	15.39	-0.65	58.64	10.8222	-2.3576	-3.8939
638	SLV 5	5.93	6.99	66.36	14.4996	-2.589	-1.1604
638	SLV 6	5.91	7.68	66.26	14.5137	-2.5827	-1.12
638	SLV 7	5.19	-7.26	69.92	14.0545	-2.656	-1.6514
638	SLV 8	5.17	-6.57	69.82	14.0686	-2.6497	-1.6111
638	SLV 9	-2.62	6.35	74.85	17.4189	-2.8178	0.9529
638	SLV 10	-2.63	7.04	74.75	17.433	-2.8116	0.9933
638	SLV 11	-3.36	-7.9	78.41	16.9738	-2.8848	0.4619
638	SLV 12	-3.37	-7.21	78.31	16.9879	-2.8786	0.5023
638	SLV 13	-12.84	0.43	86.03	20.6652	-3.11	3.2358
638	SLV 14	-12.87	1.49	85.88	20.6869	-3.1004	3.2978
638	SLV 15	-13.06	-3.85	87.1	20.5317	-3.1301	3.0885
638	SLV 16	-13.09	-2.78	86.94	20.5533	-3.1205	3.1505
638	CRTFP Ux+	0	0	0	0	0	0
638	CRTFP Ux-	0	0	0	0	0	0
638	CRTFP Uy+	0	0	0	0	0	0
638	CRTFP Uy-	0	0	0	0	0	0
642	SLU 1	1.5	-0.61	106.67	-22.0295	30.2454	0.4676
642	SLU 2	1.5	-0.67	106.72	-22.0396	30.2629	0.4864
642	SLU 3	1.54	-0.61	109.19	-22.5516	30.9619	0.4761
642	SLU 4	1.54	-0.65	109.23	-22.5577	30.9724	0.4874
642	SLU 5	1.52	-0.69	108.26	-22.3576	30.6946	0.4977
642	SLU 6	1.56	-0.64	110.73	-22.8696	31.3936	0.4875
642	SLU 7	1.56	-0.67	110.76	-22.8757	31.4041	0.4987
642	SLU 8	1.55	-0.66	109.74	-22.6654	31.1088	0.4904
642	SLU 9	1.55	-0.69	109.77	-22.6715	31.1193	0.5016
642	SLU 10	1.59	-0.58	120.02	-24.771	34.0503	0.4803
642	SLU 11	1.63	-0.52	122.49	-25.283	34.7493	0.4701
642	SLU 12	1.63	-0.56	122.53	-25.2891	34.7598	0.4813
642	SLU 13	1.62	-0.6	121.56	-25.089	34.482	0.4917
642	SLU 14	1.66	-0.54	124.03	-25.6009	35.181	0.4815
642	SLU 15	1.66	-0.58	124.06	-25.607	35.1915	0.4927
642	SLU 16	1.64	-0.56	123.04	-25.3968	34.8962	0.4843
642	SLU 17	1.64	-0.6	123.07	-25.4029	34.9067	0.4956
642	SLU 18	1.63	-0.48	125.67	-25.9314	35.656	0.459
642	SLU 19	1.63	-0.51	125.7	-25.9375	35.6665	0.4703
642	SLU 20	1.66	-0.5	127.2	-26.2494	36.0877	0.4704
642	SLU 21	1.66	-0.53	127.24	-26.2555	36.0982	0.4816
642	SLU 22	1.64	-0.44	119.37	-24.6367	33.8084	0.4486
642	SLU 23	1.64	-0.5	119.43	-24.6469	33.8259	0.4674
642	SLU 24	1.68	-0.45	121.89	-25.1589	34.5249	0.4571
642	SLU 25	1.68	-0.48	121.93	-25.165	34.5354	0.4684
642	SLU 26	1.66	-0.53	120.96	-24.9649	34.2575	0.4787
642	SLU 27	1.7	-0.47	123.43	-25.4768	34.9566	0.4685

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
642	SLU 28	1.7	-0.5	123.46	-25.4829	34.967	0.4797
642	SLU 29	1.69	-0.49	122.44	-25.2727	34.6718	0.4714
642	SLU 30	1.69	-0.52	122.47	-25.2788	34.6822	0.4826
642	SLU 31	1.73	-0.41	132.73	-27.3782	37.6133	0.4614
642	SLU 32	1.77	-0.35	135.19	-27.8902	38.3123	0.4511
642	SLU 33	1.77	-0.39	135.23	-27.8963	38.3228	0.4623
642	SLU 34	1.76	-0.43	134.26	-27.6962	38.045	0.4727
642	SLU 35	1.8	-0.37	136.73	-28.2082	38.744	0.4625
642	SLU 36	1.8	-0.41	136.76	-28.2143	38.7545	0.4737
642	SLU 37	1.78	-0.39	135.74	-28.004	38.4592	0.4653
642	SLU 38	1.78	-0.43	135.77	-28.0101	38.4697	0.4766
642	SLU 39	1.77	-0.31	138.37	-28.5386	39.219	0.44
642	SLU 40	1.77	-0.34	138.4	-28.5447	39.2295	0.4513
642	SLU 41	1.8	-0.33	139.91	-28.8566	39.6507	0.4514
642	SLU 42	1.8	-0.37	139.94	-28.8627	39.6612	0.4626
642	SLU 43	1.9	-0.85	134.32	-27.7444	38.0975	0.6144
642	SLU 44	1.9	-0.91	134.37	-27.7546	38.1149	0.6332
642	SLU 45	1.94	-0.86	136.84	-28.2665	38.8139	0.6229
642	SLU 46	1.94	-0.89	136.87	-28.2726	38.8244	0.6342
642	SLU 47	1.93	-0.93	135.9	-28.0726	38.5466	0.6445
642	SLU 48	1.96	-0.88	138.37	-28.5845	39.2456	0.6343
642	SLU 49	1.96	-0.91	138.41	-28.5906	39.2561	0.6455
642	SLU 50	1.95	-0.9	137.38	-28.3804	38.9608	0.6372
642	SLU 51	1.95	-0.93	137.42	-28.3865	38.9713	0.6484
642	SLU 52	1.99	-0.82	147.67	-30.4859	41.9023	0.6271
642	SLU 53	2.03	-0.76	150.14	-30.9979	42.6014	0.6169
642	SLU 54	2.03	-0.8	150.17	-31.004	42.6118	0.6281
642	SLU 55	2.02	-0.84	149.2	-30.8039	42.334	0.6385
642	SLU 56	2.06	-0.78	151.67	-31.3159	43.033	0.6283
642	SLU 57	2.06	-0.82	151.71	-31.322	43.0435	0.6395
642	SLU 58	2.04	-0.8	150.68	-31.1117	42.7482	0.6311
642	SLU 59	2.05	-0.84	150.72	-31.1178	42.7587	0.6424
642	SLU 60	2.03	-0.72	153.32	-31.6463	43.5081	0.6058
642	SLU 61	2.03	-0.75	153.35	-31.6524	43.5185	0.6171
642	SLU 62	2.06	-0.74	154.85	-31.9643	43.9397	0.6172
642	SLU 63	2.06	-0.77	154.88	-31.9704	43.9502	0.6284
642	SLU 64	2.04	-0.68	147.02	-30.3517	41.6604	0.5954
642	SLU 65	2.04	-0.75	147.07	-30.3618	41.6779	0.6142
642	SLU 66	2.08	-0.69	149.54	-30.8738	42.3769	0.6039
642	SLU 67	2.08	-0.72	149.57	-30.8799	42.3874	0.6152
642	SLU 68	2.07	-0.77	148.61	-30.6798	42.1096	0.6256
642	SLU 69	2.1	-0.71	151.07	-31.1918	42.8086	0.6153
642	SLU 70	2.1	-0.75	151.11	-31.1979	42.8191	0.6265
642	SLU 71	2.09	-0.73	150.09	-30.9876	42.5238	0.6182
642	SLU 72	2.09	-0.76	150.12	-30.9937	42.5343	0.6294
642	SLU 73	2.14	-0.65	160.37	-33.0932	45.4653	0.6082
642	SLU 74	2.17	-0.59	162.84	-33.6051	46.1643	0.5979
642	SLU 75	2.17	-0.63	162.87	-33.6112	46.1748	0.6091
642	SLU 76	2.16	-0.67	161.91	-33.4112	45.897	0.6195
642	SLU 77	2.2	-0.61	164.37	-33.9231	46.596	0.6093
642	SLU 78	2.2	-0.65	164.41	-33.9292	46.6065	0.6205
642	SLU 79	2.18	-0.63	163.39	-33.719	46.3112	0.6121
642	SLU 80	2.19	-0.67	163.42	-33.7251	46.3217	0.6234
642	SLU 81	2.17	-0.55	166.02	-34.2536	47.0711	0.5868
642	SLU 82	2.17	-0.58	166.05	-34.2597	47.0815	0.5981
642	SLU 83	2.2	-0.57	167.55	-34.5716	47.5027	0.5982
642	SLU 84	2.2	-0.61	167.58	-34.5777	47.5132	0.6094
642	SLE RA 1	1.54	-0.56	110.3	-22.7744	31.2634	0.4622
642	SLE RA 2	1.54	-0.6	110.34	-22.7812	31.2751	0.4747
642	SLE RA 3	1.56	-0.57	111.98	-23.1225	31.7411	0.4679
642	SLE RA 4	1.56	-0.59	112	-23.1266	31.7481	0.4754
642	SLE RA 5	1.56	-0.62	111.36	-22.9932	31.5628	0.4823
642	SLE RA 6	1.58	-0.58	113	-23.3345	32.0289	0.4754
642	SLE RA 7	1.58	-0.6	113.03	-23.3386	32.0358	0.4829
642	SLE RA 8	1.57	-0.59	112.34	-23.1984	31.839	0.4774
642	SLE RA 9	1.57	-0.62	112.37	-23.2025	31.846	0.4849
642	SLE RA 10	1.6	-0.54	119.2	-24.6021	33.8	0.4707
642	SLE RA 11	1.63	-0.5	120.85	-24.9434	34.266	0.4638
642	SLE RA 12	1.63	-0.53	120.87	-24.9475	34.273	0.4713
642	SLE RA 13	1.62	-0.55	120.22	-24.8141	34.0878	0.4783
642	SLE RA 14	1.64	-0.52	121.87	-25.1554	34.5538	0.4714
642	SLE RA 15	1.64	-0.54	121.89	-25.1594	34.5608	0.4789
642	SLE RA 16	1.63	-0.53	121.21	-25.0193	34.3639	0.4733
642	SLE RA 17	1.64	-0.55	121.23	-25.0233	34.3709	0.4808
642	SLE RA 18	1.63	-0.47	122.97	-25.3757	34.8705	0.4565
642	SLE RA 19	1.63	-0.5	122.99	-25.3798	34.8775	0.464
642	SLE RA 20	1.64	-0.49	123.99	-25.5877	35.1583	0.464
642	SLE RA 21	1.65	-0.51	124.01	-25.5917	35.1653	0.4715
642	SLE FR 1	1.54	-0.56	110.3	-22.7744	31.2634	0.4622
642	SLE FR 2	1.54	-0.57	110.31	-22.7758	31.2657	0.4647
642	SLE FR 3	1.54	-0.57	110.71	-22.8592	31.3785	0.4652
642	SLE FR 4	1.56	-0.54	114.11	-23.5561	32.3479	0.463
642	SLE FR 5	1.57	-0.54	114.51	-23.6396	32.4607	0.4635
642	SLE FR 6	1.58	-0.52	116.63	-24.075	33.067	0.4593
642	SLE QP 1	1.54	-0.56	110.3	-22.7744	31.2634	0.4622
642	SLE QP 2	1.56	-0.54	114.1	-23.5548	32.3455	0.4605
642	SLD 1	10.6	1.33	104.81	-21.7063	29.8711	1.7931
642	SLD 2	10.64	2.04	104.65	-21.6909	29.811	1.6326
642	SLD 3	10.45	-1.5	106.03	-21.9151	30.3048	2.5729
642	SLD 4	10.5	-0.78	105.88	-21.8997	30.2447	2.4123

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
642	SLD 5	4.48	4.18	109.49	-22.6864	30.9563	-0.2931
642	SLD 6	4.51	4.66	109.38	-22.6762	30.9165	-0.3997
642	SLD 7	4	-5.24	113.56	-23.3823	32.402	2.306
642	SLD 8	4.03	-4.77	113.46	-23.3721	32.3622	2.1994
642	SLD 9	-0.9	3.7	114.74	-23.7375	32.3289	-1.2784
642	SLD 10	-0.87	4.17	114.64	-23.7273	32.2891	-1.385
642	SLD 11	-1.39	-5.73	118.81	-24.4334	33.7746	1.3206
642	SLD 12	-1.36	-5.25	118.71	-24.4232	33.7348	1.2141
642	SLD 13	-7.37	-0.29	122.32	-25.2099	34.4464	-1.4913
642	SLD 14	-7.32	0.43	122.17	-25.1945	34.3863	-1.6519
642	SLD 15	-7.51	-3.12	123.54	-25.4186	34.8801	-0.7116
642	SLD 16	-7.47	-2.4	123.39	-25.4033	34.82	-0.8722
642	SLV 1	22.68	3.72	92.4	-19.2371	26.5707	3.6033
642	SLV 2	22.79	5.39	92.05	-19.2013	26.4309	3.2294
642	SLV 3	22.35	-2.68	95.17	-19.711	27.5543	5.3699
642	SLV 4	22.45	-1.02	94.82	-19.6752	27.4146	4.996
642	SLV 5	8.39	10.16	103.45	-21.5471	29.1458	-1.2104
642	SLV 6	8.46	11.25	103.21	-21.5238	29.0547	-1.454
642	SLV 7	7.27	-11.19	112.69	-23.1266	32.4246	4.6785
642	SLV 8	7.34	-10.1	112.46	-23.1033	32.3335	4.4349
642	SLV 9	-4.21	9.03	115.74	-24.0063	32.3576	-3.5139
642	SLV 10	-4.14	10.12	115.51	-23.983	32.2665	-3.7575
642	SLV 11	-5.33	-12.32	124.98	-25.5858	35.6364	2.375
642	SLV 12	-5.26	-11.24	124.75	-25.5625	35.5453	2.1314
642	SLV 13	-19.32	-0.06	133.38	-27.4344	37.2765	-4.0751
642	SLV 14	-19.22	1.61	133.03	-27.3986	37.1368	-4.449
642	SLV 15	-19.66	-6.46	136.15	-27.9083	38.2602	-2.3084
642	SLV 16	-19.55	-4.79	135.8	-27.8725	38.1204	-2.6823
642	CRTFP Ux+	0	0	0	0	0	0
642	CRTFP Ux-	0	0	0	0	0	0
642	CRTFP Uy+	0	0	0	0	0	0
642	CRTFP Uy-	0	0	0	0	0	0
643	SLU 1	2.38	-0.3	134.37	-2.0403	27.4874	0.0911
643	SLU 2	2.38	-0.37	134.41	-2.0445	27.4978	0.1068
643	SLU 3	2.44	-0.29	137.53	-2.0936	28.1332	0.0898
643	SLU 4	2.45	-0.33	137.55	-2.0961	28.1395	0.0993
643	SLU 5	2.42	-0.39	136.35	-2.0762	27.8941	0.1111
643	SLU 6	2.49	-0.31	139.46	-2.1254	28.5294	0.0941
643	SLU 7	2.49	-0.35	139.49	-2.1279	28.5357	0.1036
643	SLU 8	2.46	-0.34	138.25	-2.1038	28.2798	0.0997
643	SLU 9	2.46	-0.38	138.27	-2.1063	28.2861	0.1091
643	SLU 10	2.54	-0.19	151.07	-2.305	30.9094	0.073
643	SLU 11	2.6	-0.11	154.18	-2.3541	31.5448	0.056
643	SLU 12	2.6	-0.16	154.2	-2.3566	31.551	0.0655
643	SLU 13	2.58	-0.21	153	-2.3367	31.3056	0.0773
643	SLU 14	2.64	-0.13	156.12	-2.3859	31.941	0.0604
643	SLU 15	2.65	-0.17	156.14	-2.3884	31.9473	0.0698
643	SLU 16	2.62	-0.16	154.9	-2.3643	31.6914	0.0659
643	SLU 17	2.62	-0.2	154.93	-2.3668	31.6977	0.0753
643	SLU 18	2.61	-0.04	158.16	-2.4124	32.361	0.0428
643	SLU 19	2.61	-0.09	158.19	-2.4149	32.3673	0.0522
643	SLU 20	2.65	-0.06	160.1	-2.4442	32.7572	0.0471
643	SLU 21	2.65	-0.1	160.13	-2.4467	32.7635	0.0566
643	SLU 22	2.61	-0.04	150.56	-2.281	30.7914	0.0388
643	SLU 23	2.61	-0.11	150.6	-2.2852	30.8019	0.0545
643	SLU 24	2.67	-0.04	153.72	-2.3343	31.4373	0.0375
643	SLU 25	2.67	-0.08	153.74	-2.3368	31.4436	0.047
643	SLU 26	2.65	-0.13	152.54	-2.317	31.1981	0.0588
643	SLU 27	2.71	-0.06	155.66	-2.3661	31.8335	0.0418
643	SLU 28	2.71	-0.1	155.68	-2.3686	31.8398	0.0513
643	SLU 29	2.69	-0.08	154.44	-2.3445	31.5839	0.0474
643	SLU 30	2.69	-0.12	154.47	-2.3471	31.5902	0.0568
643	SLU 31	2.77	0.06	167.26	-2.5457	34.2135	0.0207
643	SLU 32	2.83	0.14	170.37	-2.5948	34.8488	0.0038
643	SLU 33	2.83	0.1	170.4	-2.5973	34.8551	0.0132
643	SLU 34	2.81	0.05	169.2	-2.5774	34.6097	0.025
643	SLU 35	2.87	0.12	172.31	-2.6266	35.245	0.0081
643	SLU 36	2.87	0.08	172.34	-2.6291	35.2513	0.0175
643	SLU 37	2.85	0.1	171.1	-2.605	34.9954	0.0136
643	SLU 38	2.85	0.06	171.12	-2.6075	35.0017	0.023
643	SLU 39	2.83	0.21	174.36	-2.6531	35.6651	-0.0095
643	SLU 40	2.83	0.17	174.38	-2.6556	35.6714	0
643	SLU 41	2.87	0.19	176.3	-2.6849	36.0613	-0.0052
643	SLU 42	2.87	0.15	176.32	-2.6874	36.0676	0.0043
643	SLU 43	3.02	-0.47	169.13	-2.5698	34.6007	0.1363
643	SLU 44	3.02	-0.54	169.17	-2.574	34.6112	0.152
643	SLU 45	3.08	-0.47	172.28	-2.6232	35.2466	0.1351
643	SLU 46	3.08	-0.51	172.31	-2.6257	35.2529	0.1445
643	SLU 47	3.06	-0.56	171.11	-2.6058	35.0075	0.1564
643	SLU 48	3.12	-0.49	174.22	-2.6549	35.6428	0.1394
643	SLU 49	3.12	-0.53	174.25	-2.6574	35.6491	0.1488
643	SLU 50	3.1	-0.51	173.01	-2.6334	35.3932	0.145
643	SLU 51	3.1	-0.55	173.03	-2.6359	35.3995	0.1544
643	SLU 52	3.18	-0.37	185.82	-2.8345	38.0228	0.1183
643	SLU 53	3.24	-0.29	188.94	-2.8836	38.6581	0.1013
643	SLU 54	3.24	-0.33	188.96	-2.8862	38.6644	0.1107
643	SLU 55	3.22	-0.39	187.76	-2.8663	38.419	0.1226
643	SLU 56	3.28	-0.31	190.88	-2.9154	39.0544	0.1056
643	SLU 57	3.28	-0.35	190.9	-2.9179	39.0607	0.115
643	SLU 58	3.26	-0.33	189.66	-2.8939	38.8047	0.1112

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
643	SLU 59	3.26	-0.38	189.69	-2.8964	38.811	0.1206
643	SLU 60	3.24	-0.22	192.92	-2.942	39.4744	0.0881
643	SLU 61	3.24	-0.26	192.95	-2.9445	39.4807	0.0975
643	SLU 62	3.28	-0.24	194.86	-2.9737	39.8706	0.0924
643	SLU 63	3.29	-0.28	194.89	-2.9762	39.8769	0.1018
643	SLU 64	3.24	-0.22	185.32	-2.8106	37.9048	0.084
643	SLU 65	3.24	-0.29	185.36	-2.8148	37.9153	0.0997
643	SLU 66	3.31	-0.21	188.48	-2.8639	38.5507	0.0828
643	SLU 67	3.31	-0.26	188.5	-2.8664	38.557	0.0922
643	SLU 68	3.29	-0.31	187.3	-2.8465	38.3115	0.1041
643	SLU 69	3.35	-0.23	190.42	-2.8957	38.9469	0.0871
643	SLU 70	3.35	-0.27	190.44	-2.8982	38.9532	0.0965
643	SLU 71	3.33	-0.26	189.2	-2.8741	38.6973	0.0927
643	SLU 72	3.33	-0.3	189.22	-2.8766	38.7036	0.1021
643	SLU 73	3.4	-0.11	202.02	-3.0752	41.3268	0.066
643	SLU 74	3.47	-0.04	205.13	-3.1244	41.9622	0.049
643	SLU 75	3.47	-0.08	205.16	-3.1269	41.9685	0.0584
643	SLU 76	3.44	-0.13	203.96	-3.107	41.7231	0.0703
643	SLU 77	3.51	-0.05	207.07	-3.1561	42.3584	0.0533
643	SLU 78	3.51	-0.1	207.1	-3.1586	42.3647	0.0627
643	SLU 79	3.48	-0.08	205.86	-3.1346	42.1088	0.0589
643	SLU 80	3.48	-0.12	205.88	-3.1371	42.1151	0.0683
643	SLU 81	3.47	0.03	209.12	-3.1827	42.7784	0.0358
643	SLU 82	3.47	-0.01	209.14	-3.1852	42.7847	0.0452
643	SLU 83	3.51	0.02	211.06	-3.2144	43.1747	0.0401
643	SLU 84	3.51	-0.03	211.08	-3.217	43.181	0.0495
643	SLE RA 1	2.45	-0.23	139	-2.1091	28.4314	0.0761
643	SLE RA 2	2.45	-0.27	139.02	-2.1119	28.4384	0.0866
643	SLE RA 3	2.49	-0.22	141.1	-2.1446	28.8619	0.0753
643	SLE RA 4	2.49	-0.25	141.12	-2.1463	28.8661	0.0816
643	SLE RA 5	2.47	-0.28	140.32	-2.133	28.7025	0.0895
643	SLE RA 6	2.52	-0.23	142.39	-2.1658	29.1261	0.0782
643	SLE RA 7	2.52	-0.26	142.41	-2.1675	29.1303	0.0845
643	SLE RA 8	2.5	-0.25	141.58	-2.1514	28.9597	0.0819
643	SLE RA 9	2.5	-0.28	141.6	-2.1531	28.9639	0.0882
643	SLE RA 10	2.55	-0.15	150.13	-2.2855	30.7127	0.0641
643	SLE RA 11	2.59	-0.1	152.2	-2.3183	31.1363	0.0528
643	SLE RA 12	2.59	-0.13	152.22	-2.3199	31.1405	0.0591
643	SLE RA 13	2.58	-0.17	151.42	-2.3067	30.9769	0.067
643	SLE RA 14	2.62	-0.11	153.5	-2.3394	31.4005	0.0557
643	SLE RA 15	2.62	-0.14	153.51	-2.3411	31.4047	0.0619
643	SLE RA 16	2.61	-0.13	152.69	-2.3251	31.234	0.0594
643	SLE RA 17	2.61	-0.16	152.7	-2.3267	31.2382	0.0656
643	SLE RA 18	2.6	-0.06	154.86	-2.3571	31.6805	0.044
643	SLE RA 19	2.6	-0.08	154.87	-2.3588	31.6847	0.0503
643	SLE RA 20	2.62	-0.07	156.15	-2.3783	31.9446	0.0468
643	SLE RA 21	2.62	-0.1	156.17	-2.38	31.9488	0.0531
643	SLE FR 1	2.45	-0.23	139	-2.1091	28.4314	0.0761
643	SLE FR 2	2.45	-0.23	139	-2.1096	28.4328	0.0782
643	SLE FR 3	2.46	-0.23	139.51	-2.1175	28.537	0.0773
643	SLE FR 4	2.49	-0.18	143.76	-2.184	29.4075	0.0686
643	SLE FR 5	2.5	-0.18	144.27	-2.192	29.5118	0.0676
643	SLE FR 6	2.52	-0.14	146.93	-2.2331	30.0559	0.0601
643	SLE QP 1	2.45	-0.23	139	-2.1091	28.4314	0.0761
643	SLE QP 2	2.49	-0.17	143.76	-2.1835	29.4061	0.0665
643	SLD 1	13.93	1.86	131.36	-1.9213	27.0959	-0.3122
643	SLD 2	13.96	2.94	131.26	-1.9333	27.068	-0.5097
643	SLD 3	13.75	-1.71	132.09	-2.0268	27.2764	0.4379
643	SLD 4	13.77	-0.63	131.99	-2.0388	27.2485	0.2404
643	SLD 5	6.19	5.66	138.95	-1.9426	28.4444	-1.1488
643	SLD 6	6.21	6.37	138.88	-1.9506	28.4258	-1.2799
643	SLD 7	5.59	-6.25	141.38	-2.2943	29.046	1.3514
643	SLD 8	5.6	-5.53	141.32	-2.3023	29.0275	1.2204
643	SLD 9	-0.62	5.19	146.19	-2.0647	29.7847	-1.0874
643	SLD 10	-0.61	5.9	146.13	-2.0727	29.7662	-1.2185
643	SLD 11	-1.23	-6.72	148.63	-2.4164	30.3864	1.4129
643	SLD 12	-1.21	-6.01	148.56	-2.4243	30.3678	1.2818
643	SLD 13	-8.79	0.29	155.52	-2.3281	31.5637	-0.1074
643	SLD 14	-8.77	1.36	155.42	-2.3402	31.5358	-0.3049
643	SLD 15	-8.98	-3.29	156.25	-2.4336	31.7442	0.6427
643	SLD 16	-8.95	-2.21	156.15	-2.4457	31.7163	0.4452
643	SLV 1	29.24	4.46	114.77	-1.5732	24.0071	-0.7932
643	SLV 2	29.3	6.97	114.54	-1.6012	23.942	-1.253
643	SLV 3	28.82	-3.63	116.44	-1.814	24.4167	0.9062
643	SLV 4	28.87	-1.12	116.21	-1.842	24.3516	0.4464
643	SLV 5	11.15	13.05	132.57	-1.6303	27.1766	-2.688
643	SLV 6	11.18	14.69	132.41	-1.6485	27.1342	-2.9876
643	SLV 7	9.74	-13.93	138.14	-2.4329	28.5419	2.9767
643	SLV 8	9.77	-12.29	137.99	-2.4512	28.4995	2.6771
643	SLV 9	-4.79	11.94	149.52	-1.9158	30.3127	-2.5441
643	SLV 10	-4.76	13.58	149.37	-1.9341	30.2703	-2.8437
643	SLV 11	-6.2	-15.03	155.1	-2.7184	31.678	3.1206
643	SLV 12	-6.17	-13.4	154.94	-2.7367	31.6356	2.821
643	SLV 13	-23.89	0.77	171.3	-2.525	34.4606	-0.3134
643	SLV 14	-23.84	3.28	171.07	-2.553	34.3955	-0.7732
643	SLV 15	-24.32	-7.32	172.97	-2.7658	34.8702	1.386
643	SLV 16	-24.26	-4.81	172.74	-2.7938	34.8051	0.9262
643	CRTFP Ux+	0	0	0	0	0	0
643	CRTFP Ux-	0	0	0	0	0	0
643	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
643	CRTFP Uy-	0	0	0	0	0	0
646	SLU 1	0.87	-0.08	48.32	-2.6142	-1.2752	0.0447
646	SLU 2	0.87	-0.1	48.33	-2.6167	-1.2753	0.0442
646	SLU 3	0.9	-0.08	49.45	-2.6779	-1.3049	0.0459
646	SLU 4	0.9	-0.09	49.46	-2.6794	-1.305	0.0456
646	SLU 5	0.89	-0.11	49.03	-2.6554	-1.2936	0.0448
646	SLU 6	0.91	-0.08	50.15	-2.7166	-1.3233	0.0465
646	SLU 7	0.91	-0.1	50.16	-2.718	-1.3234	0.0462
646	SLU 8	0.9	-0.09	49.72	-2.6916	-1.312	0.0459
646	SLU 9	0.9	-0.1	49.72	-2.6931	-1.312	0.0456
646	SLU 10	0.93	-0.03	54.31	-2.9448	-1.4327	0.0494
646	SLU 11	0.95	-0.01	55.43	-3.0061	-1.4624	0.051
646	SLU 12	0.95	-0.02	55.44	-3.0075	-1.4624	0.0508
646	SLU 13	0.95	-0.04	55.01	-2.9835	-1.4511	0.05
646	SLU 14	0.97	-0.02	56.13	-3.0448	-1.4808	0.0517
646	SLU 15	0.97	-0.03	56.14	-3.0462	-1.4808	0.0514
646	SLU 16	0.96	-0.02	55.7	-3.0198	-1.4694	0.0511
646	SLU 17	0.96	-0.04	55.7	-3.0212	-1.4694	0.0508
646	SLU 18	0.96	0.02	56.86	-3.083	-1.5001	0.0521
646	SLU 19	0.96	0	56.87	-3.0845	-1.5001	0.0518
646	SLU 20	0.97	0.01	57.56	-3.1217	-1.5185	0.0527
646	SLU 21	0.97	0	57.57	-3.1232	-1.5185	0.0524
646	SLU 22	0.95	0.01	54.16	-2.9262	-1.4297	0.0511
646	SLU 23	0.95	-0.01	54.17	-2.9287	-1.4298	0.0507
646	SLU 24	0.98	0.01	55.29	-2.9899	-1.4595	0.0523
646	SLU 25	0.98	0	55.3	-2.9914	-1.4595	0.0521
646	SLU 26	0.97	-0.02	54.87	-2.9674	-1.4482	0.0513
646	SLU 27	0.99	0.01	55.99	-3.0286	-1.4779	0.053
646	SLU 28	0.99	-0.01	56	-3.0301	-1.4779	0.0527
646	SLU 29	0.98	0	55.56	-3.0036	-1.4665	0.0524
646	SLU 30	0.98	-0.02	55.56	-3.0051	-1.4665	0.0521
646	SLU 31	1.01	0.05	60.15	-3.2569	-1.5872	0.0559
646	SLU 32	1.04	0.08	61.27	-3.3181	-1.6169	0.0575
646	SLU 33	1.04	0.07	61.28	-3.3196	-1.617	0.0573
646	SLU 34	1.03	0.05	60.85	-3.2956	-1.6056	0.0565
646	SLU 35	1.05	0.07	61.97	-3.3568	-1.6353	0.0582
646	SLU 36	1.05	0.06	61.98	-3.3583	-1.6353	0.0579
646	SLU 37	1.04	0.07	61.54	-3.3318	-1.6239	0.0576
646	SLU 38	1.04	0.05	61.54	-3.3333	-1.624	0.0573
646	SLU 39	1.04	0.11	62.7	-3.3951	-1.6546	0.0586
646	SLU 40	1.04	0.09	62.71	-3.3966	-1.6547	0.0583
646	SLU 41	1.05	0.1	63.4	-3.4338	-1.673	0.0592
646	SLU 42	1.05	0.09	63.41	-3.4353	-1.6731	0.0589
646	SLU 43	1.11	-0.13	60.81	-3.2915	-1.6048	0.0558
646	SLU 44	1.11	-0.16	60.82	-3.2939	-1.6048	0.0554
646	SLU 45	1.13	-0.13	61.95	-3.3551	-1.6345	0.057
646	SLU 46	1.13	-0.14	61.95	-3.3566	-1.6345	0.0567
646	SLU 47	1.12	-0.16	61.52	-3.3326	-1.6232	0.056
646	SLU 48	1.14	-0.14	62.64	-3.3938	-1.6529	0.0576
646	SLU 49	1.14	-0.15	62.65	-3.3953	-1.6529	0.0574
646	SLU 50	1.14	-0.14	62.21	-3.3688	-1.6415	0.057
646	SLU 51	1.14	-0.16	62.21	-3.3703	-1.6416	0.0568
646	SLU 52	1.16	-0.09	66.8	-3.6221	-1.7623	0.0606
646	SLU 53	1.19	-0.06	67.93	-3.6833	-1.7919	0.0622
646	SLU 54	1.19	-0.08	67.93	-3.6848	-1.792	0.0619
646	SLU 55	1.18	-0.09	67.5	-3.6608	-1.7806	0.0612
646	SLU 56	1.2	-0.07	68.62	-3.722	-1.8103	0.0628
646	SLU 57	1.2	-0.08	68.63	-3.7235	-1.8104	0.0626
646	SLU 58	1.19	-0.08	68.19	-3.697	-1.799	0.0622
646	SLU 59	1.19	-0.09	68.19	-3.6985	-1.799	0.062
646	SLU 60	1.19	-0.04	69.36	-3.7603	-1.8297	0.0632
646	SLU 61	1.19	-0.05	69.36	-3.7618	-1.8297	0.063
646	SLU 62	1.2	-0.04	70.05	-3.799	-1.8481	0.0638
646	SLU 63	1.2	-0.06	70.06	-3.8005	-1.8481	0.0636
646	SLU 64	1.19	-0.04	66.66	-3.6035	-1.7593	0.0623
646	SLU 65	1.19	-0.07	66.66	-3.606	-1.7594	0.0619
646	SLU 66	1.21	-0.04	67.79	-3.6672	-1.7891	0.0635
646	SLU 67	1.21	-0.05	67.79	-3.6687	-1.7891	0.0632
646	SLU 68	1.2	-0.07	67.36	-3.6447	-1.7778	0.0625
646	SLU 69	1.23	-0.05	68.49	-3.7059	-1.8074	0.0641
646	SLU 70	1.23	-0.06	68.49	-3.7074	-1.8075	0.0639
646	SLU 71	1.22	-0.06	68.05	-3.6809	-1.7961	0.0635
646	SLU 72	1.22	-0.07	68.06	-3.6824	-1.7961	0.0633
646	SLU 73	1.25	0	72.64	-3.9342	-1.9168	0.0671
646	SLU 74	1.27	0.03	73.77	-3.9954	-1.9465	0.0687
646	SLU 75	1.27	0.01	73.77	-3.9969	-1.9465	0.0684
646	SLU 76	1.26	-0.01	73.34	-3.9729	-1.9352	0.0677
646	SLU 77	1.28	0.02	74.46	-4.0341	-1.9649	0.0693
646	SLU 78	1.28	0.01	74.47	-4.0356	-1.9649	0.0691
646	SLU 79	1.28	0.01	74.03	-4.0091	-1.9535	0.0687
646	SLU 80	1.28	0	74.04	-4.0106	-1.9535	0.0685
646	SLU 81	1.27	0.05	75.2	-4.0724	-1.9842	0.0697
646	SLU 82	1.27	0.04	75.2	-4.0738	-1.9843	0.0695
646	SLU 83	1.29	0.05	75.9	-4.111	-2.0026	0.0703
646	SLU 84	1.29	0.03	75.9	-4.1125	-2.0026	0.0701
646	SLE RA 1	0.9	-0.05	49.99	-2.7033	-1.3194	0.0465
646	SLE RA 2	0.9	-0.07	49.99	-2.705	-1.3194	0.0462
646	SLE RA 3	0.91	-0.05	50.74	-2.7458	-1.3392	0.0473
646	SLE RA 4	0.91	-0.06	50.75	-2.7468	-1.3392	0.0471
646	SLE RA 5	0.91	-0.07	50.46	-2.7308	-1.3316	0.0466

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
646	SLE RA 6	0.92	-0.06	51.21	-2.7716	-1.3514	0.0477
646	SLE RA 7	0.92	-0.06	51.21	-2.7726	-1.3515	0.0475
646	SLE RA 8	0.92	-0.06	50.92	-2.7549	-1.3439	0.0473
646	SLE RA 9	0.92	-0.07	50.92	-2.7559	-1.3439	0.0471
646	SLE RA 10	0.93	-0.02	53.98	-2.9238	-1.4243	0.0497
646	SLE RA 11	0.95	-0.01	54.73	-2.9646	-1.4441	0.0508
646	SLE RA 12	0.95	-0.02	54.73	-2.9656	-1.4442	0.0506
646	SLE RA 13	0.94	-0.03	54.45	-2.9496	-1.4366	0.0501
646	SLE RA 14	0.96	-0.01	55.2	-2.9904	-1.4564	0.0512
646	SLE RA 15	0.96	-0.02	55.2	-2.9914	-1.4564	0.051
646	SLE RA 16	0.95	-0.02	54.91	-2.9737	-1.4488	0.0508
646	SLE RA 17	0.95	-0.03	54.91	-2.9747	-1.4488	0.0506
646	SLE RA 18	0.95	0.01	55.68	-3.0159	-1.4693	0.0514
646	SLE RA 19	0.95	0	55.69	-3.0169	-1.4693	0.0513
646	SLE RA 20	0.96	0.01	56.15	-3.0417	-1.4815	0.0519
646	SLE RA 21	0.96	0	56.15	-3.0427	-1.4816	0.0517
646	SLE FR 1	0.9	-0.05	49.99	-2.7033	-1.3194	0.0465
646	SLE FR 2	0.9	-0.06	49.99	-2.7037	-1.3194	0.0464
646	SLE FR 3	0.9	-0.05	50.18	-2.7137	-1.3243	0.0467
646	SLE FR 4	0.91	-0.04	51.7	-2.7974	-1.3643	0.0479
646	SLE FR 5	0.92	-0.04	51.88	-2.8074	-1.3692	0.0482
646	SLE FR 6	0.92	-0.02	52.84	-2.8596	-1.3943	0.049
646	SLE QP 1	0.9	-0.05	49.99	-2.7033	-1.3194	0.0465
646	SLE QP 2	0.91	-0.03	51.7	-2.7971	-1.3643	0.048
646	SLD 1	4.88	0.62	46.68	-2.4604	-1.2272	0.2529
646	SLD 2	4.89	1.04	46.66	-2.4664	-1.2264	0.2692
646	SLD 3	4.81	-0.62	46.9	-2.5153	-1.2224	0.2177
646	SLD 4	4.82	-0.2	46.87	-2.5213	-1.2215	0.234
646	SLD 5	2.2	1.98	49.88	-2.6117	-1.3307	0.1599
646	SLD 6	2.2	2.26	49.86	-2.6157	-1.3302	0.1707
646	SLD 7	1.98	-2.18	50.58	-2.7948	-1.3145	0.0425
646	SLD 8	1.99	-1.9	50.57	-2.7988	-1.314	0.0533
646	SLD 9	-0.17	1.83	52.83	-2.7955	-1.4147	0.0427
646	SLD 10	-0.16	2.11	52.81	-2.7995	-1.4141	0.0535
646	SLD 11	-0.38	-2.33	53.54	-2.9785	-1.3985	-0.0748
646	SLD 12	-0.37	-2.05	53.52	-2.9825	-1.398	-0.064
646	SLD 13	-3	0.14	56.52	-3.0729	-1.5072	-0.138
646	SLD 14	-2.99	0.56	56.5	-3.0789	-1.5063	-0.1217
646	SLD 15	-3.06	-1.11	56.74	-3.1278	-1.5023	-0.1732
646	SLD 16	-3.05	-0.69	56.71	-3.1338	-1.5015	-0.157
646	SLV 1	10.18	1.46	39.97	-2.0111	-1.0435	0.526
646	SLV 2	10.21	2.44	39.91	-2.0251	-1.0416	0.5639
646	SLV 3	10.04	-1.37	40.46	-2.1365	-1.0322	0.4462
646	SLV 4	10.06	-0.39	40.4	-2.1506	-1.0302	0.4841
646	SLV 5	3.91	4.53	47.44	-2.3686	-1.2857	0.3058
646	SLV 6	3.93	5.17	47.4	-2.3777	-1.2844	0.3304
646	SLV 7	3.42	-4.9	49.08	-2.7868	-1.2478	0.0398
646	SLV 8	3.44	-4.26	49.05	-2.7959	-1.2465	0.0644
646	SLV 9	-1.61	4.19	54.35	-2.7983	-1.4821	0.0315
646	SLV 10	-1.6	4.83	54.31	-2.8075	-1.4808	0.0562
646	SLV 11	-2.11	-5.24	55.99	-3.2165	-1.4443	-0.2345
646	SLV 12	-2.09	-4.6	55.95	-3.2257	-1.443	-0.2098
646	SLV 13	-8.24	0.32	62.99	-3.4437	-1.6985	-0.3881
646	SLV 14	-8.21	1.3	62.93	-3.4577	-1.6965	-0.3502
646	SLV 15	-8.38	-2.51	63.48	-3.5691	-1.6871	-0.4679
646	SLV 16	-8.36	-1.53	63.43	-3.5832	-1.6851	-0.43
646	CRTFP Ux+	0	0	0	0	0	0
646	CRTFP Ux-	0	0	0	0	0	0
646	CRTFP Uy+	0	0	0	0	0	0
646	CRTFP Uy-	0	0	0	0	0	0
647	SLU 1	1.09	-0.06	59.2	-0.2861	-0.036	0.0066
647	SLU 2	1.09	-0.09	59.21	-0.2884	-0.036	0.0067
647	SLU 3	1.12	-0.06	60.58	-0.2956	-0.0369	0.0067
647	SLU 4	1.12	-0.08	60.59	-0.297	-0.0368	0.0067
647	SLU 5	1.11	-0.1	60.06	-0.2936	-0.0365	0.0068
647	SLU 6	1.14	-0.07	61.44	-0.3008	-0.0374	0.0067
647	SLU 7	1.14	-0.09	61.44	-0.3022	-0.0374	0.0068
647	SLU 8	1.13	-0.08	60.91	-0.2966	-0.0371	0.0068
647	SLU 9	1.13	-0.1	60.91	-0.298	-0.0371	0.0068
647	SLU 10	1.17	-0.01	66.52	-0.3289	-0.0401	0.0077
647	SLU 11	1.2	0.02	67.9	-0.3361	-0.041	0.0076
647	SLU 12	1.2	0.01	67.91	-0.3375	-0.0409	0.0077
647	SLU 13	1.19	-0.01	67.38	-0.3342	-0.0406	0.0077
647	SLU 14	1.22	0.01	68.76	-0.3413	-0.0415	0.0077
647	SLU 15	1.22	0	68.76	-0.3427	-0.0415	0.0077
647	SLU 16	1.2	0	68.23	-0.3371	-0.0412	0.0077
647	SLU 17	1.21	-0.01	68.23	-0.3385	-0.0412	0.0078
647	SLU 18	1.2	0.06	69.65	-0.344	-0.0418	0.008
647	SLU 19	1.2	0.04	69.65	-0.3453	-0.0418	0.008
647	SLU 20	1.22	0.05	70.51	-0.3492	-0.0424	0.008
647	SLU 21	1.22	0.03	70.51	-0.3506	-0.0424	0.0081
647	SLU 22	1.2	0.04	66.36	-0.316	-0.0404	0.0069
647	SLU 23	1.2	0.02	66.37	-0.3183	-0.0404	0.007
647	SLU 24	1.23	0.05	67.75	-0.3255	-0.0413	0.007
647	SLU 25	1.23	0.03	67.75	-0.3269	-0.0412	0.007
647	SLU 26	1.22	0.01	67.22	-0.3236	-0.0409	0.0071
647	SLU 27	1.25	0.04	68.6	-0.3308	-0.0418	0.007
647	SLU 28	1.25	0.02	68.61	-0.3321	-0.0418	0.0071
647	SLU 29	1.23	0.03	68.07	-0.3265	-0.0415	0.0071
647	SLU 30	1.24	0.01	68.08	-0.3279	-0.0415	0.0071

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLU 31	1.27	0.1	73.69	-0.3588	-0.0445	0.008
647	SLU 32	1.3	0.13	75.06	-0.366	-0.0454	0.0079
647	SLU 33	1.3	0.11	75.07	-0.3674	-0.0453	0.008
647	SLU 34	1.29	0.09	74.54	-0.3641	-0.045	0.008
647	SLU 35	1.32	0.12	75.92	-0.3713	-0.0459	0.008
647	SLU 36	1.32	0.11	75.92	-0.3727	-0.0459	0.008
647	SLU 37	1.31	0.11	75.39	-0.367	-0.0456	0.008
647	SLU 38	1.31	0.1	75.39	-0.3684	-0.0456	0.0081
647	SLU 39	1.3	0.16	76.81	-0.3739	-0.0463	0.0083
647	SLU 40	1.3	0.15	76.82	-0.3753	-0.0462	0.0084
647	SLU 41	1.32	0.16	77.67	-0.3791	-0.0468	0.0084
647	SLU 42	1.32	0.14	77.67	-0.3805	-0.0468	0.0084
647	SLU 43	1.39	-0.12	74.5	-0.3616	-0.0453	0.0085
647	SLU 44	1.39	-0.15	74.51	-0.364	-0.0452	0.0086
647	SLU 45	1.42	-0.12	75.89	-0.3711	-0.0461	0.0085
647	SLU 46	1.42	-0.14	75.89	-0.3725	-0.0461	0.0086
647	SLU 47	1.41	-0.16	75.37	-0.3692	-0.0458	0.0087
647	SLU 48	1.44	-0.13	76.74	-0.3764	-0.0467	0.0086
647	SLU 49	1.44	-0.14	76.75	-0.3778	-0.0467	0.0087
647	SLU 50	1.43	-0.14	76.21	-0.3721	-0.0464	0.0086
647	SLU 51	1.43	-0.15	76.22	-0.3735	-0.0464	0.0087
647	SLU 52	1.46	-0.06	81.83	-0.4045	-0.0493	0.0096
647	SLU 53	1.49	-0.03	83.2	-0.4117	-0.0502	0.0095
647	SLU 54	1.49	-0.05	83.21	-0.4131	-0.0502	0.0095
647	SLU 55	1.48	-0.07	82.68	-0.4097	-0.0499	0.0096
647	SLU 56	1.51	-0.04	84.06	-0.4169	-0.0508	0.0095
647	SLU 57	1.51	-0.06	84.06	-0.4183	-0.0508	0.0096
647	SLU 58	1.5	-0.05	83.53	-0.4127	-0.0505	0.0096
647	SLU 59	1.5	-0.07	83.53	-0.414	-0.0505	0.0096
647	SLU 60	1.49	0	84.95	-0.4195	-0.0511	0.0099
647	SLU 61	1.49	-0.02	84.96	-0.4209	-0.0511	0.0099
647	SLU 62	1.51	-0.01	85.81	-0.4248	-0.0517	0.0099
647	SLU 63	1.51	-0.02	85.81	-0.4262	-0.0517	0.01
647	SLU 64	1.49	-0.01	81.67	-0.3916	-0.0497	0.0088
647	SLU 65	1.49	-0.04	81.67	-0.3939	-0.0497	0.0089
647	SLU 66	1.52	-0.01	83.05	-0.4011	-0.0505	0.0089
647	SLU 67	1.52	-0.03	83.06	-0.4025	-0.0505	0.0089
647	SLU 68	1.51	-0.05	82.53	-0.3991	-0.0502	0.009
647	SLU 69	1.54	-0.02	83.91	-0.4063	-0.0511	0.0089
647	SLU 70	1.54	-0.03	83.91	-0.4077	-0.0511	0.009
647	SLU 71	1.53	-0.03	83.38	-0.4021	-0.0508	0.0089
647	SLU 72	1.53	-0.04	83.38	-0.4035	-0.0508	0.009
647	SLU 73	1.56	0.04	88.99	-0.4344	-0.0538	0.0099
647	SLU 74	1.59	0.07	90.37	-0.4416	-0.0547	0.0098
647	SLU 75	1.59	0.06	90.37	-0.443	-0.0546	0.0099
647	SLU 76	1.58	0.04	89.84	-0.4396	-0.0543	0.0099
647	SLU 77	1.61	0.07	91.22	-0.4468	-0.0552	0.0099
647	SLU 78	1.61	0.05	91.23	-0.4482	-0.0552	0.0099
647	SLU 79	1.6	0.06	90.69	-0.4426	-0.0549	0.0099
647	SLU 80	1.6	0.04	90.7	-0.444	-0.0549	0.01
647	SLU 81	1.59	0.11	92.12	-0.4494	-0.0555	0.0102
647	SLU 82	1.59	0.09	92.12	-0.4508	-0.0555	0.0102
647	SLU 83	1.61	0.1	92.97	-0.4547	-0.0561	0.0102
647	SLU 84	1.61	0.08	92.98	-0.4561	-0.0561	0.0103
647	SLE RA 1	1.12	-0.03	61.25	-0.2946	-0.0373	0.0067
647	SLE RA 2	1.12	-0.05	61.25	-0.2962	-0.0372	0.0068
647	SLE RA 3	1.14	-0.03	62.17	-0.301	-0.0378	0.0067
647	SLE RA 4	1.14	-0.04	62.17	-0.3019	-0.0378	0.0068
647	SLE RA 5	1.14	-0.06	61.82	-0.2997	-0.0376	0.0068
647	SLE RA 6	1.16	-0.04	62.74	-0.3045	-0.0382	0.0068
647	SLE RA 7	1.16	-0.05	62.74	-0.3054	-0.0382	0.0068
647	SLE RA 8	1.15	-0.04	62.39	-0.3016	-0.038	0.0068
647	SLE RA 9	1.15	-0.05	62.39	-0.3026	-0.038	0.0068
647	SLE RA 10	1.17	0	66.13	-0.3232	-0.04	0.0074
647	SLE RA 11	1.19	0.02	67.05	-0.328	-0.0406	0.0074
647	SLE RA 12	1.19	0.01	67.05	-0.3289	-0.0405	0.0074
647	SLE RA 13	1.18	0	66.7	-0.3267	-0.0403	0.0075
647	SLE RA 14	1.2	0.02	67.62	-0.3315	-0.0409	0.0074
647	SLE RA 15	1.2	0.01	67.62	-0.3324	-0.0409	0.0074
647	SLE RA 16	1.2	0.01	67.26	-0.3286	-0.0407	0.0074
647	SLE RA 17	1.2	0	67.27	-0.3296	-0.0407	0.0075
647	SLE RA 18	1.19	0.05	68.21	-0.3332	-0.0412	0.0076
647	SLE RA 19	1.19	0.04	68.22	-0.3341	-0.0411	0.0077
647	SLE RA 20	1.21	0.04	68.78	-0.3367	-0.0415	0.0077
647	SLE RA 21	1.21	0.03	68.79	-0.3376	-0.0415	0.0077
647	SLE FR 1	1.12	-0.03	61.25	-0.2946	-0.0373	0.0067
647	SLE FR 2	1.12	-0.04	61.25	-0.2949	-0.0372	0.0067
647	SLE FR 3	1.13	-0.04	61.47	-0.296	-0.0374	0.0067
647	SLE FR 4	1.14	-0.01	63.34	-0.3065	-0.0384	0.007
647	SLE FR 5	1.15	-0.01	63.56	-0.3076	-0.0386	0.007
647	SLE FR 6	1.16	0.01	64.73	-0.3139	-0.0392	0.0072
647	SLE QP 1	1.12	-0.03	61.25	-0.2946	-0.0373	0.0067
647	SLE QP 2	1.14	-0.01	63.34	-0.3062	-0.0384	0.007
647	SLD 1	5.92	0.75	56.53	-0.1872	-0.0081	-0.0021
647	SLD 2	5.93	1.28	56.5	-0.1969	-0.0083	0.0041
647	SLD 3	5.84	-0.77	56.78	-0.2382	-0.0067	-0.0051
647	SLD 4	5.85	-0.23	56.75	-0.2479	-0.0069	0.0012
647	SLD 5	2.69	2.42	60.91	-0.1913	-0.0314	0.0076
647	SLD 6	2.7	2.77	60.9	-0.1977	-0.0315	0.0118
647	SLD 7	2.44	-2.63	61.76	-0.3615	-0.0268	-0.0022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
647	SLD 8	2.44	-2.28	61.74	-0.368	-0.0269	0.0019
647	SLD 9	-0.15	2.26	64.93	-0.2444	-0.0499	0.0121
647	SLD 10	-0.15	2.61	64.91	-0.2509	-0.0501	0.0162
647	SLD 11	-0.41	-2.79	65.77	-0.4147	-0.0453	0.0022
647	SLD 12	-0.4	-2.44	65.76	-0.4212	-0.0455	0.0064
647	SLD 13	-3.56	0.21	69.92	-0.3645	-0.07	0.0128
647	SLD 14	-3.56	0.75	69.89	-0.3742	-0.0701	0.0191
647	SLD 15	-3.64	-1.3	70.17	-0.4156	-0.0686	0.0098
647	SLD 16	-3.63	-0.77	70.14	-0.4252	-0.0687	0.0161
647	SLV 1	12.31	1.71	47.41	-0.029	0.0326	-0.0144
647	SLV 2	12.33	2.96	47.35	-0.0516	0.0322	0.0002
647	SLV 3	12.13	-1.72	48	-0.1456	0.0357	-0.0211
647	SLV 4	12.15	-0.47	47.94	-0.1681	0.0353	-0.0065
647	SLV 5	4.76	5.49	57.67	-0.0423	-0.0218	0.0082
647	SLV 6	4.77	6.31	57.63	-0.057	-0.0221	0.0177
647	SLV 7	4.17	-5.95	59.64	-0.4309	-0.0113	-0.0142
647	SLV 8	4.18	-5.13	59.6	-0.4456	-0.0116	-0.0046
647	SLV 9	-1.89	5.11	67.07	-0.1669	-0.0652	0.0186
647	SLV 10	-1.88	5.93	67.03	-0.1815	-0.0655	0.0282
647	SLV 11	-2.49	-6.33	69.04	-0.5554	-0.0547	-0.0037
647	SLV 12	-2.47	-5.51	69	-0.5701	-0.055	0.0058
647	SLV 13	-9.87	0.45	78.73	-0.4443	-0.1121	0.0205
647	SLV 14	-9.85	1.7	78.67	-0.4668	-0.1126	0.0351
647	SLV 15	-10.04	-2.98	79.33	-0.5608	-0.109	0.0138
647	SLV 16	-10.02	-1.73	79.26	-0.5834	-0.1094	0.0284
647	CRTFP Ux+	0	0	0	0	0	0
647	CRTFP Ux-	0	0	0	0	0	0
647	CRTFP Uy+	0	0	0	0	0	0
647	CRTFP Uy-	0	0	0	0	0	0
648	SLU 1	1.14	-0.03	60.34	-0.2646	-0.0345	0.0075
648	SLU 2	1.14	-0.06	60.34	-0.2668	-0.0345	0.0075
648	SLU 3	1.17	-0.03	61.75	-0.2735	-0.0353	0.0075
648	SLU 4	1.17	-0.04	61.75	-0.2747	-0.0353	0.0076
648	SLU 5	1.16	-0.06	61.22	-0.2717	-0.035	0.0076
648	SLU 6	1.19	-0.03	62.62	-0.2784	-0.0359	0.0076
648	SLU 7	1.19	-0.05	62.63	-0.2796	-0.0359	0.0076
648	SLU 8	1.18	-0.04	62.08	-0.2744	-0.0356	0.0076
648	SLU 9	1.18	-0.06	62.09	-0.2757	-0.0356	0.0076
648	SLU 10	1.22	0.03	67.78	-0.3041	-0.0381	0.0087
648	SLU 11	1.25	0.06	69.19	-0.3108	-0.039	0.0087
648	SLU 12	1.25	0.05	69.2	-0.3121	-0.039	0.0087
648	SLU 13	1.24	0.03	68.66	-0.309	-0.0387	0.0087
648	SLU 14	1.27	0.06	70.06	-0.3157	-0.0396	0.0087
648	SLU 15	1.27	0.04	70.07	-0.317	-0.0396	0.0087
648	SLU 16	1.26	0.05	69.52	-0.3117	-0.0392	0.0087
648	SLU 17	1.26	0.03	69.53	-0.313	-0.0392	0.0088
648	SLU 18	1.25	0.1	70.97	-0.3179	-0.0397	0.0091
648	SLU 19	1.25	0.08	70.97	-0.3192	-0.0397	0.0091
648	SLU 20	1.27	0.09	71.84	-0.3228	-0.0403	0.0092
648	SLU 21	1.27	0.08	71.84	-0.3241	-0.0403	0.0092
648	SLU 22	1.25	0.08	67.63	-0.2919	-0.0384	0.008
648	SLU 23	1.25	0.06	67.64	-0.2941	-0.0384	0.008
648	SLU 24	1.28	0.08	69.05	-0.3008	-0.0393	0.008
648	SLU 25	1.28	0.07	69.05	-0.3021	-0.0393	0.008
648	SLU 26	1.27	0.05	68.51	-0.299	-0.039	0.008
648	SLU 27	1.3	0.08	69.92	-0.3057	-0.0399	0.008
648	SLU 28	1.3	0.06	69.93	-0.307	-0.0399	0.0081
648	SLU 29	1.29	0.07	69.38	-0.3017	-0.0395	0.0081
648	SLU 30	1.29	0.05	69.38	-0.303	-0.0395	0.0081
648	SLU 31	1.32	0.15	75.08	-0.3314	-0.0421	0.0091
648	SLU 32	1.35	0.17	76.49	-0.3381	-0.043	0.0091
648	SLU 33	1.35	0.16	76.49	-0.3394	-0.043	0.0091
648	SLU 34	1.34	0.14	75.96	-0.3363	-0.0427	0.0092
648	SLU 35	1.37	0.17	77.36	-0.343	-0.0435	0.0092
648	SLU 36	1.37	0.15	77.37	-0.3443	-0.0435	0.0092
648	SLU 37	1.36	0.16	76.82	-0.3391	-0.0432	0.0092
648	SLU 38	1.36	0.14	76.83	-0.3404	-0.0432	0.0092
648	SLU 39	1.35	0.21	78.26	-0.3453	-0.0437	0.0096
648	SLU 40	1.35	0.19	78.27	-0.3466	-0.0437	0.0096
648	SLU 41	1.37	0.2	79.14	-0.3502	-0.0442	0.0096
648	SLU 42	1.37	0.19	79.14	-0.3515	-0.0442	0.0096
648	SLU 43	1.45	-0.07	75.93	-0.3346	-0.0434	0.0096
648	SLU 44	1.45	-0.1	75.94	-0.3368	-0.0434	0.0096
648	SLU 45	1.48	-0.07	77.35	-0.3435	-0.0443	0.0096
648	SLU 46	1.48	-0.09	77.35	-0.3448	-0.0443	0.0097
648	SLU 47	1.47	-0.11	76.81	-0.3417	-0.044	0.0097
648	SLU 48	1.5	-0.08	78.22	-0.3484	-0.0449	0.0097
648	SLU 49	1.5	-0.1	78.23	-0.3497	-0.0449	0.0097
648	SLU 50	1.49	-0.09	77.68	-0.3444	-0.0445	0.0097
648	SLU 51	1.49	-0.1	77.68	-0.3457	-0.0445	0.0097
648	SLU 52	1.52	-0.01	83.38	-0.3741	-0.0471	0.0108
648	SLU 53	1.55	0.02	84.79	-0.3808	-0.048	0.0108
648	SLU 54	1.55	0	84.79	-0.3821	-0.048	0.0108
648	SLU 55	1.54	-0.02	84.26	-0.379	-0.0477	0.0108
648	SLU 56	1.57	0.01	85.66	-0.3857	-0.0485	0.0108
648	SLU 57	1.57	-0.01	85.67	-0.387	-0.0485	0.0108
648	SLU 58	1.56	0	85.12	-0.3818	-0.0482	0.0108
648	SLU 59	1.56	-0.02	85.13	-0.3831	-0.0482	0.0109
648	SLU 60	1.55	0.05	86.56	-0.388	-0.0487	0.0112
648	SLU 61	1.55	0.04	86.57	-0.3893	-0.0487	0.0112

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
648	SLU 62	1.57	0.05	87.44	-0.3929	-0.0492	0.0113
648	SLU 63	1.57	0.03	87.44	-0.3942	-0.0492	0.0113
648	SLU 64	1.55	0.04	83.23	-0.3619	-0.0474	0.0101
648	SLU 65	1.55	0.01	83.24	-0.3641	-0.0474	0.0101
648	SLU 66	1.58	0.04	84.65	-0.3708	-0.0483	0.0101
648	SLU 67	1.58	0.02	84.65	-0.3721	-0.0483	0.0101
648	SLU 68	1.57	0	84.11	-0.369	-0.048	0.0101
648	SLU 69	1.6	0.03	85.52	-0.3757	-0.0488	0.0101
648	SLU 70	1.6	0.02	85.52	-0.377	-0.0488	0.0102
648	SLU 71	1.59	0.02	84.98	-0.3717	-0.0485	0.0102
648	SLU 72	1.59	0.01	84.98	-0.373	-0.0485	0.0102
648	SLU 73	1.63	0.1	90.68	-0.4014	-0.0511	0.0112
648	SLU 74	1.66	0.13	92.09	-0.4081	-0.0519	0.0112
648	SLU 75	1.66	0.11	92.09	-0.4094	-0.0519	0.0112
648	SLU 76	1.65	0.09	91.55	-0.4063	-0.0516	0.0113
648	SLU 77	1.68	0.12	92.96	-0.413	-0.0525	0.0113
648	SLU 78	1.68	0.11	92.97	-0.4143	-0.0525	0.0113
648	SLU 79	1.67	0.11	92.42	-0.4091	-0.0522	0.0113
648	SLU 80	1.67	0.1	92.42	-0.4104	-0.0522	0.0113
648	SLU 81	1.66	0.16	93.86	-0.4153	-0.0526	0.0117
648	SLU 82	1.66	0.15	93.87	-0.4166	-0.0527	0.0117
648	SLU 83	1.68	0.16	94.74	-0.4202	-0.0532	0.0117
648	SLU 84	1.68	0.14	94.74	-0.4215	-0.0532	0.0117
648	SLE RA 1	1.17	0	62.42	-0.2724	-0.0356	0.0076
648	SLE RA 2	1.17	-0.01	62.43	-0.2739	-0.0356	0.0077
648	SLE RA 3	1.19	0	63.36	-0.2783	-0.0362	0.0077
648	SLE RA 4	1.19	-0.01	63.37	-0.2792	-0.0362	0.0077
648	SLE RA 5	1.18	-0.02	63.01	-0.2771	-0.036	0.0077
648	SLE RA 6	1.2	0	63.95	-0.2816	-0.0365	0.0077
648	SLE RA 7	1.2	-0.01	63.95	-0.2824	-0.0365	0.0077
648	SLE RA 8	1.2	-0.01	63.59	-0.2789	-0.0363	0.0077
648	SLE RA 9	1.2	-0.02	63.59	-0.2798	-0.0363	0.0077
648	SLE RA 10	1.22	0.05	67.39	-0.2987	-0.038	0.0084
648	SLE RA 11	1.24	0.06	68.32	-0.3032	-0.0386	0.0084
648	SLE RA 12	1.24	0.05	68.33	-0.3041	-0.0386	0.0084
648	SLE RA 13	1.23	0.04	67.97	-0.302	-0.0384	0.0084
648	SLE RA 14	1.25	0.06	68.91	-0.3065	-0.039	0.0084
648	SLE RA 15	1.25	0.05	68.91	-0.3073	-0.039	0.0085
648	SLE RA 16	1.25	0.05	68.55	-0.3038	-0.0388	0.0085
648	SLE RA 17	1.25	0.04	68.55	-0.3047	-0.0388	0.0085
648	SLE RA 18	1.24	0.09	69.51	-0.308	-0.0391	0.0087
648	SLE RA 19	1.24	0.08	69.51	-0.3088	-0.0391	0.0087
648	SLE RA 20	1.26	0.08	70.09	-0.3112	-0.0395	0.0087
648	SLE RA 21	1.26	0.07	70.09	-0.3121	-0.0395	0.0088
648	SLE FR 1	1.17	0	62.42	-0.2724	-0.0356	0.0076
648	SLE FR 2	1.17	0	62.42	-0.2727	-0.0356	0.0076
648	SLE FR 3	1.18	0	62.65	-0.2737	-0.0357	0.0077
648	SLE FR 4	1.19	0.03	64.55	-0.2834	-0.0366	0.008
648	SLE FR 5	1.2	0.03	64.78	-0.2844	-0.0368	0.008
648	SLE FR 6	1.21	0.05	65.96	-0.2902	-0.0373	0.0082
648	SLE QP 1	1.17	0	62.42	-0.2724	-0.0356	0.0076
648	SLE QP 2	1.19	0.03	64.55	-0.2831	-0.0366	0.008
648	SLD 1	5.96	0.75	56.63	-0.1717	0.0001	-0.0012
648	SLD 2	5.97	1.32	56.61	-0.1822	0	0.0055
648	SLD 3	5.88	-0.78	56.9	-0.2171	0.001	-0.0061
648	SLD 4	5.89	-0.21	56.88	-0.2276	0.0008	0.0007
648	SLD 5	2.74	2.47	61.76	-0.1788	-0.0268	0.0113
648	SLD 6	2.74	2.85	61.75	-0.1858	-0.027	0.0158
648	SLD 7	2.48	-2.64	62.67	-0.3303	-0.0241	-0.0048
648	SLD 8	2.49	-2.27	62.66	-0.3372	-0.0242	-0.0003
648	SLD 9	-0.1	2.32	66.44	-0.2289	-0.0491	0.0163
648	SLD 10	-0.1	2.7	66.42	-0.2359	-0.0492	0.0207
648	SLD 11	-0.36	-2.79	67.35	-0.3803	-0.0463	0.0001
648	SLD 12	-0.35	-2.41	67.33	-0.3873	-0.0464	0.0046
648	SLD 13	-3.51	0.27	72.21	-0.3386	-0.0741	0.0152
648	SLD 14	-3.5	0.84	72.19	-0.3491	-0.0742	0.022
648	SLD 15	-3.58	-1.26	72.49	-0.384	-0.0732	0.0104
648	SLD 16	-3.57	-0.7	72.47	-0.3945	-0.0734	0.0171
648	SLV 1	12.34	1.67	46.02	-0.0235	0.0494	-0.0137
648	SLV 2	12.36	2.99	45.97	-0.048	0.049	0.0021
648	SLV 3	12.16	-1.81	46.66	-0.1273	0.0513	-0.0247
648	SLV 4	12.18	-0.48	46.61	-0.1518	0.0509	-0.0089
648	SLV 5	4.8	5.56	58.03	-0.0435	-0.0137	0.0154
648	SLV 6	4.82	6.42	58	-0.0594	-0.0139	0.0256
648	SLV 7	4.21	-6.03	60.15	-0.3895	-0.0073	-0.0213
648	SLV 8	4.22	-5.16	60.12	-0.4054	-0.0075	-0.011
648	SLV 9	-1.83	5.22	68.97	-0.1607	-0.0658	0.0269
648	SLV 10	-1.82	6.08	68.94	-0.1767	-0.066	0.0372
648	SLV 11	-2.43	-6.36	71.09	-0.5067	-0.0594	-0.0097
648	SLV 12	-2.42	-5.5	71.06	-0.5227	-0.0596	0.0005
648	SLV 13	-9.79	0.54	82.49	-0.4144	-0.1242	0.0249
648	SLV 14	-9.77	1.86	82.44	-0.4388	-0.1246	0.0406
648	SLV 15	-9.97	-2.94	83.12	-0.5182	-0.1223	0.0139
648	SLV 16	-9.95	-1.61	83.07	-0.5426	-0.1227	0.0296
648	CRTFP Ux+	0	0	0	0	0	0
648	CRTFP Ux-	0	0	0	0	0	0
648	CRTFP Uy+	0	0	0	0	0	0
648	CRTFP Uy-	0	0	0	0	0	0
649	SLU 1	1.18	0.01	61.4	-0.2438	-0.0319	0.0083
649	SLU 2	1.18	-0.01	61.41	-0.2458	-0.0319	0.0083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
649	SLU 3	1.21	0.02	62.84	-0.252	-0.0327	0.0083
649	SLU 4	1.21	0	62.85	-0.2532	-0.0327	0.0083
649	SLU 5	1.2	-0.02	62.3	-0.2503	-0.0324	0.0083
649	SLU 6	1.23	0.01	63.73	-0.2565	-0.0332	0.0084
649	SLU 7	1.24	-0.01	63.74	-0.2577	-0.0333	0.0084
649	SLU 8	1.22	0	63.18	-0.2529	-0.0329	0.0084
649	SLU 9	1.22	-0.02	63.19	-0.2541	-0.033	0.0084
649	SLU 10	1.26	0.08	68.96	-0.28	-0.035	0.0096
649	SLU 11	1.29	0.11	70.39	-0.2862	-0.0358	0.0096
649	SLU 12	1.29	0.1	70.4	-0.2874	-0.0358	0.0096
649	SLU 13	1.28	0.07	69.85	-0.2846	-0.0355	0.0096
649	SLU 14	1.31	0.1	71.28	-0.2908	-0.0363	0.0097
649	SLU 15	1.31	0.09	71.29	-0.292	-0.0363	0.0097
649	SLU 16	1.3	0.09	70.73	-0.2871	-0.036	0.0097
649	SLU 17	1.3	0.08	70.74	-0.2883	-0.036	0.0097
649	SLU 18	1.29	0.15	72.19	-0.2927	-0.0363	0.0101
649	SLU 19	1.29	0.13	72.19	-0.2939	-0.0363	0.0101
649	SLU 20	1.31	0.14	73.08	-0.2972	-0.0368	0.0102
649	SLU 21	1.31	0.13	73.08	-0.2984	-0.0368	0.0102
649	SLU 22	1.29	0.13	68.82	-0.2685	-0.0353	0.0089
649	SLU 23	1.29	0.1	68.83	-0.2705	-0.0353	0.0089
649	SLU 24	1.32	0.13	70.26	-0.2767	-0.0361	0.0089
649	SLU 25	1.32	0.11	70.27	-0.278	-0.0361	0.0089
649	SLU 26	1.31	0.09	69.72	-0.2751	-0.0358	0.0089
649	SLU 27	1.34	0.12	71.15	-0.2813	-0.0367	0.009
649	SLU 28	1.34	0.11	71.16	-0.2825	-0.0367	0.009
649	SLU 29	1.33	0.11	70.6	-0.2777	-0.0364	0.009
649	SLU 30	1.33	0.1	70.61	-0.2789	-0.0364	0.009
649	SLU 31	1.37	0.19	76.38	-0.3048	-0.0384	0.0102
649	SLU 32	1.4	0.22	77.81	-0.311	-0.0392	0.0102
649	SLU 33	1.4	0.21	77.82	-0.3122	-0.0392	0.0102
649	SLU 34	1.39	0.19	77.27	-0.3093	-0.0389	0.0102
649	SLU 35	1.42	0.22	78.7	-0.3156	-0.0397	0.0103
649	SLU 36	1.42	0.2	78.71	-0.3168	-0.0398	0.0103
649	SLU 37	1.41	0.21	78.15	-0.3119	-0.0394	0.0103
649	SLU 38	1.41	0.19	78.16	-0.3131	-0.0395	0.0103
649	SLU 39	1.4	0.26	79.6	-0.3174	-0.0397	0.0108
649	SLU 40	1.4	0.25	79.61	-0.3187	-0.0397	0.0108
649	SLU 41	1.42	0.26	80.5	-0.322	-0.0402	0.0108
649	SLU 42	1.42	0.24	80.5	-0.3232	-0.0402	0.0108
649	SLU 43	1.5	-0.02	77.28	-0.3084	-0.0402	0.0106
649	SLU 44	1.5	-0.05	77.29	-0.3104	-0.0403	0.0105
649	SLU 45	1.53	-0.02	78.72	-0.3166	-0.0411	0.0106
649	SLU 46	1.53	-0.04	78.73	-0.3178	-0.0411	0.0106
649	SLU 47	1.52	-0.06	78.18	-0.315	-0.0408	0.0106
649	SLU 48	1.55	-0.03	79.61	-0.3212	-0.0416	0.0106
649	SLU 49	1.55	-0.04	79.62	-0.3224	-0.0416	0.0106
649	SLU 50	1.54	-0.04	79.06	-0.3175	-0.0413	0.0106
649	SLU 51	1.54	-0.05	79.07	-0.3187	-0.0413	0.0106
649	SLU 52	1.58	0.05	84.84	-0.3446	-0.0433	0.0118
649	SLU 53	1.61	0.08	86.27	-0.3508	-0.0442	0.0119
649	SLU 54	1.61	0.06	86.28	-0.352	-0.0442	0.0119
649	SLU 55	1.6	0.04	85.73	-0.3492	-0.0439	0.0119
649	SLU 56	1.63	0.07	87.16	-0.3554	-0.0447	0.012
649	SLU 57	1.63	0.05	87.17	-0.3566	-0.0447	0.0119
649	SLU 58	1.62	0.06	86.61	-0.3518	-0.0444	0.012
649	SLU 59	1.62	0.04	86.62	-0.353	-0.0444	0.0119
649	SLU 60	1.61	0.11	88.06	-0.3573	-0.0446	0.0124
649	SLU 61	1.61	0.1	88.07	-0.3585	-0.0447	0.0124
649	SLU 62	1.63	0.11	88.96	-0.3619	-0.0452	0.0125
649	SLU 63	1.63	0.09	88.96	-0.3631	-0.0452	0.0125
649	SLU 64	1.61	0.09	84.7	-0.3332	-0.0437	0.0112
649	SLU 65	1.61	0.06	84.7	-0.3352	-0.0437	0.0112
649	SLU 66	1.64	0.09	86.14	-0.3414	-0.0445	0.0112
649	SLU 67	1.64	0.08	86.14	-0.3426	-0.0445	0.0112
649	SLU 68	1.63	0.06	85.6	-0.3397	-0.0442	0.0112
649	SLU 69	1.66	0.09	87.03	-0.3459	-0.0451	0.0113
649	SLU 70	1.66	0.07	87.03	-0.3471	-0.0451	0.0112
649	SLU 71	1.65	0.08	86.48	-0.3423	-0.0448	0.0113
649	SLU 72	1.65	0.06	86.48	-0.3435	-0.0448	0.0113
649	SLU 73	1.69	0.16	92.25	-0.3694	-0.0468	0.0125
649	SLU 74	1.72	0.19	93.69	-0.3756	-0.0476	0.0125
649	SLU 75	1.72	0.17	93.69	-0.3768	-0.0476	0.0125
649	SLU 76	1.71	0.15	93.15	-0.374	-0.0473	0.0125
649	SLU 77	1.74	0.18	94.58	-0.3802	-0.0481	0.0126
649	SLU 78	1.74	0.17	94.58	-0.3814	-0.0481	0.0126
649	SLU 79	1.73	0.17	94.03	-0.3765	-0.0478	0.0126
649	SLU 80	1.73	0.16	94.03	-0.3777	-0.0478	0.0126
649	SLU 81	1.72	0.23	95.48	-0.3821	-0.0481	0.013
649	SLU 82	1.72	0.21	95.49	-0.3833	-0.0481	0.013
649	SLU 83	1.74	0.22	96.37	-0.3866	-0.0486	0.0131
649	SLU 84	1.74	0.2	96.38	-0.3878	-0.0486	0.0131
649	SLE RA 1	1.21	0.04	63.52	-0.2508	-0.0328	0.0085
649	SLE RA 2	1.21	0.03	63.53	-0.2522	-0.0329	0.0084
649	SLE RA 3	1.23	0.05	64.48	-0.2563	-0.0334	0.0085
649	SLE RA 4	1.23	0.04	64.49	-0.2571	-0.0334	0.0085
649	SLE RA 5	1.23	0.02	64.12	-0.2552	-0.0332	0.0085
649	SLE RA 6	1.25	0.04	65.08	-0.2594	-0.0338	0.0085
649	SLE RA 7	1.25	0.03	65.08	-0.2602	-0.0338	0.0085
649	SLE RA 8	1.24	0.04	64.71	-0.2569	-0.0336	0.0085

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
649	SLE RA 9	1.24	0.02	64.71	-0.2577	-0.0336	0.0085
649	SLE RA 10	1.26	0.09	68.56	-0.275	-0.0349	0.0093
649	SLE RA 11	1.29	0.11	69.52	-0.2791	-0.0354	0.0094
649	SLE RA 12	1.29	0.1	69.52	-0.2799	-0.0355	0.0094
649	SLE RA 13	1.28	0.09	69.15	-0.278	-0.0353	0.0093
649	SLE RA 14	1.3	0.11	70.11	-0.2822	-0.0358	0.0094
649	SLE RA 15	1.3	0.1	70.11	-0.283	-0.0358	0.0094
649	SLE RA 16	1.29	0.1	69.74	-0.2798	-0.0356	0.0094
649	SLE RA 17	1.29	0.09	69.75	-0.2806	-0.0356	0.0094
649	SLE RA 18	1.29	0.14	70.71	-0.2834	-0.0358	0.0097
649	SLE RA 19	1.29	0.13	70.71	-0.2842	-0.0358	0.0097
649	SLE RA 20	1.3	0.13	71.31	-0.2865	-0.0361	0.0097
649	SLE RA 21	1.3	0.12	71.31	-0.2873	-0.0361	0.0097
649	SLE FR 1	1.21	0.04	63.52	-0.2508	-0.0328	0.0085
649	SLE FR 2	1.21	0.04	63.52	-0.2511	-0.0328	0.0085
649	SLE FR 3	1.22	0.04	63.76	-0.2521	-0.033	0.0085
649	SLE FR 4	1.24	0.07	65.68	-0.2609	-0.0337	0.0088
649	SLE FR 5	1.24	0.07	65.92	-0.2618	-0.0339	0.0088
649	SLE FR 6	1.25	0.09	67.12	-0.2671	-0.0343	0.0091
649	SLE QP 1	1.21	0.04	63.52	-0.2508	-0.0328	0.0085
649	SLE QP 2	1.23	0.07	65.68	-0.2606	-0.0337	0.0088
649	SLD 1	5.99	0.77	56.5	-0.1566	0.0064	0.0002
649	SLD 2	6	1.37	56.49	-0.1679	0.0063	0.0077
649	SLD 3	5.91	-0.79	56.79	-0.1966	0.007	-0.0068
649	SLD 4	5.92	-0.19	56.77	-0.2079	0.0068	0.0006
649	SLD 5	2.78	2.54	62.49	-0.1667	-0.0225	0.0156
649	SLD 6	2.78	2.94	62.48	-0.1742	-0.0226	0.0205
649	SLD 7	2.52	-2.67	63.45	-0.3	-0.0206	-0.0079
649	SLD 8	2.52	-2.27	63.44	-0.3075	-0.0207	-0.003
649	SLD 9	-0.05	2.41	67.92	-0.2137	-0.0467	0.0206
649	SLD 10	-0.05	2.81	67.91	-0.2212	-0.0468	0.0256
649	SLD 11	-0.31	-2.8	68.87	-0.347	-0.0448	-0.0029
649	SLD 12	-0.31	-2.4	68.86	-0.3546	-0.0449	0.0021
649	SLD 13	-3.45	0.33	74.58	-0.3134	-0.0743	0.017
649	SLD 14	-3.44	0.94	74.57	-0.3247	-0.0744	0.0245
649	SLD 15	-3.53	-1.23	74.87	-0.3534	-0.0737	0.01
649	SLD 16	-3.52	-0.63	74.85	-0.3647	-0.0739	0.0174
649	SLV 1	12.35	1.65	44.21	-0.0181	0.0602	-0.0114
649	SLV 2	12.37	3.06	44.18	-0.0445	0.0599	0.0059
649	SLV 3	12.17	-1.89	44.88	-0.1096	0.0615	-0.0275
649	SLV 4	12.19	-0.48	44.85	-0.136	0.0612	-0.0101
649	SLV 5	4.84	5.67	58.23	-0.0444	-0.0075	0.024
649	SLV 6	4.85	6.59	58.21	-0.0616	-0.0077	0.0353
649	SLV 7	4.24	-6.14	60.46	-0.3495	-0.0031	-0.0294
649	SLV 8	4.25	-5.22	60.44	-0.3667	-0.0033	-0.0181
649	SLV 9	-1.78	5.37	70.92	-0.1546	-0.0641	0.0358
649	SLV 10	-1.77	6.28	70.89	-0.1718	-0.0644	0.047
649	SLV 11	-2.38	-6.45	73.15	-0.4596	-0.0597	-0.0176
649	SLV 12	-2.37	-5.53	73.13	-0.4768	-0.06	-0.0063
649	SLV 13	-9.72	0.63	86.51	-0.3853	-0.1286	0.0278
649	SLV 14	-9.7	2.04	86.47	-0.4117	-0.129	0.0451
649	SLV 15	-9.9	-2.92	87.18	-0.4768	-0.1273	0.0118
649	SLV 16	-9.88	-1.51	87.14	-0.5032	-0.1277	0.0291
649	CRTFP Ux+	0	0	0	0	0	0
649	CRTFP Ux-	0	0	0	0	0	0
649	CRTFP Uy+	0	0	0	0	0	0
649	CRTFP Uy-	0	0	0	0	0	0
650	SLU 1	1.22	0.06	62.39	-0.2236	-0.0294	0.0089
650	SLU 2	1.22	0.03	62.39	-0.2254	-0.0294	0.0088
650	SLU 3	1.25	0.06	63.85	-0.2312	-0.0302	0.009
650	SLU 4	1.25	0.04	63.86	-0.2323	-0.0302	0.0089
650	SLU 5	1.24	0.02	63.3	-0.2297	-0.0299	0.0089
650	SLU 6	1.27	0.05	64.76	-0.2354	-0.0307	0.009
650	SLU 7	1.28	0.04	64.77	-0.2365	-0.0307	0.009
650	SLU 8	1.26	0.04	64.2	-0.2321	-0.0304	0.009
650	SLU 9	1.26	0.03	64.21	-0.2332	-0.0304	0.0089
650	SLU 10	1.3	0.13	70.03	-0.2566	-0.0319	0.0103
650	SLU 11	1.33	0.16	71.49	-0.2624	-0.0327	0.0105
650	SLU 12	1.33	0.15	71.5	-0.2635	-0.0327	0.0104
650	SLU 13	1.32	0.13	70.94	-0.2609	-0.0324	0.0104
650	SLU 14	1.35	0.16	72.4	-0.2666	-0.0332	0.0105
650	SLU 15	1.35	0.14	72.41	-0.2677	-0.0332	0.0105
650	SLU 16	1.34	0.15	71.84	-0.2633	-0.0329	0.0105
650	SLU 17	1.34	0.13	71.85	-0.2644	-0.0329	0.0104
650	SLU 18	1.33	0.2	73.3	-0.2682	-0.0329	0.011
650	SLU 19	1.33	0.19	73.3	-0.2693	-0.0329	0.011
650	SLU 20	1.35	0.2	74.21	-0.2724	-0.0334	0.0111
650	SLU 21	1.35	0.18	74.21	-0.2735	-0.0335	0.011
650	SLU 22	1.33	0.17	69.9	-0.2459	-0.0323	0.0097
650	SLU 23	1.33	0.15	69.91	-0.2477	-0.0323	0.0096
650	SLU 24	1.36	0.18	71.37	-0.2535	-0.0331	0.0098
650	SLU 25	1.37	0.16	71.38	-0.2546	-0.0331	0.0097
650	SLU 26	1.35	0.14	70.82	-0.252	-0.0328	0.0097
650	SLU 27	1.39	0.17	72.28	-0.2577	-0.0336	0.0098
650	SLU 28	1.39	0.15	72.29	-0.2588	-0.0336	0.0098
650	SLU 29	1.37	0.16	71.72	-0.2544	-0.0333	0.0098
650	SLU 30	1.38	0.14	71.73	-0.2555	-0.0333	0.0098
650	SLU 31	1.41	0.25	77.55	-0.279	-0.0348	0.0111
650	SLU 32	1.44	0.28	79.01	-0.2847	-0.0356	0.0113
650	SLU 33	1.44	0.26	79.02	-0.2858	-0.0356	0.0112

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
650	SLU 34	1.43	0.24	78.46	-0.2832	-0.0353	0.0112
650	SLU 35	1.47	0.27	79.92	-0.289	-0.0361	0.0113
650	SLU 36	1.47	0.26	79.92	-0.2901	-0.0361	0.0113
650	SLU 37	1.45	0.26	79.36	-0.2856	-0.0358	0.0113
650	SLU 38	1.45	0.25	79.36	-0.2867	-0.0358	0.0112
650	SLU 39	1.44	0.32	80.82	-0.2905	-0.0358	0.0118
650	SLU 40	1.44	0.3	80.82	-0.2916	-0.0358	0.0118
650	SLU 41	1.47	0.31	81.73	-0.2947	-0.0364	0.0119
650	SLU 42	1.47	0.3	81.73	-0.2958	-0.0364	0.0118
650	SLU 43	1.55	0.03	78.52	-0.283	-0.0372	0.0113
650	SLU 44	1.55	0.01	78.53	-0.2848	-0.0372	0.0112
650	SLU 45	1.58	0.04	79.99	-0.2906	-0.038	0.0114
650	SLU 46	1.58	0.02	80	-0.2917	-0.038	0.0113
650	SLU 47	1.57	0	79.44	-0.2891	-0.0377	0.0113
650	SLU 48	1.6	0.03	80.9	-0.2948	-0.0385	0.0114
650	SLU 49	1.6	0.01	80.9	-0.2959	-0.0385	0.0114
650	SLU 50	1.59	0.02	80.34	-0.2915	-0.0382	0.0114
650	SLU 51	1.59	0	80.34	-0.2926	-0.0382	0.0113
650	SLU 52	1.63	0.11	86.17	-0.316	-0.0397	0.0127
650	SLU 53	1.66	0.14	87.63	-0.3218	-0.0405	0.0128
650	SLU 54	1.66	0.12	87.64	-0.3229	-0.0405	0.0128
650	SLU 55	1.65	0.1	87.08	-0.3203	-0.0402	0.0128
650	SLU 56	1.68	0.13	88.54	-0.326	-0.041	0.0129
650	SLU 57	1.68	0.12	88.54	-0.3271	-0.041	0.0128
650	SLU 58	1.67	0.12	87.98	-0.3227	-0.0407	0.0129
650	SLU 59	1.67	0.11	87.98	-0.3238	-0.0407	0.0128
650	SLU 60	1.66	0.18	89.44	-0.3276	-0.0407	0.0134
650	SLU 61	1.66	0.17	89.44	-0.3287	-0.0407	0.0134
650	SLU 62	1.68	0.17	90.34	-0.3318	-0.0412	0.0135
650	SLU 63	1.68	0.16	90.35	-0.3329	-0.0413	0.0134
650	SLU 64	1.66	0.15	86.04	-0.3053	-0.0401	0.0121
650	SLU 65	1.66	0.12	86.05	-0.3072	-0.0401	0.012
650	SLU 66	1.69	0.15	87.51	-0.3129	-0.0409	0.0122
650	SLU 67	1.69	0.14	87.52	-0.314	-0.0409	0.0121
650	SLU 68	1.68	0.12	86.96	-0.3114	-0.0406	0.0121
650	SLU 69	1.71	0.15	88.42	-0.3171	-0.0414	0.0122
650	SLU 70	1.71	0.13	88.42	-0.3183	-0.0414	0.0122
650	SLU 71	1.7	0.14	87.86	-0.3138	-0.0411	0.0122
650	SLU 72	1.7	0.12	87.86	-0.3149	-0.0411	0.0121
650	SLU 73	1.74	0.23	93.69	-0.3384	-0.0426	0.0135
650	SLU 74	1.77	0.26	95.15	-0.3441	-0.0434	0.0137
650	SLU 75	1.77	0.24	95.15	-0.3452	-0.0434	0.0136
650	SLU 76	1.76	0.22	94.6	-0.3426	-0.0431	0.0136
650	SLU 77	1.79	0.25	96.06	-0.3484	-0.0439	0.0137
650	SLU 78	1.79	0.23	96.06	-0.3495	-0.0439	0.0137
650	SLU 79	1.78	0.24	95.5	-0.345	-0.0436	0.0137
650	SLU 80	1.78	0.22	95.5	-0.3461	-0.0436	0.0136
650	SLU 81	1.77	0.3	96.96	-0.3499	-0.0436	0.0142
650	SLU 82	1.77	0.28	96.96	-0.351	-0.0437	0.0142
650	SLU 83	1.79	0.29	97.86	-0.3542	-0.0442	0.0143
650	SLU 84	1.79	0.28	97.87	-0.3553	-0.0442	0.0142
650	SLE RA 1	1.25	0.09	64.53	-0.2299	-0.0302	0.0091
650	SLE RA 2	1.25	0.07	64.54	-0.2312	-0.0302	0.0091
650	SLE RA 3	1.27	0.09	65.51	-0.235	-0.0307	0.0092
650	SLE RA 4	1.27	0.08	65.52	-0.2357	-0.0307	0.0091
650	SLE RA 5	1.27	0.07	65.14	-0.234	-0.0306	0.0091
650	SLE RA 6	1.29	0.09	66.12	-0.2378	-0.0311	0.0092
650	SLE RA 7	1.29	0.08	66.12	-0.2386	-0.0311	0.0092
650	SLE RA 8	1.28	0.08	65.74	-0.2356	-0.0309	0.0092
650	SLE RA 9	1.28	0.07	65.75	-0.2363	-0.0309	0.0092
650	SLE RA 10	1.3	0.14	69.63	-0.252	-0.0319	0.0101
650	SLE RA 11	1.33	0.16	70.61	-0.2558	-0.0324	0.0102
650	SLE RA 12	1.33	0.15	70.61	-0.2566	-0.0324	0.0101
650	SLE RA 13	1.32	0.14	70.24	-0.2548	-0.0322	0.0101
650	SLE RA 14	1.34	0.16	71.21	-0.2586	-0.0327	0.0102
650	SLE RA 15	1.34	0.15	71.21	-0.2594	-0.0327	0.0102
650	SLE RA 16	1.33	0.15	70.84	-0.2564	-0.0325	0.0102
650	SLE RA 17	1.33	0.14	70.84	-0.2572	-0.0326	0.0102
650	SLE RA 18	1.33	0.19	71.81	-0.2597	-0.0326	0.0106
650	SLE RA 19	1.33	0.18	71.81	-0.2604	-0.0326	0.0105
650	SLE RA 20	1.34	0.18	72.41	-0.2625	-0.0329	0.0106
650	SLE RA 21	1.34	0.17	72.42	-0.2632	-0.0329	0.0106
650	SLE FR 1	1.25	0.09	64.53	-0.2299	-0.0302	0.0091
650	SLE FR 2	1.25	0.09	64.53	-0.2302	-0.0302	0.0091
650	SLE FR 3	1.26	0.09	64.78	-0.2311	-0.0303	0.0091
650	SLE FR 4	1.27	0.12	66.72	-0.2391	-0.0309	0.0096
650	SLE FR 5	1.28	0.12	66.96	-0.24	-0.031	0.0096
650	SLE FR 6	1.29	0.14	68.17	-0.2448	-0.0314	0.0098
650	SLE QP 1	1.25	0.09	64.53	-0.2299	-0.0302	0.0091
650	SLE QP 2	1.27	0.12	66.72	-0.2389	-0.0309	0.0096
650	SLD 1	6.02	0.8	56.22	-0.1419	0.0107	0.0022
650	SLD 2	6.02	1.45	56.2	-0.154	0.0106	0.0105
650	SLD 3	5.94	-0.8	56.51	-0.1766	0.0113	-0.0072
650	SLD 4	5.95	-0.16	56.5	-0.1888	0.0112	0.001
650	SLD 5	2.81	2.64	63.13	-0.1548	-0.0193	0.0201
650	SLD 6	2.82	3.07	63.12	-0.1629	-0.0194	0.0256
650	SLD 7	2.55	-2.71	64.1	-0.2708	-0.0173	-0.0113
650	SLD 8	2.56	-2.28	64.09	-0.2788	-0.0174	-0.0058
650	SLD 9	-0.01	2.52	69.34	-0.1989	-0.0444	0.0249
650	SLD 10	0	2.95	69.34	-0.207	-0.0445	0.0304

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
650	SLD 11	-0.27	-2.83	70.31	-0.3149	-0.0424	-0.0065
650	SLD 12	-0.27	-2.4	70.31	-0.323	-0.0425	-0.001
650	SLD 13	-3.4	0.4	76.94	-0.2889	-0.073	0.0181
650	SLD 14	-3.39	1.04	76.93	-0.3011	-0.0731	0.0264
650	SLD 15	-3.48	-1.21	77.23	-0.3237	-0.0724	0.0087
650	SLD 16	-3.47	-0.56	77.22	-0.3359	-0.0725	0.017
650	SLV 1	12.36	1.67	42.15	-0.0126	0.0665	-0.008
650	SLV 2	12.38	3.17	42.12	-0.041	0.0661	0.0113
650	SLV 3	12.18	-1.97	42.83	-0.0924	0.0679	-0.0294
650	SLV 4	12.2	-0.47	42.8	-0.1208	0.0675	-0.0101
650	SLV 5	4.87	5.84	58.32	-0.0451	-0.0038	0.0333
650	SLV 6	4.88	6.82	58.3	-0.0635	-0.0041	0.0459
650	SLV 7	4.27	-6.29	60.59	-0.3109	0.001	-0.0379
650	SLV 8	4.28	-5.31	60.57	-0.3294	0.0007	-0.0253
650	SLV 9	-1.73	5.55	72.86	-0.1484	-0.0626	0.0445
650	SLV 10	-1.72	6.53	72.84	-0.1668	-0.0628	0.057
650	SLV 11	-2.34	-6.58	75.13	-0.4142	-0.0578	-0.0267
650	SLV 12	-2.32	-5.6	75.11	-0.4327	-0.058	-0.0142
650	SLV 13	-9.65	0.71	90.63	-0.357	-0.1293	0.0292
650	SLV 14	-9.63	2.21	90.6	-0.3853	-0.1297	0.0485
650	SLV 15	-9.83	-2.93	91.31	-0.4367	-0.1279	0.0078
650	SLV 16	-9.81	-1.43	91.28	-0.4651	-0.1283	0.0271
650	CRTFP Ux+	0	0	0	0	0	0
650	CRTFP Ux-	0	0	0	0	0	0
650	CRTFP Uy+	0	0	0	0	0	0
650	CRTFP Uy-	0	0	0	0	0	0
651	SLU 1	1.25	0.1	63.3	-0.204	-0.0273	0.0093
651	SLU 2	1.25	0.08	63.31	-0.2057	-0.0274	0.0092
651	SLU 3	1.29	0.11	64.79	-0.211	-0.0281	0.0094
651	SLU 4	1.29	0.09	64.79	-0.2121	-0.0281	0.0093
651	SLU 5	1.28	0.07	64.23	-0.2097	-0.0279	0.0093
651	SLU 6	1.31	0.1	65.71	-0.215	-0.0286	0.0094
651	SLU 7	1.31	0.08	65.72	-0.216	-0.0286	0.0094
651	SLU 8	1.3	0.09	65.14	-0.2119	-0.0284	0.0094
651	SLU 9	1.3	0.07	65.15	-0.2129	-0.0284	0.0093
651	SLU 10	1.34	0.19	71.02	-0.234	-0.0294	0.0109
651	SLU 11	1.37	0.22	72.5	-0.2393	-0.0301	0.0111
651	SLU 12	1.37	0.2	72.51	-0.2404	-0.0301	0.011
651	SLU 13	1.36	0.18	71.94	-0.238	-0.0299	0.0109
651	SLU 14	1.39	0.21	73.42	-0.2433	-0.0306	0.0111
651	SLU 15	1.39	0.2	73.43	-0.2443	-0.0306	0.011
651	SLU 16	1.38	0.2	72.86	-0.2402	-0.0303	0.0111
651	SLU 17	1.38	0.19	72.86	-0.2412	-0.0304	0.011
651	SLU 18	1.37	0.26	74.31	-0.2445	-0.0302	0.0117
651	SLU 19	1.37	0.25	74.32	-0.2455	-0.0302	0.0116
651	SLU 20	1.39	0.26	75.24	-0.2484	-0.0307	0.0117
651	SLU 21	1.39	0.24	75.24	-0.2494	-0.0307	0.0117
651	SLU 22	1.37	0.23	70.9	-0.224	-0.0298	0.0103
651	SLU 23	1.37	0.2	70.91	-0.2257	-0.0298	0.0102
651	SLU 24	1.4	0.23	72.39	-0.231	-0.0306	0.0104
651	SLU 25	1.4	0.21	72.4	-0.232	-0.0306	0.0103
651	SLU 26	1.39	0.19	71.84	-0.2296	-0.0304	0.0103
651	SLU 27	1.43	0.22	73.32	-0.2349	-0.0311	0.0104
651	SLU 28	1.43	0.21	73.32	-0.2359	-0.0311	0.0104
651	SLU 29	1.41	0.21	72.75	-0.2319	-0.0308	0.0104
651	SLU 30	1.41	0.2	72.76	-0.2329	-0.0309	0.0103
651	SLU 31	1.45	0.31	78.62	-0.254	-0.0318	0.0119
651	SLU 32	1.48	0.34	80.11	-0.2593	-0.0326	0.0121
651	SLU 33	1.48	0.32	80.11	-0.2603	-0.0326	0.012
651	SLU 34	1.47	0.3	79.55	-0.2579	-0.0323	0.0119
651	SLU 35	1.51	0.33	81.03	-0.2632	-0.0331	0.0121
651	SLU 36	1.51	0.32	81.04	-0.2642	-0.0331	0.012
651	SLU 37	1.49	0.32	80.46	-0.2602	-0.0328	0.0121
651	SLU 38	1.49	0.31	80.47	-0.2612	-0.0328	0.012
651	SLU 39	1.48	0.38	81.92	-0.2644	-0.0327	0.0127
651	SLU 40	1.48	0.37	81.92	-0.2654	-0.0327	0.0126
651	SLU 41	1.51	0.38	82.84	-0.2684	-0.0332	0.0127
651	SLU 42	1.51	0.36	82.85	-0.2694	-0.0332	0.0127
651	SLU 43	1.59	0.09	79.68	-0.2584	-0.0347	0.0118
651	SLU 44	1.59	0.07	79.69	-0.2601	-0.0347	0.0117
651	SLU 45	1.63	0.1	81.17	-0.2654	-0.0355	0.0119
651	SLU 46	1.63	0.08	81.18	-0.2664	-0.0355	0.0118
651	SLU 47	1.61	0.06	80.61	-0.264	-0.0352	0.0117
651	SLU 48	1.65	0.09	82.09	-0.2693	-0.036	0.0119
651	SLU 49	1.65	0.07	82.1	-0.2704	-0.036	0.0118
651	SLU 50	1.64	0.08	81.53	-0.2663	-0.0357	0.0119
651	SLU 51	1.64	0.06	81.53	-0.2673	-0.0357	0.0118
651	SLU 52	1.67	0.18	87.4	-0.2884	-0.0367	0.0134
651	SLU 53	1.71	0.21	88.88	-0.2937	-0.0375	0.0135
651	SLU 54	1.71	0.19	88.89	-0.2947	-0.0375	0.0135
651	SLU 55	1.69	0.17	88.32	-0.2923	-0.0372	0.0134
651	SLU 56	1.73	0.2	89.81	-0.2976	-0.038	0.0136
651	SLU 57	1.73	0.19	89.81	-0.2987	-0.038	0.0135
651	SLU 58	1.72	0.19	89.24	-0.2946	-0.0377	0.0135
651	SLU 59	1.72	0.18	89.24	-0.2956	-0.0377	0.0135
651	SLU 60	1.71	0.25	90.69	-0.2988	-0.0375	0.0142
651	SLU 61	1.71	0.24	90.7	-0.2999	-0.0375	0.0141
651	SLU 62	1.73	0.25	91.62	-0.3028	-0.038	0.0142
651	SLU 63	1.73	0.23	91.62	-0.3038	-0.0381	0.0141
651	SLU 64	1.71	0.21	87.28	-0.2784	-0.0372	0.0128

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
651	SLU 65	1.71	0.19	87.29	-0.2801	-0.0372	0.0127
651	SLU 66	1.74	0.22	88.78	-0.2854	-0.038	0.0129
651	SLU 67	1.74	0.2	88.78	-0.2864	-0.038	0.0128
651	SLU 68	1.73	0.18	88.22	-0.284	-0.0377	0.0127
651	SLU 69	1.76	0.21	89.7	-0.2893	-0.0385	0.0129
651	SLU 70	1.76	0.2	89.71	-0.2903	-0.0385	0.0128
651	SLU 71	1.75	0.2	89.13	-0.2862	-0.0382	0.0129
651	SLU 72	1.75	0.19	89.14	-0.2873	-0.0382	0.0128
651	SLU 73	1.79	0.3	95	-0.3084	-0.0392	0.0143
651	SLU 74	1.82	0.33	96.49	-0.3137	-0.0399	0.0145
651	SLU 75	1.82	0.31	96.49	-0.3147	-0.04	0.0145
651	SLU 76	1.81	0.29	95.93	-0.3123	-0.0397	0.0144
651	SLU 77	1.84	0.32	97.41	-0.3176	-0.0405	0.0146
651	SLU 78	1.84	0.31	97.42	-0.3186	-0.0405	0.0145
651	SLU 79	1.83	0.31	96.84	-0.3145	-0.0402	0.0145
651	SLU 80	1.83	0.3	96.85	-0.3155	-0.0402	0.0145
651	SLU 81	1.82	0.37	98.3	-0.3188	-0.04	0.0152
651	SLU 82	1.82	0.36	98.3	-0.3198	-0.04	0.0151
651	SLU 83	1.84	0.37	99.22	-0.3227	-0.0405	0.0152
651	SLU 84	1.84	0.35	99.23	-0.3237	-0.0405	0.0151
651	SLE RA 1	1.29	0.14	65.47	-0.2097	-0.028	0.0096
651	SLE RA 2	1.29	0.12	65.48	-0.2109	-0.0281	0.0096
651	SLE RA 3	1.31	0.14	66.46	-0.2144	-0.0286	0.0097
651	SLE RA 4	1.31	0.13	66.47	-0.2151	-0.0286	0.0096
651	SLE RA 5	1.3	0.12	66.09	-0.2135	-0.0284	0.0096
651	SLE RA 6	1.32	0.14	67.08	-0.217	-0.0289	0.0097
651	SLE RA 7	1.32	0.13	67.08	-0.2177	-0.0289	0.0097
651	SLE RA 8	1.32	0.13	66.7	-0.215	-0.0287	0.0097
651	SLE RA 9	1.32	0.12	66.71	-0.2157	-0.0287	0.0096
651	SLE RA 10	1.34	0.19	70.62	-0.2297	-0.0294	0.0107
651	SLE RA 11	1.36	0.22	71.6	-0.2333	-0.0299	0.0108
651	SLE RA 12	1.36	0.2	71.61	-0.2339	-0.0299	0.0107
651	SLE RA 13	1.36	0.19	71.23	-0.2324	-0.0297	0.0107
651	SLE RA 14	1.38	0.21	72.22	-0.2359	-0.0302	0.0108
651	SLE RA 15	1.38	0.2	72.23	-0.2366	-0.0302	0.0108
651	SLE RA 16	1.37	0.2	71.84	-0.2339	-0.0301	0.0108
651	SLE RA 17	1.37	0.19	71.85	-0.2345	-0.0301	0.0107
651	SLE RA 18	1.36	0.24	72.81	-0.2367	-0.0299	0.0112
651	SLE RA 19	1.36	0.23	72.82	-0.2374	-0.0299	0.0112
651	SLE RA 20	1.38	0.24	73.43	-0.2393	-0.0303	0.0112
651	SLE RA 21	1.38	0.23	73.43	-0.24	-0.0303	0.0112
651	SLE FR 1	1.29	0.14	65.47	-0.2097	-0.028	0.0096
651	SLE FR 2	1.29	0.14	65.47	-0.21	-0.0281	0.0096
651	SLE FR 3	1.29	0.14	65.72	-0.2108	-0.0282	0.0096
651	SLE FR 4	1.31	0.17	67.67	-0.218	-0.0286	0.0101
651	SLE FR 5	1.32	0.17	67.92	-0.2189	-0.0288	0.0101
651	SLE FR 6	1.32	0.19	69.14	-0.2232	-0.029	0.0104
651	SLE QP 1	1.29	0.14	65.47	-0.2097	-0.028	0.0096
651	SLE QP 2	1.31	0.17	67.67	-0.2178	-0.0286	0.0101
651	SLD 1	6.04	0.86	55.82	-0.1276	0.0135	0.0044
651	SLD 2	6.05	1.55	55.81	-0.1406	0.0133	0.0136
651	SLD 3	5.96	-0.8	56.1	-0.1574	0.0144	-0.0073
651	SLD 4	5.97	-0.11	56.1	-0.1704	0.0142	0.0019
651	SLD 5	2.85	2.77	63.68	-0.1431	-0.0173	0.0245
651	SLD 6	2.85	3.23	63.68	-0.1518	-0.0174	0.0306
651	SLD 7	2.58	-2.77	64.64	-0.2426	-0.0143	-0.0146
651	SLD 8	2.59	-2.31	64.63	-0.2512	-0.0144	-0.0085
651	SLD 9	0.03	2.65	70.71	-0.1844	-0.0428	0.0287
651	SLD 10	0.04	3.11	70.71	-0.1931	-0.0429	0.0348
651	SLD 11	-0.23	-2.89	71.66	-0.2839	-0.0398	-0.0104
651	SLD 12	-0.23	-2.43	71.66	-0.2925	-0.0399	-0.0043
651	SLD 13	-3.35	0.45	79.25	-0.2652	-0.0714	0.0183
651	SLD 14	-3.34	1.14	79.24	-0.2782	-0.0716	0.0275
651	SLD 15	-3.43	-1.21	79.53	-0.2951	-0.0705	0.0066
651	SLD 16	-3.42	-0.52	79.53	-0.3081	-0.0707	0.0158
651	SLV 1	12.36	1.72	39.94	-0.0072	0.0699	-0.0036
651	SLV 2	12.38	3.33	39.92	-0.0375	0.0695	0.0178
651	SLV 3	12.18	-2.04	40.61	-0.0758	0.0719	-0.0302
651	SLV 4	12.2	-0.44	40.59	-0.1061	0.0716	-0.0088
651	SLV 5	4.9	6.06	58.34	-0.0453	-0.0022	0.0426
651	SLV 6	4.91	7.11	58.33	-0.0651	-0.0024	0.0566
651	SLV 7	4.29	-6.48	60.57	-0.2738	0.0048	-0.0462
651	SLV 8	4.3	-5.44	60.56	-0.2936	0.0045	-0.0322
651	SLV 9	-1.68	5.78	74.78	-0.142	-0.0618	0.0524
651	SLV 10	-1.67	6.82	74.77	-0.1618	-0.062	0.0664
651	SLV 11	-2.29	-6.76	77.01	-0.3705	-0.0548	-0.0364
651	SLV 12	-2.28	-5.72	77	-0.3903	-0.055	-0.0224
651	SLV 13	-9.58	0.78	94.75	-0.3295	-0.1288	0.029
651	SLV 14	-9.56	2.38	94.74	-0.3599	-0.1292	0.0505
651	SLV 15	-9.76	-2.98	95.42	-0.3981	-0.1267	0.0024
651	SLV 16	-9.75	-1.38	95.41	-0.4284	-0.1271	0.0238
651	CRTFP Ux+	0	0	0	0	0	0
651	CRTFP Ux-	0	0	0	0	0	0
651	CRTFP Uy+	0	0	0	0	0	0
651	CRTFP Uy-	0	0	0	0	0	0
652	SLU 1	1.28	0.15	64.15	-0.1852	-0.0259	0.0095
652	SLU 2	1.29	0.12	64.16	-0.1867	-0.0259	0.0094
652	SLU 3	1.32	0.16	65.67	-0.1916	-0.0267	0.0096
652	SLU 4	1.32	0.14	65.67	-0.1925	-0.0267	0.0095
652	SLU 5	1.31	0.12	65.1	-0.1904	-0.0265	0.0094

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
652	SLU 6	1.34	0.15	66.61	-0.1952	-0.0272	0.0096
652	SLU 7	1.34	0.13	66.62	-0.1962	-0.0272	0.0096
652	SLU 8	1.33	0.14	66.03	-0.1925	-0.0269	0.0096
652	SLU 9	1.33	0.12	66.04	-0.1934	-0.0269	0.0095
652	SLU 10	1.37	0.25	71.93	-0.2122	-0.0275	0.0112
652	SLU 11	1.4	0.28	73.44	-0.2171	-0.0283	0.0114
652	SLU 12	1.4	0.26	73.44	-0.218	-0.0283	0.0113
652	SLU 13	1.39	0.24	72.87	-0.2158	-0.028	0.0112
652	SLU 14	1.43	0.27	74.38	-0.2207	-0.0288	0.0114
652	SLU 15	1.43	0.25	74.38	-0.2216	-0.0288	0.0113
652	SLU 16	1.41	0.26	73.8	-0.2179	-0.0285	0.0114
652	SLU 17	1.41	0.24	73.81	-0.2188	-0.0285	0.0113
652	SLU 18	1.4	0.32	75.25	-0.2215	-0.0282	0.0121
652	SLU 19	1.4	0.31	75.25	-0.2225	-0.0282	0.012
652	SLU 20	1.42	0.32	76.19	-0.2252	-0.0287	0.0121
652	SLU 21	1.43	0.3	76.19	-0.2261	-0.0287	0.012
652	SLU 22	1.4	0.28	71.83	-0.2028	-0.0281	0.0107
652	SLU 23	1.4	0.25	71.84	-0.2044	-0.0281	0.0106
652	SLU 24	1.44	0.28	73.35	-0.2093	-0.0288	0.0108
652	SLU 25	1.44	0.27	73.35	-0.2102	-0.0289	0.0107
652	SLU 26	1.43	0.25	72.78	-0.208	-0.0286	0.0106
652	SLU 27	1.46	0.28	74.29	-0.2129	-0.0294	0.0108
652	SLU 28	1.46	0.26	74.3	-0.2138	-0.0294	0.0107
652	SLU 29	1.45	0.27	73.71	-0.2101	-0.0291	0.0108
652	SLU 30	1.45	0.25	73.72	-0.211	-0.0291	0.0107
652	SLU 31	1.48	0.37	79.61	-0.2298	-0.0297	0.0123
652	SLU 32	1.52	0.4	81.12	-0.2347	-0.0304	0.0125
652	SLU 33	1.52	0.39	81.12	-0.2356	-0.0304	0.0125
652	SLU 34	1.51	0.37	80.55	-0.2335	-0.0302	0.0124
652	SLU 35	1.54	0.4	82.06	-0.2384	-0.0309	0.0126
652	SLU 36	1.54	0.38	82.06	-0.2393	-0.0309	0.0125
652	SLU 37	1.53	0.39	81.48	-0.2356	-0.0307	0.0125
652	SLU 38	1.53	0.37	81.49	-0.2365	-0.0307	0.0124
652	SLU 39	1.52	0.45	82.93	-0.2392	-0.0303	0.0132
652	SLU 40	1.52	0.43	82.93	-0.2401	-0.0303	0.0131
652	SLU 41	1.54	0.45	83.87	-0.2428	-0.0308	0.0133
652	SLU 42	1.54	0.43	83.87	-0.2438	-0.0309	0.0132
652	SLU 43	1.63	0.16	80.76	-0.2347	-0.033	0.012
652	SLU 44	1.63	0.13	80.77	-0.2362	-0.033	0.0119
652	SLU 45	1.67	0.16	82.28	-0.2411	-0.0337	0.0121
652	SLU 46	1.67	0.14	82.29	-0.242	-0.0337	0.012
652	SLU 47	1.65	0.12	81.71	-0.2399	-0.0335	0.0119
652	SLU 48	1.69	0.15	83.22	-0.2447	-0.0342	0.0121
652	SLU 49	1.69	0.14	83.23	-0.2457	-0.0342	0.012
652	SLU 50	1.68	0.14	82.64	-0.242	-0.034	0.0121
652	SLU 51	1.68	0.13	82.65	-0.2429	-0.034	0.012
652	SLU 52	1.71	0.25	88.54	-0.2617	-0.0346	0.0136
652	SLU 53	1.75	0.28	90.05	-0.2666	-0.0353	0.0138
652	SLU 54	1.75	0.26	90.05	-0.2675	-0.0353	0.0138
652	SLU 55	1.74	0.24	89.48	-0.2653	-0.0351	0.0137
652	SLU 56	1.77	0.27	90.99	-0.2702	-0.0358	0.0139
652	SLU 57	1.77	0.26	91	-0.2711	-0.0358	0.0138
652	SLU 58	1.76	0.26	90.41	-0.2674	-0.0356	0.0138
652	SLU 59	1.76	0.25	90.42	-0.2683	-0.0356	0.0137
652	SLU 60	1.75	0.33	91.86	-0.271	-0.0352	0.0145
652	SLU 61	1.75	0.31	91.87	-0.272	-0.0352	0.0144
652	SLU 62	1.77	0.32	92.8	-0.2747	-0.0357	0.0146
652	SLU 63	1.77	0.3	92.81	-0.2756	-0.0357	0.0145
652	SLU 64	1.75	0.28	88.44	-0.2523	-0.0351	0.0132
652	SLU 65	1.75	0.25	88.45	-0.2539	-0.0351	0.013
652	SLU 66	1.78	0.29	89.96	-0.2588	-0.0359	0.0132
652	SLU 67	1.78	0.27	89.97	-0.2597	-0.0359	0.0132
652	SLU 68	1.77	0.25	89.39	-0.2575	-0.0356	0.0131
652	SLU 69	1.81	0.28	90.9	-0.2624	-0.0364	0.0133
652	SLU 70	1.81	0.26	90.91	-0.2633	-0.0364	0.0132
652	SLU 71	1.79	0.27	90.32	-0.2596	-0.0361	0.0132
652	SLU 72	1.79	0.25	90.33	-0.2605	-0.0361	0.0131
652	SLU 73	1.83	0.37	96.22	-0.2793	-0.0367	0.0148
652	SLU 74	1.86	0.41	97.73	-0.2842	-0.0375	0.015
652	SLU 75	1.86	0.39	97.73	-0.2851	-0.0375	0.0149
652	SLU 76	1.85	0.37	97.16	-0.283	-0.0372	0.0148
652	SLU 77	1.89	0.4	98.67	-0.2879	-0.038	0.015
652	SLU 78	1.89	0.38	98.68	-0.2888	-0.038	0.0149
652	SLU 79	1.87	0.39	98.09	-0.2851	-0.0377	0.015
652	SLU 80	1.88	0.37	98.1	-0.286	-0.0377	0.0149
652	SLU 81	1.86	0.45	99.54	-0.2887	-0.0374	0.0157
652	SLU 82	1.86	0.44	99.55	-0.2896	-0.0374	0.0156
652	SLU 83	1.89	0.45	100.48	-0.2923	-0.0379	0.0157
652	SLU 84	1.89	0.43	100.49	-0.2933	-0.0379	0.0156
652	SLE RA 1	1.32	0.19	66.34	-0.1902	-0.0265	0.0099
652	SLE RA 2	1.32	0.17	66.35	-0.1912	-0.0265	0.0098
652	SLE RA 3	1.34	0.19	67.36	-0.1945	-0.027	0.0099
652	SLE RA 4	1.34	0.18	67.36	-0.1951	-0.0271	0.0099
652	SLE RA 5	1.33	0.17	66.98	-0.1937	-0.0269	0.0098
652	SLE RA 6	1.36	0.19	67.98	-0.1969	-0.0274	0.0099
652	SLE RA 7	1.36	0.18	67.99	-0.1975	-0.0274	0.0099
652	SLE RA 8	1.35	0.18	67.6	-0.1951	-0.0272	0.0099
652	SLE RA 9	1.35	0.17	67.6	-0.1957	-0.0272	0.0098
652	SLE RA 10	1.37	0.25	71.53	-0.2082	-0.0276	0.011
652	SLE RA 11	1.4	0.27	72.54	-0.2115	-0.0281	0.0111

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
652	SLE RA 12	1.4	0.26	72.54	-0.2121	-0.0281	0.011
652	SLE RA 13	1.39	0.25	72.16	-0.2106	-0.0279	0.011
652	SLE RA 14	1.41	0.27	73.16	-0.2139	-0.0284	0.0111
652	SLE RA 15	1.41	0.26	73.17	-0.2145	-0.0285	0.0111
652	SLE RA 16	1.4	0.26	72.78	-0.212	-0.0283	0.0111
652	SLE RA 17	1.4	0.25	72.78	-0.2127	-0.0283	0.011
652	SLE RA 18	1.4	0.3	73.74	-0.2145	-0.028	0.0116
652	SLE RA 19	1.4	0.29	73.75	-0.2151	-0.0281	0.0115
652	SLE RA 20	1.41	0.3	74.37	-0.2169	-0.0284	0.0116
652	SLE RA 21	1.41	0.29	74.37	-0.2175	-0.0284	0.0115
652	SLE FR 1	1.32	0.19	66.34	-0.1902	-0.0265	0.0099
652	SLE FR 2	1.32	0.19	66.35	-0.1904	-0.0265	0.0099
652	SLE FR 3	1.32	0.19	66.6	-0.1912	-0.0267	0.0099
652	SLE FR 4	1.34	0.22	68.57	-0.1977	-0.027	0.0104
652	SLE FR 5	1.35	0.22	68.81	-0.1985	-0.0271	0.0104
652	SLE FR 6	1.36	0.25	70.04	-0.2023	-0.0273	0.0107
652	SLE QP 1	1.32	0.19	66.34	-0.1902	-0.0265	0.0099
652	SLE QP 2	1.34	0.22	68.56	-0.1975	-0.027	0.0104
652	SLD 1	6.06	0.93	55.35	-0.1136	0.0153	0.0067
652	SLD 2	6.06	1.66	55.35	-0.1275	0.0151	0.0168
652	SLD 3	5.98	-0.8	55.62	-0.1388	0.0165	-0.0072
652	SLD 4	5.98	-0.06	55.62	-0.1527	0.0163	0.0029
652	SLD 5	2.87	2.92	64.19	-0.1316	-0.0162	0.0285
652	SLD 6	2.88	3.41	64.18	-0.1409	-0.0163	0.0352
652	SLD 7	2.61	-2.84	65.09	-0.2155	-0.012	-0.0178
652	SLD 8	2.62	-2.35	65.09	-0.2247	-0.0121	-0.0111
652	SLD 9	0.07	2.79	72.03	-0.1702	-0.0418	0.0318
652	SLD 10	0.07	3.28	72.03	-0.1795	-0.0419	0.0385
652	SLD 11	-0.2	-2.96	72.94	-0.2541	-0.0377	-0.0145
652	SLD 12	-0.19	-2.47	72.94	-0.2633	-0.0378	-0.0077
652	SLD 13	-3.3	0.51	81.51	-0.2423	-0.0703	0.0178
652	SLD 14	-3.29	1.25	81.51	-0.2562	-0.0705	0.0279
652	SLD 15	-3.38	-1.22	81.78	-0.2674	-0.0691	0.0039
652	SLD 16	-3.37	-0.48	81.78	-0.2813	-0.0692	0.0141
652	SLV 1	12.36	1.81	37.64	-0.0017	0.0719	0.0013
652	SLV 2	12.38	3.53	37.64	-0.0341	0.0715	0.0249
652	SLV 3	12.18	-2.1	38.28	-0.0597	0.0748	-0.0302
652	SLV 4	12.2	-0.38	38.27	-0.092	0.0744	-0.0066
652	SLV 5	4.92	6.33	58.32	-0.0452	-0.0017	0.0513
652	SLV 6	4.94	7.45	58.32	-0.0663	-0.0019	0.0667
652	SLV 7	4.31	-6.71	60.45	-0.2383	0.008	-0.0537
652	SLV 8	4.32	-5.59	60.44	-0.2594	0.0078	-0.0384
652	SLV 9	-1.64	6.04	76.68	-0.1355	-0.0617	0.0591
652	SLV 10	-1.63	7.16	76.68	-0.1566	-0.062	0.0745
652	SLV 11	-2.25	-7	78.81	-0.3287	-0.0521	-0.0459
652	SLV 12	-2.24	-5.88	78.81	-0.3498	-0.0523	-0.0305
652	SLV 13	-9.51	0.83	98.85	-0.303	-0.1284	0.0274
652	SLV 14	-9.5	2.55	98.85	-0.3353	-0.1287	0.0509
652	SLV 15	-9.7	-3.08	99.49	-0.3609	-0.1254	-0.0041
652	SLV 16	-9.68	-1.36	99.49	-0.3933	-0.1258	0.0194
652	CRTFP Ux+	0	0	0	0	0	0
652	CRTFP Ux-	0	0	0	0	0	0
652	CRTFP Uy+	0	0	0	0	0	0
652	CRTFP Uy-	0	0	0	0	0	0
653	SLU 1	1.31	0.2	64.97	-0.1669	-0.0254	0.0094
653	SLU 2	1.31	0.17	64.98	-0.1683	-0.0254	0.0093
653	SLU 3	1.35	0.21	66.52	-0.1728	-0.0262	0.0095
653	SLU 4	1.35	0.19	66.52	-0.1736	-0.0262	0.0094
653	SLU 5	1.34	0.17	65.94	-0.1717	-0.0259	0.0093
653	SLU 6	1.37	0.2	67.47	-0.1762	-0.0267	0.0095
653	SLU 7	1.37	0.18	67.48	-0.177	-0.0267	0.0094
653	SLU 8	1.36	0.19	66.89	-0.1736	-0.0264	0.0095
653	SLU 9	1.36	0.17	66.89	-0.1745	-0.0264	0.0094
653	SLU 10	1.4	0.3	72.8	-0.191	-0.0267	0.0111
653	SLU 11	1.43	0.34	74.33	-0.1955	-0.0275	0.0113
653	SLU 12	1.43	0.32	74.34	-0.1963	-0.0275	0.0112
653	SLU 13	1.42	0.3	73.76	-0.1944	-0.0272	0.0111
653	SLU 14	1.46	0.33	75.29	-0.1989	-0.028	0.0114
653	SLU 15	1.46	0.31	75.29	-0.1997	-0.028	0.0113
653	SLU 16	1.44	0.32	74.7	-0.1963	-0.0277	0.0113
653	SLU 17	1.44	0.3	74.71	-0.1972	-0.0277	0.0112
653	SLU 18	1.43	0.39	76.14	-0.1993	-0.0273	0.012
653	SLU 19	1.43	0.37	76.14	-0.2002	-0.0273	0.0119
653	SLU 20	1.45	0.38	77.09	-0.2027	-0.0278	0.0121
653	SLU 21	1.46	0.36	77.1	-0.2035	-0.0278	0.012
653	SLU 22	1.43	0.34	72.72	-0.1824	-0.0273	0.0107
653	SLU 23	1.43	0.31	72.73	-0.1838	-0.0274	0.0106
653	SLU 24	1.47	0.34	74.26	-0.1882	-0.0281	0.0108
653	SLU 25	1.47	0.32	74.27	-0.1891	-0.0281	0.0107
653	SLU 26	1.46	0.3	73.69	-0.1871	-0.0279	0.0106
653	SLU 27	1.49	0.33	75.22	-0.1916	-0.0286	0.0108
653	SLU 28	1.49	0.32	75.23	-0.1924	-0.0286	0.0107
653	SLU 29	1.48	0.32	74.63	-0.1891	-0.0284	0.0107
653	SLU 30	1.48	0.31	74.64	-0.1899	-0.0284	0.0107
653	SLU 31	1.51	0.44	80.54	-0.2065	-0.0287	0.0124
653	SLU 32	1.55	0.47	82.08	-0.2109	-0.0294	0.0126
653	SLU 33	1.55	0.45	82.08	-0.2118	-0.0294	0.0125
653	SLU 34	1.54	0.43	81.5	-0.2098	-0.0292	0.0124
653	SLU 35	1.57	0.46	83.03	-0.2143	-0.0299	0.0126
653	SLU 36	1.57	0.45	83.04	-0.2151	-0.03	0.0125

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
653	SLU 37	1.56	0.45	82.45	-0.2118	-0.0297	0.0126
653	SLU 38	1.56	0.44	82.45	-0.2126	-0.0297	0.0125
653	SLU 39	1.55	0.52	83.88	-0.2148	-0.0292	0.0133
653	SLU 40	1.55	0.5	83.89	-0.2156	-0.0292	0.0132
653	SLU 41	1.57	0.51	84.84	-0.2181	-0.0297	0.0133
653	SLU 42	1.57	0.5	84.85	-0.219	-0.0297	0.0133
653	SLU 43	1.67	0.22	81.81	-0.2117	-0.0323	0.0118
653	SLU 44	1.67	0.19	81.82	-0.2131	-0.0324	0.0117
653	SLU 45	1.7	0.22	83.35	-0.2176	-0.0331	0.0119
653	SLU 46	1.7	0.2	83.36	-0.2184	-0.0331	0.0118
653	SLU 47	1.69	0.18	82.78	-0.2165	-0.0329	0.0117
653	SLU 48	1.73	0.22	84.31	-0.221	-0.0336	0.0119
653	SLU 49	1.73	0.2	84.32	-0.2218	-0.0336	0.0118
653	SLU 50	1.71	0.21	83.72	-0.2184	-0.0334	0.0118
653	SLU 51	1.71	0.19	83.73	-0.2193	-0.0334	0.0117
653	SLU 52	1.75	0.32	89.63	-0.2358	-0.0337	0.0135
653	SLU 53	1.79	0.35	91.17	-0.2403	-0.0344	0.0137
653	SLU 54	1.79	0.33	91.17	-0.2411	-0.0344	0.0136
653	SLU 55	1.77	0.31	90.59	-0.2392	-0.0342	0.0135
653	SLU 56	1.81	0.35	92.12	-0.2437	-0.0349	0.0137
653	SLU 57	1.81	0.33	92.13	-0.2445	-0.035	0.0136
653	SLU 58	1.8	0.33	91.54	-0.2411	-0.0347	0.0137
653	SLU 59	1.8	0.32	91.54	-0.242	-0.0347	0.0136
653	SLU 60	1.78	0.4	92.97	-0.2441	-0.0342	0.0144
653	SLU 61	1.78	0.39	92.98	-0.245	-0.0342	0.0143
653	SLU 62	1.81	0.4	93.93	-0.2475	-0.0347	0.0144
653	SLU 63	1.81	0.38	93.94	-0.2483	-0.0347	0.0143
653	SLU 64	1.78	0.35	89.55	-0.2271	-0.0343	0.0131
653	SLU 65	1.79	0.32	89.57	-0.2285	-0.0343	0.0129
653	SLU 66	1.82	0.35	91.1	-0.233	-0.0351	0.0132
653	SLU 67	1.82	0.34	91.1	-0.2339	-0.0351	0.0131
653	SLU 68	1.81	0.32	90.52	-0.2319	-0.0348	0.013
653	SLU 69	1.84	0.35	92.06	-0.2364	-0.0356	0.0132
653	SLU 70	1.84	0.33	92.06	-0.2372	-0.0356	0.0131
653	SLU 71	1.83	0.34	91.47	-0.2339	-0.0353	0.0131
653	SLU 72	1.83	0.32	91.48	-0.2347	-0.0353	0.013
653	SLU 73	1.87	0.45	97.38	-0.2512	-0.0356	0.0148
653	SLU 74	1.9	0.48	98.91	-0.2557	-0.0364	0.015
653	SLU 75	1.9	0.47	98.92	-0.2566	-0.0364	0.0149
653	SLU 76	1.89	0.45	98.34	-0.2546	-0.0361	0.0148
653	SLU 77	1.93	0.48	99.87	-0.2591	-0.0369	0.015
653	SLU 78	1.93	0.46	99.88	-0.2599	-0.0369	0.0149
653	SLU 79	1.91	0.47	99.28	-0.2566	-0.0366	0.015
653	SLU 80	1.92	0.45	99.29	-0.2574	-0.0366	0.0149
653	SLU 81	1.9	0.54	100.72	-0.2596	-0.0362	0.0157
653	SLU 82	1.9	0.52	100.72	-0.2604	-0.0362	0.0156
653	SLU 83	1.93	0.53	101.67	-0.2629	-0.0367	0.0157
653	SLU 84	1.93	0.51	101.68	-0.2638	-0.0367	0.0156
653	SLE RA 1	1.35	0.24	67.19	-0.1713	-0.0259	0.0098
653	SLE RA 2	1.35	0.22	67.19	-0.1723	-0.026	0.0097
653	SLE RA 3	1.37	0.24	68.21	-0.1753	-0.0265	0.0099
653	SLE RA 4	1.37	0.23	68.22	-0.1758	-0.0265	0.0098
653	SLE RA 5	1.36	0.22	67.83	-0.1745	-0.0263	0.0097
653	SLE RA 6	1.39	0.24	68.85	-0.1775	-0.0268	0.0099
653	SLE RA 7	1.39	0.23	68.86	-0.1781	-0.0268	0.0098
653	SLE RA 8	1.38	0.23	68.46	-0.1758	-0.0266	0.0098
653	SLE RA 9	1.38	0.22	68.47	-0.1764	-0.0266	0.0098
653	SLE RA 10	1.4	0.31	72.4	-0.1874	-0.0268	0.0109
653	SLE RA 11	1.43	0.33	73.42	-0.1904	-0.0273	0.0111
653	SLE RA 12	1.43	0.32	73.43	-0.1909	-0.0273	0.011
653	SLE RA 13	1.42	0.3	73.04	-0.1896	-0.0272	0.0109
653	SLE RA 14	1.44	0.33	74.06	-0.1926	-0.0277	0.0111
653	SLE RA 15	1.44	0.31	74.07	-0.1932	-0.0277	0.011
653	SLE RA 16	1.43	0.32	73.67	-0.1909	-0.0275	0.011
653	SLE RA 17	1.43	0.31	73.68	-0.1915	-0.0275	0.011
653	SLE RA 18	1.43	0.36	74.63	-0.1929	-0.0272	0.0115
653	SLE RA 19	1.43	0.35	74.63	-0.1935	-0.0272	0.0115
653	SLE RA 20	1.44	0.36	75.27	-0.1952	-0.0275	0.0115
653	SLE RA 21	1.44	0.35	75.27	-0.1957	-0.0276	0.0115
653	SLE FR 1	1.35	0.24	67.19	-0.1713	-0.0259	0.0098
653	SLE FR 2	1.35	0.24	67.19	-0.1715	-0.0259	0.0098
653	SLE FR 3	1.35	0.24	67.44	-0.1722	-0.0261	0.0098
653	SLE FR 4	1.37	0.27	69.42	-0.178	-0.0263	0.0103
653	SLE FR 5	1.38	0.28	69.67	-0.1787	-0.0265	0.0103
653	SLE FR 6	1.39	0.3	70.91	-0.1821	-0.0266	0.0107
653	SLE QP 1	1.35	0.24	67.19	-0.1713	-0.0259	0.0098
653	SLE QP 2	1.37	0.28	69.42	-0.1778	-0.0263	0.0103
653	SLD 1	6.07	1	54.83	-0.1	0.0162	0.0086
653	SLD 2	6.08	1.8	54.83	-0.1148	0.016	0.0195
653	SLD 3	5.99	-0.8	55.08	-0.1208	0.0178	-0.0071
653	SLD 4	6	0	55.09	-0.1356	0.0176	0.0039
653	SLD 5	2.9	3.09	64.65	-0.1202	-0.0159	0.0315
653	SLD 6	2.9	3.61	64.66	-0.13	-0.016	0.0388
653	SLD 7	2.63	-2.92	65.5	-0.1896	-0.0107	-0.0206
653	SLD 8	2.64	-2.4	65.51	-0.1994	-0.0108	-0.0134
653	SLD 9	0.1	2.95	73.33	-0.1562	-0.0419	0.034
653	SLD 10	0.11	3.48	73.33	-0.166	-0.042	0.0413
653	SLD 11	-0.16	-3.06	74.18	-0.2256	-0.0366	-0.0182
653	SLD 12	-0.16	-2.53	74.18	-0.2354	-0.0367	-0.0109
653	SLD 13	-3.26	0.56	83.75	-0.22	-0.0703	0.0168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
653	SLD 14	-3.25	1.35	83.76	-0.2348	-0.0704	0.0277
653	SLD 15	-3.34	-1.24	84.01	-0.2409	-0.0687	0.0011
653	SLD 16	-3.33	-0.45	84.01	-0.2556	-0.0688	0.0121
653	SLV 1	12.36	1.92	35.28	0.004	0.0732	0.0057
653	SLV 2	12.38	3.77	35.29	-0.0304	0.0728	0.0312
653	SLV 3	12.17	-2.17	35.88	-0.0441	0.0769	-0.0298
653	SLV 4	12.19	-0.32	35.89	-0.0785	0.0765	-0.0043
653	SLV 5	4.94	6.64	58.27	-0.0443	-0.002	0.0583
653	SLV 6	4.96	7.85	58.28	-0.0667	-0.0023	0.0749
653	SLV 7	4.33	-6.98	60.26	-0.2046	0.0103	-0.0601
653	SLV 8	4.34	-5.77	60.26	-0.227	0.0101	-0.0435
653	SLV 9	-1.6	6.33	78.57	-0.1286	-0.0627	0.0641
653	SLV 10	-1.59	7.53	78.58	-0.1511	-0.0629	0.0807
653	SLV 11	-2.22	-7.29	80.56	-0.2889	-0.0504	-0.0543
653	SLV 12	-2.2	-6.09	80.56	-0.3113	-0.0506	-0.0377
653	SLV 13	-9.45	0.87	102.95	-0.2771	-0.1291	0.025
653	SLV 14	-9.43	2.72	102.96	-0.3115	-0.1295	0.0505
653	SLV 15	-9.63	-3.21	103.55	-0.3252	-0.1254	-0.0105
653	SLV 16	-9.62	-1.36	103.56	-0.3596	-0.1258	0.015
653	CRTFP Ux+	0	0	0	0	0	0
653	CRTFP Ux-	0	0	0	0	0	0
653	CRTFP Uy+	0	0	0	0	0	0
653	CRTFP Uy-	0	0	0	0	0	0
654	SLU 1	1.34	0.25	65.8	-0.1492	-0.0266	0.009
654	SLU 2	1.34	0.22	65.81	-0.1505	-0.0266	0.0088
654	SLU 3	1.37	0.25	67.37	-0.1546	-0.0274	0.009
654	SLU 4	1.37	0.24	67.38	-0.1553	-0.0274	0.0089
654	SLU 5	1.36	0.21	66.79	-0.1536	-0.0271	0.0088
654	SLU 6	1.4	0.25	68.35	-0.1577	-0.0279	0.009
654	SLU 7	1.4	0.23	68.35	-0.1584	-0.028	0.0089
654	SLU 8	1.39	0.24	67.75	-0.1554	-0.0277	0.009
654	SLU 9	1.39	0.22	67.76	-0.1562	-0.0277	0.0089
654	SLU 10	1.42	0.36	73.67	-0.1705	-0.0279	0.0106
654	SLU 11	1.46	0.39	75.23	-0.1746	-0.0287	0.0108
654	SLU 12	1.46	0.38	75.23	-0.1754	-0.0287	0.0107
654	SLU 13	1.45	0.35	74.64	-0.1736	-0.0284	0.0106
654	SLU 14	1.48	0.39	76.2	-0.1777	-0.0292	0.0108
654	SLU 15	1.48	0.37	76.21	-0.1785	-0.0292	0.0107
654	SLU 16	1.47	0.38	75.61	-0.1754	-0.029	0.0108
654	SLU 17	1.47	0.36	75.61	-0.1762	-0.029	0.0107
654	SLU 18	1.46	0.45	77.02	-0.1778	-0.0284	0.0115
654	SLU 19	1.46	0.43	77.03	-0.1786	-0.0284	0.0114
654	SLU 20	1.48	0.44	78	-0.1809	-0.029	0.0115
654	SLU 21	1.48	0.43	78.01	-0.1817	-0.029	0.0114
654	SLU 22	1.46	0.39	73.61	-0.1625	-0.0285	0.0103
654	SLU 23	1.46	0.36	73.62	-0.1638	-0.0286	0.0102
654	SLU 24	1.49	0.4	75.18	-0.1679	-0.0294	0.0104
654	SLU 25	1.49	0.38	75.19	-0.1686	-0.0294	0.0103
654	SLU 26	1.48	0.35	74.6	-0.1669	-0.0291	0.0102
654	SLU 27	1.52	0.39	76.15	-0.171	-0.0299	0.0104
654	SLU 28	1.52	0.37	76.16	-0.1717	-0.0299	0.0103
654	SLU 29	1.51	0.38	75.56	-0.1687	-0.0296	0.0103
654	SLU 30	1.51	0.36	75.57	-0.1694	-0.0297	0.0102
654	SLU 31	1.54	0.5	81.48	-0.1838	-0.0299	0.012
654	SLU 32	1.58	0.53	83.04	-0.1879	-0.0307	0.0122
654	SLU 33	1.58	0.52	83.04	-0.1886	-0.0307	0.0121
654	SLU 34	1.57	0.49	82.45	-0.1869	-0.0304	0.012
654	SLU 35	1.6	0.53	84.01	-0.191	-0.0312	0.0122
654	SLU 36	1.6	0.51	84.02	-0.1917	-0.0312	0.0121
654	SLU 37	1.59	0.52	83.42	-0.1887	-0.0309	0.0121
654	SLU 38	1.59	0.5	83.42	-0.1895	-0.0309	0.012
654	SLU 39	1.58	0.59	84.83	-0.1911	-0.0304	0.0129
654	SLU 40	1.58	0.57	84.84	-0.1919	-0.0304	0.0128
654	SLU 41	1.6	0.58	85.81	-0.1942	-0.0309	0.0129
654	SLU 42	1.6	0.57	85.81	-0.1949	-0.0309	0.0128
654	SLU 43	1.7	0.28	82.87	-0.1895	-0.0339	0.0112
654	SLU 44	1.7	0.25	82.88	-0.1907	-0.0339	0.011
654	SLU 45	1.73	0.28	84.44	-0.1948	-0.0347	0.0112
654	SLU 46	1.73	0.26	84.44	-0.1956	-0.0347	0.0112
654	SLU 47	1.72	0.24	83.85	-0.1938	-0.0344	0.011
654	SLU 48	1.76	0.28	85.41	-0.1979	-0.0352	0.0113
654	SLU 49	1.76	0.26	85.42	-0.1987	-0.0353	0.0112
654	SLU 50	1.75	0.27	84.82	-0.1956	-0.035	0.0112
654	SLU 51	1.75	0.25	84.82	-0.1964	-0.035	0.0111
654	SLU 52	1.78	0.39	90.73	-0.2107	-0.0352	0.0128
654	SLU 53	1.82	0.42	92.29	-0.2148	-0.036	0.0131
654	SLU 54	1.82	0.4	92.3	-0.2156	-0.036	0.013
654	SLU 55	1.81	0.38	91.71	-0.2138	-0.0357	0.0128
654	SLU 56	1.84	0.42	93.27	-0.2179	-0.0365	0.0131
654	SLU 57	1.84	0.4	93.27	-0.2187	-0.0365	0.013
654	SLU 58	1.83	0.4	92.67	-0.2157	-0.0363	0.013
654	SLU 59	1.83	0.39	92.68	-0.2164	-0.0363	0.0129
654	SLU 60	1.82	0.48	94.09	-0.218	-0.0357	0.0138
654	SLU 61	1.82	0.46	94.1	-0.2188	-0.0357	0.0137
654	SLU 62	1.84	0.47	95.06	-0.2211	-0.0363	0.0138
654	SLU 63	1.84	0.45	95.07	-0.2219	-0.0363	0.0137
654	SLU 64	1.82	0.42	90.67	-0.2027	-0.0358	0.0125
654	SLU 65	1.82	0.39	90.69	-0.204	-0.0359	0.0124
654	SLU 66	1.85	0.42	92.24	-0.2081	-0.0367	0.0126
654	SLU 67	1.85	0.4	92.25	-0.2088	-0.0367	0.0125

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
654	SLU 68	1.84	0.38	91.66	-0.2071	-0.0364	0.0124
654	SLU 69	1.88	0.42	93.22	-0.2112	-0.0372	0.0126
654	SLU 70	1.88	0.4	93.23	-0.2119	-0.0372	0.0125
654	SLU 71	1.87	0.41	92.62	-0.2089	-0.0369	0.0125
654	SLU 72	1.87	0.39	92.63	-0.2097	-0.037	0.0124
654	SLU 73	1.9	0.53	98.54	-0.224	-0.0371	0.0142
654	SLU 74	1.94	0.56	100.1	-0.2281	-0.038	0.0144
654	SLU 75	1.94	0.54	100.11	-0.2289	-0.038	0.0143
654	SLU 76	1.93	0.52	99.52	-0.2271	-0.0377	0.0142
654	SLU 77	1.96	0.56	101.07	-0.2312	-0.0385	0.0144
654	SLU 78	1.96	0.54	101.08	-0.2319	-0.0385	0.0143
654	SLU 79	1.95	0.54	100.48	-0.2289	-0.0382	0.0143
654	SLU 80	1.95	0.53	100.49	-0.2297	-0.0382	0.0142
654	SLU 81	1.94	0.62	101.9	-0.2313	-0.0377	0.0151
654	SLU 82	1.94	0.6	101.9	-0.2321	-0.0377	0.015
654	SLU 83	1.96	0.61	102.87	-0.2344	-0.0382	0.0151
654	SLU 84	1.96	0.59	102.88	-0.2352	-0.0382	0.015
654	SLE RA 1	1.37	0.29	68.03	-0.153	-0.0271	0.0093
654	SLE RA 2	1.37	0.27	68.04	-0.1539	-0.0271	0.0092
654	SLE RA 3	1.4	0.29	69.08	-0.1566	-0.0277	0.0094
654	SLE RA 4	1.4	0.28	69.08	-0.1571	-0.0277	0.0093
654	SLE RA 5	1.39	0.27	68.69	-0.1559	-0.0275	0.0092
654	SLE RA 6	1.41	0.29	69.73	-0.1587	-0.0281	0.0094
654	SLE RA 7	1.41	0.28	69.73	-0.1592	-0.0281	0.0093
654	SLE RA 8	1.4	0.28	69.33	-0.1572	-0.0279	0.0093
654	SLE RA 9	1.4	0.27	69.34	-0.1577	-0.0279	0.0093
654	SLE RA 10	1.43	0.36	73.28	-0.1672	-0.028	0.0104
654	SLE RA 11	1.45	0.39	74.32	-0.1699	-0.0285	0.0106
654	SLE RA 12	1.45	0.37	74.32	-0.1704	-0.0286	0.0105
654	SLE RA 13	1.44	0.36	73.93	-0.1693	-0.0284	0.0104
654	SLE RA 14	1.47	0.38	74.97	-0.172	-0.0289	0.0106
654	SLE RA 15	1.47	0.37	74.97	-0.1725	-0.0289	0.0105
654	SLE RA 16	1.46	0.38	74.57	-0.1705	-0.0287	0.0105
654	SLE RA 17	1.46	0.36	74.57	-0.171	-0.0287	0.0105
654	SLE RA 18	1.45	0.42	75.52	-0.1721	-0.0284	0.0111
654	SLE RA 19	1.45	0.41	75.52	-0.1726	-0.0284	0.011
654	SLE RA 20	1.47	0.42	76.16	-0.1742	-0.0287	0.0111
654	SLE RA 21	1.47	0.41	76.17	-0.1747	-0.0287	0.011
654	SLE FR 1	1.37	0.29	68.03	-0.153	-0.0271	0.0093
654	SLE FR 2	1.37	0.29	68.04	-0.1532	-0.0271	0.0093
654	SLE FR 3	1.38	0.29	68.29	-0.1539	-0.0273	0.0093
654	SLE FR 4	1.4	0.33	70.28	-0.1589	-0.0275	0.0098
654	SLE FR 5	1.4	0.33	70.54	-0.1596	-0.0276	0.0099
654	SLE FR 6	1.41	0.36	71.77	-0.1626	-0.0277	0.0102
654	SLE QP 1	1.37	0.29	68.03	-0.153	-0.0271	0.0093
654	SLE QP 2	1.4	0.33	70.28	-0.1587	-0.0275	0.0099
654	SLD 1	6.08	1.09	54.29	-0.0865	0.0158	0.0165
654	SLD 2	6.09	1.94	54.3	-0.1022	0.0157	0.0281
654	SLD 3	6	-0.8	54.53	-0.1034	0.0177	-0.0004
654	SLD 4	6.01	0.05	54.54	-0.1191	0.0175	0.0112
654	SLD 5	2.92	3.27	65.12	-0.1086	-0.0173	0.0353
654	SLD 6	2.93	3.83	65.12	-0.119	-0.0174	0.043
654	SLD 7	2.65	-3.03	65.91	-0.1649	-0.0111	-0.0209
654	SLD 8	2.66	-2.46	65.92	-0.1754	-0.0112	-0.0132
654	SLD 9	0.13	3.12	74.64	-0.1421	-0.0438	0.0329
654	SLD 10	0.14	3.69	74.64	-0.1525	-0.0439	0.0406
654	SLD 11	-0.14	-3.17	75.43	-0.1985	-0.0376	-0.0233
654	SLD 12	-0.13	-2.6	75.44	-0.2089	-0.0377	-0.0156
654	SLD 13	-3.22	0.61	86.02	-0.1984	-0.0725	0.0085
654	SLD 14	-3.21	1.46	86.03	-0.214	-0.0727	0.0201
654	SLD 15	-3.3	-1.28	86.26	-0.2153	-0.0707	-0.0084
654	SLD 16	-3.29	-0.43	86.27	-0.231	-0.0708	0.0033
654	SLV 1	12.35	2.04	32.87	0.01	0.0739	0.0248
654	SLV 2	12.36	4.03	32.89	-0.0265	0.0735	0.0519
654	SLV 3	12.16	-2.24	33.43	-0.0292	0.0783	-0.0135
654	SLV 4	12.18	-0.25	33.45	-0.0657	0.0779	0.0136
654	SLV 5	4.96	6.98	58.21	-0.0423	-0.0037	0.0676
654	SLV 6	4.97	8.28	58.22	-0.066	-0.0039	0.0852
654	SLV 7	4.34	-7.28	60.07	-0.1729	0.011	-0.0599
654	SLV 8	4.35	-5.98	60.08	-0.1967	0.0107	-0.0423
654	SLV 9	-1.56	6.64	80.48	-0.1208	-0.0657	0.062
654	SLV 10	-1.55	7.94	80.49	-0.1446	-0.066	0.0796
654	SLV 11	-2.18	-7.62	82.34	-0.2515	-0.0511	-0.0655
654	SLV 12	-2.17	-6.32	82.35	-0.2752	-0.0514	-0.0479
654	SLV 13	-9.39	0.91	107.1	-0.2518	-0.1329	0.0061
654	SLV 14	-9.37	2.9	107.13	-0.2883	-0.1333	0.0332
654	SLV 15	-9.57	-3.37	107.66	-0.291	-0.1285	-0.0322
654	SLV 16	-9.56	-1.38	107.68	-0.3275	-0.1289	-0.0051
654	CRTFP Ux+	0	0	0	0	0	0
654	CRTFP Ux-	0	0	0	0	0	0
654	CRTFP Uy+	0	0	0	0	0	0
654	CRTFP Uy-	0	0	0	0	0	0
655	SLU 1	1.36	0.29	66.72	-0.132	-0.0313	0.008
655	SLU 2	1.36	0.26	66.74	-0.1331	-0.0313	0.0079
655	SLU 3	1.4	0.3	68.32	-0.1369	-0.0323	0.0081
655	SLU 4	1.4	0.28	68.33	-0.1375	-0.0323	0.008
655	SLU 5	1.38	0.26	67.73	-0.136	-0.032	0.0079
655	SLU 6	1.42	0.29	69.31	-0.1397	-0.0329	0.0081
655	SLU 7	1.42	0.28	69.32	-0.1404	-0.0329	0.008
655	SLU 8	1.41	0.28	68.71	-0.1377	-0.0326	0.008

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
655	SLU 9	1.41	0.26	68.72	-0.1384	-0.0326	0.0079
655	SLU 10	1.44	0.41	74.64	-0.1505	-0.0331	0.0096
655	SLU 11	1.48	0.45	76.22	-0.1543	-0.034	0.0098
655	SLU 12	1.48	0.43	76.23	-0.1549	-0.0341	0.0097
655	SLU 13	1.47	0.41	75.63	-0.1534	-0.0337	0.0096
655	SLU 14	1.51	0.44	77.22	-0.1571	-0.0347	0.0098
655	SLU 15	1.51	0.42	77.22	-0.1578	-0.0347	0.0097
655	SLU 16	1.49	0.43	76.61	-0.1551	-0.0344	0.0097
655	SLU 17	1.49	0.41	76.62	-0.1557	-0.0344	0.0096
655	SLU 18	1.48	0.51	78.01	-0.1569	-0.0338	0.0105
655	SLU 19	1.48	0.49	78.02	-0.1575	-0.0338	0.0104
655	SLU 20	1.5	0.5	79.01	-0.1597	-0.0345	0.0104
655	SLU 21	1.5	0.48	79.01	-0.1604	-0.0345	0.0104
655	SLU 22	1.48	0.44	74.6	-0.1432	-0.0338	0.0094
655	SLU 23	1.48	0.41	74.61	-0.1443	-0.0338	0.0093
655	SLU 24	1.52	0.45	76.2	-0.1481	-0.0348	0.0095
655	SLU 25	1.52	0.43	76.21	-0.1487	-0.0348	0.0094
655	SLU 26	1.5	0.41	75.61	-0.1472	-0.0345	0.0092
655	SLU 27	1.54	0.44	77.19	-0.1509	-0.0354	0.0094
655	SLU 28	1.54	0.42	77.2	-0.1516	-0.0354	0.0094
655	SLU 29	1.53	0.43	76.59	-0.1489	-0.0351	0.0094
655	SLU 30	1.53	0.41	76.6	-0.1495	-0.0351	0.0093
655	SLU 31	1.57	0.56	82.52	-0.1617	-0.0356	0.0109
655	SLU 32	1.6	0.6	84.1	-0.1654	-0.0365	0.0111
655	SLU 33	1.6	0.58	84.11	-0.1661	-0.0365	0.0111
655	SLU 34	1.59	0.55	83.51	-0.1645	-0.0362	0.0109
655	SLU 35	1.63	0.59	85.1	-0.1683	-0.0372	0.0111
655	SLU 36	1.63	0.57	85.1	-0.1689	-0.0372	0.011
655	SLU 37	1.61	0.58	84.49	-0.1663	-0.0368	0.0111
655	SLU 38	1.61	0.56	84.5	-0.1669	-0.0368	0.011
655	SLU 39	1.6	0.65	85.89	-0.168	-0.0363	0.0118
655	SLU 40	1.6	0.64	85.9	-0.1687	-0.0363	0.0117
655	SLU 41	1.63	0.65	86.88	-0.1709	-0.0369	0.0118
655	SLU 42	1.63	0.63	86.89	-0.1715	-0.037	0.0117
655	SLU 43	1.72	0.33	84.04	-0.1678	-0.0399	0.01
655	SLU 44	1.72	0.3	84.05	-0.1689	-0.0399	0.0099
655	SLU 45	1.76	0.34	85.64	-0.1727	-0.0408	0.0101
655	SLU 46	1.76	0.32	85.64	-0.1733	-0.0409	0.01
655	SLU 47	1.75	0.3	85.04	-0.1718	-0.0405	0.0098
655	SLU 48	1.79	0.33	86.63	-0.1755	-0.0415	0.01
655	SLU 49	1.79	0.31	86.64	-0.1762	-0.0415	0.01
655	SLU 50	1.77	0.32	86.03	-0.1735	-0.0412	0.01
655	SLU 51	1.77	0.3	86.03	-0.1741	-0.0412	0.0099
655	SLU 52	1.81	0.45	91.95	-0.1863	-0.0416	0.0115
655	SLU 53	1.85	0.49	93.54	-0.19	-0.0426	0.0117
655	SLU 54	1.85	0.47	93.55	-0.1907	-0.0426	0.0117
655	SLU 55	1.83	0.44	92.95	-0.1891	-0.0423	0.0115
655	SLU 56	1.87	0.48	94.53	-0.1929	-0.0432	0.0117
655	SLU 57	1.87	0.46	94.54	-0.1935	-0.0432	0.0117
655	SLU 58	1.86	0.47	93.93	-0.1909	-0.0429	0.0117
655	SLU 59	1.86	0.45	93.94	-0.1915	-0.0429	0.0116
655	SLU 60	1.85	0.54	95.33	-0.1927	-0.0424	0.0124
655	SLU 61	1.85	0.53	95.34	-0.1933	-0.0424	0.0123
655	SLU 62	1.87	0.54	96.32	-0.1955	-0.043	0.0124
655	SLU 63	1.87	0.52	96.33	-0.1961	-0.043	0.0123
655	SLU 64	1.85	0.48	91.92	-0.179	-0.0424	0.0113
655	SLU 65	1.85	0.45	91.93	-0.1801	-0.0424	0.0112
655	SLU 66	1.88	0.49	93.51	-0.1838	-0.0433	0.0114
655	SLU 67	1.88	0.47	93.52	-0.1845	-0.0433	0.0113
655	SLU 68	1.87	0.44	92.92	-0.1829	-0.043	0.0112
655	SLU 69	1.91	0.48	94.51	-0.1867	-0.044	0.0114
655	SLU 70	1.91	0.46	94.52	-0.1873	-0.044	0.0113
655	SLU 71	1.89	0.47	93.9	-0.1846	-0.0436	0.0113
655	SLU 72	1.89	0.45	93.91	-0.1853	-0.0436	0.0112
655	SLU 73	1.93	0.6	99.83	-0.1975	-0.0441	0.0129
655	SLU 74	1.97	0.63	101.42	-0.2012	-0.0451	0.0131
655	SLU 75	1.97	0.62	101.42	-0.2019	-0.0451	0.013
655	SLU 76	1.96	0.59	100.83	-0.2003	-0.0448	0.0129
655	SLU 77	1.99	0.63	102.41	-0.204	-0.0457	0.0131
655	SLU 78	1.99	0.61	102.42	-0.2047	-0.0457	0.013
655	SLU 79	1.98	0.62	101.81	-0.202	-0.0454	0.013
655	SLU 80	1.98	0.6	101.81	-0.2027	-0.0454	0.0129
655	SLU 81	1.97	0.69	103.21	-0.2038	-0.0449	0.0138
655	SLU 82	1.97	0.67	103.21	-0.2045	-0.0449	0.0137
655	SLU 83	1.99	0.69	104.2	-0.2067	-0.0455	0.0137
655	SLU 84	1.99	0.67	104.21	-0.2073	-0.0455	0.0137
655	SLE RA 1	1.39	0.34	68.97	-0.1352	-0.032	0.0084
655	SLE RA 2	1.39	0.32	68.98	-0.136	-0.032	0.0083
655	SLE RA 3	1.42	0.34	70.04	-0.1385	-0.0327	0.0085
655	SLE RA 4	1.42	0.33	70.04	-0.1389	-0.0327	0.0084
655	SLE RA 5	1.41	0.31	69.64	-0.1379	-0.0325	0.0083
655	SLE RA 6	1.43	0.34	70.7	-0.1403	-0.0331	0.0085
655	SLE RA 7	1.43	0.32	70.71	-0.1408	-0.0331	0.0084
655	SLE RA 8	1.43	0.33	70.3	-0.139	-0.0329	0.0084
655	SLE RA 9	1.43	0.32	70.3	-0.1394	-0.0329	0.0084
655	SLE RA 10	1.45	0.42	74.25	-0.1476	-0.0332	0.0095
655	SLE RA 11	1.47	0.44	75.31	-0.15	-0.0338	0.0096
655	SLE RA 12	1.47	0.43	75.31	-0.1505	-0.0339	0.0095
655	SLE RA 13	1.47	0.41	74.91	-0.1494	-0.0336	0.0095
655	SLE RA 14	1.49	0.44	75.97	-0.1519	-0.0343	0.0096

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
655	SLE RA 15	1.49	0.42	75.97	-0.1524	-0.0343	0.0095
655	SLE RA 16	1.48	0.43	75.57	-0.1506	-0.0341	0.0095
655	SLE RA 17	1.48	0.42	75.57	-0.151	-0.0341	0.0095
655	SLE RA 18	1.47	0.48	76.5	-0.1518	-0.0337	0.01
655	SLE RA 19	1.47	0.47	76.51	-0.1522	-0.0337	0.01
655	SLE RA 20	1.49	0.47	77.16	-0.1537	-0.0341	0.01
655	SLE RA 21	1.49	0.46	77.17	-0.1541	-0.0341	0.01
655	SLE FR 1	1.39	0.34	68.97	-0.1352	-0.032	0.0084
655	SLE FR 2	1.39	0.33	68.98	-0.1354	-0.032	0.0084
655	SLE FR 3	1.4	0.34	69.24	-0.136	-0.0322	0.0084
655	SLE FR 4	1.42	0.38	71.23	-0.1403	-0.0325	0.0089
655	SLE FR 5	1.42	0.38	71.5	-0.1409	-0.0327	0.0089
655	SLE FR 6	1.43	0.41	72.74	-0.1435	-0.0329	0.0092
655	SLE QP 1	1.39	0.34	68.97	-0.1352	-0.032	0.0084
655	SLE QP 2	1.42	0.38	71.23	-0.1402	-0.0325	0.0089
655	SLD 1	6.09	1.17	54.03	-0.0867	0.0128	0.0178
655	SLD 2	6.09	2.09	54.04	-0.1033	0.0126	0.0299
655	SLD 3	6.01	-0.8	53.79	-0.073	0.0149	0.0005
655	SLD 4	6.01	0.11	53.81	-0.0896	0.0147	0.0126
655	SLD 5	2.94	3.45	66.42	-0.1419	-0.0221	0.0356
655	SLD 6	2.94	4.06	66.43	-0.1529	-0.0222	0.0436
655	SLD 7	2.67	-3.14	65.64	-0.0962	-0.0151	-0.022
655	SLD 8	2.68	-2.53	65.65	-0.1072	-0.0152	-0.0141
655	SLD 9	0.16	3.29	76.81	-0.1731	-0.0499	0.0319
655	SLD 10	0.16	3.9	76.82	-0.1842	-0.05	0.0399
655	SLD 11	-0.11	-3.3	76.03	-0.1274	-0.0429	-0.0258
655	SLD 12	-0.1	-2.69	76.04	-0.1385	-0.043	-0.0178
655	SLD 13	-3.18	0.65	88.65	-0.1908	-0.0798	0.0053
655	SLD 14	-3.17	1.56	88.67	-0.2074	-0.08	0.0173
655	SLD 15	-3.26	-1.33	88.42	-0.1771	-0.0777	-0.0121
655	SLD 16	-3.25	-0.41	88.44	-0.1936	-0.0779	0
655	SLV 1	12.33	2.17	30.98	-0.015	0.0735	0.0293
655	SLV 2	12.35	4.3	31.02	-0.0536	0.0731	0.0573
655	SLV 3	12.14	-2.31	30.43	0.0169	0.0784	-0.01
655	SLV 4	12.16	-0.18	30.47	-0.0218	0.078	0.018
655	SLV 5	4.97	7.34	59.98	-0.1442	-0.0081	0.0696
655	SLV 6	4.98	8.72	60	-0.1694	-0.0084	0.0879
655	SLV 7	4.35	-7.6	58.16	-0.0379	0.0083	-0.0612
655	SLV 8	4.36	-6.21	58.18	-0.0631	0.008	-0.043
655	SLV 9	-1.53	6.97	84.28	-0.2173	-0.0731	0.0608
655	SLV 10	-1.51	8.35	84.31	-0.2424	-0.0734	0.0791
655	SLV 11	-2.15	-7.96	82.46	-0.111	-0.0567	-0.0701
655	SLV 12	-2.14	-6.58	82.49	-0.1362	-0.057	-0.0518
655	SLV 13	-9.33	0.94	111.99	-0.2586	-0.1431	-0.0002
655	SLV 14	-9.31	3.07	112.03	-0.2973	-0.1435	0.0278
655	SLV 15	-9.52	-3.54	111.45	-0.2268	-0.1382	-0.0395
655	SLV 16	-9.5	-1.41	111.48	-0.2654	-0.1386	-0.0114
655	CRTFP Ux+	0	0	0	0	0	0
655	CRTFP Ux-	0	0	0	0	0	0
655	CRTFP Uy+	0	0	0	0	0	0
655	CRTFP Uy-	0	0	0	0	0	0
656	SLU 1	1.37	0.33	67.9	-0.1152	-0.0431	0.0066
656	SLU 2	1.37	0.3	67.91	-0.1162	-0.0432	0.0066
656	SLU 3	1.41	0.34	69.53	-0.1196	-0.0444	0.0067
656	SLU 4	1.41	0.32	69.54	-0.1201	-0.0444	0.0066
656	SLU 5	1.4	0.3	68.93	-0.1188	-0.044	0.0065
656	SLU 6	1.44	0.33	70.55	-0.1221	-0.0453	0.0067
656	SLU 7	1.44	0.31	70.56	-0.1227	-0.0453	0.0066
656	SLU 8	1.42	0.32	69.93	-0.1204	-0.0448	0.0066
656	SLU 9	1.42	0.3	69.94	-0.121	-0.0448	0.0065
656	SLU 10	1.46	0.46	75.89	-0.131	-0.0463	0.008
656	SLU 11	1.5	0.5	77.51	-0.1344	-0.0476	0.0081
656	SLU 12	1.5	0.48	77.52	-0.135	-0.0476	0.0081
656	SLU 13	1.49	0.45	76.91	-0.1336	-0.0471	0.008
656	SLU 14	1.52	0.49	78.53	-0.137	-0.0484	0.0081
656	SLU 15	1.52	0.47	78.54	-0.1375	-0.0484	0.0081
656	SLU 16	1.51	0.48	77.91	-0.1352	-0.048	0.008
656	SLU 17	1.51	0.46	77.92	-0.1358	-0.048	0.008
656	SLU 18	1.5	0.56	79.3	-0.1364	-0.0476	0.0087
656	SLU 19	1.5	0.54	79.31	-0.137	-0.0476	0.0087
656	SLU 20	1.52	0.55	80.32	-0.139	-0.0485	0.0087
656	SLU 21	1.52	0.53	80.32	-0.1395	-0.0485	0.0086
656	SLU 22	1.5	0.49	75.88	-0.1243	-0.047	0.0079
656	SLU 23	1.5	0.46	75.89	-0.1253	-0.0471	0.0078
656	SLU 24	1.54	0.49	77.51	-0.1287	-0.0483	0.0079
656	SLU 25	1.54	0.47	77.52	-0.1293	-0.0483	0.0079
656	SLU 26	1.52	0.45	76.91	-0.1279	-0.0479	0.0078
656	SLU 27	1.56	0.49	78.53	-0.1313	-0.0492	0.0079
656	SLU 28	1.56	0.47	78.54	-0.1318	-0.0492	0.0078
656	SLU 29	1.55	0.48	77.91	-0.1295	-0.0487	0.0078
656	SLU 30	1.55	0.46	77.92	-0.1301	-0.0487	0.0078
656	SLU 31	1.58	0.61	83.87	-0.1401	-0.0502	0.0092
656	SLU 32	1.62	0.65	85.49	-0.1435	-0.0515	0.0094
656	SLU 33	1.62	0.63	85.5	-0.1441	-0.0515	0.0093
656	SLU 34	1.61	0.61	84.89	-0.1427	-0.051	0.0092
656	SLU 35	1.65	0.64	86.51	-0.1461	-0.0523	0.0093
656	SLU 36	1.65	0.62	86.51	-0.1467	-0.0523	0.0093
656	SLU 37	1.63	0.63	85.89	-0.1443	-0.0519	0.0093
656	SLU 38	1.63	0.61	85.9	-0.1449	-0.0519	0.0092
656	SLU 39	1.62	0.71	87.28	-0.1455	-0.0515	0.0099

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLU 40	1.62	0.69	87.28	-0.1461	-0.0515	0.0099
656	SLU 41	1.65	0.71	88.29	-0.1481	-0.0524	0.0099
656	SLU 42	1.65	0.69	88.3	-0.1487	-0.0524	0.0099
656	SLU 43	1.74	0.38	85.54	-0.1467	-0.0548	0.0082
656	SLU 44	1.74	0.35	85.55	-0.1476	-0.0548	0.0081
656	SLU 45	1.78	0.39	87.17	-0.151	-0.056	0.0083
656	SLU 46	1.78	0.37	87.18	-0.1516	-0.056	0.0082
656	SLU 47	1.77	0.34	86.56	-0.1502	-0.0556	0.0081
656	SLU 48	1.81	0.38	88.18	-0.1536	-0.0569	0.0082
656	SLU 49	1.81	0.36	88.19	-0.1542	-0.0569	0.0082
656	SLU 50	1.79	0.37	87.57	-0.1518	-0.0564	0.0082
656	SLU 51	1.79	0.35	87.58	-0.1524	-0.0564	0.0081
656	SLU 52	1.83	0.51	93.53	-0.1624	-0.0579	0.0096
656	SLU 53	1.87	0.54	95.15	-0.1658	-0.0592	0.0097
656	SLU 54	1.87	0.52	95.15	-0.1664	-0.0592	0.0097
656	SLU 55	1.86	0.5	94.54	-0.165	-0.0588	0.0095
656	SLU 56	1.89	0.54	96.16	-0.1684	-0.06	0.0097
656	SLU 57	1.89	0.52	96.17	-0.169	-0.06	0.0096
656	SLU 58	1.88	0.52	95.55	-0.1666	-0.0596	0.0096
656	SLU 59	1.88	0.51	95.56	-0.1672	-0.0596	0.0095
656	SLU 60	1.87	0.6	96.93	-0.1678	-0.0592	0.0103
656	SLU 61	1.87	0.59	96.94	-0.1684	-0.0593	0.0102
656	SLU 62	1.89	0.6	97.95	-0.1704	-0.0601	0.0103
656	SLU 63	1.89	0.58	97.96	-0.171	-0.0601	0.0102
656	SLU 64	1.87	0.53	93.51	-0.1558	-0.0587	0.0094
656	SLU 65	1.87	0.5	93.53	-0.1567	-0.0587	0.0094
656	SLU 66	1.91	0.54	95.15	-0.1601	-0.0599	0.0095
656	SLU 67	1.91	0.52	95.15	-0.1607	-0.0599	0.0094
656	SLU 68	1.89	0.5	94.54	-0.1593	-0.0595	0.0093
656	SLU 69	1.93	0.53	96.16	-0.1627	-0.0608	0.0095
656	SLU 70	1.93	0.52	96.17	-0.1633	-0.0608	0.0094
656	SLU 71	1.92	0.52	95.55	-0.1609	-0.0603	0.0094
656	SLU 72	1.92	0.5	95.55	-0.1615	-0.0603	0.0093
656	SLU 73	1.95	0.66	101.5	-0.1716	-0.0618	0.0108
656	SLU 74	1.99	0.7	103.13	-0.1749	-0.0631	0.0109
656	SLU 75	1.99	0.68	103.13	-0.1755	-0.0631	0.0109
656	SLU 76	1.98	0.65	102.52	-0.1741	-0.0627	0.0108
656	SLU 77	2.02	0.69	104.14	-0.1775	-0.0639	0.0109
656	SLU 78	2.02	0.67	104.15	-0.1781	-0.0639	0.0109
656	SLU 79	2	0.68	103.53	-0.1757	-0.0635	0.0108
656	SLU 80	2	0.66	103.53	-0.1763	-0.0635	0.0108
656	SLU 81	1.99	0.76	104.91	-0.1769	-0.0631	0.0115
656	SLU 82	1.99	0.74	104.92	-0.1775	-0.0632	0.0115
656	SLU 83	2.02	0.75	105.93	-0.1795	-0.064	0.0115
656	SLU 84	2.02	0.73	105.94	-0.1801	-0.064	0.0114
656	SLE RA 1	1.41	0.38	70.18	-0.1178	-0.0443	0.007
656	SLE RA 2	1.41	0.36	70.19	-0.1185	-0.0443	0.0069
656	SLE RA 3	1.43	0.38	71.27	-0.1207	-0.0451	0.007
656	SLE RA 4	1.43	0.37	71.27	-0.1211	-0.0451	0.007
656	SLE RA 5	1.43	0.35	70.87	-0.1202	-0.0448	0.0069
656	SLE RA 6	1.45	0.38	71.95	-0.1224	-0.0457	0.007
656	SLE RA 7	1.45	0.36	71.95	-0.1228	-0.0457	0.007
656	SLE RA 8	1.44	0.37	71.54	-0.1213	-0.0454	0.007
656	SLE RA 9	1.44	0.36	71.54	-0.1216	-0.0454	0.0069
656	SLE RA 10	1.47	0.46	75.51	-0.1283	-0.0464	0.0079
656	SLE RA 11	1.49	0.49	76.59	-0.1306	-0.0472	0.008
656	SLE RA 12	1.49	0.47	76.59	-0.131	-0.0472	0.008
656	SLE RA 13	1.48	0.46	76.19	-0.1301	-0.0469	0.0079
656	SLE RA 14	1.51	0.48	77.27	-0.1323	-0.0478	0.008
656	SLE RA 15	1.51	0.47	77.27	-0.1327	-0.0478	0.0079
656	SLE RA 16	1.5	0.47	76.85	-0.1311	-0.0475	0.0079
656	SLE RA 17	1.5	0.46	76.86	-0.1315	-0.0475	0.0079
656	SLE RA 18	1.49	0.53	77.78	-0.1319	-0.0473	0.0084
656	SLE RA 19	1.49	0.51	77.78	-0.1323	-0.0473	0.0083
656	SLE RA 20	1.51	0.52	78.46	-0.1336	-0.0478	0.0084
656	SLE RA 21	1.51	0.51	78.46	-0.134	-0.0478	0.0083
656	SLE FR 1	1.41	0.38	70.18	-0.1178	-0.0443	0.007
656	SLE FR 2	1.41	0.37	70.18	-0.118	-0.0443	0.007
656	SLE FR 3	1.42	0.38	70.45	-0.1185	-0.0445	0.007
656	SLE FR 4	1.43	0.42	72.46	-0.1222	-0.0452	0.0074
656	SLE FR 5	1.44	0.42	72.73	-0.1227	-0.0454	0.0074
656	SLE FR 6	1.45	0.45	73.98	-0.1249	-0.0458	0.0077
656	SLE QP 1	1.41	0.38	70.18	-0.1178	-0.0443	0.007
656	SLE QP 2	1.43	0.42	72.46	-0.1221	-0.0452	0.0074
656	SLD 1	6.09	1.25	53.71	-0.0708	0.0043	0.0199
656	SLD 2	6.09	2.23	53.73	-0.0884	0.0041	0.032
656	SLD 3	6.01	-0.81	53.46	-0.0591	0.0066	0.0031
656	SLD 4	6.01	0.16	53.48	-0.0766	0.0064	0.0152
656	SLD 5	2.95	3.63	67.21	-0.1213	-0.0337	0.0344
656	SLD 6	2.96	4.28	67.22	-0.1329	-0.0338	0.0424
656	SLD 7	2.68	-3.26	66.38	-0.0822	-0.0262	-0.0215
656	SLD 8	2.69	-2.61	66.4	-0.0938	-0.0263	-0.0135
656	SLD 9	0.18	3.46	78.52	-0.1503	-0.064	0.0283
656	SLD 10	0.19	4.1	78.54	-0.1619	-0.0641	0.0364
656	SLD 11	-0.09	-3.43	77.7	-0.1112	-0.0565	-0.0276
656	SLD 12	-0.08	-2.78	77.71	-0.1228	-0.0566	-0.0196
656	SLD 13	-3.15	0.68	91.43	-0.1675	-0.0967	-0.0004
656	SLD 14	-3.14	1.66	91.46	-0.185	-0.0969	0.0117
656	SLD 15	-3.23	-1.39	91.19	-0.1557	-0.0944	-0.0171
656	SLD 16	-3.22	-0.41	91.21	-0.1733	-0.0946	-0.0051

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
656	SLV 1	12.31	2.3	28.59	-0.0021	0.0706	0.0361
656	SLV 2	12.33	4.57	28.64	-0.0429	0.0701	0.0642
656	SLV 3	12.13	-2.38	28.02	0.0251	0.0759	-0.002
656	SLV 4	12.14	-0.11	28.06	-0.0157	0.0754	0.0261
656	SLV 5	4.98	7.69	60.17	-0.1201	-0.0184	0.0688
656	SLV 6	4.99	9.17	60.2	-0.1467	-0.0187	0.0871
656	SLV 7	4.35	-7.92	58.24	-0.0295	-0.0007	-0.0581
656	SLV 8	4.37	-6.44	58.27	-0.0561	-0.001	-0.0398
656	SLV 9	-1.5	7.28	86.65	-0.188	-0.0893	0.0546
656	SLV 10	-1.49	8.77	86.68	-0.2146	-0.0896	0.0729
656	SLV 11	-2.12	-8.32	84.72	-0.0974	-0.0717	-0.0723
656	SLV 12	-2.11	-6.84	84.75	-0.124	-0.0719	-0.054
656	SLV 13	-9.28	0.95	116.85	-0.2284	-0.1658	-0.0113
656	SLV 14	-9.26	3.23	116.9	-0.2692	-0.1662	0.0168
656	SLV 15	-9.46	-3.73	116.28	-0.2012	-0.1605	-0.0494
656	SLV 16	-9.45	-1.46	116.33	-0.242	-0.1609	-0.0213
656	CRTFP Ux+	0	0	0	0	0	0
656	CRTFP Ux-	0	0	0	0	0	0
656	CRTFP Uy+	0	0	0	0	0	0
656	CRTFP Uy-	0	0	0	0	0	0
657	SLU 1	1.18	0.31	59.25	-0.0859	1.6133	-0.0046
657	SLU 2	1.18	0.28	59.26	-0.0866	1.6136	-0.0039
657	SLU 3	1.21	0.31	60.68	-0.0893	1.6521	-0.0048
657	SLU 4	1.21	0.3	60.69	-0.0897	1.6523	-0.0043
657	SLU 5	1.2	0.28	60.15	-0.0887	1.6377	-0.0038
657	SLU 6	1.23	0.31	61.57	-0.0913	1.6762	-0.0046
657	SLU 7	1.23	0.29	61.58	-0.0917	1.6764	-0.0042
657	SLU 8	1.22	0.3	61.03	-0.09	1.6616	-0.0044
657	SLU 9	1.22	0.28	61.04	-0.0904	1.6618	-0.004
657	SLU 10	1.25	0.42	66.17	-0.0974	1.8029	-0.0069
657	SLU 11	1.29	0.45	67.59	-0.1	1.8414	-0.0077
657	SLU 12	1.29	0.44	67.6	-0.1004	1.8416	-0.0073
657	SLU 13	1.28	0.42	67.07	-0.0994	1.8271	-0.0068
657	SLU 14	1.31	0.45	68.49	-0.102	1.8656	-0.0076
657	SLU 15	1.31	0.43	68.49	-0.1024	1.8658	-0.0072
657	SLU 16	1.3	0.44	67.95	-0.1007	1.851	-0.0074
657	SLU 17	1.3	0.42	67.95	-0.1011	1.8511	-0.007
657	SLU 18	1.29	0.51	69.13	-0.1012	1.8838	-0.0089
657	SLU 19	1.29	0.49	69.13	-0.1017	1.8839	-0.0085
657	SLU 20	1.31	0.5	70.02	-0.1033	1.9079	-0.0088
657	SLU 21	1.31	0.49	70.02	-0.1037	1.9081	-0.0083
657	SLU 22	1.29	0.44	66.18	-0.0922	1.8027	-0.0076
657	SLU 23	1.29	0.42	66.19	-0.0929	1.803	-0.0069
657	SLU 24	1.32	0.45	67.61	-0.0955	1.8415	-0.0077
657	SLU 25	1.32	0.43	67.62	-0.0959	1.8417	-0.0073
657	SLU 26	1.31	0.41	67.08	-0.0949	1.8271	-0.0068
657	SLU 27	1.34	0.44	68.51	-0.0975	1.8656	-0.0076
657	SLU 28	1.34	0.43	68.51	-0.098	1.8658	-0.0072
657	SLU 29	1.33	0.43	67.97	-0.0962	1.851	-0.0074
657	SLU 30	1.33	0.42	67.97	-0.0966	1.8512	-0.007
657	SLU 31	1.36	0.56	73.11	-0.1036	1.9923	-0.0099
657	SLU 32	1.39	0.59	74.53	-0.1062	2.0308	-0.0107
657	SLU 33	1.39	0.57	74.53	-0.1067	2.031	-0.0103
657	SLU 34	1.38	0.55	74	-0.1056	2.0165	-0.0098
657	SLU 35	1.41	0.58	75.42	-0.1082	2.055	-0.0106
657	SLU 36	1.41	0.57	75.43	-0.1087	2.0552	-0.0102
657	SLU 37	1.4	0.57	74.88	-0.1069	2.0403	-0.0104
657	SLU 38	1.4	0.56	74.89	-0.1074	2.0405	-0.0099
657	SLU 39	1.39	0.64	76.06	-0.1075	2.0732	-0.0119
657	SLU 40	1.39	0.63	76.07	-0.1079	2.0733	-0.0114
657	SLU 41	1.41	0.64	76.95	-0.1095	2.0973	-0.0118
657	SLU 42	1.41	0.62	76.96	-0.1099	2.0975	-0.0113
657	SLU 43	1.5	0.35	74.64	-0.1096	2.0323	-0.005
657	SLU 44	1.5	0.33	74.66	-0.1103	2.0326	-0.0043
657	SLU 45	1.53	0.36	76.08	-0.1129	2.0711	-0.0051
657	SLU 46	1.53	0.34	76.08	-0.1133	2.0713	-0.0047
657	SLU 47	1.52	0.32	75.55	-0.1123	2.0568	-0.0042
657	SLU 48	1.55	0.35	76.97	-0.1149	2.0953	-0.005
657	SLU 49	1.55	0.34	76.98	-0.1154	2.0955	-0.0046
657	SLU 50	1.54	0.34	76.43	-0.1136	2.0807	-0.0048
657	SLU 51	1.54	0.33	76.44	-0.114	2.0808	-0.0044
657	SLU 52	1.57	0.47	81.57	-0.121	2.222	-0.0073
657	SLU 53	1.6	0.5	82.99	-0.1236	2.2605	-0.0081
657	SLU 54	1.6	0.48	83	-0.1241	2.2607	-0.0077
657	SLU 55	1.59	0.46	82.46	-0.123	2.2461	-0.0072
657	SLU 56	1.63	0.49	83.88	-0.1256	2.2846	-0.008
657	SLU 57	1.63	0.48	83.89	-0.1261	2.2848	-0.0076
657	SLU 58	1.61	0.48	83.34	-0.1243	2.27	-0.0078
657	SLU 59	1.61	0.47	83.35	-0.1247	2.2702	-0.0073
657	SLU 60	1.6	0.55	84.52	-0.1249	2.3028	-0.0093
657	SLU 61	1.6	0.54	84.53	-0.1253	2.303	-0.0088
657	SLU 62	1.62	0.55	85.42	-0.1269	2.327	-0.0092
657	SLU 63	1.62	0.53	85.42	-0.1273	2.3272	-0.0087
657	SLU 64	1.6	0.49	81.58	-0.1158	2.2217	-0.008
657	SLU 65	1.6	0.46	81.59	-0.1165	2.222	-0.0073
657	SLU 66	1.64	0.5	83.01	-0.1191	2.2605	-0.0081
657	SLU 67	1.64	0.48	83.02	-0.1196	2.2607	-0.0077
657	SLU 68	1.62	0.46	82.48	-0.1185	2.2462	-0.0072
657	SLU 69	1.66	0.49	83.9	-0.1212	2.2847	-0.008
657	SLU 70	1.66	0.47	83.91	-0.1216	2.2849	-0.0076

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
657	SLU 71	1.65	0.48	83.36	-0.1198	2.2701	-0.0078
657	SLU 72	1.65	0.46	83.37	-0.1203	2.2702	-0.0073
657	SLU 73	1.68	0.6	88.5	-0.1272	2.4114	-0.0102
657	SLU 74	1.71	0.63	89.92	-0.1299	2.4499	-0.0111
657	SLU 75	1.71	0.62	89.93	-0.1303	2.4501	-0.0106
657	SLU 76	1.7	0.6	89.4	-0.1293	2.4355	-0.0101
657	SLU 77	1.73	0.63	90.82	-0.1319	2.474	-0.011
657	SLU 78	1.73	0.61	90.82	-0.1323	2.4742	-0.0105
657	SLU 79	1.72	0.62	90.28	-0.1306	2.4594	-0.0107
657	SLU 80	1.72	0.6	90.28	-0.131	2.4596	-0.0103
657	SLU 81	1.71	0.69	91.46	-0.1311	2.4922	-0.0122
657	SLU 82	1.71	0.67	91.46	-0.1315	2.4924	-0.0118
657	SLU 83	1.73	0.68	92.35	-0.1331	2.5164	-0.0121
657	SLU 84	1.73	0.67	92.36	-0.1336	2.5166	-0.0117
657	SLE RA 1	1.21	0.35	61.23	-0.0877	1.6674	-0.0055
657	SLE RA 2	1.21	0.33	61.24	-0.0882	1.6676	-0.005
657	SLE RA 3	1.23	0.35	62.18	-0.0899	1.6933	-0.0056
657	SLE RA 4	1.23	0.34	62.19	-0.0902	1.6934	-0.0053
657	SLE RA 5	1.22	0.33	61.83	-0.0895	1.6837	-0.0049
657	SLE RA 6	1.25	0.35	62.78	-0.0913	1.7094	-0.0055
657	SLE RA 7	1.25	0.34	62.78	-0.0916	1.7095	-0.0052
657	SLE RA 8	1.24	0.34	62.42	-0.0904	1.6996	-0.0053
657	SLE RA 9	1.24	0.33	62.42	-0.0907	1.6997	-0.0051
657	SLE RA 10	1.26	0.42	65.85	-0.0953	1.7938	-0.007
657	SLE RA 11	1.28	0.44	66.79	-0.0971	1.8195	-0.0076
657	SLE RA 12	1.28	0.43	66.8	-0.0974	1.8196	-0.0073
657	SLE RA 13	1.27	0.42	66.44	-0.0967	1.8099	-0.0069
657	SLE RA 14	1.3	0.44	67.39	-0.0984	1.8356	-0.0075
657	SLE RA 15	1.3	0.43	67.39	-0.0987	1.8357	-0.0072
657	SLE RA 16	1.29	0.43	67.03	-0.0975	1.8258	-0.0073
657	SLE RA 17	1.29	0.42	67.03	-0.0978	1.826	-0.007
657	SLE RA 18	1.28	0.48	67.81	-0.0979	1.8477	-0.0083
657	SLE RA 19	1.28	0.47	67.82	-0.0982	1.8478	-0.008
657	SLE RA 20	1.29	0.48	68.41	-0.0993	1.8638	-0.0083
657	SLE RA 21	1.29	0.47	68.41	-0.0995	1.8639	-0.008
657	SLE FR 1	1.21	0.35	61.23	-0.0877	1.6674	-0.0055
657	SLE FR 2	1.21	0.34	61.23	-0.0878	1.6674	-0.0054
657	SLE FR 3	1.22	0.35	61.47	-0.0882	1.6738	-0.0055
657	SLE FR 4	1.23	0.38	63.21	-0.0909	1.7215	-0.0062
657	SLE FR 5	1.24	0.39	63.44	-0.0913	1.7279	-0.0063
657	SLE FR 6	1.24	0.41	64.52	-0.0928	1.7576	-0.0069
657	SLE QP 1	1.21	0.35	61.23	-0.0877	1.6674	-0.0055
657	SLE QP 2	1.23	0.39	63.2	-0.0908	1.7215	-0.0063
657	SLD 1	5.19	1.13	45.86	-0.0491	1.2729	-0.0086
657	SLD 2	5.19	2.02	45.89	-0.0649	1.2734	-0.0237
657	SLD 3	5.12	-0.69	45.62	-0.0393	1.267	0.03
657	SLD 4	5.13	0.19	45.65	-0.055	1.2675	0.0149
657	SLD 5	2.52	3.22	58.36	-0.0903	1.5958	-0.0629
657	SLD 6	2.52	3.81	58.37	-0.1008	1.5962	-0.0729
657	SLD 7	2.29	-2.87	57.57	-0.0576	1.576	0.0659
657	SLD 8	2.3	-2.29	57.58	-0.068	1.5764	0.0559
657	SLD 9	0.17	3.06	68.83	-0.1135	1.8666	-0.0686
657	SLD 10	0.17	3.65	68.84	-0.124	1.8669	-0.0786
657	SLD 11	-0.06	-3.04	68.03	-0.0808	1.8468	0.0602
657	SLD 12	-0.06	-2.45	68.05	-0.0912	1.8472	0.0502
657	SLD 13	-2.66	0.59	80.76	-0.1265	2.1755	-0.0276
657	SLD 14	-2.66	1.47	80.78	-0.1423	2.176	-0.0427
657	SLD 15	-2.73	-1.24	80.52	-0.1167	2.1695	0.011
657	SLD 16	-2.73	-0.36	80.55	-0.1324	2.1701	-0.004
657	SLV 1	10.48	2.08	22.63	0.0069	0.672	-0.0104
657	SLV 2	10.5	4.13	22.68	-0.0298	0.6732	-0.0455
657	SLV 3	10.32	-2.07	22.07	0.0296	0.6581	0.0771
657	SLV 4	10.34	-0.02	22.13	-0.0071	0.6593	0.042
657	SLV 5	4.25	6.82	51.87	-0.0893	1.4275	-0.1341
657	SLV 6	4.26	8.16	51.9	-0.1132	1.4282	-0.157
657	SLV 7	3.71	-7	50.01	-0.0139	1.3812	0.1576
657	SLV 8	3.72	-5.66	50.05	-0.0378	1.382	0.1348
657	SLV 9	-1.26	6.43	76.36	-0.1437	2.061	-0.1474
657	SLV 10	-1.25	7.77	76.4	-0.1676	2.0618	-0.1703
657	SLV 11	-1.79	-7.38	74.51	-0.0683	2.0147	0.1443
657	SLV 12	-1.78	-6.04	74.54	-0.0922	2.0155	0.1215
657	SLV 13	-7.87	0.79	104.28	-0.1744	2.7837	-0.0547
657	SLV 14	-7.86	2.84	104.33	-0.2111	2.7849	-0.0898
657	SLV 15	-8.03	-3.35	103.72	-0.1518	2.7698	0.0328
657	SLV 16	-8.02	-1.3	103.78	-0.1885	2.771	-0.0023
657	CRTFP Ux+	0	0	0	0	0	0
657	CRTFP Ux-	0	0	0	0	0	0
657	CRTFP Uy+	0	0	0	0	0	0
657	CRTFP Uy-	0	0	0	0	0	0
659	SLU 1	1.99	0.54	101.34	0.1152	23.8667	-0.1339
659	SLU 2	1.99	0.49	101.36	0.1147	23.8713	-0.1225
659	SLU 3	2.05	0.55	103.79	0.1169	24.4405	-0.136
659	SLU 4	2.05	0.52	103.8	0.1166	24.4432	-0.1292
659	SLU 5	2.03	0.48	102.89	0.1158	24.2287	-0.1204
659	SLU 6	2.08	0.54	105.32	0.118	24.7979	-0.1338
659	SLU 7	2.09	0.51	105.33	0.1177	24.8007	-0.127
659	SLU 8	2.07	0.52	104.4	0.1174	24.5816	-0.1295
659	SLU 9	2.07	0.49	104.41	0.1171	24.5843	-0.1227
659	SLU 10	2.12	0.73	113.15	0.1277	26.6626	-0.1812
659	SLU 11	2.17	0.78	115.58	0.1299	27.2319	-0.1946

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
659	SLU 12	2.17	0.76	115.59	0.1296	27.2346	-0.1878
659	SLU 13	2.16	0.72	114.68	0.1287	27.02	-0.179
659	SLU 14	2.21	0.78	117.11	0.131	27.5893	-0.1925
659	SLU 15	2.21	0.75	117.12	0.1307	27.592	-0.1857
659	SLU 16	2.19	0.76	116.19	0.1304	27.3729	-0.1882
659	SLU 17	2.19	0.73	116.2	0.1301	27.3756	-0.1814
659	SLU 18	2.17	0.88	118.18	0.1338	27.8544	-0.2176
659	SLU 19	2.17	0.85	118.19	0.1335	27.8571	-0.2108
659	SLU 20	2.21	0.87	119.71	0.1349	28.2118	-0.2155
659	SLU 21	2.21	0.84	119.72	0.1345	28.2145	-0.2087
659	SLU 22	2.17	0.77	113.18	0.1321	26.661	-0.1914
659	SLU 23	2.17	0.73	113.19	0.1316	26.6655	-0.1801
659	SLU 24	2.23	0.78	115.63	0.1338	27.2348	-0.1935
659	SLU 25	2.23	0.75	115.64	0.1335	27.2375	-0.1867
659	SLU 26	2.21	0.72	114.73	0.1327	27.0229	-0.1779
659	SLU 27	2.26	0.77	117.16	0.1349	27.5922	-0.1913
659	SLU 28	2.26	0.74	117.17	0.1346	27.5949	-0.1846
659	SLU 29	2.24	0.75	116.24	0.1343	27.3758	-0.187
659	SLU 30	2.24	0.73	116.25	0.134	27.3785	-0.1803
659	SLU 31	2.3	0.96	124.99	0.1446	29.4569	-0.2387
659	SLU 32	2.35	1.02	127.42	0.1468	30.0261	-0.2521
659	SLU 33	2.35	0.99	127.43	0.1465	30.0289	-0.2454
659	SLU 34	2.33	0.96	126.52	0.1457	29.8143	-0.2365
659	SLU 35	2.39	1.01	128.95	0.1479	30.3835	-0.25
659	SLU 36	2.39	0.98	128.96	0.1476	30.3863	-0.2432
659	SLU 37	2.37	0.99	128.03	0.1473	30.1672	-0.2457
659	SLU 38	2.37	0.96	128.04	0.147	30.1699	-0.2389
659	SLU 39	2.35	1.11	130.02	0.1507	30.6486	-0.2751
659	SLU 40	2.35	1.08	130.03	0.1504	30.6513	-0.2684
659	SLU 41	2.39	1.1	131.55	0.1518	31.006	-0.273
659	SLU 42	2.39	1.08	131.56	0.1515	31.0088	-0.2662
659	SLU 43	2.53	0.62	127.68	0.144	30.0687	-0.1543
659	SLU 44	2.53	0.57	127.7	0.1434	30.0732	-0.143
659	SLU 45	2.58	0.63	130.13	0.1457	30.6425	-0.1564
659	SLU 46	2.59	0.6	130.14	0.1453	30.6452	-0.1496
659	SLU 47	2.57	0.56	129.23	0.1445	30.4307	-0.1408
659	SLU 48	2.62	0.62	131.66	0.1468	30.9999	-0.1543
659	SLU 49	2.62	0.59	131.67	0.1464	31.0027	-0.1475
659	SLU 50	2.6	0.6	130.74	0.1462	30.7835	-0.15
659	SLU 51	2.6	0.57	130.75	0.1458	30.7863	-0.1432
659	SLU 52	2.66	0.81	139.49	0.1564	32.8646	-0.2016
659	SLU 53	2.71	0.87	141.92	0.1587	33.4339	-0.2151
659	SLU 54	2.71	0.84	141.94	0.1583	33.4366	-0.2083
659	SLU 55	2.69	0.8	141.02	0.1575	33.222	-0.1994
659	SLU 56	2.75	0.86	143.45	0.1598	33.7913	-0.2129
659	SLU 57	2.75	0.83	143.47	0.1594	33.794	-0.2061
659	SLU 58	2.73	0.84	142.53	0.1592	33.5749	-0.2086
659	SLU 59	2.73	0.81	142.54	0.1588	33.5776	-0.2018
659	SLU 60	2.71	0.96	144.52	0.1626	34.0564	-0.2381
659	SLU 61	2.71	0.93	144.54	0.1622	34.0591	-0.2313
659	SLU 62	2.74	0.95	146.05	0.1637	34.4138	-0.2359
659	SLU 63	2.74	0.92	146.07	0.1633	34.4165	-0.2291
659	SLU 64	2.71	0.85	139.52	0.1609	32.863	-0.2118
659	SLU 65	2.71	0.81	139.54	0.1604	32.8675	-0.2005
659	SLU 66	2.76	0.86	141.97	0.1626	33.4368	-0.2139
659	SLU 67	2.76	0.83	141.98	0.1623	33.4395	-0.2072
659	SLU 68	2.75	0.8	141.07	0.1614	33.2249	-0.1983
659	SLU 69	2.8	0.85	143.5	0.1637	33.7942	-0.2118
659	SLU 70	2.8	0.82	143.51	0.1633	33.7969	-0.205
659	SLU 71	2.78	0.83	142.58	0.1631	33.5778	-0.2075
659	SLU 72	2.78	0.81	142.59	0.1628	33.5805	-0.2007
659	SLU 73	2.83	1.05	151.33	0.1733	35.6588	-0.2591
659	SLU 74	2.89	1.1	153.76	0.1756	36.2281	-0.2726
659	SLU 75	2.89	1.07	153.77	0.1752	36.2308	-0.2658
659	SLU 76	2.87	1.04	152.86	0.1744	36.0163	-0.257
659	SLU 77	2.92	1.09	155.29	0.1767	36.5855	-0.2704
659	SLU 78	2.93	1.06	155.31	0.1763	36.5883	-0.2636
659	SLU 79	2.91	1.07	154.37	0.1761	36.3692	-0.2661
659	SLU 80	2.91	1.05	154.38	0.1757	36.3719	-0.2593
659	SLU 81	2.89	1.19	156.36	0.1795	36.8506	-0.2956
659	SLU 82	2.89	1.17	156.37	0.1791	36.8533	-0.2888
659	SLU 83	2.92	1.18	157.89	0.1806	37.208	-0.2934
659	SLU 84	2.92	1.16	157.91	0.1802	37.2108	-0.2866
659	SLE RA 1	2.04	0.6	104.72	0.1201	24.6651	-0.1503
659	SLE RA 2	2.04	0.57	104.73	0.1197	24.6681	-0.1428
659	SLE RA 3	2.08	0.61	106.35	0.1212	25.0476	-0.1517
659	SLE RA 4	2.08	0.59	106.36	0.121	25.0494	-0.1472
659	SLE RA 5	2.07	0.57	105.75	0.1204	24.9064	-0.1413
659	SLE RA 6	2.1	0.6	107.38	0.1219	25.2859	-0.1503
659	SLE RA 7	2.11	0.59	107.38	0.1217	25.2877	-0.1457
659	SLE RA 8	2.09	0.59	106.76	0.1215	25.1416	-0.1474
659	SLE RA 9	2.09	0.57	106.77	0.1213	25.1434	-0.1429
659	SLE RA 10	2.13	0.73	112.59	0.1284	26.529	-0.1818
659	SLE RA 11	2.16	0.77	114.22	0.1298	26.9085	-0.1908
659	SLE RA 12	2.16	0.75	114.22	0.1296	26.9103	-0.1863
659	SLE RA 13	2.15	0.73	113.61	0.1291	26.7673	-0.1804
659	SLE RA 14	2.19	0.76	115.24	0.1306	27.1468	-0.1894
659	SLE RA 15	2.19	0.74	115.24	0.1303	27.1486	-0.1848
659	SLE RA 16	2.18	0.75	114.62	0.1302	27.0025	-0.1865
659	SLE RA 17	2.18	0.73	114.63	0.13	27.0044	-0.182

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
659	SLE RA 18	2.16	0.83	115.95	0.1324	27.3235	-0.2061
659	SLE RA 19	2.16	0.81	115.96	0.1322	27.3253	-0.2016
659	SLE RA 20	2.19	0.83	116.97	0.1332	27.5618	-0.2047
659	SLE RA 21	2.19	0.81	116.98	0.1329	27.5636	-0.2002
659	SLE FR 1	2.04	0.6	104.72	0.1201	24.6651	-0.1503
659	SLE FR 2	2.04	0.6	104.72	0.12	24.6657	-0.1488
659	SLE FR 3	2.05	0.6	105.13	0.1204	24.7604	-0.1497
659	SLE FR 4	2.08	0.67	108.09	0.1237	25.4632	-0.1655
659	SLE FR 5	2.09	0.67	108.5	0.1241	25.5579	-0.1665
659	SLE FR 6	2.1	0.72	110.33	0.1263	25.9943	-0.1782
659	SLE QP 1	2.04	0.6	104.72	0.1201	24.6651	-0.1503
659	SLE QP 2	2.08	0.67	108.09	0.1238	25.4626	-0.167
659	SLD 1	8.75	1.97	77.68	0.0984	18.7204	-0.482
659	SLD 2	8.76	3.5	77.73	0.084	18.7284	-0.8493
659	SLD 3	8.64	-1.17	77.25	0.1078	18.6306	0.2832
659	SLD 4	8.65	0.36	77.3	0.0934	18.6387	-0.0841
659	SLD 5	4.25	5.55	99.61	0.1046	23.5746	-1.3553
659	SLD 6	4.26	6.56	99.64	0.095	23.5799	-1.599
659	SLD 7	3.87	-4.92	98.18	0.1358	23.2754	1.1953
659	SLD 8	3.88	-3.91	98.21	0.1263	23.2808	0.9516
659	SLD 9	0.28	5.25	117.97	0.1213	27.6444	-1.2857
659	SLD 10	0.29	6.26	118	0.1118	27.6498	-1.5294
659	SLD 11	-0.1	-5.21	116.54	0.1525	27.3453	1.2649
659	SLD 12	-0.1	-4.2	116.57	0.143	27.3506	1.0212
659	SLD 13	-4.49	0.99	138.88	0.1542	32.2865	-0.25
659	SLD 14	-4.48	2.52	138.92	0.1398	32.2946	-0.6173
659	SLD 15	-4.6	-2.15	138.45	0.1635	32.1968	0.5152
659	SLD 16	-4.59	-0.62	138.49	0.1492	32.2049	0.1479
659	SLV 1	17.68	3.6	36.95	0.0645	9.6881	-0.8786
659	SLV 2	17.7	7.16	37.05	0.031	9.7069	-1.7337
659	SLV 3	17.41	-3.51	35.94	0.0859	9.4782	0.8558
659	SLV 4	17.43	0.04	36.04	0.0525	9.497	0.0007
659	SLV 5	7.16	11.72	88.25	0.0793	21.0453	-2.8607
659	SLV 6	7.18	14.04	88.32	0.0576	21.0575	-3.4178
659	SLV 7	6.27	-12	84.9	0.1508	20.3456	2.9206
659	SLV 8	6.28	-9.68	84.97	0.129	20.3579	2.3634
659	SLV 9	-2.12	11.03	131.21	0.1185	30.5673	-2.6975
659	SLV 10	-2.11	13.35	131.27	0.0967	30.5796	-3.2547
659	SLV 11	-3.02	-12.69	127.86	0.19	29.8677	3.0837
659	SLV 12	-3	-10.38	127.92	0.1682	29.8799	2.5266
659	SLV 13	-13.27	1.3	180.13	0.1951	41.4282	-0.3348
659	SLV 14	-13.25	4.86	180.23	0.1616	41.447	-1.1899
659	SLV 15	-13.54	-5.81	179.13	0.2165	41.2183	1.3996
659	SLV 16	-13.52	-2.26	179.23	0.1831	41.2371	0.5445
659	CRTFP Ux+	0	0	0	0	0.0001	0
659	CRTFP Ux-	0	0	0	0	-0.0001	0
659	CRTFP Uy+	0	0	0	0	0	0
659	CRTFP Uy-	0	0	0	0	0	0
661	SLU 1	0.65	-0.06	36.46	-0.7078	1.0123	0.0139
661	SLU 2	0.65	-0.08	36.47	-0.7081	1.0139	0.0147
661	SLU 3	0.67	-0.05	37.31	-0.7245	1.0366	0.0141
661	SLU 4	0.67	-0.07	37.32	-0.7246	1.0376	0.0145
661	SLU 5	0.66	-0.08	36.99	-0.7183	1.0285	0.015
661	SLU 6	0.68	-0.06	37.84	-0.7347	1.0513	0.0144
661	SLU 7	0.68	-0.07	37.84	-0.7348	1.0522	0.0149
661	SLU 8	0.68	-0.07	37.51	-0.7283	1.0415	0.0146
661	SLU 9	0.68	-0.08	37.52	-0.7284	1.0425	0.015
661	SLU 10	0.7	-0.02	40.98	-0.7959	1.1409	0.0139
661	SLU 11	0.71	0	41.82	-0.8123	1.1637	0.0133
661	SLU 12	0.71	-0.01	41.83	-0.8124	1.1646	0.0137
661	SLU 13	0.71	-0.03	41.5	-0.8061	1.1556	0.0142
661	SLU 14	0.73	-0.01	42.35	-0.8225	1.1783	0.0136
661	SLU 15	0.73	-0.02	42.35	-0.8226	1.1792	0.0141
661	SLU 16	0.72	-0.01	42.02	-0.8161	1.1686	0.0138
661	SLU 17	0.72	-0.03	42.03	-0.8162	1.1695	0.0142
661	SLU 18	0.71	0.02	42.9	-0.8332	1.1938	0.0127
661	SLU 19	0.71	0.01	42.91	-0.8334	1.1947	0.0132
661	SLU 20	0.73	0.01	43.43	-0.8435	1.2084	0.0131
661	SLU 21	0.73	0	43.43	-0.8436	1.2093	0.0135
661	SLU 22	0.72	0.01	40.86	-0.7931	1.1312	0.0125
661	SLU 23	0.72	0	40.87	-0.7933	1.1328	0.0133
661	SLU 24	0.73	0.02	41.72	-0.8097	1.1555	0.0127
661	SLU 25	0.73	0.01	41.72	-0.8099	1.1565	0.0132
661	SLU 26	0.73	-0.01	41.4	-0.8036	1.1474	0.0136
661	SLU 27	0.74	0.01	42.24	-0.82	1.1701	0.013
661	SLU 28	0.74	0	42.25	-0.8201	1.1711	0.0135
661	SLU 29	0.74	0.01	41.91	-0.8135	1.1604	0.0132
661	SLU 30	0.74	-0.01	41.92	-0.8137	1.1614	0.0137
661	SLU 31	0.76	0.05	45.38	-0.8811	1.2598	0.0125
661	SLU 32	0.78	0.07	46.23	-0.8975	1.2825	0.0119
661	SLU 33	0.78	0.06	46.23	-0.8977	1.2835	0.0123
661	SLU 34	0.77	0.04	45.91	-0.8913	1.2744	0.0128
661	SLU 35	0.79	0.06	46.75	-0.9078	1.2971	0.0122
661	SLU 36	0.79	0.05	46.76	-0.9079	1.2981	0.0127
661	SLU 37	0.78	0.06	46.42	-0.9013	1.2874	0.0124
661	SLU 38	0.78	0.04	46.43	-0.9015	1.2884	0.0129
661	SLU 39	0.78	0.09	47.31	-0.9185	1.3126	0.0113
661	SLU 40	0.78	0.08	47.31	-0.9187	1.3136	0.0118
661	SLU 41	0.79	0.08	47.83	-0.9287	1.3273	0.0117
661	SLU 42	0.79	0.07	47.84	-0.9289	1.3282	0.0122

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
661	SLU 43	0.83	-0.1	45.89	-0.8909	1.2752	0.0185
661	SLU 44	0.83	-0.12	45.9	-0.8912	1.2769	0.0193
661	SLU 45	0.85	-0.1	46.74	-0.9076	1.2996	0.0187
661	SLU 46	0.85	-0.11	46.75	-0.9077	1.3005	0.0192
661	SLU 47	0.84	-0.12	46.42	-0.9014	1.2915	0.0197
661	SLU 48	0.86	-0.1	47.27	-0.9178	1.3142	0.019
661	SLU 49	0.86	-0.11	47.27	-0.9179	1.3152	0.0195
661	SLU 50	0.85	-0.11	46.94	-0.9114	1.3045	0.0192
661	SLU 51	0.85	-0.12	46.94	-0.9115	1.3055	0.0197
661	SLU 52	0.87	-0.07	50.41	-0.979	1.4039	0.0185
661	SLU 53	0.89	-0.04	51.25	-0.9954	1.4266	0.0179
661	SLU 54	0.89	-0.06	51.26	-0.9955	1.4276	0.0184
661	SLU 55	0.88	-0.07	50.93	-0.9892	1.4185	0.0188
661	SLU 56	0.9	-0.05	51.78	-1.0056	1.4412	0.0182
661	SLU 57	0.9	-0.06	51.78	-1.0057	1.4422	0.0187
661	SLU 58	0.89	-0.06	51.45	-0.9992	1.4315	0.0184
661	SLU 59	0.89	-0.07	51.46	-0.9993	1.4325	0.0189
661	SLU 60	0.89	-0.02	52.33	-1.0163	1.4567	0.0174
661	SLU 61	0.89	-0.04	52.34	-1.0165	1.4577	0.0178
661	SLU 62	0.9	-0.03	52.86	-1.0266	1.4713	0.0177
661	SLU 63	0.9	-0.04	52.86	-1.0267	1.4723	0.0182
661	SLU 64	0.89	-0.03	50.29	-0.9762	1.3941	0.0171
661	SLU 65	0.89	-0.05	50.3	-0.9764	1.3957	0.0179
661	SLU 66	0.91	-0.02	51.14	-0.9928	1.4185	0.0173
661	SLU 67	0.91	-0.04	51.15	-0.993	1.4194	0.0178
661	SLU 68	0.9	-0.05	50.82	-0.9867	1.4104	0.0183
661	SLU 69	0.92	-0.03	51.67	-1.0031	1.4331	0.0177
661	SLU 70	0.92	-0.04	51.67	-1.0032	1.434	0.0181
661	SLU 71	0.91	-0.04	51.34	-0.9967	1.4234	0.0178
661	SLU 72	0.91	-0.05	51.35	-0.9968	1.4243	0.0183
661	SLU 73	0.93	0.01	54.81	-1.0642	1.5228	0.0171
661	SLU 74	0.95	0.03	55.65	-1.0806	1.5455	0.0165
661	SLU 75	0.95	0.02	55.66	-1.0808	1.5464	0.017
661	SLU 76	0.94	0	55.33	-1.0745	1.5374	0.0175
661	SLU 77	0.96	0.02	56.18	-1.0909	1.5601	0.0169
661	SLU 78	0.96	0.01	56.18	-1.091	1.5611	0.0173
661	SLU 79	0.96	0.01	55.85	-1.0844	1.5504	0.017
661	SLU 80	0.96	0	55.86	-1.0846	1.5513	0.0175
661	SLU 81	0.95	0.05	56.73	-1.1016	1.5756	0.016
661	SLU 82	0.95	0.03	56.74	-1.1018	1.5765	0.0165
661	SLU 83	0.96	0.04	57.26	-1.1118	1.5902	0.0163
661	SLU 84	0.96	0.03	57.26	-1.112	1.5912	0.0168
661	SLE RA 1	0.67	-0.04	37.72	-0.7322	1.0463	0.0135
661	SLE RA 2	0.67	-0.05	37.72	-0.7323	1.0474	0.014
661	SLE RA 3	0.68	-0.03	38.29	-0.7433	1.0625	0.0136
661	SLE RA 4	0.68	-0.04	38.29	-0.7434	1.0631	0.0139
661	SLE RA 5	0.68	-0.05	38.07	-0.7392	1.0571	0.0142
661	SLE RA 6	0.69	-0.04	38.64	-0.7501	1.0722	0.0138
661	SLE RA 7	0.69	-0.05	38.64	-0.7502	1.0729	0.0142
661	SLE RA 8	0.69	-0.04	38.42	-0.7458	1.0658	0.0139
661	SLE RA 9	0.69	-0.05	38.42	-0.7459	1.0664	0.0143
661	SLE RA 10	0.7	-0.01	40.73	-0.7909	1.132	0.0135
661	SLE RA 11	0.71	0	41.29	-0.8018	1.1472	0.0131
661	SLE RA 12	0.71	-0.01	41.3	-0.8019	1.1478	0.0134
661	SLE RA 13	0.71	-0.02	41.08	-0.7977	1.1418	0.0137
661	SLE RA 14	0.72	0	41.64	-0.8086	1.1569	0.0133
661	SLE RA 15	0.72	-0.01	41.65	-0.8087	1.1576	0.0136
661	SLE RA 16	0.71	-0.01	41.43	-0.8043	1.1504	0.0134
661	SLE RA 17	0.71	-0.02	41.43	-0.8044	1.1511	0.0137
661	SLE RA 18	0.71	0.01	42.01	-0.8158	1.1672	0.0127
661	SLE RA 19	0.71	0	42.02	-0.8159	1.1679	0.013
661	SLE RA 20	0.72	0.01	42.36	-0.8226	1.177	0.0129
661	SLE RA 21	0.72	0	42.37	-0.8227	1.1776	0.0133
661	SLE FR 1	0.67	-0.04	37.72	-0.7322	1.0463	0.0135
661	SLE FR 2	0.67	-0.04	37.72	-0.7322	1.0465	0.0136
661	SLE FR 3	0.67	-0.04	37.86	-0.7349	1.0502	0.0136
661	SLE FR 4	0.68	-0.02	39.01	-0.7573	1.0828	0.0134
661	SLE FR 5	0.69	-0.02	39.15	-0.76	1.0865	0.0133
661	SLE FR 6	0.69	-0.01	39.87	-0.774	1.1068	0.0131
661	SLE QP 1	0.67	-0.04	37.72	-0.7322	1.0463	0.0135
661	SLE QP 2	0.68	-0.02	39.01	-0.7573	1.0826	0.0133
661	SLD 1	3.79	0.51	35.64	-0.6922	1.0565	0.0534
661	SLD 2	3.78	0.81	35.61	-0.6917	1.0545	0.0469
661	SLD 3	3.74	-0.46	35.77	-0.6965	1.0829	0.0862
661	SLD 4	3.73	-0.16	35.74	-0.6961	1.0809	0.0796
661	SLD 5	1.69	1.55	37.8	-0.7313	1.035	-0.0232
661	SLD 6	1.69	1.75	37.78	-0.731	1.0337	-0.0275
661	SLD 7	1.53	-1.68	38.25	-0.7457	1.1231	0.086
661	SLD 8	1.52	-1.48	38.23	-0.7454	1.1218	0.0816
661	SLD 9	-0.16	1.43	39.79	-0.7692	1.0434	-0.0551
661	SLD 10	-0.16	1.63	39.77	-0.7688	1.042	-0.0595
661	SLD 11	-0.32	-1.79	40.24	-0.7836	1.1314	0.054
661	SLD 12	-0.32	-1.6	40.22	-0.7833	1.1301	0.0497
661	SLD 13	-2.37	0.11	42.27	-0.8185	1.0842	-0.0531
661	SLD 14	-2.37	0.41	42.24	-0.818	1.0822	-0.0597
661	SLD 15	-2.42	-0.85	42.41	-0.8228	1.1106	-0.0204
661	SLD 16	-2.42	-0.55	42.37	-0.8223	1.1086	-0.0269
661	SLV 1	7.94	1.19	31.13	-0.6052	1.0226	0.1084
661	SLV 2	7.93	1.89	31.06	-0.6041	1.018	0.0931
661	SLV 3	7.83	-1	31.44	-0.6151	1.0823	0.1826

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
661	SLV 4	7.82	-0.31	31.37	-0.614	1.0777	0.1673
661	SLV 5	3.03	3.55	36.18	-0.6969	0.9749	-0.0681
661	SLV 6	3.03	4	36.14	-0.6961	0.9719	-0.078
661	SLV 7	2.66	-3.77	37.22	-0.7298	1.1738	0.1793
661	SLV 8	2.65	-3.31	37.17	-0.7291	1.1708	0.1693
661	SLV 9	-1.28	3.27	40.84	-0.7855	0.9943	-0.1428
661	SLV 10	-1.29	3.72	40.79	-0.7847	0.9913	-0.1528
661	SLV 11	-1.66	-4.04	41.88	-0.8184	1.1933	0.1045
661	SLV 12	-1.67	-3.59	41.83	-0.8177	1.1903	0.0946
661	SLV 13	-6.45	0.26	46.65	-0.9005	1.0874	-0.1408
661	SLV 14	-6.46	0.96	46.57	-0.8994	1.0828	-0.156
661	SLV 15	-6.56	-1.93	46.96	-0.9104	1.1471	-0.0666
661	SLV 16	-6.58	-1.23	46.88	-0.9093	1.1425	-0.0818
661	CRTFP Ux+	0	0	0	0	0	0
661	CRTFP Ux-	0	0	0	0	0	0
663	SLU 1	-1.51	-0.13	109.56	-5.5578	-20.5713	-0.0879
663	SLU 2	-1.52	-0.39	109.59	-5.5578	-20.5783	-0.1372
663	SLU 3	-1.55	-0.12	112.22	-5.6924	-21.0675	-0.0869
663	SLU 4	-1.55	-0.27	112.24	-5.6924	-21.0717	-0.1165
663	SLU 5	-1.54	-0.38	111.27	-5.6423	-20.8903	-0.1358
663	SLU 6	-1.57	-0.11	113.9	-5.7768	-21.3796	-0.0854
663	SLU 7	-1.58	-0.26	113.92	-5.7769	-21.3838	-0.115
663	SLU 8	-1.56	-0.11	112.91	-5.7266	-21.1954	-0.085
663	SLU 9	-1.57	-0.26	112.93	-5.7267	-21.1996	-0.1145
663	SLU 10	-1.55	-0.24	122.39	-6.2062	-22.9946	-0.1091
663	SLU 11	-1.58	0.03	125.02	-6.3407	-23.4839	-0.0587
663	SLU 12	-1.59	-0.13	125.04	-6.3408	-23.4881	-0.0883
663	SLU 13	-1.58	-0.23	124.07	-6.2906	-23.3067	-0.1076
663	SLU 14	-1.61	0.04	126.69	-6.4252	-23.7959	-0.0572
663	SLU 15	-1.62	-0.11	126.72	-6.4252	-23.8001	-0.0868
663	SLU 16	-1.6	0.04	125.71	-6.375	-23.6117	-0.0568
663	SLU 17	-1.61	-0.11	125.73	-6.375	-23.6159	-0.0864
663	SLU 18	-1.56	0.08	127.84	-6.484	-24.0232	-0.0477
663	SLU 19	-1.57	-0.08	127.86	-6.484	-24.0274	-0.0773
663	SLU 20	-1.59	0.09	129.52	-6.5684	-24.3352	-0.0462
663	SLU 21	-1.59	-0.06	129.54	-6.5684	-24.3394	-0.0758
663	SLU 22	-1.62	0.04	122.5	-6.2067	-23.007	-0.0575
663	SLU 23	-1.63	-0.21	122.53	-6.2068	-23.014	-0.1068
663	SLU 24	-1.66	0.06	125.16	-6.3414	-23.5032	-0.0564
663	SLU 25	-1.66	-0.1	125.18	-6.3414	-23.5074	-0.086
663	SLU 26	-1.65	-0.2	124.21	-6.2912	-23.326	-0.1053
663	SLU 27	-1.69	0.07	126.83	-6.4258	-23.8152	-0.055
663	SLU 28	-1.69	-0.08	126.85	-6.4258	-23.8194	-0.0846
663	SLU 29	-1.67	0.07	125.85	-6.3756	-23.631	-0.0545
663	SLU 30	-1.68	-0.08	125.87	-6.3756	-23.6352	-0.0841
663	SLU 31	-1.66	-0.06	135.33	-6.8551	-25.4303	-0.0786
663	SLU 32	-1.7	0.21	137.96	-6.9897	-25.9195	-0.0283
663	SLU 33	-1.7	0.05	137.98	-6.9897	-25.9237	-0.0579
663	SLU 34	-1.69	-0.05	137.01	-6.9395	-25.7423	-0.0771
663	SLU 35	-1.72	0.22	139.63	-7.0741	-26.2315	-0.0268
663	SLU 36	-1.73	0.07	139.65	-7.0741	-26.2357	-0.0564
663	SLU 37	-1.71	0.22	138.65	-7.0239	-26.0473	-0.0263
663	SLU 38	-1.72	0.07	138.67	-7.024	-26.0515	-0.0559
663	SLU 39	-1.67	0.26	140.78	-7.1329	-26.4588	-0.0172
663	SLU 40	-1.68	0.1	140.8	-7.133	-26.463	-0.0468
663	SLU 41	-1.7	0.27	142.46	-7.2174	-26.7709	-0.0157
663	SLU 42	-1.7	0.12	142.48	-7.2174	-26.7751	-0.0453
663	SLU 43	-1.92	-0.23	137.99	-7.0026	-25.9076	-0.1247
663	SLU 44	-1.93	-0.49	138.02	-7.0027	-25.9146	-0.1741
663	SLU 45	-1.96	-0.22	140.65	-7.1372	-26.4039	-0.1237
663	SLU 46	-1.97	-0.37	140.67	-7.1373	-26.4081	-0.1533
663	SLU 47	-1.96	-0.48	139.7	-7.0871	-26.2267	-0.1726
663	SLU 48	-1.99	-0.21	142.33	-7.2217	-26.7159	-0.1222
663	SLU 49	-1.99	-0.36	142.35	-7.2217	-26.7201	-0.1518
663	SLU 50	-1.98	-0.21	141.34	-7.1715	-26.5317	-0.1218
663	SLU 51	-1.98	-0.36	141.36	-7.1715	-26.5359	-0.1514
663	SLU 52	-1.97	-0.34	150.82	-7.651	-28.331	-0.1459
663	SLU 53	-2	-0.07	153.45	-7.7856	-28.8202	-0.0955
663	SLU 54	-2	-0.23	153.47	-7.7856	-28.8244	-0.1251
663	SLU 55	-1.99	-0.33	152.5	-7.7354	-28.643	-0.1444
663	SLU 56	-2.03	-0.06	155.13	-7.87	-29.1322	-0.0941
663	SLU 57	-2.03	-0.21	155.15	-7.87	-29.1364	-0.1236
663	SLU 58	-2.01	-0.06	154.14	-7.8198	-28.948	-0.0936
663	SLU 59	-2.02	-0.21	154.16	-7.8198	-28.9522	-0.1232
663	SLU 60	-1.98	-0.02	156.28	-7.9288	-29.3595	-0.0845
663	SLU 61	-1.98	-0.18	156.3	-7.9288	-29.3637	-0.1141
663	SLU 62	-2	-0.01	157.95	-8.0132	-29.6716	-0.083
663	SLU 63	-2.01	-0.16	157.97	-8.0133	-29.6758	-0.1126
663	SLU 64	-2.03	-0.06	150.93	-7.6516	-28.3433	-0.0943
663	SLU 65	-2.04	-0.31	150.96	-7.6516	-28.3503	-0.1436
663	SLU 66	-2.07	-0.04	153.59	-7.7862	-28.8395	-0.0933
663	SLU 67	-2.08	-0.2	153.61	-7.7862	-28.8437	-0.1229
663	SLU 68	-2.07	-0.3	152.64	-7.7361	-28.6623	-0.1421
663	SLU 69	-2.1	-0.03	155.27	-7.8706	-29.1515	-0.0918
663	SLU 70	-2.1	-0.18	155.29	-7.8707	-29.1557	-0.1214
663	SLU 71	-2.09	-0.03	154.28	-7.8204	-28.9673	-0.0913
663	SLU 72	-2.09	-0.18	154.3	-7.8205	-28.9715	-0.1209
663	SLU 73	-2.08	-0.16	163.76	-8.3	-30.7666	-0.1154
663	SLU 74	-2.11	0.1	166.39	-8.4345	-31.2558	-0.0651
663	SLU 75	-2.11	-0.05	166.41	-8.4346	-31.26	-0.0947

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
663	SLU 76	-2.11	-0.15	165.44	-8.3844	-31.0786	-0.114
663	SLU 77	-2.14	0.12	168.07	-8.519	-31.5679	-0.0636
663	SLU 78	-2.14	-0.04	168.09	-8.519	-31.5721	-0.0932
663	SLU 79	-2.13	0.12	167.08	-8.4688	-31.3837	-0.0631
663	SLU 80	-2.13	-0.03	167.1	-8.4688	-31.3879	-0.0927
663	SLU 81	-2.09	0.15	169.21	-8.5778	-31.7952	-0.054
663	SLU 82	-2.09	0	169.23	-8.5778	-31.7994	-0.0836
663	SLU 83	-2.11	0.17	170.89	-8.6622	-32.1072	-0.0526
663	SLU 84	-2.12	0.01	170.91	-8.6622	-32.1114	-0.0822
663	SLE RA 1	-1.54	-0.08	113.26	-5.7432	-21.2672	-0.0792
663	SLE RA 2	-1.55	-0.25	113.28	-5.7432	-21.2719	-0.1121
663	SLE RA 3	-1.57	-0.07	115.03	-5.8329	-21.598	-0.0785
663	SLE RA 4	-1.57	-0.18	115.04	-5.833	-21.6008	-0.0983
663	SLE RA 5	-1.56	-0.24	114.4	-5.7995	-21.4799	-0.1111
663	SLE RA 6	-1.58	-0.06	116.15	-5.8892	-21.8061	-0.0775
663	SLE RA 7	-1.59	-0.17	116.16	-5.8893	-21.8089	-0.0973
663	SLE RA 8	-1.58	-0.06	115.49	-5.8558	-21.6833	-0.0772
663	SLE RA 9	-1.58	-0.17	115.5	-5.8558	-21.6861	-0.097
663	SLE RA 10	-1.57	-0.15	121.81	-6.1755	-22.8828	-0.0933
663	SLE RA 11	-1.59	0.02	123.56	-6.2652	-23.2089	-0.0598
663	SLE RA 12	-1.59	-0.08	123.58	-6.2652	-23.2117	-0.0795
663	SLE RA 13	-1.59	-0.15	122.93	-6.2317	-23.0908	-0.0923
663	SLE RA 14	-1.61	0.03	124.68	-6.3215	-23.4169	-0.0588
663	SLE RA 15	-1.61	-0.07	124.69	-6.3215	-23.4197	-0.0785
663	SLE RA 16	-1.6	0.03	124.02	-6.288	-23.2941	-0.0585
663	SLE RA 17	-1.6	-0.07	124.04	-6.288	-23.2969	-0.0782
663	SLE RA 18	-1.58	0.06	125.45	-6.3607	-23.5685	-0.0524
663	SLE RA 19	-1.58	-0.04	125.46	-6.3607	-23.5713	-0.0721
663	SLE RA 20	-1.59	0.07	126.56	-6.4169	-23.7765	-0.0514
663	SLE RA 21	-1.6	-0.03	126.58	-6.417	-23.7793	-0.0711
663	SLE FR 1	-1.54	-0.08	113.26	-5.7432	-21.2672	-0.0792
663	SLE FR 2	-1.54	-0.12	113.26	-5.7432	-21.2682	-0.0858
663	SLE FR 3	-1.55	-0.08	113.7	-5.7657	-21.3504	-0.0788
663	SLE FR 4	-1.55	-0.07	116.92	-5.9284	-21.9585	-0.0777
663	SLE FR 5	-1.56	-0.04	117.36	-5.951	-22.0408	-0.0708
663	SLE FR 6	-1.56	-0.01	119.35	-6.0519	-22.4178	-0.0658
663	SLE QP 1	-1.54	-0.08	113.26	-5.7432	-21.2672	-0.0792
663	SLE QP 2	-1.55	-0.04	116.91	-5.9284	-21.9576	-0.0712
663	SLD 1	6.4	1.58	150.76	-7.7935	-28.0474	0.6719
663	SLD 2	6.35	-0.08	150.93	-7.7841	-28.0855	0.3573
663	SLD 3	6.22	-2.17	151.27	-7.7581	-28.1559	-0.0568
663	SLD 4	6.17	-3.83	151.45	-7.7488	-28.1941	-0.3714
663	SLD 5	1.12	6.43	126.25	-6.5432	-23.613	1.3141
663	SLD 6	1.09	5.33	126.37	-6.537	-23.6383	1.1054
663	SLD 7	0.52	-6.06	127.97	-6.4255	-23.9748	-1.1149
663	SLD 8	0.48	-7.16	128.09	-6.4193	-24.0001	-1.3236
663	SLD 9	-3.58	7.08	105.74	-5.4376	-19.9151	1.1813
663	SLD 10	-3.62	5.98	105.86	-5.4314	-19.9404	0.9725
663	SLD 11	-4.19	-5.41	107.46	-5.3198	-20.2769	-1.2477
663	SLD 12	-4.22	-6.51	107.57	-5.3136	-20.3022	-1.4565
663	SLD 13	-9.27	3.75	82.38	-4.1081	-15.7211	0.229
663	SLD 14	-9.32	2.09	82.55	-4.0987	-15.7593	-0.0856
663	SLD 15	-9.45	0	82.89	-4.0727	-15.8297	-0.4997
663	SLD 16	-9.5	-1.66	83.07	-4.0634	-15.8678	-0.8143
663	SLV 1	17.04	3.59	196.09	-10.2918	-36.2056	1.6357
663	SLV 2	16.92	-0.28	196.5	-10.2701	-36.2944	0.9033
663	SLV 3	16.63	-4.89	197.3	-10.2092	-36.4591	-0.0122
663	SLV 4	16.51	-8.75	197.71	-10.1875	-36.5479	-0.7446
663	SLV 5	4.67	14.58	138.77	-7.3665	-25.8319	3.069
663	SLV 6	4.6	12.06	139.03	-7.3524	-25.8898	2.5918
663	SLV 7	3.3	-13.66	142.78	-7.0912	-26.6769	-2.4241
663	SLV 8	3.22	-16.18	143.05	-7.0771	-26.7347	-2.9013
663	SLV 9	-6.32	16.1	90.77	-4.7798	-17.1804	2.759
663	SLV 10	-6.4	13.58	91.04	-4.7656	-17.2383	2.2818
663	SLV 11	-7.7	-12.14	94.79	-4.5045	-18.0254	-2.7342
663	SLV 12	-7.77	-14.66	95.06	-4.4903	-18.0832	-3.2114
663	SLV 13	-19.61	8.67	36.12	-1.6694	-7.3673	0.6023
663	SLV 14	-19.73	4.8	36.53	-1.6477	-7.4561	-0.1301
663	SLV 15	-20.02	0.2	37.32	-1.5868	-7.6208	-1.0457
663	SLV 16	-20.14	-3.67	37.73	-1.5651	-7.7096	-1.7781
663	CRTFP Ux+	0	0	0	0	0.0001	0
663	CRTFP Ux-	0	0	0	0	-0.0001	0
663	CRTFP Uy+	0	0	0	0	0	0
663	CRTFP Uy-	0	0	0	0	0	0
678	SLU 1	-2.11	-2.75	200.5	-14.8477	-12.1045	-0.3553
678	SLU 2	-2.12	-3.03	200.55	-14.8482	-12.1122	-0.3705
678	SLU 3	-2.16	-2.78	205.33	-15.2031	-12.3984	-0.3611
678	SLU 4	-2.17	-2.95	205.37	-15.2034	-12.403	-0.3702
678	SLU 5	-2.16	-3.05	203.56	-15.0677	-12.2932	-0.3758
678	SLU 6	-2.2	-2.8	208.34	-15.4227	-12.5794	-0.3664
678	SLU 7	-2.21	-2.97	208.38	-15.423	-12.5841	-0.3755
678	SLU 8	-2.19	-2.8	206.52	-15.2867	-12.4666	-0.3658
678	SLU 9	-2.19	-2.97	206.55	-15.287	-12.4712	-0.375
678	SLU 10	-2.14	-3.11	225.48	-16.6794	-13.6251	-0.3774
678	SLU 11	-2.18	-2.87	230.26	-17.0344	-13.9113	-0.368
678	SLU 12	-2.19	-3.03	230.3	-17.0347	-13.9159	-0.3771
678	SLU 13	-2.18	-3.14	228.5	-16.899	-13.8061	-0.3827
678	SLU 14	-2.22	-2.89	233.28	-17.2539	-14.0923	-0.3732
678	SLU 15	-2.22	-3.06	233.31	-17.2542	-14.097	-0.3824
678	SLU 16	-2.21	-2.89	231.45	-17.118	-13.9795	-0.3727

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
678	SLU 17	-2.21	-3.06	231.49	-17.1183	-13.9841	-0.3818
678	SLU 18	-2.14	-2.87	236.11	-17.4638	-14.2658	-0.3651
678	SLU 19	-2.14	-3.04	236.15	-17.4641	-14.2704	-0.3743
678	SLU 20	-2.18	-2.9	239.13	-17.6833	-14.4468	-0.3704
678	SLU 21	-2.18	-3.07	239.16	-17.6836	-14.4515	-0.3795
678	SLU 22	-2.28	-2.69	224.97	-16.6089	-13.5668	-0.3627
678	SLU 23	-2.29	-2.97	225.02	-16.6094	-13.5745	-0.3779
678	SLU 24	-2.33	-2.72	229.8	-16.9644	-13.8607	-0.3685
678	SLU 25	-2.34	-2.89	229.84	-16.9647	-13.8653	-0.3776
678	SLU 26	-2.33	-3	228.04	-16.8289	-13.7556	-0.3832
678	SLU 27	-2.37	-2.75	232.82	-17.1839	-14.0418	-0.3737
678	SLU 28	-2.38	-2.92	232.85	-17.1842	-14.0464	-0.3829
678	SLU 29	-2.36	-2.74	230.99	-17.0479	-13.9289	-0.3732
678	SLU 30	-2.36	-2.91	231.03	-17.0482	-13.9335	-0.3823
678	SLU 31	-2.31	-3.06	249.96	-18.4407	-15.0874	-0.3848
678	SLU 32	-2.35	-2.81	254.74	-18.7957	-15.3736	-0.3754
678	SLU 33	-2.36	-2.98	254.77	-18.796	-15.3782	-0.3845
678	SLU 34	-2.35	-3.09	252.97	-18.6602	-15.2685	-0.3901
678	SLU 35	-2.39	-2.84	257.75	-19.0152	-15.5547	-0.3806
678	SLU 36	-2.39	-3	257.78	-19.0155	-15.5593	-0.3898
678	SLU 37	-2.38	-2.83	255.93	-18.8792	-15.4418	-0.3801
678	SLU 38	-2.38	-3	255.96	-18.8795	-15.4464	-0.3892
678	SLU 39	-2.31	-2.82	260.59	-19.225	-15.7281	-0.3725
678	SLU 40	-2.31	-2.98	260.62	-19.2253	-15.7327	-0.3817
678	SLU 41	-2.35	-2.84	263.6	-19.4446	-15.9091	-0.3778
678	SLU 42	-2.35	-3.01	263.63	-19.4449	-15.9138	-0.3869
678	SLU 43	-2.69	-3.59	252.25	-18.6981	-15.2345	-0.4593
678	SLU 44	-2.69	-3.87	252.31	-18.6986	-15.2422	-0.4746
678	SLU 45	-2.74	-3.62	257.09	-19.0536	-15.5284	-0.4651
678	SLU 46	-2.74	-3.79	257.12	-19.0539	-15.533	-0.4743
678	SLU 47	-2.73	-3.9	255.32	-18.9181	-15.4232	-0.4798
678	SLU 48	-2.78	-3.65	260.1	-19.2731	-15.7094	-0.4704
678	SLU 49	-2.78	-3.81	260.14	-19.2734	-15.714	-0.4796
678	SLU 50	-2.76	-3.64	258.28	-19.1371	-15.5966	-0.4699
678	SLU 51	-2.77	-3.81	258.31	-19.1374	-15.6012	-0.479
678	SLU 52	-2.71	-3.96	277.24	-20.5299	-16.7551	-0.4815
678	SLU 53	-2.76	-3.71	282.02	-20.8849	-17.0413	-0.472
678	SLU 54	-2.76	-3.88	282.06	-20.8852	-17.0459	-0.4812
678	SLU 55	-2.75	-3.98	280.26	-20.7494	-16.9361	-0.4867
678	SLU 56	-2.79	-3.73	285.04	-21.1044	-17.2223	-0.4773
678	SLU 57	-2.8	-3.9	285.07	-21.1047	-17.2269	-0.4864
678	SLU 58	-2.78	-3.73	283.21	-20.9684	-17.1095	-0.4767
678	SLU 59	-2.79	-3.9	283.25	-20.9687	-17.1141	-0.4859
678	SLU 60	-2.71	-3.72	287.87	-21.3142	-17.3958	-0.4692
678	SLU 61	-2.72	-3.88	287.91	-21.3145	-17.4004	-0.4783
678	SLU 62	-2.75	-3.74	290.89	-21.5337	-17.5768	-0.4744
678	SLU 63	-2.76	-3.91	290.92	-21.534	-17.5814	-0.4836
678	SLU 64	-2.86	-3.53	276.73	-20.4594	-16.6968	-0.4667
678	SLU 65	-2.86	-3.81	276.78	-20.4599	-16.7045	-0.482
678	SLU 66	-2.91	-3.56	281.56	-20.8148	-16.9907	-0.4725
678	SLU 67	-2.91	-3.73	281.6	-20.8151	-16.9953	-0.4817
678	SLU 68	-2.9	-3.84	279.79	-20.6794	-16.8855	-0.4872
678	SLU 69	-2.95	-3.59	284.58	-21.0344	-17.1717	-0.4778
678	SLU 70	-2.95	-3.76	284.61	-21.0347	-17.1764	-0.4869
678	SLU 71	-2.93	-3.59	282.75	-20.8984	-17.0589	-0.4772
678	SLU 72	-2.94	-3.76	282.79	-20.8987	-17.0635	-0.4864
678	SLU 73	-2.88	-3.9	301.71	-22.2911	-18.2174	-0.4889
678	SLU 74	-2.93	-3.65	306.5	-22.6461	-18.5036	-0.4794
678	SLU 75	-2.93	-3.82	306.53	-22.6464	-18.5082	-0.4886
678	SLU 76	-2.92	-3.93	304.73	-22.5107	-18.3984	-0.4941
678	SLU 77	-2.96	-3.68	309.51	-22.8656	-18.6846	-0.4847
678	SLU 78	-2.97	-3.85	309.54	-22.8659	-18.6893	-0.4938
678	SLU 79	-2.95	-3.68	307.68	-22.7297	-18.5718	-0.4841
678	SLU 80	-2.96	-3.84	307.72	-22.73	-18.5764	-0.4933
678	SLU 81	-2.88	-3.66	312.34	-23.0755	-18.8581	-0.4766
678	SLU 82	-2.89	-3.83	312.38	-23.0758	-18.8627	-0.4857
678	SLU 83	-2.92	-3.69	315.36	-23.295	-19.0391	-0.4818
678	SLU 84	-2.93	-3.85	315.39	-23.2953	-19.0437	-0.491
678	SLE RA 1	-2.16	-2.73	207.49	-15.3509	-12.5223	-0.3574
678	SLE RA 2	-2.17	-2.92	207.53	-15.3512	-12.5274	-0.3676
678	SLE RA 3	-2.19	-2.75	210.71	-15.5879	-12.7182	-0.3613
678	SLE RA 4	-2.2	-2.86	210.73	-15.5881	-12.7213	-0.3674
678	SLE RA 5	-2.19	-2.94	209.53	-15.4976	-12.6481	-0.3711
678	SLE RA 6	-2.22	-2.77	212.72	-15.7342	-12.8389	-0.3648
678	SLE RA 7	-2.22	-2.88	212.74	-15.7344	-12.842	-0.3709
678	SLE RA 8	-2.21	-2.77	211.51	-15.6436	-12.7637	-0.3644
678	SLE RA 9	-2.21	-2.88	211.53	-15.6438	-12.7668	-0.3705
678	SLE RA 10	-2.18	-2.98	224.15	-16.5721	-13.536	-0.3722
678	SLE RA 11	-2.21	-2.81	227.33	-16.8087	-13.7268	-0.3659
678	SLE RA 12	-2.21	-2.92	227.36	-16.8089	-13.7299	-0.372
678	SLE RA 13	-2.2	-2.99	226.16	-16.7184	-13.6567	-0.3757
678	SLE RA 14	-2.23	-2.83	229.34	-16.9551	-13.8475	-0.3694
678	SLE RA 15	-2.24	-2.94	229.36	-16.9553	-13.8506	-0.3755
678	SLE RA 16	-2.22	-2.82	228.13	-16.8644	-13.7723	-0.369
678	SLE RA 17	-2.23	-2.94	228.15	-16.8646	-13.7754	-0.3751
678	SLE RA 18	-2.18	-2.81	231.23	-17.095	-13.9632	-0.364
678	SLE RA 19	-2.18	-2.93	231.26	-17.0952	-13.9662	-0.3701
678	SLE RA 20	-2.2	-2.83	233.24	-17.2413	-14.0839	-0.3675
678	SLE RA 21	-2.21	-2.94	233.26	-17.2415	-14.0869	-0.3736
678	SLE FR 1	-2.16	-2.73	207.49	-15.3509	-12.5223	-0.3574

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
678	SLE FR 2	-2.16	-2.77	207.5	-15.3509	-12.5233	-0.3594
678	SLE FR 3	-2.17	-2.74	208.29	-15.4094	-12.5706	-0.3588
678	SLE FR 4	-2.17	-2.79	214.62	-15.8742	-12.9556	-0.3614
678	SLE FR 5	-2.17	-2.76	215.42	-15.9326	-13.0028	-0.3608
678	SLE FR 6	-2.17	-2.77	219.36	-16.2229	-13.2427	-0.3607
678	SLE QP 1	-2.16	-2.73	207.49	-15.3509	-12.5223	-0.3574
678	SLE QP 2	-2.16	-2.76	214.61	-15.8741	-12.9546	-0.3594
678	SLD 1	15.27	-1.53	234.89	-17.7253	-13.9285	1.0209
678	SLD 2	15.23	-3.04	235.18	-17.6881	-13.9472	0.9632
678	SLD 3	15	-6.84	235.55	-17.8484	-14.0407	0.6725
678	SLD 4	14.95	-8.35	235.84	-17.8111	-14.0593	0.6147
678	SLD 5	3.49	5.94	219.64	-16.2496	-13.0733	0.5937
678	SLD 6	3.46	4.94	219.83	-16.2249	-13.0856	0.5554
678	SLD 7	2.58	-11.76	221.85	-16.6598	-13.4471	-0.5678
678	SLD 8	2.55	-12.76	222.04	-16.6351	-13.4595	-0.6062
678	SLD 9	-6.88	7.25	207.19	-15.1131	-12.4497	-0.1126
678	SLD 10	-6.91	6.25	207.38	-15.0884	-12.462	-0.1509
678	SLD 11	-7.79	-10.45	209.4	-15.5233	-12.8235	-1.2741
678	SLD 12	-7.82	-11.45	209.59	-15.4986	-12.8358	-1.3125
678	SLD 13	-19.28	2.83	193.38	-13.9371	-11.8498	-1.3334
678	SLD 14	-19.33	1.33	193.67	-13.8998	-11.8685	-1.3912
678	SLD 15	-19.56	-2.47	194.05	-14.0601	-11.9619	-1.6819
678	SLD 16	-19.6	-3.98	194.34	-14.0229	-11.9806	-1.7397
678	SLV 1	38.6	-0.1	262.04	-20.2043	-15.2369	2.8542
678	SLV 2	38.49	-3.61	262.71	-20.1176	-15.2803	2.7197
678	SLV 3	37.97	-12.11	263.59	-20.4901	-15.4912	2.0657
678	SLV 4	37.86	-15.62	264.26	-20.4034	-15.5346	1.9312
678	SLV 5	11.05	16.87	226.37	-16.7549	-13.2458	1.8241
678	SLV 6	10.98	14.58	226.81	-16.6984	-13.2741	1.7365
678	SLV 7	8.93	-23.16	231.54	-17.7077	-14.0937	-0.804
678	SLV 8	8.86	-25.45	231.98	-17.6512	-14.122	-0.8916
678	SLV 9	-13.19	19.93	197.25	-14.097	-11.7871	0.1729
678	SLV 10	-13.26	17.65	197.68	-14.0405	-11.8154	0.0852
678	SLV 11	-15.31	-20.1	202.41	-15.0498	-12.635	-2.4552
678	SLV 12	-15.38	-22.38	202.85	-14.9933	-12.6633	-2.5429
678	SLV 13	-42.19	10.11	164.96	-11.3448	-10.3745	-2.65
678	SLV 14	-42.3	6.6	165.63	-11.2581	-10.4179	-2.7845
678	SLV 15	-42.82	-1.9	166.51	-11.6306	-10.6288	-3.4384
678	SLV 16	-42.93	-5.41	167.18	-11.5439	-10.6723	-3.5729
678	CRTFP Ux+	0	0	0	0	0	0
678	CRTFP Ux-	0	0	0	0	0	0
678	CRTFP Uy+	0	0	0	0	0	0
678	CRTFP Uy-	0	0	0	0	0	0
723	SLU 1	0.73	0.21	37.22	1.0151	11.3533	-0.0939
723	SLU 2	0.73	0.2	37.23	1.0152	11.355	-0.0879
723	SLU 3	0.75	0.22	38.12	1.0395	11.6226	-0.0956
723	SLU 4	0.75	0.21	38.12	1.0395	11.6237	-0.092
723	SLU 5	0.74	0.19	37.79	1.0304	11.5229	-0.0871
723	SLU 6	0.76	0.21	38.68	1.0547	11.7905	-0.0949
723	SLU 7	0.76	0.2	38.68	1.0547	11.7915	-0.0912
723	SLU 8	0.75	0.21	38.34	1.0455	11.6891	-0.0924
723	SLU 9	0.75	0.2	38.34	1.0456	11.6901	-0.0887
723	SLU 10	0.77	0.29	41.56	1.1331	12.6772	-0.1207
723	SLU 11	0.79	0.31	42.45	1.1573	12.9448	-0.1285
723	SLU 12	0.79	0.3	42.45	1.1574	12.9458	-0.1249
723	SLU 13	0.78	0.28	42.12	1.1483	12.8451	-0.12
723	SLU 14	0.8	0.3	43.01	1.1725	13.1126	-0.1277
723	SLU 15	0.8	0.29	43.01	1.1726	13.1137	-0.1241
723	SLU 16	0.8	0.3	42.67	1.1633	13.0112	-0.1253
723	SLU 17	0.8	0.29	42.67	1.1634	13.0122	-0.1216
723	SLU 18	0.79	0.34	43.41	1.1834	13.2421	-0.1409
723	SLU 19	0.79	0.33	43.41	1.1835	13.2431	-0.1373
723	SLU 20	0.8	0.34	43.97	1.1986	13.41	-0.1401
723	SLU 21	0.8	0.33	43.97	1.1987	13.411	-0.1365
723	SLU 22	0.79	0.3	41.57	1.1337	12.6769	-0.1267
723	SLU 23	0.79	0.28	41.58	1.1338	12.6786	-0.1206
723	SLU 24	0.81	0.31	42.47	1.158	12.9462	-0.1284
723	SLU 25	0.81	0.3	42.47	1.1581	12.9472	-0.1248
723	SLU 26	0.8	0.28	42.14	1.149	12.8465	-0.1199
723	SLU 27	0.82	0.3	43.03	1.1733	13.1141	-0.1276
723	SLU 28	0.82	0.29	43.03	1.1733	13.1151	-0.124
723	SLU 29	0.82	0.3	42.69	1.1641	13.0126	-0.1251
723	SLU 30	0.82	0.29	42.7	1.1642	13.0137	-0.1215
723	SLU 31	0.83	0.38	45.91	1.2517	14.0008	-0.1535
723	SLU 32	0.85	0.4	46.8	1.2759	14.2683	-0.1613
723	SLU 33	0.85	0.39	46.81	1.276	14.2694	-0.1577
723	SLU 34	0.85	0.37	46.47	1.2669	14.1686	-0.1527
723	SLU 35	0.87	0.39	47.36	1.2911	14.4362	-0.1605
723	SLU 36	0.87	0.38	47.36	1.2912	14.4372	-0.1569
723	SLU 37	0.86	0.39	47.02	1.2819	14.3348	-0.158
723	SLU 38	0.86	0.38	47.03	1.282	14.3358	-0.1544
723	SLU 39	0.85	0.43	47.76	1.302	14.5657	-0.1737
723	SLU 40	0.85	0.42	47.76	1.3021	14.5667	-0.17
723	SLU 41	0.87	0.43	48.32	1.3172	14.7335	-0.1729
723	SLU 42	0.87	0.42	48.32	1.3173	14.7346	-0.1692
723	SLU 43	0.92	0.25	46.89	1.2789	14.3055	-0.1109
723	SLU 44	0.92	0.23	46.9	1.2791	14.3072	-0.1048
723	SLU 45	0.94	0.25	47.79	1.3033	14.5748	-0.1126
723	SLU 46	0.94	0.24	47.79	1.3034	14.5759	-0.109
723	SLU 47	0.94	0.23	47.46	1.2943	14.4751	-0.104

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
723	SLU 48	0.96	0.25	48.35	1.3185	14.7427	-0.1118
723	SLU 49	0.96	0.24	48.35	1.3186	14.7437	-0.1082
723	SLU 50	0.95	0.24	48.01	1.3093	14.6413	-0.1093
723	SLU 51	0.95	0.23	48.02	1.3094	14.6423	-0.1057
723	SLU 52	0.97	0.32	51.23	1.3969	15.6294	-0.1377
723	SLU 53	0.99	0.34	52.12	1.4212	15.897	-0.1455
723	SLU 54	0.99	0.33	52.13	1.4213	15.898	-0.1418
723	SLU 55	0.98	0.32	51.79	1.4121	15.7973	-0.1369
723	SLU 56	1	0.34	52.68	1.4364	16.0648	-0.1447
723	SLU 57	1	0.33	52.69	1.4365	16.0659	-0.1411
723	SLU 58	0.99	0.33	52.34	1.4272	15.9634	-0.1422
723	SLU 59	0.99	0.32	52.35	1.4273	15.9644	-0.1386
723	SLU 60	0.99	0.38	53.08	1.4473	16.1943	-0.1578
723	SLU 61	0.99	0.37	53.09	1.4474	16.1953	-0.1542
723	SLU 62	1	0.37	53.64	1.4625	16.3622	-0.1571
723	SLU 63	1	0.36	53.64	1.4626	16.3632	-0.1534
723	SLU 64	0.99	0.34	51.25	1.3975	15.6291	-0.1436
723	SLU 65	0.99	0.32	51.25	1.3977	15.6308	-0.1376
723	SLU 66	1.01	0.34	52.14	1.4219	15.8984	-0.1454
723	SLU 67	1.01	0.33	52.15	1.422	15.8994	-0.1417
723	SLU 68	1	0.32	51.81	1.4129	15.7987	-0.1368
723	SLU 69	1.02	0.34	52.7	1.4371	16.0663	-0.1446
723	SLU 70	1.02	0.33	52.71	1.4372	16.0673	-0.1409
723	SLU 71	1.01	0.33	52.37	1.4279	15.9648	-0.1421
723	SLU 72	1.01	0.32	52.37	1.428	15.9659	-0.1385
723	SLU 73	1.03	0.41	55.58	1.5155	16.953	-0.1704
723	SLU 74	1.05	0.43	56.48	1.5398	17.2205	-0.1782
723	SLU 75	1.05	0.42	56.48	1.5399	17.2216	-0.1746
723	SLU 76	1.04	0.41	56.14	1.5307	17.1208	-0.1697
723	SLU 77	1.06	0.43	57.03	1.555	17.3884	-0.1775
723	SLU 78	1.06	0.42	57.04	1.5551	17.3894	-0.1738
723	SLU 79	1.06	0.42	56.7	1.5458	17.287	-0.175
723	SLU 80	1.06	0.41	56.7	1.5459	17.288	-0.1713
723	SLU 81	1.05	0.47	57.43	1.5659	17.5179	-0.1906
723	SLU 82	1.05	0.45	57.44	1.566	17.5189	-0.187
723	SLU 83	1.06	0.46	57.99	1.5811	17.6857	-0.1898
723	SLU 84	1.06	0.45	58	1.5812	17.6868	-0.1862
723	SLE RA 1	0.74	0.24	38.46	1.049	11.7315	-0.1033
723	SLE RA 2	0.75	0.23	38.47	1.0491	11.7326	-0.0992
723	SLE RA 3	0.76	0.24	39.06	1.0652	11.911	-0.1044
723	SLE RA 4	0.76	0.23	39.06	1.0653	11.9117	-0.102
723	SLE RA 5	0.75	0.23	38.84	1.0592	11.8445	-0.0987
723	SLE RA 6	0.77	0.24	39.43	1.0753	12.0229	-0.1039
723	SLE RA 7	0.77	0.23	39.44	1.0754	12.0236	-0.1015
723	SLE RA 8	0.76	0.23	39.21	1.0692	11.9553	-0.1023
723	SLE RA 9	0.76	0.23	39.21	1.0693	11.956	-0.0998
723	SLE RA 10	0.77	0.29	41.36	1.1276	12.6141	-0.1212
723	SLE RA 11	0.79	0.3	41.95	1.1438	12.7925	-0.1263
723	SLE RA 12	0.79	0.29	41.95	1.1438	12.7931	-0.1239
723	SLE RA 13	0.78	0.29	41.73	1.1378	12.726	-0.1206
723	SLE RA 14	0.8	0.3	42.32	1.1539	12.9044	-0.1258
723	SLE RA 15	0.8	0.29	42.32	1.154	12.9051	-0.1234
723	SLE RA 16	0.79	0.29	42.1	1.1478	12.8367	-0.1242
723	SLE RA 17	0.79	0.29	42.1	1.1479	12.8374	-0.1217
723	SLE RA 18	0.79	0.33	42.59	1.1612	12.9907	-0.1346
723	SLE RA 19	0.79	0.32	42.59	1.1613	12.9914	-0.1322
723	SLE RA 20	0.8	0.32	42.96	1.1713	13.1026	-0.1341
723	SLE RA 21	0.8	0.32	42.96	1.1714	13.1033	-0.1317
723	SLE FR 1	0.74	0.24	38.46	1.049	11.7315	-0.1033
723	SLE FR 2	0.74	0.24	38.46	1.049	11.7317	-0.1025
723	SLE FR 3	0.75	0.24	38.61	1.053	11.7762	-0.1031
723	SLE FR 4	0.76	0.26	39.7	1.0826	12.1095	-0.1119
723	SLE FR 5	0.76	0.26	39.85	1.0867	12.154	-0.1125
723	SLE FR 6	0.77	0.28	40.53	1.1051	12.3611	-0.1189
723	SLE QP 1	0.74	0.24	38.46	1.049	11.7315	-0.1033
723	SLE QP 2	0.76	0.26	39.7	1.0826	12.1092	-0.1127
723	SLD 1	3.17	0.74	28.59	0.7809	8.9862	-0.3243
723	SLD 2	3.14	1.31	28.58	0.7797	8.9919	-0.5216
723	SLD 3	3.22	-0.43	28.75	0.7854	8.9421	0.0854
723	SLD 4	3.19	0.14	28.74	0.7843	8.9479	-0.112
723	SLD 5	1.41	2.09	36.13	0.9854	11.2381	-0.7615
723	SLD 6	1.39	2.46	36.12	0.9846	11.2419	-0.8925
723	SLD 7	1.58	-1.83	36.66	1.0006	11.0913	0.6039
723	SLD 8	1.56	-1.45	36.65	0.9999	11.0951	0.4729
723	SLD 9	-0.04	1.98	42.75	1.1654	13.1234	-0.6982
723	SLD 10	-0.06	2.36	42.74	1.1646	13.1272	-0.8292
723	SLD 11	0.13	-1.94	43.28	1.1806	12.9766	0.6671
723	SLD 12	0.11	-1.56	43.27	1.1799	12.9804	0.5362
723	SLD 13	-1.67	0.39	50.66	1.381	15.2706	-0.1134
723	SLD 14	-1.7	0.96	50.65	1.3798	15.2763	-0.3107
723	SLD 15	-1.62	-0.78	50.82	1.3855	15.2266	0.2963
723	SLD 16	-1.65	-0.21	50.81	1.3844	15.2323	0.0989
723	SLV 1	6.39	1.34	13.71	0.3766	4.8022	-0.5941
723	SLV 2	6.32	2.67	13.68	0.374	4.8155	-1.0536
723	SLV 3	6.51	-1.32	14.08	0.3873	4.6994	0.3343
723	SLV 4	6.44	0	14.05	0.3846	4.7128	-0.1252
723	SLV 5	2.28	4.4	31.35	0.8552	10.0706	-1.5845
723	SLV 6	2.23	5.26	31.33	0.8534	10.0793	-1.8838
723	SLV 7	2.68	-4.48	32.58	0.8906	9.7281	1.5103
723	SLV 8	2.63	-3.62	32.56	0.8889	9.7368	1.2109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
723	SLV 9	-1.12	4.15	46.84	1.2764	14.4817	-1.4363
723	SLV 10	-1.16	5.01	46.82	1.2747	14.4904	-1.7357
723	SLV 11	-0.72	-4.73	48.07	1.3118	14.1391	1.6585
723	SLV 12	-0.76	-3.87	48.05	1.3101	14.1478	1.3591
723	SLV 13	-4.93	0.53	65.35	1.7806	19.5057	-0.1002
723	SLV 14	-5	1.85	65.32	1.778	19.519	-0.5597
723	SLV 15	-4.81	-2.14	65.72	1.7913	19.4029	0.8282
723	SLV 16	-4.88	-0.82	65.69	1.7886	19.4163	0.3688
723	CRTFP Ux+	0	0	0	0	0	0
723	CRTFP Ux-	0	0	0	0	0	0
723	CRTFP Uy+	0	0	0	0	0	0
723	CRTFP Uy-	0	0	0	0	0	0
726	SLU 1	1.36	-0.07	74.16	10.779	-0.402	-0.2057
726	SLU 2	1.36	-0.11	74.17	10.7796	-0.3986	-0.2051
726	SLU 3	1.4	-0.07	75.89	11.0293	-0.41	-0.2115
726	SLU 4	1.4	-0.09	75.89	11.0297	-0.408	-0.2111
726	SLU 5	1.39	-0.12	75.23	10.9344	-0.4042	-0.2088
726	SLU 6	1.42	-0.08	76.95	11.1841	-0.4157	-0.2152
726	SLU 7	1.42	-0.1	76.96	11.1845	-0.4136	-0.2148
726	SLU 8	1.41	-0.09	76.29	11.0885	-0.4133	-0.2132
726	SLU 9	1.41	-0.11	76.3	11.0888	-0.4112	-0.2128
726	SLU 10	1.45	0	83.31	12.1065	-0.4437	-0.218
726	SLU 11	1.49	0.04	85.03	12.3563	-0.4552	-0.2245
726	SLU 12	1.49	0.02	85.03	12.3566	-0.4531	-0.2241
726	SLU 13	1.47	-0.01	84.38	12.2613	-0.4494	-0.2217
726	SLU 14	1.51	0.03	86.09	12.511	-0.4608	-0.2282
726	SLU 15	1.51	0.01	86.1	12.5114	-0.4588	-0.2278
726	SLU 16	1.5	0.02	85.43	12.4154	-0.4585	-0.2261
726	SLU 17	1.5	-0.01	85.44	12.4158	-0.4564	-0.2257
726	SLU 18	1.49	0.08	87.22	12.6746	-0.4665	-0.2242
726	SLU 19	1.49	0.06	87.22	12.675	-0.4644	-0.2238
726	SLU 20	1.51	0.07	88.29	12.8293	-0.4722	-0.2279
726	SLU 21	1.51	0.05	88.29	12.8297	-0.4701	-0.2275
726	SLU 22	1.49	0.08	83.13	12.0828	-0.4544	-0.2251
726	SLU 23	1.49	0.04	83.13	12.0834	-0.4509	-0.2244
726	SLU 24	1.53	0.08	84.85	12.3332	-0.4624	-0.2309
726	SLU 25	1.53	0.06	84.86	12.3335	-0.4603	-0.2305
726	SLU 26	1.51	0.03	84.2	12.2382	-0.4565	-0.2281
726	SLU 27	1.55	0.07	85.92	12.4879	-0.468	-0.2346
726	SLU 28	1.55	0.05	85.92	12.4883	-0.4659	-0.2342
726	SLU 29	1.54	0.06	85.26	12.3923	-0.4656	-0.2325
726	SLU 30	1.54	0.03	85.26	12.3927	-0.4636	-0.2321
726	SLU 31	1.58	0.15	92.28	13.4104	-0.496	-0.2374
726	SLU 32	1.62	0.19	93.99	13.6601	-0.5075	-0.2438
726	SLU 33	1.62	0.17	94	13.6605	-0.5054	-0.2434
726	SLU 34	1.6	0.14	93.34	13.5651	-0.5017	-0.2411
726	SLU 35	1.64	0.18	95.06	13.8148	-0.5132	-0.2475
726	SLU 36	1.64	0.16	95.06	13.8152	-0.5111	-0.2471
726	SLU 37	1.63	0.17	94.4	13.7192	-0.5108	-0.2454
726	SLU 38	1.63	0.14	94.4	13.7196	-0.5087	-0.2451
726	SLU 39	1.62	0.23	96.19	13.9784	-0.5189	-0.2436
726	SLU 40	1.62	0.21	96.19	13.9788	-0.5168	-0.2432
726	SLU 41	1.64	0.22	97.25	14.1332	-0.5245	-0.2473
726	SLU 42	1.64	0.2	97.26	14.1335	-0.5224	-0.2469
726	SLU 43	1.73	-0.15	93.33	13.5656	-0.5047	-0.2608
726	SLU 44	1.73	-0.19	93.34	13.5663	-0.5012	-0.2602
726	SLU 45	1.76	-0.14	95.06	13.816	-0.5127	-0.2666
726	SLU 46	1.76	-0.16	95.06	13.8164	-0.5106	-0.2662
726	SLU 47	1.75	-0.19	94.41	13.721	-0.5069	-0.2639
726	SLU 48	1.79	-0.15	96.13	13.9707	-0.5184	-0.2703
726	SLU 49	1.79	-0.17	96.13	13.9711	-0.5163	-0.2699
726	SLU 50	1.78	-0.16	95.47	13.8751	-0.516	-0.2683
726	SLU 51	1.77	-0.19	95.47	13.8755	-0.5139	-0.2679
726	SLU 52	1.81	-0.08	102.48	14.8932	-0.5464	-0.2731
726	SLU 53	1.85	-0.03	104.2	15.1429	-0.5579	-0.2796
726	SLU 54	1.85	-0.06	104.21	15.1433	-0.5558	-0.2792
726	SLU 55	1.84	-0.09	103.55	15.0479	-0.552	-0.2768
726	SLU 56	1.88	-0.04	105.27	15.2977	-0.5635	-0.2833
726	SLU 57	1.88	-0.06	105.27	15.298	-0.5614	-0.2829
726	SLU 58	1.86	-0.06	104.61	15.2021	-0.5611	-0.2812
726	SLU 59	1.86	-0.08	104.61	15.2024	-0.5591	-0.2808
726	SLU 60	1.85	0.01	106.39	15.4612	-0.5692	-0.2793
726	SLU 61	1.85	-0.01	106.4	15.4616	-0.5671	-0.2789
726	SLU 62	1.88	0	107.46	15.616	-0.5748	-0.283
726	SLU 63	1.88	-0.02	107.46	15.6164	-0.5728	-0.2826
726	SLU 64	1.86	0	102.3	14.8695	-0.557	-0.2802
726	SLU 65	1.86	-0.04	102.31	14.8701	-0.5536	-0.2795
726	SLU 66	1.89	0.01	104.03	15.1198	-0.565	-0.286
726	SLU 67	1.89	-0.02	104.03	15.1202	-0.563	-0.2856
726	SLU 68	1.88	-0.05	103.37	15.0249	-0.5592	-0.2832
726	SLU 69	1.92	0	105.09	15.2746	-0.5707	-0.2897
726	SLU 70	1.92	-0.02	105.1	15.275	-0.5686	-0.2893
726	SLU 71	1.9	-0.02	104.43	15.179	-0.5683	-0.2876
726	SLU 72	1.9	-0.04	104.44	15.1793	-0.5662	-0.2872
726	SLU 73	1.94	0.07	111.45	16.197	-0.5987	-0.2925
726	SLU 74	1.98	0.12	113.17	16.4467	-0.6102	-0.2989
726	SLU 75	1.98	0.09	113.17	16.4471	-0.6081	-0.2985
726	SLU 76	1.97	0.06	112.52	16.3518	-0.6044	-0.2962
726	SLU 77	2.01	0.11	114.23	16.6015	-0.6158	-0.3026
726	SLU 78	2.01	0.08	114.24	16.6019	-0.6138	-0.3022

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
726	SLU 79	1.99	0.09	113.57	16.5059	-0.6135	-0.3005
726	SLU 80	1.99	0.07	113.58	16.5063	-0.6114	-0.3001
726	SLU 81	1.98	0.16	115.36	16.7651	-0.6215	-0.2987
726	SLU 82	1.98	0.13	115.36	16.7655	-0.6194	-0.2983
726	SLU 83	2.01	0.15	116.43	16.9198	-0.6272	-0.3024
726	SLU 84	2.01	0.13	116.43	16.9202	-0.6251	-0.302
726	SLE RA 1	1.4	-0.03	76.72	11.1515	-0.417	-0.2113
726	SLE RA 2	1.4	-0.06	76.73	11.1519	-0.4147	-0.2108
726	SLE RA 3	1.42	-0.03	77.87	11.3184	-0.4223	-0.2151
726	SLE RA 4	1.42	-0.04	77.88	11.3187	-0.4209	-0.2149
726	SLE RA 5	1.41	-0.06	77.44	11.2551	-0.4184	-0.2133
726	SLE RA 6	1.44	-0.03	78.58	11.4216	-0.4261	-0.2176
726	SLE RA 7	1.44	-0.05	78.59	11.4218	-0.4247	-0.2173
726	SLE RA 8	1.43	-0.04	78.14	11.3578	-0.4245	-0.2162
726	SLE RA 9	1.43	-0.06	78.15	11.3581	-0.4231	-0.216
726	SLE RA 10	1.46	0.02	82.82	12.0365	-0.4448	-0.2195
726	SLE RA 11	1.48	0.05	83.97	12.203	-0.4524	-0.2238
726	SLE RA 12	1.48	0.03	83.97	12.2033	-0.451	-0.2235
726	SLE RA 13	1.47	0.01	83.53	12.1397	-0.4485	-0.2219
726	SLE RA 14	1.5	0.04	84.68	12.3062	-0.4562	-0.2262
726	SLE RA 15	1.5	0.02	84.68	12.3064	-0.4548	-0.226
726	SLE RA 16	1.49	0.03	84.24	12.2424	-0.4546	-0.2248
726	SLE RA 17	1.49	0.01	84.24	12.2427	-0.4532	-0.2246
726	SLE RA 18	1.48	0.07	85.43	12.4152	-0.46	-0.2236
726	SLE RA 19	1.48	0.06	85.43	12.4155	-0.4586	-0.2233
726	SLE RA 20	1.5	0.07	86.14	12.5184	-0.4637	-0.2261
726	SLE RA 21	1.5	0.05	86.14	12.5187	-0.4624	-0.2258
726	SLE FR 1	1.4	-0.03	76.72	11.1515	-0.417	-0.2113
726	SLE FR 2	1.4	-0.04	76.72	11.1516	-0.4165	-0.2112
726	SLE FR 3	1.41	-0.03	77.01	11.1928	-0.4185	-0.2123
726	SLE FR 4	1.42	-0.01	79.33	11.5307	-0.4294	-0.2149
726	SLE FR 5	1.43	0	79.62	11.5719	-0.4314	-0.216
726	SLE FR 6	1.44	0.02	81.08	11.7834	-0.4385	-0.2174
726	SLE QP 1	1.4	-0.03	76.72	11.1515	-0.417	-0.2113
726	SLE QP 2	1.42	0	79.33	11.5306	-0.4299	-0.215
726	SLD 1	7.8	1.07	72.69	10.6022	-0.2544	-1.1328
726	SLD 2	7.74	1.69	72.61	10.5877	-0.2547	-1.112
726	SLD 3	7.7	-0.92	72.86	10.5755	-0.2082	-1.1466
726	SLD 4	7.64	-0.3	72.77	10.5609	-0.2084	-1.1258
726	SLD 5	3.5	3.22	77.11	11.2954	-0.4474	-0.4733
726	SLD 6	3.45	3.63	77.06	11.2857	-0.4476	-0.4594
726	SLD 7	3.17	-3.4	77.65	11.2061	-0.2932	-0.5191
726	SLD 8	3.13	-2.99	77.59	11.1965	-0.2933	-0.5053
726	SLD 9	-0.28	2.99	81.08	11.8648	-0.5665	0.0754
726	SLD 10	-0.32	3.4	81.02	11.8551	-0.5666	0.0892
726	SLD 11	-0.6	-3.63	81.61	11.7755	-0.4122	0.0295
726	SLD 12	-0.65	-3.22	81.55	11.7659	-0.4124	0.0433
726	SLD 13	-4.79	0.3	85.9	12.5003	-0.6513	0.6958
726	SLD 14	-4.85	0.92	85.81	12.4858	-0.6516	0.7167
726	SLD 15	-4.89	-1.69	86.06	12.4735	-0.6051	0.6821
726	SLD 16	-4.95	-1.07	85.97	12.459	-0.6053	0.7029
726	SLV 1	16.33	2.44	63.8	9.3578	-0.0181	-2.3609
726	SLV 2	16.18	3.88	63.59	9.324	-0.0187	-2.3125
726	SLV 3	16.1	-2.06	64.17	9.2957	0.0868	-2.393
726	SLV 4	15.96	-0.63	63.97	9.2619	0.0862	-2.3446
726	SLV 5	6.26	7.3	74.14	10.9789	-0.4653	-0.8186
726	SLV 6	6.17	8.24	74	10.9568	-0.4657	-0.787
726	SLV 7	5.51	-7.7	75.39	10.772	-0.1157	-0.9256
726	SLV 8	5.42	-6.76	75.26	10.7499	-0.1161	-0.894
726	SLV 9	-2.57	6.76	83.41	12.3113	-0.7436	0.4641
726	SLV 10	-2.66	7.7	83.27	12.2893	-0.744	0.4957
726	SLV 11	-3.32	-8.24	84.66	12.1044	-0.3941	0.3571
726	SLV 12	-3.41	-7.31	84.53	12.0824	-0.3945	0.3886
726	SLV 13	-13.11	0.62	94.7	13.7993	-0.9459	1.9146
726	SLV 14	-13.25	2.06	94.49	13.7655	-0.9465	1.9631
726	SLV 15	-13.33	-3.88	95.08	13.7373	-0.8411	1.8825
726	SLV 16	-13.48	-2.44	94.87	13.7035	-0.8417	1.931
726	CRTFP Ux+	0	0	0	0	0	0
726	CRTFP Ux-	0	0	0	0	0	0
726	CRTFP Uy+	0	0	0	0	0	0
726	CRTFP Uy-	0	0	0	0	0	0
729	SLU 1	0.79	0.26	41.79	-0.0589	11.7244	-0.0879
729	SLU 2	0.79	0.24	41.8	-0.0589	11.7259	-0.0808
729	SLU 3	0.81	0.26	42.8	-0.0605	11.9987	-0.0893
729	SLU 4	0.81	0.25	42.8	-0.0605	11.9996	-0.085
729	SLU 5	0.81	0.23	42.43	-0.0599	11.897	-0.0795
729	SLU 6	0.83	0.26	43.42	-0.0615	12.1698	-0.0879
729	SLU 7	0.83	0.24	43.43	-0.0615	12.1707	-0.0837
729	SLU 8	0.82	0.25	43.04	-0.0609	12.0666	-0.0853
729	SLU 9	0.82	0.24	43.05	-0.0609	12.0675	-0.081
729	SLU 10	0.84	0.34	46.65	-0.0665	13.0783	-0.1178
729	SLU 11	0.86	0.37	47.64	-0.068	13.351	-0.1263
729	SLU 12	0.86	0.35	47.65	-0.0681	13.3519	-0.122
729	SLU 13	0.85	0.34	47.27	-0.0675	13.2494	-0.1165
729	SLU 14	0.87	0.36	48.27	-0.069	13.5221	-0.125
729	SLU 15	0.88	0.35	48.27	-0.069	13.523	-0.1207
729	SLU 16	0.87	0.36	47.89	-0.0684	13.4189	-0.1223
729	SLU 17	0.87	0.34	47.9	-0.0685	13.4199	-0.118
729	SLU 18	0.86	0.41	48.72	-0.0697	13.6563	-0.1408
729	SLU 19	0.86	0.4	48.72	-0.0697	13.6572	-0.1365

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
729	SLU 20	0.87	0.41	49.34	-0.0707	13.8274	-0.1395
729	SLU 21	0.87	0.39	49.35	-0.0707	13.8283	-0.1352
729	SLU 22	0.86	0.36	46.67	-0.0663	13.0789	-0.1241
729	SLU 23	0.86	0.34	46.68	-0.0663	13.0805	-0.117
729	SLU 24	0.88	0.36	47.68	-0.0678	13.3532	-0.1255
729	SLU 25	0.88	0.35	47.68	-0.0679	13.3542	-0.1212
729	SLU 26	0.87	0.34	47.3	-0.0673	13.2516	-0.1157
729	SLU 27	0.9	0.36	48.3	-0.0688	13.5243	-0.1242
729	SLU 28	0.9	0.35	48.3	-0.0688	13.5253	-0.1199
729	SLU 29	0.89	0.35	47.92	-0.0682	13.4211	-0.1215
729	SLU 30	0.89	0.34	47.93	-0.0683	13.4221	-0.1172
729	SLU 31	0.91	0.45	51.53	-0.0739	14.4328	-0.154
729	SLU 32	0.93	0.47	52.52	-0.0754	14.7056	-0.1625
729	SLU 33	0.93	0.46	52.53	-0.0754	14.7065	-0.1582
729	SLU 34	0.92	0.44	52.15	-0.0748	14.6039	-0.1527
729	SLU 35	0.94	0.47	53.15	-0.0764	14.8767	-0.1612
729	SLU 36	0.94	0.46	53.15	-0.0764	14.8776	-0.1569
729	SLU 37	0.94	0.46	52.77	-0.0758	14.7735	-0.1585
729	SLU 38	0.94	0.45	52.77	-0.0758	14.7744	-0.1543
729	SLU 39	0.92	0.51	53.6	-0.0771	15.0109	-0.177
729	SLU 40	0.92	0.5	53.6	-0.0771	15.0118	-0.1727
729	SLU 41	0.94	0.51	54.22	-0.0781	15.182	-0.1757
729	SLU 42	0.94	0.5	54.23	-0.0781	15.1829	-0.1714
729	SLU 43	1.01	0.3	52.66	-0.074	14.7772	-0.1018
729	SLU 44	1.01	0.28	52.67	-0.074	14.7788	-0.0947
729	SLU 45	1.03	0.3	53.66	-0.0756	15.0515	-0.1032
729	SLU 46	1.03	0.29	53.67	-0.0756	15.0525	-0.0989
729	SLU 47	1.02	0.27	53.29	-0.075	14.9499	-0.0934
729	SLU 48	1.04	0.3	54.29	-0.0766	15.2226	-0.1019
729	SLU 49	1.04	0.29	54.29	-0.0766	15.2236	-0.0976
729	SLU 50	1.04	0.29	53.91	-0.076	15.1194	-0.0992
729	SLU 51	1.04	0.28	53.91	-0.076	15.1204	-0.0949
729	SLU 52	1.05	0.38	57.51	-0.0816	16.1311	-0.1317
729	SLU 53	1.07	0.41	58.51	-0.0832	16.4039	-0.1402
729	SLU 54	1.07	0.4	58.51	-0.0832	16.4048	-0.136
729	SLU 55	1.07	0.38	58.14	-0.0826	16.3022	-0.1304
729	SLU 56	1.09	0.4	59.14	-0.0842	16.575	-0.1389
729	SLU 57	1.09	0.39	59.14	-0.0842	16.5759	-0.1347
729	SLU 58	1.08	0.4	58.76	-0.0836	16.4718	-0.1363
729	SLU 59	1.08	0.38	58.76	-0.0836	16.4727	-0.132
729	SLU 60	1.07	0.45	59.58	-0.0848	16.7092	-0.1547
729	SLU 61	1.07	0.44	59.59	-0.0849	16.7101	-0.1505
729	SLU 62	1.09	0.45	60.21	-0.0858	16.8803	-0.1534
729	SLU 63	1.09	0.43	60.21	-0.0858	16.8812	-0.1492
729	SLU 64	1.07	0.4	57.54	-0.0814	16.1318	-0.1381
729	SLU 65	1.07	0.38	57.54	-0.0814	16.1334	-0.1309
729	SLU 66	1.1	0.41	58.54	-0.083	16.4061	-0.1394
729	SLU 67	1.1	0.39	58.54	-0.083	16.407	-0.1352
729	SLU 68	1.09	0.38	58.17	-0.0824	16.3045	-0.1296
729	SLU 69	1.11	0.4	59.17	-0.084	16.5772	-0.1381
729	SLU 70	1.11	0.39	59.17	-0.084	16.5781	-0.1338
729	SLU 71	1.1	0.39	58.79	-0.0834	16.474	-0.1354
729	SLU 72	1.1	0.38	58.79	-0.0834	16.475	-0.1312
729	SLU 73	1.12	0.49	62.39	-0.089	17.4857	-0.168
729	SLU 74	1.14	0.51	63.39	-0.0906	17.7585	-0.1765
729	SLU 75	1.14	0.5	63.39	-0.0906	17.7594	-0.1722
729	SLU 76	1.13	0.48	63.02	-0.09	17.6568	-0.1667
729	SLU 77	1.16	0.51	64.01	-0.0915	17.9296	-0.1752
729	SLU 78	1.16	0.5	64.02	-0.0916	17.9305	-0.1709
729	SLU 79	1.15	0.5	63.64	-0.0909	17.8264	-0.1725
729	SLU 80	1.15	0.49	63.64	-0.091	17.8273	-0.1682
729	SLU 81	1.14	0.55	64.46	-0.0922	18.0638	-0.191
729	SLU 82	1.14	0.54	64.47	-0.0922	18.0647	-0.1867
729	SLU 83	1.15	0.55	65.09	-0.0932	18.2349	-0.1897
729	SLU 84	1.15	0.54	65.09	-0.0932	18.2358	-0.1854
729	SLE RA 1	0.81	0.29	43.19	-0.061	12.1114	-0.0982
729	SLE RA 2	0.81	0.27	43.19	-0.061	12.1124	-0.0935
729	SLE RA 3	0.83	0.29	43.86	-0.062	12.2942	-0.0991
729	SLE RA 4	0.83	0.28	43.86	-0.0621	12.2949	-0.0963
729	SLE RA 5	0.82	0.27	43.61	-0.0617	12.2265	-0.0926
729	SLE RA 6	0.84	0.29	44.27	-0.0627	12.4083	-0.0983
729	SLE RA 7	0.84	0.28	44.28	-0.0627	12.4089	-0.0954
729	SLE RA 8	0.83	0.28	44.02	-0.0623	12.3395	-0.0965
729	SLE RA 9	0.83	0.27	44.02	-0.0623	12.3401	-0.0936
729	SLE RA 10	0.84	0.34	46.42	-0.0661	13.014	-0.1182
729	SLE RA 11	0.86	0.36	47.09	-0.0671	13.1958	-0.1238
729	SLE RA 12	0.86	0.35	47.09	-0.0671	13.1964	-0.121
729	SLE RA 13	0.85	0.34	46.84	-0.0667	13.1281	-0.1173
729	SLE RA 14	0.87	0.36	47.5	-0.0678	13.3099	-0.123
729	SLE RA 15	0.87	0.35	47.51	-0.0678	13.3105	-0.1201
729	SLE RA 16	0.86	0.35	47.25	-0.0674	13.2411	-0.1212
729	SLE RA 17	0.86	0.34	47.26	-0.0674	13.2417	-0.1183
729	SLE RA 18	0.85	0.39	47.8	-0.0682	13.3993	-0.1335
729	SLE RA 19	0.85	0.38	47.81	-0.0682	13.4	-0.1307
729	SLE RA 20	0.86	0.39	48.22	-0.0689	13.5134	-0.1326
729	SLE RA 21	0.86	0.38	48.22	-0.0689	13.514	-0.1298
729	SLE FR 1	0.81	0.29	43.19	-0.061	12.1114	-0.0982
729	SLE FR 2	0.81	0.28	43.19	-0.061	12.1116	-0.0973
729	SLE FR 3	0.81	0.29	43.35	-0.0613	12.157	-0.0979
729	SLE FR 4	0.82	0.31	44.57	-0.0632	12.498	-0.1079

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
729	SLE FR 5	0.83	0.32	44.74	-0.0634	12.5434	-0.1085
729	SLE FR 6	0.83	0.34	45.5	-0.0646	12.7554	-0.1159
729	SLE QP 1	0.81	0.29	43.19	-0.061	12.1114	-0.0982
729	SLE QP 2	0.82	0.32	44.57	-0.0632	12.4978	-0.1088
729	SLD 1	3.5	0.87	32.16	-0.0437	9.2967	-0.3001
729	SLD 2	3.44	1.53	32.11	-0.0449	9.3038	-0.5303
729	SLD 3	3.59	-0.5	32.35	-0.0422	9.2452	0.1765
729	SLD 4	3.52	0.16	32.3	-0.0435	9.2522	-0.0536
729	SLD 5	1.51	2.43	40.57	-0.0593	11.6143	-0.8472
729	SLD 6	1.46	2.87	40.54	-0.0602	11.619	-1
729	SLD 7	1.8	-2.12	41.21	-0.0544	11.4426	0.7415
729	SLD 8	1.76	-1.68	41.17	-0.0552	11.4473	0.5888
729	SLD 9	-0.11	2.31	47.97	-0.0711	13.5483	-0.8064
729	SLD 10	-0.15	2.75	47.94	-0.0719	13.5529	-0.9591
729	SLD 11	0.19	-2.24	48.61	-0.0661	13.3766	0.7823
729	SLD 12	0.14	-1.8	48.58	-0.067	13.3812	0.6296
729	SLD 13	-1.88	0.47	56.84	-0.0829	15.7433	-0.164
729	SLD 14	-1.94	1.13	56.79	-0.0841	15.7503	-0.3941
729	SLD 15	-1.79	-0.9	57.03	-0.0814	15.6918	0.3126
729	SLD 16	-1.86	-0.24	56.98	-0.0826	15.6988	0.0825
729	SLV 1	7.09	1.56	15.53	-0.0175	5.0078	-0.5407
729	SLV 2	6.93	3.1	15.42	-0.0205	5.0242	-1.0764
729	SLV 3	7.29	-1.53	15.98	-0.0141	4.8884	0.5396
729	SLV 4	7.14	0.01	15.86	-0.0171	4.9047	0.0039
729	SLV 5	2.42	5.12	35.21	-0.054	10.4291	-1.7827
729	SLV 6	2.32	6.12	35.13	-0.056	10.4397	-2.1318
729	SLV 7	3.1	-5.2	36.69	-0.0428	10.0309	1.8184
729	SLV 8	3	-4.2	36.61	-0.0448	10.0416	1.4693
729	SLV 9	-1.35	4.83	52.53	-0.0816	14.954	-1.6869
729	SLV 10	-1.45	5.84	52.46	-0.0835	14.9646	-2.036
729	SLV 11	-0.67	-5.48	54.01	-0.0703	14.5558	1.9141
729	SLV 12	-0.78	-4.48	53.94	-0.0723	14.5665	1.5651
729	SLV 13	-5.49	0.63	73.28	-0.1092	20.0908	-0.2215
729	SLV 14	-5.64	2.16	73.17	-0.1122	20.1071	-0.7573
729	SLV 15	-5.29	-2.47	73.73	-0.1058	19.9714	0.8588
729	SLV 16	-5.44	-0.93	73.61	-0.1088	19.9877	0.3231
729	CRTFP Ux+	0	0	0	0	0	0
729	CRTFP Ux-	0	0	0	0	0	0
729	CRTFP Uy+	0	0	0	0	0	0
729	CRTFP Uy-	0	0	0	0	0	0
731	SLU 1	0.26	0.87	98.93	-15.8714	1.1328	-0.0049
731	SLU 2	0.25	0.74	98.88	-15.8668	1.1308	-0.0052
731	SLU 3	0.26	0.92	101.27	-16.2505	1.1646	-0.0049
731	SLU 4	0.26	0.84	101.24	-16.2477	1.1634	-0.005
731	SLU 5	0.25	0.75	100.29	-16.0959	1.149	-0.0053
731	SLU 6	0.27	0.93	102.68	-16.4795	1.1829	-0.005
731	SLU 7	0.27	0.86	102.65	-16.4768	1.1816	-0.0051
731	SLU 8	0.27	0.9	101.74	-16.3295	1.1693	-0.0051
731	SLU 9	0.26	0.82	101.72	-16.3268	1.1681	-0.0053
731	SLU 10	0.34	0.93	112	-17.9642	1.3034	0.0062
731	SLU 11	0.36	1.11	114.38	-18.3478	1.3373	0.0065
731	SLU 12	0.35	1.03	114.35	-18.3451	1.3361	0.0063
731	SLU 13	0.35	0.94	113.41	-18.1932	1.3217	0.006
731	SLU 14	0.36	1.12	115.79	-18.5769	1.3555	0.0064
731	SLU 15	0.36	1.05	115.76	-18.5741	1.3543	0.0062
731	SLU 16	0.36	1.08	114.86	-18.4269	1.342	0.0062
731	SLU 17	0.36	1.01	114.83	-18.4241	1.3408	0.0061
731	SLU 18	0.39	1.13	117.66	-18.8676	1.3795	0.0113
731	SLU 19	0.38	1.06	117.64	-18.8649	1.3783	0.0111
731	SLU 20	0.39	1.15	119.07	-19.0967	1.3978	0.0112
731	SLU 21	0.39	1.07	119.04	-19.0939	1.3965	0.011
731	SLU 22	0.3	1.23	111.18	-17.8234	1.3169	-0.0039
731	SLU 23	0.29	1.1	111.13	-17.8188	1.3148	-0.0042
731	SLU 24	0.3	1.28	113.52	-18.2025	1.3487	-0.0038
731	SLU 25	0.3	1.21	113.49	-18.1997	1.3474	-0.004
731	SLU 26	0.29	1.12	112.54	-18.0479	1.3331	-0.0043
731	SLU 27	0.31	1.3	114.92	-18.4316	1.3669	-0.0039
731	SLU 28	0.31	1.22	114.9	-18.4288	1.3657	-0.0041
731	SLU 29	0.31	1.26	113.99	-18.2816	1.3534	-0.0041
731	SLU 30	0.3	1.18	113.97	-18.2788	1.3521	-0.0043
731	SLU 31	0.38	1.29	124.25	-19.9162	1.4875	0.0072
731	SLU 32	0.4	1.47	126.63	-20.2999	1.5213	0.0075
731	SLU 33	0.39	1.39	126.6	-20.2971	1.5201	0.0073
731	SLU 34	0.39	1.3	125.66	-20.1453	1.5058	0.0071
731	SLU 35	0.4	1.49	128.04	-20.5289	1.5396	0.0074
731	SLU 36	0.4	1.41	128.01	-20.5262	1.5384	0.0072
731	SLU 37	0.4	1.45	127.11	-20.3789	1.5261	0.0073
731	SLU 38	0.4	1.37	127.08	-20.3762	1.5248	0.0071
731	SLU 39	0.43	1.5	129.91	-20.8197	1.5636	0.0123
731	SLU 40	0.42	1.42	129.88	-20.8169	1.5623	0.0122
731	SLU 41	0.43	1.51	131.32	-21.0487	1.5818	0.0122
731	SLU 42	0.43	1.44	131.29	-21.046	1.5806	0.012
731	SLU 43	0.32	1	124.41	-19.9635	1.4095	-0.0067
731	SLU 44	0.31	0.87	124.36	-19.9589	1.4075	-0.007
731	SLU 45	0.33	1.05	126.75	-20.3426	1.4413	-0.0067
731	SLU 46	0.32	0.98	126.72	-20.3399	1.4401	-0.0069
731	SLU 47	0.32	0.89	125.77	-20.188	1.4257	-0.0071
731	SLU 48	0.33	1.07	128.15	-20.5717	1.4596	-0.0068
731	SLU 49	0.33	0.99	128.13	-20.5689	1.4584	-0.007
731	SLU 50	0.33	1.03	127.22	-20.4217	1.446	-0.0069

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
731	SLU 51	0.33	0.95	127.2	-20.4189	1.4448	-0.0071
731	SLU 52	0.4	1.06	137.48	-22.0563	1.5802	0.0043
731	SLU 53	0.42	1.24	139.86	-22.44	1.614	0.0046
731	SLU 54	0.41	1.17	139.83	-22.4372	1.6128	0.0045
731	SLU 55	0.41	1.08	138.88	-22.2854	1.5984	0.0042
731	SLU 56	0.43	1.26	141.27	-22.669	1.6323	0.0045
731	SLU 57	0.42	1.18	141.24	-22.6663	1.6311	0.0044
731	SLU 58	0.42	1.22	140.34	-22.519	1.6187	0.0044
731	SLU 59	0.42	1.14	140.31	-22.5163	1.6175	0.0042
731	SLU 60	0.45	1.27	143.14	-22.9598	1.6562	0.0095
731	SLU 61	0.44	1.19	143.11	-22.957	1.655	0.0093
731	SLU 62	0.46	1.28	144.55	-23.1888	1.6745	0.0094
731	SLU 63	0.45	1.21	144.52	-23.1861	1.6733	0.0092
731	SLU 64	0.36	1.36	136.66	-21.9156	1.5936	-0.0057
731	SLU 65	0.35	1.24	136.61	-21.911	1.5915	-0.006
731	SLU 66	0.37	1.42	138.99	-22.2946	1.6254	-0.0057
731	SLU 67	0.36	1.34	138.97	-22.2919	1.6242	-0.0058
731	SLU 68	0.36	1.25	138.02	-22.1401	1.6098	-0.0061
731	SLU 69	0.37	1.43	140.4	-22.5237	1.6436	-0.0058
731	SLU 70	0.37	1.36	140.38	-22.521	1.6424	-0.0059
731	SLU 71	0.37	1.39	139.47	-22.3737	1.6301	-0.0059
731	SLU 72	0.37	1.32	139.45	-22.371	1.6289	-0.0061
731	SLU 73	0.44	1.42	149.73	-24.0084	1.7642	0.0054
731	SLU 74	0.46	1.61	152.11	-24.392	1.7981	0.0057
731	SLU 75	0.45	1.53	152.08	-24.3893	1.7969	0.0055
731	SLU 76	0.45	1.44	151.13	-24.2374	1.7825	0.0053
731	SLU 77	0.47	1.62	153.52	-24.6211	1.8163	0.0056
731	SLU 78	0.46	1.54	153.49	-24.6183	1.8151	0.0054
731	SLU 79	0.46	1.58	152.59	-24.4711	1.8028	0.0054
731	SLU 80	0.46	1.51	152.56	-24.4683	1.8016	0.0053
731	SLU 81	0.49	1.63	155.39	-24.9118	1.8403	0.0105
731	SLU 82	0.48	1.56	155.36	-24.9091	1.8391	0.0103
731	SLU 83	0.5	1.65	156.8	-25.1409	1.8586	0.0104
731	SLU 84	0.49	1.57	156.77	-25.1381	1.8573	0.0102
731	SLE RA 1	0.27	0.97	102.43	-16.4291	1.1854	-0.0046
731	SLE RA 2	0.26	0.89	102.4	-16.4261	1.184	-0.0048
731	SLE RA 3	0.27	1.01	103.99	-16.6818	1.2066	-0.0046
731	SLE RA 4	0.27	0.95	103.97	-16.68	1.2058	-0.0047
731	SLE RA 5	0.27	0.89	103.34	-16.5788	1.1962	-0.0049
731	SLE RA 6	0.28	1.02	104.93	-16.8345	1.2188	-0.0047
731	SLE RA 7	0.27	0.96	104.91	-16.8327	1.2179	-0.0048
731	SLE RA 8	0.28	0.99	104.31	-16.7345	1.2097	-0.0048
731	SLE RA 9	0.27	0.94	104.29	-16.7327	1.2089	-0.0049
731	SLE RA 10	0.32	1.01	111.14	-17.8243	1.2992	0.0028
731	SLE RA 11	0.33	1.13	112.73	-18.0801	1.3217	0.003
731	SLE RA 12	0.33	1.08	112.71	-18.0782	1.3209	0.0029
731	SLE RA 13	0.33	1.02	112.08	-17.977	1.3113	0.0027
731	SLE RA 14	0.34	1.14	113.67	-18.2328	1.3339	0.0029
731	SLE RA 15	0.33	1.09	113.65	-18.2309	1.3331	0.0028
731	SLE RA 16	0.34	1.11	113.05	-18.1328	1.3249	0.0028
731	SLE RA 17	0.33	1.06	113.03	-18.1309	1.324	0.0027
731	SLE RA 18	0.35	1.15	114.92	-18.4266	1.3499	0.0062
731	SLE RA 19	0.35	1.1	114.9	-18.4248	1.349	0.0061
731	SLE RA 20	0.36	1.16	115.86	-18.5793	1.362	0.0061
731	SLE RA 21	0.36	1.11	115.84	-18.5775	1.3612	0.006
731	SLE FR 1	0.27	0.97	102.43	-16.4291	1.1854	-0.0046
731	SLE FR 2	0.27	0.95	102.42	-16.4285	1.1851	-0.0046
731	SLE FR 3	0.27	0.97	102.8	-16.4902	1.1903	-0.0046
731	SLE FR 4	0.29	1.01	106.17	-17.0277	1.2345	-0.0014
731	SLE FR 5	0.3	1.03	106.55	-17.0894	1.2396	-0.0014
731	SLE FR 6	0.31	1.06	108.67	-17.4279	1.2676	0.0008
731	SLE QP 1	0.27	0.97	102.43	-16.4291	1.1854	-0.0046
731	SLE QP 2	0.29	1.02	106.17	-17.0284	1.2347	-0.0014
731	SLD 1	9.74	3.34	108.59	-17.2164	1.3042	1.4733
731	SLD 2	9.6	2.93	108.41	-17.1964	1.3043	1.4698
731	SLD 3	9.88	0.26	108.13	-17.1756	1.2638	1.494
731	SLD 4	9.74	-0.14	107.95	-17.1556	1.264	1.4905
731	SLD 5	2.95	6.46	107.63	-17.1503	1.3167	0.4102
731	SLD 6	2.86	6.19	107.51	-17.137	1.3168	0.4079
731	SLD 7	3.4	-3.8	106.09	-17.0143	1.1823	0.4793
731	SLD 8	3.31	-4.07	105.98	-17.001	1.1824	0.477
731	SLD 9	-2.72	6.12	106.37	-17.0557	1.2871	-0.4797
731	SLD 10	-2.81	5.85	106.26	-17.0424	1.2872	-0.4821
731	SLD 11	-2.27	-4.15	104.84	-16.9197	1.1527	-0.4106
731	SLD 12	-2.36	-4.41	104.72	-16.9065	1.1528	-0.413
731	SLD 13	-9.15	2.19	104.4	-16.9011	1.2055	-1.4932
731	SLD 14	-9.29	1.79	104.22	-16.8812	1.2056	-1.4967
731	SLD 15	-9.01	-0.89	103.94	-16.8603	1.1652	-1.4725
731	SLD 16	-9.15	-1.29	103.76	-16.8404	1.1653	-1.476
731	SLV 1	22.39	6.32	111.87	-17.4758	1.3961	3.4467
731	SLV 2	22.06	5.38	111.47	-17.4293	1.3964	3.4385
731	SLV 3	22.7	-0.65	110.82	-17.3822	1.3052	3.4951
731	SLV 4	22.38	-1.59	110.42	-17.3358	1.3054	3.4868
731	SLV 5	6.5	13.34	109.54	-17.3127	1.421	0.9612
731	SLV 6	6.29	12.73	109.28	-17.2824	1.4212	0.9558
731	SLV 7	7.55	-9.88	106.05	-17.0008	1.1179	1.1223
731	SLV 8	7.34	-10.49	105.79	-16.9705	1.1181	1.117
731	SLV 9	-6.75	12.54	106.56	-17.0862	1.3514	-1.1197
731	SLV 10	-6.96	11.93	106.3	-17.0559	1.3516	-1.1251
731	SLV 11	-5.7	-10.69	103.07	-16.7743	1.0483	-0.9585

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
731	SLV 12	-5.91	-11.3	102.81	-16.744	1.0485	-0.9639
731	SLV 13	-21.79	3.63	101.93	-16.7209	1.164	-3.4896
731	SLV 14	-22.11	2.69	101.53	-16.6745	1.1643	-3.4978
731	SLV 15	-21.47	-3.34	100.88	-16.6274	1.0731	-3.4412
731	SLV 16	-21.8	-4.27	100.48	-16.5809	1.0734	-3.4495
731	CRTFP Ux+	0	0	0	0	0	0
731	CRTFP Ux-	0	0	0	0	0	0
731	CRTFP Uy+	0	0	0	0	0	0
731	CRTFP Uy-	0	0	0	0	0	0
734	SLU 1	0.84	2.18	83.08	-11.1	-2.3235	0.1743
734	SLU 2	0.83	2.11	83.05	-11.0981	-2.3211	0.1724
734	SLU 3	0.87	2.27	84.96	-11.3538	-2.3763	0.1798
734	SLU 4	0.86	2.22	84.94	-11.3526	-2.3749	0.1787
734	SLU 5	0.85	2.14	84.2	-11.252	-2.3526	0.1754
734	SLU 6	0.89	2.3	86.11	-11.5076	-2.4078	0.1827
734	SLU 7	0.88	2.26	86.09	-11.5065	-2.4064	0.1816
734	SLU 8	0.88	2.25	85.37	-11.4077	-2.3864	0.1802
734	SLU 9	0.87	2.2	85.35	-11.4066	-2.385	0.1791
734	SLU 10	0.93	2.48	93.86	-12.5366	-2.6244	0.1924
734	SLU 11	0.97	2.63	95.77	-12.7923	-2.6796	0.1997
734	SLU 12	0.97	2.59	95.75	-12.7911	-2.6782	0.1986
734	SLU 13	0.95	2.51	95	-12.6904	-2.6559	0.1953
734	SLU 14	0.99	2.66	96.92	-12.9461	-2.7111	0.2027
734	SLU 15	0.98	2.62	96.9	-12.9449	-2.7096	0.2016
734	SLU 16	0.98	2.61	96.18	-12.8462	-2.6897	0.2001
734	SLU 17	0.98	2.57	96.16	-12.845	-2.6883	0.199
734	SLU 18	0.99	2.71	98.52	-13.155	-2.7568	0.2028
734	SLU 19	0.98	2.66	98.5	-13.1538	-2.7554	0.2017
734	SLU 20	1.01	2.74	99.67	-13.3088	-2.7882	0.2057
734	SLU 21	1	2.7	99.65	-13.3077	-2.7868	0.2046
734	SLU 22	0.96	2.66	93.07	-12.4204	-2.6201	0.1997
734	SLU 23	0.95	2.59	93.04	-12.4185	-2.6178	0.1978
734	SLU 24	0.99	2.75	94.95	-12.6742	-2.6729	0.2052
734	SLU 25	0.98	2.71	94.93	-12.673	-2.6715	0.2041
734	SLU 26	0.97	2.63	94.19	-12.5724	-2.6492	0.2008
734	SLU 27	1	2.78	96.1	-12.828	-2.7044	0.2081
734	SLU 28	1	2.74	96.08	-12.8269	-2.703	0.207
734	SLU 29	1	2.73	95.36	-12.7281	-2.683	0.2056
734	SLU 30	0.99	2.69	95.35	-12.727	-2.6816	0.2045
734	SLU 31	1.05	2.96	103.85	-13.857	-2.921	0.2178
734	SLU 32	1.09	3.11	105.76	-14.1127	-2.9762	0.2251
734	SLU 33	1.08	3.07	105.74	-14.1115	-2.9748	0.224
734	SLU 34	1.07	2.99	105	-14.0108	-2.9525	0.2207
734	SLU 35	1.11	3.15	106.91	-14.2665	-3.0077	0.2281
734	SLU 36	1.1	3.1	106.89	-14.2654	-3.0062	0.227
734	SLU 37	1.1	3.09	106.17	-14.1666	-2.9863	0.2255
734	SLU 38	1.09	3.05	106.15	-14.1654	-2.9849	0.2244
734	SLU 39	1.11	3.19	108.51	-14.4754	-3.0534	0.2282
734	SLU 40	1.1	3.14	108.49	-14.4742	-3.052	0.2271
734	SLU 41	1.12	3.22	109.66	-14.6292	-3.0848	0.2311
734	SLU 42	1.12	3.18	109.64	-14.6281	-3.0834	0.23
734	SLU 43	1.06	2.67	104.58	-13.9773	-2.9189	0.2179
734	SLU 44	1.05	2.6	104.55	-13.9754	-2.9165	0.216
734	SLU 45	1.08	2.76	106.46	-14.2311	-2.9717	0.2234
734	SLU 46	1.08	2.71	106.44	-14.2299	-2.9703	0.2222
734	SLU 47	1.06	2.63	105.69	-14.1293	-2.948	0.219
734	SLU 48	1.1	2.79	107.6	-14.3849	-3.0031	0.2263
734	SLU 49	1.1	2.75	107.59	-14.3838	-3.0017	0.2252
734	SLU 50	1.09	2.74	106.87	-14.285	-2.9818	0.2238
734	SLU 51	1.09	2.69	106.85	-14.2839	-2.9804	0.2227
734	SLU 52	1.15	2.97	115.36	-15.4139	-3.2198	0.2359
734	SLU 53	1.19	3.12	117.27	-15.6696	-3.275	0.2433
734	SLU 54	1.18	3.08	117.25	-15.6684	-3.2735	0.2422
734	SLU 55	1.17	3	116.5	-15.5677	-3.2513	0.2389
734	SLU 56	1.2	3.15	118.41	-15.8234	-3.3064	0.2462
734	SLU 57	1.2	3.11	118.4	-15.8222	-3.305	0.2451
734	SLU 58	1.2	3.1	117.68	-15.7235	-3.2851	0.2437
734	SLU 59	1.19	3.06	117.66	-15.7223	-3.2837	0.2426
734	SLU 60	1.2	3.19	120.02	-16.0323	-3.3522	0.2463
734	SLU 61	1.2	3.15	120	-16.0311	-3.3507	0.2452
734	SLU 62	1.22	3.23	121.17	-16.1861	-3.3836	0.2493
734	SLU 63	1.22	3.18	121.15	-16.185	-3.3822	0.2482
734	SLU 64	1.17	3.15	114.57	-15.2977	-3.2155	0.2433
734	SLU 65	1.16	3.08	114.54	-15.2958	-3.2131	0.2414
734	SLU 66	1.2	3.24	116.45	-15.5515	-3.2683	0.2488
734	SLU 67	1.19	3.2	116.43	-15.5503	-3.2669	0.2476
734	SLU 68	1.18	3.12	115.68	-15.4497	-3.2446	0.2444
734	SLU 69	1.22	3.27	117.6	-15.7053	-3.2998	0.2517
734	SLU 70	1.21	3.23	117.58	-15.7042	-3.2983	0.2506
734	SLU 71	1.21	3.22	116.86	-15.6054	-3.2784	0.2492
734	SLU 72	1.2	3.18	116.84	-15.6043	-3.277	0.2481
734	SLU 73	1.26	3.45	125.35	-16.7343	-3.5164	0.2614
734	SLU 74	1.3	3.6	127.26	-16.99	-3.5716	0.2687
734	SLU 75	1.29	3.56	127.24	-16.9888	-3.5701	0.2676
734	SLU 76	1.28	3.48	126.49	-16.8881	-3.5479	0.2643
734	SLU 77	1.32	3.64	128.41	-17.1438	-3.603	0.2716
734	SLU 78	1.31	3.59	128.39	-17.1427	-3.6016	0.2705
734	SLU 79	1.31	3.58	127.67	-17.0439	-3.5817	0.2691
734	SLU 80	1.31	3.54	127.65	-17.0427	-3.5803	0.268
734	SLU 81	1.32	3.68	130.01	-17.3527	-3.6488	0.2717

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
734	SLU 82	1.31	3.63	129.99	-17.3515	-3.6473	0.2706
734	SLU 83	1.34	3.71	131.16	-17.5065	-3.6802	0.2747
734	SLU 84	1.33	3.67	131.14	-17.5054	-3.6788	0.2736
734	SLE RA 1	0.88	2.32	85.93	-11.4773	-2.4083	0.1815
734	SLE RA 2	0.87	2.27	85.91	-11.476	-2.4067	0.1803
734	SLE RA 3	0.89	2.38	87.19	-11.6465	-2.4435	0.1852
734	SLE RA 4	0.89	2.35	87.18	-11.6457	-2.4425	0.1845
734	SLE RA 5	0.88	2.29	86.68	-11.5786	-2.4277	0.1823
734	SLE RA 6	0.91	2.4	87.95	-11.749	-2.4644	0.1872
734	SLE RA 7	0.9	2.37	87.94	-11.7483	-2.4635	0.1864
734	SLE RA 8	0.9	2.36	87.46	-11.6824	-2.4502	0.1855
734	SLE RA 9	0.9	2.33	87.45	-11.6817	-2.4493	0.1847
734	SLE RA 10	0.94	2.52	93.12	-12.435	-2.6089	0.1936
734	SLE RA 11	0.96	2.62	94.39	-12.6054	-2.6457	0.1985
734	SLE RA 12	0.96	2.59	94.38	-12.6047	-2.6447	0.1978
734	SLE RA 13	0.95	2.54	93.88	-12.5375	-2.6298	0.1956
734	SLE RA 14	0.97	2.64	95.16	-12.708	-2.6666	0.2005
734	SLE RA 15	0.97	2.61	95.15	-12.7072	-2.6657	0.1997
734	SLE RA 16	0.97	2.61	94.67	-12.6414	-2.6524	0.1988
734	SLE RA 17	0.97	2.58	94.66	-12.6406	-2.6515	0.198
734	SLE RA 18	0.97	2.67	96.23	-12.8473	-2.6971	0.2005
734	SLE RA 19	0.97	2.64	96.22	-12.8465	-2.6962	0.1998
734	SLE RA 20	0.99	2.69	96.99	-12.9498	-2.7181	0.2025
734	SLE RA 21	0.98	2.66	96.98	-12.9491	-2.7171	0.2018
734	SLE FR 1	0.88	2.32	85.93	-11.4773	-2.4083	0.1815
734	SLE FR 2	0.87	2.31	85.93	-11.477	-2.408	0.1813
734	SLE FR 3	0.88	2.33	86.24	-11.5183	-2.4167	0.1823
734	SLE FR 4	0.9	2.42	89.02	-11.888	-2.4946	0.187
734	SLE FR 5	0.91	2.43	89.33	-11.9293	-2.5033	0.188
734	SLE FR 6	0.93	2.49	91.08	-12.1623	-2.5527	0.191
734	SLE QP 1	0.88	2.32	85.93	-11.4773	-2.4083	0.1815
734	SLE QP 2	0.91	2.42	89.02	-11.8883	-2.4949	0.1872
734	SLD 1	9.56	3.4	84.14	-11.333	-1.9535	1.3029
734	SLD 2	9.44	3.71	84.28	-11.3454	-1.9625	1.3102
734	SLD 3	9.4	0.75	83.78	-11.3645	-1.9067	1.2269
734	SLD 4	9.27	1.05	83.92	-11.377	-1.9157	1.2341
734	SLD 5	3.78	6.69	88.08	-11.6716	-2.4019	0.636
734	SLD 6	3.7	6.9	88.18	-11.6798	-2.4079	0.6408
734	SLD 7	3.22	-2.16	86.87	-11.7768	-2.2458	0.3824
734	SLD 8	3.13	-1.96	86.97	-11.785	-2.2518	0.3872
734	SLD 9	-1.32	6.81	91.08	-11.9916	-2.7381	-0.0128
734	SLD 10	-1.41	7.01	91.17	-11.9998	-2.744	-0.008
734	SLD 11	-1.89	-2.05	89.87	-12.0967	-2.582	-0.2663
734	SLD 12	-1.97	-1.84	89.96	-12.105	-2.588	-0.2615
734	SLD 13	-7.46	3.8	94.12	-12.3996	-3.0741	-0.8596
734	SLD 14	-7.58	4.1	94.27	-12.412	-3.0831	-0.8524
734	SLD 15	-7.63	1.14	93.76	-12.4312	-3.0273	-0.9357
734	SLD 16	-7.75	1.45	93.9	-12.4436	-3.0363	-0.9285
734	SLV 1	21.15	4.6	77.59	-10.5893	-1.2267	2.7932
734	SLV 2	20.86	5.32	77.92	-10.6182	-1.2476	2.8101
734	SLV 3	20.76	-1.42	76.76	-10.6626	-1.1205	2.6208
734	SLV 4	20.47	-0.7	77.09	-10.6915	-1.1414	2.6377
734	SLV 5	7.62	12.08	86.79	-11.3824	-2.2718	1.2274
734	SLV 6	7.43	12.55	87	-11.4012	-2.2854	1.2384
734	SLV 7	6.32	-7.98	84.03	-11.6266	-1.9179	0.653
734	SLV 8	6.13	-7.51	84.25	-11.6454	-1.9316	0.664
734	SLV 9	-4.32	12.36	93.8	-12.1311	-3.0583	-0.2895
734	SLV 10	-4.51	12.83	94.01	-12.15	-3.0719	-0.2785
734	SLV 11	-5.62	-7.7	91.04	-12.3753	-2.7044	-0.864
734	SLV 12	-5.81	-7.23	91.26	-12.3942	-2.7181	-0.8529
734	SLV 13	-18.66	5.55	100.95	-13.0851	-3.8484	-2.2632
734	SLV 14	-18.95	6.26	101.28	-13.114	-3.8693	-2.2463
734	SLV 15	-19.04	-0.47	100.12	-13.1583	-3.7422	-2.4356
734	SLV 16	-19.34	0.25	100.46	-13.1872	-3.7632	-2.4187
734	CRTFP Ux+	0	0	0	0	0	0
734	CRTFP Ux-	0	0	0	0	0	0
734	CRTFP Uy+	0	0	0	0	0	0
734	CRTFP Uy-	0	0	0	0	0	0
737	SLU 1	0.73	0.26	39.86	-0.0674	10.0343	-0.0898
737	SLU 2	0.73	0.24	39.87	-0.0674	10.0356	-0.0826
737	SLU 3	0.75	0.27	40.82	-0.0692	10.2643	-0.0912
737	SLU 4	0.75	0.25	40.82	-0.0692	10.2651	-0.0868
737	SLU 5	0.75	0.24	40.46	-0.0685	10.1791	-0.0813
737	SLU 6	0.77	0.26	41.41	-0.0703	10.4079	-0.0899
737	SLU 7	0.77	0.25	41.41	-0.0703	10.4086	-0.0855
737	SLU 8	0.76	0.25	41.05	-0.0696	10.3214	-0.0872
737	SLU 9	0.76	0.24	41.05	-0.0696	10.3222	-0.0829
737	SLU 10	0.78	0.35	44.47	-0.076	11.1743	-0.1199
737	SLU 11	0.8	0.37	45.42	-0.0778	11.4031	-0.1285
737	SLU 12	0.8	0.36	45.42	-0.0778	11.4039	-0.1241
737	SLU 13	0.79	0.34	45.06	-0.0772	11.3179	-0.1186
737	SLU 14	0.81	0.37	46.01	-0.0789	11.5467	-0.1272
737	SLU 15	0.81	0.36	46.01	-0.079	11.5474	-0.1228
737	SLU 16	0.8	0.36	45.65	-0.0783	11.4602	-0.1245
737	SLU 17	0.8	0.35	45.65	-0.0783	11.461	-0.1202
737	SLU 18	0.79	0.41	46.43	-0.0797	11.6611	-0.143
737	SLU 19	0.79	0.4	46.44	-0.0797	11.6619	-0.1387
737	SLU 20	0.81	0.41	47.03	-0.0809	11.8047	-0.1418
737	SLU 21	0.81	0.4	47.03	-0.0809	11.8055	-0.1374
737	SLU 22	0.8	0.37	44.5	-0.0758	11.1756	-0.1262

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
737	SLU 23	0.8	0.35	44.51	-0.0759	11.1768	-0.119
737	SLU 24	0.82	0.37	45.45	-0.0776	11.4056	-0.1276
737	SLU 25	0.82	0.36	45.45	-0.0777	11.4063	-0.1233
737	SLU 26	0.81	0.34	45.1	-0.077	11.3204	-0.1177
737	SLU 27	0.83	0.37	46.04	-0.0788	11.5491	-0.1263
737	SLU 28	0.83	0.35	46.05	-0.0788	11.5499	-0.122
737	SLU 29	0.82	0.36	45.69	-0.0781	11.4627	-0.1236
737	SLU 30	0.82	0.35	45.69	-0.0781	11.4634	-0.1193
737	SLU 31	0.84	0.45	49.1	-0.0845	12.3156	-0.1563
737	SLU 32	0.86	0.48	50.05	-0.0863	12.5444	-0.1649
737	SLU 33	0.86	0.46	50.05	-0.0863	12.5451	-0.1606
737	SLU 34	0.85	0.45	49.7	-0.0857	12.4592	-0.155
737	SLU 35	0.87	0.47	50.64	-0.0874	12.6879	-0.1636
737	SLU 36	0.87	0.46	50.65	-0.0874	12.6887	-0.1593
737	SLU 37	0.87	0.47	50.29	-0.0868	12.6015	-0.1609
737	SLU 38	0.87	0.45	50.29	-0.0868	12.6022	-0.1566
737	SLU 39	0.85	0.52	51.07	-0.0882	12.8024	-0.1795
737	SLU 40	0.85	0.51	51.07	-0.0882	12.8032	-0.1752
737	SLU 41	0.87	0.52	51.66	-0.0894	12.946	-0.1782
737	SLU 42	0.87	0.5	51.67	-0.0894	12.9467	-0.1739
737	SLU 43	0.93	0.3	50.23	-0.0846	12.6533	-0.1042
737	SLU 44	0.93	0.28	50.24	-0.0847	12.6546	-0.097
737	SLU 45	0.95	0.31	51.19	-0.0864	12.8833	-0.1056
737	SLU 46	0.95	0.3	51.19	-0.0865	12.8841	-0.1013
737	SLU 47	0.95	0.28	50.83	-0.0858	12.7981	-0.0957
737	SLU 48	0.97	0.3	51.78	-0.0876	13.0269	-0.1043
737	SLU 49	0.97	0.29	51.78	-0.0876	13.0276	-0.1
737	SLU 50	0.96	0.3	51.42	-0.0869	12.9404	-0.1016
737	SLU 51	0.96	0.28	51.42	-0.0869	12.9412	-0.0973
737	SLU 52	0.97	0.39	54.84	-0.0933	13.7934	-0.1343
737	SLU 53	0.99	0.42	55.79	-0.0951	14.0221	-0.1429
737	SLU 54	0.99	0.4	55.79	-0.0951	14.0229	-0.1386
737	SLU 55	0.99	0.39	55.43	-0.0945	13.9369	-0.133
737	SLU 56	1.01	0.41	56.38	-0.0962	14.1657	-0.1416
737	SLU 57	1.01	0.4	56.38	-0.0963	14.1664	-0.1373
737	SLU 58	1	0.4	56.02	-0.0956	14.0792	-0.1389
737	SLU 59	1	0.39	56.02	-0.0956	14.08	-0.1346
737	SLU 60	0.99	0.46	56.81	-0.097	14.2801	-0.1575
737	SLU 61	0.99	0.44	56.81	-0.097	14.2809	-0.1532
737	SLU 62	1.01	0.45	57.4	-0.0982	14.4237	-0.1562
737	SLU 63	1.01	0.44	57.4	-0.0982	14.4245	-0.1519
737	SLU 64	0.99	0.41	54.87	-0.0931	13.7946	-0.1406
737	SLU 65	0.99	0.39	54.88	-0.0932	13.7958	-0.1334
737	SLU 66	1.02	0.41	55.82	-0.0949	14.0246	-0.142
737	SLU 67	1.02	0.4	55.83	-0.095	14.0253	-0.1377
737	SLU 68	1.01	0.38	55.47	-0.0943	13.9394	-0.1322
737	SLU 69	1.03	0.41	56.42	-0.0961	14.1681	-0.1407
737	SLU 70	1.03	0.4	56.42	-0.0961	14.1689	-0.1364
737	SLU 71	1.02	0.4	56.06	-0.0954	14.0817	-0.1381
737	SLU 72	1.02	0.39	56.06	-0.0954	14.0824	-0.1337
737	SLU 73	1.04	0.5	59.47	-0.1018	14.9346	-0.1707
737	SLU 74	1.06	0.52	60.42	-0.1036	15.1634	-0.1793
737	SLU 75	1.06	0.51	60.42	-0.1036	15.1641	-0.175
737	SLU 76	1.05	0.49	60.07	-0.103	15.0782	-0.1694
737	SLU 77	1.07	0.52	61.01	-0.1047	15.3069	-0.178
737	SLU 78	1.07	0.5	61.02	-0.1047	15.3077	-0.1737
737	SLU 79	1.06	0.51	60.66	-0.1041	15.2205	-0.1754
737	SLU 80	1.06	0.5	60.66	-0.1041	15.2212	-0.171
737	SLU 81	1.05	0.56	61.44	-0.1055	15.4214	-0.1939
737	SLU 82	1.05	0.55	61.44	-0.1055	15.4222	-0.1896
737	SLU 83	1.07	0.56	62.03	-0.1066	15.565	-0.1926
737	SLU 84	1.07	0.55	62.04	-0.1067	15.5657	-0.1883
737	SLE RA 1	0.75	0.29	41.19	-0.0698	10.3604	-0.1002
737	SLE RA 2	0.75	0.28	41.19	-0.0698	10.3612	-0.0954
737	SLE RA 3	0.77	0.29	41.82	-0.071	10.5137	-0.1011
737	SLE RA 4	0.77	0.29	41.83	-0.071	10.5142	-0.0982
737	SLE RA 5	0.76	0.28	41.59	-0.0705	10.4569	-0.0945
737	SLE RA 6	0.77	0.29	42.22	-0.0717	10.6094	-0.1002
737	SLE RA 7	0.77	0.28	42.22	-0.0717	10.6099	-0.0974
737	SLE RA 8	0.77	0.29	41.98	-0.0713	10.5518	-0.0985
737	SLE RA 9	0.77	0.28	41.98	-0.0713	10.5523	-0.0956
737	SLE RA 10	0.78	0.35	44.26	-0.0756	11.1204	-0.1202
737	SLE RA 11	0.79	0.37	44.89	-0.0768	11.2729	-0.126
737	SLE RA 12	0.79	0.36	44.89	-0.0768	11.2734	-0.1231
737	SLE RA 13	0.79	0.35	44.65	-0.0763	11.2161	-0.1194
737	SLE RA 14	0.8	0.36	45.29	-0.0775	11.3686	-0.1251
737	SLE RA 15	0.8	0.35	45.29	-0.0775	11.3691	-0.1222
737	SLE RA 16	0.8	0.36	45.05	-0.0771	11.311	-0.1233
737	SLE RA 17	0.8	0.35	45.05	-0.0771	11.3115	-0.1204
737	SLE RA 18	0.79	0.39	45.57	-0.078	11.4449	-0.1357
737	SLE RA 19	0.79	0.39	45.57	-0.078	11.4454	-0.1328
737	SLE RA 20	0.8	0.39	45.96	-0.0788	11.5406	-0.1348
737	SLE RA 21	0.8	0.38	45.97	-0.0788	11.5411	-0.132
737	SLE FR 1	0.75	0.29	41.19	-0.0698	10.3604	-0.1002
737	SLE FR 2	0.75	0.29	41.19	-0.0698	10.3605	-0.0992
737	SLE FR 3	0.75	0.29	41.35	-0.0701	10.3987	-0.0998
737	SLE FR 4	0.76	0.32	42.5	-0.0723	10.6859	-0.1099
737	SLE FR 5	0.77	0.32	42.66	-0.0726	10.724	-0.1105
737	SLE FR 6	0.77	0.34	43.38	-0.0739	10.9027	-0.1179
737	SLE QP 1	0.75	0.29	41.19	-0.0698	10.3604	-0.1002

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
737	SLE QP 2	0.76	0.32	42.5	-0.0723	10.6857	-0.1108
737	SLD 1	3.28	0.87	30.74	-0.05	7.9911	-0.3014
737	SLD 2	3.18	1.53	30.65	-0.0514	7.9959	-0.5319
737	SLD 3	3.4	-0.49	30.95	-0.0481	7.9434	0.1759
737	SLD 4	3.3	0.17	30.86	-0.0495	7.9482	-0.0546
737	SLD 5	1.35	2.44	38.67	-0.0682	9.9488	-0.8499
737	SLD 6	1.28	2.88	38.61	-0.0691	9.952	-1.0029
737	SLD 7	1.76	-2.12	39.37	-0.0619	9.7898	0.7409
737	SLD 8	1.7	-1.68	39.31	-0.0628	9.793	0.588
737	SLD 9	-0.17	2.32	45.69	-0.0817	11.5785	-0.8096
737	SLD 10	-0.24	2.76	45.63	-0.0826	11.5817	-0.9626
737	SLD 11	0.25	-2.24	46.39	-0.0754	11.4195	0.7812
737	SLD 12	0.18	-1.8	46.33	-0.0763	11.4227	0.6283
737	SLD 13	-1.78	0.48	54.14	-0.0951	13.4233	-0.167
737	SLD 14	-1.88	1.14	54.05	-0.0964	13.4281	-0.3976
737	SLD 15	-1.65	-0.89	54.35	-0.0932	13.3756	0.3102
737	SLD 16	-1.75	-0.23	54.26	-0.0945	13.3804	0.0797
737	SLV 1	6.65	1.57	14.99	-0.02	4.3804	-0.5409
737	SLV 2	6.42	3.11	14.78	-0.0233	4.3915	-1.0775
737	SLV 3	6.93	-1.53	15.48	-0.0158	4.2702	0.5409
737	SLV 4	6.7	0.01	15.27	-0.019	4.2813	0.0043
737	SLV 5	2.14	5.13	33.56	-0.0625	8.9592	-1.7862
737	SLV 6	1.99	6.13	33.42	-0.0646	8.9665	-2.1359
737	SLV 7	3.09	-5.21	35.16	-0.0482	8.5921	1.8198
737	SLV 8	2.94	-4.2	35.03	-0.0503	8.5993	1.4701
737	SLV 9	-1.41	4.85	49.98	-0.0942	12.7722	-1.6917
737	SLV 10	-1.56	5.85	49.84	-0.0963	12.7794	-2.0414
737	SLV 11	-0.46	-5.49	51.59	-0.0799	12.405	1.9142
737	SLV 12	-0.61	-4.48	51.45	-0.082	12.4122	1.5645
737	SLV 13	-5.18	0.64	69.74	-0.1255	17.0902	-0.2259
737	SLV 14	-5.41	2.18	69.53	-0.1288	17.1013	-0.7626
737	SLV 15	-4.89	-2.46	70.22	-0.1212	16.98	0.8559
737	SLV 16	-5.12	-0.92	70.01	-0.1245	16.9911	0.3192
737	CRTFP Ux+	0	0	0	0	0	0
737	CRTFP Ux-	0	0	0	0	0	0
737	CRTFP Uy+	0	0	0	0	0	0
737	CRTFP Uy-	0	0	0	0	0	0
738	SLU 1	-1.03	-0.01	63.35	-11.4577	-9.7345	-0.1777
738	SLU 2	-1.04	-0.17	63.37	-11.4619	-9.7455	-0.2192
738	SLU 3	-1.05	0	64.88	-11.7359	-9.9546	-0.1797
738	SLU 4	-1.06	-0.09	64.9	-11.7384	-9.9612	-0.2046
738	SLU 5	-1.05	-0.16	64.34	-11.6373	-9.8827	-0.2198
738	SLU 6	-1.07	0.01	65.85	-11.9113	-10.0918	-0.1804
738	SLU 7	-1.08	-0.09	65.87	-11.9138	-10.0984	-0.2052
738	SLU 8	-1.06	0.01	65.29	-11.8085	-10.0089	-0.1791
738	SLU 9	-1.07	-0.09	65.3	-11.811	-10.0155	-0.2039
738	SLU 10	-1.08	-0.07	70.72	-12.7958	-10.8814	-0.2001
738	SLU 11	-1.09	0.1	72.23	-13.0698	-11.0905	-0.1607
738	SLU 12	-1.1	0	72.25	-13.0723	-11.0971	-0.1855
738	SLU 13	-1.09	-0.06	71.69	-12.9712	-11.0186	-0.2008
738	SLU 14	-1.11	0.11	73.2	-13.2452	-11.2277	-0.1613
738	SLU 15	-1.12	0.01	73.22	-13.2477	-11.2343	-0.1862
738	SLU 16	-1.1	0.11	72.63	-13.1424	-11.1448	-0.16
738	SLU 17	-1.11	0.01	72.65	-13.145	-11.1514	-0.1849
738	SLU 18	-1.08	0.13	73.84	-13.3633	-11.3572	-0.1505
738	SLU 19	-1.09	0.04	73.86	-13.3658	-11.3638	-0.1754
738	SLU 20	-1.1	0.14	74.81	-13.5387	-11.4944	-0.1512
738	SLU 21	-1.11	0.05	74.83	-13.5412	-11.501	-0.1761
738	SLU 22	-1.11	0.11	70.81	-12.8101	-10.8711	-0.1617
738	SLU 23	-1.12	-0.05	70.83	-12.8143	-10.882	-0.2031
738	SLU 24	-1.13	0.12	72.34	-13.0883	-11.0911	-0.1637
738	SLU 25	-1.14	0.02	72.36	-13.0908	-11.0977	-0.1885
738	SLU 26	-1.14	-0.04	71.8	-12.9897	-11.0192	-0.2038
738	SLU 27	-1.15	0.13	73.31	-13.2637	-11.2284	-0.1643
738	SLU 28	-1.16	0.03	73.33	-13.2662	-11.2349	-0.1892
738	SLU 29	-1.14	0.13	72.75	-13.1609	-11.1455	-0.163
738	SLU 30	-1.15	0.03	72.76	-13.1634	-11.1521	-0.1879
738	SLU 31	-1.16	0.05	78.18	-14.1482	-12.0179	-0.1841
738	SLU 32	-1.17	0.22	79.69	-14.4222	-12.227	-0.1446
738	SLU 33	-1.18	0.12	79.7	-14.4247	-12.2336	-0.1695
738	SLU 34	-1.18	0.06	79.15	-14.3236	-12.1551	-0.1848
738	SLU 35	-1.19	0.22	80.66	-14.5976	-12.3642	-0.1453
738	SLU 36	-1.2	0.13	80.67	-14.6001	-12.3708	-0.1702
738	SLU 37	-1.18	0.22	80.09	-14.4948	-12.2814	-0.144
738	SLU 38	-1.19	0.13	80.11	-14.4974	-12.288	-0.1688
738	SLU 39	-1.16	0.25	81.3	-14.7157	-12.4938	-0.1345
738	SLU 40	-1.17	0.15	81.32	-14.7182	-12.5004	-0.1594
738	SLU 41	-1.18	0.26	82.27	-14.8911	-12.631	-0.1352
738	SLU 42	-1.19	0.16	82.29	-14.8936	-12.6376	-0.16
738	SLU 43	-1.31	-0.05	79.8	-14.4313	-12.2652	-0.2365
738	SLU 44	-1.32	-0.21	79.82	-14.4355	-12.2762	-0.278
738	SLU 45	-1.33	-0.04	81.33	-14.7095	-12.4853	-0.2385
738	SLU 46	-1.34	-0.14	81.35	-14.712	-12.4919	-0.2634
738	SLU 47	-1.33	-0.2	80.79	-14.6109	-12.4134	-0.2786
738	SLU 48	-1.35	-0.03	82.3	-14.8849	-12.6225	-0.2392
738	SLU 49	-1.36	-0.13	82.32	-14.8874	-12.6291	-0.264
738	SLU 50	-1.34	-0.03	81.73	-14.7821	-12.5396	-0.2379
738	SLU 51	-1.35	-0.13	81.75	-14.7846	-12.5462	-0.2627
738	SLU 52	-1.36	-0.11	87.17	-15.7694	-13.4121	-0.2589
738	SLU 53	-1.37	0.06	88.68	-16.0434	-13.6212	-0.2195

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
738	SLU 54	-1.38	-0.04	88.69	-16.0459	-13.6277	-0.2443
738	SLU 55	-1.37	-0.1	88.14	-15.9449	-13.5493	-0.2596
738	SLU 56	-1.39	0.06	89.65	-16.2188	-13.7584	-0.2201
738	SLU 57	-1.4	-0.03	89.66	-16.2214	-13.765	-0.245
738	SLU 58	-1.38	0.06	89.08	-16.1161	-13.6755	-0.2188
738	SLU 59	-1.39	-0.03	89.1	-16.1186	-13.6821	-0.2437
738	SLU 60	-1.36	0.09	90.29	-16.3369	-13.8879	-0.2094
738	SLU 61	-1.37	-0.01	90.3	-16.3394	-13.8945	-0.2342
738	SLU 62	-1.38	0.1	91.26	-16.5123	-14.0251	-0.21
738	SLU 63	-1.39	0	91.27	-16.5149	-14.0317	-0.2349
738	SLU 64	-1.39	0.06	87.25	-15.7837	-13.4018	-0.2205
738	SLU 65	-1.4	-0.09	87.28	-15.7879	-13.4127	-0.2619
738	SLU 66	-1.41	0.07	88.79	-16.0619	-13.6218	-0.2225
738	SLU 67	-1.42	-0.02	88.81	-16.0644	-13.6284	-0.2473
738	SLU 68	-1.42	-0.08	88.25	-15.9633	-13.5499	-0.2626
738	SLU 69	-1.43	0.08	89.76	-16.2373	-13.759	-0.2231
738	SLU 70	-1.44	-0.01	89.78	-16.2398	-13.7656	-0.248
738	SLU 71	-1.42	0.08	89.19	-16.1345	-13.6762	-0.2218
738	SLU 72	-1.43	-0.01	89.21	-16.1371	-13.6828	-0.2467
738	SLU 73	-1.44	0	94.62	-17.1218	-14.5486	-0.2429
738	SLU 74	-1.45	0.17	96.14	-17.3958	-14.7577	-0.2034
738	SLU 75	-1.46	0.08	96.15	-17.3984	-14.7643	-0.2283
738	SLU 76	-1.46	0.01	95.59	-17.2973	-14.6858	-0.2436
738	SLU 77	-1.47	0.18	97.11	-17.5712	-14.8949	-0.2041
738	SLU 78	-1.48	0.09	97.12	-17.5738	-14.9015	-0.229
738	SLU 79	-1.46	0.18	96.54	-17.4685	-14.8121	-0.2028
738	SLU 80	-1.47	0.09	96.55	-17.471	-14.8186	-0.2277
738	SLU 81	-1.44	0.2	97.75	-17.6893	-15.0245	-0.1933
738	SLU 82	-1.45	0.11	97.76	-17.6919	-15.031	-0.2182
738	SLU 83	-1.46	0.21	98.72	-17.8647	-15.1617	-0.194
738	SLU 84	-1.47	0.12	98.73	-17.8673	-15.1682	-0.2188
738	SLE RA 1	-1.05	0.02	65.48	-11.8441	-10.0593	-0.1731
738	SLE RA 2	-1.06	-0.08	65.5	-11.8469	-10.0666	-0.2008
738	SLE RA 3	-1.07	0.03	66.5	-12.0295	-10.206	-0.1745
738	SLE RA 4	-1.07	-0.03	66.51	-12.0312	-10.2104	-0.191
738	SLE RA 5	-1.07	-0.08	66.14	-11.9638	-10.158	-0.2012
738	SLE RA 6	-1.08	0.04	67.15	-12.1465	-10.2974	-0.1749
738	SLE RA 7	-1.08	-0.03	67.16	-12.1482	-10.3018	-0.1915
738	SLE RA 8	-1.07	0.04	66.77	-12.078	-10.2422	-0.174
738	SLE RA 9	-1.08	-0.03	66.78	-12.0796	-10.2466	-0.1906
738	SLE RA 10	-1.08	-0.02	70.39	-12.7362	-10.8238	-0.1881
738	SLE RA 11	-1.09	0.1	71.4	-12.9188	-10.9632	-0.1618
738	SLE RA 12	-1.1	0.03	71.41	-12.9205	-10.9676	-0.1783
738	SLE RA 13	-1.09	-0.01	71.04	-12.8531	-10.9153	-0.1885
738	SLE RA 14	-1.1	0.1	72.05	-13.0358	-11.0547	-0.1622
738	SLE RA 15	-1.11	0.04	72.06	-13.0375	-11.0591	-0.1788
738	SLE RA 16	-1.1	0.1	71.67	-12.9673	-10.9995	-0.1613
738	SLE RA 17	-1.1	0.04	71.68	-12.9689	-11.0038	-0.1779
738	SLE RA 18	-1.09	0.12	72.47	-13.1145	-11.1411	-0.155
738	SLE RA 19	-1.09	0.05	72.48	-13.1162	-11.1454	-0.1716
738	SLE RA 20	-1.1	0.12	73.12	-13.2314	-11.2325	-0.1555
738	SLE RA 21	-1.1	0.06	73.13	-13.2331	-11.2369	-0.172
738	SLE FR 1	-1.05	0.02	65.48	-11.8441	-10.0593	-0.1731
738	SLE FR 2	-1.05	0	65.48	-11.8446	-10.0607	-0.1787
738	SLE FR 3	-1.05	0.03	65.74	-11.8909	-10.0958	-0.1733
738	SLE FR 4	-1.06	0.03	67.58	-12.2258	-10.3853	-0.1732
738	SLE FR 5	-1.06	0.05	67.84	-12.272	-10.4204	-0.1679
738	SLE FR 6	-1.07	0.07	68.98	-12.4793	-10.6002	-0.1641
738	SLE QP 1	-1.05	0.02	65.48	-11.8441	-10.0593	-0.1731
738	SLE QP 2	-1.06	0.05	67.58	-12.2252	-10.3838	-0.1677
738	SLD 1	3.68	1.06	86.62	-15.6918	-13.1586	0.9546
738	SLD 2	3.55	0.05	86.78	-15.7182	-13.2353	0.6828
738	SLD 3	3.52	-1.23	86.87	-15.7403	-13.3544	0.3546
738	SLD 4	3.39	-2.24	87.04	-15.7667	-13.4312	0.0827
738	SLD 5	0.64	4.01	72.87	-13.1869	-10.9052	1.1285
738	SLD 6	0.55	3.34	72.98	-13.2044	-10.9561	0.9481
738	SLD 7	0.09	-3.62	73.73	-13.3485	-11.5581	-0.8717
738	SLD 8	0	-4.29	73.84	-13.366	-11.6091	-1.0521
738	SLD 9	-2.12	4.4	61.32	-11.0845	-9.1585	0.7167
738	SLD 10	-2.21	3.73	61.43	-11.1019	-9.2095	0.5363
738	SLD 11	-2.67	-3.24	62.18	-11.246	-9.8115	-1.2835
738	SLD 12	-2.76	-3.91	62.29	-11.2635	-9.8624	-1.4639
738	SLD 13	-5.5	2.34	48.12	-8.6837	-7.3364	-0.4181
738	SLD 14	-5.64	1.33	48.28	-8.7101	-7.4132	-0.69
738	SLD 15	-5.67	0.05	48.37	-8.7322	-7.5323	-1.0182
738	SLD 16	-5.8	-0.96	48.54	-8.7586	-7.609	-1.29
738	SLV 1	10.02	2.32	112.12	-20.3357	-16.8827	2.4311
738	SLV 2	9.71	-0.03	112.5	-20.3971	-17.0614	1.7982
738	SLV 3	9.64	-2.86	112.72	-20.4492	-17.3293	1.0742
738	SLV 4	9.34	-5.21	113.11	-20.5106	-17.508	0.4413
738	SLV 5	2.88	9	79.96	-14.4754	-11.6247	2.7811
738	SLV 6	2.68	7.47	80.21	-14.5154	-11.7412	2.3688
738	SLV 7	1.64	-8.26	81.97	-14.8538	-13.1133	-1.7418
738	SLV 8	1.44	-9.8	82.22	-14.8937	-13.2298	-2.1542
738	SLV 9	-3.56	9.9	52.94	-9.5567	-7.5378	1.8188
738	SLV 10	-3.76	8.37	53.19	-9.5966	-7.6543	1.4064
738	SLV 11	-4.8	-7.37	54.95	-9.935	-9.0264	-2.7042
738	SLV 12	-5	-8.9	55.2	-9.975	-9.1428	-3.1166
738	SLV 13	-11.46	5.32	22.05	-3.9398	-3.2596	-0.7768
738	SLV 14	-11.76	2.96	22.44	-4.0012	-3.4383	-1.4096

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
738	SLV 15	-11.83	0.14	22.65	-4.0533	-3.7062	-2.1336
738	SLV 16	-12.14	-2.22	23.04	-4.1147	-3.8849	-2.7665
738	CRTFP Ux+	0	0	0	0	0	0
738	CRTFP Ux-	0	0	0	0	0	0
738	CRTFP Uy+	0	0	0	0	0	0
738	CRTFP Uy-	0	0	0	0	0	0
741	SLU 1	-1.17	-1.39	105.16	-14.8788	2.0378	-0.1171
741	SLU 2	-1.19	-1.54	105.2	-14.8834	2.0323	-0.1146
741	SLU 3	-1.21	-1.41	107.71	-15.2385	2.0848	-0.1205
741	SLU 4	-1.21	-1.5	107.73	-15.2413	2.0815	-0.119
741	SLU 5	-1.21	-1.55	106.8	-15.1087	2.0646	-0.117
741	SLU 6	-1.23	-1.42	109.31	-15.4638	2.1171	-0.1229
741	SLU 7	-1.24	-1.51	109.33	-15.4666	2.1138	-0.1214
741	SLU 8	-1.22	-1.42	108.36	-15.3293	2.1024	-0.1219
741	SLU 9	-1.23	-1.51	108.38	-15.3321	2.0991	-0.1204
741	SLU 10	-1.22	-1.58	118.28	-16.7336	2.2632	-0.114
741	SLU 11	-1.23	-1.45	120.79	-17.0887	2.3157	-0.1199
741	SLU 12	-1.24	-1.54	120.81	-17.0915	2.3124	-0.1184
741	SLU 13	-1.24	-1.6	119.88	-16.9589	2.2955	-0.1164
741	SLU 14	-1.25	-1.46	122.39	-17.314	2.348	-0.1223
741	SLU 15	-1.26	-1.55	122.41	-17.3168	2.3447	-0.1208
741	SLU 16	-1.24	-1.46	121.44	-17.1795	2.3334	-0.1213
741	SLU 17	-1.25	-1.55	121.46	-17.1823	2.3301	-0.1198
741	SLU 18	-1.21	-1.45	123.84	-17.5219	2.3677	-0.1163
741	SLU 19	-1.22	-1.54	123.87	-17.5247	2.3644	-0.1148
741	SLU 20	-1.23	-1.47	125.44	-17.7472	2.4	-0.1187
741	SLU 21	-1.24	-1.56	125.47	-17.75	2.3967	-0.1172
741	SLU 22	-1.28	-1.36	118.12	-16.7077	2.2781	-0.13
741	SLU 23	-1.29	-1.51	118.17	-16.7123	2.2726	-0.1275
741	SLU 24	-1.31	-1.37	120.67	-17.0674	2.3251	-0.1334
741	SLU 25	-1.32	-1.46	120.7	-17.0702	2.3218	-0.1319
741	SLU 26	-1.31	-1.52	119.77	-16.9376	2.3049	-0.1299
741	SLU 27	-1.33	-1.39	122.27	-17.2927	2.3574	-0.1358
741	SLU 28	-1.34	-1.48	122.3	-17.2955	2.3541	-0.1343
741	SLU 29	-1.32	-1.38	121.32	-17.1582	2.3427	-0.1348
741	SLU 30	-1.33	-1.47	121.35	-17.161	2.3394	-0.1333
741	SLU 31	-1.32	-1.55	131.25	-18.5625	2.5035	-0.1269
741	SLU 32	-1.33	-1.42	133.75	-18.9176	2.556	-0.1328
741	SLU 33	-1.34	-1.51	133.78	-18.9204	2.5527	-0.1313
741	SLU 34	-1.34	-1.56	132.85	-18.7878	2.5358	-0.1293
741	SLU 35	-1.35	-1.43	135.35	-19.1429	2.5883	-0.1352
741	SLU 36	-1.36	-1.52	135.38	-19.1456	2.585	-0.1337
741	SLU 37	-1.34	-1.43	134.4	-19.0084	2.5737	-0.1342
741	SLU 38	-1.35	-1.52	134.43	-19.0112	2.5704	-0.1327
741	SLU 39	-1.31	-1.42	136.81	-19.3508	2.608	-0.1292
741	SLU 40	-1.32	-1.51	136.83	-19.3536	2.6047	-0.1277
741	SLU 41	-1.33	-1.43	138.41	-19.5761	2.6403	-0.1316
741	SLU 42	-1.34	-1.52	138.43	-19.5789	2.637	-0.1301
741	SLU 43	-1.49	-1.82	132.26	-18.7154	2.5668	-0.1478
741	SLU 44	-1.51	-1.97	132.31	-18.72	2.5612	-0.1453
741	SLU 45	-1.52	-1.84	134.81	-19.0751	2.6137	-0.1512
741	SLU 46	-1.53	-1.93	134.84	-19.0779	2.6104	-0.1497
741	SLU 47	-1.53	-1.98	133.9	-18.9453	2.5936	-0.1477
741	SLU 48	-1.54	-1.85	136.41	-19.3004	2.6461	-0.1536
741	SLU 49	-1.55	-1.94	136.44	-19.3032	2.6427	-0.1521
741	SLU 50	-1.53	-1.85	135.46	-19.1659	2.6314	-0.1526
741	SLU 51	-1.54	-1.94	135.49	-19.1687	2.6281	-0.1511
741	SLU 52	-1.53	-2.01	145.38	-20.5702	2.7922	-0.1447
741	SLU 53	-1.55	-1.88	147.89	-20.9253	2.8447	-0.1506
741	SLU 54	-1.56	-1.97	147.92	-20.9281	2.8413	-0.1491
741	SLU 55	-1.55	-2.03	146.98	-20.7955	2.8245	-0.1471
741	SLU 56	-1.57	-1.89	149.49	-21.1506	2.877	-0.153
741	SLU 57	-1.58	-1.98	149.51	-21.1534	2.8737	-0.1515
741	SLU 58	-1.56	-1.89	148.54	-21.0161	2.8623	-0.152
741	SLU 59	-1.57	-1.98	148.56	-21.0189	2.859	-0.1505
741	SLU 60	-1.53	-1.88	150.95	-21.3585	2.8967	-0.147
741	SLU 61	-1.54	-1.97	150.97	-21.3613	2.8933	-0.1455
741	SLU 62	-1.55	-1.9	152.55	-21.5838	2.929	-0.1494
741	SLU 63	-1.56	-1.98	152.57	-21.5866	2.9257	-0.1479
741	SLU 64	-1.59	-1.79	145.23	-20.5443	2.8071	-0.1607
741	SLU 65	-1.61	-1.94	145.27	-20.5489	2.8015	-0.1582
741	SLU 66	-1.62	-1.8	147.77	-20.904	2.854	-0.1641
741	SLU 67	-1.63	-1.89	147.8	-20.9068	2.8507	-0.1626
741	SLU 68	-1.63	-1.95	146.87	-20.7742	2.8339	-0.1606
741	SLU 69	-1.65	-1.82	149.37	-21.1293	2.8864	-0.1665
741	SLU 70	-1.66	-1.9	149.4	-21.1321	2.883	-0.165
741	SLU 71	-1.64	-1.81	148.42	-20.9948	2.8717	-0.1655
741	SLU 72	-1.65	-1.9	148.45	-20.9976	2.8684	-0.164
741	SLU 73	-1.64	-1.98	158.35	-22.3991	3.0325	-0.1576
741	SLU 74	-1.65	-1.85	160.85	-22.7542	3.085	-0.1635
741	SLU 75	-1.66	-1.94	160.88	-22.757	3.0816	-0.162
741	SLU 76	-1.66	-1.99	159.95	-22.6244	3.0648	-0.16
741	SLU 77	-1.67	-1.86	162.45	-22.9795	3.1173	-0.1659
741	SLU 78	-1.68	-1.95	162.48	-22.9822	3.114	-0.1644
741	SLU 79	-1.66	-1.86	161.5	-22.845	3.1026	-0.1649
741	SLU 80	-1.67	-1.95	161.53	-22.8478	3.0993	-0.1634
741	SLU 81	-1.63	-1.85	163.91	-23.1874	3.137	-0.1599
741	SLU 82	-1.64	-1.94	163.94	-23.1902	3.1336	-0.1584
741	SLU 83	-1.65	-1.86	165.51	-23.4127	3.1693	-0.1623
741	SLU 84	-1.66	-1.95	165.54	-23.4155	3.166	-0.1608

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
741	SLE RA 1	-1.2	-1.38	108.86	-15.4014	2.1065	-0.1208
741	SLE RA 2	-1.21	-1.48	108.89	-15.4044	2.1028	-0.1191
741	SLE RA 3	-1.22	-1.39	110.56	-15.6412	2.1378	-0.123
741	SLE RA 4	-1.23	-1.45	110.58	-15.643	2.1356	-0.122
741	SLE RA 5	-1.23	-1.49	109.96	-15.5546	2.1243	-0.1207
741	SLE RA 6	-1.24	-1.4	111.63	-15.7913	2.1593	-0.1246
741	SLE RA 7	-1.24	-1.46	111.65	-15.7932	2.1571	-0.1236
741	SLE RA 8	-1.23	-1.4	111	-15.7017	2.1496	-0.124
741	SLE RA 9	-1.24	-1.46	111.01	-15.7035	2.1473	-0.123
741	SLE RA 10	-1.23	-1.51	117.61	-16.6379	2.2567	-0.1187
741	SLE RA 11	-1.24	-1.42	119.28	-16.8746	2.2917	-0.1226
741	SLE RA 12	-1.25	-1.48	119.3	-16.8765	2.2895	-0.1216
741	SLE RA 13	-1.24	-1.52	118.68	-16.7881	2.2783	-0.1203
741	SLE RA 14	-1.25	-1.43	120.35	-17.0248	2.3133	-0.1242
741	SLE RA 15	-1.26	-1.49	120.36	-17.0266	2.3111	-0.1232
741	SLE RA 16	-1.25	-1.43	119.71	-16.9352	2.3035	-0.1236
741	SLE RA 17	-1.25	-1.49	119.73	-16.937	2.3013	-0.1226
741	SLE RA 18	-1.23	-1.42	121.32	-17.1634	2.3264	-0.1202
741	SLE RA 19	-1.23	-1.48	121.34	-17.1653	2.3242	-0.1192
741	SLE RA 20	-1.24	-1.43	122.39	-17.3136	2.3479	-0.1218
741	SLE RA 21	-1.25	-1.49	122.4	-17.3155	2.3457	-0.1208
741	SLE FR 1	-1.2	-1.38	108.86	-15.4014	2.1065	-0.1208
741	SLE FR 2	-1.21	-1.4	108.87	-15.402	2.1057	-0.1205
741	SLE FR 3	-1.21	-1.39	109.29	-15.4614	2.1151	-0.1214
741	SLE FR 4	-1.21	-1.41	112.61	-15.9306	2.1717	-0.1203
741	SLE FR 5	-1.22	-1.4	113.03	-15.99	2.1811	-0.1213
741	SLE FR 6	-1.22	-1.4	115.09	-16.2824	2.2164	-0.1205
741	SLE QP 1	-1.2	-1.38	108.86	-15.4014	2.1065	-0.1208
741	SLE QP 2	-1.21	-1.39	112.6	-15.93	2.1724	-0.1206
741	SLD 1	7.83	-0.74	121.37	-17.3276	2.436	1.1501
741	SLD 2	7.66	-1.55	121.77	-17.3697	2.4512	1.1636
741	SLD 3	7.68	-3.56	121.61	-17.2834	2.3364	1.2076
741	SLD 4	7.5	-4.38	122.02	-17.3256	2.3516	1.2211
741	SLD 5	1.77	3.23	114.79	-16.4086	2.3997	0.171
741	SLD 6	1.65	2.69	115.06	-16.4365	2.4098	0.18
741	SLD 7	1.25	-6.18	115.6	-16.2614	2.0679	0.3625
741	SLD 8	1.14	-6.72	115.87	-16.2893	2.078	0.3715
741	SLD 9	-3.56	3.93	109.33	-15.5706	2.2669	-0.6127
741	SLD 10	-3.67	3.39	109.6	-15.5986	2.277	-0.6038
741	SLD 11	-4.07	-5.48	110.15	-15.4234	1.9351	-0.4212
741	SLD 12	-4.19	-6.02	110.41	-15.4514	1.9452	-0.4123
741	SLD 13	-9.92	1.59	103.18	-14.5344	1.9932	-1.4623
741	SLD 14	-10.1	0.77	103.59	-14.5765	2.0085	-1.4488
741	SLD 15	-10.08	-1.24	103.43	-14.4902	1.8937	-1.4049
741	SLD 16	-10.25	-2.05	103.83	-14.5324	1.9089	-1.3914
741	SLV 1	19.93	0.02	133.12	-19.1991	2.7847	2.8524
741	SLV 2	19.52	-1.87	134.06	-19.2972	2.8201	2.8839
741	SLV 3	19.57	-6.37	133.69	-19.0973	2.5596	2.983
741	SLV 4	19.16	-8.25	134.63	-19.1954	2.5951	3.0145
741	SLV 5	5.75	9.04	117.73	-17.048	2.6913	0.5675
741	SLV 6	5.48	7.82	118.35	-17.1119	2.7144	0.5881
741	SLV 7	4.56	-12.24	119.62	-16.7084	1.941	1.0031
741	SLV 8	4.29	-13.47	120.23	-16.7723	1.9641	1.0236
741	SLV 9	-6.71	10.68	104.97	-15.0876	2.3808	-1.2649
741	SLV 10	-6.98	9.45	105.58	-15.1515	2.4039	-1.2444
741	SLV 11	-7.9	-10.6	106.85	-14.7481	1.6305	-0.8293
741	SLV 12	-8.17	-11.83	107.47	-14.812	1.6536	-0.8088
741	SLV 13	-21.58	5.46	90.57	-12.6646	1.7498	-3.2558
741	SLV 14	-22	3.58	91.51	-12.7627	1.7853	-3.2243
741	SLV 15	-21.94	-0.92	91.14	-12.5627	1.5248	-3.1251
741	SLV 16	-22.35	-2.81	92.08	-12.6608	1.5602	-3.0936
741	CRTFP Ux+	0	0	0	0	0	0
741	CRTFP Ux-	0	0	0	0	0	0
741	CRTFP Uy+	0	0	0	0	0	0
741	CRTFP Uy-	0	0	0	0	0	0
744	SLU 1	1.71	-0.01	88.08	-8.5746	0.0193	0.1499
744	SLU 2	1.71	-0.06	88.08	-8.5748	0.0279	0.1501
744	SLU 3	1.76	0	90.12	-8.7735	0.0227	0.154
744	SLU 4	1.76	-0.03	90.11	-8.7736	0.0278	0.1541
744	SLU 5	1.74	-0.07	89.34	-8.6978	0.029	0.1527
744	SLU 6	1.79	-0.01	91.38	-8.8965	0.0238	0.1566
744	SLU 7	1.79	-0.04	91.38	-8.8966	0.029	0.1567
744	SLU 8	1.77	-0.03	90.6	-8.8206	0.0215	0.1551
744	SLU 9	1.77	-0.06	90.6	-8.8208	0.0267	0.1552
744	SLU 10	1.81	0.08	98.87	-9.629	0.043	0.1598
744	SLU 11	1.87	0.14	100.91	-9.8276	0.0377	0.1637
744	SLU 12	1.86	0.11	100.91	-9.8277	0.0429	0.1638
744	SLU 13	1.85	0.07	100.14	-9.752	0.0441	0.1624
744	SLU 14	1.9	0.13	102.18	-9.9506	0.0388	0.1663
744	SLU 15	1.9	0.1	102.17	-9.9507	0.044	0.1664
744	SLU 16	1.88	0.11	101.4	-9.8748	0.0366	0.1648
744	SLU 17	1.88	0.08	101.4	-9.8749	0.0417	0.1649
744	SLU 18	1.87	0.19	103.51	-10.0806	0.0408	0.1637
744	SLU 19	1.86	0.16	103.5	-10.0807	0.046	0.1639
744	SLU 20	1.9	0.18	104.77	-10.2036	0.0419	0.1663
744	SLU 21	1.89	0.15	104.77	-10.2037	0.0471	0.1665
744	SLU 22	1.87	0.17	98.75	-9.6122	0.0292	0.1645
744	SLU 23	1.87	0.13	98.75	-9.6123	0.0379	0.1647
744	SLU 24	1.92	0.18	100.79	-9.811	0.0326	0.1686
744	SLU 25	1.92	0.16	100.79	-9.8111	0.0378	0.1687

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
744	SLU 26	1.9	0.12	100.01	-9.7353	0.039	0.1673
744	SLU 27	1.95	0.17	102.05	-9.934	0.0337	0.1712
744	SLU 28	1.95	0.15	102.05	-9.9341	0.0389	0.1713
744	SLU 29	1.93	0.16	101.28	-9.8582	0.0315	0.1696
744	SLU 30	1.93	0.13	101.27	-9.8583	0.0366	0.1698
744	SLU 31	1.97	0.27	109.55	-10.6665	0.0529	0.1744
744	SLU 32	2.03	0.32	111.59	-10.8651	0.0477	0.1783
744	SLU 33	2.02	0.29	111.58	-10.8653	0.0529	0.1784
744	SLU 34	2	0.26	110.81	-10.7895	0.054	0.1769
744	SLU 35	2.06	0.31	112.85	-10.9882	0.0488	0.1809
744	SLU 36	2.05	0.28	112.85	-10.9883	0.054	0.181
744	SLU 37	2.04	0.29	112.07	-10.9123	0.0465	0.1793
744	SLU 38	2.04	0.27	112.07	-10.9124	0.0517	0.1795
744	SLU 39	2.03	0.37	114.18	-11.1181	0.0507	0.1783
744	SLU 40	2.02	0.34	114.18	-11.1182	0.0559	0.1784
744	SLU 41	2.06	0.36	115.44	-11.2411	0.0518	0.1809
744	SLU 42	2.05	0.33	115.44	-11.2412	0.057	0.181
744	SLU 43	2.17	-0.08	110.85	-10.7913	0.0216	0.1899
744	SLU 44	2.17	-0.12	110.84	-10.7915	0.0303	0.1901
744	SLU 45	2.22	-0.07	112.88	-10.9901	0.025	0.194
744	SLU 46	2.22	-0.1	112.88	-10.9902	0.0302	0.1941
744	SLU 47	2.2	-0.13	112.1	-10.9145	0.0314	0.1927
744	SLU 48	2.25	-0.08	114.14	-11.1131	0.0261	0.1966
744	SLU 49	2.25	-0.11	114.14	-11.1132	0.0313	0.1967
744	SLU 50	2.23	-0.1	113.37	-11.0373	0.0239	0.1951
744	SLU 51	2.23	-0.12	113.37	-11.0374	0.029	0.1952
744	SLU 52	2.27	0.01	121.64	-11.8457	0.0453	0.1998
744	SLU 53	2.33	0.07	123.68	-12.0443	0.0401	0.2037
744	SLU 54	2.32	0.04	123.68	-12.0444	0.0453	0.2038
744	SLU 55	2.3	0	122.9	-11.9687	0.0464	0.2024
744	SLU 56	2.36	0.06	124.94	-12.1673	0.0412	0.2063
744	SLU 57	2.35	0.03	124.94	-12.1674	0.0464	0.2064
744	SLU 58	2.34	0.04	124.17	-12.0915	0.0389	0.2048
744	SLU 59	2.34	0.01	124.16	-12.0916	0.0441	0.2049
744	SLU 60	2.33	0.12	126.27	-12.2973	0.0431	0.2037
744	SLU 61	2.32	0.09	126.27	-12.2974	0.0483	0.2039
744	SLU 62	2.36	0.11	127.53	-12.4203	0.0443	0.2063
744	SLU 63	2.35	0.08	127.53	-12.4204	0.0494	0.2064
744	SLU 64	2.33	0.11	121.52	-11.8288	0.0316	0.2044
744	SLU 65	2.32	0.06	121.51	-11.829	0.0402	0.2046
744	SLU 66	2.38	0.12	123.55	-12.0276	0.035	0.2086
744	SLU 67	2.37	0.09	123.55	-12.0278	0.0402	0.2087
744	SLU 68	2.36	0.05	122.78	-11.952	0.0413	0.2072
744	SLU 69	2.41	0.11	124.81	-12.1506	0.0361	0.2111
744	SLU 70	2.41	0.08	124.81	-12.1508	0.0413	0.2113
744	SLU 71	2.39	0.09	124.04	-12.0748	0.0338	0.2096
744	SLU 72	2.39	0.06	124.04	-12.0749	0.039	0.2097
744	SLU 73	2.43	0.2	132.31	-12.8832	0.0553	0.2143
744	SLU 74	2.49	0.25	134.35	-13.0818	0.05	0.2182
744	SLU 75	2.48	0.23	134.35	-13.0819	0.0552	0.2184
744	SLU 76	2.46	0.19	133.57	-13.0062	0.0564	0.2169
744	SLU 77	2.52	0.24	135.61	-13.2048	0.0512	0.2208
744	SLU 78	2.51	0.22	135.61	-13.2049	0.0563	0.221
744	SLU 79	2.5	0.23	134.84	-13.129	0.0489	0.2193
744	SLU 80	2.5	0.2	134.84	-13.1291	0.0541	0.2194
744	SLU 81	2.49	0.3	136.94	-13.3348	0.0531	0.2183
744	SLU 82	2.48	0.28	136.94	-13.3349	0.0583	0.2184
744	SLU 83	2.52	0.29	138.2	-13.4578	0.0542	0.2209
744	SLU 84	2.51	0.27	138.2	-13.4579	0.0594	0.221
744	SLE RA 1	1.76	0.04	91.13	-8.8711	0.0221	0.1541
744	SLE RA 2	1.75	0.01	91.13	-8.8712	0.0279	0.1542
744	SLE RA 3	1.79	0.05	92.49	-9.0036	0.0244	0.1568
744	SLE RA 4	1.79	0.03	92.49	-9.0037	0.0278	0.1569
744	SLE RA 5	1.77	0.01	91.97	-8.9532	0.0286	0.1559
744	SLE RA 6	1.81	0.04	93.33	-9.0856	0.0251	0.1585
744	SLE RA 7	1.81	0.02	93.33	-9.0857	0.0286	0.1586
744	SLE RA 8	1.8	0.03	92.81	-9.0351	0.0236	0.1575
744	SLE RA 9	1.8	0.01	92.81	-9.0351	0.0271	0.1576
744	SLE RA 10	1.83	0.1	98.33	-9.574	0.0379	0.1607
744	SLE RA 11	1.86	0.14	99.69	-9.7064	0.0344	0.1633
744	SLE RA 12	1.86	0.12	99.68	-9.7065	0.0379	0.1634
744	SLE RA 13	1.85	0.1	99.17	-9.656	0.0387	0.1624
744	SLE RA 14	1.88	0.13	100.53	-9.7884	0.0352	0.165
744	SLE RA 15	1.88	0.11	100.53	-9.7885	0.0386	0.1651
744	SLE RA 16	1.87	0.12	100.01	-9.7379	0.0336	0.164
744	SLE RA 17	1.87	0.1	100.01	-9.7379	0.0371	0.1641
744	SLE RA 18	1.86	0.17	101.41	-9.875	0.0364	0.1633
744	SLE RA 19	1.86	0.15	101.41	-9.8751	0.0399	0.1634
744	SLE RA 20	1.88	0.17	102.25	-9.957	0.0372	0.165
744	SLE RA 21	1.88	0.15	102.25	-9.9571	0.0407	0.1651
744	SLE FR 1	1.76	0.04	91.13	-8.8711	0.0221	0.1541
744	SLE FR 2	1.76	0.04	91.13	-8.8711	0.0233	0.1541
744	SLE FR 3	1.77	0.04	91.47	-8.9039	0.0224	0.1548
744	SLE FR 4	1.79	0.08	94.21	-9.1723	0.0276	0.1569
744	SLE FR 5	1.8	0.08	94.55	-9.2051	0.0267	0.1575
744	SLE FR 6	1.81	0.11	96.27	-9.3731	0.0293	0.1587
744	SLE QP 1	1.76	0.04	91.13	-8.8711	0.0221	0.1541
744	SLE QP 2	1.79	0.08	94.21	-9.1723	0.0264	0.1568
744	SLD 1	9.27	1.33	87	-8.4446	0.1099	0.8912
744	SLD 2	9.09	2.06	86.83	-8.4324	0.1177	0.8921

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
744	SLD 3	9.38	-1.04	86.62	-8.4168	0.1719	0.8796
744	SLD 4	9.2	-0.31	86.45	-8.4047	0.1796	0.8805
744	SLD 5	3.9	3.92	92.66	-8.9982	-0.0439	0.3946
744	SLD 6	3.78	4.4	92.54	-8.9902	-0.0388	0.3951
744	SLD 7	4.27	-3.98	91.39	-8.9058	0.1626	0.3559
744	SLD 8	4.15	-3.5	91.28	-8.8977	0.1678	0.3565
744	SLD 9	-0.57	3.66	97.15	-9.4468	-0.115	-0.0428
744	SLD 10	-0.69	4.15	97.04	-9.4387	-0.1098	-0.0423
744	SLD 11	-0.2	-4.24	95.89	-9.3544	0.0916	-0.0815
744	SLD 12	-0.32	-3.75	95.77	-9.3463	0.0968	-0.0809
744	SLD 13	-5.62	0.47	101.98	-9.9398	-0.1268	-0.5668
744	SLD 14	-5.8	1.2	101.81	-9.9277	-0.1191	-0.566
744	SLD 15	-5.51	-1.9	101.6	-9.9121	-0.0649	-0.5784
744	SLD 16	-5.69	-1.17	101.43	-9.9	-0.0571	-0.5776
744	SLV 1	19.27	2.92	77.32	-7.4686	0.2239	1.8738
744	SLV 2	18.86	4.63	76.92	-7.4404	0.242	1.8757
744	SLV 3	19.53	-2.45	76.45	-7.4049	0.3642	1.8469
744	SLV 4	19.12	-0.74	76.05	-7.3766	0.3823	1.8488
744	SLV 5	6.71	8.78	90.54	-8.7629	-0.1303	0.7124
744	SLV 6	6.44	9.89	90.28	-8.7444	-0.1185	0.7137
744	SLV 7	7.58	-9.12	87.64	-8.5503	0.3373	0.6227
744	SLV 8	7.31	-8.01	87.37	-8.5319	0.3491	0.6239
744	SLV 9	-3.73	8.17	101.06	-9.8126	-0.2963	-0.3103
744	SLV 10	-4	9.29	100.79	-9.7942	-0.2845	-0.309
744	SLV 11	-2.86	-9.73	98.15	-9.6001	0.1713	-0.4
744	SLV 12	-3.13	-8.61	97.89	-9.5817	0.1831	-0.3988
744	SLV 13	-15.54	0.9	112.38	-10.9679	-0.3295	-1.5352
744	SLV 14	-15.96	2.61	111.98	-10.9396	-0.3114	-1.5332
744	SLV 15	-15.28	-4.47	111.51	-10.9041	-0.1892	-1.5621
744	SLV 16	-15.7	-2.76	111.1	-10.8759	-0.1711	-1.5602
744	CRTFP Ux+	0	0	0	0	0	0
744	CRTFP Ux-	0	0	0	0	0	0
744	CRTFP Uy+	0	0	0	0	0	0
744	CRTFP Uy-	0	0	0	0	0	0
747	SLU 1	0.27	0.58	53.65	-0.0403	0.8159	-0.0117
747	SLU 2	0.26	0.51	53.62	-0.0405	0.8147	-0.0112
747	SLU 3	0.28	0.61	54.9	-0.0418	0.8389	-0.0121
747	SLU 4	0.27	0.57	54.88	-0.0419	0.8382	-0.0118
747	SLU 5	0.27	0.52	54.36	-0.0415	0.8278	-0.0116
747	SLU 6	0.28	0.62	55.64	-0.0428	0.852	-0.0125
747	SLU 7	0.28	0.58	55.62	-0.0429	0.8513	-0.0121
747	SLU 8	0.28	0.6	55.14	-0.0424	0.8421	-0.0125
747	SLU 9	0.28	0.55	55.12	-0.0425	0.8414	-0.0121
747	SLU 10	0.32	0.62	60.77	-0.0452	0.9417	-0.0115
747	SLU 11	0.33	0.72	62.05	-0.0466	0.9658	-0.0125
747	SLU 12	0.33	0.68	62.02	-0.0467	0.9651	-0.0121
747	SLU 13	0.32	0.63	61.51	-0.0463	0.9548	-0.0119
747	SLU 14	0.34	0.73	62.79	-0.0476	0.9789	-0.0128
747	SLU 15	0.34	0.69	62.77	-0.0477	0.9782	-0.0125
747	SLU 16	0.34	0.71	62.29	-0.0472	0.969	-0.0128
747	SLU 17	0.34	0.67	62.27	-0.0473	0.9683	-0.0125
747	SLU 18	0.35	0.74	63.87	-0.0472	0.9973	-0.0123
747	SLU 19	0.35	0.7	63.85	-0.0472	0.9966	-0.0119
747	SLU 20	0.36	0.75	64.61	-0.0482	1.0103	-0.0126
747	SLU 21	0.35	0.71	64.59	-0.0483	1.0096	-0.0123
747	SLU 22	0.31	0.79	60.39	-0.0435	0.9449	-0.0134
747	SLU 23	0.3	0.72	60.35	-0.0436	0.9437	-0.0128
747	SLU 24	0.31	0.82	61.63	-0.045	0.9678	-0.0137
747	SLU 25	0.31	0.78	61.61	-0.045	0.9671	-0.0134
747	SLU 26	0.31	0.73	61.09	-0.0446	0.9568	-0.0132
747	SLU 27	0.32	0.83	62.37	-0.046	0.9809	-0.0141
747	SLU 28	0.32	0.79	62.35	-0.0461	0.9802	-0.0138
747	SLU 29	0.32	0.81	61.87	-0.0456	0.971	-0.0141
747	SLU 30	0.32	0.77	61.85	-0.0456	0.9703	-0.0138
747	SLU 31	0.36	0.84	67.5	-0.0484	1.0706	-0.0132
747	SLU 32	0.37	0.94	68.78	-0.0498	1.0948	-0.0141
747	SLU 33	0.37	0.9	68.76	-0.0498	1.0941	-0.0138
747	SLU 34	0.36	0.84	68.24	-0.0494	1.0837	-0.0135
747	SLU 35	0.38	0.95	69.52	-0.0508	1.1079	-0.0145
747	SLU 36	0.37	0.91	69.5	-0.0509	1.1072	-0.0141
747	SLU 37	0.38	0.93	69.02	-0.0503	1.098	-0.0145
747	SLU 38	0.37	0.88	69	-0.0504	1.0973	-0.0141
747	SLU 39	0.39	0.96	70.6	-0.0503	1.1262	-0.0139
747	SLU 40	0.38	0.91	70.58	-0.0504	1.1255	-0.0135
747	SLU 41	0.4	0.97	71.34	-0.0514	1.1393	-0.0142
747	SLU 42	0.39	0.92	71.32	-0.0514	1.1386	-0.0139
747	SLU 43	0.34	0.68	67.44	-0.0514	1.0165	-0.0147
747	SLU 44	0.33	0.61	67.41	-0.0515	1.0153	-0.0142
747	SLU 45	0.34	0.71	68.69	-0.0528	1.0394	-0.0151
747	SLU 46	0.34	0.67	68.66	-0.0529	1.0387	-0.0147
747	SLU 47	0.33	0.62	68.15	-0.0525	1.0284	-0.0145
747	SLU 48	0.35	0.72	69.43	-0.0539	1.0525	-0.0154
747	SLU 49	0.35	0.68	69.41	-0.0539	1.0518	-0.0151
747	SLU 50	0.35	0.7	68.93	-0.0534	1.0426	-0.0154
747	SLU 51	0.34	0.65	68.91	-0.0535	1.0419	-0.0151
747	SLU 52	0.39	0.72	74.56	-0.0563	1.1423	-0.0145
747	SLU 53	0.4	0.82	75.83	-0.0576	1.1664	-0.0154
747	SLU 54	0.4	0.78	75.81	-0.0577	1.1657	-0.0151
747	SLU 55	0.39	0.73	75.3	-0.0573	1.1553	-0.0149
747	SLU 56	0.41	0.83	76.58	-0.0586	1.1795	-0.0158

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
747	SLU 57	0.4	0.79	76.55	-0.0587	1.1788	-0.0155
747	SLU 58	0.41	0.81	76.08	-0.0582	1.1696	-0.0158
747	SLU 59	0.4	0.77	76.05	-0.0583	1.1689	-0.0155
747	SLU 60	0.42	0.84	77.66	-0.0582	1.1978	-0.0152
747	SLU 61	0.41	0.8	77.63	-0.0583	1.1971	-0.0149
747	SLU 62	0.43	0.85	78.4	-0.0592	1.2109	-0.0156
747	SLU 63	0.42	0.81	78.38	-0.0593	1.2102	-0.0153
747	SLU 64	0.37	0.89	74.18	-0.0545	1.1454	-0.0163
747	SLU 65	0.37	0.82	74.14	-0.0546	1.1443	-0.0158
747	SLU 66	0.38	0.92	75.42	-0.056	1.1684	-0.0167
747	SLU 67	0.38	0.88	75.4	-0.0561	1.1677	-0.0164
747	SLU 68	0.37	0.83	74.88	-0.0557	1.1573	-0.0161
747	SLU 69	0.39	0.93	76.16	-0.057	1.1815	-0.0171
747	SLU 70	0.38	0.89	76.14	-0.0571	1.1808	-0.0167
747	SLU 71	0.39	0.91	75.66	-0.0566	1.1716	-0.0171
747	SLU 72	0.38	0.87	75.64	-0.0566	1.1709	-0.0167
747	SLU 73	0.42	0.93	81.29	-0.0594	1.2712	-0.0161
747	SLU 74	0.44	1.04	82.57	-0.0608	1.2953	-0.0171
747	SLU 75	0.44	1	82.55	-0.0608	1.2946	-0.0167
747	SLU 76	0.43	0.94	82.03	-0.0604	1.2843	-0.0165
747	SLU 77	0.45	1.05	83.31	-0.0618	1.3084	-0.0174
747	SLU 78	0.44	1.01	83.29	-0.0619	1.3077	-0.0171
747	SLU 79	0.45	1.03	82.81	-0.0614	1.2985	-0.0174
747	SLU 80	0.44	0.98	82.79	-0.0614	1.2978	-0.0171
747	SLU 81	0.46	1.06	84.39	-0.0614	1.3268	-0.0168
747	SLU 82	0.45	1.01	84.37	-0.0614	1.3261	-0.0165
747	SLU 83	0.46	1.07	85.13	-0.0624	1.3399	-0.0172
747	SLU 84	0.46	1.02	85.11	-0.0625	1.3392	-0.0169
747	SLE RA 1	0.28	0.64	55.58	-0.0412	0.8527	-0.0122
747	SLE RA 2	0.27	0.59	55.55	-0.0413	0.852	-0.0118
747	SLE RA 3	0.28	0.66	56.41	-0.0422	0.8681	-0.0125
747	SLE RA 4	0.28	0.63	56.39	-0.0423	0.8676	-0.0122
747	SLE RA 5	0.28	0.6	56.05	-0.042	0.8607	-0.0121
747	SLE RA 6	0.29	0.67	56.9	-0.0429	0.8768	-0.0127
747	SLE RA 7	0.29	0.64	56.89	-0.043	0.8763	-0.0125
747	SLE RA 8	0.29	0.65	56.57	-0.0426	0.8702	-0.0127
747	SLE RA 9	0.29	0.62	56.55	-0.0427	0.8697	-0.0125
747	SLE RA 10	0.31	0.67	60.32	-0.0445	0.9366	-0.0121
747	SLE RA 11	0.32	0.74	61.17	-0.0454	0.9527	-0.0127
747	SLE RA 12	0.32	0.71	61.16	-0.0455	0.9522	-0.0125
747	SLE RA 13	0.32	0.67	60.81	-0.0452	0.9453	-0.0123
747	SLE RA 14	0.33	0.74	61.67	-0.0461	0.9614	-0.0129
747	SLE RA 15	0.32	0.71	61.65	-0.0461	0.961	-0.0127
747	SLE RA 16	0.33	0.73	61.33	-0.0458	0.9548	-0.0129
747	SLE RA 17	0.32	0.7	61.32	-0.0459	0.9544	-0.0127
747	SLE RA 18	0.33	0.75	62.39	-0.0458	0.9736	-0.0125
747	SLE RA 19	0.33	0.72	62.37	-0.0458	0.9732	-0.0123
747	SLE RA 20	0.34	0.75	62.88	-0.0465	0.9824	-0.0128
747	SLE RA 21	0.34	0.73	62.87	-0.0465	0.9819	-0.0126
747	SLE FR 1	0.28	0.64	55.58	-0.0412	0.8527	-0.0122
747	SLE FR 2	0.28	0.63	55.57	-0.0413	0.8526	-0.0121
747	SLE FR 3	0.28	0.64	55.78	-0.0415	0.8562	-0.0123
747	SLE FR 4	0.29	0.66	57.62	-0.0426	0.8889	-0.0122
747	SLE FR 5	0.3	0.67	57.82	-0.0429	0.8925	-0.0124
747	SLE FR 6	0.31	0.69	58.98	-0.0435	0.9132	-0.0124
747	SLE QP 1	0.28	0.64	55.58	-0.0412	0.8527	-0.0122
747	SLE QP 2	0.3	0.67	57.62	-0.0426	0.889	-0.0123
747	SLD 1	5.67	2	60.32	-0.0163	0.9345	-0.0228
747	SLD 2	5.53	1.77	60.17	-0.0171	0.9337	-0.0144
747	SLD 3	5.75	0.26	59.89	-0.015	0.9157	-0.0208
747	SLD 4	5.61	0.04	59.75	-0.0158	0.9149	-0.0124
747	SLD 5	1.82	3.75	59.09	-0.0365	0.9313	-0.0201
747	SLD 6	1.72	3.59	59	-0.037	0.9308	-0.0145
747	SLD 7	2.07	-2.04	57.69	-0.0323	0.8686	-0.0133
747	SLD 8	1.98	-2.19	57.6	-0.0328	0.8681	-0.0077
747	SLD 9	-1.39	3.54	57.65	-0.0524	0.9099	-0.0169
747	SLD 10	-1.48	3.39	57.55	-0.0529	0.9094	-0.0113
747	SLD 11	-1.13	-2.25	56.24	-0.0482	0.8472	-0.0101
747	SLD 12	-1.22	-2.4	56.15	-0.0487	0.8467	-0.0045
747	SLD 13	-5.02	1.31	55.49	-0.0694	0.8631	-0.0122
747	SLD 14	-5.16	1.08	55.35	-0.0702	0.8624	-0.0038
747	SLD 15	-4.94	-0.43	55.07	-0.0682	0.8443	-0.0102
747	SLD 16	-5.08	-0.66	54.93	-0.069	0.8436	-0.0018
747	SLV 1	12.86	3.72	63.96	0.0193	0.9954	-0.0368
747	SLV 2	12.54	3.18	63.63	0.0174	0.9936	-0.0172
747	SLV 3	13.04	-0.21	63.01	0.0222	0.9529	-0.0322
747	SLV 4	12.72	-0.75	62.67	0.0204	0.9511	-0.0126
747	SLV 5	3.85	7.64	61.03	-0.0281	0.9857	-0.0301
747	SLV 6	3.64	7.29	60.81	-0.0293	0.9845	-0.0173
747	SLV 7	4.45	-5.46	57.85	-0.0184	0.8441	-0.0148
747	SLV 8	4.24	-5.81	57.63	-0.0196	0.8429	-0.002
747	SLV 9	-3.65	7.15	57.62	-0.0656	0.9352	-0.0226
747	SLV 10	-3.86	6.81	57.4	-0.0668	0.934	-0.0099
747	SLV 11	-3.05	-5.95	54.43	-0.0559	0.7935	-0.0073
747	SLV 12	-3.25	-6.3	54.21	-0.0571	0.7923	0.0054
747	SLV 13	-12.13	2.09	52.57	-0.1056	0.8269	-0.012
747	SLV 14	-12.45	1.56	52.23	-0.1074	0.8251	0.0076
747	SLV 15	-11.95	-1.84	51.62	-0.1027	0.7844	-0.0074
747	SLV 16	-12.27	-2.37	51.28	-0.1045	0.7826	0.0122
747	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
747	CRTFP Ux-	0	0	0	0	0	0
750	SLU 1	0.49	1.43	48.73	-0.0395	-0.2625	0.0041
750	SLU 2	0.48	1.39	48.7	-0.0396	-0.2613	0.0047
750	SLU 3	0.5	1.49	49.82	-0.0407	-0.2691	0.0042
750	SLU 4	0.5	1.46	49.8	-0.0408	-0.2684	0.0046
750	SLU 5	0.49	1.41	49.37	-0.0403	-0.2652	0.0046
750	SLU 6	0.52	1.51	50.48	-0.0414	-0.273	0.0042
750	SLU 7	0.51	1.48	50.47	-0.0415	-0.2722	0.0045
750	SLU 8	0.51	1.47	50.07	-0.0408	-0.2703	0.004
750	SLU 9	0.51	1.45	50.05	-0.0409	-0.2696	0.0043
750	SLU 10	0.55	1.62	55.08	-0.0443	-0.3	0.0041
750	SLU 11	0.57	1.72	56.19	-0.0454	-0.3078	0.0037
750	SLU 12	0.57	1.69	56.17	-0.0455	-0.3071	0.004
750	SLU 13	0.56	1.64	55.74	-0.045	-0.3039	0.0041
750	SLU 14	0.59	1.74	56.86	-0.0461	-0.3117	0.0036
750	SLU 15	0.58	1.72	56.84	-0.0462	-0.311	0.0039
750	SLU 16	0.58	1.71	56.44	-0.0455	-0.309	0.0034
750	SLU 17	0.58	1.68	56.42	-0.0456	-0.3083	0.0038
750	SLU 18	0.59	1.77	57.84	-0.0461	-0.3178	0.0033
750	SLU 19	0.58	1.74	57.82	-0.0462	-0.317	0.0037
750	SLU 20	0.6	1.79	58.51	-0.0468	-0.3216	0.0033
750	SLU 21	0.59	1.76	58.49	-0.0469	-0.3209	0.0036
750	SLU 22	0.56	1.74	54.71	-0.0416	-0.3079	0.0041
750	SLU 23	0.55	1.69	54.68	-0.0418	-0.3067	0.0046
750	SLU 24	0.58	1.79	55.8	-0.0429	-0.3145	0.0042
750	SLU 25	0.57	1.77	55.78	-0.043	-0.3138	0.0045
750	SLU 26	0.56	1.72	55.35	-0.0425	-0.3106	0.0046
750	SLU 27	0.59	1.81	56.46	-0.0436	-0.3184	0.0041
750	SLU 28	0.58	1.79	56.45	-0.0436	-0.3177	0.0044
750	SLU 29	0.59	1.78	56.05	-0.043	-0.3157	0.0039
750	SLU 30	0.58	1.76	56.03	-0.0431	-0.315	0.0043
750	SLU 31	0.62	1.93	61.06	-0.0465	-0.3454	0.0041
750	SLU 32	0.65	2.03	62.17	-0.0475	-0.3532	0.0036
750	SLU 33	0.64	2	62.15	-0.0476	-0.3525	0.0039
750	SLU 34	0.63	1.95	61.72	-0.0471	-0.3493	0.004
750	SLU 35	0.66	2.05	62.84	-0.0482	-0.3571	0.0035
750	SLU 36	0.65	2.02	62.82	-0.0483	-0.3564	0.0039
750	SLU 37	0.66	2.02	62.42	-0.0477	-0.3544	0.0034
750	SLU 38	0.65	1.99	62.4	-0.0478	-0.3537	0.0037
750	SLU 39	0.66	2.07	63.82	-0.0483	-0.3632	0.0033
750	SLU 40	0.66	2.05	63.8	-0.0484	-0.3625	0.0036
750	SLU 41	0.67	2.1	64.49	-0.049	-0.3671	0.0032
750	SLU 42	0.67	2.07	64.47	-0.0491	-0.3664	0.0035
750	SLU 43	0.61	1.76	61.3	-0.0506	-0.3256	0.0054
750	SLU 44	0.6	1.71	61.27	-0.0507	-0.3244	0.0059
750	SLU 45	0.63	1.81	62.39	-0.0518	-0.3322	0.0055
750	SLU 46	0.62	1.78	62.37	-0.0519	-0.3315	0.0058
750	SLU 47	0.61	1.73	61.94	-0.0514	-0.3283	0.0059
750	SLU 48	0.64	1.83	63.05	-0.0525	-0.3361	0.0054
750	SLU 49	0.63	1.81	63.03	-0.0526	-0.3354	0.0057
750	SLU 50	0.63	1.8	62.63	-0.0519	-0.3334	0.0053
750	SLU 51	0.63	1.77	62.62	-0.052	-0.3327	0.0056
750	SLU 52	0.67	1.95	67.65	-0.0554	-0.3631	0.0054
750	SLU 53	0.7	2.04	68.76	-0.0565	-0.3709	0.0049
750	SLU 54	0.69	2.02	68.74	-0.0566	-0.3702	0.0052
750	SLU 55	0.68	1.97	68.31	-0.0561	-0.367	0.0053
750	SLU 56	0.71	2.07	69.43	-0.0572	-0.3748	0.0049
750	SLU 57	0.7	2.04	69.41	-0.0573	-0.3741	0.0052
750	SLU 58	0.7	2.03	69.01	-0.0566	-0.3721	0.0047
750	SLU 59	0.7	2.01	68.99	-0.0567	-0.3714	0.005
750	SLU 60	0.71	2.09	70.41	-0.0572	-0.3809	0.0046
750	SLU 61	0.7	2.06	70.39	-0.0573	-0.3802	0.0049
750	SLU 62	0.72	2.11	71.08	-0.0579	-0.3848	0.0045
750	SLU 63	0.72	2.09	71.06	-0.058	-0.3841	0.0049
750	SLU 64	0.68	2.06	67.28	-0.0527	-0.3711	0.0053
750	SLU 65	0.67	2.02	67.25	-0.0529	-0.3699	0.0059
750	SLU 66	0.7	2.12	68.37	-0.054	-0.3777	0.0054
750	SLU 67	0.69	2.09	68.35	-0.0541	-0.3769	0.0057
750	SLU 68	0.69	2.04	67.92	-0.0536	-0.3738	0.0058
750	SLU 69	0.71	2.14	69.03	-0.0547	-0.3816	0.0053
750	SLU 70	0.71	2.11	69.01	-0.0547	-0.3808	0.0057
750	SLU 71	0.71	2.11	68.61	-0.0541	-0.3789	0.0052
750	SLU 72	0.7	2.08	68.6	-0.0542	-0.3781	0.0055
750	SLU 73	0.74	2.25	73.63	-0.0576	-0.4086	0.0053
750	SLU 74	0.77	2.35	74.74	-0.0586	-0.4164	0.0049
750	SLU 75	0.76	2.33	74.72	-0.0587	-0.4156	0.0052
750	SLU 76	0.76	2.28	74.29	-0.0582	-0.4125	0.0052
750	SLU 77	0.78	2.37	75.41	-0.0593	-0.4203	0.0048
750	SLU 78	0.78	2.35	75.39	-0.0594	-0.4195	0.0051
750	SLU 79	0.78	2.34	74.99	-0.0588	-0.4176	0.0046
750	SLU 80	0.77	2.31	74.97	-0.0589	-0.4168	0.005
750	SLU 81	0.78	2.4	76.39	-0.0594	-0.4263	0.0045
750	SLU 82	0.78	2.37	76.37	-0.0595	-0.4256	0.0049
750	SLU 83	0.8	2.42	77.06	-0.0601	-0.4302	0.0045
750	SLU 84	0.79	2.39	77.04	-0.0602	-0.4295	0.0048
750	SLE RA 1	0.51	1.52	50.44	-0.0401	-0.2754	0.0041
750	SLE RA 2	0.5	1.49	50.42	-0.0402	-0.2747	0.0045
750	SLE RA 3	0.52	1.56	51.16	-0.0409	-0.2798	0.0042
750	SLE RA 4	0.52	1.54	51.15	-0.041	-0.2794	0.0044
750	SLE RA 5	0.51	1.5	50.86	-0.0406	-0.2773	0.0044

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
750	SLE RA 6	0.53	1.57	51.61	-0.0414	-0.2824	0.0041
750	SLE RA 7	0.52	1.55	51.6	-0.0414	-0.282	0.0043
750	SLE RA 8	0.53	1.55	51.33	-0.041	-0.2806	0.004
750	SLE RA 9	0.52	1.53	51.32	-0.0411	-0.2802	0.0042
750	SLE RA 10	0.55	1.65	54.67	-0.0433	-0.3005	0.0041
750	SLE RA 11	0.57	1.71	55.41	-0.044	-0.3056	0.0038
750	SLE RA 12	0.56	1.69	55.4	-0.0441	-0.3052	0.004
750	SLE RA 13	0.56	1.66	55.11	-0.0438	-0.3031	0.0041
750	SLE RA 14	0.58	1.73	55.86	-0.0445	-0.3082	0.0038
750	SLE RA 15	0.57	1.71	55.85	-0.0445	-0.3078	0.004
750	SLE RA 16	0.57	1.7	55.58	-0.0441	-0.3064	0.0036
750	SLE RA 17	0.57	1.69	55.57	-0.0442	-0.306	0.0039
750	SLE RA 18	0.58	1.74	56.51	-0.0445	-0.3123	0.0036
750	SLE RA 19	0.57	1.73	56.5	-0.0446	-0.3118	0.0038
750	SLE RA 20	0.58	1.76	56.96	-0.045	-0.3149	0.0035
750	SLE RA 21	0.58	1.74	56.94	-0.0451	-0.3144	0.0038
750	SLE FR 1	0.51	1.52	50.44	-0.0401	-0.2754	0.0041
750	SLE FR 2	0.51	1.51	50.44	-0.0401	-0.2753	0.0042
750	SLE FR 3	0.51	1.52	50.62	-0.0403	-0.2765	0.0041
750	SLE FR 4	0.53	1.58	52.26	-0.0414	-0.2863	0.004
750	SLE FR 5	0.53	1.59	52.44	-0.0416	-0.2875	0.0039
750	SLE FR 6	0.54	1.63	53.48	-0.0423	-0.2939	0.0038
750	SLE QP 1	0.51	1.52	50.44	-0.0401	-0.2754	0.0041
750	SLE QP 2	0.53	1.59	52.26	-0.0414	-0.2865	0.004
750	SLD 1	5.97	2.19	48.34	-0.062	0.0231	-0.0113
750	SLD 2	5.83	2.38	48.46	-0.0615	0.0178	-0.0027
750	SLD 3	5.86	0.54	47.9	-0.0646	0.0472	-0.0122
750	SLD 4	5.73	0.73	48.03	-0.0641	0.0419	-0.0036
750	SLD 5	2.35	4.22	51.72	-0.0439	-0.2292	-0.0008
750	SLD 6	2.26	4.35	51.81	-0.0435	-0.2327	0.005
750	SLD 7	1.99	-1.25	50.27	-0.0523	-0.1489	-0.0039
750	SLD 8	1.9	-1.12	50.35	-0.052	-0.1524	0.0018
750	SLD 9	-0.84	4.3	54.17	-0.0309	-0.4206	0.0061
750	SLD 10	-0.93	4.42	54.26	-0.0305	-0.4241	0.0118
750	SLD 11	-1.2	-1.18	52.72	-0.0393	-0.3403	0.0029
750	SLD 12	-1.29	-1.05	52.8	-0.039	-0.3438	0.0087
750	SLD 13	-4.67	2.44	56.5	-0.0188	-0.6149	0.0115
750	SLD 14	-4.8	2.63	56.62	-0.0183	-0.6202	0.0201
750	SLD 15	-4.78	0.8	56.06	-0.0213	-0.5908	0.0106
750	SLD 16	-4.91	0.99	56.19	-0.0208	-0.5961	0.0192
750	SLV 1	13.25	2.92	43.06	-0.0897	0.4389	-0.0317
750	SLV 2	12.93	3.36	43.36	-0.0885	0.4265	-0.0116
750	SLV 3	13	-0.8	42.07	-0.0955	0.4934	-0.0339
750	SLV 4	12.68	-0.36	42.37	-0.0943	0.481	-0.0138
750	SLV 5	4.78	7.55	50.95	-0.0474	-0.1494	-0.007
750	SLV 6	4.57	7.84	51.14	-0.0466	-0.1575	0.0061
750	SLV 7	3.95	-4.85	47.65	-0.0666	0.0323	-0.0142
750	SLV 8	3.74	-4.56	47.85	-0.0658	0.0242	-0.0012
750	SLV 9	-2.68	7.73	56.68	-0.017	-0.5972	0.0091
750	SLV 10	-2.89	8.02	56.87	-0.0163	-0.6053	0.0221
750	SLV 11	-3.51	-4.66	53.38	-0.0362	-0.4155	0.0018
750	SLV 12	-3.72	-4.38	53.57	-0.0355	-0.4236	0.0149
750	SLV 13	-11.63	3.53	62.16	0.0115	-1.054	0.0217
750	SLV 14	-11.94	3.97	62.45	0.0126	-1.0664	0.0418
750	SLV 15	-11.87	-0.19	61.17	0.0057	-0.9995	0.0195
750	SLV 16	-12.19	0.25	61.46	0.0069	-1.0119	0.0396
750	CRTFP Ux+	0	0	0	0	0	0
750	CRTFP Ux-	0	0	0	0	0	0
752	SLU 1	-0.58	0.02	31.82	-0.0358	-3.178	0.0052
752	SLU 2	-0.59	-0.07	31.84	-0.0358	-3.1829	-0.0158
752	SLU 3	-0.59	0.02	32.59	-0.0368	-3.2428	0.0066
752	SLU 4	-0.6	-0.03	32.6	-0.0367	-3.2457	-0.006
752	SLU 5	-0.6	-0.06	32.32	-0.0363	-3.223	-0.0145
752	SLU 6	-0.6	0.03	33.08	-0.0373	-3.2829	0.008
752	SLU 7	-0.61	-0.02	33.09	-0.0373	-3.2859	-0.0046
752	SLU 8	-0.6	0.03	32.79	-0.037	-3.2582	0.0079
752	SLU 9	-0.6	-0.02	32.8	-0.0369	-3.2612	-0.0047
752	SLU 10	-0.62	-0.01	35.49	-0.0406	-3.5388	-0.0019
752	SLU 11	-0.63	0.08	36.25	-0.0416	-3.5987	0.0206
752	SLU 12	-0.63	0.03	36.26	-0.0416	-3.6016	0.008
752	SLU 13	-0.63	-0.01	35.98	-0.0412	-3.5789	-0.0005
752	SLU 14	-0.64	0.08	36.73	-0.0422	-3.6388	0.022
752	SLU 15	-0.64	0.03	36.74	-0.0421	-3.6417	0.0093
752	SLU 16	-0.63	0.08	36.45	-0.0418	-3.6141	0.0219
752	SLU 17	-0.64	0.03	36.46	-0.0418	-3.617	0.0093
752	SLU 18	-0.63	0.1	37.04	-0.0427	-3.6864	0.0251
752	SLU 19	-0.63	0.05	37.05	-0.0427	-3.6893	0.0125
752	SLU 20	-0.64	0.1	37.53	-0.0433	-3.7265	0.0265
752	SLU 21	-0.64	0.05	37.54	-0.0433	-3.7295	0.0139
752	SLU 22	-0.63	0.08	35.55	-0.0405	-3.5314	0.0215
752	SLU 23	-0.64	0	35.56	-0.0404	-3.5362	0.0005
752	SLU 24	-0.64	0.09	36.32	-0.0414	-3.5962	0.0229
752	SLU 25	-0.65	0.04	36.32	-0.0414	-3.5991	0.0103
752	SLU 26	-0.65	0	36.05	-0.041	-3.5764	0.0018
752	SLU 27	-0.65	0.09	36.8	-0.042	-3.6363	0.0243
752	SLU 28	-0.66	0.04	36.81	-0.0419	-3.6392	0.0117
752	SLU 29	-0.65	0.09	36.52	-0.0416	-3.6116	0.0242
752	SLU 30	-0.65	0.04	36.53	-0.0416	-3.6145	0.0116
752	SLU 31	-0.67	0.05	39.22	-0.0453	-3.8921	0.0144
752	SLU 32	-0.68	0.14	39.97	-0.0462	-3.9521	0.0369

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
752	SLU 33	-0.68	0.09	39.98	-0.0462	-3.955	0.0243
752	SLU 34	-0.68	0.06	39.7	-0.0458	-3.9322	0.0158
752	SLU 35	-0.69	0.15	40.46	-0.0468	-3.9922	0.0383
752	SLU 36	-0.69	0.1	40.47	-0.0468	-3.9951	0.0256
752	SLU 37	-0.68	0.15	40.18	-0.0465	-3.9675	0.0382
752	SLU 38	-0.69	0.1	40.18	-0.0464	-3.9704	0.0256
752	SLU 39	-0.68	0.16	40.77	-0.0474	-4.0398	0.0414
752	SLU 40	-0.68	0.11	40.78	-0.0474	-4.0427	0.0288
752	SLU 41	-0.69	0.17	41.26	-0.048	-4.0799	0.0428
752	SLU 42	-0.69	0.12	41.26	-0.0479	-4.0828	0.0302
752	SLU 43	-0.74	0	40.09	-0.045	-4.0103	0.0012
752	SLU 44	-0.74	-0.08	40.11	-0.0449	-4.0151	-0.0199
752	SLU 45	-0.75	0.01	40.86	-0.0459	-4.0751	0.0026
752	SLU 46	-0.76	-0.04	40.87	-0.0459	-4.078	-0.01
752	SLU 47	-0.75	-0.08	40.59	-0.0455	-4.0552	-0.0185
752	SLU 48	-0.76	0.01	41.35	-0.0465	-4.1152	0.004
752	SLU 49	-0.76	-0.04	41.36	-0.0464	-4.1181	-0.0087
752	SLU 50	-0.76	0.01	41.06	-0.0461	-4.0905	0.0039
752	SLU 51	-0.76	-0.04	41.07	-0.0461	-4.0934	-0.0087
752	SLU 52	-0.78	-0.03	43.76	-0.0498	-4.371	-0.0059
752	SLU 53	-0.78	0.06	44.52	-0.0507	-4.431	0.0166
752	SLU 54	-0.79	0.01	44.53	-0.0507	-4.4339	0.0039
752	SLU 55	-0.79	-0.02	44.25	-0.0503	-4.4111	-0.0045
752	SLU 56	-0.79	0.07	45	-0.0513	-4.4711	0.0179
752	SLU 57	-0.8	0.02	45.01	-0.0513	-4.474	0.0053
752	SLU 58	-0.79	0.07	44.72	-0.051	-4.4464	0.0178
752	SLU 59	-0.79	0.02	44.73	-0.0509	-4.4493	0.0052
752	SLU 60	-0.78	0.08	45.31	-0.0519	-4.5187	0.0211
752	SLU 61	-0.79	0.03	45.32	-0.0519	-4.5216	0.0085
752	SLU 62	-0.79	0.08	45.8	-0.0525	-4.5588	0.0225
752	SLU 63	-0.8	0.03	45.81	-0.0524	-4.5617	0.0098
752	SLU 64	-0.79	0.07	43.81	-0.0497	-4.3636	0.0175
752	SLU 65	-0.79	-0.02	43.83	-0.0496	-4.3685	-0.0036
752	SLU 66	-0.8	0.07	44.58	-0.0506	-4.4284	0.0189
752	SLU 67	-0.8	0.02	44.59	-0.0505	-4.4314	0.0063
752	SLU 68	-0.8	-0.01	44.32	-0.0502	-4.4086	-0.0022
752	SLU 69	-0.81	0.08	45.07	-0.0511	-4.4685	0.0203
752	SLU 70	-0.81	0.03	45.08	-0.0511	-4.4715	0.0076
752	SLU 71	-0.81	0.08	44.79	-0.0508	-4.4438	0.0202
752	SLU 72	-0.81	0.03	44.8	-0.0507	-4.4468	0.0076
752	SLU 73	-0.83	0.04	47.49	-0.0544	-4.7244	0.0104
752	SLU 74	-0.83	0.13	48.24	-0.0554	-4.7843	0.0329
752	SLU 75	-0.84	0.08	48.25	-0.0554	-4.7872	0.0202
752	SLU 76	-0.83	0.04	47.97	-0.055	-4.7645	0.0118
752	SLU 77	-0.84	0.13	48.73	-0.056	-4.8244	0.0342
752	SLU 78	-0.85	0.08	48.74	-0.0559	-4.8274	0.0216
752	SLU 79	-0.84	0.13	48.44	-0.0556	-4.7997	0.0341
752	SLU 80	-0.84	0.08	48.45	-0.0556	-4.8027	0.0215
752	SLU 81	-0.83	0.14	49.04	-0.0566	-4.872	0.0374
752	SLU 82	-0.84	0.09	49.05	-0.0565	-4.875	0.0248
752	SLU 83	-0.84	0.15	49.52	-0.0571	-4.9121	0.0388
752	SLU 84	-0.85	0.1	49.53	-0.0571	-4.9151	0.0261
752	SLE RA 1	-0.59	0.04	32.88	-0.0372	-3.279	0.0099
752	SLE RA 2	-0.6	-0.02	32.9	-0.0371	-3.2822	-0.0042
752	SLE RA 3	-0.6	0.04	33.4	-0.0378	-3.3222	0.0108
752	SLE RA 4	-0.61	0.01	33.4	-0.0378	-3.3241	0.0024
752	SLE RA 5	-0.6	-0.02	33.22	-0.0375	-3.309	-0.0033
752	SLE RA 6	-0.61	0.04	33.72	-0.0382	-3.3489	0.0117
752	SLE RA 7	-0.61	0.01	33.73	-0.0381	-3.3509	0.0033
752	SLE RA 8	-0.61	0.04	33.53	-0.0379	-3.3324	0.0117
752	SLE RA 9	-0.61	0.01	33.54	-0.0379	-3.3344	0.0033
752	SLE RA 10	-0.62	0.02	35.33	-0.0404	-3.5195	0.0051
752	SLE RA 11	-0.63	0.08	35.84	-0.041	-3.5594	0.0201
752	SLE RA 12	-0.63	0.04	35.84	-0.041	-3.5614	0.0117
752	SLE RA 13	-0.63	0.02	35.66	-0.0407	-3.5462	0.006
752	SLE RA 14	-0.63	0.08	36.16	-0.0414	-3.5862	0.021
752	SLE RA 15	-0.63	0.05	36.17	-0.0414	-3.5881	0.0126
752	SLE RA 16	-0.63	0.08	35.97	-0.0411	-3.5697	0.021
752	SLE RA 17	-0.63	0.05	35.98	-0.0411	-3.5717	0.0126
752	SLE RA 18	-0.63	0.09	36.37	-0.0418	-3.6179	0.0231
752	SLE RA 19	-0.63	0.05	36.37	-0.0417	-3.6199	0.0147
752	SLE RA 20	-0.63	0.09	36.69	-0.0421	-3.6447	0.0241
752	SLE RA 21	-0.63	0.06	36.7	-0.0421	-3.6466	0.0156
752	SLE FR 1	-0.59	0.04	32.88	-0.0372	-3.279	0.0099
752	SLE FR 2	-0.6	0.02	32.89	-0.0372	-3.2796	0.007
752	SLE FR 3	-0.6	0.04	33.01	-0.0373	-3.2897	0.0102
752	SLE FR 4	-0.6	0.04	33.93	-0.0385	-3.3813	0.011
752	SLE FR 5	-0.61	0.05	34.06	-0.0387	-3.3913	0.0142
752	SLE FR 6	-0.61	0.06	34.63	-0.0395	-3.4484	0.0165
752	SLE QP 1	-0.59	0.04	32.88	-0.0372	-3.279	0.0099
752	SLE QP 2	-0.6	0.05	33.93	-0.0386	-3.3807	0.0138
752	SLD 1	1.84	0.6	43.34	-0.0533	-4.2245	0.1508
752	SLD 2	1.74	0.06	43.46	-0.0524	-4.2601	0.0172
752	SLD 3	1.77	-0.62	43.47	-0.0524	-4.3226	-0.1536
752	SLD 4	1.67	-1.16	43.58	-0.0516	-4.3581	-0.2872
752	SLD 5	0.26	2.16	36.55	-0.0444	-3.4787	0.5409
752	SLD 6	0.19	1.8	36.62	-0.0438	-3.5023	0.4522
752	SLD 7	0.01	-1.9	36.96	-0.0416	-3.8054	-0.4738
752	SLD 8	-0.05	-2.25	37.03	-0.041	-3.829	-0.5624
752	SLD 9	-1.16	2.36	30.83	-0.0361	-2.9323	0.5901

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
752	SLD 10	-1.22	2	30.9	-0.0355	-2.9559	0.5015
752	SLD 11	-1.4	-1.7	31.24	-0.0333	-3.259	-0.4246
752	SLD 12	-1.47	-2.05	31.31	-0.0327	-3.2826	-0.5132
752	SLD 13	-2.88	1.26	24.28	-0.0255	-2.4032	0.3149
752	SLD 14	-2.97	0.72	24.39	-0.0247	-2.4387	0.1813
752	SLD 15	-2.95	0.04	24.4	-0.0247	-2.5012	0.0105
752	SLD 16	-3.05	-0.49	24.52	-0.0238	-2.5368	-0.1231
752	SLV 1	5.11	1.27	55.95	-0.073	-5.3589	0.3216
752	SLV 2	4.88	0.02	56.22	-0.071	-5.4417	0.0106
752	SLV 3	4.94	-1.48	56.24	-0.0711	-5.5819	-0.3668
752	SLV 4	4.71	-2.73	56.51	-0.0691	-5.6647	-0.6778
752	SLV 5	1.4	4.81	40.05	-0.0521	-3.6212	1.2049
752	SLV 6	1.26	3.99	40.23	-0.0509	-3.6752	1.0023
752	SLV 7	0.84	-4.36	41.01	-0.0457	-4.3648	-1.0898
752	SLV 8	0.7	-5.17	41.19	-0.0445	-4.4188	-1.2924
752	SLV 9	-1.9	5.27	26.67	-0.0326	-2.3425	1.3201
752	SLV 10	-2.05	4.46	26.85	-0.0314	-2.3965	1.1175
752	SLV 11	-2.46	-3.89	27.63	-0.0262	-3.0861	-0.9746
752	SLV 12	-2.61	-4.7	27.81	-0.025	-3.1401	-1.1773
752	SLV 13	-5.92	2.83	11.35	-0.008	-1.0966	0.7055
752	SLV 14	-6.15	1.58	11.62	-0.006	-1.1794	0.3945
752	SLV 15	-6.09	0.08	11.64	-0.0061	-1.3196	0.017
752	SLV 16	-6.31	-1.17	11.91	-0.0041	-1.4024	-0.2939
752	CRTFP Ux+	0	0	0	0	0	0
752	CRTFP Ux-	0	0	0	0	0	0
752	CRTFP Uy+	0	0	0	0	0	0
752	CRTFP Uy-	0	0	0	0	0	0
755	SLU 1	0.69	0.26	37.84	-0.0662	8.3579	-0.0909
755	SLU 2	0.69	0.24	37.84	-0.0663	8.359	-0.0837
755	SLU 3	0.71	0.27	38.73	-0.068	8.5441	-0.0923
755	SLU 4	0.71	0.25	38.74	-0.068	8.5448	-0.088
755	SLU 5	0.7	0.24	38.4	-0.0674	8.4753	-0.0824
755	SLU 6	0.72	0.26	39.29	-0.0691	8.6604	-0.091
755	SLU 7	0.72	0.25	39.29	-0.0691	8.6611	-0.0867
755	SLU 8	0.71	0.26	38.95	-0.0684	8.5905	-0.0884
755	SLU 9	0.71	0.24	38.96	-0.0685	8.5911	-0.084
755	SLU 10	0.73	0.35	42.18	-0.0748	9.2849	-0.1211
755	SLU 11	0.75	0.37	43.07	-0.0765	9.47	-0.1298
755	SLU 12	0.75	0.36	43.07	-0.0765	9.4707	-0.1254
755	SLU 13	0.74	0.35	42.74	-0.0759	9.4011	-0.1198
755	SLU 14	0.76	0.37	43.63	-0.0776	9.5863	-0.1285
755	SLU 15	0.76	0.36	43.63	-0.0776	9.587	-0.1241
755	SLU 16	0.75	0.36	43.29	-0.077	9.5163	-0.1258
755	SLU 17	0.75	0.35	43.29	-0.077	9.517	-0.1215
755	SLU 18	0.74	0.42	44.03	-0.0784	9.6806	-0.1445
755	SLU 19	0.74	0.4	44.04	-0.0784	9.6812	-0.1401
755	SLU 20	0.76	0.41	44.59	-0.0795	9.7969	-0.1432
755	SLU 21	0.76	0.4	44.59	-0.0795	9.7975	-0.1388
755	SLU 22	0.74	0.37	42.21	-0.0746	9.2863	-0.1275
755	SLU 23	0.75	0.35	42.22	-0.0746	9.2874	-0.1202
755	SLU 24	0.76	0.37	43.11	-0.0764	9.4726	-0.1289
755	SLU 25	0.77	0.36	43.11	-0.0764	9.4733	-0.1245
755	SLU 26	0.76	0.34	42.78	-0.0757	9.4037	-0.1189
755	SLU 27	0.78	0.37	43.67	-0.0775	9.5889	-0.1276
755	SLU 28	0.78	0.36	43.67	-0.0775	9.5895	-0.1232
755	SLU 29	0.77	0.36	43.33	-0.0768	9.5189	-0.1249
755	SLU 30	0.77	0.35	43.34	-0.0768	9.5196	-0.1206
755	SLU 31	0.79	0.45	46.56	-0.0831	10.2133	-0.1577
755	SLU 32	0.8	0.48	47.45	-0.0849	10.3985	-0.1664
755	SLU 33	0.8	0.47	47.45	-0.0849	10.3992	-0.162
755	SLU 34	0.8	0.45	47.12	-0.0842	10.3296	-0.1564
755	SLU 35	0.82	0.48	48.01	-0.086	10.5148	-0.1651
755	SLU 36	0.82	0.46	48.01	-0.086	10.5154	-0.1607
755	SLU 37	0.81	0.47	47.67	-0.0853	10.4448	-0.1624
755	SLU 38	0.81	0.46	47.67	-0.0853	10.4455	-0.158
755	SLU 39	0.8	0.52	48.41	-0.0867	10.609	-0.1811
755	SLU 40	0.8	0.51	48.41	-0.0868	10.6097	-0.1767
755	SLU 41	0.81	0.52	48.97	-0.0879	10.7253	-0.1798
755	SLU 42	0.82	0.51	48.97	-0.0879	10.726	-0.1754
755	SLU 43	0.87	0.31	47.68	-0.0832	10.5469	-0.1057
755	SLU 44	0.87	0.29	47.69	-0.0833	10.548	-0.0984
755	SLU 45	0.89	0.31	48.58	-0.085	10.7332	-0.1071
755	SLU 46	0.89	0.3	48.58	-0.085	10.7338	-0.1027
755	SLU 47	0.89	0.28	48.25	-0.0844	10.6643	-0.0971
755	SLU 48	0.91	0.31	49.14	-0.0861	10.8495	-0.1058
755	SLU 49	0.91	0.29	49.14	-0.0861	10.8501	-0.1014
755	SLU 50	0.9	0.3	48.8	-0.0855	10.7795	-0.1031
755	SLU 51	0.9	0.29	48.81	-0.0855	10.7801	-0.0987
755	SLU 52	0.91	0.39	52.03	-0.0918	11.4739	-0.1359
755	SLU 53	0.93	0.42	52.92	-0.0935	11.6591	-0.1445
755	SLU 54	0.93	0.41	52.92	-0.0935	11.6597	-0.1402
755	SLU 55	0.93	0.39	52.59	-0.0929	11.5902	-0.1346
755	SLU 56	0.95	0.41	53.48	-0.0946	11.7753	-0.1433
755	SLU 57	0.95	0.4	53.48	-0.0946	11.776	-0.1389
755	SLU 58	0.94	0.41	53.14	-0.094	11.7054	-0.1406
755	SLU 59	0.94	0.39	53.14	-0.094	11.706	-0.1362
755	SLU 60	0.93	0.46	53.88	-0.0954	11.8696	-0.1592
755	SLU 61	0.93	0.45	53.88	-0.0954	11.8703	-0.1549
755	SLU 62	0.94	0.46	54.44	-0.0965	11.9859	-0.1579
755	SLU 63	0.94	0.44	54.44	-0.0965	11.9866	-0.1536

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
755	SLU 64	0.93	0.41	52.06	-0.0916	11.4754	-0.1423
755	SLU 65	0.93	0.39	52.07	-0.0916	11.4765	-0.135
755	SLU 66	0.95	0.42	52.96	-0.0934	11.6616	-0.1436
755	SLU 67	0.95	0.4	52.96	-0.0934	11.6623	-0.1393
755	SLU 68	0.95	0.39	52.63	-0.0927	11.5928	-0.1337
755	SLU 69	0.96	0.41	53.52	-0.0945	11.7779	-0.1424
755	SLU 70	0.97	0.4	53.52	-0.0945	11.7786	-0.138
755	SLU 71	0.96	0.4	53.18	-0.0938	11.708	-0.1397
755	SLU 72	0.96	0.39	53.18	-0.0938	11.7086	-0.1353
755	SLU 73	0.97	0.5	56.41	-0.1001	12.4024	-0.1724
755	SLU 74	0.99	0.52	57.3	-0.1019	12.5875	-0.1811
755	SLU 75	0.99	0.51	57.3	-0.1019	12.5882	-0.1767
755	SLU 76	0.99	0.49	56.97	-0.1012	12.5186	-0.1712
755	SLU 77	1	0.52	57.86	-0.103	12.7038	-0.1798
755	SLU 78	1	0.51	57.86	-0.103	12.7045	-0.1755
755	SLU 79	1	0.51	57.52	-0.1023	12.6338	-0.1772
755	SLU 80	1	0.5	57.52	-0.1023	12.6345	-0.1728
755	SLU 81	0.99	0.56	58.26	-0.1037	12.7981	-0.1958
755	SLU 82	0.99	0.55	58.26	-0.1038	12.7987	-0.1914
755	SLU 83	1	0.56	58.82	-0.1049	12.9144	-0.1945
755	SLU 84	1	0.55	58.82	-0.1049	12.915	-0.1901
755	SLE RA 1	0.7	0.29	39.09	-0.0686	8.6231	-0.1014
755	SLE RA 2	0.7	0.28	39.09	-0.0686	8.6239	-0.0965
755	SLE RA 3	0.72	0.3	39.68	-0.0698	8.7473	-0.1023
755	SLE RA 4	0.72	0.29	39.69	-0.0698	8.7478	-0.0994
755	SLE RA 5	0.71	0.28	39.46	-0.0694	8.7014	-0.0957
755	SLE RA 6	0.73	0.29	40.06	-0.0705	8.8249	-0.1015
755	SLE RA 7	0.73	0.29	40.06	-0.0705	8.8253	-0.0985
755	SLE RA 8	0.72	0.29	39.83	-0.0701	8.7782	-0.0997
755	SLE RA 9	0.72	0.28	39.83	-0.0701	8.7786	-0.0968
755	SLE RA 10	0.73	0.35	41.98	-0.0743	9.2411	-0.1215
755	SLE RA 11	0.74	0.37	42.58	-0.0755	9.3646	-0.1273
755	SLE RA 12	0.74	0.36	42.58	-0.0755	9.365	-0.1244
755	SLE RA 13	0.74	0.35	42.35	-0.0751	9.3187	-0.1207
755	SLE RA 14	0.75	0.37	42.95	-0.0762	9.4421	-0.1264
755	SLE RA 15	0.75	0.36	42.95	-0.0762	9.4425	-0.1235
755	SLE RA 16	0.75	0.36	42.72	-0.0758	9.3955	-0.1247
755	SLE RA 17	0.75	0.35	42.73	-0.0758	9.3959	-0.1217
755	SLE RA 18	0.74	0.4	43.22	-0.0767	9.505	-0.1371
755	SLE RA 19	0.74	0.39	43.22	-0.0767	9.5054	-0.1342
755	SLE RA 20	0.75	0.39	43.59	-0.0775	9.5825	-0.1362
755	SLE RA 21	0.75	0.38	43.59	-0.0775	9.5829	-0.1333
755	SLE FR 1	0.7	0.29	39.09	-0.0686	8.6231	-0.1014
755	SLE FR 2	0.7	0.29	39.09	-0.0686	8.6233	-0.1004
755	SLE FR 3	0.71	0.29	39.24	-0.0689	8.6542	-0.1011
755	SLE FR 4	0.71	0.32	40.33	-0.0711	8.8878	-0.1111
755	SLE FR 5	0.72	0.32	40.47	-0.0713	8.9187	-0.1118
755	SLE FR 6	0.72	0.34	41.15	-0.0727	9.0641	-0.1192
755	SLE QP 1	0.7	0.29	39.09	-0.0686	8.6231	-0.1014
755	SLE QP 2	0.71	0.32	40.33	-0.071	8.8877	-0.1121
755	SLD 1	3.04	0.87	29.25	-0.049	6.7031	-0.3021
755	SLD 2	2.91	1.54	29.12	-0.0505	6.7036	-0.5329
755	SLD 3	3.21	-0.5	29.5	-0.0468	6.6635	0.1757
755	SLD 4	3.08	0.17	29.36	-0.0483	6.6641	-0.0552
755	SLD 5	1.19	2.44	36.66	-0.0675	8.2922	-0.8517
755	SLD 6	1.1	2.88	36.57	-0.0685	8.2926	-1.0049
755	SLD 7	1.73	-2.12	37.47	-0.0601	8.1603	0.7408
755	SLD 8	1.65	-1.68	37.38	-0.0611	8.1607	0.5876
755	SLD 9	-0.22	2.33	43.27	-0.081	9.6147	-0.8118
755	SLD 10	-0.31	2.77	43.18	-0.0819	9.6151	-0.965
755	SLD 11	0.33	-2.24	44.08	-0.0736	9.4828	0.7807
755	SLD 12	0.24	-1.8	43.99	-0.0746	9.4832	0.6275
755	SLD 13	-1.65	0.48	51.29	-0.0938	11.1113	-0.169
755	SLD 14	-1.78	1.14	51.15	-0.0953	11.1119	-0.3999
755	SLD 15	-1.48	-0.89	51.53	-0.0916	11.0717	0.3087
755	SLD 16	-1.61	-0.23	51.4	-0.0931	11.0723	0.0779
755	SLV 1	6.16	1.56	14.42	-0.0193	3.7757	-0.5408
755	SLV 2	5.86	3.11	14.11	-0.0228	3.777	-1.0782
755	SLV 3	6.54	-1.54	14.98	-0.0143	3.6843	0.5421
755	SLV 4	6.23	0	14.67	-0.0178	3.6857	0.0047
755	SLV 5	1.84	5.13	31.76	-0.0625	7.4924	-1.7886
755	SLV 6	1.64	6.14	31.56	-0.0647	7.4933	-2.1388
755	SLV 7	3.08	-5.21	33.62	-0.0459	7.1879	1.821
755	SLV 8	2.88	-4.21	33.42	-0.0481	7.1888	1.4708
755	SLV 9	-1.45	4.85	47.23	-0.094	10.5866	-1.695
755	SLV 10	-1.65	5.86	47.03	-0.0962	10.5875	-2.0452
755	SLV 11	-0.21	-5.49	49.09	-0.0774	10.2821	1.9145
755	SLV 12	-0.41	-4.48	48.89	-0.0796	10.283	1.5644
755	SLV 13	-4.8	0.64	65.98	-0.1243	14.0897	-0.2289
755	SLV 14	-5.11	2.19	65.67	-0.1278	14.0911	-0.7663
755	SLV 15	-4.43	-2.46	66.54	-0.1193	13.9984	0.854
755	SLV 16	-4.73	-0.92	66.23	-0.1228	13.9997	0.3166
755	CRTFP Ux+	0	0	0	0	0	0
755	CRTFP Ux-	0	0	0	0	0	0
755	CRTFP Uy+	0	0	0	0	0	0
755	CRTFP Uy-	0	0	0	0	0	0
757	SLU 1	1.23	0.03	59.8	0.0163	0.1374	-0.0123
757	SLU 2	1.22	0	59.8	0.0162	0.1446	-0.0117
757	SLU 3	1.26	0.04	61.18	0.0165	0.143	-0.0126
757	SLU 4	1.26	0.02	61.18	0.0165	0.1473	-0.0123

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
757	SLU 5	1.24	0	60.65	0.0164	0.1473	-0.012
757	SLU 6	1.29	0.04	62.04	0.0167	0.1457	-0.0129
757	SLU 7	1.28	0.02	62.03	0.0167	0.1501	-0.0126
757	SLU 8	1.27	0.02	61.51	0.0166	0.1428	-0.0129
757	SLU 9	1.27	0	61.51	0.0166	0.1472	-0.0125
757	SLU 10	1.3	0.1	67.1	0.0176	0.1723	-0.0125
757	SLU 11	1.34	0.14	68.48	0.0179	0.1707	-0.0134
757	SLU 12	1.34	0.12	68.48	0.0179	0.1751	-0.0131
757	SLU 13	1.32	0.09	67.96	0.0178	0.1751	-0.0128
757	SLU 14	1.36	0.13	69.34	0.0181	0.1735	-0.0137
757	SLU 15	1.36	0.11	69.33	0.0181	0.1778	-0.0134
757	SLU 16	1.35	0.12	68.82	0.018	0.1706	-0.0137
757	SLU 17	1.35	0.1	68.81	0.018	0.1749	-0.0133
757	SLU 18	1.34	0.17	70.24	0.0183	0.177	-0.0134
757	SLU 19	1.33	0.15	70.23	0.0182	0.1813	-0.0131
757	SLU 20	1.36	0.17	71.09	0.0184	0.1797	-0.0137
757	SLU 21	1.36	0.15	71.09	0.0184	0.1841	-0.0134
757	SLU 22	1.34	0.16	67.07	0.0188	0.1624	-0.013
757	SLU 23	1.33	0.13	67.06	0.0187	0.1696	-0.0124
757	SLU 24	1.37	0.17	68.44	0.019	0.168	-0.0133
757	SLU 25	1.37	0.15	68.44	0.019	0.1723	-0.013
757	SLU 26	1.36	0.13	67.92	0.0189	0.1723	-0.0127
757	SLU 27	1.4	0.16	69.3	0.0192	0.1707	-0.0136
757	SLU 28	1.39	0.15	69.29	0.0192	0.1751	-0.0133
757	SLU 29	1.38	0.15	68.78	0.0191	0.1678	-0.0135
757	SLU 30	1.38	0.13	68.77	0.0191	0.1722	-0.0132
757	SLU 31	1.41	0.23	74.36	0.0201	0.1973	-0.0132
757	SLU 32	1.45	0.27	75.75	0.0204	0.1957	-0.0141
757	SLU 33	1.45	0.25	75.74	0.0204	0.2001	-0.0138
757	SLU 34	1.43	0.22	75.22	0.0203	0.2001	-0.0135
757	SLU 35	1.47	0.26	76.6	0.0206	0.1985	-0.0144
757	SLU 36	1.47	0.24	76.6	0.0206	0.2028	-0.014
757	SLU 37	1.46	0.25	76.08	0.0205	0.1956	-0.0143
757	SLU 38	1.46	0.23	76.08	0.0205	0.1999	-0.014
757	SLU 39	1.45	0.3	77.5	0.0208	0.202	-0.0141
757	SLU 40	1.45	0.28	77.5	0.0207	0.2063	-0.0137
757	SLU 41	1.47	0.3	78.36	0.0209	0.2047	-0.0144
757	SLU 42	1.47	0.28	78.35	0.0209	0.2091	-0.014
757	SLU 43	1.56	0	75.26	0.0203	0.17	-0.0157
757	SLU 44	1.55	-0.03	75.25	0.0202	0.1772	-0.0152
757	SLU 45	1.59	0.01	76.63	0.0205	0.1756	-0.0161
757	SLU 46	1.59	-0.01	76.63	0.0205	0.18	-0.0158
757	SLU 47	1.57	-0.04	76.1	0.0204	0.18	-0.0155
757	SLU 48	1.62	0	77.49	0.0207	0.1784	-0.0164
757	SLU 49	1.61	-0.02	77.48	0.0207	0.1827	-0.0161
757	SLU 50	1.6	-0.01	76.96	0.0207	0.1755	-0.0163
757	SLU 51	1.6	-0.03	76.96	0.0206	0.1798	-0.016
757	SLU 52	1.63	0.07	82.55	0.0216	0.205	-0.016
757	SLU 53	1.67	0.1	83.93	0.0219	0.2034	-0.0169
757	SLU 54	1.67	0.09	83.93	0.0219	0.2077	-0.0165
757	SLU 55	1.65	0.06	83.41	0.0218	0.2077	-0.0163
757	SLU 56	1.69	0.1	84.79	0.0221	0.2061	-0.0172
757	SLU 57	1.69	0.08	84.79	0.0221	0.2104	-0.0168
757	SLU 58	1.68	0.09	84.27	0.0221	0.2032	-0.0171
757	SLU 59	1.68	0.07	84.26	0.022	0.2076	-0.0168
757	SLU 60	1.67	0.14	85.69	0.0223	0.2096	-0.0169
757	SLU 61	1.67	0.12	85.68	0.0223	0.214	-0.0165
757	SLU 62	1.69	0.13	86.54	0.0225	0.2124	-0.0171
757	SLU 63	1.69	0.11	86.54	0.0224	0.2167	-0.0168
757	SLU 64	1.67	0.13	82.52	0.0228	0.195	-0.0164
757	SLU 65	1.66	0.1	82.51	0.0227	0.2022	-0.0159
757	SLU 66	1.7	0.14	83.9	0.023	0.2006	-0.0168
757	SLU 67	1.7	0.12	83.89	0.023	0.205	-0.0164
757	SLU 68	1.69	0.09	83.37	0.0229	0.205	-0.0162
757	SLU 69	1.73	0.13	84.75	0.0232	0.2034	-0.0171
757	SLU 70	1.72	0.11	84.75	0.0232	0.2077	-0.0167
757	SLU 71	1.72	0.12	84.23	0.0232	0.2005	-0.017
757	SLU 72	1.71	0.1	84.22	0.0231	0.2048	-0.0167
757	SLU 73	1.74	0.19	89.82	0.0241	0.23	-0.0166
757	SLU 74	1.78	0.23	91.2	0.0244	0.2284	-0.0175
757	SLU 75	1.78	0.21	91.19	0.0244	0.2327	-0.0172
757	SLU 76	1.76	0.19	90.67	0.0243	0.2327	-0.0169
757	SLU 77	1.8	0.23	92.05	0.0246	0.2311	-0.0178
757	SLU 78	1.8	0.21	92.05	0.0246	0.2354	-0.0175
757	SLU 79	1.79	0.22	91.53	0.0246	0.2282	-0.0178
757	SLU 80	1.79	0.2	91.53	0.0245	0.2326	-0.0174
757	SLU 81	1.78	0.27	92.95	0.0248	0.2346	-0.0175
757	SLU 82	1.78	0.25	92.95	0.0247	0.239	-0.0172
757	SLU 83	1.8	0.26	93.81	0.025	0.2374	-0.0178
757	SLU 84	1.8	0.24	93.8	0.0249	0.2417	-0.0175
757	SLE RA 1	1.26	0.07	61.88	0.017	0.1445	-0.0125
757	SLE RA 2	1.26	0.05	61.88	0.0169	0.1493	-0.0121
757	SLE RA 3	1.28	0.08	62.8	0.0171	0.1483	-0.0127
757	SLE RA 4	1.28	0.06	62.79	0.0171	0.1511	-0.0125
757	SLE RA 5	1.27	0.05	62.44	0.0171	0.1512	-0.0123
757	SLE RA 6	1.3	0.07	63.37	0.0173	0.1501	-0.0129
757	SLE RA 7	1.3	0.06	63.36	0.0172	0.153	-0.0127
757	SLE RA 8	1.29	0.06	63.02	0.0172	0.1482	-0.0129
757	SLE RA 9	1.29	0.05	63.02	0.0172	0.1511	-0.0127
757	SLE RA 10	1.31	0.11	66.74	0.0179	0.1678	-0.0126

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
757	SLE RA 11	1.33	0.14	67.67	0.0181	0.1667	-0.0132
757	SLE RA 12	1.33	0.13	67.66	0.0181	0.1696	-0.013
757	SLE RA 13	1.32	0.11	67.31	0.018	0.1697	-0.0128
757	SLE RA 14	1.35	0.14	68.24	0.0182	0.1686	-0.0134
757	SLE RA 15	1.35	0.12	68.23	0.0182	0.1715	-0.0132
757	SLE RA 16	1.34	0.13	67.89	0.0182	0.1667	-0.0134
757	SLE RA 17	1.34	0.12	67.89	0.0181	0.1695	-0.0132
757	SLE RA 18	1.33	0.16	68.83	0.0183	0.1709	-0.0132
757	SLE RA 19	1.33	0.15	68.83	0.0183	0.1738	-0.013
757	SLE RA 20	1.35	0.16	69.4	0.0184	0.1728	-0.0134
757	SLE RA 21	1.35	0.15	69.4	0.0184	0.1756	-0.0132
757	SLE FR 1	1.26	0.07	61.88	0.017	0.1445	-0.0125
757	SLE FR 2	1.26	0.07	61.88	0.017	0.1455	-0.0124
757	SLE FR 3	1.27	0.07	62.11	0.017	0.1452	-0.0126
757	SLE FR 4	1.28	0.09	63.97	0.0174	0.1534	-0.0126
757	SLE FR 5	1.29	0.1	64.19	0.0174	0.1532	-0.0128
757	SLE FR 6	1.3	0.12	65.36	0.0176	0.1577	-0.0128
757	SLE QP 1	1.26	0.07	61.88	0.017	0.1445	-0.0125
757	SLE QP 2	1.28	0.1	63.97	0.0174	0.1524	-0.0127
757	SLD 1	6.36	0.92	59.33	0.021	0.1822	-0.0215
757	SLD 2	6.17	1.42	59.14	0.0185	0.1897	-0.0103
757	SLD 3	6.43	-0.68	59.02	0.0235	0.2278	-0.0233
757	SLD 4	6.24	-0.18	58.83	0.0211	0.2352	-0.0121
757	SLD 5	2.73	2.68	63.07	0.015	0.091	-0.0147
757	SLD 6	2.6	3.01	62.95	0.0134	0.0959	-0.0073
757	SLD 7	2.98	-2.65	62.05	0.0235	0.2427	-0.0205
757	SLD 8	2.85	-2.32	61.93	0.0219	0.2477	-0.0131
757	SLD 9	-0.29	2.52	66.01	0.0128	0.0572	-0.0123
757	SLD 10	-0.41	2.85	65.88	0.0112	0.0621	-0.0049
757	SLD 11	-0.03	-2.81	64.98	0.0213	0.2089	-0.0181
757	SLD 12	-0.16	-2.48	64.86	0.0197	0.2139	-0.0107
757	SLD 13	-3.68	0.38	69.1	0.0137	0.0696	-0.0133
757	SLD 14	-3.87	0.87	68.91	0.0113	0.0771	-0.0021
757	SLD 15	-3.6	-1.22	68.79	0.0162	0.1152	-0.0151
757	SLD 16	-3.79	-0.73	68.61	0.0138	0.1226	-0.0039
757	SLV 1	13.15	1.97	53.1	0.0259	0.2241	-0.0333
757	SLV 2	12.7	3.13	52.66	0.0202	0.2415	-0.0073
757	SLV 3	13.33	-1.65	52.39	0.0317	0.3271	-0.0373
757	SLV 4	12.88	-0.5	51.95	0.026	0.3445	-0.0112
757	SLV 5	4.65	5.95	61.85	0.0121	0.0146	-0.0174
757	SLV 6	4.36	6.7	61.57	0.0084	0.0259	-0.0005
757	SLV 7	5.24	-6.12	59.5	0.0315	0.3581	-0.0307
757	SLV 8	4.95	-5.37	59.22	0.0278	0.3694	-0.0137
757	SLV 9	-2.39	5.57	68.72	0.007	-0.0646	-0.0117
757	SLV 10	-2.68	6.32	68.43	0.0033	-0.0532	0.0053
757	SLV 11	-1.8	-6.51	66.37	0.0263	0.2789	-0.0249
757	SLV 12	-2.09	-5.76	66.08	0.0227	0.2903	-0.008
757	SLV 13	-10.31	0.7	75.98	0.0087	-0.0397	-0.0142
757	SLV 14	-10.76	1.85	75.54	0.0031	-0.0223	0.0119
757	SLV 15	-10.14	-2.93	75.27	0.0145	0.0634	-0.0181
757	SLV 16	-10.58	-1.77	74.83	0.0089	0.0808	0.0079
757	CRTFP Ux+	0	0	0	0	0	0
757	CRTFP Ux-	0	0	0	0	0	0
760	SLU 1	-0.8	-0.82	63.57	-0.005	-0.3196	0.0156
760	SLU 2	-0.82	-0.91	63.61	-0.0045	-0.3242	0.0163
760	SLU 3	-0.82	-0.83	65.11	-0.005	-0.329	0.016
760	SLU 4	-0.83	-0.88	65.14	-0.0047	-0.3318	0.0165
760	SLU 5	-0.83	-0.92	64.58	-0.0044	-0.328	0.0166
760	SLU 6	-0.84	-0.84	66.09	-0.005	-0.3327	0.0163
760	SLU 7	-0.85	-0.89	66.11	-0.0047	-0.3355	0.0167
760	SLU 8	-0.83	-0.84	65.51	-0.0049	-0.3271	0.016
760	SLU 9	-0.84	-0.89	65.54	-0.0046	-0.3299	0.0165
760	SLU 10	-0.85	-0.94	71.51	-0.0053	-0.3812	0.0186
760	SLU 11	-0.85	-0.86	73.01	-0.0058	-0.386	0.0183
760	SLU 12	-0.86	-0.91	73.04	-0.0055	-0.3887	0.0188
760	SLU 13	-0.86	-0.94	72.48	-0.0052	-0.3849	0.0188
760	SLU 14	-0.87	-0.86	73.99	-0.0057	-0.3897	0.0185
760	SLU 15	-0.88	-0.92	74.01	-0.0054	-0.3925	0.019
760	SLU 16	-0.86	-0.86	73.42	-0.0056	-0.3841	0.0183
760	SLU 17	-0.87	-0.92	73.44	-0.0053	-0.3868	0.0188
760	SLU 18	-0.84	-0.86	74.86	-0.0061	-0.401	0.0188
760	SLU 19	-0.85	-0.91	74.88	-0.0058	-0.4038	0.0193
760	SLU 20	-0.86	-0.86	75.83	-0.006	-0.4047	0.019
760	SLU 21	-0.87	-0.92	75.85	-0.0057	-0.4075	0.0195
760	SLU 22	-0.87	-0.8	71.44	-0.0047	-0.3685	0.0172
760	SLU 23	-0.89	-0.89	71.49	-0.0042	-0.3731	0.0179
760	SLU 24	-0.9	-0.81	72.99	-0.0047	-0.3779	0.0176
760	SLU 25	-0.9	-0.86	73.01	-0.0044	-0.3807	0.0181
760	SLU 26	-0.9	-0.9	72.46	-0.0041	-0.3769	0.0182
760	SLU 27	-0.91	-0.82	73.96	-0.0046	-0.3816	0.0179
760	SLU 28	-0.92	-0.87	73.99	-0.0043	-0.3844	0.0183
760	SLU 29	-0.9	-0.82	73.39	-0.0045	-0.376	0.0176
760	SLU 30	-0.91	-0.87	73.42	-0.0042	-0.3788	0.0181
760	SLU 31	-0.92	-0.92	79.39	-0.005	-0.4301	0.0202
760	SLU 32	-0.92	-0.83	80.89	-0.0055	-0.4349	0.0199
760	SLU 33	-0.93	-0.89	80.92	-0.0052	-0.4376	0.0204
760	SLU 34	-0.93	-0.92	80.36	-0.0049	-0.4338	0.0204
760	SLU 35	-0.94	-0.84	81.87	-0.0054	-0.4386	0.0201
760	SLU 36	-0.95	-0.9	81.89	-0.0051	-0.4414	0.0206
760	SLU 37	-0.93	-0.84	81.29	-0.0053	-0.433	0.0199

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
760	SLU 38	-0.94	-0.89	81.32	-0.005	-0.4357	0.0204
760	SLU 39	-0.92	-0.84	82.73	-0.0058	-0.4499	0.0204
760	SLU 40	-0.92	-0.89	82.76	-0.0055	-0.4527	0.0209
760	SLU 41	-0.93	-0.84	83.71	-0.0057	-0.4536	0.0206
760	SLU 42	-0.94	-0.9	83.73	-0.0054	-0.4564	0.0211
760	SLU 43	-1.02	-1.08	79.94	-0.0066	-0.3988	0.0197
760	SLU 44	-1.03	-1.17	79.98	-0.0061	-0.4034	0.0204
760	SLU 45	-1.04	-1.08	81.48	-0.0066	-0.4081	0.0201
760	SLU 46	-1.05	-1.14	81.51	-0.0063	-0.4109	0.0206
760	SLU 47	-1.05	-1.17	80.95	-0.006	-0.4071	0.0207
760	SLU 48	-1.05	-1.09	82.45	-0.0066	-0.4119	0.0204
760	SLU 49	-1.06	-1.15	82.48	-0.0063	-0.4146	0.0208
760	SLU 50	-1.05	-1.09	81.88	-0.0065	-0.4062	0.0201
760	SLU 51	-1.06	-1.14	81.91	-0.0062	-0.409	0.0206
760	SLU 52	-1.06	-1.19	87.88	-0.0069	-0.4603	0.0227
760	SLU 53	-1.07	-1.11	89.38	-0.0074	-0.4651	0.0224
760	SLU 54	-1.08	-1.16	89.41	-0.0071	-0.4679	0.0229
760	SLU 55	-1.08	-1.2	88.85	-0.0068	-0.4641	0.023
760	SLU 56	-1.08	-1.12	90.36	-0.0073	-0.4688	0.0226
760	SLU 57	-1.09	-1.17	90.38	-0.0071	-0.4716	0.0231
760	SLU 58	-1.08	-1.12	89.79	-0.0072	-0.4632	0.0224
760	SLU 59	-1.08	-1.17	89.81	-0.0069	-0.466	0.0229
760	SLU 60	-1.06	-1.11	91.23	-0.0077	-0.4801	0.0229
760	SLU 61	-1.07	-1.17	91.25	-0.0074	-0.4829	0.0234
760	SLU 62	-1.07	-1.12	92.2	-0.0076	-0.4839	0.0232
760	SLU 63	-1.08	-1.17	92.22	-0.0074	-0.4866	0.0236
760	SLU 64	-1.09	-1.05	87.81	-0.0063	-0.4476	0.0213
760	SLU 65	-1.11	-1.14	87.85	-0.0058	-0.4523	0.022
760	SLU 66	-1.11	-1.06	89.36	-0.0063	-0.457	0.0217
760	SLU 67	-1.12	-1.12	89.38	-0.006	-0.4598	0.0222
760	SLU 68	-1.12	-1.15	88.83	-0.0057	-0.456	0.0223
760	SLU 69	-1.13	-1.07	90.33	-0.0062	-0.4608	0.022
760	SLU 70	-1.14	-1.12	90.36	-0.0059	-0.4635	0.0224
760	SLU 71	-1.12	-1.07	89.76	-0.0061	-0.4551	0.0217
760	SLU 72	-1.13	-1.12	89.79	-0.0058	-0.4579	0.0222
760	SLU 73	-1.13	-1.17	95.76	-0.0066	-0.5092	0.0243
760	SLU 74	-1.14	-1.09	97.26	-0.0071	-0.514	0.024
760	SLU 75	-1.15	-1.14	97.29	-0.0068	-0.5168	0.0245
760	SLU 76	-1.15	-1.18	96.73	-0.0065	-0.513	0.0246
760	SLU 77	-1.15	-1.1	98.24	-0.007	-0.5177	0.0243
760	SLU 78	-1.16	-1.15	98.26	-0.0067	-0.5205	0.0247
760	SLU 79	-1.15	-1.09	97.66	-0.0069	-0.5121	0.024
760	SLU 80	-1.16	-1.15	97.69	-0.0066	-0.5149	0.0245
760	SLU 81	-1.13	-1.09	99.1	-0.0074	-0.529	0.0245
760	SLU 82	-1.14	-1.14	99.13	-0.0071	-0.5318	0.025
760	SLU 83	-1.15	-1.1	100.08	-0.0073	-0.5328	0.0248
760	SLU 84	-1.15	-1.15	100.1	-0.007	-0.5355	0.0252
760	SLE RA 1	-0.82	-0.82	65.82	-0.0049	-0.3336	0.016
760	SLE RA 2	-0.83	-0.88	65.85	-0.0046	-0.3367	0.0165
760	SLE RA 3	-0.84	-0.82	66.85	-0.0049	-0.3399	0.0163
760	SLE RA 4	-0.84	-0.86	66.86	-0.0047	-0.3417	0.0166
760	SLE RA 5	-0.84	-0.88	66.49	-0.0045	-0.3392	0.0167
760	SLE RA 6	-0.85	-0.83	67.5	-0.0049	-0.3423	0.0165
760	SLE RA 7	-0.85	-0.86	67.51	-0.0047	-0.3442	0.0168
760	SLE RA 8	-0.84	-0.83	67.12	-0.0048	-0.3386	0.0163
760	SLE RA 9	-0.85	-0.86	67.13	-0.0046	-0.3404	0.0166
760	SLE RA 10	-0.85	-0.89	71.11	-0.0051	-0.3747	0.018
760	SLE RA 11	-0.86	-0.84	72.12	-0.0054	-0.3778	0.0178
760	SLE RA 12	-0.86	-0.87	72.13	-0.0052	-0.3797	0.0181
760	SLE RA 13	-0.86	-0.9	71.76	-0.005	-0.3771	0.0182
760	SLE RA 14	-0.87	-0.84	72.77	-0.0054	-0.3803	0.018
760	SLE RA 15	-0.87	-0.88	72.78	-0.0052	-0.3822	0.0183
760	SLE RA 16	-0.86	-0.84	72.38	-0.0053	-0.3766	0.0178
760	SLE RA 17	-0.87	-0.88	72.4	-0.0051	-0.3784	0.0182
760	SLE RA 18	-0.85	-0.84	73.34	-0.0056	-0.3879	0.0182
760	SLE RA 19	-0.86	-0.88	73.36	-0.0054	-0.3897	0.0185
760	SLE RA 20	-0.86	-0.84	73.99	-0.0056	-0.3903	0.0183
760	SLE RA 21	-0.87	-0.88	74.01	-0.0054	-0.3922	0.0186
760	SLE FR 1	-0.82	-0.82	65.82	-0.0049	-0.3336	0.016
760	SLE FR 2	-0.83	-0.83	65.82	-0.0048	-0.3342	0.0161
760	SLE FR 3	-0.83	-0.82	66.08	-0.0049	-0.3346	0.0161
760	SLE FR 4	-0.83	-0.84	68.08	-0.0051	-0.3505	0.0168
760	SLE FR 5	-0.84	-0.82	68.34	-0.0051	-0.3509	0.0167
760	SLE FR 6	-0.84	-0.83	69.58	-0.0053	-0.3607	0.0171
760	SLE QP 1	-0.82	-0.82	65.82	-0.0049	-0.3336	0.016
760	SLE QP 2	-0.83	-0.82	68.08	-0.0051	-0.3499	0.0167
760	SLD 1	4.61	-0.42	72.51	-0.0302	-0.3704	0.0179
760	SLD 2	4.43	-0.91	72.89	-0.026	-0.3627	0.0288
760	SLD 3	4.51	-2.13	72.61	-0.0244	-0.4341	0.0201
760	SLD 4	4.32	-2.62	72.99	-0.0202	-0.4264	0.031
760	SLD 5	0.99	1.98	69.18	-0.0223	-0.2609	0.0117
760	SLD 6	0.87	1.66	69.44	-0.0195	-0.2558	0.0189
760	SLD 7	0.65	-3.72	69.52	-0.0028	-0.4731	0.0191
760	SLD 8	0.53	-4.05	69.77	0	-0.468	0.0263
760	SLD 9	-2.19	2.4	66.38	-0.0102	-0.2318	0.007
760	SLD 10	-2.31	2.08	66.63	-0.0074	-0.2267	0.0143
760	SLD 11	-2.53	-3.3	66.71	0.0092	-0.444	0.0144
760	SLD 12	-2.65	-3.63	66.97	0.012	-0.4389	0.0217
760	SLD 13	-5.99	0.97	63.16	0.0099	-0.2734	0.0023
760	SLD 14	-6.17	0.49	63.54	0.0141	-0.2657	0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
760	SLD 15	-6.09	-0.74	63.26	0.0157	-0.3371	0.0045
760	SLD 16	-6.27	-1.23	63.65	0.02	-0.3293	0.0155
760	SLV 1	11.89	0.05	78.45	-0.0635	-0.4004	0.0196
760	SLV 2	11.46	-1.08	79.34	-0.0537	-0.3824	0.0451
760	SLV 3	11.65	-3.82	78.68	-0.0504	-0.5443	0.0246
760	SLV 4	11.23	-4.95	79.58	-0.0405	-0.5263	0.0501
760	SLV 5	3.42	5.51	70.67	-0.0443	-0.15	0.0054
760	SLV 6	3.14	4.77	71.26	-0.0379	-0.1383	0.022
760	SLV 7	2.63	-7.39	71.46	-0.0005	-0.6295	0.0222
760	SLV 8	2.35	-8.13	72.04	0.0059	-0.6178	0.0388
760	SLV 9	-4.01	6.49	64.11	-0.0162	-0.0819	-0.0055
760	SLV 10	-4.29	5.75	64.69	-0.0098	-0.0702	0.0111
760	SLV 11	-4.8	-6.42	64.89	0.0277	-0.5615	0.0113
760	SLV 12	-5.08	-7.16	65.48	0.0341	-0.5497	0.0279
760	SLV 13	-12.89	3.31	56.57	0.0303	-0.1735	-0.0168
760	SLV 14	-13.31	2.17	57.47	0.0401	-0.1555	0.0087
760	SLV 15	-13.13	-0.56	56.81	0.0434	-0.3173	-0.0118
760	SLV 16	-13.55	-1.7	57.71	0.0533	-0.2993	0.0137
760	CRTFP Ux+	0	0	0	0	0	0
760	CRTFP Ux-	0	0	0	0	0	0
760	CRTFP Uy+	0	0	0	0	0	0
760	CRTFP Uy-	0	0	0	0	0	0
763	SLU 1	0.32	0.64	52.75	-0.0194	0.8565	-0.0047
763	SLU 2	0.3	0.57	52.71	-0.0193	0.8553	-0.0041
763	SLU 3	0.33	0.67	53.96	-0.0202	0.8806	-0.0049
763	SLU 4	0.32	0.63	53.94	-0.0201	0.8799	-0.0045
763	SLU 5	0.31	0.58	53.43	-0.0199	0.869	-0.0043
763	SLU 6	0.33	0.68	54.68	-0.0208	0.8943	-0.0051
763	SLU 7	0.33	0.64	54.65	-0.0207	0.8936	-0.0048
763	SLU 8	0.33	0.66	54.18	-0.0206	0.8839	-0.0052
763	SLU 9	0.33	0.62	54.16	-0.0205	0.8832	-0.0048
763	SLU 10	0.36	0.69	59.75	-0.0217	0.9893	-0.0036
763	SLU 11	0.38	0.79	61	-0.0226	1.0146	-0.0044
763	SLU 12	0.38	0.75	60.98	-0.0225	1.0139	-0.0041
763	SLU 13	0.37	0.7	60.47	-0.0223	1.003	-0.0039
763	SLU 14	0.39	0.8	61.71	-0.0232	1.0283	-0.0047
763	SLU 15	0.39	0.76	61.69	-0.0231	1.0276	-0.0043
763	SLU 16	0.39	0.78	61.22	-0.023	1.0178	-0.0047
763	SLU 17	0.38	0.74	61.2	-0.023	1.0172	-0.0043
763	SLU 18	0.4	0.81	62.81	-0.0229	1.0478	-0.004
763	SLU 19	0.39	0.77	62.78	-0.0228	1.0472	-0.0037
763	SLU 20	0.41	0.82	63.52	-0.0235	1.0615	-0.0043
763	SLU 21	0.4	0.78	63.5	-0.0234	1.0609	-0.0039
763	SLU 22	0.36	0.86	59.42	-0.0203	0.9908	-0.0055
763	SLU 23	0.35	0.79	59.38	-0.0202	0.9897	-0.0049
763	SLU 24	0.37	0.89	60.63	-0.0211	1.015	-0.0057
763	SLU 25	0.36	0.85	60.61	-0.021	1.0143	-0.0054
763	SLU 26	0.36	0.8	60.1	-0.0208	1.0034	-0.0052
763	SLU 27	0.38	0.9	61.34	-0.0217	1.0287	-0.006
763	SLU 28	0.37	0.86	61.32	-0.0216	1.028	-0.0056
763	SLU 29	0.38	0.88	60.85	-0.0215	1.0183	-0.006
763	SLU 30	0.37	0.84	60.83	-0.0215	1.0176	-0.0057
763	SLU 31	0.41	0.91	66.42	-0.0226	1.1237	-0.0045
763	SLU 32	0.43	1.01	67.67	-0.0235	1.1489	-0.0053
763	SLU 33	0.42	0.97	67.65	-0.0235	1.1482	-0.0049
763	SLU 34	0.42	0.92	67.14	-0.0233	1.1374	-0.0047
763	SLU 35	0.44	1.02	68.38	-0.0241	1.1626	-0.0055
763	SLU 36	0.43	0.98	68.36	-0.0241	1.162	-0.0052
763	SLU 37	0.44	1	67.89	-0.024	1.1522	-0.0056
763	SLU 38	0.43	0.96	67.87	-0.0239	1.1515	-0.0052
763	SLU 39	0.45	1.03	69.48	-0.0238	1.1822	-0.0049
763	SLU 40	0.44	0.99	69.45	-0.0237	1.1815	-0.0045
763	SLU 41	0.45	1.04	70.19	-0.0244	1.1959	-0.0051
763	SLU 42	0.45	1	70.17	-0.0243	1.1952	-0.0048
763	SLU 43	0.4	0.76	66.29	-0.0249	1.0673	-0.0058
763	SLU 44	0.38	0.68	66.25	-0.0248	1.0662	-0.0052
763	SLU 45	0.41	0.79	67.5	-0.0257	1.0915	-0.006
763	SLU 46	0.4	0.75	67.47	-0.0256	1.0908	-0.0056
763	SLU 47	0.39	0.7	66.97	-0.0254	1.0799	-0.0054
763	SLU 48	0.41	0.8	68.21	-0.0263	1.1052	-0.0062
763	SLU 49	0.41	0.76	68.19	-0.0262	1.1045	-0.0059
763	SLU 50	0.41	0.78	67.72	-0.0261	1.0948	-0.0063
763	SLU 51	0.41	0.73	67.7	-0.026	1.0941	-0.0059
763	SLU 52	0.44	0.81	73.29	-0.0272	1.2002	-0.0047
763	SLU 53	0.46	0.91	74.54	-0.0281	1.2254	-0.0055
763	SLU 54	0.46	0.87	74.51	-0.028	1.2247	-0.0052
763	SLU 55	0.45	0.82	74.01	-0.0278	1.2139	-0.005
763	SLU 56	0.47	0.92	75.25	-0.0287	1.2391	-0.0058
763	SLU 57	0.47	0.88	75.23	-0.0286	1.2385	-0.0054
763	SLU 58	0.47	0.9	74.76	-0.0285	1.2287	-0.0058
763	SLU 59	0.46	0.86	74.74	-0.0285	1.228	-0.0055
763	SLU 60	0.48	0.93	76.34	-0.0284	1.2587	-0.0051
763	SLU 61	0.47	0.89	76.32	-0.0283	1.258	-0.0048
763	SLU 62	0.49	0.94	77.06	-0.029	1.2724	-0.0054
763	SLU 63	0.48	0.9	77.04	-0.0289	1.2717	-0.005
763	SLU 64	0.44	0.98	72.96	-0.0258	1.2017	-0.0067
763	SLU 65	0.43	0.9	72.92	-0.0257	1.2006	-0.006
763	SLU 66	0.45	1.01	74.17	-0.0266	1.2258	-0.0069
763	SLU 67	0.44	0.97	74.14	-0.0265	1.2251	-0.0065
763	SLU 68	0.44	0.92	73.64	-0.0263	1.2143	-0.0063

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
763	SLU 69	0.46	1.02	74.88	-0.0272	1.2395	-0.0071
763	SLU 70	0.45	0.98	74.86	-0.0271	1.2389	-0.0067
763	SLU 71	0.46	1	74.39	-0.027	1.2291	-0.0071
763	SLU 72	0.45	0.95	74.37	-0.027	1.2284	-0.0068
763	SLU 73	0.49	1.03	79.96	-0.0281	1.3345	-0.0056
763	SLU 74	0.51	1.13	81.21	-0.029	1.3598	-0.0064
763	SLU 75	0.5	1.09	81.18	-0.029	1.3591	-0.006
763	SLU 76	0.5	1.04	80.68	-0.0287	1.3482	-0.0058
763	SLU 77	0.52	1.14	81.92	-0.0296	1.3735	-0.0066
763	SLU 78	0.51	1.1	81.9	-0.0296	1.3728	-0.0063
763	SLU 79	0.52	1.12	81.43	-0.0295	1.3631	-0.0067
763	SLU 80	0.51	1.08	81.41	-0.0294	1.3624	-0.0063
763	SLU 81	0.52	1.15	83.01	-0.0293	1.3931	-0.006
763	SLU 82	0.52	1.11	82.99	-0.0292	1.3924	-0.0056
763	SLU 83	0.53	1.16	83.73	-0.0299	1.4068	-0.0062
763	SLU 84	0.53	1.12	83.71	-0.0298	1.4061	-0.0059
763	SLE RA 1	0.33	0.7	54.66	-0.0197	0.8948	-0.0049
763	SLE RA 2	0.32	0.65	54.63	-0.0196	0.8941	-0.0045
763	SLE RA 3	0.34	0.73	55.46	-0.0202	0.9109	-0.0051
763	SLE RA 4	0.33	0.7	55.45	-0.0201	0.9105	-0.0048
763	SLE RA 5	0.33	0.66	55.11	-0.02	0.9032	-0.0047
763	SLE RA 6	0.34	0.73	55.94	-0.0206	0.9201	-0.0052
763	SLE RA 7	0.34	0.7	55.92	-0.0205	0.9196	-0.005
763	SLE RA 8	0.34	0.72	55.61	-0.0205	0.9131	-0.0053
763	SLE RA 9	0.34	0.69	55.6	-0.0204	0.9127	-0.005
763	SLE RA 10	0.36	0.74	59.32	-0.0212	0.9834	-0.0042
763	SLE RA 11	0.37	0.81	60.15	-0.0218	1.0002	-0.0048
763	SLE RA 12	0.37	0.78	60.14	-0.0217	0.9998	-0.0045
763	SLE RA 13	0.37	0.74	59.8	-0.0216	0.9925	-0.0044
763	SLE RA 14	0.38	0.81	60.63	-0.0222	1.0094	-0.0049
763	SLE RA 15	0.38	0.78	60.62	-0.0222	1.0089	-0.0047
763	SLE RA 16	0.38	0.8	60.3	-0.0221	1.0024	-0.0049
763	SLE RA 17	0.38	0.77	60.29	-0.022	1.002	-0.0047
763	SLE RA 18	0.38	0.82	61.36	-0.022	1.0224	-0.0045
763	SLE RA 19	0.38	0.79	61.35	-0.0219	1.022	-0.0043
763	SLE RA 20	0.39	0.82	61.84	-0.0224	1.0316	-0.0047
763	SLE RA 21	0.39	0.8	61.82	-0.0223	1.0311	-0.0044
763	SLE FR 1	0.33	0.7	54.66	-0.0197	0.8948	-0.0049
763	SLE FR 2	0.33	0.69	54.65	-0.0196	0.8947	-0.0049
763	SLE FR 3	0.33	0.71	54.85	-0.0198	0.8985	-0.005
763	SLE FR 4	0.34	0.73	56.66	-0.0203	0.933	-0.0047
763	SLE FR 5	0.35	0.74	56.86	-0.0205	0.9368	-0.0049
763	SLE FR 6	0.36	0.76	58.01	-0.0208	0.9586	-0.0047
763	SLE QP 1	0.33	0.7	54.66	-0.0197	0.8948	-0.0049
763	SLE QP 2	0.35	0.74	56.67	-0.0203	0.9331	-0.0048
763	SLD 1	5.78	2.08	60.05	-0.0016	0.9802	-0.0196
763	SLD 2	5.59	1.85	59.89	-0.0019	0.9792	-0.0107
763	SLD 3	5.86	0.35	59.66	0.0017	0.9632	-0.0163
763	SLD 4	5.68	0.12	59.5	0.0014	0.9622	-0.0074
763	SLD 5	1.89	3.81	58.3	-0.0196	0.9732	-0.0159
763	SLD 6	1.76	3.66	58.19	-0.0199	0.9725	-0.01
763	SLD 7	2.16	-1.97	57.01	-0.0087	0.9166	-0.0048
763	SLD 8	2.03	-2.12	56.9	-0.0089	0.9159	0.0011
763	SLD 9	-1.34	3.6	56.43	-0.0318	0.9503	-0.0107
763	SLD 10	-1.47	3.44	56.32	-0.032	0.9496	-0.0048
763	SLD 11	-1.07	-2.19	55.14	-0.0208	0.8938	0.0004
763	SLD 12	-1.19	-2.34	55.04	-0.0211	0.8931	0.0063
763	SLD 13	-4.98	1.36	53.83	-0.0421	0.9041	-0.0022
763	SLD 14	-5.17	1.13	53.67	-0.0424	0.903	0.0067
763	SLD 15	-4.9	-0.38	53.44	-0.0388	0.8871	0.0011
763	SLD 16	-5.09	-0.61	53.28	-0.0391	0.886	0.01
763	SLV 1	13.05	3.82	64.63	0.0239	1.0435	-0.0393
763	SLV 2	12.62	3.28	64.25	0.023	1.0411	-0.0186
763	SLV 3	13.24	-0.11	63.75	0.0313	1.0051	-0.0318
763	SLV 4	12.81	-0.65	63.37	0.0305	1.0027	-0.0111
763	SLV 5	3.95	7.71	60.45	-0.0182	1.0249	-0.0302
763	SLV 6	3.67	7.36	60.21	-0.0187	1.0233	-0.0167
763	SLV 7	4.58	-5.38	57.52	0.0065	0.8969	-0.0051
763	SLV 8	4.3	-5.73	57.28	0.006	0.8953	0.0084
763	SLV 9	-3.6	7.2	56.05	-0.0467	0.9709	-0.018
763	SLV 10	-3.88	6.85	55.81	-0.0472	0.9693	-0.0045
763	SLV 11	-2.97	-5.89	53.13	-0.022	0.8429	0.0071
763	SLV 12	-3.25	-6.24	52.88	-0.0225	0.8413	0.0206
763	SLV 13	-12.12	2.12	49.96	-0.0712	0.8636	0.0015
763	SLV 14	-12.55	1.59	49.59	-0.072	0.8611	0.0222
763	SLV 15	-11.93	-1.8	49.08	-0.0637	0.8252	0.009
763	SLV 16	-12.36	-2.34	48.71	-0.0646	0.8227	0.0297
763	CRTFP Ux+	0	0	0	0	0	0
763	CRTFP Ux-	0	0	0	0	0	0
766	SLU 1	0.43	1.36	43.67	-0.818	-0.266	0.0117
766	SLU 2	0.42	1.32	43.64	-0.8174	-0.265	0.0119
766	SLU 3	0.44	1.41	44.63	-0.8362	-0.2729	0.012
766	SLU 4	0.44	1.39	44.62	-0.8358	-0.2724	0.0122
766	SLU 5	0.43	1.34	44.23	-0.8286	-0.2692	0.0121
766	SLU 6	0.45	1.43	45.23	-0.8474	-0.2772	0.0122
766	SLU 7	0.45	1.41	45.21	-0.847	-0.2766	0.0124
766	SLU 8	0.45	1.4	44.86	-0.8404	-0.2744	0.012
766	SLU 9	0.44	1.38	44.84	-0.84	-0.2738	0.0122
766	SLU 10	0.48	1.54	49.36	-0.9245	-0.305	0.0132
766	SLU 11	0.51	1.63	50.35	-0.9433	-0.3129	0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
766	SLU 12	0.5	1.6	50.34	-0.943	-0.3123	0.0135
766	SLU 13	0.49	1.56	49.95	-0.9357	-0.3092	0.0134
766	SLU 14	0.52	1.65	50.95	-0.9545	-0.3171	0.0135
766	SLU 15	0.51	1.63	50.93	-0.9542	-0.3166	0.0137
766	SLU 16	0.52	1.62	50.58	-0.9475	-0.3144	0.0133
766	SLU 17	0.51	1.59	50.56	-0.9472	-0.3138	0.0135
766	SLU 18	0.52	1.67	51.84	-0.971	-0.3231	0.0135
766	SLU 19	0.51	1.65	51.82	-0.9707	-0.3225	0.0136
766	SLU 20	0.53	1.69	52.43	-0.9822	-0.3273	0.0137
766	SLU 21	0.53	1.67	52.42	-0.9819	-0.3267	0.0138
766	SLU 22	0.5	1.64	49.09	-0.918	-0.3108	0.0133
766	SLU 23	0.48	1.6	49.06	-0.9174	-0.3098	0.0136
766	SLU 24	0.51	1.69	50.05	-0.9362	-0.3177	0.0137
766	SLU 25	0.5	1.67	50.04	-0.9358	-0.3172	0.0138
766	SLU 26	0.49	1.62	49.65	-0.9286	-0.314	0.0137
766	SLU 27	0.52	1.71	50.65	-0.9474	-0.322	0.0139
766	SLU 28	0.51	1.69	50.63	-0.947	-0.3214	0.014
766	SLU 29	0.52	1.68	50.28	-0.9404	-0.3192	0.0137
766	SLU 30	0.51	1.66	50.26	-0.94	-0.3186	0.0138
766	SLU 31	0.55	1.82	54.78	-1.0245	-0.3498	0.0148
766	SLU 32	0.58	1.91	55.77	-1.0433	-0.3577	0.015
766	SLU 33	0.57	1.89	55.76	-1.043	-0.3571	0.0151
766	SLU 34	0.56	1.84	55.37	-1.0357	-0.354	0.015
766	SLU 35	0.59	1.93	56.37	-1.0545	-0.3619	0.0152
766	SLU 36	0.58	1.91	56.35	-1.0542	-0.3614	0.0153
766	SLU 37	0.58	1.9	56	-1.0475	-0.3592	0.015
766	SLU 38	0.58	1.88	55.98	-1.0472	-0.3586	0.0151
766	SLU 39	0.59	1.96	57.26	-1.071	-0.3679	0.0151
766	SLU 40	0.58	1.93	57.24	-1.0707	-0.3673	0.0153
766	SLU 41	0.6	1.98	57.85	-1.0822	-0.3721	0.0153
766	SLU 42	0.59	1.95	57.84	-1.0819	-0.3715	0.0155
766	SLU 43	0.53	1.67	54.91	-1.0291	-0.3304	0.0146
766	SLU 44	0.52	1.63	54.88	-1.0285	-0.3294	0.0148
766	SLU 45	0.55	1.72	55.88	-1.0473	-0.3374	0.015
766	SLU 46	0.54	1.7	55.86	-1.047	-0.3368	0.0151
766	SLU 47	0.53	1.65	55.48	-1.0397	-0.3337	0.015
766	SLU 48	0.56	1.74	56.47	-1.0585	-0.3416	0.0152
766	SLU 49	0.55	1.72	56.45	-1.0582	-0.341	0.0153
766	SLU 50	0.56	1.71	56.1	-1.0515	-0.3389	0.015
766	SLU 51	0.55	1.69	56.08	-1.0512	-0.3383	0.0151
766	SLU 52	0.59	1.85	60.6	-1.1356	-0.3694	0.0161
766	SLU 53	0.61	1.94	61.6	-1.1544	-0.3773	0.0163
766	SLU 54	0.61	1.91	61.58	-1.1541	-0.3768	0.0164
766	SLU 55	0.6	1.87	61.2	-1.1468	-0.3736	0.0163
766	SLU 56	0.63	1.96	62.19	-1.1656	-0.3816	0.0165
766	SLU 57	0.62	1.93	62.17	-1.1653	-0.381	0.0166
766	SLU 58	0.62	1.93	61.82	-1.1586	-0.3788	0.0163
766	SLU 59	0.62	1.9	61.8	-1.1583	-0.3782	0.0164
766	SLU 60	0.63	1.98	63.08	-1.1821	-0.3875	0.0164
766	SLU 61	0.62	1.96	63.06	-1.1818	-0.3869	0.0166
766	SLU 62	0.64	2	63.68	-1.1933	-0.3917	0.0166
766	SLU 63	0.63	1.98	63.66	-1.193	-0.3911	0.0168
766	SLU 64	0.6	1.95	60.33	-1.1291	-0.3752	0.0162
766	SLU 65	0.59	1.91	60.3	-1.1285	-0.3742	0.0165
766	SLU 66	0.62	2	61.3	-1.1473	-0.3822	0.0166
766	SLU 67	0.61	1.98	61.28	-1.147	-0.3816	0.0168
766	SLU 68	0.6	1.93	60.9	-1.1397	-0.3785	0.0167
766	SLU 69	0.63	2.02	61.89	-1.1585	-0.3864	0.0168
766	SLU 70	0.62	2	61.87	-1.1582	-0.3858	0.017
766	SLU 71	0.62	1.99	61.52	-1.1515	-0.3837	0.0166
766	SLU 72	0.62	1.97	61.5	-1.1512	-0.3831	0.0168
766	SLU 73	0.65	2.13	66.02	-1.2356	-0.4142	0.0178
766	SLU 74	0.68	2.22	67.02	-1.2544	-0.4221	0.0179
766	SLU 75	0.67	2.2	67	-1.2541	-0.4216	0.0181
766	SLU 76	0.67	2.15	66.61	-1.2468	-0.4184	0.018
766	SLU 77	0.69	2.24	67.61	-1.2656	-0.4264	0.0181
766	SLU 78	0.69	2.22	67.59	-1.2653	-0.4258	0.0183
766	SLU 79	0.69	2.21	67.24	-1.2586	-0.4236	0.0179
766	SLU 80	0.68	2.19	67.22	-1.2583	-0.423	0.0181
766	SLU 81	0.69	2.27	68.5	-1.2821	-0.4323	0.0181
766	SLU 82	0.69	2.24	68.48	-1.2818	-0.4317	0.0182
766	SLU 83	0.71	2.29	69.1	-1.2933	-0.4365	0.0183
766	SLU 84	0.7	2.26	69.08	-1.293	-0.436	0.0184
766	SLE RA 1	0.45	1.44	45.22	-0.8466	-0.2788	0.0121
766	SLE RA 2	0.44	1.41	45.2	-0.8462	-0.2781	0.0123
766	SLE RA 3	0.46	1.47	45.86	-0.8587	-0.2834	0.0124
766	SLE RA 4	0.45	1.46	45.85	-0.8585	-0.283	0.0125
766	SLE RA 5	0.45	1.43	45.59	-0.8536	-0.2809	0.0124
766	SLE RA 6	0.46	1.49	46.26	-0.8662	-0.2862	0.0125
766	SLE RA 7	0.46	1.47	46.25	-0.8659	-0.2858	0.0126
766	SLE RA 8	0.46	1.47	46.01	-0.8615	-0.2844	0.0124
766	SLE RA 9	0.46	1.45	46	-0.8613	-0.284	0.0125
766	SLE RA 10	0.48	1.56	49.01	-0.9176	-0.3048	0.0131
766	SLE RA 11	0.5	1.62	49.67	-0.9301	-0.3101	0.0132
766	SLE RA 12	0.5	1.6	49.66	-0.9299	-0.3097	0.0133
766	SLE RA 13	0.49	1.57	49.41	-0.925	-0.3076	0.0133
766	SLE RA 14	0.51	1.63	50.07	-0.9376	-0.3129	0.0134
766	SLE RA 15	0.5	1.62	50.06	-0.9373	-0.3125	0.0135
766	SLE RA 16	0.51	1.61	49.82	-0.9329	-0.3111	0.0132
766	SLE RA 17	0.5	1.6	49.81	-0.9327	-0.3107	0.0133

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
766	SLE RA 18	0.51	1.65	50.66	-0.9486	-0.3168	0.0134
766	SLE RA 19	0.51	1.63	50.65	-0.9483	-0.3165	0.0135
766	SLE RA 20	0.52	1.66	51.06	-0.9561	-0.3197	0.0135
766	SLE RA 21	0.51	1.65	51.05	-0.9558	-0.3193	0.0136
766	SLE FR 1	0.45	1.44	45.22	-0.8466	-0.2788	0.0121
766	SLE FR 2	0.45	1.43	45.21	-0.8465	-0.2786	0.0122
766	SLE FR 3	0.45	1.44	45.37	-0.8496	-0.2799	0.0122
766	SLE FR 4	0.46	1.5	46.85	-0.8771	-0.2901	0.0125
766	SLE FR 5	0.47	1.51	47.01	-0.8802	-0.2913	0.0125
766	SLE FR 6	0.48	1.54	47.94	-0.8976	-0.2978	0.0127
766	SLE QP 1	0.45	1.44	45.22	-0.8466	-0.2788	0.0121
766	SLE QP 2	0.47	1.5	46.85	-0.8772	-0.2902	0.0125
766	SLD 1	5.49	2.04	42.82	-0.8133	-0.0045	0.0905
766	SLD 2	5.32	2.22	42.94	-0.8156	-0.0096	0.0955
766	SLD 3	5.39	0.55	42.43	-0.804	0.0147	0.0874
766	SLD 4	5.23	0.73	42.55	-0.8064	0.0096	0.0924
766	SLD 5	2.15	3.89	46.21	-0.8716	-0.2326	0.0398
766	SLD 6	2.04	4.01	46.29	-0.8732	-0.236	0.0431
766	SLD 7	1.83	-1.07	44.91	-0.8408	-0.1688	0.0293
766	SLD 8	1.72	-0.96	44.99	-0.8423	-0.1721	0.0326
766	SLD 9	-0.79	3.96	48.71	-0.912	-0.4083	-0.0076
766	SLD 10	-0.9	4.08	48.79	-0.9136	-0.4116	-0.0043
766	SLD 11	-1.11	-1	47.41	-0.8812	-0.3444	-0.0181
766	SLD 12	-1.21	-0.89	47.49	-0.8827	-0.3478	-0.0148
766	SLD 13	-4.3	2.28	51.15	-0.948	-0.59	-0.0674
766	SLD 14	-4.46	2.45	51.27	-0.9503	-0.5951	-0.0624
766	SLD 15	-4.39	0.79	50.76	-0.9388	-0.5708	-0.0705
766	SLD 16	-4.56	0.96	50.88	-0.9411	-0.5759	-0.0656
766	SLV 1	12.21	2.71	37.4	-0.7273	0.3791	0.1949
766	SLV 2	11.82	3.11	37.68	-0.7327	0.3672	0.2065
766	SLV 3	11.99	-0.67	36.52	-0.7063	0.4225	0.1878
766	SLV 4	11.6	-0.27	36.8	-0.7118	0.4107	0.1993
766	SLV 5	4.39	6.91	45.3	-0.863	-0.1531	0.076
766	SLV 6	4.14	7.17	45.49	-0.8666	-0.1609	0.0835
766	SLV 7	3.66	-4.34	42.36	-0.7932	-0.0085	0.0522
766	SLV 8	3.41	-4.08	42.55	-0.7967	-0.0162	0.0598
766	SLV 9	-2.48	7.08	51.15	-0.9576	-0.5642	-0.0348
766	SLV 10	-2.73	7.34	51.34	-0.9612	-0.5719	-0.0273
766	SLV 11	-3.2	-4.17	48.21	-0.8878	-0.4195	-0.0585
766	SLV 12	-3.46	-3.91	48.4	-0.8913	-0.4273	-0.051
766	SLV 13	-10.67	3.27	56.9	-1.0426	-0.991	-0.1743
766	SLV 14	-11.06	3.67	57.18	-1.048	-1.0029	-0.1628
766	SLV 15	-10.89	-0.1	56.02	-1.0216	-0.9476	-0.1815
766	SLV 16	-11.27	0.3	56.3	-1.0271	-0.9595	-0.1699
766	CRTFP Ux+	0	0	0	0	0	0
766	CRTFP Ux-	0	0	0	0	0	0
768	SLU 1	-0.61	0.03	30.86	-0.0266	-2.6479	0.0083
768	SLU 2	-0.61	-0.05	30.87	-0.0265	-2.6507	-0.0128
768	SLU 3	-0.62	0.04	31.6	-0.0273	-2.6995	0.0098
768	SLU 4	-0.62	-0.01	31.61	-0.0272	-2.7012	-0.0029
768	SLU 5	-0.62	-0.05	31.34	-0.0269	-2.6829	-0.0114
768	SLU 6	-0.63	0.04	32.07	-0.0277	-2.7316	0.0112
768	SLU 7	-0.63	-0.01	32.08	-0.0277	-2.7333	-0.0014
768	SLU 8	-0.62	0.04	31.8	-0.0274	-2.7121	0.0111
768	SLU 9	-0.63	-0.01	31.81	-0.0274	-2.7138	-0.0015
768	SLU 10	-0.65	0	34.4	-0.0301	-2.9313	0.0015
768	SLU 11	-0.66	0.09	35.13	-0.0308	-2.98	0.0242
768	SLU 12	-0.66	0.04	35.14	-0.0308	-2.9818	0.0115
768	SLU 13	-0.66	0.01	34.87	-0.0305	-2.9634	0.0029
768	SLU 14	-0.67	0.1	35.6	-0.0313	-3.0122	0.0256
768	SLU 15	-0.67	0.05	35.61	-0.0312	-3.0139	0.0129
768	SLU 16	-0.67	0.1	35.32	-0.031	-2.9927	0.0255
768	SLU 17	-0.67	0.05	35.33	-0.031	-2.9944	0.0128
768	SLU 18	-0.66	0.11	35.89	-0.0317	-3.0487	0.0288
768	SLU 19	-0.67	0.06	35.9	-0.0316	-3.0504	0.0161
768	SLU 20	-0.67	0.12	36.36	-0.0321	-3.0808	0.0302
768	SLU 21	-0.68	0.07	36.37	-0.0321	-3.0825	0.0175
768	SLU 22	-0.66	0.1	34.46	-0.03	-2.9275	0.025
768	SLU 23	-0.67	0.01	34.47	-0.0299	-2.9304	0.0039
768	SLU 24	-0.68	0.1	35.2	-0.0307	-2.9791	0.0265
768	SLU 25	-0.68	0.05	35.21	-0.0306	-2.9808	0.0138
768	SLU 26	-0.68	0.02	34.94	-0.0303	-2.9625	0.0053
768	SLU 27	-0.69	0.11	35.67	-0.0311	-3.0112	0.0279
768	SLU 28	-0.69	0.06	35.68	-0.0311	-3.013	0.0152
768	SLU 29	-0.68	0.11	35.4	-0.0308	-2.9917	0.0278
768	SLU 30	-0.68	0.06	35.41	-0.0308	-2.9935	0.0151
768	SLU 31	-0.71	0.07	38	-0.0335	-3.2109	0.0182
768	SLU 32	-0.72	0.16	38.73	-0.0342	-3.2597	0.0408
768	SLU 33	-0.72	0.11	38.74	-0.0342	-3.2614	0.0282
768	SLU 34	-0.72	0.07	38.47	-0.0339	-3.243	0.0196
768	SLU 35	-0.73	0.16	39.2	-0.0347	-3.2918	0.0422
768	SLU 36	-0.73	0.11	39.21	-0.0346	-3.2935	0.0296
768	SLU 37	-0.72	0.16	38.92	-0.0344	-3.2723	0.0421
768	SLU 38	-0.72	0.11	38.93	-0.0344	-3.274	0.0295
768	SLU 39	-0.72	0.18	39.49	-0.0351	-3.3283	0.0455
768	SLU 40	-0.72	0.13	39.5	-0.035	-3.33	0.0328
768	SLU 41	-0.73	0.18	39.96	-0.0355	-3.3604	0.0469
768	SLU 42	-0.73	0.13	39.97	-0.0355	-3.3621	0.0342
768	SLU 43	-0.77	0.02	38.88	-0.0334	-3.3463	0.0051
768	SLU 44	-0.77	-0.07	38.89	-0.0333	-3.3492	-0.016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
768	SLU 45	-0.78	0.02	39.62	-0.0341	-3.398	0.0066
768	SLU 46	-0.79	-0.03	39.63	-0.034	-3.3997	-0.0061
768	SLU 47	-0.78	-0.06	39.37	-0.0337	-3.3813	-0.0146
768	SLU 48	-0.79	0.03	40.09	-0.0345	-3.4301	0.008
768	SLU 49	-0.8	-0.02	40.1	-0.0345	-3.4318	-0.0047
768	SLU 50	-0.79	0.03	39.82	-0.0343	-3.4106	0.0079
768	SLU 51	-0.79	-0.02	39.83	-0.0342	-3.4123	-0.0048
768	SLU 52	-0.81	-0.01	42.42	-0.0369	-3.6298	-0.0017
768	SLU 53	-0.82	0.08	43.15	-0.0377	-3.6785	0.0209
768	SLU 54	-0.83	0.03	43.16	-0.0376	-3.6803	0.0083
768	SLU 55	-0.82	-0.01	42.89	-0.0373	-3.6619	-0.0003
768	SLU 56	-0.83	0.08	43.62	-0.0381	-3.7106	0.0223
768	SLU 57	-0.84	0.03	43.63	-0.038	-3.7124	0.0097
768	SLU 58	-0.83	0.08	43.35	-0.0378	-3.6911	0.0222
768	SLU 59	-0.83	0.03	43.36	-0.0378	-3.6929	0.0096
768	SLU 60	-0.83	0.1	43.91	-0.0385	-3.7471	0.0256
768	SLU 61	-0.83	0.05	43.93	-0.0384	-3.7489	0.0129
768	SLU 62	-0.84	0.1	44.39	-0.0389	-3.7793	0.027
768	SLU 63	-0.84	0.05	44.4	-0.0389	-3.781	0.0143
768	SLU 64	-0.82	0.08	42.48	-0.0368	-3.626	0.0218
768	SLU 65	-0.83	0	42.49	-0.0367	-3.6289	0.0006
768	SLU 66	-0.84	0.09	43.22	-0.0375	-3.6776	0.0233
768	SLU 67	-0.84	0.04	43.23	-0.0374	-3.6793	0.0106
768	SLU 68	-0.84	0	42.97	-0.0371	-3.661	0.0021
768	SLU 69	-0.85	0.09	43.69	-0.0379	-3.7097	0.0247
768	SLU 70	-0.85	0.04	43.7	-0.0379	-3.7114	0.012
768	SLU 71	-0.84	0.09	43.42	-0.0377	-3.6902	0.0246
768	SLU 72	-0.85	0.04	43.43	-0.0376	-3.6919	0.0119
768	SLU 73	-0.87	0.05	46.02	-0.0403	-3.9094	0.015
768	SLU 74	-0.88	0.14	46.75	-0.0411	-3.9582	0.0376
768	SLU 75	-0.88	0.09	46.76	-0.041	-3.9599	0.0249
768	SLU 76	-0.88	0.06	46.49	-0.0407	-3.9415	0.0164
768	SLU 77	-0.89	0.15	47.22	-0.0415	-3.9903	0.039
768	SLU 78	-0.89	0.1	47.23	-0.0414	-3.992	0.0263
768	SLU 79	-0.88	0.15	46.95	-0.0412	-3.9708	0.0389
768	SLU 80	-0.89	0.1	46.96	-0.0412	-3.9725	0.0262
768	SLU 81	-0.88	0.16	47.51	-0.0419	-4.0268	0.0422
768	SLU 82	-0.88	0.11	47.53	-0.0418	-4.0285	0.0296
768	SLU 83	-0.89	0.17	47.99	-0.0423	-4.0589	0.0437
768	SLU 84	-0.89	0.12	48	-0.0423	-4.0606	0.031
768	SLE RA 1	-0.62	0.05	31.88	-0.0276	-2.7277	0.0131
768	SLE RA 2	-0.63	-0.01	31.9	-0.0275	-2.7297	-0.001
768	SLE RA 3	-0.63	0.05	32.38	-0.028	-2.7622	0.0141
768	SLE RA 4	-0.63	0.02	32.39	-0.028	-2.7633	0.0056
768	SLE RA 5	-0.63	0	32.21	-0.0278	-2.7511	-0.0001
768	SLE RA 6	-0.64	0.06	32.69	-0.0283	-2.7836	0.015
768	SLE RA 7	-0.64	0.02	32.7	-0.0283	-2.7847	0.0066
768	SLE RA 8	-0.63	0.06	32.51	-0.0281	-2.7706	0.015
768	SLE RA 9	-0.64	0.02	32.52	-0.0281	-2.7717	0.0065
768	SLE RA 10	-0.65	0.03	34.25	-0.0299	-2.9167	0.0086
768	SLE RA 11	-0.66	0.09	34.73	-0.0304	-2.9492	0.0236
768	SLE RA 12	-0.66	0.06	34.74	-0.0304	-2.9504	0.0152
768	SLE RA 13	-0.66	0.03	34.56	-0.0302	-2.9381	0.0095
768	SLE RA 14	-0.66	0.09	35.05	-0.0307	-2.9706	0.0246
768	SLE RA 15	-0.67	0.06	35.05	-0.0306	-2.9718	0.0161
768	SLE RA 16	-0.66	0.09	34.86	-0.0305	-2.9576	0.0245
768	SLE RA 17	-0.66	0.06	34.87	-0.0305	-2.9588	0.0161
768	SLE RA 18	-0.66	0.1	35.24	-0.031	-2.9949	0.0267
768	SLE RA 19	-0.66	0.07	35.25	-0.0309	-2.9961	0.0183
768	SLE RA 20	-0.67	0.11	35.56	-0.0312	-3.0164	0.0277
768	SLE RA 21	-0.67	0.07	35.56	-0.0312	-3.0175	0.0192
768	SLE FR 1	-0.62	0.05	31.88	-0.0276	-2.7277	0.0131
768	SLE FR 2	-0.62	0.04	31.89	-0.0276	-2.7281	0.0103
768	SLE FR 3	-0.62	0.05	32.01	-0.0277	-2.7363	0.0135
768	SLE FR 4	-0.63	0.05	32.89	-0.0286	-2.8083	0.0144
768	SLE FR 5	-0.64	0.07	33.02	-0.0287	-2.8165	0.0176
768	SLE FR 6	-0.64	0.08	33.56	-0.0293	-2.8613	0.0199
768	SLE QP 1	-0.62	0.05	31.88	-0.0276	-2.7277	0.0131
768	SLE QP 2	-0.63	0.07	32.89	-0.0286	-2.8079	0.0172
768	SLD 1	1.79	0.61	41.92	-0.0403	-3.4806	0.1544
768	SLD 2	1.68	0.08	42.06	-0.0392	-3.5035	0.0207
768	SLD 3	1.73	-0.6	42.04	-0.0389	-3.5403	-0.1504
768	SLD 4	1.62	-1.14	42.19	-0.0378	-3.5632	-0.2841
768	SLD 5	0.21	2.17	35.39	-0.0345	-2.915	0.5449
768	SLD 6	0.13	1.82	35.48	-0.0337	-2.9302	0.4562
768	SLD 7	0.01	-1.88	35.8	-0.0298	-3.1141	-0.4711
768	SLD 8	-0.07	-2.24	35.89	-0.029	-3.1292	-0.5598
768	SLD 9	-1.19	2.37	29.89	-0.0282	-2.4866	0.5941
768	SLD 10	-1.27	2.01	29.99	-0.0274	-2.5017	0.5054
768	SLD 11	-1.4	-1.69	30.3	-0.0235	-2.6857	-0.4218
768	SLD 12	-1.48	-2.04	30.4	-0.0227	-2.7008	-0.5106
768	SLD 13	-2.88	1.27	23.6	-0.0194	-2.0526	0.3184
768	SLD 14	-3	0.73	23.74	-0.0182	-2.0755	0.1848
768	SLD 15	-2.94	0.05	23.72	-0.018	-2.1123	0.0137
768	SLD 16	-3.06	-0.48	23.86	-0.0168	-2.1352	-0.12
768	SLV 1	5.04	1.3	54.01	-0.0561	-4.3842	0.3255
768	SLV 2	4.77	0.05	54.35	-0.0534	-4.4375	0.0143
768	SLV 3	4.9	-1.46	54.3	-0.0529	-4.5202	-0.3638
768	SLV 4	4.63	-2.71	54.64	-0.0502	-4.5734	-0.675
768	SLV 5	1.33	4.83	38.73	-0.0421	-3.0652	1.2098

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
768	SLV 6	1.15	4.01	38.95	-0.0404	-3.0999	1.0071
768	SLV 7	0.86	-4.35	39.69	-0.0315	-3.5184	-1.0879
768	SLV 8	0.69	-5.16	39.91	-0.0297	-3.5531	-1.2906
768	SLV 9	-1.95	5.29	25.87	-0.0274	-2.0627	1.325
768	SLV 10	-2.13	4.48	26.09	-0.0257	-2.0974	1.1222
768	SLV 11	-2.42	-3.88	26.83	-0.0168	-2.5159	-0.9727
768	SLV 12	-2.59	-4.7	27.05	-0.015	-2.5506	-1.1755
768	SLV 13	-5.89	2.84	11.15	-0.007	-1.0424	0.7094
768	SLV 14	-6.16	1.59	11.49	-0.0043	-1.0956	0.3982
768	SLV 15	-6.03	0.08	11.43	-0.0038	-1.1784	0.02
768	SLV 16	-6.3	-1.17	11.77	-0.0011	-1.2316	-0.2911
768	CRTFP Ux+	0	0	0	0	0	0
768	CRTFP Ux-	0	0	0	0	0	0
768	CRTFP Uy+	0	0	0	0	0	0
768	CRTFP Uy-	0	0	0	0	0	0
771	SLU 1	0.66	0.26	35.92	-0.0601	6.82	-0.0917
771	SLU 2	0.66	0.24	35.93	-0.0601	6.8209	-0.0843
771	SLU 3	0.68	0.27	36.77	-0.0617	6.9662	-0.0931
771	SLU 4	0.68	0.25	36.77	-0.0617	6.9668	-0.0886
771	SLU 5	0.68	0.24	36.45	-0.0611	6.9122	-0.083
771	SLU 6	0.69	0.26	37.3	-0.0627	7.0575	-0.0918
771	SLU 7	0.69	0.25	37.3	-0.0627	7.0581	-0.0874
771	SLU 8	0.69	0.26	36.98	-0.0621	7.0026	-0.0891
771	SLU 9	0.69	0.24	36.98	-0.0621	7.0032	-0.0847
771	SLU 10	0.7	0.35	40.02	-0.0678	7.5508	-0.1219
771	SLU 11	0.72	0.37	40.86	-0.0694	7.6961	-0.1307
771	SLU 12	0.72	0.36	40.87	-0.0694	7.6967	-0.1263
771	SLU 13	0.72	0.35	40.55	-0.0688	7.6421	-0.1207
771	SLU 14	0.73	0.37	41.39	-0.0704	7.7874	-0.1294
771	SLU 15	0.73	0.36	41.39	-0.0704	7.788	-0.125
771	SLU 16	0.73	0.36	41.07	-0.0698	7.7325	-0.1267
771	SLU 17	0.73	0.35	41.07	-0.0698	7.733	-0.1223
771	SLU 18	0.72	0.42	41.77	-0.071	7.8627	-0.1454
771	SLU 19	0.72	0.4	41.77	-0.0711	7.8633	-0.141
771	SLU 20	0.73	0.41	42.3	-0.0721	7.954	-0.1441
771	SLU 21	0.73	0.4	42.3	-0.0721	7.9546	-0.1397
771	SLU 22	0.72	0.37	40.06	-0.0676	7.5525	-0.1284
771	SLU 23	0.72	0.35	40.07	-0.0677	7.5535	-0.121
771	SLU 24	0.74	0.37	40.91	-0.0692	7.6987	-0.1297
771	SLU 25	0.74	0.36	40.91	-0.0692	7.6993	-0.1253
771	SLU 26	0.73	0.34	40.59	-0.0687	7.6448	-0.1197
771	SLU 27	0.75	0.37	41.44	-0.0702	7.7901	-0.1284
771	SLU 28	0.75	0.36	41.44	-0.0703	7.7906	-0.124
771	SLU 29	0.74	0.36	41.12	-0.0696	7.7351	-0.1258
771	SLU 30	0.75	0.35	41.12	-0.0697	7.7357	-0.1214
771	SLU 31	0.76	0.45	44.16	-0.0753	8.2834	-0.1586
771	SLU 32	0.78	0.48	45	-0.0769	8.4286	-0.1673
771	SLU 33	0.78	0.47	45	-0.0769	8.4292	-0.1629
771	SLU 34	0.77	0.45	44.69	-0.0764	8.3747	-0.1573
771	SLU 35	0.79	0.48	45.53	-0.0779	8.5199	-0.1661
771	SLU 36	0.79	0.46	45.53	-0.0779	8.5205	-0.1616
771	SLU 37	0.78	0.47	45.21	-0.0773	8.465	-0.1634
771	SLU 38	0.78	0.46	45.21	-0.0774	8.4656	-0.159
771	SLU 39	0.77	0.52	45.91	-0.0786	8.5952	-0.1821
771	SLU 40	0.77	0.51	45.91	-0.0786	8.5958	-0.1777
771	SLU 41	0.79	0.52	46.44	-0.0796	8.6865	-0.1808
771	SLU 42	0.79	0.51	46.44	-0.0796	8.6871	-0.1764
771	SLU 43	0.84	0.31	45.28	-0.0755	8.6148	-0.1066
771	SLU 44	0.84	0.29	45.29	-0.0755	8.6158	-0.0993
771	SLU 45	0.86	0.31	46.13	-0.0771	8.761	-0.108
771	SLU 46	0.86	0.3	46.13	-0.0771	8.7616	-0.1036
771	SLU 47	0.85	0.28	45.81	-0.0765	8.7071	-0.098
771	SLU 48	0.87	0.31	46.66	-0.0781	8.8523	-0.1067
771	SLU 49	0.87	0.29	46.66	-0.0781	8.8529	-0.1023
771	SLU 50	0.87	0.3	46.34	-0.0775	8.7974	-0.1041
771	SLU 51	0.87	0.29	46.34	-0.0775	8.798	-0.0996
771	SLU 52	0.88	0.39	49.38	-0.0832	9.3457	-0.1369
771	SLU 53	0.9	0.42	50.22	-0.0848	9.4909	-0.1456
771	SLU 54	0.9	0.41	50.22	-0.0848	9.4915	-0.1412
771	SLU 55	0.89	0.39	49.91	-0.0842	9.437	-0.1356
771	SLU 56	0.91	0.41	50.75	-0.0858	9.5822	-0.1443
771	SLU 57	0.91	0.4	50.75	-0.0858	9.5828	-0.1399
771	SLU 58	0.9	0.41	50.43	-0.0852	9.5273	-0.1417
771	SLU 59	0.91	0.39	50.43	-0.0852	9.5279	-0.1372
771	SLU 60	0.89	0.46	51.13	-0.0865	9.6575	-0.1604
771	SLU 61	0.9	0.45	51.13	-0.0865	9.6581	-0.1559
771	SLU 62	0.91	0.46	51.66	-0.0875	9.7488	-0.1591
771	SLU 63	0.91	0.44	51.66	-0.0875	9.7494	-0.1547
771	SLU 64	0.9	0.41	49.42	-0.083	9.3474	-0.1433
771	SLU 65	0.9	0.39	49.42	-0.0831	9.3483	-0.1359
771	SLU 66	0.92	0.42	50.27	-0.0846	9.4936	-0.1447
771	SLU 67	0.92	0.4	50.27	-0.0847	9.4942	-0.1402
771	SLU 68	0.91	0.39	49.95	-0.0841	9.4396	-0.1346
771	SLU 69	0.93	0.41	50.79	-0.0857	9.5849	-0.1434
771	SLU 70	0.93	0.4	50.8	-0.0857	9.5855	-0.139
771	SLU 71	0.92	0.4	50.47	-0.0851	9.53	-0.1407
771	SLU 72	0.92	0.39	50.48	-0.0851	9.5305	-0.1363
771	SLU 73	0.94	0.5	53.52	-0.0908	10.0782	-0.1735
771	SLU 74	0.95	0.52	54.36	-0.0923	10.2235	-0.1823
771	SLU 75	0.96	0.51	54.36	-0.0924	10.224	-0.1779

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
771	SLU 76	0.95	0.49	54.04	-0.0918	10.1695	-0.1723
771	SLU 77	0.97	0.52	54.89	-0.0933	10.3148	-0.181
771	SLU 78	0.97	0.51	54.89	-0.0934	10.3153	-0.1766
771	SLU 79	0.96	0.51	54.57	-0.0928	10.2599	-0.1783
771	SLU 80	0.96	0.5	54.57	-0.0928	10.2604	-0.1739
771	SLU 81	0.95	0.56	55.27	-0.094	10.3901	-0.197
771	SLU 82	0.95	0.55	55.27	-0.094	10.3906	-0.1926
771	SLU 83	0.96	0.56	55.79	-0.095	10.4814	-0.1957
771	SLU 84	0.97	0.55	55.8	-0.0951	10.4819	-0.1913
771	SLE RA 1	0.68	0.29	37.11	-0.0622	7.0293	-0.1022
771	SLE RA 2	0.68	0.28	37.11	-0.0622	7.0299	-0.0973
771	SLE RA 3	0.69	0.3	37.67	-0.0633	7.1267	-0.1031
771	SLE RA 4	0.69	0.29	37.67	-0.0633	7.1271	-0.1001
771	SLE RA 5	0.69	0.28	37.46	-0.0629	7.0908	-0.0964
771	SLE RA 6	0.7	0.29	38.02	-0.064	7.1876	-0.1022
771	SLE RA 7	0.7	0.29	38.02	-0.064	7.188	-0.0993
771	SLE RA 8	0.69	0.29	37.81	-0.0636	7.151	-0.1005
771	SLE RA 9	0.7	0.28	37.81	-0.0636	7.1514	-0.0975
771	SLE RA 10	0.7	0.35	39.84	-0.0674	7.5165	-0.1223
771	SLE RA 11	0.72	0.37	40.4	-0.0684	7.6133	-0.1282
771	SLE RA 12	0.72	0.36	40.4	-0.0684	7.6137	-0.1252
771	SLE RA 13	0.71	0.35	40.19	-0.068	7.5774	-0.1215
771	SLE RA 14	0.72	0.37	40.75	-0.0691	7.6742	-0.1273
771	SLE RA 15	0.73	0.36	40.75	-0.0691	7.6746	-0.1244
771	SLE RA 16	0.72	0.36	40.54	-0.0687	7.6376	-0.1255
771	SLE RA 17	0.72	0.35	40.54	-0.0687	7.638	-0.1226
771	SLE RA 18	0.71	0.4	41	-0.0695	7.7244	-0.138
771	SLE RA 19	0.71	0.39	41.01	-0.0696	7.7248	-0.135
771	SLE RA 20	0.72	0.39	41.36	-0.0702	7.7853	-0.1371
771	SLE RA 21	0.72	0.38	41.36	-0.0702	7.7857	-0.1342
771	SLE FR 1	0.68	0.29	37.11	-0.0622	7.0293	-0.1022
771	SLE FR 2	0.68	0.29	37.11	-0.0622	7.0294	-0.1012
771	SLE FR 3	0.68	0.29	37.25	-0.0625	7.0536	-0.1018
771	SLE FR 4	0.69	0.32	38.28	-0.0644	7.2379	-0.1119
771	SLE FR 5	0.69	0.32	38.42	-0.0647	7.2622	-0.1126
771	SLE FR 6	0.69	0.34	39.05	-0.0659	7.3768	-0.1201
771	SLE QP 1	0.68	0.29	37.11	-0.0622	7.0293	-0.1022
771	SLE QP 2	0.69	0.32	38.28	-0.0644	7.2378	-0.1129
771	SLD 1	2.82	0.87	27.85	-0.0442	5.5278	-0.3025
771	SLD 2	2.65	1.53	27.67	-0.0457	5.5226	-0.5335
771	SLD 3	3.02	-0.5	28.15	-0.0417	5.4988	0.1756
771	SLD 4	2.86	0.17	27.97	-0.0433	5.4936	-0.0555
771	SLD 5	1.05	2.45	34.73	-0.0618	6.7697	-0.8528
771	SLD 6	0.94	2.89	34.61	-0.0628	6.7662	-1.0062
771	SLD 7	1.72	-2.12	35.72	-0.0536	6.6731	0.7407
771	SLD 8	1.62	-1.68	35.6	-0.0546	6.6697	0.5874
771	SLD 9	-0.24	2.33	40.95	-0.0742	7.806	-0.8132
771	SLD 10	-0.35	2.77	40.83	-0.0752	7.8025	-0.9665
771	SLD 11	0.44	-2.24	41.94	-0.066	7.7094	0.7803
771	SLD 12	0.33	-1.8	41.82	-0.067	7.7059	0.627
771	SLD 13	-1.48	0.48	48.58	-0.0855	8.982	-0.1704
771	SLD 14	-1.64	1.15	48.41	-0.0871	8.9768	-0.4014
771	SLD 15	-1.28	-0.89	48.88	-0.0831	8.953	0.3077
771	SLD 16	-1.44	-0.22	48.7	-0.0846	8.9478	0.0766
771	SLV 1	5.67	1.56	13.89	-0.017	3.2366	-0.5406
771	SLV 2	5.29	3.1	13.48	-0.0206	3.2244	-1.0785
771	SLV 3	6.13	-1.54	14.56	-0.0115	3.1694	0.543
771	SLV 4	5.75	0	14.15	-0.0151	3.1573	0.0051
771	SLV 5	1.55	5.13	30.02	-0.0579	6.1414	-1.7901
771	SLV 6	1.3	6.14	29.75	-0.0603	6.1335	-2.1406
771	SLV 7	3.09	-5.22	32.25	-0.0395	5.9176	1.8219
771	SLV 8	2.84	-4.21	31.98	-0.0418	5.9097	1.4714
771	SLV 9	-1.47	4.86	44.57	-0.087	8.5659	-1.6972
771	SLV 10	-1.71	5.86	44.3	-0.0893	8.558	-2.0477
771	SLV 11	0.07	-5.49	46.8	-0.0685	8.3422	1.9147
771	SLV 12	-0.17	-4.48	46.53	-0.0709	8.3342	1.5643
771	SLV 13	-4.38	0.65	62.4	-0.1137	11.3184	-0.231
771	SLV 14	-4.75	2.19	61.99	-0.1174	11.3062	-0.7689
771	SLV 15	-3.91	-2.46	63.07	-0.1082	11.2512	0.8526
771	SLV 16	-4.29	-0.91	62.66	-0.1118	11.2391	0.3147
771	CRTFP Ux+	0	0	0	0	0	0
771	CRTFP Ux-	0	0	0	0	0	0
771	CRTFP Uy+	0	0	0	0	0	0
771	CRTFP Uy-	0	0	0	0	0	0
773	SLU 1	1.3	0.06	60.34	0.019	0.2023	-0.0136
773	SLU 2	1.29	0.03	60.33	0.019	0.2101	-0.0129
773	SLU 3	1.34	0.07	61.73	0.0193	0.2096	-0.0139
773	SLU 4	1.33	0.05	61.72	0.0193	0.2143	-0.0136
773	SLU 5	1.31	0.03	61.2	0.0192	0.2139	-0.0133
773	SLU 6	1.36	0.07	62.59	0.0196	0.2134	-0.0143
773	SLU 7	1.35	0.05	62.58	0.0196	0.2181	-0.0139
773	SLU 8	1.35	0.05	62.06	0.0194	0.2098	-0.0142
773	SLU 9	1.34	0.03	62.06	0.0194	0.2145	-0.0138
773	SLU 10	1.37	0.13	67.69	0.021	0.2469	-0.0139
773	SLU 11	1.42	0.17	69.08	0.0213	0.2463	-0.0149
773	SLU 12	1.41	0.15	69.08	0.0213	0.2511	-0.0145
773	SLU 13	1.4	0.13	68.55	0.0212	0.2506	-0.0142
773	SLU 14	1.44	0.16	69.94	0.0215	0.2501	-0.0152
773	SLU 15	1.44	0.15	69.94	0.0215	0.2548	-0.0148
773	SLU 16	1.43	0.15	69.42	0.0214	0.2466	-0.0152

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
773	SLU 17	1.42	0.13	69.41	0.0214	0.2513	-0.0148
773	SLU 18	1.42	0.2	70.85	0.0218	0.2548	-0.0149
773	SLU 19	1.41	0.19	70.84	0.0218	0.2595	-0.0145
773	SLU 20	1.44	0.2	71.71	0.022	0.2585	-0.0152
773	SLU 21	1.44	0.18	71.71	0.022	0.2632	-0.0148
773	SLU 22	1.41	0.19	67.69	0.0218	0.2367	-0.0143
773	SLU 23	1.4	0.16	67.68	0.0218	0.2446	-0.0137
773	SLU 24	1.45	0.2	69.07	0.0222	0.244	-0.0147
773	SLU 25	1.44	0.18	69.07	0.0222	0.2487	-0.0143
773	SLU 26	1.43	0.16	68.54	0.0221	0.2483	-0.014
773	SLU 27	1.48	0.2	69.93	0.0224	0.2478	-0.015
773	SLU 28	1.47	0.18	69.93	0.0224	0.2525	-0.0146
773	SLU 29	1.46	0.18	69.41	0.0223	0.2443	-0.015
773	SLU 30	1.46	0.17	69.4	0.0223	0.249	-0.0146
773	SLU 31	1.49	0.26	75.03	0.0238	0.2813	-0.0146
773	SLU 32	1.53	0.3	76.43	0.0241	0.2808	-0.0156
773	SLU 33	1.53	0.28	76.42	0.0242	0.2855	-0.0152
773	SLU 34	1.51	0.26	75.9	0.024	0.2851	-0.0149
773	SLU 35	1.56	0.3	77.29	0.0244	0.2845	-0.0159
773	SLU 36	1.55	0.28	77.28	0.0244	0.2892	-0.0156
773	SLU 37	1.55	0.28	76.76	0.0242	0.281	-0.0159
773	SLU 38	1.54	0.26	76.76	0.0242	0.2857	-0.0155
773	SLU 39	1.53	0.34	78.19	0.0246	0.2892	-0.0157
773	SLU 40	1.53	0.32	78.19	0.0246	0.2939	-0.0153
773	SLU 41	1.56	0.33	79.05	0.0249	0.293	-0.016
773	SLU 42	1.55	0.31	79.05	0.0249	0.2977	-0.0156
773	SLU 43	1.65	0.04	75.93	0.0237	0.2512	-0.0174
773	SLU 44	1.64	0	75.92	0.0237	0.259	-0.0168
773	SLU 45	1.69	0.04	77.31	0.0241	0.2585	-0.0178
773	SLU 46	1.68	0.03	77.31	0.0241	0.2632	-0.0174
773	SLU 47	1.66	0	76.78	0.0239	0.2628	-0.0171
773	SLU 48	1.71	0.04	78.17	0.0243	0.2623	-0.0181
773	SLU 49	1.7	0.02	78.17	0.0243	0.267	-0.0177
773	SLU 50	1.7	0.03	77.65	0.0241	0.2587	-0.018
773	SLU 51	1.69	0.01	77.64	0.0242	0.2634	-0.0177
773	SLU 52	1.72	0.1	83.27	0.0257	0.2958	-0.0177
773	SLU 53	1.77	0.14	84.67	0.026	0.2952	-0.0187
773	SLU 54	1.76	0.12	84.66	0.026	0.2999	-0.0183
773	SLU 55	1.75	0.1	84.13	0.0259	0.2995	-0.018
773	SLU 56	1.79	0.14	85.53	0.0262	0.299	-0.019
773	SLU 57	1.79	0.12	85.52	0.0262	0.3037	-0.0186
773	SLU 58	1.78	0.13	85	0.0261	0.2954	-0.019
773	SLU 59	1.77	0.11	85	0.0261	0.3002	-0.0186
773	SLU 60	1.77	0.18	86.43	0.0265	0.3037	-0.0187
773	SLU 61	1.76	0.16	86.43	0.0265	0.3084	-0.0183
773	SLU 62	1.79	0.17	87.29	0.0267	0.3074	-0.019
773	SLU 63	1.79	0.15	87.29	0.0267	0.3121	-0.0187
773	SLU 64	1.77	0.17	83.27	0.0266	0.2856	-0.0181
773	SLU 65	1.75	0.14	83.26	0.0266	0.2935	-0.0175
773	SLU 66	1.8	0.18	84.66	0.0269	0.2929	-0.0185
773	SLU 67	1.8	0.16	84.65	0.0269	0.2976	-0.0181
773	SLU 68	1.78	0.13	84.13	0.0268	0.2972	-0.0178
773	SLU 69	1.83	0.17	85.52	0.0271	0.2967	-0.0188
773	SLU 70	1.82	0.15	85.51	0.0271	0.3014	-0.0184
773	SLU 71	1.81	0.16	84.99	0.027	0.2931	-0.0188
773	SLU 72	1.81	0.14	84.99	0.027	0.2978	-0.0184
773	SLU 73	1.84	0.24	90.62	0.0285	0.3302	-0.0184
773	SLU 74	1.88	0.27	92.01	0.0289	0.3297	-0.0194
773	SLU 75	1.88	0.26	92.01	0.0289	0.3344	-0.0191
773	SLU 76	1.86	0.23	91.48	0.0287	0.334	-0.0188
773	SLU 77	1.91	0.27	92.87	0.0291	0.3334	-0.0198
773	SLU 78	1.9	0.25	92.87	0.0291	0.3381	-0.0194
773	SLU 79	1.9	0.26	92.35	0.029	0.3299	-0.0197
773	SLU 80	1.89	0.24	92.34	0.029	0.3346	-0.0193
773	SLU 81	1.88	0.31	93.78	0.0294	0.3381	-0.0195
773	SLU 82	1.88	0.29	93.77	0.0294	0.3428	-0.0191
773	SLU 83	1.91	0.3	94.64	0.0296	0.3419	-0.0198
773	SLU 84	1.9	0.29	94.63	0.0296	0.3466	-0.0194
773	SLE RA 1	1.33	0.1	62.44	0.0198	0.2121	-0.0138
773	SLE RA 2	1.33	0.08	62.44	0.0198	0.2174	-0.0134
773	SLE RA 3	1.36	0.11	63.36	0.02	0.217	-0.014
773	SLE RA 4	1.35	0.09	63.36	0.02	0.2201	-0.0138
773	SLE RA 5	1.34	0.08	63.01	0.02	0.2199	-0.0136
773	SLE RA 6	1.37	0.1	63.94	0.0202	0.2195	-0.0143
773	SLE RA 7	1.37	0.09	63.94	0.0202	0.2227	-0.014
773	SLE RA 8	1.36	0.09	63.59	0.0201	0.2172	-0.0142
773	SLE RA 9	1.36	0.08	63.59	0.0201	0.2203	-0.014
773	SLE RA 10	1.38	0.15	67.34	0.0211	0.2419	-0.014
773	SLE RA 11	1.41	0.17	68.27	0.0213	0.2415	-0.0147
773	SLE RA 12	1.41	0.16	68.26	0.0213	0.2446	-0.0144
773	SLE RA 13	1.4	0.14	67.91	0.0213	0.2444	-0.0142
773	SLE RA 14	1.43	0.17	68.84	0.0215	0.244	-0.0149
773	SLE RA 15	1.42	0.16	68.84	0.0215	0.2471	-0.0146
773	SLE RA 16	1.42	0.16	68.49	0.0214	0.2416	-0.0148
773	SLE RA 17	1.42	0.15	68.49	0.0214	0.2448	-0.0146
773	SLE RA 18	1.41	0.19	69.45	0.0217	0.2471	-0.0147
773	SLE RA 19	1.41	0.18	69.44	0.0217	0.2503	-0.0144
773	SLE RA 20	1.43	0.19	70.02	0.0218	0.2496	-0.0149
773	SLE RA 21	1.42	0.18	70.02	0.0218	0.2528	-0.0146
773	SLE FR 1	1.33	0.1	62.44	0.0198	0.2121	-0.0138

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
773	SLE FR 2	1.33	0.1	62.44	0.0198	0.2132	-0.0137
773	SLE FR 3	1.34	0.1	62.67	0.0199	0.2131	-0.0139
773	SLE FR 4	1.35	0.12	64.54	0.0204	0.2237	-0.014
773	SLE FR 5	1.36	0.13	64.77	0.0204	0.2236	-0.0141
773	SLE FR 6	1.37	0.15	65.94	0.0207	0.2296	-0.0142
773	SLE QP 1	1.33	0.1	62.44	0.0198	0.2121	-0.0138
773	SLE QP 2	1.36	0.13	64.54	0.0204	0.2226	-0.0141
773	SLD 1	6.49	0.94	59.75	0.021	0.2387	-0.0287
773	SLD 2	6.24	1.43	59.47	0.0179	0.2472	-0.0169
773	SLD 3	6.57	-0.66	59.99	0.0267	0.2853	-0.0302
773	SLD 4	6.32	-0.17	59.72	0.0237	0.2938	-0.0184
773	SLD 5	2.83	2.71	62.78	0.0124	0.1552	-0.0183
773	SLD 6	2.66	3.04	62.6	0.0103	0.1609	-0.0105
773	SLD 7	3.08	-2.62	63.6	0.0316	0.3105	-0.0233
773	SLD 8	2.92	-2.3	63.42	0.0295	0.3162	-0.0155
773	SLD 9	-0.2	2.55	65.67	0.0112	0.1291	-0.0126
773	SLD 10	-0.37	2.88	65.49	0.0092	0.1348	-0.0048
773	SLD 11	0.05	-2.78	66.48	0.0304	0.2843	-0.0177
773	SLD 12	-0.11	-2.45	66.3	0.0284	0.29	-0.0098
773	SLD 13	-3.61	0.42	69.36	0.0171	0.1515	-0.0097
773	SLD 14	-3.86	0.92	69.09	0.014	0.16	0.0021
773	SLD 15	-3.53	-1.18	69.61	0.0228	0.198	-0.0112
773	SLD 16	-3.78	-0.68	69.34	0.0197	0.2066	0.0006
773	SLV 1	13.37	1.97	53.31	0.022	0.2625	-0.0483
773	SLV 2	12.78	3.12	52.68	0.0149	0.2824	-0.0208
773	SLV 3	13.55	-1.65	53.88	0.035	0.3679	-0.0517
773	SLV 4	12.96	-0.5	53.25	0.0279	0.3878	-0.0242
773	SLV 5	4.79	5.97	60.42	0.0024	0.0712	-0.0239
773	SLV 6	4.4	6.72	60.01	-0.0023	0.0842	-0.006
773	SLV 7	5.39	-6.1	62.32	0.0458	0.4226	-0.0354
773	SLV 8	5.01	-5.35	61.91	0.0411	0.4355	-0.0175
773	SLV 9	-2.29	5.61	67.17	-0.0004	0.0097	-0.0106
773	SLV 10	-2.68	6.36	66.76	-0.005	0.0227	0.0073
773	SLV 11	-1.69	-6.47	69.08	0.043	0.3611	-0.0221
773	SLV 12	-2.08	-5.72	68.67	0.0383	0.374	-0.0042
773	SLV 13	-10.24	0.76	75.83	0.0128	0.0575	-0.0039
773	SLV 14	-10.83	1.91	75.2	0.0057	0.0774	0.0236
773	SLV 15	-10.06	-2.87	76.4	0.0258	0.1629	-0.0073
773	SLV 16	-10.65	-1.71	75.77	0.0187	0.1828	0.0202
773	CRTFP Ux+	0	0	0	0	0	0
773	CRTFP Ux-	0	0	0	0	0	0
776	SLU 1	-0.9	-0.81	63.36	-0.0097	-0.3695	0.0194
776	SLU 2	-0.92	-0.9	63.42	-0.0091	-0.3743	0.0202
776	SLU 3	-0.93	-0.82	64.9	-0.0099	-0.3802	0.02
776	SLU 4	-0.94	-0.87	64.94	-0.0096	-0.3831	0.0204
776	SLU 5	-0.94	-0.91	64.39	-0.0092	-0.3788	0.0205
776	SLU 6	-0.94	-0.83	65.88	-0.01	-0.3846	0.0202
776	SLU 7	-0.95	-0.88	65.91	-0.0097	-0.3875	0.0207
776	SLU 8	-0.93	-0.83	65.31	-0.0099	-0.3784	0.02
776	SLU 9	-0.95	-0.88	65.34	-0.0095	-0.3813	0.0205
776	SLU 10	-0.97	-0.93	71.29	-0.0106	-0.4383	0.023
776	SLU 11	-0.97	-0.85	72.77	-0.0114	-0.4442	0.0227
776	SLU 12	-0.98	-0.9	72.81	-0.011	-0.4471	0.0232
776	SLU 13	-0.98	-0.93	72.26	-0.0107	-0.4428	0.0233
776	SLU 14	-0.99	-0.85	73.75	-0.0115	-0.4486	0.023
776	SLU 15	-1	-0.91	73.78	-0.0111	-0.4515	0.0235
776	SLU 16	-0.98	-0.85	73.18	-0.0113	-0.4424	0.0228
776	SLU 17	-0.99	-0.91	73.21	-0.011	-0.4453	0.0232
776	SLU 18	-0.96	-0.85	74.61	-0.0118	-0.4609	0.0234
776	SLU 19	-0.98	-0.9	74.64	-0.0114	-0.4638	0.0238
776	SLU 20	-0.98	-0.86	75.58	-0.0119	-0.4654	0.0237
776	SLU 21	-0.99	-0.91	75.61	-0.0115	-0.4683	0.0241
776	SLU 22	-0.99	-0.79	71.24	-0.0102	-0.4257	0.0214
776	SLU 23	-1	-0.88	71.29	-0.0097	-0.4305	0.0221
776	SLU 24	-1.01	-0.8	72.78	-0.0104	-0.4363	0.0219
776	SLU 25	-1.02	-0.85	72.81	-0.0101	-0.4392	0.0224
776	SLU 26	-1.02	-0.89	72.27	-0.0097	-0.4349	0.0224
776	SLU 27	-1.02	-0.81	73.75	-0.0105	-0.4408	0.0222
776	SLU 28	-1.04	-0.86	73.79	-0.0102	-0.4437	0.0227
776	SLU 29	-1.02	-0.81	73.18	-0.0104	-0.4346	0.0219
776	SLU 30	-1.03	-0.86	73.22	-0.0101	-0.4375	0.0224
776	SLU 31	-1.05	-0.91	79.16	-0.0111	-0.4945	0.0249
776	SLU 32	-1.05	-0.82	80.65	-0.0119	-0.5003	0.0247
776	SLU 33	-1.06	-0.88	80.68	-0.0116	-0.5032	0.0251
776	SLU 34	-1.06	-0.91	80.14	-0.0112	-0.4989	0.0252
776	SLU 35	-1.07	-0.83	81.62	-0.012	-0.5048	0.025
776	SLU 36	-1.08	-0.89	81.66	-0.0116	-0.5077	0.0254
776	SLU 37	-1.06	-0.83	81.05	-0.0118	-0.4986	0.0247
776	SLU 38	-1.07	-0.88	81.09	-0.0115	-0.5015	0.0252
776	SLU 39	-1.05	-0.83	82.48	-0.0123	-0.5171	0.0253
776	SLU 40	-1.06	-0.88	82.51	-0.012	-0.52	0.0258
776	SLU 41	-1.06	-0.83	83.45	-0.0124	-0.5216	0.0256
776	SLU 42	-1.07	-0.89	83.49	-0.012	-0.5245	0.0261
776	SLU 43	-1.15	-1.06	79.67	-0.0124	-0.4611	0.0246
776	SLU 44	-1.17	-1.15	79.72	-0.0119	-0.4659	0.0253
776	SLU 45	-1.17	-1.07	81.21	-0.0127	-0.4718	0.0251
776	SLU 46	-1.18	-1.13	81.24	-0.0123	-0.4747	0.0256
776	SLU 47	-1.18	-1.16	80.7	-0.012	-0.4704	0.0256
776	SLU 48	-1.19	-1.08	82.18	-0.0128	-0.4762	0.0254
776	SLU 49	-1.2	-1.13	82.22	-0.0124	-0.4791	0.0259

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
776	SLU 50	-1.18	-1.08	81.62	-0.0126	-0.47	0.0252
776	SLU 51	-1.19	-1.13	81.65	-0.0123	-0.4729	0.0256
776	SLU 52	-1.21	-1.18	87.6	-0.0133	-0.5299	0.0281
776	SLU 53	-1.21	-1.1	89.08	-0.0141	-0.5358	0.0279
776	SLU 54	-1.23	-1.15	89.12	-0.0138	-0.5387	0.0283
776	SLU 55	-1.22	-1.19	88.57	-0.0134	-0.5344	0.0284
776	SLU 56	-1.23	-1.1	90.05	-0.0142	-0.5402	0.0282
776	SLU 57	-1.24	-1.16	90.09	-0.0139	-0.5431	0.0286
776	SLU 58	-1.22	-1.1	89.49	-0.0141	-0.534	0.0279
776	SLU 59	-1.23	-1.16	89.52	-0.0137	-0.5369	0.0284
776	SLU 60	-1.21	-1.1	90.91	-0.0145	-0.5525	0.0285
776	SLU 61	-1.22	-1.15	90.95	-0.0142	-0.5554	0.029
776	SLU 62	-1.22	-1.11	91.89	-0.0146	-0.557	0.0288
776	SLU 63	-1.24	-1.16	91.92	-0.0143	-0.5599	0.0293
776	SLU 64	-1.23	-1.04	87.54	-0.013	-0.5173	0.0265
776	SLU 65	-1.25	-1.13	87.6	-0.0124	-0.5221	0.0273
776	SLU 66	-1.25	-1.05	89.09	-0.0132	-0.5279	0.0271
776	SLU 67	-1.26	-1.1	89.12	-0.0128	-0.5308	0.0275
776	SLU 68	-1.26	-1.14	88.57	-0.0125	-0.5265	0.0276
776	SLU 69	-1.27	-1.06	90.06	-0.0133	-0.5324	0.0273
776	SLU 70	-1.28	-1.11	90.09	-0.0129	-0.5353	0.0278
776	SLU 71	-1.26	-1.06	89.49	-0.0131	-0.5262	0.0271
776	SLU 72	-1.27	-1.11	89.53	-0.0128	-0.5291	0.0276
776	SLU 73	-1.29	-1.16	95.47	-0.0138	-0.5861	0.0301
776	SLU 74	-1.3	-1.08	96.96	-0.0146	-0.5919	0.0298
776	SLU 75	-1.31	-1.13	96.99	-0.0143	-0.5948	0.0303
776	SLU 76	-1.31	-1.16	96.45	-0.0139	-0.5905	0.0304
776	SLU 77	-1.31	-1.08	97.93	-0.0147	-0.5964	0.0301
776	SLU 78	-1.32	-1.14	97.96	-0.0144	-0.5993	0.0306
776	SLU 79	-1.3	-1.08	97.36	-0.0146	-0.5902	0.0299
776	SLU 80	-1.31	-1.14	97.4	-0.0142	-0.5931	0.0303
776	SLU 81	-1.29	-1.08	98.79	-0.015	-0.6087	0.0305
776	SLU 82	-1.3	-1.13	98.82	-0.0147	-0.6116	0.0309
776	SLU 83	-1.31	-1.08	99.76	-0.0151	-0.6132	0.0308
776	SLU 84	-1.32	-1.14	99.8	-0.0148	-0.6161	0.0312
776	SLE RA 1	-0.93	-0.81	65.61	-0.0099	-0.3856	0.02
776	SLE RA 2	-0.94	-0.87	65.65	-0.0095	-0.3888	0.0205
776	SLE RA 3	-0.94	-0.81	66.64	-0.01	-0.3927	0.0203
776	SLE RA 4	-0.95	-0.85	66.66	-0.0098	-0.3946	0.0206
776	SLE RA 5	-0.95	-0.87	66.3	-0.0095	-0.3917	0.0207
776	SLE RA 6	-0.95	-0.82	67.29	-0.0101	-0.3956	0.0205
776	SLE RA 7	-0.96	-0.85	67.31	-0.0098	-0.3976	0.0208
776	SLE RA 8	-0.95	-0.82	66.91	-0.01	-0.3915	0.0204
776	SLE RA 9	-0.96	-0.85	66.93	-0.0097	-0.3934	0.0207
776	SLE RA 10	-0.97	-0.88	70.9	-0.0104	-0.4314	0.0223
776	SLE RA 11	-0.97	-0.83	71.89	-0.011	-0.4353	0.0222
776	SLE RA 12	-0.98	-0.86	71.91	-0.0107	-0.4373	0.0225
776	SLE RA 13	-0.98	-0.89	71.54	-0.0105	-0.4344	0.0225
776	SLE RA 14	-0.98	-0.83	72.53	-0.011	-0.4383	0.0224
776	SLE RA 15	-0.99	-0.87	72.56	-0.0108	-0.4402	0.0227
776	SLE RA 16	-0.98	-0.83	72.16	-0.0109	-0.4342	0.0222
776	SLE RA 17	-0.98	-0.87	72.18	-0.0107	-0.4361	0.0225
776	SLE RA 18	-0.97	-0.83	73.11	-0.0112	-0.4465	0.0226
776	SLE RA 19	-0.98	-0.87	73.13	-0.011	-0.4484	0.0229
776	SLE RA 20	-0.98	-0.83	73.76	-0.0113	-0.4495	0.0228
776	SLE RA 21	-0.99	-0.87	73.78	-0.0111	-0.4514	0.0231
776	SLE FR 1	-0.93	-0.81	65.61	-0.0099	-0.3856	0.02
776	SLE FR 2	-0.93	-0.82	65.62	-0.0098	-0.3862	0.0201
776	SLE FR 3	-0.93	-0.81	65.87	-0.0099	-0.3867	0.02
776	SLE FR 4	-0.94	-0.83	67.87	-0.0102	-0.4045	0.0209
776	SLE FR 5	-0.94	-0.82	68.12	-0.0103	-0.405	0.0208
776	SLE FR 6	-0.95	-0.82	69.36	-0.0105	-0.416	0.0213
776	SLE QP 1	-0.93	-0.81	65.61	-0.0099	-0.3856	0.02
776	SLE QP 2	-0.94	-0.81	67.86	-0.0103	-0.4038	0.0208
776	SLD 1	4.52	-0.41	71.64	-0.0327	-0.4352	0.017
776	SLD 2	4.27	-0.89	72.15	-0.0282	-0.4268	0.029
776	SLD 3	4.4	-2.12	71.89	-0.0238	-0.4991	0.0194
776	SLD 4	4.16	-2.6	72.41	-0.0192	-0.4907	0.0313
776	SLD 5	0.91	1.99	68.52	-0.0315	-0.3178	0.0139
776	SLD 6	0.75	1.67	68.86	-0.0284	-0.3123	0.0218
776	SLD 7	0.54	-3.71	69.36	-0.0015	-0.5309	0.0217
776	SLD 8	0.37	-4.03	69.7	0.0015	-0.5253	0.0297
776	SLD 9	-2.25	2.4	66.02	-0.022	-0.2824	0.0118
776	SLD 10	-2.42	2.08	66.36	-0.019	-0.2768	0.0198
776	SLD 11	-2.63	-3.29	66.86	0.0079	-0.4954	0.0197
776	SLD 12	-2.79	-3.62	67.2	0.0109	-0.4898	0.0276
776	SLD 13	-6.04	0.97	63.31	-0.0014	-0.3169	0.0102
776	SLD 14	-6.28	0.49	63.83	0.0032	-0.3086	0.0221
776	SLD 15	-6.15	-0.73	63.57	0.0076	-0.3809	0.0125
776	SLD 16	-6.39	-1.22	64.08	0.0122	-0.3725	0.0245
776	SLV 1	11.81	0.07	76.72	-0.0624	-0.4798	0.0122
776	SLV 2	11.24	-1.06	77.92	-0.0518	-0.4603	0.04
776	SLV 3	11.55	-3.8	77.3	-0.0422	-0.6242	0.0175
776	SLV 4	10.98	-4.93	78.49	-0.0315	-0.6047	0.0453
776	SLV 5	3.38	5.51	69.44	-0.0586	-0.211	0.0052
776	SLV 6	3	4.78	70.22	-0.0516	-0.1983	0.0233
776	SLV 7	2.52	-7.37	71.35	0.009	-0.6924	0.023
776	SLV 8	2.14	-8.11	72.13	0.016	-0.6797	0.0411
776	SLV 9	-4.02	6.48	63.59	-0.0365	-0.128	0.0004
776	SLV 10	-4.4	5.75	64.37	-0.0296	-0.1153	0.0185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
776	SLV 11	-4.88	-6.4	65.5	0.0311	-0.6094	0.0182
776	SLV 12	-5.26	-7.14	66.28	0.038	-0.5966	0.0363
776	SLV 13	-12.86	3.3	57.23	0.011	-0.203	-0.0038
776	SLV 14	-13.43	2.17	58.42	0.0216	-0.1835	0.024
776	SLV 15	-13.12	-0.56	57.8	0.0313	-0.3474	0.0015
776	SLV 16	-13.69	-1.7	59	0.0419	-0.3279	0.0293
776	CRTFP Ux+	0	0	0	0	0	0
776	CRTFP Ux-	0	0	0	0	0	0
776	CRTFP Uy+	0	0	0	0	0	0
776	CRTFP Uy-	0	0	0	0	0	0
792	SLU 1	0.78	1.71	124.2	-0.04	-20.0995	0.3149
792	SLU 2	0.75	1.55	124.13	-0.0353	-20.089	0.2877
792	SLU 3	0.81	1.8	127.01	-0.0422	-20.5469	0.3299
792	SLU 4	0.79	1.7	126.97	-0.0394	-20.5406	0.3136
792	SLU 5	0.77	1.57	125.79	-0.0387	-20.3542	0.2924
792	SLU 6	0.83	1.83	128.67	-0.0456	-20.8121	0.3346
792	SLU 7	0.81	1.73	128.63	-0.0428	-20.8058	0.3183
792	SLU 8	0.83	1.77	127.52	-0.0468	-20.6299	0.3242
792	SLU 9	0.81	1.67	127.48	-0.044	-20.6236	0.3079
792	SLU 10	0.88	1.86	140.64	-0.0407	-22.7256	0.3469
792	SLU 11	0.94	2.11	143.53	-0.0476	-23.1835	0.389
792	SLU 12	0.92	2.01	143.48	-0.0448	-23.1772	0.3728
792	SLU 13	0.9	1.89	142.3	-0.0441	-22.9908	0.3516
792	SLU 14	0.96	2.14	145.19	-0.051	-23.4487	0.3937
792	SLU 15	0.94	2.04	145.15	-0.0482	-23.4424	0.3774
792	SLU 16	0.96	2.08	144.04	-0.0523	-23.2665	0.3834
792	SLU 17	0.94	1.98	143.99	-0.0494	-23.2602	0.3671
792	SLU 18	0.97	2.16	147.79	-0.0477	-23.8661	0.3994
792	SLU 19	0.95	2.06	147.75	-0.0449	-23.8598	0.3831
792	SLU 20	0.99	2.19	149.45	-0.0512	-24.1313	0.4041
792	SLU 21	0.97	2.09	149.41	-0.0483	-24.125	0.3878
792	SLU 22	0.9	2.26	139.93	-0.0232	-22.6031	0.4105
792	SLU 23	0.86	2.09	139.86	-0.0184	-22.5926	0.3833
792	SLU 24	0.93	2.35	142.74	-0.0254	-23.0505	0.4255
792	SLU 25	0.9	2.24	142.7	-0.0225	-23.0442	0.4092
792	SLU 26	0.89	2.12	141.52	-0.0219	-22.8578	0.388
792	SLU 27	0.95	2.37	144.4	-0.0288	-23.3157	0.4302
792	SLU 28	0.93	2.27	144.36	-0.026	-23.3094	0.4139
792	SLU 29	0.95	2.31	143.25	-0.03	-23.1335	0.4198
792	SLU 30	0.93	2.21	143.21	-0.0272	-23.1272	0.4035
792	SLU 31	0.99	2.4	156.37	-0.0239	-25.2292	0.4425
792	SLU 32	1.06	2.66	159.25	-0.0308	-25.6871	0.4846
792	SLU 33	1.03	2.56	159.21	-0.028	-25.6808	0.4684
792	SLU 34	1.02	2.43	158.03	-0.0273	-25.4944	0.4472
792	SLU 35	1.08	2.69	160.92	-0.0342	-25.9523	0.4893
792	SLU 36	1.06	2.58	160.87	-0.0314	-25.946	0.473
792	SLU 37	1.08	2.63	159.76	-0.0354	-25.7701	0.479
792	SLU 38	1.06	2.53	159.72	-0.0326	-25.7638	0.4627
792	SLU 39	1.09	2.71	163.52	-0.0309	-26.3697	0.495
792	SLU 40	1.07	2.61	163.47	-0.0281	-26.3634	0.4787
792	SLU 41	1.11	2.73	165.18	-0.0343	-26.6349	0.4996
792	SLU 42	1.09	2.63	165.14	-0.0315	-26.6286	0.4834
792	SLU 43	0.98	2.04	156.06	-0.0578	-25.2709	0.3766
792	SLU 44	0.94	1.87	155.99	-0.053	-25.2604	0.3494
792	SLU 45	1	2.13	158.88	-0.06	-25.7183	0.3916
792	SLU 46	0.98	2.03	158.84	-0.0571	-25.712	0.3753
792	SLU 47	0.97	1.9	157.66	-0.0564	-25.5256	0.3541
792	SLU 48	1.03	2.15	160.54	-0.0634	-25.9836	0.3962
792	SLU 49	1.01	2.05	160.5	-0.0605	-25.9772	0.38
792	SLU 50	1.03	2.1	159.39	-0.0646	-25.8014	0.3859
792	SLU 51	1	2	159.35	-0.0618	-25.7951	0.3696
792	SLU 52	1.07	2.19	172.51	-0.0584	-27.8971	0.4086
792	SLU 53	1.14	2.44	175.39	-0.0654	-28.355	0.4507
792	SLU 54	1.11	2.34	175.35	-0.0625	-28.3487	0.4345
792	SLU 55	1.1	2.21	174.17	-0.0619	-28.1623	0.4133
792	SLU 56	1.16	2.47	177.05	-0.0688	-28.6202	0.4554
792	SLU 57	1.14	2.37	177.01	-0.066	-28.6139	0.4391
792	SLU 58	1.16	2.41	175.9	-0.07	-28.438	0.4451
792	SLU 59	1.13	2.31	175.86	-0.0672	-28.4317	0.4288
792	SLU 60	1.17	2.49	179.65	-0.0655	-29.0376	0.4611
792	SLU 61	1.14	2.39	179.61	-0.0627	-29.0312	0.4448
792	SLU 62	1.19	2.52	181.32	-0.0689	-29.3028	0.4657
792	SLU 63	1.17	2.41	181.27	-0.0661	-29.2965	0.4495
792	SLU 64	1.1	2.59	171.79	-0.041	-27.7746	0.4721
792	SLU 65	1.06	2.42	171.72	-0.0362	-27.764	0.445
792	SLU 66	1.12	2.67	174.61	-0.0432	-28.222	0.4872
792	SLU 67	1.1	2.57	174.57	-0.0403	-28.2156	0.4709
792	SLU 68	1.08	2.45	173.39	-0.0396	-28.0293	0.4497
792	SLU 69	1.15	2.7	176.27	-0.0466	-28.4872	0.4918
792	SLU 70	1.12	2.6	176.23	-0.0437	-28.4809	0.4756
792	SLU 71	1.14	2.64	175.12	-0.0478	-28.305	0.4815
792	SLU 72	1.12	2.54	175.08	-0.0449	-28.2987	0.4652
792	SLU 73	1.19	2.73	188.24	-0.0416	-30.4007	0.5042
792	SLU 74	1.25	2.99	191.12	-0.0486	-30.8586	0.5463
792	SLU 75	1.23	2.88	191.08	-0.0457	-30.8523	0.53
792	SLU 76	1.21	2.76	189.9	-0.045	-30.6659	0.5088
792	SLU 77	1.28	3.01	192.78	-0.052	-31.1238	0.551
792	SLU 78	1.25	2.91	192.74	-0.0491	-31.1175	0.5347
792	SLU 79	1.27	2.95	191.63	-0.0532	-30.9416	0.5406
792	SLU 80	1.25	2.85	191.59	-0.0504	-30.9353	0.5244

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
792	SLU 81	1.28	3.03	195.38	-0.0487	-31.5412	0.5567
792	SLU 82	1.26	2.93	195.34	-0.0458	-31.5349	0.5404
792	SLU 83	1.31	3.06	197.05	-0.0521	-31.8064	0.5613
792	SLU 84	1.28	2.96	197	-0.0493	-31.8001	0.5451
792	SLE RA 1	0.82	1.87	128.69	-0.0352	-20.8148	0.3422
792	SLE RA 2	0.79	1.76	128.64	-0.032	-20.8078	0.3241
792	SLE RA 3	0.83	1.93	130.57	-0.0367	-21.1131	0.3522
792	SLE RA 4	0.82	1.86	130.54	-0.0348	-21.1089	0.3413
792	SLE RA 5	0.81	1.78	129.75	-0.0343	-20.9846	0.3272
792	SLE RA 6	0.85	1.95	131.68	-0.0389	-21.2899	0.3553
792	SLE RA 7	0.84	1.88	131.65	-0.037	-21.2857	0.3445
792	SLE RA 8	0.85	1.91	130.91	-0.0398	-21.1684	0.3484
792	SLE RA 9	0.83	1.84	130.88	-0.0379	-21.1642	0.3376
792	SLE RA 10	0.88	1.97	139.65	-0.0357	-22.5655	0.3635
792	SLE RA 11	0.92	2.14	141.58	-0.0403	-22.8708	0.3916
792	SLE RA 12	0.91	2.07	141.55	-0.0384	-22.8666	0.3808
792	SLE RA 13	0.9	1.98	140.76	-0.0379	-22.7423	0.3666
792	SLE RA 14	0.94	2.15	142.68	-0.0426	-23.0476	0.3947
792	SLE RA 15	0.92	2.09	142.66	-0.0407	-23.0434	0.3839
792	SLE RA 16	0.94	2.12	141.92	-0.0434	-22.9262	0.3878
792	SLE RA 17	0.92	2.05	141.89	-0.0415	-22.922	0.377
792	SLE RA 18	0.94	2.17	144.42	-0.0404	-23.3259	0.3985
792	SLE RA 19	0.93	2.1	144.39	-0.0385	-23.3217	0.3877
792	SLE RA 20	0.96	2.19	145.53	-0.0426	-23.5027	0.4016
792	SLE RA 21	0.94	2.12	145.5	-0.0407	-23.4985	0.3908
792	SLE FR 1	0.82	1.87	128.69	-0.0352	-20.8148	0.3422
792	SLE FR 2	0.81	1.85	128.68	-0.0346	-20.8134	0.3386
792	SLE FR 3	0.82	1.88	129.13	-0.0361	-20.8855	0.3434
792	SLE FR 4	0.85	1.94	133.4	-0.0361	-21.5667	0.3555
792	SLE FR 5	0.86	1.97	133.85	-0.0377	-21.6388	0.3603
792	SLE FR 6	0.88	2.02	136.55	-0.0378	-22.0703	0.3704
792	SLE QP 1	0.82	1.87	128.69	-0.0352	-20.8148	0.3422
792	SLE QP 2	0.86	1.96	133.41	-0.0367	-21.5681	0.3591
792	SLD 1	14.36	5.14	142.69	0.0793	-23.1203	0.8755
792	SLD 2	13.8	4.63	142.29	0.0783	-23.0535	0.815
792	SLD 3	14.15	0.99	142.11	0.1759	-23.2007	0.1735
792	SLD 4	13.58	0.48	141.71	0.1749	-23.1339	0.1129
792	SLD 5	5.34	9.29	137.15	-0.1483	-21.924	1.5898
792	SLD 6	4.97	8.96	136.88	-0.1489	-21.8796	1.5496
792	SLD 7	4.62	-4.53	135.21	0.1737	-22.192	-0.7504
792	SLD 8	4.24	-4.87	134.94	0.1731	-22.1476	-0.7905
792	SLD 9	-2.53	8.79	131.88	-0.2466	-20.9886	1.5087
792	SLD 10	-2.91	8.45	131.61	-0.2472	-20.9442	1.4685
792	SLD 11	-3.26	-5.04	129.93	0.0754	-21.2566	-0.8314
792	SLD 12	-3.63	-5.38	129.67	0.0748	-21.2122	-0.8716
792	SLD 13	-11.87	3.44	125.11	-0.2484	-20.0024	0.6053
792	SLD 14	-12.44	2.93	124.71	-0.2494	-19.9355	0.5447
792	SLD 15	-12.09	-0.71	124.53	-0.1518	-20.0828	-0.0968
792	SLD 16	-12.65	-1.22	124.13	-0.1528	-20.0159	-0.1574
792	SLV 1	32.44	9.24	155.23	0.2385	-25.2201	1.5408
792	SLV 2	31.13	8.05	154.3	0.2361	-25.0644	1.3998
792	SLV 3	31.94	-0.15	153.9	0.4571	-25.4049	-0.0483
792	SLV 4	30.62	-1.34	152.97	0.4547	-25.2492	-0.1893
792	SLV 5	11.32	18.59	142.14	-0.2853	-22.4108	3.1486
792	SLV 6	10.47	17.81	141.54	-0.2868	-22.3094	3.0568
792	SLV 7	9.65	-12.7	137.7	0.4433	-23.0268	-2.1486
792	SLV 8	8.79	-13.47	137.09	0.4418	-22.9254	-2.2405
792	SLV 9	-7.08	17.39	129.73	-0.5153	-20.2109	2.9586
792	SLV 10	-7.94	16.62	129.12	-0.5168	-20.1095	2.8668
792	SLV 11	-8.76	-13.89	125.28	0.2133	-20.8269	-2.3386
792	SLV 12	-9.61	-14.67	124.68	0.2118	-20.7255	-2.4305
792	SLV 13	-28.91	5.26	113.85	-0.5282	-17.887	0.9075
792	SLV 14	-30.22	4.07	112.92	-0.5306	-17.7314	0.7665
792	SLV 15	-29.42	-4.13	112.52	-0.3096	-18.0718	-0.6817
792	SLV 16	-30.73	-5.32	111.59	-0.312	-17.9162	-0.8227
792	CRTFP Ux+	0	0	0	0	0	0
792	CRTFP Ux-	0	0	0	0	0	0
792	CRTFP Uy+	0	0	0	0	0	0
792	CRTFP Uy-	0	0	0	0	0	0
795	SLU 1	0.61	1.37	81.88	0.2672	12.688	-0.1842
795	SLU 2	0.58	1.26	81.84	0.2721	12.6811	-0.1662
795	SLU 3	0.63	1.43	83.68	0.2731	12.9703	-0.1934
795	SLU 4	0.61	1.37	83.66	0.2761	12.9662	-0.1826
795	SLU 5	0.6	1.28	82.91	0.2739	12.8485	-0.1691
795	SLU 6	0.65	1.45	84.75	0.2749	13.1377	-0.1963
795	SLU 7	0.63	1.39	84.73	0.2779	13.1336	-0.1855
795	SLU 8	0.64	1.41	84.02	0.2708	13.0228	-0.19
795	SLU 9	0.63	1.34	84	0.2738	13.0186	-0.1792
795	SLU 10	0.68	1.51	92.46	0.306	14.344	-0.2004
795	SLU 11	0.73	1.68	94.31	0.3069	14.6332	-0.2276
795	SLU 12	0.71	1.62	94.28	0.3099	14.6291	-0.2168
795	SLU 13	0.7	1.53	93.54	0.3078	14.5113	-0.2033
795	SLU 14	0.74	1.7	95.38	0.3088	14.8006	-0.2305
795	SLU 15	0.73	1.64	95.35	0.3117	14.7964	-0.2197
795	SLU 16	0.74	1.66	94.65	0.3047	14.6857	-0.2242
795	SLU 17	0.73	1.59	94.62	0.3076	14.6815	-0.2134
795	SLU 18	0.75	1.73	97.06	0.3155	15.0636	-0.2331
795	SLU 19	0.73	1.66	97.04	0.3185	15.0594	-0.2223
795	SLU 20	0.77	1.75	98.14	0.3174	15.231	-0.236
795	SLU 21	0.75	1.68	98.11	0.3203	15.2268	-0.2252

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
795	SLU 22	0.7	1.77	91.99	0.3273	14.2692	-0.2432
795	SLU 23	0.67	1.66	91.94	0.3322	14.2623	-0.2251
795	SLU 24	0.72	1.83	93.79	0.3332	14.5516	-0.2524
795	SLU 25	0.7	1.77	93.76	0.3362	14.5474	-0.2415
795	SLU 26	0.69	1.68	93.01	0.334	14.4297	-0.228
795	SLU 27	0.74	1.85	94.86	0.335	14.7189	-0.2552
795	SLU 28	0.72	1.79	94.83	0.338	14.7148	-0.2444
795	SLU 29	0.74	1.81	94.13	0.3309	14.604	-0.2489
795	SLU 30	0.72	1.74	94.1	0.3339	14.5998	-0.2381
795	SLU 31	0.77	1.91	102.57	0.366	15.9252	-0.2593
795	SLU 32	0.82	2.09	104.41	0.367	16.2144	-0.2866
795	SLU 33	0.8	2.02	104.39	0.37	16.2103	-0.2757
795	SLU 34	0.79	1.93	103.64	0.3679	16.0926	-0.2622
795	SLU 35	0.84	2.11	105.48	0.3689	16.3818	-0.2895
795	SLU 36	0.82	2.04	105.46	0.3718	16.3777	-0.2786
795	SLU 37	0.83	2.06	104.75	0.3648	16.2669	-0.2831
795	SLU 38	0.82	2	104.73	0.3677	16.2627	-0.2723
795	SLU 39	0.84	2.13	107.17	0.3756	16.6448	-0.292
795	SLU 40	0.83	2.06	107.14	0.3786	16.6406	-0.2812
795	SLU 41	0.86	2.15	108.24	0.3774	16.8122	-0.2949
795	SLU 42	0.84	2.08	108.21	0.3804	16.808	-0.2841
795	SLU 43	0.76	1.64	102.98	0.3267	15.9523	-0.2193
795	SLU 44	0.73	1.53	102.94	0.3317	15.9453	-0.2013
795	SLU 45	0.78	1.7	104.78	0.3327	16.2346	-0.2285
795	SLU 46	0.76	1.64	104.76	0.3356	16.2304	-0.2177
795	SLU 47	0.75	1.55	104.01	0.3335	16.1127	-0.2041
795	SLU 48	0.8	1.73	105.85	0.3345	16.402	-0.2314
795	SLU 49	0.78	1.66	105.83	0.3374	16.3978	-0.2205
795	SLU 50	0.8	1.68	105.12	0.3304	16.2871	-0.225
795	SLU 51	0.78	1.62	105.1	0.3334	16.2829	-0.2142
795	SLU 52	0.83	1.78	113.57	0.3655	17.6082	-0.2355
795	SLU 53	0.88	1.96	115.41	0.3665	17.8975	-0.2627
795	SLU 54	0.86	1.89	115.38	0.3695	17.8933	-0.2519
795	SLU 55	0.85	1.8	114.64	0.3673	17.7756	-0.2383
795	SLU 56	0.9	1.98	116.48	0.3683	18.0649	-0.2656
795	SLU 57	0.88	1.91	116.45	0.3713	18.0607	-0.2548
795	SLU 58	0.89	1.93	115.75	0.3642	17.95	-0.2593
795	SLU 59	0.88	1.87	115.72	0.3672	17.9458	-0.2484
795	SLU 60	0.9	2	118.17	0.3751	18.3279	-0.2682
795	SLU 61	0.88	1.93	118.14	0.378	18.3237	-0.2573
795	SLU 62	0.92	2.02	119.24	0.3769	18.4953	-0.271
795	SLU 63	0.9	1.95	119.21	0.3799	18.4911	-0.2602
795	SLU 64	0.85	2.04	113.09	0.3868	17.5335	-0.2782
795	SLU 65	0.82	1.93	113.04	0.3918	17.5266	-0.2602
795	SLU 66	0.87	2.11	114.89	0.3927	17.8158	-0.2874
795	SLU 67	0.85	2.04	114.86	0.3957	17.8117	-0.2766
795	SLU 68	0.84	1.95	114.11	0.3936	17.6939	-0.2631
795	SLU 69	0.89	2.13	115.96	0.3946	17.9832	-0.2903
795	SLU 70	0.87	2.06	115.93	0.3975	17.979	-0.2795
795	SLU 71	0.89	2.08	115.23	0.3905	17.8683	-0.284
795	SLU 72	0.87	2.02	115.2	0.3934	17.8641	-0.2732
795	SLU 73	0.92	2.18	123.67	0.4256	19.1894	-0.2944
795	SLU 74	0.97	2.36	125.51	0.4266	19.4787	-0.3216
795	SLU 75	0.95	2.29	125.49	0.4295	19.4746	-0.3108
795	SLU 76	0.94	2.2	124.74	0.4274	19.3568	-0.2973
795	SLU 77	0.99	2.38	126.58	0.4284	19.6461	-0.3245
795	SLU 78	0.97	2.31	126.56	0.4314	19.6419	-0.3137
795	SLU 79	0.99	2.34	125.86	0.4243	19.5312	-0.3182
795	SLU 80	0.97	2.27	125.83	0.4273	19.527	-0.3074
795	SLU 81	0.99	2.4	128.27	0.4352	19.9091	-0.3271
795	SLU 82	0.98	2.34	128.24	0.4381	19.9049	-0.3163
795	SLU 83	1.01	2.42	129.34	0.437	20.0765	-0.33
795	SLU 84	0.99	2.36	129.31	0.44	20.0723	-0.3191
795	SLE RA 1	0.63	1.48	84.77	0.2844	13.1398	-0.2011
795	SLE RA 2	0.62	1.41	84.74	0.2876	13.1352	-0.189
795	SLE RA 3	0.65	1.53	85.97	0.2883	13.328	-0.2072
795	SLE RA 4	0.64	1.48	85.95	0.2903	13.3252	-0.2
795	SLE RA 5	0.63	1.42	85.45	0.2889	13.2468	-0.191
795	SLE RA 6	0.66	1.54	86.68	0.2895	13.4396	-0.2091
795	SLE RA 7	0.65	1.49	86.66	0.2915	13.4368	-0.2019
795	SLE RA 8	0.66	1.51	86.2	0.2868	13.363	-0.2049
795	SLE RA 9	0.65	1.47	86.18	0.2888	13.3602	-0.1977
795	SLE RA 10	0.68	1.58	91.82	0.3102	14.2438	-0.2118
795	SLE RA 11	0.71	1.69	93.05	0.3109	14.4366	-0.23
795	SLE RA 12	0.7	1.65	93.04	0.3128	14.4338	-0.2228
795	SLE RA 13	0.69	1.59	92.54	0.3114	14.3553	-0.2138
795	SLE RA 14	0.73	1.71	93.77	0.3121	14.5482	-0.2319
795	SLE RA 15	0.71	1.66	93.75	0.3141	14.5454	-0.2247
795	SLE RA 16	0.72	1.68	93.28	0.3094	14.4716	-0.2277
795	SLE RA 17	0.71	1.63	93.26	0.3113	14.4688	-0.2205
795	SLE RA 18	0.73	1.72	94.89	0.3166	14.7235	-0.2337
795	SLE RA 19	0.72	1.68	94.87	0.3186	14.7207	-0.2264
795	SLE RA 20	0.74	1.74	95.6	0.3178	14.8351	-0.2356
795	SLE RA 21	0.73	1.69	95.59	0.3198	14.8323	-0.2283
795	SLE FR 1	0.63	1.48	84.77	0.2844	13.1398	-0.2011
795	SLE FR 2	0.63	1.47	84.76	0.285	13.1389	-0.1987
795	SLE FR 3	0.64	1.49	85.05	0.2848	13.1844	-0.2018
795	SLE FR 4	0.66	1.54	87.8	0.2947	13.614	-0.2084
795	SLE FR 5	0.67	1.56	88.09	0.2945	13.6596	-0.2116
795	SLE FR 6	0.68	1.6	89.83	0.3005	13.9317	-0.2174

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
795	SLE QP 1	0.63	1.48	84.77	0.2844	13.1398	-0.2011
795	SLE QP 2	0.66	1.55	87.81	0.294	13.6149	-0.2108
795	SLD 1	10.58	3.61	94.96	0.2973	14.6742	-0.5489
795	SLD 2	10.17	3.37	94.7	0.2921	14.6326	-0.4969
795	SLD 3	10.42	0.72	94.61	0.4051	14.6196	-0.1001
795	SLD 4	10.01	0.48	94.35	0.3999	14.5781	-0.0481
795	SLD 5	3.96	6.6	90.53	0.1324	14.0229	-1.0024
795	SLD 6	3.68	6.44	90.35	0.129	13.9954	-0.9679
795	SLD 7	3.42	-3.03	89.37	0.4918	13.8412	0.4936
795	SLD 8	3.15	-3.19	89.2	0.4884	13.8136	0.5281
795	SLD 9	-1.82	6.3	86.42	0.0997	13.4162	-0.9498
795	SLD 10	-2.09	6.14	86.24	0.0962	13.3886	-0.9153
795	SLD 11	-2.36	-3.33	85.26	0.4591	13.2345	0.5462
795	SLD 12	-2.63	-3.49	85.09	0.4556	13.2069	0.5807
795	SLD 13	-8.68	2.63	81.26	0.1881	12.6517	-0.3736
795	SLD 14	-9.1	2.39	81	0.183	12.6102	-0.3216
795	SLD 15	-8.84	-0.26	80.91	0.296	12.5972	0.0752
795	SLD 16	-9.26	-0.5	80.65	0.2908	12.5557	0.1272
795	SLV 1	23.85	6.25	104.6	0.3058	16.1034	-0.9847
795	SLV 2	22.89	5.69	104	0.2937	16.0066	-0.8635
795	SLV 3	23.48	-0.29	103.81	0.5501	15.9783	0.0312
795	SLV 4	22.52	-0.85	103.2	0.538	15.8816	0.1523
795	SLV 5	8.35	12.98	94.16	-0.0709	14.5681	-2.005
795	SLV 6	7.73	12.61	93.76	-0.0788	14.5051	-1.926
795	SLV 7	7.11	-8.82	91.51	0.7435	14.1513	1.3811
795	SLV 8	6.49	-9.19	91.11	0.7356	14.0883	1.4601
795	SLV 9	-5.16	12.3	84.5	-0.1476	13.1416	-1.8818
795	SLV 10	-5.79	11.93	84.1	-0.1555	13.0785	-1.8028
795	SLV 11	-6.4	-9.51	81.85	0.6668	12.7248	1.5044
795	SLV 12	-7.03	-9.87	81.45	0.6589	12.6617	1.5833
795	SLV 13	-21.2	3.96	72.41	0.0501	11.3482	-0.574
795	SLV 14	-22.15	3.4	71.8	0.038	11.2515	-0.4528
795	SLV 15	-21.57	-2.58	71.62	0.2944	11.2232	0.4419
795	SLV 16	-22.53	-3.14	71.01	0.2823	11.1264	0.563
795	CRTFP Ux+	0	0	0	0	0	0
795	CRTFP Ux-	0	0	0	0	0	0
795	CRTFP Uy+	0	0	0	0	0	0
795	CRTFP Uy-	0	0	0	0	0	0
796	SLU 1	0.37	0.87	44.87	0.1805	0.0545	0.0115
796	SLU 2	0.36	0.81	44.84	0.1835	0.0545	0.012
796	SLU 3	0.38	0.91	45.83	0.1847	0.0561	0.0117
796	SLU 4	0.37	0.88	45.82	0.1866	0.0561	0.012
796	SLU 5	0.37	0.83	45.42	0.1851	0.0554	0.0122
796	SLU 6	0.4	0.92	46.41	0.1863	0.057	0.0119
796	SLU 7	0.39	0.89	46.39	0.1881	0.057	0.0122
796	SLU 8	0.39	0.9	46.02	0.1837	0.0563	0.0118
796	SLU 9	0.38	0.86	46.01	0.1855	0.0563	0.0121
796	SLU 10	0.42	0.97	50.56	0.2062	0.0637	0.0137
796	SLU 11	0.44	1.07	51.55	0.2074	0.0653	0.0134
796	SLU 12	0.44	1.03	51.53	0.2092	0.0653	0.0137
796	SLU 13	0.43	0.98	51.14	0.2078	0.0645	0.0138
796	SLU 14	0.46	1.08	52.12	0.2089	0.0662	0.0135
796	SLU 15	0.45	1.05	52.11	0.2108	0.0662	0.0138
796	SLU 16	0.45	1.06	51.74	0.2063	0.0654	0.0135
796	SLU 17	0.45	1.02	51.72	0.2081	0.0654	0.0138
796	SLU 18	0.46	1.1	53.03	0.2128	0.0676	0.0138
796	SLU 19	0.45	1.06	53.02	0.2146	0.0676	0.0141
796	SLU 20	0.47	1.11	53.61	0.2144	0.0685	0.014
796	SLU 21	0.46	1.08	53.6	0.2162	0.0685	0.0143
796	SLU 22	0.43	1.11	50.3	0.2201	0.0632	0.0123
796	SLU 23	0.41	1.05	50.28	0.2232	0.0632	0.0128
796	SLU 24	0.44	1.15	51.27	0.2244	0.0648	0.0125
796	SLU 25	0.43	1.11	51.25	0.2262	0.0648	0.0129
796	SLU 26	0.42	1.06	50.85	0.2248	0.064	0.013
796	SLU 27	0.45	1.16	51.84	0.2259	0.0657	0.0127
796	SLU 28	0.44	1.13	51.83	0.2278	0.0657	0.013
796	SLU 29	0.45	1.14	51.46	0.2233	0.0649	0.0126
796	SLU 30	0.44	1.1	51.44	0.2251	0.0649	0.0129
796	SLU 31	0.47	1.21	55.99	0.2458	0.0723	0.0145
796	SLU 32	0.5	1.31	56.98	0.247	0.074	0.0142
796	SLU 33	0.49	1.27	56.97	0.2488	0.074	0.0145
796	SLU 34	0.48	1.22	56.57	0.2474	0.0732	0.0146
796	SLU 35	0.51	1.32	57.56	0.2486	0.0749	0.0143
796	SLU 36	0.5	1.28	57.54	0.2504	0.0749	0.0147
796	SLU 37	0.51	1.3	57.17	0.2459	0.0741	0.0143
796	SLU 38	0.5	1.26	57.16	0.2478	0.0741	0.0146
796	SLU 39	0.52	1.34	58.47	0.2524	0.0763	0.0146
796	SLU 40	0.51	1.3	58.45	0.2543	0.0763	0.015
796	SLU 41	0.53	1.35	59.04	0.254	0.0772	0.0148
796	SLU 42	0.52	1.31	59.03	0.2559	0.0772	0.0151
796	SLU 43	0.47	1.05	56.47	0.2211	0.0679	0.0147
796	SLU 44	0.45	0.99	56.44	0.2241	0.0679	0.0152
796	SLU 45	0.48	1.09	57.43	0.2253	0.0695	0.0149
796	SLU 46	0.47	1.06	57.42	0.2271	0.0695	0.0152
796	SLU 47	0.46	1.01	57.02	0.2257	0.0687	0.0153
796	SLU 48	0.49	1.1	58.01	0.2269	0.0704	0.0151
796	SLU 49	0.48	1.07	57.99	0.2287	0.0704	0.0154
796	SLU 50	0.49	1.08	57.62	0.2242	0.0696	0.015
796	SLU 51	0.48	1.04	57.61	0.2261	0.0696	0.0153
796	SLU 52	0.51	1.15	62.16	0.2467	0.077	0.0168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
796	SLU 53	0.54	1.25	63.15	0.2479	0.0787	0.0165
796	SLU 54	0.53	1.21	63.13	0.2497	0.0787	0.0168
796	SLU 55	0.52	1.16	62.73	0.2483	0.0779	0.017
796	SLU 56	0.55	1.26	63.72	0.2495	0.0796	0.0167
796	SLU 57	0.54	1.23	63.71	0.2513	0.0796	0.017
796	SLU 58	0.55	1.24	63.34	0.2469	0.0788	0.0166
796	SLU 59	0.54	1.2	63.32	0.2487	0.0788	0.0169
796	SLU 60	0.55	1.28	64.63	0.2534	0.081	0.017
796	SLU 61	0.54	1.24	64.62	0.2552	0.081	0.0173
796	SLU 62	0.56	1.29	65.21	0.255	0.0819	0.0172
796	SLU 63	0.55	1.26	65.19	0.2568	0.0819	0.0175
796	SLU 64	0.52	1.29	61.9	0.2607	0.0766	0.0155
796	SLU 65	0.51	1.23	61.88	0.2637	0.0765	0.016
796	SLU 66	0.53	1.33	62.86	0.2649	0.0782	0.0157
796	SLU 67	0.52	1.29	62.85	0.2667	0.0782	0.016
796	SLU 68	0.52	1.24	62.45	0.2653	0.0774	0.0162
796	SLU 69	0.54	1.34	63.44	0.2665	0.0791	0.0159
796	SLU 70	0.53	1.31	63.43	0.2683	0.0791	0.0162
796	SLU 71	0.54	1.32	63.05	0.2639	0.0783	0.0158
796	SLU 72	0.53	1.28	63.04	0.2657	0.0783	0.0161
796	SLU 73	0.57	1.39	67.59	0.2864	0.0857	0.0176
796	SLU 74	0.59	1.49	68.58	0.2875	0.0874	0.0173
796	SLU 75	0.58	1.45	68.56	0.2894	0.0874	0.0177
796	SLU 76	0.58	1.4	68.17	0.2879	0.0866	0.0178
796	SLU 77	0.6	1.5	69.16	0.2891	0.0883	0.0175
796	SLU 78	0.6	1.46	69.14	0.291	0.0882	0.0178
796	SLU 79	0.6	1.48	68.77	0.2865	0.0875	0.0174
796	SLU 80	0.59	1.44	68.75	0.2883	0.0875	0.0177
796	SLU 81	0.61	1.52	70.06	0.293	0.0897	0.0178
796	SLU 82	0.6	1.48	70.05	0.2948	0.0896	0.0181
796	SLU 83	0.62	1.53	70.64	0.2946	0.0905	0.018
796	SLU 84	0.61	1.49	70.63	0.2964	0.0905	0.0183
796	SLE RA 1	0.39	0.94	46.42	0.1918	0.057	0.0117
796	SLE RA 2	0.38	0.9	46.4	0.1938	0.057	0.0121
796	SLE RA 3	0.4	0.97	47.06	0.1946	0.0581	0.0119
796	SLE RA 4	0.39	0.94	47.05	0.1959	0.0581	0.0121
796	SLE RA 5	0.39	0.91	46.79	0.1949	0.0576	0.0122
796	SLE RA 6	0.4	0.98	47.45	0.1957	0.0587	0.012
796	SLE RA 7	0.4	0.95	47.44	0.1969	0.0587	0.0122
796	SLE RA 8	0.4	0.96	47.19	0.1939	0.0582	0.0119
796	SLE RA 9	0.4	0.93	47.18	0.1951	0.0582	0.0122
796	SLE RA 10	0.42	1.01	50.21	0.2089	0.0631	0.0132
796	SLE RA 11	0.44	1.07	50.87	0.2097	0.0642	0.013
796	SLE RA 12	0.43	1.05	50.86	0.2109	0.0642	0.0132
796	SLE RA 13	0.43	1.01	50.6	0.21	0.0637	0.0133
796	SLE RA 14	0.44	1.08	51.26	0.2108	0.0648	0.0131
796	SLE RA 15	0.44	1.06	51.25	0.212	0.0648	0.0133
796	SLE RA 16	0.44	1.06	51	0.209	0.0643	0.013
796	SLE RA 17	0.44	1.04	50.99	0.2102	0.0643	0.0132
796	SLE RA 18	0.45	1.09	51.86	0.2134	0.0657	0.0133
796	SLE RA 19	0.44	1.07	51.85	0.2146	0.0657	0.0135
796	SLE RA 20	0.45	1.1	52.25	0.2144	0.0663	0.0134
796	SLE RA 21	0.45	1.08	52.24	0.2156	0.0663	0.0136
796	SLE FR 1	0.39	0.94	46.42	0.1918	0.057	0.0117
796	SLE FR 2	0.39	0.93	46.42	0.1922	0.057	0.0118
796	SLE FR 3	0.39	0.94	46.58	0.1922	0.0572	0.0118
796	SLE FR 4	0.4	0.98	48.05	0.1987	0.0596	0.0123
796	SLE FR 5	0.41	0.99	48.21	0.1987	0.0598	0.0122
796	SLE FR 6	0.42	1.02	49.14	0.2026	0.0613	0.0125
796	SLE QP 1	0.39	0.94	46.42	0.1918	0.057	0.0117
796	SLE QP 2	0.41	0.99	48.05	0.1983	0.0596	0.0122
796	SLD 1	6.22	2.1	52.06	0.1756	0.0725	0.0014
796	SLD 2	5.98	2	51.93	0.1717	0.0717	0.007
796	SLD 3	6.12	0.46	51.87	0.2434	0.0729	0.0079
796	SLD 4	5.88	0.37	51.75	0.2395	0.0721	0.0135
796	SLD 5	2.34	3.81	49.56	0.0893	0.063	-0.0019
796	SLD 6	2.18	3.75	49.48	0.0867	0.0625	0.0018
796	SLD 7	2.02	-1.63	48.94	0.3154	0.0644	0.0197
796	SLD 8	1.86	-1.69	48.86	0.3128	0.0638	0.0234
796	SLD 9	-1.05	3.66	47.25	0.0837	0.0554	0.001
796	SLD 10	-1.21	3.6	47.17	0.0811	0.0548	0.0047
796	SLD 11	-1.37	-1.78	46.63	0.3099	0.0567	0.0226
796	SLD 12	-1.53	-1.84	46.55	0.3073	0.0562	0.0263
796	SLD 13	-5.07	1.6	44.36	0.157	0.0471	0.0109
796	SLD 14	-5.31	1.51	44.23	0.1532	0.0463	0.0165
796	SLD 15	-5.16	-0.03	44.17	0.2249	0.0475	0.0174
796	SLD 16	-5.4	-0.12	44.05	0.221	0.0467	0.023
796	SLV 1	13.99	3.52	57.46	0.1481	0.0898	-0.0128
796	SLV 2	13.43	3.3	57.16	0.1391	0.088	0.0002
796	SLV 3	13.77	-0.17	57.03	0.3019	0.0908	0.0018
796	SLV 4	13.21	-0.4	56.73	0.2929	0.089	0.0149
796	SLV 5	4.91	7.39	51.58	-0.0485	0.0675	-0.0198
796	SLV 6	4.55	7.25	51.38	-0.0543	0.0663	-0.0113
796	SLV 7	4.18	-4.93	50.15	0.4642	0.0708	0.029
796	SLV 8	3.81	-5.07	49.96	0.4583	0.0696	0.0375
796	SLV 9	-3	7.04	46.15	-0.0618	0.0496	-0.0131
796	SLV 10	-3.37	6.9	45.96	-0.0677	0.0484	-0.0046
796	SLV 11	-3.74	-5.27	44.72	0.4509	0.0529	0.0357
796	SLV 12	-4.1	-5.42	44.53	0.445	0.0517	0.0442
796	SLV 13	-12.4	2.37	39.37	0.1036	0.0302	0.0095

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
796	SLV 14	-12.96	2.15	39.08	0.0946	0.0284	0.0226
796	SLV 15	-12.62	-1.33	38.95	0.2574	0.0312	0.0241
796	SLV 16	-13.18	-1.55	38.65	0.2484	0.0294	0.0372
796	CRTFP Ux+	0	0	0	0	0	0
796	CRTFP Ux-	0	0	0	0	0	0
796	CRTFP Uy+	0	0	0	0	0	0
796	CRTFP Uy-	0	0	0	0	0	0
797	SLU 1	0.39	0.94	43.71	0.1851	0.0262	0.0135
797	SLU 2	0.37	0.88	43.68	0.1881	0.0262	0.0139
797	SLU 3	0.4	0.98	44.64	0.1895	0.0271	0.0138
797	SLU 4	0.39	0.95	44.62	0.1913	0.027	0.0141
797	SLU 5	0.38	0.9	44.24	0.1898	0.0266	0.0142
797	SLU 6	0.41	1	45.19	0.1912	0.0275	0.014
797	SLU 7	0.4	0.96	45.18	0.193	0.0274	0.0143
797	SLU 8	0.41	0.97	44.82	0.1885	0.027	0.0139
797	SLU 9	0.4	0.93	44.81	0.1904	0.027	0.0142
797	SLU 10	0.43	1.05	49.2	0.2112	0.0307	0.0157
797	SLU 11	0.46	1.15	50.15	0.2126	0.0315	0.0156
797	SLU 12	0.45	1.11	50.14	0.2144	0.0315	0.0159
797	SLU 13	0.45	1.07	49.76	0.213	0.0311	0.016
797	SLU 14	0.47	1.16	50.71	0.2143	0.0319	0.0158
797	SLU 15	0.46	1.13	50.7	0.2162	0.0319	0.0161
797	SLU 16	0.47	1.14	50.34	0.2117	0.0315	0.0157
797	SLU 17	0.46	1.1	50.33	0.2135	0.0315	0.016
797	SLU 18	0.48	1.18	51.59	0.2181	0.0326	0.0161
797	SLU 19	0.47	1.15	51.58	0.2199	0.0326	0.0163
797	SLU 20	0.49	1.2	52.15	0.2198	0.033	0.0163
797	SLU 21	0.48	1.16	52.13	0.2217	0.033	0.0165
797	SLU 22	0.45	1.19	48.96	0.2254	0.0304	0.0147
797	SLU 23	0.43	1.13	48.93	0.2284	0.0304	0.0151
797	SLU 24	0.46	1.23	49.88	0.2298	0.0312	0.015
797	SLU 25	0.45	1.19	49.87	0.2316	0.0312	0.0152
797	SLU 26	0.44	1.14	49.49	0.2301	0.0308	0.0153
797	SLU 27	0.47	1.24	50.44	0.2315	0.0316	0.0152
797	SLU 28	0.46	1.2	50.43	0.2334	0.0316	0.0155
797	SLU 29	0.47	1.21	50.07	0.2289	0.0312	0.0151
797	SLU 30	0.46	1.18	50.06	0.2307	0.0312	0.0154
797	SLU 31	0.49	1.3	54.45	0.2515	0.0349	0.0169
797	SLU 32	0.52	1.39	55.4	0.2529	0.0357	0.0168
797	SLU 33	0.51	1.36	55.39	0.2547	0.0357	0.017
797	SLU 34	0.51	1.31	55.01	0.2533	0.0353	0.0171
797	SLU 35	0.53	1.41	55.96	0.2547	0.0361	0.017
797	SLU 36	0.52	1.37	55.94	0.2565	0.0361	0.0172
797	SLU 37	0.53	1.38	55.59	0.252	0.0357	0.0169
797	SLU 38	0.52	1.35	55.57	0.2538	0.0357	0.0171
797	SLU 39	0.54	1.43	56.84	0.2584	0.0368	0.0172
797	SLU 40	0.53	1.39	56.82	0.2602	0.0368	0.0175
797	SLU 41	0.55	1.44	57.4	0.2601	0.0372	0.0174
797	SLU 42	0.54	1.4	57.38	0.262	0.0372	0.0177
797	SLU 43	0.48	1.14	55.02	0.2268	0.0327	0.0172
797	SLU 44	0.47	1.08	55	0.2298	0.0326	0.0176
797	SLU 45	0.5	1.18	55.95	0.2312	0.0335	0.0175
797	SLU 46	0.49	1.15	55.93	0.233	0.0335	0.0177
797	SLU 47	0.48	1.1	55.55	0.2315	0.0331	0.0178
797	SLU 48	0.51	1.19	56.51	0.2329	0.0339	0.0177
797	SLU 49	0.5	1.16	56.49	0.2347	0.0339	0.018
797	SLU 50	0.51	1.17	56.14	0.2302	0.0335	0.0176
797	SLU 51	0.5	1.13	56.12	0.2321	0.0335	0.0179
797	SLU 52	0.53	1.25	60.51	0.2529	0.0371	0.0194
797	SLU 53	0.56	1.35	61.47	0.2543	0.038	0.0193
797	SLU 54	0.55	1.31	61.45	0.2561	0.038	0.0195
797	SLU 55	0.54	1.26	61.07	0.2547	0.0375	0.0196
797	SLU 56	0.57	1.36	62.03	0.256	0.0384	0.0195
797	SLU 57	0.56	1.33	62.01	0.2579	0.0384	0.0197
797	SLU 58	0.57	1.34	61.66	0.2534	0.038	0.0194
797	SLU 59	0.56	1.3	61.64	0.2552	0.0379	0.0196
797	SLU 60	0.57	1.38	62.9	0.2598	0.0391	0.0197
797	SLU 61	0.56	1.35	62.89	0.2616	0.0391	0.02
797	SLU 62	0.59	1.39	63.46	0.2615	0.0395	0.0199
797	SLU 63	0.58	1.36	63.45	0.2634	0.0395	0.0202
797	SLU 64	0.54	1.38	60.27	0.2671	0.0369	0.0183
797	SLU 65	0.53	1.33	60.24	0.2701	0.0368	0.0188
797	SLU 66	0.56	1.42	61.2	0.2715	0.0377	0.0186
797	SLU 67	0.55	1.39	61.18	0.2733	0.0377	0.0189
797	SLU 68	0.54	1.34	60.8	0.2718	0.0372	0.019
797	SLU 69	0.57	1.44	61.75	0.2732	0.0381	0.0188
797	SLU 70	0.56	1.4	61.74	0.275	0.0381	0.0191
797	SLU 71	0.57	1.41	61.38	0.2705	0.0377	0.0187
797	SLU 72	0.56	1.38	61.37	0.2724	0.0377	0.019
797	SLU 73	0.59	1.49	65.76	0.2932	0.0413	0.0206
797	SLU 74	0.62	1.59	66.71	0.2946	0.0422	0.0204
797	SLU 75	0.61	1.56	66.7	0.2964	0.0422	0.0207
797	SLU 76	0.6	1.51	66.32	0.295	0.0417	0.0208
797	SLU 77	0.63	1.61	67.27	0.2964	0.0426	0.0206
797	SLU 78	0.62	1.57	67.26	0.2982	0.0426	0.0209
797	SLU 79	0.63	1.58	66.9	0.2937	0.0421	0.0205
797	SLU 80	0.62	1.55	66.89	0.2955	0.0421	0.0208
797	SLU 81	0.63	1.62	68.15	0.3001	0.0433	0.0209
797	SLU 82	0.62	1.59	68.14	0.3019	0.0433	0.0211
797	SLU 83	0.64	1.64	68.71	0.3018	0.0437	0.0211

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
797	SLU 84	0.64	1.6	68.69	0.3037	0.0437	0.0214
797	SLE RA 1	0.41	1.01	45.21	0.1966	0.0274	0.0138
797	SLE RA 2	0.39	0.97	45.19	0.1986	0.0274	0.0141
797	SLE RA 3	0.41	1.04	45.83	0.1995	0.028	0.014
797	SLE RA 4	0.41	1.01	45.82	0.2007	0.028	0.0142
797	SLE RA 5	0.4	0.98	45.56	0.1998	0.0277	0.0143
797	SLE RA 6	0.42	1.05	46.2	0.2007	0.0282	0.0142
797	SLE RA 7	0.41	1.02	46.19	0.2019	0.0282	0.0144
797	SLE RA 8	0.42	1.03	45.95	0.1989	0.028	0.0141
797	SLE RA 9	0.41	1.01	45.94	0.2001	0.028	0.0143
797	SLE RA 10	0.44	1.08	48.87	0.214	0.0304	0.0153
797	SLE RA 11	0.46	1.15	49.5	0.2149	0.031	0.0152
797	SLE RA 12	0.45	1.13	49.49	0.2162	0.031	0.0154
797	SLE RA 13	0.44	1.09	49.24	0.2152	0.0307	0.0155
797	SLE RA 14	0.46	1.16	49.88	0.2161	0.0312	0.0154
797	SLE RA 15	0.46	1.14	49.87	0.2173	0.0312	0.0156
797	SLE RA 16	0.46	1.14	49.63	0.2143	0.031	0.0153
797	SLE RA 17	0.46	1.12	49.62	0.2155	0.031	0.0155
797	SLE RA 18	0.47	1.17	50.46	0.2186	0.0317	0.0155
797	SLE RA 19	0.46	1.15	50.45	0.2198	0.0317	0.0157
797	SLE RA 20	0.47	1.18	50.83	0.2198	0.032	0.0157
797	SLE RA 21	0.47	1.16	50.82	0.221	0.032	0.0159
797	SLE FR 1	0.41	1.01	45.21	0.1966	0.0274	0.0138
797	SLE FR 2	0.4	1	45.2	0.197	0.0274	0.0139
797	SLE FR 3	0.41	1.02	45.36	0.197	0.0275	0.0139
797	SLE FR 4	0.42	1.05	46.78	0.2036	0.0287	0.0144
797	SLE FR 5	0.43	1.06	46.93	0.2036	0.0288	0.0144
797	SLE FR 6	0.44	1.09	47.83	0.2076	0.0296	0.0147
797	SLE QP 1	0.41	1.01	45.21	0.1966	0.0274	0.0138
797	SLE QP 2	0.42	1.06	46.78	0.2032	0.0287	0.0143
797	SLD 1	6.24	2.12	50.25	0.165	0.053	0.0054
797	SLD 2	6	2.05	50.14	0.1609	0.052	0.0103
797	SLD 3	6.15	0.52	50.06	0.2328	0.0534	0.0104
797	SLD 4	5.9	0.45	49.96	0.2287	0.0525	0.0154
797	SLD 5	2.36	3.82	48.12	0.0896	0.0355	0.0031
797	SLD 6	2.2	3.77	48.05	0.0869	0.0349	0.0064
797	SLD 7	2.04	-1.52	47.51	0.3157	0.0369	0.0199
797	SLD 8	1.88	-1.56	47.44	0.313	0.0363	0.0232
797	SLD 9	-1.03	3.68	46.13	0.0934	0.0211	0.0055
797	SLD 10	-1.19	3.64	46.06	0.0907	0.0205	0.0088
797	SLD 11	-1.35	-1.65	45.52	0.3195	0.0225	0.0223
797	SLD 12	-1.51	-1.7	45.45	0.3168	0.0219	0.0256
797	SLD 13	-5.06	1.67	43.61	0.1776	0.005	0.0133
797	SLD 14	-5.3	1.6	43.5	0.1735	0.004	0.0183
797	SLD 15	-5.15	0.07	43.42	0.2455	0.0054	0.0184
797	SLD 16	-5.39	0	43.32	0.2414	0.0044	0.0233
797	SLV 1	14.02	3.48	54.91	0.1153	0.0856	-0.0065
797	SLV 2	13.46	3.32	54.67	0.1058	0.0834	0.0051
797	SLV 3	13.8	-0.14	54.5	0.2691	0.0865	0.0048
797	SLV 4	13.24	-0.3	54.26	0.2596	0.0843	0.0165
797	SLV 5	4.94	7.31	49.9	-0.0548	0.0447	-0.0111
797	SLV 6	4.57	7.21	49.74	-0.061	0.0433	-0.0036
797	SLV 7	4.2	-4.77	48.51	0.4579	0.0479	0.0266
797	SLV 8	3.83	-4.87	48.35	0.4517	0.0465	0.0342
797	SLV 9	-2.99	6.99	45.21	-0.0453	0.0109	-0.0055
797	SLV 10	-3.35	6.89	45.06	-0.0515	0.0095	0.002
797	SLV 11	-3.73	-5.09	43.83	0.4673	0.0142	0.0323
797	SLV 12	-4.09	-5.19	43.67	0.4611	0.0127	0.0398
797	SLV 13	-12.4	2.42	39.31	0.1467	-0.0269	0.0122
797	SLV 14	-12.96	2.26	39.07	0.1372	-0.0291	0.0239
797	SLV 15	-12.62	-1.21	38.89	0.3005	-0.026	0.0236
797	SLV 16	-13.18	-1.36	38.66	0.291	-0.0282	0.0352
797	CRTFP Ux+	0	0	0	0	0	0
797	CRTFP Ux-	0	0	0	0	0	0
797	CRTFP Uy+	0	0	0	0	0	0
797	CRTFP Uy-	0	0	0	0	0	0
798	SLU 1	0.41	1.02	43.29	0.19	0.0036	0.0153
798	SLU 2	0.39	0.97	43.26	0.193	0.0036	0.0156
798	SLU 3	0.42	1.06	44.2	0.1946	0.0037	0.0156
798	SLU 4	0.41	1.03	44.19	0.1964	0.0037	0.0159
798	SLU 5	0.4	0.98	43.81	0.1949	0.0036	0.0159
798	SLU 6	0.43	1.08	44.75	0.1965	0.0037	0.0159
798	SLU 7	0.42	1.05	44.74	0.1983	0.0037	0.0161
798	SLU 8	0.43	1.05	44.39	0.1938	0.0036	0.0158
798	SLU 9	0.42	1.02	44.38	0.1956	0.0036	0.016
798	SLU 10	0.46	1.14	48.71	0.2167	0.0042	0.0176
798	SLU 11	0.48	1.24	49.65	0.2183	0.0044	0.0176
798	SLU 12	0.47	1.21	49.63	0.2201	0.0044	0.0178
798	SLU 13	0.47	1.16	49.26	0.2186	0.0042	0.0178
798	SLU 14	0.5	1.26	50.2	0.2202	0.0044	0.0179
798	SLU 15	0.49	1.22	50.18	0.222	0.0044	0.0181
798	SLU 16	0.49	1.23	49.84	0.2174	0.0043	0.0177
798	SLU 17	0.48	1.2	49.82	0.2193	0.0042	0.018
798	SLU 18	0.5	1.28	51.07	0.2238	0.0045	0.0181
798	SLU 19	0.49	1.24	51.05	0.2256	0.0045	0.0183
798	SLU 20	0.51	1.29	51.62	0.2257	0.0045	0.0183
798	SLU 21	0.5	1.26	51.6	0.2275	0.0045	0.0185
798	SLU 22	0.47	1.27	48.47	0.231	0.0041	0.0168
798	SLU 23	0.45	1.22	48.44	0.2341	0.0041	0.0171
798	SLU 24	0.48	1.31	49.38	0.2357	0.0043	0.0172

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
798	SLU 25	0.47	1.28	49.37	0.2375	0.0043	0.0174
798	SLU 26	0.46	1.23	48.99	0.236	0.0041	0.0174
798	SLU 27	0.49	1.33	49.93	0.2376	0.0043	0.0174
798	SLU 28	0.48	1.3	49.92	0.2394	0.0043	0.0176
798	SLU 29	0.49	1.3	49.57	0.2348	0.0042	0.0173
798	SLU 30	0.48	1.27	49.56	0.2367	0.0041	0.0175
798	SLU 31	0.52	1.39	53.89	0.2577	0.0048	0.0191
798	SLU 32	0.55	1.49	54.83	0.2593	0.0049	0.0191
798	SLU 33	0.54	1.46	54.81	0.2611	0.0049	0.0194
798	SLU 34	0.53	1.41	54.44	0.2596	0.0048	0.0194
798	SLU 35	0.56	1.51	55.38	0.2612	0.005	0.0194
798	SLU 36	0.55	1.47	55.36	0.263	0.0049	0.0196
798	SLU 37	0.56	1.48	55.02	0.2585	0.0048	0.0193
798	SLU 38	0.55	1.45	55	0.2603	0.0048	0.0195
798	SLU 39	0.56	1.53	56.25	0.2648	0.0051	0.0196
798	SLU 40	0.55	1.49	56.23	0.2666	0.0051	0.0198
798	SLU 41	0.57	1.54	56.8	0.2667	0.0051	0.0198
798	SLU 42	0.56	1.51	56.78	0.2686	0.0051	0.0201
798	SLU 43	0.51	1.24	54.5	0.2329	0.0045	0.0193
798	SLU 44	0.49	1.19	54.47	0.2359	0.0044	0.0197
798	SLU 45	0.52	1.28	55.41	0.2375	0.0046	0.0197
798	SLU 46	0.51	1.25	55.4	0.2393	0.0046	0.0199
798	SLU 47	0.5	1.2	55.02	0.2378	0.0045	0.0199
798	SLU 48	0.53	1.3	55.96	0.2394	0.0046	0.02
798	SLU 49	0.52	1.27	55.95	0.2412	0.0046	0.0202
798	SLU 50	0.53	1.27	55.6	0.2367	0.0045	0.0198
798	SLU 51	0.52	1.24	55.59	0.2385	0.0045	0.02
798	SLU 52	0.56	1.36	59.92	0.2596	0.0051	0.0217
798	SLU 53	0.58	1.46	60.86	0.2612	0.0053	0.0217
798	SLU 54	0.57	1.43	60.84	0.263	0.0053	0.0219
798	SLU 55	0.57	1.38	60.47	0.2615	0.0051	0.0219
798	SLU 56	0.6	1.48	61.41	0.2631	0.0053	0.0219
798	SLU 57	0.59	1.44	61.39	0.2649	0.0053	0.0221
798	SLU 58	0.6	1.45	61.05	0.2604	0.0051	0.0218
798	SLU 59	0.59	1.42	61.03	0.2622	0.0051	0.022
798	SLU 60	0.6	1.5	62.27	0.2667	0.0054	0.0221
798	SLU 61	0.59	1.46	62.26	0.2685	0.0054	0.0223
798	SLU 62	0.61	1.51	62.83	0.2686	0.0054	0.0224
798	SLU 63	0.6	1.48	62.81	0.2704	0.0054	0.0226
798	SLU 64	0.57	1.49	59.68	0.2739	0.005	0.0208
798	SLU 65	0.55	1.44	59.65	0.277	0.005	0.0212
798	SLU 66	0.58	1.53	60.59	0.2786	0.0052	0.0212
798	SLU 67	0.57	1.5	60.58	0.2804	0.0052	0.0214
798	SLU 68	0.56	1.45	60.2	0.2789	0.005	0.0215
798	SLU 69	0.59	1.55	61.14	0.2805	0.0052	0.0215
798	SLU 70	0.58	1.52	61.13	0.2823	0.0052	0.0217
798	SLU 71	0.59	1.52	60.78	0.2778	0.005	0.0213
798	SLU 72	0.58	1.49	60.77	0.2796	0.005	0.0216
798	SLU 73	0.62	1.62	65.1	0.3006	0.0057	0.0232
798	SLU 74	0.65	1.71	66.04	0.3022	0.0058	0.0232
798	SLU 75	0.64	1.68	66.02	0.304	0.0058	0.0234
798	SLU 76	0.63	1.63	65.65	0.3025	0.0057	0.0234
798	SLU 77	0.66	1.73	66.59	0.3041	0.0058	0.0234
798	SLU 78	0.65	1.69	66.57	0.3059	0.0058	0.0237
798	SLU 79	0.66	1.7	66.23	0.3014	0.0057	0.0233
798	SLU 80	0.65	1.67	66.21	0.3032	0.0057	0.0235
798	SLU 81	0.66	1.75	67.46	0.3077	0.006	0.0236
798	SLU 82	0.65	1.71	67.44	0.3096	0.006	0.0239
798	SLU 83	0.67	1.76	68.01	0.3097	0.006	0.0239
798	SLU 84	0.66	1.73	67.99	0.3115	0.006	0.0241
798	SLE RA 1	0.42	1.09	44.77	0.2017	0.0037	0.0157
798	SLE RA 2	0.41	1.06	44.75	0.2037	0.0037	0.0159
798	SLE RA 3	0.43	1.12	45.38	0.2048	0.0038	0.016
798	SLE RA 4	0.43	1.1	45.37	0.206	0.0038	0.0161
798	SLE RA 5	0.42	1.07	45.12	0.205	0.0037	0.0161
798	SLE RA 6	0.44	1.13	45.74	0.2061	0.0038	0.0161
798	SLE RA 7	0.43	1.11	45.73	0.2073	0.0038	0.0163
798	SLE RA 8	0.44	1.11	45.5	0.2042	0.0038	0.016
798	SLE RA 9	0.43	1.09	45.49	0.2055	0.0037	0.0162
798	SLE RA 10	0.46	1.17	48.38	0.2195	0.0042	0.0173
798	SLE RA 11	0.48	1.24	49.01	0.2206	0.0043	0.0173
798	SLE RA 12	0.47	1.22	49	0.2218	0.0043	0.0174
798	SLE RA 13	0.46	1.18	48.75	0.2208	0.0042	0.0174
798	SLE RA 14	0.48	1.25	49.37	0.2218	0.0043	0.0174
798	SLE RA 15	0.48	1.23	49.36	0.223	0.0043	0.0176
798	SLE RA 16	0.48	1.23	49.13	0.22	0.0042	0.0173
798	SLE RA 17	0.48	1.21	49.12	0.2212	0.0042	0.0175
798	SLE RA 18	0.49	1.26	49.95	0.2242	0.0044	0.0176
798	SLE RA 19	0.48	1.24	49.94	0.2254	0.0044	0.0177
798	SLE RA 20	0.49	1.27	50.32	0.2255	0.0044	0.0177
798	SLE RA 21	0.49	1.25	50.31	0.2267	0.0044	0.0179
798	SLE FR 1	0.42	1.09	44.77	0.2017	0.0037	0.0157
798	SLE FR 2	0.42	1.09	44.76	0.2021	0.0037	0.0157
798	SLE FR 3	0.43	1.1	44.91	0.2022	0.0037	0.0158
798	SLE FR 4	0.44	1.14	46.32	0.2089	0.0039	0.0163
798	SLE FR 5	0.45	1.15	46.47	0.209	0.0039	0.0163
798	SLE FR 6	0.45	1.18	47.36	0.213	0.0041	0.0166
798	SLE QP 1	0.42	1.09	44.77	0.2017	0.0037	0.0157
798	SLE QP 2	0.44	1.14	46.32	0.2085	0.0039	0.0163
798	SLD 1	6.27	2.17	48.96	0.1633	0.0362	0.0087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
798	SLD 2	6.03	2.12	48.89	0.159	0.0352	0.0133
798	SLD 3	6.17	0.59	48.78	0.2312	0.0367	0.0118
798	SLD 4	5.93	0.55	48.71	0.2269	0.0356	0.0164
798	SLD 5	2.38	3.85	47.4	0.0927	0.0131	0.0084
798	SLD 6	2.22	3.82	47.35	0.0898	0.0124	0.0115
798	SLD 7	2.06	-1.41	46.8	0.3191	0.0147	0.0188
798	SLD 8	1.9	-1.44	46.75	0.3162	0.014	0.0219
798	SLD 9	-1.01	3.73	45.89	0.1007	-0.0061	0.0106
798	SLD 10	-1.17	3.7	45.85	0.0978	-0.0068	0.0137
798	SLD 11	-1.34	-1.54	45.29	0.3271	-0.0045	0.021
798	SLD 12	-1.5	-1.56	45.24	0.3243	-0.0052	0.0241
798	SLD 13	-5.04	1.74	43.94	0.19	-0.0278	0.0161
798	SLD 14	-5.28	1.7	43.86	0.1857	-0.0288	0.0207
798	SLD 15	-5.14	0.16	43.76	0.258	-0.0273	0.0192
798	SLD 16	-5.38	0.12	43.68	0.2536	-0.0283	0.0238
798	SLV 1	14.06	3.48	52.53	0.1047	0.0795	-0.0014
798	SLV 2	13.5	3.38	52.36	0.0946	0.077	0.0094
798	SLV 3	13.83	-0.1	52.12	0.2587	0.0806	0.0057
798	SLV 4	13.27	-0.19	51.95	0.2486	0.0781	0.0165
798	SLV 5	4.96	7.28	48.84	-0.0545	0.0253	-0.0017
798	SLV 6	4.6	7.22	48.73	-0.061	0.0238	0.0054
798	SLV 7	4.22	-4.63	47.47	0.4589	0.029	0.0219
798	SLV 8	3.85	-4.7	47.35	0.4523	0.0275	0.029
798	SLV 9	-2.97	6.98	45.29	-0.0354	-0.0196	0.0035
798	SLV 10	-3.33	6.92	45.18	-0.042	-0.0212	0.0106
798	SLV 11	-3.71	-4.93	43.92	0.478	-0.0159	0.0272
798	SLV 12	-4.08	-4.99	43.81	0.4714	-0.0175	0.0342
798	SLV 13	-12.39	2.48	40.7	0.1683	-0.0703	0.016
798	SLV 14	-12.95	2.39	40.53	0.1582	-0.0727	0.0268
798	SLV 15	-12.61	-1.09	40.29	0.3223	-0.0692	0.0231
798	SLV 16	-13.17	-1.19	40.12	0.3123	-0.0716	0.0339
798	CRTFP Ux+	0	0	0	0	0	0
798	CRTFP Ux-	0	0	0	0	0	0
798	CRTFP Uy+	0	0	0	0	0	0
798	CRTFP Uy-	0	0	0	0	0	0
799	SLU 1	0.42	1.11	43.44	0.1952	-0.0139	0.0166
799	SLU 2	0.41	1.06	43.42	0.1983	-0.0139	0.0169
799	SLU 3	0.44	1.15	44.36	0.2001	-0.0142	0.0171
799	SLU 4	0.43	1.12	44.35	0.2019	-0.0142	0.0172
799	SLU 5	0.42	1.07	43.98	0.2003	-0.0142	0.0172
799	SLU 6	0.45	1.17	44.92	0.2021	-0.0145	0.0173
799	SLU 7	0.44	1.14	44.9	0.204	-0.0145	0.0175
799	SLU 8	0.45	1.14	44.56	0.1994	-0.0145	0.0172
799	SLU 9	0.44	1.11	44.54	0.2012	-0.0145	0.0173
799	SLU 10	0.48	1.25	48.89	0.2225	-0.0162	0.019
799	SLU 11	0.51	1.34	49.83	0.2243	-0.0166	0.0192
799	SLU 12	0.5	1.31	49.82	0.2261	-0.0166	0.0194
799	SLU 13	0.49	1.26	49.45	0.2246	-0.0165	0.0193
799	SLU 14	0.52	1.36	50.39	0.2264	-0.0169	0.0195
799	SLU 15	0.51	1.33	50.38	0.2282	-0.0169	0.0196
799	SLU 16	0.52	1.33	50.03	0.2236	-0.0168	0.0193
799	SLU 17	0.51	1.3	50.01	0.2254	-0.0168	0.0195
799	SLU 18	0.52	1.38	51.26	0.2299	-0.0172	0.0196
799	SLU 19	0.51	1.35	51.25	0.2317	-0.0172	0.0198
799	SLU 20	0.53	1.4	51.82	0.232	-0.0175	0.0199
799	SLU 21	0.52	1.36	51.8	0.2338	-0.0175	0.0201
799	SLU 22	0.49	1.37	48.65	0.2371	-0.0161	0.0185
799	SLU 23	0.47	1.32	48.63	0.2402	-0.0161	0.0188
799	SLU 24	0.5	1.41	49.57	0.242	-0.0165	0.0189
799	SLU 25	0.49	1.38	49.55	0.2438	-0.0165	0.0191
799	SLU 26	0.48	1.33	49.18	0.2422	-0.0164	0.0191
799	SLU 27	0.51	1.43	50.13	0.244	-0.0168	0.0192
799	SLU 28	0.5	1.4	50.11	0.2458	-0.0168	0.0194
799	SLU 29	0.51	1.4	49.76	0.2413	-0.0167	0.019
799	SLU 30	0.5	1.37	49.75	0.2431	-0.0167	0.0192
799	SLU 31	0.54	1.51	54.1	0.2644	-0.0184	0.0209
799	SLU 32	0.57	1.6	55.04	0.2662	-0.0188	0.021
799	SLU 33	0.56	1.57	55.02	0.268	-0.0188	0.0212
799	SLU 34	0.55	1.52	54.65	0.2665	-0.0187	0.0212
799	SLU 35	0.58	1.62	55.6	0.2683	-0.0191	0.0213
799	SLU 36	0.57	1.59	55.58	0.2701	-0.0191	0.0215
799	SLU 37	0.58	1.59	55.24	0.2655	-0.019	0.0212
799	SLU 38	0.57	1.56	55.22	0.2673	-0.019	0.0213
799	SLU 39	0.59	1.64	56.47	0.2718	-0.0194	0.0215
799	SLU 40	0.58	1.61	56.45	0.2736	-0.0194	0.0217
799	SLU 41	0.6	1.66	57.02	0.2738	-0.0197	0.0218
799	SLU 42	0.59	1.63	57.01	0.2757	-0.0197	0.022
799	SLU 43	0.53	1.35	54.69	0.2395	-0.0172	0.0209
799	SLU 44	0.51	1.3	54.67	0.2425	-0.0173	0.0212
799	SLU 45	0.54	1.4	55.61	0.2443	-0.0176	0.0214
799	SLU 46	0.53	1.37	55.6	0.2461	-0.0176	0.0216
799	SLU 47	0.52	1.32	55.23	0.2445	-0.0176	0.0215
799	SLU 48	0.55	1.41	56.17	0.2464	-0.0179	0.0217
799	SLU 49	0.54	1.38	56.15	0.2482	-0.0179	0.0219
799	SLU 50	0.55	1.39	55.81	0.2436	-0.0178	0.0215
799	SLU 51	0.54	1.35	55.79	0.2454	-0.0179	0.0217
799	SLU 52	0.58	1.49	60.14	0.2667	-0.0196	0.0234
799	SLU 53	0.61	1.59	61.08	0.2685	-0.0199	0.0235
799	SLU 54	0.6	1.55	61.07	0.2703	-0.0199	0.0237
799	SLU 55	0.59	1.51	60.7	0.2688	-0.0199	0.0236

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
799	SLU 56	0.62	1.6	61.64	0.2706	-0.0202	0.0238
799	SLU 57	0.61	1.57	61.62	0.2724	-0.0202	0.024
799	SLU 58	0.62	1.58	61.28	0.2678	-0.0202	0.0236
799	SLU 59	0.61	1.54	61.26	0.2697	-0.0202	0.0238
799	SLU 60	0.63	1.62	62.51	0.2741	-0.0205	0.024
799	SLU 61	0.62	1.59	62.49	0.2759	-0.0206	0.0242
799	SLU 62	0.64	1.64	63.06	0.2762	-0.0208	0.0243
799	SLU 63	0.63	1.61	63.05	0.278	-0.0209	0.0244
799	SLU 64	0.59	1.61	59.9	0.2813	-0.0195	0.0228
799	SLU 65	0.58	1.56	59.87	0.2844	-0.0195	0.0231
799	SLU 66	0.61	1.66	60.82	0.2862	-0.0199	0.0233
799	SLU 67	0.6	1.63	60.8	0.288	-0.0199	0.0234
799	SLU 68	0.59	1.58	60.43	0.2864	-0.0198	0.0234
799	SLU 69	0.62	1.68	61.37	0.2882	-0.0202	0.0235
799	SLU 70	0.61	1.64	61.36	0.2901	-0.0202	0.0237
799	SLU 71	0.62	1.65	61.01	0.2855	-0.0201	0.0234
799	SLU 72	0.61	1.62	61	0.2873	-0.0201	0.0236
799	SLU 73	0.65	1.75	65.35	0.3086	-0.0218	0.0252
799	SLU 74	0.68	1.85	66.29	0.3104	-0.0222	0.0254
799	SLU 75	0.67	1.82	66.27	0.3122	-0.0222	0.0256
799	SLU 76	0.66	1.77	65.9	0.3107	-0.0221	0.0255
799	SLU 77	0.69	1.86	66.84	0.3125	-0.0225	0.0257
799	SLU 78	0.68	1.83	66.83	0.3143	-0.0225	0.0258
799	SLU 79	0.69	1.84	66.48	0.3097	-0.0224	0.0255
799	SLU 80	0.68	1.8	66.47	0.3115	-0.0224	0.0257
799	SLU 81	0.69	1.88	67.71	0.316	-0.0228	0.0258
799	SLU 82	0.68	1.85	67.7	0.3178	-0.0228	0.026
799	SLU 83	0.7	1.9	68.27	0.3181	-0.0231	0.0261
799	SLU 84	0.69	1.87	68.26	0.3199	-0.0231	0.0263
799	SLE RA 1	0.44	1.18	44.93	0.2072	-0.0145	0.0171
799	SLE RA 2	0.43	1.15	44.92	0.2092	-0.0145	0.0173
799	SLE RA 3	0.45	1.21	45.54	0.2104	-0.0148	0.0174
799	SLE RA 4	0.45	1.19	45.53	0.2116	-0.0148	0.0176
799	SLE RA 5	0.44	1.16	45.29	0.2106	-0.0147	0.0175
799	SLE RA 6	0.46	1.22	45.91	0.2118	-0.015	0.0176
799	SLE RA 7	0.45	1.2	45.91	0.213	-0.015	0.0177
799	SLE RA 8	0.46	1.21	45.67	0.21	-0.0149	0.0175
799	SLE RA 9	0.45	1.19	45.66	0.2112	-0.0149	0.0176
799	SLE RA 10	0.48	1.27	48.56	0.2254	-0.0161	0.0188
799	SLE RA 11	0.5	1.34	49.19	0.2266	-0.0163	0.0189
799	SLE RA 12	0.49	1.32	49.18	0.2278	-0.0163	0.019
799	SLE RA 13	0.48	1.29	48.93	0.2268	-0.0163	0.0189
799	SLE RA 14	0.5	1.35	49.56	0.228	-0.0165	0.019
799	SLE RA 15	0.5	1.33	49.55	0.2292	-0.0165	0.0192
799	SLE RA 16	0.5	1.33	49.32	0.2261	-0.0164	0.0189
799	SLE RA 17	0.5	1.31	49.31	0.2273	-0.0165	0.019
799	SLE RA 18	0.51	1.36	50.14	0.2303	-0.0167	0.0192
799	SLE RA 19	0.5	1.34	50.13	0.2315	-0.0167	0.0193
799	SLE RA 20	0.52	1.38	50.51	0.2317	-0.0169	0.0193
799	SLE RA 21	0.51	1.35	50.5	0.2329	-0.0169	0.0195
799	SLE FR 1	0.44	1.18	44.93	0.2072	-0.0145	0.0171
799	SLE FR 2	0.44	1.18	44.93	0.2076	-0.0145	0.0172
799	SLE FR 3	0.45	1.19	45.08	0.2078	-0.0146	0.0172
799	SLE FR 4	0.46	1.23	46.49	0.2145	-0.0152	0.0178
799	SLE FR 5	0.47	1.24	46.64	0.2147	-0.0152	0.0178
799	SLE FR 6	0.47	1.27	47.54	0.2188	-0.0156	0.0181
799	SLE QP 1	0.44	1.18	44.93	0.2072	-0.0145	0.0171
799	SLE QP 2	0.46	1.24	46.49	0.2141	-0.0152	0.0177
799	SLD 1	6.29	2.23	48.15	0.1599	0.0218	0.011
799	SLD 2	6.05	2.21	48.11	0.1554	0.0207	0.0156
799	SLD 3	6.19	0.66	47.97	0.2281	0.0223	0.0124
799	SLD 4	5.95	0.65	47.93	0.2235	0.0212	0.017
799	SLD 5	2.4	3.92	47.27	0.0953	-0.0047	0.0128
799	SLD 6	2.24	3.91	47.25	0.0923	-0.0054	0.0158
799	SLD 7	2.08	-1.31	46.67	0.3225	-0.0029	0.0174
799	SLD 8	1.92	-1.32	46.64	0.3195	-0.0036	0.0205
799	SLD 9	-0.99	3.8	46.35	0.1088	-0.0267	0.015
799	SLD 10	-1.15	3.79	46.32	0.1058	-0.0274	0.0181
799	SLD 11	-1.32	-1.43	45.74	0.336	-0.0249	0.0196
799	SLD 12	-1.48	-1.44	45.71	0.3329	-0.0256	0.0227
799	SLD 13	-5.03	1.83	45.06	0.2048	-0.0515	0.0185
799	SLD 14	-5.27	1.82	45.02	0.2002	-0.0526	0.0231
799	SLD 15	-5.13	0.26	44.88	0.2729	-0.051	0.0199
799	SLD 16	-5.37	0.25	44.84	0.2684	-0.0521	0.0244
799	SLV 1	14.09	3.5	50.41	0.0893	0.0713	0.0021
799	SLV 2	13.53	3.46	50.31	0.0787	0.0687	0.0127
799	SLV 3	13.86	-0.05	50	0.2438	0.0725	0.0053
799	SLV 4	13.3	-0.09	49.9	0.2332	0.07	0.0159
799	SLV 5	4.99	7.31	48.31	-0.0557	0.0093	0.0063
799	SLV 6	4.62	7.29	48.25	-0.0626	0.0077	0.0133
799	SLV 7	4.24	-4.53	46.94	0.4592	0.0135	0.017
799	SLV 8	3.87	-4.55	46.87	0.4523	0.0118	0.0239
799	SLV 9	-2.95	7.03	46.12	-0.024	-0.0421	0.0116
799	SLV 10	-3.31	7.01	46.05	-0.0309	-0.0438	0.0185
799	SLV 11	-3.7	-4.81	44.74	0.4909	-0.038	0.0222
799	SLV 12	-4.06	-4.84	44.68	0.484	-0.0397	0.0292
799	SLV 13	-12.38	2.56	43.09	0.1951	-0.1003	0.0196
799	SLV 14	-12.94	2.53	42.99	0.1845	-0.1028	0.0302
799	SLV 15	-12.6	-0.99	42.68	0.3495	-0.0991	0.0227
799	SLV 16	-13.16	-1.03	42.58	0.339	-0.1016	0.0334

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
799	CRTFP Ux+	0	0	0	0	0	0
799	CRTFP Ux-	0	0	0	0	0	0
799	CRTFP Uy+	0	0	0	0	0	0
799	CRTFP Uy-	0	0	0	0	0	0
800	SLU 1	0.44	1.2	44.05	0.2009	-0.0273	0.0174
800	SLU 2	0.42	1.15	44.02	0.2039	-0.0273	0.0176
800	SLU 3	0.45	1.25	44.98	0.2059	-0.0281	0.0179
800	SLU 4	0.44	1.22	44.97	0.2077	-0.0281	0.018
800	SLU 5	0.44	1.17	44.59	0.2062	-0.0278	0.0179
800	SLU 6	0.47	1.27	45.55	0.2082	-0.0286	0.0181
800	SLU 7	0.46	1.24	45.54	0.21	-0.0286	0.0183
800	SLU 8	0.47	1.24	45.19	0.2054	-0.0284	0.0179
800	SLU 9	0.46	1.21	45.17	0.2072	-0.0284	0.0181
800	SLU 10	0.49	1.35	49.6	0.2288	-0.0319	0.0198
800	SLU 11	0.53	1.45	50.56	0.2308	-0.0327	0.0201
800	SLU 12	0.52	1.42	50.54	0.2326	-0.0327	0.0202
800	SLU 13	0.51	1.37	50.17	0.231	-0.0324	0.0201
800	SLU 14	0.54	1.47	51.12	0.2331	-0.0332	0.0204
800	SLU 15	0.53	1.44	51.11	0.2349	-0.0332	0.0205
800	SLU 16	0.54	1.44	50.76	0.2303	-0.033	0.0202
800	SLU 17	0.53	1.41	50.74	0.2321	-0.033	0.0203
800	SLU 18	0.54	1.49	52.01	0.2364	-0.0338	0.0205
800	SLU 19	0.53	1.46	51.99	0.2382	-0.0339	0.0207
800	SLU 20	0.55	1.51	52.58	0.2387	-0.0344	0.0208
800	SLU 21	0.54	1.48	52.56	0.2405	-0.0344	0.021
800	SLU 22	0.51	1.48	49.35	0.2437	-0.0317	0.0195
800	SLU 23	0.49	1.42	49.33	0.2467	-0.0317	0.0198
800	SLU 24	0.52	1.52	50.29	0.2487	-0.0325	0.02
800	SLU 25	0.51	1.49	50.27	0.2506	-0.0325	0.0202
800	SLU 26	0.5	1.44	49.9	0.249	-0.0323	0.0201
800	SLU 27	0.54	1.54	50.86	0.251	-0.033	0.0203
800	SLU 28	0.53	1.51	50.84	0.2528	-0.033	0.0205
800	SLU 29	0.53	1.51	50.49	0.2482	-0.0328	0.0201
800	SLU 30	0.52	1.48	50.48	0.25	-0.0328	0.0202
800	SLU 31	0.56	1.63	54.9	0.2716	-0.0363	0.022
800	SLU 32	0.59	1.72	55.86	0.2736	-0.0371	0.0222
800	SLU 33	0.58	1.69	55.85	0.2754	-0.0371	0.0224
800	SLU 34	0.58	1.64	55.47	0.2738	-0.0369	0.0223
800	SLU 35	0.61	1.74	56.43	0.2759	-0.0376	0.0225
800	SLU 36	0.6	1.71	56.41	0.2777	-0.0376	0.0227
800	SLU 37	0.6	1.71	56.06	0.2731	-0.0374	0.0223
800	SLU 38	0.59	1.68	56.05	0.2749	-0.0374	0.0225
800	SLU 39	0.61	1.76	57.31	0.2792	-0.0383	0.0227
800	SLU 40	0.6	1.73	57.3	0.281	-0.0383	0.0228
800	SLU 41	0.62	1.78	57.88	0.2815	-0.0388	0.023
800	SLU 42	0.61	1.75	57.87	0.2833	-0.0388	0.0231
800	SLU 43	0.55	1.47	55.44	0.2465	-0.0339	0.0218
800	SLU 44	0.53	1.42	55.42	0.2495	-0.034	0.0221
800	SLU 45	0.56	1.52	56.38	0.2515	-0.0347	0.0223
800	SLU 46	0.55	1.49	56.36	0.2533	-0.0347	0.0225
800	SLU 47	0.55	1.44	55.99	0.2517	-0.0345	0.0224
800	SLU 48	0.58	1.54	56.95	0.2538	-0.0353	0.0226
800	SLU 49	0.57	1.51	56.93	0.2556	-0.0353	0.0228
800	SLU 50	0.57	1.51	56.58	0.251	-0.035	0.0224
800	SLU 51	0.56	1.48	56.57	0.2528	-0.035	0.0226
800	SLU 52	0.6	1.62	60.99	0.2744	-0.0386	0.0243
800	SLU 53	0.63	1.72	61.95	0.2764	-0.0393	0.0246
800	SLU 54	0.62	1.69	61.94	0.2782	-0.0393	0.0247
800	SLU 55	0.62	1.64	61.56	0.2766	-0.0391	0.0246
800	SLU 56	0.65	1.74	62.52	0.2786	-0.0399	0.0248
800	SLU 57	0.64	1.71	62.51	0.2805	-0.0399	0.025
800	SLU 58	0.64	1.71	62.15	0.2758	-0.0396	0.0246
800	SLU 59	0.63	1.68	62.14	0.2777	-0.0396	0.0248
800	SLU 60	0.65	1.76	63.4	0.282	-0.0405	0.025
800	SLU 61	0.64	1.73	63.39	0.2838	-0.0405	0.0252
800	SLU 62	0.66	1.78	63.97	0.2843	-0.0411	0.0253
800	SLU 63	0.65	1.75	63.96	0.2861	-0.0411	0.0255
800	SLU 64	0.62	1.74	60.75	0.2893	-0.0384	0.024
800	SLU 65	0.6	1.69	60.72	0.2923	-0.0384	0.0242
800	SLU 66	0.63	1.79	61.68	0.2943	-0.0392	0.0245
800	SLU 67	0.62	1.76	61.67	0.2961	-0.0392	0.0246
800	SLU 68	0.61	1.71	61.29	0.2946	-0.0389	0.0245
800	SLU 69	0.64	1.81	62.25	0.2966	-0.0397	0.0248
800	SLU 70	0.63	1.78	62.24	0.2984	-0.0397	0.0249
800	SLU 71	0.64	1.78	61.89	0.2938	-0.0395	0.0246
800	SLU 72	0.63	1.75	61.87	0.2956	-0.0395	0.0247
800	SLU 73	0.67	1.89	66.3	0.3172	-0.043	0.0265
800	SLU 74	0.7	1.99	67.26	0.3192	-0.0438	0.0267
800	SLU 75	0.69	1.96	67.24	0.321	-0.0438	0.0269
800	SLU 76	0.68	1.91	66.87	0.3194	-0.0435	0.0268
800	SLU 77	0.71	2.01	67.82	0.3215	-0.0443	0.027
800	SLU 78	0.7	1.98	67.81	0.3233	-0.0443	0.0272
800	SLU 79	0.71	1.98	67.46	0.3187	-0.0441	0.0268
800	SLU 80	0.7	1.95	67.44	0.3205	-0.0441	0.0269
800	SLU 81	0.72	2.03	68.71	0.3248	-0.0449	0.0272
800	SLU 82	0.71	2	68.69	0.3266	-0.0449	0.0273
800	SLU 83	0.73	2.05	69.28	0.3271	-0.0455	0.0275
800	SLU 84	0.72	2.02	69.26	0.3289	-0.0455	0.0276
800	SLE RA 1	0.46	1.28	45.56	0.2131	-0.0285	0.018
800	SLE RA 2	0.45	1.25	45.55	0.2151	-0.0286	0.0181

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
800	SLE RA 3	0.47	1.31	46.19	0.2165	-0.0291	0.0183
800	SLE RA 4	0.46	1.29	46.18	0.2177	-0.0291	0.0184
800	SLE RA 5	0.46	1.26	45.93	0.2166	-0.0289	0.0183
800	SLE RA 6	0.48	1.33	46.57	0.218	-0.0294	0.0185
800	SLE RA 7	0.47	1.3	46.56	0.2192	-0.0294	0.0186
800	SLE RA 8	0.48	1.31	46.32	0.2161	-0.0293	0.0184
800	SLE RA 9	0.47	1.29	46.31	0.2173	-0.0293	0.0185
800	SLE RA 10	0.5	1.38	49.26	0.2317	-0.0316	0.0196
800	SLE RA 11	0.52	1.45	49.9	0.2331	-0.0321	0.0198
800	SLE RA 12	0.51	1.43	49.89	0.2343	-0.0321	0.0199
800	SLE RA 13	0.5	1.39	49.64	0.2332	-0.032	0.0198
800	SLE RA 14	0.52	1.46	50.28	0.2346	-0.0325	0.02
800	SLE RA 15	0.52	1.44	50.27	0.2358	-0.0325	0.0201
800	SLE RA 16	0.52	1.44	50.04	0.2327	-0.0323	0.0198
800	SLE RA 17	0.52	1.42	50.03	0.2339	-0.0323	0.0199
800	SLE RA 18	0.53	1.47	50.87	0.2368	-0.0329	0.0201
800	SLE RA 19	0.52	1.45	50.86	0.238	-0.0329	0.0202
800	SLE RA 20	0.54	1.49	51.25	0.2383	-0.0333	0.0203
800	SLE RA 21	0.53	1.47	51.24	0.2395	-0.0333	0.0204
800	SLE FR 1	0.46	1.28	45.56	0.2131	-0.0285	0.018
800	SLE FR 2	0.46	1.28	45.56	0.2135	-0.0285	0.018
800	SLE FR 3	0.46	1.29	45.72	0.2137	-0.0287	0.0181
800	SLE FR 4	0.48	1.33	47.15	0.2206	-0.0299	0.0186
800	SLE FR 5	0.48	1.34	47.31	0.2208	-0.03	0.0187
800	SLE FR 6	0.49	1.38	48.22	0.225	-0.0307	0.019
800	SLE QP 1	0.46	1.28	45.56	0.2131	-0.0285	0.018
800	SLE QP 2	0.48	1.34	47.16	0.2202	-0.0299	0.0186
800	SLD 1	6.31	2.31	47.87	0.1565	0.0093	0.0131
800	SLD 2	6.07	2.32	47.86	0.1517	0.0082	0.0179
800	SLD 3	6.21	0.74	47.69	0.225	0.0099	0.0112
800	SLD 4	5.97	0.75	47.68	0.2202	0.0088	0.016
800	SLD 5	2.42	4.01	47.65	0.0981	-0.0188	0.0189
800	SLD 6	2.26	4.02	47.65	0.095	-0.0195	0.0221
800	SLD 7	2.09	-1.23	47.04	0.3264	-0.0168	0.0127
800	SLD 8	1.93	-1.22	47.03	0.3232	-0.0176	0.0158
800	SLD 9	-0.97	3.9	47.28	0.1173	-0.0421	0.0214
800	SLD 10	-1.13	3.91	47.28	0.1141	-0.0429	0.0246
800	SLD 11	-1.3	-1.34	46.67	0.3455	-0.0402	0.0151
800	SLD 12	-1.46	-1.33	46.66	0.3423	-0.0409	0.0183
800	SLD 13	-5.01	1.93	46.64	0.2203	-0.0685	0.0212
800	SLD 14	-5.25	1.94	46.62	0.2155	-0.0696	0.026
800	SLD 15	-5.11	0.36	46.45	0.2887	-0.0679	0.0193
800	SLD 16	-5.35	0.37	46.44	0.284	-0.069	0.0242
800	SLV 1	14.11	3.55	48.91	0.0733	0.0618	0.0056
800	SLV 2	13.55	3.57	48.89	0.0622	0.0592	0.0168
800	SLV 3	13.88	-0.01	48.49	0.2285	0.0632	0.0013
800	SLV 4	13.32	0.01	48.47	0.2174	0.0606	0.0125
800	SLV 5	5.01	7.4	48.32	-0.0573	-0.004	0.0193
800	SLV 6	4.65	7.41	48.31	-0.0645	-0.0056	0.0266
800	SLV 7	4.26	-4.47	46.92	0.4601	0.0006	0.0049
800	SLV 8	3.89	-4.45	46.91	0.4528	-0.0011	0.0122
800	SLV 9	-2.93	7.13	47.4	-0.0123	-0.0586	0.025
800	SLV 10	-3.3	7.15	47.39	-0.0196	-0.0603	0.0323
800	SLV 11	-3.69	-4.73	46	0.505	-0.0541	0.0106
800	SLV 12	-4.05	-4.72	45.99	0.4977	-0.0558	0.0179
800	SLV 13	-12.36	2.67	45.84	0.2231	-0.1203	0.0248
800	SLV 14	-12.92	2.69	45.82	0.212	-0.1229	0.036
800	SLV 15	-12.59	-0.89	45.42	0.3783	-0.1189	0.0204
800	SLV 16	-13.15	-0.87	45.4	0.3672	-0.1215	0.0316
800	CRTFP Ux+	0	0	0	0	0	0
800	CRTFP Ux-	0	0	0	0	0	0
800	CRTFP Uy+	0	0	0	0	0	0
800	CRTFP Uy-	0	0	0	0	0	0
801	SLU 1	0.45	1.3	44.99	0.2069	-0.0375	0.0173
801	SLU 2	0.44	1.25	44.97	0.21	-0.0375	0.0176
801	SLU 3	0.47	1.35	45.96	0.2122	-0.0386	0.0179
801	SLU 4	0.46	1.32	45.94	0.214	-0.0386	0.018
801	SLU 5	0.45	1.27	45.56	0.2124	-0.0383	0.0179
801	SLU 6	0.48	1.37	46.54	0.2146	-0.0393	0.0181
801	SLU 7	0.47	1.34	46.53	0.2164	-0.0394	0.0183
801	SLU 8	0.48	1.34	46.17	0.2118	-0.039	0.0179
801	SLU 9	0.47	1.31	46.16	0.2136	-0.039	0.018
801	SLU 10	0.51	1.46	50.7	0.2355	-0.0438	0.0198
801	SLU 11	0.54	1.57	51.69	0.2378	-0.0449	0.0201
801	SLU 12	0.53	1.53	51.67	0.2396	-0.0449	0.0203
801	SLU 13	0.52	1.48	51.29	0.2379	-0.0446	0.0201
801	SLU 14	0.55	1.59	52.28	0.2402	-0.0457	0.0204
801	SLU 15	0.54	1.55	52.26	0.242	-0.0457	0.0205
801	SLU 16	0.55	1.56	51.9	0.2373	-0.0453	0.0202
801	SLU 17	0.54	1.52	51.89	0.2391	-0.0453	0.0203
801	SLU 18	0.56	1.61	53.18	0.2434	-0.0465	0.0206
801	SLU 19	0.55	1.58	53.17	0.2453	-0.0466	0.0207
801	SLU 20	0.57	1.63	53.77	0.2459	-0.0473	0.0209
801	SLU 21	0.56	1.6	53.76	0.2477	-0.0473	0.021
801	SLU 22	0.52	1.59	50.45	0.2507	-0.0436	0.0197
801	SLU 23	0.51	1.53	50.43	0.2538	-0.0436	0.0199
801	SLU 24	0.54	1.64	51.41	0.256	-0.0447	0.0202
801	SLU 25	0.53	1.6	51.4	0.2578	-0.0447	0.0203
801	SLU 26	0.52	1.55	51.02	0.2562	-0.0443	0.0202
801	SLU 27	0.55	1.66	52	0.2584	-0.0454	0.0205

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
801	SLU 28	0.54	1.62	51.99	0.2602	-0.0454	0.0206
801	SLU 29	0.55	1.63	51.63	0.2556	-0.045	0.0202
801	SLU 30	0.54	1.59	51.61	0.2574	-0.045	0.0204
801	SLU 31	0.58	1.75	56.16	0.2793	-0.0499	0.0222
801	SLU 32	0.61	1.85	57.15	0.2816	-0.051	0.0225
801	SLU 33	0.6	1.82	57.13	0.2834	-0.051	0.0226
801	SLU 34	0.59	1.77	56.75	0.2817	-0.0506	0.0224
801	SLU 35	0.62	1.87	57.73	0.284	-0.0517	0.0227
801	SLU 36	0.61	1.84	57.72	0.2858	-0.0517	0.0229
801	SLU 37	0.62	1.84	57.36	0.2811	-0.0514	0.0225
801	SLU 38	0.61	1.81	57.35	0.2829	-0.0514	0.0226
801	SLU 39	0.63	1.89	58.64	0.2872	-0.0526	0.0229
801	SLU 40	0.62	1.86	58.63	0.2891	-0.0526	0.023
801	SLU 41	0.64	1.91	59.23	0.2897	-0.0533	0.0232
801	SLU 42	0.63	1.88	59.21	0.2915	-0.0533	0.0233
801	SLU 43	0.57	1.59	56.62	0.254	-0.0467	0.0217
801	SLU 44	0.55	1.54	56.6	0.257	-0.0467	0.022
801	SLU 45	0.58	1.64	57.58	0.2593	-0.0478	0.0223
801	SLU 46	0.57	1.61	57.57	0.2611	-0.0478	0.0224
801	SLU 47	0.56	1.56	57.19	0.2594	-0.0474	0.0223
801	SLU 48	0.59	1.66	58.17	0.2617	-0.0485	0.0225
801	SLU 49	0.58	1.63	58.16	0.2635	-0.0485	0.0227
801	SLU 50	0.59	1.63	57.8	0.2588	-0.0481	0.0223
801	SLU 51	0.58	1.6	57.78	0.2606	-0.0482	0.0225
801	SLU 52	0.62	1.76	62.33	0.2826	-0.053	0.0242
801	SLU 53	0.65	1.86	63.32	0.2848	-0.0541	0.0245
801	SLU 54	0.64	1.83	63.3	0.2866	-0.0541	0.0247
801	SLU 55	0.63	1.78	62.92	0.285	-0.0537	0.0245
801	SLU 56	0.67	1.88	63.9	0.2872	-0.0548	0.0248
801	SLU 57	0.66	1.85	63.89	0.289	-0.0548	0.0249
801	SLU 58	0.66	1.85	63.53	0.2844	-0.0545	0.0246
801	SLU 59	0.65	1.82	63.51	0.2862	-0.0545	0.0247
801	SLU 60	0.67	1.9	64.81	0.2905	-0.0557	0.025
801	SLU 61	0.66	1.87	64.8	0.2923	-0.0557	0.0251
801	SLU 62	0.68	1.92	65.4	0.2929	-0.0564	0.0253
801	SLU 63	0.67	1.89	65.38	0.2947	-0.0565	0.0254
801	SLU 64	0.64	1.88	62.08	0.2978	-0.0528	0.0241
801	SLU 65	0.62	1.83	62.06	0.3008	-0.0528	0.0243
801	SLU 66	0.65	1.93	63.04	0.3031	-0.0539	0.0246
801	SLU 67	0.64	1.9	63.03	0.3049	-0.0539	0.0247
801	SLU 68	0.63	1.85	62.64	0.3032	-0.0535	0.0246
801	SLU 69	0.66	1.95	63.63	0.3055	-0.0546	0.0249
801	SLU 70	0.65	1.92	63.62	0.3073	-0.0546	0.025
801	SLU 71	0.66	1.92	63.25	0.3026	-0.0542	0.0246
801	SLU 72	0.65	1.89	63.24	0.3044	-0.0542	0.0248
801	SLU 73	0.69	2.04	67.79	0.3264	-0.0591	0.0266
801	SLU 74	0.72	2.14	68.77	0.3286	-0.0602	0.0269
801	SLU 75	0.71	2.11	68.76	0.3304	-0.0602	0.027
801	SLU 76	0.71	2.06	68.37	0.3288	-0.0598	0.0269
801	SLU 77	0.74	2.16	69.36	0.331	-0.0609	0.0271
801	SLU 78	0.73	2.13	69.35	0.3328	-0.0609	0.0273
801	SLU 79	0.73	2.13	68.99	0.3282	-0.0605	0.0269
801	SLU 80	0.72	2.1	68.97	0.33	-0.0605	0.027
801	SLU 81	0.74	2.18	70.27	0.3343	-0.0618	0.0273
801	SLU 82	0.73	2.15	70.25	0.3361	-0.0618	0.0274
801	SLU 83	0.75	2.2	70.85	0.3367	-0.0625	0.0276
801	SLU 84	0.74	2.17	70.84	0.3385	-0.0625	0.0277
801	SLE RA 1	0.47	1.38	46.55	0.2195	-0.0393	0.018
801	SLE RA 2	0.46	1.35	46.54	0.2215	-0.0393	0.0182
801	SLE RA 3	0.48	1.42	47.2	0.223	-0.04	0.0184
801	SLE RA 4	0.48	1.4	47.19	0.2242	-0.04	0.0184
801	SLE RA 5	0.47	1.36	46.93	0.2231	-0.0397	0.0184
801	SLE RA 6	0.49	1.43	47.59	0.2246	-0.0405	0.0185
801	SLE RA 7	0.49	1.41	47.58	0.2258	-0.0405	0.0186
801	SLE RA 8	0.49	1.41	47.34	0.2227	-0.0402	0.0184
801	SLE RA 9	0.48	1.39	47.33	0.2239	-0.0402	0.0185
801	SLE RA 10	0.51	1.49	50.36	0.2385	-0.0435	0.0197
801	SLE RA 11	0.53	1.56	51.02	0.24	-0.0442	0.0199
801	SLE RA 12	0.53	1.54	51.01	0.2412	-0.0442	0.02
801	SLE RA 13	0.52	1.5	50.75	0.2401	-0.044	0.0199
801	SLE RA 14	0.54	1.57	51.41	0.2416	-0.0447	0.02
801	SLE RA 15	0.53	1.55	51.4	0.2428	-0.0447	0.0201
801	SLE RA 16	0.54	1.55	51.16	0.2397	-0.0444	0.0199
801	SLE RA 17	0.53	1.53	51.15	0.2409	-0.0444	0.02
801	SLE RA 18	0.54	1.59	52.01	0.2438	-0.0453	0.0202
801	SLE RA 19	0.54	1.57	52	0.245	-0.0453	0.0202
801	SLE RA 20	0.55	1.6	52.4	0.2454	-0.0458	0.0203
801	SLE RA 21	0.55	1.58	52.39	0.2466	-0.0458	0.0204
801	SLE FR 1	0.47	1.38	46.55	0.2195	-0.0393	0.018
801	SLE FR 2	0.47	1.38	46.55	0.2199	-0.0393	0.018
801	SLE FR 3	0.48	1.39	46.71	0.2201	-0.0394	0.0181
801	SLE FR 4	0.49	1.44	48.19	0.2272	-0.0411	0.0187
801	SLE FR 5	0.5	1.45	48.35	0.2274	-0.0413	0.0187
801	SLE FR 6	0.51	1.48	49.28	0.2316	-0.0423	0.0191
801	SLE QP 1	0.47	1.38	46.55	0.2195	-0.0393	0.018
801	SLE QP 2	0.5	1.44	48.19	0.2268	-0.0411	0.0186
801	SLD 1	6.32	2.39	47.35	0.1533	-0.0013	0.0128
801	SLD 2	6.08	2.43	47.37	0.1483	-0.0024	0.0181
801	SLD 3	6.23	0.81	47.16	0.2222	-0.0006	0.0092
801	SLD 4	5.99	0.84	47.18	0.2172	-0.0017	0.0146

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
801	SLD 5	2.44	4.13	48.23	0.1011	-0.0299	0.0212
801	SLD 6	2.28	4.15	48.24	0.0978	-0.0306	0.0248
801	SLD 7	2.11	-1.16	47.59	0.3308	-0.0278	0.0095
801	SLD 8	1.95	-1.14	47.6	0.3275	-0.0285	0.0131
801	SLD 9	-0.96	4.02	48.78	0.126	-0.0536	0.0242
801	SLD 10	-1.12	4.05	48.8	0.1227	-0.0544	0.0278
801	SLD 11	-1.29	-1.26	48.14	0.3557	-0.0515	0.0125
801	SLD 12	-1.45	-1.24	48.16	0.3524	-0.0522	0.0161
801	SLD 13	-4.99	2.04	49.2	0.2363	-0.0804	0.0227
801	SLD 14	-5.24	2.08	49.23	0.2313	-0.0815	0.0281
801	SLD 15	-5.09	0.46	49.01	0.3052	-0.0798	0.0192
801	SLD 16	-5.33	0.5	49.03	0.3002	-0.0809	0.0245
801	SLV 1	14.12	3.61	46.17	0.0572	0.0521	0.0047
801	SLV 2	13.56	3.69	46.22	0.0455	0.0495	0.0171
801	SLV 3	13.9	0.02	45.73	0.2134	0.0536	-0.0033
801	SLV 4	13.34	0.1	45.78	0.2016	0.051	0.0091
801	SLV 5	5.03	7.52	48.24	-0.0589	-0.0149	0.0244
801	SLV 6	4.66	7.58	48.27	-0.0665	-0.0166	0.0325
801	SLV 7	4.27	-4.45	46.78	0.4616	-0.01	-0.0022
801	SLV 8	3.9	-4.39	46.82	0.454	-0.0116	0.0059
801	SLV 9	-2.91	7.28	49.57	-0.0005	-0.0705	0.0314
801	SLV 10	-3.28	7.33	49.6	-0.0081	-0.0722	0.0395
801	SLV 11	-3.67	-4.69	48.11	0.5201	-0.0655	0.0048
801	SLV 12	-4.04	-4.64	48.15	0.5124	-0.0672	0.0129
801	SLV 13	-12.34	2.79	50.6	0.2519	-0.1331	0.0282
801	SLV 14	-12.91	2.87	50.65	0.2402	-0.1357	0.0406
801	SLV 15	-12.57	-0.8	50.16	0.408	-0.1316	0.0202
801	SLV 16	-13.13	-0.72	50.21	0.3963	-0.1342	0.0326
801	CRTFP Ux+	0	0	0	0	0	0
801	CRTFP Ux-	0	0	0	0	0	0
801	CRTFP Uy+	0	0	0	0	0	0
801	CRTFP Uy-	0	0	0	0	0	0
802	SLU 1	0.46	1.4	46.19	0.2134	-0.0444	0.0163
802	SLU 2	0.45	1.35	46.17	0.2164	-0.0444	0.0166
802	SLU 3	0.48	1.45	47.19	0.2189	-0.0457	0.0169
802	SLU 4	0.47	1.42	47.17	0.2207	-0.0457	0.017
802	SLU 5	0.46	1.37	46.78	0.219	-0.0452	0.0168
802	SLU 6	0.49	1.47	47.8	0.2215	-0.0465	0.0171
802	SLU 7	0.48	1.44	47.78	0.2233	-0.0465	0.0173
802	SLU 8	0.49	1.44	47.41	0.2186	-0.046	0.0169
802	SLU 9	0.48	1.41	47.4	0.2204	-0.046	0.017
802	SLU 10	0.52	1.57	52.1	0.2427	-0.0518	0.0188
802	SLU 11	0.55	1.67	53.12	0.2452	-0.0531	0.019
802	SLU 12	0.54	1.64	53.11	0.247	-0.0531	0.0192
802	SLU 13	0.53	1.59	52.71	0.2453	-0.0526	0.019
802	SLU 14	0.56	1.7	53.73	0.2478	-0.0539	0.0193
802	SLU 15	0.55	1.67	53.72	0.2496	-0.0539	0.0194
802	SLU 16	0.56	1.67	53.34	0.2449	-0.0535	0.019
802	SLU 17	0.55	1.64	53.33	0.2467	-0.0535	0.0192
802	SLU 18	0.57	1.72	54.66	0.2509	-0.0549	0.0194
802	SLU 19	0.56	1.69	54.65	0.2527	-0.0549	0.0196
802	SLU 20	0.58	1.74	55.28	0.2535	-0.0558	0.0197
802	SLU 21	0.57	1.71	55.26	0.2553	-0.0558	0.0199
802	SLU 22	0.54	1.69	51.84	0.2583	-0.0515	0.0187
802	SLU 23	0.52	1.64	51.82	0.2613	-0.0515	0.019
802	SLU 24	0.55	1.75	52.84	0.2638	-0.0528	0.0192
802	SLU 25	0.54	1.72	52.82	0.2656	-0.0528	0.0194
802	SLU 26	0.53	1.66	52.43	0.2639	-0.0524	0.0192
802	SLU 27	0.56	1.77	53.45	0.2664	-0.0537	0.0195
802	SLU 28	0.55	1.74	53.44	0.2682	-0.0537	0.0196
802	SLU 29	0.56	1.74	53.06	0.2634	-0.0532	0.0192
802	SLU 30	0.55	1.71	53.05	0.2653	-0.0532	0.0194
802	SLU 31	0.59	1.87	57.75	0.2876	-0.0589	0.0211
802	SLU 32	0.62	1.97	58.77	0.29	-0.0602	0.0214
802	SLU 33	0.61	1.94	58.76	0.2919	-0.0602	0.0215
802	SLU 34	0.61	1.89	58.36	0.2902	-0.0598	0.0214
802	SLU 35	0.64	1.99	59.38	0.2926	-0.0611	0.0217
802	SLU 36	0.63	1.96	59.37	0.2945	-0.0611	0.0218
802	SLU 37	0.64	1.96	58.99	0.2897	-0.0606	0.0214
802	SLU 38	0.63	1.93	58.98	0.2915	-0.0606	0.0215
802	SLU 39	0.64	2.02	60.32	0.2958	-0.0621	0.0218
802	SLU 40	0.63	1.99	60.3	0.2976	-0.0621	0.022
802	SLU 41	0.65	2.04	60.93	0.2984	-0.063	0.0221
802	SLU 42	0.64	2.01	60.91	0.3002	-0.063	0.0222
802	SLU 43	0.58	1.71	58.11	0.262	-0.0552	0.0204
802	SLU 44	0.56	1.66	58.09	0.265	-0.0552	0.0207
802	SLU 45	0.59	1.77	59.11	0.2675	-0.0565	0.0209
802	SLU 46	0.58	1.74	59.09	0.2693	-0.0565	0.0211
802	SLU 47	0.57	1.68	58.7	0.2676	-0.056	0.0209
802	SLU 48	0.61	1.79	59.72	0.2701	-0.0574	0.0212
802	SLU 49	0.6	1.76	59.7	0.2719	-0.0574	0.0214
802	SLU 50	0.6	1.76	59.33	0.2672	-0.0569	0.0209
802	SLU 51	0.59	1.73	59.32	0.269	-0.0569	0.0211
802	SLU 52	0.63	1.89	64.02	0.2913	-0.0626	0.0229
802	SLU 53	0.67	1.99	65.04	0.2938	-0.0639	0.0231
802	SLU 54	0.66	1.96	65.03	0.2956	-0.0639	0.0233
802	SLU 55	0.65	1.91	64.63	0.2939	-0.0635	0.0231
802	SLU 56	0.68	2.01	65.65	0.2964	-0.0648	0.0234
802	SLU 57	0.67	1.98	65.64	0.2982	-0.0648	0.0235
802	SLU 58	0.68	1.98	65.26	0.2935	-0.0643	0.0231

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
802	SLU 59	0.67	1.95	65.25	0.2953	-0.0643	0.0233
802	SLU 60	0.68	2.04	66.58	0.2996	-0.0658	0.0235
802	SLU 61	0.67	2.01	66.57	0.3014	-0.0658	0.0237
802	SLU 62	0.7	2.06	67.2	0.3022	-0.0666	0.0238
802	SLU 63	0.69	2.03	67.18	0.304	-0.0666	0.0239
802	SLU 64	0.65	2.01	63.76	0.3069	-0.0624	0.0228
802	SLU 65	0.63	1.96	63.74	0.3099	-0.0624	0.023
802	SLU 66	0.67	2.06	64.76	0.3124	-0.0637	0.0233
802	SLU 67	0.66	2.03	64.74	0.3142	-0.0637	0.0235
802	SLU 68	0.65	1.98	64.35	0.3125	-0.0632	0.0233
802	SLU 69	0.68	2.08	65.37	0.315	-0.0645	0.0236
802	SLU 70	0.67	2.05	65.35	0.3168	-0.0645	0.0237
802	SLU 71	0.68	2.05	64.98	0.3121	-0.0641	0.0233
802	SLU 72	0.67	2.02	64.97	0.3139	-0.0641	0.0235
802	SLU 73	0.71	2.19	69.67	0.3362	-0.0698	0.0252
802	SLU 74	0.74	2.29	70.69	0.3387	-0.0711	0.0255
802	SLU 75	0.73	2.26	70.68	0.3405	-0.0711	0.0256
802	SLU 76	0.72	2.21	70.28	0.3388	-0.0706	0.0255
802	SLU 77	0.75	2.31	71.3	0.3413	-0.0719	0.0257
802	SLU 78	0.74	2.28	71.29	0.3431	-0.0719	0.0259
802	SLU 79	0.75	2.28	70.91	0.3384	-0.0715	0.0255
802	SLU 80	0.74	2.25	70.9	0.3402	-0.0715	0.0256
802	SLU 81	0.76	2.33	72.24	0.3444	-0.073	0.0259
802	SLU 82	0.75	2.3	72.22	0.3463	-0.073	0.0261
802	SLU 83	0.77	2.36	72.85	0.347	-0.0738	0.0262
802	SLU 84	0.76	2.33	72.83	0.3488	-0.0738	0.0263
802	SLE RA 1	0.48	1.48	47.8	0.2262	-0.0464	0.017
802	SLE RA 2	0.47	1.45	47.79	0.2282	-0.0464	0.0172
802	SLE RA 3	0.49	1.52	48.47	0.2299	-0.0473	0.0174
802	SLE RA 4	0.49	1.5	48.46	0.2311	-0.0473	0.0175
802	SLE RA 5	0.48	1.46	48.2	0.23	-0.047	0.0174
802	SLE RA 6	0.5	1.53	48.88	0.2316	-0.0478	0.0175
802	SLE RA 7	0.5	1.51	48.87	0.2328	-0.0478	0.0176
802	SLE RA 8	0.5	1.51	48.62	0.2297	-0.0475	0.0174
802	SLE RA 9	0.49	1.49	48.61	0.2309	-0.0475	0.0175
802	SLE RA 10	0.52	1.6	51.74	0.2457	-0.0513	0.0186
802	SLE RA 11	0.54	1.67	52.42	0.2474	-0.0522	0.0188
802	SLE RA 12	0.54	1.65	52.42	0.2486	-0.0522	0.0189
802	SLE RA 13	0.53	1.61	52.15	0.2475	-0.0519	0.0188
802	SLE RA 14	0.55	1.68	52.83	0.2491	-0.0528	0.019
802	SLE RA 15	0.55	1.66	52.82	0.2503	-0.0528	0.0191
802	SLE RA 16	0.55	1.66	52.57	0.2472	-0.0525	0.0188
802	SLE RA 17	0.54	1.64	52.56	0.2484	-0.0525	0.0189
802	SLE RA 18	0.55	1.7	53.45	0.2512	-0.0535	0.0191
802	SLE RA 19	0.55	1.68	53.45	0.2524	-0.0535	0.0192
802	SLE RA 20	0.56	1.71	53.86	0.253	-0.054	0.0193
802	SLE RA 21	0.56	1.69	53.85	0.2542	-0.054	0.0194
802	SLE FR 1	0.48	1.48	47.8	0.2262	-0.0464	0.017
802	SLE FR 2	0.48	1.47	47.8	0.2266	-0.0464	0.017
802	SLE FR 3	0.49	1.49	47.97	0.2269	-0.0466	0.0171
802	SLE FR 4	0.5	1.54	49.5	0.2341	-0.0485	0.0177
802	SLE FR 5	0.51	1.55	49.66	0.2344	-0.0487	0.0177
802	SLE FR 6	0.52	1.59	50.63	0.2387	-0.0499	0.0181
802	SLE QP 1	0.48	1.48	47.8	0.2262	-0.0464	0.017
802	SLE QP 2	0.51	1.55	49.5	0.2337	-0.0485	0.0176
802	SLD 1	6.33	2.47	47.59	0.1504	-0.0093	0.0103
802	SLD 2	6.09	2.54	47.64	0.1451	-0.0104	0.0164
802	SLD 3	6.23	0.86	47.38	0.2199	-0.0086	0.0055
802	SLD 4	5.99	0.93	47.44	0.2146	-0.0096	0.0117
802	SLD 5	2.45	4.25	49.23	0.1043	-0.0377	0.0215
802	SLD 6	2.29	4.3	49.26	0.1008	-0.0384	0.0256
802	SLD 7	2.12	-1.11	48.55	0.3359	-0.0352	0.0057
802	SLD 8	1.96	-1.07	48.58	0.3324	-0.0359	0.0098
802	SLD 9	-0.95	4.16	50.42	0.135	-0.0611	0.0255
802	SLD 10	-1.11	4.2	50.45	0.1315	-0.0618	0.0296
802	SLD 11	-1.28	-1.21	49.74	0.3666	-0.0586	0.0097
802	SLD 12	-1.44	-1.16	49.77	0.3631	-0.0593	0.0137
802	SLD 13	-4.98	2.16	51.56	0.2528	-0.0874	0.0236
802	SLD 14	-5.22	2.23	51.62	0.2475	-0.0885	0.0297
802	SLD 15	-5.08	0.55	51.36	0.3223	-0.0867	0.0188
802	SLD 16	-5.32	0.62	51.41	0.317	-0.0877	0.025
802	SLV 1	14.13	3.66	45.01	0.0411	0.0432	0.0003
802	SLV 2	13.57	3.81	45.13	0.0288	0.0408	0.0146
802	SLV 3	13.9	0.01	44.54	0.1985	0.045	-0.0105
802	SLV 4	13.34	0.17	44.67	0.1862	0.0425	0.0038
802	SLV 5	5.04	7.68	48.83	-0.0606	-0.0232	0.0263
802	SLV 6	4.67	7.78	48.91	-0.0687	-0.0248	0.0356
802	SLV 7	4.27	-4.47	47.29	0.464	-0.0174	-0.0097
802	SLV 8	3.91	-4.37	47.37	0.456	-0.019	-0.0004
802	SLV 9	-2.9	7.46	51.63	0.0114	-0.078	0.0357
802	SLV 10	-3.26	7.56	51.71	0.0034	-0.0796	0.045
802	SLV 11	-3.66	-4.69	50.09	0.5361	-0.0722	-0.0003
802	SLV 12	-4.03	-4.59	50.17	0.528	-0.0738	0.009
802	SLV 13	-12.33	2.92	54.33	0.2813	-0.1396	0.0315
802	SLV 14	-12.89	3.08	54.46	0.2689	-0.142	0.0458
802	SLV 15	-12.56	-0.72	53.87	0.4387	-0.1378	0.0207
802	SLV 16	-13.12	-0.57	53.99	0.4263	-0.1403	0.035
802	CRTFP Ux+	0	0	0	0	0	0
802	CRTFP Ux-	0	0	0	0	0	0
802	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
802	CRTFP Uy-	0	0	0	0	0	0
803	SLU 1	0.47	1.48	47.52	0.2203	-0.0464	0.0141
803	SLU 2	0.45	1.43	47.49	0.2233	-0.0464	0.0145
803	SLU 3	0.48	1.54	48.56	0.226	-0.0478	0.0146
803	SLU 4	0.47	1.51	48.54	0.2278	-0.0477	0.0148
803	SLU 5	0.46	1.46	48.13	0.2261	-0.0472	0.0147
803	SLU 6	0.5	1.56	49.19	0.2288	-0.0486	0.0148
803	SLU 7	0.49	1.53	49.18	0.2306	-0.0486	0.015
803	SLU 8	0.49	1.53	48.79	0.2258	-0.0481	0.0146
803	SLU 9	0.48	1.5	48.78	0.2276	-0.0481	0.0147
803	SLU 10	0.52	1.67	53.65	0.2504	-0.054	0.0164
803	SLU 11	0.56	1.78	54.71	0.2531	-0.0554	0.0166
803	SLU 12	0.55	1.75	54.69	0.2549	-0.0554	0.0167
803	SLU 13	0.54	1.69	54.28	0.2531	-0.0549	0.0166
803	SLU 14	0.57	1.8	55.34	0.2558	-0.0563	0.0168
803	SLU 15	0.56	1.77	55.33	0.2577	-0.0563	0.0169
803	SLU 16	0.57	1.77	54.94	0.2529	-0.0558	0.0165
803	SLU 17	0.56	1.74	54.93	0.2547	-0.0558	0.0167
803	SLU 18	0.57	1.82	56.31	0.2589	-0.0573	0.0169
803	SLU 19	0.56	1.79	56.29	0.2607	-0.0573	0.0171
803	SLU 20	0.59	1.85	56.94	0.2617	-0.0582	0.0171
803	SLU 21	0.58	1.82	56.93	0.2635	-0.0582	0.0173
803	SLU 22	0.54	1.79	53.38	0.2663	-0.0539	0.0163
803	SLU 23	0.52	1.74	53.36	0.2693	-0.0539	0.0167
803	SLU 24	0.56	1.85	54.42	0.272	-0.0552	0.0168
803	SLU 25	0.55	1.82	54.41	0.2739	-0.0552	0.017
803	SLU 26	0.54	1.77	54	0.2721	-0.0547	0.0169
803	SLU 27	0.57	1.87	55.06	0.2748	-0.0561	0.017
803	SLU 28	0.56	1.84	55.04	0.2766	-0.0561	0.0172
803	SLU 29	0.57	1.84	54.66	0.2718	-0.0556	0.0168
803	SLU 30	0.56	1.81	54.64	0.2737	-0.0556	0.0169
803	SLU 31	0.6	1.98	59.51	0.2964	-0.0615	0.0186
803	SLU 32	0.63	2.09	60.57	0.2991	-0.0629	0.0188
803	SLU 33	0.62	2.06	60.56	0.3009	-0.0629	0.0189
803	SLU 34	0.61	2	60.15	0.2992	-0.0624	0.0188
803	SLU 35	0.64	2.11	61.21	0.3019	-0.0638	0.019
803	SLU 36	0.63	2.08	61.2	0.3037	-0.0638	0.0191
803	SLU 37	0.64	2.08	60.81	0.2989	-0.0633	0.0187
803	SLU 38	0.63	2.05	60.79	0.3007	-0.0633	0.0189
803	SLU 39	0.65	2.13	62.17	0.305	-0.0648	0.0191
803	SLU 40	0.64	2.1	62.16	0.3068	-0.0648	0.0193
803	SLU 41	0.66	2.16	62.81	0.3077	-0.0657	0.0193
803	SLU 42	0.65	2.13	62.8	0.3096	-0.0657	0.0195
803	SLU 43	0.58	1.82	59.76	0.2705	-0.0578	0.0176
803	SLU 44	0.57	1.77	59.74	0.2736	-0.0577	0.0179
803	SLU 45	0.6	1.88	60.8	0.2763	-0.0591	0.0181
803	SLU 46	0.59	1.85	60.79	0.2781	-0.0591	0.0183
803	SLU 47	0.58	1.79	60.38	0.2764	-0.0586	0.0182
803	SLU 48	0.61	1.9	61.44	0.2791	-0.06	0.0183
803	SLU 49	0.6	1.87	61.42	0.2809	-0.06	0.0185
803	SLU 50	0.61	1.87	61.03	0.2761	-0.0595	0.0181
803	SLU 51	0.6	1.84	61.02	0.2779	-0.0595	0.0182
803	SLU 52	0.64	2.01	65.89	0.3007	-0.0654	0.0199
803	SLU 53	0.67	2.11	66.95	0.3034	-0.0668	0.02
803	SLU 54	0.66	2.08	66.94	0.3052	-0.0668	0.0202
803	SLU 55	0.65	2.03	66.53	0.3034	-0.0663	0.0201
803	SLU 56	0.68	2.14	67.59	0.3061	-0.0676	0.0203
803	SLU 57	0.67	2.11	67.57	0.308	-0.0676	0.0204
803	SLU 58	0.68	2.1	67.19	0.3032	-0.0671	0.02
803	SLU 59	0.67	2.07	67.17	0.305	-0.0671	0.0202
803	SLU 60	0.69	2.16	68.55	0.3092	-0.0687	0.0204
803	SLU 61	0.68	2.13	68.54	0.311	-0.0687	0.0206
803	SLU 62	0.7	2.18	69.19	0.312	-0.0696	0.0206
803	SLU 63	0.69	2.15	69.17	0.3138	-0.0695	0.0208
803	SLU 64	0.66	2.13	65.63	0.3166	-0.0652	0.0198
803	SLU 65	0.64	2.08	65.6	0.3196	-0.0652	0.0201
803	SLU 66	0.67	2.19	66.67	0.3223	-0.0666	0.0203
803	SLU 67	0.66	2.16	66.65	0.3242	-0.0666	0.0205
803	SLU 68	0.65	2.11	66.24	0.3224	-0.0661	0.0204
803	SLU 69	0.68	2.21	67.3	0.3251	-0.0675	0.0205
803	SLU 70	0.67	2.18	67.29	0.3269	-0.0675	0.0207
803	SLU 71	0.68	2.18	66.9	0.3221	-0.067	0.0202
803	SLU 72	0.67	2.15	66.89	0.324	-0.067	0.0204
803	SLU 73	0.71	2.32	71.76	0.3467	-0.0729	0.0221
803	SLU 74	0.74	2.42	72.82	0.3494	-0.0743	0.0222
803	SLU 75	0.73	2.4	72.8	0.3512	-0.0742	0.0224
803	SLU 76	0.73	2.34	72.39	0.3495	-0.0737	0.0223
803	SLU 77	0.76	2.45	73.45	0.3522	-0.0751	0.0225
803	SLU 78	0.75	2.42	73.44	0.354	-0.0751	0.0226
803	SLU 79	0.76	2.41	73.05	0.3492	-0.0746	0.0222
803	SLU 80	0.75	2.39	73.04	0.351	-0.0746	0.0224
803	SLU 81	0.76	2.47	74.42	0.3552	-0.0762	0.0226
803	SLU 82	0.75	2.44	74.4	0.3571	-0.0762	0.0228
803	SLU 83	0.77	2.49	75.05	0.358	-0.077	0.0228
803	SLU 84	0.76	2.46	75.04	0.3598	-0.077	0.023
803	SLE RA 1	0.49	1.57	49.19	0.2334	-0.0485	0.0148
803	SLE RA 2	0.48	1.54	49.18	0.2354	-0.0485	0.015
803	SLE RA 3	0.5	1.61	49.89	0.2372	-0.0494	0.0151
803	SLE RA 4	0.49	1.59	49.88	0.2385	-0.0494	0.0152
803	SLE RA 5	0.49	1.55	49.6	0.2373	-0.0491	0.0151

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
803	SLE RA 6	0.51	1.62	50.31	0.2391	-0.05	0.0152
803	SLE RA 7	0.5	1.6	50.3	0.2403	-0.05	0.0153
803	SLE RA 8	0.51	1.6	50.04	0.2371	-0.0497	0.0151
803	SLE RA 9	0.5	1.58	50.03	0.2383	-0.0497	0.0152
803	SLE RA 10	0.53	1.7	53.28	0.2535	-0.0536	0.0163
803	SLE RA 11	0.55	1.77	53.99	0.2553	-0.0546	0.0164
803	SLE RA 12	0.54	1.75	53.98	0.2565	-0.0545	0.0165
803	SLE RA 13	0.53	1.71	53.7	0.2553	-0.0542	0.0164
803	SLE RA 14	0.56	1.78	54.41	0.2571	-0.0551	0.0165
803	SLE RA 15	0.55	1.76	54.4	0.2584	-0.0551	0.0166
803	SLE RA 16	0.55	1.76	54.14	0.2552	-0.0548	0.0163
803	SLE RA 17	0.55	1.74	54.13	0.2564	-0.0548	0.0165
803	SLE RA 18	0.56	1.8	55.05	0.2592	-0.0558	0.0166
803	SLE RA 19	0.55	1.78	55.05	0.2604	-0.0558	0.0168
803	SLE RA 20	0.57	1.81	55.48	0.261	-0.0564	0.0168
803	SLE RA 21	0.56	1.79	55.47	0.2623	-0.0564	0.0169
803	SLE FR 1	0.49	1.57	49.19	0.2334	-0.0485	0.0148
803	SLE FR 2	0.49	1.56	49.19	0.2338	-0.0485	0.0148
803	SLE FR 3	0.49	1.58	49.36	0.2341	-0.0488	0.0148
803	SLE FR 4	0.51	1.63	50.95	0.2415	-0.0507	0.0154
803	SLE FR 5	0.51	1.64	51.12	0.2419	-0.051	0.0154
803	SLE FR 6	0.52	1.68	52.12	0.2463	-0.0522	0.0157
803	SLE QP 1	0.49	1.57	49.19	0.2334	-0.0485	0.0148
803	SLE QP 2	0.51	1.64	50.95	0.2411	-0.0507	0.0153
803	SLD 1	6.33	2.54	47.95	0.1478	-0.0134	0.0052
803	SLD 2	6.09	2.64	48.03	0.1422	-0.0143	0.0124
803	SLD 3	6.23	0.9	47.72	0.2179	-0.0124	0
803	SLD 4	5.99	1	47.81	0.2124	-0.0133	0.0072
803	SLD 5	2.45	4.38	50.37	0.1077	-0.0408	0.0189
803	SLD 6	2.29	4.44	50.43	0.104	-0.0415	0.0237
803	SLD 7	2.12	-1.09	49.63	0.3416	-0.0376	0.0015
803	SLD 8	1.96	-1.02	49.69	0.3379	-0.0382	0.0063
803	SLD 9	-0.94	4.3	52.22	0.1444	-0.0633	0.0244
803	SLD 10	-1.1	4.36	52.27	0.1407	-0.0639	0.0292
803	SLD 11	-1.27	-1.17	51.48	0.3782	-0.06	0.007
803	SLD 12	-1.43	-1.1	51.53	0.3745	-0.0606	0.0118
803	SLD 13	-4.97	2.27	54.1	0.2699	-0.0881	0.0235
803	SLD 14	-5.21	2.38	54.18	0.2643	-0.0891	0.0307
803	SLD 15	-5.07	0.63	53.88	0.3401	-0.0871	0.0183
803	SLD 16	-5.31	0.74	53.96	0.3345	-0.0881	0.0255
803	SLV 1	14.12	3.69	43.91	0.025	0.0368	-0.0085
803	SLV 2	13.56	3.93	44.1	0.0121	0.0345	0.0083
803	SLV 3	13.89	-0.02	43.4	0.1839	0.039	-0.0204
803	SLV 4	13.33	0.22	43.59	0.171	0.0368	-0.0036
803	SLV 5	5.04	7.84	49.57	-0.0624	-0.0275	0.0232
803	SLV 6	4.68	8	49.7	-0.0708	-0.0289	0.0341
803	SLV 7	4.27	-4.53	47.89	0.4672	-0.02	-0.0163
803	SLV 8	3.91	-4.37	48.01	0.4588	-0.0215	-0.0054
803	SLV 9	-2.89	7.65	53.89	0.0235	-0.08	0.036
803	SLV 10	-3.26	7.81	54.02	0.015	-0.0814	0.047
803	SLV 11	-3.66	-4.72	52.21	0.5531	-0.0725	-0.0035
803	SLV 12	-4.02	-4.56	52.33	0.5447	-0.074	0.0075
803	SLV 13	-12.31	3.06	58.31	0.3113	-0.1382	0.0343
803	SLV 14	-12.88	3.3	58.5	0.2984	-0.1405	0.0511
803	SLV 15	-12.55	-0.65	57.81	0.4702	-0.136	0.0224
803	SLV 16	-13.11	-0.41	58	0.4572	-0.1382	0.0392
803	CRTFP Ux+	0	0	0	0	0	0
803	CRTFP Ux-	0	0	0	0	0	0
803	CRTFP Uy+	0	0	0	0	0	0
803	CRTFP Uy-	0	0	0	0	0	0
804	SLU 1	0.42	1.41	44.43	0.2079	0.7954	-0.0168
804	SLU 2	0.41	1.37	44.41	0.2107	0.795	-0.0157
804	SLU 3	0.44	1.47	45.41	0.2133	0.8127	-0.0175
804	SLU 4	0.43	1.44	45.4	0.215	0.8124	-0.0168
804	SLU 5	0.42	1.39	45.01	0.2134	0.8056	-0.016
804	SLU 6	0.45	1.49	46.01	0.216	0.8233	-0.0178
804	SLU 7	0.44	1.46	46	0.2177	0.823	-0.0171
804	SLU 8	0.45	1.46	45.63	0.2133	0.8166	-0.0174
804	SLU 9	0.44	1.43	45.62	0.215	0.8163	-0.0167
804	SLU 10	0.48	1.6	50.2	0.2362	0.8977	-0.0185
804	SLU 11	0.5	1.69	51.2	0.2388	0.9154	-0.0203
804	SLU 12	0.5	1.67	51.19	0.2405	0.9151	-0.0196
804	SLU 13	0.49	1.62	50.8	0.2389	0.9083	-0.0188
804	SLU 14	0.52	1.71	51.8	0.2415	0.926	-0.0206
804	SLU 15	0.51	1.69	51.79	0.2432	0.9257	-0.0199
804	SLU 16	0.51	1.68	51.43	0.2388	0.9193	-0.0202
804	SLU 17	0.51	1.66	51.41	0.2404	0.919	-0.0195
804	SLU 18	0.52	1.74	52.71	0.2443	0.9421	-0.0209
804	SLU 19	0.51	1.71	52.69	0.246	0.9419	-0.0202
804	SLU 20	0.53	1.76	53.31	0.247	0.9527	-0.0212
804	SLU 21	0.52	1.73	53.29	0.2487	0.9525	-0.0205
804	SLU 22	0.49	1.71	49.96	0.2511	0.8931	-0.0207
804	SLU 23	0.47	1.66	49.94	0.2539	0.8927	-0.0195
804	SLU 24	0.5	1.76	50.94	0.2566	0.9104	-0.0213
804	SLU 25	0.49	1.73	50.93	0.2582	0.9102	-0.0206
804	SLU 26	0.49	1.68	50.54	0.2566	0.9033	-0.0198
804	SLU 27	0.52	1.78	51.54	0.2593	0.921	-0.0216
804	SLU 28	0.51	1.75	51.53	0.2609	0.9208	-0.0209
804	SLU 29	0.51	1.75	51.16	0.2565	0.9143	-0.0213
804	SLU 30	0.5	1.72	51.15	0.2582	0.9141	-0.0206

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
804	SLU 31	0.54	1.89	55.73	0.2794	0.9954	-0.0224
804	SLU 32	0.57	1.98	56.73	0.282	1.0131	-0.0242
804	SLU 33	0.56	1.96	56.72	0.2837	1.0129	-0.0235
804	SLU 34	0.55	1.91	56.33	0.2821	1.006	-0.0226
804	SLU 35	0.58	2.01	57.33	0.2847	1.0237	-0.0245
804	SLU 36	0.57	1.98	57.32	0.2864	1.0235	-0.0238
804	SLU 37	0.58	1.97	56.95	0.282	1.017	-0.0241
804	SLU 38	0.57	1.95	56.94	0.2837	1.0168	-0.0234
804	SLU 39	0.59	2.03	58.23	0.2875	1.0398	-0.0247
804	SLU 40	0.58	2	58.22	0.2892	1.0396	-0.024
804	SLU 41	0.6	2.05	58.83	0.2902	1.0504	-0.025
804	SLU 42	0.59	2.02	58.82	0.2919	1.0502	-0.0243
804	SLU 43	0.53	1.74	55.87	0.2554	1.0005	-0.0206
804	SLU 44	0.51	1.69	55.85	0.2582	1.0001	-0.0194
804	SLU 45	0.54	1.79	56.85	0.2609	1.0178	-0.0212
804	SLU 46	0.53	1.76	56.83	0.2626	1.0175	-0.0205
804	SLU 47	0.52	1.72	56.45	0.2609	1.0107	-0.0197
804	SLU 48	0.55	1.81	57.45	0.2636	1.0284	-0.0215
804	SLU 49	0.54	1.79	57.43	0.2653	1.0281	-0.0208
804	SLU 50	0.55	1.78	57.07	0.2608	1.0217	-0.0211
804	SLU 51	0.54	1.75	57.05	0.2625	1.0214	-0.0204
804	SLU 52	0.58	1.92	61.64	0.2837	1.1028	-0.0222
804	SLU 53	0.61	2.01	62.64	0.2864	1.1205	-0.024
804	SLU 54	0.6	1.99	62.62	0.2881	1.1202	-0.0233
804	SLU 55	0.59	1.94	62.24	0.2864	1.1134	-0.0225
804	SLU 56	0.62	2.04	63.24	0.2891	1.1311	-0.0243
804	SLU 57	0.61	2.01	63.22	0.2908	1.1308	-0.0236
804	SLU 58	0.62	2.01	62.86	0.2863	1.1244	-0.024
804	SLU 59	0.61	1.98	62.85	0.288	1.1241	-0.0233
804	SLU 60	0.62	2.06	64.14	0.2918	1.1472	-0.0246
804	SLU 61	0.61	2.03	64.13	0.2935	1.147	-0.0239
804	SLU 62	0.64	2.08	64.74	0.2945	1.1578	-0.0249
804	SLU 63	0.63	2.05	64.73	0.2962	1.1576	-0.0242
804	SLU 64	0.59	2.03	61.4	0.2986	1.0982	-0.0244
804	SLU 65	0.58	1.99	61.37	0.3014	1.0978	-0.0233
804	SLU 66	0.61	2.08	62.37	0.3041	1.1155	-0.0251
804	SLU 67	0.6	2.06	62.36	0.3058	1.1153	-0.0244
804	SLU 68	0.59	2.01	61.97	0.3041	1.1084	-0.0235
804	SLU 69	0.62	2.1	62.97	0.3068	1.1261	-0.0254
804	SLU 70	0.61	2.08	62.96	0.3085	1.1259	-0.0247
804	SLU 71	0.62	2.07	62.6	0.304	1.1194	-0.025
804	SLU 72	0.61	2.05	62.58	0.3057	1.1192	-0.0243
804	SLU 73	0.65	2.21	67.17	0.3269	1.2005	-0.0261
804	SLU 74	0.68	2.31	68.17	0.3296	1.2182	-0.0279
804	SLU 75	0.67	2.28	68.15	0.3313	1.218	-0.0272
804	SLU 76	0.66	2.23	67.77	0.3296	1.2111	-0.0264
804	SLU 77	0.69	2.33	68.77	0.3323	1.2288	-0.0282
804	SLU 78	0.68	2.3	68.75	0.334	1.2286	-0.0275
804	SLU 79	0.69	2.3	68.39	0.3295	1.2221	-0.0278
804	SLU 80	0.68	2.27	68.37	0.3312	1.2219	-0.0271
804	SLU 81	0.69	2.35	69.67	0.335	1.2449	-0.0285
804	SLU 82	0.68	2.33	69.66	0.3367	1.2447	-0.0278
804	SLU 83	0.7	2.37	70.27	0.3377	1.2555	-0.0287
804	SLU 84	0.69	2.35	70.26	0.3394	1.2553	-0.028
804	SLE RA 1	0.44	1.5	46.01	0.2202	0.8233	-0.0179
804	SLE RA 2	0.43	1.47	46	0.2221	0.823	-0.0172
804	SLE RA 3	0.45	1.53	46.66	0.2239	0.8348	-0.0184
804	SLE RA 4	0.45	1.51	46.66	0.225	0.8347	-0.0179
804	SLE RA 5	0.44	1.48	46.4	0.2239	0.8301	-0.0174
804	SLE RA 6	0.46	1.55	47.06	0.2257	0.8419	-0.0186
804	SLE RA 7	0.45	1.53	47.06	0.2268	0.8417	-0.0181
804	SLE RA 8	0.46	1.53	46.81	0.2238	0.8374	-0.0183
804	SLE RA 9	0.45	1.51	46.8	0.2249	0.8373	-0.0179
804	SLE RA 10	0.48	1.62	49.86	0.2391	0.8915	-0.019
804	SLE RA 11	0.5	1.68	50.53	0.2409	0.9033	-0.0203
804	SLE RA 12	0.49	1.67	50.52	0.242	0.9031	-0.0198
804	SLE RA 13	0.48	1.63	50.26	0.2409	0.8986	-0.0192
804	SLE RA 14	0.5	1.7	50.93	0.2427	0.9104	-0.0204
804	SLE RA 15	0.5	1.68	50.92	0.2438	0.9102	-0.02
804	SLE RA 16	0.5	1.68	50.67	0.2408	0.9059	-0.0202
804	SLE RA 17	0.5	1.66	50.66	0.2419	0.9057	-0.0197
804	SLE RA 18	0.51	1.71	51.53	0.2445	0.9211	-0.0206
804	SLE RA 19	0.5	1.69	51.52	0.2456	0.921	-0.0202
804	SLE RA 20	0.51	1.73	51.93	0.2463	0.9282	-0.0208
804	SLE RA 21	0.51	1.71	51.92	0.2474	0.928	-0.0204
804	SLE FR 1	0.44	1.5	46.01	0.2202	0.8233	-0.0179
804	SLE FR 2	0.44	1.49	46.01	0.2206	0.8232	-0.0178
804	SLE FR 3	0.45	1.5	46.17	0.2209	0.8261	-0.018
804	SLE FR 4	0.46	1.56	47.66	0.2279	0.8526	-0.0186
804	SLE FR 5	0.47	1.57	47.83	0.2282	0.8555	-0.0188
804	SLE FR 6	0.47	1.6	48.77	0.2323	0.8722	-0.0193
804	SLE QP 1	0.44	1.5	46.01	0.2202	0.8233	-0.0179
804	SLE QP 2	0.46	1.56	47.67	0.2275	0.8526	-0.0187
804	SLD 1	5.77	2.36	44.03	0.1333	0.8105	-0.0445
804	SLD 2	5.55	2.49	44.13	0.1279	0.8117	-0.0395
804	SLD 3	5.67	0.84	43.8	0.1982	0.8072	-0.0204
804	SLD 4	5.45	0.98	43.9	0.1928	0.8084	-0.0153
804	SLD 5	2.23	4.08	46.91	0.1018	0.8448	-0.064
804	SLD 6	2.09	4.17	46.97	0.0982	0.8456	-0.0607
804	SLD 7	1.93	-0.98	46.14	0.3181	0.8337	0.0165

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
804	SLD 8	1.78	-0.89	46.21	0.3146	0.8345	0.0198
804	SLD 9	-0.86	4.02	49.13	0.1404	0.8708	-0.0573
804	SLD 10	-1	4.1	49.19	0.1369	0.8716	-0.0539
804	SLD 11	-1.16	-1.05	48.36	0.3568	0.8596	0.0232
804	SLD 12	-1.31	-0.96	48.43	0.3532	0.8604	0.0265
804	SLD 13	-4.53	2.15	51.44	0.2621	0.8969	-0.0221
804	SLD 14	-4.75	2.28	51.54	0.2568	0.8981	-0.0171
804	SLD 15	-4.62	0.63	51.21	0.3271	0.8936	0.002
804	SLD 16	-4.84	0.76	51.31	0.3217	0.8948	0.0071
804	SLV 1	12.86	3.39	39.15	0.0092	0.7538	-0.0782
804	SLV 2	12.35	3.69	39.37	-0.0032	0.7566	-0.0664
804	SLV 3	12.65	-0.05	38.62	0.1561	0.7463	-0.0235
804	SLV 4	12.14	0.25	38.85	0.1437	0.7491	-0.0117
804	SLV 5	4.59	7.27	45.86	-0.0587	0.834	-0.1216
804	SLV 6	4.26	7.47	46.01	-0.0668	0.8358	-0.1139
804	SLV 7	3.89	-4.19	44.13	0.4312	0.8087	0.0607
804	SLV 8	3.55	-3.99	44.27	0.4231	0.8106	0.0684
804	SLV 9	-2.63	7.12	51.06	0.0319	0.8947	-0.1058
804	SLV 10	-2.96	7.31	51.21	0.0238	0.8965	-0.0982
804	SLV 11	-3.33	-4.35	49.33	0.5218	0.8695	0.0764
804	SLV 12	-3.67	-4.15	49.47	0.5137	0.8713	0.0841
804	SLV 13	-11.21	2.87	56.48	0.3112	0.9562	-0.0258
804	SLV 14	-11.72	3.17	56.71	0.2988	0.959	-0.014
804	SLV 15	-11.42	-0.57	55.96	0.4582	0.9486	0.0289
804	SLV 16	-11.94	-0.27	56.19	0.4458	0.9515	0.0407
804	CRTFP Ux+	0	0	0	0	0	0
804	CRTFP Ux-	0	0	0	0	0	0
804	CRTFP Uy+	0	0	0	0	0	0
804	CRTFP Uy-	0	0	0	0	0	0
806	SLU 1	0.79	2.74	85.33	-0.0668	3.2483	-0.1029
806	SLU 2	0.76	2.66	85.29	-0.0644	3.2476	-0.0988
806	SLU 3	0.81	2.84	87.22	-0.0675	3.3184	-0.1067
806	SLU 4	0.8	2.79	87.19	-0.0661	3.3179	-0.1042
806	SLU 5	0.78	2.7	86.45	-0.0654	3.2906	-0.1004
806	SLU 6	0.84	2.88	88.38	-0.0685	3.3614	-0.1084
806	SLU 7	0.82	2.84	88.35	-0.0671	3.361	-0.1059
806	SLU 8	0.83	2.82	87.65	-0.0687	3.3344	-0.1062
806	SLU 9	0.82	2.78	87.62	-0.0673	3.3339	-0.1037
806	SLU 10	0.88	3.1	96.45	-0.0746	3.6647	-0.1152
806	SLU 11	0.94	3.28	98.39	-0.0777	3.7355	-0.1231
806	SLU 12	0.92	3.23	98.36	-0.0763	3.7351	-0.1206
806	SLU 13	0.9	3.14	97.61	-0.0756	3.7077	-0.1168
806	SLU 14	0.96	3.32	99.55	-0.0787	3.7785	-0.1248
806	SLU 15	0.94	3.27	99.52	-0.0773	3.7781	-0.1223
806	SLU 16	0.96	3.26	98.82	-0.0789	3.7515	-0.1226
806	SLU 17	0.94	3.21	98.79	-0.0775	3.7511	-0.1201
806	SLU 18	0.96	3.36	101.29	-0.0813	3.8442	-0.1263
806	SLU 19	0.95	3.32	101.26	-0.0799	3.8438	-0.1238
806	SLU 20	0.99	3.4	102.45	-0.0823	3.8872	-0.128
806	SLU 21	0.97	3.36	102.42	-0.0809	3.8868	-0.1255
806	SLU 22	0.91	3.3	96.01	-0.0613	3.6393	-0.1244
806	SLU 23	0.88	3.23	95.97	-0.0589	3.6386	-0.1203
806	SLU 24	0.94	3.41	97.9	-0.062	3.7094	-0.1282
806	SLU 25	0.92	3.36	97.87	-0.0606	3.7089	-0.1258
806	SLU 26	0.9	3.27	97.13	-0.0599	3.6816	-0.1219
806	SLU 27	0.96	3.45	99.06	-0.063	3.7524	-0.1299
806	SLU 28	0.94	3.4	99.03	-0.0616	3.752	-0.1274
806	SLU 29	0.96	3.39	98.33	-0.0632	3.7253	-0.1277
806	SLU 30	0.94	3.34	98.3	-0.0618	3.7249	-0.1252
806	SLU 31	1.01	3.66	107.14	-0.0691	4.0557	-0.1367
806	SLU 32	1.06	3.84	109.07	-0.0722	4.1265	-0.1446
806	SLU 33	1.04	3.8	109.04	-0.0708	4.1261	-0.1422
806	SLU 34	1.03	3.71	108.29	-0.07	4.0987	-0.1383
806	SLU 35	1.08	3.88	110.23	-0.0732	4.1695	-0.1463
806	SLU 36	1.07	3.84	110.2	-0.0717	4.1691	-0.1438
806	SLU 37	1.08	3.82	109.5	-0.0734	4.1425	-0.1441
806	SLU 38	1.06	3.78	109.47	-0.072	4.142	-0.1416
806	SLU 39	1.09	3.93	111.97	-0.0758	4.2352	-0.1478
806	SLU 40	1.07	3.88	111.94	-0.0744	4.2348	-0.1454
806	SLU 41	1.11	3.97	113.13	-0.0768	4.2782	-0.1495
806	SLU 42	1.09	3.92	113.1	-0.0754	4.2778	-0.147
806	SLU 43	0.98	3.37	107.27	-0.0887	4.0888	-0.1264
806	SLU 44	0.95	3.29	107.22	-0.0864	4.088	-0.1222
806	SLU 45	1.01	3.47	109.16	-0.0895	4.1588	-0.1302
806	SLU 46	0.99	3.42	109.13	-0.0881	4.1584	-0.1277
806	SLU 47	0.98	3.33	108.38	-0.0873	4.1311	-0.1239
806	SLU 48	1.03	3.51	110.32	-0.0904	4.2018	-0.1319
806	SLU 49	1.01	3.46	110.29	-0.089	4.2014	-0.1294
806	SLU 50	1.03	3.45	109.59	-0.0907	4.1748	-0.1297
806	SLU 51	1.01	3.4	109.56	-0.0893	4.1744	-0.1272
806	SLU 52	1.08	3.73	118.39	-0.0965	4.5052	-0.1386
806	SLU 53	1.13	3.9	120.32	-0.0997	4.5759	-0.1466
806	SLU 54	1.11	3.86	120.3	-0.0982	4.5755	-0.1441
806	SLU 55	1.1	3.77	119.55	-0.0975	4.5482	-0.1403
806	SLU 56	1.15	3.95	121.48	-0.1006	4.619	-0.1483
806	SLU 57	1.14	3.9	121.46	-0.0992	4.6185	-0.1458
806	SLU 58	1.15	3.89	120.76	-0.1009	4.5919	-0.1461
806	SLU 59	1.13	3.84	120.73	-0.0994	4.5915	-0.1436
806	SLU 60	1.16	3.99	123.22	-0.1033	4.6846	-0.1498
806	SLU 61	1.14	3.94	123.2	-0.1019	4.6842	-0.1473

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
806	SLU 62	1.18	4.03	124.38	-0.1043	4.7277	-0.1515
806	SLU 63	1.16	3.99	124.36	-0.1028	4.7272	-0.149
806	SLU 64	1.11	3.93	117.95	-0.0832	4.4797	-0.1479
806	SLU 65	1.08	3.86	117.9	-0.0808	4.479	-0.1438
806	SLU 66	1.13	4.03	119.84	-0.084	4.5498	-0.1517
806	SLU 67	1.11	3.99	119.81	-0.0825	4.5494	-0.1492
806	SLU 68	1.1	3.9	119.06	-0.0818	4.5221	-0.1454
806	SLU 69	1.15	4.07	121	-0.0849	4.5928	-0.1534
806	SLU 70	1.14	4.03	120.97	-0.0835	4.5924	-0.1509
806	SLU 71	1.15	4.01	120.27	-0.0852	4.5658	-0.1512
806	SLU 72	1.13	3.97	120.24	-0.0837	4.5654	-0.1487
806	SLU 73	1.2	4.29	129.07	-0.091	4.8962	-0.1602
806	SLU 74	1.25	4.47	131.01	-0.0941	4.9669	-0.1681
806	SLU 75	1.24	4.42	130.98	-0.0927	4.9665	-0.1656
806	SLU 76	1.22	4.33	130.23	-0.092	4.9392	-0.1618
806	SLU 77	1.28	4.51	132.17	-0.0951	5.0099	-0.1698
806	SLU 78	1.26	4.47	132.14	-0.0937	5.0095	-0.1673
806	SLU 79	1.27	4.45	131.44	-0.0953	4.9829	-0.1676
806	SLU 80	1.26	4.41	131.41	-0.0939	4.9825	-0.1651
806	SLU 81	1.28	4.56	133.91	-0.0978	5.0756	-0.1713
806	SLU 82	1.26	4.51	133.88	-0.0963	5.0752	-0.1688
806	SLU 83	1.3	4.6	135.06	-0.0987	5.1187	-0.173
806	SLU 84	1.29	4.55	135.04	-0.0973	5.1182	-0.1705
806	SLE RA 1	0.82	2.9	88.38	-0.0652	3.36	-0.109
806	SLE RA 2	0.8	2.85	88.35	-0.0636	3.3596	-0.1063
806	SLE RA 3	0.84	2.97	89.64	-0.0657	3.4067	-0.1116
806	SLE RA 4	0.83	2.94	89.62	-0.0648	3.4064	-0.1099
806	SLE RA 5	0.82	2.88	89.13	-0.0643	3.3882	-0.1074
806	SLE RA 6	0.86	3	90.41	-0.0664	3.4354	-0.1127
806	SLE RA 7	0.84	2.97	90.4	-0.0654	3.4351	-0.111
806	SLE RA 8	0.85	2.96	89.93	-0.0665	3.4174	-0.1112
806	SLE RA 9	0.84	2.92	89.91	-0.0656	3.4171	-0.1096
806	SLE RA 10	0.89	3.14	95.8	-0.0704	3.6376	-0.1172
806	SLE RA 11	0.92	3.26	97.09	-0.0725	3.6848	-0.1225
806	SLE RA 12	0.91	3.23	97.07	-0.0716	3.6845	-0.1209
806	SLE RA 13	0.9	3.17	96.57	-0.0711	3.6663	-0.1183
806	SLE RA 14	0.94	3.29	97.86	-0.0731	3.7135	-0.1236
806	SLE RA 15	0.93	3.26	97.84	-0.0722	3.7132	-0.122
806	SLE RA 16	0.94	3.25	97.37	-0.0733	3.6955	-0.1222
806	SLE RA 17	0.92	3.22	97.36	-0.0724	3.6952	-0.1205
806	SLE RA 18	0.94	3.32	99.02	-0.0749	3.7573	-0.1247
806	SLE RA 19	0.93	3.29	99	-0.074	3.757	-0.123
806	SLE RA 20	0.96	3.34	99.79	-0.0756	3.786	-0.1258
806	SLE RA 21	0.94	3.31	99.77	-0.0746	3.7857	-0.1241
806	SLE FR 1	0.82	2.9	88.38	-0.0652	3.36	-0.109
806	SLE FR 2	0.82	2.89	88.38	-0.0649	3.3599	-0.1085
806	SLE FR 3	0.83	2.91	88.69	-0.0655	3.3715	-0.1095
806	SLE FR 4	0.86	3.01	91.57	-0.0678	3.4791	-0.1132
806	SLE FR 5	0.86	3.04	91.88	-0.0684	3.4907	-0.1142
806	SLE FR 6	0.88	3.11	93.7	-0.0701	3.5587	-0.1169
806	SLE QP 1	0.82	2.9	88.38	-0.0652	3.36	-0.109
806	SLE QP 2	0.86	3.02	91.57	-0.0681	3.4792	-0.1137
806	SLD 1	10.83	4.08	83.23	-0.1253	3.5279	-0.1651
806	SLD 2	10.42	4.41	83.45	-0.1302	3.5299	-0.1627
806	SLD 3	10.66	1.19	82.73	-0.0717	3.5343	-0.0479
806	SLD 4	10.24	1.51	82.95	-0.0767	3.5363	-0.0455
806	SLD 5	4.19	7.68	89.8	-0.1656	3.4838	-0.3075
806	SLD 6	3.91	7.89	89.94	-0.1689	3.4851	-0.3059
806	SLD 7	3.61	-1.98	88.12	0.0129	3.505	0.0835
806	SLD 8	3.34	-1.76	88.26	0.0096	3.5064	0.0851
806	SLD 9	-1.62	7.81	94.89	-0.1459	3.452	-0.3125
806	SLD 10	-1.89	8.03	95.03	-0.1492	3.4534	-0.3109
806	SLD 11	-2.19	-1.84	93.21	0.0326	3.4733	0.0784
806	SLD 12	-2.47	-1.63	93.35	0.0293	3.4746	0.08
806	SLD 13	-8.52	4.53	100.2	-0.0596	3.4221	-0.182
806	SLD 14	-8.94	4.86	100.42	-0.0646	3.4241	-0.1796
806	SLD 15	-8.7	1.64	99.7	-0.0061	3.4285	-0.0647
806	SLD 16	-9.11	1.97	99.92	-0.011	3.4305	-0.0623
806	SLV 1	24.17	5.38	72.04	-0.2002	3.5988	-0.2291
806	SLV 2	23.2	6.14	72.54	-0.2118	3.6035	-0.2235
806	SLV 3	23.77	-1.18	70.9	-0.079	3.6137	0.0365
806	SLV 4	22.8	-0.42	71.4	-0.0906	3.6184	0.0421
806	SLV 5	8.62	13.55	87.36	-0.2896	3.4916	-0.5521
806	SLV 6	8	14.04	87.68	-0.2971	3.4946	-0.5485
806	SLV 7	7.3	-8.32	83.56	0.1144	3.5414	0.3331
806	SLV 8	6.67	-7.82	83.88	0.1069	3.5445	0.3368
806	SLV 9	-4.95	13.87	99.27	-0.2432	3.414	-0.5642
806	SLV 10	-5.58	14.37	99.59	-0.2507	3.417	-0.5606
806	SLV 11	-6.28	-7.99	95.47	0.1608	3.4638	0.321
806	SLV 12	-6.91	-7.5	95.79	0.1533	3.4668	0.3247
806	SLV 13	-21.09	6.47	111.75	-0.0457	3.34	-0.2695
806	SLV 14	-22.05	7.23	112.25	-0.0572	3.3447	-0.2639
806	SLV 15	-21.49	-0.09	110.61	0.0755	3.3549	-0.004
806	SLV 16	-22.45	0.67	111.11	0.064	3.3596	0.0016
806	CRTFP Ux+	0	0	0	0	0	0
806	CRTFP Ux-	0	0	0	0	0	0
806	CRTFP Uy+	0	0	0	0	0	0
806	CRTFP Uy-	0	0	0	0	0	0
808	SLU 1	-0.63	0.04	30.23	-0.0137	-2.325	0.0108
808	SLU 2	-0.64	-0.04	30.25	-0.0136	-2.3266	-0.0104

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
808	SLU 3	-0.64	0.05	30.96	-0.0141	-2.3686	0.0123
808	SLU 4	-0.65	0	30.97	-0.014	-2.3695	-0.0004
808	SLU 5	-0.65	-0.04	30.71	-0.0138	-2.3539	-0.009
808	SLU 6	-0.65	0.05	31.42	-0.0143	-2.3959	0.0138
808	SLU 7	-0.66	0	31.43	-0.0142	-2.3969	0.001
808	SLU 8	-0.65	0.05	31.15	-0.0141	-2.3796	0.0137
808	SLU 9	-0.65	0	31.17	-0.0141	-2.3805	0.0009
808	SLU 10	-0.68	0.01	33.69	-0.0154	-2.5594	0.0042
808	SLU 11	-0.69	0.1	34.4	-0.0159	-2.6014	0.0269
808	SLU 12	-0.7	0.05	34.41	-0.0158	-2.6024	0.0142
808	SLU 13	-0.69	0.02	34.15	-0.0157	-2.5867	0.0056
808	SLU 14	-0.7	0.11	34.86	-0.0161	-2.6287	0.0284
808	SLU 15	-0.71	0.06	34.88	-0.0161	-2.6297	0.0157
808	SLU 16	-0.7	0.11	34.6	-0.016	-2.6124	0.0283
808	SLU 17	-0.7	0.06	34.61	-0.0159	-2.6134	0.0156
808	SLU 18	-0.7	0.12	35.15	-0.0163	-2.6576	0.0317
808	SLU 19	-0.7	0.07	35.16	-0.0163	-2.6585	0.0189
808	SLU 20	-0.71	0.13	35.61	-0.0165	-2.6849	0.0331
808	SLU 21	-0.71	0.08	35.62	-0.0165	-2.6858	0.0204
808	SLU 22	-0.69	0.11	33.75	-0.0154	-2.5585	0.0277
808	SLU 23	-0.7	0.02	33.77	-0.0153	-2.56	0.0065
808	SLU 24	-0.7	0.11	34.48	-0.0157	-2.6021	0.0293
808	SLU 25	-0.71	0.06	34.49	-0.0157	-2.603	0.0166
808	SLU 26	-0.71	0.03	34.23	-0.0155	-2.5874	0.008
808	SLU 27	-0.71	0.12	34.94	-0.0159	-2.6294	0.0307
808	SLU 28	-0.72	0.07	34.95	-0.0159	-2.6304	0.018
808	SLU 29	-0.71	0.12	34.67	-0.0158	-2.6131	0.0306
808	SLU 30	-0.71	0.07	34.69	-0.0158	-2.614	0.0179
808	SLU 31	-0.74	0.08	37.21	-0.0171	-2.7929	0.0212
808	SLU 32	-0.75	0.17	37.92	-0.0176	-2.8349	0.0439
808	SLU 33	-0.76	0.12	37.94	-0.0175	-2.8359	0.0312
808	SLU 34	-0.75	0.09	37.68	-0.0173	-2.8202	0.0226
808	SLU 35	-0.76	0.18	38.39	-0.0178	-2.8622	0.0453
808	SLU 36	-0.77	0.13	38.4	-0.0177	-2.8632	0.0326
808	SLU 37	-0.76	0.18	38.12	-0.0176	-2.8459	0.0452
808	SLU 38	-0.76	0.13	38.13	-0.0176	-2.8469	0.0325
808	SLU 39	-0.76	0.19	38.67	-0.018	-2.8911	0.0486
808	SLU 40	-0.76	0.14	38.68	-0.0179	-2.892	0.0359
808	SLU 41	-0.77	0.2	39.13	-0.0182	-2.9184	0.0501
808	SLU 42	-0.77	0.14	39.14	-0.0181	-2.9193	0.0373
808	SLU 43	-0.8	0.03	38.09	-0.0172	-2.9424	0.0082
808	SLU 44	-0.8	-0.06	38.11	-0.0171	-2.944	-0.013
808	SLU 45	-0.81	0.04	38.82	-0.0176	-2.986	0.0097
808	SLU 46	-0.82	-0.02	38.83	-0.0175	-2.987	-0.003
808	SLU 47	-0.81	-0.05	38.57	-0.0174	-2.9713	-0.0116
808	SLU 48	-0.82	0.04	39.28	-0.0178	-3.0133	0.0112
808	SLU 49	-0.83	-0.01	39.29	-0.0178	-3.0143	-0.0015
808	SLU 50	-0.82	0.04	39.02	-0.0177	-2.997	0.0111
808	SLU 51	-0.82	-0.01	39.03	-0.0176	-2.998	-0.0016
808	SLU 52	-0.85	0	41.56	-0.019	-3.1768	0.0016
808	SLU 53	-0.86	0.09	42.26	-0.0194	-3.2188	0.0244
808	SLU 54	-0.86	0.04	42.28	-0.0194	-3.2198	0.0116
808	SLU 55	-0.86	0.01	42.02	-0.0192	-3.2041	0.0031
808	SLU 56	-0.87	0.1	42.73	-0.0197	-3.2462	0.0258
808	SLU 57	-0.87	0.05	42.74	-0.0196	-3.2471	0.0131
808	SLU 58	-0.86	0.1	42.46	-0.0195	-3.2298	0.0257
808	SLU 59	-0.87	0.05	42.47	-0.0195	-3.2308	0.013
808	SLU 60	-0.87	0.11	43.01	-0.0198	-3.275	0.0291
808	SLU 61	-0.87	0.06	43.02	-0.0198	-3.276	0.0164
808	SLU 62	-0.88	0.12	43.47	-0.0201	-3.3023	0.0305
808	SLU 63	-0.88	0.07	43.48	-0.02	-3.3033	0.0178
808	SLU 64	-0.86	0.1	41.61	-0.0189	-3.1759	0.0251
808	SLU 65	-0.86	0.01	41.63	-0.0188	-3.1775	0.004
808	SLU 66	-0.87	0.1	42.34	-0.0193	-3.2195	0.0267
808	SLU 67	-0.88	0.05	42.35	-0.0192	-3.2205	0.014
808	SLU 68	-0.87	0.02	42.1	-0.019	-3.2048	0.0054
808	SLU 69	-0.88	0.11	42.8	-0.0195	-3.2468	0.0281
808	SLU 70	-0.89	0.06	42.82	-0.0194	-3.2478	0.0154
808	SLU 71	-0.88	0.11	42.54	-0.0193	-3.2305	0.028
808	SLU 72	-0.88	0.06	42.55	-0.0193	-3.2315	0.0153
808	SLU 73	-0.91	0.07	45.08	-0.0206	-3.4103	0.0186
808	SLU 74	-0.92	0.16	45.79	-0.0211	-3.4523	0.0413
808	SLU 75	-0.92	0.11	45.8	-0.021	-3.4533	0.0286
808	SLU 76	-0.92	0.07	45.54	-0.0209	-3.4376	0.02
808	SLU 77	-0.93	0.17	46.25	-0.0213	-3.4797	0.0428
808	SLU 78	-0.93	0.12	46.26	-0.0213	-3.4806	0.03
808	SLU 79	-0.92	0.17	45.98	-0.0212	-3.4633	0.0427
808	SLU 80	-0.93	0.11	45.99	-0.0211	-3.4643	0.0299
808	SLU 81	-0.92	0.18	46.53	-0.0215	-3.5085	0.046
808	SLU 82	-0.93	0.13	46.54	-0.0215	-3.5095	0.0333
808	SLU 83	-0.93	0.18	46.99	-0.0217	-3.5358	0.0475
808	SLU 84	-0.94	0.13	47.01	-0.0217	-3.5368	0.0348
808	SLE RA 1	-0.65	0.06	31.24	-0.0142	-2.3917	0.0156
808	SLE RA 2	-0.65	0	31.25	-0.0141	-2.3927	0.0015
808	SLE RA 3	-0.66	0.06	31.72	-0.0144	-2.4208	0.0166
808	SLE RA 4	-0.66	0.03	31.73	-0.0144	-2.4214	0.0082
808	SLE RA 5	-0.66	0.01	31.56	-0.0143	-2.4109	0.0025
808	SLE RA 6	-0.66	0.07	32.03	-0.0146	-2.439	0.0176
808	SLE RA 7	-0.67	0.03	32.04	-0.0145	-2.4396	0.0091
808	SLE RA 8	-0.66	0.07	31.85	-0.0145	-2.4281	0.0175

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
808	SLE RA 9	-0.66	0.03	31.86	-0.0144	-2.4287	0.0091
808	SLE RA 10	-0.68	0.04	33.55	-0.0153	-2.548	0.0112
808	SLE RA 11	-0.69	0.1	34.02	-0.0156	-2.576	0.0264
808	SLE RA 12	-0.69	0.07	34.03	-0.0156	-2.5766	0.0179
808	SLE RA 13	-0.69	0.05	33.85	-0.0155	-2.5662	0.0122
808	SLE RA 14	-0.69	0.11	34.33	-0.0158	-2.5942	0.0274
808	SLE RA 15	-0.7	0.07	34.33	-0.0157	-2.5948	0.0189
808	SLE RA 16	-0.69	0.11	34.15	-0.0157	-2.5833	0.0273
808	SLE RA 17	-0.69	0.07	34.16	-0.0157	-2.5839	0.0188
808	SLE RA 18	-0.69	0.11	34.52	-0.0159	-2.6134	0.0295
808	SLE RA 19	-0.69	0.08	34.52	-0.0159	-2.6141	0.0211
808	SLE RA 20	-0.7	0.12	34.82	-0.0161	-2.6316	0.0305
808	SLE RA 21	-0.7	0.08	34.83	-0.016	-2.6323	0.022
808	SLE FR 1	-0.65	0.06	31.24	-0.0142	-2.3917	0.0156
808	SLE FR 2	-0.65	0.05	31.24	-0.0142	-2.3919	0.0128
808	SLE FR 3	-0.65	0.06	31.36	-0.0142	-2.399	0.016
808	SLE FR 4	-0.66	0.06	32.22	-0.0147	-2.4584	0.017
808	SLE FR 5	-0.66	0.08	32.34	-0.0148	-2.4655	0.0202
808	SLE FR 6	-0.67	0.09	32.88	-0.015	-2.5025	0.0226
808	SLE QP 1	-0.65	0.06	31.24	-0.0142	-2.3917	0.0156
808	SLE QP 2	-0.66	0.08	32.22	-0.0147	-2.4582	0.0198
808	SLD 1	1.78	0.63	40.96	-0.0224	-3.0198	0.1568
808	SLD 2	1.64	0.09	41.15	-0.021	-3.0373	0.0232
808	SLD 3	1.73	-0.59	41.11	-0.0205	-3.0575	-0.1481
808	SLD 4	1.59	-1.13	41.29	-0.019	-3.0751	-0.2818
808	SLD 5	0.18	2.19	34.59	-0.0203	-2.5662	0.5477
808	SLD 6	0.09	1.83	34.71	-0.0193	-2.5778	0.459
808	SLD 7	0	-1.87	35.07	-0.0137	-2.6921	-0.4687
808	SLD 8	-0.09	-2.23	35.2	-0.0127	-2.7038	-0.5574
808	SLD 9	-1.23	2.38	29.24	-0.0166	-2.2126	0.597
808	SLD 10	-1.32	2.03	29.37	-0.0157	-2.2243	0.5083
808	SLD 11	-1.4	-1.68	29.73	-0.0101	-2.3386	-0.4194
808	SLD 12	-1.5	-2.03	29.85	-0.0091	-2.3502	-0.5081
808	SLD 13	-2.91	1.28	23.15	-0.0104	-1.8413	0.3213
808	SLD 14	-3.05	0.74	23.33	-0.0089	-1.8589	0.1877
808	SLD 15	-2.96	0.06	23.29	-0.0084	-1.8791	0.0164
808	SLD 16	-3.1	-0.48	23.48	-0.0069	-1.8966	-0.1173
808	SLV 1	5.05	1.32	52.68	-0.0328	-3.7736	0.3278
808	SLV 2	4.72	0.06	53.11	-0.0294	-3.8144	0.0166
808	SLV 3	4.93	-1.44	53.01	-0.0283	-3.8596	-0.3618
808	SLV 4	4.61	-2.69	53.45	-0.0249	-3.9004	-0.673
808	SLV 5	1.29	4.85	37.77	-0.0275	-2.7151	1.2128
808	SLV 6	1.08	4.03	38.05	-0.0253	-2.7417	1.01
808	SLV 7	0.89	-4.34	38.89	-0.0126	-3.0019	-1.0859
808	SLV 8	0.68	-5.15	39.17	-0.0104	-3.0285	-1.2887
808	SLV 9	-2	5.3	25.27	-0.019	-1.8879	1.3282
808	SLV 10	-2.21	4.49	25.55	-0.0168	-1.9145	1.1254
808	SLV 11	-2.4	-3.88	26.39	-0.0041	-2.1747	-0.9704
808	SLV 12	-2.61	-4.69	26.67	-0.0019	-2.2013	-1.1732
808	SLV 13	-5.92	2.84	11	-0.0045	-1.016	0.7126
808	SLV 14	-6.25	1.59	11.43	-0.0011	-1.0568	0.4014
808	SLV 15	-6.04	0.09	11.33	0	-1.102	0.023
808	SLV 16	-6.37	-1.16	11.76	0.0034	-1.1428	-0.2882
808	CRTFP Ux+	0	0	0	0	0	0
808	CRTFP Ux-	0	0	0	0	0	0
808	CRTFP Uy+	0	0	0	0	0	0
808	CRTFP Uy-	0	0	0	0	0	0
811	SLU 1	0.66	0.26	34.23	-0.052	5.4812	-0.0921
811	SLU 2	0.66	0.24	34.23	-0.052	5.4821	-0.0847
811	SLU 3	0.68	0.27	35.03	-0.0534	5.5926	-0.0935
811	SLU 4	0.68	0.25	35.03	-0.0534	5.5931	-0.089
811	SLU 5	0.68	0.24	34.73	-0.0529	5.5516	-0.0834
811	SLU 6	0.69	0.26	35.53	-0.0543	5.6621	-0.0922
811	SLU 7	0.69	0.25	35.53	-0.0543	5.6626	-0.0877
811	SLU 8	0.68	0.25	35.23	-0.0538	5.6203	-0.0895
811	SLU 9	0.69	0.24	35.23	-0.0538	5.6208	-0.0851
811	SLU 10	0.7	0.35	38.11	-0.0587	6.0408	-0.1224
811	SLU 11	0.72	0.37	38.91	-0.06	6.1513	-0.1312
811	SLU 12	0.72	0.36	38.91	-0.06	6.1518	-0.1267
811	SLU 13	0.72	0.34	38.61	-0.0595	6.1104	-0.1211
811	SLU 14	0.73	0.37	39.41	-0.0609	6.2209	-0.1299
811	SLU 15	0.73	0.36	39.41	-0.0609	6.2214	-0.1254
811	SLU 16	0.73	0.36	39.11	-0.0604	6.179	-0.1273
811	SLU 17	0.73	0.35	39.11	-0.0604	6.1796	-0.1228
811	SLU 18	0.72	0.42	39.77	-0.0614	6.2794	-0.146
811	SLU 19	0.72	0.4	39.77	-0.0615	6.2799	-0.1415
811	SLU 20	0.73	0.41	40.27	-0.0623	6.3489	-0.1447
811	SLU 21	0.73	0.4	40.27	-0.0624	6.3495	-0.1402
811	SLU 22	0.72	0.37	38.16	-0.0585	6.0428	-0.1289
811	SLU 23	0.72	0.35	38.16	-0.0585	6.0437	-0.1214
811	SLU 24	0.74	0.37	38.96	-0.0599	6.1542	-0.1302
811	SLU 25	0.74	0.36	38.96	-0.0599	6.1547	-0.1257
811	SLU 26	0.73	0.34	38.66	-0.0594	6.1132	-0.1201
811	SLU 27	0.75	0.37	39.46	-0.0608	6.2237	-0.1289
811	SLU 28	0.75	0.35	39.46	-0.0608	6.2243	-0.1244
811	SLU 29	0.74	0.36	39.15	-0.0603	6.1819	-0.1263
811	SLU 30	0.75	0.35	39.16	-0.0603	6.1824	-0.1218
811	SLU 31	0.76	0.45	42.04	-0.0652	6.6024	-0.1591
811	SLU 32	0.78	0.48	42.84	-0.0665	6.7129	-0.1679
811	SLU 33	0.78	0.47	42.84	-0.0665	6.7135	-0.1635

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
811	SLU 34	0.77	0.45	42.54	-0.066	6.672	-0.1578
811	SLU 35	0.79	0.47	43.33	-0.0674	6.7825	-0.1666
811	SLU 36	0.79	0.46	43.34	-0.0674	6.783	-0.1622
811	SLU 37	0.78	0.47	43.03	-0.0669	6.7407	-0.164
811	SLU 38	0.79	0.45	43.03	-0.0669	6.7412	-0.1595
811	SLU 39	0.77	0.52	43.7	-0.0679	6.841	-0.1827
811	SLU 40	0.78	0.51	43.7	-0.068	6.8415	-0.1783
811	SLU 41	0.79	0.52	44.2	-0.0688	6.9106	-0.1814
811	SLU 42	0.79	0.5	44.2	-0.0689	6.9111	-0.177
811	SLU 43	0.83	0.31	43.16	-0.0653	6.933	-0.1072
811	SLU 44	0.84	0.28	43.16	-0.0654	6.9339	-0.0997
811	SLU 45	0.85	0.31	43.96	-0.0667	7.0444	-0.1085
811	SLU 46	0.86	0.3	43.96	-0.0668	7.0449	-0.1041
811	SLU 47	0.85	0.28	43.66	-0.0663	7.0034	-0.0984
811	SLU 48	0.87	0.31	44.46	-0.0676	7.1139	-0.1072
811	SLU 49	0.87	0.29	44.46	-0.0677	7.1144	-0.1028
811	SLU 50	0.86	0.3	44.15	-0.0671	7.0721	-0.1046
811	SLU 51	0.86	0.28	44.15	-0.0672	7.0726	-0.1001
811	SLU 52	0.88	0.39	47.03	-0.072	7.4926	-0.1374
811	SLU 53	0.9	0.42	47.83	-0.0734	7.6031	-0.1462
811	SLU 54	0.9	0.4	47.84	-0.0734	7.6036	-0.1418
811	SLU 55	0.89	0.39	47.53	-0.0729	7.5622	-0.1361
811	SLU 56	0.91	0.41	48.33	-0.0743	7.6727	-0.145
811	SLU 57	0.91	0.4	48.33	-0.0743	7.6732	-0.1405
811	SLU 58	0.9	0.41	48.03	-0.0737	7.6308	-0.1423
811	SLU 59	0.91	0.39	48.03	-0.0738	7.6314	-0.1378
811	SLU 60	0.89	0.46	48.69	-0.0748	7.7312	-0.1611
811	SLU 61	0.9	0.45	48.7	-0.0748	7.7317	-0.1566
811	SLU 62	0.91	0.45	49.19	-0.0757	7.8007	-0.1598
811	SLU 63	0.91	0.44	49.19	-0.0757	7.8013	-0.1553
811	SLU 64	0.89	0.41	47.08	-0.0718	7.4946	-0.1439
811	SLU 65	0.9	0.39	47.08	-0.0719	7.4955	-0.1364
811	SLU 66	0.91	0.41	47.88	-0.0733	7.606	-0.1453
811	SLU 67	0.92	0.4	47.88	-0.0733	7.6065	-0.1408
811	SLU 68	0.91	0.38	47.58	-0.0728	7.565	-0.1351
811	SLU 69	0.93	0.41	48.38	-0.0741	7.6755	-0.144
811	SLU 70	0.93	0.4	48.38	-0.0742	7.6761	-0.1395
811	SLU 71	0.92	0.4	48.08	-0.0736	7.6337	-0.1413
811	SLU 72	0.92	0.39	48.08	-0.0737	7.6342	-0.1368
811	SLU 73	0.94	0.5	50.96	-0.0785	8.0542	-0.1742
811	SLU 74	0.95	0.52	51.76	-0.0799	8.1647	-0.183
811	SLU 75	0.96	0.51	51.76	-0.0799	8.1653	-0.1785
811	SLU 76	0.95	0.49	51.46	-0.0794	8.1238	-0.1729
811	SLU 77	0.97	0.52	52.26	-0.0808	8.2343	-0.1817
811	SLU 78	0.97	0.5	52.26	-0.0808	8.2348	-0.1772
811	SLU 79	0.96	0.51	51.96	-0.0802	8.1924	-0.179
811	SLU 80	0.96	0.5	51.96	-0.0803	8.193	-0.1746
811	SLU 81	0.95	0.56	52.62	-0.0813	8.2928	-0.1978
811	SLU 82	0.95	0.55	52.62	-0.0813	8.2933	-0.1933
811	SLU 83	0.97	0.56	53.12	-0.0822	8.3624	-0.1965
811	SLU 84	0.97	0.55	53.12	-0.0822	8.3629	-0.192
811	SLE RA 1	0.67	0.29	35.35	-0.0538	5.6416	-0.1026
811	SLE RA 2	0.68	0.28	35.36	-0.0539	5.6422	-0.0976
811	SLE RA 3	0.69	0.29	35.89	-0.0548	5.7159	-0.1035
811	SLE RA 4	0.69	0.29	35.89	-0.0548	5.7163	-0.1005
811	SLE RA 5	0.69	0.28	35.69	-0.0545	5.6886	-0.0968
811	SLE RA 6	0.7	0.29	36.22	-0.0554	5.7623	-0.1027
811	SLE RA 7	0.7	0.28	36.22	-0.0554	5.7626	-0.0997
811	SLE RA 8	0.69	0.29	36.02	-0.055	5.7344	-0.1009
811	SLE RA 9	0.69	0.28	36.02	-0.055	5.7347	-0.0979
811	SLE RA 10	0.7	0.35	37.94	-0.0583	6.0147	-0.1228
811	SLE RA 11	0.71	0.37	38.47	-0.0592	6.0884	-0.1287
811	SLE RA 12	0.72	0.36	38.47	-0.0592	6.0888	-0.1257
811	SLE RA 13	0.71	0.35	38.27	-0.0589	6.0611	-0.1219
811	SLE RA 14	0.72	0.36	38.8	-0.0598	6.1348	-0.1278
811	SLE RA 15	0.73	0.36	38.81	-0.0598	6.1351	-0.1248
811	SLE RA 16	0.72	0.36	38.6	-0.0594	6.1069	-0.126
811	SLE RA 17	0.72	0.35	38.6	-0.0595	6.1072	-0.1231
811	SLE RA 18	0.71	0.39	39.05	-0.0601	6.1738	-0.1385
811	SLE RA 19	0.71	0.39	39.05	-0.0602	6.1741	-0.1356
811	SLE RA 20	0.72	0.39	39.38	-0.0607	6.2202	-0.1377
811	SLE RA 21	0.72	0.38	39.38	-0.0608	6.2205	-0.1347
811	SLE FR 1	0.67	0.29	35.35	-0.0538	5.6416	-0.1026
811	SLE FR 2	0.67	0.29	35.35	-0.0538	5.6418	-0.1016
811	SLE FR 3	0.68	0.29	35.49	-0.0541	5.6602	-0.1023
811	SLE FR 4	0.69	0.32	36.46	-0.0557	5.8014	-0.1124
811	SLE FR 5	0.69	0.32	36.59	-0.056	5.8198	-0.113
811	SLE FR 6	0.69	0.34	37.2	-0.057	5.9077	-0.1206
811	SLE QP 1	0.67	0.29	35.35	-0.0538	5.6416	-0.1026
811	SLE QP 2	0.69	0.32	36.46	-0.0557	5.8013	-0.1134
811	SLD 1	2.61	0.87	26.62	-0.038	4.4924	-0.3026
811	SLD 2	2.41	1.53	26.39	-0.0396	4.4799	-0.5338
811	SLD 3	2.85	-0.5	26.97	-0.0353	4.5124	0.1756
811	SLD 4	2.66	0.16	26.75	-0.037	4.5	-0.0555
811	SLD 5	0.93	2.44	33.01	-0.0541	5.3805	-0.8534
811	SLD 6	0.8	2.88	32.86	-0.0552	5.3722	-1.0069
811	SLD 7	1.74	-2.12	34.2	-0.0453	5.4473	0.7407
811	SLD 8	1.61	-1.68	34.05	-0.0464	5.439	0.5873
811	SLD 9	-0.24	2.33	38.87	-0.0651	6.1636	-0.814
811	SLD 10	-0.37	2.77	38.72	-0.0661	6.1553	-0.9675

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
811	SLD 11	0.57	-2.24	40.07	-0.0563	6.2303	0.7801
811	SLD 12	0.44	-1.8	39.92	-0.0573	6.222	0.6267
811	SLD 13	-1.29	0.48	46.18	-0.0745	7.1026	-0.1713
811	SLD 14	-1.48	1.15	45.95	-0.0761	7.0901	-0.4024
811	SLD 15	-1.04	-0.89	46.53	-0.0719	7.1226	0.307
811	SLD 16	-1.24	-0.22	46.31	-0.0735	7.1102	0.0758
811	SLV 1	5.19	1.56	13.44	-0.0141	2.7389	-0.5402
811	SLV 2	4.73	3.1	12.91	-0.0179	2.7099	-1.0784
811	SLV 3	5.74	-1.55	14.25	-0.0081	2.7857	0.5438
811	SLV 4	5.29	-0.01	13.72	-0.0119	2.7566	0.0056
811	SLV 5	1.28	5.13	28.42	-0.0516	4.8168	-1.7909
811	SLV 6	0.98	6.14	28.07	-0.0541	4.7978	-2.1416
811	SLV 7	3.12	-5.22	31.12	-0.0317	4.9726	1.8224
811	SLV 8	2.82	-4.21	30.78	-0.0342	4.9537	1.4717
811	SLV 9	-1.45	4.86	42.15	-0.0773	6.6489	-1.6985
811	SLV 10	-1.75	5.87	41.8	-0.0797	6.63	-2.0492
811	SLV 11	0.39	-5.49	44.85	-0.0574	6.8047	1.9148
811	SLV 12	0.09	-4.49	44.51	-0.0598	6.7858	1.5641
811	SLV 13	-3.92	0.65	59.2	-0.0996	8.846	-0.2324
811	SLV 14	-4.37	2.2	58.67	-0.1033	8.8169	-0.7706
811	SLV 15	-3.36	-2.45	60.01	-0.0936	8.8927	0.8516
811	SLV 16	-3.81	-0.91	59.48	-0.0974	8.8637	0.3134
811	CRTFP Ux+	0	0	0	0	0	0
811	CRTFP Ux-	0	0	0	0	0	0
811	CRTFP Uy+	0	0	0	0	0	0
811	CRTFP Uy-	0	0	0	0	0	0
813	SLU 1	1.38	0.09	60.94	0.0204	0.2676	-0.0138
813	SLU 2	1.36	0.06	60.93	0.0204	0.2761	-0.0131
813	SLU 3	1.41	0.09	62.33	0.0208	0.2766	-0.0142
813	SLU 4	1.41	0.08	62.33	0.0208	0.2817	-0.0137
813	SLU 5	1.39	0.05	61.8	0.0207	0.2809	-0.0134
813	SLU 6	1.44	0.09	63.2	0.021	0.2814	-0.0145
813	SLU 7	1.43	0.07	63.2	0.0211	0.2865	-0.014
813	SLU 8	1.43	0.08	62.67	0.0209	0.2772	-0.0145
813	SLU 9	1.42	0.06	62.67	0.0209	0.2823	-0.014
813	SLU 10	1.45	0.16	68.35	0.0227	0.3219	-0.0141
813	SLU 11	1.5	0.2	69.75	0.0231	0.3224	-0.0152
813	SLU 12	1.49	0.18	69.75	0.0231	0.3275	-0.0147
813	SLU 13	1.47	0.15	69.22	0.023	0.3267	-0.0144
813	SLU 14	1.53	0.19	70.62	0.0233	0.3272	-0.0155
813	SLU 15	1.52	0.17	70.62	0.0234	0.3323	-0.015
813	SLU 16	1.52	0.18	70.09	0.0232	0.323	-0.0155
813	SLU 17	1.51	0.16	70.09	0.0232	0.3281	-0.015
813	SLU 18	1.5	0.23	71.53	0.0237	0.333	-0.0152
813	SLU 19	1.49	0.21	71.53	0.0237	0.3381	-0.0148
813	SLU 20	1.53	0.23	72.4	0.0239	0.3378	-0.0156
813	SLU 21	1.52	0.21	72.4	0.0239	0.3429	-0.0151
813	SLU 22	1.49	0.22	68.37	0.0234	0.3115	-0.0146
813	SLU 23	1.48	0.19	68.36	0.0234	0.32	-0.0138
813	SLU 24	1.53	0.23	69.77	0.0238	0.3206	-0.0149
813	SLU 25	1.52	0.21	69.76	0.0238	0.3256	-0.0145
813	SLU 26	1.51	0.18	69.23	0.0237	0.3248	-0.0142
813	SLU 27	1.56	0.22	70.63	0.0241	0.3254	-0.0153
813	SLU 28	1.55	0.21	70.63	0.0241	0.3304	-0.0148
813	SLU 29	1.55	0.21	70.11	0.0239	0.3211	-0.0152
813	SLU 30	1.54	0.19	70.1	0.0239	0.3262	-0.0148
813	SLU 31	1.57	0.29	75.78	0.0258	0.3658	-0.0149
813	SLU 32	1.62	0.33	77.19	0.0261	0.3664	-0.0159
813	SLU 33	1.61	0.31	77.18	0.0262	0.3714	-0.0155
813	SLU 34	1.59	0.29	76.65	0.026	0.3706	-0.0152
813	SLU 35	1.65	0.33	78.05	0.0264	0.3712	-0.0163
813	SLU 36	1.64	0.31	78.05	0.0264	0.3762	-0.0158
813	SLU 37	1.63	0.31	77.52	0.0262	0.3669	-0.0162
813	SLU 38	1.63	0.29	77.52	0.0262	0.372	-0.0158
813	SLU 39	1.62	0.37	78.97	0.0267	0.377	-0.016
813	SLU 40	1.61	0.35	78.96	0.0267	0.3821	-0.0156
813	SLU 41	1.65	0.36	79.84	0.0269	0.3818	-0.0163
813	SLU 42	1.64	0.34	79.83	0.027	0.3868	-0.0159
813	SLU 43	1.75	0.07	76.67	0.0255	0.3328	-0.0177
813	SLU 44	1.73	0.04	76.66	0.0255	0.3413	-0.0169
813	SLU 45	1.79	0.07	78.07	0.0259	0.3419	-0.018
813	SLU 46	1.78	0.06	78.06	0.0259	0.3469	-0.0176
813	SLU 47	1.76	0.03	77.53	0.0257	0.3461	-0.0173
813	SLU 48	1.81	0.07	78.93	0.0261	0.3467	-0.0184
813	SLU 49	1.8	0.05	78.93	0.0261	0.3517	-0.0179
813	SLU 50	1.8	0.06	78.4	0.0259	0.3424	-0.0183
813	SLU 51	1.79	0.04	78.4	0.026	0.3475	-0.0179
813	SLU 52	1.82	0.14	84.08	0.0278	0.3871	-0.0179
813	SLU 53	1.87	0.18	85.48	0.0282	0.3877	-0.019
813	SLU 54	1.86	0.16	85.48	0.0282	0.3927	-0.0186
813	SLU 55	1.85	0.13	84.95	0.028	0.3919	-0.0183
813	SLU 56	1.9	0.17	86.35	0.0284	0.3925	-0.0194
813	SLU 57	1.89	0.15	86.35	0.0284	0.3975	-0.0189
813	SLU 58	1.89	0.16	85.82	0.0282	0.3882	-0.0193
813	SLU 59	1.88	0.14	85.82	0.0283	0.3933	-0.0189
813	SLU 60	1.87	0.21	87.27	0.0288	0.3983	-0.0191
813	SLU 61	1.86	0.19	87.26	0.0288	0.4033	-0.0187
813	SLU 62	1.9	0.21	88.13	0.029	0.4031	-0.0194
813	SLU 63	1.89	0.19	88.13	0.029	0.4081	-0.019
813	SLU 64	1.87	0.2	84.1	0.0285	0.3768	-0.0184

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
813	SLU 65	1.85	0.17	84.1	0.0285	0.3852	-0.0177
813	SLU 66	1.9	0.21	85.5	0.0289	0.3858	-0.0188
813	SLU 67	1.9	0.19	85.49	0.0289	0.3909	-0.0184
813	SLU 68	1.88	0.16	84.96	0.0288	0.39	-0.018
813	SLU 69	1.93	0.2	86.37	0.0291	0.3906	-0.0191
813	SLU 70	1.92	0.19	86.36	0.0292	0.3957	-0.0187
813	SLU 71	1.92	0.19	85.84	0.029	0.3864	-0.0191
813	SLU 72	1.91	0.17	85.83	0.029	0.3914	-0.0187
813	SLU 73	1.94	0.27	91.51	0.0308	0.431	-0.0187
813	SLU 74	1.99	0.31	92.92	0.0312	0.4316	-0.0198
813	SLU 75	1.98	0.29	92.91	0.0312	0.4367	-0.0194
813	SLU 76	1.97	0.27	92.38	0.0311	0.4358	-0.0191
813	SLU 77	2.02	0.31	93.79	0.0315	0.4364	-0.0201
813	SLU 78	2.01	0.29	93.78	0.0315	0.4415	-0.0197
813	SLU 79	2.01	0.29	93.26	0.0313	0.4322	-0.0201
813	SLU 80	2	0.27	93.25	0.0313	0.4372	-0.0197
813	SLU 81	1.99	0.35	94.7	0.0318	0.4422	-0.0199
813	SLU 82	1.98	0.33	94.7	0.0318	0.4473	-0.0194
813	SLU 83	2.02	0.34	95.57	0.032	0.447	-0.0202
813	SLU 84	2.01	0.32	95.56	0.032	0.4521	-0.0198
813	SLE RA 1	1.41	0.12	63.06	0.0212	0.2802	-0.014
813	SLE RA 2	1.4	0.1	63.06	0.0213	0.2858	-0.0135
813	SLE RA 3	1.43	0.13	63.99	0.0215	0.2862	-0.0143
813	SLE RA 4	1.43	0.12	63.99	0.0215	0.2896	-0.014
813	SLE RA 5	1.42	0.1	63.63	0.0214	0.289	-0.0138
813	SLE RA 6	1.45	0.13	64.57	0.0217	0.2894	-0.0145
813	SLE RA 7	1.45	0.11	64.57	0.0217	0.2928	-0.0142
813	SLE RA 8	1.44	0.12	64.22	0.0216	0.2866	-0.0145
813	SLE RA 9	1.44	0.11	64.21	0.0216	0.29	-0.0142
813	SLE RA 10	1.46	0.17	68	0.0228	0.3163	-0.0142
813	SLE RA 11	1.49	0.2	68.94	0.0231	0.3167	-0.0149
813	SLE RA 12	1.49	0.19	68.93	0.0231	0.3201	-0.0146
813	SLE RA 13	1.48	0.17	68.58	0.023	0.3195	-0.0144
813	SLE RA 14	1.51	0.19	69.52	0.0232	0.3199	-0.0151
813	SLE RA 15	1.51	0.18	69.51	0.0232	0.3233	-0.0149
813	SLE RA 16	1.5	0.19	69.16	0.0231	0.3171	-0.0151
813	SLE RA 17	1.5	0.17	69.16	0.0231	0.3205	-0.0148
813	SLE RA 18	1.49	0.22	70.13	0.0234	0.3238	-0.015
813	SLE RA 19	1.49	0.21	70.12	0.0235	0.3272	-0.0147
813	SLE RA 20	1.51	0.22	70.7	0.0236	0.327	-0.0152
813	SLE RA 21	1.5	0.21	70.7	0.0236	0.3304	-0.0149
813	SLE FR 1	1.41	0.12	63.06	0.0212	0.2802	-0.014
813	SLE FR 2	1.41	0.12	63.06	0.0213	0.2813	-0.0139
813	SLE FR 3	1.42	0.12	63.29	0.0213	0.2815	-0.0141
813	SLE FR 4	1.43	0.15	65.18	0.0219	0.2944	-0.0142
813	SLE FR 5	1.44	0.15	65.41	0.022	0.2945	-0.0144
813	SLE FR 6	1.45	0.17	66.59	0.0223	0.302	-0.0145
813	SLE QP 1	1.41	0.12	63.06	0.0212	0.2802	-0.014
813	SLE QP 2	1.43	0.15	65.18	0.0219	0.2933	-0.0143
813	SLD 1	6.67	0.95	60.46	0.0187	0.2983	-0.0359
813	SLD 2	6.35	1.45	60.09	0.0152	0.3079	-0.0237
813	SLD 3	6.75	-0.65	60.7	0.0268	0.346	-0.037
813	SLD 4	6.43	-0.15	60.33	0.0234	0.3556	-0.0248
813	SLD 5	2.94	2.73	63.48	0.0092	0.2207	-0.0212
813	SLD 6	2.73	3.06	63.23	0.0069	0.2271	-0.0132
813	SLD 7	3.21	-2.6	64.26	0.0364	0.3797	-0.0251
813	SLD 8	3	-2.27	64.01	0.0341	0.3861	-0.017
813	SLD 9	-0.13	2.58	66.35	0.0097	0.2004	-0.0116
813	SLD 10	-0.34	2.91	66.1	0.0074	0.2068	-0.0035
813	SLD 11	0.14	-2.75	67.13	0.0369	0.3594	-0.0155
813	SLD 12	-0.07	-2.42	66.88	0.0347	0.3658	-0.0074
813	SLD 13	-3.56	0.46	70.03	0.0204	0.2309	-0.0038
813	SLD 14	-3.88	0.95	69.66	0.017	0.2405	0.0084
813	SLD 15	-3.48	-1.14	70.27	0.0286	0.2786	-0.005
813	SLD 16	-3.8	-0.65	69.9	0.0252	0.2882	0.0072
813	SLV 1	13.67	1.97	54.14	0.0146	0.308	-0.0647
813	SLV 2	12.93	3.12	53.27	0.0066	0.3304	-0.0363
813	SLV 3	13.86	-1.66	54.68	0.033	0.4159	-0.0673
813	SLV 4	13.12	-0.5	53.82	0.0251	0.4383	-0.0389
813	SLV 5	4.95	5.99	61.2	-0.0069	0.13	-0.0304
813	SLV 6	4.47	6.74	60.63	-0.0121	0.1446	-0.0119
813	SLV 7	5.58	-6.08	63	0.0547	0.4898	-0.0392
813	SLV 8	5.09	-5.34	62.44	0.0495	0.5044	-0.0207
813	SLV 9	-2.22	5.64	67.92	-0.0057	0.0821	-0.0079
813	SLV 10	-2.71	6.39	67.36	-0.0109	0.0967	0.0106
813	SLV 11	-1.6	-6.43	69.73	0.0559	0.4419	-0.0167
813	SLV 12	-2.08	-5.68	69.16	0.0507	0.4565	0.0018
813	SLV 13	-10.25	0.81	76.54	0.0188	0.1482	0.0103
813	SLV 14	-10.99	1.96	75.68	0.0108	0.1706	0.0387
813	SLV 15	-10.06	-2.81	77.08	0.0372	0.2561	0.0077
813	SLV 16	-10.8	-1.66	76.22	0.0293	0.2785	0.036
813	CRTFP Ux+	0	0	0	0	0	0
813	CRTFP Ux-	0	0	0	0	0	0
816	SLU 1	-1.02	-0.81	63.03	-0.013	-0.4202	0.0213
816	SLU 2	-1.04	-0.9	63.1	-0.0125	-0.4253	0.022
816	SLU 3	-1.05	-0.82	64.56	-0.0134	-0.4322	0.0218
816	SLU 4	-1.06	-0.87	64.6	-0.0131	-0.4352	0.0223
816	SLU 5	-1.06	-0.9	64.07	-0.0128	-0.4305	0.0223
816	SLU 6	-1.06	-0.82	65.53	-0.0136	-0.4374	0.0221
816	SLU 7	-1.08	-0.88	65.57	-0.0133	-0.4404	0.0226

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
816	SLU 8	-1.05	-0.82	64.96	-0.0135	-0.4307	0.0219
816	SLU 9	-1.07	-0.88	65.01	-0.0132	-0.4337	0.0223
816	SLU 10	-1.1	-0.92	70.92	-0.0145	-0.4965	0.0251
816	SLU 11	-1.11	-0.84	72.38	-0.0154	-0.5034	0.0249
816	SLU 12	-1.12	-0.89	72.42	-0.0151	-0.5064	0.0254
816	SLU 13	-1.12	-0.93	71.89	-0.0148	-0.5017	0.0254
816	SLU 14	-1.12	-0.85	73.35	-0.0157	-0.5086	0.0252
816	SLU 15	-1.14	-0.9	73.39	-0.0154	-0.5116	0.0257
816	SLU 16	-1.11	-0.85	72.79	-0.0155	-0.5018	0.025
816	SLU 17	-1.13	-0.9	72.83	-0.0152	-0.5049	0.0254
816	SLU 18	-1.11	-0.84	74.2	-0.0159	-0.5219	0.0257
816	SLU 19	-1.12	-0.9	74.24	-0.0156	-0.525	0.0261
816	SLU 20	-1.12	-0.85	75.17	-0.0161	-0.5271	0.026
816	SLU 21	-1.14	-0.9	75.21	-0.0158	-0.5302	0.0264
816	SLU 22	-1.11	-0.79	70.88	-0.0142	-0.4838	0.0234
816	SLU 23	-1.14	-0.88	70.95	-0.0137	-0.4888	0.0242
816	SLU 24	-1.14	-0.8	72.41	-0.0146	-0.4958	0.024
816	SLU 25	-1.16	-0.85	72.45	-0.0143	-0.4988	0.0244
816	SLU 26	-1.15	-0.88	71.92	-0.014	-0.494	0.0245
816	SLU 27	-1.16	-0.8	73.38	-0.0149	-0.501	0.0243
816	SLU 28	-1.17	-0.86	73.42	-0.0145	-0.504	0.0248
816	SLU 29	-1.15	-0.8	72.82	-0.0147	-0.4942	0.024
816	SLU 30	-1.16	-0.85	72.86	-0.0144	-0.4972	0.0245
816	SLU 31	-1.2	-0.9	78.77	-0.0157	-0.56	0.0273
816	SLU 32	-1.2	-0.82	80.23	-0.0166	-0.5669	0.0271
816	SLU 33	-1.22	-0.87	80.27	-0.0163	-0.57	0.0275
816	SLU 34	-1.21	-0.91	79.74	-0.016	-0.5652	0.0276
816	SLU 35	-1.22	-0.83	81.2	-0.0169	-0.5722	0.0274
816	SLU 36	-1.23	-0.88	81.24	-0.0166	-0.5752	0.0278
816	SLU 37	-1.21	-0.83	80.64	-0.0167	-0.5654	0.0271
816	SLU 38	-1.22	-0.88	80.68	-0.0164	-0.5684	0.0276
816	SLU 39	-1.2	-0.82	82.05	-0.0171	-0.5855	0.0278
816	SLU 40	-1.21	-0.88	82.09	-0.0168	-0.5885	0.0283
816	SLU 41	-1.22	-0.83	83.02	-0.0173	-0.5907	0.0282
816	SLU 42	-1.23	-0.88	83.06	-0.017	-0.5937	0.0286
816	SLU 43	-1.29	-1.06	79.24	-0.0165	-0.5245	0.0269
816	SLU 44	-1.32	-1.15	79.32	-0.016	-0.5296	0.0276
816	SLU 45	-1.32	-1.06	80.78	-0.0169	-0.5365	0.0275
816	SLU 46	-1.34	-1.12	80.82	-0.0166	-0.5395	0.0279
816	SLU 47	-1.34	-1.15	80.29	-0.0162	-0.5348	0.028
816	SLU 48	-1.34	-1.07	81.75	-0.0171	-0.5417	0.0278
816	SLU 49	-1.35	-1.13	81.79	-0.0168	-0.5447	0.0282
816	SLU 50	-1.33	-1.07	81.18	-0.017	-0.5349	0.0275
816	SLU 51	-1.34	-1.12	81.22	-0.0167	-0.538	0.028
816	SLU 52	-1.38	-1.17	87.14	-0.018	-0.6007	0.0307
816	SLU 53	-1.38	-1.09	88.6	-0.0189	-0.6077	0.0306
816	SLU 54	-1.4	-1.14	88.64	-0.0186	-0.6107	0.031
816	SLU 55	-1.4	-1.18	88.11	-0.0183	-0.606	0.031
816	SLU 56	-1.4	-1.1	89.57	-0.0191	-0.6129	0.0309
816	SLU 57	-1.41	-1.15	89.61	-0.0188	-0.6159	0.0313
816	SLU 58	-1.39	-1.1	89	-0.019	-0.6061	0.0306
816	SLU 59	-1.4	-1.15	89.05	-0.0187	-0.6091	0.0311
816	SLU 60	-1.38	-1.09	90.42	-0.0194	-0.6262	0.0313
816	SLU 61	-1.39	-1.15	90.46	-0.0191	-0.6292	0.0318
816	SLU 62	-1.4	-1.1	91.39	-0.0196	-0.6314	0.0316
816	SLU 63	-1.41	-1.15	91.43	-0.0193	-0.6344	0.0321
816	SLU 64	-1.39	-1.04	87.09	-0.0177	-0.5881	0.0291
816	SLU 65	-1.41	-1.13	87.17	-0.0172	-0.5931	0.0298
816	SLU 66	-1.42	-1.04	88.63	-0.0181	-0.6	0.0296
816	SLU 67	-1.43	-1.1	88.67	-0.0178	-0.6031	0.0301
816	SLU 68	-1.43	-1.13	88.14	-0.0175	-0.5983	0.0301
816	SLU 69	-1.43	-1.05	89.6	-0.0183	-0.6053	0.0299
816	SLU 70	-1.45	-1.11	89.64	-0.018	-0.6083	0.0304
816	SLU 71	-1.42	-1.05	89.03	-0.0182	-0.5985	0.0297
816	SLU 72	-1.44	-1.1	89.08	-0.0179	-0.6015	0.0301
816	SLU 73	-1.47	-1.15	94.99	-0.0192	-0.6643	0.0329
816	SLU 74	-1.47	-1.07	96.45	-0.0201	-0.6712	0.0327
816	SLU 75	-1.49	-1.12	96.49	-0.0198	-0.6742	0.0332
816	SLU 76	-1.49	-1.16	95.96	-0.0195	-0.6695	0.0332
816	SLU 77	-1.49	-1.08	97.42	-0.0204	-0.6764	0.033
816	SLU 78	-1.51	-1.13	97.46	-0.0201	-0.6795	0.0335
816	SLU 79	-1.48	-1.08	96.85	-0.0202	-0.6697	0.0328
816	SLU 80	-1.5	-1.13	96.9	-0.0199	-0.6727	0.0332
816	SLU 81	-1.47	-1.07	98.27	-0.0206	-0.6898	0.0335
816	SLU 82	-1.49	-1.13	98.31	-0.0203	-0.6928	0.0339
816	SLU 83	-1.49	-1.08	99.24	-0.0208	-0.695	0.0338
816	SLU 84	-1.5	-1.13	99.28	-0.0205	-0.698	0.0342
816	SLE RA 1	-1.05	-0.8	65.27	-0.0134	-0.4384	0.0219
816	SLE RA 2	-1.06	-0.86	65.32	-0.013	-0.4417	0.0224
816	SLE RA 3	-1.07	-0.81	66.29	-0.0136	-0.4464	0.0223
816	SLE RA 4	-1.07	-0.84	66.32	-0.0134	-0.4484	0.0226
816	SLE RA 5	-1.07	-0.87	65.96	-0.0132	-0.4452	0.0226
816	SLE RA 6	-1.08	-0.81	66.94	-0.0138	-0.4499	0.0225
816	SLE RA 7	-1.09	-0.85	66.97	-0.0136	-0.4519	0.0228
816	SLE RA 8	-1.07	-0.81	66.56	-0.0137	-0.4453	0.0223
816	SLE RA 9	-1.08	-0.85	66.59	-0.0135	-0.4474	0.0226
816	SLE RA 10	-1.1	-0.88	70.53	-0.0144	-0.4892	0.0244
816	SLE RA 11	-1.11	-0.82	71.51	-0.015	-0.4938	0.0243
816	SLE RA 12	-1.11	-0.86	71.53	-0.0148	-0.4958	0.0246
816	SLE RA 13	-1.11	-0.88	71.18	-0.0145	-0.4927	0.0246

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
816	SLE RA 14	-1.12	-0.83	72.15	-0.0151	-0.4973	0.0245
816	SLE RA 15	-1.13	-0.86	72.18	-0.0149	-0.4993	0.0248
816	SLE RA 16	-1.11	-0.83	71.78	-0.015	-0.4928	0.0243
816	SLE RA 17	-1.12	-0.86	71.8	-0.0148	-0.4948	0.0247
816	SLE RA 18	-1.1	-0.83	72.72	-0.0153	-0.5062	0.0248
816	SLE RA 19	-1.11	-0.86	72.75	-0.0151	-0.5082	0.0251
816	SLE RA 20	-1.12	-0.83	73.36	-0.0154	-0.5097	0.025
816	SLE RA 21	-1.12	-0.87	73.39	-0.0152	-0.5117	0.0253
816	SLE FR 1	-1.05	-0.8	65.27	-0.0134	-0.4384	0.0219
816	SLE FR 2	-1.05	-0.81	65.28	-0.0133	-0.4391	0.022
816	SLE FR 3	-1.05	-0.8	65.53	-0.0134	-0.4398	0.022
816	SLE FR 4	-1.07	-0.82	67.51	-0.0139	-0.4594	0.0229
816	SLE FR 5	-1.07	-0.81	67.76	-0.014	-0.4601	0.0228
816	SLE FR 6	-1.08	-0.81	68.99	-0.0143	-0.4723	0.0234
816	SLE QP 1	-1.05	-0.8	65.27	-0.0134	-0.4384	0.0219
816	SLE QP 2	-1.06	-0.81	67.5	-0.0139	-0.4587	0.0228
816	SLD 1	4.45	-0.4	70.73	-0.0306	-0.502	0.0061
816	SLD 2	4.14	-0.88	71.37	-0.0263	-0.4929	0.0187
816	SLD 3	4.33	-2.11	71.25	-0.0205	-0.5663	0.0084
816	SLD 4	4.02	-2.59	71.89	-0.0162	-0.5572	0.021
816	SLD 5	0.84	1.99	67.57	-0.0351	-0.3758	0.012
816	SLD 6	0.63	1.67	68	-0.0322	-0.3698	0.0204
816	SLD 7	0.42	-3.7	69.3	-0.0013	-0.5902	0.0196
816	SLD 8	0.22	-4.02	69.72	0.0015	-0.5841	0.028
816	SLD 9	-2.34	2.4	65.29	-0.0294	-0.3333	0.0175
816	SLD 10	-2.55	2.08	65.71	-0.0266	-0.3273	0.0259
816	SLD 11	-2.75	-3.29	67.01	0.0043	-0.5476	0.0251
816	SLD 12	-2.96	-3.61	67.44	0.0072	-0.5416	0.0335
816	SLD 13	-6.14	0.97	63.12	-0.0117	-0.3602	0.0245
816	SLD 14	-6.46	0.49	63.76	-0.0074	-0.3512	0.0372
816	SLD 15	-6.27	-0.73	63.64	-0.0016	-0.4245	0.0268
816	SLD 16	-6.58	-1.22	64.28	0.0027	-0.4155	0.0394
816	SLV 1	11.83	0.08	75.08	-0.0526	-0.5626	-0.0161
816	SLV 2	11.1	-1.05	76.57	-0.0425	-0.5415	0.0134
816	SLV 3	11.55	-3.78	76.25	-0.0296	-0.7079	-0.0109
816	SLV 4	10.82	-4.91	77.74	-0.0196	-0.6868	0.0185
816	SLV 5	3.36	5.51	67.74	-0.0621	-0.2733	-0.0019
816	SLV 6	2.88	4.78	68.71	-0.0555	-0.2596	0.0173
816	SLV 7	2.42	-7.36	71.64	0.0143	-0.7575	0.0153
816	SLV 8	1.94	-8.09	72.61	0.0209	-0.7437	0.0345
816	SLV 9	-4.07	6.47	62.4	-0.0488	-0.1738	0.011
816	SLV 10	-4.55	5.74	63.37	-0.0422	-0.16	0.0302
816	SLV 11	-5.01	-6.4	66.3	0.0276	-0.6579	0.0283
816	SLV 12	-5.49	-7.13	67.27	0.0342	-0.6442	0.0474
816	SLV 13	-12.94	3.29	57.27	-0.0083	-0.2307	0.027
816	SLV 14	-13.68	2.16	58.76	0.0017	-0.2096	0.0564
816	SLV 15	-13.23	-0.57	58.44	0.0146	-0.376	0.0322
816	SLV 16	-13.96	-1.7	59.93	0.0247	-0.3549	0.0616
816	CRTFP Ux+	0	0	0	0	0	0
816	CRTFP Ux-	0	0	0	0	0	0
816	CRTFP Uy+	0	0	0	0	0	0
816	CRTFP Uy-	0	0	0	0	0	0
831	SLU 1	0.27	0.72	51.08	0.0312	0.8035	0.0113
831	SLU 2	0.25	0.66	51.06	0.0315	0.8024	0.0118
831	SLU 3	0.27	0.76	52.24	0.0319	0.8261	0.0115
831	SLU 4	0.26	0.72	52.23	0.0322	0.8255	0.0118
831	SLU 5	0.26	0.67	51.74	0.0319	0.8152	0.0119
831	SLU 6	0.28	0.77	52.93	0.0323	0.8389	0.0116
831	SLU 7	0.27	0.73	52.91	0.0325	0.8383	0.0119
831	SLU 8	0.28	0.75	52.44	0.0318	0.8291	0.0114
831	SLU 9	0.27	0.71	52.43	0.032	0.8285	0.0117
831	SLU 10	0.29	0.78	57.88	0.0357	0.9284	0.0142
831	SLU 11	0.32	0.89	59.06	0.0361	0.9521	0.0138
831	SLU 12	0.3	0.85	59.05	0.0363	0.9514	0.0142
831	SLU 13	0.3	0.79	58.56	0.036	0.9412	0.0143
831	SLU 14	0.32	0.9	59.74	0.0364	0.9649	0.0139
831	SLU 15	0.31	0.86	59.73	0.0366	0.9642	0.0143
831	SLU 16	0.32	0.87	59.26	0.0359	0.9551	0.0137
831	SLU 17	0.31	0.83	59.25	0.0362	0.9544	0.0141
831	SLU 18	0.32	0.91	60.82	0.0371	0.9835	0.0146
831	SLU 19	0.31	0.86	60.81	0.0373	0.9828	0.015
831	SLU 20	0.33	0.92	61.5	0.0374	0.9963	0.0147
831	SLU 21	0.32	0.88	61.49	0.0376	0.9956	0.015
831	SLU 22	0.31	0.95	57.62	0.0363	0.9284	0.0127
831	SLU 23	0.29	0.88	57.6	0.0367	0.9273	0.0133
831	SLU 24	0.31	0.98	58.78	0.0371	0.9511	0.0129
831	SLU 25	0.3	0.94	58.77	0.0373	0.9504	0.0133
831	SLU 26	0.3	0.89	58.28	0.037	0.9401	0.0134
831	SLU 27	0.32	0.99	59.46	0.0374	0.9639	0.013
831	SLU 28	0.31	0.95	59.45	0.0376	0.9632	0.0134
831	SLU 29	0.32	0.97	58.98	0.0369	0.9541	0.0128
831	SLU 30	0.31	0.93	58.97	0.0372	0.9534	0.0132
831	SLU 31	0.33	1	64.42	0.0408	1.0533	0.0156
831	SLU 32	0.36	1.11	65.6	0.0412	1.077	0.0153
831	SLU 33	0.35	1.07	65.59	0.0414	1.0764	0.0156
831	SLU 34	0.34	1.02	65.1	0.0411	1.0661	0.0157
831	SLU 35	0.37	1.12	66.28	0.0415	1.0898	0.0154
831	SLU 36	0.35	1.08	66.27	0.0417	1.0892	0.0157
831	SLU 37	0.37	1.1	65.8	0.0411	1.08	0.0152
831	SLU 38	0.35	1.06	65.79	0.0413	1.0793	0.0155

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
831	SLU 39	0.36	1.13	67.36	0.0422	1.1084	0.0161
831	SLU 40	0.35	1.09	67.35	0.0424	1.1077	0.0164
831	SLU 41	0.37	1.14	68.04	0.0425	1.1212	0.0161
831	SLU 42	0.36	1.1	68.03	0.0427	1.1205	0.0165
831	SLU 43	0.33	0.87	64.16	0.0387	1.0018	0.0141
831	SLU 44	0.31	0.8	64.14	0.0391	1.0006	0.0147
831	SLU 45	0.34	0.9	65.33	0.0395	1.0244	0.0144
831	SLU 46	0.33	0.86	65.31	0.0397	1.0237	0.0147
831	SLU 47	0.32	0.81	64.83	0.0394	1.0135	0.0148
831	SLU 48	0.35	0.91	66.01	0.0398	1.0372	0.0144
831	SLU 49	0.34	0.87	66	0.0401	1.0365	0.0148
831	SLU 50	0.35	0.89	65.53	0.0394	1.0274	0.0143
831	SLU 51	0.34	0.85	65.52	0.0396	1.0267	0.0146
831	SLU 52	0.35	0.92	70.96	0.0433	1.1266	0.0171
831	SLU 53	0.38	1.03	72.14	0.0437	1.1503	0.0167
831	SLU 54	0.37	0.99	72.13	0.0439	1.1497	0.0171
831	SLU 55	0.36	0.94	71.64	0.0436	1.1394	0.0171
831	SLU 56	0.39	1.04	72.83	0.044	1.1631	0.0168
831	SLU 57	0.38	1	72.82	0.0442	1.1625	0.0171
831	SLU 58	0.39	1.02	72.35	0.0435	1.1533	0.0166
831	SLU 59	0.38	0.98	72.33	0.0438	1.1527	0.017
831	SLU 60	0.39	1.05	73.9	0.0447	1.1817	0.0175
831	SLU 61	0.38	1.01	73.89	0.0449	1.181	0.0178
831	SLU 62	0.4	1.06	74.59	0.045	1.1945	0.0176
831	SLU 63	0.39	1.02	74.57	0.0452	1.1938	0.0179
831	SLU 64	0.37	1.09	70.7	0.0439	1.1267	0.0156
831	SLU 65	0.35	1.02	70.68	0.0442	1.1256	0.0162
831	SLU 66	0.38	1.12	71.86	0.0446	1.1493	0.0158
831	SLU 67	0.37	1.08	71.85	0.0449	1.1486	0.0162
831	SLU 68	0.36	1.03	71.36	0.0446	1.1384	0.0162
831	SLU 69	0.39	1.13	72.54	0.045	1.1621	0.0159
831	SLU 70	0.38	1.09	72.53	0.0452	1.1614	0.0162
831	SLU 71	0.39	1.11	72.06	0.0445	1.1523	0.0157
831	SLU 72	0.38	1.07	72.05	0.0447	1.1516	0.0161
831	SLU 73	0.39	1.15	77.5	0.0484	1.2515	0.0185
831	SLU 74	0.42	1.25	78.68	0.0488	1.2752	0.0182
831	SLU 75	0.41	1.21	78.67	0.049	1.2746	0.0185
831	SLU 76	0.4	1.16	78.18	0.0487	1.2643	0.0186
831	SLU 77	0.43	1.26	79.36	0.0491	1.2881	0.0182
831	SLU 78	0.42	1.22	79.35	0.0493	1.2874	0.0186
831	SLU 79	0.43	1.24	78.88	0.0487	1.2782	0.0181
831	SLU 80	0.42	1.2	78.87	0.0489	1.2776	0.0184
831	SLU 81	0.43	1.27	80.44	0.0498	1.3066	0.0189
831	SLU 82	0.42	1.23	80.43	0.05	1.306	0.0193
831	SLU 83	0.44	1.28	81.12	0.0501	1.3194	0.019
831	SLU 84	0.43	1.24	81.11	0.0503	1.3188	0.0194
831	SLE RA 1	0.28	0.79	52.95	0.0326	0.8392	0.0117
831	SLE RA 2	0.27	0.74	52.93	0.0329	0.8385	0.0121
831	SLE RA 3	0.28	0.81	53.72	0.0331	0.8543	0.0118
831	SLE RA 4	0.28	0.78	53.72	0.0333	0.8538	0.0121
831	SLE RA 5	0.27	0.75	53.39	0.0331	0.847	0.0121
831	SLE RA 6	0.29	0.82	54.18	0.0334	0.8628	0.0119
831	SLE RA 7	0.28	0.79	54.17	0.0335	0.8624	0.0121
831	SLE RA 8	0.29	0.8	53.86	0.0331	0.8563	0.0118
831	SLE RA 9	0.28	0.78	53.85	0.0332	0.8558	0.012
831	SLE RA 10	0.29	0.83	57.48	0.0356	0.9225	0.0136
831	SLE RA 11	0.31	0.9	58.27	0.0359	0.9383	0.0134
831	SLE RA 12	0.3	0.87	58.26	0.036	0.9378	0.0136
831	SLE RA 13	0.3	0.83	57.94	0.0358	0.931	0.0137
831	SLE RA 14	0.32	0.9	58.72	0.0361	0.9468	0.0134
831	SLE RA 15	0.31	0.88	58.72	0.0363	0.9464	0.0137
831	SLE RA 16	0.32	0.89	58.4	0.0358	0.9403	0.0133
831	SLE RA 17	0.31	0.86	58.39	0.036	0.9398	0.0136
831	SLE RA 18	0.32	0.91	59.44	0.0366	0.9592	0.0139
831	SLE RA 19	0.31	0.88	59.43	0.0367	0.9587	0.0141
831	SLE RA 20	0.32	0.92	59.9	0.0368	0.9677	0.014
831	SLE RA 21	0.31	0.89	59.89	0.0369	0.9673	0.0142
831	SLE FR 1	0.28	0.79	52.95	0.0326	0.8392	0.0117
831	SLE FR 2	0.27	0.78	52.94	0.0327	0.8391	0.0117
831	SLE FR 3	0.28	0.79	53.13	0.0327	0.8426	0.0117
831	SLE FR 4	0.29	0.81	54.89	0.0339	0.8751	0.0124
831	SLE FR 5	0.29	0.83	55.08	0.0339	0.8786	0.0124
831	SLE FR 6	0.3	0.85	56.19	0.0346	0.8992	0.0128
831	SLE QP 1	0.28	0.79	52.95	0.0326	0.8392	0.0117
831	SLE QP 2	0.29	0.82	54.89	0.0338	0.8752	0.0123
831	SLD 1	5.76	2.13	58.69	0.0391	0.9168	-0.0098
831	SLD 2	5.48	1.91	58.53	0.0392	0.9158	0.0003
831	SLD 3	5.66	0.47	58.78	0.0459	0.9027	-0.0071
831	SLD 4	5.39	0.25	58.62	0.046	0.9016	0.003
831	SLD 5	2.12	3.78	55.91	0.025	0.9093	-0.0003
831	SLD 6	1.94	3.63	55.81	0.0251	0.9086	0.0064
831	SLD 7	1.8	-1.76	56.24	0.0478	0.8623	0.0088
831	SLD 8	1.62	-1.91	56.13	0.0479	0.8615	0.0155
831	SLD 9	-1.05	3.56	53.66	0.0197	0.8889	0.0092
831	SLD 10	-1.23	3.41	53.55	0.0198	0.8881	0.0158
831	SLD 11	-1.37	-1.98	53.98	0.0425	0.8418	0.0183
831	SLD 12	-1.55	-2.13	53.88	0.0426	0.8411	0.025
831	SLD 13	-4.81	1.4	51.17	0.0216	0.8488	0.0217
831	SLD 14	-5.08	1.18	51.01	0.0217	0.8477	0.0318
831	SLD 15	-4.9	-0.26	51.26	0.0284	0.8347	0.0244

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
831	SLD 16	-5.18	-0.49	51.1	0.0285	0.8336	0.0345
831	SLV 1	13.07	3.83	63.81	0.0465	0.9732	-0.0393
831	SLV 2	12.43	3.31	63.44	0.0467	0.9706	-0.0159
831	SLV 3	12.85	0.06	64.04	0.0619	0.9412	-0.0331
831	SLV 4	12.21	-0.45	63.67	0.0622	0.9386	-0.0097
831	SLV 5	4.57	7.52	57.28	0.0141	0.9536	-0.0167
831	SLV 6	4.15	7.18	57.04	0.0143	0.9519	-0.0014
831	SLV 7	3.83	-5.02	58.06	0.0656	0.8469	0.004
831	SLV 8	3.42	-5.36	57.82	0.0658	0.8453	0.0193
831	SLV 9	-2.84	7	51.97	0.0018	0.9052	0.0054
831	SLV 10	-3.26	6.67	51.73	0.002	0.9035	0.0207
831	SLV 11	-3.58	-5.54	52.75	0.0533	0.7985	0.0261
831	SLV 12	-3.99	-5.87	52.51	0.0535	0.7968	0.0413
831	SLV 13	-11.63	2.1	46.12	0.0054	0.8118	0.0344
831	SLV 14	-12.27	1.58	45.75	0.0057	0.8092	0.0578
831	SLV 15	-11.85	-1.66	46.35	0.0209	0.7798	0.0405
831	SLV 16	-12.49	-2.18	45.98	0.0211	0.7772	0.064
831	CRTFP Ux+	0	0	0	0	0	0
831	CRTFP Ux-	0	0	0	0	0	0
834	SLU 1	0.36	1.39	42.65	0.8195	-0.2618	-0.0028
834	SLU 2	0.34	1.36	42.64	0.8195	-0.2609	-0.0019
834	SLU 3	0.37	1.44	43.6	0.8379	-0.2688	-0.0028
834	SLU 4	0.36	1.42	43.59	0.8379	-0.2683	-0.0023
834	SLU 5	0.35	1.38	43.22	0.8307	-0.2652	-0.0021
834	SLU 6	0.38	1.46	44.18	0.8491	-0.2731	-0.003
834	SLU 7	0.37	1.44	44.17	0.8491	-0.2726	-0.0025
834	SLU 8	0.38	1.43	43.81	0.8419	-0.2704	-0.0031
834	SLU 9	0.37	1.41	43.8	0.8419	-0.2699	-0.0026
834	SLU 10	0.4	1.57	48.21	0.9265	-0.3004	-0.0017
834	SLU 11	0.43	1.66	49.18	0.9449	-0.3083	-0.0026
834	SLU 12	0.42	1.64	49.17	0.9449	-0.3078	-0.0021
834	SLU 13	0.41	1.6	48.79	0.9377	-0.3047	-0.0019
834	SLU 14	0.44	1.68	49.76	0.9561	-0.3126	-0.0028
834	SLU 15	0.43	1.66	49.75	0.9561	-0.3121	-0.0023
834	SLU 16	0.44	1.65	49.39	0.9489	-0.3099	-0.0029
834	SLU 17	0.43	1.63	49.38	0.9489	-0.3094	-0.0024
834	SLU 18	0.44	1.71	50.62	0.9724	-0.3182	-0.0025
834	SLU 19	0.43	1.68	50.61	0.9724	-0.3177	-0.002
834	SLU 20	0.45	1.73	51.2	0.9836	-0.3225	-0.0027
834	SLU 21	0.44	1.7	51.19	0.9836	-0.322	-0.0022
834	SLU 22	0.41	1.68	48.03	0.9239	-0.305	-0.0026
834	SLU 23	0.4	1.64	48.02	0.9238	-0.3041	-0.0018
834	SLU 24	0.43	1.73	48.98	0.9422	-0.312	-0.0027
834	SLU 25	0.42	1.7	48.97	0.9422	-0.3114	-0.0022
834	SLU 26	0.41	1.66	48.6	0.935	-0.3084	-0.002
834	SLU 27	0.44	1.75	49.56	0.9534	-0.3163	-0.0029
834	SLU 28	0.43	1.73	49.55	0.9534	-0.3158	-0.0023
834	SLU 29	0.44	1.72	49.19	0.9463	-0.3136	-0.003
834	SLU 30	0.43	1.7	49.18	0.9462	-0.3131	-0.0025
834	SLU 31	0.45	1.86	53.6	1.0308	-0.3436	-0.0016
834	SLU 32	0.48	1.95	54.56	1.0493	-0.3515	-0.0025
834	SLU 33	0.47	1.92	54.55	1.0492	-0.3509	-0.002
834	SLU 34	0.46	1.88	54.18	1.0421	-0.3479	-0.0018
834	SLU 35	0.49	1.97	55.14	1.0605	-0.3558	-0.0027
834	SLU 36	0.48	1.95	55.13	1.0605	-0.3553	-0.0022
834	SLU 37	0.49	1.94	54.77	1.0533	-0.3531	-0.0028
834	SLU 38	0.48	1.91	54.76	1.0533	-0.3526	-0.0023
834	SLU 39	0.49	1.99	56	1.0767	-0.3614	-0.0023
834	SLU 40	0.48	1.97	55.99	1.0767	-0.3609	-0.0018
834	SLU 41	0.5	2.01	56.58	1.0879	-0.3657	-0.0025
834	SLU 42	0.49	1.99	56.57	1.0879	-0.3652	-0.002
834	SLU 43	0.45	1.71	53.6	1.0296	-0.3255	-0.0036
834	SLU 44	0.43	1.68	53.59	1.0296	-0.3247	-0.0028
834	SLU 45	0.46	1.76	54.55	1.048	-0.3325	-0.0037
834	SLU 46	0.45	1.74	54.54	1.048	-0.332	-0.0032
834	SLU 47	0.44	1.7	54.17	1.0408	-0.329	-0.003
834	SLU 48	0.47	1.79	55.13	1.0592	-0.3369	-0.0039
834	SLU 49	0.46	1.76	55.12	1.0592	-0.3363	-0.0034
834	SLU 50	0.47	1.75	54.76	1.052	-0.3342	-0.004
834	SLU 51	0.46	1.73	54.75	1.052	-0.3336	-0.0035
834	SLU 52	0.49	1.9	59.16	1.1366	-0.3641	-0.0026
834	SLU 53	0.52	1.98	60.13	1.155	-0.372	-0.0035
834	SLU 54	0.51	1.96	60.12	1.155	-0.3715	-0.003
834	SLU 55	0.5	1.92	59.74	1.1478	-0.3685	-0.0028
834	SLU 56	0.53	2	60.71	1.1662	-0.3763	-0.0037
834	SLU 57	0.52	1.98	60.7	1.1662	-0.3758	-0.0032
834	SLU 58	0.53	1.97	60.34	1.159	-0.3737	-0.0038
834	SLU 59	0.52	1.95	60.33	1.159	-0.3731	-0.0033
834	SLU 60	0.53	2.03	61.57	1.1825	-0.3819	-0.0034
834	SLU 61	0.52	2	61.56	1.1825	-0.3814	-0.0028
834	SLU 62	0.54	2.05	62.15	1.1937	-0.3863	-0.0035
834	SLU 63	0.53	2.03	62.14	1.1937	-0.3857	-0.003
834	SLU 64	0.5	2	58.98	1.1339	-0.3687	-0.0035
834	SLU 65	0.49	1.96	58.97	1.1339	-0.3678	-0.0026
834	SLU 66	0.52	2.05	59.93	1.1523	-0.3757	-0.0035
834	SLU 67	0.5	2.02	59.92	1.1523	-0.3752	-0.003
834	SLU 68	0.5	1.98	59.55	1.1451	-0.3721	-0.0028
834	SLU 69	0.53	2.07	60.51	1.1635	-0.38	-0.0037
834	SLU 70	0.52	2.05	60.5	1.1635	-0.3795	-0.0032
834	SLU 71	0.53	2.04	60.14	1.1563	-0.3774	-0.0039

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
834	SLU 72	0.51	2.02	60.13	1.1563	-0.3768	-0.0034
834	SLU 73	0.54	2.18	64.55	1.2409	-0.4073	-0.0024
834	SLU 74	0.57	2.27	65.51	1.2593	-0.4152	-0.0034
834	SLU 75	0.56	2.24	65.5	1.2593	-0.4147	-0.0028
834	SLU 76	0.55	2.2	65.13	1.2521	-0.4116	-0.0026
834	SLU 77	0.58	2.29	66.09	1.2705	-0.4195	-0.0035
834	SLU 78	0.57	2.27	66.08	1.2705	-0.419	-0.003
834	SLU 79	0.58	2.26	65.72	1.2634	-0.4168	-0.0037
834	SLU 80	0.57	2.24	65.71	1.2633	-0.4163	-0.0032
834	SLU 81	0.58	2.31	66.95	1.2868	-0.4251	-0.0032
834	SLU 82	0.57	2.29	66.94	1.2868	-0.4246	-0.0027
834	SLU 83	0.59	2.33	67.53	1.298	-0.4294	-0.0034
834	SLU 84	0.58	2.31	67.52	1.298	-0.4289	-0.0029
834	SLE RA 1	0.38	1.47	44.19	0.8493	-0.2741	-0.0027
834	SLE RA 2	0.36	1.45	44.18	0.8493	-0.2735	-0.0021
834	SLE RA 3	0.38	1.51	44.82	0.8616	-0.2788	-0.0027
834	SLE RA 4	0.38	1.49	44.81	0.8616	-0.2784	-0.0024
834	SLE RA 5	0.37	1.46	44.56	0.8568	-0.2764	-0.0023
834	SLE RA 6	0.39	1.52	45.21	0.8691	-0.2817	-0.0029
834	SLE RA 7	0.38	1.51	45.2	0.869	-0.2813	-0.0025
834	SLE RA 8	0.39	1.5	44.96	0.8643	-0.2799	-0.003
834	SLE RA 9	0.38	1.49	44.96	0.8643	-0.2795	-0.0026
834	SLE RA 10	0.4	1.59	47.9	0.9207	-0.2999	-0.002
834	SLE RA 11	0.42	1.65	48.54	0.9329	-0.3051	-0.0026
834	SLE RA 12	0.41	1.64	48.53	0.9329	-0.3048	-0.0023
834	SLE RA 13	0.41	1.61	48.28	0.9281	-0.3028	-0.0021
834	SLE RA 14	0.43	1.67	48.93	0.9404	-0.308	-0.0027
834	SLE RA 15	0.42	1.65	48.92	0.9404	-0.3077	-0.0024
834	SLE RA 16	0.43	1.65	48.68	0.9356	-0.3062	-0.0028
834	SLE RA 17	0.42	1.63	48.67	0.9356	-0.3059	-0.0025
834	SLE RA 18	0.43	1.68	49.5	0.9512	-0.3117	-0.0025
834	SLE RA 19	0.42	1.67	49.49	0.9512	-0.3114	-0.0022
834	SLE RA 20	0.43	1.7	49.89	0.9587	-0.3146	-0.0027
834	SLE RA 21	0.43	1.68	49.88	0.9587	-0.3143	-0.0023
834	SLE FR 1	0.38	1.47	44.19	0.8493	-0.2741	-0.0027
834	SLE FR 2	0.37	1.47	44.19	0.8493	-0.274	-0.0026
834	SLE FR 3	0.38	1.48	44.34	0.8523	-0.2753	-0.0028
834	SLE FR 4	0.39	1.53	45.78	0.8799	-0.2853	-0.0025
834	SLE FR 5	0.39	1.54	45.94	0.8829	-0.2866	-0.0027
834	SLE FR 6	0.4	1.58	46.84	0.9003	-0.2929	-0.0026
834	SLE QP 1	0.38	1.47	44.19	0.8493	-0.2741	-0.0027
834	SLE QP 2	0.39	1.54	45.78	0.8799	-0.2854	-0.0027
834	SLD 1	5.38	2.05	41.33	0.794	-0.014	-0.1138
834	SLD 2	5.13	2.21	41.42	0.7952	-0.0188	-0.1003
834	SLD 3	5.3	0.63	41.42	0.7982	0.0017	-0.1159
834	SLD 4	5.05	0.79	41.51	0.7994	-0.003	-0.1023
834	SLD 5	2.05	3.82	44.29	0.8476	-0.227	-0.0353
834	SLD 6	1.89	3.93	44.35	0.8484	-0.2302	-0.0263
834	SLD 7	1.79	-0.92	44.59	0.8615	-0.1745	-0.0422
834	SLD 8	1.62	-0.81	44.65	0.8623	-0.1776	-0.0333
834	SLD 9	-0.84	3.88	46.91	0.8975	-0.3932	0.0279
834	SLD 10	-1	3.99	46.97	0.8983	-0.3963	0.0369
834	SLD 11	-1.11	-0.85	47.21	0.9115	-0.3406	0.021
834	SLD 12	-1.27	-0.74	47.27	0.9122	-0.3438	0.03
834	SLD 13	-4.26	2.28	50.05	0.9604	-0.5678	0.097
834	SLD 14	-4.51	2.44	50.14	0.9616	-0.5726	0.1105
834	SLD 15	-4.35	0.86	50.14	0.9646	-0.552	0.0949
834	SLD 16	-4.6	1.02	50.23	0.9658	-0.5568	0.1085
834	SLV 1	12.05	2.68	35.37	0.6792	0.3502	-0.2624
834	SLV 2	11.47	3.06	35.58	0.6819	0.3391	-0.231
834	SLV 3	11.86	-0.54	35.57	0.6887	0.386	-0.2673
834	SLV 4	11.28	-0.16	35.78	0.6914	0.3749	-0.2358
834	SLV 5	4.27	6.69	42.31	0.8048	-0.147	-0.0788
834	SLV 6	3.89	6.94	42.44	0.8066	-0.1542	-0.0583
834	SLV 7	3.65	-4.04	43	0.8365	-0.0278	-0.0949
834	SLV 8	3.27	-3.79	43.13	0.8383	-0.035	-0.0744
834	SLV 9	-2.49	6.86	48.43	0.9215	-0.5358	0.0691
834	SLV 10	-2.87	7.11	48.57	0.9233	-0.543	0.0896
834	SLV 11	-3.11	-3.87	49.12	0.9533	-0.4166	0.053
834	SLV 12	-3.49	-3.62	49.26	0.955	-0.4238	0.0735
834	SLV 13	-10.5	3.23	55.78	1.0684	-0.9457	0.2305
834	SLV 14	-11.08	3.61	55.99	1.0711	-0.9568	0.262
834	SLV 15	-10.68	0.01	55.99	1.0779	-0.91	0.2257
834	SLV 16	-11.27	0.39	56.2	1.0806	-0.921	0.2571
834	CRTFP Ux+	0	0	0	0	0	0
834	CRTFP Ux-	0	0	0	0	0	0
836	SLU 1	-0.65	0.05	30.05	0.0025	-2.2746	0.0125
836	SLU 2	-0.66	-0.04	30.07	0.0026	-2.2755	-0.0087
836	SLU 3	-0.67	0.05	30.78	0.0025	-2.3171	0.0141
836	SLU 4	-0.67	0	30.79	0.0026	-2.3176	0.0013
836	SLU 5	-0.67	-0.03	30.53	0.0026	-2.3022	-0.0073
836	SLU 6	-0.68	0.06	31.23	0.0026	-2.3439	0.0155
836	SLU 7	-0.68	0.01	31.25	0.0026	-2.3444	0.0028
836	SLU 8	-0.67	0.06	30.97	0.0026	-2.3282	0.0154
836	SLU 9	-0.67	0.01	30.98	0.0026	-2.3287	0.0027
836	SLU 10	-0.71	0.02	33.49	0.0029	-2.4965	0.0061
836	SLU 11	-0.72	0.11	34.19	0.0029	-2.5381	0.0289
836	SLU 12	-0.72	0.06	34.21	0.0029	-2.5386	0.0161
836	SLU 13	-0.72	0.03	33.95	0.0029	-2.5233	0.0075
836	SLU 14	-0.73	0.12	34.65	0.0029	-2.5649	0.0303

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
836	SLU 15	-0.73	0.07	34.67	0.0029	-2.5654	0.0176
836	SLU 16	-0.72	0.12	34.39	0.0029	-2.5492	0.0302
836	SLU 17	-0.73	0.07	34.4	0.0029	-2.5497	0.0175
836	SLU 18	-0.73	0.13	34.94	0.0029	-2.5903	0.0336
836	SLU 19	-0.73	0.08	34.95	0.003	-2.5908	0.0209
836	SLU 20	-0.74	0.14	35.39	0.003	-2.6171	0.0351
836	SLU 21	-0.74	0.09	35.41	0.003	-2.6176	0.0224
836	SLU 22	-0.71	0.12	33.56	0.003	-2.4982	0.0296
836	SLU 23	-0.72	0.03	33.58	0.0031	-2.499	0.0084
836	SLU 24	-0.73	0.12	34.28	0.003	-2.5407	0.0312
836	SLU 25	-0.73	0.07	34.29	0.0031	-2.5412	0.0185
836	SLU 26	-0.73	0.04	34.04	0.0031	-2.5258	0.0099
836	SLU 27	-0.74	0.13	34.74	0.0031	-2.5675	0.0327
836	SLU 28	-0.74	0.08	34.75	0.0031	-2.568	0.02
836	SLU 29	-0.73	0.13	34.47	0.0031	-2.5517	0.0326
836	SLU 30	-0.74	0.08	34.49	0.0031	-2.5522	0.0198
836	SLU 31	-0.77	0.09	37	0.0034	-2.72	0.0232
836	SLU 32	-0.78	0.18	37.7	0.0034	-2.7617	0.046
836	SLU 33	-0.79	0.13	37.71	0.0034	-2.7622	0.0333
836	SLU 34	-0.78	0.1	37.45	0.0034	-2.7468	0.0247
836	SLU 35	-0.79	0.19	38.16	0.0034	-2.7885	0.0475
836	SLU 36	-0.8	0.14	38.17	0.0034	-2.789	0.0348
836	SLU 37	-0.79	0.19	37.89	0.0034	-2.7727	0.0474
836	SLU 38	-0.79	0.14	37.9	0.0034	-2.7733	0.0346
836	SLU 39	-0.79	0.2	38.44	0.0035	-2.8139	0.0508
836	SLU 40	-0.79	0.15	38.45	0.0035	-2.8144	0.0381
836	SLU 41	-0.8	0.21	38.9	0.0035	-2.8407	0.0523
836	SLU 42	-0.8	0.15	38.91	0.0035	-2.8412	0.0395
836	SLU 43	-0.82	0.04	37.87	0.0031	-2.8803	0.0104
836	SLU 44	-0.83	-0.05	37.89	0.0032	-2.8812	-0.0109
836	SLU 45	-0.84	0.04	38.59	0.0031	-2.9228	0.0119
836	SLU 46	-0.84	-0.01	38.6	0.0032	-2.9234	-0.0008
836	SLU 47	-0.84	-0.04	38.35	0.0032	-2.908	-0.0094
836	SLU 48	-0.85	0.05	39.05	0.0032	-2.9496	0.0134
836	SLU 49	-0.85	0	39.06	0.0032	-2.9501	0.0007
836	SLU 50	-0.84	0.05	38.78	0.0031	-2.9339	0.0133
836	SLU 51	-0.85	0	38.8	0.0032	-2.9344	0.0005
836	SLU 52	-0.88	0.01	41.31	0.0035	-3.1022	0.0039
836	SLU 53	-0.89	0.1	42.01	0.0034	-3.1439	0.0267
836	SLU 54	-0.9	0.05	42.02	0.0035	-3.1444	0.014
836	SLU 55	-0.89	0.02	41.77	0.0035	-3.129	0.0054
836	SLU 56	-0.9	0.11	42.47	0.0035	-3.1706	0.0282
836	SLU 57	-0.91	0.06	42.48	0.0035	-3.1712	0.0155
836	SLU 58	-0.9	0.11	42.2	0.0035	-3.1549	0.0281
836	SLU 59	-0.9	0.06	42.22	0.0035	-3.1554	0.0153
836	SLU 60	-0.9	0.12	42.75	0.0035	-3.1961	0.0315
836	SLU 61	-0.9	0.07	42.76	0.0036	-3.1966	0.0188
836	SLU 62	-0.91	0.13	43.21	0.0036	-3.2228	0.033
836	SLU 63	-0.91	0.08	43.22	0.0036	-3.2234	0.0202
836	SLU 64	-0.89	0.11	41.37	0.0036	-3.1039	0.0275
836	SLU 65	-0.89	0.02	41.39	0.0037	-3.1048	0.0063
836	SLU 66	-0.9	0.11	42.09	0.0036	-3.1464	0.0291
836	SLU 67	-0.91	0.06	42.11	0.0037	-3.1469	0.0164
836	SLU 68	-0.9	0.03	41.85	0.0037	-3.1315	0.0077
836	SLU 69	-0.91	0.12	42.55	0.0037	-3.1732	0.0306
836	SLU 70	-0.92	0.07	42.57	0.0037	-3.1737	0.0178
836	SLU 71	-0.91	0.12	42.29	0.0036	-3.1575	0.0304
836	SLU 72	-0.91	0.07	42.3	0.0037	-3.158	0.0177
836	SLU 73	-0.95	0.08	44.81	0.004	-3.3258	0.0211
836	SLU 74	-0.96	0.17	45.51	0.0039	-3.3674	0.0439
836	SLU 75	-0.96	0.12	45.53	0.004	-3.3679	0.0312
836	SLU 76	-0.96	0.09	45.27	0.004	-3.3525	0.0225
836	SLU 77	-0.97	0.18	45.97	0.004	-3.3942	0.0454
836	SLU 78	-0.97	0.13	45.98	0.004	-3.3947	0.0326
836	SLU 79	-0.96	0.18	45.71	0.004	-3.3785	0.0452
836	SLU 80	-0.96	0.13	45.72	0.004	-3.379	0.0325
836	SLU 81	-0.96	0.19	46.25	0.004	-3.4196	0.0487
836	SLU 82	-0.97	0.14	46.27	0.0041	-3.4201	0.0359
836	SLU 83	-0.97	0.2	46.71	0.0041	-3.4464	0.0501
836	SLU 84	-0.98	0.15	46.73	0.0041	-3.4469	0.0374
836	SLE RA 1	-0.67	0.07	31.05	0.0026	-2.3385	0.0174
836	SLE RA 2	-0.67	0.01	31.07	0.0027	-2.3391	0.0032
836	SLE RA 3	-0.68	0.07	31.54	0.0027	-2.3668	0.0184
836	SLE RA 4	-0.68	0.04	31.54	0.0027	-2.3672	0.01
836	SLE RA 5	-0.68	0.01	31.37	0.0027	-2.3569	0.0042
836	SLE RA 6	-0.69	0.08	31.84	0.0027	-2.3847	0.0194
836	SLE RA 7	-0.69	0.04	31.85	0.0027	-2.385	0.0109
836	SLE RA 8	-0.68	0.07	31.66	0.0027	-2.3742	0.0193
836	SLE RA 9	-0.68	0.04	31.67	0.0027	-2.3745	0.0109
836	SLE RA 10	-0.71	0.05	33.35	0.0029	-2.4864	0.0131
836	SLE RA 11	-0.71	0.11	33.81	0.0029	-2.5142	0.0283
836	SLE RA 12	-0.72	0.08	33.82	0.0029	-2.5145	0.0198
836	SLE RA 13	-0.72	0.05	33.65	0.0029	-2.5042	0.0141
836	SLE RA 14	-0.72	0.11	34.12	0.0029	-2.532	0.0293
836	SLE RA 15	-0.72	0.08	34.13	0.0029	-2.5324	0.0208
836	SLE RA 16	-0.72	0.11	33.94	0.0029	-2.5215	0.0292
836	SLE RA 17	-0.72	0.08	33.95	0.0029	-2.5219	0.0207
836	SLE RA 18	-0.72	0.12	34.31	0.0029	-2.549	0.0315
836	SLE RA 19	-0.72	0.09	34.32	0.003	-2.5493	0.023
836	SLE RA 20	-0.73	0.13	34.61	0.003	-2.5668	0.0325

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
836	SLE RA 21	-0.73	0.09	34.62	0.003	-2.5672	0.024
836	SLE FR 1	-0.67	0.07	31.05	0.0026	-2.3385	0.0174
836	SLE FR 2	-0.67	0.06	31.06	0.0027	-2.3386	0.0146
836	SLE FR 3	-0.67	0.07	31.18	0.0027	-2.3456	0.0178
836	SLE FR 4	-0.68	0.07	32.03	0.0027	-2.4017	0.0188
836	SLE FR 5	-0.69	0.09	32.15	0.0027	-2.4088	0.022
836	SLE FR 6	-0.69	0.1	32.68	0.0028	-2.4437	0.0244
836	SLE QP 1	-0.67	0.07	31.05	0.0026	-2.3385	0.0174
836	SLE QP 2	-0.68	0.08	32.03	0.0027	-2.4016	0.0216
836	SLD 1	1.81	0.64	40.62	-0.0003	-2.9306	0.1584
836	SLD 2	1.65	0.1	40.85	0.0015	-2.9502	0.0247
836	SLD 3	1.76	-0.58	40.81	0.0022	-2.9611	-0.1464
836	SLD 4	1.6	-1.12	41.05	0.004	-2.9806	-0.28
836	SLD 5	0.17	2.2	34.27	-0.0022	-2.5106	0.5492
836	SLD 6	0.06	1.84	34.42	-0.0011	-2.5235	0.4605
836	SLD 7	0.01	-1.87	34.92	0.006	-2.6121	-0.4667
836	SLD 8	-0.1	-2.22	35.07	0.0072	-2.6251	-0.5554
836	SLD 9	-1.26	2.39	28.99	-0.0017	-2.1782	0.5986
836	SLD 10	-1.37	2.03	29.14	-0.0006	-2.1911	0.5099
836	SLD 11	-1.43	-1.67	29.64	0.0065	-2.2797	-0.4172
836	SLD 12	-1.54	-2.03	29.79	0.0077	-2.2927	-0.5059
836	SLD 13	-2.96	1.29	23.01	0.0015	-1.8226	0.3233
836	SLD 14	-3.13	0.75	23.25	0.0032	-1.8421	0.1896
836	SLD 15	-3.01	0.07	23.21	0.004	-1.8531	0.0185
836	SLD 16	-3.18	-0.47	23.44	0.0057	-1.8726	-0.1151
836	SLV 1	5.15	1.33	52.13	-0.0042	-3.6405	0.3289
836	SLV 2	4.76	0.08	52.68	-0.0001	-3.686	0.0178
836	SLV 3	5.04	-1.42	52.58	0.0014	-3.7098	-0.3603
836	SLV 4	4.65	-2.68	53.12	0.0055	-3.7553	-0.6714
836	SLV 5	1.31	4.86	37.29	-0.0086	-2.6602	1.2138
836	SLV 6	1.05	4.04	37.65	-0.0059	-2.6898	1.0111
836	SLV 7	0.93	-4.33	38.77	0.0101	-2.8912	-1.0836
836	SLV 8	0.68	-5.14	39.13	0.0128	-2.9209	-1.2863
836	SLV 9	-2.04	5.31	24.93	-0.0073	-1.8824	1.3296
836	SLV 10	-2.3	4.5	25.29	-0.0047	-1.912	1.1268
836	SLV 11	-2.42	-3.87	26.41	0.0114	-2.1134	-0.9679
836	SLV 12	-2.67	-4.69	26.77	0.014	-2.1431	-1.1706
836	SLV 13	-6.02	2.84	10.94	0	-1.0479	0.7147
836	SLV 14	-6.4	1.59	11.48	0.004	-1.0934	0.4036
836	SLV 15	-6.13	0.09	11.38	0.0056	-1.1172	0.0254
836	SLV 16	-6.52	-1.16	11.93	0.0097	-1.1627	-0.2857
836	CRTFP Ux+	0	0	0	0	0	0
836	CRTFP Ux-	0	0	0	0	0	0
836	CRTFP Uy+	0	0	0	0	0	0
836	CRTFP Uy-	0	0	0	0	0	0
839	SLU 1	0.68	0.26	32.78	-0.0443	4.3474	-0.0924
839	SLU 2	0.69	0.24	32.78	-0.0444	4.3482	-0.0848
839	SLU 3	0.7	0.26	33.54	-0.0455	4.4293	-0.0937
839	SLU 4	0.7	0.25	33.54	-0.0456	4.4298	-0.0892
839	SLU 5	0.7	0.24	33.26	-0.0452	4.3993	-0.0835
839	SLU 6	0.71	0.26	34.02	-0.0463	4.4804	-0.0924
839	SLU 7	0.72	0.25	34.02	-0.0464	4.4809	-0.0879
839	SLU 8	0.71	0.25	33.73	-0.0459	4.4496	-0.0898
839	SLU 9	0.71	0.24	33.73	-0.0459	4.4501	-0.0852
839	SLU 10	0.73	0.35	36.47	-0.05	4.7615	-0.1226
839	SLU 11	0.75	0.37	37.24	-0.0511	4.8426	-0.1315
839	SLU 12	0.75	0.36	37.24	-0.0512	4.8431	-0.127
839	SLU 13	0.75	0.34	36.95	-0.0508	4.8127	-0.1213
839	SLU 14	0.76	0.37	37.71	-0.0519	4.8938	-0.1302
839	SLU 15	0.76	0.35	37.71	-0.052	4.8943	-0.1257
839	SLU 16	0.75	0.36	37.42	-0.0515	4.863	-0.1276
839	SLU 17	0.76	0.35	37.42	-0.0515	4.8635	-0.123
839	SLU 18	0.75	0.41	38.06	-0.0523	4.9379	-0.1464
839	SLU 19	0.75	0.4	38.06	-0.0524	4.9383	-0.1419
839	SLU 20	0.76	0.41	38.53	-0.0531	4.989	-0.1451
839	SLU 21	0.76	0.4	38.53	-0.0531	4.9895	-0.1406
839	SLU 22	0.74	0.37	36.53	-0.0498	4.7639	-0.1291
839	SLU 23	0.75	0.34	36.53	-0.0499	4.7647	-0.1216
839	SLU 24	0.76	0.37	37.29	-0.051	4.8459	-0.1305
839	SLU 25	0.77	0.36	37.29	-0.0511	4.8463	-0.126
839	SLU 26	0.76	0.34	37	-0.0507	4.8159	-0.1203
839	SLU 27	0.78	0.37	37.76	-0.0518	4.897	-0.1292
839	SLU 28	0.78	0.35	37.76	-0.0518	4.8975	-0.1247
839	SLU 29	0.77	0.36	37.47	-0.0514	4.8662	-0.1265
839	SLU 30	0.77	0.34	37.47	-0.0514	4.8667	-0.122
839	SLU 31	0.79	0.45	40.22	-0.0555	5.1781	-0.1594
839	SLU 32	0.81	0.48	40.98	-0.0566	5.2592	-0.1683
839	SLU 33	0.81	0.46	40.98	-0.0567	5.2597	-0.1638
839	SLU 34	0.81	0.45	40.69	-0.0563	5.2292	-0.1581
839	SLU 35	0.82	0.47	41.46	-0.0574	5.3103	-0.167
839	SLU 36	0.83	0.46	41.46	-0.0574	5.3108	-0.1625
839	SLU 37	0.82	0.47	41.17	-0.0569	5.2795	-0.1643
839	SLU 38	0.82	0.45	41.17	-0.057	5.28	-0.1598
839	SLU 39	0.81	0.52	41.8	-0.0578	5.3544	-0.1831
839	SLU 40	0.81	0.51	41.8	-0.0579	5.3549	-0.1786
839	SLU 41	0.82	0.51	42.28	-0.0586	5.4055	-0.1818
839	SLU 42	0.83	0.5	42.28	-0.0586	5.406	-0.1773
839	SLU 43	0.86	0.3	41.33	-0.0557	5.5088	-0.1075
839	SLU 44	0.87	0.28	41.33	-0.0558	5.5096	-0.0999
839	SLU 45	0.88	0.31	42.09	-0.057	5.5907	-0.1088

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
839	SLU 46	0.89	0.29	42.09	-0.057	5.5912	-0.1043
839	SLU 47	0.88	0.28	41.81	-0.0566	5.5607	-0.0986
839	SLU 48	0.9	0.3	42.57	-0.0577	5.6418	-0.1075
839	SLU 49	0.9	0.29	42.57	-0.0578	5.6423	-0.103
839	SLU 50	0.89	0.3	42.28	-0.0573	5.611	-0.1049
839	SLU 51	0.89	0.28	42.28	-0.0573	5.6115	-0.1003
839	SLU 52	0.91	0.39	45.03	-0.0614	5.9229	-0.1377
839	SLU 53	0.93	0.41	45.79	-0.0625	6.004	-0.1466
839	SLU 54	0.93	0.4	45.79	-0.0626	6.0045	-0.1421
839	SLU 55	0.93	0.38	45.5	-0.0622	5.9741	-0.1364
839	SLU 56	0.94	0.41	46.26	-0.0633	6.0552	-0.1453
839	SLU 57	0.95	0.4	46.26	-0.0634	6.0557	-0.1408
839	SLU 58	0.94	0.4	45.97	-0.0629	6.0244	-0.1427
839	SLU 59	0.94	0.39	45.97	-0.0629	6.0249	-0.1381
839	SLU 60	0.93	0.46	46.61	-0.0637	6.0993	-0.1615
839	SLU 61	0.93	0.44	46.61	-0.0638	6.0997	-0.157
839	SLU 62	0.94	0.45	47.08	-0.0645	6.1504	-0.1602
839	SLU 63	0.95	0.44	47.08	-0.0646	6.1509	-0.1557
839	SLU 64	0.92	0.41	45.08	-0.0612	5.9253	-0.1442
839	SLU 65	0.93	0.39	45.08	-0.0613	5.9261	-0.1367
839	SLU 66	0.94	0.41	45.84	-0.0624	6.0073	-0.1456
839	SLU 67	0.95	0.4	45.84	-0.0625	6.0077	-0.1411
839	SLU 68	0.94	0.38	45.55	-0.0621	5.9773	-0.1354
839	SLU 69	0.96	0.41	46.31	-0.0632	6.0584	-0.1443
839	SLU 70	0.96	0.39	46.31	-0.0633	6.0589	-0.1398
839	SLU 71	0.95	0.4	46.02	-0.0628	6.0276	-0.1416
839	SLU 72	0.96	0.39	46.02	-0.0628	6.0281	-0.1371
839	SLU 73	0.98	0.49	48.77	-0.0669	6.3395	-0.1745
839	SLU 74	0.99	0.52	49.53	-0.068	6.4206	-0.1834
839	SLU 75	0.99	0.51	49.53	-0.0681	6.4211	-0.1789
839	SLU 76	0.99	0.49	49.24	-0.0677	6.3906	-0.1732
839	SLU 77	1.01	0.51	50.01	-0.0688	6.4717	-0.1821
839	SLU 78	1.01	0.5	50.01	-0.0689	6.4722	-0.1776
839	SLU 79	1	0.51	49.72	-0.0684	6.4409	-0.1794
839	SLU 80	1	0.49	49.72	-0.0684	6.4414	-0.1749
839	SLU 81	0.99	0.56	50.35	-0.0692	6.5158	-0.1982
839	SLU 82	0.99	0.55	50.35	-0.0693	6.5163	-0.1937
839	SLU 83	1	0.56	50.83	-0.07	6.5669	-0.1969
839	SLU 84	1.01	0.54	50.83	-0.07	6.5674	-0.1924
839	SLE RA 1	0.7	0.29	33.85	-0.0459	4.4664	-0.1029
839	SLE RA 2	0.7	0.28	33.85	-0.0459	4.4669	-0.0978
839	SLE RA 3	0.71	0.29	34.36	-0.0467	4.521	-0.1038
839	SLE RA 4	0.71	0.28	34.36	-0.0467	4.5213	-0.1007
839	SLE RA 5	0.71	0.27	34.17	-0.0465	4.501	-0.097
839	SLE RA 6	0.72	0.29	34.68	-0.0472	4.5551	-0.1029
839	SLE RA 7	0.72	0.28	34.68	-0.0472	4.5554	-0.0999
839	SLE RA 8	0.72	0.29	34.48	-0.0469	4.5346	-0.1011
839	SLE RA 9	0.72	0.28	34.48	-0.0469	4.5349	-0.0981
839	SLE RA 10	0.73	0.35	36.31	-0.0497	4.7425	-0.1231
839	SLE RA 11	0.74	0.36	36.82	-0.0504	4.7966	-0.129
839	SLE RA 12	0.74	0.36	36.82	-0.0505	4.7969	-0.126
839	SLE RA 13	0.74	0.35	36.63	-0.0502	4.7766	-0.1222
839	SLE RA 14	0.75	0.36	37.14	-0.0509	4.8307	-0.1281
839	SLE RA 15	0.75	0.35	37.14	-0.051	4.831	-0.1251
839	SLE RA 16	0.75	0.36	36.95	-0.0506	4.8101	-0.1263
839	SLE RA 17	0.75	0.35	36.95	-0.0507	4.8104	-0.1233
839	SLE RA 18	0.74	0.39	37.37	-0.0512	4.86	-0.1389
839	SLE RA 19	0.74	0.38	37.37	-0.0513	4.8604	-0.1359
839	SLE RA 20	0.75	0.39	37.68	-0.0517	4.8941	-0.138
839	SLE RA 21	0.75	0.38	37.68	-0.0518	4.8945	-0.135
839	SLE FR 1	0.7	0.29	33.85	-0.0459	4.4664	-0.1029
839	SLE FR 2	0.7	0.29	33.85	-0.0459	4.4665	-0.1019
839	SLE FR 3	0.7	0.29	33.98	-0.0461	4.48	-0.1025
839	SLE FR 4	0.71	0.32	34.91	-0.0475	4.5846	-0.1127
839	SLE FR 5	0.71	0.32	35.03	-0.0477	4.5981	-0.1133
839	SLE FR 6	0.72	0.34	35.61	-0.0486	4.6632	-0.1209
839	SLE QP 1	0.7	0.29	33.85	-0.0459	4.4664	-0.1029
839	SLE QP 2	0.71	0.32	34.91	-0.0475	4.5845	-0.1137
839	SLD 1	2.43	0.87	25.56	-0.0321	3.6426	-0.3026
839	SLD 2	2.2	1.53	25.29	-0.0338	3.6216	-0.5338
839	SLD 3	2.71	-0.5	26	-0.0293	3.6648	0.1757
839	SLD 4	2.49	0.16	25.72	-0.031	3.6437	-0.0555
839	SLD 5	0.84	2.44	31.5	-0.0468	4.2722	-0.8537
839	SLD 6	0.69	2.88	31.32	-0.0479	4.2582	-1.0072
839	SLD 7	1.78	-2.13	32.94	-0.0375	4.346	0.7406
839	SLD 8	1.63	-1.68	32.75	-0.0386	4.332	0.5871
839	SLD 9	-0.21	2.33	37.06	-0.0564	4.837	-0.8145
839	SLD 10	-0.36	2.77	36.88	-0.0575	4.823	-0.9679
839	SLD 11	0.73	-2.24	38.5	-0.0471	4.9107	0.7798
839	SLD 12	0.58	-1.8	38.31	-0.0482	4.8968	0.6264
839	SLD 13	-1.07	0.48	44.1	-0.064	5.5253	-0.1718
839	SLD 14	-1.29	1.15	43.82	-0.0657	5.5042	-0.4031
839	SLD 15	-0.78	-0.89	44.53	-0.0612	5.5474	0.3065
839	SLD 16	-1.01	-0.22	44.25	-0.0629	5.5264	0.0752
839	SLV 1	4.74	1.55	13.07	-0.0114	2.3812	-0.5398
839	SLV 2	4.21	3.1	12.42	-0.0153	2.3322	-1.0781
839	SLV 3	5.38	-1.55	14.04	-0.0051	2.4321	0.5444
839	SLV 4	4.85	-0.01	13.39	-0.009	2.3831	0.006
839	SLV 5	1.04	5.13	26.99	-0.0455	3.855	-1.7911
839	SLV 6	0.69	6.14	26.57	-0.0481	3.823	-2.1419

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
839	SLV 7	3.18	-5.22	30.24	-0.0245	4.0245	1.8226
839	SLV 8	2.84	-4.22	29.82	-0.0271	3.9926	1.4718
839	SLV 9	-1.41	4.86	40	-0.0679	5.1764	-1.6992
839	SLV 10	-1.76	5.87	39.58	-0.0705	5.1445	-2.0499
839	SLV 11	0.73	-5.49	43.24	-0.0469	5.3459	1.9145
839	SLV 12	0.38	-4.49	42.82	-0.0494	5.314	1.5638
839	SLV 13	-3.43	0.65	56.42	-0.086	6.7859	-0.2333
839	SLV 14	-3.96	2.2	55.78	-0.0899	6.7369	-0.7717
839	SLV 15	-2.79	-2.45	57.39	-0.0797	6.8368	0.8508
839	SLV 16	-3.32	-0.91	56.75	-0.0836	6.7878	0.3124
839	CRTFP Ux+	0	0	0	0	0	0
839	CRTFP Ux-	0	0	0	0	0	0
839	CRTFP Uy+	0	0	0	0	0	0
839	CRTFP Uy-	0	0	0	0	0	0
841	SLU 1	1.45	0.11	61.59	0.0232	0.3334	-0.0127
841	SLU 2	1.43	0.08	61.58	0.0232	0.3425	-0.0119
841	SLU 3	1.49	0.12	63	0.0237	0.3442	-0.0131
841	SLU 4	1.48	0.1	63	0.0238	0.3496	-0.0126
841	SLU 5	1.46	0.07	62.46	0.0235	0.3484	-0.0122
841	SLU 6	1.52	0.11	63.88	0.024	0.35	-0.0134
841	SLU 7	1.51	0.09	63.87	0.024	0.3555	-0.0129
841	SLU 8	1.5	0.1	63.34	0.0238	0.3451	-0.0134
841	SLU 9	1.49	0.08	63.34	0.0238	0.3506	-0.0129
841	SLU 10	1.52	0.18	69.08	0.0261	0.3975	-0.0129
841	SLU 11	1.58	0.22	70.5	0.0265	0.3991	-0.0141
841	SLU 12	1.57	0.2	70.49	0.0266	0.4046	-0.0136
841	SLU 13	1.55	0.17	69.95	0.0263	0.4033	-0.0132
841	SLU 14	1.61	0.22	71.37	0.0268	0.405	-0.0144
841	SLU 15	1.6	0.2	71.37	0.0268	0.4104	-0.0139
841	SLU 16	1.6	0.2	70.84	0.0266	0.4	-0.0144
841	SLU 17	1.59	0.18	70.83	0.0266	0.4055	-0.0139
841	SLU 18	1.58	0.25	72.3	0.0272	0.4119	-0.0142
841	SLU 19	1.57	0.24	72.29	0.0272	0.4174	-0.0137
841	SLU 20	1.61	0.25	73.17	0.0275	0.4178	-0.0145
841	SLU 21	1.6	0.23	73.17	0.0275	0.4232	-0.014
841	SLU 22	1.57	0.24	69.12	0.0266	0.3869	-0.0135
841	SLU 23	1.55	0.21	69.11	0.0266	0.396	-0.0127
841	SLU 24	1.61	0.25	70.53	0.0271	0.3977	-0.0138
841	SLU 25	1.6	0.23	70.53	0.0271	0.4031	-0.0133
841	SLU 26	1.58	0.21	69.99	0.0269	0.4019	-0.013
841	SLU 27	1.64	0.25	71.4	0.0274	0.4035	-0.0141
841	SLU 28	1.63	0.23	71.4	0.0274	0.409	-0.0136
841	SLU 29	1.63	0.23	70.87	0.0272	0.3986	-0.0141
841	SLU 30	1.62	0.22	70.87	0.0272	0.4041	-0.0136
841	SLU 31	1.65	0.31	76.61	0.0294	0.451	-0.0137
841	SLU 32	1.71	0.35	78.02	0.0299	0.4526	-0.0148
841	SLU 33	1.69	0.34	78.02	0.03	0.4581	-0.0143
841	SLU 34	1.68	0.31	77.48	0.0297	0.4568	-0.014
841	SLU 35	1.73	0.35	78.9	0.0302	0.4585	-0.0151
841	SLU 36	1.72	0.33	78.9	0.0302	0.4639	-0.0146
841	SLU 37	1.72	0.34	78.36	0.03	0.4536	-0.0151
841	SLU 38	1.71	0.32	78.36	0.03	0.459	-0.0146
841	SLU 39	1.71	0.39	79.83	0.0306	0.4654	-0.0149
841	SLU 40	1.69	0.37	79.82	0.0306	0.4709	-0.0144
841	SLU 41	1.73	0.39	80.7	0.0309	0.4713	-0.0152
841	SLU 42	1.72	0.37	80.7	0.0309	0.4767	-0.0147
841	SLU 43	1.84	0.09	77.48	0.029	0.4151	-0.0163
841	SLU 44	1.82	0.06	77.48	0.029	0.4242	-0.0155
841	SLU 45	1.88	0.1	78.89	0.0295	0.4259	-0.0166
841	SLU 46	1.87	0.08	78.89	0.0296	0.4313	-0.0161
841	SLU 47	1.85	0.06	78.35	0.0293	0.4301	-0.0158
841	SLU 48	1.91	0.1	79.77	0.0298	0.4317	-0.0169
841	SLU 49	1.9	0.08	79.77	0.0298	0.4372	-0.0164
841	SLU 50	1.9	0.08	79.23	0.0296	0.4268	-0.0169
841	SLU 51	1.89	0.07	79.23	0.0296	0.4323	-0.0164
841	SLU 52	1.92	0.16	84.97	0.0319	0.4792	-0.0165
841	SLU 53	1.97	0.2	86.39	0.0324	0.4808	-0.0176
841	SLU 54	1.96	0.19	86.39	0.0324	0.4863	-0.0171
841	SLU 55	1.94	0.16	85.85	0.0321	0.485	-0.0168
841	SLU 56	2	0.2	87.27	0.0326	0.4866	-0.0179
841	SLU 57	1.99	0.18	87.26	0.0326	0.4921	-0.0174
841	SLU 58	1.99	0.19	86.73	0.0324	0.4817	-0.0179
841	SLU 59	1.98	0.17	86.73	0.0324	0.4872	-0.0174
841	SLU 60	1.97	0.24	88.19	0.033	0.4936	-0.0177
841	SLU 61	1.96	0.22	88.19	0.0331	0.4991	-0.0172
841	SLU 62	2	0.24	89.07	0.0333	0.4994	-0.0181
841	SLU 63	1.99	0.22	89.06	0.0333	0.5049	-0.0176
841	SLU 64	1.96	0.23	85.01	0.0324	0.4686	-0.0171
841	SLU 65	1.95	0.2	85.01	0.0324	0.4777	-0.0162
841	SLU 66	2.01	0.24	86.42	0.0329	0.4794	-0.0174
841	SLU 67	1.99	0.22	86.42	0.033	0.4848	-0.0169
841	SLU 68	1.97	0.19	85.88	0.0327	0.4836	-0.0165
841	SLU 69	2.03	0.23	87.3	0.0332	0.4852	-0.0177
841	SLU 70	2.02	0.21	87.3	0.0332	0.4907	-0.0172
841	SLU 71	2.02	0.22	86.76	0.033	0.4803	-0.0177
841	SLU 72	2.01	0.2	86.76	0.033	0.4858	-0.0172
841	SLU 73	2.04	0.3	92.5	0.0353	0.5327	-0.0172
841	SLU 74	2.1	0.34	93.92	0.0357	0.5343	-0.0184
841	SLU 75	2.09	0.32	93.92	0.0358	0.5398	-0.0179
841	SLU 76	2.07	0.3	93.38	0.0355	0.5385	-0.0175

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
841	SLU 77	2.13	0.34	94.8	0.036	0.5401	-0.0187
841	SLU 78	2.12	0.32	94.79	0.036	0.5456	-0.0182
841	SLU 79	2.11	0.32	94.26	0.0358	0.5352	-0.0187
841	SLU 80	2.1	0.3	94.26	0.0358	0.5407	-0.0182
841	SLU 81	2.1	0.38	95.72	0.0364	0.5471	-0.0185
841	SLU 82	2.09	0.36	95.72	0.0364	0.5526	-0.018
841	SLU 83	2.13	0.37	96.6	0.0367	0.553	-0.0188
841	SLU 84	2.11	0.35	96.59	0.0367	0.5584	-0.0183
841	SLE RA 1	1.48	0.15	63.74	0.0242	0.3487	-0.013
841	SLE RA 2	1.47	0.12	63.74	0.0242	0.3548	-0.0124
841	SLE RA 3	1.51	0.15	64.68	0.0245	0.3559	-0.0132
841	SLE RA 4	1.5	0.14	64.68	0.0245	0.3595	-0.0128
841	SLE RA 5	1.49	0.12	64.32	0.0244	0.3587	-0.0126
841	SLE RA 6	1.53	0.15	65.26	0.0247	0.3598	-0.0134
841	SLE RA 7	1.52	0.14	65.26	0.0247	0.3634	-0.013
841	SLE RA 8	1.52	0.14	64.91	0.0246	0.3565	-0.0134
841	SLE RA 9	1.51	0.13	64.91	0.0246	0.3601	-0.013
841	SLE RA 10	1.53	0.19	68.73	0.0261	0.3914	-0.0131
841	SLE RA 11	1.57	0.22	69.68	0.0264	0.3925	-0.0138
841	SLE RA 12	1.57	0.21	69.68	0.0264	0.3962	-0.0135
841	SLE RA 13	1.55	0.19	69.32	0.0263	0.3953	-0.0133
841	SLE RA 14	1.59	0.22	70.26	0.0266	0.3964	-0.014
841	SLE RA 15	1.58	0.21	70.26	0.0266	0.4	-0.0137
841	SLE RA 16	1.58	0.21	69.9	0.0264	0.3931	-0.014
841	SLE RA 17	1.58	0.2	69.9	0.0264	0.3968	-0.0137
841	SLE RA 18	1.57	0.24	70.88	0.0269	0.4011	-0.0139
841	SLE RA 19	1.57	0.23	70.88	0.0269	0.4047	-0.0136
841	SLE RA 20	1.59	0.24	71.46	0.0271	0.4049	-0.0141
841	SLE RA 21	1.58	0.23	71.46	0.0271	0.4086	-0.0138
841	SLE FR 1	1.48	0.15	63.74	0.0242	0.3487	-0.013
841	SLE FR 2	1.48	0.14	63.74	0.0242	0.3499	-0.0129
841	SLE FR 3	1.49	0.14	63.97	0.0243	0.3503	-0.013
841	SLE FR 4	1.51	0.17	65.88	0.025	0.3656	-0.0131
841	SLE FR 5	1.52	0.17	66.11	0.0251	0.366	-0.0133
841	SLE FR 6	1.53	0.19	67.31	0.0255	0.3749	-0.0134
841	SLE QP 1	1.48	0.15	63.74	0.0242	0.3487	-0.013
841	SLE QP 2	1.51	0.17	65.88	0.025	0.3644	-0.0132
841	SLD 1	6.88	0.96	61.07	0.018	0.3047	-0.0418
841	SLD 2	6.5	1.45	60.6	0.0145	0.3155	-0.0295
841	SLD 3	6.96	-0.64	61.48	0.0275	0.3536	-0.0426
841	SLD 4	6.58	-0.14	61.01	0.024	0.3644	-0.0302
841	SLD 5	3.07	2.74	63.9	0.0091	0.2704	-0.023
841	SLD 6	2.81	3.07	63.59	0.0068	0.2775	-0.0148
841	SLD 7	3.34	-2.58	65.27	0.0408	0.4334	-0.0254
841	SLD 8	3.09	-2.25	64.95	0.0385	0.4405	-0.0172
841	SLD 9	-0.07	2.6	66.81	0.0115	0.2883	-0.0093
841	SLD 10	-0.32	2.93	66.5	0.0092	0.2954	-0.0011
841	SLD 11	0.21	-2.72	68.17	0.0432	0.4513	-0.0117
841	SLD 12	-0.04	-2.39	67.86	0.0409	0.4585	-0.0035
841	SLD 13	-3.56	0.49	70.76	0.026	0.3645	0.0038
841	SLD 14	-3.94	0.99	70.28	0.0225	0.3752	0.0161
841	SLD 15	-3.47	-1.11	71.17	0.0355	0.4134	0.003
841	SLD 16	-3.86	-0.61	70.69	0.032	0.4241	0.0153
841	SLV 1	14.06	1.96	54.63	0.0088	0.2252	-0.08
841	SLV 2	13.17	3.11	53.53	0.0008	0.2501	-0.0514
841	SLV 3	14.26	-1.66	55.56	0.0303	0.3358	-0.0817
841	SLV 4	13.36	-0.51	54.45	0.0223	0.3608	-0.0531
841	SLV 5	5.14	6	61.29	-0.011	0.1505	-0.0358
841	SLV 6	4.56	6.75	60.57	-0.0163	0.1667	-0.0171
841	SLV 7	5.79	-6.07	64.39	0.0606	0.5193	-0.0414
841	SLV 8	5.2	-5.32	63.67	0.0554	0.5355	-0.0227
841	SLV 9	-2.18	5.67	68.1	-0.0054	0.1933	-0.0038
841	SLV 10	-2.76	6.42	67.38	-0.0106	0.2096	0.0149
841	SLV 11	-1.54	-6.4	71.19	0.0663	0.5621	-0.0094
841	SLV 12	-2.12	-5.65	70.47	0.061	0.5784	0.0093
841	SLV 13	-10.34	0.86	77.31	0.0277	0.3681	0.0266
841	SLV 14	-11.24	2.01	76.2	0.0197	0.393	0.0552
841	SLV 15	-10.15	-2.76	78.24	0.0492	0.4787	0.0249
841	SLV 16	-11.04	-1.61	77.13	0.0411	0.5037	0.0536
841	CRTFP Ux+	0	0	0	0	0	0
841	CRTFP Ux-	0	0	0	0	0	0
844	SLU 1	-1.14	-0.81	62.7	-0.0085	-0.472	0.0209
844	SLU 2	-1.17	-0.89	62.78	-0.0082	-0.4772	0.0216
844	SLU 3	-1.17	-0.81	64.22	-0.0088	-0.4853	0.0215
844	SLU 4	-1.19	-0.87	64.27	-0.0087	-0.4884	0.0219
844	SLU 5	-1.19	-0.9	63.74	-0.0085	-0.4832	0.0219
844	SLU 6	-1.19	-0.82	65.18	-0.0091	-0.4912	0.0217
844	SLU 7	-1.21	-0.87	65.23	-0.0089	-0.4944	0.0221
844	SLU 8	-1.18	-0.82	64.62	-0.0091	-0.4839	0.0215
844	SLU 9	-1.2	-0.87	64.67	-0.0089	-0.487	0.0219
844	SLU 10	-1.25	-0.92	70.55	-0.0098	-0.5557	0.0249
844	SLU 11	-1.25	-0.84	71.99	-0.0104	-0.5638	0.0247
844	SLU 12	-1.27	-0.89	72.04	-0.0102	-0.5669	0.0251
844	SLU 13	-1.27	-0.93	71.51	-0.0101	-0.5617	0.0251
844	SLU 14	-1.27	-0.85	72.95	-0.0107	-0.5698	0.025
844	SLU 15	-1.29	-0.9	73	-0.0105	-0.5729	0.0254
844	SLU 16	-1.26	-0.84	72.39	-0.0106	-0.5624	0.0247
844	SLU 17	-1.27	-0.9	72.44	-0.0105	-0.5656	0.0251
844	SLU 18	-1.25	-0.84	73.79	-0.0107	-0.5841	0.0256
844	SLU 19	-1.27	-0.9	73.84	-0.0106	-0.5873	0.026

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
844	SLU 20	-1.27	-0.85	74.76	-0.011	-0.5901	0.0258
844	SLU 21	-1.29	-0.9	74.81	-0.0109	-0.5932	0.0262
844	SLU 22	-1.25	-0.79	70.52	-0.0094	-0.543	0.0232
844	SLU 23	-1.28	-0.88	70.6	-0.0091	-0.5483	0.0239
844	SLU 24	-1.28	-0.79	72.04	-0.0097	-0.5563	0.0237
844	SLU 25	-1.3	-0.85	72.09	-0.0096	-0.5595	0.0241
844	SLU 26	-1.29	-0.88	71.56	-0.0094	-0.5542	0.0241
844	SLU 27	-1.3	-0.8	73	-0.01	-0.5623	0.024
844	SLU 28	-1.31	-0.85	73.05	-0.0098	-0.5654	0.0244
844	SLU 29	-1.29	-0.8	72.44	-0.01	-0.555	0.0237
844	SLU 30	-1.3	-0.85	72.49	-0.0098	-0.5581	0.0241
844	SLU 31	-1.35	-0.9	78.37	-0.0107	-0.6268	0.0271
844	SLU 32	-1.36	-0.82	79.8	-0.0113	-0.6349	0.027
844	SLU 33	-1.37	-0.87	79.86	-0.0111	-0.638	0.0274
844	SLU 34	-1.37	-0.91	79.33	-0.011	-0.6328	0.0274
844	SLU 35	-1.37	-0.83	80.77	-0.0116	-0.6408	0.0272
844	SLU 36	-1.39	-0.88	80.82	-0.0114	-0.644	0.0277
844	SLU 37	-1.36	-0.83	80.21	-0.0115	-0.6335	0.027
844	SLU 38	-1.38	-0.88	80.26	-0.0114	-0.6366	0.0274
844	SLU 39	-1.36	-0.82	81.61	-0.0117	-0.6552	0.0278
844	SLU 40	-1.38	-0.88	81.66	-0.0115	-0.6584	0.0282
844	SLU 41	-1.38	-0.83	82.57	-0.0119	-0.6612	0.0281
844	SLU 42	-1.39	-0.88	82.62	-0.0118	-0.6643	0.0285
844	SLU 43	-1.45	-1.05	78.83	-0.0107	-0.5892	0.0264
844	SLU 44	-1.48	-1.14	78.91	-0.0104	-0.5944	0.0271
844	SLU 45	-1.48	-1.06	80.35	-0.0111	-0.6025	0.027
844	SLU 46	-1.5	-1.12	80.4	-0.0109	-0.6056	0.0274
844	SLU 47	-1.49	-1.15	79.87	-0.0107	-0.6004	0.0274
844	SLU 48	-1.5	-1.07	81.31	-0.0114	-0.6084	0.0272
844	SLU 49	-1.51	-1.12	81.36	-0.0112	-0.6116	0.0276
844	SLU 50	-1.49	-1.07	80.75	-0.0113	-0.6011	0.027
844	SLU 51	-1.5	-1.12	80.8	-0.0111	-0.6042	0.0274
844	SLU 52	-1.55	-1.17	86.68	-0.012	-0.6729	0.0304
844	SLU 53	-1.56	-1.09	88.12	-0.0127	-0.681	0.0302
844	SLU 54	-1.57	-1.14	88.17	-0.0125	-0.6842	0.0306
844	SLU 55	-1.57	-1.18	87.64	-0.0123	-0.6789	0.0306
844	SLU 56	-1.58	-1.09	89.08	-0.0129	-0.687	0.0305
844	SLU 57	-1.59	-1.15	89.13	-0.0128	-0.6901	0.0309
844	SLU 58	-1.56	-1.09	88.52	-0.0129	-0.6796	0.0302
844	SLU 59	-1.58	-1.15	88.57	-0.0127	-0.6828	0.0306
844	SLU 60	-1.56	-1.09	89.92	-0.013	-0.7014	0.0311
844	SLU 61	-1.58	-1.14	89.97	-0.0128	-0.7045	0.0315
844	SLU 62	-1.58	-1.1	90.88	-0.0133	-0.7073	0.0313
844	SLU 63	-1.59	-1.15	90.94	-0.0131	-0.7105	0.0317
844	SLU 64	-1.55	-1.03	86.65	-0.0116	-0.6602	0.0287
844	SLU 65	-1.58	-1.12	86.73	-0.0113	-0.6655	0.0294
844	SLU 66	-1.58	-1.04	88.17	-0.012	-0.6736	0.0292
844	SLU 67	-1.6	-1.1	88.22	-0.0118	-0.6767	0.0296
844	SLU 68	-1.6	-1.13	87.69	-0.0116	-0.6715	0.0296
844	SLU 69	-1.6	-1.05	89.13	-0.0123	-0.6795	0.0295
844	SLU 70	-1.62	-1.1	89.18	-0.0121	-0.6827	0.0299
844	SLU 71	-1.59	-1.05	88.57	-0.0122	-0.6722	0.0292
844	SLU 72	-1.61	-1.1	88.62	-0.012	-0.6753	0.0296
844	SLU 73	-1.66	-1.15	94.5	-0.0129	-0.744	0.0326
844	SLU 74	-1.66	-1.07	95.93	-0.0136	-0.7521	0.0325
844	SLU 75	-1.68	-1.12	95.98	-0.0134	-0.7552	0.0329
844	SLU 76	-1.68	-1.16	95.46	-0.0132	-0.75	0.0329
844	SLU 77	-1.68	-1.07	96.9	-0.0138	-0.758	0.0327
844	SLU 78	-1.7	-1.13	96.95	-0.0137	-0.7612	0.0332
844	SLU 79	-1.67	-1.07	96.33	-0.0138	-0.7507	0.0325
844	SLU 80	-1.69	-1.13	96.39	-0.0136	-0.7538	0.0329
844	SLU 81	-1.66	-1.07	97.74	-0.0139	-0.7724	0.0333
844	SLU 82	-1.68	-1.12	97.79	-0.0137	-0.7756	0.0337
844	SLU 83	-1.68	-1.08	98.7	-0.0142	-0.7784	0.0336
844	SLU 84	-1.7	-1.13	98.75	-0.014	-0.7815	0.034
844	SLE RA 1	-1.17	-0.8	64.93	-0.0087	-0.4923	0.0216
844	SLE RA 2	-1.19	-0.86	64.99	-0.0085	-0.4958	0.022
844	SLE RA 3	-1.19	-0.8	65.95	-0.009	-0.5011	0.0219
844	SLE RA 4	-1.2	-0.84	65.98	-0.0089	-0.5032	0.0222
844	SLE RA 5	-1.2	-0.86	65.63	-0.0087	-0.4997	0.0222
844	SLE RA 6	-1.2	-0.81	66.59	-0.0092	-0.5051	0.0221
844	SLE RA 7	-1.22	-0.85	66.62	-0.009	-0.5072	0.0224
844	SLE RA 8	-1.2	-0.81	66.21	-0.0091	-0.5002	0.0219
844	SLE RA 9	-1.21	-0.84	66.25	-0.009	-0.5023	0.0222
844	SLE RA 10	-1.24	-0.88	70.17	-0.0096	-0.5481	0.0242
844	SLE RA 11	-1.24	-0.82	71.12	-0.01	-0.5535	0.0241
844	SLE RA 12	-1.26	-0.86	71.16	-0.0099	-0.5556	0.0244
844	SLE RA 13	-1.26	-0.88	70.81	-0.0098	-0.5521	0.0244
844	SLE RA 14	-1.26	-0.83	71.77	-0.0102	-0.5575	0.0243
844	SLE RA 15	-1.27	-0.86	71.8	-0.0101	-0.5596	0.0245
844	SLE RA 16	-1.25	-0.83	71.39	-0.0102	-0.5526	0.0241
844	SLE RA 17	-1.26	-0.86	71.43	-0.0101	-0.5547	0.0244
844	SLE RA 18	-1.25	-0.82	72.33	-0.0102	-0.567	0.0247
844	SLE RA 19	-1.26	-0.86	72.36	-0.0101	-0.5691	0.0249
844	SLE RA 20	-1.26	-0.83	72.97	-0.0104	-0.571	0.0248
844	SLE RA 21	-1.27	-0.86	73	-0.0103	-0.5731	0.0251
844	SLE FR 1	-1.17	-0.8	64.93	-0.0087	-0.4923	0.0216
844	SLE FR 2	-1.18	-0.81	64.94	-0.0087	-0.493	0.0217
844	SLE FR 3	-1.18	-0.8	65.19	-0.0088	-0.4938	0.0216
844	SLE FR 4	-1.2	-0.82	67.16	-0.0092	-0.5154	0.0226

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
844	SLE FR 5	-1.2	-0.81	67.41	-0.0093	-0.5163	0.0226
844	SLE FR 6	-1.21	-0.81	68.63	-0.0095	-0.5297	0.0231
844	SLE QP 1	-1.17	-0.8	64.93	-0.0087	-0.4923	0.0216
844	SLE QP 2	-1.19	-0.81	67.15	-0.0092	-0.5147	0.0225
844	SLD 1	4.44	-0.39	70.05	-0.0138	-0.5707	-0.0031
844	SLD 2	4.05	-0.88	70.8	-0.0105	-0.5609	0.0099
844	SLD 3	4.3	-2.1	70.84	-0.0048	-0.6355	-0.0011
844	SLD 4	3.92	-2.58	71.6	-0.0015	-0.6257	0.0119
844	SLD 5	0.77	1.99	66.69	-0.025	-0.435	0.0094
844	SLD 6	0.51	1.67	67.18	-0.0228	-0.4285	0.0181
844	SLD 7	0.32	-3.69	69.32	0.0053	-0.651	0.0161
844	SLD 8	0.07	-4.01	69.82	0.0075	-0.6445	0.0247
844	SLD 9	-2.45	2.4	64.48	-0.0259	-0.3849	0.0203
844	SLD 10	-2.71	2.08	64.98	-0.0237	-0.3784	0.0289
844	SLD 11	-2.9	-3.28	67.12	0.0044	-0.6009	0.0269
844	SLD 12	-3.16	-3.6	67.62	0.0066	-0.5944	0.0356
844	SLD 13	-6.31	0.97	62.71	-0.0169	-0.4037	0.0331
844	SLD 14	-6.69	0.48	63.46	-0.0136	-0.3939	0.0461
844	SLD 15	-6.44	-0.74	63.5	-0.0078	-0.4685	0.0351
844	SLD 16	-6.83	-1.22	64.25	-0.0045	-0.4587	0.0481
844	SLV 1	11.97	0.09	73.98	-0.0197	-0.6484	-0.0371
844	SLV 2	11.07	-1.03	75.73	-0.012	-0.6257	-0.0069
844	SLV 3	11.66	-3.76	75.77	0.0009	-0.7948	-0.0326
844	SLV 4	10.76	-4.88	77.52	0.0086	-0.7721	-0.0023
844	SLV 5	3.37	5.5	66.18	-0.0449	-0.3368	-0.0076
844	SLV 6	2.79	4.77	67.32	-0.0399	-0.322	0.0121
844	SLV 7	2.36	-7.34	72.14	0.0238	-0.8247	0.0075
844	SLV 8	1.77	-8.07	73.28	0.0287	-0.8099	0.0272
844	SLV 9	-4.16	6.46	61.03	-0.0471	-0.2195	0.0178
844	SLV 10	-4.75	5.73	62.17	-0.0421	-0.2046	0.0375
844	SLV 11	-5.18	-6.39	66.98	0.0216	-0.7074	0.0328
844	SLV 12	-5.76	-7.12	68.12	0.0266	-0.6926	0.0526
844	SLV 13	-13.15	3.27	56.79	-0.027	-0.2573	0.0473
844	SLV 14	-14.05	2.15	58.54	-0.0193	-0.2346	0.0776
844	SLV 15	-13.46	-0.58	58.57	-0.0064	-0.4037	0.0519
844	SLV 16	-14.36	-1.71	60.32	0.0013	-0.381	0.0821
844	CRTFP Ux+	0	0	0	0	0	0
844	CRTFP Ux-	0	0	0	0	0	0
844	CRTFP Uy+	0	0	0	0	0	0
844	CRTFP Uy-	0	0	0	0	0	0
847	SLU 1	0.19	0.77	52.24	0.0419	0.7448	0.0172
847	SLU 2	0.17	0.71	52.23	0.0424	0.7436	0.0178
847	SLU 3	0.19	0.81	53.43	0.043	0.7657	0.0176
847	SLU 4	0.18	0.77	53.43	0.0433	0.765	0.018
847	SLU 5	0.18	0.72	52.93	0.0429	0.7555	0.0179
847	SLU 6	0.2	0.82	54.13	0.0435	0.7775	0.0178
847	SLU 7	0.19	0.78	54.12	0.0438	0.7768	0.0181
847	SLU 8	0.2	0.8	53.63	0.0429	0.7684	0.0175
847	SLU 9	0.19	0.76	53.63	0.0432	0.7677	0.0179
847	SLU 10	0.19	0.84	59.2	0.0477	0.86	0.0209
847	SLU 11	0.22	0.94	60.4	0.0484	0.8821	0.0208
847	SLU 12	0.21	0.9	60.4	0.0487	0.8814	0.0211
847	SLU 13	0.2	0.85	59.9	0.0482	0.8719	0.0211
847	SLU 14	0.23	0.95	61.1	0.0489	0.8939	0.0209
847	SLU 15	0.22	0.91	61.09	0.0492	0.8932	0.0213
847	SLU 16	0.23	0.93	60.6	0.0483	0.8848	0.0207
847	SLU 17	0.22	0.89	60.6	0.0486	0.8841	0.021
847	SLU 18	0.23	0.96	62.19	0.0496	0.9111	0.0217
847	SLU 19	0.21	0.92	62.19	0.0498	0.9104	0.022
847	SLU 20	0.23	0.97	62.89	0.0501	0.9229	0.0219
847	SLU 21	0.22	0.93	62.89	0.0504	0.9222	0.0222
847	SLU 22	0.22	1	58.96	0.0482	0.8602	0.0196
847	SLU 23	0.2	0.93	58.95	0.0487	0.8591	0.0202
847	SLU 24	0.22	1.04	60.15	0.0493	0.8812	0.0201
847	SLU 25	0.21	1	60.15	0.0496	0.8805	0.0204
847	SLU 26	0.21	0.94	59.65	0.0492	0.8709	0.0204
847	SLU 27	0.23	1.05	60.84	0.0499	0.893	0.0202
847	SLU 28	0.22	1.01	60.84	0.0501	0.8923	0.0206
847	SLU 29	0.23	1.03	60.35	0.0493	0.8839	0.02
847	SLU 30	0.22	0.98	60.34	0.0495	0.8832	0.0203
847	SLU 31	0.22	1.06	65.92	0.054	0.9755	0.0234
847	SLU 32	0.25	1.17	67.12	0.0547	0.9976	0.0232
847	SLU 33	0.24	1.13	67.11	0.055	0.9969	0.0235
847	SLU 34	0.23	1.08	66.62	0.0546	0.9873	0.0235
847	SLU 35	0.26	1.18	67.81	0.0552	1.0094	0.0234
847	SLU 36	0.25	1.14	67.81	0.0555	1.0087	0.0237
847	SLU 37	0.26	1.16	67.32	0.0546	1.0003	0.0231
847	SLU 38	0.25	1.12	67.31	0.0549	0.9996	0.0235
847	SLU 39	0.26	1.19	68.91	0.0559	1.0265	0.0241
847	SLU 40	0.24	1.15	68.91	0.0561	1.0258	0.0245
847	SLU 41	0.26	1.2	69.61	0.0564	1.0384	0.0243
847	SLU 42	0.25	1.16	69.6	0.0567	1.0377	0.0246
847	SLU 43	0.23	0.93	65.61	0.0523	0.9286	0.0215
847	SLU 44	0.21	0.86	65.6	0.0528	0.9275	0.0221
847	SLU 45	0.24	0.96	66.8	0.0534	0.9496	0.0219
847	SLU 46	0.23	0.92	66.8	0.0537	0.9489	0.0223
847	SLU 47	0.22	0.87	66.3	0.0533	0.9393	0.0223
847	SLU 48	0.25	0.98	67.49	0.0539	0.9614	0.0221
847	SLU 49	0.24	0.94	67.49	0.0542	0.9607	0.0225
847	SLU 50	0.25	0.95	67	0.0534	0.9523	0.0219

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
847	SLU 51	0.24	0.91	66.99	0.0536	0.9516	0.0222
847	SLU 52	0.24	0.99	72.57	0.0581	1.0439	0.0253
847	SLU 53	0.27	1.1	73.77	0.0588	1.066	0.0251
847	SLU 54	0.25	1.06	73.77	0.0591	1.0653	0.0254
847	SLU 55	0.25	1	73.27	0.0586	1.0557	0.0254
847	SLU 56	0.28	1.11	74.46	0.0593	1.0778	0.0253
847	SLU 57	0.26	1.07	74.46	0.0596	1.0771	0.0256
847	SLU 58	0.28	1.08	73.97	0.0587	1.0687	0.025
847	SLU 59	0.26	1.04	73.96	0.059	1.068	0.0254
847	SLU 60	0.27	1.12	75.56	0.06	1.0949	0.026
847	SLU 61	0.26	1.07	75.56	0.0602	1.0942	0.0264
847	SLU 62	0.28	1.13	76.26	0.0605	1.1068	0.0262
847	SLU 63	0.27	1.09	76.25	0.0608	1.1061	0.0265
847	SLU 64	0.26	1.15	72.32	0.0586	1.0441	0.024
847	SLU 65	0.24	1.09	72.32	0.0591	1.0429	0.0245
847	SLU 66	0.27	1.19	73.52	0.0597	1.065	0.0244
847	SLU 67	0.26	1.15	73.51	0.06	1.0643	0.0247
847	SLU 68	0.25	1.1	73.01	0.0596	1.0548	0.0247
847	SLU 69	0.28	1.2	74.21	0.0603	1.0768	0.0245
847	SLU 70	0.27	1.16	74.21	0.0605	1.0761	0.0249
847	SLU 71	0.28	1.18	73.71	0.0597	1.0678	0.0243
847	SLU 72	0.27	1.14	73.71	0.0599	1.0671	0.0246
847	SLU 73	0.27	1.22	79.29	0.0644	1.1593	0.0277
847	SLU 74	0.3	1.32	80.49	0.0651	1.1814	0.0275
847	SLU 75	0.28	1.28	80.48	0.0654	1.1807	0.0279
847	SLU 76	0.28	1.23	79.98	0.065	1.1712	0.0279
847	SLU 77	0.31	1.34	81.18	0.0656	1.1932	0.0277
847	SLU 78	0.29	1.29	81.18	0.0659	1.1925	0.028
847	SLU 79	0.31	1.31	80.68	0.065	1.1841	0.0274
847	SLU 80	0.29	1.27	80.68	0.0653	1.1835	0.0278
847	SLU 81	0.3	1.34	82.28	0.0663	1.2104	0.0285
847	SLU 82	0.29	1.3	82.28	0.0666	1.2097	0.0288
847	SLU 83	0.31	1.35	82.98	0.0668	1.2222	0.0286
847	SLU 84	0.3	1.31	82.97	0.0671	1.2215	0.029
847	SLE RA 1	0.2	0.84	54.16	0.0437	0.7778	0.0179
847	SLE RA 2	0.18	0.79	54.15	0.044	0.777	0.0183
847	SLE RA 3	0.2	0.86	54.95	0.0445	0.7917	0.0182
847	SLE RA 4	0.19	0.84	54.95	0.0446	0.7913	0.0184
847	SLE RA 5	0.19	0.8	54.62	0.0444	0.7849	0.0184
847	SLE RA 6	0.21	0.87	55.42	0.0448	0.7996	0.0183
847	SLE RA 7	0.2	0.84	55.41	0.045	0.7991	0.0185
847	SLE RA 8	0.21	0.85	55.08	0.0444	0.7935	0.0181
847	SLE RA 9	0.2	0.83	55.08	0.0446	0.7931	0.0184
847	SLE RA 10	0.2	0.88	58.8	0.0476	0.8546	0.0204
847	SLE RA 11	0.22	0.95	59.6	0.048	0.8693	0.0203
847	SLE RA 12	0.21	0.92	59.6	0.0482	0.8689	0.0205
847	SLE RA 13	0.21	0.89	59.26	0.0479	0.8625	0.0205
847	SLE RA 14	0.22	0.96	60.06	0.0484	0.8772	0.0204
847	SLE RA 15	0.22	0.93	60.06	0.0486	0.8767	0.0206
847	SLE RA 16	0.23	0.94	59.73	0.048	0.8711	0.0202
847	SLE RA 17	0.22	0.92	59.73	0.0482	0.8707	0.0205
847	SLE RA 18	0.22	0.96	60.79	0.0488	0.8886	0.0209
847	SLE RA 19	0.21	0.94	60.79	0.049	0.8882	0.0211
847	SLE RA 20	0.23	0.97	61.26	0.0492	0.8965	0.021
847	SLE RA 21	0.22	0.94	61.26	0.0493	0.8961	0.0212
847	SLE FR 1	0.2	0.84	54.16	0.0437	0.7778	0.0179
847	SLE FR 2	0.19	0.83	54.16	0.0438	0.7776	0.018
847	SLE FR 3	0.2	0.84	54.34	0.0438	0.7809	0.0179
847	SLE FR 4	0.2	0.87	56.15	0.0453	0.8109	0.0189
847	SLE FR 5	0.21	0.88	56.33	0.0454	0.8142	0.0188
847	SLE FR 6	0.21	0.9	57.48	0.0463	0.8332	0.0194
847	SLE QP 1	0.2	0.84	54.16	0.0437	0.7778	0.0179
847	SLE QP 2	0.2	0.88	56.15	0.0452	0.811	0.0188
847	SLD 1	5.8	2.19	60.12	0.0494	0.8554	-0.0082
847	SLD 2	5.47	1.97	59.97	0.0496	0.8545	0.0029
847	SLD 3	5.69	0.53	60.34	0.0571	0.8417	-0.0065
847	SLD 4	5.36	0.31	60.18	0.0573	0.8408	0.0046
847	SLD 5	2.1	3.83	57.05	0.0348	0.8452	0.0062
847	SLD 6	1.88	3.68	56.94	0.035	0.8446	0.0136
847	SLD 7	1.75	-1.71	57.76	0.0604	0.7997	0.0116
847	SLD 8	1.54	-1.86	57.65	0.0605	0.7991	0.019
847	SLD 9	-1.13	3.61	54.64	0.03	0.823	0.0186
847	SLD 10	-1.35	3.46	54.54	0.0301	0.8224	0.026
847	SLD 11	-1.47	-1.93	55.35	0.0555	0.7775	0.024
847	SLD 12	-1.69	-2.08	55.25	0.0556	0.7769	0.0314
847	SLD 13	-4.96	1.44	52.12	0.0332	0.7813	0.033
847	SLD 14	-5.29	1.22	51.96	0.0334	0.7804	0.0441
847	SLD 15	-5.06	-0.22	52.33	0.0409	0.7676	0.0347
847	SLD 16	-5.39	-0.44	52.17	0.0411	0.7667	0.0458
847	SLV 1	13.28	3.9	65.5	0.0553	0.9152	-0.0441
847	SLV 2	12.51	3.38	65.14	0.0558	0.9131	-0.0183
847	SLV 3	13.04	0.14	65.98	0.0727	0.8842	-0.0404
847	SLV 4	12.27	-0.38	65.62	0.0731	0.8821	-0.0146
847	SLV 5	4.62	7.58	58.28	0.0219	0.8896	-0.0102
847	SLV 6	4.12	7.24	58.05	0.0222	0.8882	0.0066
847	SLV 7	3.83	-4.96	59.89	0.0797	0.7864	0.0021
847	SLV 8	3.33	-5.3	59.66	0.08	0.785	0.0189
847	SLV 9	-2.92	7.05	52.64	0.0105	0.8371	0.0187
847	SLV 10	-3.42	6.71	52.4	0.0108	0.8357	0.0355
847	SLV 11	-3.71	-5.49	54.25	0.0683	0.7338	0.031

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
847	SLV 12	-4.21	-5.83	54.01	0.0686	0.7325	0.0478
847	SLV 13	-11.86	2.13	46.68	0.0173	0.74	0.0522
847	SLV 14	-12.63	1.61	46.32	0.0178	0.7379	0.078
847	SLV 15	-12.1	-1.63	47.16	0.0347	0.709	0.0559
847	SLV 16	-12.87	-2.15	46.8	0.0351	0.7069	0.0817
847	CRTFP Ux+	0	0	0	0	0	0
847	CRTFP Ux-	0	0	0	0	0	0
850	SLU 1	0.38	1.59	48.39	0.0478	-0.2724	0.0029
850	SLU 2	0.36	1.55	48.39	0.0482	-0.2714	0.0036
850	SLU 3	0.39	1.65	49.48	0.0492	-0.2796	0.003
850	SLU 4	0.38	1.62	49.48	0.0495	-0.2791	0.0035
850	SLU 5	0.37	1.57	49.05	0.049	-0.2759	0.0036
850	SLU 6	0.4	1.67	50.14	0.05	-0.2842	0.003
850	SLU 7	0.39	1.65	50.14	0.0503	-0.2836	0.0035
850	SLU 8	0.4	1.64	49.72	0.0494	-0.2814	0.0029
850	SLU 9	0.39	1.61	49.71	0.0496	-0.2808	0.0033
850	SLU 10	0.41	1.8	54.71	0.0541	-0.312	0.0053
850	SLU 11	0.44	1.9	55.8	0.0551	-0.3203	0.0047
850	SLU 12	0.43	1.87	55.8	0.0554	-0.3197	0.0052
850	SLU 13	0.42	1.82	55.37	0.0549	-0.3165	0.0053
850	SLU 14	0.46	1.92	56.46	0.0559	-0.3248	0.0047
850	SLU 15	0.44	1.9	56.46	0.0561	-0.3242	0.0052
850	SLU 16	0.46	1.89	56.04	0.0552	-0.322	0.0046
850	SLU 17	0.44	1.86	56.03	0.0555	-0.3214	0.005
850	SLU 18	0.45	1.94	57.42	0.0562	-0.3304	0.0053
850	SLU 19	0.44	1.92	57.42	0.0565	-0.3298	0.0058
850	SLU 20	0.47	1.97	58.09	0.057	-0.3349	0.0053
850	SLU 21	0.45	1.94	58.08	0.0572	-0.3343	0.0057
850	SLU 22	0.43	1.91	54.54	0.0549	-0.3168	0.0043
850	SLU 23	0.41	1.87	54.53	0.0554	-0.3159	0.005
850	SLU 24	0.44	1.97	55.62	0.0563	-0.3241	0.0044
850	SLU 25	0.43	1.94	55.62	0.0566	-0.3235	0.0049
850	SLU 26	0.42	1.89	55.19	0.0561	-0.3204	0.005
850	SLU 27	0.46	1.99	56.28	0.0571	-0.3286	0.0044
850	SLU 28	0.44	1.97	56.28	0.0574	-0.3281	0.0049
850	SLU 29	0.46	1.96	55.86	0.0565	-0.3259	0.0043
850	SLU 30	0.44	1.93	55.86	0.0567	-0.3253	0.0047
850	SLU 31	0.46	2.12	60.85	0.0612	-0.3565	0.0067
850	SLU 32	0.5	2.22	61.94	0.0622	-0.3647	0.0061
850	SLU 33	0.48	2.19	61.94	0.0625	-0.3641	0.0066
850	SLU 34	0.47	2.14	61.51	0.062	-0.361	0.0067
850	SLU 35	0.51	2.24	62.6	0.063	-0.3693	0.0061
850	SLU 36	0.49	2.22	62.6	0.0632	-0.3687	0.0066
850	SLU 37	0.51	2.21	62.18	0.0623	-0.3665	0.006
850	SLU 38	0.49	2.18	62.18	0.0626	-0.3659	0.0064
850	SLU 39	0.51	2.26	63.56	0.0633	-0.3749	0.0067
850	SLU 40	0.49	2.24	63.56	0.0636	-0.3743	0.0072
850	SLU 41	0.52	2.29	64.23	0.0641	-0.3794	0.0067
850	SLU 42	0.51	2.26	64.22	0.0643	-0.3788	0.0071
850	SLU 43	0.48	1.96	60.81	0.0597	-0.3388	0.0033
850	SLU 44	0.45	1.92	60.8	0.0602	-0.3378	0.004
850	SLU 45	0.49	2.02	61.89	0.0611	-0.3461	0.0034
850	SLU 46	0.47	1.99	61.89	0.0614	-0.3455	0.0039
850	SLU 47	0.46	1.94	61.46	0.0609	-0.3424	0.004
850	SLU 48	0.5	2.04	62.55	0.0619	-0.3506	0.0034
850	SLU 49	0.49	2.02	62.55	0.0622	-0.35	0.0038
850	SLU 50	0.5	2.01	62.13	0.0613	-0.3479	0.0032
850	SLU 51	0.49	1.98	62.13	0.0615	-0.3473	0.0037
850	SLU 52	0.51	2.17	67.12	0.066	-0.3785	0.0057
850	SLU 53	0.54	2.26	68.21	0.067	-0.3867	0.0051
850	SLU 54	0.53	2.24	68.21	0.0673	-0.3861	0.0056
850	SLU 55	0.52	2.19	67.78	0.0668	-0.383	0.0057
850	SLU 56	0.55	2.29	68.87	0.0678	-0.3912	0.0051
850	SLU 57	0.54	2.26	68.87	0.068	-0.3906	0.0055
850	SLU 58	0.55	2.25	68.45	0.0671	-0.3885	0.005
850	SLU 59	0.54	2.23	68.45	0.0674	-0.3879	0.0054
850	SLU 60	0.55	2.31	69.84	0.0681	-0.3968	0.0057
850	SLU 61	0.54	2.29	69.83	0.0684	-0.3963	0.0061
850	SLU 62	0.56	2.34	70.5	0.0689	-0.4014	0.0057
850	SLU 63	0.55	2.31	70.5	0.0691	-0.4008	0.0061
850	SLU 64	0.53	2.28	66.95	0.0668	-0.3833	0.0047
850	SLU 65	0.51	2.24	66.94	0.0673	-0.3823	0.0054
850	SLU 66	0.54	2.34	68.03	0.0682	-0.3906	0.0048
850	SLU 67	0.53	2.31	68.03	0.0685	-0.39	0.0053
850	SLU 68	0.52	2.26	67.61	0.068	-0.3868	0.0054
850	SLU 69	0.55	2.36	68.69	0.069	-0.3951	0.0048
850	SLU 70	0.54	2.34	68.69	0.0693	-0.3945	0.0052
850	SLU 71	0.55	2.33	68.27	0.0684	-0.3924	0.0047
850	SLU 72	0.54	2.3	68.27	0.0686	-0.3918	0.0051
850	SLU 73	0.56	2.48	73.26	0.0731	-0.4229	0.0071
850	SLU 74	0.59	2.58	74.35	0.0741	-0.4312	0.0065
850	SLU 75	0.58	2.56	74.35	0.0744	-0.4306	0.007
850	SLU 76	0.57	2.51	73.93	0.0739	-0.4275	0.0071
850	SLU 77	0.6	2.61	75.02	0.0749	-0.4357	0.0065
850	SLU 78	0.59	2.58	75.01	0.0751	-0.4351	0.0069
850	SLU 79	0.6	2.57	74.59	0.0742	-0.433	0.0064
850	SLU 80	0.59	2.55	74.59	0.0745	-0.4324	0.0068
850	SLU 81	0.6	2.63	75.98	0.0752	-0.4413	0.0071
850	SLU 82	0.59	2.61	75.97	0.0755	-0.4407	0.0076
850	SLU 83	0.61	2.66	76.64	0.076	-0.4458	0.0071

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
850	SLU 84	0.6	2.63	76.64	0.0762	-0.4453	0.0075
850	SLE RA 1	0.39	1.68	50.15	0.0498	-0.2851	0.0033
850	SLE RA 2	0.38	1.65	50.15	0.0501	-0.2844	0.0038
850	SLE RA 3	0.4	1.72	50.87	0.0508	-0.2899	0.0034
850	SLE RA 4	0.39	1.7	50.87	0.051	-0.2895	0.0037
850	SLE RA 5	0.39	1.67	50.59	0.0506	-0.2874	0.0038
850	SLE RA 6	0.41	1.74	51.31	0.0513	-0.2929	0.0034
850	SLE RA 7	0.4	1.72	51.31	0.0515	-0.2925	0.0037
850	SLE RA 8	0.41	1.71	51.03	0.0509	-0.2911	0.0033
850	SLE RA 9	0.4	1.7	51.03	0.051	-0.2907	0.0036
850	SLE RA 10	0.41	1.82	54.36	0.054	-0.3115	0.0049
850	SLE RA 11	0.44	1.89	55.09	0.0547	-0.317	0.0045
850	SLE RA 12	0.43	1.87	55.08	0.0549	-0.3166	0.0048
850	SLE RA 13	0.42	1.84	54.8	0.0546	-0.3145	0.0049
850	SLE RA 14	0.45	1.9	55.53	0.0552	-0.32	0.0045
850	SLE RA 15	0.44	1.89	55.52	0.0554	-0.3196	0.0048
850	SLE RA 16	0.45	1.88	55.24	0.0548	-0.3182	0.0044
850	SLE RA 17	0.44	1.86	55.24	0.055	-0.3178	0.0047
850	SLE RA 18	0.44	1.92	56.17	0.0554	-0.3238	0.0049
850	SLE RA 19	0.44	1.9	56.17	0.0556	-0.3234	0.0052
850	SLE RA 20	0.45	1.93	56.61	0.056	-0.3268	0.0049
850	SLE RA 21	0.44	1.92	56.61	0.0561	-0.3264	0.0052
850	SLE FR 1	0.39	1.68	50.15	0.0498	-0.2851	0.0033
850	SLE FR 2	0.39	1.68	50.15	0.0499	-0.2849	0.0034
850	SLE FR 3	0.4	1.69	50.33	0.0501	-0.2863	0.0033
850	SLE FR 4	0.41	1.75	51.95	0.0516	-0.2965	0.0039
850	SLE FR 5	0.41	1.76	52.13	0.0517	-0.2979	0.0038
850	SLE FR 6	0.42	1.8	53.16	0.0526	-0.3044	0.0041
850	SLE QP 1	0.39	1.68	50.15	0.0498	-0.2851	0.0033
850	SLE QP 2	0.41	1.75	51.95	0.0515	-0.2967	0.0038
850	SLD 1	6.05	2.32	46.96	0.0457	-0.0048	-0.0234
850	SLD 2	5.72	2.5	47.04	0.0448	-0.0096	-0.0122
850	SLD 3	5.96	0.75	47.14	0.0538	0.0112	-0.0247
850	SLD 4	5.63	0.93	47.21	0.053	0.0064	-0.0135
850	SLD 5	2.29	4.27	50.18	0.0376	-0.2324	-0.0044
850	SLD 6	2.07	4.39	50.23	0.037	-0.2356	0.003
850	SLD 7	2	-0.97	50.76	0.0647	-0.1792	-0.0088
850	SLD 8	1.78	-0.84	50.81	0.0641	-0.1824	-0.0014
850	SLD 9	-0.96	4.35	53.1	0.0389	-0.4109	0.0089
850	SLD 10	-1.18	4.47	53.15	0.0384	-0.4141	0.0164
850	SLD 11	-1.26	-0.89	53.68	0.066	-0.3577	0.0046
850	SLD 12	-1.48	-0.77	53.73	0.0655	-0.3609	0.012
850	SLD 13	-4.81	2.57	56.7	0.0501	-0.5997	0.0211
850	SLD 14	-5.14	2.76	56.77	0.0492	-0.6045	0.0323
850	SLD 15	-4.9	1	56.87	0.0582	-0.5838	0.0198
850	SLD 16	-5.23	1.19	56.95	0.0574	-0.5886	0.031
850	SLV 1	13.59	3.01	40.28	0.0378	0.3869	-0.0597
850	SLV 2	12.82	3.43	40.46	0.0358	0.3758	-0.0337
850	SLV 3	13.39	-0.55	40.68	0.0562	0.4231	-0.0627
850	SLV 4	12.62	-0.12	40.85	0.0542	0.412	-0.0367
850	SLV 5	4.81	7.45	47.82	0.0198	-0.1446	-0.0153
850	SLV 6	4.31	7.73	47.94	0.0185	-0.1519	0.0017
850	SLV 7	4.13	-4.41	49.14	0.0812	-0.0238	-0.0253
850	SLV 8	3.63	-4.13	49.26	0.0799	-0.0311	-0.0084
850	SLV 9	-2.81	7.64	54.65	0.0231	-0.5623	0.0159
850	SLV 10	-3.31	7.91	54.77	0.0219	-0.5695	0.0329
850	SLV 11	-3.49	-4.22	55.97	0.0845	-0.4415	0.0059
850	SLV 12	-3.99	-3.95	56.09	0.0832	-0.4488	0.0229
850	SLV 13	-11.8	3.63	63.06	0.0488	-1.0054	0.0443
850	SLV 14	-12.57	4.05	63.23	0.0469	-1.0165	0.0703
850	SLV 15	-12	0.07	63.45	0.0673	-0.9691	0.0413
850	SLV 16	-12.77	0.49	63.63	0.0653	-0.9803	0.0673
850	CRTFP Ux+	0	0	0	0	0	0
850	CRTFP Ux-	0	0	0	0	0	0
852	SLU 1	-0.66	0.05	30.42	0.0222	-2.5684	0.0134
852	SLU 2	-0.67	-0.03	30.45	0.0223	-2.5691	-0.0078
852	SLU 3	-0.68	0.06	31.16	0.0227	-2.6187	0.015
852	SLU 4	-0.69	0.01	31.17	0.0228	-2.6191	0.0023
852	SLU 5	-0.68	-0.03	30.91	0.0226	-2.6009	-0.0064
852	SLU 6	-0.69	0.06	31.62	0.0231	-2.6504	0.0165
852	SLU 7	-0.7	0.01	31.64	0.0231	-2.6508	0.0037
852	SLU 8	-0.68	0.06	31.35	0.0229	-2.632	0.0164
852	SLU 9	-0.69	0.01	31.37	0.0229	-2.6324	0.0036
852	SLU 10	-0.73	0.03	33.92	0.0251	-2.8229	0.0071
852	SLU 11	-0.74	0.12	34.62	0.0256	-2.8725	0.0299
852	SLU 12	-0.74	0.07	34.64	0.0257	-2.8729	0.0171
852	SLU 13	-0.74	0.03	34.38	0.0255	-2.8547	0.0085
852	SLU 14	-0.75	0.12	35.09	0.026	-2.9042	0.0314
852	SLU 15	-0.75	0.07	35.1	0.026	-2.9046	0.0186
852	SLU 16	-0.74	0.12	34.82	0.0258	-2.8858	0.0313
852	SLU 17	-0.75	0.07	34.83	0.0258	-2.8862	0.0185
852	SLU 18	-0.75	0.14	35.38	0.0263	-2.931	0.0347
852	SLU 19	-0.75	0.09	35.39	0.0264	-2.9314	0.0219
852	SLU 20	-0.76	0.14	35.84	0.0266	-2.9628	0.0362
852	SLU 21	-0.76	0.09	35.86	0.0267	-2.9632	0.0234
852	SLU 22	-0.73	0.12	33.98	0.0253	-2.8273	0.0307
852	SLU 23	-0.74	0.04	34.01	0.0254	-2.828	0.0094
852	SLU 24	-0.75	0.13	34.71	0.0258	-2.8775	0.0323
852	SLU 25	-0.75	0.08	34.73	0.0259	-2.8779	0.0195
852	SLU 26	-0.75	0.04	34.47	0.0257	-2.8598	0.0109

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
852	SLU 27	-0.76	0.13	35.18	0.0262	-2.9093	0.0337
852	SLU 28	-0.76	0.08	35.19	0.0262	-2.9097	0.021
852	SLU 29	-0.75	0.13	34.91	0.026	-2.8909	0.0336
852	SLU 30	-0.76	0.08	34.92	0.026	-2.8913	0.0209
852	SLU 31	-0.8	0.1	37.47	0.0283	-3.0818	0.0243
852	SLU 32	-0.8	0.19	38.18	0.0287	-3.1313	0.0472
852	SLU 33	-0.81	0.14	38.2	0.0288	-3.1317	0.0344
852	SLU 34	-0.81	0.1	37.94	0.0286	-3.1135	0.0258
852	SLU 35	-0.81	0.19	38.64	0.0291	-3.1631	0.0486
852	SLU 36	-0.82	0.14	38.66	0.0291	-3.1635	0.0359
852	SLU 37	-0.81	0.19	38.38	0.0289	-3.1447	0.0485
852	SLU 38	-0.81	0.14	38.39	0.0289	-3.1451	0.0358
852	SLU 39	-0.81	0.21	38.93	0.0294	-3.1899	0.0519
852	SLU 40	-0.82	0.15	38.95	0.0295	-3.1903	0.0392
852	SLU 41	-0.82	0.21	39.4	0.0298	-3.2217	0.0534
852	SLU 42	-0.83	0.16	39.41	0.0298	-3.2221	0.0407
852	SLU 43	-0.84	0.04	38.33	0.0278	-3.2502	0.0115
852	SLU 44	-0.85	-0.04	38.36	0.0279	-3.2509	-0.0097
852	SLU 45	-0.86	0.05	39.06	0.0283	-3.3004	0.0131
852	SLU 46	-0.86	0	39.08	0.0284	-3.3008	0.0004
852	SLU 47	-0.86	-0.04	38.82	0.0282	-3.2826	-0.0083
852	SLU 48	-0.87	0.06	39.53	0.0287	-3.3322	0.0146
852	SLU 49	-0.87	0.01	39.54	0.0287	-3.3326	0.0018
852	SLU 50	-0.86	0.06	39.26	0.0285	-3.3138	0.0145
852	SLU 51	-0.87	0	39.27	0.0285	-3.3142	0.0017
852	SLU 52	-0.91	0.02	41.82	0.0307	-3.5047	0.0052
852	SLU 53	-0.91	0.11	42.53	0.0312	-3.5542	0.028
852	SLU 54	-0.92	0.06	42.55	0.0312	-3.5546	0.0153
852	SLU 55	-0.92	0.02	42.29	0.0311	-3.5364	0.0066
852	SLU 56	-0.93	0.12	42.99	0.0315	-3.586	0.0295
852	SLU 57	-0.93	0.06	43.01	0.0316	-3.5864	0.0167
852	SLU 58	-0.92	0.12	42.73	0.0313	-3.5676	0.0294
852	SLU 59	-0.92	0.06	42.74	0.0314	-3.568	0.0166
852	SLU 60	-0.92	0.13	43.28	0.0319	-3.6128	0.0328
852	SLU 61	-0.93	0.08	43.3	0.0319	-3.6132	0.02
852	SLU 62	-0.93	0.13	43.75	0.0322	-3.6446	0.0343
852	SLU 63	-0.94	0.08	43.76	0.0323	-3.6449	0.0215
852	SLU 64	-0.91	0.11	41.89	0.0309	-3.5091	0.0288
852	SLU 65	-0.92	0.03	41.91	0.031	-3.5097	0.0075
852	SLU 66	-0.92	0.12	42.62	0.0314	-3.5593	0.0304
852	SLU 67	-0.93	0.07	42.64	0.0315	-3.5597	0.0176
852	SLU 68	-0.93	0.03	42.38	0.0313	-3.5415	0.009
852	SLU 69	-0.93	0.13	43.08	0.0318	-3.5911	0.0319
852	SLU 70	-0.94	0.07	43.1	0.0318	-3.5915	0.0191
852	SLU 71	-0.93	0.13	42.82	0.0316	-3.5726	0.0317
852	SLU 72	-0.93	0.07	42.83	0.0316	-3.573	0.019
852	SLU 73	-0.97	0.09	45.38	0.0338	-3.7635	0.0224
852	SLU 74	-0.98	0.18	46.09	0.0343	-3.8131	0.0453
852	SLU 75	-0.99	0.13	46.1	0.0344	-3.8135	0.0325
852	SLU 76	-0.98	0.09	45.84	0.0342	-3.7953	0.0239
852	SLU 77	-0.99	0.18	46.55	0.0346	-3.8449	0.0467
852	SLU 78	-1	0.13	46.57	0.0347	-3.8453	0.034
852	SLU 79	-0.98	0.18	46.28	0.0345	-3.8264	0.0466
852	SLU 80	-0.99	0.13	46.3	0.0345	-3.8268	0.0339
852	SLU 81	-0.99	0.2	46.84	0.035	-3.8717	0.0501
852	SLU 82	-0.99	0.15	46.86	0.035	-3.872	0.0373
852	SLU 83	-1	0.2	47.31	0.0353	-3.9034	0.0515
852	SLU 84	-1	0.15	47.32	0.0354	-3.9038	0.0388
852	SLE RA 1	-0.68	0.07	31.44	0.0231	-2.6424	0.0184
852	SLE RA 2	-0.69	0.02	31.46	0.0231	-2.6428	0.0042
852	SLE RA 3	-0.69	0.08	31.93	0.0234	-2.6759	0.0194
852	SLE RA 4	-0.7	0.04	31.94	0.0235	-2.6761	0.0109
852	SLE RA 5	-0.7	0.02	31.77	0.0234	-2.664	0.0052
852	SLE RA 6	-0.7	0.08	32.24	0.0237	-2.6971	0.0204
852	SLE RA 7	-0.7	0.05	32.25	0.0237	-2.6973	0.0119
852	SLE RA 8	-0.7	0.08	32.06	0.0235	-2.6848	0.0203
852	SLE RA 9	-0.7	0.05	32.07	0.0236	-2.685	0.0118
852	SLE RA 10	-0.73	0.05	33.77	0.025	-2.812	0.0141
852	SLE RA 11	-0.73	0.12	34.24	0.0254	-2.8451	0.0293
852	SLE RA 12	-0.74	0.08	34.25	0.0254	-2.8453	0.0208
852	SLE RA 13	-0.73	0.06	34.08	0.0253	-2.8332	0.0151
852	SLE RA 14	-0.74	0.12	34.55	0.0256	-2.8663	0.0303
852	SLE RA 15	-0.74	0.09	34.56	0.0256	-2.8665	0.0218
852	SLE RA 16	-0.73	0.12	34.37	0.0255	-2.854	0.0302
852	SLE RA 17	-0.74	0.09	34.38	0.0255	-2.8542	0.0217
852	SLE RA 18	-0.74	0.13	34.74	0.0258	-2.8841	0.0325
852	SLE RA 19	-0.74	0.09	34.75	0.0258	-2.8844	0.024
852	SLE RA 20	-0.74	0.13	35.05	0.026	-2.9053	0.0335
852	SLE RA 21	-0.75	0.1	35.06	0.0261	-2.9056	0.025
852	SLE FR 1	-0.68	0.07	31.44	0.0231	-2.6424	0.0184
852	SLE FR 2	-0.68	0.06	31.44	0.0231	-2.6425	0.0155
852	SLE FR 3	-0.69	0.07	31.56	0.0232	-2.6509	0.0187
852	SLE FR 4	-0.7	0.08	32.43	0.0239	-2.715	0.0198
852	SLE FR 5	-0.7	0.09	32.55	0.024	-2.7234	0.023
852	SLE FR 6	-0.71	0.1	33.09	0.0244	-2.7633	0.0254
852	SLE QP 1	-0.68	0.07	31.44	0.0231	-2.6424	0.0184
852	SLE QP 2	-0.7	0.09	32.43	0.0239	-2.7149	0.0226
852	SLD 1	1.88	0.65	41.02	0.0268	-3.3084	0.1591
852	SLD 2	1.68	0.11	41.32	0.0289	-3.3372	0.0256
852	SLD 3	1.83	-0.57	41.29	0.0298	-3.3436	-0.1452

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
852	SLD 4	1.63	-1.11	41.58	0.0319	-3.3723	-0.2787
852	SLD 5	0.19	2.2	34.55	0.0199	-2.8345	0.5494
852	SLD 6	0.06	1.84	34.74	0.0213	-2.8536	0.4608
852	SLD 7	0.02	-1.86	35.44	0.0298	-2.9515	-0.465
852	SLD 8	-0.11	-2.22	35.63	0.0311	-2.9706	-0.5536
852	SLD 9	-1.28	2.39	29.23	0.0166	-2.4592	0.5988
852	SLD 10	-1.41	2.04	29.42	0.018	-2.4783	0.5102
852	SLD 11	-1.46	-1.67	30.12	0.0265	-2.5763	-0.4155
852	SLD 12	-1.59	-2.02	30.31	0.0279	-2.5954	-0.5042
852	SLD 13	-3.03	1.29	23.28	0.0159	-2.0575	0.3239
852	SLD 14	-3.23	0.75	23.57	0.018	-2.0863	0.1904
852	SLD 15	-3.08	0.07	23.54	0.0189	-2.0926	0.0196
852	SLD 16	-3.28	-0.47	23.84	0.021	-2.1214	-0.1139
852	SLV 1	5.33	1.34	52.54	0.0309	-4.1049	0.3294
852	SLV 2	4.87	0.09	53.22	0.0357	-4.1719	0.0185
852	SLV 3	5.21	-1.41	53.15	0.0376	-4.1847	-0.3588
852	SLV 4	4.75	-2.67	53.83	0.0424	-4.2517	-0.6697
852	SLV 5	1.37	4.86	37.42	0.015	-2.999	1.2131
852	SLV 6	1.07	4.05	37.87	0.0181	-3.0426	1.0105
852	SLV 7	0.97	-4.32	39.45	0.0373	-3.2652	-1.081
852	SLV 8	0.67	-5.13	39.89	0.0404	-3.3089	-1.2835
852	SLV 9	-2.07	5.31	24.97	0.0073	-2.121	1.3287
852	SLV 10	-2.37	4.5	25.41	0.0105	-2.1646	1.1262
852	SLV 11	-2.47	-3.87	26.99	0.0296	-2.3872	-0.9653
852	SLV 12	-2.77	-4.68	27.44	0.0328	-2.4308	-1.1679
852	SLV 13	-6.15	2.84	11.03	0.0054	-1.1781	0.7149
852	SLV 14	-6.61	1.59	11.71	0.0102	-1.2451	0.4041
852	SLV 15	-6.27	0.09	11.64	0.0121	-1.258	0.0267
852	SLV 16	-6.73	-1.16	12.32	0.0169	-1.325	-0.2841
852	CRTFP Ux+	0	0	0	0	0	0
852	CRTFP Ux-	0	0	0	0	0	0
852	CRTFP Uy+	0	0	0	0	0	0
852	CRTFP Uy-	0	0	0	0	0	0
855	SLU 1	0.72	0.26	31.54	-0.0385	3.3923	-0.0925
855	SLU 2	0.73	0.24	31.53	-0.0386	3.3931	-0.0849
855	SLU 3	0.75	0.26	32.26	-0.0396	3.4494	-0.0938
855	SLU 4	0.75	0.25	32.26	-0.0396	3.4499	-0.0892
855	SLU 5	0.75	0.23	31.99	-0.0393	3.4287	-0.0836
855	SLU 6	0.76	0.26	32.72	-0.0402	3.485	-0.0925
855	SLU 7	0.77	0.25	32.71	-0.0403	3.4855	-0.0879
855	SLU 8	0.76	0.25	32.44	-0.0398	3.4635	-0.0898
855	SLU 9	0.76	0.24	32.44	-0.0399	3.464	-0.0853
855	SLU 10	0.79	0.34	35.07	-0.0434	3.6835	-0.1227
855	SLU 11	0.8	0.37	35.8	-0.0444	3.7398	-0.1317
855	SLU 12	0.81	0.36	35.8	-0.0444	3.7403	-0.1271
855	SLU 13	0.8	0.34	35.52	-0.0441	3.7191	-0.1214
855	SLU 14	0.82	0.37	36.25	-0.045	3.7754	-0.1303
855	SLU 15	0.82	0.35	36.25	-0.0451	3.7759	-0.1258
855	SLU 16	0.81	0.36	35.98	-0.0446	3.7539	-0.1277
855	SLU 17	0.81	0.35	35.98	-0.0447	3.7544	-0.1232
855	SLU 18	0.8	0.41	36.59	-0.0454	3.8071	-0.1466
855	SLU 19	0.81	0.4	36.59	-0.0454	3.8076	-0.142
855	SLU 20	0.82	0.41	37.04	-0.046	3.8427	-0.1453
855	SLU 21	0.82	0.4	37.04	-0.0461	3.8432	-0.1407
855	SLU 22	0.79	0.36	35.13	-0.0432	3.6864	-0.1293
855	SLU 23	0.8	0.34	35.13	-0.0433	3.6873	-0.1217
855	SLU 24	0.82	0.37	35.86	-0.0443	3.7436	-0.1306
855	SLU 25	0.82	0.35	35.86	-0.0443	3.7441	-0.126
855	SLU 26	0.82	0.34	35.58	-0.044	3.7229	-0.1204
855	SLU 27	0.83	0.36	36.31	-0.0449	3.7792	-0.1293
855	SLU 28	0.84	0.35	36.31	-0.045	3.7797	-0.1247
855	SLU 29	0.82	0.36	36.03	-0.0445	3.7577	-0.1266
855	SLU 30	0.83	0.34	36.03	-0.0446	3.7582	-0.1221
855	SLU 31	0.85	0.45	38.66	-0.0481	3.9776	-0.1596
855	SLU 32	0.87	0.47	39.39	-0.0491	4.0339	-0.1685
855	SLU 33	0.87	0.46	39.39	-0.0491	4.0344	-0.1639
855	SLU 34	0.87	0.44	39.12	-0.0488	4.0133	-0.1582
855	SLU 35	0.88	0.47	39.85	-0.0497	4.0695	-0.1672
855	SLU 36	0.89	0.46	39.84	-0.0498	4.07	-0.1626
855	SLU 37	0.88	0.46	39.57	-0.0494	4.048	-0.1645
855	SLU 38	0.88	0.45	39.57	-0.0494	4.0485	-0.16
855	SLU 39	0.87	0.52	40.18	-0.0501	4.1013	-0.1834
855	SLU 40	0.87	0.5	40.18	-0.0501	4.1018	-0.1788
855	SLU 41	0.88	0.51	40.63	-0.0507	4.1369	-0.1821
855	SLU 42	0.89	0.5	40.63	-0.0508	4.1374	-0.1775
855	SLU 43	0.92	0.3	39.77	-0.0484	4.3091	-0.1076
855	SLU 44	0.93	0.28	39.76	-0.0485	4.31	-0.1
855	SLU 45	0.94	0.3	40.49	-0.0495	4.3663	-0.1089
855	SLU 46	0.95	0.29	40.49	-0.0495	4.3668	-0.1043
855	SLU 47	0.94	0.27	40.22	-0.0492	4.3456	-0.0987
855	SLU 48	0.96	0.3	40.95	-0.0502	4.4019	-0.1076
855	SLU 49	0.96	0.29	40.94	-0.0502	4.4024	-0.103
855	SLU 50	0.95	0.29	40.67	-0.0498	4.3804	-0.105
855	SLU 51	0.96	0.28	40.67	-0.0498	4.3809	-0.1004
855	SLU 52	0.98	0.39	43.3	-0.0533	4.6004	-0.1379
855	SLU 53	0.99	0.41	44.03	-0.0543	4.6566	-0.1468
855	SLU 54	1	0.4	44.03	-0.0544	4.6571	-0.1422
855	SLU 55	1	0.38	43.75	-0.054	4.636	-0.1366
855	SLU 56	1.01	0.41	44.48	-0.055	4.6922	-0.1455
855	SLU 57	1.02	0.39	44.48	-0.055	4.6927	-0.1409

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
855	SLU 58	1	0.4	44.21	-0.0546	4.6707	-0.1428
855	SLU 59	1.01	0.39	44.21	-0.0546	4.6712	-0.1383
855	SLU 60	0.99	0.45	44.82	-0.0553	4.724	-0.1617
855	SLU 61	1	0.44	44.82	-0.0553	4.7245	-0.1571
855	SLU 62	1.01	0.45	45.27	-0.056	4.7596	-0.1604
855	SLU 63	1.01	0.44	45.27	-0.056	4.7601	-0.1558
855	SLU 64	0.99	0.41	43.36	-0.0531	4.6033	-0.1444
855	SLU 65	1	0.38	43.36	-0.0532	4.6041	-0.1368
855	SLU 66	1.01	0.41	44.09	-0.0542	4.6604	-0.1457
855	SLU 67	1.02	0.4	44.08	-0.0543	4.6609	-0.1412
855	SLU 68	1.01	0.38	43.81	-0.0539	4.6397	-0.1355
855	SLU 69	1.03	0.4	44.54	-0.0549	4.696	-0.1444
855	SLU 70	1.03	0.39	44.54	-0.0549	4.6965	-0.1398
855	SLU 71	1.02	0.4	44.26	-0.0545	4.6745	-0.1418
855	SLU 72	1.02	0.38	44.26	-0.0545	4.675	-0.1372
855	SLU 73	1.05	0.49	46.89	-0.058	4.8945	-0.1747
855	SLU 74	1.06	0.52	47.62	-0.059	4.9508	-0.1836
855	SLU 75	1.07	0.5	47.62	-0.0591	4.9513	-0.179
855	SLU 76	1.06	0.49	47.34	-0.0587	4.9301	-0.1734
855	SLU 77	1.08	0.51	48.08	-0.0597	4.9864	-0.1823
855	SLU 78	1.08	0.5	48.07	-0.0597	4.9869	-0.1777
855	SLU 79	1.07	0.5	47.8	-0.0593	4.9649	-0.1796
855	SLU 80	1.08	0.49	47.8	-0.0593	4.9654	-0.1751
855	SLU 81	1.06	0.56	48.41	-0.06	5.0181	-0.1985
855	SLU 82	1.07	0.55	48.41	-0.0601	5.0186	-0.1939
855	SLU 83	1.08	0.55	48.86	-0.0607	5.0537	-0.1972
855	SLU 84	1.08	0.54	48.86	-0.0607	5.0542	-0.1926
855	SLE RA 1	0.74	0.29	32.56	-0.0398	3.4763	-0.103
855	SLE RA 2	0.75	0.27	32.56	-0.0399	3.4769	-0.0979
855	SLE RA 3	0.76	0.29	33.05	-0.0405	3.5144	-0.1039
855	SLE RA 4	0.76	0.28	33.05	-0.0406	3.5148	-0.1008
855	SLE RA 5	0.76	0.27	32.86	-0.0404	3.5006	-0.097
855	SLE RA 6	0.77	0.29	33.35	-0.041	3.5382	-0.103
855	SLE RA 7	0.77	0.28	33.35	-0.041	3.5385	-0.0999
855	SLE RA 8	0.76	0.28	33.17	-0.0407	3.5238	-0.1012
855	SLE RA 9	0.77	0.27	33.17	-0.0408	3.5242	-0.0982
855	SLE RA 10	0.79	0.35	34.92	-0.0431	3.6705	-0.1232
855	SLE RA 11	0.79	0.36	35.41	-0.0437	3.708	-0.1291
855	SLE RA 12	0.8	0.35	35.41	-0.0438	3.7083	-0.1261
855	SLE RA 13	0.8	0.34	35.22	-0.0436	3.6942	-0.1223
855	SLE RA 14	0.8	0.36	35.71	-0.0442	3.7317	-0.1282
855	SLE RA 15	0.81	0.35	35.71	-0.0442	3.7321	-0.1252
855	SLE RA 16	0.8	0.36	35.52	-0.0439	3.7174	-0.1265
855	SLE RA 17	0.8	0.35	35.52	-0.044	3.7177	-0.1234
855	SLE RA 18	0.79	0.39	35.93	-0.0444	3.7529	-0.1391
855	SLE RA 19	0.8	0.38	35.93	-0.0444	3.7532	-0.136
855	SLE RA 20	0.8	0.39	36.23	-0.0449	3.7766	-0.1382
855	SLE RA 21	0.81	0.38	36.23	-0.0449	3.777	-0.1351
855	SLE FR 1	0.74	0.29	32.56	-0.0398	3.4763	-0.103
855	SLE FR 2	0.75	0.29	32.56	-0.0398	3.4765	-0.102
855	SLE FR 3	0.75	0.29	32.68	-0.04	3.4858	-0.1026
855	SLE FR 4	0.76	0.32	33.57	-0.0412	3.5594	-0.1128
855	SLE FR 5	0.76	0.32	33.69	-0.0414	3.5688	-0.1135
855	SLE FR 6	0.77	0.34	34.25	-0.0421	3.6146	-0.121
855	SLE QP 1	0.74	0.29	32.56	-0.0398	3.4763	-0.103
855	SLE QP 2	0.76	0.32	33.57	-0.0412	3.5593	-0.1138
855	SLD 1	2.28	0.86	24.67	-0.0276	2.9277	-0.3024
855	SLD 2	2.02	1.53	24.34	-0.0294	2.8969	-0.5337
855	SLD 3	2.6	-0.51	25.18	-0.0247	2.9633	0.1758
855	SLD 4	2.35	0.16	24.85	-0.0265	2.9324	-0.0554
855	SLD 5	0.77	2.44	30.19	-0.0412	3.3215	-0.8537
855	SLD 6	0.6	2.88	29.97	-0.0424	3.3011	-1.0071
855	SLD 7	1.85	-2.13	31.89	-0.0315	3.44	0.7405
855	SLD 8	1.68	-1.69	31.67	-0.0327	3.4196	0.587
855	SLD 9	-0.16	2.33	35.48	-0.0497	3.699	-0.8146
855	SLD 10	-0.33	2.77	35.26	-0.0509	3.6786	-0.9681
855	SLD 11	0.92	-2.24	37.18	-0.04	3.8175	0.7795
855	SLD 12	0.75	-1.8	36.96	-0.0412	3.7971	0.6261
855	SLD 13	-0.83	0.48	42.3	-0.0559	4.1862	-0.1722
855	SLD 14	-1.09	1.15	41.97	-0.0577	4.1553	-0.4034
855	SLD 15	-0.5	-0.89	42.81	-0.053	4.2217	0.3061
855	SLD 16	-0.76	-0.22	42.48	-0.0548	4.1909	0.0748
855	SLV 1	4.33	1.55	12.76	-0.0094	2.0827	-0.5393
855	SLV 2	3.72	3.09	12	-0.0134	2.011	-1.0777
855	SLV 3	5.06	-1.56	13.91	-0.0028	2.1634	0.5447
855	SLV 4	4.46	-0.01	13.15	-0.0068	2.0916	0.0064
855	SLV 5	0.82	5.13	25.72	-0.0409	3.0066	-1.7909
855	SLV 6	0.43	6.13	25.22	-0.0436	2.9598	-2.1417
855	SLV 7	3.27	-5.23	29.56	-0.019	3.2755	1.8225
855	SLV 8	2.88	-4.22	29.06	-0.0216	3.2288	1.4717
855	SLV 9	-1.36	4.86	38.09	-0.0608	3.8898	-1.6993
855	SLV 10	-1.75	5.87	37.59	-0.0634	3.8431	-2.0501
855	SLV 11	1.09	-5.49	41.93	-0.0388	4.1588	1.9141
855	SLV 12	0.7	-4.49	41.43	-0.0415	4.112	1.5633
855	SLV 13	-2.94	0.65	54	-0.0756	5.027	-0.234
855	SLV 14	-3.54	2.2	53.24	-0.0796	4.9552	-0.7723
855	SLV 15	-2.2	-2.45	55.15	-0.069	5.1077	0.8501
855	SLV 16	-2.81	-0.91	54.39	-0.073	5.0359	0.3117
855	CRTFP Ux+	0	0	0	0	0	0
855	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
855	CRTFP Uy+	0	0	0	0	0	0
855	CRTFP Uy-	0	0	0	0	0	0
857	SLU 1	1.51	0.12	62.38	0.0299	0.3999	-0.0102
857	SLU 2	1.49	0.09	62.38	0.0299	0.4096	-0.0093
857	SLU 3	1.56	0.13	63.81	0.0306	0.4124	-0.0104
857	SLU 4	1.54	0.11	63.81	0.0306	0.4182	-0.0099
857	SLU 5	1.52	0.09	63.26	0.0303	0.4165	-0.0096
857	SLU 6	1.58	0.13	64.7	0.031	0.4192	-0.0107
857	SLU 7	1.57	0.11	64.69	0.031	0.4251	-0.0102
857	SLU 8	1.57	0.12	64.15	0.0307	0.4136	-0.0107
857	SLU 9	1.56	0.1	64.15	0.0307	0.4195	-0.0102
857	SLU 10	1.59	0.2	69.97	0.0337	0.4738	-0.0102
857	SLU 11	1.65	0.24	71.4	0.0344	0.4765	-0.0113
857	SLU 12	1.64	0.22	71.4	0.0344	0.4824	-0.0108
857	SLU 13	1.62	0.19	70.85	0.0341	0.4807	-0.0105
857	SLU 14	1.68	0.23	72.29	0.0348	0.4834	-0.0116
857	SLU 15	1.67	0.22	72.29	0.0348	0.4893	-0.011
857	SLU 16	1.67	0.22	71.74	0.0345	0.4778	-0.0116
857	SLU 17	1.66	0.2	71.74	0.0345	0.4837	-0.0111
857	SLU 18	1.65	0.27	73.23	0.0353	0.4915	-0.0115
857	SLU 19	1.64	0.26	73.23	0.0353	0.4974	-0.0109
857	SLU 20	1.68	0.27	74.11	0.0357	0.4984	-0.0117
857	SLU 21	1.67	0.25	74.11	0.0357	0.5043	-0.0112
857	SLU 22	1.64	0.26	70.02	0.0342	0.463	-0.0108
857	SLU 23	1.62	0.23	70.02	0.0342	0.4728	-0.0099
857	SLU 24	1.68	0.27	71.45	0.0349	0.4755	-0.0111
857	SLU 25	1.67	0.25	71.45	0.0349	0.4814	-0.0105
857	SLU 26	1.65	0.23	70.9	0.0346	0.4797	-0.0102
857	SLU 27	1.71	0.27	72.34	0.0353	0.4824	-0.0113
857	SLU 28	1.7	0.25	72.34	0.0353	0.4883	-0.0108
857	SLU 29	1.7	0.25	71.8	0.035	0.4768	-0.0114
857	SLU 30	1.69	0.23	71.79	0.035	0.4827	-0.0108
857	SLU 31	1.72	0.33	77.61	0.038	0.537	-0.0108
857	SLU 32	1.78	0.38	79.05	0.0387	0.5397	-0.012
857	SLU 33	1.77	0.36	79.04	0.0387	0.5456	-0.0114
857	SLU 34	1.75	0.33	78.5	0.0384	0.5439	-0.0111
857	SLU 35	1.81	0.37	79.93	0.0391	0.5466	-0.0122
857	SLU 36	1.8	0.35	79.93	0.0391	0.5524	-0.0117
857	SLU 37	1.8	0.36	79.39	0.0388	0.541	-0.0123
857	SLU 38	1.78	0.34	79.39	0.0387	0.5468	-0.0117
857	SLU 39	1.78	0.41	80.87	0.0396	0.5547	-0.0121
857	SLU 40	1.77	0.39	80.87	0.0396	0.5606	-0.0116
857	SLU 41	1.81	0.41	81.76	0.04	0.5616	-0.0124
857	SLU 42	1.8	0.39	81.76	0.04	0.5675	-0.0118
857	SLU 43	1.92	0.11	78.47	0.0374	0.4982	-0.0131
857	SLU 44	1.9	0.08	78.47	0.0374	0.5079	-0.0122
857	SLU 45	1.97	0.12	79.9	0.0382	0.5107	-0.0133
857	SLU 46	1.95	0.11	79.9	0.0381	0.5165	-0.0128
857	SLU 47	1.93	0.08	79.35	0.0378	0.5148	-0.0124
857	SLU 48	2	0.12	80.79	0.0385	0.5175	-0.0136
857	SLU 49	1.98	0.1	80.79	0.0385	0.5234	-0.013
857	SLU 50	1.98	0.11	80.24	0.0382	0.5119	-0.0136
857	SLU 51	1.97	0.09	80.24	0.0382	0.5178	-0.013
857	SLU 52	2	0.19	86.06	0.0412	0.5721	-0.013
857	SLU 53	2.06	0.23	87.5	0.0419	0.5748	-0.0142
857	SLU 54	2.05	0.21	87.49	0.0419	0.5807	-0.0136
857	SLU 55	2.03	0.18	86.95	0.0416	0.579	-0.0133
857	SLU 56	2.09	0.23	88.38	0.0423	0.5817	-0.0144
857	SLU 57	2.08	0.21	88.38	0.0423	0.5876	-0.0139
857	SLU 58	2.08	0.21	87.84	0.042	0.5761	-0.0145
857	SLU 59	2.07	0.19	87.83	0.042	0.582	-0.0139
857	SLU 60	2.06	0.26	89.32	0.0429	0.5898	-0.0143
857	SLU 61	2.05	0.25	89.32	0.0428	0.5957	-0.0138
857	SLU 62	2.09	0.26	90.21	0.0432	0.5967	-0.0146
857	SLU 63	2.08	0.24	90.2	0.0432	0.6026	-0.014
857	SLU 64	2.05	0.25	86.12	0.0417	0.5613	-0.0137
857	SLU 65	2.03	0.22	86.11	0.0417	0.5711	-0.0128
857	SLU 66	2.09	0.26	87.55	0.0424	0.5738	-0.0139
857	SLU 67	2.08	0.24	87.54	0.0424	0.5797	-0.0134
857	SLU 68	2.06	0.22	87	0.0421	0.578	-0.013
857	SLU 69	2.12	0.26	88.43	0.0428	0.5807	-0.0142
857	SLU 70	2.11	0.24	88.43	0.0428	0.5866	-0.0136
857	SLU 71	2.11	0.24	87.89	0.0425	0.5751	-0.0142
857	SLU 72	2.1	0.22	87.89	0.0425	0.581	-0.0137
857	SLU 73	2.13	0.33	93.71	0.0455	0.6353	-0.0137
857	SLU 74	2.19	0.37	95.14	0.0462	0.638	-0.0148
857	SLU 75	2.18	0.35	95.14	0.0462	0.6439	-0.0143
857	SLU 76	2.16	0.32	94.59	0.0459	0.6422	-0.0139
857	SLU 77	2.22	0.36	96.03	0.0466	0.6449	-0.0151
857	SLU 78	2.21	0.34	96.02	0.0466	0.6507	-0.0145
857	SLU 79	2.21	0.35	95.48	0.0463	0.6393	-0.0151
857	SLU 80	2.19	0.33	95.48	0.0463	0.6451	-0.0146
857	SLU 81	2.19	0.4	96.97	0.0471	0.653	-0.015
857	SLU 82	2.18	0.38	96.96	0.0471	0.6589	-0.0144
857	SLU 83	2.22	0.4	97.85	0.0475	0.6599	-0.0152
857	SLU 84	2.21	0.38	97.85	0.0475	0.6658	-0.0147
857	SLE RA 1	1.55	0.16	64.56	0.0312	0.4179	-0.0104
857	SLE RA 2	1.53	0.14	64.56	0.0311	0.4244	-0.0098
857	SLE RA 3	1.58	0.17	65.52	0.0316	0.4262	-0.0105
857	SLE RA 4	1.57	0.16	65.52	0.0316	0.4301	-0.0102

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
857	SLE RA 5	1.55	0.14	65.15	0.0314	0.429	-0.01
857	SLE RA 6	1.6	0.17	66.11	0.0319	0.4308	-0.0107
857	SLE RA 7	1.59	0.15	66.11	0.0319	0.4347	-0.0104
857	SLE RA 8	1.59	0.16	65.74	0.0317	0.4271	-0.0107
857	SLE RA 9	1.58	0.15	65.74	0.0316	0.431	-0.0104
857	SLE RA 10	1.6	0.21	69.62	0.0337	0.4672	-0.0104
857	SLE RA 11	1.64	0.24	70.58	0.0342	0.469	-0.0111
857	SLE RA 12	1.63	0.23	70.58	0.0342	0.4729	-0.0108
857	SLE RA 13	1.62	0.21	70.21	0.0339	0.4718	-0.0106
857	SLE RA 14	1.66	0.24	71.17	0.0344	0.4736	-0.0113
857	SLE RA 15	1.65	0.22	71.17	0.0344	0.4775	-0.011
857	SLE RA 16	1.65	0.23	70.81	0.0342	0.4699	-0.0113
857	SLE RA 17	1.65	0.22	70.81	0.0342	0.4738	-0.011
857	SLE RA 18	1.64	0.26	71.8	0.0348	0.479	-0.0112
857	SLE RA 19	1.63	0.25	71.79	0.0348	0.4829	-0.0109
857	SLE RA 20	1.66	0.26	72.39	0.035	0.4836	-0.0114
857	SLE RA 21	1.65	0.25	72.38	0.035	0.4875	-0.0111
857	SLE FR 1	1.55	0.16	64.56	0.0312	0.4179	-0.0104
857	SLE FR 2	1.55	0.16	64.56	0.0311	0.4192	-0.0103
857	SLE FR 3	1.56	0.16	64.8	0.0313	0.4198	-0.0105
857	SLE FR 4	1.57	0.19	66.73	0.0322	0.4376	-0.0105
857	SLE FR 5	1.59	0.19	66.97	0.0323	0.4381	-0.0107
857	SLE FR 6	1.6	0.21	68.18	0.033	0.4485	-0.0108
857	SLE QP 1	1.55	0.16	64.56	0.0312	0.4179	-0.0104
857	SLE QP 2	1.58	0.19	66.73	0.0322	0.4363	-0.0106
857	SLD 1	7.12	0.97	61.64	0.0186	0.3707	-0.0454
857	SLD 2	6.67	1.46	61.07	0.0155	0.3826	-0.0333
857	SLD 3	7.2	-0.63	62.31	0.0286	0.4209	-0.0461
857	SLD 4	6.75	-0.13	61.74	0.0255	0.4327	-0.034
857	SLD 5	3.19	2.76	64.3	0.0136	0.3383	-0.0223
857	SLD 6	2.89	3.08	63.92	0.0115	0.3462	-0.0142
857	SLD 7	3.48	-2.56	66.53	0.0468	0.5056	-0.0245
857	SLD 8	3.18	-2.24	66.14	0.0447	0.5135	-0.0165
857	SLD 9	-0.02	2.62	67.32	0.0197	0.359	-0.0048
857	SLD 10	-0.32	2.95	66.94	0.0177	0.3669	0.0032
857	SLD 11	0.26	-2.7	69.55	0.0529	0.5263	-0.0071
857	SLD 12	-0.04	-2.37	69.17	0.0509	0.5342	0.001
857	SLD 13	-3.6	0.52	71.73	0.039	0.4398	0.0127
857	SLD 14	-4.05	1.01	71.16	0.0359	0.4516	0.0248
857	SLD 15	-3.51	-1.08	72.4	0.049	0.4899	0.012
857	SLD 16	-3.96	-0.58	71.83	0.0458	0.5018	0.0241
857	SLV 1	14.53	1.95	54.84	0.0007	0.2832	-0.0919
857	SLV 2	13.48	3.1	53.5	-0.0066	0.3108	-0.0638
857	SLV 3	14.73	-1.66	56.35	0.0233	0.3968	-0.0935
857	SLV 4	13.68	-0.52	55.01	0.016	0.4243	-0.0653
857	SLV 5	5.35	6	61.11	-0.0101	0.2133	-0.0376
857	SLV 6	4.66	6.75	60.24	-0.0149	0.2313	-0.0193
857	SLV 7	6.01	-6.05	66.14	0.0651	0.5917	-0.0428
857	SLV 8	5.33	-5.3	65.27	0.0603	0.6097	-0.0245
857	SLV 9	-2.17	5.69	68.2	0.0042	0.2628	0.0032
857	SLV 10	-2.85	6.44	67.32	-0.0006	0.2808	0.0215
857	SLV 11	-1.51	-6.36	73.23	0.0794	0.6412	-0.002
857	SLV 12	-2.19	-5.62	72.36	0.0746	0.6592	0.0163
857	SLV 13	-10.53	0.9	78.46	0.0485	0.4482	0.044
857	SLV 14	-11.58	2.05	77.12	0.0412	0.4757	0.0722
857	SLV 15	-10.33	-2.71	79.97	0.071	0.5617	0.0425
857	SLV 16	-11.38	-1.57	78.63	0.0637	0.5893	0.0706
857	CRTFP Ux+	0	0	0	0	0	0
857	CRTFP Ux-	0	0	0	0	0	0
860	SLU 1	-1.26	-0.8	62.7	0.0111	-0.5247	0.0182
860	SLU 2	-1.29	-0.89	62.79	0.0111	-0.5302	0.0188
860	SLU 3	-1.29	-0.81	64.22	0.0112	-0.5394	0.0186
860	SLU 4	-1.31	-0.87	64.27	0.0112	-0.5427	0.019
860	SLU 5	-1.31	-0.9	63.74	0.0109	-0.537	0.019
860	SLU 6	-1.31	-0.82	65.17	0.011	-0.5462	0.0188
860	SLU 7	-1.33	-0.87	65.23	0.011	-0.5494	0.0192
860	SLU 8	-1.3	-0.82	64.61	0.0108	-0.5382	0.0186
860	SLU 9	-1.31	-0.87	64.66	0.0108	-0.5415	0.0189
860	SLU 10	-1.38	-0.92	70.54	0.0119	-0.6163	0.022
860	SLU 11	-1.38	-0.84	71.97	0.012	-0.6255	0.0218
860	SLU 12	-1.4	-0.89	72.02	0.012	-0.6288	0.0222
860	SLU 13	-1.4	-0.93	71.49	0.0118	-0.623	0.0222
860	SLU 14	-1.4	-0.85	72.92	0.0119	-0.6322	0.022
860	SLU 15	-1.42	-0.9	72.98	0.0118	-0.6355	0.0224
860	SLU 16	-1.39	-0.84	72.36	0.0117	-0.6243	0.0218
860	SLU 17	-1.41	-0.9	72.41	0.0116	-0.6275	0.0221
860	SLU 18	-1.39	-0.84	73.77	0.0123	-0.6477	0.0228
860	SLU 19	-1.41	-0.9	73.83	0.0123	-0.6509	0.0231
860	SLU 20	-1.41	-0.85	74.73	0.0121	-0.6544	0.023
860	SLU 21	-1.43	-0.9	74.78	0.0121	-0.6577	0.0233
860	SLU 22	-1.37	-0.79	70.52	0.0125	-0.6035	0.0204
860	SLU 23	-1.41	-0.87	70.61	0.0125	-0.609	0.021
860	SLU 24	-1.41	-0.79	72.04	0.0126	-0.6182	0.0208
860	SLU 25	-1.43	-0.85	72.09	0.0125	-0.6215	0.0212
860	SLU 26	-1.43	-0.88	71.56	0.0123	-0.6157	0.0212
860	SLU 27	-1.43	-0.8	72.99	0.0124	-0.6249	0.021
860	SLU 28	-1.45	-0.85	73.04	0.0124	-0.6282	0.0214
860	SLU 29	-1.41	-0.8	72.43	0.0122	-0.617	0.0208
860	SLU 30	-1.43	-0.85	72.48	0.0122	-0.6203	0.0211
860	SLU 31	-1.5	-0.9	78.36	0.0133	-0.695	0.0242

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
860	SLU 32	-1.5	-0.82	79.79	0.0134	-0.7042	0.0241
860	SLU 33	-1.52	-0.87	79.84	0.0134	-0.7075	0.0244
860	SLU 34	-1.52	-0.91	79.31	0.0131	-0.7018	0.0244
860	SLU 35	-1.52	-0.83	80.74	0.0132	-0.711	0.0242
860	SLU 36	-1.54	-0.88	80.8	0.0132	-0.7142	0.0246
860	SLU 37	-1.51	-0.83	80.18	0.013	-0.703	0.024
860	SLU 38	-1.53	-0.88	80.23	0.013	-0.7063	0.0243
860	SLU 39	-1.51	-0.82	81.59	0.0137	-0.7264	0.025
860	SLU 40	-1.53	-0.88	81.65	0.0136	-0.7297	0.0253
860	SLU 41	-1.53	-0.83	82.55	0.0135	-0.7332	0.0252
860	SLU 42	-1.55	-0.88	82.6	0.0135	-0.7364	0.0255
860	SLU 43	-1.59	-1.05	78.83	0.014	-0.6552	0.0229
860	SLU 44	-1.62	-1.14	78.92	0.0139	-0.6606	0.0235
860	SLU 45	-1.62	-1.06	80.35	0.014	-0.6698	0.0233
860	SLU 46	-1.64	-1.11	80.4	0.014	-0.6731	0.0237
860	SLU 47	-1.64	-1.15	79.87	0.0138	-0.6674	0.0237
860	SLU 48	-1.64	-1.07	81.3	0.0139	-0.6766	0.0235
860	SLU 49	-1.66	-1.12	81.35	0.0139	-0.6799	0.0239
860	SLU 50	-1.63	-1.07	80.74	0.0137	-0.6686	0.0233
860	SLU 51	-1.65	-1.12	80.79	0.0137	-0.6719	0.0236
860	SLU 52	-1.72	-1.17	86.67	0.0148	-0.7467	0.0267
860	SLU 53	-1.72	-1.09	88.1	0.0149	-0.7559	0.0266
860	SLU 54	-1.74	-1.14	88.15	0.0148	-0.7592	0.0269
860	SLU 55	-1.74	-1.17	87.62	0.0146	-0.7534	0.0269
860	SLU 56	-1.74	-1.09	89.05	0.0147	-0.7626	0.0267
860	SLU 57	-1.76	-1.15	89.11	0.0147	-0.7659	0.0271
860	SLU 58	-1.73	-1.09	88.49	0.0145	-0.7547	0.0265
860	SLU 59	-1.75	-1.15	88.54	0.0145	-0.758	0.0268
860	SLU 60	-1.73	-1.09	89.9	0.0151	-0.7781	0.0275
860	SLU 61	-1.75	-1.14	89.96	0.0151	-0.7814	0.0278
860	SLU 62	-1.75	-1.1	90.86	0.015	-0.7848	0.0277
860	SLU 63	-1.77	-1.15	90.91	0.015	-0.7881	0.028
860	SLU 64	-1.71	-1.03	86.65	0.0154	-0.7339	0.0251
860	SLU 65	-1.74	-1.12	86.74	0.0153	-0.7394	0.0257
860	SLU 66	-1.74	-1.04	88.17	0.0154	-0.7486	0.0255
860	SLU 67	-1.76	-1.09	88.22	0.0154	-0.7519	0.0259
860	SLU 68	-1.76	-1.13	87.69	0.0152	-0.7461	0.0259
860	SLU 69	-1.76	-1.05	89.12	0.0153	-0.7553	0.0257
860	SLU 70	-1.78	-1.1	89.17	0.0153	-0.7586	0.0261
860	SLU 71	-1.75	-1.05	88.56	0.0151	-0.7474	0.0255
860	SLU 72	-1.77	-1.1	88.61	0.0151	-0.7507	0.0258
860	SLU 73	-1.84	-1.15	94.49	0.0161	-0.8254	0.0289
860	SLU 74	-1.84	-1.07	95.92	0.0162	-0.8346	0.0288
860	SLU 75	-1.86	-1.12	95.97	0.0162	-0.8379	0.0291
860	SLU 76	-1.86	-1.16	95.44	0.016	-0.8322	0.0291
860	SLU 77	-1.86	-1.07	96.87	0.0161	-0.8414	0.029
860	SLU 78	-1.88	-1.13	96.93	0.0161	-0.8447	0.0293
860	SLU 79	-1.85	-1.07	96.31	0.0159	-0.8334	0.0287
860	SLU 80	-1.87	-1.13	96.36	0.0159	-0.8367	0.0291
860	SLU 81	-1.85	-1.07	97.72	0.0165	-0.8568	0.0297
860	SLU 82	-1.87	-1.12	97.78	0.0165	-0.8601	0.03
860	SLU 83	-1.87	-1.08	98.68	0.0164	-0.8636	0.0299
860	SLU 84	-1.89	-1.13	98.73	0.0164	-0.8669	0.0302
860	SLE RA 1	-1.29	-0.8	64.94	0.0115	-0.5473	0.0188
860	SLE RA 2	-1.31	-0.86	64.99	0.0115	-0.5509	0.0192
860	SLE RA 3	-1.31	-0.8	65.95	0.0116	-0.557	0.0191
860	SLE RA 4	-1.32	-0.84	65.98	0.0115	-0.5592	0.0194
860	SLE RA 5	-1.32	-0.86	65.63	0.0114	-0.5554	0.0193
860	SLE RA 6	-1.32	-0.81	66.58	0.0115	-0.5615	0.0193
860	SLE RA 7	-1.34	-0.84	66.62	0.0114	-0.5637	0.0195
860	SLE RA 8	-1.32	-0.81	66.21	0.0113	-0.5562	0.0191
860	SLE RA 9	-1.33	-0.84	66.24	0.0113	-0.5584	0.0193
860	SLE RA 10	-1.37	-0.88	70.16	0.012	-0.6083	0.0214
860	SLE RA 11	-1.38	-0.82	71.11	0.0121	-0.6144	0.0213
860	SLE RA 12	-1.39	-0.86	71.15	0.0121	-0.6166	0.0215
860	SLE RA 13	-1.39	-0.88	70.8	0.0119	-0.6128	0.0215
860	SLE RA 14	-1.39	-0.83	71.75	0.012	-0.6189	0.0214
860	SLE RA 15	-1.4	-0.86	71.79	0.012	-0.6211	0.0216
860	SLE RA 16	-1.38	-0.83	71.38	0.0119	-0.6136	0.0212
860	SLE RA 17	-1.39	-0.86	71.41	0.0119	-0.6158	0.0215
860	SLE RA 18	-1.38	-0.82	72.32	0.0123	-0.6292	0.0219
860	SLE RA 19	-1.39	-0.86	72.35	0.0123	-0.6314	0.0221
860	SLE RA 20	-1.39	-0.83	72.95	0.0122	-0.6337	0.022
860	SLE RA 21	-1.41	-0.86	72.99	0.0122	-0.6359	0.0222
860	SLE FR 1	-1.29	-0.8	64.94	0.0115	-0.5473	0.0188
860	SLE FR 2	-1.29	-0.81	64.95	0.0115	-0.548	0.0189
860	SLE FR 3	-1.29	-0.8	65.19	0.0115	-0.549	0.0189
860	SLE FR 4	-1.32	-0.82	67.16	0.0117	-0.5726	0.0198
860	SLE FR 5	-1.32	-0.81	67.4	0.0117	-0.5736	0.0198
860	SLE FR 6	-1.33	-0.81	68.63	0.0119	-0.5882	0.0204
860	SLE QP 1	-1.29	-0.8	64.94	0.0115	-0.5473	0.0188
860	SLE QP 2	-1.32	-0.81	67.15	0.0117	-0.5718	0.0198
860	SLD 1	4.48	-0.39	70.16	0.026	-0.6412	-0.0144
860	SLD 2	4.02	-0.87	70.98	0.0274	-0.6308	-0.0014
860	SLD 3	4.34	-2.09	71.17	0.0322	-0.7067	-0.0129
860	SLD 4	3.88	-2.57	71.99	0.0336	-0.6962	0.0001
860	SLD 5	0.72	1.98	66.38	0.0064	-0.4953	0.0048
860	SLD 6	0.42	1.66	66.92	0.0073	-0.4883	0.0134
860	SLD 7	0.25	-3.68	69.73	0.027	-0.7135	0.0099
860	SLD 8	-0.06	-4	70.28	0.028	-0.7065	0.0185

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
860	SLD 9	-2.58	2.39	64.02	-0.0045	-0.4372	0.021
860	SLD 10	-2.88	2.07	64.57	-0.0035	-0.4302	0.0296
860	SLD 11	-3.05	-3.28	67.38	0.0162	-0.6553	0.0261
860	SLD 12	-3.36	-3.6	67.92	0.0171	-0.6484	0.0347
860	SLD 13	-6.51	0.96	62.31	-0.0101	-0.4475	0.0394
860	SLD 14	-6.97	0.48	63.13	-0.0087	-0.437	0.0524
860	SLD 15	-6.66	-0.74	63.32	-0.0039	-0.5129	0.0409
860	SLD 16	-7.11	-1.22	64.14	-0.0025	-0.5024	0.0539
860	SLV 1	12.23	0.1	74.24	0.0452	-0.737	-0.06
860	SLV 2	11.16	-1.02	76.15	0.0485	-0.7126	-0.0298
860	SLV 3	11.91	-3.74	76.52	0.0594	-0.8848	-0.0565
860	SLV 4	10.84	-4.86	78.43	0.0626	-0.8604	-0.0263
860	SLV 5	3.43	5.49	65.49	-0.0002	-0.4014	-0.0148
860	SLV 6	2.73	4.76	66.74	0.0019	-0.3855	0.0049
860	SLV 7	2.35	-7.32	73.07	0.0469	-0.8942	-0.0031
860	SLV 8	1.65	-8.05	74.32	0.049	-0.8784	0.0165
860	SLV 9	-4.28	6.44	59.98	-0.0255	-0.2653	0.023
860	SLV 10	-4.98	5.71	61.23	-0.0234	-0.2494	0.0426
860	SLV 11	-5.36	-6.37	67.56	0.0216	-0.7581	0.0346
860	SLV 12	-6.06	-7.1	68.81	0.0237	-0.7422	0.0543
860	SLV 13	-13.47	3.25	55.87	-0.0391	-0.2832	0.0658
860	SLV 14	-14.54	2.13	57.78	-0.0359	-0.2589	0.096
860	SLV 15	-13.8	-0.59	58.15	-0.025	-0.4311	0.0693
860	SLV 16	-14.87	-1.71	60.06	-0.0218	-0.4067	0.0995
860	CRTFP Ux+	0	0	0	0	0	0
860	CRTFP Ux-	0	0	0	0	0	0
860	CRTFP Uy+	0	0	0	0	0	0
860	CRTFP Uy-	0	0	0	0	0	0
863	SLU 1	0.08	0.82	53.63	0.047	0.687	0.0219
863	SLU 2	0.06	0.75	53.64	0.0475	0.6858	0.0224
863	SLU 3	0.09	0.85	54.86	0.0483	0.7062	0.0224
863	SLU 4	0.07	0.81	54.87	0.0486	0.7055	0.0228
863	SLU 5	0.07	0.76	54.36	0.0481	0.6966	0.0227
863	SLU 6	0.09	0.87	55.58	0.0489	0.7171	0.0227
863	SLU 7	0.08	0.83	55.58	0.0492	0.7164	0.023
863	SLU 8	0.1	0.84	55.06	0.0482	0.7087	0.0224
863	SLU 9	0.08	0.8	55.07	0.0485	0.708	0.0227
863	SLU 10	0.07	0.89	60.79	0.0533	0.7928	0.0262
863	SLU 11	0.09	0.99	62.01	0.054	0.8132	0.0262
863	SLU 12	0.08	0.95	62.01	0.0543	0.8125	0.0265
863	SLU 13	0.07	0.9	61.5	0.0539	0.8036	0.0264
863	SLU 14	0.1	1	62.72	0.0546	0.8241	0.0264
863	SLU 15	0.09	0.96	62.73	0.0549	0.8234	0.0267
863	SLU 16	0.11	0.98	62.2	0.0539	0.8157	0.0261
863	SLU 17	0.09	0.94	62.21	0.0543	0.815	0.0264
863	SLU 18	0.09	1.01	63.84	0.0552	0.8398	0.0272
863	SLU 19	0.08	0.97	63.84	0.0555	0.8391	0.0275
863	SLU 20	0.1	1.02	64.55	0.0558	0.8507	0.0275
863	SLU 21	0.09	0.98	64.56	0.0561	0.85	0.0278
863	SLU 22	0.1	1.05	60.55	0.0537	0.7931	0.0251
863	SLU 23	0.07	0.98	60.56	0.0543	0.7919	0.0256
863	SLU 24	0.1	1.09	61.79	0.055	0.8124	0.0256
863	SLU 25	0.09	1.05	61.79	0.0553	0.8117	0.0259
863	SLU 26	0.08	0.99	61.28	0.0549	0.8028	0.0259
863	SLU 27	0.11	1.1	62.5	0.0556	0.8232	0.0259
863	SLU 28	0.1	1.06	62.51	0.0559	0.8225	0.0262
863	SLU 29	0.11	1.07	61.98	0.055	0.8148	0.0256
863	SLU 30	0.1	1.03	61.99	0.0553	0.8141	0.0259
863	SLU 31	0.08	1.12	67.71	0.06	0.8989	0.0293
863	SLU 32	0.11	1.22	68.93	0.0607	0.9194	0.0293
863	SLU 33	0.1	1.18	68.94	0.0611	0.9186	0.0297
863	SLU 34	0.09	1.13	68.42	0.0606	0.9098	0.0296
863	SLU 35	0.12	1.23	69.64	0.0614	0.9302	0.0296
863	SLU 36	0.1	1.19	69.65	0.0617	0.9295	0.0299
863	SLU 37	0.12	1.21	69.13	0.0607	0.9218	0.0293
863	SLU 38	0.11	1.17	69.13	0.061	0.9211	0.0296
863	SLU 39	0.11	1.24	70.76	0.0619	0.946	0.0304
863	SLU 40	0.09	1.2	70.77	0.0622	0.9452	0.0307
863	SLU 41	0.12	1.26	71.47	0.0625	0.9568	0.0306
863	SLU 42	0.1	1.21	71.48	0.0629	0.9561	0.031
863	SLU 43	0.1	0.98	67.35	0.0588	0.8567	0.0273
863	SLU 44	0.08	0.92	67.36	0.0593	0.8555	0.0279
863	SLU 45	0.11	1.02	68.58	0.0601	0.8759	0.0279
863	SLU 46	0.09	0.98	68.59	0.0604	0.8752	0.0282
863	SLU 47	0.09	0.93	68.07	0.0599	0.8663	0.0281
863	SLU 48	0.11	1.03	69.29	0.0607	0.8868	0.0281
863	SLU 49	0.1	0.99	69.3	0.061	0.8861	0.0285
863	SLU 50	0.12	1.01	68.78	0.06	0.8784	0.0278
863	SLU 51	0.1	0.97	68.78	0.0603	0.8777	0.0282
863	SLU 52	0.09	1.05	74.5	0.065	0.9625	0.0316
863	SLU 53	0.11	1.16	75.72	0.0658	0.9829	0.0316
863	SLU 54	0.1	1.12	75.73	0.0661	0.9822	0.032
863	SLU 55	0.09	1.06	75.22	0.0657	0.9733	0.0319
863	SLU 56	0.12	1.17	76.44	0.0664	0.9938	0.0319
863	SLU 57	0.11	1.13	76.44	0.0667	0.9931	0.0322
863	SLU 58	0.12	1.15	75.92	0.0657	0.9854	0.0316
863	SLU 59	0.11	1.1	75.93	0.0661	0.9847	0.0319
863	SLU 60	0.11	1.18	77.55	0.067	1.0095	0.0327
863	SLU 61	0.1	1.14	77.56	0.0673	1.0088	0.033
863	SLU 62	0.12	1.19	78.27	0.0676	1.0204	0.0329

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
863	SLU 63	0.11	1.15	78.27	0.0679	1.0197	0.0333
863	SLU 64	0.12	1.21	74.27	0.0655	0.9628	0.0305
863	SLU 65	0.09	1.15	74.28	0.066	0.9616	0.0311
863	SLU 66	0.12	1.25	75.5	0.0668	0.9821	0.0311
863	SLU 67	0.11	1.21	75.51	0.0671	0.9814	0.0314
863	SLU 68	0.1	1.16	74.99	0.0667	0.9725	0.0313
863	SLU 69	0.13	1.27	76.22	0.0674	0.9929	0.0313
863	SLU 70	0.11	1.22	76.22	0.0677	0.9922	0.0317
863	SLU 71	0.13	1.24	75.7	0.0667	0.9846	0.031
863	SLU 72	0.12	1.2	75.7	0.0671	0.9838	0.0314
863	SLU 73	0.1	1.28	81.42	0.0718	1.0686	0.0348
863	SLU 74	0.13	1.39	82.65	0.0725	1.0891	0.0348
863	SLU 75	0.12	1.35	82.65	0.0729	1.0883	0.0351
863	SLU 76	0.11	1.3	82.14	0.0724	1.0795	0.0351
863	SLU 77	0.14	1.4	83.36	0.0731	1.0999	0.0351
863	SLU 78	0.12	1.36	83.37	0.0735	1.0992	0.0354
863	SLU 79	0.14	1.38	82.84	0.0725	1.0915	0.0348
863	SLU 80	0.13	1.34	82.85	0.0728	1.0908	0.0351
863	SLU 81	0.13	1.41	84.48	0.0737	1.1157	0.0359
863	SLU 82	0.11	1.37	84.48	0.074	1.1149	0.0362
863	SLU 83	0.14	1.42	85.19	0.0743	1.1265	0.0361
863	SLU 84	0.12	1.38	85.2	0.0746	1.1258	0.0364
863	SLE RA 1	0.09	0.88	55.61	0.0489	0.7173	0.0228
863	SLE RA 2	0.07	0.84	55.62	0.0493	0.7165	0.0232
863	SLE RA 3	0.09	0.91	56.43	0.0498	0.7301	0.0232
863	SLE RA 4	0.08	0.88	56.43	0.05	0.7297	0.0234
863	SLE RA 5	0.08	0.85	56.09	0.0497	0.7237	0.0233
863	SLE RA 6	0.09	0.92	56.91	0.0502	0.7374	0.0233
863	SLE RA 7	0.09	0.89	56.91	0.0504	0.7369	0.0235
863	SLE RA 8	0.1	0.9	56.56	0.0497	0.7318	0.0231
863	SLE RA 9	0.09	0.87	56.57	0.0499	0.7313	0.0233
863	SLE RA 10	0.08	0.93	60.38	0.0531	0.7878	0.0256
863	SLE RA 11	0.09	1	61.19	0.0536	0.8015	0.0256
863	SLE RA 12	0.09	0.97	61.2	0.0538	0.801	0.0259
863	SLE RA 13	0.08	0.94	60.85	0.0535	0.7951	0.0258
863	SLE RA 14	0.1	1.01	61.67	0.054	0.8087	0.0258
863	SLE RA 15	0.09	0.98	61.67	0.0542	0.8082	0.026
863	SLE RA 16	0.1	0.99	61.32	0.0536	0.8031	0.0256
863	SLE RA 17	0.09	0.96	61.33	0.0538	0.8026	0.0258
863	SLE RA 18	0.09	1.01	62.41	0.0544	0.8192	0.0263
863	SLE RA 19	0.08	0.99	62.42	0.0546	0.8187	0.0266
863	SLE RA 20	0.1	1.02	62.89	0.0548	0.8264	0.0265
863	SLE RA 21	0.09	0.99	62.89	0.055	0.826	0.0267
863	SLE FR 1	0.09	0.88	55.61	0.0489	0.7173	0.0228
863	SLE FR 2	0.08	0.87	55.61	0.049	0.7172	0.0229
863	SLE FR 3	0.09	0.89	55.8	0.0491	0.7202	0.0229
863	SLE FR 4	0.09	0.91	57.65	0.0506	0.7477	0.0239
863	SLE FR 5	0.09	0.93	57.84	0.0507	0.7508	0.0239
863	SLE FR 6	0.09	0.95	59.01	0.0516	0.7683	0.0246
863	SLE QP 1	0.09	0.88	55.61	0.0489	0.7173	0.0228
863	SLE QP 2	0.09	0.92	57.65	0.0505	0.7479	0.0239
863	SLD 1	5.83	2.25	61.74	0.055	0.8015	-0.0073
863	SLD 2	5.44	2.03	61.59	0.0552	0.8007	0.0045
863	SLD 3	5.73	0.59	62.19	0.0631	0.7882	-0.0062
863	SLD 4	5.34	0.36	62.04	0.0633	0.7875	0.0055
863	SLD 5	2.05	3.88	58.22	0.0396	0.7842	0.0107
863	SLD 6	1.79	3.73	58.13	0.0397	0.7837	0.0186
863	SLD 7	1.69	-1.66	59.72	0.0665	0.7401	0.0143
863	SLD 8	1.43	-1.81	59.62	0.0667	0.7396	0.0221
863	SLD 9	-1.25	3.65	55.68	0.0344	0.7562	0.0256
863	SLD 10	-1.51	3.5	55.58	0.0345	0.7557	0.0334
863	SLD 11	-1.61	-1.89	57.18	0.0614	0.7121	0.0292
863	SLD 12	-1.87	-2.04	57.08	0.0615	0.7116	0.037
863	SLD 13	-5.16	1.48	53.26	0.0378	0.7083	0.0422
863	SLD 14	-5.55	1.26	53.12	0.038	0.7075	0.054
863	SLD 15	-5.27	-0.18	53.71	0.0459	0.695	0.0433
863	SLD 16	-5.66	-0.4	53.56	0.0461	0.6943	0.055
863	SLV 1	13.52	3.96	67.27	0.0614	0.8734	-0.0489
863	SLV 2	12.61	3.44	66.92	0.0619	0.8718	-0.0215
863	SLV 3	13.27	0.2	68.28	0.0797	0.8434	-0.0465
863	SLV 4	12.36	-0.32	67.93	0.0803	0.8417	-0.0191
863	SLV 5	4.65	7.63	59.06	0.0259	0.8314	-0.0065
863	SLV 6	4.06	7.29	58.84	0.0263	0.8303	0.0113
863	SLV 7	3.83	-4.91	62.43	0.087	0.7313	0.0017
863	SLV 8	3.24	-5.24	62.21	0.0873	0.7302	0.0195
863	SLV 9	-3.06	7.09	53.09	0.0138	0.7656	0.0282
863	SLV 10	-3.65	6.75	52.87	0.0141	0.7645	0.046
863	SLV 11	-3.88	-5.45	56.46	0.0748	0.6655	0.0364
863	SLV 12	-4.47	-5.78	56.24	0.0752	0.6644	0.0542
863	SLV 13	-12.18	2.16	47.37	0.0208	0.6541	0.0668
863	SLV 14	-13.09	1.64	47.02	0.0213	0.6524	0.0942
863	SLV 15	-12.43	-1.6	48.38	0.0392	0.624	0.0692
863	SLV 16	-13.34	-2.12	48.04	0.0397	0.6223	0.0966
863	CRTFP Ux+	0	0	0	0	0	0
863	CRTFP Ux-	0	0	0	0	0	0
866	SLU 1	0.37	1.64	50.03	0.0562	-0.2558	0.0011
866	SLU 2	0.34	1.6	50.04	0.0567	-0.2548	0.0019
866	SLU 3	0.38	1.7	51.16	0.0579	-0.2626	0.0012
866	SLU 4	0.36	1.67	51.17	0.0582	-0.262	0.0017
866	SLU 5	0.35	1.62	50.72	0.0576	-0.259	0.0018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
866	SLU 6	0.39	1.72	51.85	0.0588	-0.2669	0.0011
866	SLU 7	0.38	1.7	51.85	0.0591	-0.2663	0.0016
866	SLU 8	0.39	1.69	51.4	0.058	-0.2643	0.001
866	SLU 9	0.38	1.66	51.41	0.0583	-0.2637	0.0015
866	SLU 10	0.38	1.85	56.56	0.0635	-0.2924	0.0038
866	SLU 11	0.42	1.95	57.68	0.0646	-0.3002	0.0031
866	SLU 12	0.41	1.93	57.68	0.065	-0.2996	0.0036
866	SLU 13	0.4	1.88	57.24	0.0644	-0.2966	0.0037
866	SLU 14	0.43	1.98	58.37	0.0656	-0.3045	0.003
866	SLU 15	0.42	1.95	58.37	0.0659	-0.3039	0.0035
866	SLU 16	0.44	1.94	57.92	0.0648	-0.3019	0.0029
866	SLU 17	0.42	1.92	57.93	0.0651	-0.3013	0.0034
866	SLU 18	0.43	2	59.34	0.0659	-0.3095	0.0038
866	SLU 19	0.41	1.97	59.35	0.0662	-0.3089	0.0043
866	SLU 20	0.44	2.02	60.03	0.0668	-0.3138	0.0038
866	SLU 21	0.43	2	60.03	0.0671	-0.3131	0.0042
866	SLU 22	0.41	1.96	56.4	0.0642	-0.297	0.0025
866	SLU 23	0.39	1.92	56.41	0.0647	-0.296	0.0033
866	SLU 24	0.43	2.02	57.54	0.0659	-0.3038	0.0026
866	SLU 25	0.41	2	57.54	0.0662	-0.3032	0.003
866	SLU 26	0.4	1.95	57.1	0.0656	-0.3003	0.0032
866	SLU 27	0.44	2.05	58.22	0.0668	-0.3081	0.0025
866	SLU 28	0.42	2.02	58.23	0.0671	-0.3075	0.003
866	SLU 29	0.44	2.01	57.78	0.066	-0.3056	0.0024
866	SLU 30	0.42	1.99	57.79	0.0663	-0.305	0.0029
866	SLU 31	0.43	2.17	62.93	0.0715	-0.3336	0.0052
866	SLU 32	0.47	2.27	64.06	0.0726	-0.3414	0.0045
866	SLU 33	0.45	2.25	64.06	0.0729	-0.3408	0.0049
866	SLU 34	0.44	2.2	63.62	0.0724	-0.3379	0.0051
866	SLU 35	0.48	2.3	64.74	0.0735	-0.3457	0.0044
866	SLU 36	0.46	2.28	64.75	0.0738	-0.3451	0.0049
866	SLU 37	0.48	2.26	64.3	0.0728	-0.3432	0.0043
866	SLU 38	0.46	2.24	64.3	0.0731	-0.3426	0.0048
866	SLU 39	0.47	2.32	65.72	0.0739	-0.3507	0.0052
866	SLU 40	0.46	2.3	65.72	0.0742	-0.3501	0.0057
866	SLU 41	0.49	2.35	66.4	0.0748	-0.355	0.0052
866	SLU 42	0.47	2.32	66.41	0.0751	-0.3544	0.0056
866	SLU 43	0.46	2.02	62.85	0.0703	-0.3183	0.0009
866	SLU 44	0.44	1.98	62.86	0.0708	-0.3173	0.0017
866	SLU 45	0.48	2.08	63.98	0.072	-0.3252	0.001
866	SLU 46	0.46	2.05	63.99	0.0723	-0.3246	0.0015
866	SLU 47	0.45	2	63.55	0.0718	-0.3216	0.0017
866	SLU 48	0.49	2.1	64.67	0.0729	-0.3295	0.001
866	SLU 49	0.47	2.08	64.67	0.0732	-0.3288	0.0015
866	SLU 50	0.49	2.07	64.22	0.0721	-0.3269	0.0008
866	SLU 51	0.47	2.04	64.23	0.0725	-0.3263	0.0013
866	SLU 52	0.48	2.23	69.38	0.0776	-0.3549	0.0036
866	SLU 53	0.52	2.33	70.5	0.0788	-0.3628	0.0029
866	SLU 54	0.5	2.31	70.51	0.0791	-0.3622	0.0034
866	SLU 55	0.49	2.26	70.06	0.0785	-0.3592	0.0036
866	SLU 56	0.53	2.36	71.19	0.0797	-0.367	0.0029
866	SLU 57	0.51	2.33	71.19	0.08	-0.3664	0.0034
866	SLU 58	0.53	2.32	70.74	0.0789	-0.3645	0.0027
866	SLU 59	0.51	2.3	70.75	0.0792	-0.3639	0.0032
866	SLU 60	0.52	2.38	72.16	0.08	-0.3721	0.0037
866	SLU 61	0.51	2.35	72.17	0.0803	-0.3715	0.0041
866	SLU 62	0.54	2.4	72.85	0.0809	-0.3763	0.0036
866	SLU 63	0.52	2.38	72.85	0.0812	-0.3757	0.0041
866	SLU 64	0.51	2.34	69.23	0.0783	-0.3596	0.0023
866	SLU 65	0.48	2.3	69.24	0.0788	-0.3586	0.0031
866	SLU 66	0.52	2.4	70.36	0.08	-0.3664	0.0024
866	SLU 67	0.5	2.38	70.36	0.0803	-0.3658	0.0029
866	SLU 68	0.49	2.33	69.92	0.0797	-0.3629	0.0031
866	SLU 69	0.53	2.43	71.05	0.0809	-0.3707	0.0024
866	SLU 70	0.52	2.4	71.05	0.0812	-0.3701	0.0028
866	SLU 71	0.53	2.39	70.6	0.0801	-0.3682	0.0022
866	SLU 72	0.52	2.37	70.61	0.0804	-0.3676	0.0027
866	SLU 73	0.53	2.55	75.75	0.0856	-0.3962	0.005
866	SLU 74	0.56	2.65	76.88	0.0867	-0.404	0.0043
866	SLU 75	0.55	2.63	76.88	0.0871	-0.4034	0.0048
866	SLU 76	0.54	2.58	76.44	0.0865	-0.4005	0.005
866	SLU 77	0.57	2.68	77.57	0.0877	-0.4083	0.0043
866	SLU 78	0.56	2.66	77.57	0.088	-0.4077	0.0048
866	SLU 79	0.58	2.64	77.12	0.0869	-0.4058	0.0041
866	SLU 80	0.56	2.62	77.13	0.0872	-0.4052	0.0046
866	SLU 81	0.57	2.7	78.54	0.088	-0.4133	0.005
866	SLU 82	0.55	2.68	78.54	0.0883	-0.4127	0.0055
866	SLU 83	0.58	2.73	79.23	0.0889	-0.4176	0.005
866	SLU 84	0.57	2.7	79.23	0.0892	-0.417	0.0055
866	SLE RA 1	0.38	1.73	51.85	0.0585	-0.2676	0.0015
866	SLE RA 2	0.36	1.7	51.86	0.0588	-0.2669	0.002
866	SLE RA 3	0.39	1.77	52.6	0.0596	-0.2721	0.0015
866	SLE RA 4	0.38	1.75	52.61	0.0598	-0.2717	0.0019
866	SLE RA 5	0.37	1.72	52.31	0.0594	-0.2697	0.002
866	SLE RA 6	0.4	1.79	53.06	0.0602	-0.275	0.0015
866	SLE RA 7	0.39	1.77	53.07	0.0604	-0.2746	0.0018
866	SLE RA 8	0.4	1.76	52.77	0.0597	-0.2733	0.0014
866	SLE RA 9	0.39	1.75	52.77	0.0599	-0.2729	0.0017
866	SLE RA 10	0.39	1.87	56.2	0.0633	-0.2919	0.0033
866	SLE RA 11	0.42	1.94	56.95	0.0641	-0.2972	0.0028

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
866	SLE RA 12	0.41	1.92	56.95	0.0643	-0.2968	0.0031
866	SLE RA 13	0.4	1.89	56.66	0.0639	-0.2948	0.0032
866	SLE RA 14	0.43	1.96	57.41	0.0647	-0.3	0.0028
866	SLE RA 15	0.42	1.94	57.41	0.0649	-0.2996	0.0031
866	SLE RA 16	0.43	1.93	57.11	0.0642	-0.2983	0.0027
866	SLE RA 17	0.42	1.92	57.12	0.0644	-0.2979	0.003
866	SLE RA 18	0.42	1.97	58.06	0.0649	-0.3034	0.0033
866	SLE RA 19	0.41	1.95	58.06	0.0651	-0.303	0.0036
866	SLE RA 20	0.43	1.99	58.52	0.0655	-0.3062	0.0033
866	SLE RA 21	0.42	1.97	58.52	0.0657	-0.3058	0.0036
866	SLE FR 1	0.38	1.73	51.85	0.0585	-0.2676	0.0015
866	SLE FR 2	0.38	1.72	51.85	0.0585	-0.2674	0.0016
866	SLE FR 3	0.38	1.74	52.03	0.0587	-0.2687	0.0015
866	SLE FR 4	0.39	1.8	53.71	0.0605	-0.2782	0.0021
866	SLE FR 5	0.4	1.81	53.89	0.0607	-0.2794	0.002
866	SLE FR 6	0.4	1.85	54.95	0.0617	-0.2855	0.0024
866	SLE QP 1	0.38	1.73	51.85	0.0585	-0.2676	0.0015
866	SLE QP 2	0.39	1.8	53.71	0.0604	-0.2783	0.002
866	SLD 1	6.1	2.37	48.6	0.0538	0.0066	-0.0298
866	SLD 2	5.71	2.55	48.65	0.0529	0.0022	-0.0179
866	SLD 3	6.19	0.8	49.04	0.0627	0.0211	-0.0306
866	SLD 4	5.8	0.98	49.08	0.0617	0.0168	-0.0187
866	SLD 5	2.04	4.32	51.52	0.0452	-0.2141	-0.0085
866	SLD 6	1.78	4.44	51.55	0.0446	-0.2169	-0.0005
866	SLD 7	2.34	-0.91	52.95	0.0746	-0.1657	-0.0111
866	SLD 8	2.08	-0.79	52.98	0.074	-0.1686	-0.0032
866	SLD 9	-1.29	4.4	54.44	0.0468	-0.388	0.0073
866	SLD 10	-1.55	4.52	54.47	0.0462	-0.3909	0.0152
866	SLD 11	-0.99	-0.84	55.87	0.0762	-0.3397	0.0046
866	SLD 12	-1.25	-0.72	55.9	0.0756	-0.3425	0.0125
866	SLD 13	-5.01	2.63	58.34	0.0591	-0.5733	0.0227
866	SLD 14	-5.4	2.81	58.39	0.0582	-0.5777	0.0347
866	SLD 15	-4.92	1.06	58.77	0.0679	-0.5588	0.0219
866	SLD 16	-5.31	1.24	58.82	0.067	-0.5631	0.0338
866	SLV 1	13.74	3.06	41.78	0.0449	0.3887	-0.0723
866	SLV 2	12.83	3.48	41.9	0.0427	0.3787	-0.0445
866	SLV 3	13.95	-0.5	42.76	0.0649	0.4217	-0.0742
866	SLV 4	13.03	-0.08	42.87	0.0627	0.4117	-0.0464
866	SLV 5	4.24	7.5	48.63	0.0259	-0.1264	-0.0223
866	SLV 6	3.65	7.78	48.71	0.0244	-0.133	-0.0042
866	SLV 7	4.93	-4.36	51.88	0.0924	-0.0165	-0.0285
866	SLV 8	4.34	-4.08	51.96	0.091	-0.023	-0.0104
866	SLV 9	-3.55	7.69	55.46	0.0298	-0.5335	0.0145
866	SLV 10	-4.15	7.96	55.54	0.0284	-0.5401	0.0326
866	SLV 11	-2.86	-4.17	58.71	0.0964	-0.4236	0.0083
866	SLV 12	-3.46	-3.9	58.79	0.095	-0.4301	0.0264
866	SLV 13	-12.25	3.68	64.55	0.0582	-0.9683	0.0504
866	SLV 14	-13.16	4.1	64.66	0.0559	-0.9783	0.0782
866	SLV 15	-12.04	0.12	65.53	0.0781	-0.9353	0.0486
866	SLV 16	-12.95	0.55	65.64	0.0759	-0.9453	0.0764
866	CRTFP Ux+	0	0	0	0	0	0
866	CRTFP Ux-	0	0	0	0	0	0
868	SLU 1	-0.67	0.05	31.46	0.0458	-3.2861	0.0135
868	SLU 2	-0.68	-0.03	31.49	0.0459	-3.2871	-0.0077
868	SLU 3	-0.69	0.06	32.22	0.047	-3.3549	0.0151
868	SLU 4	-0.69	0.01	32.23	0.047	-3.3555	0.0024
868	SLU 5	-0.69	-0.03	31.97	0.0467	-3.3307	-0.0063
868	SLU 6	-0.7	0.07	32.7	0.0477	-3.3986	0.0166
868	SLU 7	-0.71	0.02	32.71	0.0478	-3.3992	0.0038
868	SLU 8	-0.69	0.07	32.42	0.0473	-3.3734	0.0165
868	SLU 9	-0.7	0.01	32.44	0.0473	-3.374	0.0037
868	SLU 10	-0.74	0.03	35.09	0.0519	-3.6279	0.0071
868	SLU 11	-0.74	0.12	35.82	0.0529	-3.6957	0.03
868	SLU 12	-0.75	0.07	35.83	0.053	-3.6963	0.0172
868	SLU 13	-0.75	0.03	35.57	0.0526	-3.6715	0.0086
868	SLU 14	-0.75	0.13	36.3	0.0537	-3.7394	0.0314
868	SLU 15	-0.76	0.07	36.32	0.0537	-3.74	0.0187
868	SLU 16	-0.75	0.13	36.02	0.0532	-3.7142	0.0313
868	SLU 17	-0.76	0.07	36.04	0.0533	-3.7148	0.0186
868	SLU 18	-0.75	0.14	36.6	0.0543	-3.7729	0.0348
868	SLU 19	-0.76	0.09	36.62	0.0544	-3.7735	0.022
868	SLU 20	-0.76	0.15	37.08	0.0551	-3.8166	0.0362
868	SLU 21	-0.77	0.09	37.1	0.0551	-3.8172	0.0235
868	SLU 22	-0.73	0.12	35.16	0.0521	-3.6355	0.0308
868	SLU 23	-0.75	0.04	35.19	0.0521	-3.6365	0.0095
868	SLU 24	-0.75	0.13	35.92	0.0532	-3.7044	0.0323
868	SLU 25	-0.76	0.08	35.93	0.0533	-3.705	0.0196
868	SLU 26	-0.76	0.04	35.67	0.0529	-3.6802	0.011
868	SLU 27	-0.76	0.14	36.4	0.0539	-3.748	0.0338
868	SLU 28	-0.77	0.08	36.41	0.054	-3.7486	0.0211
868	SLU 29	-0.75	0.14	36.12	0.0535	-3.7228	0.0337
868	SLU 30	-0.76	0.08	36.14	0.0536	-3.7234	0.0209
868	SLU 31	-0.8	0.1	38.79	0.0581	-3.9773	0.0244
868	SLU 32	-0.81	0.19	39.52	0.0592	-4.0452	0.0472
868	SLU 33	-0.82	0.14	39.53	0.0592	-4.0458	0.0345
868	SLU 34	-0.82	0.1	39.27	0.0588	-4.021	0.0258
868	SLU 35	-0.82	0.2	40	0.0599	-4.0888	0.0487
868	SLU 36	-0.83	0.14	40.01	0.0599	-4.0894	0.0359
868	SLU 37	-0.81	0.19	39.72	0.0595	-4.0636	0.0486
868	SLU 38	-0.82	0.14	39.74	0.0595	-4.0642	0.0358

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
868	SLU 39	-0.82	0.21	40.3	0.0605	-4.1224	0.052
868	SLU 40	-0.82	0.16	40.32	0.0606	-4.123	0.0392
868	SLU 41	-0.83	0.21	40.78	0.0613	-4.166	0.0535
868	SLU 42	-0.83	0.16	40.8	0.0613	-4.1666	0.0407
868	SLU 43	-0.85	0.05	39.63	0.0575	-4.1521	0.0117
868	SLU 44	-0.86	-0.04	39.66	0.0575	-4.1531	-0.0096
868	SLU 45	-0.87	0.05	40.39	0.0586	-4.2209	0.0132
868	SLU 46	-0.87	0	40.4	0.0587	-4.2215	0.0005
868	SLU 47	-0.87	-0.03	40.14	0.0583	-4.1967	-0.0081
868	SLU 48	-0.88	0.06	40.87	0.0593	-4.2646	0.0147
868	SLU 49	-0.88	0.01	40.88	0.0594	-4.2652	0.002
868	SLU 50	-0.87	0.06	40.59	0.0589	-4.2394	0.0146
868	SLU 51	-0.88	0.01	40.61	0.059	-4.24	0.0018
868	SLU 52	-0.92	0.02	43.26	0.0635	-4.4939	0.0053
868	SLU 53	-0.92	0.11	43.99	0.0645	-4.5617	0.0281
868	SLU 54	-0.93	0.06	44	0.0646	-4.5623	0.0154
868	SLU 55	-0.93	0.03	43.74	0.0642	-4.5375	0.0067
868	SLU 56	-0.93	0.12	44.47	0.0653	-4.6054	0.0296
868	SLU 57	-0.94	0.07	44.48	0.0653	-4.606	0.0168
868	SLU 58	-0.93	0.12	44.19	0.0649	-4.5802	0.0295
868	SLU 59	-0.93	0.07	44.21	0.0649	-4.5808	0.0167
868	SLU 60	-0.93	0.13	44.77	0.0659	-4.6389	0.0329
868	SLU 61	-0.94	0.08	44.79	0.066	-4.6395	0.0201
868	SLU 62	-0.94	0.14	45.25	0.0667	-4.6826	0.0344
868	SLU 63	-0.95	0.09	45.27	0.0667	-4.6832	0.0216
868	SLU 64	-0.91	0.12	43.33	0.0637	-4.5015	0.0289
868	SLU 65	-0.93	0.03	43.35	0.0638	-4.5025	0.0077
868	SLU 66	-0.93	0.12	44.09	0.0648	-4.5704	0.0305
868	SLU 67	-0.94	0.07	44.1	0.0649	-4.571	0.0177
868	SLU 68	-0.94	0.04	43.84	0.0645	-4.5462	0.0091
868	SLU 69	-0.94	0.13	44.57	0.0656	-4.6141	0.032
868	SLU 70	-0.95	0.08	44.58	0.0656	-4.6147	0.0192
868	SLU 71	-0.93	0.13	44.29	0.0651	-4.5888	0.0318
868	SLU 72	-0.94	0.08	44.3	0.0652	-4.5894	0.0191
868	SLU 73	-0.98	0.09	46.96	0.0697	-4.8433	0.0225
868	SLU 74	-0.99	0.18	47.69	0.0708	-4.9112	0.0454
868	SLU 75	-1	0.13	47.7	0.0708	-4.9118	0.0326
868	SLU 76	-0.99	0.1	47.44	0.0704	-4.887	0.024
868	SLU 77	-1	0.19	48.17	0.0715	-4.9549	0.0468
868	SLU 78	-1.01	0.14	48.18	0.0716	-4.9555	0.0341
868	SLU 79	-0.99	0.19	47.89	0.0711	-4.9296	0.0467
868	SLU 80	-1	0.14	47.91	0.0711	-4.9302	0.034
868	SLU 81	-0.99	0.2	48.47	0.0722	-4.9884	0.0501
868	SLU 82	-1	0.15	48.49	0.0722	-4.989	0.0374
868	SLU 83	-1	0.21	48.95	0.0729	-5.032	0.0516
868	SLU 84	-1.01	0.16	48.97	0.0729	-5.0326	0.0389
868	SLE RA 1	-0.69	0.07	32.52	0.0476	-3.3859	0.0185
868	SLE RA 2	-0.7	0.02	32.53	0.0477	-3.3866	0.0043
868	SLE RA 3	-0.7	0.08	33.02	0.0484	-3.4318	0.0195
868	SLE RA 4	-0.7	0.04	33.03	0.0484	-3.4322	0.011
868	SLE RA 5	-0.7	0.02	32.85	0.0482	-3.4157	0.0053
868	SLE RA 6	-0.71	0.08	33.34	0.0489	-3.4609	0.0205
868	SLE RA 7	-0.71	0.05	33.35	0.0489	-3.4613	0.012
868	SLE RA 8	-0.7	0.08	33.16	0.0486	-3.4441	0.0204
868	SLE RA 9	-0.71	0.05	33.17	0.0486	-3.4445	0.0119
868	SLE RA 10	-0.74	0.06	34.93	0.0516	-3.6138	0.0142
868	SLE RA 11	-0.74	0.12	35.42	0.0523	-3.659	0.0294
868	SLE RA 12	-0.74	0.08	35.43	0.0524	-3.6594	0.0209
868	SLE RA 13	-0.74	0.06	35.26	0.0521	-3.6429	0.0152
868	SLE RA 14	-0.74	0.12	35.74	0.0528	-3.6881	0.0304
868	SLE RA 15	-0.75	0.09	35.75	0.0529	-3.6885	0.0219
868	SLE RA 16	-0.74	0.12	35.56	0.0525	-3.6713	0.0303
868	SLE RA 17	-0.75	0.09	35.57	0.0526	-3.6717	0.0218
868	SLE RA 18	-0.74	0.13	35.95	0.0533	-3.7105	0.0326
868	SLE RA 19	-0.75	0.1	35.96	0.0533	-3.7109	0.0241
868	SLE RA 20	-0.75	0.13	36.27	0.0538	-3.7396	0.0336
868	SLE RA 21	-0.75	0.1	36.28	0.0538	-3.74	0.0251
868	SLE FR 1	-0.69	0.07	32.52	0.0476	-3.3859	0.0185
868	SLE FR 2	-0.69	0.06	32.52	0.0476	-3.386	0.0156
868	SLE FR 3	-0.69	0.08	32.64	0.0478	-3.3975	0.0188
868	SLE FR 4	-0.71	0.08	33.55	0.0493	-3.4834	0.0199
868	SLE FR 5	-0.71	0.09	33.67	0.0495	-3.4949	0.0231
868	SLE FR 6	-0.71	0.1	34.23	0.0504	-3.5482	0.0255
868	SLE QP 1	-0.69	0.07	32.52	0.0476	-3.3859	0.0185
868	SLE QP 2	-0.7	0.09	33.54	0.0493	-3.4833	0.0227
868	SLD 1	1.98	0.65	42.33	0.0589	-4.2591	0.1593
868	SLD 2	1.75	0.11	42.69	0.0613	-4.3046	0.0259
868	SLD 3	1.92	-0.57	42.69	0.0623	-4.3092	-0.1443
868	SLD 4	1.69	-1.1	43.05	0.0648	-4.3548	-0.2777
868	SLD 5	0.24	2.2	35.57	0.0465	-3.6316	0.5483
868	SLD 6	0.08	1.84	35.81	0.0482	-3.6618	0.4598
868	SLD 7	0.03	-1.85	36.76	0.058	-3.7989	-0.4636
868	SLD 8	-0.12	-2.21	37.01	0.0596	-3.8291	-0.5521
868	SLD 9	-1.29	2.39	30.08	0.039	-3.1374	0.5975
868	SLD 10	-1.44	2.04	30.32	0.0407	-3.1677	0.509
868	SLD 11	-1.49	-1.66	31.28	0.0505	-3.3047	-0.4144
868	SLD 12	-1.64	-2.02	31.52	0.0521	-3.3349	-0.5029
868	SLD 13	-3.1	1.29	24.04	0.0338	-2.6118	0.3231
868	SLD 14	-3.33	0.75	24.4	0.0363	-2.6573	0.1897
868	SLD 15	-3.16	0.07	24.4	0.0373	-2.662	0.0195

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
868	SLD 16	-3.39	-0.47	24.76	0.0397	-2.7075	-0.1139
868	SLV 1	5.57	1.35	54.11	0.0718	-5.3001	0.3296
868	SLV 2	5.03	0.1	54.95	0.0776	-5.4061	0.0191
868	SLV 3	5.43	-1.4	54.92	0.0796	-5.4142	-0.3569
868	SLV 4	4.89	-2.65	55.76	0.0854	-5.5202	-0.6674
868	SLV 5	1.48	4.86	38.33	0.0433	-3.8367	1.2106
868	SLV 6	1.13	4.04	38.88	0.047	-3.9058	1.0083
868	SLV 7	1.02	-4.31	41.04	0.0692	-4.2169	-1.0778
868	SLV 8	0.67	-5.13	41.59	0.0729	-4.286	-1.2802
868	SLV 9	-2.07	5.31	25.5	0.0257	-2.6806	1.3256
868	SLV 10	-2.42	4.49	26.05	0.0294	-2.7496	1.1232
868	SLV 11	-2.54	-3.86	28.21	0.0516	-3.0608	-0.9629
868	SLV 12	-2.89	-4.68	28.76	0.0554	-3.1299	-1.1652
868	SLV 13	-6.3	2.84	11.33	0.0133	-1.4464	0.7128
868	SLV 14	-6.83	1.58	12.17	0.019	-1.5524	0.4023
868	SLV 15	-6.44	0.09	12.14	0.021	-1.5604	0.0263
868	SLV 16	-6.97	-1.17	12.98	0.0268	-1.6664	-0.2842
868	CRTFP Ux+	0	0	0	0	0	0
868	CRTFP Ux-	0	0	0	0	0	0
868	CRTFP Uy+	0	0	0	0	0	0
868	CRTFP Uy-	0	0	0	0	0	0
871	SLU 1	0.79	0.26	30.43	-0.0356	2.5607	-0.0926
871	SLU 2	0.8	0.24	30.42	-0.0357	2.5618	-0.085
871	SLU 3	0.81	0.26	31.12	-0.0366	2.5963	-0.094
871	SLU 4	0.82	0.25	31.12	-0.0366	2.5969	-0.0894
871	SLU 5	0.82	0.23	30.85	-0.0363	2.5839	-0.0837
871	SLU 6	0.83	0.26	31.56	-0.0372	2.6184	-0.0926
871	SLU 7	0.84	0.24	31.55	-0.0373	2.619	-0.088
871	SLU 8	0.82	0.25	31.29	-0.0368	2.605	-0.09
871	SLU 9	0.83	0.24	31.29	-0.0369	2.6056	-0.0854
871	SLU 10	0.86	0.34	33.82	-0.0401	2.7446	-0.1229
871	SLU 11	0.87	0.37	34.52	-0.0409	2.7791	-0.1319
871	SLU 12	0.88	0.36	34.52	-0.041	2.7798	-0.1273
871	SLU 13	0.88	0.34	34.25	-0.0407	2.7667	-0.1216
871	SLU 14	0.89	0.37	34.95	-0.0416	2.8012	-0.1306
871	SLU 15	0.9	0.35	34.95	-0.0417	2.8019	-0.126
871	SLU 16	0.88	0.36	34.69	-0.0412	2.7878	-0.128
871	SLU 17	0.89	0.34	34.69	-0.0413	2.7884	-0.1234
871	SLU 18	0.87	0.41	35.28	-0.0418	2.8219	-0.1469
871	SLU 19	0.88	0.4	35.28	-0.0419	2.8226	-0.1423
871	SLU 20	0.89	0.41	35.71	-0.0425	2.844	-0.1455
871	SLU 21	0.9	0.39	35.71	-0.0425	2.8447	-0.141
871	SLU 22	0.86	0.36	33.88	-0.0399	2.7481	-0.1295
871	SLU 23	0.88	0.34	33.88	-0.04	2.7491	-0.1218
871	SLU 24	0.89	0.37	34.58	-0.0409	2.7836	-0.1308
871	SLU 25	0.9	0.35	34.58	-0.0409	2.7843	-0.1262
871	SLU 26	0.89	0.34	34.31	-0.0406	2.7712	-0.1205
871	SLU 27	0.91	0.36	35.01	-0.0415	2.8057	-0.1295
871	SLU 28	0.92	0.35	35.01	-0.0416	2.8064	-0.1249
871	SLU 29	0.9	0.35	34.75	-0.0411	2.7923	-0.1269
871	SLU 30	0.91	0.34	34.74	-0.0412	2.7929	-0.1223
871	SLU 31	0.94	0.45	37.28	-0.0444	2.932	-0.1598
871	SLU 32	0.95	0.47	37.98	-0.0453	2.9665	-0.1688
871	SLU 33	0.96	0.46	37.97	-0.0453	2.9671	-0.1642
871	SLU 34	0.96	0.44	37.71	-0.045	2.9541	-0.1585
871	SLU 35	0.97	0.47	38.41	-0.0459	2.9886	-0.1674
871	SLU 36	0.98	0.46	38.41	-0.046	2.9892	-0.1628
871	SLU 37	0.96	0.46	38.15	-0.0455	2.9751	-0.1648
871	SLU 38	0.97	0.45	38.14	-0.0456	2.9757	-0.1602
871	SLU 39	0.95	0.52	38.74	-0.0461	3.0093	-0.1837
871	SLU 40	0.96	0.5	38.74	-0.0462	3.0099	-0.1791
871	SLU 41	0.97	0.51	39.17	-0.0468	3.0314	-0.1824
871	SLU 42	0.98	0.5	39.17	-0.0468	3.032	-0.1778
871	SLU 43	1	0.3	38.37	-0.0447	3.2647	-0.1078
871	SLU 44	1.01	0.28	38.36	-0.0449	3.2658	-0.1002
871	SLU 45	1.02	0.3	39.07	-0.0457	3.3003	-0.1091
871	SLU 46	1.03	0.29	39.06	-0.0458	3.3009	-0.1045
871	SLU 47	1.03	0.27	38.8	-0.0455	3.2879	-0.0988
871	SLU 48	1.04	0.3	39.5	-0.0464	3.3224	-0.1078
871	SLU 49	1.05	0.29	39.49	-0.0464	3.323	-0.1032
871	SLU 50	1.03	0.29	39.23	-0.046	3.309	-0.1052
871	SLU 51	1.04	0.28	39.23	-0.0461	3.3096	-0.1006
871	SLU 52	1.07	0.38	41.76	-0.0493	3.4486	-0.1381
871	SLU 53	1.09	0.41	42.46	-0.0501	3.4831	-0.1471
871	SLU 54	1.09	0.4	42.46	-0.0502	3.4837	-0.1425
871	SLU 55	1.09	0.38	42.19	-0.0499	3.4707	-0.1368
871	SLU 56	1.1	0.41	42.9	-0.0508	3.5052	-0.1457
871	SLU 57	1.11	0.39	42.89	-0.0508	3.5058	-0.1412
871	SLU 58	1.09	0.4	42.63	-0.0504	3.4918	-0.1431
871	SLU 59	1.1	0.39	42.63	-0.0505	3.4924	-0.1385
871	SLU 60	1.09	0.45	43.23	-0.051	3.5259	-0.162
871	SLU 61	1.09	0.44	43.22	-0.0511	3.5266	-0.1574
871	SLU 62	1.1	0.45	43.66	-0.0517	3.548	-0.1607
871	SLU 63	1.11	0.44	43.65	-0.0517	3.5487	-0.1561
871	SLU 64	1.08	0.4	41.83	-0.0491	3.4521	-0.1447
871	SLU 65	1.09	0.38	41.82	-0.0492	3.4531	-0.137
871	SLU 66	1.1	0.41	42.52	-0.05	3.4876	-0.146
871	SLU 67	1.11	0.39	42.52	-0.0501	3.4882	-0.1414
871	SLU 68	1.11	0.38	42.25	-0.0498	3.4752	-0.1357
871	SLU 69	1.12	0.4	42.96	-0.0507	3.5097	-0.1446

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
871	SLU 70	1.13	0.39	42.95	-0.0508	3.5103	-0.1401
871	SLU 71	1.11	0.4	42.69	-0.0503	3.4963	-0.142
871	SLU 72	1.12	0.38	42.69	-0.0504	3.4969	-0.1374
871	SLU 73	1.15	0.49	45.22	-0.0536	3.6359	-0.175
871	SLU 74	1.16	0.52	45.92	-0.0544	3.6705	-0.1839
871	SLU 75	1.17	0.5	45.92	-0.0545	3.6711	-0.1793
871	SLU 76	1.17	0.49	45.65	-0.0542	3.6581	-0.1736
871	SLU 77	1.18	0.51	46.35	-0.0551	3.6926	-0.1826
871	SLU 78	1.19	0.5	46.35	-0.0551	3.6932	-0.178
871	SLU 79	1.17	0.5	46.09	-0.0547	3.6791	-0.18
871	SLU 80	1.18	0.49	46.09	-0.0548	3.6797	-0.1754
871	SLU 81	1.16	0.56	46.68	-0.0553	3.7133	-0.1989
871	SLU 82	1.17	0.54	46.68	-0.0554	3.7139	-0.1943
871	SLU 83	1.18	0.55	47.11	-0.056	3.7354	-0.1976
871	SLU 84	1.19	0.54	47.11	-0.056	3.736	-0.193
871	SLE RA 1	0.81	0.29	31.41	-0.0368	2.6143	-0.1032
871	SLE RA 2	0.82	0.27	31.41	-0.0369	2.615	-0.0981
871	SLE RA 3	0.83	0.29	31.88	-0.0374	2.638	-0.104
871	SLE RA 4	0.83	0.28	31.88	-0.0375	2.6384	-0.101
871	SLE RA 5	0.83	0.27	31.7	-0.0373	2.6297	-0.0972
871	SLE RA 6	0.84	0.29	32.17	-0.0379	2.6527	-0.1032
871	SLE RA 7	0.84	0.28	32.16	-0.0379	2.6531	-0.1001
871	SLE RA 8	0.83	0.28	31.99	-0.0376	2.6437	-0.1014
871	SLE RA 9	0.84	0.27	31.99	-0.0377	2.6442	-0.0984
871	SLE RA 10	0.86	0.34	33.68	-0.0398	2.7369	-0.1234
871	SLE RA 11	0.87	0.36	34.14	-0.0404	2.7599	-0.1293
871	SLE RA 12	0.87	0.35	34.14	-0.0404	2.7603	-0.1263
871	SLE RA 13	0.87	0.34	33.96	-0.0402	2.7516	-0.1225
871	SLE RA 14	0.88	0.36	34.43	-0.0408	2.7746	-0.1285
871	SLE RA 15	0.88	0.35	34.43	-0.0409	2.775	-0.1254
871	SLE RA 16	0.87	0.35	34.26	-0.0406	2.7656	-0.1267
871	SLE RA 17	0.88	0.35	34.25	-0.0406	2.766	-0.1237
871	SLE RA 18	0.87	0.39	34.65	-0.041	2.7884	-0.1393
871	SLE RA 19	0.87	0.38	34.65	-0.041	2.7888	-0.1363
871	SLE RA 20	0.88	0.39	34.94	-0.0414	2.8031	-0.1384
871	SLE RA 21	0.88	0.38	34.94	-0.0414	2.8036	-0.1354
871	SLE FR 1	0.81	0.29	31.41	-0.0368	2.6143	-0.1032
871	SLE FR 2	0.81	0.28	31.41	-0.0368	2.6144	-0.1022
871	SLE FR 3	0.81	0.29	31.53	-0.037	2.6202	-0.1028
871	SLE FR 4	0.83	0.32	32.38	-0.0381	2.6667	-0.113
871	SLE FR 5	0.83	0.32	32.5	-0.0382	2.6724	-0.1137
871	SLE FR 6	0.84	0.34	33.03	-0.0389	2.7013	-0.1212
871	SLE QP 1	0.81	0.29	31.41	-0.0368	2.6143	-0.1032
871	SLE QP 2	0.83	0.32	32.39	-0.038	2.6665	-0.114
871	SLD 1	2.16	0.86	23.88	-0.0254	2.3046	-0.3024
871	SLD 2	1.87	1.53	23.49	-0.0272	2.2631	-0.5336
871	SLD 3	2.53	-0.51	24.47	-0.0225	2.3574	0.1757
871	SLD 4	2.23	0.16	24.09	-0.0242	2.3158	-0.0555
871	SLD 5	0.73	2.44	29	-0.0385	2.4855	-0.8537
871	SLD 6	0.54	2.88	28.75	-0.0396	2.4579	-1.0071
871	SLD 7	1.94	-2.13	30.98	-0.0285	2.6613	0.7401
871	SLD 8	1.75	-1.69	30.73	-0.0297	2.6337	0.5867
871	SLD 9	-0.09	2.32	34.05	-0.0464	2.6993	-0.8147
871	SLD 10	-0.29	2.76	33.79	-0.0476	2.6717	-0.9681
871	SLD 11	1.12	-2.24	36.02	-0.0364	2.8751	0.7791
871	SLD 12	0.93	-1.8	35.77	-0.0376	2.8475	0.6256
871	SLD 13	-0.58	0.48	40.68	-0.0518	3.0172	-0.1725
871	SLD 14	-0.87	1.15	40.3	-0.0536	2.9757	-0.4037
871	SLD 15	-0.21	-0.89	41.28	-0.0489	3.07	0.3056
871	SLD 16	-0.51	-0.22	40.89	-0.0506	3.0284	0.0744
871	SLV 1	3.96	1.54	12.5	-0.0084	1.8217	-0.5389
871	SLV 2	3.28	3.09	11.61	-0.0126	1.725	-1.0772
871	SLV 3	4.78	-1.56	13.84	-0.0017	1.941	0.5448
871	SLV 4	4.1	-0.02	12.95	-0.0058	1.8443	0.0065
871	SLV 5	0.64	5.12	24.55	-0.0387	2.2491	-1.7905
871	SLV 6	0.19	6.13	23.97	-0.0414	2.1861	-2.1413
871	SLV 7	3.38	-5.23	29.01	-0.0162	2.6468	1.8219
871	SLV 8	2.94	-4.22	28.43	-0.0189	2.5838	1.4712
871	SLV 9	-1.29	4.86	36.34	-0.0572	2.7493	-1.6992
871	SLV 10	-1.73	5.86	35.76	-0.0599	2.6862	-2.05
871	SLV 11	1.46	-5.49	40.8	-0.0347	3.1469	1.9132
871	SLV 12	1.02	-4.49	40.22	-0.0374	3.0839	1.5625
871	SLV 13	-2.45	0.65	51.82	-0.0702	3.4888	-0.2345
871	SLV 14	-3.13	2.2	50.93	-0.0744	3.392	-0.7728
871	SLV 15	-1.62	-2.45	53.16	-0.0635	3.6081	0.8492
871	SLV 16	-2.3	-0.91	52.27	-0.0676	3.5113	0.3109
871	CRTFP Ux+	0	0	0	0	0	0
871	CRTFP Ux-	0	0	0	0	0	0
871	CRTFP Uy+	0	0	0	0	0	0
871	CRTFP Uy-	0	0	0	0	0	0
873	SLU 1	1.56	0.14	63.46	0.0429	0.467	-0.006
873	SLU 2	1.53	0.11	63.46	0.0428	0.4774	-0.005
873	SLU 3	1.6	0.15	64.92	0.044	0.4812	-0.0061
873	SLU 4	1.59	0.13	64.92	0.0439	0.4875	-0.0055
873	SLU 5	1.56	0.1	64.36	0.0434	0.4854	-0.0052
873	SLU 6	1.63	0.14	65.82	0.0445	0.4892	-0.0063
873	SLU 7	1.62	0.13	65.82	0.0445	0.4954	-0.0057
873	SLU 8	1.62	0.13	65.26	0.044	0.4829	-0.0064
873	SLU 9	1.61	0.11	65.26	0.044	0.4891	-0.0058
873	SLU 10	1.64	0.21	71.19	0.0484	0.5509	-0.0057

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
873	SLU 11	1.71	0.25	72.65	0.0496	0.5548	-0.0067
873	SLU 12	1.69	0.24	72.65	0.0495	0.561	-0.0062
873	SLU 13	1.67	0.21	72.09	0.049	0.5589	-0.0058
873	SLU 14	1.74	0.25	73.55	0.0501	0.5627	-0.0069
873	SLU 15	1.72	0.23	73.55	0.0501	0.569	-0.0063
873	SLU 16	1.72	0.24	73	0.0496	0.5564	-0.007
873	SLU 17	1.71	0.22	72.99	0.0496	0.5627	-0.0064
873	SLU 18	1.71	0.29	74.51	0.0509	0.572	-0.0069
873	SLU 19	1.69	0.27	74.51	0.0509	0.5783	-0.0063
873	SLU 20	1.74	0.29	75.41	0.0515	0.58	-0.0071
873	SLU 21	1.72	0.27	75.41	0.0514	0.5862	-0.0065
873	SLU 22	1.69	0.28	71.26	0.0489	0.54	-0.0064
873	SLU 23	1.66	0.25	71.26	0.0489	0.5504	-0.0054
873	SLU 24	1.73	0.29	72.72	0.05	0.5542	-0.0065
873	SLU 25	1.72	0.27	72.71	0.05	0.5605	-0.0059
873	SLU 26	1.69	0.24	72.15	0.0494	0.5583	-0.0056
873	SLU 27	1.76	0.28	73.62	0.0506	0.5622	-0.0067
873	SLU 28	1.75	0.26	73.61	0.0505	0.5684	-0.0061
873	SLU 29	1.75	0.27	73.06	0.0501	0.5559	-0.0068
873	SLU 30	1.74	0.25	73.06	0.05	0.5621	-0.0062
873	SLU 31	1.77	0.35	78.99	0.0545	0.6239	-0.0061
873	SLU 32	1.84	0.39	80.45	0.0556	0.6277	-0.0072
873	SLU 33	1.82	0.37	80.45	0.0556	0.634	-0.0066
873	SLU 34	1.8	0.35	79.89	0.055	0.6318	-0.0062
873	SLU 35	1.87	0.39	81.35	0.0562	0.6357	-0.0073
873	SLU 36	1.85	0.37	81.35	0.0562	0.6419	-0.0067
873	SLU 37	1.86	0.38	80.79	0.0557	0.6294	-0.0074
873	SLU 38	1.84	0.36	80.79	0.0556	0.6356	-0.0068
873	SLU 39	1.84	0.43	82.31	0.0569	0.645	-0.0073
873	SLU 40	1.82	0.41	82.31	0.0569	0.6512	-0.0067
873	SLU 41	1.87	0.43	83.21	0.0575	0.6529	-0.0075
873	SLU 42	1.85	0.41	83.21	0.0575	0.6592	-0.0069
873	SLU 43	1.98	0.13	79.83	0.0537	0.5821	-0.0076
873	SLU 44	1.96	0.1	79.82	0.0536	0.5925	-0.0067
873	SLU 45	2.03	0.14	81.29	0.0547	0.5963	-0.0077
873	SLU 46	2.01	0.12	81.28	0.0547	0.6026	-0.0072
873	SLU 47	1.99	0.1	80.72	0.0542	0.6004	-0.0068
873	SLU 48	2.06	0.14	82.19	0.0553	0.6043	-0.0079
873	SLU 49	2.04	0.12	82.18	0.0553	0.6105	-0.0073
873	SLU 50	2.05	0.13	81.63	0.0548	0.598	-0.008
873	SLU 51	2.03	0.11	81.62	0.0548	0.6042	-0.0074
873	SLU 52	2.06	0.21	87.56	0.0592	0.666	-0.0073
873	SLU 53	2.13	0.25	89.02	0.0604	0.6698	-0.0084
873	SLU 54	2.11	0.23	89.02	0.0603	0.6761	-0.0078
873	SLU 55	2.09	0.2	88.46	0.0598	0.674	-0.0075
873	SLU 56	2.16	0.25	89.92	0.0609	0.6778	-0.0086
873	SLU 57	2.14	0.23	89.92	0.0609	0.684	-0.008
873	SLU 58	2.15	0.23	89.36	0.0604	0.6715	-0.0087
873	SLU 59	2.13	0.21	89.36	0.0604	0.6777	-0.0081
873	SLU 60	2.13	0.28	90.88	0.0617	0.6871	-0.0086
873	SLU 61	2.11	0.27	90.87	0.0617	0.6934	-0.008
873	SLU 62	2.16	0.28	91.78	0.0623	0.6951	-0.0088
873	SLU 63	2.14	0.26	91.77	0.0622	0.7013	-0.0082
873	SLU 64	2.11	0.27	87.63	0.0597	0.655	-0.0081
873	SLU 65	2.09	0.24	87.62	0.0596	0.6655	-0.0071
873	SLU 66	2.16	0.28	89.08	0.0608	0.6693	-0.0082
873	SLU 67	2.14	0.26	89.08	0.0608	0.6755	-0.0076
873	SLU 68	2.12	0.24	88.52	0.0602	0.6734	-0.0072
873	SLU 69	2.19	0.28	89.98	0.0614	0.6772	-0.0083
873	SLU 70	2.17	0.26	89.98	0.0613	0.6835	-0.0077
873	SLU 71	2.18	0.26	89.43	0.0608	0.6709	-0.0084
873	SLU 72	2.16	0.24	89.42	0.0608	0.6772	-0.0078
873	SLU 73	2.19	0.35	95.35	0.0653	0.739	-0.0077
873	SLU 74	2.26	0.39	96.82	0.0664	0.7428	-0.0088
873	SLU 75	2.24	0.37	96.81	0.0664	0.7491	-0.0082
873	SLU 76	2.22	0.34	96.25	0.0658	0.7469	-0.0079
873	SLU 77	2.29	0.38	97.72	0.067	0.7508	-0.009
873	SLU 78	2.27	0.36	97.71	0.0669	0.757	-0.0084
873	SLU 79	2.28	0.37	97.16	0.0665	0.7445	-0.0091
873	SLU 80	2.26	0.35	97.16	0.0664	0.7507	-0.0085
873	SLU 81	2.26	0.42	98.68	0.0677	0.7601	-0.009
873	SLU 82	2.24	0.4	98.67	0.0677	0.7663	-0.0084
873	SLU 83	2.29	0.42	99.58	0.0683	0.768	-0.0092
873	SLU 84	2.27	0.4	99.57	0.0683	0.7743	-0.0086
873	SLE RA 1	1.6	0.18	65.69	0.0446	0.4878	-0.0061
873	SLE RA 2	1.58	0.16	65.69	0.0446	0.4948	-0.0054
873	SLE RA 3	1.63	0.18	66.66	0.0453	0.4973	-0.0062
873	SLE RA 4	1.61	0.17	66.66	0.0453	0.5015	-0.0058
873	SLE RA 5	1.6	0.15	66.29	0.0449	0.5001	-0.0056
873	SLE RA 6	1.65	0.18	67.26	0.0457	0.5026	-0.0063
873	SLE RA 7	1.64	0.17	67.26	0.0457	0.5068	-0.0059
873	SLE RA 8	1.64	0.17	66.89	0.0454	0.4984	-0.0063
873	SLE RA 9	1.63	0.16	66.89	0.0453	0.5026	-0.006
873	SLE RA 10	1.65	0.23	70.84	0.0483	0.5438	-0.0059
873	SLE RA 11	1.69	0.26	71.82	0.0491	0.5464	-0.0066
873	SLE RA 12	1.68	0.24	71.82	0.049	0.5505	-0.0062
873	SLE RA 13	1.67	0.23	71.44	0.0487	0.5491	-0.006
873	SLE RA 14	1.72	0.25	72.42	0.0494	0.5517	-0.0067
873	SLE RA 15	1.7	0.24	72.42	0.0494	0.5558	-0.0063
873	SLE RA 16	1.71	0.24	72.05	0.0491	0.5475	-0.0068

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
873	SLE RA 17	1.7	0.23	72.04	0.0491	0.5516	-0.0064
873	SLE RA 18	1.7	0.28	73.06	0.0499	0.5579	-0.0067
873	SLE RA 19	1.68	0.27	73.05	0.0499	0.562	-0.0063
873	SLE RA 20	1.72	0.28	73.66	0.0503	0.5632	-0.0068
873	SLE RA 21	1.7	0.26	73.65	0.0503	0.5673	-0.0065
873	SLE FR 1	1.6	0.18	65.69	0.0446	0.4878	-0.0061
873	SLE FR 2	1.59	0.17	65.69	0.0446	0.4892	-0.006
873	SLE FR 3	1.61	0.18	65.93	0.0447	0.49	-0.0062
873	SLE FR 4	1.62	0.2	67.9	0.0462	0.5102	-0.0062
873	SLE FR 5	1.64	0.21	68.14	0.0464	0.511	-0.0063
873	SLE FR 6	1.65	0.23	69.37	0.0473	0.5228	-0.0064
873	SLE QP 1	1.6	0.18	65.69	0.0446	0.4878	-0.0061
873	SLE QP 2	1.63	0.21	67.9	0.0462	0.5088	-0.0063
873	SLD 1	7.37	0.97	62.26	0.0217	0.4312	-0.0468
873	SLD 2	6.86	1.47	61.6	0.0194	0.4442	-0.0353
873	SLD 3	7.46	-0.62	63.21	0.0316	0.4828	-0.0455
873	SLD 4	6.94	-0.13	62.55	0.0292	0.4957	-0.034
873	SLD 5	3.31	2.77	64.89	0.0244	0.405	-0.0226
873	SLD 6	2.97	3.09	64.46	0.0228	0.4136	-0.015
873	SLD 7	3.6	-2.55	68.05	0.0572	0.5769	-0.0181
873	SLD 8	3.26	-2.22	67.61	0.0556	0.5855	-0.0104
873	SLD 9	-0.01	2.64	68.19	0.0368	0.4322	-0.0021
873	SLD 10	-0.35	2.96	67.76	0.0352	0.4408	0.0055
873	SLD 11	0.28	-2.68	71.35	0.0696	0.6041	0.0024
873	SLD 12	-0.06	-2.35	70.91	0.068	0.6127	0.01
873	SLD 13	-3.69	0.54	73.26	0.0632	0.522	0.0214
873	SLD 14	-4.2	1.04	72.6	0.0608	0.5349	0.0329
873	SLD 15	-3.6	-1.05	74.2	0.073	0.5735	0.0227
873	SLD 16	-4.12	-0.56	73.54	0.0707	0.5865	0.0342
873	SLV 1	15.06	1.94	54.73	-0.0107	0.3277	-0.101
873	SLV 2	13.86	3.09	53.2	-0.0162	0.3579	-0.0742
873	SLV 3	15.26	-1.67	56.87	0.0116	0.4443	-0.0979
873	SLV 4	14.06	-0.52	55.33	0.0062	0.4745	-0.0711
873	SLV 5	5.56	6	60.98	-0.0038	0.2724	-0.0441
873	SLV 6	4.78	6.75	59.98	-0.0073	0.292	-0.0266
873	SLV 7	6.23	-6.03	68.1	0.0707	0.661	-0.0338
873	SLV 8	5.45	-5.29	67.1	0.0671	0.6807	-0.0163
873	SLV 9	-2.2	5.7	68.7	0.0253	0.337	0.0038
873	SLV 10	-2.98	6.45	67.7	0.0217	0.3567	0.0212
873	SLV 11	-1.53	-6.33	75.82	0.0997	0.7257	0.0141
873	SLV 12	-2.31	-5.59	74.82	0.0962	0.7453	0.0315
873	SLV 13	-10.81	0.94	80.47	0.0862	0.5432	0.0585
873	SLV 14	-12	2.08	78.94	0.0808	0.5734	0.0853
873	SLV 15	-10.61	-2.67	82.6	0.1086	0.6598	0.0616
873	SLV 16	-11.8	-1.53	81.07	0.1031	0.69	0.0884
873	CRTFP Ux+	0	0	0	0	0	0
873	CRTFP Ux-	0	0	0	0	0	0
873	CRTFP Uy+	0	0	0	0	0	0
873	CRTFP Uy-	0	0	0	0	0	0
876	SLU 1	-2.13	-1.25	100.11	12.2414	-0.9445	0.2779
876	SLU 2	-2.19	-1.39	100.23	12.2542	-0.9533	0.2852
876	SLU 3	-2.19	-1.26	102.52	12.535	-0.9706	0.2851
876	SLU 4	-2.22	-1.35	102.59	12.5427	-0.9759	0.2894
876	SLU 5	-2.22	-1.4	101.73	12.4354	-0.9658	0.2892
876	SLU 6	-2.22	-1.28	104.02	12.7162	-0.983	0.2891
876	SLU 7	-2.26	-1.36	104.09	12.7239	-0.9883	0.2934
876	SLU 8	-2.2	-1.27	103.11	12.6038	-0.9693	0.2859
876	SLU 9	-2.23	-1.36	103.18	12.6115	-0.9746	0.2903
876	SLU 10	-2.37	-1.43	112.59	13.7649	-1.1045	0.313
876	SLU 11	-2.38	-1.31	114.88	14.0457	-1.1218	0.3129
876	SLU 12	-2.41	-1.39	114.95	14.0534	-1.1271	0.3173
876	SLU 13	-2.41	-1.44	114.09	13.9461	-1.117	0.317
876	SLU 14	-2.41	-1.32	116.37	14.2269	-1.1342	0.3169
876	SLU 15	-2.44	-1.4	116.45	14.2346	-1.1395	0.3213
876	SLU 16	-2.39	-1.32	115.46	14.1145	-1.1205	0.3138
876	SLU 17	-2.42	-1.4	115.54	14.1222	-1.1258	0.3181
876	SLU 18	-2.4	-1.31	117.76	14.3995	-1.1605	0.3177
876	SLU 19	-2.43	-1.4	117.84	14.4072	-1.1658	0.3221
876	SLU 20	-2.43	-1.32	119.26	14.5807	-1.1729	0.3217
876	SLU 21	-2.46	-1.41	119.33	14.5884	-1.1782	0.3261
876	SLU 22	-2.34	-1.22	112.6	13.7696	-1.0855	0.3067
876	SLU 23	-2.4	-1.36	112.72	13.7824	-1.0944	0.314
876	SLU 24	-2.4	-1.24	115.01	14.0632	-1.1116	0.3139
876	SLU 25	-2.43	-1.32	115.08	14.0709	-1.1169	0.3182
876	SLU 26	-2.43	-1.37	114.22	13.9636	-1.1068	0.318
876	SLU 27	-2.43	-1.25	116.51	14.2444	-1.124	0.3179
876	SLU 28	-2.47	-1.33	116.58	14.2521	-1.1293	0.3222
876	SLU 29	-2.41	-1.25	115.6	14.132	-1.1104	0.3147
876	SLU 30	-2.44	-1.33	115.67	14.1397	-1.1157	0.3191
876	SLU 31	-2.58	-1.4	125.08	15.2931	-1.2456	0.3418
876	SLU 32	-2.58	-1.28	127.37	15.5739	-1.2628	0.3417
876	SLU 33	-2.62	-1.36	127.44	15.5815	-1.2681	0.3461
876	SLU 34	-2.62	-1.42	126.58	15.4743	-1.258	0.3458
876	SLU 35	-2.62	-1.29	128.86	15.7551	-1.2752	0.3457
876	SLU 36	-2.65	-1.37	128.94	15.7628	-1.2805	0.3501
876	SLU 37	-2.59	-1.29	127.95	15.6427	-1.2616	0.3426
876	SLU 38	-2.63	-1.37	128.03	15.6504	-1.2669	0.3469
876	SLU 39	-2.61	-1.28	130.25	15.9277	-1.3015	0.3465
876	SLU 40	-2.64	-1.37	130.33	15.9354	-1.3068	0.3509
876	SLU 41	-2.64	-1.29	131.75	16.1089	-1.3139	0.3505

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
876	SLU 42	-2.67	-1.38	131.82	16.1166	-1.3192	0.3549
876	SLU 43	-2.7	-1.64	125.86	15.3899	-1.1795	0.3514
876	SLU 44	-2.76	-1.78	125.98	15.4027	-1.1883	0.3587
876	SLU 45	-2.76	-1.65	128.27	15.6835	-1.2056	0.3586
876	SLU 46	-2.79	-1.73	128.34	15.6912	-1.2109	0.3629
876	SLU 47	-2.79	-1.79	127.48	15.5839	-1.2007	0.3627
876	SLU 48	-2.79	-1.66	129.77	15.8647	-1.218	0.3626
876	SLU 49	-2.83	-1.74	129.84	15.8724	-1.2233	0.3669
876	SLU 50	-2.77	-1.66	128.86	15.7523	-1.2043	0.3594
876	SLU 51	-2.8	-1.74	128.93	15.76	-1.2096	0.3638
876	SLU 52	-2.94	-1.82	138.34	16.9134	-1.3395	0.3865
876	SLU 53	-2.94	-1.69	140.63	17.1942	-1.3568	0.3864
876	SLU 54	-2.98	-1.78	140.7	17.2018	-1.3621	0.3908
876	SLU 55	-2.98	-1.83	139.84	17.0946	-1.352	0.3905
876	SLU 56	-2.98	-1.7	142.13	17.3754	-1.3692	0.3904
876	SLU 57	-3.01	-1.79	142.2	17.3831	-1.3745	0.3948
876	SLU 58	-2.95	-1.7	141.22	17.263	-1.3555	0.3873
876	SLU 59	-2.99	-1.78	141.29	17.2707	-1.3608	0.3916
876	SLU 60	-2.97	-1.7	143.51	17.548	-1.3955	0.3912
876	SLU 61	-3	-1.78	143.59	17.5557	-1.4008	0.3956
876	SLU 62	-3	-1.71	145.01	17.7292	-1.4079	0.3952
876	SLU 63	-3.03	-1.79	145.09	17.7369	-1.4132	0.3996
876	SLU 64	-2.91	-1.61	138.35	16.9181	-1.3205	0.3802
876	SLU 65	-2.97	-1.75	138.47	16.9309	-1.3294	0.3875
876	SLU 66	-2.97	-1.62	140.76	17.2117	-1.3466	0.3874
876	SLU 67	-3	-1.7	140.83	17.2194	-1.3519	0.3917
876	SLU 68	-3	-1.76	139.97	17.1121	-1.3418	0.3915
876	SLU 69	-3	-1.63	142.26	17.3929	-1.359	0.3914
876	SLU 70	-3.03	-1.72	142.33	17.4006	-1.3643	0.3957
876	SLU 71	-2.98	-1.63	141.35	17.2805	-1.3454	0.3882
876	SLU 72	-3.01	-1.71	141.42	17.2882	-1.3507	0.3926
876	SLU 73	-3.15	-1.79	150.83	18.4415	-1.4806	0.4153
876	SLU 74	-3.15	-1.66	153.12	18.7223	-1.4978	0.4152
876	SLU 75	-3.19	-1.75	153.19	18.73	-1.5031	0.4196
876	SLU 76	-3.19	-1.8	152.33	18.6228	-1.493	0.4193
876	SLU 77	-3.19	-1.67	154.62	18.9036	-1.5102	0.4192
876	SLU 78	-3.22	-1.76	154.69	18.9112	-1.5155	0.4236
876	SLU 79	-3.16	-1.67	153.71	18.7912	-1.4966	0.4161
876	SLU 80	-3.2	-1.76	153.78	18.7989	-1.5019	0.4204
876	SLU 81	-3.18	-1.67	156	19.0762	-1.5365	0.42
876	SLU 82	-3.21	-1.75	156.08	19.0839	-1.5418	0.4244
876	SLU 83	-3.21	-1.68	157.5	19.2574	-1.5489	0.424
876	SLU 84	-3.24	-1.76	157.58	19.2651	-1.5542	0.4284
876	SLE RA 1	-2.19	-1.24	103.68	12.678	-0.9848	0.2861
876	SLE RA 2	-2.23	-1.34	103.76	12.6866	-0.9907	0.291
876	SLE RA 3	-2.23	-1.25	105.29	12.8738	-1.0022	0.2909
876	SLE RA 4	-2.25	-1.31	105.33	12.8789	-1.0057	0.2938
876	SLE RA 5	-2.25	-1.34	104.76	12.8074	-0.999	0.2936
876	SLE RA 6	-2.25	-1.26	106.28	12.9946	-1.0104	0.2936
876	SLE RA 7	-2.28	-1.32	106.33	12.9997	-1.014	0.2965
876	SLE RA 8	-2.24	-1.26	105.68	12.9197	-1.0013	0.2915
876	SLE RA 9	-2.26	-1.31	105.73	12.9248	-1.0049	0.2944
876	SLE RA 10	-2.35	-1.36	112	13.6937	-1.0915	0.3096
876	SLE RA 11	-2.36	-1.28	113.52	13.8809	-1.103	0.3095
876	SLE RA 12	-2.38	-1.34	113.57	13.886	-1.1065	0.3124
876	SLE RA 13	-2.38	-1.37	113	13.8145	-1.0998	0.3122
876	SLE RA 14	-2.38	-1.29	114.52	14.0017	-1.1112	0.3122
876	SLE RA 15	-2.4	-1.34	114.57	14.0068	-1.1148	0.3151
876	SLE RA 16	-2.36	-1.29	113.92	13.9268	-1.1021	0.3101
876	SLE RA 17	-2.38	-1.34	113.96	13.9319	-1.1057	0.313
876	SLE RA 18	-2.37	-1.28	115.45	14.1168	-1.1288	0.3127
876	SLE RA 19	-2.39	-1.34	115.5	14.1219	-1.1323	0.3156
876	SLE RA 20	-2.39	-1.29	116.45	14.2376	-1.1371	0.3154
876	SLE RA 21	-2.41	-1.35	116.5	14.2427	-1.1406	0.3182
876	SLE FR 1	-2.19	-1.24	103.68	12.678	-0.9848	0.2861
876	SLE FR 2	-2.2	-1.26	103.7	12.6797	-0.986	0.2871
876	SLE FR 3	-2.2	-1.25	104.08	12.7264	-0.9881	0.2872
876	SLE FR 4	-2.25	-1.27	107.23	13.1114	-1.0292	0.2951
876	SLE FR 5	-2.26	-1.26	107.61	13.158	-1.0313	0.2952
876	SLE FR 6	-2.28	-1.26	109.56	13.3974	-1.0568	0.2994
876	SLE QP 1	-2.19	-1.24	103.68	12.678	-0.9848	0.2861
876	SLE QP 2	-2.25	-1.26	107.21	13.1097	-1.028	0.2941
876	SLD 1	7.25	-0.6	113.85	14.1037	-1.1752	-0.9285
876	SLD 2	6.39	-1.35	115.11	14.2466	-1.1574	-0.8011
876	SLD 3	7.02	-3.25	115.61	14.3204	-1.274	-0.8998
876	SLD 4	6.16	-3.99	116.87	14.4633	-1.2563	-0.7724
876	SLD 5	1.11	3.08	106.3	13.0532	-0.9254	-0.1394
876	SLD 6	0.54	2.58	107.13	13.148	-0.9136	-0.0548
876	SLD 7	0.34	-5.72	112.18	13.7756	-1.255	-0.0437
876	SLD 8	-0.24	-6.22	113.01	13.8704	-1.2432	0.0409
876	SLD 9	-4.26	3.71	101.41	12.3489	-0.8128	0.5473
876	SLD 10	-4.83	3.21	102.24	12.4437	-0.801	0.6319
876	SLD 11	-5.03	-5.1	107.29	13.0713	-1.1423	0.6431
876	SLD 12	-5.6	-5.59	108.12	13.1661	-1.1306	0.7276
876	SLD 13	-10.65	1.48	97.55	11.756	-0.7997	1.3606
876	SLD 14	-11.51	0.73	98.81	11.8989	-0.7819	1.488
876	SLD 15	-10.88	-1.16	99.31	11.9728	-0.8986	1.3893
876	SLD 16	-11.74	-1.91	100.57	12.1156	-0.8808	1.5167
876	SLV 1	19.94	0.16	122.82	15.4439	-1.3766	-2.563
876	SLV 2	17.94	-1.58	125.74	15.7765	-1.3353	-2.2664

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
876	SLV 3	19.41	-5.81	126.81	15.935	-1.5999	-2.4975
876	SLV 4	17.41	-7.55	129.74	16.2676	-1.5585	-2.2008
876	SLV 5	5.57	8.54	105.32	13.0066	-0.8012	-0.7146
876	SLV 6	4.26	7.4	107.23	13.2233	-0.7743	-0.5213
876	SLV 7	3.8	-11.38	118.63	14.6437	-1.5454	-0.4961
876	SLV 8	2.49	-12.51	120.54	14.8604	-1.5185	-0.3028
876	SLV 9	-6.99	10	93.88	11.3589	-0.5375	0.8911
876	SLV 10	-8.29	8.87	95.79	11.5756	-0.5105	1.0843
876	SLV 11	-8.76	-9.91	107.19	12.996	-1.2817	1.1095
876	SLV 12	-10.06	-11.05	109.1	13.2127	-1.2548	1.3028
876	SLV 13	-21.9	5.04	84.68	9.9517	-0.4974	2.789
876	SLV 14	-23.91	3.3	87.61	10.2843	-0.4561	3.0857
876	SLV 15	-22.43	-0.93	88.68	10.4428	-0.7207	2.8546
876	SLV 16	-24.44	-2.67	91.6	10.7754	-0.6794	3.1512
876	CRTFP Ux+	0	0	0	0	0	0
876	CRTFP Ux-	0	0	0	0	0	0
876	CRTFP Uy+	0	0	0	0	0	0
876	CRTFP Uy-	0	0	0	0	0	0
879	SLU 1	-0.04	0.85	55.16	0.0512	0.63	0.0253
879	SLU 2	-0.07	0.79	55.19	0.0518	0.6288	0.0258
879	SLU 3	-0.04	0.89	56.44	0.0526	0.6476	0.0259
879	SLU 4	-0.06	0.85	56.45	0.0529	0.6469	0.0262
879	SLU 5	-0.06	0.8	55.92	0.0525	0.6387	0.0261
879	SLU 6	-0.04	0.91	57.17	0.0533	0.6575	0.0262
879	SLU 7	-0.05	0.87	57.19	0.0536	0.6568	0.0265
879	SLU 8	-0.03	0.88	56.63	0.0525	0.6498	0.0259
879	SLU 9	-0.05	0.84	56.65	0.0529	0.6491	0.0262
879	SLU 10	-0.08	0.93	62.52	0.0578	0.7265	0.0299
879	SLU 11	-0.06	1.03	63.76	0.0586	0.7453	0.03
879	SLU 12	-0.07	0.99	63.78	0.0589	0.7446	0.0303
879	SLU 13	-0.08	0.94	63.25	0.0585	0.7364	0.0302
879	SLU 14	-0.05	1.05	64.5	0.0593	0.7552	0.0303
879	SLU 15	-0.07	1.01	64.51	0.0596	0.7545	0.0306
879	SLU 16	-0.05	1.02	63.96	0.0585	0.7476	0.03
879	SLU 17	-0.06	0.98	63.97	0.0589	0.7468	0.0303
879	SLU 18	-0.06	1.05	65.63	0.0597	0.7696	0.0311
879	SLU 19	-0.08	1.01	65.64	0.0601	0.7689	0.0314
879	SLU 20	-0.06	1.07	66.36	0.0604	0.7795	0.0314
879	SLU 21	-0.07	1.03	66.38	0.0608	0.7788	0.0317
879	SLU 22	-0.05	1.09	62.3	0.0582	0.727	0.029
879	SLU 23	-0.07	1.02	62.33	0.0589	0.7257	0.0295
879	SLU 24	-0.05	1.13	63.57	0.0597	0.7446	0.0296
879	SLU 25	-0.06	1.09	63.59	0.06	0.7438	0.0299
879	SLU 26	-0.07	1.04	63.06	0.0595	0.7356	0.0298
879	SLU 27	-0.04	1.14	64.31	0.0604	0.7545	0.0299
879	SLU 28	-0.06	1.1	64.32	0.0607	0.7537	0.0302
879	SLU 29	-0.04	1.12	63.77	0.0596	0.7468	0.0296
879	SLU 30	-0.05	1.08	63.78	0.06	0.746	0.0299
879	SLU 31	-0.09	1.16	69.65	0.0649	0.8234	0.0336
879	SLU 32	-0.06	1.27	70.9	0.0657	0.8423	0.0337
879	SLU 33	-0.08	1.23	70.92	0.066	0.8415	0.034
879	SLU 34	-0.08	1.18	70.39	0.0655	0.8333	0.0339
879	SLU 35	-0.05	1.28	71.63	0.0664	0.8522	0.034
879	SLU 36	-0.07	1.24	71.65	0.0667	0.8514	0.0343
879	SLU 37	-0.05	1.26	71.09	0.0656	0.8445	0.0337
879	SLU 38	-0.06	1.22	71.11	0.066	0.8438	0.034
879	SLU 39	-0.07	1.29	72.77	0.0668	0.8666	0.0348
879	SLU 40	-0.08	1.25	72.78	0.0672	0.8658	0.0352
879	SLU 41	-0.06	1.3	73.5	0.0675	0.8765	0.0351
879	SLU 42	-0.08	1.26	73.52	0.0679	0.8757	0.0355
879	SLU 43	-0.06	1.03	69.26	0.0641	0.7858	0.0316
879	SLU 44	-0.08	0.96	69.29	0.0647	0.7845	0.0321
879	SLU 45	-0.05	1.07	70.54	0.0655	0.8034	0.0322
879	SLU 46	-0.07	1.03	70.55	0.0659	0.8026	0.0325
879	SLU 47	-0.08	0.98	70.03	0.0654	0.7944	0.0324
879	SLU 48	-0.05	1.08	71.27	0.0662	0.8133	0.0325
879	SLU 49	-0.06	1.04	71.29	0.0666	0.8125	0.0328
879	SLU 50	-0.04	1.06	70.73	0.0655	0.8056	0.0322
879	SLU 51	-0.06	1.02	70.75	0.0658	0.8049	0.0325
879	SLU 52	-0.1	1.1	76.62	0.0707	0.8822	0.0362
879	SLU 53	-0.07	1.21	77.86	0.0715	0.9011	0.0363
879	SLU 54	-0.08	1.17	77.88	0.0719	0.9004	0.0366
879	SLU 55	-0.09	1.12	77.35	0.0714	0.8922	0.0365
879	SLU 56	-0.06	1.22	78.6	0.0722	0.911	0.0366
879	SLU 57	-0.08	1.18	78.61	0.0726	0.9103	0.0369
879	SLU 58	-0.06	1.2	78.06	0.0715	0.9033	0.0363
879	SLU 59	-0.07	1.16	78.07	0.0718	0.9026	0.0366
879	SLU 60	-0.07	1.23	79.73	0.0727	0.9254	0.0374
879	SLU 61	-0.09	1.19	79.75	0.073	0.9246	0.0378
879	SLU 62	-0.07	1.24	80.46	0.0733	0.9353	0.0377
879	SLU 63	-0.08	1.2	80.48	0.0737	0.9345	0.0381
879	SLU 64	-0.06	1.27	76.4	0.0712	0.8828	0.0353
879	SLU 65	-0.09	1.2	76.43	0.0718	0.8815	0.0358
879	SLU 66	-0.06	1.3	77.67	0.0726	0.9004	0.0359
879	SLU 67	-0.07	1.26	77.69	0.073	0.8996	0.0362
879	SLU 68	-0.08	1.21	77.16	0.0725	0.8914	0.0361
879	SLU 69	-0.05	1.32	78.41	0.0733	0.9103	0.0362
879	SLU 70	-0.07	1.28	78.43	0.0736	0.9095	0.0366
879	SLU 71	-0.05	1.29	77.87	0.0725	0.9026	0.0359
879	SLU 72	-0.06	1.25	77.89	0.0729	0.9018	0.0362

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
879	SLU 73	-0.1	1.34	83.76	0.0778	0.9792	0.0399
879	SLU 74	-0.07	1.44	85	0.0786	0.9981	0.04
879	SLU 75	-0.09	1.4	85.02	0.079	0.9973	0.0404
879	SLU 76	-0.09	1.35	84.49	0.0785	0.9891	0.0402
879	SLU 77	-0.07	1.46	85.74	0.0793	1.008	0.0403
879	SLU 78	-0.08	1.42	85.75	0.0796	1.0072	0.0407
879	SLU 79	-0.06	1.43	85.2	0.0785	1.0003	0.04
879	SLU 80	-0.08	1.39	85.21	0.0789	0.9995	0.0403
879	SLU 81	-0.08	1.46	86.87	0.0797	1.0224	0.0411
879	SLU 82	-0.09	1.42	86.88	0.0801	1.0216	0.0415
879	SLU 83	-0.07	1.48	87.6	0.0804	1.0323	0.0414
879	SLU 84	-0.09	1.44	87.62	0.0808	1.0315	0.0418
879	SLE RA 1	-0.04	0.92	57.2	0.0532	0.6577	0.0263
879	SLE RA 2	-0.06	0.88	57.22	0.0536	0.6569	0.0267
879	SLE RA 3	-0.04	0.95	58.05	0.0541	0.6695	0.0268
879	SLE RA 4	-0.05	0.92	58.06	0.0544	0.669	0.027
879	SLE RA 5	-0.06	0.89	57.71	0.0541	0.6635	0.0269
879	SLE RA 6	-0.04	0.96	58.54	0.0546	0.6761	0.027
879	SLE RA 7	-0.05	0.93	58.55	0.0548	0.6756	0.0272
879	SLE RA 8	-0.04	0.94	58.18	0.0541	0.6709	0.0267
879	SLE RA 9	-0.05	0.91	58.19	0.0544	0.6704	0.0269
879	SLE RA 10	-0.07	0.97	62.1	0.0576	0.722	0.0294
879	SLE RA 11	-0.05	1.04	62.93	0.0581	0.7346	0.0295
879	SLE RA 12	-0.06	1.01	62.95	0.0584	0.7341	0.0297
879	SLE RA 13	-0.07	0.98	62.59	0.0581	0.7286	0.0296
879	SLE RA 14	-0.05	1.05	63.42	0.0586	0.7412	0.0297
879	SLE RA 15	-0.06	1.02	63.44	0.0588	0.7407	0.0299
879	SLE RA 16	-0.05	1.03	63.06	0.0581	0.7361	0.0295
879	SLE RA 17	-0.06	1.01	63.08	0.0584	0.7356	0.0297
879	SLE RA 18	-0.06	1.05	64.18	0.0589	0.7508	0.0302
879	SLE RA 19	-0.07	1.03	64.19	0.0591	0.7503	0.0304
879	SLE RA 20	-0.05	1.06	64.67	0.0594	0.7574	0.0304
879	SLE RA 21	-0.06	1.04	64.68	0.0596	0.7569	0.0306
879	SLE FR 1	-0.04	0.92	57.2	0.0532	0.6577	0.0263
879	SLE FR 2	-0.05	0.91	57.21	0.0533	0.6576	0.0264
879	SLE FR 3	-0.04	0.93	57.4	0.0534	0.6604	0.0264
879	SLE FR 4	-0.05	0.95	59.3	0.055	0.6855	0.0276
879	SLE FR 5	-0.05	0.97	59.49	0.0551	0.6883	0.0276
879	SLE FR 6	-0.05	0.99	60.69	0.056	0.7043	0.0283
879	SLE QP 1	-0.04	0.92	57.2	0.0532	0.6577	0.0263
879	SLE QP 2	-0.05	0.96	59.29	0.0549	0.6857	0.0275
879	SLD 1	5.87	2.29	63.5	0.0604	0.7519	-0.0055
879	SLD 2	5.41	2.07	63.36	0.0606	0.7514	0.0065
879	SLD 3	5.76	0.63	64.21	0.0688	0.7391	-0.0066
879	SLD 4	5.3	0.41	64.06	0.069	0.7385	0.0054
879	SLD 5	1.98	3.92	59.52	0.0438	0.7251	0.0171
879	SLD 6	1.67	3.77	59.43	0.044	0.7248	0.0251
879	SLD 7	1.61	-1.61	61.86	0.0717	0.6823	0.0134
879	SLD 8	1.31	-1.76	61.76	0.0719	0.6819	0.0214
879	SLD 9	-1.4	3.69	56.83	0.0379	0.6894	0.0336
879	SLD 10	-1.71	3.54	56.73	0.0381	0.689	0.0416
879	SLD 11	-1.77	-1.85	59.16	0.0658	0.6465	0.0299
879	SLD 12	-2.07	-2	59.07	0.066	0.6462	0.0379
879	SLD 13	-5.4	1.51	54.53	0.0408	0.6328	0.0496
879	SLD 14	-5.85	1.29	54.38	0.041	0.6323	0.0616
879	SLD 15	-5.51	-0.15	55.23	0.0492	0.6199	0.0485
879	SLD 16	-5.96	-0.37	55.08	0.0494	0.6194	0.0605
879	SLV 1	13.78	4.01	69.2	0.0683	0.8407	-0.0496
879	SLV 2	12.72	3.5	68.87	0.0688	0.8394	-0.0216
879	SLV 3	13.53	0.26	70.78	0.0872	0.8115	-0.0521
879	SLV 4	12.47	-0.26	70.45	0.0877	0.8102	-0.0241
879	SLV 5	4.67	7.67	59.92	0.0301	0.7767	0.0033
879	SLV 6	3.98	7.33	59.71	0.0304	0.7759	0.0216
879	SLV 7	3.83	-4.86	65.2	0.0932	0.6793	-0.0052
879	SLV 8	3.14	-5.19	64.99	0.0936	0.6785	0.0131
879	SLV 9	-3.23	7.12	53.6	0.0162	0.6928	0.0419
879	SLV 10	-3.92	6.78	53.39	0.0166	0.692	0.0602
879	SLV 11	-4.08	-5.41	58.88	0.0794	0.5955	0.0334
879	SLV 12	-4.77	-5.74	58.67	0.0797	0.5946	0.0517
879	SLV 13	-12.57	2.19	48.14	0.0221	0.5611	0.0791
879	SLV 14	-13.62	1.67	47.81	0.0226	0.5598	0.1071
879	SLV 15	-12.82	-1.57	49.72	0.041	0.5319	0.0766
879	SLV 16	-13.88	-2.09	49.39	0.0415	0.5306	0.1046
879	CRTFP Ux+	0	0	0	0	0	0
879	CRTFP Ux-	0	0	0	0	0	0
882	SLU 1	0.37	1.68	51.89	0.0629	-0.2396	-0.0008
882	SLU 2	0.34	1.64	51.91	0.0635	-0.2386	0
882	SLU 3	0.38	1.74	53.07	0.0648	-0.246	-0.0008
882	SLU 4	0.36	1.71	53.09	0.0652	-0.2453	-0.0003
882	SLU 5	0.35	1.66	52.63	0.0645	-0.2426	-0.0001
882	SLU 6	0.39	1.76	53.79	0.0658	-0.25	-0.0008
882	SLU 7	0.37	1.74	53.81	0.0662	-0.2494	-0.0003
882	SLU 8	0.39	1.73	53.32	0.0649	-0.2477	-0.001
882	SLU 9	0.37	1.7	53.34	0.0653	-0.2471	-0.0005
882	SLU 10	0.37	1.89	58.66	0.071	-0.2732	0.002
882	SLU 11	0.41	1.99	59.82	0.0723	-0.2806	0.0012
882	SLU 12	0.39	1.97	59.83	0.0726	-0.28	0.0017
882	SLU 13	0.38	1.92	59.37	0.072	-0.2772	0.0019
882	SLU 14	0.42	2.02	60.53	0.0733	-0.2846	0.0011
882	SLU 15	0.41	2	60.55	0.0736	-0.284	0.0016

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
882	SLU 16	0.42	1.99	60.06	0.0724	-0.2823	0.001
882	SLU 17	0.41	1.96	60.08	0.0728	-0.2817	0.0015
882	SLU 18	0.41	2.04	61.52	0.0736	-0.2891	0.002
882	SLU 19	0.4	2.02	61.53	0.074	-0.2885	0.0025
882	SLU 20	0.43	2.07	62.23	0.0746	-0.2931	0.0019
882	SLU 21	0.41	2.05	62.25	0.075	-0.2925	0.0024
882	SLU 22	0.41	2.01	58.52	0.0716	-0.2777	0.0005
882	SLU 23	0.38	1.96	58.55	0.0722	-0.2767	0.0013
882	SLU 24	0.42	2.07	59.71	0.0735	-0.2841	0.0005
882	SLU 25	0.4	2.04	59.73	0.0738	-0.2834	0.001
882	SLU 26	0.39	1.99	59.27	0.0732	-0.2807	0.0012
882	SLU 27	0.43	2.09	60.43	0.0745	-0.2881	0.0004
882	SLU 28	0.41	2.07	60.45	0.0748	-0.2875	0.0009
882	SLU 29	0.43	2.06	59.96	0.0736	-0.2858	0.0003
882	SLU 30	0.41	2.03	59.98	0.074	-0.2852	0.0008
882	SLU 31	0.41	2.22	65.29	0.0797	-0.3113	0.0032
882	SLU 32	0.45	2.32	66.45	0.0809	-0.3187	0.0024
882	SLU 33	0.43	2.3	66.47	0.0813	-0.3181	0.0029
882	SLU 34	0.42	2.25	66.01	0.0807	-0.3153	0.0032
882	SLU 35	0.46	2.35	67.17	0.0819	-0.3228	0.0024
882	SLU 36	0.44	2.32	67.19	0.0823	-0.3221	0.0029
882	SLU 37	0.46	2.31	66.7	0.0811	-0.3204	0.0023
882	SLU 38	0.44	2.29	66.72	0.0814	-0.3198	0.0028
882	SLU 39	0.45	2.37	68.15	0.0823	-0.3272	0.0032
882	SLU 40	0.43	2.35	68.17	0.0826	-0.3266	0.0037
882	SLU 41	0.46	2.4	68.87	0.0833	-0.3312	0.0032
882	SLU 42	0.45	2.37	68.89	0.0836	-0.3306	0.0037
882	SLU 43	0.47	2.07	65.18	0.0788	-0.2984	-0.0015
882	SLU 44	0.43	2.03	65.2	0.0794	-0.2974	-0.0007
882	SLU 45	0.48	2.13	66.36	0.0807	-0.3048	-0.0014
882	SLU 46	0.46	2.1	66.38	0.0811	-0.3042	-0.0009
882	SLU 47	0.45	2.05	65.92	0.0804	-0.3014	-0.0007
882	SLU 48	0.49	2.15	67.08	0.0817	-0.3088	-0.0015
882	SLU 49	0.47	2.13	67.1	0.0821	-0.3082	-0.001
882	SLU 50	0.49	2.12	66.61	0.0808	-0.3065	-0.0016
882	SLU 51	0.47	2.09	66.63	0.0812	-0.3059	-0.0011
882	SLU 52	0.47	2.28	71.95	0.0869	-0.332	0.0013
882	SLU 53	0.51	2.39	73.11	0.0882	-0.3394	0.0005
882	SLU 54	0.49	2.36	73.12	0.0885	-0.3388	0.001
882	SLU 55	0.48	2.31	72.66	0.0879	-0.3361	0.0012
882	SLU 56	0.52	2.41	73.82	0.0892	-0.3435	0.0004
882	SLU 57	0.5	2.39	73.84	0.0895	-0.3428	0.0009
882	SLU 58	0.52	2.38	73.35	0.0883	-0.3411	0.0003
882	SLU 59	0.5	2.35	73.37	0.0887	-0.3405	0.0008
882	SLU 60	0.51	2.43	74.81	0.0895	-0.3479	0.0013
882	SLU 61	0.49	2.41	74.82	0.0899	-0.3473	0.0018
882	SLU 62	0.52	2.46	75.52	0.0905	-0.3519	0.0012
882	SLU 63	0.51	2.44	75.54	0.0909	-0.3513	0.0017
882	SLU 64	0.5	2.4	71.81	0.0875	-0.3365	-0.0002
882	SLU 65	0.47	2.36	71.84	0.0881	-0.3355	0.0006
882	SLU 66	0.51	2.46	73	0.0894	-0.3429	-0.0002
882	SLU 67	0.5	2.43	73.02	0.0897	-0.3423	0.0003
882	SLU 68	0.49	2.38	72.56	0.0891	-0.3395	0.0005
882	SLU 69	0.53	2.48	73.72	0.0904	-0.3469	-0.0002
882	SLU 70	0.51	2.46	73.74	0.0907	-0.3463	0.0002
882	SLU 71	0.53	2.45	73.25	0.0895	-0.3446	-0.0004
882	SLU 72	0.51	2.42	73.27	0.0899	-0.344	0.0001
882	SLU 73	0.5	2.61	78.58	0.0956	-0.3701	0.0026
882	SLU 74	0.55	2.71	79.74	0.0968	-0.3775	0.0018
882	SLU 75	0.53	2.69	79.76	0.0972	-0.3769	0.0023
882	SLU 76	0.52	2.64	79.3	0.0966	-0.3742	0.0025
882	SLU 77	0.56	2.74	80.46	0.0978	-0.3816	0.0017
882	SLU 78	0.54	2.72	80.48	0.0982	-0.3809	0.0022
882	SLU 79	0.56	2.7	79.99	0.097	-0.3792	0.0016
882	SLU 80	0.54	2.68	80.01	0.0973	-0.3786	0.0021
882	SLU 81	0.55	2.76	81.44	0.0982	-0.386	0.0026
882	SLU 82	0.53	2.74	81.46	0.0985	-0.3854	0.0031
882	SLU 83	0.56	2.79	82.16	0.0992	-0.39	0.0025
882	SLU 84	0.54	2.76	82.18	0.0995	-0.3894	0.003
882	SLE RA 1	0.38	1.77	53.78	0.0654	-0.2505	-0.0004
882	SLE RA 2	0.36	1.74	53.8	0.0658	-0.2498	0.0001
882	SLE RA 3	0.39	1.81	54.58	0.0666	-0.2547	-0.0004
882	SLE RA 4	0.37	1.8	54.59	0.0669	-0.2543	-0.0001
882	SLE RA 5	0.37	1.76	54.28	0.0665	-0.2525	0.0001
882	SLE RA 6	0.39	1.83	55.05	0.0673	-0.2574	-0.0005
882	SLE RA 7	0.38	1.81	55.06	0.0676	-0.257	-0.0001
882	SLE RA 8	0.4	1.8	54.74	0.0667	-0.2559	-0.0005
882	SLE RA 9	0.38	1.79	54.75	0.067	-0.2555	-0.0002
882	SLE RA 10	0.38	1.92	58.3	0.0708	-0.2729	0.0014
882	SLE RA 11	0.41	1.98	59.07	0.0716	-0.2778	0.0009
882	SLE RA 12	0.4	1.97	59.08	0.0719	-0.2774	0.0012
882	SLE RA 13	0.39	1.93	58.77	0.0715	-0.2756	0.0014
882	SLE RA 14	0.42	2	59.55	0.0723	-0.2805	0.0008
882	SLE RA 15	0.4	1.98	59.56	0.0725	-0.2801	0.0012
882	SLE RA 16	0.42	1.98	59.23	0.0717	-0.279	0.0008
882	SLE RA 17	0.4	1.96	59.25	0.072	-0.2785	0.0011
882	SLE RA 18	0.41	2.02	60.2	0.0725	-0.2835	0.0014
882	SLE RA 19	0.4	2	60.21	0.0728	-0.2831	0.0017
882	SLE RA 20	0.42	2.03	60.68	0.0732	-0.2862	0.0014
882	SLE RA 21	0.41	2.02	60.69	0.0734	-0.2857	0.0017

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
882	SLE FR 1	0.38	1.77	53.78	0.0654	-0.2505	-0.0004
882	SLE FR 2	0.37	1.77	53.79	0.0655	-0.2503	-0.0003
882	SLE FR 3	0.38	1.78	53.97	0.0657	-0.2515	-0.0005
882	SLE FR 4	0.38	1.84	55.71	0.0676	-0.2602	0.0002
882	SLE FR 5	0.39	1.85	55.9	0.0678	-0.2614	0.0001
882	SLE FR 6	0.39	1.89	56.99	0.069	-0.267	0.0005
882	SLE QP 1	0.38	1.77	53.78	0.0654	-0.2505	-0.0004
882	SLE QP 2	0.39	1.84	55.71	0.0675	-0.2604	0.0001
882	SLD 1	6.27	2.41	50.5	0.0604	0.0178	-0.0347
882	SLD 2	5.82	2.59	50.52	0.0594	0.014	-0.0224
882	SLD 3	6.36	0.84	51.21	0.0697	0.0309	-0.0355
882	SLD 4	5.91	1.02	51.23	0.0687	0.0271	-0.0232
882	SLD 5	2.1	4.36	53.06	0.0515	-0.1961	-0.0114
882	SLD 6	1.79	4.48	53.08	0.0509	-0.1987	-0.0033
882	SLD 7	2.4	-0.87	55.43	0.0824	-0.1524	-0.0139
882	SLD 8	2.1	-0.75	55.44	0.0817	-0.1549	-0.0058
882	SLD 9	-1.32	4.44	55.97	0.0533	-0.3658	0.006
882	SLD 10	-1.63	4.56	55.98	0.0527	-0.3684	0.0142
882	SLD 11	-1.02	-0.79	58.34	0.0842	-0.3221	0.0035
882	SLD 12	-1.32	-0.67	58.35	0.0835	-0.3246	0.0116
882	SLD 13	-5.13	2.67	60.19	0.0664	-0.5478	0.0234
882	SLD 14	-5.59	2.85	60.21	0.0654	-0.5517	0.0357
882	SLD 15	-5.04	1.1	60.9	0.0757	-0.5347	0.0227
882	SLD 16	-5.5	1.28	60.92	0.0746	-0.5385	0.0349
882	SLV 1	14.15	3.1	43.55	0.0507	0.3909	-0.0812
882	SLV 2	13.09	3.52	43.59	0.0483	0.382	-0.0526
882	SLV 3	14.36	-0.46	45.15	0.0717	0.4208	-0.083
882	SLV 4	13.3	-0.04	45.2	0.0693	0.4119	-0.0544
882	SLV 5	4.38	7.54	49.61	0.0311	-0.1087	-0.0266
882	SLV 6	3.69	7.81	49.64	0.0296	-0.1145	-0.008
882	SLV 7	5.09	-4.31	54.98	0.101	-0.0091	-0.0325
882	SLV 8	4.4	-4.04	55	0.0995	-0.0149	-0.0139
882	SLV 9	-3.62	7.72	56.41	0.0356	-0.5058	0.0141
882	SLV 10	-4.31	8	56.44	0.0341	-0.5116	0.0328
882	SLV 11	-2.91	-4.12	61.78	0.1055	-0.4062	0.0082
882	SLV 12	-3.6	-3.85	61.81	0.104	-0.412	0.0269
882	SLV 13	-12.52	3.72	66.22	0.0658	-0.9326	0.0546
882	SLV 14	-13.58	4.15	66.26	0.0634	-0.9416	0.0832
882	SLV 15	-12.31	0.17	67.83	0.0867	-0.9027	0.0529
882	SLV 16	-13.37	0.59	67.87	0.0844	-0.9117	0.0815
882	CRTFP Ux+	0	0	0	0	0	0
882	CRTFP Ux-	0	0	0	0	0	0
884	SLU 1	-0.66	0.05	33.29	0.074	-4.523	0.0128
884	SLU 2	-0.68	-0.03	33.32	0.0741	-4.525	-0.0084
884	SLU 3	-0.68	0.06	34.09	0.0759	-4.624	0.0143
884	SLU 4	-0.69	0.01	34.11	0.0759	-4.6252	0.0016
884	SLU 5	-0.69	-0.03	33.83	0.0753	-4.5891	-0.007
884	SLU 6	-0.69	0.07	34.6	0.0771	-4.6881	0.0158
884	SLU 7	-0.7	0.01	34.62	0.0771	-4.6893	0.003
884	SLU 8	-0.68	0.07	34.31	0.0764	-4.6511	0.0157
884	SLU 9	-0.69	0.01	34.33	0.0764	-4.6523	0.0029
884	SLU 10	-0.73	0.03	37.16	0.0837	-5.0187	0.0063
884	SLU 11	-0.73	0.12	37.93	0.0854	-5.1177	0.0291
884	SLU 12	-0.74	0.07	37.95	0.0855	-5.1189	0.0163
884	SLU 13	-0.74	0.03	37.67	0.0848	-5.0827	0.0077
884	SLU 14	-0.74	0.13	38.44	0.0866	-5.1818	0.0305
884	SLU 15	-0.75	0.07	38.46	0.0867	-5.183	0.0178
884	SLU 16	-0.73	0.13	38.15	0.0859	-5.1448	0.0304
884	SLU 17	-0.75	0.07	38.16	0.086	-5.146	0.0177
884	SLU 18	-0.74	0.14	38.77	0.0877	-5.2282	0.0338
884	SLU 19	-0.75	0.09	38.79	0.0877	-5.2294	0.0211
884	SLU 20	-0.75	0.14	39.28	0.0888	-5.2923	0.0353
884	SLU 21	-0.76	0.09	39.3	0.0889	-5.2935	0.0225
884	SLU 22	-0.72	0.12	37.23	0.0839	-5.0304	0.0299
884	SLU 23	-0.74	0.04	37.26	0.084	-5.0324	0.0087
884	SLU 24	-0.74	0.13	38.04	0.0858	-5.1314	0.0315
884	SLU 25	-0.75	0.08	38.06	0.0859	-5.1326	0.0187
884	SLU 26	-0.75	0.04	37.77	0.0852	-5.0964	0.0101
884	SLU 27	-0.75	0.14	38.55	0.087	-5.1955	0.0329
884	SLU 28	-0.76	0.08	38.57	0.087	-5.1967	0.0202
884	SLU 29	-0.74	0.13	38.25	0.0863	-5.1585	0.0328
884	SLU 30	-0.75	0.08	38.27	0.0863	-5.1597	0.0201
884	SLU 31	-0.79	0.1	41.1	0.0936	-5.5261	0.0234
884	SLU 32	-0.79	0.19	41.88	0.0953	-5.6251	0.0462
884	SLU 33	-0.8	0.14	41.89	0.0954	-5.6263	0.0334
884	SLU 34	-0.8	0.1	41.61	0.0948	-5.5901	0.0249
884	SLU 35	-0.8	0.19	42.39	0.0965	-5.6891	0.0476
884	SLU 36	-0.81	0.14	42.4	0.0966	-5.6903	0.0349
884	SLU 37	-0.79	0.19	42.09	0.0958	-5.6522	0.0475
884	SLU 38	-0.81	0.14	42.11	0.0959	-5.6534	0.0348
884	SLU 39	-0.8	0.21	42.72	0.0976	-5.7356	0.051
884	SLU 40	-0.81	0.16	42.73	0.0976	-5.7368	0.0382
884	SLU 41	-0.81	0.21	43.23	0.0988	-5.7997	0.0524
884	SLU 42	-0.82	0.16	43.24	0.0988	-5.8009	0.0397
884	SLU 43	-0.84	0.05	41.92	0.0928	-5.7059	0.0107
884	SLU 44	-0.85	-0.04	41.95	0.0929	-5.7079	-0.0105
884	SLU 45	-0.85	0.05	42.73	0.0947	-5.807	0.0123
884	SLU 46	-0.86	0	42.74	0.0947	-5.8082	-0.0004
884	SLU 47	-0.87	-0.03	42.46	0.0941	-5.772	-0.009
884	SLU 48	-0.86	0.06	43.24	0.0959	-5.871	0.0137

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
884	SLU 49	-0.88	0.01	43.25	0.0959	-5.8722	0.001
884	SLU 50	-0.86	0.06	42.94	0.0952	-5.8341	0.0136
884	SLU 51	-0.87	0.01	42.96	0.0952	-5.8353	0.0009
884	SLU 52	-0.91	0.02	45.79	0.1025	-6.2016	0.0042
884	SLU 53	-0.91	0.11	46.56	0.1042	-6.3006	0.027
884	SLU 54	-0.92	0.06	46.58	0.1043	-6.3018	0.0143
884	SLU 55	-0.92	0.03	46.3	0.1036	-6.2657	0.0057
884	SLU 56	-0.92	0.12	47.07	0.1054	-6.3647	0.0285
884	SLU 57	-0.93	0.07	47.09	0.1055	-6.3659	0.0157
884	SLU 58	-0.91	0.12	46.78	0.1047	-6.3277	0.0284
884	SLU 59	-0.92	0.07	46.8	0.1048	-6.3289	0.0156
884	SLU 60	-0.91	0.13	47.4	0.1065	-6.4112	0.0318
884	SLU 61	-0.92	0.08	47.42	0.1065	-6.4124	0.019
884	SLU 62	-0.92	0.14	47.91	0.1076	-6.4752	0.0332
884	SLU 63	-0.94	0.09	47.93	0.1077	-6.4764	0.0205
884	SLU 64	-0.9	0.12	45.87	0.1027	-6.2133	0.0279
884	SLU 65	-0.92	0.03	45.9	0.1028	-6.2153	0.0066
884	SLU 66	-0.91	0.12	46.67	0.1046	-6.3143	0.0294
884	SLU 67	-0.93	0.07	46.69	0.1047	-6.3155	0.0167
884	SLU 68	-0.93	0.04	46.41	0.104	-6.2794	0.0081
884	SLU 69	-0.92	0.13	47.18	0.1058	-6.3784	0.0309
884	SLU 70	-0.94	0.08	47.2	0.1058	-6.3796	0.0181
884	SLU 71	-0.92	0.13	46.89	0.1051	-6.3414	0.0308
884	SLU 72	-0.93	0.08	46.9	0.1052	-6.3426	0.018
884	SLU 73	-0.97	0.09	49.74	0.1124	-6.709	0.0214
884	SLU 74	-0.97	0.18	50.51	0.1142	-6.808	0.0441
884	SLU 75	-0.98	0.13	50.53	0.1142	-6.8092	0.0314
884	SLU 76	-0.98	0.1	50.25	0.1136	-6.7731	0.0228
884	SLU 77	-0.98	0.19	51.02	0.1153	-6.8721	0.0456
884	SLU 78	-0.99	0.14	51.04	0.1154	-6.8733	0.0329
884	SLU 79	-0.97	0.19	50.72	0.1147	-6.8351	0.0455
884	SLU 80	-0.98	0.14	50.74	0.1147	-6.8363	0.0328
884	SLU 81	-0.97	0.2	51.35	0.1164	-6.9186	0.0489
884	SLU 82	-0.99	0.15	51.37	0.1164	-6.9198	0.0362
884	SLU 83	-0.98	0.21	51.86	0.1176	-6.9826	0.0504
884	SLU 84	-1	0.15	51.88	0.1176	-6.9838	0.0376
884	SLE RA 1	-0.68	0.07	34.42	0.0768	-4.668	0.0177
884	SLE RA 2	-0.69	0.02	34.44	0.0769	-4.6693	0.0035
884	SLE RA 3	-0.69	0.08	34.95	0.0781	-4.7353	0.0187
884	SLE RA 4	-0.7	0.04	34.96	0.0781	-4.7361	0.0102
884	SLE RA 5	-0.7	0.02	34.78	0.0777	-4.712	0.0045
884	SLE RA 6	-0.69	0.08	35.29	0.0789	-4.778	0.0197
884	SLE RA 7	-0.7	0.05	35.3	0.0789	-4.7788	0.0112
884	SLE RA 8	-0.69	0.08	35.09	0.0784	-4.7534	0.0196
884	SLE RA 9	-0.7	0.05	35.11	0.0785	-4.7542	0.0111
884	SLE RA 10	-0.73	0.06	36.99	0.0833	-4.9984	0.0133
884	SLE RA 11	-0.72	0.12	37.51	0.0845	-5.0644	0.0285
884	SLE RA 12	-0.73	0.08	37.52	0.0845	-5.0652	0.02
884	SLE RA 13	-0.73	0.06	37.33	0.0841	-5.0411	0.0143
884	SLE RA 14	-0.73	0.12	37.85	0.0853	-5.1071	0.0295
884	SLE RA 15	-0.74	0.09	37.86	0.0853	-5.1079	0.021
884	SLE RA 16	-0.73	0.12	37.65	0.0848	-5.0825	0.0294
884	SLE RA 17	-0.73	0.09	37.67	0.0848	-5.0833	0.0209
884	SLE RA 18	-0.73	0.13	38.07	0.0859	-5.1381	0.0317
884	SLE RA 19	-0.74	0.1	38.08	0.086	-5.1389	0.0232
884	SLE RA 20	-0.73	0.13	38.41	0.0867	-5.1808	0.0327
884	SLE RA 21	-0.74	0.1	38.42	0.0868	-5.1816	0.0242
884	SLE FR 1	-0.68	0.07	34.42	0.0768	-4.668	0.0177
884	SLE FR 2	-0.68	0.06	34.42	0.0768	-4.6682	0.0148
884	SLE FR 3	-0.68	0.08	34.55	0.0772	-4.685	0.0181
884	SLE FR 4	-0.69	0.08	35.52	0.0796	-4.8093	0.0191
884	SLE FR 5	-0.69	0.09	35.65	0.0799	-4.8261	0.0223
884	SLE FR 6	-0.7	0.1	36.24	0.0814	-4.903	0.0247
884	SLE QP 1	-0.68	0.07	34.42	0.0768	-4.668	0.0177
884	SLE QP 2	-0.69	0.09	35.51	0.0796	-4.809	0.0219
884	SLD 1	2.1	0.65	44.7	0.0968	-5.9095	0.1591
884	SLD 2	1.83	0.11	45.15	0.0997	-5.98	0.0258
884	SLD 3	2.02	-0.56	45.17	0.1007	-5.9847	-0.1435
884	SLD 4	1.75	-1.1	45.62	0.1036	-6.0552	-0.2767
884	SLD 5	0.32	2.2	37.48	0.0782	-5.0122	0.5461
884	SLD 6	0.14	1.84	37.77	0.0801	-5.059	0.4577
884	SLD 7	0.05	-1.85	39.04	0.0914	-5.263	-0.4624
884	SLD 8	-0.13	-2.21	39.33	0.0933	-5.3098	-0.5508
884	SLD 9	-1.25	2.39	31.69	0.0658	-4.3082	0.5946
884	SLD 10	-1.43	2.03	31.99	0.0678	-4.355	0.5062
884	SLD 11	-1.52	-1.66	33.25	0.079	-4.559	-0.414
884	SLD 12	-1.7	-2.02	33.54	0.0809	-4.6058	-0.5024
884	SLD 13	-3.14	1.28	25.41	0.0555	-3.5628	0.3205
884	SLD 14	-3.4	0.74	25.85	0.0584	-3.6333	0.1873
884	SLD 15	-3.22	0.07	25.88	0.0594	-3.638	0.0179
884	SLD 16	-3.48	-0.47	26.32	0.0623	-3.7085	-0.1153
884	SLV 1	5.83	1.35	57.03	0.12	-7.3863	0.3303
884	SLV 2	5.21	0.1	58.07	0.1268	-7.5505	0.0201
884	SLV 3	5.65	-1.39	58.09	0.129	-7.5572	-0.354
884	SLV 4	5.03	-2.64	59.13	0.1357	-7.7214	-0.6641
884	SLV 5	1.65	4.86	40.18	0.0769	-5.2941	1.2067
884	SLV 6	1.25	4.04	40.85	0.0813	-5.4011	1.0046
884	SLV 7	1.04	-4.3	43.71	0.1068	-5.8638	-1.0741
884	SLV 8	0.63	-5.12	44.39	0.1112	-5.9708	-1.2762
884	SLV 9	-2.02	5.3	26.64	0.0479	-3.6472	1.32

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
884	SLV 10	-2.42	4.48	27.31	0.0523	-3.7542	1.1179
884	SLV 11	-2.63	-3.86	30.17	0.0778	-4.2169	-0.9608
884	SLV 12	-3.04	-4.67	30.85	0.0822	-4.3239	-1.1629
884	SLV 13	-6.41	2.83	11.89	0.0234	-1.8966	0.7079
884	SLV 14	-7.03	1.57	12.93	0.0302	-2.0608	0.3977
884	SLV 15	-6.59	0.08	12.96	0.0324	-2.0675	0.0237
884	SLV 16	-7.21	-1.17	13.99	0.0391	-2.2317	-0.2865
884	CRTFP Ux+	0	0	0	0	0	0
884	CRTFP Ux-	0	0	0	0	0	0
884	CRTFP Uy+	0	0	0	0	0	0
884	CRTFP Uy-	0	0	0	0	0	0
887	SLU 1	0.86	0.26	29.36	-0.0358	1.8025	-0.0931
887	SLU 2	0.88	0.24	29.35	-0.036	1.804	-0.0854
887	SLU 3	0.89	0.26	30.02	-0.0369	1.8184	-0.0945
887	SLU 4	0.9	0.25	30.02	-0.0369	1.8193	-0.0898
887	SLU 5	0.9	0.23	29.76	-0.0366	1.8138	-0.0841
887	SLU 6	0.91	0.26	30.44	-0.0375	1.8282	-0.0931
887	SLU 7	0.92	0.25	30.43	-0.0376	1.8291	-0.0885
887	SLU 8	0.9	0.25	30.18	-0.0371	1.8221	-0.0905
887	SLU 9	0.91	0.24	30.18	-0.0372	1.823	-0.0859
887	SLU 10	0.95	0.34	32.61	-0.0404	1.8883	-0.1235
887	SLU 11	0.96	0.37	33.29	-0.0413	1.9027	-0.1325
887	SLU 12	0.97	0.36	33.28	-0.0413	1.9036	-0.1279
887	SLU 13	0.97	0.34	33.03	-0.041	1.8981	-0.1222
887	SLU 14	0.98	0.37	33.7	-0.0419	1.9125	-0.1312
887	SLU 15	0.99	0.35	33.7	-0.042	1.9134	-0.1266
887	SLU 16	0.97	0.36	33.45	-0.0415	1.9064	-0.1286
887	SLU 17	0.98	0.35	33.44	-0.0416	1.9073	-0.124
887	SLU 18	0.96	0.41	34.02	-0.0421	1.923	-0.1475
887	SLU 19	0.97	0.4	34.02	-0.0422	1.9239	-0.1429
887	SLU 20	0.98	0.41	34.44	-0.0428	1.9328	-0.1462
887	SLU 21	0.99	0.4	34.43	-0.0429	1.9337	-0.1416
887	SLU 22	0.95	0.36	32.68	-0.0402	1.8923	-0.1301
887	SLU 23	0.96	0.34	32.67	-0.0403	1.8938	-0.1224
887	SLU 24	0.98	0.37	33.35	-0.0412	1.9082	-0.1314
887	SLU 25	0.99	0.35	33.34	-0.0413	1.9091	-0.1268
887	SLU 26	0.98	0.34	33.09	-0.041	1.9036	-0.1211
887	SLU 27	1	0.36	33.76	-0.0418	1.918	-0.1301
887	SLU 28	1.01	0.35	33.76	-0.0419	1.9189	-0.1255
887	SLU 29	0.99	0.36	33.51	-0.0415	1.9119	-0.1275
887	SLU 30	1	0.34	33.5	-0.0415	1.9128	-0.1228
887	SLU 31	1.03	0.45	35.94	-0.0447	1.9781	-0.1604
887	SLU 32	1.04	0.48	36.62	-0.0456	1.9925	-0.1694
887	SLU 33	1.05	0.46	36.61	-0.0457	1.9934	-0.1648
887	SLU 34	1.05	0.45	36.35	-0.0454	1.9879	-0.1591
887	SLU 35	1.06	0.47	37.03	-0.0462	2.0023	-0.1681
887	SLU 36	1.07	0.46	37.02	-0.0463	2.0032	-0.1635
887	SLU 37	1.05	0.46	36.78	-0.0459	1.9962	-0.1655
887	SLU 38	1.06	0.45	36.77	-0.0459	1.9971	-0.1609
887	SLU 39	1.04	0.52	37.35	-0.0465	2.0127	-0.1844
887	SLU 40	1.05	0.5	37.35	-0.0465	2.0136	-0.1798
887	SLU 41	1.06	0.51	37.76	-0.0471	2.0225	-0.1831
887	SLU 42	1.07	0.5	37.76	-0.0472	2.0234	-0.1785
887	SLU 43	1.09	0.3	37.02	-0.0451	2.3125	-0.1084
887	SLU 44	1.11	0.28	37.01	-0.0453	2.314	-0.1007
887	SLU 45	1.12	0.3	37.69	-0.0461	2.3284	-0.1097
887	SLU 46	1.13	0.29	37.68	-0.0462	2.3293	-0.1051
887	SLU 47	1.13	0.27	37.43	-0.0459	2.3238	-0.0994
887	SLU 48	1.14	0.3	38.1	-0.0468	2.3382	-0.1084
887	SLU 49	1.15	0.29	38.1	-0.0469	2.3391	-0.1038
887	SLU 50	1.13	0.29	37.85	-0.0464	2.3321	-0.1058
887	SLU 51	1.14	0.28	37.84	-0.0465	2.333	-0.1012
887	SLU 52	1.18	0.39	40.28	-0.0497	2.3983	-0.1388
887	SLU 53	1.19	0.41	40.96	-0.0505	2.4127	-0.1478
887	SLU 54	1.2	0.4	40.95	-0.0506	2.4136	-0.1432
887	SLU 55	1.2	0.38	40.69	-0.0503	2.4081	-0.1375
887	SLU 56	1.21	0.41	41.37	-0.0512	2.4225	-0.1465
887	SLU 57	1.22	0.39	41.36	-0.0513	2.4234	-0.1419
887	SLU 58	1.2	0.4	41.12	-0.0508	2.4164	-0.1439
887	SLU 59	1.21	0.39	41.11	-0.0509	2.4173	-0.1392
887	SLU 60	1.19	0.46	41.69	-0.0514	2.433	-0.1628
887	SLU 61	1.2	0.44	41.68	-0.0515	2.4339	-0.1582
887	SLU 62	1.21	0.45	42.1	-0.052	2.4428	-0.1615
887	SLU 63	1.22	0.44	42.1	-0.0521	2.4437	-0.1569
887	SLU 64	1.18	0.41	40.35	-0.0494	2.4023	-0.1454
887	SLU 65	1.19	0.38	40.34	-0.0496	2.4038	-0.1377
887	SLU 66	1.21	0.41	41.02	-0.0505	2.4182	-0.1467
887	SLU 67	1.22	0.4	41.01	-0.0505	2.4191	-0.142
887	SLU 68	1.21	0.38	40.75	-0.0502	2.4136	-0.1363
887	SLU 69	1.22	0.41	41.43	-0.0511	2.428	-0.1454
887	SLU 70	1.23	0.39	41.42	-0.0512	2.4289	-0.1407
887	SLU 71	1.21	0.4	41.18	-0.0507	2.4219	-0.1427
887	SLU 72	1.23	0.38	41.17	-0.0508	2.4228	-0.1381
887	SLU 73	1.26	0.49	43.61	-0.054	2.4881	-0.1757
887	SLU 74	1.27	0.52	44.28	-0.0549	2.5025	-0.1847
887	SLU 75	1.28	0.5	44.28	-0.0549	2.5034	-0.1801
887	SLU 76	1.28	0.49	44.02	-0.0546	2.4979	-0.1744
887	SLU 77	1.29	0.51	44.7	-0.0555	2.5123	-0.1834
887	SLU 78	1.3	0.5	44.69	-0.0556	2.5132	-0.1788
887	SLU 79	1.28	0.51	44.44	-0.0551	2.5062	-0.1808

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
887	SLU 80	1.29	0.49	44.44	-0.0552	2.5071	-0.1762
887	SLU 81	1.27	0.56	45.02	-0.0557	2.5227	-0.1997
887	SLU 82	1.28	0.55	45.01	-0.0558	2.5236	-0.1951
887	SLU 83	1.29	0.56	45.43	-0.0564	2.5325	-0.1984
887	SLU 84	1.3	0.54	45.42	-0.0565	2.5334	-0.1938
887	SLE RA 1	0.89	0.29	30.31	-0.0371	1.8282	-0.1037
887	SLE RA 2	0.9	0.27	30.3	-0.0372	1.8292	-0.0986
887	SLE RA 3	0.91	0.29	30.75	-0.0378	1.8388	-0.1046
887	SLE RA 4	0.91	0.28	30.75	-0.0378	1.8394	-0.1015
887	SLE RA 5	0.91	0.27	30.58	-0.0376	1.8357	-0.0977
887	SLE RA 6	0.92	0.29	31.03	-0.0382	1.8453	-0.1037
887	SLE RA 7	0.93	0.28	31.02	-0.0382	1.8459	-0.1006
887	SLE RA 8	0.91	0.28	30.86	-0.0379	1.8412	-0.1019
887	SLE RA 9	0.92	0.27	30.85	-0.038	1.8418	-0.0989
887	SLE RA 10	0.94	0.35	32.48	-0.0401	1.8854	-0.1239
887	SLE RA 11	0.95	0.36	32.93	-0.0407	1.895	-0.1299
887	SLE RA 12	0.96	0.35	32.93	-0.0407	1.8956	-0.1269
887	SLE RA 13	0.96	0.34	32.75	-0.0405	1.8919	-0.1231
887	SLE RA 14	0.96	0.36	33.21	-0.0411	1.9015	-0.1291
887	SLE RA 15	0.97	0.35	33.2	-0.0412	1.9021	-0.126
887	SLE RA 16	0.96	0.36	33.04	-0.0409	1.8974	-0.1273
887	SLE RA 17	0.96	0.35	33.03	-0.0409	1.898	-0.1242
887	SLE RA 18	0.95	0.39	33.42	-0.0413	1.9085	-0.1399
887	SLE RA 19	0.96	0.38	33.41	-0.0413	1.9091	-0.1369
887	SLE RA 20	0.96	0.39	33.69	-0.0417	1.915	-0.1391
887	SLE RA 21	0.97	0.38	33.69	-0.0418	1.9156	-0.136
887	SLE FR 1	0.89	0.29	30.31	-0.0371	1.8282	-0.1037
887	SLE FR 2	0.89	0.29	30.31	-0.0371	1.8284	-0.1027
887	SLE FR 3	0.89	0.29	30.42	-0.0373	1.8308	-0.1034
887	SLE FR 4	0.91	0.32	31.24	-0.0384	1.8525	-0.1135
887	SLE FR 5	0.91	0.32	31.35	-0.0385	1.8549	-0.1142
887	SLE FR 6	0.92	0.34	31.86	-0.0392	1.8683	-0.1218
887	SLE QP 1	0.89	0.29	30.31	-0.0371	1.8282	-0.1037
887	SLE QP 2	0.91	0.32	31.24	-0.0383	1.8523	-0.1146
887	SLD 1	2.07	0.86	23.11	-0.0257	1.7009	-0.3028
887	SLD 2	1.74	1.52	22.68	-0.0275	1.6477	-0.5339
887	SLD 3	2.47	-0.51	23.79	-0.0227	1.772	0.1752
887	SLD 4	2.14	0.16	23.35	-0.0245	1.7189	-0.056
887	SLD 5	0.7	2.44	27.85	-0.0388	1.7086	-0.8539
887	SLD 6	0.49	2.88	27.56	-0.04	1.6734	-1.0073
887	SLD 7	2.05	-2.13	30.11	-0.0288	1.9457	0.7393
887	SLD 8	1.83	-1.69	29.82	-0.03	1.9105	0.5859
887	SLD 9	-0.02	2.32	32.66	-0.0467	1.7941	-0.815
887	SLD 10	-0.23	2.77	32.37	-0.0479	1.7588	-0.9684
887	SLD 11	1.33	-2.24	34.92	-0.0367	2.0312	0.7781
887	SLD 12	1.11	-1.8	34.63	-0.0379	1.9959	0.6248
887	SLD 13	-0.33	0.48	39.13	-0.0522	1.9857	-0.1732
887	SLD 14	-0.66	1.15	38.69	-0.054	1.9325	-0.4043
887	SLD 15	0.07	-0.89	39.81	-0.0492	2.0568	0.3048
887	SLD 16	-0.25	-0.22	39.37	-0.051	2.0037	0.0736
887	SLV 1	3.63	1.54	12.25	-0.0087	1.5006	-0.539
887	SLV 2	2.87	3.09	11.23	-0.0129	1.3768	-1.0771
887	SLV 3	4.54	-1.56	13.78	-0.0019	1.6613	0.5444
887	SLV 4	3.78	-0.02	12.77	-0.0061	1.5376	0.0062
887	SLV 5	0.47	5.12	23.4	-0.039	1.5247	-1.7904
887	SLV 6	-0.03	6.13	22.74	-0.0417	1.4441	-2.141
887	SLV 7	3.52	-5.22	28.5	-0.0164	2.0606	1.8208
887	SLV 8	3.02	-4.22	27.84	-0.0191	1.9799	1.4701
887	SLV 9	-1.21	4.86	34.64	-0.0576	1.7246	-1.6993
887	SLV 10	-1.71	5.86	33.98	-0.0603	1.644	-2.0499
887	SLV 11	1.84	-5.49	39.74	-0.0349	2.2605	1.9119
887	SLV 12	1.34	-4.48	39.08	-0.0377	2.1799	1.5612
887	SLV 13	-1.97	0.66	49.72	-0.0706	2.167	-0.2354
887	SLV 14	-2.73	2.2	48.7	-0.0748	2.0432	-0.7735
887	SLV 15	-1.06	-2.45	51.25	-0.0638	2.3277	0.848
887	SLV 16	-1.82	-0.9	50.23	-0.068	2.204	0.3098
887	CRTFP Ux+	0	0	0	0	0	0
887	CRTFP Ux-	0	0	0	0	0	0
887	CRTFP Uy+	0	0	0	0	0	0
887	CRTFP Uy-	0	0	0	0	0	0
889	SLU 1	1.36	0.13	55.95	-1.5217	0.4582	0.0377
889	SLU 2	1.33	0.1	55.94	-1.5215	0.4678	0.0378
889	SLU 3	1.4	0.14	57.23	-1.5566	0.472	0.0388
889	SLU 4	1.38	0.12	57.23	-1.5565	0.4777	0.0389
889	SLU 5	1.36	0.1	56.73	-1.5431	0.4755	0.0385
889	SLU 6	1.43	0.13	58.03	-1.5781	0.4797	0.0395
889	SLU 7	1.41	0.12	58.02	-1.578	0.4855	0.0396
889	SLU 8	1.42	0.12	57.53	-1.5648	0.4737	0.0391
889	SLU 9	1.4	0.11	57.53	-1.5647	0.4794	0.0392
889	SLU 10	1.42	0.19	62.77	-1.7069	0.539	0.0401
889	SLU 11	1.49	0.23	64.07	-1.7419	0.5432	0.0411
889	SLU 12	1.47	0.21	64.06	-1.7418	0.5489	0.0411
889	SLU 13	1.45	0.19	63.56	-1.7284	0.5467	0.0408
889	SLU 14	1.52	0.23	64.86	-1.7635	0.5509	0.0418
889	SLU 15	1.5	0.21	64.85	-1.7634	0.5566	0.0418
889	SLU 16	1.51	0.21	64.36	-1.7501	0.5449	0.0414
889	SLU 17	1.49	0.2	64.36	-1.75	0.5506	0.0414
889	SLU 18	1.49	0.26	65.71	-1.7865	0.5599	0.041
889	SLU 19	1.47	0.24	65.7	-1.7864	0.5656	0.041
889	SLU 20	1.52	0.26	66.5	-1.808	0.5676	0.0417

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
889	SLU 21	1.5	0.24	66.49	-1.8079	0.5734	0.0417
889	SLU 22	1.48	0.25	62.84	-1.7086	0.5293	0.0408
889	SLU 23	1.45	0.22	62.84	-1.7084	0.5388	0.0409
889	SLU 24	1.51	0.26	64.13	-1.7435	0.543	0.0419
889	SLU 25	1.5	0.24	64.13	-1.7434	0.5488	0.042
889	SLU 26	1.47	0.22	63.63	-1.73	0.5466	0.0416
889	SLU 27	1.54	0.25	64.92	-1.765	0.5508	0.0426
889	SLU 28	1.52	0.24	64.92	-1.7649	0.5565	0.0426
889	SLU 29	1.53	0.24	64.43	-1.7517	0.5447	0.0422
889	SLU 30	1.51	0.23	64.42	-1.7516	0.5505	0.0423
889	SLU 31	1.54	0.31	69.67	-1.8938	0.61	0.0432
889	SLU 32	1.6	0.35	70.96	-1.9288	0.6142	0.0442
889	SLU 33	1.59	0.33	70.96	-1.9287	0.6199	0.0442
889	SLU 34	1.56	0.31	70.46	-1.9153	0.6177	0.0439
889	SLU 35	1.63	0.35	71.75	-1.9504	0.6219	0.0449
889	SLU 36	1.61	0.33	71.75	-1.9503	0.6277	0.0449
889	SLU 37	1.62	0.33	71.26	-1.937	0.6159	0.0445
889	SLU 38	1.6	0.32	71.25	-1.9369	0.6216	0.0445
889	SLU 39	1.61	0.38	72.6	-1.9734	0.6309	0.0441
889	SLU 40	1.59	0.36	72.6	-1.9733	0.6367	0.0441
889	SLU 41	1.63	0.38	73.39	-1.9949	0.6387	0.0448
889	SLU 42	1.62	0.36	73.39	-1.9948	0.6444	0.0448
889	SLU 43	1.73	0.13	70.37	-1.9141	0.5713	0.048
889	SLU 44	1.7	0.1	70.36	-1.914	0.5809	0.0481
889	SLU 45	1.77	0.13	71.65	-1.949	0.5851	0.0491
889	SLU 46	1.75	0.12	71.65	-1.9489	0.5908	0.0491
889	SLU 47	1.73	0.1	71.15	-1.9355	0.5886	0.0488
889	SLU 48	1.8	0.13	72.45	-1.9706	0.5928	0.0498
889	SLU 49	1.78	0.12	72.44	-1.9705	0.5986	0.0498
889	SLU 50	1.79	0.12	71.95	-1.9572	0.5868	0.0494
889	SLU 51	1.77	0.1	71.95	-1.9571	0.5926	0.0494
889	SLU 52	1.79	0.19	77.19	-2.0993	0.6521	0.0503
889	SLU 53	1.86	0.23	78.49	-2.1343	0.6563	0.0513
889	SLU 54	1.84	0.21	78.48	-2.1342	0.662	0.0514
889	SLU 55	1.82	0.19	77.98	-2.1209	0.6598	0.051
889	SLU 56	1.89	0.22	79.28	-2.1559	0.664	0.052
889	SLU 57	1.87	0.21	79.27	-2.1558	0.6697	0.0521
889	SLU 58	1.88	0.21	78.78	-2.1426	0.658	0.0517
889	SLU 59	1.86	0.2	78.78	-2.1425	0.6637	0.0517
889	SLU 60	1.86	0.26	80.13	-2.1789	0.673	0.0512
889	SLU 61	1.84	0.24	80.12	-2.1788	0.6787	0.0513
889	SLU 62	1.89	0.25	80.92	-2.2004	0.6807	0.0519
889	SLU 63	1.87	0.24	80.91	-2.2003	0.6865	0.052
889	SLU 64	1.84	0.25	77.26	-2.101	0.6424	0.0511
889	SLU 65	1.82	0.22	77.26	-2.1009	0.6519	0.0512
889	SLU 66	1.88	0.25	78.55	-2.1359	0.6561	0.0522
889	SLU 67	1.86	0.24	78.55	-2.1358	0.6619	0.0522
889	SLU 68	1.84	0.22	78.05	-2.1224	0.6597	0.0519
889	SLU 69	1.91	0.25	79.34	-2.1575	0.6639	0.0529
889	SLU 70	1.89	0.24	79.34	-2.1574	0.6696	0.0529
889	SLU 71	1.9	0.24	78.85	-2.1441	0.6578	0.0525
889	SLU 72	1.88	0.22	78.84	-2.144	0.6636	0.0525
889	SLU 73	1.91	0.31	84.09	-2.2862	0.7231	0.0534
889	SLU 74	1.97	0.35	85.38	-2.3213	0.7273	0.0544
889	SLU 75	1.96	0.33	85.38	-2.3212	0.733	0.0545
889	SLU 76	1.93	0.31	84.88	-2.3078	0.7308	0.0541
889	SLU 77	2	0.34	86.17	-2.3428	0.735	0.0551
889	SLU 78	1.98	0.33	86.17	-2.3427	0.7408	0.0552
889	SLU 79	1.99	0.33	85.68	-2.3295	0.729	0.0547
889	SLU 80	1.97	0.32	85.67	-2.3294	0.7348	0.0548
889	SLU 81	1.97	0.38	87.02	-2.3658	0.744	0.0543
889	SLU 82	1.96	0.36	87.02	-2.3657	0.7498	0.0544
889	SLU 83	2	0.37	87.81	-2.3874	0.7518	0.055
889	SLU 84	1.98	0.36	87.81	-2.3873	0.7575	0.0551
889	SLE RA 1	1.39	0.16	57.92	-1.5751	0.4785	0.0386
889	SLE RA 2	1.38	0.14	57.91	-1.575	0.4849	0.0387
889	SLE RA 3	1.42	0.17	58.78	-1.5984	0.4877	0.0393
889	SLE RA 4	1.41	0.16	58.77	-1.5983	0.4915	0.0394
889	SLE RA 5	1.39	0.14	58.44	-1.5894	0.4901	0.0391
889	SLE RA 6	1.44	0.17	59.3	-1.6127	0.4928	0.0398
889	SLE RA 7	1.43	0.16	59.3	-1.6127	0.4967	0.0398
889	SLE RA 8	1.43	0.16	58.97	-1.6038	0.4888	0.0395
889	SLE RA 9	1.42	0.15	58.97	-1.6038	0.4927	0.0396
889	SLE RA 10	1.44	0.21	62.47	-1.6985	0.5323	0.0402
889	SLE RA 11	1.48	0.23	63.33	-1.7219	0.5351	0.0409
889	SLE RA 12	1.47	0.22	63.33	-1.7218	0.539	0.0409
889	SLE RA 13	1.45	0.2	62.99	-1.7129	0.5375	0.0406
889	SLE RA 14	1.5	0.23	63.86	-1.7363	0.5403	0.0413
889	SLE RA 15	1.49	0.22	63.85	-1.7362	0.5441	0.0413
889	SLE RA 16	1.49	0.22	63.53	-1.7274	0.5363	0.0411
889	SLE RA 17	1.48	0.21	63.52	-1.7273	0.5401	0.0411
889	SLE RA 18	1.48	0.25	64.42	-1.7516	0.5463	0.0408
889	SLE RA 19	1.47	0.24	64.42	-1.7515	0.5501	0.0408
889	SLE RA 20	1.5	0.25	64.95	-1.766	0.5515	0.0412
889	SLE RA 21	1.49	0.24	64.95	-1.7659	0.5553	0.0413
889	SLE FR 1	1.39	0.16	57.92	-1.5751	0.4785	0.0386
889	SLE FR 2	1.39	0.16	57.92	-1.5751	0.4798	0.0386
889	SLE FR 3	1.4	0.16	58.13	-1.5808	0.4806	0.0388
889	SLE FR 4	1.42	0.19	59.87	-1.628	0.5001	0.0393
889	SLE FR 5	1.43	0.19	60.08	-1.6338	0.5009	0.0395

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
889	SLE FR 6	1.44	0.21	61.17	-1.6634	0.5124	0.0397
889	SLE QP 1	1.39	0.16	57.92	-1.5751	0.4785	0.0386
889	SLE QP 2	1.42	0.19	59.87	-1.6281	0.4989	0.0393
889	SLD 1	6.55	0.84	54.25	-1.4965	0.4196	0.1474
889	SLD 2	6.06	1.26	53.64	-1.4802	0.4318	0.1424
889	SLD 3	6.63	-0.53	55.28	-1.5199	0.4655	0.1502
889	SLD 4	6.13	-0.11	54.67	-1.5035	0.4776	0.1451
889	SLD 5	2.93	2.39	56.73	-1.5561	0.4034	0.0685
889	SLD 6	2.61	2.67	56.33	-1.5453	0.4114	0.0651
889	SLD 7	3.19	-2.18	60.17	-1.634	0.5561	0.0776
889	SLD 8	2.86	-1.9	59.76	-1.6232	0.5642	0.0742
889	SLD 9	-0.02	2.28	59.98	-1.6329	0.4335	0.0043
889	SLD 10	-0.35	2.56	59.57	-1.6221	0.4416	0.0009
889	SLD 11	0.23	-2.29	63.41	-1.7108	0.5863	0.0134
889	SLD 12	-0.09	-2.01	63.01	-1.7	0.5943	0.0101
889	SLD 13	-3.29	0.48	65.07	-1.7526	0.5201	-0.0666
889	SLD 14	-3.79	0.91	64.46	-1.7362	0.5322	-0.0716
889	SLD 15	-3.22	-0.89	66.1	-1.7759	0.5659	-0.0638
889	SLD 16	-3.71	-0.46	65.49	-1.7596	0.5781	-0.0689
889	SLV 1	13.41	1.67	46.76	-1.321	0.3141	0.2921
889	SLV 2	12.27	2.65	45.34	-1.283	0.3423	0.2804
889	SLV 3	13.59	-1.44	49.09	-1.3738	0.4177	0.2984
889	SLV 4	12.45	-0.45	47.67	-1.3357	0.4459	0.2867
889	SLV 5	4.95	5.17	52.65	-1.4626	0.2813	0.1077
889	SLV 6	4.21	5.81	51.73	-1.4378	0.2997	0.1
889	SLV 7	5.54	-5.18	60.42	-1.6385	0.6267	0.1286
889	SLV 8	4.79	-4.54	59.49	-1.6137	0.6451	0.121
889	SLV 9	-1.95	4.92	60.25	-1.6424	0.3526	-0.0424
889	SLV 10	-2.7	5.56	59.32	-1.6176	0.371	-0.0501
889	SLV 11	-1.37	-5.44	68.01	-1.8183	0.698	-0.0215
889	SLV 12	-2.11	-4.79	67.08	-1.7935	0.7164	-0.0291
889	SLV 13	-9.61	0.83	72.07	-1.9204	0.5518	-0.2081
889	SLV 14	-10.75	1.82	70.65	-1.8823	0.58	-0.2199
889	SLV 15	-9.43	-2.28	74.4	-1.9731	0.6554	-0.2019
889	SLV 16	-10.57	-1.29	72.98	-1.9351	0.6836	-0.2136
889	CRTFP Ux+	0	0	0	0	0	0
889	CRTFP Ux-	0	0	0	0	0	0
889	CRTFP Uy+	0	0	0	0	0	0
889	CRTFP Uy-	0	0	0	0	0	0
906	SLU 1	-0.18	0.89	56.86	0.0585	0.5739	0.0274
906	SLU 2	-0.21	0.82	56.91	0.0592	0.5726	0.0279
906	SLU 3	-0.19	0.93	58.19	0.0602	0.5899	0.0281
906	SLU 4	-0.2	0.89	58.21	0.0606	0.5891	0.0284
906	SLU 5	-0.21	0.83	57.67	0.06	0.5815	0.0282
906	SLU 6	-0.18	0.94	58.94	0.061	0.5988	0.0284
906	SLU 7	-0.2	0.9	58.97	0.0614	0.598	0.0287
906	SLU 8	-0.18	0.91	58.38	0.0602	0.5918	0.028
906	SLU 9	-0.19	0.87	58.41	0.0606	0.591	0.0283
906	SLU 10	-0.25	0.96	64.44	0.066	0.6611	0.0321
906	SLU 11	-0.22	1.07	65.71	0.0669	0.6784	0.0323
906	SLU 12	-0.24	1.03	65.74	0.0673	0.6776	0.0326
906	SLU 13	-0.25	0.98	65.19	0.0668	0.6701	0.0325
906	SLU 14	-0.22	1.08	66.47	0.0677	0.6874	0.0327
906	SLU 15	-0.24	1.04	66.5	0.0682	0.6866	0.033
906	SLU 16	-0.21	1.06	65.9	0.0669	0.6804	0.0323
906	SLU 17	-0.23	1.02	65.93	0.0673	0.6796	0.0326
906	SLU 18	-0.24	1.09	67.61	0.0682	0.7004	0.0334
906	SLU 19	-0.25	1.05	67.64	0.0686	0.6996	0.0338
906	SLU 20	-0.23	1.1	68.37	0.069	0.7094	0.0338
906	SLU 21	-0.25	1.06	68.4	0.0694	0.7086	0.0341
906	SLU 22	-0.21	1.12	64.23	0.0665	0.6618	0.0314
906	SLU 23	-0.24	1.06	64.28	0.0671	0.6605	0.0319
906	SLU 24	-0.21	1.16	65.56	0.0681	0.6778	0.0321
906	SLU 25	-0.23	1.12	65.58	0.0685	0.677	0.0324
906	SLU 26	-0.23	1.07	65.04	0.068	0.6694	0.0322
906	SLU 27	-0.21	1.18	66.31	0.0689	0.6867	0.0324
906	SLU 28	-0.22	1.14	66.34	0.0693	0.6859	0.0327
906	SLU 29	-0.2	1.15	65.75	0.0681	0.6797	0.032
906	SLU 30	-0.22	1.11	65.78	0.0685	0.6789	0.0323
906	SLU 31	-0.27	1.2	71.81	0.0739	0.749	0.0361
906	SLU 32	-0.25	1.31	73.08	0.0749	0.7663	0.0363
906	SLU 33	-0.26	1.27	73.11	0.0753	0.7655	0.0366
906	SLU 34	-0.27	1.21	72.56	0.0747	0.758	0.0365
906	SLU 35	-0.24	1.32	73.84	0.0757	0.7753	0.0367
906	SLU 36	-0.26	1.28	73.87	0.0761	0.7745	0.037
906	SLU 37	-0.24	1.29	73.27	0.0748	0.7683	0.0363
906	SLU 38	-0.25	1.25	73.3	0.0753	0.7675	0.0366
906	SLU 39	-0.26	1.33	74.98	0.0761	0.7883	0.0375
906	SLU 40	-0.28	1.29	75.01	0.0765	0.7875	0.0378
906	SLU 41	-0.26	1.34	75.74	0.0769	0.7973	0.0378
906	SLU 42	-0.27	1.3	75.77	0.0774	0.7965	0.0381
906	SLU 43	-0.23	1.07	71.4	0.0734	0.7159	0.0342
906	SLU 44	-0.26	1	71.45	0.0741	0.7146	0.0347
906	SLU 45	-0.23	1.11	72.72	0.075	0.7319	0.0349
906	SLU 46	-0.25	1.07	72.75	0.0754	0.7311	0.0352
906	SLU 47	-0.26	1.02	72.2	0.0749	0.7235	0.035
906	SLU 48	-0.23	1.12	73.47	0.0758	0.7408	0.0352
906	SLU 49	-0.25	1.08	73.5	0.0762	0.74	0.0355
906	SLU 50	-0.22	1.1	72.91	0.075	0.7338	0.0349
906	SLU 51	-0.24	1.06	72.94	0.0754	0.733	0.0352

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
906	SLU 52	-0.3	1.15	78.97	0.0808	0.8031	0.039
906	SLU 53	-0.27	1.25	80.24	0.0818	0.8204	0.0392
906	SLU 54	-0.29	1.21	80.27	0.0822	0.8196	0.0395
906	SLU 55	-0.29	1.16	79.73	0.0817	0.8121	0.0393
906	SLU 56	-0.27	1.27	81	0.0826	0.8294	0.0395
906	SLU 57	-0.28	1.23	81.03	0.083	0.8286	0.0398
906	SLU 58	-0.26	1.24	80.44	0.0818	0.8224	0.0391
906	SLU 59	-0.28	1.2	80.46	0.0822	0.8216	0.0394
906	SLU 60	-0.28	1.27	82.15	0.0831	0.8424	0.0403
906	SLU 61	-0.3	1.23	82.17	0.0835	0.8416	0.0406
906	SLU 62	-0.28	1.29	82.9	0.0839	0.8514	0.0406
906	SLU 63	-0.3	1.25	82.93	0.0843	0.8506	0.0409
906	SLU 64	-0.26	1.31	78.77	0.0813	0.8038	0.0382
906	SLU 65	-0.29	1.24	78.82	0.082	0.8025	0.0387
906	SLU 66	-0.26	1.35	80.09	0.0829	0.8198	0.0389
906	SLU 67	-0.28	1.31	80.12	0.0833	0.819	0.0392
906	SLU 68	-0.28	1.26	79.57	0.0828	0.8115	0.039
906	SLU 69	-0.25	1.36	80.85	0.0837	0.8287	0.0392
906	SLU 70	-0.27	1.32	80.87	0.0841	0.8279	0.0396
906	SLU 71	-0.25	1.34	80.28	0.0829	0.8217	0.0389
906	SLU 72	-0.27	1.3	80.31	0.0833	0.8209	0.0392
906	SLU 73	-0.32	1.38	86.34	0.0888	0.891	0.043
906	SLU 74	-0.29	1.49	87.61	0.0897	0.9083	0.0432
906	SLU 75	-0.31	1.45	87.64	0.0901	0.9075	0.0435
906	SLU 76	-0.32	1.4	87.1	0.0896	0.9	0.0433
906	SLU 77	-0.29	1.5	88.37	0.0905	0.9173	0.0435
906	SLU 78	-0.31	1.46	88.4	0.0909	0.9165	0.0438
906	SLU 79	-0.28	1.48	87.81	0.0897	0.9103	0.0431
906	SLU 80	-0.3	1.44	87.83	0.0901	0.9095	0.0434
906	SLU 81	-0.31	1.51	89.52	0.091	0.9303	0.0443
906	SLU 82	-0.32	1.47	89.54	0.0914	0.9295	0.0446
906	SLU 83	-0.3	1.53	90.27	0.0918	0.9393	0.0446
906	SLU 84	-0.32	1.49	90.3	0.0922	0.9385	0.0449
906	SLE RA 1	-0.19	0.95	58.97	0.0608	0.599	0.0285
906	SLE RA 2	-0.21	0.91	59	0.0613	0.5981	0.0288
906	SLE RA 3	-0.19	0.98	59.85	0.0619	0.6096	0.029
906	SLE RA 4	-0.2	0.95	59.87	0.0622	0.6091	0.0292
906	SLE RA 5	-0.21	0.92	59.51	0.0618	0.6041	0.0291
906	SLE RA 6	-0.19	0.99	60.36	0.0624	0.6156	0.0292
906	SLE RA 7	-0.2	0.96	60.38	0.0627	0.6151	0.0294
906	SLE RA 8	-0.19	0.97	59.98	0.0619	0.6109	0.029
906	SLE RA 9	-0.2	0.95	60	0.0622	0.6104	0.0292
906	SLE RA 10	-0.23	1	64.02	0.0658	0.6572	0.0317
906	SLE RA 11	-0.22	1.08	64.87	0.0664	0.6687	0.0318
906	SLE RA 12	-0.23	1.05	64.89	0.0667	0.6682	0.032
906	SLE RA 13	-0.23	1.01	64.52	0.0663	0.6631	0.0319
906	SLE RA 14	-0.21	1.08	65.37	0.0669	0.6747	0.032
906	SLE RA 15	-0.23	1.06	65.39	0.0672	0.6741	0.0322
906	SLE RA 16	-0.21	1.07	65	0.0664	0.67	0.0318
906	SLE RA 17	-0.22	1.04	65.02	0.0667	0.6695	0.032
906	SLE RA 18	-0.23	1.09	66.14	0.0673	0.6833	0.0326
906	SLE RA 19	-0.24	1.06	66.16	0.0675	0.6828	0.0328
906	SLE RA 20	-0.22	1.1	66.64	0.0678	0.6893	0.0328
906	SLE RA 21	-0.23	1.07	66.66	0.0681	0.6888	0.033
906	SLE FR 1	-0.19	0.95	58.97	0.0608	0.599	0.0285
906	SLE FR 2	-0.2	0.95	58.98	0.0609	0.5988	0.0286
906	SLE FR 3	-0.19	0.96	59.17	0.061	0.6014	0.0286
906	SLE FR 4	-0.21	0.99	61.13	0.0628	0.6241	0.0298
906	SLE FR 5	-0.2	1	61.32	0.063	0.6267	0.0298
906	SLE FR 6	-0.21	1.02	62.55	0.064	0.6412	0.0305
906	SLE QP 1	-0.19	0.95	58.97	0.0608	0.599	0.0285
906	SLE QP 2	-0.2	0.99	61.12	0.0627	0.6243	0.0297
906	SLD 1	5.89	2.33	65.49	0.0697	0.7049	-0.0038
906	SLD 2	5.38	2.11	65.36	0.0699	0.7045	0.008
906	SLD 3	5.78	0.67	66.45	0.0784	0.6924	-0.005
906	SLD 4	5.27	0.45	66.32	0.0786	0.692	0.0068
906	SLD 5	1.89	3.95	60.99	0.0516	0.6675	0.0194
906	SLD 6	1.55	3.8	60.9	0.0518	0.6673	0.0273
906	SLD 7	1.52	-1.58	64.21	0.0806	0.6258	0.0152
906	SLD 8	1.18	-1.72	64.12	0.0807	0.6256	0.0231
906	SLD 9	-1.58	3.71	58.12	0.0448	0.6231	0.0364
906	SLD 10	-1.92	3.57	58.03	0.0449	0.6228	0.0442
906	SLD 11	-1.95	-1.81	61.34	0.0737	0.5813	0.0322
906	SLD 12	-2.29	-1.96	61.25	0.0738	0.5811	0.04
906	SLD 13	-5.67	1.54	55.92	0.0469	0.5566	0.0527
906	SLD 14	-6.19	1.32	55.79	0.0471	0.5562	0.0645
906	SLD 15	-5.78	-0.12	56.88	0.0555	0.5441	0.0514
906	SLD 16	-6.3	-0.34	56.75	0.0557	0.5437	0.0632
906	SLV 1	14.05	4.06	71.4	0.0796	0.8128	-0.0485
906	SLV 2	12.84	3.54	71.09	0.0801	0.812	-0.021
906	SLV 3	13.79	0.3	73.58	0.0993	0.7843	-0.0515
906	SLV 4	12.59	-0.21	73.27	0.0997	0.7835	-0.0239
906	SLV 5	4.67	7.7	60.95	0.0379	0.7242	0.0058
906	SLV 6	3.89	7.36	60.75	0.0382	0.7237	0.0238
906	SLV 7	3.82	-4.81	68.22	0.1034	0.6292	-0.0039
906	SLV 8	3.04	-5.15	68.01	0.1037	0.6287	0.014
906	SLV 9	-3.44	7.14	54.23	0.0217	0.6199	0.0454
906	SLV 10	-4.22	6.8	54.02	0.022	0.6194	0.0633
906	SLV 11	-4.29	-5.37	61.49	0.0873	0.5249	0.0357
906	SLV 12	-5.08	-5.71	61.29	0.0876	0.5244	0.0536

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
906	SLV 13	-12.99	2.2	48.97	0.0257	0.4651	0.0834
906	SLV 14	-14.19	1.68	48.66	0.0262	0.4643	0.1109
906	SLV 15	-13.25	-1.55	51.15	0.0454	0.4367	0.0805
906	SLV 16	-14.45	-2.07	50.84	0.0459	0.4358	0.108
906	CRTFP Ux+	0	0	0	0	0	0
906	CRTFP Ux-	0	0	0	0	0	0
909	SLU 1	0.38	1.71	53.98	0.0716	-0.2238	-0.0027
909	SLU 2	0.34	1.67	54.03	0.0723	-0.2228	-0.0019
909	SLU 3	0.39	1.77	55.23	0.0737	-0.2298	-0.0028
909	SLU 4	0.37	1.75	55.26	0.0741	-0.2291	-0.0023
909	SLU 5	0.36	1.69	54.78	0.0734	-0.2266	-0.002
909	SLU 6	0.4	1.8	55.98	0.0748	-0.2336	-0.0029
909	SLU 7	0.38	1.77	56.01	0.0753	-0.2329	-0.0024
909	SLU 8	0.4	1.76	55.48	0.0739	-0.2314	-0.0029
909	SLU 9	0.38	1.74	55.51	0.0743	-0.2308	-0.0025
909	SLU 10	0.36	1.93	61.02	0.0808	-0.2545	-0.0001
909	SLU 11	0.41	2.03	62.22	0.0822	-0.2615	-0.001
909	SLU 12	0.39	2.01	62.25	0.0826	-0.2609	-0.0005
909	SLU 13	0.38	1.96	61.77	0.0819	-0.2583	-0.0002
909	SLU 14	0.42	2.06	62.97	0.0833	-0.2653	-0.0011
909	SLU 15	0.4	2.03	63	0.0838	-0.2647	-0.0006
909	SLU 16	0.42	2.02	62.47	0.0824	-0.2632	-0.0011
909	SLU 17	0.4	2	62.5	0.0828	-0.2626	-0.0006
909	SLU 18	0.41	2.08	63.96	0.0838	-0.2692	-0.0001
909	SLU 19	0.39	2.06	63.99	0.0842	-0.2685	0.0003
909	SLU 20	0.42	2.11	64.72	0.0849	-0.273	-0.0003
909	SLU 21	0.4	2.08	64.74	0.0853	-0.2723	0.0002
909	SLU 22	0.41	2.04	60.9	0.0813	-0.2588	-0.0017
909	SLU 23	0.37	2	60.95	0.082	-0.2578	-0.0009
909	SLU 24	0.42	2.1	62.15	0.0834	-0.2648	-0.0017
909	SLU 25	0.4	2.08	62.18	0.0838	-0.2641	-0.0012
909	SLU 26	0.39	2.03	61.7	0.0831	-0.2616	-0.001
909	SLU 27	0.43	2.13	62.9	0.0845	-0.2686	-0.0018
909	SLU 28	0.41	2.1	62.93	0.085	-0.268	-0.0013
909	SLU 29	0.43	2.09	62.4	0.0836	-0.2665	-0.0019
909	SLU 30	0.41	2.07	62.43	0.084	-0.2658	-0.0014
909	SLU 31	0.4	2.26	67.94	0.0905	-0.2895	0.001
909	SLU 32	0.44	2.36	69.14	0.0919	-0.2965	0.0001
909	SLU 33	0.42	2.34	69.17	0.0923	-0.2959	0.0006
909	SLU 34	0.41	2.29	68.69	0.0916	-0.2933	0.0008
909	SLU 35	0.45	2.39	69.89	0.093	-0.3003	0
909	SLU 36	0.43	2.36	69.92	0.0935	-0.2997	0.0005
909	SLU 37	0.46	2.35	69.39	0.0921	-0.2982	-0.0001
909	SLU 38	0.44	2.33	69.42	0.0925	-0.2976	0.0004
909	SLU 39	0.44	2.41	70.89	0.0935	-0.3042	0.0009
909	SLU 40	0.42	2.39	70.92	0.0939	-0.3035	0.0014
909	SLU 41	0.45	2.44	71.64	0.0946	-0.308	0.0008
909	SLU 42	0.43	2.41	71.67	0.095	-0.3074	0.0013
909	SLU 43	0.48	2.11	67.8	0.0898	-0.2789	-0.0039
909	SLU 44	0.44	2.07	67.85	0.0905	-0.2779	-0.0031
909	SLU 45	0.49	2.17	69.05	0.0919	-0.2849	-0.0039
909	SLU 46	0.47	2.14	69.08	0.0923	-0.2843	-0.0035
909	SLU 47	0.46	2.09	68.6	0.0916	-0.2817	-0.0032
909	SLU 48	0.5	2.2	69.8	0.093	-0.2887	-0.0041
909	SLU 49	0.48	2.17	69.83	0.0934	-0.2881	-0.0036
909	SLU 50	0.51	2.16	69.3	0.0921	-0.2866	-0.0041
909	SLU 51	0.48	2.14	69.33	0.0925	-0.286	-0.0036
909	SLU 52	0.47	2.33	74.84	0.099	-0.3096	-0.0013
909	SLU 53	0.51	2.43	76.04	0.1004	-0.3166	-0.0021
909	SLU 54	0.49	2.41	76.07	0.1008	-0.316	-0.0016
909	SLU 55	0.48	2.35	75.59	0.1001	-0.3135	-0.0014
909	SLU 56	0.53	2.46	76.79	0.1015	-0.3205	-0.0022
909	SLU 57	0.5	2.43	76.82	0.1019	-0.3198	-0.0018
909	SLU 58	0.53	2.42	76.29	0.1005	-0.3183	-0.0023
909	SLU 59	0.51	2.4	76.32	0.101	-0.3177	-0.0018
909	SLU 60	0.51	2.48	77.78	0.1019	-0.3243	-0.0013
909	SLU 61	0.49	2.46	77.81	0.1023	-0.3237	-0.0008
909	SLU 62	0.52	2.51	78.54	0.1031	-0.3281	-0.0014
909	SLU 63	0.5	2.48	78.56	0.1035	-0.3275	-0.0009
909	SLU 64	0.51	2.44	74.72	0.0995	-0.314	-0.0029
909	SLU 65	0.48	2.4	74.77	0.1002	-0.3129	-0.002
909	SLU 66	0.52	2.5	75.97	0.1016	-0.3199	-0.0029
909	SLU 67	0.5	2.48	76	0.102	-0.3193	-0.0024
909	SLU 68	0.49	2.43	75.52	0.1013	-0.3167	-0.0021
909	SLU 69	0.53	2.53	76.72	0.1027	-0.3237	-0.003
909	SLU 70	0.51	2.5	76.75	0.1031	-0.3231	-0.0025
909	SLU 71	0.54	2.49	76.22	0.1018	-0.3216	-0.0031
909	SLU 72	0.52	2.47	76.25	0.1022	-0.321	-0.0026
909	SLU 73	0.5	2.66	81.76	0.1087	-0.3447	-0.0002
909	SLU 74	0.54	2.76	82.96	0.1101	-0.3517	-0.0011
909	SLU 75	0.52	2.74	82.99	0.1105	-0.351	-0.0006
909	SLU 76	0.51	2.69	82.51	0.1098	-0.3485	-0.0003
909	SLU 77	0.56	2.79	83.71	0.1112	-0.3555	-0.0012
909	SLU 78	0.54	2.76	83.74	0.1116	-0.3548	-0.0007
909	SLU 79	0.56	2.75	83.21	0.1102	-0.3533	-0.0013
909	SLU 80	0.54	2.73	83.24	0.1107	-0.3527	-0.0008
909	SLU 81	0.54	2.81	84.71	0.1116	-0.3593	-0.0003
909	SLU 82	0.52	2.79	84.74	0.112	-0.3587	0.0002
909	SLU 83	0.56	2.84	85.46	0.1128	-0.3631	-0.0004
909	SLU 84	0.53	2.81	85.49	0.1132	-0.3625	0.0001

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
909	SLE RA 1	0.39	1.8	55.96	0.0744	-0.2338	-0.0024
909	SLE RA 2	0.36	1.78	55.99	0.0749	-0.2331	-0.0019
909	SLE RA 3	0.39	1.84	56.79	0.0758	-0.2378	-0.0025
909	SLE RA 4	0.38	1.83	56.81	0.0761	-0.2374	-0.0021
909	SLE RA 5	0.37	1.79	56.49	0.0756	-0.2357	-0.002
909	SLE RA 6	0.4	1.86	57.29	0.0765	-0.2403	-0.0025
909	SLE RA 7	0.39	1.85	57.31	0.0768	-0.2399	-0.0022
909	SLE RA 8	0.4	1.84	56.96	0.0759	-0.2389	-0.0026
909	SLE RA 9	0.39	1.82	56.98	0.0762	-0.2385	-0.0022
909	SLE RA 10	0.38	1.95	60.65	0.0805	-0.2543	-0.0007
909	SLE RA 11	0.41	2.02	61.45	0.0815	-0.2589	-0.0012
909	SLE RA 12	0.39	2	61.47	0.0817	-0.2585	-0.0009
909	SLE RA 13	0.39	1.97	61.15	0.0813	-0.2568	-0.0007
909	SLE RA 14	0.42	2.04	61.95	0.0822	-0.2615	-0.0013
909	SLE RA 15	0.4	2.02	61.97	0.0825	-0.2611	-0.001
909	SLE RA 16	0.42	2.01	61.62	0.0816	-0.2601	-0.0014
909	SLE RA 17	0.4	2	61.64	0.0818	-0.2596	-0.001
909	SLE RA 18	0.41	2.05	62.61	0.0825	-0.264	-0.0007
909	SLE RA 19	0.39	2.04	62.63	0.0828	-0.2636	-0.0004
909	SLE RA 20	0.42	2.07	63.11	0.0832	-0.2666	-0.0008
909	SLE RA 21	0.4	2.05	63.13	0.0835	-0.2662	-0.0005
909	SLE FR 1	0.39	1.8	55.96	0.0744	-0.2338	-0.0024
909	SLE FR 2	0.38	1.8	55.96	0.0745	-0.2337	-0.0023
909	SLE FR 3	0.39	1.81	56.16	0.0747	-0.2348	-0.0025
909	SLE FR 4	0.39	1.87	57.96	0.0769	-0.2427	-0.0018
909	SLE FR 5	0.4	1.88	58.15	0.0771	-0.2439	-0.0019
909	SLE FR 6	0.4	1.93	59.29	0.0784	-0.2489	-0.0016
909	SLE QP 1	0.39	1.8	55.96	0.0744	-0.2338	-0.0024
909	SLE QP 2	0.39	1.88	57.95	0.0768	-0.2429	-0.0019
909	SLD 1	6.47	2.44	52.62	0.0694	0.0289	-0.0375
909	SLD 2	5.94	2.62	52.61	0.0683	0.0255	-0.0253
909	SLD 3	6.56	0.87	53.63	0.079	0.0407	-0.0384
909	SLD 4	6.04	1.05	53.61	0.078	0.0374	-0.0262
909	SLD 5	2.16	4.39	54.83	0.0601	-0.1786	-0.0134
909	SLD 6	1.82	4.51	54.82	0.0594	-0.1809	-0.0053
909	SLD 7	2.48	-0.83	58.18	0.0924	-0.1393	-0.0165
909	SLD 8	2.14	-0.71	58.17	0.0917	-0.1415	-0.0084
909	SLD 9	-1.35	4.47	57.74	0.062	-0.3443	0.0046
909	SLD 10	-1.7	4.59	57.73	0.0613	-0.3465	0.0127
909	SLD 11	-1.03	-0.76	61.09	0.0943	-0.3049	0.0015
909	SLD 12	-1.38	-0.64	61.08	0.0935	-0.3071	0.0095
909	SLD 13	-5.26	2.7	62.3	0.0757	-0.5231	0.0224
909	SLD 14	-5.78	2.88	62.28	0.0746	-0.5265	0.0346
909	SLD 15	-5.16	1.13	63.3	0.0854	-0.5113	0.0215
909	SLD 16	-5.68	1.31	63.29	0.0843	-0.5147	0.0336
909	SLV 1	14.59	3.13	45.52	0.0591	0.3935	-0.085
909	SLV 2	13.38	3.55	45.48	0.0566	0.3856	-0.0567
909	SLV 3	14.81	-0.42	47.79	0.081	0.4204	-0.0872
909	SLV 4	13.6	0	47.76	0.0785	0.4126	-0.0588
909	SLV 5	4.53	7.56	50.78	0.0387	-0.0915	-0.0285
909	SLV 6	3.74	7.84	50.75	0.0371	-0.0966	-0.0101
909	SLV 7	5.27	-4.27	58.37	0.1118	-0.0016	-0.0358
909	SLV 8	4.48	-4	58.34	0.1101	-0.0067	-0.0173
909	SLV 9	-3.69	7.75	57.57	0.0435	-0.479	0.0135
909	SLV 10	-4.48	8.03	57.54	0.0419	-0.4842	0.0319
909	SLV 11	-2.95	-4.08	65.15	0.1166	-0.3892	0.0062
909	SLV 12	-3.74	-3.81	65.13	0.115	-0.3943	0.0247
909	SLV 13	-12.82	3.76	68.15	0.0751	-0.8984	0.055
909	SLV 14	-14.03	4.18	68.11	0.0727	-0.9062	0.0833
909	SLV 15	-12.59	0.21	70.43	0.0971	-0.8714	0.0528
909	SLV 16	-13.81	0.63	70.39	0.0946	-0.8793	0.0812
909	CRTFP Ux+	0	0	0	0	0	0
909	CRTFP Ux-	0	0	0	0	0	0
911	SLU 1	-0.54	0.04	30.79	-0.7931	-5.3833	-0.005
911	SLU 2	-0.56	-0.03	30.82	-0.7938	-5.3865	-0.0238
911	SLU 3	-0.56	0.05	31.53	-0.8123	-5.509	-0.0041
911	SLU 4	-0.57	0.01	31.55	-0.8127	-5.511	-0.0154
911	SLU 5	-0.57	-0.02	31.29	-0.806	-5.4663	-0.0229
911	SLU 6	-0.56	0.05	32.01	-0.8244	-5.5888	-0.0031
911	SLU 7	-0.58	0.01	32.02	-0.8248	-5.5907	-0.0144
911	SLU 8	-0.56	0.05	31.73	-0.8174	-5.5427	-0.003
911	SLU 9	-0.57	0.01	31.75	-0.8178	-5.5447	-0.0143
911	SLU 10	-0.6	0.02	34.39	-0.8852	-5.9969	-0.0124
911	SLU 11	-0.6	0.1	35.11	-0.9036	-6.1195	0.0073
911	SLU 12	-0.61	0.06	35.13	-0.9041	-6.1214	-0.004
911	SLU 13	-0.61	0.03	34.87	-0.8973	-6.0767	-0.0114
911	SLU 14	-0.6	0.11	35.59	-0.9158	-6.1992	0.0083
911	SLU 15	-0.62	0.06	35.6	-0.9162	-6.2012	-0.003
911	SLU 16	-0.6	0.11	35.31	-0.9087	-6.1532	0.0084
911	SLU 17	-0.61	0.06	35.33	-0.9092	-6.1551	-0.0029
911	SLU 18	-0.6	0.12	35.9	-0.9236	-6.2553	0.0113
911	SLU 19	-0.61	0.07	35.92	-0.9241	-6.2573	0
911	SLU 20	-0.61	0.12	36.37	-0.9358	-6.335	0.0123
911	SLU 21	-0.62	0.08	36.39	-0.9362	-6.337	0.001
911	SLU 22	-0.59	0.1	34.47	-0.887	-6.0111	0.0084
911	SLU 23	-0.61	0.03	34.5	-0.8878	-6.0144	-0.0105
911	SLU 24	-0.6	0.11	35.21	-0.9062	-6.1369	0.0093
911	SLU 25	-0.61	0.06	35.23	-0.9066	-6.1388	-0.0021
911	SLU 26	-0.62	0.03	34.97	-0.8999	-6.0941	-0.0095
911	SLU 27	-0.61	0.11	35.69	-0.9183	-6.2166	0.0102

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
911	SLU 28	-0.62	0.07	35.71	-0.9188	-6.2186	-0.0011
911	SLU 29	-0.6	0.11	35.41	-0.9113	-6.1706	0.0103
911	SLU 30	-0.62	0.07	35.43	-0.9118	-6.1725	-0.001
911	SLU 31	-0.65	0.08	38.08	-0.9792	-6.6248	0.0009
911	SLU 32	-0.64	0.16	38.79	-0.9976	-6.7473	0.0207
911	SLU 33	-0.65	0.12	38.81	-0.998	-6.7493	0.0093
911	SLU 34	-0.66	0.09	38.55	-0.9913	-6.7045	0.0019
911	SLU 35	-0.65	0.16	39.27	-1.0097	-6.827	0.0217
911	SLU 36	-0.66	0.12	39.28	-1.0102	-6.829	0.0103
911	SLU 37	-0.64	0.16	38.99	-1.0027	-6.781	0.0218
911	SLU 38	-0.66	0.12	39.01	-1.0031	-6.783	0.0104
911	SLU 39	-0.64	0.18	39.58	-1.0176	-6.8831	0.0247
911	SLU 40	-0.66	0.13	39.6	-1.018	-6.8851	0.0134
911	SLU 41	-0.65	0.18	40.05	-1.0297	-6.9629	0.0257
911	SLU 42	-0.67	0.14	40.07	-1.0302	-6.9648	0.0143
911	SLU 43	-0.69	0.04	38.76	-0.9988	-6.783	-0.011
911	SLU 44	-0.71	-0.04	38.79	-0.9995	-6.7862	-0.0299
911	SLU 45	-0.7	0.04	39.51	-1.018	-6.9088	-0.0102
911	SLU 46	-0.71	0	39.52	-1.0184	-6.9107	-0.0215
911	SLU 47	-0.72	-0.03	39.26	-1.0117	-6.866	-0.0289
911	SLU 48	-0.71	0.05	39.98	-1.0301	-6.9885	-0.0092
911	SLU 49	-0.72	0	40	-1.0305	-6.9905	-0.0205
911	SLU 50	-0.7	0.05	39.71	-1.0231	-6.9425	-0.0091
911	SLU 51	-0.72	0	39.72	-1.0235	-6.9444	-0.0204
911	SLU 52	-0.75	0.01	42.37	-1.0909	-7.3967	-0.0185
911	SLU 53	-0.74	0.09	43.09	-1.1094	-7.5192	0.0013
911	SLU 54	-0.76	0.05	43.1	-1.1098	-7.5211	-0.0101
911	SLU 55	-0.76	0.02	42.84	-1.1031	-7.4764	-0.0175
911	SLU 56	-0.75	0.1	43.56	-1.1215	-7.5989	0.0022
911	SLU 57	-0.76	0.05	43.58	-1.1219	-7.6009	-0.0091
911	SLU 58	-0.74	0.1	43.29	-1.1145	-7.5529	0.0023
911	SLU 59	-0.76	0.05	43.3	-1.1149	-7.5548	-0.009
911	SLU 60	-0.74	0.11	43.87	-1.1294	-7.655	0.0053
911	SLU 61	-0.76	0.07	43.89	-1.1298	-7.657	-0.006
911	SLU 62	-0.75	0.12	44.35	-1.1415	-7.7348	0.0063
911	SLU 63	-0.77	0.07	44.36	-1.1419	-7.7367	-0.0051
911	SLU 64	-0.73	0.1	42.44	-1.0928	-7.4108	0.0023
911	SLU 65	-0.75	0.02	42.47	-1.0935	-7.4141	-0.0166
911	SLU 66	-0.75	0.1	43.19	-1.1119	-7.5366	0.0032
911	SLU 67	-0.76	0.06	43.21	-1.1124	-7.5386	-0.0081
911	SLU 68	-0.76	0.03	42.94	-1.1056	-7.4938	-0.0156
911	SLU 69	-0.76	0.11	43.66	-1.1241	-7.6163	0.0042
911	SLU 70	-0.77	0.06	43.68	-1.1245	-7.6183	-0.0072
911	SLU 71	-0.75	0.11	43.39	-1.117	-7.5703	0.0043
911	SLU 72	-0.76	0.06	43.41	-1.1175	-7.5723	-0.0071
911	SLU 73	-0.8	0.07	46.05	-1.1849	-8.0245	-0.0051
911	SLU 74	-0.79	0.15	46.77	-1.2033	-8.147	0.0146
911	SLU 75	-0.8	0.11	46.78	-1.2037	-8.149	0.0033
911	SLU 76	-0.8	0.08	46.52	-1.197	-8.1042	-0.0042
911	SLU 77	-0.8	0.16	47.24	-1.2154	-8.2268	0.0156
911	SLU 78	-0.81	0.11	47.26	-1.2159	-8.2287	0.0043
911	SLU 79	-0.79	0.16	46.97	-1.2084	-8.1807	0.0157
911	SLU 80	-0.8	0.11	46.98	-1.2089	-8.1827	0.0044
911	SLU 81	-0.79	0.17	47.55	-1.2233	-8.2828	0.0186
911	SLU 82	-0.8	0.13	47.57	-1.2237	-8.2848	0.0073
911	SLU 83	-0.8	0.17	48.03	-1.2354	-8.3626	0.0196
911	SLU 84	-0.81	0.13	48.04	-1.2359	-8.3645	0.0083
911	SLE RA 1	-0.55	0.06	31.84	-0.8199	-5.5626	-0.0012
911	SLE RA 2	-0.57	0.01	31.86	-0.8204	-5.5648	-0.0137
911	SLE RA 3	-0.56	0.06	32.34	-0.8327	-5.6465	-0.0006
911	SLE RA 4	-0.57	0.04	32.35	-0.833	-5.6478	-0.0081
911	SLE RA 5	-0.57	0.02	32.17	-0.8285	-5.618	-0.0131
911	SLE RA 6	-0.57	0.07	32.65	-0.8408	-5.6997	0.0001
911	SLE RA 7	-0.58	0.04	32.66	-0.8411	-5.701	-0.0075
911	SLE RA 8	-0.57	0.07	32.47	-0.8361	-5.669	0.0002
911	SLE RA 9	-0.57	0.04	32.48	-0.8364	-5.6703	-0.0074
911	SLE RA 10	-0.6	0.05	34.24	-0.8813	-5.9718	-0.0061
911	SLE RA 11	-0.59	0.1	34.72	-0.8936	-6.0534	0.007
911	SLE RA 12	-0.6	0.07	34.73	-0.8939	-6.0548	-0.0005
911	SLE RA 13	-0.6	0.05	34.56	-0.8894	-6.0249	-0.0055
911	SLE RA 14	-0.6	0.1	35.04	-0.9017	-6.1066	0.0077
911	SLE RA 15	-0.61	0.07	35.05	-0.902	-6.1079	0.0001
911	SLE RA 16	-0.59	0.1	34.86	-0.897	-6.0759	0.0078
911	SLE RA 17	-0.6	0.07	34.87	-0.8973	-6.0772	0.0002
911	SLE RA 18	-0.59	0.11	35.25	-0.907	-6.144	0.0097
911	SLE RA 19	-0.6	0.08	35.26	-0.9073	-6.1453	0.0022
911	SLE RA 20	-0.6	0.11	35.56	-0.9151	-6.1972	0.0104
911	SLE RA 21	-0.61	0.08	35.57	-0.9154	-6.1985	0.0028
911	SLE FR 1	-0.55	0.06	31.84	-0.8199	-5.5626	-0.0012
911	SLE FR 2	-0.56	0.05	31.84	-0.82	-5.5631	-0.0037
911	SLE FR 3	-0.56	0.06	31.96	-0.8232	-5.5839	-0.0009
911	SLE FR 4	-0.57	0.07	32.86	-0.8461	-5.7375	-0.0004
911	SLE FR 5	-0.57	0.08	32.99	-0.8493	-5.7583	0.0024
911	SLE FR 6	-0.57	0.09	33.54	-0.8635	-5.8533	0.0043
911	SLE QP 1	-0.55	0.06	31.84	-0.8199	-5.5626	-0.0012
911	SLE QP 2	-0.57	0.08	32.86	-0.846	-5.737	0.0021
911	SLD 1	1.91	0.56	41.28	-1.065	-7.08	0.1613
911	SLD 2	1.65	0.1	41.74	-1.0757	-7.1679	0.0394
911	SLD 3	1.81	-0.48	41.78	-1.0763	-7.1731	-0.1005
911	SLD 4	1.55	-0.94	42.24	-1.0869	-7.261	-0.2224

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
911	SLD 5	0.37	1.89	34.54	-0.8927	-5.9828	0.4691
911	SLD 6	0.2	1.58	34.84	-0.8998	-6.0411	0.3881
911	SLD 7	0.05	-1.59	36.22	-0.9302	-6.293	-0.4035
911	SLD 8	-0.13	-1.89	36.52	-0.9373	-6.3514	-0.4844
911	SLD 9	-1	2.05	29.2	-0.7548	-5.1227	0.4887
911	SLD 10	-1.18	1.74	29.5	-0.7619	-5.181	0.4077
911	SLD 11	-1.33	-1.43	30.88	-0.7923	-5.433	-0.3839
911	SLD 12	-1.5	-1.73	31.18	-0.7994	-5.4913	-0.4648
911	SLD 13	-2.68	1.1	23.48	-0.6052	-4.2131	0.2266
911	SLD 14	-2.94	0.63	23.94	-0.6158	-4.301	0.1047
911	SLD 15	-2.78	0.05	23.98	-0.6164	-4.3062	-0.0351
911	SLD 16	-3.04	-0.41	24.44	-0.6271	-4.3941	-0.1571
911	SLV 1	5.22	1.17	52.57	-1.3587	-8.8823	0.364
911	SLV 2	4.61	0.09	53.64	-1.3835	-9.0869	0.0801
911	SLV 3	4.99	-1.19	53.71	-1.3842	-9.0937	-0.228
911	SLV 4	4.39	-2.27	54.78	-1.4091	-9.2984	-0.5118
911	SLV 5	1.61	4.17	36.85	-0.9568	-6.3239	1.0584
911	SLV 6	1.22	3.46	37.55	-0.973	-6.4573	0.8734
911	SLV 7	0.87	-3.69	40.66	-1.0418	-7.0288	-0.9148
911	SLV 8	0.48	-4.39	41.36	-1.058	-7.1621	-1.0998
911	SLV 9	-1.61	4.54	24.36	-0.6341	-4.312	1.104
911	SLV 10	-2	3.84	25.06	-0.6502	-4.4453	0.919
911	SLV 11	-2.35	-3.31	28.17	-0.7191	-5.0168	-0.8692
911	SLV 12	-2.74	-4.01	28.87	-0.7353	-5.1501	-1.0542
911	SLV 13	-5.52	2.42	10.94	-0.283	-2.1757	0.516
911	SLV 14	-6.13	1.34	12.01	-0.3079	-2.3804	0.2322
911	SLV 15	-5.74	0.06	12.08	-0.3086	-2.3872	-0.0759
911	SLV 16	-6.35	-1.01	13.15	-0.3334	-2.5918	-0.3598
911	CRTFP Ux+	0	0	0	0	0	0
911	CRTFP Ux-	0	0	0	0	0	0
911	CRTFP Uy+	0	0	0	0	0	0
911	CRTFP Uy-	0	0	0	0	0	0
914	SLU 1	1.73	0.17	74.03	-3.4977	-0.0856	0.0994
914	SLU 2	1.69	0.14	74.02	-3.4973	-0.0737	0.0982
914	SLU 3	1.78	0.18	75.75	-3.5772	-0.0834	0.1023
914	SLU 4	1.75	0.16	75.74	-3.577	-0.0763	0.1015
914	SLU 5	1.72	0.13	75.07	-3.5466	-0.0734	0.1
914	SLU 6	1.81	0.18	76.79	-3.6265	-0.083	0.1041
914	SLU 7	1.79	0.16	76.79	-3.6263	-0.0759	0.1034
914	SLU 8	1.8	0.16	76.13	-3.5963	-0.0848	0.1031
914	SLU 9	1.78	0.14	76.12	-3.5961	-0.0777	0.1024
914	SLU 10	1.81	0.26	83.09	-3.921	-0.0649	0.1056
914	SLU 11	1.9	0.3	84.81	-4.0009	-0.0746	0.1096
914	SLU 12	1.87	0.28	84.81	-4.0007	-0.0675	0.1089
914	SLU 13	1.84	0.25	84.14	-3.9703	-0.0645	0.1074
914	SLU 14	1.93	0.3	85.86	-4.0502	-0.0742	0.1114
914	SLU 15	1.9	0.28	85.86	-4.0501	-0.0671	0.1107
914	SLU 16	1.92	0.28	85.2	-4.02	-0.076	0.1104
914	SLU 17	1.89	0.26	85.19	-4.0198	-0.0689	0.1097
914	SLU 18	1.9	0.34	86.99	-4.1029	-0.073	0.1099
914	SLU 19	1.87	0.32	86.98	-4.1028	-0.0659	0.1092
914	SLU 20	1.93	0.34	88.04	-4.1523	-0.0726	0.1118
914	SLU 21	1.91	0.32	88.03	-4.1521	-0.0655	0.111
914	SLU 22	1.88	0.33	83.2	-3.9251	-0.0776	0.1088
914	SLU 23	1.83	0.29	83.19	-3.9248	-0.0657	0.1076
914	SLU 24	1.92	0.34	84.91	-4.0047	-0.0754	0.1117
914	SLU 25	1.9	0.32	84.9	-4.0045	-0.0683	0.1109
914	SLU 26	1.87	0.29	84.23	-3.9741	-0.0654	0.1095
914	SLU 27	1.96	0.33	85.96	-4.054	-0.0751	0.1135
914	SLU 28	1.93	0.31	85.95	-4.0538	-0.068	0.1128
914	SLU 29	1.95	0.32	85.29	-4.0237	-0.0769	0.1125
914	SLU 30	1.92	0.3	85.29	-4.0235	-0.0698	0.1118
914	SLU 31	1.95	0.41	92.25	-4.3485	-0.0569	0.115
914	SLU 32	2.04	0.46	93.98	-4.4284	-0.0666	0.119
914	SLU 33	2.01	0.44	93.97	-4.4282	-0.0595	0.1183
914	SLU 34	1.99	0.41	93.3	-4.3978	-0.0566	0.1168
914	SLU 35	2.08	0.45	95.02	-4.4777	-0.0663	0.1209
914	SLU 36	2.05	0.43	95.02	-4.4775	-0.0591	0.1201
914	SLU 37	2.06	0.44	94.36	-4.4474	-0.0681	0.1199
914	SLU 38	2.04	0.42	94.35	-4.4472	-0.061	0.1191
914	SLU 39	2.04	0.5	96.15	-4.5304	-0.065	0.1193
914	SLU 40	2.02	0.48	96.14	-4.5302	-0.0579	0.1186
914	SLU 41	2.08	0.49	97.2	-4.5797	-0.0646	0.1212
914	SLU 42	2.05	0.47	97.19	-4.5795	-0.0575	0.1204
914	SLU 43	2.2	0.17	93.1	-4.4004	-0.114	0.126
914	SLU 44	2.16	0.14	93.09	-4.4001	-0.1021	0.1248
914	SLU 45	2.25	0.18	94.81	-4.48	-0.1118	0.1289
914	SLU 46	2.22	0.16	94.81	-4.4798	-0.1047	0.1281
914	SLU 47	2.19	0.13	94.14	-4.4494	-0.1018	0.1266
914	SLU 48	2.28	0.18	95.86	-4.5293	-0.1114	0.1307
914	SLU 49	2.26	0.16	95.86	-4.5291	-0.1043	0.13
914	SLU 50	2.27	0.16	95.2	-4.499	-0.1132	0.1297
914	SLU 51	2.24	0.14	95.19	-4.4988	-0.1061	0.129
914	SLU 52	2.28	0.26	102.16	-4.8238	-0.0933	0.1322
914	SLU 53	2.36	0.3	103.88	-4.9037	-0.103	0.1362
914	SLU 54	2.34	0.28	103.88	-4.9035	-0.0959	0.1355
914	SLU 55	2.31	0.25	103.21	-4.8731	-0.0929	0.134
914	SLU 56	2.4	0.3	104.93	-4.953	-0.1026	0.138
914	SLU 57	2.37	0.28	104.92	-4.9528	-0.0955	0.1373
914	SLU 58	2.39	0.28	104.27	-4.9227	-0.1044	0.137

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
914	SLU 59	2.36	0.26	104.26	-4.9225	-0.0973	0.1363
914	SLU 60	2.37	0.34	106.06	-5.0057	-0.1014	0.1365
914	SLU 61	2.34	0.32	106.05	-5.0055	-0.0943	0.1358
914	SLU 62	2.4	0.34	107.1	-5.055	-0.101	0.1384
914	SLU 63	2.38	0.32	107.1	-5.0548	-0.0939	0.1376
914	SLU 64	2.35	0.32	102.26	-4.8279	-0.106	0.1354
914	SLU 65	2.3	0.29	102.25	-4.8275	-0.0941	0.1342
914	SLU 66	2.39	0.34	103.98	-4.9074	-0.1038	0.1383
914	SLU 67	2.37	0.32	103.97	-4.9073	-0.0967	0.1375
914	SLU 68	2.34	0.29	103.3	-4.8768	-0.0938	0.1361
914	SLU 69	2.43	0.33	105.03	-4.9568	-0.1035	0.1401
914	SLU 70	2.4	0.31	105.02	-4.9566	-0.0964	0.1394
914	SLU 71	2.42	0.32	104.36	-4.9265	-0.1053	0.1391
914	SLU 72	2.39	0.3	104.36	-4.9263	-0.0982	0.1384
914	SLU 73	2.42	0.41	111.32	-5.2512	-0.0853	0.1416
914	SLU 74	2.51	0.45	113.04	-5.3311	-0.095	0.1456
914	SLU 75	2.48	0.43	113.04	-5.331	-0.0879	0.1449
914	SLU 76	2.46	0.41	112.37	-5.3005	-0.085	0.1434
914	SLU 77	2.54	0.45	114.09	-5.3805	-0.0947	0.1475
914	SLU 78	2.52	0.43	114.09	-5.3803	-0.0876	0.1467
914	SLU 79	2.53	0.44	113.43	-5.3502	-0.0965	0.1465
914	SLU 80	2.51	0.42	113.42	-5.35	-0.0894	0.1457
914	SLU 81	2.51	0.49	115.22	-5.4332	-0.0934	0.1459
914	SLU 82	2.49	0.47	115.21	-5.433	-0.0863	0.1452
914	SLU 83	2.55	0.49	116.27	-5.4825	-0.0931	0.1478
914	SLU 84	2.52	0.47	116.26	-5.4823	-0.0859	0.147
914	SLE RA 1	1.77	0.22	76.65	-3.6198	-0.0833	0.1021
914	SLE RA 2	1.74	0.19	76.64	-3.6196	-0.0754	0.1013
914	SLE RA 3	1.8	0.22	77.79	-3.6728	-0.0818	0.104
914	SLE RA 4	1.79	0.21	77.79	-3.6727	-0.0771	0.1035
914	SLE RA 5	1.77	0.19	77.34	-3.6524	-0.0751	0.1025
914	SLE RA 6	1.83	0.22	78.49	-3.7057	-0.0816	0.1052
914	SLE RA 7	1.81	0.21	78.49	-3.7056	-0.0769	0.1047
914	SLE RA 8	1.82	0.21	78.05	-3.6855	-0.0828	0.1046
914	SLE RA 9	1.8	0.2	78.05	-3.6854	-0.0781	0.1041
914	SLE RA 10	1.82	0.27	82.69	-3.902	-0.0695	0.1062
914	SLE RA 11	1.88	0.3	83.84	-3.9553	-0.076	0.1089
914	SLE RA 12	1.86	0.29	83.83	-3.9552	-0.0712	0.1084
914	SLE RA 13	1.85	0.27	83.39	-3.9349	-0.0693	0.1074
914	SLE RA 14	1.91	0.3	84.54	-3.9882	-0.0757	0.1101
914	SLE RA 15	1.89	0.29	84.53	-3.9881	-0.071	0.1096
914	SLE RA 16	1.9	0.29	84.09	-3.968	-0.0769	0.1095
914	SLE RA 17	1.88	0.28	84.09	-3.9679	-0.0722	0.109
914	SLE RA 18	1.88	0.33	85.29	-4.0233	-0.0749	0.1091
914	SLE RA 19	1.87	0.32	85.28	-4.0232	-0.0702	0.1086
914	SLE RA 20	1.91	0.33	85.99	-4.0562	-0.0747	0.1103
914	SLE RA 21	1.89	0.31	85.98	-4.0561	-0.0699	0.1098
914	SLE FR 1	1.77	0.22	76.65	-3.6198	-0.0833	0.1021
914	SLE FR 2	1.77	0.21	76.65	-3.6197	-0.0817	0.1019
914	SLE FR 3	1.78	0.21	76.93	-3.6329	-0.0832	0.1026
914	SLE FR 4	1.8	0.24	79.24	-3.7408	-0.0792	0.104
914	SLE FR 5	1.82	0.25	79.52	-3.754	-0.0807	0.1047
914	SLE FR 6	1.83	0.27	80.97	-3.8216	-0.0791	0.1056
914	SLE QP 1	1.77	0.22	76.65	-3.6198	-0.0833	0.1021
914	SLE QP 2	1.81	0.25	79.24	-3.7408	-0.0808	0.1042
914	SLD 1	8.62	1.07	70.51	-3.4795	-0.1506	0.4191
914	SLD 2	7.94	1.62	69.71	-3.4385	-0.1255	0.3999
914	SLD 3	8.72	-0.68	72.09	-3.5343	-0.1091	0.405
914	SLD 4	8.04	-0.14	71.3	-3.4933	-0.084	0.3857
914	SLD 5	3.83	3.06	74.37	-3.5867	-0.1692	0.2236
914	SLD 6	3.37	3.42	73.84	-3.5595	-0.1525	0.2108
914	SLD 7	4.15	-2.79	79.64	-3.7695	-0.0309	0.1765
914	SLD 8	3.7	-2.43	79.11	-3.7423	-0.0142	0.1637
914	SLD 9	-0.09	2.93	79.37	-3.7394	-0.1473	0.0447
914	SLD 10	-0.54	3.29	78.84	-3.7122	-0.1306	0.0319
914	SLD 11	0.24	-2.92	84.65	-3.9222	-0.009	-0.0024
914	SLD 12	-0.21	-2.56	84.12	-3.895	0.0077	-0.0152
914	SLD 13	-4.42	0.64	87.19	-3.9884	-0.0776	-0.1773
914	SLD 14	-5.11	1.18	86.39	-3.9474	-0.0524	-0.1966
914	SLD 15	-4.32	-1.12	88.77	-4.0432	-0.0361	-0.1915
914	SLD 16	-5.01	-0.58	87.98	-4.0022	-0.0109	-0.2107
914	SLV 1	17.74	2.12	58.86	-3.1311	-0.2442	0.8399
914	SLV 2	16.14	3.39	57.01	-3.0356	-0.1857	0.7951
914	SLV 3	17.97	-1.86	62.44	-3.2549	-0.1503	0.8078
914	SLV 4	16.37	-0.59	60.59	-3.1594	-0.0917	0.763
914	SLV 5	6.52	6.62	68.03	-3.3869	-0.2827	0.3815
914	SLV 6	5.48	7.44	66.82	-3.3247	-0.2445	0.3523
914	SLV 7	7.28	-6.63	79.95	-3.7996	0.0306	0.2744
914	SLV 8	6.24	-5.81	78.75	-3.7374	0.0688	0.2452
914	SLV 9	-2.63	6.31	79.74	-3.7443	-0.2304	-0.0368
914	SLV 10	-3.67	7.13	78.53	-3.6821	-0.1922	-0.066
914	SLV 11	-1.87	-6.94	91.66	-4.157	0.0829	-0.1439
914	SLV 12	-2.91	-6.12	90.46	-4.0948	0.1211	-0.1731
914	SLV 13	-12.76	1.09	97.9	-4.3223	-0.0699	-0.5546
914	SLV 14	-14.36	2.35	96.05	-4.2268	-0.0113	-0.5994
914	SLV 15	-12.53	-2.89	101.47	-4.4461	0.0241	-0.5867
914	SLV 16	-14.13	-1.62	99.62	-4.3506	0.0827	-0.6315
914	CRTFP Ux+	0	0	0	0	0	0
914	CRTFP Ux-	0	0	0	0	0	0
914	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
914	CRTFP Uy-	0	0	0	0	0	0
929	SLU 1	0.46	0.13	14.26	-1.4457	0.6485	-0.0001
929	SLU 2	0.47	0.12	14.25	-1.445	0.6496	0.0049
929	SLU 3	0.47	0.13	14.58	-1.4783	0.6499	0.0009
929	SLU 4	0.48	0.13	14.58	-1.4779	0.6505	0.0039
929	SLU 5	0.48	0.12	14.45	-1.4652	0.6504	0.0066
929	SLU 6	0.48	0.13	14.78	-1.4985	0.6507	0.0026
929	SLU 7	0.49	0.12	14.78	-1.4981	0.6513	0.0056
929	SLU 8	0.48	0.13	14.66	-1.4861	0.6501	0.0034
929	SLU 9	0.48	0.12	14.65	-1.4857	0.6507	0.0064
929	SLU 10	0.5	0.17	15.84	-1.6055	0.6587	-0.0104
929	SLU 11	0.51	0.19	16.16	-1.6388	0.659	-0.0144
929	SLU 12	0.52	0.18	16.16	-1.6384	0.6596	-0.0114
929	SLU 13	0.51	0.17	16.03	-1.6257	0.6595	-0.0087
929	SLU 14	0.52	0.19	16.36	-1.659	0.6598	-0.0127
929	SLU 15	0.53	0.18	16.36	-1.6586	0.6604	-0.0097
929	SLU 16	0.51	0.18	16.24	-1.6466	0.6592	-0.0119
929	SLU 17	0.52	0.18	16.24	-1.6462	0.6598	-0.0089
929	SLU 18	0.51	0.21	16.52	-1.6749	0.6615	-0.0219
929	SLU 19	0.52	0.2	16.52	-1.6745	0.6621	-0.0189
929	SLU 20	0.52	0.21	16.72	-1.6951	0.6623	-0.0202
929	SLU 21	0.53	0.2	16.72	-1.6947	0.6629	-0.0172
929	SLU 22	0.5	0.18	15.87	-1.6093	0.6608	-0.0139
929	SLU 23	0.51	0.17	15.87	-1.6086	0.6618	-0.009
929	SLU 24	0.52	0.19	16.19	-1.6419	0.6622	-0.013
929	SLU 25	0.52	0.18	16.19	-1.6415	0.6628	-0.01
929	SLU 26	0.52	0.17	16.07	-1.6288	0.6626	-0.0072
929	SLU 27	0.53	0.18	16.39	-1.6621	0.663	-0.0112
929	SLU 28	0.53	0.18	16.39	-1.6617	0.6636	-0.0083
929	SLU 29	0.52	0.18	16.27	-1.6497	0.6623	-0.0105
929	SLU 30	0.53	0.17	16.27	-1.6493	0.663	-0.0075
929	SLU 31	0.55	0.23	17.45	-1.7691	0.6709	-0.0243
929	SLU 32	0.56	0.24	17.78	-1.8024	0.6713	-0.0283
929	SLU 33	0.56	0.23	17.77	-1.802	0.6719	-0.0253
929	SLU 34	0.56	0.23	17.65	-1.7893	0.6717	-0.0226
929	SLU 35	0.57	0.24	17.98	-1.8226	0.6721	-0.0265
929	SLU 36	0.57	0.23	17.97	-1.8222	0.6727	-0.0236
929	SLU 37	0.56	0.23	17.85	-1.8102	0.6714	-0.0258
929	SLU 38	0.57	0.23	17.85	-1.8098	0.6721	-0.0228
929	SLU 39	0.56	0.26	18.13	-1.8385	0.6738	-0.0358
929	SLU 40	0.56	0.25	18.13	-1.8381	0.6744	-0.0328
929	SLU 41	0.57	0.26	18.33	-1.8587	0.6746	-0.0341
929	SLU 42	0.57	0.25	18.33	-1.8583	0.6752	-0.0311
929	SLU 43	0.58	0.15	17.99	-1.8233	0.8389	0.0047
929	SLU 44	0.59	0.14	17.98	-1.8227	0.8399	0.0096
929	SLU 45	0.59	0.15	18.31	-1.8559	0.8403	0.0057
929	SLU 46	0.6	0.15	18.3	-1.8555	0.8409	0.0086
929	SLU 47	0.6	0.14	18.18	-1.8429	0.8407	0.0114
929	SLU 48	0.61	0.15	18.51	-1.8761	0.8411	0.0074
929	SLU 49	0.61	0.15	18.5	-1.8757	0.8417	0.0103
929	SLU 50	0.6	0.15	18.38	-1.8637	0.8404	0.0081
929	SLU 51	0.61	0.14	18.38	-1.8633	0.8411	0.0111
929	SLU 52	0.63	0.2	19.56	-1.9831	0.849	-0.0057
929	SLU 53	0.63	0.21	19.89	-2.0164	0.8494	-0.0097
929	SLU 54	0.64	0.2	19.88	-2.016	0.85	-0.0067
929	SLU 55	0.64	0.19	19.76	-2.0033	0.8498	-0.0039
929	SLU 56	0.64	0.21	20.09	-2.0366	0.8502	-0.0079
929	SLU 57	0.65	0.2	20.08	-2.0362	0.8508	-0.005
929	SLU 58	0.64	0.2	19.97	-2.0242	0.8495	-0.0072
929	SLU 59	0.64	0.2	19.96	-2.0238	0.8502	-0.0042
929	SLU 60	0.63	0.23	20.25	-2.0526	0.8519	-0.0172
929	SLU 61	0.64	0.22	20.24	-2.0522	0.8525	-0.0142
929	SLU 62	0.64	0.23	20.44	-2.0728	0.8527	-0.0154
929	SLU 63	0.65	0.22	20.44	-2.0724	0.8533	-0.0125
929	SLU 64	0.62	0.21	19.6	-1.9869	0.8511	-0.0092
929	SLU 65	0.63	0.19	19.59	-1.9863	0.8522	-0.0042
929	SLU 66	0.64	0.21	19.92	-2.0195	0.8525	-0.0082
929	SLU 67	0.65	0.2	19.92	-2.0191	0.8531	-0.0052
929	SLU 68	0.64	0.19	19.79	-2.0065	0.853	-0.0025
929	SLU 69	0.65	0.21	20.12	-2.0397	0.8533	-0.0065
929	SLU 70	0.66	0.2	20.11	-2.0393	0.8539	-0.0035
929	SLU 71	0.65	0.2	20	-2.0273	0.8527	-0.0057
929	SLU 72	0.65	0.19	19.99	-2.0269	0.8533	-0.0028
929	SLU 73	0.67	0.25	21.17	-2.1467	0.8613	-0.0195
929	SLU 74	0.68	0.26	21.5	-2.18	0.8616	-0.0235
929	SLU 75	0.68	0.25	21.5	-2.1796	0.8622	-0.0206
929	SLU 76	0.68	0.25	21.37	-2.1669	0.8621	-0.0178
929	SLU 77	0.69	0.26	21.7	-2.2002	0.8624	-0.0218
929	SLU 78	0.69	0.25	21.7	-2.1998	0.863	-0.0188
929	SLU 79	0.68	0.26	21.58	-2.1878	0.8618	-0.021
929	SLU 80	0.69	0.25	21.57	-2.1874	0.8624	-0.0181
929	SLU 81	0.68	0.28	21.86	-2.2162	0.8641	-0.031
929	SLU 82	0.68	0.28	21.85	-2.2157	0.8648	-0.0281
929	SLU 83	0.69	0.28	22.06	-2.2364	0.8649	-0.0293
929	SLU 84	0.69	0.27	22.05	-2.2359	0.8655	-0.0263
929	SLE RA 1	0.47	0.15	14.72	-1.4925	0.652	-0.004
929	SLE RA 2	0.48	0.14	14.72	-1.492	0.6527	-0.0007
929	SLE RA 3	0.48	0.15	14.94	-1.5142	0.653	-0.0034
929	SLE RA 4	0.48	0.14	14.93	-1.5139	0.6534	-0.0014
929	SLE RA 5	0.48	0.14	14.85	-1.5055	0.6532	0.0004

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
929	SLE RA 6	0.49	0.15	15.07	-1.5277	0.6535	-0.0022
929	SLE RA 7	0.49	0.14	15.07	-1.5274	0.6539	-0.0002
929	SLE RA 8	0.48	0.14	14.99	-1.5194	0.6531	-0.0017
929	SLE RA 9	0.49	0.14	14.98	-1.5191	0.6535	0.0003
929	SLE RA 10	0.5	0.18	15.77	-1.599	0.6588	-0.0109
929	SLE RA 11	0.51	0.18	15.99	-1.6212	0.659	-0.0136
929	SLE RA 12	0.51	0.18	15.99	-1.6209	0.6594	-0.0116
929	SLE RA 13	0.51	0.17	15.9	-1.6124	0.6593	-0.0098
929	SLE RA 14	0.51	0.18	16.12	-1.6346	0.6595	-0.0124
929	SLE RA 15	0.52	0.18	16.12	-1.6344	0.66	-0.0104
929	SLE RA 16	0.51	0.18	16.04	-1.6264	0.6591	-0.0119
929	SLE RA 17	0.51	0.18	16.04	-1.6261	0.6596	-0.0099
929	SLE RA 18	0.51	0.2	16.23	-1.6453	0.6607	-0.0186
929	SLE RA 19	0.51	0.19	16.23	-1.645	0.6611	-0.0166
929	SLE RA 20	0.51	0.2	16.36	-1.6587	0.6612	-0.0174
929	SLE RA 21	0.52	0.19	16.36	-1.6585	0.6616	-0.0155
929	SLE FR 1	0.47	0.15	14.72	-1.4925	0.652	-0.004
929	SLE FR 2	0.47	0.15	14.72	-1.4924	0.6522	-0.0034
929	SLE FR 3	0.47	0.15	14.77	-1.4978	0.6522	-0.0036
929	SLE FR 4	0.48	0.16	15.17	-1.5382	0.6548	-0.0077
929	SLE FR 5	0.48	0.16	15.23	-1.5437	0.6548	-0.0079
929	SLE FR 6	0.49	0.17	15.47	-1.5689	0.6564	-0.0113
929	SLE QP 1	0.47	0.15	14.72	-1.4925	0.652	-0.004
929	SLE QP 2	0.48	0.16	15.17	-1.5383	0.6546	-0.0084
929	SLD 1	1	0.43	11.26	-1.1408	0.7337	-0.0145
929	SLD 2	0.82	0.76	11.02	-1.1169	0.7022	-0.1483
929	SLD 3	1.22	-0.25	11.63	-1.178	0.777	0.2463
929	SLD 4	1.04	0.08	11.39	-1.1541	0.7455	0.1125
929	SLD 5	0.34	1.22	13.48	-1.367	0.6184	-0.3815
929	SLD 6	0.22	1.44	13.32	-1.3511	0.5975	-0.4703
929	SLD 7	1.06	-1.06	14.72	-1.491	0.7627	0.488
929	SLD 8	0.94	-0.84	14.56	-1.4751	0.7418	0.3992
929	SLD 9	0.02	1.16	15.79	-1.6015	0.5674	-0.4159
929	SLD 10	-0.1	1.38	15.63	-1.5856	0.5465	-0.5047
929	SLD 11	0.74	-1.12	17.03	-1.7255	0.7117	0.4535
929	SLD 12	0.62	-0.9	16.87	-1.7096	0.6908	0.3647
929	SLD 13	-0.08	0.24	18.96	-1.9225	0.5638	-0.1293
929	SLD 14	-0.25	0.58	18.72	-1.8986	0.5323	-0.2631
929	SLD 15	0.14	-0.44	19.33	-1.9597	0.6071	0.1315
929	SLD 16	-0.04	-0.11	19.09	-1.9358	0.5756	-0.0023
929	SLV 1	1.7	0.77	6.02	-0.6098	0.8413	-0.0142
929	SLV 2	1.29	1.54	5.47	-0.5542	0.768	-0.3257
929	SLV 3	2.19	-0.78	6.86	-0.6938	0.9391	0.577
929	SLV 4	1.78	-0.01	6.31	-0.6382	0.8658	0.2655
929	SLV 5	0.18	2.56	11.25	-1.1421	0.5752	-0.852
929	SLV 6	-0.09	3.06	10.89	-1.1059	0.5274	-1.055
929	SLV 7	1.81	-2.61	14.05	-1.4221	0.9012	1.1186
929	SLV 8	1.54	-2.11	13.69	-1.3859	0.8534	0.9157
929	SLV 9	-0.58	2.43	16.66	-1.6907	0.4558	-0.9324
929	SLV 10	-0.85	2.93	16.3	-1.6545	0.4081	-1.1354
929	SLV 11	1.05	-2.74	19.45	-1.9707	0.7818	1.0382
929	SLV 12	0.78	-2.24	19.09	-1.9344	0.7341	0.8352
929	SLV 13	-0.82	0.33	24.04	-2.4384	0.4434	-0.2823
929	SLV 14	-1.23	1.1	23.48	-2.3828	0.3701	-0.5938
929	SLV 15	-0.33	-1.22	24.88	-2.5224	0.5412	0.3089
929	SLV 16	-0.74	-0.45	24.32	-2.4668	0.4679	-0.0026
929	CRTFP Ux+	0	0	0	0	0	0
929	CRTFP Ux-	0	0	0	0	0	0
929	CRTFP Uy+	0	0	0	0	0	0
929	CRTFP Uy-	0	0	0	0	0	0
932	SLU 1	-0.33	0.91	58.9	0.0733	0.5185	0.0281
932	SLU 2	-0.36	0.84	58.97	0.074	0.5171	0.0286
932	SLU 3	-0.34	0.95	60.28	0.0753	0.5329	0.0289
932	SLU 4	-0.36	0.91	60.32	0.0758	0.532	0.0292
932	SLU 5	-0.36	0.86	59.76	0.0751	0.5251	0.029
932	SLU 6	-0.34	0.97	61.07	0.0763	0.5409	0.0292
932	SLU 7	-0.36	0.92	61.11	0.0768	0.5401	0.0295
932	SLU 8	-0.33	0.94	60.47	0.0753	0.5345	0.0288
932	SLU 9	-0.35	0.9	60.52	0.0758	0.5337	0.0291
932	SLU 10	-0.42	0.99	66.74	0.0827	0.5966	0.0328
932	SLU 11	-0.4	1.1	68.04	0.084	0.6124	0.0331
932	SLU 12	-0.42	1.05	68.09	0.0844	0.6116	0.0334
932	SLU 13	-0.42	1	67.52	0.0838	0.6047	0.0332
932	SLU 14	-0.4	1.11	68.83	0.085	0.6204	0.0334
932	SLU 15	-0.41	1.07	68.87	0.0855	0.6196	0.0337
932	SLU 16	-0.39	1.08	68.24	0.084	0.6141	0.0331
932	SLU 17	-0.41	1.04	68.28	0.0845	0.6132	0.0333
932	SLU 18	-0.42	1.12	69.99	0.0857	0.6321	0.0341
932	SLU 19	-0.44	1.08	70.04	0.0862	0.6313	0.0344
932	SLU 20	-0.41	1.13	70.78	0.0867	0.6401	0.0345
932	SLU 21	-0.43	1.09	70.82	0.0872	0.6393	0.0348
932	SLU 22	-0.38	1.15	66.55	0.0832	0.5975	0.0322
932	SLU 23	-0.41	1.08	66.62	0.0839	0.5961	0.0327
932	SLU 24	-0.39	1.19	67.93	0.0852	0.6118	0.0329
932	SLU 25	-0.4	1.15	67.97	0.0856	0.611	0.0332
932	SLU 26	-0.41	1.1	67.41	0.0849	0.6041	0.033
932	SLU 27	-0.38	1.2	68.71	0.0862	0.6199	0.0333
932	SLU 28	-0.4	1.16	68.75	0.0866	0.619	0.0336
932	SLU 29	-0.37	1.18	68.12	0.0852	0.6135	0.0329
932	SLU 30	-0.39	1.14	68.16	0.0857	0.6127	0.0332

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
932	SLU 31	-0.47	1.23	74.38	0.0926	0.6756	0.0369
932	SLU 32	-0.44	1.33	75.69	0.0939	0.6913	0.0372
932	SLU 33	-0.46	1.29	75.73	0.0943	0.6905	0.0374
932	SLU 34	-0.47	1.24	75.17	0.0936	0.6836	0.0372
932	SLU 35	-0.44	1.35	76.47	0.0949	0.6994	0.0375
932	SLU 36	-0.46	1.31	76.52	0.0953	0.6985	0.0378
932	SLU 37	-0.43	1.32	75.88	0.0939	0.693	0.0371
932	SLU 38	-0.45	1.28	75.92	0.0944	0.6922	0.0374
932	SLU 39	-0.46	1.36	77.64	0.0956	0.7111	0.0382
932	SLU 40	-0.48	1.32	77.68	0.096	0.7102	0.0385
932	SLU 41	-0.46	1.37	78.42	0.0966	0.7191	0.0386
932	SLU 42	-0.48	1.33	78.47	0.097	0.7183	0.0389
932	SLU 43	-0.42	1.1	73.95	0.0919	0.647	0.0352
932	SLU 44	-0.45	1.03	74.02	0.0927	0.6456	0.0356
932	SLU 45	-0.42	1.14	75.33	0.0939	0.6613	0.0359
932	SLU 46	-0.44	1.1	75.37	0.0944	0.6605	0.0362
932	SLU 47	-0.45	1.05	74.81	0.0937	0.6536	0.036
932	SLU 48	-0.42	1.16	76.12	0.0949	0.6694	0.0363
932	SLU 49	-0.44	1.12	76.16	0.0954	0.6685	0.0366
932	SLU 50	-0.41	1.13	75.52	0.0939	0.663	0.0359
932	SLU 51	-0.43	1.09	75.57	0.0944	0.6622	0.0362
932	SLU 52	-0.51	1.18	81.79	0.1013	0.7251	0.0399
932	SLU 53	-0.48	1.29	83.09	0.1026	0.7409	0.0401
932	SLU 54	-0.5	1.25	83.14	0.103	0.74	0.0404
932	SLU 55	-0.5	1.19	82.57	0.1024	0.7331	0.0402
932	SLU 56	-0.48	1.3	83.88	0.1036	0.7489	0.0405
932	SLU 57	-0.5	1.26	83.92	0.1041	0.7481	0.0408
932	SLU 58	-0.47	1.28	83.29	0.1026	0.7425	0.0401
932	SLU 59	-0.49	1.23	83.33	0.1031	0.7417	0.0404
932	SLU 60	-0.5	1.31	85.04	0.1043	0.7606	0.0412
932	SLU 61	-0.52	1.27	85.08	0.1048	0.7597	0.0415
932	SLU 62	-0.5	1.32	85.83	0.1053	0.7686	0.0415
932	SLU 63	-0.52	1.28	85.87	0.1058	0.7678	0.0418
932	SLU 64	-0.46	1.34	81.6	0.1018	0.7259	0.0392
932	SLU 65	-0.49	1.27	81.67	0.1025	0.7246	0.0397
932	SLU 66	-0.47	1.38	82.98	0.1038	0.7403	0.04
932	SLU 67	-0.49	1.34	83.02	0.1042	0.7395	0.0403
932	SLU 68	-0.49	1.29	82.45	0.1035	0.7326	0.0401
932	SLU 69	-0.47	1.4	83.76	0.1048	0.7483	0.0403
932	SLU 70	-0.49	1.36	83.8	0.1053	0.7475	0.0406
932	SLU 71	-0.46	1.37	83.17	0.1038	0.742	0.04
932	SLU 72	-0.48	1.33	83.21	0.1043	0.7412	0.0402
932	SLU 73	-0.55	1.42	89.43	0.1112	0.8041	0.0439
932	SLU 74	-0.53	1.53	90.74	0.1125	0.8198	0.0442
932	SLU 75	-0.55	1.49	90.78	0.1129	0.819	0.0445
932	SLU 76	-0.55	1.43	90.22	0.1122	0.8121	0.0443
932	SLU 77	-0.53	1.54	91.52	0.1135	0.8278	0.0446
932	SLU 78	-0.54	1.5	91.57	0.1139	0.827	0.0448
932	SLU 79	-0.52	1.51	90.93	0.1125	0.8215	0.0442
932	SLU 80	-0.54	1.47	90.97	0.113	0.8207	0.0445
932	SLU 81	-0.55	1.55	92.69	0.1142	0.8395	0.0453
932	SLU 82	-0.57	1.51	92.73	0.1146	0.8387	0.0455
932	SLU 83	-0.54	1.56	93.47	0.1152	0.8476	0.0456
932	SLU 84	-0.56	1.52	93.52	0.1157	0.8467	0.0459
932	SLE RA 1	-0.35	0.98	61.09	0.0761	0.5411	0.0293
932	SLE RA 2	-0.37	0.93	61.13	0.0766	0.5401	0.0296
932	SLE RA 3	-0.35	1.01	62.01	0.0775	0.5506	0.0298
932	SLE RA 4	-0.36	0.98	62.03	0.0778	0.5501	0.03
932	SLE RA 5	-0.37	0.94	61.66	0.0773	0.5455	0.0298
932	SLE RA 6	-0.35	1.02	62.53	0.0781	0.556	0.03
932	SLE RA 7	-0.36	0.99	62.56	0.0784	0.5554	0.0302
932	SLE RA 8	-0.34	1	62.14	0.0775	0.5518	0.0298
932	SLE RA 9	-0.36	0.97	62.16	0.0778	0.5512	0.03
932	SLE RA 10	-0.41	1.03	66.31	0.0824	0.5932	0.0324
932	SLE RA 11	-0.39	1.1	67.18	0.0832	0.6036	0.0326
932	SLE RA 12	-0.4	1.08	67.21	0.0835	0.6031	0.0328
932	SLE RA 13	-0.4	1.04	66.83	0.0831	0.5985	0.0327
932	SLE RA 14	-0.39	1.11	67.7	0.0839	0.609	0.0328
932	SLE RA 15	-0.4	1.08	67.73	0.0842	0.6084	0.033
932	SLE RA 16	-0.38	1.09	67.31	0.0833	0.6048	0.0326
932	SLE RA 17	-0.39	1.07	67.34	0.0836	0.6042	0.0328
932	SLE RA 18	-0.4	1.12	68.48	0.0844	0.6168	0.0333
932	SLE RA 19	-0.41	1.09	68.51	0.0847	0.6162	0.0335
932	SLE RA 20	-0.4	1.13	69	0.0851	0.6221	0.0335
932	SLE RA 21	-0.41	1.1	69.03	0.0854	0.6216	0.0337
932	SLE FR 1	-0.35	0.98	61.09	0.0761	0.5411	0.0293
932	SLE FR 2	-0.35	0.97	61.1	0.0762	0.5409	0.0294
932	SLE FR 3	-0.35	0.98	61.3	0.0764	0.5432	0.0294
932	SLE FR 4	-0.37	1.01	63.31	0.0787	0.5636	0.0306
932	SLE FR 5	-0.36	1.02	63.52	0.0789	0.5659	0.0306
932	SLE FR 6	-0.37	1.05	64.78	0.0803	0.5789	0.0313
932	SLE QP 1	-0.35	0.98	61.09	0.0761	0.5411	0.0293
932	SLE QP 2	-0.36	1.02	63.31	0.0786	0.5638	0.0305
932	SLD 1	5.91	2.36	67.89	0.0875	0.6596	-0.0005
932	SLD 2	5.33	2.14	67.76	0.0877	0.6594	0.0105
932	SLD 3	5.8	0.7	69.13	0.0967	0.6473	-0.0018
932	SLD 4	5.22	0.48	69	0.0969	0.6472	0.0093
932	SLD 5	1.8	3.97	62.82	0.0673	0.6111	0.0211
932	SLD 6	1.41	3.82	62.74	0.0674	0.611	0.0285
932	SLD 7	1.42	-1.55	66.96	0.098	0.5703	0.0168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
932	SLD 8	1.04	-1.69	66.87	0.0981	0.5702	0.0242
932	SLD 9	-1.76	3.73	59.74	0.0591	0.5574	0.0368
932	SLD 10	-2.15	3.59	59.65	0.0592	0.5573	0.0442
932	SLD 11	-2.14	-1.78	63.87	0.0898	0.5165	0.0325
932	SLD 12	-2.52	-1.93	63.79	0.0899	0.5164	0.0399
932	SLD 13	-5.95	1.56	57.61	0.0603	0.4804	0.0517
932	SLD 14	-6.52	1.34	57.48	0.0605	0.4802	0.0628
932	SLD 15	-6.06	-0.1	58.85	0.0695	0.4681	0.0504
932	SLD 16	-6.64	-0.32	58.72	0.0697	0.468	0.0615
932	SLV 1	14.3	4.09	74.09	0.1	0.7878	-0.042
932	SLV 2	12.96	3.57	73.79	0.1004	0.7874	-0.0162
932	SLV 3	14.04	0.34	76.9	0.1209	0.7599	-0.045
932	SLV 4	12.7	-0.18	76.6	0.1212	0.7595	-0.0192
932	SLV 5	4.67	7.71	62.34	0.0533	0.6733	0.0087
932	SLV 6	3.79	7.38	62.14	0.0536	0.6731	0.0255
932	SLV 7	3.8	-4.77	71.69	0.1228	0.5804	-0.0012
932	SLV 8	2.93	-5.11	71.5	0.1231	0.5801	0.0156
932	SLV 9	-3.65	7.15	55.11	0.0341	0.5474	0.0454
932	SLV 10	-4.53	6.81	54.92	0.0344	0.5472	0.0622
932	SLV 11	-4.51	-5.34	64.47	0.1036	0.4545	0.0355
932	SLV 12	-5.39	-5.67	64.27	0.1039	0.4542	0.0523
932	SLV 13	-13.42	2.22	50.01	0.036	0.368	0.0802
932	SLV 14	-14.77	1.7	49.71	0.0363	0.3676	0.1059
932	SLV 15	-13.68	-1.53	52.82	0.0568	0.3401	0.0772
932	SLV 16	-15.03	-2.05	52.52	0.0572	0.3398	0.103
932	CRTFP Ux+	0	0	0	0	0	0
932	CRTFP Ux-	0	0	0	0	0	0
932	CRTFP Uy+	0	0	0	0	0	0
932	CRTFP Uy-	0	0	0	0	0	0
935	SLU 1	0.4	1.73	56.43	0.0867	-0.2084	-0.0047
935	SLU 2	0.36	1.69	56.5	0.0874	-0.2073	-0.0039
935	SLU 3	0.41	1.79	57.75	0.0891	-0.2139	-0.0048
935	SLU 4	0.38	1.77	57.8	0.0896	-0.2133	-0.0043
935	SLU 5	0.37	1.72	57.29	0.0888	-0.2109	-0.004
935	SLU 6	0.42	1.82	58.54	0.0905	-0.2175	-0.0049
935	SLU 7	0.4	1.8	58.59	0.0909	-0.2169	-0.0044
935	SLU 8	0.42	1.78	58.01	0.0893	-0.2156	-0.0049
935	SLU 9	0.4	1.76	58.05	0.0898	-0.215	-0.0045
935	SLU 10	0.37	1.95	63.79	0.0979	-0.2362	-0.0024
935	SLU 11	0.42	2.06	65.04	0.0996	-0.2428	-0.0032
935	SLU 12	0.4	2.03	65.08	0.1	-0.2422	-0.0028
935	SLU 13	0.38	1.98	64.58	0.0992	-0.2398	-0.0025
935	SLU 14	0.43	2.08	65.83	0.1009	-0.2464	-0.0034
935	SLU 15	0.41	2.06	65.87	0.1014	-0.2458	-0.0029
935	SLU 16	0.44	2.05	65.29	0.0998	-0.2445	-0.0034
935	SLU 17	0.41	2.02	65.34	0.1003	-0.2439	-0.003
935	SLU 18	0.42	2.11	66.84	0.1016	-0.2497	-0.0025
935	SLU 19	0.39	2.08	66.88	0.1021	-0.249	-0.002
935	SLU 20	0.43	2.13	67.63	0.1029	-0.2533	-0.0026
935	SLU 21	0.41	2.11	67.67	0.1034	-0.2526	-0.0022
935	SLU 22	0.42	2.06	63.69	0.0983	-0.2404	-0.0039
935	SLU 23	0.38	2.03	63.76	0.0991	-0.2393	-0.0032
935	SLU 24	0.43	2.13	65.01	0.1008	-0.2459	-0.004
935	SLU 25	0.41	2.1	65.05	0.1012	-0.2453	-0.0036
935	SLU 26	0.4	2.05	64.55	0.1004	-0.2429	-0.0033
935	SLU 27	0.45	2.15	65.8	0.1021	-0.2495	-0.0042
935	SLU 28	0.42	2.13	65.84	0.1026	-0.2489	-0.0037
935	SLU 29	0.45	2.12	65.27	0.101	-0.2476	-0.0042
935	SLU 30	0.43	2.09	65.31	0.1015	-0.2469	-0.0037
935	SLU 31	0.4	2.29	71.04	0.1095	-0.2682	-0.0016
935	SLU 32	0.45	2.39	72.29	0.1113	-0.2748	-0.0025
935	SLU 33	0.42	2.37	72.33	0.1117	-0.2742	-0.0021
935	SLU 34	0.41	2.31	71.83	0.1109	-0.2718	-0.0018
935	SLU 35	0.46	2.42	73.08	0.1126	-0.2784	-0.0027
935	SLU 36	0.44	2.39	73.12	0.1131	-0.2778	-0.0022
935	SLU 37	0.46	2.38	72.55	0.1115	-0.2765	-0.0027
935	SLU 38	0.44	2.36	72.59	0.1119	-0.2758	-0.0022
935	SLU 39	0.44	2.44	74.09	0.1133	-0.2817	-0.0018
935	SLU 40	0.42	2.42	74.13	0.1137	-0.281	-0.0013
935	SLU 41	0.46	2.47	74.88	0.1146	-0.2853	-0.0019
935	SLU 42	0.43	2.44	74.92	0.1151	-0.2846	-0.0014
935	SLU 43	0.51	2.14	70.88	0.1086	-0.26	-0.0063
935	SLU 44	0.47	2.1	70.95	0.1094	-0.2589	-0.0055
935	SLU 45	0.52	2.2	72.2	0.1111	-0.2655	-0.0064
935	SLU 46	0.49	2.17	72.24	0.1116	-0.2648	-0.006
935	SLU 47	0.48	2.12	71.74	0.1107	-0.2625	-0.0057
935	SLU 48	0.53	2.22	72.99	0.1125	-0.2691	-0.0066
935	SLU 49	0.51	2.2	73.03	0.1129	-0.2684	-0.0061
935	SLU 50	0.53	2.19	72.45	0.1113	-0.2672	-0.0066
935	SLU 51	0.51	2.17	72.5	0.1118	-0.2665	-0.0061
935	SLU 52	0.48	2.36	78.23	0.1199	-0.2878	-0.004
935	SLU 53	0.53	2.46	79.48	0.1216	-0.2944	-0.0049
935	SLU 54	0.51	2.44	79.52	0.122	-0.2937	-0.0044
935	SLU 55	0.49	2.39	79.02	0.1212	-0.2914	-0.0042
935	SLU 56	0.54	2.49	80.27	0.1229	-0.298	-0.005
935	SLU 57	0.52	2.46	80.31	0.1234	-0.2973	-0.0046
935	SLU 58	0.55	2.45	79.74	0.1218	-0.2961	-0.0051
935	SLU 59	0.52	2.43	79.78	0.1223	-0.2954	-0.0046
935	SLU 60	0.52	2.51	81.28	0.1236	-0.3012	-0.0041
935	SLU 61	0.5	2.49	81.32	0.124	-0.3006	-0.0037

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
935	SLU 62	0.54	2.54	82.07	0.1249	-0.3048	-0.0043
935	SLU 63	0.51	2.51	82.11	0.1254	-0.3042	-0.0038
935	SLU 64	0.53	2.47	78.13	0.1203	-0.292	-0.0056
935	SLU 65	0.49	2.43	78.2	0.1211	-0.2909	-0.0048
935	SLU 66	0.54	2.53	79.45	0.1228	-0.2975	-0.0057
935	SLU 67	0.52	2.51	79.49	0.1232	-0.2968	-0.0052
935	SLU 68	0.51	2.46	78.99	0.1224	-0.2945	-0.005
935	SLU 69	0.56	2.56	80.24	0.1241	-0.3011	-0.0058
935	SLU 70	0.53	2.53	80.28	0.1246	-0.3004	-0.0054
935	SLU 71	0.56	2.52	79.71	0.123	-0.2991	-0.0059
935	SLU 72	0.54	2.5	79.75	0.1235	-0.2985	-0.0054
935	SLU 73	0.51	2.69	85.48	0.1315	-0.3198	-0.0033
935	SLU 74	0.56	2.79	86.73	0.1332	-0.3264	-0.0042
935	SLU 75	0.53	2.77	86.78	0.1337	-0.3257	-0.0037
935	SLU 76	0.52	2.72	86.27	0.1329	-0.3234	-0.0034
935	SLU 77	0.57	2.82	87.52	0.1346	-0.33	-0.0043
935	SLU 78	0.55	2.8	87.57	0.1351	-0.3293	-0.0038
935	SLU 79	0.57	2.79	86.99	0.1335	-0.328	-0.0043
935	SLU 80	0.55	2.76	87.03	0.1339	-0.3274	-0.0039
935	SLU 81	0.55	2.85	88.53	0.1353	-0.3332	-0.0034
935	SLU 82	0.53	2.82	88.58	0.1357	-0.3326	-0.0029
935	SLU 83	0.57	2.87	89.32	0.1366	-0.3368	-0.0035
935	SLU 84	0.54	2.85	89.37	0.1371	-0.3362	-0.0031
935	SLE RA 1	0.4	1.83	58.51	0.09	-0.2176	-0.0045
935	SLE RA 2	0.38	1.8	58.55	0.0905	-0.2168	-0.0039
935	SLE RA 3	0.41	1.87	59.39	0.0916	-0.2212	-0.0045
935	SLE RA 4	0.4	1.85	59.42	0.0919	-0.2208	-0.0042
935	SLE RA 5	0.39	1.82	59.08	0.0914	-0.2192	-0.004
935	SLE RA 6	0.42	1.89	59.91	0.0925	-0.2236	-0.0046
935	SLE RA 7	0.41	1.87	59.94	0.0928	-0.2232	-0.0043
935	SLE RA 8	0.42	1.86	59.56	0.0918	-0.2223	-0.0046
935	SLE RA 9	0.41	1.85	59.59	0.0921	-0.2219	-0.0043
935	SLE RA 10	0.39	1.98	63.41	0.0975	-0.2361	-0.0029
935	SLE RA 11	0.42	2.04	64.24	0.0986	-0.2405	-0.0035
935	SLE RA 12	0.4	2.03	64.27	0.0989	-0.2401	-0.0032
935	SLE RA 13	0.4	1.99	63.93	0.0984	-0.2385	-0.003
935	SLE RA 14	0.43	2.06	64.77	0.0995	-0.2429	-0.0036
935	SLE RA 15	0.41	2.04	64.8	0.0998	-0.2425	-0.0033
935	SLE RA 16	0.43	2.04	64.41	0.0988	-0.2416	-0.0036
935	SLE RA 17	0.42	2.02	64.44	0.0991	-0.2412	-0.0033
935	SLE RA 18	0.42	2.08	65.44	0.1	-0.2451	-0.003
935	SLE RA 19	0.4	2.06	65.47	0.1003	-0.2446	-0.0027
935	SLE RA 20	0.43	2.09	65.97	0.1008	-0.2475	-0.0031
935	SLE RA 21	0.41	2.08	66	0.1012	-0.247	-0.0028
935	SLE FR 1	0.4	1.83	58.51	0.09	-0.2176	-0.0045
935	SLE FR 2	0.4	1.82	58.52	0.0901	-0.2174	-0.0044
935	SLE FR 3	0.41	1.83	58.72	0.0903	-0.2185	-0.0045
935	SLE FR 4	0.4	1.9	60.6	0.0931	-0.2257	-0.0039
935	SLE FR 5	0.41	1.91	60.8	0.0933	-0.2268	-0.0041
935	SLE FR 6	0.41	1.95	61.97	0.095	-0.2313	-0.0037
935	SLE QP 1	0.4	1.83	58.51	0.09	-0.2176	-0.0045
935	SLE QP 2	0.41	1.9	60.59	0.093	-0.2258	-0.004
935	SLD 1	6.67	2.46	55.09	0.0847	0.04	-0.0385
935	SLD 2	6.08	2.64	55.04	0.0836	0.037	-0.027
935	SLD 3	6.77	0.9	56.41	0.095	0.0506	-0.0375
935	SLD 4	6.18	1.08	56.36	0.0939	0.0476	-0.0259
935	SLD 5	2.24	4.41	56.95	0.0751	-0.1616	-0.0181
935	SLD 6	1.85	4.53	56.92	0.0744	-0.1636	-0.0104
935	SLD 7	2.57	-0.81	61.34	0.1093	-0.1263	-0.0145
935	SLD 8	2.19	-0.69	61.3	0.1086	-0.1282	-0.0069
935	SLD 9	-1.37	4.49	59.87	0.0774	-0.3234	-0.0012
935	SLD 10	-1.76	4.61	59.84	0.0766	-0.3253	0.0065
935	SLD 11	-1.04	-0.73	64.25	0.1115	-0.2881	0.0024
935	SLD 12	-1.42	-0.61	64.22	0.1108	-0.29	0.01
935	SLD 13	-5.37	2.72	64.82	0.0921	-0.4993	0.0179
935	SLD 14	-5.95	2.91	64.77	0.091	-0.5022	0.0294
935	SLD 15	-5.27	1.16	66.13	0.1023	-0.4887	0.0189
935	SLD 16	-5.85	1.34	66.08	0.1012	-0.4916	0.0305
935	SLV 1	15.04	3.15	47.78	0.0734	0.3963	-0.0846
935	SLV 2	13.68	3.57	47.66	0.0708	0.3896	-0.0577
935	SLV 3	15.27	-0.4	50.76	0.0967	0.4206	-0.0821
935	SLV 4	13.91	0.02	50.64	0.0941	0.4138	-0.0553
935	SLV 5	4.69	7.58	52.25	0.0523	-0.0748	-0.0366
935	SLV 6	3.8	7.85	52.17	0.0506	-0.0792	-0.0191
935	SLV 7	5.46	-4.24	62.18	0.1298	0.0061	-0.0285
935	SLV 8	4.57	-3.96	62.1	0.1281	0.0017	-0.011
935	SLV 9	-3.76	7.77	59.07	0.0579	-0.4533	0.0029
935	SLV 10	-4.64	8.04	59	0.0562	-0.4577	0.0204
935	SLV 11	-2.99	-4.05	69	0.1353	-0.3724	0.0111
935	SLV 12	-3.87	-3.77	68.93	0.1336	-0.3768	0.0286
935	SLV 13	-13.1	3.78	70.53	0.0919	-0.8654	0.0473
935	SLV 14	-14.46	4.2	70.42	0.0893	-0.8722	0.0741
935	SLV 15	-12.87	0.24	73.51	0.1151	-0.8412	0.0497
935	SLV 16	-14.23	0.66	73.4	0.1125	-0.848	0.0765
935	CRTFP Ux+	0	0	0	0	0	0
935	CRTFP Ux-	0	0	0	0	0	0
935	CRTFP Uy+	0	0	0	0	0	0
935	CRTFP Uy-	0	0	0	0	0	0
938	SLU 1	0.42	0.04	19.98	0.5661	5.0603	-0.0206
938	SLU 2	0.41	0.03	19.98	0.5662	5.0613	-0.0178

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
938	SLU 3	0.43	0.04	20.44	0.5793	5.1799	-0.0216
938	SLU 4	0.42	0.04	20.45	0.5794	5.1804	-0.0199
938	SLU 5	0.42	0.03	20.26	0.5743	5.1334	-0.0178
938	SLU 6	0.44	0.04	20.73	0.5874	5.252	-0.0216
938	SLU 7	0.43	0.03	20.73	0.5875	5.2525	-0.0199
938	SLU 8	0.44	0.04	20.54	0.5822	5.2045	-0.0206
938	SLU 9	0.43	0.03	20.55	0.5823	5.2051	-0.019
938	SLU 10	0.43	0.06	22.44	0.6362	5.6888	-0.0263
938	SLU 11	0.46	0.07	22.91	0.6493	5.8074	-0.03
938	SLU 12	0.45	0.07	22.91	0.6494	5.808	-0.0284
938	SLU 13	0.44	0.06	22.73	0.6442	5.7609	-0.0262
938	SLU 14	0.47	0.07	23.19	0.6574	5.8796	-0.03
938	SLU 15	0.46	0.07	23.19	0.6575	5.8801	-0.0284
938	SLU 16	0.46	0.07	23.01	0.6522	5.8321	-0.029
938	SLU 17	0.46	0.06	23.01	0.6522	5.8327	-0.0274
938	SLU 18	0.46	0.08	23.5	0.666	5.9569	-0.0327
938	SLU 19	0.45	0.08	23.5	0.6661	5.9574	-0.031
938	SLU 20	0.47	0.08	23.78	0.6741	6.029	-0.0327
938	SLU 21	0.46	0.08	23.78	0.6742	6.0295	-0.031
938	SLU 22	0.45	0.08	22.47	0.6369	5.6936	-0.0314
938	SLU 23	0.44	0.07	22.47	0.637	5.6945	-0.0286
938	SLU 24	0.47	0.08	22.94	0.6501	5.8131	-0.0324
938	SLU 25	0.46	0.08	22.94	0.6502	5.8137	-0.0307
938	SLU 26	0.45	0.07	22.76	0.6451	5.7666	-0.0286
938	SLU 27	0.47	0.08	23.22	0.6582	5.8852	-0.0324
938	SLU 28	0.47	0.07	23.22	0.6583	5.8858	-0.0307
938	SLU 29	0.47	0.08	23.04	0.653	5.8378	-0.0314
938	SLU 30	0.46	0.07	23.04	0.653	5.8383	-0.0297
938	SLU 31	0.47	0.1	24.94	0.707	6.3221	-0.037
938	SLU 32	0.49	0.11	25.4	0.7201	6.4407	-0.0408
938	SLU 33	0.49	0.11	25.4	0.7202	6.4412	-0.0391
938	SLU 34	0.48	0.1	25.22	0.715	6.3942	-0.037
938	SLU 35	0.5	0.11	25.68	0.7282	6.5128	-0.0408
938	SLU 36	0.5	0.1	25.69	0.7282	6.5133	-0.0391
938	SLU 37	0.5	0.11	25.5	0.7229	6.4653	-0.0398
938	SLU 38	0.49	0.1	25.5	0.723	6.4659	-0.0381
938	SLU 39	0.49	0.12	25.99	0.7368	6.5901	-0.0434
938	SLU 40	0.49	0.12	25.99	0.7369	6.5906	-0.0417
938	SLU 41	0.5	0.12	26.27	0.7449	6.6622	-0.0434
938	SLU 42	0.5	0.12	26.28	0.745	6.6627	-0.0417
938	SLU 43	0.53	0.04	25.12	0.7116	6.3613	-0.0231
938	SLU 44	0.52	0.03	25.12	0.7118	6.3623	-0.0203
938	SLU 45	0.54	0.04	25.58	0.7249	6.4809	-0.0241
938	SLU 46	0.54	0.03	25.58	0.725	6.4814	-0.0225
938	SLU 47	0.53	0.03	25.4	0.7198	6.4344	-0.0203
938	SLU 48	0.55	0.04	25.87	0.7329	6.553	-0.0241
938	SLU 49	0.55	0.03	25.87	0.733	6.5535	-0.0224
938	SLU 50	0.55	0.04	25.68	0.7277	6.5055	-0.0231
938	SLU 51	0.54	0.03	25.69	0.7278	6.5061	-0.0215
938	SLU 52	0.55	0.06	27.58	0.7817	6.9898	-0.0288
938	SLU 53	0.57	0.07	28.05	0.7949	7.1084	-0.0325
938	SLU 54	0.56	0.06	28.05	0.795	7.109	-0.0309
938	SLU 55	0.56	0.06	27.87	0.7898	7.0619	-0.0287
938	SLU 56	0.58	0.07	28.33	0.8029	7.1805	-0.0325
938	SLU 57	0.57	0.06	28.33	0.803	7.1811	-0.0309
938	SLU 58	0.58	0.07	28.15	0.7977	7.1331	-0.0315
938	SLU 59	0.57	0.06	28.15	0.7978	7.1337	-0.0299
938	SLU 60	0.57	0.08	28.64	0.8116	7.2578	-0.0352
938	SLU 61	0.57	0.07	28.64	0.8117	7.2584	-0.0335
938	SLU 62	0.58	0.08	28.92	0.8196	7.33	-0.0352
938	SLU 63	0.57	0.07	28.92	0.8197	7.3305	-0.0335
938	SLU 64	0.57	0.08	27.61	0.7824	6.9946	-0.0339
938	SLU 65	0.56	0.07	27.61	0.7826	6.9955	-0.0311
938	SLU 66	0.58	0.08	28.07	0.7957	7.1141	-0.0349
938	SLU 67	0.57	0.07	28.08	0.7958	7.1147	-0.0332
938	SLU 68	0.56	0.07	27.89	0.7906	7.0676	-0.0311
938	SLU 69	0.59	0.08	28.36	0.8037	7.1862	-0.0349
938	SLU 70	0.58	0.07	28.36	0.8038	7.1868	-0.0332
938	SLU 71	0.59	0.07	28.17	0.7985	7.1388	-0.0339
938	SLU 72	0.58	0.07	28.18	0.7986	7.1393	-0.0322
938	SLU 73	0.58	0.1	30.08	0.8525	7.623	-0.0395
938	SLU 74	0.61	0.11	30.54	0.8657	7.7417	-0.0433
938	SLU 75	0.6	0.1	30.54	0.8657	7.7422	-0.0416
938	SLU 76	0.59	0.1	30.36	0.8606	7.6952	-0.0395
938	SLU 77	0.62	0.11	30.82	0.8737	7.8138	-0.0433
938	SLU 78	0.61	0.1	30.82	0.8738	7.8143	-0.0416
938	SLU 79	0.61	0.11	30.64	0.8685	7.7663	-0.0423
938	SLU 80	0.61	0.1	30.64	0.8686	7.7669	-0.0406
938	SLU 81	0.61	0.12	31.13	0.8824	7.8911	-0.0459
938	SLU 82	0.6	0.11	31.13	0.8825	7.8916	-0.0442
938	SLU 83	0.62	0.12	31.41	0.8904	7.9632	-0.0459
938	SLU 84	0.61	0.11	31.41	0.8905	7.9637	-0.0442
938	SLE RA 1	0.43	0.05	20.69	0.5863	5.2413	-0.0237
938	SLE RA 2	0.42	0.04	20.69	0.5864	5.2419	-0.0219
938	SLE RA 3	0.44	0.05	21	0.5951	5.321	-0.0244
938	SLE RA 4	0.43	0.05	21	0.5952	5.3213	-0.0233
938	SLE RA 5	0.43	0.04	20.88	0.5918	5.2899	-0.0218
938	SLE RA 6	0.44	0.05	21.19	0.6005	5.369	-0.0244
938	SLE RA 7	0.44	0.05	21.19	0.6006	5.3694	-0.0233
938	SLE RA 8	0.44	0.05	21.07	0.597	5.3374	-0.0237

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
938	SLE RA 9	0.44	0.04	21.07	0.5971	5.3378	-0.0226
938	SLE RA 10	0.44	0.06	22.33	0.633	5.6603	-0.0275
938	SLE RA 11	0.46	0.07	22.64	0.6418	5.7393	-0.03
938	SLE RA 12	0.45	0.07	22.64	0.6419	5.7397	-0.0289
938	SLE RA 13	0.45	0.06	22.52	0.6384	5.7083	-0.0275
938	SLE RA 14	0.46	0.07	22.83	0.6472	5.7874	-0.03
938	SLE RA 15	0.46	0.07	22.83	0.6472	5.7878	-0.0289
938	SLE RA 16	0.46	0.07	22.71	0.6437	5.7558	-0.0293
938	SLE RA 17	0.45	0.07	22.71	0.6437	5.7561	-0.0282
938	SLE RA 18	0.46	0.08	23.04	0.6529	5.8389	-0.0317
938	SLE RA 19	0.45	0.08	23.04	0.653	5.8393	-0.0306
938	SLE RA 20	0.46	0.08	23.23	0.6583	5.887	-0.0317
938	SLE RA 21	0.46	0.07	23.23	0.6584	5.8874	-0.0306
938	SLE FR 1	0.43	0.05	20.69	0.5863	5.2413	-0.0237
938	SLE FR 2	0.43	0.05	20.69	0.5863	5.2414	-0.0233
938	SLE FR 3	0.43	0.05	20.76	0.5884	5.2605	-0.0237
938	SLE FR 4	0.44	0.06	21.39	0.6063	5.4207	-0.0257
938	SLE FR 5	0.44	0.06	21.47	0.6084	5.4398	-0.0261
938	SLE FR 6	0.44	0.06	21.86	0.6196	5.5401	-0.0277
938	SLE QP 1	0.43	0.05	20.69	0.5863	5.2413	-0.0237
938	SLE QP 2	0.44	0.06	21.39	0.6063	5.4206	-0.0261
938	SLD 1	2.25	0.3	18.6	0.5205	4.5562	-0.1379
938	SLD 2	2.06	0.44	18.41	0.5155	4.5344	-0.1652
938	SLD 3	2.28	-0.15	19.09	0.535	4.6541	-0.0243
938	SLD 4	2.09	-0.02	18.9	0.53	4.6322	-0.0516
938	SLD 5	0.98	0.8	19.84	0.5595	5.0168	-0.227
938	SLD 6	0.85	0.88	19.72	0.5562	5.0024	-0.2451
938	SLD 7	1.06	-0.72	21.48	0.6078	5.343	0.1517
938	SLD 8	0.94	-0.63	21.36	0.6045	5.3285	0.1336
938	SLD 9	-0.06	0.75	21.43	0.6081	5.5126	-0.1858
938	SLD 10	-0.19	0.83	21.3	0.6048	5.4982	-0.2039
938	SLD 11	0.02	-0.77	23.07	0.6564	5.8388	0.1929
938	SLD 12	-0.1	-0.68	22.94	0.6531	5.8243	0.1747
938	SLD 13	-1.21	0.14	23.88	0.6825	6.2089	-0.0006
938	SLD 14	-1.4	0.27	23.7	0.6776	6.1871	-0.028
938	SLD 15	-1.19	-0.32	24.38	0.697	6.3067	0.1129
938	SLD 16	-1.38	-0.19	24.19	0.6921	6.2849	0.0856
938	SLV 1	4.68	0.62	14.87	0.4061	3.4011	-0.2835
938	SLV 2	4.24	0.92	14.43	0.3945	3.3503	-0.3471
938	SLV 3	4.74	-0.41	15.98	0.4389	3.6234	-0.0262
938	SLV 4	4.3	-0.1	15.54	0.4274	3.5726	-0.0898
938	SLV 5	1.69	1.73	17.82	0.4985	4.4865	-0.4825
938	SLV 6	1.41	1.93	17.54	0.4909	4.4534	-0.5239
938	SLV 7	1.9	-1.69	21.54	0.6079	5.2275	0.3754
938	SLV 8	1.61	-1.5	21.25	0.6004	5.1944	0.3339
938	SLV 9	-0.74	1.61	21.53	0.6122	5.6467	-0.3862
938	SLV 10	-1.02	1.81	21.25	0.6047	5.6136	-0.4276
938	SLV 11	-0.53	-1.81	25.25	0.7216	6.3878	0.4717
938	SLV 12	-0.82	-1.61	24.96	0.7141	6.3547	0.4303
938	SLV 13	-3.43	0.22	27.24	0.7852	7.2685	0.0375
938	SLV 14	-3.87	0.53	26.8	0.7737	7.2177	-0.0261
938	SLV 15	-3.36	-0.81	28.36	0.818	7.4909	0.2949
938	SLV 16	-3.8	-0.5	27.92	0.8065	7.4401	0.2313
938	CRTFP Ux+	0	0	0	0	0	0
938	CRTFP Ux-	0	0	0	0	0	0
938	CRTFP Uy+	0	0	0	0	0	0
938	CRTFP Uy-	0	0	0	0	0	0
939	SLU 1	-0.87	0.09	50.57	-16.8581	-8.5903	-0.3193
939	SLU 2	-0.91	-0.03	50.62	-16.8746	-8.5975	-0.3527
939	SLU 3	-0.89	0.09	51.8	-17.2656	-8.7976	-0.3268
939	SLU 4	-0.91	0.02	51.83	-17.2755	-8.8019	-0.3468
939	SLU 5	-0.92	-0.03	51.39	-17.1327	-8.7288	-0.3565
939	SLU 6	-0.91	0.1	52.57	-17.5237	-8.9289	-0.3307
939	SLU 7	-0.93	0.03	52.6	-17.5336	-8.9332	-0.3507
939	SLU 8	-0.9	0.1	52.12	-17.3744	-8.853	-0.327
939	SLU 9	-0.92	0.03	52.15	-17.3843	-8.8573	-0.347
939	SLU 10	-0.97	0.05	56.5	-18.8166	-9.5949	-0.364
939	SLU 11	-0.96	0.18	57.68	-19.2076	-9.795	-0.3382
939	SLU 12	-0.98	0.11	57.71	-19.2175	-9.7993	-0.3582
939	SLU 13	-0.98	0.06	57.28	-19.0747	-9.7262	-0.3679
939	SLU 14	-0.97	0.19	58.46	-19.4657	-9.9263	-0.342
939	SLU 15	-0.99	0.12	58.49	-19.4756	-9.9306	-0.3621
939	SLU 16	-0.96	0.19	58.01	-19.3164	-9.8504	-0.3384
939	SLU 17	-0.98	0.11	58.04	-19.3263	-9.8547	-0.3584
939	SLU 18	-0.96	0.21	58.98	-19.6324	-10.0152	-0.3355
939	SLU 19	-0.98	0.14	59.01	-19.6423	-10.0195	-0.3555
939	SLU 20	-0.98	0.22	59.76	-19.8905	-10.1465	-0.3394
939	SLU 21	-1	0.14	59.79	-19.9004	-10.1508	-0.3594
939	SLU 22	-0.94	0.18	56.62	-18.8554	-9.6162	-0.3312
939	SLU 23	-0.98	0.06	56.67	-18.8719	-9.6234	-0.3646
939	SLU 24	-0.97	0.19	57.85	-19.2629	-9.8235	-0.3388
939	SLU 25	-0.99	0.12	57.88	-19.2727	-9.8278	-0.3588
939	SLU 26	-0.99	0.07	57.45	-19.13	-9.7547	-0.3685
939	SLU 27	-0.98	0.2	58.63	-19.521	-9.9548	-0.3426
939	SLU 28	-1	0.13	58.66	-19.5309	-9.9591	-0.3627
939	SLU 29	-0.97	0.2	58.18	-19.3716	-9.8789	-0.339
939	SLU 30	-0.99	0.13	58.21	-19.3815	-9.8832	-0.359
939	SLU 31	-1.04	0.15	62.56	-20.8139	-10.6208	-0.376
939	SLU 32	-1.03	0.28	63.74	-21.2049	-10.8209	-0.3501
939	SLU 33	-1.05	0.21	63.77	-21.2147	-10.8252	-0.3702

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
939	SLU 34	-1.06	0.16	63.34	-21.072	-10.7521	-0.3799
939	SLU 35	-1.05	0.29	64.52	-21.463	-10.9522	-0.354
939	SLU 36	-1.07	0.21	64.55	-21.4729	-10.9565	-0.374
939	SLU 37	-1.04	0.28	64.07	-21.3136	-10.8763	-0.3503
939	SLU 38	-1.06	0.21	64.1	-21.3235	-10.8806	-0.3704
939	SLU 39	-1.03	0.31	65.04	-21.6297	-11.0411	-0.3475
939	SLU 40	-1.06	0.23	65.07	-21.6396	-11.0454	-0.3675
939	SLU 41	-1.05	0.31	65.81	-21.8878	-11.1724	-0.3513
939	SLU 42	-1.07	0.24	65.84	-21.8977	-11.1767	-0.3714
939	SLU 43	-1.1	0.08	63.66	-21.2308	-10.8157	-0.4109
939	SLU 44	-1.14	-0.04	63.71	-21.2473	-10.8228	-0.4443
939	SLU 45	-1.13	0.09	64.89	-21.6383	-11.0229	-0.4185
939	SLU 46	-1.15	0.01	64.92	-21.6482	-11.0272	-0.4385
939	SLU 47	-1.15	-0.03	64.49	-21.5054	-10.9542	-0.4482
939	SLU 48	-1.14	0.09	65.67	-21.8964	-11.1543	-0.4223
939	SLU 49	-1.16	0.02	65.7	-21.9063	-11.1586	-0.4424
939	SLU 50	-1.13	0.09	65.22	-21.747	-11.0783	-0.4187
939	SLU 51	-1.15	0.02	65.25	-21.7569	-11.0826	-0.4387
939	SLU 52	-1.21	0.04	69.6	-23.1893	-11.8202	-0.4557
939	SLU 53	-1.19	0.17	70.78	-23.5803	-12.0203	-0.4299
939	SLU 54	-1.22	0.1	70.81	-23.5902	-12.0246	-0.4499
939	SLU 55	-1.22	0.05	70.38	-23.4474	-11.9515	-0.4596
939	SLU 56	-1.21	0.18	71.56	-23.8384	-12.1517	-0.4337
939	SLU 57	-1.23	0.11	71.59	-23.8483	-12.156	-0.4538
939	SLU 58	-1.2	0.18	71.1	-23.6891	-12.0757	-0.43
939	SLU 59	-1.22	0.11	71.13	-23.6989	-12.08	-0.4501
939	SLU 60	-1.2	0.2	72.07	-24.0051	-12.2405	-0.4272
939	SLU 61	-1.22	0.13	72.1	-24.015	-12.2448	-0.4472
939	SLU 62	-1.21	0.21	72.85	-24.2632	-12.3718	-0.431
939	SLU 63	-1.23	0.14	72.88	-24.2731	-12.3761	-0.4511
939	SLU 64	-1.18	0.18	69.72	-23.2281	-11.8416	-0.4229
939	SLU 65	-1.21	0.06	69.77	-23.2445	-11.8487	-0.4563
939	SLU 66	-1.2	0.18	70.95	-23.6355	-12.0489	-0.4305
939	SLU 67	-1.22	0.11	70.98	-23.6454	-12.0532	-0.4505
939	SLU 68	-1.23	0.06	70.54	-23.5027	-11.9801	-0.4602
939	SLU 69	-1.22	0.19	71.72	-23.8936	-12.1802	-0.4343
939	SLU 70	-1.24	0.12	71.75	-23.9035	-12.1845	-0.4544
939	SLU 71	-1.21	0.19	71.27	-23.7443	-12.1042	-0.4306
939	SLU 72	-1.23	0.12	71.3	-23.7542	-12.1085	-0.4507
939	SLU 73	-1.28	0.14	75.65	-25.1865	-12.8461	-0.4677
939	SLU 74	-1.27	0.27	76.83	-25.5775	-13.0463	-0.4418
939	SLU 75	-1.29	0.2	76.86	-25.5874	-13.0506	-0.4619
939	SLU 76	-1.29	0.15	76.43	-25.4447	-12.9775	-0.4715
939	SLU 77	-1.28	0.28	77.61	-25.8356	-13.1776	-0.4457
939	SLU 78	-1.3	0.21	77.64	-25.8455	-13.1819	-0.4657
939	SLU 79	-1.27	0.28	77.16	-25.6863	-13.1016	-0.442
939	SLU 80	-1.29	0.2	77.19	-25.6962	-13.1059	-0.462
939	SLU 81	-1.27	0.3	78.13	-26.0023	-13.2664	-0.4392
939	SLU 82	-1.29	0.23	78.16	-26.0122	-13.2707	-0.4592
939	SLU 83	-1.28	0.31	78.91	-26.2605	-13.3978	-0.443
939	SLU 84	-1.31	0.23	78.94	-26.2704	-13.4021	-0.4631
939	SLE RA 1	-0.89	0.11	52.3	-17.4288	-8.8834	-0.3227
939	SLE RA 2	-0.91	0.03	52.33	-17.4398	-8.8882	-0.3449
939	SLE RA 3	-0.91	0.12	53.12	-17.7004	-9.0216	-0.3277
939	SLE RA 4	-0.92	0.07	53.14	-17.707	-9.0245	-0.3411
939	SLE RA 5	-0.92	0.04	52.85	-17.6118	-8.9758	-0.3475
939	SLE RA 6	-0.92	0.12	53.64	-17.8725	-9.1092	-0.3303
939	SLE RA 7	-0.93	0.08	53.66	-17.8791	-9.112	-0.3436
939	SLE RA 8	-0.91	0.12	53.34	-17.7729	-9.0585	-0.3278
939	SLE RA 9	-0.92	0.08	53.35	-17.7795	-9.0614	-0.3412
939	SLE RA 10	-0.96	0.09	56.26	-18.7344	-9.5531	-0.3525
939	SLE RA 11	-0.95	0.18	57.04	-18.9951	-9.6865	-0.3353
939	SLE RA 12	-0.96	0.13	57.06	-19.0017	-9.6894	-0.3487
939	SLE RA 13	-0.97	0.1	56.77	-18.9065	-9.6407	-0.3551
939	SLE RA 14	-0.96	0.18	57.56	-19.1672	-9.7741	-0.3379
939	SLE RA 15	-0.97	0.13	57.58	-19.1738	-9.777	-0.3512
939	SLE RA 16	-0.95	0.18	57.26	-19.0676	-9.7235	-0.3354
939	SLE RA 17	-0.97	0.13	57.28	-19.0742	-9.7263	-0.3488
939	SLE RA 18	-0.95	0.19	57.91	-19.2783	-9.8333	-0.3335
939	SLE RA 19	-0.97	0.15	57.93	-19.2849	-9.8362	-0.3469
939	SLE RA 20	-0.96	0.2	58.42	-19.4504	-9.9209	-0.3361
939	SLE RA 21	-0.98	0.15	58.44	-19.457	-9.9237	-0.3494
939	SLE FR 1	-0.89	0.11	52.3	-17.4288	-8.8834	-0.3227
939	SLE FR 2	-0.89	0.1	52.3	-17.431	-8.8844	-0.3271
939	SLE FR 3	-0.89	0.12	52.5	-17.4976	-8.9185	-0.3237
939	SLE FR 4	-0.91	0.12	53.99	-17.9858	-9.1694	-0.3304
939	SLE FR 5	-0.91	0.14	54.19	-18.0525	-9.2034	-0.327
939	SLE FR 6	-0.92	0.15	55.1	-18.3535	-9.3584	-0.3281
939	SLE QP 1	-0.89	0.11	52.3	-17.4288	-8.8834	-0.3227
939	SLE QP 2	-0.91	0.14	53.98	-17.9836	-9.1684	-0.3259
939	SLD 1	3.1	0.92	67.91	-22.7126	-11.4309	1.2881
939	SLD 2	2.67	0.18	68.68	-22.9437	-11.5649	1.0029
939	SLD 3	2.94	-0.76	68.77	-22.9628	-11.575	0.9424
939	SLD 4	2.51	-1.51	69.53	-23.1939	-11.7091	0.6572
939	SLD 5	0.61	3.06	56.73	-18.9808	-9.6042	0.7344
939	SLD 6	0.33	2.57	57.24	-19.1342	-9.6931	0.5451
939	SLD 7	0.08	-2.55	59.57	-19.8148	-10.0846	-0.4179
939	SLD 8	-0.2	-3.04	60.08	-19.9682	-10.1736	-0.6072
939	SLD 9	-1.61	3.32	47.88	-15.9991	-8.1632	-0.0447
939	SLD 10	-1.89	2.82	48.39	-16.1525	-8.2522	-0.234

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
939	SLD 11	-2.15	-2.29	50.72	-16.833	-8.6437	-1.197
939	SLD 12	-2.43	-2.79	51.23	-16.9864	-8.7326	-1.3863
939	SLD 13	-4.33	1.78	38.43	-12.7734	-6.6277	-1.309
939	SLD 14	-4.75	1.03	39.19	-13.0045	-6.7618	-1.5943
939	SLD 15	-4.49	0.1	39.28	-13.0235	-6.7719	-1.6547
939	SLD 16	-4.91	-0.65	40.05	-13.2547	-6.9059	-1.9399
939	SLV 1	8.45	1.91	86.61	-29.0564	-14.4668	3.4321
939	SLV 2	7.46	0.17	88.39	-29.5946	-14.7789	2.7681
939	SLV 3	8.08	-1.9	88.54	-29.6239	-14.7939	2.6512
939	SLV 4	7.09	-3.64	90.32	-30.1621	-15.1061	1.9871
939	SLV 5	2.63	6.75	60.53	-20.3502	-10.2069	2.1027
939	SLV 6	1.98	5.61	61.69	-20.7009	-10.4102	1.67
939	SLV 7	1.41	-5.94	66.97	-22.2418	-11.2974	-0.5005
939	SLV 8	0.76	-7.08	68.12	-22.5925	-11.5008	-0.9332
939	SLV 9	-2.58	7.35	39.83	-13.3748	-6.836	0.2813
939	SLV 10	-3.23	6.22	40.99	-13.7255	-7.0394	-0.1514
939	SLV 11	-3.8	-5.34	46.27	-15.2664	-7.9266	-2.3218
939	SLV 12	-4.44	-6.47	47.43	-15.6171	-8.1299	-2.7545
939	SLV 13	-8.91	3.92	17.64	-5.8052	-3.2307	-2.639
939	SLV 14	-9.9	2.17	19.42	-6.3434	-3.5429	-3.303
939	SLV 15	-9.27	0.11	19.57	-6.3727	-3.5579	-3.42
939	SLV 16	-10.26	-1.63	21.35	-6.9109	-3.87	-4.084
939	CRTFP Ux+	0	0	0	0	0	0
939	CRTFP Ux-	0	0	0	0	0	0
939	CRTFP Uy+	0	0	0	0	0	0
939	CRTFP Uy-	0	0	0	0	0	0
941	SLU 1	-0.66	0.02	31.7	-15.83	-0.8075	-0.38
941	SLU 2	-0.68	-0.06	31.72	-15.8438	-0.808	-0.394
941	SLU 3	-0.68	0.02	32.46	-16.2068	-0.8268	-0.3901
941	SLU 4	-0.69	-0.03	32.48	-16.2151	-0.8271	-0.3986
941	SLU 5	-0.69	-0.06	32.21	-16.0828	-0.8202	-0.4
941	SLU 6	-0.69	0.03	32.94	-16.4458	-0.839	-0.3961
941	SLU 7	-0.7	-0.02	32.96	-16.4541	-0.8393	-0.4045
941	SLU 8	-0.68	0.03	32.66	-16.308	-0.8319	-0.3918
941	SLU 9	-0.69	-0.02	32.68	-16.3163	-0.8322	-0.4003
941	SLU 10	-0.73	-0.01	35.38	-17.6383	-0.9006	-0.4242
941	SLU 11	-0.73	0.07	36.12	-18.0013	-0.9193	-0.4202
941	SLU 12	-0.74	0.03	36.13	-18.0096	-0.9196	-0.4287
941	SLU 13	-0.74	-0.01	35.86	-17.8773	-0.9128	-0.4301
941	SLU 14	-0.74	0.08	36.6	-18.2403	-0.9315	-0.4262
941	SLU 15	-0.75	0.03	36.61	-18.2486	-0.9318	-0.4346
941	SLU 16	-0.73	0.08	36.32	-18.1026	-0.9245	-0.4219
941	SLU 17	-0.75	0.03	36.34	-18.1108	-0.9248	-0.4304
941	SLU 18	-0.74	0.09	36.92	-18.3936	-0.9397	-0.423
941	SLU 19	-0.75	0.04	36.93	-18.4019	-0.94	-0.4314
941	SLU 20	-0.75	0.1	37.4	-18.6326	-0.9519	-0.4289
941	SLU 21	-0.76	0.05	37.42	-18.6409	-0.9523	-0.4374
941	SLU 22	-0.72	0.08	35.46	-17.6756	-0.9027	-0.413
941	SLU 23	-0.74	0	35.48	-17.6894	-0.9032	-0.427
941	SLU 24	-0.74	0.08	36.22	-18.0524	-0.9219	-0.4231
941	SLU 25	-0.75	0.04	36.23	-18.0606	-0.9222	-0.4316
941	SLU 26	-0.75	0	35.97	-17.9284	-0.9154	-0.433
941	SLU 27	-0.75	0.09	36.7	-18.2914	-0.9341	-0.4291
941	SLU 28	-0.76	0.04	36.72	-18.2996	-0.9344	-0.4375
941	SLU 29	-0.74	0.09	36.42	-18.1536	-0.9271	-0.4248
941	SLU 30	-0.75	0.04	36.44	-18.1619	-0.9274	-0.4333
941	SLU 31	-0.79	0.05	39.14	-19.4839	-0.9957	-0.4572
941	SLU 32	-0.79	0.14	39.87	-19.8469	-1.0145	-0.4532
941	SLU 33	-0.8	0.09	39.89	-19.8552	-1.0148	-0.4617
941	SLU 34	-0.8	0.06	39.62	-19.7229	-1.008	-0.4631
941	SLU 35	-0.8	0.14	40.36	-20.0859	-1.0267	-0.4592
941	SLU 36	-0.81	0.09	40.37	-20.0942	-1.027	-0.4676
941	SLU 37	-0.79	0.14	40.08	-19.9481	-1.0196	-0.4549
941	SLU 38	-0.81	0.09	40.09	-19.9564	-1.02	-0.4634
941	SLU 39	-0.8	0.15	40.68	-20.2392	-1.0349	-0.456
941	SLU 40	-0.81	0.1	40.69	-20.2475	-1.0352	-0.4644
941	SLU 41	-0.81	0.16	41.16	-20.4782	-1.0471	-0.4619
941	SLU 42	-0.82	0.11	41.18	-20.4865	-1.0474	-0.4704
941	SLU 43	-0.84	0	39.92	-19.9462	-1.0171	-0.4827
941	SLU 44	-0.86	-0.08	39.95	-19.96	-1.0177	-0.4967
941	SLU 45	-0.85	0.01	40.68	-20.323	-1.0364	-0.4928
941	SLU 46	-0.87	-0.04	40.7	-20.3313	-1.0367	-0.5013
941	SLU 47	-0.87	-0.07	40.43	-20.199	-1.0299	-0.5027
941	SLU 48	-0.86	0.01	41.17	-20.562	-1.0486	-0.4987
941	SLU 49	-0.88	-0.04	41.18	-20.5703	-1.0489	-0.5072
941	SLU 50	-0.86	0.01	40.89	-20.4243	-1.0416	-0.4945
941	SLU 51	-0.87	-0.04	40.9	-20.4325	-1.0419	-0.503
941	SLU 52	-0.91	-0.03	43.6	-21.7546	-1.1102	-0.5268
941	SLU 53	-0.91	0.06	44.34	-22.1176	-1.1289	-0.5229
941	SLU 54	-0.92	0.01	44.35	-22.1258	-1.1293	-0.5314
941	SLU 55	-0.92	-0.02	44.08	-21.9936	-1.1224	-0.5328
941	SLU 56	-0.92	0.06	44.82	-22.3566	-1.1412	-0.5288
941	SLU 57	-0.93	0.02	44.84	-22.3648	-1.1415	-0.5373
941	SLU 58	-0.91	0.06	44.54	-22.2188	-1.1341	-0.5246
941	SLU 59	-0.92	0.01	44.56	-22.2271	-1.1344	-0.5331
941	SLU 60	-0.91	0.07	45.14	-22.5099	-1.1494	-0.5257
941	SLU 61	-0.93	0.03	45.16	-22.5181	-1.1497	-0.5341
941	SLU 62	-0.92	0.08	45.62	-22.7489	-1.1616	-0.5316
941	SLU 63	-0.94	0.03	45.64	-22.7572	-1.1619	-0.54
941	SLU 64	-0.9	0.06	43.68	-21.7918	-1.1123	-0.5157

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
941	SLU 65	-0.92	-0.02	43.7	-21.8056	-1.1128	-0.5297
941	SLU 66	-0.91	0.07	44.44	-22.1686	-1.1315	-0.5258
941	SLU 67	-0.93	0.02	44.46	-22.1769	-1.1319	-0.5342
941	SLU 68	-0.93	-0.01	44.19	-22.0446	-1.125	-0.5357
941	SLU 69	-0.92	0.07	44.92	-22.4076	-1.1438	-0.5317
941	SLU 70	-0.94	0.03	44.94	-22.4159	-1.1441	-0.5402
941	SLU 71	-0.92	0.07	44.64	-22.2698	-1.1367	-0.5275
941	SLU 72	-0.93	0.02	44.66	-22.2781	-1.137	-0.536
941	SLU 73	-0.97	0.03	47.36	-23.6001	-1.2054	-0.5598
941	SLU 74	-0.97	0.12	48.09	-23.9631	-1.2241	-0.5559
941	SLU 75	-0.98	0.07	48.11	-23.9714	-1.2244	-0.5644
941	SLU 76	-0.98	0.04	47.84	-23.8391	-1.2176	-0.5658
941	SLU 77	-0.98	0.12	48.58	-24.2021	-1.2363	-0.5618
941	SLU 78	-0.99	0.08	48.59	-24.2104	-1.2366	-0.5703
941	SLU 79	-0.97	0.12	48.3	-24.0644	-1.2293	-0.5576
941	SLU 80	-0.98	0.08	48.31	-24.0726	-1.2296	-0.5661
941	SLU 81	-0.97	0.14	48.9	-24.3554	-1.2445	-0.5587
941	SLU 82	-0.99	0.09	48.91	-24.3637	-1.2448	-0.5671
941	SLU 83	-0.98	0.14	49.38	-24.5945	-1.2567	-0.5646
941	SLU 84	-1	0.09	49.4	-24.6027	-1.257	-0.573
941	SLE RA 1	-0.68	0.03	32.77	-16.3573	-0.8347	-0.3894
941	SLE RA 2	-0.69	-0.02	32.79	-16.3665	-0.835	-0.3988
941	SLE RA 3	-0.69	0.04	33.28	-16.6085	-0.8475	-0.3962
941	SLE RA 4	-0.7	0.01	33.29	-16.614	-0.8477	-0.4018
941	SLE RA 5	-0.7	-0.02	33.11	-16.5258	-0.8432	-0.4027
941	SLE RA 6	-0.69	0.04	33.6	-16.7678	-0.8557	-0.4001
941	SLE RA 7	-0.7	0.01	33.61	-16.7734	-0.8559	-0.4058
941	SLE RA 8	-0.69	0.04	33.42	-16.676	-0.851	-0.3973
941	SLE RA 9	-0.7	0.01	33.43	-16.6815	-0.8512	-0.4029
941	SLE RA 10	-0.73	0.02	35.23	-17.5629	-0.8968	-0.4189
941	SLE RA 11	-0.72	0.07	35.72	-17.8049	-0.9092	-0.4163
941	SLE RA 12	-0.73	0.04	35.73	-17.8104	-0.9094	-0.4219
941	SLE RA 13	-0.73	0.02	35.55	-17.7222	-0.9049	-0.4228
941	SLE RA 14	-0.73	0.08	36.04	-17.9642	-0.9174	-0.4202
941	SLE RA 15	-0.74	0.04	36.05	-17.9697	-0.9176	-0.4258
941	SLE RA 16	-0.73	0.08	35.85	-17.8724	-0.9127	-0.4174
941	SLE RA 17	-0.73	0.04	35.86	-17.8779	-0.9129	-0.423
941	SLE RA 18	-0.73	0.08	36.25	-18.0664	-0.9228	-0.4181
941	SLE RA 19	-0.74	0.05	36.26	-18.0719	-0.9231	-0.4237
941	SLE RA 20	-0.73	0.09	36.57	-18.2257	-0.931	-0.422
941	SLE RA 21	-0.74	0.06	36.58	-18.2313	-0.9312	-0.4277
941	SLE FR 1	-0.68	0.03	32.77	-16.3573	-0.8347	-0.3894
941	SLE FR 2	-0.68	0.02	32.78	-16.3591	-0.8348	-0.3913
941	SLE FR 3	-0.68	0.04	32.9	-16.421	-0.838	-0.391
941	SLE FR 4	-0.69	0.04	33.82	-16.8719	-0.8612	-0.3999
941	SLE FR 5	-0.69	0.05	33.94	-16.9338	-0.8644	-0.3996
941	SLE FR 6	-0.7	0.06	34.51	-17.2119	-0.8788	-0.4038
941	SLE QP 1	-0.68	0.03	32.77	-16.3573	-0.8347	-0.3894
941	SLE QP 2	-0.69	0.05	33.82	-16.87	-0.8611	-0.398
941	SLD 1	2.14	0.59	42.31	-21.1769	-1.0653	1.2402
941	SLD 2	1.85	0.08	42.76	-21.3884	-1.0769	1.0647
941	SLD 3	2.05	-0.56	42.78	-21.3879	-1.0766	1.1665
941	SLD 4	1.77	-1.07	43.24	-21.5995	-1.0882	0.991
941	SLD 5	0.34	2.05	35.56	-17.8035	-0.9032	0.2371
941	SLD 6	0.15	1.71	35.86	-17.9439	-0.911	0.1207
941	SLD 7	0.05	-1.79	37.14	-18.5071	-0.9407	-0.0085
941	SLD 8	-0.13	-2.13	37.44	-18.6475	-0.9484	-0.125
941	SLD 9	-1.25	2.22	30.19	-15.0926	-0.7739	-0.6711
941	SLD 10	-1.44	1.89	30.49	-15.233	-0.7816	-0.7875
941	SLD 11	-1.53	-1.61	31.77	-15.7962	-0.8113	-0.9167
941	SLD 12	-1.72	-1.95	32.07	-15.9366	-0.819	-1.0332
941	SLD 13	-3.15	1.17	24.39	-12.1406	-0.6341	-1.7871
941	SLD 14	-3.43	0.66	24.85	-12.3521	-0.6457	-1.9626
941	SLD 15	-3.24	0.02	24.87	-12.3517	-0.6453	-1.8608
941	SLD 16	-3.52	-0.49	25.32	-12.5632	-0.657	-2.0363
941	SLV 1	5.91	1.27	53.71	-26.9536	-1.3392	3.4282
941	SLV 2	5.26	0.08	54.76	-27.4461	-1.3663	3.0197
941	SLV 3	5.72	-1.34	54.78	-27.4329	-1.3648	3.2617
941	SLV 4	5.07	-2.52	55.84	-27.9255	-1.3918	2.8532
941	SLV 5	1.69	4.57	37.97	-19.0815	-0.9611	1.0742
941	SLV 6	1.27	3.8	38.66	-19.4024	-0.9787	0.808
941	SLV 7	1.06	-4.11	41.55	-20.6793	-1.0462	0.5191
941	SLV 8	0.63	-4.88	42.24	-21.0003	-1.0638	0.253
941	SLV 9	-2.01	4.98	25.39	-12.7398	-0.6584	-1.049
941	SLV 10	-2.44	4.21	26.08	-13.0607	-0.6761	-1.3152
941	SLV 11	-2.65	-3.7	28.98	-14.3376	-0.7436	-1.6041
941	SLV 12	-3.08	-4.48	29.66	-14.6586	-0.7612	-1.8703
941	SLV 13	-6.45	2.62	11.79	-5.8146	-0.3305	-3.6492
941	SLV 14	-7.1	1.44	12.85	-6.3072	-0.3575	-4.0578
941	SLV 15	-6.64	0.02	12.87	-6.294	-0.356	-3.8157
941	SLV 16	-7.3	-1.17	13.93	-6.7865	-0.3831	-4.2243
941	CRTFP Ux+	0	0	0	0	0	0
941	CRTFP Ux-	0	0	0	0	0	0
941	CRTFP Uy+	0	0	0	0	0	0
941	CRTFP Uy-	0	0	0	0	0	0
942	SLU 1	-0.78	-0.05	33.68	-15.7298	0.1072	-0.4487
942	SLU 2	-0.8	-0.14	33.7	-15.7404	0.1076	-0.4624
942	SLU 3	-0.8	-0.05	34.48	-16.097	0.1101	-0.4608
942	SLU 4	-0.81	-0.1	34.49	-16.1034	0.1103	-0.469
942	SLU 5	-0.81	-0.13	34.21	-15.9739	0.1094	-0.4695

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
942	SLU 6	-0.81	-0.04	34.99	-16.3304	0.1119	-0.468
942	SLU 7	-0.82	-0.09	35	-16.3368	0.1121	-0.4762
942	SLU 8	-0.8	-0.04	34.7	-16.1966	0.1108	-0.463
942	SLU 9	-0.82	-0.09	34.71	-16.2031	0.111	-0.4712
942	SLU 10	-0.86	-0.09	37.56	-17.4941	0.1206	-0.4999
942	SLU 11	-0.86	0	38.34	-17.8506	0.1231	-0.4983
942	SLU 12	-0.88	-0.05	38.35	-17.8571	0.1233	-0.5065
942	SLU 13	-0.88	-0.09	38.07	-17.7275	0.1224	-0.507
942	SLU 14	-0.87	0	38.85	-18.0841	0.1249	-0.5055
942	SLU 15	-0.89	-0.05	38.86	-18.0905	0.1251	-0.5136
942	SLU 16	-0.87	0	38.56	-17.9503	0.1239	-0.5005
942	SLU 17	-0.88	-0.05	38.57	-17.9567	0.1241	-0.5087
942	SLU 18	-0.87	0.01	39.19	-18.235	0.1259	-0.5023
942	SLU 19	-0.88	-0.04	39.21	-18.2414	0.1261	-0.5105
942	SLU 20	-0.88	0.02	39.7	-18.4684	0.1277	-0.5094
942	SLU 21	-0.9	-0.04	39.72	-18.4748	0.1279	-0.5176
942	SLU 22	-0.85	0	37.65	-17.5333	0.1207	-0.4899
942	SLU 23	-0.87	-0.08	37.67	-17.544	0.121	-0.5035
942	SLU 24	-0.87	0.01	38.45	-17.9006	0.1235	-0.502
942	SLU 25	-0.88	-0.04	38.46	-17.907	0.1237	-0.5102
942	SLU 26	-0.88	-0.08	38.18	-17.7775	0.1228	-0.5107
942	SLU 27	-0.88	0.01	38.96	-18.134	0.1253	-0.5091
942	SLU 28	-0.89	-0.04	38.97	-18.1404	0.1255	-0.5173
942	SLU 29	-0.87	0.01	38.67	-18.0002	0.1243	-0.5042
942	SLU 30	-0.89	-0.04	38.68	-18.0066	0.1245	-0.5124
942	SLU 31	-0.94	-0.04	41.53	-19.2977	0.1341	-0.541
942	SLU 32	-0.93	0.05	42.31	-19.6542	0.1366	-0.5395
942	SLU 33	-0.95	0	42.32	-19.6606	0.1368	-0.5476
942	SLU 34	-0.95	-0.03	42.04	-19.5311	0.1359	-0.5481
942	SLU 35	-0.94	0.06	42.82	-19.8877	0.1384	-0.5466
942	SLU 36	-0.96	0.01	42.83	-19.8941	0.1386	-0.5548
942	SLU 37	-0.94	0.06	42.53	-19.7539	0.1373	-0.5416
942	SLU 38	-0.95	0.01	42.54	-19.7603	0.1375	-0.5498
942	SLU 39	-0.94	0.07	43.16	-20.0386	0.1393	-0.5434
942	SLU 40	-0.95	0.02	43.17	-20.045	0.1395	-0.5516
942	SLU 41	-0.95	0.07	43.67	-20.272	0.1411	-0.5506
942	SLU 42	-0.97	0.02	43.68	-20.2784	0.1413	-0.5587
942	SLU 43	-0.98	-0.09	42.42	-19.8303	0.1348	-0.5692
942	SLU 44	-1.01	-0.17	42.44	-19.841	0.1351	-0.5829
942	SLU 45	-1.01	-0.08	43.23	-20.1976	0.1376	-0.5813
942	SLU 46	-1.02	-0.14	43.24	-20.204	0.1378	-0.5895
942	SLU 47	-1.02	-0.17	42.95	-20.0745	0.1369	-0.59
942	SLU 48	-1.02	-0.08	43.73	-20.431	0.1394	-0.5885
942	SLU 49	-1.03	-0.13	43.75	-20.4374	0.1396	-0.5967
942	SLU 50	-1.01	-0.08	43.44	-20.2972	0.1384	-0.5835
942	SLU 51	-1.02	-0.13	43.45	-20.3036	0.1386	-0.5917
942	SLU 52	-1.07	-0.13	46.3	-21.5947	0.1482	-0.6204
942	SLU 53	-1.07	-0.04	47.09	-21.9512	0.1507	-0.6188
942	SLU 54	-1.08	-0.09	47.1	-21.9576	0.1509	-0.627
942	SLU 55	-1.09	-0.12	46.81	-21.8281	0.15	-0.6275
942	SLU 56	-1.08	-0.04	47.59	-22.1847	0.1525	-0.626
942	SLU 57	-1.1	-0.09	47.61	-22.1911	0.1527	-0.6341
942	SLU 58	-1.07	-0.04	47.3	-22.0509	0.1514	-0.621
942	SLU 59	-1.09	-0.09	47.31	-22.0573	0.1516	-0.6292
942	SLU 60	-1.08	-0.03	47.94	-22.3355	0.1534	-0.6228
942	SLU 61	-1.09	-0.08	47.95	-22.342	0.1536	-0.631
942	SLU 62	-1.09	-0.02	48.45	-22.569	0.1552	-0.6299
942	SLU 63	-1.1	-0.07	48.46	-22.5754	0.1554	-0.6381
942	SLU 64	-1.06	-0.03	46.39	-21.6339	0.1483	-0.6104
942	SLU 65	-1.08	-0.12	46.41	-21.6446	0.1486	-0.624
942	SLU 66	-1.08	-0.03	47.19	-22.0011	0.1511	-0.6225
942	SLU 67	-1.09	-0.08	47.21	-22.0075	0.1513	-0.6307
942	SLU 68	-1.09	-0.11	46.92	-21.878	0.1504	-0.6312
942	SLU 69	-1.09	-0.02	47.7	-22.2346	0.1529	-0.6296
942	SLU 70	-1.1	-0.07	47.71	-22.241	0.1531	-0.6378
942	SLU 71	-1.08	-0.02	47.41	-22.1008	0.1518	-0.6247
942	SLU 72	-1.09	-0.07	47.42	-22.1072	0.152	-0.6329
942	SLU 73	-1.14	-0.07	50.27	-23.3982	0.1616	-0.6615
942	SLU 74	-1.14	0.02	51.05	-23.7548	0.1641	-0.66
942	SLU 75	-1.16	-0.03	51.07	-23.7612	0.1643	-0.6682
942	SLU 76	-1.16	-0.07	50.78	-23.6317	0.1634	-0.6687
942	SLU 77	-1.15	0.02	51.56	-23.9882	0.1659	-0.6671
942	SLU 78	-1.17	-0.03	51.57	-23.9946	0.1661	-0.6753
942	SLU 79	-1.14	0.02	51.27	-23.8544	0.1649	-0.6621
942	SLU 80	-1.16	-0.03	51.28	-23.8609	0.1651	-0.6703
942	SLU 81	-1.15	0.03	51.91	-24.1391	0.1669	-0.6639
942	SLU 82	-1.16	-0.02	51.92	-24.1455	0.1671	-0.6721
942	SLU 83	-1.16	0.04	52.41	-24.3726	0.1687	-0.6711
942	SLU 84	-1.17	-0.01	52.43	-24.379	0.1689	-0.6793
942	SLE RA 1	-0.8	-0.04	34.81	-16.2451	0.1111	-0.4605
942	SLE RA 2	-0.81	-0.09	34.83	-16.2522	0.1113	-0.4696
942	SLE RA 3	-0.81	-0.03	35.35	-16.4899	0.113	-0.4686
942	SLE RA 4	-0.82	-0.07	35.36	-16.4942	0.1131	-0.474
942	SLE RA 5	-0.82	-0.09	35.17	-16.4078	0.1125	-0.4743
942	SLE RA 6	-0.82	-0.03	35.69	-16.6455	0.1142	-0.4733
942	SLE RA 7	-0.83	-0.06	35.7	-16.6498	0.1143	-0.4788
942	SLE RA 8	-0.81	-0.03	35.49	-16.5563	0.1135	-0.47
942	SLE RA 9	-0.82	-0.06	35.5	-16.5606	0.1136	-0.4755
942	SLE RA 10	-0.86	-0.06	37.4	-17.4213	0.12	-0.4946
942	SLE RA 11	-0.85	0	37.92	-17.659	0.1217	-0.4935

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
942	SLE RA 12	-0.86	-0.04	37.93	-17.6633	0.1218	-0.499
942	SLE RA 13	-0.86	-0.06	37.74	-17.5769	0.1212	-0.4993
942	SLE RA 14	-0.86	0	38.26	-17.8146	0.1229	-0.4983
942	SLE RA 15	-0.87	-0.03	38.27	-17.8189	0.123	-0.5038
942	SLE RA 16	-0.86	0	38.07	-17.7254	0.1222	-0.495
942	SLE RA 17	-0.87	-0.03	38.07	-17.7297	0.1223	-0.5005
942	SLE RA 18	-0.86	0.01	38.49	-17.9152	0.1235	-0.4962
942	SLE RA 19	-0.87	-0.03	38.5	-17.9195	0.1236	-0.5016
942	SLE RA 20	-0.87	0.01	38.83	-18.0708	0.1247	-0.5009
942	SLE RA 21	-0.88	-0.03	38.84	-18.0751	0.1248	-0.5064
942	SLE FR 1	-0.8	-0.04	34.81	-16.2451	0.1111	-0.4605
942	SLE FR 2	-0.8	-0.05	34.82	-16.2465	0.1111	-0.4623
942	SLE FR 3	-0.8	-0.04	34.95	-16.3073	0.1116	-0.4624
942	SLE FR 4	-0.82	-0.04	35.92	-16.7475	0.1149	-0.473
942	SLE FR 5	-0.82	-0.02	36.05	-16.8084	0.1153	-0.4731
942	SLE FR 6	-0.83	-0.02	36.65	-17.0801	0.1173	-0.4783
942	SLE QP 1	-0.8	-0.04	34.81	-16.2451	0.1111	-0.4605
942	SLE QP 2	-0.81	-0.02	35.92	-16.7461	0.1148	-0.4712
942	SLD 1	2.5	0.59	44.37	-20.7483	0.1629	1.4324
942	SLD 2	2.17	0.03	44.85	-20.9617	0.1644	1.2439
942	SLD 3	2.4	-0.69	44.83	-20.9379	0.166	1.3782
942	SLD 4	2.07	-1.24	45.32	-21.1513	0.1674	1.1897
942	SLD 5	0.39	2.19	37.66	-17.6204	0.1243	0.2164
942	SLD 6	0.17	1.82	37.98	-17.762	0.1253	0.0913
942	SLD 7	0.06	-2.05	39.21	-18.2525	0.1346	0.0356
942	SLD 8	-0.16	-2.42	39.53	-18.3941	0.1355	-0.0894
942	SLD 9	-1.47	2.37	32.3	-15.0982	0.0941	-0.8529
942	SLD 10	-1.69	2	32.62	-15.2398	0.095	-0.978
942	SLD 11	-1.8	-1.87	33.85	-15.7302	0.1043	-1.0337
942	SLD 12	-2.02	-2.24	34.17	-15.8718	0.1053	-1.1588
942	SLD 13	-3.7	1.19	26.51	-12.3409	0.0622	-2.1321
942	SLD 14	-4.03	0.64	27	-12.5543	0.0636	-2.3206
942	SLD 15	-3.8	-0.08	26.98	-12.5305	0.0652	-2.1863
942	SLD 16	-4.13	-0.63	27.46	-12.7439	0.0667	-2.3748
942	SLV 1	6.92	1.35	55.71	-26.1158	0.2275	3.9766
942	SLV 2	6.15	0.06	56.83	-26.6126	0.2309	3.5378
942	SLV 3	6.7	-1.52	56.76	-26.5474	0.2345	3.8533
942	SLV 4	5.93	-2.82	57.89	-27.0442	0.2378	3.4145
942	SLV 5	1.98	4.98	40.05	-18.8151	0.1375	1.1272
942	SLV 6	1.48	4.13	40.79	-19.1388	0.1397	0.8413
942	SLV 7	1.24	-4.61	43.57	-20.2538	0.1607	0.7164
942	SLV 8	0.74	-5.45	44.31	-20.5775	0.1628	0.4305
942	SLV 9	-2.37	5.41	27.52	-12.9147	0.0668	-1.3729
942	SLV 10	-2.87	4.56	28.26	-13.2384	0.069	-1.6588
942	SLV 11	-3.11	-4.18	31.05	-14.3535	0.0899	-1.7837
942	SLV 12	-3.61	-5.03	31.78	-14.6772	0.0921	-2.0696
942	SLV 13	-7.56	2.77	13.94	-6.448	-0.0082	-4.3569
942	SLV 14	-8.33	1.48	15.07	-6.9448	-0.0048	-4.7957
942	SLV 15	-7.78	-0.1	15	-6.8797	-0.0013	-4.4802
942	SLV 16	-8.55	-1.4	16.13	-7.3765	0.0021	-4.919
942	CRTFP Ux+	0	0	0	0	0	0
942	CRTFP Ux-	0	0	0	0	0	0
942	CRTFP Uy+	0	0	0	0	0	0
942	CRTFP Uy-	0	0	0	0	0	0
943	SLU 1	-0.78	-0.12	30.62	-13.2842	0.0853	-0.4517
943	SLU 2	-0.81	-0.2	30.63	-13.2897	0.0855	-0.4652
943	SLU 3	-0.8	-0.12	31.34	-13.5869	0.0875	-0.4638
943	SLU 4	-0.82	-0.16	31.35	-13.5902	0.0877	-0.4719
943	SLU 5	-0.82	-0.19	31.09	-13.4828	0.087	-0.4724
943	SLU 6	-0.82	-0.12	31.8	-13.7799	0.089	-0.471
943	SLU 7	-0.83	-0.16	31.81	-13.7832	0.0891	-0.4791
943	SLU 8	-0.81	-0.12	31.54	-13.6702	0.0881	-0.466
943	SLU 9	-0.82	-0.16	31.54	-13.6736	0.0883	-0.4741
943	SLU 10	-0.87	-0.17	34.12	-14.7415	0.0958	-0.5031
943	SLU 11	-0.87	-0.09	34.83	-15.0387	0.0978	-0.5018
943	SLU 12	-0.88	-0.13	34.84	-15.042	0.098	-0.5099
943	SLU 13	-0.88	-0.16	34.58	-14.9346	0.0972	-0.5103
943	SLU 14	-0.88	-0.09	35.29	-15.2317	0.0992	-0.5089
943	SLU 15	-0.9	-0.13	35.3	-15.235	0.0994	-0.5171
943	SLU 16	-0.87	-0.09	35.03	-15.122	0.0984	-0.504
943	SLU 17	-0.89	-0.13	35.03	-15.1254	0.0985	-0.5121
943	SLU 18	-0.88	-0.08	35.6	-15.3582	0.0999	-0.5059
943	SLU 19	-0.89	-0.13	35.61	-15.3615	0.1001	-0.514
943	SLU 20	-0.89	-0.08	36.06	-15.5512	0.1013	-0.5131
943	SLU 21	-0.9	-0.12	36.07	-15.5545	0.1015	-0.5212
943	SLU 22	-0.85	-0.08	34.21	-14.7772	0.0959	-0.4933
943	SLU 23	-0.88	-0.15	34.22	-14.7828	0.0962	-0.5068
943	SLU 24	-0.87	-0.07	34.93	-15.0799	0.0981	-0.5054
943	SLU 25	-0.89	-0.12	34.93	-15.0833	0.0983	-0.5135
943	SLU 26	-0.89	-0.15	34.67	-14.9758	0.0976	-0.514
943	SLU 27	-0.89	-0.07	35.38	-15.273	0.0996	-0.5126
943	SLU 28	-0.9	-0.12	35.39	-15.2763	0.0997	-0.5207
943	SLU 29	-0.88	-0.07	35.12	-15.1633	0.0987	-0.5076
943	SLU 30	-0.89	-0.12	35.13	-15.1666	0.0989	-0.5157
943	SLU 31	-0.94	-0.12	37.71	-16.2346	0.1064	-0.5447
943	SLU 32	-0.94	-0.05	38.42	-16.5317	0.1084	-0.5434
943	SLU 33	-0.95	-0.09	38.42	-16.5351	0.1086	-0.5515
943	SLU 34	-0.96	-0.12	38.16	-16.4276	0.1078	-0.5519
943	SLU 35	-0.95	-0.04	38.87	-16.7248	0.1098	-0.5505
943	SLU 36	-0.97	-0.09	38.88	-16.7281	0.11	-0.5587

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
943	SLU 37	-0.94	-0.04	38.61	-16.6151	0.109	-0.5456
943	SLU 38	-0.96	-0.09	38.62	-16.6184	0.1092	-0.5537
943	SLU 39	-0.95	-0.04	39.19	-16.8512	0.1105	-0.5475
943	SLU 40	-0.96	-0.08	39.2	-16.8546	0.1107	-0.5556
943	SLU 41	-0.96	-0.03	39.65	-17.0443	0.112	-0.5546
943	SLU 42	-0.97	-0.08	39.65	-17.0476	0.1121	-0.5628
943	SLU 43	-0.99	-0.17	38.58	-16.7575	0.1072	-0.5729
943	SLU 44	-1.02	-0.25	38.59	-16.7631	0.1075	-0.5864
943	SLU 45	-1.01	-0.17	39.3	-17.0603	0.1095	-0.5851
943	SLU 46	-1.03	-0.22	39.3	-17.0636	0.1096	-0.5932
943	SLU 47	-1.03	-0.25	39.05	-16.9561	0.1089	-0.5936
943	SLU 48	-1.03	-0.17	39.76	-17.2533	0.1109	-0.5922
943	SLU 49	-1.04	-0.21	39.76	-17.2566	0.1111	-0.6004
943	SLU 50	-1.02	-0.17	39.49	-17.1436	0.11	-0.5873
943	SLU 51	-1.03	-0.21	39.5	-17.1469	0.1102	-0.5954
943	SLU 52	-1.08	-0.22	42.08	-18.2149	0.1177	-0.6244
943	SLU 53	-1.08	-0.14	42.79	-18.5121	0.1197	-0.623
943	SLU 54	-1.09	-0.19	42.79	-18.5154	0.1199	-0.6311
943	SLU 55	-1.09	-0.22	42.54	-18.4079	0.1192	-0.6316
943	SLU 56	-1.09	-0.14	43.25	-18.7051	0.1212	-0.6302
943	SLU 57	-1.11	-0.18	43.25	-18.7084	0.1213	-0.6383
943	SLU 58	-1.08	-0.14	42.98	-18.5954	0.1203	-0.6252
943	SLU 59	-1.1	-0.18	42.99	-18.5987	0.1205	-0.6333
943	SLU 60	-1.09	-0.13	43.56	-18.8316	0.1219	-0.6271
943	SLU 61	-1.1	-0.18	43.57	-18.8349	0.122	-0.6352
943	SLU 62	-1.1	-0.13	44.02	-19.0246	0.1233	-0.6343
943	SLU 63	-1.11	-0.17	44.03	-19.0279	0.1235	-0.6424
943	SLU 64	-1.06	-0.13	42.16	-18.2506	0.1178	-0.6145
943	SLU 65	-1.09	-0.21	42.17	-18.2561	0.1181	-0.628
943	SLU 66	-1.08	-0.13	42.88	-18.5533	0.1201	-0.6267
943	SLU 67	-1.1	-0.17	42.89	-18.5566	0.1203	-0.6348
943	SLU 68	-1.1	-0.2	42.63	-18.4491	0.1195	-0.6352
943	SLU 69	-1.1	-0.12	43.34	-18.7463	0.1215	-0.6338
943	SLU 70	-1.11	-0.17	43.35	-18.7496	0.1217	-0.642
943	SLU 71	-1.09	-0.12	43.08	-18.6366	0.1207	-0.6289
943	SLU 72	-1.1	-0.17	43.08	-18.64	0.1208	-0.637
943	SLU 73	-1.15	-0.18	45.66	-19.7079	0.1284	-0.666
943	SLU 74	-1.15	-0.1	46.37	-20.0051	0.1303	-0.6646
943	SLU 75	-1.16	-0.14	46.38	-20.0084	0.1305	-0.6727
943	SLU 76	-1.17	-0.17	46.12	-19.901	0.1298	-0.6732
943	SLU 77	-1.16	-0.09	46.83	-20.1981	0.1318	-0.6718
943	SLU 78	-1.18	-0.14	46.84	-20.2014	0.1319	-0.6799
943	SLU 79	-1.15	-0.09	46.57	-20.0884	0.1309	-0.6668
943	SLU 80	-1.17	-0.14	46.57	-20.0918	0.1311	-0.6749
943	SLU 81	-1.16	-0.09	47.15	-20.3246	0.1325	-0.6687
943	SLU 82	-1.17	-0.13	47.15	-20.3279	0.1326	-0.6768
943	SLU 83	-1.17	-0.08	47.6	-20.5176	0.1339	-0.6759
943	SLU 84	-1.18	-0.13	47.61	-20.5209	0.1341	-0.684
943	SLE RA 1	-0.8	-0.11	31.64	-13.7108	0.0883	-0.4635
943	SLE RA 2	-0.82	-0.16	31.65	-13.7145	0.0885	-0.4726
943	SLE RA 3	-0.82	-0.11	32.12	-13.9126	0.0898	-0.4717
943	SLE RA 4	-0.83	-0.14	32.13	-13.9148	0.0899	-0.4771
943	SLE RA 5	-0.83	-0.16	31.96	-13.8431	0.0894	-0.4774
943	SLE RA 6	-0.82	-0.11	32.43	-14.0413	0.0908	-0.4764
943	SLE RA 7	-0.83	-0.14	32.43	-14.0435	0.0909	-0.4819
943	SLE RA 8	-0.82	-0.11	32.25	-13.9681	0.0902	-0.4731
943	SLE RA 9	-0.83	-0.14	32.26	-13.9703	0.0903	-0.4785
943	SLE RA 10	-0.86	-0.14	33.98	-14.6823	0.0953	-0.4979
943	SLE RA 11	-0.86	-0.09	34.45	-14.8804	0.0966	-0.497
943	SLE RA 12	-0.87	-0.12	34.46	-14.8827	0.0968	-0.5024
943	SLE RA 13	-0.87	-0.14	34.28	-14.811	0.0963	-0.5027
943	SLE RA 14	-0.87	-0.09	34.76	-15.0091	0.0976	-0.5017
943	SLE RA 15	-0.88	-0.12	34.76	-15.0113	0.0977	-0.5072
943	SLE RA 16	-0.86	-0.09	34.58	-14.936	0.097	-0.4984
943	SLE RA 17	-0.87	-0.12	34.59	-14.9382	0.0971	-0.5038
943	SLE RA 18	-0.86	-0.08	34.97	-15.0934	0.0981	-0.4997
943	SLE RA 19	-0.87	-0.11	34.97	-15.0957	0.0982	-0.5051
943	SLE RA 20	-0.87	-0.08	35.27	-15.2221	0.099	-0.5045
943	SLE RA 21	-0.88	-0.11	35.28	-15.2243	0.0991	-0.5099
943	SLE FR 1	-0.8	-0.11	31.64	-13.7108	0.0883	-0.4635
943	SLE FR 2	-0.81	-0.12	31.65	-13.7115	0.0883	-0.4653
943	SLE FR 3	-0.81	-0.11	31.77	-13.7622	0.0887	-0.4655
943	SLE FR 4	-0.82	-0.11	32.64	-14.1263	0.0913	-0.4762
943	SLE FR 5	-0.82	-0.1	32.76	-14.177	0.0916	-0.4763
943	SLE FR 6	-0.83	-0.1	33.31	-14.4021	0.0932	-0.4816
943	SLE QP 1	-0.8	-0.11	31.64	-13.7108	0.0883	-0.4635
943	SLE QP 2	-0.82	-0.1	32.64	-14.1256	0.0912	-0.4744
943	SLD 1	2.49	0.49	39.65	-17.1568	0.1335	1.4323
943	SLD 2	2.16	-0.03	40.1	-17.3412	0.1346	1.2436
943	SLD 3	2.4	-0.7	40.04	-17.2969	0.1361	1.3785
943	SLD 4	2.07	-1.22	40.48	-17.4813	0.1372	1.1898
943	SLD 5	0.38	1.98	34.08	-14.7889	0.0998	0.2135
943	SLD 6	0.16	1.64	34.38	-14.9113	0.1005	0.0883
943	SLD 7	0.06	-2	35.36	-15.256	0.1084	0.0342
943	SLD 8	-0.16	-2.34	35.66	-15.3783	0.1092	-0.0911
943	SLD 9	-1.48	2.13	29.63	-12.8728	0.0733	-0.8577
943	SLD 10	-1.7	1.79	29.92	-12.9952	0.074	-0.9829
943	SLD 11	-1.8	-1.84	30.91	-13.3399	0.0819	-1.0371
943	SLD 12	-2.02	-2.18	31.2	-13.4623	0.0827	-1.1623
943	SLD 13	-3.71	1.01	24.8	-10.7698	0.0452	-2.1386

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
943	SLD 14	-4.04	0.5	25.24	-10.9542	0.0463	-2.3272
943	SLD 15	-3.81	-0.18	25.18	-10.91	0.0478	-2.1924
943	SLD 16	-4.14	-0.7	25.63	-11.0944	0.0489	-2.3811
943	SLV 1	6.93	1.24	49.06	-21.2213	0.1903	3.9806
943	SLV 2	6.16	0.03	50.09	-21.6506	0.1929	3.5413
943	SLV 3	6.71	-1.46	49.94	-21.5417	0.1962	3.8583
943	SLV 4	5.94	-2.66	50.97	-21.9709	0.1987	3.419
943	SLV 5	1.97	4.6	36.06	-15.6929	0.1116	1.1248
943	SLV 6	1.47	3.82	36.73	-15.9726	0.1133	0.8386
943	SLV 7	1.24	-4.39	38.98	-16.7608	0.1312	0.7172
943	SLV 8	0.74	-5.17	39.65	-17.0405	0.1328	0.4309
943	SLV 9	-2.38	4.97	25.63	-11.2106	0.0496	-1.3797
943	SLV 10	-2.88	4.18	26.31	-11.4903	0.0513	-1.6659
943	SLV 11	-3.11	-4.02	28.55	-12.2785	0.0692	-1.7873
943	SLV 12	-3.61	-4.8	29.22	-12.5582	0.0709	-2.0736
943	SLV 13	-7.58	2.46	14.31	-6.2802	-0.0163	-4.3678
943	SLV 14	-8.35	1.26	15.35	-6.7095	-0.0137	-4.8071
943	SLV 15	-7.8	-0.24	15.19	-6.6006	-0.0104	-4.49
943	SLV 16	-8.57	-1.44	16.22	-7.0299	-0.0078	-4.9294
943	CRTFP Ux+	0	0	0	0	0	0
943	CRTFP Ux-	0	0	0	0	0	0
943	CRTFP Uy+	0	0	0	0	0	0
943	CRTFP Uy-	0	0	0	0	0	0
944	SLU 1	-0.79	-0.18	28.3	-11.4649	0.0611	-0.4541
944	SLU 2	-0.81	-0.25	28.3	-11.4663	0.0614	-0.4675
944	SLU 3	-0.81	-0.18	28.95	-11.7196	0.0628	-0.4663
944	SLU 4	-0.82	-0.22	28.96	-11.7204	0.0629	-0.4744
944	SLU 5	-0.82	-0.25	28.72	-11.6293	0.0624	-0.4747
944	SLU 6	-0.82	-0.18	29.37	-11.8826	0.0638	-0.4735
944	SLU 7	-0.83	-0.22	29.38	-11.8835	0.0639	-0.4816
944	SLU 8	-0.81	-0.18	29.13	-11.791	0.0632	-0.4685
944	SLU 9	-0.83	-0.22	29.14	-11.7918	0.0633	-0.4766
944	SLU 10	-0.88	-0.23	31.51	-12.6957	0.0686	-0.5059
944	SLU 11	-0.87	-0.16	32.17	-12.9489	0.07	-0.5047
944	SLU 12	-0.89	-0.2	32.17	-12.9498	0.0701	-0.5128
944	SLU 13	-0.89	-0.23	31.93	-12.8587	0.0696	-0.5131
944	SLU 14	-0.89	-0.16	32.59	-13.112	0.071	-0.5119
944	SLU 15	-0.9	-0.2	32.59	-13.1128	0.0711	-0.52
944	SLU 16	-0.88	-0.16	32.35	-13.0203	0.0704	-0.5069
944	SLU 17	-0.89	-0.2	32.35	-13.0212	0.0705	-0.515
944	SLU 18	-0.88	-0.16	32.88	-13.2211	0.0714	-0.509
944	SLU 19	-0.9	-0.2	32.89	-13.222	0.0715	-0.517
944	SLU 20	-0.89	-0.16	33.3	-13.3842	0.0724	-0.5162
944	SLU 21	-0.91	-0.2	33.31	-13.385	0.0726	-0.5242
944	SLU 22	-0.86	-0.15	31.59	-12.7288	0.0686	-0.4961
944	SLU 23	-0.88	-0.22	31.6	-12.7302	0.0688	-0.5095
944	SLU 24	-0.88	-0.15	32.25	-12.9835	0.0702	-0.5083
944	SLU 25	-0.89	-0.19	32.25	-12.9844	0.0704	-0.5164
944	SLU 26	-0.9	-0.21	32.02	-12.8933	0.0699	-0.5167
944	SLU 27	-0.89	-0.14	32.67	-13.1466	0.0713	-0.5155
944	SLU 28	-0.91	-0.18	32.67	-13.1474	0.0714	-0.5236
944	SLU 29	-0.88	-0.14	32.43	-13.0549	0.0706	-0.5105
944	SLU 30	-0.9	-0.18	32.43	-13.0558	0.0708	-0.5186
944	SLU 31	-0.95	-0.2	34.81	-13.9596	0.076	-0.5479
944	SLU 32	-0.95	-0.13	35.46	-14.2129	0.0774	-0.5467
944	SLU 33	-0.96	-0.17	35.47	-14.2137	0.0776	-0.5548
944	SLU 34	-0.96	-0.2	35.23	-14.1226	0.077	-0.5551
944	SLU 35	-0.96	-0.13	35.88	-14.3759	0.0784	-0.5539
944	SLU 36	-0.97	-0.17	35.89	-14.3768	0.0786	-0.562
944	SLU 37	-0.95	-0.13	35.64	-14.2843	0.0778	-0.5489
944	SLU 38	-0.96	-0.17	35.65	-14.2851	0.078	-0.557
944	SLU 39	-0.95	-0.13	36.18	-14.4851	0.0789	-0.551
944	SLU 40	-0.97	-0.17	36.18	-14.4859	0.079	-0.559
944	SLU 41	-0.97	-0.12	36.6	-14.6481	0.0799	-0.5582
944	SLU 42	-0.98	-0.16	36.6	-14.649	0.08	-0.5662
944	SLU 43	-1	-0.25	35.65	-14.471	0.0769	-0.576
944	SLU 44	-1.02	-0.31	35.66	-14.4724	0.0771	-0.5894
944	SLU 45	-1.02	-0.24	36.31	-14.7257	0.0786	-0.5882
944	SLU 46	-1.03	-0.28	36.31	-14.7265	0.0787	-0.5962
944	SLU 47	-1.03	-0.31	36.08	-14.6354	0.0782	-0.5966
944	SLU 48	-1.03	-0.24	36.73	-14.8887	0.0796	-0.5954
944	SLU 49	-1.05	-0.28	36.73	-14.8896	0.0797	-0.6034
944	SLU 50	-1.02	-0.24	36.49	-14.7971	0.079	-0.5904
944	SLU 51	-1.04	-0.28	36.49	-14.7979	0.0791	-0.5984
944	SLU 52	-1.09	-0.3	38.87	-15.7018	0.0843	-0.6277
944	SLU 53	-1.09	-0.23	39.52	-15.9551	0.0857	-0.6266
944	SLU 54	-1.1	-0.27	39.53	-15.9559	0.0859	-0.6346
944	SLU 55	-1.1	-0.3	39.29	-15.8648	0.0854	-0.635
944	SLU 56	-1.1	-0.23	39.94	-16.1181	0.0868	-0.6338
944	SLU 57	-1.11	-0.27	39.95	-16.1189	0.0869	-0.6418
944	SLU 58	-1.09	-0.23	39.7	-16.0264	0.0862	-0.6288
944	SLU 59	-1.1	-0.27	39.71	-16.0273	0.0863	-0.6368
944	SLU 60	-1.09	-0.22	40.24	-16.2272	0.0872	-0.6308
944	SLU 61	-1.11	-0.26	40.24	-16.2281	0.0873	-0.6388
944	SLU 62	-1.1	-0.22	40.66	-16.3903	0.0882	-0.638
944	SLU 63	-1.12	-0.26	40.66	-16.3911	0.0883	-0.6461
944	SLU 64	-1.07	-0.21	38.95	-15.7349	0.0844	-0.618
944	SLU 65	-1.09	-0.28	38.95	-15.7363	0.0846	-0.6314
944	SLU 66	-1.09	-0.21	39.61	-15.9896	0.086	-0.6302
944	SLU 67	-1.11	-0.25	39.61	-15.9905	0.0862	-0.6382

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
944	SLU 68	-1.11	-0.28	39.37	-15.8994	0.0856	-0.6386
944	SLU 69	-1.1	-0.21	40.03	-16.1527	0.087	-0.6374
944	SLU 70	-1.12	-0.25	40.03	-16.1535	0.0872	-0.6454
944	SLU 71	-1.1	-0.21	39.79	-16.061	0.0864	-0.6324
944	SLU 72	-1.11	-0.25	39.79	-16.0619	0.0866	-0.6404
944	SLU 73	-1.16	-0.27	42.17	-16.9657	0.0918	-0.6698
944	SLU 74	-1.16	-0.2	42.82	-17.219	0.0932	-0.6686
944	SLU 75	-1.17	-0.24	42.82	-17.2198	0.0933	-0.6766
944	SLU 76	-1.17	-0.26	42.59	-17.1288	0.0928	-0.677
944	SLU 77	-1.17	-0.19	43.24	-17.382	0.0942	-0.6758
944	SLU 78	-1.18	-0.23	43.24	-17.3829	0.0944	-0.6838
944	SLU 79	-1.16	-0.19	43	-17.2904	0.0936	-0.6708
944	SLU 80	-1.18	-0.23	43	-17.2912	0.0938	-0.6788
944	SLU 81	-1.16	-0.19	43.54	-17.4912	0.0947	-0.6728
944	SLU 82	-1.18	-0.23	43.54	-17.492	0.0948	-0.6809
944	SLU 83	-1.18	-0.19	43.96	-17.6542	0.0957	-0.68
944	SLU 84	-1.19	-0.23	43.96	-17.6551	0.0958	-0.6881
944	SLE RA 1	-0.81	-0.17	29.24	-11.826	0.0633	-0.4661
944	SLE RA 2	-0.82	-0.22	29.24	-11.8269	0.0634	-0.4751
944	SLE RA 3	-0.82	-0.17	29.68	-11.9958	0.0644	-0.4743
944	SLE RA 4	-0.83	-0.2	29.68	-11.9964	0.0644	-0.4796
944	SLE RA 5	-0.83	-0.21	29.52	-11.9356	0.0641	-0.4799
944	SLE RA 6	-0.83	-0.17	29.96	-12.1045	0.065	-0.4791
944	SLE RA 7	-0.84	-0.2	29.96	-12.1051	0.0651	-0.4844
944	SLE RA 8	-0.82	-0.17	29.8	-12.0434	0.0646	-0.4757
944	SLE RA 9	-0.83	-0.19	29.8	-12.044	0.0647	-0.4811
944	SLE RA 10	-0.87	-0.21	31.38	-12.6465	0.0682	-0.5007
944	SLE RA 11	-0.87	-0.16	31.82	-12.8154	0.0692	-0.4999
944	SLE RA 12	-0.88	-0.19	31.82	-12.8159	0.0692	-0.5052
944	SLE RA 13	-0.88	-0.2	31.66	-12.7552	0.0689	-0.5055
944	SLE RA 14	-0.87	-0.16	32.1	-12.9241	0.0698	-0.5047
944	SLE RA 15	-0.88	-0.18	32.1	-12.9246	0.0699	-0.51
944	SLE RA 16	-0.87	-0.16	31.94	-12.863	0.0694	-0.5013
944	SLE RA 17	-0.88	-0.18	31.94	-12.8635	0.0695	-0.5067
944	SLE RA 18	-0.87	-0.16	32.3	-12.9968	0.0701	-0.5027
944	SLE RA 19	-0.88	-0.18	32.3	-12.9974	0.0702	-0.5081
944	SLE RA 20	-0.88	-0.16	32.58	-13.1055	0.0708	-0.5075
944	SLE RA 21	-0.89	-0.18	32.58	-13.1061	0.0709	-0.5129
944	SLE FR 1	-0.81	-0.17	29.24	-11.826	0.0633	-0.4661
944	SLE FR 2	-0.81	-0.18	29.24	-11.8262	0.0633	-0.4679
944	SLE FR 3	-0.81	-0.17	29.35	-11.8695	0.0635	-0.4681
944	SLE FR 4	-0.83	-0.18	30.16	-12.1774	0.0654	-0.4789
944	SLE FR 5	-0.83	-0.17	30.27	-12.2207	0.0656	-0.479
944	SLE FR 6	-0.84	-0.16	30.77	-12.4114	0.0667	-0.4844
944	SLE QP 1	-0.81	-0.17	29.24	-11.826	0.0633	-0.4661
944	SLE QP 2	-0.83	-0.17	30.16	-12.1773	0.0653	-0.4771
944	SLD 1	2.49	0.41	35.92	-14.3928	0.1015	1.4326
944	SLD 2	2.16	-0.07	36.33	-14.5576	0.1022	1.2437
944	SLD 3	2.4	-0.71	36.24	-14.5005	0.1035	1.3792
944	SLD 4	2.07	-1.19	36.66	-14.6653	0.1042	1.1903
944	SLD 5	0.38	1.79	31.32	-12.6487	0.073	0.2112
944	SLD 6	0.16	1.47	31.59	-12.758	0.0735	0.0858
944	SLD 7	0.06	-1.94	32.4	-13.0076	0.0797	0.0331
944	SLD 8	-0.16	-2.26	32.67	-13.1169	0.0802	-0.0923
944	SLD 9	-1.49	1.92	27.64	-11.2376	0.0505	-0.862
944	SLD 10	-1.71	1.6	27.91	-11.347	0.051	-0.9873
944	SLD 11	-1.81	-1.81	28.72	-11.5965	0.0572	-1.04
944	SLD 12	-2.03	-2.12	28.99	-11.7058	0.0577	-1.1654
944	SLD 13	-3.72	0.85	23.65	-9.6892	0.0265	-2.1445
944	SLD 14	-4.05	0.37	24.07	-9.854	0.0272	-2.3334
944	SLD 15	-3.82	-0.27	23.98	-9.7969	0.0285	-2.1979
944	SLD 16	-4.15	-0.75	24.39	-9.9617	0.0292	-2.3868
944	SLV 1	6.93	1.14	43.65	-17.3631	0.1499	3.985
944	SLV 2	6.16	0.03	44.62	-17.7467	0.1516	3.5452
944	SLV 3	6.72	-1.39	44.39	-17.6108	0.1545	3.8636
944	SLV 4	5.95	-2.5	45.35	-17.9944	0.1562	3.4237
944	SLV 5	1.97	4.26	32.91	-13.2899	0.0835	1.123
944	SLV 6	1.47	3.53	33.54	-13.5399	0.0846	0.8364
944	SLV 7	1.24	-4.17	35.38	-14.1155	0.0986	0.7182
944	SLV 8	0.74	-4.9	36	-14.3655	0.0998	0.4317
944	SLV 9	-2.39	4.57	24.31	-9.989	0.0309	-1.3859
944	SLV 10	-2.89	3.84	24.94	-10.239	0.032	-1.6725
944	SLV 11	-3.12	-3.87	26.77	-10.8146	0.046	-1.7906
944	SLV 12	-3.62	-4.59	27.4	-11.0646	0.0471	-2.0772
944	SLV 13	-7.6	2.17	14.96	-6.3601	-0.0255	-4.3779
944	SLV 14	-8.37	1.05	15.92	-6.7438	-0.0238	-4.8178
944	SLV 15	-7.82	-0.36	15.7	-6.6078	-0.021	-4.4994
944	SLV 16	-8.59	-1.48	16.66	-6.9914	-0.0193	-4.9392
944	CRTFP Ux+	0	0	0	0	0	0
944	CRTFP Ux-	0	0	0	0	0	0
944	CRTFP Uy+	0	0	0	0	0	0
944	CRTFP Uy-	0	0	0	0	0	0
945	SLU 1	-0.79	-0.23	26.75	-10.295	0.0364	-0.456
945	SLU 2	-0.81	-0.29	26.75	-10.2935	0.0366	-0.4693
945	SLU 3	-0.81	-0.23	27.37	-10.5188	0.0374	-0.4683
945	SLU 4	-0.83	-0.27	27.36	-10.5179	0.0375	-0.4762
945	SLU 5	-0.83	-0.29	27.14	-10.4374	0.0372	-0.4765
945	SLU 6	-0.82	-0.23	27.76	-10.6627	0.038	-0.4755
945	SLU 7	-0.84	-0.26	27.76	-10.6618	0.0381	-0.4834
945	SLU 8	-0.82	-0.23	27.53	-10.5828	0.0376	-0.4705

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
945	SLU 9	-0.83	-0.26	27.53	-10.5819	0.0377	-0.4784
945	SLU 10	-0.88	-0.29	29.78	-11.3832	0.0406	-0.5081
945	SLU 11	-0.88	-0.23	30.4	-11.6085	0.0414	-0.5071
945	SLU 12	-0.89	-0.26	30.4	-11.6077	0.0415	-0.515
945	SLU 13	-0.89	-0.28	30.17	-11.5271	0.0412	-0.5153
945	SLU 14	-0.89	-0.22	30.79	-11.7524	0.042	-0.5143
945	SLU 15	-0.91	-0.26	30.79	-11.7515	0.0421	-0.5222
945	SLU 16	-0.88	-0.22	30.57	-11.6725	0.0417	-0.5093
945	SLU 17	-0.9	-0.26	30.57	-11.6716	0.0418	-0.5172
945	SLU 18	-0.89	-0.23	31.08	-11.8517	0.0422	-0.5115
945	SLU 19	-0.9	-0.26	31.08	-11.8508	0.0423	-0.5194
945	SLU 20	-0.9	-0.22	31.48	-11.9956	0.0428	-0.5187
945	SLU 21	-0.91	-0.26	31.47	-11.9947	0.0429	-0.5266
945	SLU 22	-0.86	-0.21	29.86	-11.4146	0.0407	-0.4984
945	SLU 23	-0.89	-0.27	29.86	-11.4131	0.0408	-0.5117
945	SLU 24	-0.89	-0.21	30.48	-11.6385	0.0416	-0.5107
945	SLU 25	-0.9	-0.24	30.48	-11.6376	0.0417	-0.5186
945	SLU 26	-0.9	-0.27	30.25	-11.557	0.0414	-0.5189
945	SLU 27	-0.9	-0.2	30.87	-11.7824	0.0422	-0.5179
945	SLU 28	-0.91	-0.24	30.87	-11.7815	0.0423	-0.5258
945	SLU 29	-0.89	-0.2	30.65	-11.7024	0.0419	-0.5129
945	SLU 30	-0.9	-0.24	30.65	-11.7015	0.042	-0.5208
945	SLU 31	-0.95	-0.26	32.89	-12.5028	0.0448	-0.5505
945	SLU 32	-0.95	-0.2	33.51	-12.7282	0.0456	-0.5495
945	SLU 33	-0.97	-0.24	33.51	-12.7273	0.0457	-0.5574
945	SLU 34	-0.97	-0.26	33.29	-12.6467	0.0454	-0.5577
945	SLU 35	-0.96	-0.2	33.91	-12.8721	0.0463	-0.5567
945	SLU 36	-0.98	-0.24	33.9	-12.8712	0.0463	-0.5646
945	SLU 37	-0.96	-0.2	33.68	-12.7921	0.0459	-0.5517
945	SLU 38	-0.97	-0.24	33.68	-12.7912	0.046	-0.5596
945	SLU 39	-0.96	-0.2	34.2	-12.9713	0.0464	-0.5539
945	SLU 40	-0.97	-0.24	34.19	-12.9705	0.0465	-0.5618
945	SLU 41	-0.97	-0.2	34.59	-13.1152	0.047	-0.5611
945	SLU 42	-0.99	-0.24	34.59	-13.1144	0.0471	-0.569
945	SLU 43	-1	-0.31	33.71	-12.9996	0.0459	-0.5783
945	SLU 44	-1.03	-0.37	33.7	-12.9981	0.0461	-0.5915
945	SLU 45	-1.02	-0.31	34.32	-13.2235	0.0469	-0.5905
945	SLU 46	-1.04	-0.34	34.32	-13.2226	0.047	-0.5985
945	SLU 47	-1.04	-0.37	34.1	-13.142	0.0467	-0.5987
945	SLU 48	-1.04	-0.31	34.72	-13.3674	0.0475	-0.5977
945	SLU 49	-1.05	-0.34	34.71	-13.3665	0.0476	-0.6057
945	SLU 50	-1.03	-0.3	34.49	-13.2874	0.0471	-0.5927
945	SLU 51	-1.04	-0.34	34.49	-13.2865	0.0472	-0.6007
945	SLU 52	-1.09	-0.36	36.74	-14.0878	0.0501	-0.6304
945	SLU 53	-1.09	-0.3	37.36	-14.3132	0.0509	-0.6293
945	SLU 54	-1.1	-0.34	37.36	-14.3123	0.051	-0.6373
945	SLU 55	-1.11	-0.36	37.13	-14.2317	0.0507	-0.6376
945	SLU 56	-1.1	-0.3	37.75	-14.4571	0.0515	-0.6366
945	SLU 57	-1.12	-0.34	37.75	-14.4562	0.0516	-0.6445
945	SLU 58	-1.09	-0.3	37.53	-14.3771	0.0511	-0.6315
945	SLU 59	-1.11	-0.34	37.52	-14.3762	0.0512	-0.6395
945	SLU 60	-1.1	-0.3	38.04	-14.5563	0.0517	-0.6338
945	SLU 61	-1.11	-0.34	38.04	-14.5554	0.0517	-0.6417
945	SLU 62	-1.11	-0.3	38.43	-14.7002	0.0523	-0.641
945	SLU 63	-1.12	-0.34	38.43	-14.6993	0.0524	-0.6489
945	SLU 64	-1.08	-0.29	36.82	-14.1192	0.0501	-0.6207
945	SLU 65	-1.1	-0.35	36.82	-14.1178	0.0503	-0.6339
945	SLU 66	-1.1	-0.28	37.44	-14.3431	0.0511	-0.6329
945	SLU 67	-1.11	-0.32	37.43	-14.3422	0.0512	-0.6409
945	SLU 68	-1.11	-0.34	37.21	-14.2617	0.0509	-0.6411
945	SLU 69	-1.11	-0.28	37.83	-14.487	0.0517	-0.6401
945	SLU 70	-1.12	-0.32	37.83	-14.4861	0.0518	-0.6481
945	SLU 71	-1.1	-0.28	37.6	-14.407	0.0513	-0.6351
945	SLU 72	-1.11	-0.32	37.6	-14.4062	0.0514	-0.6431
945	SLU 73	-1.17	-0.34	39.85	-15.2075	0.0543	-0.6728
945	SLU 74	-1.16	-0.28	40.47	-15.4328	0.0551	-0.6717
945	SLU 75	-1.18	-0.32	40.47	-15.4319	0.0552	-0.6797
945	SLU 76	-1.18	-0.34	40.24	-15.3514	0.0549	-0.68
945	SLU 77	-1.18	-0.28	40.86	-15.5767	0.0557	-0.679
945	SLU 78	-1.19	-0.31	40.86	-15.5758	0.0558	-0.6869
945	SLU 79	-1.17	-0.28	40.64	-15.4967	0.0554	-0.6739
945	SLU 80	-1.18	-0.31	40.64	-15.4959	0.0555	-0.6819
945	SLU 81	-1.17	-0.28	41.15	-15.676	0.0559	-0.6762
945	SLU 82	-1.19	-0.32	41.15	-15.6751	0.056	-0.6841
945	SLU 83	-1.18	-0.28	41.55	-15.8199	0.0565	-0.6834
945	SLU 84	-1.2	-0.31	41.54	-15.819	0.0566	-0.6913
945	SLE RA 1	-0.81	-0.22	27.64	-10.6149	0.0376	-0.4682
945	SLE RA 2	-0.83	-0.26	27.64	-10.6139	0.0377	-0.477
945	SLE RA 3	-0.83	-0.22	28.05	-10.7641	0.0383	-0.4763
945	SLE RA 4	-0.83	-0.25	28.05	-10.7635	0.0383	-0.4816
945	SLE RA 5	-0.84	-0.26	27.9	-10.7098	0.0381	-0.4818
945	SLE RA 6	-0.83	-0.22	28.31	-10.86	0.0387	-0.4811
945	SLE RA 7	-0.84	-0.25	28.31	-10.8595	0.0387	-0.4864
945	SLE RA 8	-0.83	-0.22	28.16	-10.8067	0.0384	-0.4778
945	SLE RA 9	-0.84	-0.25	28.16	-10.8062	0.0385	-0.4831
945	SLE RA 10	-0.87	-0.26	29.66	-11.3404	0.0404	-0.5028
945	SLE RA 11	-0.87	-0.22	30.07	-11.4906	0.041	-0.5022
945	SLE RA 12	-0.88	-0.24	30.07	-11.49	0.041	-0.5075
945	SLE RA 13	-0.88	-0.26	29.92	-11.4363	0.0408	-0.5077
945	SLE RA 14	-0.88	-0.22	30.33	-11.5865	0.0414	-0.507

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
945	SLE RA 15	-0.89	-0.24	30.33	-11.5859	0.0414	-0.5123
945	SLE RA 16	-0.87	-0.22	30.18	-11.5332	0.0411	-0.5036
945	SLE RA 17	-0.88	-0.24	30.18	-11.5326	0.0412	-0.5089
945	SLE RA 18	-0.88	-0.22	30.53	-11.6527	0.0415	-0.5051
945	SLE RA 19	-0.88	-0.24	30.53	-11.6521	0.0415	-0.5104
945	SLE RA 20	-0.88	-0.22	30.79	-11.7486	0.0419	-0.5099
945	SLE RA 21	-0.89	-0.24	30.79	-11.748	0.0419	-0.5152
945	SLE FR 1	-0.81	-0.22	27.64	-10.6149	0.0376	-0.4682
945	SLE FR 2	-0.81	-0.23	27.64	-10.6147	0.0377	-0.4699
945	SLE FR 3	-0.81	-0.22	27.74	-10.6533	0.0378	-0.4701
945	SLE FR 4	-0.83	-0.23	28.5	-10.926	0.0388	-0.481
945	SLE FR 5	-0.83	-0.22	28.61	-10.9646	0.0389	-0.4812
945	SLE FR 6	-0.84	-0.22	29.08	-11.1338	0.0396	-0.4866
945	SLE QP 1	-0.81	-0.22	27.64	-10.6149	0.0376	-0.4682
945	SLE QP 2	-0.83	-0.22	28.5	-10.9262	0.0388	-0.4792
945	SLD 1	2.5	0.34	33.21	-12.482	0.0688	1.4334
945	SLD 2	2.16	-0.1	33.61	-12.637	0.0691	1.2443
945	SLD 3	2.4	-0.71	33.5	-12.575	0.0701	1.3804
945	SLD 4	2.07	-1.16	33.9	-12.73	0.0705	1.1912
945	SLD 5	0.37	1.62	29.41	-11.2238	0.0457	0.2094
945	SLD 6	0.15	1.33	29.68	-11.3266	0.0459	0.0839
945	SLD 7	0.06	-1.88	30.36	-11.5337	0.0501	0.0326
945	SLD 8	-0.16	-2.18	30.62	-11.6366	0.0504	-0.0929
945	SLD 9	-1.5	1.73	26.38	-10.2159	0.0272	-0.8656
945	SLD 10	-1.72	1.44	26.65	-10.3187	0.0274	-0.9911
945	SLD 11	-1.81	-1.78	27.33	-10.5259	0.0317	-1.0423
945	SLD 12	-2.03	-2.07	27.59	-10.6287	0.0319	-1.1679
945	SLD 13	-3.73	0.71	23.11	-9.1225	0.0071	-2.1497
945	SLD 14	-4.06	0.26	23.51	-9.2775	0.0075	-2.3389
945	SLD 15	-3.83	-0.34	23.4	-9.2155	0.0085	-2.2028
945	SLD 16	-4.16	-0.79	23.79	-9.3704	0.0088	-2.3919
945	SLV 1	6.94	1.06	39.53	-14.5677	0.109	3.9898
945	SLV 2	6.17	0.02	40.46	-14.9284	0.1098	3.5494
945	SLV 3	6.73	-1.32	40.18	-14.7826	0.112	3.8692
945	SLV 4	5.96	-2.36	41.11	-15.1434	0.1128	3.4289
945	SLV 5	1.96	3.96	30.66	-11.6293	0.0551	1.1217
945	SLV 6	1.46	3.28	31.27	-11.8643	0.0557	0.8348
945	SLV 7	1.25	-3.98	32.83	-12.3457	0.0652	0.7198
945	SLV 8	0.74	-4.66	33.43	-12.5808	0.0657	0.4329
945	SLV 9	-2.4	4.21	23.57	-9.2717	0.0118	-1.3914
945	SLV 10	-2.91	3.54	24.18	-9.5067	0.0124	-1.6783
945	SLV 11	-3.12	-3.73	25.74	-9.9881	0.0219	-1.7933
945	SLV 12	-3.62	-4.4	26.35	-10.2232	0.0225	-2.0802
945	SLV 13	-7.62	1.91	15.9	-6.7091	-0.0353	-4.3873
945	SLV 14	-8.39	0.88	16.83	-7.0698	-0.0344	-4.8277
945	SLV 15	-7.83	-0.47	16.55	-6.924	-0.0322	-4.5079
945	SLV 16	-8.6	-1.51	17.48	-7.2848	-0.0314	-4.9483
945	CRTFP Ux+	0	0	0	0	0	0
945	CRTFP Ux-	0	0	0	0	0	0
945	CRTFP Uy+	0	0	0	0	0	0
945	CRTFP Uy-	0	0	0	0	0	0
946	SLU 1	-0.79	-0.28	25.98	-9.7685	0.0123	-0.4574
946	SLU 2	-0.82	-0.33	25.97	-9.7656	0.0124	-0.4704
946	SLU 3	-0.81	-0.27	26.58	-9.9785	0.0126	-0.4696
946	SLU 4	-0.83	-0.31	26.57	-9.9768	0.0127	-0.4774
946	SLU 5	-0.83	-0.33	26.35	-9.901	0.0126	-0.4776
946	SLU 6	-0.83	-0.27	26.96	-10.114	0.0128	-0.4768
946	SLU 7	-0.84	-0.31	26.95	-10.1122	0.0129	-0.4846
946	SLU 8	-0.82	-0.27	26.74	-10.0394	0.0127	-0.4718
946	SLU 9	-0.83	-0.3	26.73	-10.0376	0.0128	-0.4796
946	SLU 10	-0.88	-0.33	28.93	-10.7981	0.0133	-0.5096
946	SLU 11	-0.88	-0.28	29.53	-11.0111	0.0135	-0.5088
946	SLU 12	-0.9	-0.31	29.53	-11.0093	0.0136	-0.5166
946	SLU 13	-0.9	-0.33	29.31	-10.9336	0.0135	-0.5168
946	SLU 14	-0.89	-0.28	29.91	-11.1465	0.0138	-0.516
946	SLU 15	-0.91	-0.31	29.91	-11.1448	0.0138	-0.5238
946	SLU 16	-0.89	-0.28	29.7	-11.072	0.0136	-0.511
946	SLU 17	-0.9	-0.31	29.69	-11.0702	0.0137	-0.5188
946	SLU 18	-0.89	-0.28	30.2	-11.2436	0.0136	-0.5134
946	SLU 19	-0.9	-0.32	30.2	-11.2418	0.0137	-0.5212
946	SLU 20	-0.9	-0.28	30.58	-11.379	0.0138	-0.5206
946	SLU 21	-0.92	-0.31	30.58	-11.3773	0.0139	-0.5284
946	SLU 22	-0.87	-0.26	29.01	-10.8282	0.0134	-0.5001
946	SLU 23	-0.89	-0.31	29	-10.8253	0.0134	-0.5132
946	SLU 24	-0.89	-0.26	29.6	-11.0383	0.0137	-0.5123
946	SLU 25	-0.9	-0.29	29.6	-11.0365	0.0137	-0.5202
946	SLU 26	-0.9	-0.31	29.38	-10.9607	0.0136	-0.5204
946	SLU 27	-0.9	-0.26	29.98	-11.1737	0.0139	-0.5195
946	SLU 28	-0.91	-0.29	29.98	-11.1719	0.0139	-0.5274
946	SLU 29	-0.89	-0.26	29.77	-11.0991	0.0138	-0.5145
946	SLU 30	-0.91	-0.29	29.76	-11.0974	0.0138	-0.5224
946	SLU 31	-0.96	-0.32	31.96	-11.8578	0.0143	-0.5524
946	SLU 32	-0.96	-0.26	32.56	-12.0708	0.0146	-0.5515
946	SLU 33	-0.97	-0.3	32.56	-12.069	0.0146	-0.5594
946	SLU 34	-0.97	-0.32	32.34	-11.9933	0.0146	-0.5596
946	SLU 35	-0.97	-0.26	32.94	-12.2063	0.0148	-0.5588
946	SLU 36	-0.98	-0.3	32.94	-12.2045	0.0148	-0.5666
946	SLU 37	-0.96	-0.26	32.72	-12.1317	0.0147	-0.5537
946	SLU 38	-0.97	-0.3	32.72	-12.1299	0.0147	-0.5616
946	SLU 39	-0.96	-0.27	33.23	-12.3033	0.0147	-0.5561

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
946	SLU 40	-0.98	-0.3	33.23	-12.3015	0.0147	-0.564
946	SLU 41	-0.98	-0.27	33.61	-12.4388	0.0149	-0.5633
946	SLU 42	-0.99	-0.3	33.61	-12.437	0.0149	-0.5712
946	SLU 43	-1.01	-0.36	32.73	-12.3358	0.0156	-0.5799
946	SLU 44	-1.03	-0.42	32.73	-12.3328	0.0157	-0.593
946	SLU 45	-1.03	-0.36	33.33	-12.5458	0.016	-0.5921
946	SLU 46	-1.04	-0.39	33.33	-12.544	0.016	-0.6
946	SLU 47	-1.04	-0.42	33.11	-12.4682	0.0159	-0.6002
946	SLU 48	-1.04	-0.36	33.71	-12.6812	0.0162	-0.5993
946	SLU 49	-1.05	-0.39	33.71	-12.6794	0.0162	-0.6072
946	SLU 50	-1.03	-0.36	33.49	-12.6066	0.0161	-0.5943
946	SLU 51	-1.04	-0.39	33.49	-12.6049	0.0161	-0.6022
946	SLU 52	-1.1	-0.42	35.68	-13.3653	0.0166	-0.6322
946	SLU 53	-1.09	-0.37	36.29	-13.5783	0.0169	-0.6313
946	SLU 54	-1.11	-0.4	36.28	-13.5766	0.0169	-0.6392
946	SLU 55	-1.11	-0.42	36.06	-13.5008	0.0168	-0.6394
946	SLU 56	-1.11	-0.37	36.67	-13.7138	0.0171	-0.6385
946	SLU 57	-1.12	-0.4	36.66	-13.712	0.0171	-0.6464
946	SLU 58	-1.1	-0.37	36.45	-13.6392	0.017	-0.6335
946	SLU 59	-1.11	-0.4	36.45	-13.6374	0.017	-0.6414
946	SLU 60	-1.1	-0.37	36.96	-13.8108	0.0169	-0.6359
946	SLU 61	-1.12	-0.4	36.95	-13.8091	0.017	-0.6438
946	SLU 62	-1.11	-0.37	37.34	-13.9463	0.0172	-0.6431
946	SLU 63	-1.13	-0.4	37.33	-13.9445	0.0172	-0.651
946	SLU 64	-1.08	-0.35	35.76	-13.3955	0.0167	-0.6227
946	SLU 65	-1.1	-0.4	35.76	-13.3925	0.0168	-0.6357
946	SLU 66	-1.1	-0.35	36.36	-13.6055	0.017	-0.6349
946	SLU 67	-1.11	-0.38	36.36	-13.6037	0.0171	-0.6427
946	SLU 68	-1.12	-0.4	36.14	-13.528	0.017	-0.6429
946	SLU 69	-1.11	-0.35	36.74	-13.7409	0.0172	-0.6421
946	SLU 70	-1.13	-0.38	36.74	-13.7392	0.0173	-0.6499
946	SLU 71	-1.1	-0.34	36.52	-13.6664	0.0171	-0.6371
946	SLU 72	-1.12	-0.38	36.52	-13.6646	0.0171	-0.6449
946	SLU 73	-1.17	-0.41	38.71	-14.4251	0.0177	-0.6749
946	SLU 74	-1.17	-0.35	39.32	-14.638	0.0179	-0.6741
946	SLU 75	-1.18	-0.38	39.31	-14.6363	0.018	-0.6819
946	SLU 76	-1.18	-0.41	39.09	-14.5605	0.0179	-0.6821
946	SLU 77	-1.18	-0.35	39.7	-14.7735	0.0181	-0.6813
946	SLU 78	-1.19	-0.38	39.69	-14.7717	0.0182	-0.6891
946	SLU 79	-1.17	-0.35	39.48	-14.6989	0.018	-0.6763
946	SLU 80	-1.19	-0.38	39.48	-14.6971	0.0181	-0.6841
946	SLU 81	-1.18	-0.36	39.98	-14.8705	0.018	-0.6787
946	SLU 82	-1.19	-0.39	39.98	-14.8688	0.018	-0.6865
946	SLU 83	-1.19	-0.35	40.37	-15.006	0.0182	-0.6859
946	SLU 84	-1.2	-0.39	40.36	-15.0042	0.0182	-0.6937
946	SLE RA 1	-0.81	-0.27	26.84	-10.0713	0.0126	-0.4696
946	SLE RA 2	-0.83	-0.31	26.84	-10.0693	0.0127	-0.4783
946	SLE RA 3	-0.83	-0.27	27.24	-10.2113	0.0128	-0.4777
946	SLE RA 4	-0.84	-0.29	27.24	-10.2101	0.0129	-0.4829
946	SLE RA 5	-0.84	-0.31	27.09	-10.1596	0.0128	-0.4831
946	SLE RA 6	-0.84	-0.27	27.5	-10.3016	0.013	-0.4825
946	SLE RA 7	-0.85	-0.29	27.49	-10.3004	0.013	-0.4878
946	SLE RA 8	-0.83	-0.27	27.35	-10.2519	0.0129	-0.4792
946	SLE RA 9	-0.84	-0.29	27.35	-10.2507	0.0129	-0.4844
946	SLE RA 10	-0.87	-0.31	28.81	-10.7577	0.0133	-0.5044
946	SLE RA 11	-0.87	-0.27	29.21	-10.8997	0.0134	-0.5039
946	SLE RA 12	-0.88	-0.3	29.21	-10.8985	0.0135	-0.5091
946	SLE RA 13	-0.88	-0.31	29.06	-10.848	0.0134	-0.5092
946	SLE RA 14	-0.88	-0.27	29.47	-10.99	0.0136	-0.5087
946	SLE RA 15	-0.89	-0.29	29.46	-10.9888	0.0136	-0.5139
946	SLE RA 16	-0.88	-0.27	29.32	-10.9403	0.0135	-0.5053
946	SLE RA 17	-0.89	-0.29	29.32	-10.9391	0.0135	-0.5106
946	SLE RA 18	-0.88	-0.28	29.66	-11.0547	0.0135	-0.5069
946	SLE RA 19	-0.89	-0.3	29.66	-11.0535	0.0135	-0.5121
946	SLE RA 20	-0.89	-0.28	29.91	-11.145	0.0136	-0.5117
946	SLE RA 21	-0.9	-0.3	29.91	-11.1438	0.0136	-0.517
946	SLE FR 1	-0.81	-0.27	26.84	-10.0713	0.0126	-0.4696
946	SLE FR 2	-0.82	-0.28	26.84	-10.0709	0.0126	-0.4713
946	SLE FR 3	-0.82	-0.27	26.94	-10.1074	0.0127	-0.4715
946	SLE FR 4	-0.84	-0.28	27.69	-10.3659	0.0129	-0.4825
946	SLE FR 5	-0.84	-0.27	27.79	-10.4024	0.0129	-0.4827
946	SLE FR 6	-0.85	-0.27	28.25	-10.563	0.013	-0.4883
946	SLE QP 1	-0.81	-0.27	26.84	-10.0713	0.0126	-0.4696
946	SLE QP 2	-0.83	-0.27	27.69	-10.3663	0.0129	-0.4808
946	SLD 1	2.5	0.28	31.54	-11.4167	0.0369	1.4346
946	SLD 2	2.17	-0.14	31.93	-11.5712	0.0369	1.2454
946	SLD 3	2.4	-0.72	31.8	-11.5073	0.0376	1.382
946	SLD 4	2.07	-1.13	32.19	-11.6617	0.0376	1.1927
946	SLD 5	0.37	1.48	28.37	-10.516	0.0191	0.2081
946	SLD 6	0.15	1.21	28.63	-10.6185	0.0191	0.0825
946	SLD 7	0.06	-1.84	29.25	-10.8179	0.0213	0.0326
946	SLD 8	-0.16	-2.12	29.51	-10.9204	0.0213	-0.093
946	SLD 9	-1.5	1.57	25.86	-9.8122	0.0045	-0.8686
946	SLD 10	-1.72	1.3	26.12	-9.9148	0.0045	-0.9942
946	SLD 11	-1.82	-1.75	26.75	-10.1141	0.0066	-1.044
946	SLD 12	-2.04	-2.03	27.01	-10.2166	0.0067	-1.1697
946	SLD 13	-3.74	0.59	23.18	-9.0709	-0.0118	-2.1543
946	SLD 14	-4.07	0.17	23.57	-9.2254	-0.0118	-2.3436
946	SLD 15	-3.83	-0.41	23.45	-9.1614	-0.0112	-2.2069
946	SLD 16	-4.16	-0.82	23.84	-9.3159	-0.0112	-2.3962

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
946	SLV 1	6.95	0.98	36.7	-12.8252	0.0691	3.9948
946	SLV 2	6.18	0.01	37.61	-13.1849	0.0692	3.5541
946	SLV 3	6.74	-1.28	37.31	-13.0348	0.0706	3.8751
946	SLV 4	5.97	-2.25	38.22	-13.3945	0.0707	3.4344
946	SLV 5	1.96	3.7	29.31	-10.7228	0.0275	1.1209
946	SLV 6	1.46	3.07	29.9	-10.9572	0.0275	0.8337
946	SLV 7	1.25	-3.83	31.34	-11.4216	0.0324	0.7219
946	SLV 8	0.75	-4.46	31.93	-11.6559	0.0325	0.4347
946	SLV 9	-2.42	3.91	23.45	-9.0767	-0.0067	-1.3963
946	SLV 10	-2.92	3.28	24.04	-9.3111	-0.0067	-1.6835
946	SLV 11	-3.12	-3.61	25.47	-9.7754	-0.0018	-1.7953
946	SLV 12	-3.63	-4.24	26.07	-10.0098	-0.0017	-2.0825
946	SLV 13	-7.63	1.7	17.16	-7.3381	-0.0449	-4.396
946	SLV 14	-8.4	0.74	18.07	-7.6978	-0.0449	-4.8366
946	SLV 15	-7.85	-0.55	17.76	-7.5477	-0.0434	-4.5156
946	SLV 16	-8.62	-1.52	18.68	-7.9074	-0.0434	-4.9563
946	CRTFP Ux+	0	0	0	0	0	0
946	CRTFP Ux-	0	0	0	0	0	0
946	CRTFP Uy+	0	0	0	0	0	0
946	CRTFP Uy-	0	0	0	0	0	0
947	SLU 1	-0.79	-0.31	25.95	-9.8538	-0.0102	-0.4582
947	SLU 2	-0.82	-0.36	25.94	-9.8509	-0.0102	-0.471
947	SLU 3	-0.82	-0.31	26.55	-10.0663	-0.0105	-0.4704
947	SLU 4	-0.83	-0.34	26.54	-10.0645	-0.0105	-0.4781
947	SLU 5	-0.83	-0.36	26.32	-9.9881	-0.0104	-0.4782
947	SLU 6	-0.83	-0.31	26.93	-10.2034	-0.0106	-0.4776
947	SLU 7	-0.84	-0.34	26.92	-10.2016	-0.0106	-0.4853
947	SLU 8	-0.82	-0.31	26.71	-10.1281	-0.0105	-0.4726
947	SLU 9	-0.83	-0.34	26.7	-10.1263	-0.0105	-0.4803
947	SLU 10	-0.89	-0.38	28.92	-10.9054	-0.0122	-0.5106
947	SLU 11	-0.88	-0.33	29.52	-11.1207	-0.0125	-0.51
947	SLU 12	-0.9	-0.36	29.52	-11.119	-0.0125	-0.5177
947	SLU 13	-0.9	-0.38	29.3	-11.0425	-0.0124	-0.5178
947	SLU 14	-0.9	-0.33	29.9	-11.2578	-0.0126	-0.5172
947	SLU 15	-0.91	-0.36	29.9	-11.2561	-0.0127	-0.5249
947	SLU 16	-0.89	-0.33	29.68	-11.1825	-0.0125	-0.5122
947	SLU 17	-0.9	-0.36	29.68	-11.1808	-0.0125	-0.5199
947	SLU 18	-0.89	-0.33	30.2	-11.3602	-0.0131	-0.5147
947	SLU 19	-0.91	-0.36	30.19	-11.3585	-0.0131	-0.5224
947	SLU 20	-0.91	-0.33	30.58	-11.4973	-0.0132	-0.5219
947	SLU 21	-0.92	-0.36	30.57	-11.4956	-0.0132	-0.5296
947	SLU 22	-0.87	-0.3	28.99	-10.9343	-0.0121	-0.5013
947	SLU 23	-0.89	-0.35	28.99	-10.9314	-0.0121	-0.5141
947	SLU 24	-0.89	-0.3	29.59	-11.1467	-0.0124	-0.5135
947	SLU 25	-0.9	-0.33	29.59	-11.145	-0.0124	-0.5212
947	SLU 26	-0.9	-0.35	29.37	-11.0685	-0.0123	-0.5213
947	SLU 27	-0.9	-0.3	29.97	-11.2838	-0.0126	-0.5207
947	SLU 28	-0.92	-0.33	29.97	-11.2821	-0.0126	-0.5284
947	SLU 29	-0.89	-0.3	29.75	-11.2085	-0.0125	-0.5157
947	SLU 30	-0.91	-0.33	29.75	-11.2068	-0.0125	-0.5234
947	SLU 31	-0.96	-0.37	31.96	-11.9859	-0.0141	-0.5537
947	SLU 32	-0.96	-0.32	32.56	-12.2012	-0.0144	-0.5531
947	SLU 33	-0.97	-0.35	32.56	-12.1994	-0.0144	-0.5608
947	SLU 34	-0.97	-0.37	32.34	-12.123	-0.0143	-0.5609
947	SLU 35	-0.97	-0.32	32.94	-12.3383	-0.0146	-0.5603
947	SLU 36	-0.99	-0.35	32.94	-12.3365	-0.0146	-0.568
947	SLU 37	-0.96	-0.32	32.73	-12.263	-0.0145	-0.5553
947	SLU 38	-0.98	-0.35	32.72	-12.2612	-0.0145	-0.563
947	SLU 39	-0.97	-0.33	33.24	-12.4407	-0.015	-0.5578
947	SLU 40	-0.98	-0.35	33.24	-12.4389	-0.015	-0.5655
947	SLU 41	-0.98	-0.32	33.62	-12.5778	-0.0152	-0.565
947	SLU 42	-0.99	-0.35	33.62	-12.576	-0.0152	-0.5727
947	SLU 43	-1.01	-0.41	32.69	-12.4396	-0.0126	-0.5809
947	SLU 44	-1.03	-0.46	32.68	-12.4367	-0.0126	-0.5937
947	SLU 45	-1.03	-0.41	33.29	-12.652	-0.0129	-0.5931
947	SLU 46	-1.04	-0.44	33.28	-12.6502	-0.0129	-0.6008
947	SLU 47	-1.04	-0.46	33.06	-12.5738	-0.0128	-0.6009
947	SLU 48	-1.04	-0.41	33.67	-12.7891	-0.013	-0.6003
947	SLU 49	-1.05	-0.44	33.66	-12.7873	-0.013	-0.608
947	SLU 50	-1.03	-0.41	33.45	-12.7138	-0.0129	-0.5953
947	SLU 51	-1.05	-0.44	33.45	-12.712	-0.0129	-0.603
947	SLU 52	-1.1	-0.48	35.66	-13.4911	-0.0146	-0.6333
947	SLU 53	-1.1	-0.43	36.26	-13.7064	-0.0149	-0.6327
947	SLU 54	-1.11	-0.46	36.26	-13.7047	-0.0149	-0.6404
947	SLU 55	-1.11	-0.47	36.04	-13.6282	-0.0148	-0.6405
947	SLU 56	-1.11	-0.42	36.64	-13.8435	-0.015	-0.6398
947	SLU 57	-1.12	-0.45	36.64	-13.8418	-0.0151	-0.6475
947	SLU 58	-1.1	-0.42	36.42	-13.7682	-0.0149	-0.6348
947	SLU 59	-1.11	-0.45	36.42	-13.7665	-0.0149	-0.6425
947	SLU 60	-1.11	-0.43	36.94	-13.9459	-0.0155	-0.6374
947	SLU 61	-1.12	-0.46	36.93	-13.9442	-0.0155	-0.6451
947	SLU 62	-1.12	-0.43	37.32	-14.083	-0.0156	-0.6446
947	SLU 63	-1.13	-0.46	37.31	-14.0813	-0.0156	-0.6523
947	SLU 64	-1.08	-0.4	35.73	-13.52	-0.0145	-0.624
947	SLU 65	-1.1	-0.45	35.73	-13.5171	-0.0145	-0.6368
947	SLU 66	-1.1	-0.4	36.33	-13.7324	-0.0148	-0.6362
947	SLU 67	-1.12	-0.43	36.33	-13.7307	-0.0148	-0.6439
947	SLU 68	-1.12	-0.45	36.11	-13.6542	-0.0147	-0.644
947	SLU 69	-1.12	-0.4	36.71	-13.8695	-0.015	-0.6434
947	SLU 70	-1.13	-0.43	36.71	-13.8678	-0.015	-0.6511

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
947	SLU 71	-1.11	-0.4	36.49	-13.7942	-0.0149	-0.6384
947	SLU 72	-1.12	-0.43	36.49	-13.7925	-0.0149	-0.6461
947	SLU 73	-1.17	-0.47	38.7	-14.5716	-0.0165	-0.6764
947	SLU 74	-1.17	-0.42	39.3	-14.7869	-0.0168	-0.6757
947	SLU 75	-1.19	-0.45	39.3	-14.7851	-0.0168	-0.6835
947	SLU 76	-1.19	-0.47	39.08	-14.7087	-0.0167	-0.6836
947	SLU 77	-1.18	-0.42	39.68	-14.924	-0.017	-0.6829
947	SLU 78	-1.2	-0.45	39.68	-14.9222	-0.017	-0.6906
947	SLU 79	-1.18	-0.42	39.47	-14.8487	-0.0169	-0.6779
947	SLU 80	-1.19	-0.44	39.46	-14.8469	-0.0169	-0.6856
947	SLU 81	-1.18	-0.42	39.98	-15.0264	-0.0174	-0.6805
947	SLU 82	-1.19	-0.45	39.98	-15.0246	-0.0174	-0.6882
947	SLU 83	-1.19	-0.42	40.36	-15.1635	-0.0176	-0.6877
947	SLU 84	-1.21	-0.45	40.36	-15.1617	-0.0176	-0.6954
947	SLE RA 1	-0.82	-0.31	26.82	-10.1626	-0.0108	-0.4705
947	SLE RA 2	-0.83	-0.34	26.81	-10.1606	-0.0108	-0.4791
947	SLE RA 3	-0.83	-0.31	27.22	-10.3042	-0.0109	-0.4786
947	SLE RA 4	-0.84	-0.33	27.21	-10.303	-0.0109	-0.4838
947	SLE RA 5	-0.84	-0.34	27.07	-10.252	-0.0109	-0.4839
947	SLE RA 6	-0.84	-0.31	27.47	-10.3956	-0.011	-0.4834
947	SLE RA 7	-0.85	-0.33	27.47	-10.3944	-0.011	-0.4886
947	SLE RA 8	-0.83	-0.31	27.33	-10.3454	-0.011	-0.4801
947	SLE RA 9	-0.84	-0.33	27.32	-10.3442	-0.011	-0.4852
947	SLE RA 10	-0.88	-0.35	28.8	-10.8636	-0.0121	-0.5055
947	SLE RA 11	-0.88	-0.32	29.2	-11.0071	-0.0123	-0.505
947	SLE RA 12	-0.88	-0.34	29.2	-11.006	-0.0123	-0.5102
947	SLE RA 13	-0.89	-0.35	29.05	-10.955	-0.0122	-0.5103
947	SLE RA 14	-0.88	-0.32	29.45	-11.0985	-0.0124	-0.5098
947	SLE RA 15	-0.89	-0.34	29.45	-11.0974	-0.0124	-0.515
947	SLE RA 16	-0.88	-0.32	29.31	-11.0483	-0.0123	-0.5065
947	SLE RA 17	-0.89	-0.34	29.31	-11.0472	-0.0123	-0.5116
947	SLE RA 18	-0.88	-0.32	29.65	-11.1668	-0.0127	-0.5082
947	SLE RA 19	-0.89	-0.34	29.65	-11.1656	-0.0127	-0.5133
947	SLE RA 20	-0.89	-0.32	29.9	-11.2582	-0.0128	-0.513
947	SLE RA 21	-0.9	-0.34	29.9	-11.257	-0.0128	-0.5181
947	SLE FR 1	-0.82	-0.31	26.82	-10.1626	-0.0108	-0.4705
947	SLE FR 2	-0.82	-0.32	26.82	-10.1622	-0.0108	-0.4722
947	SLE FR 3	-0.82	-0.31	26.92	-10.1991	-0.0108	-0.4724
947	SLE FR 4	-0.84	-0.32	27.67	-10.4634	-0.0113	-0.4835
947	SLE FR 5	-0.84	-0.32	27.77	-10.5004	-0.0114	-0.4837
947	SLE FR 6	-0.85	-0.32	28.23	-10.6647	-0.0117	-0.4894
947	SLE QP 1	-0.82	-0.31	26.82	-10.1626	-0.0108	-0.4705
947	SLE QP 2	-0.84	-0.32	27.67	-10.4638	-0.0113	-0.4818
947	SLD 1	2.5	0.22	30.84	-11.1593	0.0072	1.4362
947	SLD 2	2.17	-0.17	31.24	-11.3215	0.007	1.2468
947	SLD 3	2.41	-0.73	31.11	-11.2538	0.0068	1.384
947	SLD 4	2.08	-1.12	31.5	-11.4159	0.0066	1.1946
947	SLD 5	0.37	1.36	28.15	-10.4997	-0.0051	0.2072
947	SLD 6	0.15	1.1	28.41	-10.6074	-0.0053	0.0815
947	SLD 7	0.06	-1.82	29.03	-10.8146	-0.0064	0.0332
947	SLD 8	-0.16	-2.07	29.29	-10.9222	-0.0066	-0.0925
947	SLD 9	-1.51	1.44	26.05	-10.0055	-0.0161	-0.8712
947	SLD 10	-1.73	1.19	26.31	-10.1131	-0.0162	-0.9968
947	SLD 11	-1.82	-1.73	26.92	-10.3203	-0.0173	-1.0451
947	SLD 12	-2.04	-1.99	27.19	-10.4279	-0.0175	-1.1708
947	SLD 13	-3.75	0.49	23.83	-9.5117	-0.0292	-2.1583
947	SLD 14	-4.08	0.1	24.23	-9.6739	-0.0295	-2.3476
947	SLD 15	-3.84	-0.46	24.1	-9.6062	-0.0296	-2.2105
947	SLD 16	-4.17	-0.85	24.49	-9.7683	-0.0299	-2.3998
947	SLV 1	6.96	0.89	35.1	-12.0926	0.0321	3.9997
947	SLV 2	6.19	-0.01	36.02	-12.4701	0.0315	3.5589
947	SLV 3	6.75	-1.26	35.71	-12.3111	0.0312	3.881
947	SLV 4	5.98	-2.17	36.63	-12.6886	0.0306	3.4402
947	SLV 5	1.96	3.48	28.82	-10.5547	0.0032	1.1202
947	SLV 6	1.45	2.89	29.42	-10.8007	0.0028	0.8329
947	SLV 7	1.26	-3.71	30.84	-11.283	0.0002	0.7245
947	SLV 8	0.76	-4.3	31.44	-11.529	-0.0002	0.4372
947	SLV 9	-2.43	3.67	23.9	-9.3986	-0.0224	-1.4009
947	SLV 10	-2.93	3.08	24.5	-9.6447	-0.0228	-1.6881
947	SLV 11	-3.13	-3.52	25.92	-10.1269	-0.0254	-1.7966
947	SLV 12	-3.63	-4.11	26.52	-10.373	-0.0258	-2.0838
947	SLV 13	-7.65	1.54	18.71	-8.239	-0.0532	-4.4038
947	SLV 14	-8.42	0.63	19.63	-8.6166	-0.0538	-4.8447
947	SLV 15	-7.86	-0.62	19.31	-8.4575	-0.0541	-4.5225
947	SLV 16	-8.63	-1.52	20.23	-8.8351	-0.0547	-4.9634
947	CRTFP Ux+	0	0	0	0	0	0
947	CRTFP Ux-	0	0	0	0	0	0
947	CRTFP Uy+	0	0	0	0	0	0
947	CRTFP Uy-	0	0	0	0	0	0
948	SLU 1	-0.8	-0.35	26.59	-10.4975	-0.03	-0.4586
948	SLU 2	-0.82	-0.39	26.59	-10.4962	-0.0301	-0.4713
948	SLU 3	-0.82	-0.35	27.21	-10.7272	-0.0309	-0.4708
948	SLU 4	-0.83	-0.38	27.21	-10.7264	-0.0309	-0.4784
948	SLU 5	-0.83	-0.4	26.98	-10.6441	-0.0306	-0.4784
948	SLU 6	-0.83	-0.35	27.6	-10.8751	-0.0313	-0.478
948	SLU 7	-0.84	-0.38	27.6	-10.8743	-0.0314	-0.4855
948	SLU 8	-0.82	-0.35	27.38	-10.7934	-0.031	-0.473
948	SLU 9	-0.83	-0.38	27.37	-10.7926	-0.0311	-0.4805
948	SLU 10	-0.89	-0.42	29.67	-11.6455	-0.0347	-0.5112
948	SLU 11	-0.89	-0.37	30.29	-11.8764	-0.0355	-0.5107

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
948	SLU 12	-0.9	-0.4	30.29	-11.8756	-0.0355	-0.5183
948	SLU 13	-0.9	-0.42	30.06	-11.7934	-0.0352	-0.5184
948	SLU 14	-0.9	-0.37	30.68	-12.0243	-0.0359	-0.5179
948	SLU 15	-0.91	-0.4	30.68	-12.0235	-0.036	-0.5255
948	SLU 16	-0.89	-0.37	30.46	-11.9426	-0.0356	-0.5129
948	SLU 17	-0.9	-0.4	30.45	-11.9418	-0.0357	-0.5205
948	SLU 18	-0.89	-0.38	30.99	-12.1393	-0.0366	-0.5157
948	SLU 19	-0.91	-0.41	30.99	-12.1385	-0.0367	-0.5233
948	SLU 20	-0.91	-0.38	31.39	-12.2872	-0.0371	-0.5229
948	SLU 21	-0.92	-0.41	31.38	-12.2864	-0.0372	-0.5304
948	SLU 22	-0.87	-0.34	29.74	-11.6729	-0.0346	-0.5021
948	SLU 23	-0.89	-0.39	29.74	-11.6716	-0.0347	-0.5147
948	SLU 24	-0.89	-0.34	30.36	-11.9025	-0.0354	-0.5142
948	SLU 25	-0.91	-0.37	30.35	-11.9018	-0.0355	-0.5218
948	SLU 26	-0.91	-0.39	30.13	-11.8195	-0.0352	-0.5219
948	SLU 27	-0.9	-0.34	30.75	-12.0505	-0.0359	-0.5214
948	SLU 28	-0.92	-0.37	30.74	-12.0497	-0.036	-0.529
948	SLU 29	-0.9	-0.34	30.52	-11.9687	-0.0356	-0.5164
948	SLU 30	-0.91	-0.37	30.52	-11.968	-0.0356	-0.524
948	SLU 31	-0.96	-0.41	32.82	-12.8208	-0.0393	-0.5546
948	SLU 32	-0.96	-0.37	33.44	-13.0518	-0.04	-0.5542
948	SLU 33	-0.97	-0.39	33.43	-13.051	-0.0401	-0.5617
948	SLU 34	-0.97	-0.41	33.21	-12.9688	-0.0398	-0.5618
948	SLU 35	-0.97	-0.37	33.83	-13.1997	-0.0405	-0.5613
948	SLU 36	-0.99	-0.39	33.82	-13.1989	-0.0406	-0.5689
948	SLU 37	-0.97	-0.36	33.6	-13.118	-0.0402	-0.5563
948	SLU 38	-0.98	-0.39	33.6	-13.1172	-0.0403	-0.5639
948	SLU 39	-0.97	-0.37	34.14	-13.3147	-0.0412	-0.5591
948	SLU 40	-0.98	-0.4	34.14	-13.3139	-0.0412	-0.5667
948	SLU 41	-0.98	-0.37	34.53	-13.4626	-0.0417	-0.5663
948	SLU 42	-1	-0.4	34.53	-13.4618	-0.0417	-0.5739
948	SLU 43	-1.01	-0.45	33.49	-13.2438	-0.0375	-0.5813
948	SLU 44	-1.03	-0.5	33.49	-13.2425	-0.0376	-0.594
948	SLU 45	-1.03	-0.45	34.11	-13.4734	-0.0383	-0.5935
948	SLU 46	-1.04	-0.48	34.1	-13.4727	-0.0384	-0.6011
948	SLU 47	-1.04	-0.5	33.88	-13.3904	-0.0381	-0.6011
948	SLU 48	-1.04	-0.45	34.5	-13.6214	-0.0388	-0.6007
948	SLU 49	-1.06	-0.48	34.49	-13.6206	-0.0388	-0.6082
948	SLU 50	-1.03	-0.45	34.27	-13.5396	-0.0385	-0.5957
948	SLU 51	-1.05	-0.48	34.27	-13.5389	-0.0385	-0.6032
948	SLU 52	-1.1	-0.52	36.57	-14.3917	-0.0422	-0.6339
948	SLU 53	-1.1	-0.48	37.19	-14.6227	-0.0429	-0.6334
948	SLU 54	-1.11	-0.5	37.18	-14.6219	-0.043	-0.641
948	SLU 55	-1.11	-0.52	36.96	-14.5396	-0.0427	-0.6411
948	SLU 56	-1.11	-0.48	37.58	-14.7706	-0.0434	-0.6406
948	SLU 57	-1.12	-0.5	37.58	-14.7698	-0.0435	-0.6482
948	SLU 58	-1.1	-0.47	37.35	-14.6889	-0.0431	-0.6356
948	SLU 59	-1.12	-0.5	37.35	-14.6881	-0.0431	-0.6432
948	SLU 60	-1.11	-0.48	37.89	-14.8856	-0.0441	-0.6384
948	SLU 61	-1.12	-0.51	37.89	-14.8848	-0.0441	-0.646
948	SLU 62	-1.12	-0.48	38.28	-15.0335	-0.0446	-0.6456
948	SLU 63	-1.13	-0.51	38.28	-15.0327	-0.0446	-0.6531
948	SLU 64	-1.08	-0.45	36.64	-14.4192	-0.0421	-0.6248
948	SLU 65	-1.11	-0.5	36.64	-14.4179	-0.0422	-0.6374
948	SLU 66	-1.11	-0.45	37.26	-14.6488	-0.0429	-0.6369
948	SLU 67	-1.12	-0.48	37.25	-14.648	-0.0429	-0.6445
948	SLU 68	-1.12	-0.5	37.03	-14.5658	-0.0426	-0.6446
948	SLU 69	-1.12	-0.45	37.65	-14.7967	-0.0434	-0.6441
948	SLU 70	-1.13	-0.48	37.64	-14.7959	-0.0434	-0.6517
948	SLU 71	-1.11	-0.45	37.42	-14.715	-0.043	-0.6391
948	SLU 72	-1.12	-0.48	37.42	-14.7142	-0.0431	-0.6467
948	SLU 73	-1.18	-0.52	39.72	-15.5671	-0.0468	-0.6773
948	SLU 74	-1.17	-0.47	40.34	-15.798	-0.0475	-0.6769
948	SLU 75	-1.19	-0.5	40.33	-15.7973	-0.0475	-0.6844
948	SLU 76	-1.19	-0.52	40.11	-15.715	-0.0472	-0.6845
948	SLU 77	-1.19	-0.47	40.73	-15.946	-0.048	-0.684
948	SLU 78	-1.2	-0.5	40.72	-15.9452	-0.048	-0.6916
948	SLU 79	-1.18	-0.47	40.5	-15.8642	-0.0476	-0.679
948	SLU 80	-1.19	-0.5	40.5	-15.8635	-0.0477	-0.6866
948	SLU 81	-1.18	-0.48	41.04	-16.061	-0.0486	-0.6818
948	SLU 82	-1.2	-0.51	41.04	-16.0602	-0.0487	-0.6894
948	SLU 83	-1.2	-0.48	41.43	-16.2089	-0.0491	-0.689
948	SLU 84	-1.21	-0.51	41.43	-16.2081	-0.0492	-0.6966
948	SLE RA 1	-0.82	-0.35	27.49	-10.8334	-0.0313	-0.471
948	SLE RA 2	-0.83	-0.38	27.49	-10.8325	-0.0314	-0.4795
948	SLE RA 3	-0.83	-0.35	27.9	-10.9865	-0.0319	-0.4791
948	SLE RA 4	-0.84	-0.37	27.9	-10.9859	-0.0319	-0.4842
948	SLE RA 5	-0.84	-0.38	27.75	-10.9311	-0.0317	-0.4842
948	SLE RA 6	-0.84	-0.35	28.16	-11.0851	-0.0322	-0.4839
948	SLE RA 7	-0.85	-0.37	28.16	-11.0845	-0.0323	-0.489
948	SLE RA 8	-0.83	-0.35	28.01	-11.0306	-0.032	-0.4806
948	SLE RA 9	-0.84	-0.37	28.01	-11.0301	-0.032	-0.4856
948	SLE RA 10	-0.88	-0.39	29.54	-11.5986	-0.0345	-0.5061
948	SLE RA 11	-0.88	-0.36	29.96	-11.7526	-0.035	-0.5058
948	SLE RA 12	-0.89	-0.38	29.95	-11.7521	-0.035	-0.5108
948	SLE RA 13	-0.89	-0.39	29.8	-11.6973	-0.0348	-0.5109
948	SLE RA 14	-0.89	-0.36	30.22	-11.8512	-0.0353	-0.5106
948	SLE RA 15	-0.89	-0.38	30.21	-11.8507	-0.0353	-0.5156
948	SLE RA 16	-0.88	-0.36	30.07	-11.7967	-0.0351	-0.5072
948	SLE RA 17	-0.89	-0.38	30.07	-11.7962	-0.0351	-0.5123

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
948	SLE RA 18	-0.88	-0.37	30.43	-11.9279	-0.0357	-0.5091
948	SLE RA 19	-0.89	-0.39	30.42	-11.9273	-0.0358	-0.5141
948	SLE RA 20	-0.89	-0.37	30.69	-12.0265	-0.0361	-0.5139
948	SLE RA 21	-0.9	-0.39	30.69	-12.026	-0.0361	-0.5189
948	SLE FR 1	-0.82	-0.35	27.49	-10.8334	-0.0313	-0.471
948	SLE FR 2	-0.82	-0.35	27.49	-10.8332	-0.0314	-0.4727
948	SLE FR 3	-0.82	-0.35	27.6	-10.8728	-0.0315	-0.473
948	SLE FR 4	-0.84	-0.36	28.37	-11.1615	-0.0327	-0.4841
948	SLE FR 5	-0.84	-0.35	28.48	-11.2012	-0.0328	-0.4844
948	SLE FR 6	-0.85	-0.36	28.96	-11.3806	-0.0335	-0.4901
948	SLE QP 1	-0.82	-0.35	27.49	-10.8334	-0.0313	-0.471
948	SLE QP 2	-0.84	-0.35	28.37	-11.1617	-0.0327	-0.4825
948	SLD 1	2.5	0.16	31.05	-11.645	-0.0195	1.4379
948	SLD 2	2.17	-0.2	31.46	-11.8212	-0.02	1.2485
948	SLD 3	2.41	-0.76	31.33	-11.7504	-0.0205	1.3862
948	SLD 4	2.08	-1.12	31.74	-11.9266	-0.021	1.1968
948	SLD 5	0.36	1.27	28.68	-11.1148	-0.0271	0.2065
948	SLD 6	0.14	1.02	28.95	-11.2317	-0.0274	0.0808
948	SLD 7	0.06	-1.81	29.61	-11.4662	-0.0305	0.0342
948	SLD 8	-0.16	-2.05	29.88	-11.5831	-0.0308	-0.0915
948	SLD 9	-1.51	1.34	26.87	-10.7403	-0.0345	-0.8734
948	SLD 10	-1.73	1.1	27.14	-10.8573	-0.0349	-0.9991
948	SLD 11	-1.82	-1.73	27.79	-11.0918	-0.0379	-1.0457
948	SLD 12	-2.04	-1.97	28.07	-11.2087	-0.0382	-1.1714
948	SLD 13	-3.76	0.42	25.01	-10.3969	-0.0443	-2.1617
948	SLD 14	-4.09	0.05	25.42	-10.573	-0.0448	-2.3511
948	SLD 15	-3.85	-0.5	25.29	-10.5023	-0.0453	-2.2134
948	SLD 16	-4.18	-0.87	25.69	-10.6785	-0.0458	-2.4028
948	SLV 1	6.97	0.82	34.65	-12.2945	-0.002	4.0046
948	SLV 2	6.2	-0.03	35.6	-12.7046	-0.0031	3.5638
948	SLV 3	6.76	-1.27	35.29	-12.5377	-0.0043	3.887
948	SLV 4	5.99	-2.12	36.24	-12.9478	-0.0054	3.4462
948	SLV 5	1.95	3.31	29.12	-11.0606	-0.0198	1.1195
948	SLV 6	1.45	2.76	29.74	-11.3279	-0.0205	0.8323
948	SLV 7	1.26	-3.64	31.25	-11.8712	-0.0274	0.7275
948	SLV 8	0.76	-4.19	31.87	-12.1385	-0.0281	0.4403
948	SLV 9	-2.44	3.49	24.88	-10.185	-0.0372	-1.4052
948	SLV 10	-2.94	2.94	25.5	-10.4522	-0.0379	-1.6924
948	SLV 11	-3.13	-3.46	27.01	-10.9956	-0.0448	-1.7972
948	SLV 12	-3.63	-4.01	27.63	-11.2628	-0.0455	-2.0844
948	SLV 13	-7.67	1.41	20.51	-9.3756	-0.06	-4.4111
948	SLV 14	-8.44	0.56	21.46	-9.7858	-0.061	-4.8519
948	SLV 15	-7.87	-0.67	21.15	-9.6188	-0.0622	-4.5287
948	SLV 16	-8.64	-1.52	22.1	-10.029	-0.0633	-4.9695
948	CRTFP Ux+	0	0	0	0	0	0
948	CRTFP Ux-	0	0	0	0	0	0
948	CRTFP Uy+	0	0	0	0	0	0
948	CRTFP Uy-	0	0	0	0	0	0
949	SLU 1	-0.8	-0.38	27.81	-11.6232	-0.0459	-0.4587
949	SLU 2	-0.82	-0.42	27.81	-11.6249	-0.0461	-0.4712
949	SLU 3	-0.82	-0.38	28.46	-11.8828	-0.0472	-0.4709
949	SLU 4	-0.83	-0.41	28.46	-11.8839	-0.0473	-0.4783
949	SLU 5	-0.83	-0.42	28.22	-11.7914	-0.0469	-0.4783
949	SLU 6	-0.83	-0.38	28.87	-12.0493	-0.0479	-0.478
949	SLU 7	-0.84	-0.41	28.87	-12.0504	-0.048	-0.4855
949	SLU 8	-0.82	-0.38	28.63	-11.9562	-0.0474	-0.473
949	SLU 9	-0.83	-0.41	28.63	-11.9572	-0.0475	-0.4805
949	SLU 10	-0.89	-0.45	31.07	-12.9327	-0.0528	-0.5115
949	SLU 11	-0.89	-0.4	31.72	-13.1906	-0.0539	-0.5112
949	SLU 12	-0.9	-0.43	31.72	-13.1916	-0.054	-0.5186
949	SLU 13	-0.9	-0.45	31.48	-13.0992	-0.0536	-0.5186
949	SLU 14	-0.9	-0.4	32.13	-13.357	-0.0546	-0.5183
949	SLU 15	-0.91	-0.43	32.13	-13.3581	-0.0547	-0.5258
949	SLU 16	-0.89	-0.4	31.89	-13.2639	-0.0542	-0.5133
949	SLU 17	-0.9	-0.43	31.89	-13.2649	-0.0543	-0.5208
949	SLU 18	-0.9	-0.41	32.47	-13.4914	-0.0556	-0.5164
949	SLU 19	-0.91	-0.44	32.47	-13.4924	-0.0557	-0.5238
949	SLU 20	-0.91	-0.41	32.88	-13.6579	-0.0563	-0.5235
949	SLU 21	-0.92	-0.44	32.88	-13.6589	-0.0564	-0.5309
949	SLU 22	-0.87	-0.37	31.14	-12.958	-0.0526	-0.5025
949	SLU 23	-0.89	-0.42	31.14	-12.9597	-0.0528	-0.5149
949	SLU 24	-0.89	-0.38	31.78	-13.2176	-0.0539	-0.5147
949	SLU 25	-0.91	-0.4	31.78	-13.2187	-0.054	-0.5221
949	SLU 26	-0.91	-0.42	31.55	-13.1262	-0.0536	-0.5221
949	SLU 27	-0.91	-0.38	32.19	-13.3841	-0.0546	-0.5218
949	SLU 28	-0.92	-0.4	32.19	-13.3852	-0.0547	-0.5292
949	SLU 29	-0.9	-0.38	31.96	-13.291	-0.0541	-0.5168
949	SLU 30	-0.91	-0.4	31.96	-13.292	-0.0542	-0.5243
949	SLU 31	-0.96	-0.44	34.4	-14.2675	-0.0595	-0.5553
949	SLU 32	-0.96	-0.4	35.05	-14.5254	-0.0606	-0.555
949	SLU 33	-0.98	-0.43	35.04	-14.5264	-0.0607	-0.5624
949	SLU 34	-0.98	-0.45	34.81	-14.434	-0.0603	-0.5624
949	SLU 35	-0.98	-0.4	35.46	-14.6918	-0.0613	-0.5621
949	SLU 36	-0.99	-0.43	35.45	-14.6929	-0.0614	-0.5696
949	SLU 37	-0.97	-0.4	35.22	-14.5987	-0.0608	-0.5571
949	SLU 38	-0.98	-0.43	35.22	-14.5997	-0.0609	-0.5646
949	SLU 39	-0.97	-0.41	35.8	-14.8262	-0.0622	-0.5601
949	SLU 40	-0.99	-0.44	35.8	-14.8272	-0.0623	-0.5676
949	SLU 41	-0.98	-0.41	36.21	-14.9927	-0.063	-0.5673
949	SLU 42	-1	-0.44	36.21	-14.9937	-0.0631	-0.5747

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
949	SLU 43	-1.01	-0.49	35.01	-14.6525	-0.0574	-0.5814
949	SLU 44	-1.03	-0.53	35.01	-14.6543	-0.0576	-0.5938
949	SLU 45	-1.03	-0.49	35.66	-14.9121	-0.0587	-0.5935
949	SLU 46	-1.04	-0.52	35.66	-14.9132	-0.0588	-0.6009
949	SLU 47	-1.04	-0.54	35.42	-14.8207	-0.0583	-0.6009
949	SLU 48	-1.04	-0.49	36.07	-15.0786	-0.0594	-0.6006
949	SLU 49	-1.06	-0.52	36.07	-15.0797	-0.0595	-0.6081
949	SLU 50	-1.03	-0.49	35.83	-14.9855	-0.0589	-0.5956
949	SLU 51	-1.05	-0.52	35.83	-14.9865	-0.059	-0.6031
949	SLU 52	-1.1	-0.56	38.27	-15.962	-0.0643	-0.6341
949	SLU 53	-1.1	-0.52	38.92	-16.2199	-0.0654	-0.6338
949	SLU 54	-1.11	-0.54	38.92	-16.2209	-0.0655	-0.6413
949	SLU 55	-1.11	-0.56	38.68	-16.1285	-0.0651	-0.6412
949	SLU 56	-1.11	-0.52	39.33	-16.3864	-0.0661	-0.6409
949	SLU 57	-1.13	-0.54	39.33	-16.3874	-0.0662	-0.6484
949	SLU 58	-1.1	-0.52	39.09	-16.2932	-0.0656	-0.636
949	SLU 59	-1.12	-0.54	39.09	-16.2943	-0.0657	-0.6434
949	SLU 60	-1.11	-0.52	39.67	-16.5207	-0.067	-0.639
949	SLU 61	-1.12	-0.55	39.67	-16.5217	-0.0671	-0.6464
949	SLU 62	-1.12	-0.53	40.08	-16.6872	-0.0678	-0.6461
949	SLU 63	-1.13	-0.55	40.08	-16.6882	-0.0679	-0.6536
949	SLU 64	-1.09	-0.49	38.34	-15.9873	-0.0641	-0.6251
949	SLU 65	-1.11	-0.53	38.34	-15.9891	-0.0643	-0.6376
949	SLU 66	-1.11	-0.49	38.99	-16.2469	-0.0654	-0.6373
949	SLU 67	-1.12	-0.52	38.99	-16.248	-0.0655	-0.6447
949	SLU 68	-1.12	-0.53	38.75	-16.1555	-0.065	-0.6447
949	SLU 69	-1.12	-0.49	39.4	-16.4134	-0.0661	-0.6444
949	SLU 70	-1.13	-0.52	39.4	-16.4145	-0.0662	-0.6519
949	SLU 71	-1.11	-0.49	39.16	-16.3203	-0.0656	-0.6394
949	SLU 72	-1.12	-0.52	39.16	-16.3213	-0.0657	-0.6469
949	SLU 73	-1.18	-0.56	41.6	-17.2968	-0.071	-0.6779
949	SLU 74	-1.18	-0.51	42.25	-17.5547	-0.0721	-0.6776
949	SLU 75	-1.19	-0.54	42.25	-17.5557	-0.0722	-0.685
949	SLU 76	-1.19	-0.56	42.01	-17.4633	-0.0718	-0.685
949	SLU 77	-1.19	-0.51	42.66	-17.7212	-0.0728	-0.6847
949	SLU 78	-1.2	-0.54	42.66	-17.7222	-0.0729	-0.6922
949	SLU 79	-1.18	-0.51	42.42	-17.628	-0.0723	-0.6797
949	SLU 80	-1.19	-0.54	42.42	-17.6291	-0.0724	-0.6872
949	SLU 81	-1.19	-0.52	43	-17.8555	-0.0737	-0.6828
949	SLU 82	-1.2	-0.55	43	-17.8565	-0.0738	-0.6902
949	SLU 83	-1.2	-0.52	43.41	-18.022	-0.0745	-0.6899
949	SLU 84	-1.21	-0.55	43.41	-18.023	-0.0746	-0.6973
949	SLE RA 1	-0.82	-0.38	28.76	-12.0046	-0.0479	-0.4713
949	SLE RA 2	-0.83	-0.41	28.76	-12.0057	-0.048	-0.4795
949	SLE RA 3	-0.83	-0.38	29.19	-12.1777	-0.0487	-0.4793
949	SLE RA 4	-0.84	-0.39	29.19	-12.1784	-0.0488	-0.4843
949	SLE RA 5	-0.84	-0.41	29.03	-12.1167	-0.0485	-0.4843
949	SLE RA 6	-0.84	-0.38	29.47	-12.2886	-0.0492	-0.4841
949	SLE RA 7	-0.85	-0.4	29.46	-12.2893	-0.0492	-0.4891
949	SLE RA 8	-0.83	-0.38	29.31	-12.2265	-0.0488	-0.4808
949	SLE RA 9	-0.84	-0.39	29.31	-12.2272	-0.0489	-0.4857
949	SLE RA 10	-0.88	-0.42	30.93	-12.8776	-0.0525	-0.5064
949	SLE RA 11	-0.88	-0.39	31.37	-13.0495	-0.0532	-0.5062
949	SLE RA 12	-0.89	-0.41	31.37	-13.0502	-0.0532	-0.5112
949	SLE RA 13	-0.89	-0.42	31.21	-12.9885	-0.053	-0.5112
949	SLE RA 14	-0.89	-0.39	31.64	-13.1605	-0.0537	-0.511
949	SLE RA 15	-0.9	-0.41	31.64	-13.1612	-0.0537	-0.5159
949	SLE RA 16	-0.88	-0.39	31.48	-13.0984	-0.0533	-0.5077
949	SLE RA 17	-0.89	-0.41	31.48	-13.0991	-0.0534	-0.5126
949	SLE RA 18	-0.88	-0.4	31.87	-13.25	-0.0543	-0.5097
949	SLE RA 19	-0.89	-0.42	31.87	-13.2507	-0.0543	-0.5146
949	SLE RA 20	-0.89	-0.4	32.14	-13.361	-0.0548	-0.5144
949	SLE RA 21	-0.9	-0.42	32.14	-13.3617	-0.0548	-0.5194
949	SLE FR 1	-0.82	-0.38	28.76	-12.0046	-0.0479	-0.4713
949	SLE FR 2	-0.82	-0.38	28.76	-12.0048	-0.0479	-0.4729
949	SLE FR 3	-0.82	-0.38	28.87	-12.049	-0.0481	-0.4732
949	SLE FR 4	-0.84	-0.39	29.69	-12.3784	-0.0498	-0.4844
949	SLE FR 5	-0.84	-0.38	29.8	-12.4226	-0.05	-0.4847
949	SLE FR 6	-0.85	-0.39	30.31	-12.6273	-0.0511	-0.4905
949	SLE QP 1	-0.82	-0.38	28.76	-12.0046	-0.0479	-0.4713
949	SLE QP 2	-0.84	-0.38	29.69	-12.3782	-0.0498	-0.4828
949	SLD 1	2.51	0.11	32.05	-12.7804	-0.0419	1.4397
949	SLD 2	2.18	-0.23	32.47	-12.9744	-0.0424	1.2504
949	SLD 3	2.42	-0.79	32.36	-12.9096	-0.0436	1.3885
949	SLD 4	2.09	-1.13	32.78	-13.1037	-0.0441	1.1993
949	SLD 5	0.36	1.19	29.85	-12.2675	-0.0447	0.2059
949	SLD 6	0.14	0.97	30.13	-12.3963	-0.0451	0.0803
949	SLD 7	0.06	-1.81	30.88	-12.6984	-0.0504	0.0355
949	SLD 8	-0.16	-2.03	31.17	-12.8272	-0.0508	-0.0901
949	SLD 9	-1.52	1.27	28.22	-11.9292	-0.0488	-0.8755
949	SLD 10	-1.74	1.04	28.5	-12.058	-0.0492	-1.0011
949	SLD 11	-1.82	-1.73	29.25	-12.3601	-0.0545	-1.0459
949	SLD 12	-2.04	-1.96	29.53	-12.4889	-0.0548	-1.1714
949	SLD 13	-3.76	0.36	26.6	-11.6527	-0.0554	-2.1649
949	SLD 14	-4.09	0.02	27.03	-11.8468	-0.056	-2.3541
949	SLD 15	-3.85	-0.54	26.91	-11.782	-0.0571	-2.216
949	SLD 16	-4.18	-0.88	27.34	-11.9761	-0.0577	-2.4052
949	SLV 1	6.98	0.74	35.21	-13.3225	-0.0314	4.0093
949	SLV 2	6.21	-0.06	36.2	-13.7743	-0.0326	3.5688
949	SLV 3	6.77	-1.29	35.92	-13.6191	-0.0352	3.893

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
949	SLV 4	6.01	-2.09	36.91	-14.0708	-0.0365	3.4525
949	SLV 5	1.95	3.18	30.1	-12.1323	-0.0382	1.1186
949	SLV 6	1.45	2.66	30.74	-12.4267	-0.0391	0.8316
949	SLV 7	1.27	-3.6	32.46	-13.1208	-0.051	0.731
949	SLV 8	0.77	-4.12	33.11	-13.4152	-0.0518	0.444
949	SLV 9	-2.45	3.36	26.28	-11.3412	-0.0478	-1.4095
949	SLV 10	-2.95	2.84	26.92	-11.6356	-0.0486	-1.6966
949	SLV 11	-3.13	-3.43	28.64	-12.3297	-0.0605	-1.7972
949	SLV 12	-3.63	-3.95	29.29	-12.6241	-0.0613	-2.0842
949	SLV 13	-7.68	1.33	22.48	-10.6856	-0.0631	-4.418
949	SLV 14	-8.45	0.53	23.47	-11.1373	-0.0644	-4.8585
949	SLV 15	-7.89	-0.71	23.19	-10.9821	-0.0669	-4.5343
949	SLV 16	-8.65	-1.51	24.18	-11.4339	-0.0682	-4.9748
949	CRTFP Ux+	0	0	0	0	0	0
949	CRTFP Ux-	0	0	0	0	0	0
949	CRTFP Uy+	0	0	0	0	0	0
949	CRTFP Uy-	0	0	0	0	0	0
950	SLU 1	-0.8	-0.39	29.45	-13.1268	-0.0563	-0.4586
950	SLU 2	-0.82	-0.44	29.45	-13.133	-0.0565	-0.4708
950	SLU 3	-0.82	-0.4	30.14	-13.4265	-0.0578	-0.4706
950	SLU 4	-0.83	-0.42	30.14	-13.4302	-0.0579	-0.478
950	SLU 5	-0.83	-0.44	29.89	-13.324	-0.0574	-0.4779
950	SLU 6	-0.83	-0.4	30.57	-13.6175	-0.0587	-0.4777
950	SLU 7	-0.84	-0.43	30.58	-13.6212	-0.0588	-0.4851
950	SLU 8	-0.82	-0.4	30.32	-13.5088	-0.058	-0.4728
950	SLU 9	-0.83	-0.43	30.32	-13.5125	-0.0582	-0.4801
950	SLU 10	-0.89	-0.47	32.95	-14.6501	-0.0646	-0.5115
950	SLU 11	-0.89	-0.42	33.63	-14.9437	-0.0659	-0.5114
950	SLU 12	-0.9	-0.45	33.64	-14.9473	-0.066	-0.5187
950	SLU 13	-0.9	-0.47	33.39	-14.8411	-0.0655	-0.5186
950	SLU 14	-0.9	-0.42	34.07	-15.1346	-0.0668	-0.5185
950	SLU 15	-0.91	-0.45	34.07	-15.1383	-0.0669	-0.5258
950	SLU 16	-0.89	-0.42	33.82	-15.0259	-0.0662	-0.5135
950	SLU 17	-0.9	-0.45	33.82	-15.0296	-0.0663	-0.5208
950	SLU 18	-0.9	-0.43	34.44	-15.2941	-0.0679	-0.5167
950	SLU 19	-0.91	-0.46	34.45	-15.2978	-0.068	-0.524
950	SLU 20	-0.91	-0.43	34.88	-15.4851	-0.0688	-0.5238
950	SLU 21	-0.92	-0.46	34.88	-15.4888	-0.0689	-0.5311
950	SLU 22	-0.87	-0.39	33.01	-14.6721	-0.0643	-0.5027
950	SLU 23	-0.89	-0.44	33.01	-14.6783	-0.0646	-0.5149
950	SLU 24	-0.89	-0.4	33.7	-14.9718	-0.0659	-0.5148
950	SLU 25	-0.91	-0.42	33.7	-14.9755	-0.066	-0.5221
950	SLU 26	-0.91	-0.44	33.45	-14.8693	-0.0655	-0.522
950	SLU 27	-0.91	-0.4	34.14	-15.1628	-0.0667	-0.5219
950	SLU 28	-0.92	-0.43	34.14	-15.1665	-0.0669	-0.5292
950	SLU 29	-0.9	-0.4	33.88	-15.0541	-0.0661	-0.5169
950	SLU 30	-0.91	-0.42	33.88	-15.0578	-0.0663	-0.5242
950	SLU 31	-0.97	-0.47	36.51	-16.1954	-0.0727	-0.5556
950	SLU 32	-0.97	-0.42	37.2	-16.489	-0.074	-0.5555
950	SLU 33	-0.98	-0.45	37.2	-16.4926	-0.0741	-0.5628
950	SLU 34	-0.98	-0.47	36.95	-16.3864	-0.0736	-0.5627
950	SLU 35	-0.98	-0.42	37.63	-16.68	-0.0749	-0.5626
950	SLU 36	-0.99	-0.45	37.64	-16.6836	-0.075	-0.5699
950	SLU 37	-0.97	-0.42	37.38	-16.5712	-0.0743	-0.5576
950	SLU 38	-0.98	-0.45	37.38	-16.5749	-0.0744	-0.565
950	SLU 39	-0.97	-0.43	38.01	-16.8394	-0.076	-0.5609
950	SLU 40	-0.99	-0.46	38.01	-16.8431	-0.0761	-0.5682
950	SLU 41	-0.99	-0.43	38.44	-17.0304	-0.0769	-0.568
950	SLU 42	-1	-0.46	38.45	-17.0341	-0.077	-0.5753
950	SLU 43	-1.01	-0.51	37.06	-16.535	-0.0704	-0.581
950	SLU 44	-1.03	-0.56	37.06	-16.5412	-0.0706	-0.5932
950	SLU 45	-1.03	-0.52	37.75	-16.8348	-0.0719	-0.5931
950	SLU 46	-1.04	-0.54	37.75	-16.8384	-0.072	-0.6004
950	SLU 47	-1.04	-0.56	37.5	-16.7322	-0.0715	-0.6003
950	SLU 48	-1.04	-0.52	38.18	-17.0257	-0.0728	-0.6002
950	SLU 49	-1.06	-0.55	38.19	-17.0294	-0.0729	-0.6075
950	SLU 50	-1.03	-0.52	37.93	-16.917	-0.0721	-0.5952
950	SLU 51	-1.05	-0.54	37.93	-16.9207	-0.0723	-0.6025
950	SLU 52	-1.1	-0.59	40.56	-18.0583	-0.0787	-0.6339
950	SLU 53	-1.1	-0.54	41.25	-18.3519	-0.08	-0.6338
950	SLU 54	-1.11	-0.57	41.25	-18.3556	-0.0801	-0.6411
950	SLU 55	-1.11	-0.59	41	-18.2493	-0.0796	-0.641
950	SLU 56	-1.11	-0.54	41.68	-18.5429	-0.0809	-0.6409
950	SLU 57	-1.13	-0.57	41.69	-18.5466	-0.081	-0.6482
950	SLU 58	-1.1	-0.54	41.43	-18.4342	-0.0803	-0.6359
950	SLU 59	-1.12	-0.57	41.43	-18.4378	-0.0804	-0.6432
950	SLU 60	-1.11	-0.55	42.05	-18.7024	-0.082	-0.6392
950	SLU 61	-1.12	-0.58	42.06	-18.7061	-0.0821	-0.6465
950	SLU 62	-1.12	-0.55	42.49	-18.8934	-0.0829	-0.6463
950	SLU 63	-1.14	-0.58	42.49	-18.8971	-0.083	-0.6536
950	SLU 64	-1.09	-0.51	40.62	-18.0804	-0.0784	-0.6251
950	SLU 65	-1.11	-0.56	40.63	-18.0865	-0.0787	-0.6373
950	SLU 66	-1.11	-0.52	41.31	-18.3801	-0.08	-0.6372
950	SLU 67	-1.12	-0.54	41.31	-18.3837	-0.0801	-0.6445
950	SLU 68	-1.12	-0.56	41.06	-18.2775	-0.0796	-0.6444
950	SLU 69	-1.12	-0.52	41.75	-18.5711	-0.0808	-0.6443
950	SLU 70	-1.13	-0.54	41.75	-18.5747	-0.081	-0.6516
950	SLU 71	-1.11	-0.52	41.49	-18.4623	-0.0802	-0.6394
950	SLU 72	-1.12	-0.54	41.5	-18.466	-0.0804	-0.6467
950	SLU 73	-1.18	-0.58	44.12	-19.6036	-0.0868	-0.6781

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
950	SLU 74	-1.18	-0.54	44.81	-19.8972	-0.0881	-0.6779
950	SLU 75	-1.19	-0.57	44.81	-19.9009	-0.0882	-0.6853
950	SLU 76	-1.19	-0.59	44.56	-19.7946	-0.0877	-0.6852
950	SLU 77	-1.19	-0.54	45.25	-20.0882	-0.089	-0.685
950	SLU 78	-1.2	-0.57	45.25	-20.0919	-0.0891	-0.6924
950	SLU 79	-1.18	-0.54	44.99	-19.9795	-0.0884	-0.6801
950	SLU 80	-1.19	-0.57	45	-19.9832	-0.0885	-0.6874
950	SLU 81	-1.19	-0.55	45.62	-20.2477	-0.0901	-0.6833
950	SLU 82	-1.2	-0.58	45.62	-20.2514	-0.0902	-0.6906
950	SLU 83	-1.2	-0.55	46.06	-20.4387	-0.091	-0.6904
950	SLU 84	-1.21	-0.58	46.06	-20.4424	-0.0911	-0.6977
950	SLE RA 1	-0.82	-0.39	30.46	-13.5683	-0.0586	-0.4712
950	SLE RA 2	-0.83	-0.42	30.47	-13.5724	-0.0587	-0.4793
950	SLE RA 3	-0.83	-0.4	30.92	-13.7681	-0.0596	-0.4792
950	SLE RA 4	-0.84	-0.41	30.93	-13.7706	-0.0597	-0.4841
950	SLE RA 5	-0.84	-0.43	30.76	-13.6998	-0.0593	-0.484
950	SLE RA 6	-0.84	-0.4	31.21	-13.8955	-0.0602	-0.484
950	SLE RA 7	-0.85	-0.42	31.22	-13.8979	-0.0603	-0.4888
950	SLE RA 8	-0.84	-0.4	31.05	-13.823	-0.0598	-0.4806
950	SLE RA 9	-0.84	-0.41	31.05	-13.8255	-0.0598	-0.4855
950	SLE RA 10	-0.88	-0.44	32.8	-14.5839	-0.0641	-0.5065
950	SLE RA 11	-0.88	-0.41	33.26	-14.7796	-0.065	-0.5064
950	SLE RA 12	-0.89	-0.43	33.26	-14.782	-0.0651	-0.5113
950	SLE RA 13	-0.89	-0.44	33.09	-14.7112	-0.0647	-0.5112
950	SLE RA 14	-0.89	-0.41	33.55	-14.9069	-0.0656	-0.5111
950	SLE RA 15	-0.9	-0.43	33.55	-14.9093	-0.0657	-0.516
950	SLE RA 16	-0.88	-0.41	33.38	-14.8344	-0.0652	-0.5078
950	SLE RA 17	-0.89	-0.43	33.38	-14.8369	-0.0653	-0.5127
950	SLE RA 18	-0.89	-0.42	33.8	-15.0132	-0.0663	-0.51
950	SLE RA 19	-0.89	-0.44	33.8	-15.0157	-0.0664	-0.5148
950	SLE RA 20	-0.89	-0.42	34.09	-15.1405	-0.0669	-0.5147
950	SLE RA 21	-0.9	-0.44	34.09	-15.143	-0.067	-0.5196
950	SLE FR 1	-0.82	-0.39	30.46	-13.5683	-0.0586	-0.4712
950	SLE FR 2	-0.82	-0.4	30.46	-13.5692	-0.0586	-0.4728
950	SLE FR 3	-0.82	-0.4	30.58	-13.6193	-0.0588	-0.4731
950	SLE FR 4	-0.84	-0.41	31.46	-14.0026	-0.0609	-0.4844
950	SLE FR 5	-0.84	-0.4	31.58	-14.0527	-0.0611	-0.4847
950	SLE FR 6	-0.85	-0.41	32.13	-14.2908	-0.0624	-0.4906
950	SLE QP 1	-0.82	-0.39	30.46	-13.5683	-0.0586	-0.4712
950	SLE QP 2	-0.84	-0.4	31.46	-14.0018	-0.0609	-0.4828
950	SLD 1	2.51	0.07	33.66	-14.4424	-0.0581	1.4415
950	SLD 2	2.18	-0.25	34.1	-14.6552	-0.0585	1.2526
950	SLD 3	2.42	-0.82	34.02	-14.6122	-0.0604	1.3911
950	SLD 4	2.09	-1.14	34.46	-14.825	-0.0608	1.2022
950	SLD 5	0.36	1.15	31.49	-13.8379	-0.0565	0.2053
950	SLD 6	0.14	0.93	31.79	-13.9791	-0.0567	0.0799
950	SLD 7	0.07	-1.82	32.7	-14.4037	-0.0642	0.0372
950	SLD 8	-0.15	-2.03	32.99	-14.5449	-0.0645	-0.0881
950	SLD 9	-1.53	1.23	29.94	-13.4587	-0.0573	-0.8775
950	SLD 10	-1.74	1.01	30.23	-13.5999	-0.0576	-1.0029
950	SLD 11	-1.82	-1.74	31.14	-14.0245	-0.065	-1.0456
950	SLD 12	-2.04	-1.95	31.43	-14.1657	-0.0653	-1.171
950	SLD 13	-3.77	0.34	28.47	-13.1786	-0.0609	-2.1678
950	SLD 14	-4.1	0.02	28.91	-13.3914	-0.0614	-2.3567
950	SLD 15	-3.86	-0.55	28.83	-13.3484	-0.0633	-2.2182
950	SLD 16	-4.19	-0.87	29.27	-13.5612	-0.0637	-2.4072
950	SLV 1	6.99	0.66	36.61	-15.0383	-0.0544	4.0138
950	SLV 2	6.22	-0.09	37.63	-15.5338	-0.0554	3.5739
950	SLV 3	6.79	-1.35	37.43	-15.4255	-0.0597	3.899
950	SLV 4	6.02	-2.1	38.46	-15.921	-0.0607	3.4591
950	SLV 5	1.95	3.1	31.58	-13.6385	-0.0509	1.1176
950	SLV 6	1.45	2.61	32.24	-13.9613	-0.0515	0.831
950	SLV 7	1.28	-3.61	34.33	-14.929	-0.0683	0.735
950	SLV 8	0.78	-4.09	34.99	-15.2519	-0.0689	0.4484
950	SLV 9	-2.46	3.29	27.93	-12.7517	-0.0528	-1.414
950	SLV 10	-2.96	2.8	28.6	-13.0746	-0.0535	-1.7006
950	SLV 11	-3.13	-3.41	30.68	-14.0423	-0.0703	-1.7966
950	SLV 12	-3.63	-3.9	31.35	-14.3651	-0.0709	-2.0832
950	SLV 13	-7.7	1.3	24.47	-12.0826	-0.0611	-4.4248
950	SLV 14	-8.47	0.55	25.49	-12.5781	-0.0621	-4.8646
950	SLV 15	-7.9	-0.71	25.29	-12.4698	-0.0663	-4.5395
950	SLV 16	-8.67	-1.46	26.32	-12.9653	-0.0673	-4.9794
950	CRTFP Ux+	0	0	0	0	0	0
950	CRTFP Ux-	0	0	0	0	0	0
950	CRTFP Uy+	0	0	0	0	0	0
950	CRTFP Uy-	0	0	0	0	0	0
951	SLU 1	-0.8	-0.4	31.29	-14.8781	-0.0588	-0.4578
951	SLU 2	-0.82	-0.45	31.3	-14.8897	-0.059	-0.4698
951	SLU 3	-0.82	-0.41	32.03	-15.2245	-0.0603	-0.4698
951	SLU 4	-0.83	-0.43	32.04	-15.2315	-0.0605	-0.477
951	SLU 5	-0.83	-0.45	31.77	-15.1089	-0.06	-0.4768
951	SLU 6	-0.83	-0.41	32.49	-15.4436	-0.0612	-0.4769
951	SLU 7	-0.84	-0.44	32.5	-15.4506	-0.0614	-0.4841
951	SLU 8	-0.82	-0.41	32.22	-15.3164	-0.0606	-0.4719
951	SLU 9	-0.83	-0.44	32.23	-15.3234	-0.0607	-0.4791
951	SLU 10	-0.89	-0.47	35.07	-16.6505	-0.0676	-0.5109
951	SLU 11	-0.89	-0.43	35.8	-16.9853	-0.0689	-0.5109
951	SLU 12	-0.9	-0.46	35.8	-16.9922	-0.0691	-0.5181
951	SLU 13	-0.9	-0.48	35.53	-16.8697	-0.0685	-0.5179
951	SLU 14	-0.9	-0.43	36.26	-17.2044	-0.0698	-0.518

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
951	SLU 15	-0.91	-0.46	36.27	-17.2114	-0.07	-0.5252
951	SLU 16	-0.89	-0.43	35.99	-17.0772	-0.0691	-0.513
951	SLU 17	-0.9	-0.46	35.99	-17.0842	-0.0693	-0.5202
951	SLU 18	-0.9	-0.44	36.67	-17.3935	-0.071	-0.5165
951	SLU 19	-0.91	-0.47	36.68	-17.4005	-0.0711	-0.5237
951	SLU 20	-0.91	-0.44	37.13	-17.6127	-0.0719	-0.5236
951	SLU 21	-0.92	-0.47	37.14	-17.6197	-0.0721	-0.5308
951	SLU 22	-0.87	-0.4	35.12	-16.6677	-0.0672	-0.5023
951	SLU 23	-0.89	-0.45	35.13	-16.6794	-0.0675	-0.5143
951	SLU 24	-0.89	-0.4	35.86	-17.0141	-0.0688	-0.5144
951	SLU 25	-0.91	-0.43	35.87	-17.0211	-0.069	-0.5215
951	SLU 26	-0.91	-0.45	35.6	-16.8985	-0.0684	-0.5214
951	SLU 27	-0.91	-0.41	36.32	-17.2333	-0.0697	-0.5214
951	SLU 28	-0.92	-0.43	36.33	-17.2403	-0.0699	-0.5286
951	SLU 29	-0.9	-0.4	36.05	-17.1061	-0.069	-0.5164
951	SLU 30	-0.91	-0.43	36.06	-17.1131	-0.0692	-0.5236
951	SLU 31	-0.97	-0.47	38.9	-18.4402	-0.0761	-0.5554
951	SLU 32	-0.97	-0.43	39.62	-18.7749	-0.0773	-0.5554
951	SLU 33	-0.98	-0.46	39.63	-18.7819	-0.0775	-0.5626
951	SLU 34	-0.98	-0.47	39.36	-18.6593	-0.077	-0.5624
951	SLU 35	-0.98	-0.43	40.09	-18.9941	-0.0782	-0.5625
951	SLU 36	-0.99	-0.46	40.1	-19.0011	-0.0784	-0.5697
951	SLU 37	-0.97	-0.43	39.81	-18.8669	-0.0776	-0.5575
951	SLU 38	-0.98	-0.46	39.82	-18.8738	-0.0777	-0.5647
951	SLU 39	-0.98	-0.43	40.5	-19.1831	-0.0794	-0.561
951	SLU 40	-0.99	-0.46	40.51	-19.1901	-0.0796	-0.5682
951	SLU 41	-0.99	-0.44	40.96	-19.4023	-0.0803	-0.5681
951	SLU 42	-1	-0.46	40.97	-19.4093	-0.0805	-0.5753
951	SLU 43	-1.01	-0.53	39.36	-18.7279	-0.0735	-0.5799
951	SLU 44	-1.03	-0.57	39.38	-18.7396	-0.0738	-0.5919
951	SLU 45	-1.03	-0.53	40.1	-19.0743	-0.0751	-0.5919
951	SLU 46	-1.04	-0.56	40.11	-19.0813	-0.0752	-0.5991
951	SLU 47	-1.04	-0.57	39.84	-18.9587	-0.0747	-0.5989
951	SLU 48	-1.04	-0.53	40.57	-19.2935	-0.076	-0.599
951	SLU 49	-1.05	-0.56	40.58	-19.3005	-0.0761	-0.6062
951	SLU 50	-1.03	-0.53	40.29	-19.1663	-0.0753	-0.594
951	SLU 51	-1.05	-0.56	40.3	-19.1733	-0.0755	-0.6012
951	SLU 52	-1.1	-0.6	43.14	-20.5004	-0.0823	-0.633
951	SLU 53	-1.1	-0.55	43.87	-20.8351	-0.0836	-0.633
951	SLU 54	-1.11	-0.58	43.88	-20.8421	-0.0838	-0.6402
951	SLU 55	-1.11	-0.6	43.61	-20.7195	-0.0832	-0.64
951	SLU 56	-1.11	-0.56	44.33	-21.0543	-0.0845	-0.6401
951	SLU 57	-1.13	-0.58	44.34	-21.0613	-0.0847	-0.6472
951	SLU 58	-1.1	-0.55	44.06	-20.9271	-0.0838	-0.6351
951	SLU 59	-1.12	-0.58	44.07	-20.9341	-0.084	-0.6423
951	SLU 60	-1.11	-0.56	44.74	-21.2433	-0.0857	-0.6386
951	SLU 61	-1.12	-0.59	44.75	-21.2503	-0.0859	-0.6458
951	SLU 62	-1.12	-0.56	45.21	-21.4625	-0.0866	-0.6457
951	SLU 63	-1.14	-0.59	45.22	-21.4695	-0.0868	-0.6528
951	SLU 64	-1.09	-0.52	43.19	-20.5176	-0.0819	-0.6244
951	SLU 65	-1.11	-0.57	43.21	-20.5292	-0.0822	-0.6364
951	SLU 66	-1.11	-0.53	43.93	-20.8639	-0.0835	-0.6364
951	SLU 67	-1.12	-0.55	43.94	-20.8709	-0.0837	-0.6436
951	SLU 68	-1.12	-0.57	43.67	-20.7484	-0.0831	-0.6434
951	SLU 69	-1.12	-0.53	44.4	-21.0831	-0.0844	-0.6435
951	SLU 70	-1.13	-0.56	44.41	-21.0901	-0.0846	-0.6507
951	SLU 71	-1.11	-0.53	44.12	-20.9559	-0.0837	-0.6385
951	SLU 72	-1.12	-0.55	44.13	-20.9629	-0.0839	-0.6457
951	SLU 73	-1.18	-0.59	46.97	-22.29	-0.0908	-0.6775
951	SLU 74	-1.18	-0.55	47.7	-22.6247	-0.0921	-0.6775
951	SLU 75	-1.19	-0.58	47.71	-22.6317	-0.0922	-0.6847
951	SLU 76	-1.19	-0.59	47.44	-22.5092	-0.0917	-0.6845
951	SLU 77	-1.19	-0.55	48.16	-22.8439	-0.093	-0.6846
951	SLU 78	-1.2	-0.58	48.17	-22.8509	-0.0931	-0.6918
951	SLU 79	-1.18	-0.55	47.89	-22.7167	-0.0923	-0.6796
951	SLU 80	-1.19	-0.58	47.9	-22.7237	-0.0925	-0.6868
951	SLU 81	-1.19	-0.56	48.57	-23.033	-0.0942	-0.6831
951	SLU 82	-1.2	-0.58	48.58	-23.04	-0.0943	-0.6903
951	SLU 83	-1.2	-0.56	49.04	-23.2521	-0.0951	-0.6902
951	SLU 84	-1.21	-0.59	49.05	-23.2591	-0.0952	-0.6973
951	SLE RA 1	-0.82	-0.4	32.38	-15.3894	-0.0612	-0.4705
951	SLE RA 2	-0.83	-0.43	32.39	-15.3972	-0.0614	-0.4785
951	SLE RA 3	-0.83	-0.4	32.88	-15.6203	-0.0622	-0.4785
951	SLE RA 4	-0.84	-0.42	32.88	-15.625	-0.0623	-0.4833
951	SLE RA 5	-0.84	-0.43	32.7	-15.5433	-0.062	-0.4832
951	SLE RA 6	-0.84	-0.41	33.19	-15.7664	-0.0628	-0.4833
951	SLE RA 7	-0.85	-0.42	33.19	-15.7711	-0.0629	-0.488
951	SLE RA 8	-0.83	-0.41	33	-15.6816	-0.0624	-0.4799
951	SLE RA 9	-0.84	-0.42	33.01	-15.6863	-0.0625	-0.4847
951	SLE RA 10	-0.88	-0.45	34.9	-16.571	-0.0671	-0.5059
951	SLE RA 11	-0.88	-0.42	35.39	-16.7942	-0.0679	-0.5059
951	SLE RA 12	-0.89	-0.44	35.39	-16.7989	-0.068	-0.5107
951	SLE RA 13	-0.89	-0.45	35.21	-16.7172	-0.0677	-0.5106
951	SLE RA 14	-0.89	-0.42	35.7	-16.9403	-0.0685	-0.5106
951	SLE RA 15	-0.9	-0.44	35.7	-16.945	-0.0686	-0.5154
951	SLE RA 16	-0.88	-0.42	35.51	-16.8555	-0.0681	-0.5073
951	SLE RA 17	-0.89	-0.44	35.52	-16.8602	-0.0682	-0.5121
951	SLE RA 18	-0.89	-0.43	35.97	-17.0664	-0.0693	-0.5097
951	SLE RA 19	-0.89	-0.44	35.98	-17.071	-0.0694	-0.5145
951	SLE RA 20	-0.89	-0.43	36.28	-17.2125	-0.0699	-0.5144

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
951	SLE RA 21	-0.9	-0.45	36.29	-17.2171	-0.07	-0.5192
951	SLE FR 1	-0.82	-0.4	32.38	-15.3894	-0.0612	-0.4705
951	SLE FR 2	-0.82	-0.41	32.39	-15.391	-0.0612	-0.4721
951	SLE FR 3	-0.82	-0.4	32.51	-15.4479	-0.0614	-0.4724
951	SLE FR 4	-0.84	-0.42	33.46	-15.894	-0.0637	-0.4839
951	SLE FR 5	-0.84	-0.41	33.58	-15.9509	-0.0639	-0.4842
951	SLE FR 6	-0.85	-0.41	34.18	-16.2279	-0.0652	-0.4901
951	SLE QP 1	-0.82	-0.4	32.38	-15.3894	-0.0612	-0.4705
951	SLE QP 2	-0.84	-0.41	33.46	-15.8925	-0.0636	-0.4823
951	SLD 1	2.52	0.01	35.66	-16.4777	-0.0661	1.4439
951	SLD 2	2.19	-0.29	36.11	-16.7073	-0.0662	1.2553
951	SLD 3	2.43	-0.88	36.09	-16.7027	-0.0689	1.3942
951	SLD 4	2.1	-1.18	36.54	-16.9323	-0.069	1.2057
951	SLD 5	0.36	1.11	33.38	-15.6851	-0.0601	0.2051
951	SLD 6	0.14	0.92	33.68	-15.8375	-0.0602	0.08
951	SLD 7	0.07	-1.84	34.82	-16.435	-0.0694	0.0397
951	SLD 8	-0.15	-2.04	35.12	-16.5874	-0.0695	-0.0854
951	SLD 9	-1.53	1.22	31.8	-15.1976	-0.0577	-0.8791
951	SLD 10	-1.75	1.02	32.1	-15.35	-0.0578	-1.0042
951	SLD 11	-1.82	-1.73	33.24	-15.9475	-0.0671	-1.0446
951	SLD 12	-2.04	-1.93	33.54	-16.0999	-0.0671	-1.1697
951	SLD 13	-3.78	0.36	30.38	-14.8527	-0.0582	-2.1702
951	SLD 14	-4.11	0.06	30.83	-15.0823	-0.0583	-2.3588
951	SLD 15	-3.86	-0.53	30.81	-15.0777	-0.061	-2.2199
951	SLD 16	-4.19	-0.83	31.26	-15.3073	-0.0611	-2.4084
951	SLV 1	7	0.54	38.61	-17.2701	-0.0696	4.0185
951	SLV 2	6.23	-0.16	39.66	-17.8048	-0.0698	3.5796
951	SLV 3	6.8	-1.47	39.6	-17.7813	-0.0759	3.9055
951	SLV 4	6.04	-2.17	40.64	-18.316	-0.0761	3.4666
951	SLV 5	1.95	3.04	33.33	-15.4365	-0.0558	1.1165
951	SLV 6	1.45	2.58	34.01	-15.7849	-0.0559	0.8306
951	SLV 7	1.29	-3.64	36.6	-17.1404	-0.0769	0.7398
951	SLV 8	0.79	-4.1	37.29	-17.4888	-0.077	0.4538
951	SLV 9	-2.47	3.28	29.63	-14.2962	-0.0502	-1.4184
951	SLV 10	-2.97	2.83	30.31	-14.6446	-0.0504	-1.7044
951	SLV 11	-3.12	-3.4	32.9	-16.0001	-0.0713	-1.7951
951	SLV 12	-3.62	-3.86	33.58	-16.3485	-0.0715	-2.0811
951	SLV 13	-7.71	1.35	26.28	-13.469	-0.0511	-4.4311
951	SLV 14	-8.48	0.65	27.32	-14.0037	-0.0513	-4.87
951	SLV 15	-7.91	-0.66	27.26	-13.9802	-0.0574	-4.5442
951	SLV 16	-8.68	-1.36	28.3	-14.5149	-0.0577	-4.9831
951	CRTFP Ux+	0	0	0	0	0	0
951	CRTFP Ux-	0	0	0	0	0	0
951	CRTFP Uy+	0	0	0	0	0	0
951	CRTFP Uy-	0	0	0	0	0	0
952	SLU 1	-0.54	-0.28	22.21	-11.1562	1.3615	-0.2919
952	SLU 2	-0.55	-0.31	22.23	-11.1676	1.3623	-0.2979
952	SLU 3	-0.55	-0.28	22.74	-11.4195	1.3939	-0.2998
952	SLU 4	-0.56	-0.3	22.75	-11.4264	1.3944	-0.3034
952	SLU 5	-0.56	-0.31	22.56	-11.3332	1.3826	-0.3025
952	SLU 6	-0.56	-0.28	23.07	-11.5852	1.4141	-0.3044
952	SLU 7	-0.57	-0.3	23.08	-11.5921	1.4146	-0.308
952	SLU 8	-0.55	-0.28	22.87	-11.4876	1.402	-0.3011
952	SLU 9	-0.56	-0.3	22.88	-11.4944	1.4025	-0.3047
952	SLU 10	-0.6	-0.32	24.93	-12.5105	1.5274	-0.3251
952	SLU 11	-0.6	-0.29	25.44	-12.7625	1.559	-0.327
952	SLU 12	-0.61	-0.31	25.45	-12.7693	1.5594	-0.3306
952	SLU 13	-0.61	-0.32	25.26	-12.6762	1.5477	-0.3297
952	SLU 14	-0.61	-0.29	25.77	-12.9282	1.5792	-0.3316
952	SLU 15	-0.62	-0.31	25.78	-12.935	1.5797	-0.3352
952	SLU 16	-0.6	-0.29	25.57	-12.8305	1.5671	-0.3283
952	SLU 17	-0.61	-0.31	25.58	-12.8373	1.5676	-0.3319
952	SLU 18	-0.61	-0.29	26.07	-13.0747	1.5973	-0.3307
952	SLU 19	-0.62	-0.31	26.08	-13.0815	1.5978	-0.3343
952	SLU 20	-0.62	-0.3	26.4	-13.2403	1.6176	-0.3353
952	SLU 21	-0.62	-0.32	26.41	-13.2472	1.6181	-0.339
952	SLU 22	-0.59	-0.27	24.95	-12.5186	1.5292	-0.3224
952	SLU 23	-0.6	-0.3	24.97	-12.53	1.53	-0.3285
952	SLU 24	-0.6	-0.27	25.48	-12.782	1.5615	-0.3304
952	SLU 25	-0.61	-0.29	25.49	-12.7888	1.562	-0.334
952	SLU 26	-0.61	-0.3	25.3	-12.6957	1.5502	-0.3331
952	SLU 27	-0.61	-0.28	25.81	-12.9476	1.5818	-0.335
952	SLU 28	-0.62	-0.29	25.82	-12.9545	1.5823	-0.3386
952	SLU 29	-0.61	-0.27	25.61	-12.85	1.5697	-0.3317
952	SLU 30	-0.61	-0.29	25.62	-12.8568	1.5702	-0.3353
952	SLU 31	-0.65	-0.32	27.67	-13.8729	1.6951	-0.3557
952	SLU 32	-0.65	-0.29	28.18	-14.1249	1.7266	-0.3576
952	SLU 33	-0.66	-0.31	28.19	-14.1317	1.7271	-0.3612
952	SLU 34	-0.66	-0.32	28	-14.0386	1.7153	-0.3603
952	SLU 35	-0.66	-0.29	28.51	-14.2906	1.7468	-0.3622
952	SLU 36	-0.67	-0.31	28.52	-14.2974	1.7473	-0.3658
952	SLU 37	-0.66	-0.29	28.32	-14.1929	1.7347	-0.3589
952	SLU 38	-0.66	-0.31	28.32	-14.1997	1.7352	-0.3625
952	SLU 39	-0.66	-0.29	28.81	-14.4371	1.765	-0.3613
952	SLU 40	-0.67	-0.31	28.82	-14.4439	1.7655	-0.3649
952	SLU 41	-0.67	-0.29	29.14	-14.6027	1.7852	-0.3659
952	SLU 42	-0.68	-0.31	29.15	-14.6096	1.7857	-0.3696
952	SLU 43	-0.68	-0.36	27.94	-14.0359	1.7125	-0.3689
952	SLU 44	-0.69	-0.39	27.95	-14.0473	1.7133	-0.3749
952	SLU 45	-0.69	-0.36	28.47	-14.2993	1.7449	-0.3769

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
952	SLU 46	-0.7	-0.38	28.47	-14.3061	1.7453	-0.3805
952	SLU 47	-0.7	-0.39	28.28	-14.213	1.7336	-0.3796
952	SLU 48	-0.7	-0.36	28.8	-14.465	1.7651	-0.3815
952	SLU 49	-0.71	-0.38	28.81	-14.4718	1.7656	-0.3851
952	SLU 50	-0.7	-0.36	28.6	-14.3673	1.753	-0.3782
952	SLU 51	-0.71	-0.38	28.61	-14.3741	1.7535	-0.3818
952	SLU 52	-0.74	-0.4	30.65	-15.3902	1.8784	-0.4021
952	SLU 53	-0.74	-0.38	31.17	-15.6422	1.9099	-0.4041
952	SLU 54	-0.75	-0.39	31.18	-15.649	1.9104	-0.4077
952	SLU 55	-0.75	-0.41	30.98	-15.5559	1.8986	-0.4068
952	SLU 56	-0.75	-0.38	31.5	-15.8079	1.9302	-0.4087
952	SLU 57	-0.76	-0.4	31.51	-15.8147	1.9307	-0.4123
952	SLU 58	-0.75	-0.38	31.3	-15.7102	1.9181	-0.4054
952	SLU 59	-0.75	-0.4	31.31	-15.7171	1.9186	-0.409
952	SLU 60	-0.75	-0.38	31.8	-15.9544	1.9483	-0.4078
952	SLU 61	-0.76	-0.4	31.8	-15.9612	1.9488	-0.4114
952	SLU 62	-0.76	-0.38	32.13	-16.1201	1.9686	-0.4124
952	SLU 63	-0.77	-0.4	32.13	-16.1269	1.9691	-0.416
952	SLU 64	-0.73	-0.36	30.68	-15.3983	1.8801	-0.3995
952	SLU 65	-0.75	-0.39	30.69	-15.4097	1.881	-0.4055
952	SLU 66	-0.75	-0.36	31.21	-15.6617	1.9125	-0.4075
952	SLU 67	-0.76	-0.38	31.22	-15.6685	1.913	-0.4111
952	SLU 68	-0.76	-0.39	31.02	-15.5754	1.9012	-0.4102
952	SLU 69	-0.76	-0.36	31.54	-15.8274	1.9328	-0.4121
952	SLU 70	-0.76	-0.38	31.55	-15.8342	1.9332	-0.4157
952	SLU 71	-0.75	-0.36	31.34	-15.7297	1.9207	-0.4088
952	SLU 72	-0.76	-0.38	31.35	-15.7365	1.9211	-0.4124
952	SLU 73	-0.8	-0.4	33.39	-16.7526	2.046	-0.4327
952	SLU 74	-0.8	-0.37	33.91	-17.0046	2.0776	-0.4347
952	SLU 75	-0.8	-0.39	33.92	-17.0115	2.0781	-0.4383
952	SLU 76	-0.8	-0.4	33.72	-16.9183	2.0663	-0.4374
952	SLU 77	-0.8	-0.37	34.24	-17.1703	2.0978	-0.4393
952	SLU 78	-0.81	-0.39	34.25	-17.1771	2.0983	-0.4429
952	SLU 79	-0.8	-0.37	34.04	-17.0726	2.0857	-0.436
952	SLU 80	-0.81	-0.39	34.05	-17.0795	2.0862	-0.4396
952	SLU 81	-0.8	-0.37	34.54	-17.3168	2.116	-0.4384
952	SLU 82	-0.81	-0.39	34.55	-17.3236	2.1164	-0.442
952	SLU 83	-0.81	-0.38	34.87	-17.4825	2.1362	-0.443
952	SLU 84	-0.82	-0.4	34.88	-17.4893	2.1367	-0.4466
952	SLE RA 1	-0.55	-0.27	23	-11.5454	1.4094	-0.3006
952	SLE RA 2	-0.56	-0.3	23.01	-11.553	1.41	-0.3046
952	SLE RA 3	-0.56	-0.28	23.35	-11.721	1.431	-0.3059
952	SLE RA 4	-0.57	-0.29	23.35	-11.7256	1.4313	-0.3083
952	SLE RA 5	-0.57	-0.3	23.23	-11.6635	1.4235	-0.3077
952	SLE RA 6	-0.57	-0.28	23.57	-11.8315	1.4445	-0.309
952	SLE RA 7	-0.57	-0.29	23.58	-11.836	1.4448	-0.3114
952	SLE RA 8	-0.56	-0.28	23.44	-11.7664	1.4364	-0.3068
952	SLE RA 9	-0.57	-0.29	23.44	-11.7709	1.4368	-0.3092
952	SLE RA 10	-0.59	-0.3	24.81	-12.4483	1.52	-0.3227
952	SLE RA 11	-0.59	-0.28	25.15	-12.6163	1.541	-0.324
952	SLE RA 12	-0.6	-0.3	25.16	-12.6209	1.5414	-0.3264
952	SLE RA 13	-0.6	-0.31	25.03	-12.5588	1.5335	-0.3258
952	SLE RA 14	-0.6	-0.29	25.37	-12.7268	1.5545	-0.3271
952	SLE RA 15	-0.61	-0.3	25.38	-12.7313	1.5549	-0.3295
952	SLE RA 16	-0.6	-0.29	25.24	-12.6616	1.5465	-0.3249
952	SLE RA 17	-0.6	-0.3	25.24	-12.6662	1.5468	-0.3273
952	SLE RA 18	-0.6	-0.29	25.57	-12.8244	1.5666	-0.3265
952	SLE RA 19	-0.6	-0.3	25.57	-12.829	1.567	-0.3289
952	SLE RA 20	-0.6	-0.29	25.79	-12.9349	1.5801	-0.3296
952	SLE RA 21	-0.61	-0.3	25.79	-12.9394	1.5805	-0.332
952	SLE FR 1	-0.55	-0.27	23	-11.5454	1.4094	-0.3006
952	SLE FR 2	-0.55	-0.28	23	-11.547	1.4095	-0.3014
952	SLE FR 3	-0.55	-0.27	23.08	-11.5896	1.4148	-0.3018
952	SLE FR 4	-0.57	-0.28	23.77	-11.9306	1.4567	-0.3092
952	SLE FR 5	-0.57	-0.28	23.86	-11.9733	1.462	-0.3096
952	SLE FR 6	-0.58	-0.28	24.28	-12.1849	1.488	-0.3135
952	SLE QP 1	-0.55	-0.27	23	-11.5454	1.4094	-0.3006
952	SLE QP 2	-0.57	-0.28	23.77	-11.9291	1.4566	-0.3084
952	SLD 1	1.71	-0.04	25.34	-12.4493	1.5519	0.9702
952	SLD 2	1.49	-0.23	25.64	-12.6136	1.5708	0.8544
952	SLD 3	1.65	-0.64	25.68	-12.6382	1.5721	0.9993
952	SLD 4	1.43	-0.83	25.98	-12.8025	1.591	0.8835
952	SLD 5	0.24	0.74	23.67	-11.7688	1.4511	0.0521
952	SLD 6	0.1	0.61	23.87	-11.8779	1.4637	-0.0247
952	SLD 7	0.05	-1.26	24.8	-12.3985	1.5184	0.1491
952	SLD 8	-0.1	-1.39	25	-12.5075	1.5309	0.0723
952	SLD 9	-1.04	0.84	22.53	-11.3507	1.3822	-0.689
952	SLD 10	-1.18	0.71	22.74	-11.4598	1.3947	-0.7658
952	SLD 11	-1.23	-1.17	23.67	-11.9804	1.4495	-0.592
952	SLD 12	-1.38	-1.3	23.87	-12.0894	1.462	-0.6689
952	SLD 13	-2.56	0.28	21.56	-11.0557	1.3222	-1.5002
952	SLD 14	-2.78	0.08	21.86	-11.22	1.341	-1.616
952	SLD 15	-2.62	-0.33	21.89	-11.2446	1.3424	-1.4711
952	SLD 16	-2.84	-0.52	22.2	-11.4089	1.3612	-1.5869
952	SLV 1	4.75	0.26	27.46	-13.1538	1.6804	2.6806
952	SLV 2	4.23	-0.19	28.16	-13.5364	1.7243	2.4111
952	SLV 3	4.62	-1.1	28.23	-13.5821	1.7263	2.7479
952	SLV 4	4.1	-1.55	28.93	-13.9647	1.7702	2.4784
952	SLV 5	1.32	2.03	23.58	-11.5797	1.4465	0.5336
952	SLV 6	0.98	1.74	24.04	-11.829	1.4751	0.358

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
952	SLV 7	0.88	-2.51	26.15	-13.0074	1.5993	0.758
952	SLV 8	0.54	-2.8	26.61	-13.2567	1.6279	0.5824
952	SLV 9	-1.68	2.25	20.93	-10.6016	1.2852	-1.1991
952	SLV 10	-2.01	1.96	21.39	-10.8509	1.3138	-1.3748
952	SLV 11	-2.11	-2.29	23.49	-12.0293	1.4381	-0.9747
952	SLV 12	-2.45	-2.58	23.95	-12.2786	1.4667	-1.1503
952	SLV 13	-5.23	0.99	18.61	-9.8936	1.143	-3.0951
952	SLV 14	-5.75	0.55	19.31	-10.2761	1.1869	-3.3647
952	SLV 15	-5.36	-0.37	19.38	-10.3219	1.1888	-3.0278
952	SLV 16	-5.88	-0.81	20.08	-10.7044	1.2327	-3.2973
952	CRTFP Ux+	0	0	0	0	0	0
952	CRTFP Ux-	0	0	0	0	0	0
952	CRTFP Uy+	0	0	0	0	0	0
952	CRTFP Uy-	0	0	0	0	0	0
955	SLU 1	-2.23	-1.24	106.98	-27.9691	-2.0172	-0.6177
955	SLU 2	-2.29	-1.38	107.07	-27.9939	-2.0284	-0.634
955	SLU 3	-2.29	-1.25	109.54	-28.6385	-2.0694	-0.6337
955	SLU 4	-2.32	-1.34	109.6	-28.6533	-2.0761	-0.6436
955	SLU 5	-2.32	-1.39	108.63	-28.4046	-2.0551	-0.6434
955	SLU 6	-2.32	-1.26	111.1	-29.0492	-2.096	-0.6431
955	SLU 7	-2.35	-1.35	111.15	-29.0641	-2.1027	-0.653
955	SLU 8	-2.29	-1.26	110.1	-28.7905	-2.0706	-0.6365
955	SLU 9	-2.33	-1.34	110.15	-28.8054	-2.0773	-0.6463
955	SLU 10	-2.51	-1.42	120.32	-31.445	-2.3275	-0.6896
955	SLU 11	-2.5	-1.3	122.79	-32.0897	-2.3685	-0.6893
955	SLU 12	-2.54	-1.38	122.84	-32.1045	-2.3752	-0.6992
955	SLU 13	-2.54	-1.43	121.88	-31.8557	-2.3542	-0.699
955	SLU 14	-2.54	-1.31	124.35	-32.5004	-2.3952	-0.6987
955	SLU 15	-2.57	-1.39	124.4	-32.5152	-2.4019	-0.7086
955	SLU 16	-2.51	-1.3	123.35	-32.2417	-2.3697	-0.6921
955	SLU 17	-2.55	-1.39	123.4	-32.2566	-2.3764	-0.7019
955	SLU 18	-2.54	-1.3	125.91	-32.8993	-2.4445	-0.6971
955	SLU 19	-2.58	-1.38	125.96	-32.9142	-2.4512	-0.7069
955	SLU 20	-2.57	-1.31	127.47	-33.3101	-2.4712	-0.7065
955	SLU 21	-2.61	-1.39	127.52	-33.3249	-2.4779	-0.7163
955	SLU 22	-2.46	-1.21	120.38	-31.461	-2.3072	-0.6779
955	SLU 23	-2.52	-1.35	120.47	-31.4858	-2.3183	-0.6943
955	SLU 24	-2.52	-1.23	122.94	-32.1304	-2.3593	-0.694
955	SLU 25	-2.55	-1.31	122.99	-32.1453	-2.366	-0.7038
955	SLU 26	-2.55	-1.36	122.03	-31.8965	-2.345	-0.7037
955	SLU 27	-2.55	-1.24	124.5	-32.5412	-2.386	-0.7034
955	SLU 28	-2.58	-1.32	124.55	-32.556	-2.3927	-0.7132
955	SLU 29	-2.52	-1.23	123.5	-32.2825	-2.3605	-0.6967
955	SLU 30	-2.56	-1.32	123.55	-32.2973	-2.3672	-0.7066
955	SLU 31	-2.74	-1.39	133.72	-34.937	-2.6174	-0.7499
955	SLU 32	-2.74	-1.27	136.19	-35.5816	-2.6584	-0.7496
955	SLU 33	-2.77	-1.35	136.24	-35.5964	-2.6651	-0.7594
955	SLU 34	-2.77	-1.4	135.27	-35.3477	-2.6441	-0.7593
955	SLU 35	-2.77	-1.28	137.75	-35.9923	-2.6851	-0.759
955	SLU 36	-2.8	-1.36	137.8	-36.0072	-2.6918	-0.7688
955	SLU 37	-2.74	-1.28	136.75	-35.7337	-2.6596	-0.7523
955	SLU 38	-2.78	-1.36	136.8	-35.7485	-2.6663	-0.7621
955	SLU 39	-2.77	-1.27	139.31	-36.3913	-2.7345	-0.7573
955	SLU 40	-2.81	-1.36	139.36	-36.4061	-2.7412	-0.7672
955	SLU 41	-2.8	-1.28	140.87	-36.802	-2.7612	-0.7667
955	SLU 42	-2.84	-1.37	140.92	-36.8169	-2.7679	-0.7766
955	SLU 43	-2.82	-1.62	134.49	-35.1626	-2.523	-0.7823
955	SLU 44	-2.88	-1.76	134.57	-35.1874	-2.5341	-0.7987
955	SLU 45	-2.88	-1.64	137.05	-35.832	-2.5751	-0.7984
955	SLU 46	-2.91	-1.72	137.1	-35.8468	-2.5818	-0.8082
955	SLU 47	-2.91	-1.77	136.13	-35.5981	-2.5608	-0.8081
955	SLU 48	-2.91	-1.65	138.6	-36.2427	-2.6018	-0.8078
955	SLU 49	-2.94	-1.73	138.65	-36.2576	-2.6085	-0.8176
955	SLU 50	-2.88	-1.64	137.6	-35.984	-2.5763	-0.8011
955	SLU 51	-2.92	-1.73	137.65	-35.9989	-2.583	-0.8109
955	SLU 52	-3.09	-1.8	147.82	-38.6385	-2.8333	-0.8543
955	SLU 53	-3.09	-1.68	150.29	-39.2831	-2.8742	-0.854
955	SLU 54	-3.13	-1.76	150.35	-39.298	-2.8809	-0.8638
955	SLU 55	-3.13	-1.81	149.38	-39.0492	-2.8599	-0.8637
955	SLU 56	-3.13	-1.69	151.85	-39.6939	-2.9009	-0.8634
955	SLU 57	-3.16	-1.77	151.9	-39.7087	-2.9076	-0.8732
955	SLU 58	-3.1	-1.69	150.85	-39.4352	-2.8755	-0.8567
955	SLU 59	-3.14	-1.77	150.9	-39.4501	-2.8822	-0.8665
955	SLU 60	-3.13	-1.68	153.41	-40.0928	-2.9503	-0.8617
955	SLU 61	-3.17	-1.76	153.46	-40.1077	-2.957	-0.8715
955	SLU 62	-3.16	-1.69	154.97	-40.5036	-2.977	-0.8711
955	SLU 63	-3.2	-1.78	155.02	-40.5184	-2.9837	-0.8809
955	SLU 64	-3.05	-1.59	147.88	-38.6545	-2.8129	-0.8426
955	SLU 65	-3.11	-1.73	147.97	-38.6793	-2.8241	-0.8589
955	SLU 66	-3.11	-1.61	150.44	-39.3239	-2.8651	-0.8586
955	SLU 67	-3.14	-1.69	150.5	-39.3388	-2.8718	-0.8685
955	SLU 68	-3.14	-1.74	149.53	-39.09	-2.8508	-0.8683
955	SLU 69	-3.14	-1.62	152	-39.7346	-2.8917	-0.868
955	SLU 70	-3.17	-1.7	152.05	-39.7495	-2.8984	-0.8779
955	SLU 71	-3.11	-1.62	151	-39.476	-2.8663	-0.8614
955	SLU 72	-3.15	-1.7	151.05	-39.4908	-2.873	-0.8712
955	SLU 73	-3.33	-1.77	161.22	-42.1305	-3.1232	-0.9145
955	SLU 74	-3.32	-1.65	163.69	-42.7751	-3.1642	-0.9142
955	SLU 75	-3.36	-1.73	163.74	-42.7899	-3.1709	-0.924
955	SLU 76	-3.36	-1.78	162.78	-42.5412	-3.1499	-0.9239

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
955	SLU 77	-3.36	-1.66	165.25	-43.1858	-3.1909	-0.9236
955	SLU 78	-3.39	-1.74	165.3	-43.2007	-3.1976	-0.9335
955	SLU 79	-3.33	-1.66	164.25	-42.9271	-3.1654	-0.917
955	SLU 80	-3.37	-1.74	164.3	-42.942	-3.1721	-0.9268
955	SLU 81	-3.36	-1.65	166.81	-43.5848	-3.2402	-0.922
955	SLU 82	-3.4	-1.74	166.86	-43.5996	-3.2469	-0.9318
955	SLU 83	-3.39	-1.67	168.37	-43.9955	-3.2669	-0.9314
955	SLU 84	-3.43	-1.75	168.42	-44.0104	-3.2736	-0.9412
955	SLE RA 1	-2.29	-1.23	110.81	-28.9668	-2.1001	-0.6349
955	SLE RA 2	-2.33	-1.32	110.87	-28.9833	-2.1075	-0.6458
955	SLE RA 3	-2.33	-1.24	112.52	-29.4131	-2.1348	-0.6456
955	SLE RA 4	-2.36	-1.3	112.55	-29.423	-2.1393	-0.6521
955	SLE RA 5	-2.35	-1.33	111.91	-29.2571	-2.1253	-0.6521
955	SLE RA 6	-2.35	-1.25	113.56	-29.6869	-2.1526	-0.6519
955	SLE RA 7	-2.38	-1.3	113.59	-29.6968	-2.1571	-0.6584
955	SLE RA 8	-2.34	-1.25	112.89	-29.5144	-2.1356	-0.6474
955	SLE RA 9	-2.36	-1.3	112.92	-29.5243	-2.1401	-0.654
955	SLE RA 10	-2.48	-1.35	119.7	-31.2841	-2.3069	-0.6829
955	SLE RA 11	-2.48	-1.27	121.35	-31.7138	-2.3342	-0.6827
955	SLE RA 12	-2.5	-1.32	121.39	-31.7237	-2.3387	-0.6892
955	SLE RA 13	-2.5	-1.36	120.74	-31.5579	-2.3247	-0.6891
955	SLE RA 14	-2.5	-1.28	122.39	-31.9876	-2.352	-0.6889
955	SLE RA 15	-2.52	-1.33	122.42	-31.9976	-2.3565	-0.6955
955	SLE RA 16	-2.48	-1.28	121.72	-31.8152	-2.335	-0.6845
955	SLE RA 17	-2.51	-1.33	121.76	-31.8251	-2.3395	-0.691
955	SLE RA 18	-2.5	-1.27	123.43	-32.2536	-2.3849	-0.6878
955	SLE RA 19	-2.53	-1.33	123.46	-32.2635	-2.3894	-0.6944
955	SLE RA 20	-2.52	-1.28	124.47	-32.5274	-2.4027	-0.6941
955	SLE RA 21	-2.55	-1.34	124.5	-32.5373	-2.4072	-0.7006
955	SLE FR 1	-2.29	-1.23	110.81	-28.9668	-2.1001	-0.6349
955	SLE FR 2	-2.3	-1.25	110.82	-28.9701	-2.1015	-0.6371
955	SLE FR 3	-2.3	-1.24	111.23	-29.0763	-2.1072	-0.6374
955	SLE FR 4	-2.36	-1.26	114.61	-29.9562	-2.187	-0.6529
955	SLE FR 5	-2.37	-1.25	115.01	-30.0624	-2.1926	-0.6533
955	SLE FR 6	-2.4	-1.25	117.12	-30.6102	-2.2425	-0.6614
955	SLE QP 1	-2.29	-1.23	110.81	-28.9668	-2.1001	-0.6349
955	SLE QP 2	-2.36	-1.24	114.6	-29.9529	-2.1855	-0.6508
955	SLD 1	7.72	-0.6	126.36	-32.572	-2.6703	1.9854
955	SLD 2	6.71	-1.34	127.35	-32.8708	-2.6404	1.729
955	SLD 3	7.49	-3.22	128.15	-33.0453	-2.7853	1.9116
955	SLD 4	6.48	-3.96	129.13	-33.344	-2.7555	1.6551
955	SLD 5	1.2	3.05	115.25	-29.9666	-2.1619	0.2987
955	SLD 6	0.53	2.56	115.9	-30.1648	-2.142	0.1285
955	SLD 7	0.43	-5.67	121.19	-31.544	-2.5454	0.0526
955	SLD 8	-0.24	-6.16	121.84	-31.7422	-2.5256	-0.1176
955	SLD 9	-4.47	3.67	107.36	-28.1635	-1.8455	-1.184
955	SLD 10	-5.14	3.18	108.01	-28.3617	-1.8256	-1.3542
955	SLD 11	-5.25	-5.05	113.3	-29.7409	-2.229	-1.43
955	SLD 12	-5.92	-5.54	113.95	-29.9391	-2.2092	-1.6002
955	SLD 13	-11.19	1.47	100.07	-26.5617	-1.6156	-2.9567
955	SLD 14	-12.2	0.73	101.05	-26.8604	-1.5857	-3.2132
955	SLD 15	-11.43	-1.15	101.85	-27.0349	-1.7307	-3.0305
955	SLD 16	-12.43	-1.89	102.83	-27.3337	-1.7008	-3.287
955	SLV 1	21.19	0.15	142.19	-36.0986	-3.3244	5.5089
955	SLV 2	18.84	-1.57	144.48	-36.794	-3.2549	4.9118
955	SLV 3	20.66	-5.76	146.23	-37.1718	-3.5842	5.3413
955	SLV 4	18.31	-7.48	148.53	-37.8673	-3.5147	4.7441
955	SLV 5	5.92	8.45	116.34	-30.0465	-2.1454	1.5564
955	SLV 6	4.39	7.33	117.84	-30.4997	-2.1	1.1674
955	SLV 7	4.16	-11.27	129.82	-33.6241	-3.0114	0.9975
955	SLV 8	2.63	-12.39	131.31	-34.0772	-2.9661	0.6084
955	SLV 9	-7.34	9.9	97.88	-25.8285	-1.4049	-1.9099
955	SLV 10	-8.87	8.78	99.38	-26.2816	-1.3596	-2.299
955	SLV 11	-9.11	-9.82	111.36	-29.406	-2.271	-2.4689
955	SLV 12	-10.64	-10.94	112.85	-29.8592	-2.2257	-2.858
955	SLV 13	-23.03	4.99	80.67	-22.0384	-0.8563	-6.0457
955	SLV 14	-25.38	3.27	82.96	-22.7339	-0.7868	-6.6428
955	SLV 15	-23.56	-0.92	84.71	-23.1117	-1.1162	-6.2133
955	SLV 16	-25.91	-2.64	87	-23.8071	-1.0466	-6.8105
955	CRTFP Ux+	0	0	0	0	0	0
955	CRTFP Ux-	0	0	0	0	0	0
955	CRTFP Uy+	0	0	0	0	0	0
955	CRTFP Uy-	0	0	0	0	0	0
958	SLU 1	0.65	0.08	26.93	-7.7172	-1.7238	0.2334
958	SLU 2	0.64	0.07	26.91	-7.7192	-1.7223	0.2272
958	SLU 3	0.67	0.08	27.55	-7.8914	-1.7633	0.2399
958	SLU 4	0.66	0.08	27.54	-7.8926	-1.7624	0.2362
958	SLU 5	0.65	0.07	27.29	-7.8263	-1.7466	0.2317
958	SLU 6	0.68	0.08	27.93	-7.9985	-1.7875	0.2444
958	SLU 7	0.67	0.08	27.92	-7.9997	-1.7867	0.2407
958	SLU 8	0.68	0.08	27.69	-7.9315	-1.7723	0.2424
958	SLU 9	0.67	0.07	27.68	-7.9326	-1.7714	0.2387
958	SLU 10	0.68	0.11	30.19	-8.645	-1.9316	0.2455
958	SLU 11	0.71	0.13	30.83	-8.8173	-1.9725	0.2582
958	SLU 12	0.7	0.12	30.81	-8.8184	-1.9717	0.2545
958	SLU 13	0.69	0.11	30.57	-8.7521	-1.9558	0.25
958	SLU 14	0.73	0.13	31.2	-8.9244	-1.9968	0.2628
958	SLU 15	0.72	0.12	31.19	-8.9255	-1.9959	0.259
958	SLU 16	0.72	0.12	30.97	-8.8573	-1.9815	0.2608
958	SLU 17	0.71	0.12	30.95	-8.8585	-1.9807	0.2571

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
958	SLU 18	0.72	0.14	31.61	-9.0399	-2.0227	0.2596
958	SLU 19	0.71	0.14	31.6	-9.041	-2.0218	0.2559
958	SLU 20	0.73	0.14	31.99	-9.147	-2.047	0.2641
958	SLU 21	0.72	0.14	31.98	-9.1481	-2.0461	0.2604
958	SLU 22	0.71	0.14	30.24	-8.6543	-1.9353	0.2563
958	SLU 23	0.69	0.13	30.22	-8.6563	-1.9339	0.25
958	SLU 24	0.72	0.14	30.86	-8.8285	-1.9748	0.2628
958	SLU 25	0.71	0.14	30.85	-8.8297	-1.974	0.259
958	SLU 26	0.7	0.13	30.6	-8.7634	-1.9581	0.2546
958	SLU 27	0.74	0.14	31.24	-8.9356	-1.9991	0.2673
958	SLU 28	0.73	0.13	31.23	-8.9368	-1.9982	0.2635
958	SLU 29	0.73	0.13	31	-8.8686	-1.9838	0.2653
958	SLU 30	0.72	0.13	30.99	-8.8697	-1.983	0.2616
958	SLU 31	0.73	0.17	33.5	-9.5821	-2.1431	0.2684
958	SLU 32	0.77	0.19	34.14	-9.7544	-2.1841	0.2811
958	SLU 33	0.76	0.18	34.12	-9.7555	-2.1832	0.2774
958	SLU 34	0.75	0.17	33.88	-9.6892	-2.1674	0.2729
958	SLU 35	0.78	0.19	34.51	-9.8615	-2.2083	0.2856
958	SLU 36	0.77	0.18	34.5	-9.8626	-2.2074	0.2819
958	SLU 37	0.78	0.18	34.28	-9.7944	-2.1931	0.2837
958	SLU 38	0.77	0.17	34.26	-9.7956	-2.1922	0.2799
958	SLU 39	0.77	0.2	34.92	-9.977	-2.2342	0.2825
958	SLU 40	0.76	0.19	34.91	-9.9781	-2.2334	0.2787
958	SLU 41	0.78	0.2	35.3	-10.0841	-2.2585	0.287
958	SLU 42	0.77	0.19	35.29	-10.0852	-2.2576	0.2833
958	SLU 43	0.83	0.08	33.88	-9.7111	-2.1684	0.2956
958	SLU 44	0.81	0.07	33.86	-9.7131	-2.167	0.2894
958	SLU 45	0.85	0.09	34.5	-9.8853	-2.2079	0.3021
958	SLU 46	0.84	0.08	34.48	-9.8865	-2.207	0.2983
958	SLU 47	0.83	0.07	34.24	-9.8202	-2.1912	0.2939
958	SLU 48	0.86	0.09	34.87	-9.9924	-2.2322	0.3066
958	SLU 49	0.85	0.08	34.86	-9.9936	-2.2313	0.3029
958	SLU 50	0.86	0.08	34.64	-9.9253	-2.2169	0.3046
958	SLU 51	0.85	0.07	34.62	-9.9265	-2.216	0.3009
958	SLU 52	0.86	0.12	37.13	-10.6389	-2.3762	0.3077
958	SLU 53	0.89	0.13	37.77	-10.8112	-2.4171	0.3204
958	SLU 54	0.88	0.13	37.76	-10.8123	-2.4163	0.3167
958	SLU 55	0.87	0.12	37.51	-10.746	-2.4005	0.3122
958	SLU 56	0.9	0.13	38.15	-10.9183	-2.4414	0.3249
958	SLU 57	0.89	0.13	38.14	-10.9194	-2.4405	0.3212
958	SLU 58	0.9	0.12	37.91	-10.8512	-2.4261	0.323
958	SLU 59	0.89	0.12	37.9	-10.8523	-2.4253	0.3192
958	SLU 60	0.89	0.15	38.55	-11.0337	-2.4673	0.3218
958	SLU 61	0.88	0.14	38.54	-11.0349	-2.4665	0.318
958	SLU 62	0.91	0.15	38.93	-11.1409	-2.4916	0.3263
958	SLU 63	0.9	0.14	38.92	-11.142	-2.4907	0.3226
958	SLU 64	0.88	0.14	37.19	-10.6482	-2.3799	0.3184
958	SLU 65	0.87	0.13	37.17	-10.6502	-2.3785	0.3122
958	SLU 66	0.9	0.15	37.81	-10.8224	-2.4194	0.3249
958	SLU 67	0.89	0.14	37.79	-10.8236	-2.4186	0.3212
958	SLU 68	0.88	0.13	37.55	-10.7573	-2.4027	0.3168
958	SLU 69	0.91	0.14	38.18	-10.9295	-2.4437	0.3295
958	SLU 70	0.9	0.14	38.17	-10.9307	-2.4428	0.3257
958	SLU 71	0.91	0.14	37.95	-10.8624	-2.4284	0.3275
958	SLU 72	0.9	0.13	37.93	-10.8636	-2.4276	0.3238
958	SLU 73	0.91	0.18	40.44	-11.576	-2.5877	0.3306
958	SLU 74	0.95	0.19	41.08	-11.7482	-2.6287	0.3433
958	SLU 75	0.94	0.18	41.07	-11.7494	-2.6278	0.3395
958	SLU 76	0.92	0.17	40.82	-11.6831	-2.612	0.3351
958	SLU 77	0.96	0.19	41.46	-11.8554	-2.6529	0.3478
958	SLU 78	0.95	0.18	41.45	-11.8565	-2.6521	0.3441
958	SLU 79	0.95	0.18	41.22	-11.7883	-2.6377	0.3458
958	SLU 80	0.94	0.18	41.21	-11.7894	-2.6368	0.3421
958	SLU 81	0.95	0.2	41.87	-11.9708	-2.6789	0.3446
958	SLU 82	0.94	0.2	41.85	-11.972	-2.678	0.3409
958	SLU 83	0.96	0.2	42.24	-12.0779	-2.7031	0.3492
958	SLU 84	0.95	0.2	42.23	-12.0791	-2.7022	0.3454
958	SLE RA 1	0.67	0.1	27.88	-7.985	-1.7842	0.2399
958	SLE RA 2	0.66	0.09	27.86	-7.9863	-1.7833	0.2358
958	SLE RA 3	0.68	0.1	28.29	-8.1011	-1.8106	0.2443
958	SLE RA 4	0.67	0.09	28.28	-8.1019	-1.81	0.2418
958	SLE RA 5	0.67	0.09	28.12	-8.0577	-1.7994	0.2388
958	SLE RA 6	0.69	0.1	28.54	-8.1725	-1.8267	0.2473
958	SLE RA 7	0.68	0.09	28.54	-8.1733	-1.8262	0.2448
958	SLE RA 8	0.69	0.09	28.38	-8.1278	-1.8166	0.246
958	SLE RA 9	0.68	0.09	28.38	-8.1286	-1.816	0.2435
958	SLE RA 10	0.69	0.12	30.05	-8.6035	-1.9228	0.248
958	SLE RA 11	0.71	0.13	30.47	-8.7183	-1.9501	0.2565
958	SLE RA 12	0.7	0.12	30.47	-8.7191	-1.9495	0.254
958	SLE RA 13	0.7	0.12	30.3	-8.6749	-1.9389	0.251
958	SLE RA 14	0.72	0.13	30.73	-8.7897	-1.9662	0.2595
958	SLE RA 15	0.71	0.12	30.72	-8.7905	-1.9656	0.257
958	SLE RA 16	0.71	0.12	30.57	-8.745	-1.9561	0.2582
958	SLE RA 17	0.71	0.12	30.56	-8.7458	-1.9555	0.2557
958	SLE RA 18	0.71	0.14	31	-8.8667	-1.9835	0.2574
958	SLE RA 19	0.7	0.13	30.99	-8.8675	-1.9829	0.2549
958	SLE RA 20	0.72	0.14	31.25	-8.9381	-1.9997	0.2604
958	SLE RA 21	0.71	0.13	31.24	-8.9389	-1.9991	0.2579
958	SLE FR 1	0.67	0.1	27.88	-7.985	-1.7842	0.2399
958	SLE FR 2	0.67	0.09	27.88	-7.9852	-1.784	0.2391

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
958	SLE FR 3	0.67	0.1	27.98	-8.0135	-1.7907	0.2411
958	SLE FR 4	0.68	0.11	28.81	-8.2498	-1.8438	0.2443
958	SLE FR 5	0.68	0.11	28.91	-8.2781	-1.8505	0.2464
958	SLE FR 6	0.69	0.12	29.44	-8.4259	-1.8839	0.2487
958	SLE QP 1	0.67	0.1	27.88	-7.985	-1.7842	0.2399
958	SLE QP 2	0.68	0.11	28.81	-8.2495	-1.844	0.2452
958	SLD 1	3.24	0.24	25.57	-7.4338	-1.6361	1.157
958	SLD 2	2.98	0.47	25.26	-7.356	-1.6156	1.0813
958	SLD 3	3.27	-0.4	26.11	-7.5768	-1.6701	1.1132
958	SLD 4	3.02	-0.18	25.8	-7.4991	-1.6497	1.0374
958	SLD 5	1.44	1.09	27.08	-7.802	-1.7337	0.599
958	SLD 6	1.27	1.24	26.87	-7.7504	-1.7202	0.5487
958	SLD 7	1.56	-1.07	28.88	-8.2788	-1.8472	0.4529
958	SLD 8	1.39	-0.91	28.67	-8.2272	-1.8336	0.4026
958	SLD 9	-0.03	1.13	28.96	-8.2718	-1.8544	0.0877
958	SLD 10	-0.2	1.28	28.75	-8.2202	-1.8409	0.0375
958	SLD 11	0.09	-1.02	30.76	-8.7486	-1.9678	-0.0584
958	SLD 12	-0.08	-0.87	30.55	-8.697	-1.9543	-0.1086
958	SLD 13	-1.65	0.39	31.83	-8.9999	-2.0384	-0.5471
958	SLD 14	-1.91	0.62	31.51	-8.9222	-2.0179	-0.6228
958	SLD 15	-1.62	-0.25	32.37	-9.143	-2.0724	-0.5909
958	SLD 16	-1.88	-0.02	32.05	-9.0652	-2.052	-0.6666
958	SLV 1	6.66	0.4	21.25	-6.3456	-1.3586	2.3752
958	SLV 2	6.05	0.93	20.52	-6.1646	-1.3111	2.199
958	SLV 3	6.74	-1.07	22.47	-6.669	-1.4357	2.2758
958	SLV 4	6.14	-0.53	21.74	-6.488	-1.3881	2.0995
958	SLV 5	2.45	2.32	24.82	-7.2196	-1.5899	1.066
958	SLV 6	2.06	2.67	24.34	-7.1016	-1.5589	0.9512
958	SLV 7	2.74	-2.56	28.89	-8.2977	-1.8467	0.7345
958	SLV 8	2.34	-2.21	28.42	-8.1798	-1.8157	0.6196
958	SLV 9	-0.98	2.43	29.21	-8.3192	-1.8723	-0.1293
958	SLV 10	-1.38	2.77	28.73	-8.2013	-1.8413	-0.2441
958	SLV 11	-0.7	-2.45	33.28	-9.3974	-2.1291	-0.4608
958	SLV 12	-1.09	-2.1	32.81	-9.2794	-2.0981	-0.5757
958	SLV 13	-4.78	0.75	35.88	-10.011	-2.2999	-1.6091
958	SLV 14	-5.38	1.28	35.15	-9.83	-2.2523	-1.7854
958	SLV 15	-4.69	-0.71	37.11	-10.3344	-2.377	-1.7086
958	SLV 16	-5.3	-0.18	36.37	-10.1534	-2.3294	-1.8849
958	CRTFP Ux+	0	0	0	0	0	0
958	CRTFP Ux-	0	0	0	0	0	0
958	CRTFP Uy+	0	0	0	0	0	0
958	CRTFP Uy-	0	0	0	0	0	0
959	SLU 1	0.96	0.12	38.03	-9.8554	0.0533	0.337
959	SLU 2	0.94	0.11	37.99	-9.8539	0.0538	0.329
959	SLU 3	0.99	0.13	38.9	-10.0733	0.0548	0.3462
959	SLU 4	0.97	0.13	38.87	-10.0724	0.0551	0.3414
959	SLU 5	0.96	0.11	38.52	-9.9881	0.0547	0.3358
959	SLU 6	1.01	0.13	39.43	-10.2074	0.0556	0.353
959	SLU 7	0.99	0.12	39.41	-10.2066	0.0559	0.3482
959	SLU 8	1	0.12	39.1	-10.1237	0.055	0.3506
959	SLU 9	0.99	0.11	39.07	-10.1228	0.0553	0.3458
959	SLU 10	1	0.18	42.58	-11.0165	0.0615	0.3517
959	SLU 11	1.05	0.2	43.49	-11.2358	0.0625	0.3689
959	SLU 12	1.04	0.19	43.47	-11.235	0.0628	0.3641
959	SLU 13	1.02	0.18	43.12	-11.1506	0.0624	0.3585
959	SLU 14	1.07	0.19	44.02	-11.37	0.0633	0.3757
959	SLU 15	1.06	0.19	44	-11.3691	0.0636	0.3709
959	SLU 16	1.07	0.19	43.69	-11.2862	0.0627	0.3733
959	SLU 17	1.05	0.18	43.67	-11.2853	0.063	0.3685
959	SLU 18	1.05	0.22	44.59	-11.5161	0.0643	0.3695
959	SLU 19	1.04	0.21	44.57	-11.5153	0.0646	0.3646
959	SLU 20	1.07	0.22	45.13	-11.6503	0.0652	0.3762
959	SLU 21	1.06	0.21	45.1	-11.6494	0.0655	0.3714
959	SLU 22	1.04	0.21	42.67	-11.0328	0.0611	0.3651
959	SLU 23	1.02	0.2	42.63	-11.0314	0.0616	0.3571
959	SLU 24	1.07	0.22	43.54	-11.2507	0.0626	0.3742
959	SLU 25	1.05	0.21	43.52	-11.2498	0.0628	0.3694
959	SLU 26	1.04	0.2	43.17	-11.1655	0.0625	0.3639
959	SLU 27	1.09	0.21	44.08	-11.3848	0.0634	0.381
959	SLU 28	1.07	0.21	44.05	-11.384	0.0637	0.3762
959	SLU 29	1.08	0.21	43.74	-11.3011	0.0628	0.3787
959	SLU 30	1.07	0.2	43.72	-11.3002	0.0631	0.3739
959	SLU 31	1.08	0.26	47.23	-12.1939	0.0693	0.3798
959	SLU 32	1.13	0.28	48.14	-12.4132	0.0703	0.3969
959	SLU 33	1.12	0.27	48.11	-12.4124	0.0705	0.3921
959	SLU 34	1.1	0.26	47.76	-12.328	0.0701	0.3866
959	SLU 35	1.15	0.28	48.67	-12.5474	0.0711	0.4037
959	SLU 36	1.14	0.27	48.64	-12.5465	0.0714	0.3989
959	SLU 37	1.15	0.27	48.34	-12.4636	0.0705	0.4014
959	SLU 38	1.13	0.26	48.31	-12.4627	0.0708	0.3966
959	SLU 39	1.13	0.3	49.24	-12.6935	0.0721	0.3975
959	SLU 40	1.12	0.29	49.21	-12.6927	0.0724	0.3927
959	SLU 41	1.15	0.3	49.77	-12.8277	0.073	0.4043
959	SLU 42	1.14	0.29	49.75	-12.8268	0.0733	0.3995
959	SLU 43	1.22	0.13	47.85	-12.4083	0.0667	0.4285
959	SLU 44	1.2	0.12	47.8	-12.4069	0.0672	0.4205
959	SLU 45	1.25	0.14	48.71	-12.6262	0.0681	0.4376
959	SLU 46	1.23	0.13	48.69	-12.6254	0.0684	0.4328
959	SLU 47	1.22	0.12	48.34	-12.541	0.068	0.4273
959	SLU 48	1.27	0.14	49.25	-12.7604	0.069	0.4444

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
959	SLU 49	1.25	0.13	49.22	-12.7595	0.0692	0.4396
959	SLU 50	1.26	0.13	48.91	-12.6766	0.0684	0.4421
959	SLU 51	1.25	0.12	48.89	-12.6757	0.0687	0.4373
959	SLU 52	1.26	0.19	52.4	-13.5694	0.0749	0.4432
959	SLU 53	1.31	0.21	53.31	-13.7887	0.0758	0.4603
959	SLU 54	1.3	0.2	53.28	-13.7879	0.0761	0.4555
959	SLU 55	1.28	0.19	52.93	-13.7035	0.0757	0.45
959	SLU 56	1.33	0.2	53.84	-13.9229	0.0767	0.4671
959	SLU 57	1.32	0.2	53.82	-13.922	0.0769	0.4623
959	SLU 58	1.33	0.19	53.51	-13.8391	0.0761	0.4648
959	SLU 59	1.31	0.19	53.48	-13.8383	0.0764	0.46
959	SLU 60	1.32	0.23	54.41	-14.069	0.0777	0.4609
959	SLU 61	1.3	0.22	54.38	-14.0682	0.078	0.4561
959	SLU 62	1.33	0.22	54.94	-14.2032	0.0785	0.4677
959	SLU 63	1.32	0.22	54.92	-14.2023	0.0788	0.4629
959	SLU 64	1.3	0.22	52.49	-13.5857	0.0745	0.4566
959	SLU 65	1.28	0.21	52.45	-13.5843	0.0749	0.4486
959	SLU 66	1.33	0.22	53.36	-13.8036	0.0759	0.4657
959	SLU 67	1.32	0.22	53.33	-13.8028	0.0762	0.4609
959	SLU 68	1.3	0.2	52.98	-13.7184	0.0758	0.4554
959	SLU 69	1.35	0.22	53.89	-13.9378	0.0767	0.4725
959	SLU 70	1.33	0.22	53.87	-13.9369	0.077	0.4677
959	SLU 71	1.34	0.21	53.56	-13.854	0.0762	0.4702
959	SLU 72	1.33	0.21	53.53	-13.8531	0.0764	0.4654
959	SLU 73	1.34	0.27	57.04	-14.7468	0.0826	0.4713
959	SLU 74	1.39	0.29	57.95	-14.9661	0.0836	0.4884
959	SLU 75	1.38	0.28	57.93	-14.9653	0.0839	0.4836
959	SLU 76	1.36	0.27	57.58	-14.8809	0.0835	0.4781
959	SLU 77	1.41	0.29	58.49	-15.1003	0.0844	0.4952
959	SLU 78	1.4	0.28	58.46	-15.0994	0.0847	0.4904
959	SLU 79	1.41	0.28	58.15	-15.0165	0.0839	0.4929
959	SLU 80	1.39	0.27	58.13	-15.0157	0.0841	0.4881
959	SLU 81	1.4	0.31	59.05	-15.2464	0.0855	0.489
959	SLU 82	1.38	0.3	59.03	-15.2456	0.0857	0.4842
959	SLU 83	1.42	0.31	59.59	-15.3806	0.0863	0.4958
959	SLU 84	1.4	0.3	59.56	-15.3797	0.0866	0.491
959	SLE RA 1	0.98	0.15	39.36	-10.1918	0.0556	0.345
959	SLE RA 2	0.97	0.14	39.33	-10.1908	0.0559	0.3397
959	SLE RA 3	1	0.15	39.93	-10.337	0.0565	0.3511
959	SLE RA 4	0.99	0.15	39.92	-10.3365	0.0567	0.3479
959	SLE RA 5	0.98	0.14	39.68	-10.2803	0.0565	0.3442
959	SLE RA 6	1.01	0.15	40.29	-10.4265	0.0571	0.3557
959	SLE RA 7	1.01	0.15	40.27	-10.4259	0.0573	0.3525
959	SLE RA 8	1.01	0.15	40.07	-10.3706	0.0567	0.3541
959	SLE RA 9	1	0.14	40.05	-10.3701	0.0569	0.3509
959	SLE RA 10	1.01	0.18	42.39	-10.9658	0.061	0.3548
959	SLE RA 11	1.05	0.2	43	-11.1121	0.0617	0.3663
959	SLE RA 12	1.04	0.19	42.98	-11.1115	0.0618	0.3631
959	SLE RA 13	1.03	0.18	42.75	-11.0553	0.0616	0.3594
959	SLE RA 14	1.06	0.2	43.35	-11.2015	0.0622	0.3708
959	SLE RA 15	1.05	0.19	43.34	-11.2009	0.0624	0.3676
959	SLE RA 16	1.05	0.19	43.13	-11.1456	0.0618	0.3692
959	SLE RA 17	1.04	0.18	43.11	-11.1451	0.062	0.366
959	SLE RA 18	1.05	0.21	43.73	-11.2989	0.0629	0.3667
959	SLE RA 19	1.04	0.21	43.72	-11.2984	0.0631	0.3635
959	SLE RA 20	1.06	0.21	44.09	-11.3884	0.0635	0.3712
959	SLE RA 21	1.05	0.2	44.07	-11.3878	0.0637	0.368
959	SLE FR 1	0.98	0.15	39.36	-10.1918	0.0556	0.345
959	SLE FR 2	0.98	0.15	39.35	-10.1916	0.0556	0.344
959	SLE FR 3	0.99	0.15	39.5	-10.2275	0.0558	0.3469
959	SLE FR 4	1	0.17	40.66	-10.5237	0.0578	0.3505
959	SLE FR 5	1.01	0.17	40.81	-10.5597	0.058	0.3533
959	SLE FR 6	1.02	0.18	41.54	-10.7453	0.0592	0.3559
959	SLE QP 1	0.98	0.15	39.36	-10.1918	0.0556	0.345
959	SLE QP 2	1	0.17	40.67	-10.5239	0.0578	0.3515
959	SLD 1	4.73	0.28	35.99	-9.5924	0.0578	1.6525
959	SLD 2	4.35	0.64	35.52	-9.4896	0.0578	1.5204
959	SLD 3	4.78	-0.65	36.71	-9.7557	0.0606	1.6714
959	SLD 4	4.4	-0.29	36.25	-9.6528	0.0607	1.5393
959	SLD 5	2.11	1.55	38.25	-10.0155	0.0534	0.7372
959	SLD 6	1.86	1.78	37.94	-9.9473	0.0534	0.6496
959	SLD 7	2.29	-1.55	40.67	-10.5598	0.063	0.8001
959	SLD 8	2.04	-1.32	40.36	-10.4915	0.0631	0.7125
959	SLD 9	-0.03	1.65	40.98	-10.5563	0.0525	-0.0094
959	SLD 10	-0.28	1.89	40.67	-10.4881	0.0525	-0.0971
959	SLD 11	0.15	-1.45	43.4	-11.1006	0.0621	0.0535
959	SLD 12	-0.1	-1.21	43.09	-11.0323	0.0622	-0.0342
959	SLD 13	-2.4	0.63	45.09	-11.395	0.0548	-0.8363
959	SLD 14	-2.78	0.98	44.62	-11.2922	0.0549	-0.9683
959	SLD 15	-2.34	-0.3	45.81	-11.5583	0.0577	-0.8174
959	SLD 16	-2.72	0.05	45.35	-11.4554	0.0578	-0.9495
959	SLV 1	9.71	0.41	29.74	-8.3493	0.0579	3.3927
959	SLV 2	8.83	1.24	28.66	-8.1098	0.0581	3.0852
959	SLV 3	9.84	-1.7	31.38	-8.7195	0.0645	3.4368
959	SLV 4	8.96	-0.87	30.3	-8.4801	0.0646	3.1293
959	SLV 5	3.58	3.29	35.09	-9.3521	0.0479	1.251
959	SLV 6	3	3.83	34.38	-9.1961	0.048	1.0506
959	SLV 7	4	-3.73	40.57	-10.5862	0.0697	1.3981
959	SLV 8	3.42	-3.2	39.86	-10.4302	0.0698	1.1978
959	SLV 9	-1.42	3.53	41.48	-10.6177	0.0458	-0.4947

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
959	SLV 10	-1.99	4.07	40.77	-10.4616	0.0459	-0.695
959	SLV 11	-1	-3.5	46.96	-11.8517	0.0676	-0.3476
959	SLV 12	-1.57	-2.96	46.25	-11.6957	0.0677	-0.5479
959	SLV 13	-6.95	1.21	51.03	-12.5678	0.0509	-2.4263
959	SLV 14	-7.83	2.03	49.95	-12.3283	0.0511	-2.7338
959	SLV 15	-6.82	-0.9	52.68	-12.938	0.0575	-2.3821
959	SLV 16	-7.71	-0.08	51.6	-12.6986	0.0576	-2.6896
959	CRTFP Ux+	0	0	0	0	0	0
959	CRTFP Ux-	0	0	0	0	0	0
959	CRTFP Uy+	0	0	0	0	0	0
959	CRTFP Uy-	0	0	0	0	0	0
960	SLU 1	0.97	0.14	36.4	-8.3266	0.0548	0.3412
960	SLU 2	0.95	0.13	36.35	-8.3199	0.0552	0.3333
960	SLU 3	1	0.15	37.23	-8.5052	0.0562	0.3505
960	SLU 4	0.99	0.14	37.2	-8.5011	0.0565	0.3457
960	SLU 5	0.97	0.13	36.86	-8.43	0.056	0.3402
960	SLU 6	1.02	0.15	37.74	-8.6152	0.0571	0.3574
960	SLU 7	1.01	0.14	37.7	-8.6112	0.0573	0.3526
960	SLU 8	1.01	0.14	37.42	-8.5468	0.0565	0.355
960	SLU 9	1	0.13	37.39	-8.5428	0.0567	0.3502
960	SLU 10	1.02	0.2	40.71	-9.2765	0.0631	0.3562
960	SLU 11	1.06	0.21	41.59	-9.4618	0.0641	0.3733
960	SLU 12	1.05	0.21	41.56	-9.4578	0.0643	0.3686
960	SLU 13	1.03	0.2	41.22	-9.3866	0.0639	0.3631
960	SLU 14	1.08	0.21	42.1	-9.5719	0.065	0.3802
960	SLU 15	1.07	0.21	42.06	-9.5678	0.0652	0.3755
960	SLU 16	1.08	0.2	41.78	-9.5035	0.0644	0.3778
960	SLU 17	1.06	0.2	41.75	-9.4994	0.0646	0.3731
960	SLU 18	1.07	0.23	42.63	-9.6933	0.0661	0.3738
960	SLU 19	1.05	0.23	42.6	-9.6892	0.0663	0.3691
960	SLU 20	1.09	0.23	43.14	-9.8034	0.0669	0.3807
960	SLU 21	1.07	0.23	43.11	-9.7993	0.0672	0.376
960	SLU 22	1.05	0.22	40.81	-9.2957	0.0628	0.3694
960	SLU 23	1.03	0.22	40.76	-9.2889	0.0631	0.3616
960	SLU 24	1.08	0.23	41.64	-9.4742	0.0642	0.3787
960	SLU 25	1.07	0.23	41.6	-9.4701	0.0644	0.374
960	SLU 26	1.05	0.22	41.26	-9.399	0.064	0.3685
960	SLU 27	1.1	0.23	42.14	-9.5843	0.0651	0.3856
960	SLU 28	1.09	0.23	42.11	-9.5802	0.0653	0.3809
960	SLU 29	1.09	0.22	41.83	-9.5158	0.0645	0.3832
960	SLU 30	1.08	0.22	41.79	-9.5118	0.0647	0.3785
960	SLU 31	1.1	0.28	45.12	-10.2456	0.071	0.3844
960	SLU 32	1.15	0.3	46	-10.4308	0.0721	0.4016
960	SLU 33	1.13	0.29	45.96	-10.4268	0.0723	0.3968
960	SLU 34	1.12	0.28	45.63	-10.3557	0.0719	0.3913
960	SLU 35	1.16	0.3	46.5	-10.5409	0.073	0.4085
960	SLU 36	1.15	0.29	46.47	-10.5369	0.0732	0.4037
960	SLU 37	1.16	0.29	46.19	-10.4725	0.0724	0.4061
960	SLU 38	1.14	0.28	46.15	-10.4684	0.0726	0.4013
960	SLU 39	1.15	0.32	47.04	-10.6623	0.0741	0.4021
960	SLU 40	1.13	0.31	47.01	-10.6582	0.0743	0.3973
960	SLU 41	1.17	0.32	47.55	-10.7724	0.0749	0.409
960	SLU 42	1.15	0.31	47.52	-10.7683	0.0751	0.4042
960	SLU 43	1.24	0.15	45.81	-10.4924	0.0685	0.4339
960	SLU 44	1.21	0.15	45.76	-10.4856	0.0689	0.426
960	SLU 45	1.26	0.16	46.64	-10.6709	0.0699	0.4431
960	SLU 46	1.25	0.16	46.6	-10.6669	0.0702	0.4384
960	SLU 47	1.23	0.15	46.27	-10.5957	0.0697	0.4329
960	SLU 48	1.28	0.16	47.14	-10.781	0.0708	0.45
960	SLU 49	1.27	0.16	47.11	-10.777	0.071	0.4453
960	SLU 50	1.28	0.15	46.83	-10.7126	0.0702	0.4476
960	SLU 51	1.26	0.15	46.79	-10.7085	0.0704	0.4429
960	SLU 52	1.28	0.21	50.12	-11.4423	0.0768	0.4488
960	SLU 53	1.33	0.23	51	-11.6275	0.0778	0.466
960	SLU 54	1.32	0.22	50.97	-11.6235	0.0781	0.4613
960	SLU 55	1.3	0.21	50.63	-11.5524	0.0776	0.4557
960	SLU 56	1.35	0.23	51.51	-11.7376	0.0787	0.4729
960	SLU 57	1.33	0.22	51.47	-11.7336	0.0789	0.4682
960	SLU 58	1.34	0.22	51.19	-11.6692	0.0781	0.4705
960	SLU 59	1.33	0.21	51.16	-11.6652	0.0783	0.4658
960	SLU 60	1.33	0.25	52.04	-11.859	0.0798	0.4665
960	SLU 61	1.32	0.24	52.01	-11.855	0.08	0.4618
960	SLU 62	1.35	0.25	52.55	-11.9691	0.0806	0.4734
960	SLU 63	1.34	0.24	52.52	-11.9651	0.0809	0.4687
960	SLU 64	1.32	0.24	50.22	-11.4614	0.0765	0.4621
960	SLU 65	1.29	0.23	50.17	-11.4547	0.0769	0.4542
960	SLU 66	1.34	0.25	51.05	-11.6399	0.0779	0.4714
960	SLU 67	1.33	0.24	51.01	-11.6359	0.0781	0.4667
960	SLU 68	1.31	0.23	50.67	-11.5648	0.0777	0.4611
960	SLU 69	1.36	0.24	51.55	-11.75	0.0788	0.4783
960	SLU 70	1.35	0.24	51.52	-11.746	0.079	0.4736
960	SLU 71	1.36	0.24	51.24	-11.6816	0.0782	0.4759
960	SLU 72	1.34	0.23	51.2	-11.6775	0.0784	0.4712
960	SLU 73	1.36	0.3	54.53	-12.4113	0.0847	0.4771
960	SLU 74	1.41	0.31	55.41	-12.5966	0.0858	0.4942
960	SLU 75	1.4	0.31	55.37	-12.5925	0.086	0.4895
960	SLU 76	1.38	0.29	55.03	-12.5214	0.0856	0.484
960	SLU 77	1.43	0.31	55.91	-12.7067	0.0867	0.5011
960	SLU 78	1.42	0.3	55.88	-12.7026	0.0869	0.4964
960	SLU 79	1.42	0.3	55.6	-12.6382	0.0861	0.4987

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
960	SLU 80	1.41	0.3	55.56	-12.6342	0.0863	0.494
960	SLU 81	1.41	0.33	56.45	-12.828	0.0878	0.4947
960	SLU 82	1.4	0.33	56.42	-12.824	0.088	0.49
960	SLU 83	1.43	0.33	56.96	-12.9381	0.0886	0.5016
960	SLU 84	1.42	0.32	56.93	-12.9341	0.0888	0.4969
960	SLE RA 1	1	0.17	37.66	-8.6035	0.0571	0.3493
960	SLE RA 2	0.98	0.16	37.63	-8.599	0.0573	0.344
960	SLE RA 3	1.01	0.17	38.21	-8.7225	0.058	0.3554
960	SLE RA 4	1	0.17	38.19	-8.7198	0.0582	0.3523
960	SLE RA 5	0.99	0.16	37.96	-8.6724	0.0579	0.3486
960	SLE RA 6	1.03	0.17	38.55	-8.7959	0.0586	0.36
960	SLE RA 7	1.02	0.17	38.53	-8.7932	0.0588	0.3569
960	SLE RA 8	1.02	0.16	38.34	-8.7503	0.0582	0.3584
960	SLE RA 9	1.01	0.16	38.32	-8.7476	0.0584	0.3553
960	SLE RA 10	1.02	0.2	40.53	-9.2368	0.0626	0.3592
960	SLE RA 11	1.06	0.21	41.12	-9.3603	0.0633	0.3707
960	SLE RA 12	1.05	0.21	41.1	-9.3576	0.0634	0.3675
960	SLE RA 13	1.04	0.2	40.87	-9.3102	0.0632	0.3638
960	SLE RA 14	1.07	0.21	41.46	-9.4337	0.0639	0.3753
960	SLE RA 15	1.06	0.21	41.44	-9.431	0.064	0.3721
960	SLE RA 16	1.07	0.21	41.25	-9.388	0.0635	0.3737
960	SLE RA 17	1.06	0.2	41.22	-9.3854	0.0636	0.3705
960	SLE RA 18	1.06	0.23	41.82	-9.5146	0.0646	0.371
960	SLE RA 19	1.05	0.22	41.79	-9.5119	0.0648	0.3679
960	SLE RA 20	1.07	0.23	42.15	-9.588	0.0652	0.3756
960	SLE RA 21	1.06	0.22	42.13	-9.5853	0.0653	0.3725
960	SLE FR 1	1	0.17	37.66	-8.6035	0.0571	0.3493
960	SLE FR 2	0.99	0.16	37.66	-8.6026	0.0571	0.3482
960	SLE FR 3	1	0.16	37.8	-8.6329	0.0573	0.3511
960	SLE FR 4	1.01	0.18	38.9	-8.8759	0.0594	0.3547
960	SLE FR 5	1.02	0.18	39.04	-8.9062	0.0596	0.3576
960	SLE FR 6	1.03	0.2	39.74	-9.059	0.0608	0.3601
960	SLE QP 1	1	0.17	37.66	-8.6035	0.0571	0.3493
960	SLE QP 2	1.01	0.18	38.91	-8.8768	0.0593	0.3558
960	SLD 1	4.74	0.22	34.17	-8.1954	0.0633	1.6571
960	SLD 2	4.36	0.6	33.7	-8.1039	0.0632	1.5244
960	SLD 3	4.79	-0.69	34.83	-8.3153	0.0658	1.6761
960	SLD 4	4.41	-0.32	34.37	-8.2238	0.0656	1.5434
960	SLD 5	2.12	1.52	36.57	-8.5072	0.0569	0.7414
960	SLD 6	1.87	1.77	36.26	-8.4465	0.0568	0.6534
960	SLD 7	2.3	-1.54	38.77	-8.9068	0.065	0.8049
960	SLD 8	2.05	-1.29	38.46	-8.8461	0.0649	0.7168
960	SLD 9	-0.02	1.66	39.35	-8.9075	0.0538	-0.0053
960	SLD 10	-0.27	1.91	39.05	-8.8468	0.0537	-0.0933
960	SLD 11	0.16	-1.4	41.56	-9.3071	0.0619	0.0582
960	SLD 12	-0.09	-1.15	41.25	-9.2464	0.0618	-0.0299
960	SLD 13	-2.38	0.69	43.45	-9.5298	0.0531	-0.8319
960	SLD 14	-2.76	1.06	42.99	-9.4384	0.0529	-0.9645
960	SLD 15	-2.33	-0.23	44.11	-9.6497	0.0555	-0.8128
960	SLD 16	-2.71	0.14	43.65	-9.5582	0.0553	-0.9455
960	SLV 1	9.72	0.25	27.84	-7.2852	0.0688	3.3976
960	SLV 2	8.83	1.12	26.76	-7.0722	0.0684	3.0888
960	SLV 3	9.85	-1.83	29.34	-7.559	0.0743	3.4422
960	SLV 4	8.96	-0.96	28.26	-7.346	0.0739	3.1333
960	SLV 5	3.59	3.21	33.5	-8.0216	0.0539	1.2551
960	SLV 6	3.01	3.78	32.8	-7.8829	0.0536	1.0539
960	SLV 7	4.01	-3.73	38.5	-8.9341	0.0723	1.4035
960	SLV 8	3.44	-3.16	37.8	-8.7953	0.072	1.2022
960	SLV 9	-1.41	3.53	40.02	-8.9584	0.0467	-0.4907
960	SLV 10	-1.98	4.1	39.31	-8.8196	0.0464	-0.6919
960	SLV 11	-0.98	-3.41	45.02	-9.8708	0.065	-0.3423
960	SLV 12	-1.56	-2.84	44.32	-9.732	0.0648	-0.5436
960	SLV 13	-6.93	1.33	49.55	-10.4077	0.0448	-2.4217
960	SLV 14	-7.82	2.2	48.48	-10.1947	0.0444	-2.7306
960	SLV 15	-6.8	-0.76	51.06	-10.6814	0.0503	-2.3772
960	SLV 16	-7.69	0.12	49.98	-10.4684	0.0499	-2.6861
960	CRTFP Ux+	0	0	0	0	0	0
960	CRTFP Ux-	0	0	0	0	0	0
960	CRTFP Uy+	0	0	0	0	0	0
960	CRTFP Uy-	0	0	0	0	0	0
961	SLU 1	0.98	0.17	34.87	-6.9564	0.0476	0.345
961	SLU 2	0.96	0.16	34.81	-6.9454	0.0479	0.3373
961	SLU 3	1.01	0.17	35.65	-7.0999	0.0488	0.3545
961	SLU 4	1	0.17	35.62	-7.0933	0.049	0.3498
961	SLU 5	0.98	0.16	35.29	-7.034	0.0486	0.3443
961	SLU 6	1.03	0.17	36.14	-7.1886	0.0496	0.3614
961	SLU 7	1.02	0.17	36.1	-7.182	0.0497	0.3568
961	SLU 8	1.02	0.16	35.84	-7.1337	0.0491	0.359
961	SLU 9	1.01	0.16	35.8	-7.1271	0.0492	0.3544
961	SLU 10	1.03	0.23	38.95	-7.7174	0.0548	0.3603
961	SLU 11	1.08	0.24	39.79	-7.8719	0.0558	0.3775
961	SLU 12	1.06	0.24	39.76	-7.8653	0.0559	0.3728
961	SLU 13	1.05	0.22	39.43	-7.806	0.0556	0.3673
961	SLU 14	1.1	0.24	40.28	-7.9606	0.0565	0.3844
961	SLU 15	1.08	0.24	40.24	-7.9539	0.0567	0.3798
961	SLU 16	1.09	0.23	39.98	-7.9057	0.056	0.382
961	SLU 17	1.08	0.23	39.94	-7.8991	0.0562	0.3774
961	SLU 18	1.08	0.26	40.78	-8.0592	0.0576	0.3779
961	SLU 19	1.06	0.26	40.74	-8.0526	0.0577	0.3733
961	SLU 20	1.1	0.26	41.27	-8.1479	0.0583	0.3849

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
961	SLU 21	1.08	0.26	41.23	-8.1413	0.0584	0.3802
961	SLU 22	1.06	0.25	39.05	-7.7382	0.0546	0.3735
961	SLU 23	1.04	0.24	38.99	-7.7272	0.0549	0.3658
961	SLU 24	1.09	0.26	39.84	-7.8817	0.0559	0.3829
961	SLU 25	1.08	0.25	39.8	-7.8751	0.056	0.3783
961	SLU 26	1.06	0.24	39.47	-7.8158	0.0556	0.3727
961	SLU 27	1.11	0.26	40.32	-7.9704	0.0566	0.3899
961	SLU 28	1.1	0.25	40.29	-7.9638	0.0567	0.3853
961	SLU 29	1.1	0.25	40.02	-7.9155	0.0561	0.3874
961	SLU 30	1.09	0.24	39.98	-7.9089	0.0562	0.3828
961	SLU 31	1.11	0.31	43.13	-8.4991	0.0618	0.3888
961	SLU 32	1.16	0.33	43.98	-8.6537	0.0628	0.4059
961	SLU 33	1.14	0.32	43.94	-8.6471	0.063	0.4013
961	SLU 34	1.13	0.31	43.61	-8.5878	0.0626	0.3957
961	SLU 35	1.18	0.32	44.46	-8.7424	0.0635	0.4129
961	SLU 36	1.16	0.32	44.42	-8.7357	0.0637	0.4083
961	SLU 37	1.17	0.31	44.16	-8.6875	0.0631	0.4104
961	SLU 38	1.16	0.31	44.12	-8.6809	0.0632	0.4058
961	SLU 39	1.16	0.35	44.97	-8.841	0.0646	0.4063
961	SLU 40	1.14	0.34	44.93	-8.8344	0.0647	0.4017
961	SLU 41	1.18	0.34	45.45	-8.9297	0.0653	0.4133
961	SLU 42	1.16	0.34	45.41	-8.9231	0.0654	0.4087
961	SLU 43	1.25	0.19	43.9	-8.7753	0.0595	0.4388
961	SLU 44	1.23	0.18	43.83	-8.7643	0.0598	0.4311
961	SLU 45	1.28	0.19	44.68	-8.9188	0.0607	0.4482
961	SLU 46	1.26	0.19	44.64	-8.9122	0.0609	0.4436
961	SLU 47	1.25	0.18	44.32	-8.8529	0.0605	0.4381
961	SLU 48	1.3	0.19	45.16	-9.0075	0.0615	0.4552
961	SLU 49	1.28	0.19	45.13	-9.0008	0.0616	0.4506
961	SLU 50	1.29	0.18	44.86	-8.9526	0.061	0.4528
961	SLU 51	1.28	0.18	44.83	-8.946	0.0611	0.4481
961	SLU 52	1.29	0.25	47.97	-9.5362	0.0667	0.4541
961	SLU 53	1.34	0.26	48.82	-9.6908	0.0677	0.4712
961	SLU 54	1.33	0.26	48.78	-9.6842	0.0678	0.4666
961	SLU 55	1.31	0.25	48.46	-9.6249	0.0674	0.4611
961	SLU 56	1.36	0.26	49.3	-9.7794	0.0684	0.4782
961	SLU 57	1.35	0.26	49.27	-9.7728	0.0686	0.4736
961	SLU 58	1.36	0.25	49	-9.7246	0.0679	0.4758
961	SLU 59	1.34	0.25	48.96	-9.718	0.0681	0.4711
961	SLU 60	1.34	0.28	49.81	-9.8781	0.0694	0.4716
961	SLU 61	1.33	0.28	49.77	-9.8715	0.0696	0.467
961	SLU 62	1.36	0.28	50.29	-9.9668	0.0702	0.4786
961	SLU 63	1.35	0.28	50.25	-9.9602	0.0703	0.474
961	SLU 64	1.33	0.27	48.08	-9.5571	0.0665	0.4672
961	SLU 65	1.31	0.26	48.02	-9.546	0.0668	0.4595
961	SLU 66	1.36	0.28	48.87	-9.7006	0.0677	0.4767
961	SLU 67	1.35	0.27	48.83	-9.694	0.0679	0.472
961	SLU 68	1.33	0.26	48.5	-9.6347	0.0675	0.4665
961	SLU 69	1.38	0.28	49.35	-9.7893	0.0685	0.4836
961	SLU 70	1.36	0.27	49.31	-9.7826	0.0686	0.479
961	SLU 71	1.37	0.27	49.05	-9.7344	0.068	0.4812
961	SLU 72	1.36	0.26	49.01	-9.7278	0.0681	0.4766
961	SLU 73	1.37	0.33	52.16	-10.318	0.0737	0.4825
961	SLU 74	1.42	0.35	53	-10.4726	0.0747	0.4997
961	SLU 75	1.41	0.34	52.97	-10.4659	0.0748	0.495
961	SLU 76	1.39	0.33	52.64	-10.4067	0.0745	0.4895
961	SLU 77	1.44	0.34	53.49	-10.5612	0.0754	0.5066
961	SLU 78	1.43	0.34	53.45	-10.5546	0.0756	0.502
961	SLU 79	1.44	0.34	53.19	-10.5064	0.0749	0.5042
961	SLU 80	1.42	0.33	53.15	-10.4998	0.0751	0.4996
961	SLU 81	1.42	0.37	53.99	-10.6599	0.0765	0.5001
961	SLU 82	1.41	0.36	53.95	-10.6533	0.0766	0.4955
961	SLU 83	1.44	0.37	54.48	-10.7486	0.0772	0.5071
961	SLU 84	1.43	0.36	54.44	-10.742	0.0773	0.5024
961	SLE RA 1	1.01	0.19	36.06	-7.1798	0.0496	0.3532
961	SLE RA 2	0.99	0.19	36.02	-7.1724	0.0498	0.348
961	SLE RA 3	1.02	0.19	36.59	-7.2755	0.0504	0.3594
961	SLE RA 4	1.02	0.19	36.56	-7.271	0.0505	0.3564
961	SLE RA 5	1	0.18	36.35	-7.2315	0.0503	0.3527
961	SLE RA 6	1.04	0.19	36.91	-7.3346	0.0509	0.3641
961	SLE RA 7	1.03	0.19	36.89	-7.3301	0.051	0.361
961	SLE RA 8	1.03	0.19	36.71	-7.298	0.0506	0.3625
961	SLE RA 9	1.02	0.19	36.68	-7.2936	0.0507	0.3594
961	SLE RA 10	1.04	0.23	38.78	-7.6871	0.0544	0.3633
961	SLE RA 11	1.07	0.24	39.35	-7.7901	0.0551	0.3748
961	SLE RA 12	1.06	0.24	39.32	-7.7857	0.0552	0.3717
961	SLE RA 13	1.05	0.23	39.1	-7.7462	0.0549	0.368
961	SLE RA 14	1.08	0.24	39.67	-7.8492	0.0556	0.3794
961	SLE RA 15	1.07	0.24	39.65	-7.8448	0.0557	0.3763
961	SLE RA 16	1.08	0.23	39.47	-7.8127	0.0552	0.3778
961	SLE RA 17	1.07	0.23	39.44	-7.8082	0.0553	0.3747
961	SLE RA 18	1.07	0.25	40.01	-7.915	0.0563	0.3751
961	SLE RA 19	1.06	0.25	39.98	-7.9106	0.0564	0.372
961	SLE RA 20	1.08	0.25	40.33	-7.9741	0.0567	0.3797
961	SLE RA 21	1.07	0.25	40.3	-7.9697	0.0568	0.3766
961	SLE FR 1	1.01	0.19	36.06	-7.1798	0.0496	0.3532
961	SLE FR 2	1	0.19	36.06	-7.1783	0.0497	0.3521
961	SLE FR 3	1.01	0.19	36.19	-7.2034	0.0498	0.355
961	SLE FR 4	1.02	0.21	37.24	-7.3989	0.0517	0.3587
961	SLE FR 5	1.03	0.21	37.38	-7.424	0.0518	0.3616

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
961	SLE FR 6	1.04	0.22	38.04	-7.5474	0.0529	0.3641
961	SLE QP 1	1.01	0.19	36.06	-7.1798	0.0496	0.3532
961	SLE QP 2	1.03	0.21	37.25	-7.4004	0.0516	0.3597
961	SLD 1	4.75	0.2	32.32	-6.8859	0.0602	1.6611
961	SLD 2	4.36	0.59	31.86	-6.8067	0.0599	1.528
961	SLD 3	4.8	-0.72	32.93	-6.9818	0.0619	1.6804
961	SLD 4	4.42	-0.32	32.47	-6.9027	0.0617	1.5473
961	SLD 5	2.13	1.52	34.92	-7.1148	0.0516	0.7452
961	SLD 6	1.87	1.78	34.62	-7.0623	0.0514	0.6569
961	SLD 7	2.31	-1.53	36.96	-7.4348	0.0574	0.8093
961	SLD 8	2.06	-1.26	36.66	-7.3822	0.0572	0.7209
961	SLD 9	-0.01	1.68	37.83	-7.4185	0.046	-0.0015
961	SLD 10	-0.26	1.94	37.53	-7.3659	0.0458	-0.0898
961	SLD 11	0.18	-1.37	39.88	-7.7384	0.0518	0.0626
961	SLD 12	-0.08	-1.1	39.57	-7.6859	0.0517	-0.0257
961	SLD 13	-2.37	0.74	42.02	-7.898	0.0416	-0.8278
961	SLD 14	-2.75	1.13	41.57	-7.8189	0.0413	-0.9609
961	SLD 15	-2.31	-0.18	42.63	-7.994	0.0433	-0.8086
961	SLD 16	-2.7	0.22	42.18	-7.9148	0.0431	-0.9417
961	SLV 1	9.73	0.16	25.73	-6.1978	0.0717	3.4018
961	SLV 2	8.84	1.07	24.67	-6.0135	0.0712	3.092
961	SLV 3	9.85	-1.92	27.12	-6.4192	0.0757	3.4468
961	SLV 4	8.96	-1	26.06	-6.2349	0.0751	3.1369
961	SLV 5	3.6	3.17	31.87	-6.7362	0.0518	1.2586
961	SLV 6	3.02	3.77	31.17	-6.6161	0.0514	1.0567
961	SLV 7	4.03	-3.73	36.51	-7.4742	0.0649	1.4085
961	SLV 8	3.45	-3.13	35.82	-7.3541	0.0646	1.2066
961	SLV 9	-1.4	3.55	38.68	-7.4466	0.0387	-0.4872
961	SLV 10	-1.98	4.15	37.99	-7.3265	0.0383	-0.6891
961	SLV 11	-0.97	-3.35	43.32	-8.1846	0.0518	-0.3373
961	SLV 12	-1.55	-2.76	42.63	-8.0645	0.0515	-0.5392
961	SLV 13	-6.91	1.41	48.44	-8.5658	0.0281	-2.4175
961	SLV 14	-7.8	2.33	47.37	-8.3815	0.0276	-2.7274
961	SLV 15	-6.79	-0.66	49.83	-8.7872	0.0321	-2.3725
961	SLV 16	-7.68	0.26	48.77	-8.6029	0.0315	-2.6824
961	CRTFP Ux+	0	0	0	0	0	0
961	CRTFP Ux-	0	0	0	0	0	0
961	CRTFP Uy+	0	0	0	0	0	0
961	CRTFP Uy-	0	0	0	0	0	0
962	SLU 1	0.99	0.2	33.63	-5.8314	0.0351	0.3485
962	SLU 2	0.97	0.19	33.57	-5.8174	0.0353	0.341
962	SLU 3	1.02	0.2	34.39	-5.9465	0.036	0.3581
962	SLU 4	1.01	0.2	34.35	-5.938	0.0361	0.3536
962	SLU 5	0.99	0.19	34.03	-5.8886	0.0358	0.348
962	SLU 6	1.04	0.2	34.85	-6.0177	0.0365	0.3652
962	SLU 7	1.03	0.2	34.81	-6.0092	0.0366	0.3606
962	SLU 8	1.03	0.19	34.56	-5.9738	0.0362	0.3627
962	SLU 9	1.02	0.19	34.52	-5.9654	0.0363	0.3581
962	SLU 10	1.04	0.26	37.52	-6.4374	0.0406	0.3641
962	SLU 11	1.09	0.28	38.34	-6.5664	0.0413	0.3812
962	SLU 12	1.07	0.27	38.3	-6.558	0.0414	0.3767
962	SLU 13	1.06	0.26	37.99	-6.5086	0.0411	0.3712
962	SLU 14	1.11	0.27	38.81	-6.6376	0.0419	0.3883
962	SLU 15	1.09	0.27	38.77	-6.6292	0.0419	0.3838
962	SLU 16	1.1	0.26	38.52	-6.5938	0.0415	0.3858
962	SLU 17	1.09	0.26	38.48	-6.5854	0.0416	0.3813
962	SLU 18	1.09	0.3	39.28	-6.7171	0.0428	0.3816
962	SLU 19	1.07	0.29	39.24	-6.7087	0.0428	0.3771
962	SLU 20	1.11	0.3	39.75	-6.7883	0.0433	0.3887
962	SLU 21	1.09	0.29	39.71	-6.7799	0.0434	0.3841
962	SLU 22	1.07	0.28	37.63	-6.459	0.0405	0.3772
962	SLU 23	1.05	0.28	37.57	-6.445	0.0406	0.3696
962	SLU 24	1.1	0.29	38.39	-6.574	0.0414	0.3867
962	SLU 25	1.09	0.29	38.35	-6.5656	0.0414	0.3822
962	SLU 26	1.07	0.28	38.03	-6.5162	0.0411	0.3767
962	SLU 27	1.12	0.29	38.85	-6.6452	0.0419	0.3938
962	SLU 28	1.11	0.29	38.81	-6.6368	0.042	0.3893
962	SLU 29	1.11	0.28	38.56	-6.6014	0.0415	0.3913
962	SLU 30	1.1	0.28	38.52	-6.593	0.0416	0.3868
962	SLU 31	1.12	0.35	41.52	-7.0649	0.046	0.3928
962	SLU 32	1.17	0.36	42.34	-7.194	0.0467	0.4099
962	SLU 33	1.15	0.36	42.3	-7.1856	0.0468	0.4054
962	SLU 34	1.14	0.35	41.99	-7.1361	0.0465	0.3998
962	SLU 35	1.19	0.36	42.81	-7.2652	0.0472	0.417
962	SLU 36	1.17	0.36	42.77	-7.2567	0.0473	0.4124
962	SLU 37	1.18	0.35	42.52	-7.2213	0.0469	0.4145
962	SLU 38	1.17	0.35	42.48	-7.2129	0.0469	0.4099
962	SLU 39	1.17	0.38	43.28	-7.3446	0.0481	0.4103
962	SLU 40	1.16	0.38	43.24	-7.3362	0.0482	0.4057
962	SLU 41	1.19	0.38	43.75	-7.4158	0.0486	0.4173
962	SLU 42	1.18	0.38	43.71	-7.4074	0.0487	0.4128
962	SLU 43	1.26	0.22	42.35	-7.3657	0.0439	0.4433
962	SLU 44	1.24	0.22	42.28	-7.3517	0.044	0.4357
962	SLU 45	1.29	0.23	43.11	-7.4807	0.0447	0.4528
962	SLU 46	1.28	0.23	43.07	-7.4723	0.0448	0.4483
962	SLU 47	1.26	0.22	42.75	-7.4229	0.0445	0.4428
962	SLU 48	1.31	0.23	43.57	-7.5519	0.0452	0.4599
962	SLU 49	1.3	0.23	43.53	-7.5435	0.0453	0.4554
962	SLU 50	1.3	0.22	43.28	-7.5081	0.0449	0.4574
962	SLU 51	1.29	0.22	43.24	-7.4997	0.045	0.4529

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
962	SLU 52	1.31	0.29	46.24	-7.9716	0.0493	0.4589
962	SLU 53	1.36	0.3	47.06	-8.1007	0.05	0.476
962	SLU 54	1.34	0.3	47.02	-8.0923	0.0501	0.4715
962	SLU 55	1.33	0.29	46.7	-8.0428	0.0498	0.4659
962	SLU 56	1.38	0.3	47.53	-8.1719	0.0506	0.483
962	SLU 57	1.36	0.3	47.49	-8.1635	0.0506	0.4785
962	SLU 58	1.37	0.29	47.24	-8.128	0.0502	0.4806
962	SLU 59	1.36	0.29	47.2	-8.1196	0.0503	0.476
962	SLU 60	1.36	0.33	48	-8.2514	0.0515	0.4764
962	SLU 61	1.34	0.32	47.96	-8.2429	0.0515	0.4718
962	SLU 62	1.38	0.32	48.47	-8.3225	0.052	0.4834
962	SLU 63	1.36	0.32	48.43	-8.3141	0.0521	0.4789
962	SLU 64	1.34	0.31	46.35	-7.9933	0.0492	0.4719
962	SLU 65	1.32	0.31	46.28	-7.9792	0.0493	0.4644
962	SLU 66	1.37	0.32	47.11	-8.1083	0.0501	0.4815
962	SLU 67	1.36	0.32	47.07	-8.0999	0.0502	0.4769
962	SLU 68	1.34	0.3	46.75	-8.0504	0.0499	0.4714
962	SLU 69	1.39	0.32	47.57	-8.1795	0.0506	0.4885
962	SLU 70	1.38	0.32	47.53	-8.1711	0.0507	0.484
962	SLU 71	1.38	0.31	47.28	-8.1357	0.0502	0.486
962	SLU 72	1.37	0.31	47.24	-8.1272	0.0503	0.4815
962	SLU 73	1.39	0.38	50.24	-8.5992	0.0547	0.4875
962	SLU 74	1.44	0.39	51.06	-8.7282	0.0554	0.5046
962	SLU 75	1.42	0.39	51.02	-8.7198	0.0555	0.5001
962	SLU 76	1.41	0.38	50.7	-8.6704	0.0552	0.4946
962	SLU 77	1.46	0.39	51.53	-8.7994	0.0559	0.5117
962	SLU 78	1.44	0.39	51.49	-8.791	0.056	0.5072
962	SLU 79	1.45	0.38	51.24	-8.7556	0.0556	0.5092
962	SLU 80	1.44	0.38	51.2	-8.7472	0.0556	0.5047
962	SLU 81	1.44	0.41	52	-8.8789	0.0568	0.505
962	SLU 82	1.42	0.41	51.96	-8.8705	0.0569	0.5005
962	SLU 83	1.46	0.41	52.47	-8.9501	0.0573	0.5121
962	SLU 84	1.45	0.41	52.43	-8.9417	0.0574	0.5075
962	SLE RA 1	1.02	0.22	34.78	-6.0107	0.0367	0.3567
962	SLE RA 2	1	0.22	34.73	-6.0014	0.0368	0.3517
962	SLE RA 3	1.03	0.23	35.28	-6.0874	0.0373	0.3631
962	SLE RA 4	1.03	0.22	35.25	-6.0818	0.0373	0.3601
962	SLE RA 5	1.01	0.22	35.04	-6.0489	0.0371	0.3564
962	SLE RA 6	1.05	0.23	35.59	-6.1349	0.0376	0.3678
962	SLE RA 7	1.04	0.22	35.56	-6.1293	0.0377	0.3648
962	SLE RA 8	1.04	0.22	35.4	-6.1057	0.0374	0.3661
962	SLE RA 9	1.03	0.22	35.37	-6.1001	0.0374	0.3631
962	SLE RA 10	1.05	0.26	37.37	-6.4147	0.0403	0.3671
962	SLE RA 11	1.08	0.27	37.92	-6.5007	0.0408	0.3785
962	SLE RA 12	1.07	0.27	37.89	-6.4951	0.0409	0.3755
962	SLE RA 13	1.06	0.26	37.68	-6.4622	0.0407	0.3718
962	SLE RA 14	1.09	0.27	38.23	-6.5482	0.0412	0.3832
962	SLE RA 15	1.08	0.27	38.2	-6.5426	0.0412	0.3802
962	SLE RA 16	1.09	0.27	38.03	-6.519	0.0409	0.3816
962	SLE RA 17	1.08	0.26	38.01	-6.5134	0.041	0.3785
962	SLE RA 18	1.08	0.29	38.54	-6.6012	0.0417	0.3788
962	SLE RA 19	1.07	0.29	38.52	-6.5956	0.0418	0.3758
962	SLE RA 20	1.09	0.29	38.85	-6.6486	0.0421	0.3835
962	SLE RA 21	1.08	0.29	38.83	-6.643	0.0421	0.3805
962	SLE FR 1	1.02	0.22	34.78	-6.0107	0.0367	0.3567
962	SLE FR 2	1.01	0.22	34.77	-6.0089	0.0367	0.3557
962	SLE FR 3	1.02	0.22	34.9	-6.0297	0.0368	0.3586
962	SLE FR 4	1.03	0.24	35.9	-6.186	0.0382	0.3623
962	SLE FR 5	1.04	0.24	36.03	-6.2069	0.0383	0.3652
962	SLE FR 6	1.05	0.25	36.66	-6.306	0.0392	0.3677
962	SLE QP 1	1.02	0.22	34.78	-6.0107	0.0367	0.3567
962	SLE QP 2	1.03	0.24	35.91	-6.1879	0.0382	0.3633
962	SLD 1	4.75	0.2	30.65	-5.7474	0.0514	1.6646
962	SLD 2	4.37	0.62	30.2	-5.6805	0.0512	1.5313
962	SLD 3	4.81	-0.72	31.23	-5.8391	0.0524	1.6841
962	SLD 4	4.43	-0.3	30.78	-5.7722	0.0522	1.5507
962	SLD 5	2.14	1.55	33.53	-5.9288	0.0407	0.7485
962	SLD 6	1.88	1.83	33.23	-5.8844	0.0406	0.66
962	SLD 7	2.32	-1.52	35.47	-6.2345	0.044	0.8133
962	SLD 8	2.07	-1.24	35.17	-6.1901	0.0439	0.7248
962	SLD 9	0	1.72	36.64	-6.1857	0.0325	0.0019
962	SLD 10	-0.25	2	36.35	-6.1412	0.0324	-0.0866
962	SLD 11	0.19	-1.34	38.58	-6.4914	0.0358	0.0667
962	SLD 12	-0.07	-1.07	38.28	-6.4469	0.0357	-0.0218
962	SLD 13	-2.36	0.78	41.03	-6.6036	0.0242	-0.824
962	SLD 14	-2.74	1.2	40.58	-6.5366	0.024	-0.9574
962	SLD 15	-2.3	-0.14	41.61	-6.6953	0.0252	-0.8046
962	SLD 16	-2.69	0.28	41.16	-6.6283	0.025	-0.938
962	SLV 1	9.73	0.13	23.62	-5.1582	0.0691	3.4052
962	SLV 2	8.84	1.09	22.58	-5.0023	0.0687	3.0947
962	SLV 3	9.86	-1.96	24.95	-5.3708	0.0713	3.4507
962	SLV 4	8.97	-0.99	23.9	-5.2149	0.071	3.1402
962	SLV 5	3.6	3.2	30.4	-5.584	0.0442	1.2615
962	SLV 6	3.02	3.83	29.72	-5.4824	0.0439	1.0592
962	SLV 7	4.04	-3.75	34.81	-6.2925	0.0516	1.4131
962	SLV 8	3.46	-3.12	34.13	-6.1909	0.0513	1.2107
962	SLV 9	-1.39	3.6	37.69	-6.1848	0.0251	-0.4841
962	SLV 10	-1.97	4.23	37	-6.0832	0.0248	-0.6864
962	SLV 11	-0.95	-3.35	42.1	-6.8933	0.0324	-0.3325
962	SLV 12	-1.53	-2.72	41.41	-6.7917	0.0322	-0.5349

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
962	SLV 13	-6.9	1.47	47.91	-7.1609	0.0054	-2.4135
962	SLV 14	-7.79	2.44	46.87	-7.005	0.0051	-2.724
962	SLV 15	-6.77	-0.61	49.24	-7.3734	0.0076	-2.368
962	SLV 16	-7.66	0.36	48.19	-7.2175	0.0073	-2.6786
962	CRTFP Ux+	0	0	0	0	0	0
962	CRTFP Ux-	0	0	0	0	0	0
962	CRTFP Uy+	0	0	0	0	0	0
962	CRTFP Uy-	0	0	0	0	0	0
963	SLU 1	1	0.23	32.81	-5.0174	0.02	0.3517
963	SLU 2	0.98	0.22	32.74	-5.0016	0.02	0.3443
963	SLU 3	1.03	0.24	33.55	-5.1121	0.0204	0.3614
963	SLU 4	1.02	0.24	33.5	-5.1026	0.0204	0.3569
963	SLU 5	1	0.22	33.2	-5.0603	0.0203	0.3514
963	SLU 6	1.05	0.24	34	-5.1708	0.0207	0.3685
963	SLU 7	1.04	0.23	33.96	-5.1613	0.0207	0.3641
963	SLU 8	1.04	0.23	33.72	-5.1348	0.0205	0.3659
963	SLU 9	1.03	0.23	33.68	-5.1253	0.0205	0.3615
963	SLU 10	1.05	0.3	36.57	-5.5104	0.0233	0.3676
963	SLU 11	1.09	0.32	37.37	-5.6208	0.0238	0.3847
963	SLU 12	1.08	0.31	37.33	-5.6114	0.0238	0.3802
963	SLU 13	1.07	0.3	37.02	-5.5691	0.0236	0.3747
963	SLU 14	1.12	0.32	37.83	-5.6795	0.0241	0.3918
963	SLU 15	1.1	0.31	37.78	-5.6701	0.0241	0.3874
963	SLU 16	1.11	0.31	37.55	-5.6436	0.0239	0.3893
963	SLU 17	1.1	0.3	37.5	-5.6341	0.0239	0.3848
963	SLU 18	1.1	0.34	38.28	-5.7442	0.0248	0.385
963	SLU 19	1.08	0.34	38.24	-5.7348	0.0248	0.3805
963	SLU 20	1.12	0.34	38.73	-5.8029	0.025	0.3921
963	SLU 21	1.1	0.34	38.69	-5.7935	0.025	0.3877
963	SLU 22	1.08	0.32	36.68	-5.5322	0.0233	0.3805
963	SLU 23	1.06	0.32	36.61	-5.5164	0.0233	0.3731
963	SLU 24	1.11	0.33	37.42	-5.6269	0.0238	0.3902
963	SLU 25	1.1	0.33	37.38	-5.6174	0.0238	0.3858
963	SLU 26	1.08	0.32	37.07	-5.5751	0.0236	0.3803
963	SLU 27	1.13	0.33	37.87	-5.6856	0.024	0.3973
963	SLU 28	1.12	0.33	37.83	-5.6761	0.024	0.3929
963	SLU 29	1.12	0.32	37.59	-5.6496	0.0238	0.3948
963	SLU 30	1.11	0.32	37.55	-5.6401	0.0239	0.3904
963	SLU 31	1.13	0.39	40.44	-6.0252	0.0267	0.3964
963	SLU 32	1.18	0.41	41.24	-6.1356	0.0271	0.4135
963	SLU 33	1.16	0.4	41.2	-6.1262	0.0271	0.4091
963	SLU 34	1.15	0.39	40.89	-6.0839	0.027	0.4036
963	SLU 35	1.2	0.41	41.7	-6.1943	0.0274	0.4207
963	SLU 36	1.18	0.4	41.65	-6.1849	0.0274	0.4162
963	SLU 37	1.19	0.4	41.42	-6.1584	0.0272	0.4181
963	SLU 38	1.18	0.39	41.37	-6.1489	0.0272	0.4137
963	SLU 39	1.18	0.43	42.15	-6.259	0.0281	0.4138
963	SLU 40	1.16	0.43	42.11	-6.2496	0.0281	0.4094
963	SLU 41	1.2	0.43	42.6	-6.3177	0.0284	0.421
963	SLU 42	1.19	0.43	42.56	-6.3083	0.0284	0.4165
963	SLU 43	1.27	0.27	41.33	-6.3461	0.0248	0.4473
963	SLU 44	1.25	0.26	41.26	-6.3304	0.0248	0.4399
963	SLU 45	1.3	0.28	42.06	-6.4408	0.0253	0.457
963	SLU 46	1.29	0.27	42.02	-6.4313	0.0253	0.4525
963	SLU 47	1.27	0.26	41.71	-6.389	0.0251	0.447
963	SLU 48	1.32	0.28	42.52	-6.4995	0.0255	0.4641
963	SLU 49	1.31	0.27	42.47	-6.49	0.0256	0.4597
963	SLU 50	1.31	0.27	42.24	-6.4635	0.0253	0.4615
963	SLU 51	1.3	0.26	42.19	-6.4541	0.0254	0.4571
963	SLU 52	1.32	0.34	45.08	-6.8391	0.0282	0.4632
963	SLU 53	1.37	0.35	45.89	-6.9496	0.0286	0.4803
963	SLU 54	1.35	0.35	45.85	-6.9401	0.0286	0.4758
963	SLU 55	1.34	0.34	45.54	-6.8978	0.0285	0.4703
963	SLU 56	1.39	0.35	46.34	-7.0083	0.0289	0.4874
963	SLU 57	1.37	0.35	46.3	-6.9988	0.0289	0.483
963	SLU 58	1.38	0.34	46.06	-6.9723	0.0287	0.4849
963	SLU 59	1.37	0.34	46.02	-6.9628	0.0287	0.4804
963	SLU 60	1.37	0.38	46.79	-7.073	0.0296	0.4806
963	SLU 61	1.36	0.37	46.75	-7.0635	0.0296	0.4762
963	SLU 62	1.39	0.38	47.25	-7.1317	0.0299	0.4877
963	SLU 63	1.38	0.37	47.21	-7.1222	0.0299	0.4833
963	SLU 64	1.36	0.36	45.2	-6.8609	0.0281	0.4761
963	SLU 65	1.33	0.35	45.13	-6.8452	0.0282	0.4687
963	SLU 66	1.38	0.37	45.93	-6.9556	0.0286	0.4858
963	SLU 67	1.37	0.36	45.89	-6.9461	0.0286	0.4814
963	SLU 68	1.35	0.35	45.58	-6.9039	0.0284	0.4759
963	SLU 69	1.4	0.37	46.39	-7.0143	0.0289	0.4929
963	SLU 70	1.39	0.36	46.35	-7.0048	0.0289	0.4885
963	SLU 71	1.4	0.36	46.11	-6.9783	0.0287	0.4904
963	SLU 72	1.38	0.35	46.06	-6.9689	0.0287	0.486
963	SLU 73	1.4	0.43	48.95	-7.3539	0.0315	0.4921
963	SLU 74	1.45	0.45	49.76	-7.4644	0.032	0.5091
963	SLU 75	1.44	0.44	49.72	-7.4549	0.032	0.5047
963	SLU 76	1.42	0.43	49.41	-7.4126	0.0318	0.4992
963	SLU 77	1.47	0.44	50.21	-7.5231	0.0322	0.5163
963	SLU 78	1.46	0.44	50.17	-7.5136	0.0322	0.5118
963	SLU 79	1.46	0.44	49.93	-7.4871	0.032	0.5137
963	SLU 80	1.45	0.43	49.89	-7.4776	0.0321	0.5093
963	SLU 81	1.45	0.47	50.67	-7.5878	0.0329	0.5094
963	SLU 82	1.44	0.47	50.62	-7.5783	0.033	0.505

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
963	SLU 83	1.47	0.47	51.12	-7.6465	0.0332	0.5166
963	SLU 84	1.46	0.47	51.08	-7.637	0.0332	0.5121
963	SLE RA 1	1.02	0.26	33.92	-5.1645	0.0209	0.3599
963	SLE RA 2	1.01	0.25	33.87	-5.154	0.0209	0.355
963	SLE RA 3	1.04	0.26	34.41	-5.2276	0.0212	0.3664
963	SLE RA 4	1.03	0.26	34.38	-5.2213	0.0212	0.3634
963	SLE RA 5	1.02	0.25	34.17	-5.1931	0.0211	0.3597
963	SLE RA 6	1.06	0.26	34.71	-5.2667	0.0214	0.3711
963	SLE RA 7	1.05	0.26	34.68	-5.2604	0.0214	0.3682
963	SLE RA 8	1.05	0.26	34.52	-5.2428	0.0213	0.3694
963	SLE RA 9	1.04	0.25	34.49	-5.2365	0.0213	0.3665
963	SLE RA 10	1.05	0.3	36.42	-5.4932	0.0232	0.3705
963	SLE RA 11	1.09	0.31	36.96	-5.5668	0.0235	0.3819
963	SLE RA 12	1.08	0.31	36.93	-5.5605	0.0235	0.379
963	SLE RA 13	1.07	0.3	36.72	-5.5323	0.0234	0.3753
963	SLE RA 14	1.1	0.31	37.26	-5.6059	0.0236	0.3867
963	SLE RA 15	1.09	0.31	37.23	-5.5996	0.0237	0.3837
963	SLE RA 16	1.1	0.31	37.07	-5.5819	0.0235	0.385
963	SLE RA 17	1.09	0.3	37.05	-5.5756	0.0235	0.382
963	SLE RA 18	1.09	0.33	37.56	-5.6491	0.0241	0.3821
963	SLE RA 19	1.08	0.33	37.53	-5.6427	0.0241	0.3792
963	SLE RA 20	1.1	0.33	37.86	-5.6882	0.0243	0.3869
963	SLE RA 21	1.09	0.33	37.84	-5.6819	0.0243	0.3839
963	SLE FR 1	1.02	0.26	33.92	-5.1645	0.0209	0.3599
963	SLE FR 2	1.02	0.26	33.91	-5.1624	0.0209	0.3589
963	SLE FR 3	1.03	0.26	34.04	-5.1802	0.021	0.3618
963	SLE FR 4	1.04	0.28	35	-5.3078	0.0219	0.3656
963	SLE FR 5	1.05	0.28	35.13	-5.3255	0.0219	0.3685
963	SLE FR 6	1.06	0.29	35.74	-5.4068	0.0225	0.371
963	SLE QP 1	1.02	0.26	33.92	-5.1645	0.0209	0.3599
963	SLE QP 2	1.04	0.28	35.01	-5.3099	0.0219	0.3666
963	SLD 1	4.76	0.24	29.29	-4.8552	0.0396	1.6676
963	SLD 2	4.38	0.68	28.85	-4.7988	0.0396	1.5341
963	SLD 3	4.82	-0.7	29.86	-4.9504	0.0401	1.6872
963	SLD 4	4.43	-0.26	29.41	-4.894	0.04	1.5537
963	SLD 5	2.14	1.61	32.52	-5.0394	0.0266	0.7513
963	SLD 6	1.89	1.9	32.22	-5.002	0.0265	0.6627
963	SLD 7	2.33	-1.52	34.41	-5.3566	0.028	0.8169
963	SLD 8	2.08	-1.23	34.11	-5.3192	0.028	0.7282
963	SLD 9	0.01	1.79	35.91	-5.3006	0.0158	0.0049
963	SLD 10	-0.24	2.08	35.62	-5.2631	0.0158	-0.0837
963	SLD 11	0.2	-1.35	37.8	-5.6178	0.0172	0.0704
963	SLD 12	-0.06	-1.06	37.5	-5.5803	0.0172	-0.0182
963	SLD 13	-2.35	0.82	40.61	-5.7258	0.0037	-0.8206
963	SLD 14	-2.73	1.26	40.16	-5.6693	0.0037	-0.9541
963	SLD 15	-2.29	-0.12	41.18	-5.8209	0.0041	-0.8009
963	SLD 16	-2.67	0.32	40.73	-5.7645	0.0041	-0.9344
963	SLV 1	9.73	0.15	21.65	-4.2473	0.0634	3.4078
963	SLV 2	8.84	1.18	20.61	-4.1158	0.0634	3.0969
963	SLV 3	9.86	-1.98	22.94	-4.4676	0.0644	3.4537
963	SLV 4	8.97	-0.95	21.9	-4.3362	0.0644	3.1429
963	SLV 5	3.61	3.29	29.23	-4.68	0.0328	1.2638
963	SLV 6	3.02	3.96	28.55	-4.5944	0.0328	1.0613
963	SLV 7	4.05	-3.81	33.53	-5.4145	0.0361	1.4171
963	SLV 8	3.46	-3.14	32.85	-5.3288	0.0361	1.2146
963	SLV 9	-1.38	3.7	37.17	-5.2909	0.0076	-0.4814
963	SLV 10	-1.96	4.36	36.49	-5.2053	0.0076	-0.684
963	SLV 11	-0.94	-3.4	41.47	-6.0254	0.0109	-0.3281
963	SLV 12	-1.52	-2.73	40.79	-5.9397	0.0109	-0.5307
963	SLV 13	-6.88	1.51	48.12	-6.2836	-0.0206	-2.4097
963	SLV 14	-7.78	2.53	47.08	-6.1521	-0.0206	-2.7206
963	SLV 15	-6.75	-0.62	49.41	-6.5039	-0.0196	-2.3638
963	SLV 16	-7.65	0.4	48.37	-6.3725	-0.0197	-2.6746
963	CRTFP Ux+	0	0	0	0	0	0
963	CRTFP Ux-	0	0	0	0	0	0
963	CRTFP Uy+	0	0	0	0	0	0
963	CRTFP Uy-	0	0	0	0	0	0
964	SLU 1	1.01	0.27	32.46	-4.5445	0.0037	0.3543
964	SLU 2	0.99	0.26	32.39	-4.528	0.0036	0.347
964	SLU 3	1.04	0.28	33.19	-4.6276	0.0037	0.364
964	SLU 4	1.02	0.27	33.15	-4.6176	0.0037	0.3597
964	SLU 5	1.01	0.26	32.84	-4.5796	0.0036	0.3542
964	SLU 6	1.06	0.28	33.64	-4.6792	0.0037	0.3712
964	SLU 7	1.04	0.27	33.6	-4.6692	0.0037	0.3669
964	SLU 8	1.05	0.27	33.36	-4.6477	0.0037	0.3687
964	SLU 9	1.04	0.26	33.32	-4.6378	0.0037	0.3643
964	SLU 10	1.05	0.35	36.15	-4.9698	0.0049	0.3705
964	SLU 11	1.1	0.36	36.95	-5.0695	0.005	0.3875
964	SLU 12	1.09	0.36	36.9	-5.0595	0.0049	0.3832
964	SLU 13	1.07	0.35	36.6	-5.0214	0.0049	0.3777
964	SLU 14	1.12	0.36	37.39	-5.121	0.005	0.3947
964	SLU 15	1.11	0.36	37.35	-5.1111	0.0049	0.3904
964	SLU 16	1.12	0.35	37.12	-5.0896	0.005	0.3921
964	SLU 17	1.1	0.35	37.07	-5.0797	0.0049	0.3878
964	SLU 18	1.1	0.39	37.83	-5.1758	0.0055	0.3878
964	SLU 19	1.09	0.39	37.79	-5.1658	0.0054	0.3834
964	SLU 20	1.12	0.39	38.28	-5.2274	0.0055	0.395
964	SLU 21	1.11	0.39	38.24	-5.2174	0.0055	0.3906
964	SLU 22	1.09	0.37	36.26	-4.9916	0.0049	0.3833
964	SLU 23	1.07	0.36	36.19	-4.975	0.0048	0.3761

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
964	SLU 24	1.12	0.38	36.99	-5.0747	0.0049	0.3931
964	SLU 25	1.11	0.37	36.95	-5.0647	0.0049	0.3887
964	SLU 26	1.09	0.36	36.64	-5.0266	0.0048	0.3833
964	SLU 27	1.14	0.37	37.44	-5.1263	0.0049	0.4003
964	SLU 28	1.13	0.37	37.4	-5.1163	0.0049	0.3959
964	SLU 29	1.13	0.37	37.16	-5.0948	0.0049	0.3977
964	SLU 30	1.12	0.36	37.12	-5.0849	0.0048	0.3934
964	SLU 31	1.14	0.44	39.95	-5.4169	0.0061	0.3995
964	SLU 32	1.18	0.46	40.75	-5.5165	0.0062	0.4165
964	SLU 33	1.17	0.46	40.71	-5.5066	0.0061	0.4122
964	SLU 34	1.16	0.44	40.4	-5.4685	0.0061	0.4067
964	SLU 35	1.21	0.46	41.2	-5.5681	0.0062	0.4237
964	SLU 36	1.19	0.46	41.16	-5.5582	0.0061	0.4194
964	SLU 37	1.2	0.45	40.92	-5.5367	0.0061	0.4211
964	SLU 38	1.19	0.45	40.88	-5.5267	0.0061	0.4168
964	SLU 39	1.19	0.49	41.63	-5.6228	0.0067	0.4168
964	SLU 40	1.17	0.48	41.59	-5.6129	0.0066	0.4125
964	SLU 41	1.21	0.49	42.08	-5.6744	0.0067	0.424
964	SLU 42	1.19	0.48	42.04	-5.6645	0.0066	0.4197
964	SLU 43	1.28	0.32	40.89	-5.7546	0.0044	0.4506
964	SLU 44	1.26	0.31	40.82	-5.738	0.0043	0.4434
964	SLU 45	1.31	0.33	41.62	-5.8376	0.0044	0.4604
964	SLU 46	1.3	0.32	41.58	-5.8277	0.0044	0.456
964	SLU 47	1.28	0.31	41.27	-5.7896	0.0043	0.4506
964	SLU 48	1.33	0.32	42.07	-5.8892	0.0044	0.4676
964	SLU 49	1.32	0.32	42.03	-5.8793	0.0044	0.4632
964	SLU 50	1.32	0.32	41.79	-5.8578	0.0044	0.465
964	SLU 51	1.31	0.31	41.75	-5.8478	0.0044	0.4606
964	SLU 52	1.33	0.39	44.58	-6.1799	0.0056	0.4668
964	SLU 53	1.38	0.41	45.38	-6.2795	0.0057	0.4838
964	SLU 54	1.36	0.41	45.34	-6.2696	0.0056	0.4795
964	SLU 55	1.35	0.39	45.03	-6.2315	0.0056	0.474
964	SLU 56	1.4	0.41	45.83	-6.3311	0.0057	0.491
964	SLU 57	1.38	0.41	45.79	-6.3212	0.0056	0.4867
964	SLU 58	1.39	0.4	45.55	-6.2996	0.0057	0.4884
964	SLU 59	1.38	0.4	45.51	-6.2897	0.0056	0.4841
964	SLU 60	1.38	0.44	46.26	-6.3858	0.0062	0.4841
964	SLU 61	1.36	0.43	46.22	-6.3759	0.0061	0.4798
964	SLU 62	1.4	0.44	46.71	-6.4374	0.0062	0.4913
964	SLU 63	1.39	0.43	46.67	-6.4275	0.0061	0.4869
964	SLU 64	1.36	0.41	44.7	-6.2016	0.0056	0.4796
964	SLU 65	1.34	0.41	44.63	-6.1851	0.0055	0.4724
964	SLU 66	1.39	0.42	45.43	-6.2847	0.0056	0.4894
964	SLU 67	1.38	0.42	45.38	-6.2748	0.0056	0.4851
964	SLU 68	1.36	0.41	45.08	-6.2367	0.0055	0.4796
964	SLU 69	1.41	0.42	45.87	-6.3363	0.0056	0.4966
964	SLU 70	1.4	0.42	45.83	-6.3264	0.0056	0.4923
964	SLU 71	1.41	0.41	45.6	-6.3048	0.0056	0.494
964	SLU 72	1.39	0.41	45.55	-6.2949	0.0055	0.4897
964	SLU 73	1.41	0.49	48.39	-6.627	0.0068	0.4958
964	SLU 74	1.46	0.51	49.18	-6.7266	0.0069	0.5129
964	SLU 75	1.45	0.5	49.14	-6.7167	0.0068	0.5085
964	SLU 76	1.43	0.49	48.83	-6.6786	0.0068	0.503
964	SLU 77	1.48	0.51	49.63	-6.7782	0.0069	0.5201
964	SLU 78	1.47	0.5	49.59	-6.7683	0.0068	0.5157
964	SLU 79	1.47	0.5	49.35	-6.7467	0.0068	0.5175
964	SLU 80	1.46	0.49	49.31	-6.7368	0.0068	0.5131
964	SLU 81	1.46	0.54	50.07	-6.8329	0.0074	0.5131
964	SLU 82	1.45	0.53	50.02	-6.823	0.0073	0.5088
964	SLU 83	1.48	0.54	50.52	-6.8845	0.0074	0.5203
964	SLU 84	1.47	0.53	50.47	-6.8746	0.0073	0.516
964	SLE RA 1	1.03	0.3	33.55	-4.6722	0.004	0.3626
964	SLE RA 2	1.02	0.29	33.5	-4.6612	0.004	0.3577
964	SLE RA 3	1.05	0.3	34.03	-4.7276	0.004	0.3691
964	SLE RA 4	1.04	0.3	34	-4.721	0.004	0.3662
964	SLE RA 5	1.03	0.29	33.8	-4.6956	0.004	0.3625
964	SLE RA 6	1.06	0.3	34.33	-4.762	0.004	0.3739
964	SLE RA 7	1.06	0.3	34.3	-4.7554	0.004	0.371
964	SLE RA 8	1.06	0.3	34.15	-4.741	0.004	0.3722
964	SLE RA 9	1.05	0.29	34.12	-4.7344	0.004	0.3693
964	SLE RA 10	1.06	0.35	36.01	-4.9558	0.0048	0.3734
964	SLE RA 11	1.09	0.36	36.54	-5.0222	0.0049	0.3847
964	SLE RA 12	1.09	0.36	36.51	-5.0156	0.0049	0.3818
964	SLE RA 13	1.08	0.35	36.31	-4.9902	0.0048	0.3782
964	SLE RA 14	1.11	0.36	36.84	-5.0566	0.0049	0.3895
964	SLE RA 15	1.1	0.36	36.81	-5.05	0.0049	0.3866
964	SLE RA 16	1.1	0.35	36.65	-5.0356	0.0049	0.3878
964	SLE RA 17	1.1	0.35	36.62	-5.029	0.0048	0.3849
964	SLE RA 18	1.09	0.38	37.13	-5.0931	0.0052	0.3849
964	SLE RA 19	1.09	0.38	37.1	-5.0865	0.0052	0.382
964	SLE RA 20	1.11	0.38	37.43	-5.1275	0.0052	0.3897
964	SLE RA 21	1.1	0.37	37.4	-5.1209	0.0052	0.3868
964	SLE FR 1	1.03	0.3	33.55	-4.6722	0.004	0.3626
964	SLE FR 2	1.03	0.3	33.54	-4.67	0.004	0.3616
964	SLE FR 3	1.04	0.3	33.67	-4.686	0.004	0.3645
964	SLE FR 4	1.05	0.32	34.61	-4.7963	0.0044	0.3683
964	SLE FR 5	1.06	0.32	34.74	-4.8122	0.0044	0.3712
964	SLE FR 6	1.06	0.34	35.34	-4.8827	0.0046	0.3737
964	SLE QP 1	1.03	0.3	33.55	-4.6722	0.004	0.3626
964	SLE QP 2	1.05	0.32	34.62	-4.7985	0.0044	0.3693

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
964	SLD 1	4.77	0.3	28.31	-4.2477	0.0271	1.6698
964	SLD 2	4.38	0.77	27.86	-4.1986	0.0273	1.5363
964	SLD 3	4.82	-0.68	28.88	-4.3437	0.0262	1.6897
964	SLD 4	4.44	-0.21	28.43	-4.2946	0.0264	1.5561
964	SLD 5	2.15	1.71	31.94	-4.4966	0.0125	0.7536
964	SLD 6	1.89	2.02	31.65	-4.464	0.0126	0.6649
964	SLD 7	2.34	-1.54	33.84	-4.8166	0.0095	0.8198
964	SLD 8	2.08	-1.23	33.54	-4.784	0.0097	0.7312
964	SLD 9	0.02	1.87	35.7	-4.813	-0.0009	0.0073
964	SLD 10	-0.24	2.18	35.4	-4.7804	-0.0008	-0.0813
964	SLD 11	0.21	-1.38	37.6	-5.133	-0.0039	0.0736
964	SLD 12	-0.05	-1.07	37.3	-5.1004	-0.0037	-0.015
964	SLD 13	-2.34	0.85	40.81	-5.3023	-0.0176	-0.8176
964	SLD 14	-2.72	1.32	40.36	-5.2533	-0.0174	-0.9512
964	SLD 15	-2.28	-0.12	41.38	-5.3984	-0.0185	-0.7977
964	SLD 16	-2.66	0.34	40.93	-5.3493	-0.0183	-0.9313
964	SLV 1	9.73	0.24	19.87	-3.511	0.0574	3.4093
964	SLV 2	8.84	1.33	18.82	-3.3968	0.0579	3.0984
964	SLV 3	9.87	-1.97	21.16	-3.7331	0.0554	3.4558
964	SLV 4	8.97	-0.88	20.11	-3.6188	0.0558	3.1449
964	SLV 5	3.61	3.45	28.41	-4.0956	0.0233	1.2654
964	SLV 6	3.03	4.17	27.73	-4.0211	0.0236	1.0628
964	SLV 7	4.06	-3.91	32.73	-4.8357	0.0165	1.4204
964	SLV 8	3.47	-3.2	32.05	-4.7613	0.0168	1.2178
964	SLV 9	-1.37	3.84	37.19	-4.8357	-0.0081	-0.4793
964	SLV 10	-1.95	4.55	36.51	-4.7613	-0.0078	-0.6819
964	SLV 11	-0.93	-3.52	41.51	-5.5758	-0.0148	-0.3243
964	SLV 12	-1.51	-2.81	40.83	-5.5014	-0.0145	-0.5269
964	SLV 13	-6.87	1.53	49.13	-5.9781	-0.0471	-2.4064
964	SLV 14	-7.77	2.62	48.08	-5.8639	-0.0466	-2.7173
964	SLV 15	-6.74	-0.68	50.42	-6.2002	-0.0491	-2.3599
964	SLV 16	-7.63	0.41	49.37	-6.0859	-0.0487	-2.6708
964	CRTFP Ux+	0	0	0	0	0	0
964	CRTFP Ux-	0	0	0	0	0	0
964	CRTFP Uy+	0	0	0	0	0	0
964	CRTFP Uy-	0	0	0	0	0	0
965	SLU 1	1.01	0.31	32.59	-4.4254	-0.0124	0.3563
965	SLU 2	0.99	0.3	32.52	-4.4088	-0.0125	0.3492
965	SLU 3	1.04	0.32	33.32	-4.506	-0.0128	0.3661
965	SLU 4	1.03	0.32	33.28	-4.496	-0.0129	0.3619
965	SLU 5	1.01	0.3	32.98	-4.4589	-0.0128	0.3564
965	SLU 6	1.06	0.32	33.78	-4.5561	-0.013	0.3734
965	SLU 7	1.05	0.32	33.74	-4.5461	-0.0131	0.3691
965	SLU 8	1.05	0.31	33.5	-4.5256	-0.0129	0.3708
965	SLU 9	1.04	0.31	33.46	-4.5156	-0.013	0.3665
965	SLU 10	1.06	0.4	36.27	-4.8292	-0.0133	0.3727
965	SLU 11	1.11	0.42	37.07	-4.9264	-0.0136	0.3897
965	SLU 12	1.1	0.41	37.03	-4.9165	-0.0137	0.3854
965	SLU 13	1.08	0.4	36.73	-4.8793	-0.0136	0.38
965	SLU 14	1.13	0.42	37.53	-4.9765	-0.0138	0.3969
965	SLU 15	1.12	0.41	37.49	-4.9666	-0.0139	0.3927
965	SLU 16	1.12	0.41	37.25	-4.9461	-0.0137	0.3943
965	SLU 17	1.11	0.4	37.21	-4.9361	-0.0138	0.3901
965	SLU 18	1.11	0.45	37.95	-5.0261	-0.0135	0.3899
965	SLU 19	1.1	0.44	37.91	-5.0161	-0.0136	0.3857
965	SLU 20	1.13	0.45	38.4	-5.0762	-0.0138	0.3972
965	SLU 21	1.12	0.44	38.36	-5.0662	-0.0139	0.3929
965	SLU 22	1.1	0.42	36.39	-4.851	-0.0133	0.3855
965	SLU 23	1.08	0.41	36.32	-4.8344	-0.0135	0.3784
965	SLU 24	1.12	0.43	37.12	-4.9316	-0.0137	0.3953
965	SLU 25	1.11	0.42	37.08	-4.9216	-0.0138	0.3911
965	SLU 26	1.1	0.41	36.78	-4.8845	-0.0137	0.3856
965	SLU 27	1.14	0.43	37.58	-4.9817	-0.014	0.4026
965	SLU 28	1.13	0.42	37.54	-4.9717	-0.014	0.3983
965	SLU 29	1.14	0.42	37.3	-4.9512	-0.0138	0.3999
965	SLU 30	1.13	0.41	37.26	-4.9412	-0.0139	0.3957
965	SLU 31	1.14	0.5	40.07	-5.2549	-0.0143	0.4019
965	SLU 32	1.19	0.52	40.87	-5.3521	-0.0145	0.4189
965	SLU 33	1.18	0.52	40.83	-5.3421	-0.0146	0.4146
965	SLU 34	1.16	0.5	40.53	-5.305	-0.0145	0.4092
965	SLU 35	1.21	0.52	41.33	-5.4022	-0.0148	0.4261
965	SLU 36	1.2	0.52	41.29	-5.3922	-0.0148	0.4219
965	SLU 37	1.2	0.51	41.05	-5.3717	-0.0146	0.4235
965	SLU 38	1.19	0.51	41.01	-5.3617	-0.0147	0.4192
965	SLU 39	1.19	0.55	41.75	-5.4517	-0.0145	0.4191
965	SLU 40	1.18	0.55	41.71	-5.4417	-0.0145	0.4149
965	SLU 41	1.21	0.55	42.2	-5.5018	-0.0147	0.4264
965	SLU 42	1.2	0.55	42.16	-5.4918	-0.0148	0.4221
965	SLU 43	1.29	0.37	41.06	-5.6071	-0.0158	0.4531
965	SLU 44	1.27	0.36	41	-5.5904	-0.0159	0.4461
965	SLU 45	1.32	0.38	41.8	-5.6876	-0.0162	0.463
965	SLU 46	1.31	0.38	41.76	-5.6777	-0.0163	0.4588
965	SLU 47	1.29	0.36	41.45	-5.6405	-0.0162	0.4533
965	SLU 48	1.34	0.38	42.25	-5.7377	-0.0164	0.4703
965	SLU 49	1.33	0.37	42.21	-5.7278	-0.0165	0.466
965	SLU 50	1.33	0.37	41.97	-5.7073	-0.0163	0.4676
965	SLU 51	1.32	0.37	41.93	-5.6973	-0.0164	0.4634
965	SLU 52	1.34	0.46	44.75	-6.0109	-0.0167	0.4696
965	SLU 53	1.38	0.48	45.55	-6.1081	-0.017	0.4866
965	SLU 54	1.37	0.47	45.51	-6.0981	-0.0171	0.4823

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
965	SLU 55	1.36	0.46	45.2	-6.061	-0.017	0.4769
965	SLU 56	1.4	0.48	46	-6.1582	-0.0173	0.4938
965	SLU 57	1.39	0.47	45.96	-6.1482	-0.0173	0.4896
965	SLU 58	1.4	0.47	45.72	-6.1278	-0.0171	0.4912
965	SLU 59	1.38	0.46	45.68	-6.1178	-0.0172	0.4869
965	SLU 60	1.38	0.51	46.42	-6.2078	-0.017	0.4868
965	SLU 61	1.37	0.5	46.38	-6.1978	-0.017	0.4825
965	SLU 62	1.4	0.51	46.88	-6.2579	-0.0172	0.494
965	SLU 63	1.39	0.5	46.84	-6.2479	-0.0173	0.4898
965	SLU 64	1.37	0.48	44.86	-6.0327	-0.0167	0.4823
965	SLU 65	1.35	0.47	44.8	-6.0161	-0.0169	0.4752
965	SLU 66	1.4	0.49	45.6	-6.1133	-0.0171	0.4922
965	SLU 67	1.39	0.48	45.56	-6.1033	-0.0172	0.4879
965	SLU 68	1.37	0.47	45.25	-6.0662	-0.0171	0.4825
965	SLU 69	1.42	0.48	46.05	-6.1634	-0.0174	0.4994
965	SLU 70	1.41	0.48	46.01	-6.1534	-0.0175	0.4952
965	SLU 71	1.41	0.48	45.77	-6.1329	-0.0172	0.4968
965	SLU 72	1.4	0.47	45.73	-6.1229	-0.0173	0.4926
965	SLU 73	1.42	0.56	48.55	-6.4366	-0.0177	0.4988
965	SLU 74	1.47	0.58	49.35	-6.5338	-0.0179	0.5158
965	SLU 75	1.45	0.57	49.31	-6.5238	-0.018	0.5115
965	SLU 76	1.44	0.56	49	-6.4867	-0.0179	0.506
965	SLU 77	1.49	0.58	49.8	-6.5839	-0.0182	0.523
965	SLU 78	1.47	0.57	49.76	-6.5739	-0.0183	0.5187
965	SLU 79	1.48	0.57	49.52	-6.5534	-0.018	0.5204
965	SLU 80	1.47	0.56	49.48	-6.5434	-0.0181	0.5161
965	SLU 81	1.47	0.61	50.22	-6.6334	-0.0179	0.516
965	SLU 82	1.45	0.61	50.18	-6.6234	-0.018	0.5117
965	SLU 83	1.49	0.61	50.68	-6.6835	-0.0181	0.5232
965	SLU 84	1.48	0.61	50.64	-6.6735	-0.0182	0.519
965	SLE RA 1	1.04	0.34	33.68	-4.547	-0.0127	0.3646
965	SLE RA 2	1.02	0.34	33.63	-4.5359	-0.0128	0.3599
965	SLE RA 3	1.06	0.35	34.16	-4.6007	-0.0129	0.3712
965	SLE RA 4	1.05	0.35	34.14	-4.5941	-0.013	0.3684
965	SLE RA 5	1.04	0.34	33.93	-4.5693	-0.0129	0.3647
965	SLE RA 6	1.07	0.35	34.47	-4.6341	-0.0131	0.376
965	SLE RA 7	1.06	0.35	34.44	-4.6275	-0.0131	0.3732
965	SLE RA 8	1.06	0.34	34.28	-4.6138	-0.013	0.3743
965	SLE RA 9	1.06	0.34	34.25	-4.6071	-0.0131	0.3714
965	SLE RA 10	1.07	0.4	36.13	-4.8162	-0.0133	0.3756
965	SLE RA 11	1.1	0.41	36.67	-4.881	-0.0135	0.3869
965	SLE RA 12	1.09	0.41	36.64	-4.8744	-0.0135	0.3841
965	SLE RA 13	1.08	0.4	36.43	-4.8496	-0.0135	0.3804
965	SLE RA 14	1.11	0.41	36.97	-4.9144	-0.0136	0.3917
965	SLE RA 15	1.11	0.41	36.94	-4.9078	-0.0137	0.3889
965	SLE RA 16	1.11	0.41	36.78	-4.8941	-0.0135	0.39
965	SLE RA 17	1.1	0.4	36.75	-4.8875	-0.0136	0.3871
965	SLE RA 18	1.1	0.43	37.25	-4.9475	-0.0134	0.387
965	SLE RA 19	1.09	0.43	37.22	-4.9408	-0.0135	0.3842
965	SLE RA 20	1.11	0.43	37.55	-4.9809	-0.0136	0.3919
965	SLE RA 21	1.11	0.43	37.52	-4.9742	-0.0137	0.389
965	SLE FR 1	1.04	0.34	33.68	-4.547	-0.0127	0.3646
965	SLE FR 2	1.03	0.34	33.67	-4.5448	-0.0127	0.3637
965	SLE FR 3	1.04	0.34	33.8	-4.5604	-0.0127	0.3665
965	SLE FR 4	1.05	0.37	34.74	-4.6649	-0.0129	0.3704
965	SLE FR 5	1.06	0.37	34.87	-4.6805	-0.013	0.3733
965	SLE FR 6	1.07	0.39	35.46	-4.7472	-0.013	0.3758
965	SLE QP 1	1.04	0.34	33.68	-4.547	-0.0127	0.3646
965	SLE QP 2	1.06	0.37	34.75	-4.6671	-0.0129	0.3713
965	SLD 1	4.77	0.38	27.7	-3.9411	0.0144	1.6713
965	SLD 2	4.38	0.88	27.24	-3.8952	0.0148	1.5378
965	SLD 3	4.83	-0.64	28.29	-4.0319	0.0128	1.6914
965	SLD 4	4.44	-0.14	27.83	-3.986	0.0132	1.5579
965	SLD 5	2.15	1.84	31.82	-4.3199	-0.0024	0.7551
965	SLD 6	1.9	2.17	31.52	-4.2895	-0.0021	0.6666
965	SLD 7	2.34	-1.58	33.79	-4.6227	-0.0076	0.8221
965	SLD 8	2.09	-1.25	33.49	-4.5922	-0.0074	0.7335
965	SLD 9	0.02	1.99	36.01	-4.7421	-0.0184	0.0092
965	SLD 10	-0.23	2.32	35.71	-4.7116	-0.0181	-0.0794
965	SLD 11	0.22	-1.43	37.98	-5.0448	-0.0237	0.0761
965	SLD 12	-0.04	-1.1	37.67	-5.0144	-0.0234	-0.0125
965	SLD 13	-2.33	0.88	41.66	-5.3482	-0.039	-0.8152
965	SLD 14	-2.71	1.38	41.2	-5.3024	-0.0386	-0.9487
965	SLD 15	-2.27	-0.14	42.25	-5.4391	-0.0406	-0.7951
965	SLD 16	-2.66	0.36	41.79	-5.3932	-0.0402	-0.9286
965	SLV 1	9.73	0.37	18.28	-2.9695	0.0509	3.4101
965	SLV 2	8.84	1.53	17.22	-2.8627	0.0518	3.0993
965	SLV 3	9.87	-1.96	19.63	-3.1797	0.0473	3.4571
965	SLV 4	8.97	-0.79	18.56	-3.0729	0.0482	3.1463
965	SLV 5	3.61	3.69	27.96	-3.8578	0.0115	1.2663
965	SLV 6	3.03	4.45	27.27	-3.7883	0.0121	1.0638
965	SLV 7	4.06	-4.06	32.43	-4.5584	-0.0004	1.423
965	SLV 8	3.48	-3.3	31.74	-4.4889	0.0002	1.2205
965	SLV 9	-1.37	4.04	37.76	-4.8454	-0.026	-0.4778
965	SLV 10	-1.95	4.8	37.06	-4.7758	-0.0254	-0.6803
965	SLV 11	-0.92	-3.71	42.23	-5.546	-0.0379	-0.3211
965	SLV 12	-1.5	-2.95	41.53	-5.4765	-0.0373	-0.5236
965	SLV 13	-6.86	1.53	50.94	-6.2614	-0.074	-2.4036
965	SLV 14	-7.76	2.7	49.87	-6.1546	-0.0731	-2.7144
965	SLV 15	-6.72	-0.79	52.28	-6.4716	-0.0776	-2.3566

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
965	SLV 16	-7.62	0.38	51.21	-6.3648	-0.0766	-2.6674
965	CRTFP Ux+	0	0	0	0	0	0
965	CRTFP Ux-	0	0	0	0	0	0
965	CRTFP Uy+	0	0	0	0	0	0
965	CRTFP Uy-	0	0	0	0	0	0
966	SLU 1	1.02	0.36	33.18	-4.6488	-0.0274	0.3576
966	SLU 2	1	0.35	33.12	-4.6324	-0.0276	0.3506
966	SLU 3	1.04	0.37	33.93	-4.7356	-0.0282	0.3676
966	SLU 4	1.03	0.37	33.9	-4.7258	-0.0283	0.3634
966	SLU 5	1.02	0.35	33.59	-4.6864	-0.0281	0.3579
966	SLU 6	1.07	0.37	34.4	-4.7896	-0.0287	0.3748
966	SLU 7	1.05	0.36	34.36	-4.7798	-0.0288	0.3706
966	SLU 8	1.06	0.36	34.11	-4.7568	-0.0284	0.3722
966	SLU 9	1.05	0.36	34.07	-4.747	-0.0285	0.368
966	SLU 10	1.06	0.46	36.92	-5.0753	-0.0303	0.3743
966	SLU 11	1.11	0.48	37.74	-5.1785	-0.0309	0.3912
966	SLU 12	1.1	0.47	37.7	-5.1686	-0.031	0.387
966	SLU 13	1.08	0.46	37.39	-5.1293	-0.0308	0.3815
966	SLU 14	1.13	0.48	38.2	-5.2325	-0.0314	0.3985
966	SLU 15	1.12	0.47	38.16	-5.2226	-0.0315	0.3943
966	SLU 16	1.12	0.47	37.92	-5.1997	-0.0311	0.3958
966	SLU 17	1.11	0.46	37.88	-5.1898	-0.0312	0.3916
966	SLU 18	1.11	0.52	38.62	-5.2815	-0.0313	0.3914
966	SLU 19	1.1	0.51	38.58	-5.2716	-0.0314	0.3872
966	SLU 20	1.13	0.52	39.08	-5.3355	-0.0318	0.3986
966	SLU 21	1.12	0.51	39.04	-5.3256	-0.0319	0.3945
966	SLU 22	1.1	0.48	37.04	-5.0975	-0.0303	0.3869
966	SLU 23	1.08	0.46	36.98	-5.0811	-0.0305	0.3799
966	SLU 24	1.13	0.49	37.79	-5.1843	-0.0311	0.3968
966	SLU 25	1.12	0.48	37.75	-5.1745	-0.0312	0.3926
966	SLU 26	1.1	0.46	37.44	-5.1351	-0.031	0.3872
966	SLU 27	1.15	0.49	38.25	-5.2383	-0.0316	0.4041
966	SLU 28	1.14	0.48	38.22	-5.2285	-0.0317	0.3999
966	SLU 29	1.14	0.48	37.97	-5.2055	-0.0313	0.4015
966	SLU 30	1.13	0.47	37.93	-5.1957	-0.0314	0.3973
966	SLU 31	1.15	0.57	40.78	-5.5239	-0.0332	0.4035
966	SLU 32	1.19	0.59	41.59	-5.6272	-0.0338	0.4205
966	SLU 33	1.18	0.58	41.56	-5.6173	-0.0339	0.4163
966	SLU 34	1.17	0.57	41.25	-5.5779	-0.0337	0.4108
966	SLU 35	1.21	0.59	42.06	-5.6812	-0.0343	0.4277
966	SLU 36	1.2	0.58	42.02	-5.6713	-0.0344	0.4235
966	SLU 37	1.21	0.58	41.77	-5.6484	-0.034	0.4251
966	SLU 38	1.2	0.57	41.73	-5.6385	-0.0341	0.4209
966	SLU 39	1.19	0.63	42.47	-5.7301	-0.0342	0.4206
966	SLU 40	1.18	0.62	42.44	-5.7203	-0.0343	0.4165
966	SLU 41	1.21	0.63	42.94	-5.7841	-0.0347	0.4279
966	SLU 42	1.2	0.62	42.9	-5.7743	-0.0348	0.4237
966	SLU 43	1.29	0.44	41.82	-5.8897	-0.0346	0.4549
966	SLU 44	1.27	0.42	41.75	-5.8733	-0.0348	0.4479
966	SLU 45	1.32	0.44	42.57	-5.9765	-0.0354	0.4648
966	SLU 46	1.31	0.44	42.53	-5.9666	-0.0355	0.4606
966	SLU 47	1.29	0.42	42.22	-5.9273	-0.0353	0.4552
966	SLU 48	1.34	0.44	43.03	-6.0305	-0.0359	0.4721
966	SLU 49	1.33	0.44	42.99	-6.0206	-0.036	0.4679
966	SLU 50	1.33	0.43	42.75	-5.9977	-0.0356	0.4694
966	SLU 51	1.32	0.43	42.71	-5.9878	-0.0357	0.4652
966	SLU 52	1.34	0.53	45.56	-6.3161	-0.0375	0.4715
966	SLU 53	1.39	0.55	46.37	-6.4193	-0.0381	0.4884
966	SLU 54	1.38	0.54	46.33	-6.4095	-0.0382	0.4842
966	SLU 55	1.36	0.53	46.02	-6.3701	-0.038	0.4788
966	SLU 56	1.41	0.55	46.83	-6.4733	-0.0386	0.4957
966	SLU 57	1.4	0.54	46.8	-6.4635	-0.0387	0.4915
966	SLU 58	1.4	0.54	46.55	-6.4405	-0.0383	0.493
966	SLU 59	1.39	0.53	46.51	-6.4307	-0.0384	0.4889
966	SLU 60	1.39	0.59	47.25	-6.5223	-0.0385	0.4886
966	SLU 61	1.38	0.58	47.21	-6.5125	-0.0386	0.4844
966	SLU 62	1.41	0.59	47.71	-6.5763	-0.039	0.4959
966	SLU 63	1.4	0.58	47.68	-6.5665	-0.0391	0.4917
966	SLU 64	1.38	0.55	45.67	-6.3383	-0.0375	0.4841
966	SLU 65	1.36	0.53	45.61	-6.3219	-0.0377	0.4772
966	SLU 66	1.4	0.56	46.42	-6.4251	-0.0383	0.4941
966	SLU 67	1.39	0.55	46.39	-6.4153	-0.0384	0.4899
966	SLU 68	1.38	0.53	46.07	-6.3759	-0.0382	0.4845
966	SLU 69	1.43	0.56	46.89	-6.4791	-0.0388	0.5014
966	SLU 70	1.41	0.55	46.85	-6.4693	-0.0389	0.4972
966	SLU 71	1.42	0.55	46.6	-6.4463	-0.0385	0.4987
966	SLU 72	1.41	0.54	46.56	-6.4365	-0.0386	0.4945
966	SLU 73	1.42	0.64	49.41	-6.7648	-0.0404	0.5008
966	SLU 74	1.47	0.66	50.23	-6.868	-0.041	0.5177
966	SLU 75	1.46	0.66	50.19	-6.8581	-0.0411	0.5135
966	SLU 76	1.44	0.64	49.88	-6.8188	-0.0409	0.5081
966	SLU 77	1.49	0.66	50.69	-6.922	-0.0415	0.525
966	SLU 78	1.48	0.65	50.65	-6.9121	-0.0416	0.5208
966	SLU 79	1.48	0.65	50.4	-6.8892	-0.0412	0.5223
966	SLU 80	1.47	0.65	50.37	-6.8793	-0.0413	0.5181
966	SLU 81	1.47	0.7	51.11	-6.971	-0.0414	0.5179
966	SLU 82	1.46	0.69	51.07	-6.9611	-0.0415	0.5137
966	SLU 83	1.49	0.7	51.57	-7.025	-0.0419	0.5252
966	SLU 84	1.48	0.69	51.53	-7.0151	-0.042	0.521
966	SLE RA 1	1.04	0.4	34.29	-4.777	-0.0282	0.366

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
966	SLE RA 2	1.03	0.39	34.24	-4.7661	-0.0283	0.3613
966	SLE RA 3	1.06	0.4	34.79	-4.8349	-0.0287	0.3726
966	SLE RA 4	1.05	0.4	34.76	-4.8283	-0.0288	0.3698
966	SLE RA 5	1.04	0.39	34.55	-4.8021	-0.0287	0.3662
966	SLE RA 6	1.07	0.4	35.1	-4.8709	-0.0291	0.3775
966	SLE RA 7	1.07	0.4	35.07	-4.8643	-0.0291	0.3747
966	SLE RA 8	1.07	0.4	34.9	-4.849	-0.0289	0.3757
966	SLE RA 9	1.06	0.39	34.88	-4.8425	-0.029	0.3729
966	SLE RA 10	1.07	0.46	36.78	-5.0613	-0.0302	0.3771
966	SLE RA 11	1.1	0.47	37.32	-5.1301	-0.0306	0.3884
966	SLE RA 12	1.1	0.47	37.3	-5.1236	-0.0306	0.3856
966	SLE RA 13	1.09	0.46	37.09	-5.0973	-0.0305	0.3819
966	SLE RA 14	1.12	0.47	37.63	-5.1661	-0.0309	0.3932
966	SLE RA 15	1.11	0.47	37.61	-5.1596	-0.031	0.3904
966	SLE RA 16	1.11	0.47	37.44	-5.1443	-0.0307	0.3914
966	SLE RA 17	1.1	0.46	37.42	-5.1377	-0.0308	0.3887
966	SLE RA 18	1.1	0.5	37.91	-5.1988	-0.0308	0.3885
966	SLE RA 19	1.1	0.49	37.88	-5.1922	-0.0309	0.3857
966	SLE RA 20	1.12	0.5	38.22	-5.2348	-0.0311	0.3933
966	SLE RA 21	1.11	0.49	38.19	-5.2282	-0.0312	0.3905
966	SLE FR 1	1.04	0.4	34.29	-4.777	-0.0282	0.366
966	SLE FR 2	1.04	0.39	34.28	-4.7748	-0.0282	0.3651
966	SLE FR 3	1.05	0.4	34.41	-4.7914	-0.0284	0.3679
966	SLE FR 4	1.06	0.43	35.36	-4.9014	-0.029	0.3718
966	SLE FR 5	1.06	0.43	35.5	-4.918	-0.0291	0.3747
966	SLE FR 6	1.07	0.45	36.1	-4.9879	-0.0295	0.3772
966	SLE QP 1	1.04	0.4	34.29	-4.777	-0.0282	0.366
966	SLE QP 2	1.06	0.43	35.37	-4.9036	-0.029	0.3727
966	SLD 1	4.77	0.49	27.46	-3.9245	0.0027	1.6721
966	SLD 2	4.38	1.03	26.99	-3.8773	0.0033	1.5387
966	SLD 3	4.83	-0.61	28.09	-4.0056	0.0005	1.6924
966	SLD 4	4.44	-0.07	27.62	-3.9584	0.0011	1.559
966	SLD 5	2.15	2	32.13	-4.4953	-0.0163	0.756
966	SLD 6	1.9	2.36	31.82	-4.464	-0.0159	0.6675
966	SLD 7	2.35	-1.64	34.23	-4.7658	-0.0236	0.8236
966	SLD 8	2.09	-1.28	33.91	-4.7345	-0.0231	0.7351
966	SLD 9	0.03	2.13	36.83	-5.0726	-0.0348	0.0104
966	SLD 10	-0.23	2.49	36.52	-5.0413	-0.0344	-0.0782
966	SLD 11	0.22	-1.51	38.93	-5.3431	-0.0421	0.0779
966	SLD 12	-0.03	-1.15	38.61	-5.3118	-0.0417	-0.0106
966	SLD 13	-2.32	0.92	43.13	-5.8487	-0.0591	-0.8135
966	SLD 14	-2.71	1.46	42.65	-5.8015	-0.0585	-0.9469
966	SLD 15	-2.26	-0.17	43.76	-5.9299	-0.0613	-0.7933
966	SLD 16	-2.65	0.37	43.28	-5.8827	-0.0607	-0.9266
966	SLV 1	9.73	0.53	16.89	-2.6136	0.045	3.41
966	SLV 2	8.83	1.79	15.78	-2.5036	0.0465	3.0995
966	SLV 3	9.87	-1.95	18.31	-2.8019	0.0401	3.4575
966	SLV 4	8.97	-0.69	17.21	-2.692	0.0416	3.147
966	SLV 5	3.61	3.99	27.86	-3.9503	0.0004	1.2666
966	SLV 6	3.03	4.81	27.14	-3.8787	0.0014	1.0643
966	SLV 7	4.07	-4.26	32.61	-4.578	-0.016	1.4247
966	SLV 8	3.48	-3.44	31.89	-4.5064	-0.015	1.2223
966	SLV 9	-1.36	4.3	38.85	-5.3007	-0.043	-0.4769
966	SLV 10	-1.95	5.12	38.13	-5.2291	-0.042	-0.6792
966	SLV 11	-0.91	-3.96	43.61	-5.9285	-0.0594	-0.3188
966	SLV 12	-1.49	-3.14	42.89	-5.8569	-0.0584	-0.5211
966	SLV 13	-6.85	1.54	53.54	-7.1152	-0.0996	-2.4015
966	SLV 14	-7.75	2.8	52.43	-7.0052	-0.0981	-2.712
966	SLV 15	-6.71	-0.94	54.96	-7.3035	-0.1045	-2.3541
966	SLV 16	-7.61	0.32	53.86	-7.1936	-0.103	-2.6646
966	CRTFP Ux+	0	0	0	0	0	0
966	CRTFP Ux-	0	0	0	0	0	0
966	CRTFP Uy+	0	0	0	0	0	0
966	CRTFP Uy-	0	0	0	0	0	0
967	SLU 1	1.02	0.42	34.19	-5.1836	-0.0402	0.3584
967	SLU 2	1	0.4	34.14	-5.1676	-0.0404	0.3515
967	SLU 3	1.05	0.43	34.97	-5.2846	-0.0414	0.3684
967	SLU 4	1.04	0.42	34.94	-5.275	-0.0415	0.3642
967	SLU 5	1.02	0.4	34.62	-5.2304	-0.0412	0.3588
967	SLU 6	1.07	0.43	35.45	-5.3474	-0.0421	0.3757
967	SLU 7	1.06	0.42	35.42	-5.3378	-0.0422	0.3715
967	SLU 8	1.06	0.42	35.16	-5.3093	-0.0416	0.373
967	SLU 9	1.05	0.41	35.12	-5.2996	-0.0418	0.3689
967	SLU 10	1.07	0.52	38.04	-5.6723	-0.0448	0.3751
967	SLU 11	1.11	0.55	38.88	-5.7894	-0.0457	0.392
967	SLU 12	1.1	0.54	38.85	-5.7797	-0.0458	0.3879
967	SLU 13	1.09	0.52	38.53	-5.7351	-0.0455	0.3825
967	SLU 14	1.13	0.55	39.36	-5.8522	-0.0464	0.3993
967	SLU 15	1.12	0.54	39.33	-5.8426	-0.0465	0.3952
967	SLU 16	1.13	0.54	39.06	-5.814	-0.046	0.3966
967	SLU 17	1.11	0.53	39.03	-5.8044	-0.0461	0.3925
967	SLU 18	1.11	0.59	39.78	-5.9047	-0.0464	0.3922
967	SLU 19	1.1	0.58	39.74	-5.8951	-0.0466	0.388
967	SLU 20	1.13	0.59	40.26	-5.9675	-0.0471	0.3995
967	SLU 21	1.12	0.58	40.22	-5.9579	-0.0473	0.3953
967	SLU 22	1.1	0.54	38.16	-5.6955	-0.0448	0.3877
967	SLU 23	1.08	0.53	38.1	-5.6795	-0.045	0.3808
967	SLU 24	1.13	0.55	38.94	-5.7965	-0.0459	0.3977
967	SLU 25	1.12	0.54	38.9	-5.7869	-0.046	0.3936
967	SLU 26	1.1	0.53	38.58	-5.7423	-0.0457	0.3881

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
967	SLU 27	1.15	0.55	39.42	-5.8593	-0.0466	0.405
967	SLU 28	1.14	0.54	39.39	-5.8497	-0.0467	0.4009
967	SLU 29	1.14	0.54	39.12	-5.8212	-0.0462	0.4023
967	SLU 30	1.13	0.53	39.09	-5.8115	-0.0463	0.3982
967	SLU 31	1.15	0.65	42.01	-6.1842	-0.0493	0.4045
967	SLU 32	1.2	0.67	42.85	-6.3013	-0.0502	0.4213
967	SLU 33	1.18	0.66	42.81	-6.2916	-0.0504	0.4172
967	SLU 34	1.17	0.65	42.49	-6.2471	-0.05	0.4118
967	SLU 35	1.22	0.67	43.33	-6.3641	-0.0509	0.4286
967	SLU 36	1.2	0.66	43.29	-6.3545	-0.0511	0.4245
967	SLU 37	1.21	0.66	43.03	-6.3259	-0.0505	0.426
967	SLU 38	1.2	0.65	43	-6.3163	-0.0507	0.4218
967	SLU 39	1.2	0.72	43.74	-6.4166	-0.051	0.4215
967	SLU 40	1.18	0.7	43.71	-6.407	-0.0511	0.4174
967	SLU 41	1.22	0.72	44.23	-6.4795	-0.0517	0.4288
967	SLU 42	1.2	0.7	44.19	-6.4698	-0.0518	0.4247
967	SLU 43	1.3	0.51	43.09	-6.5632	-0.0507	0.4558
967	SLU 44	1.28	0.49	43.03	-6.5471	-0.051	0.449
967	SLU 45	1.32	0.52	43.87	-6.6642	-0.0519	0.4658
967	SLU 46	1.31	0.5	43.83	-6.6545	-0.052	0.4617
967	SLU 47	1.3	0.49	43.51	-6.61	-0.0517	0.4563
967	SLU 48	1.34	0.51	44.35	-6.727	-0.0526	0.4731
967	SLU 49	1.33	0.5	44.32	-6.7174	-0.0527	0.469
967	SLU 50	1.34	0.51	44.05	-6.6889	-0.0522	0.4705
967	SLU 51	1.33	0.49	44.02	-6.6792	-0.0523	0.4663
967	SLU 52	1.34	0.61	46.94	-7.0519	-0.0553	0.4726
967	SLU 53	1.39	0.64	47.78	-7.169	-0.0562	0.4895
967	SLU 54	1.38	0.62	47.74	-7.1593	-0.0563	0.4853
967	SLU 55	1.36	0.61	47.42	-7.1147	-0.056	0.4799
967	SLU 56	1.41	0.63	48.26	-7.2318	-0.0569	0.4968
967	SLU 57	1.4	0.62	48.22	-7.2221	-0.057	0.4926
967	SLU 58	1.4	0.63	47.96	-7.1936	-0.0565	0.4941
967	SLU 59	1.39	0.61	47.93	-7.184	-0.0566	0.49
967	SLU 60	1.39	0.68	48.67	-7.2843	-0.057	0.4896
967	SLU 61	1.38	0.67	48.64	-7.2747	-0.0571	0.4855
967	SLU 62	1.41	0.68	49.16	-7.3471	-0.0577	0.4969
967	SLU 63	1.4	0.67	49.12	-7.3375	-0.0578	0.4928
967	SLU 64	1.38	0.63	47.06	-7.0751	-0.0553	0.4852
967	SLU 65	1.36	0.61	47	-7.059	-0.0555	0.4783
967	SLU 66	1.41	0.64	47.83	-7.1761	-0.0564	0.4951
967	SLU 67	1.39	0.63	47.8	-7.1665	-0.0565	0.491
967	SLU 68	1.38	0.61	47.48	-7.1219	-0.0562	0.4856
967	SLU 69	1.43	0.64	48.32	-7.2389	-0.0571	0.5024
967	SLU 70	1.42	0.63	48.28	-7.2293	-0.0572	0.4983
967	SLU 71	1.42	0.63	48.02	-7.2008	-0.0567	0.4998
967	SLU 72	1.41	0.62	47.99	-7.1911	-0.0568	0.4957
967	SLU 73	1.42	0.73	50.91	-7.5638	-0.0599	0.5019
967	SLU 74	1.47	0.76	51.74	-7.6809	-0.0608	0.5188
967	SLU 75	1.46	0.75	51.71	-7.6712	-0.0609	0.5147
967	SLU 76	1.45	0.73	51.39	-7.6266	-0.0606	0.5092
967	SLU 77	1.49	0.76	52.23	-7.7437	-0.0615	0.5261
967	SLU 78	1.48	0.75	52.19	-7.734	-0.0616	0.522
967	SLU 79	1.49	0.75	51.93	-7.7055	-0.061	0.5234
967	SLU 80	1.47	0.74	51.9	-7.6959	-0.0612	0.5193
967	SLU 81	1.47	0.8	52.64	-7.7962	-0.0615	0.519
967	SLU 82	1.46	0.79	52.61	-7.7866	-0.0616	0.5148
967	SLU 83	1.49	0.8	53.12	-7.859	-0.0622	0.5263
967	SLU 84	1.48	0.79	53.09	-7.8494	-0.0623	0.5221
967	SLE RA 1	1.04	0.46	35.33	-5.3299	-0.0415	0.3668
967	SLE RA 2	1.03	0.44	35.29	-5.3192	-0.0417	0.3622
967	SLE RA 3	1.06	0.46	35.84	-5.3972	-0.0423	0.3734
967	SLE RA 4	1.05	0.46	35.82	-5.3908	-0.0424	0.3707
967	SLE RA 5	1.04	0.44	35.61	-5.3611	-0.0421	0.367
967	SLE RA 6	1.07	0.46	36.17	-5.4391	-0.0427	0.3783
967	SLE RA 7	1.07	0.46	36.14	-5.4327	-0.0428	0.3755
967	SLE RA 8	1.07	0.46	35.97	-5.4137	-0.0425	0.3765
967	SLE RA 9	1.06	0.45	35.95	-5.4072	-0.0426	0.3738
967	SLE RA 10	1.07	0.52	37.89	-5.6557	-0.0446	0.3779
967	SLE RA 11	1.1	0.54	38.45	-5.7337	-0.0452	0.3892
967	SLE RA 12	1.1	0.54	38.43	-5.7273	-0.0453	0.3864
967	SLE RA 13	1.09	0.52	38.22	-5.6976	-0.045	0.3828
967	SLE RA 14	1.12	0.54	38.77	-5.7756	-0.0456	0.394
967	SLE RA 15	1.11	0.54	38.75	-5.7692	-0.0457	0.3913
967	SLE RA 16	1.11	0.54	38.57	-5.7502	-0.0454	0.3923
967	SLE RA 17	1.11	0.53	38.55	-5.7437	-0.0455	0.3895
967	SLE RA 18	1.1	0.57	39.05	-5.8106	-0.0457	0.3893
967	SLE RA 19	1.1	0.56	39.03	-5.8042	-0.0458	0.3865
967	SLE RA 20	1.12	0.57	39.37	-5.8525	-0.0461	0.3942
967	SLE RA 21	1.11	0.56	39.35	-5.8461	-0.0462	0.3914
967	SLE FR 1	1.04	0.46	35.33	-5.3299	-0.0415	0.3668
967	SLE FR 2	1.04	0.45	35.32	-5.3277	-0.0416	0.3658
967	SLE FR 3	1.05	0.46	35.45	-5.3466	-0.0417	0.3687
967	SLE FR 4	1.06	0.49	36.43	-5.472	-0.0428	0.3726
967	SLE FR 5	1.07	0.49	36.57	-5.4909	-0.043	0.3755
967	SLE FR 6	1.07	0.51	37.19	-5.5703	-0.0436	0.378
967	SLE QP 1	1.04	0.46	35.33	-5.3299	-0.0415	0.3668
967	SLE QP 2	1.06	0.49	36.44	-5.4741	-0.0428	0.3735
967	SLD 1	4.77	0.6	27.54	-4.1671	-0.0072	1.6723
967	SLD 2	4.38	1.19	27.05	-4.1143	-0.0063	1.5391
967	SLD 3	4.83	-0.57	28.23	-4.239	-0.0098	1.6927

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
967	SLD 4	4.44	0.01	27.73	-4.1862	-0.009	1.5595
967	SLD 5	2.15	2.2	32.83	-4.9825	-0.0282	0.7564
967	SLD 6	1.9	2.59	32.5	-4.9475	-0.0277	0.668
967	SLD 7	2.35	-1.71	35.1	-5.2223	-0.037	0.8245
967	SLD 8	2.09	-1.33	34.78	-5.1872	-0.0365	0.7361
967	SLD 9	0.03	2.31	38.11	-5.761	-0.0491	0.011
967	SLD 10	-0.23	2.7	37.78	-5.7259	-0.0485	-0.0774
967	SLD 11	0.22	-1.6	40.39	-6.0008	-0.0579	0.079
967	SLD 12	-0.03	-1.22	40.06	-5.9657	-0.0573	-0.0094
967	SLD 13	-2.32	0.97	45.15	-6.762	-0.0766	-0.8125
967	SLD 14	-2.7	1.55	44.66	-6.7092	-0.0758	-0.9457
967	SLD 15	-2.26	-0.2	45.84	-6.834	-0.0792	-0.792
967	SLD 16	-2.65	0.38	45.34	-6.7811	-0.0784	-0.9253
967	SLV 1	9.72	0.71	15.64	-2.4166	0.0405	3.4095
967	SLV 2	8.83	2.07	14.49	-2.2935	0.0424	3.0993
967	SLV 3	9.86	-1.95	17.19	-2.584	0.0345	3.4573
967	SLV 4	8.97	-0.59	16.04	-2.4609	0.0364	3.1471
967	SLV 5	3.61	4.35	28.06	-4.3246	-0.0091	1.2664
967	SLV 6	3.02	5.24	27.3	-4.2444	-0.0078	1.0643
967	SLV 7	4.07	-4.51	33.22	-4.8826	-0.029	1.4256
967	SLV 8	3.48	-3.63	32.47	-4.8024	-0.0278	1.2235
967	SLV 9	-1.36	4.61	40.42	-6.1458	-0.0578	-0.4765
967	SLV 10	-1.95	5.5	39.66	-6.0656	-0.0566	-0.6786
967	SLV 11	-0.9	-4.26	45.58	-6.7038	-0.0777	-0.3172
967	SLV 12	-1.49	-3.37	44.83	-6.6236	-0.0765	-0.5194
967	SLV 13	-6.85	1.57	56.84	-8.4873	-0.1219	-2.4
967	SLV 14	-7.74	2.93	55.69	-8.3642	-0.12	-2.7103
967	SLV 15	-6.71	-1.09	58.39	-8.6547	-0.1279	-2.3523
967	SLV 16	-7.6	0.27	57.24	-8.5316	-0.126	-2.6625
967	CRTFP Ux+	0	0	0	0	0	0
967	CRTFP Ux-	0	0	0	0	0	0
967	CRTFP Uy+	0	0	0	0	0	0
967	CRTFP Uy-	0	0	0	0	0	0
968	SLU 1	0.88	0.42	30.62	-5.0679	0.823	0.2979
968	SLU 2	0.86	0.4	30.58	-5.0545	0.8216	0.2926
968	SLU 3	0.9	0.42	31.32	-5.1706	0.8417	0.3063
968	SLU 4	0.89	0.41	31.3	-5.1625	0.8409	0.3031
968	SLU 5	0.88	0.39	31.01	-5.1183	0.8332	0.2989
968	SLU 6	0.92	0.42	31.76	-5.2345	0.8533	0.3126
968	SLU 7	0.91	0.41	31.73	-5.2264	0.8525	0.3094
968	SLU 8	0.92	0.41	31.49	-5.1956	0.8462	0.3105
968	SLU 9	0.91	0.4	31.46	-5.1876	0.8453	0.3073
968	SLU 10	0.92	0.51	34.07	-5.5604	0.9156	0.3096
968	SLU 11	0.96	0.54	34.82	-5.6766	0.9357	0.3234
968	SLU 12	0.95	0.53	34.79	-5.6685	0.9349	0.3202
968	SLU 13	0.94	0.51	34.51	-5.6243	0.9272	0.316
968	SLU 14	0.98	0.54	35.25	-5.7404	0.9473	0.3297
968	SLU 15	0.97	0.53	35.23	-5.7324	0.9465	0.3265
968	SLU 16	0.97	0.53	34.99	-5.7016	0.9402	0.3276
968	SLU 17	0.96	0.52	34.96	-5.6936	0.9394	0.3244
968	SLU 18	0.96	0.58	35.61	-5.7907	0.9573	0.3223
968	SLU 19	0.95	0.57	35.59	-5.7826	0.9565	0.3191
968	SLU 20	0.98	0.58	36.05	-5.8546	0.9689	0.3286
968	SLU 21	0.97	0.57	36.02	-5.8465	0.9681	0.3254
968	SLU 22	0.95	0.53	34.17	-5.5814	0.9184	0.3199
968	SLU 23	0.94	0.51	34.13	-5.568	0.917	0.3146
968	SLU 24	0.98	0.54	34.87	-5.6841	0.9371	0.3283
968	SLU 25	0.97	0.53	34.85	-5.6761	0.9363	0.3252
968	SLU 26	0.95	0.51	34.56	-5.6319	0.9286	0.3209
968	SLU 27	0.99	0.54	35.31	-5.748	0.9487	0.3347
968	SLU 28	0.98	0.53	35.28	-5.74	0.9479	0.3315
968	SLU 29	0.99	0.53	35.04	-5.7092	0.9416	0.3326
968	SLU 30	0.98	0.52	35.02	-5.7011	0.9408	0.3294
968	SLU 31	0.99	0.63	37.62	-6.074	1.0111	0.3317
968	SLU 32	1.03	0.65	38.37	-6.1901	1.0312	0.3454
968	SLU 33	1.02	0.64	38.34	-6.182	1.0304	0.3422
968	SLU 34	1.01	0.63	38.06	-6.1379	1.0227	0.338
968	SLU 35	1.05	0.65	38.81	-6.254	1.0428	0.3518
968	SLU 36	1.04	0.64	38.78	-6.2459	1.042	0.3486
968	SLU 37	1.04	0.64	38.54	-6.2152	1.0357	0.3497
968	SLU 38	1.03	0.63	38.51	-6.2071	1.0348	0.3465
968	SLU 39	1.03	0.7	39.17	-6.3042	1.0528	0.3443
968	SLU 40	1.02	0.68	39.14	-6.2962	1.0519	0.3411
968	SLU 41	1.05	0.69	39.6	-6.3681	1.0644	0.3507
968	SLU 42	1.04	0.68	39.58	-6.3601	1.0635	0.3475
968	SLU 43	1.12	0.5	38.59	-6.4121	1.0371	0.3796
968	SLU 44	1.1	0.48	38.55	-6.3987	1.0358	0.3743
968	SLU 45	1.14	0.51	39.29	-6.5149	1.0559	0.3881
968	SLU 46	1.13	0.5	39.27	-6.5068	1.055	0.3849
968	SLU 47	1.12	0.48	38.98	-6.4626	1.0474	0.3807
968	SLU 48	1.16	0.51	39.73	-6.5788	1.0675	0.3944
968	SLU 49	1.15	0.5	39.7	-6.5707	1.0666	0.3912
968	SLU 50	1.16	0.5	39.46	-6.5399	1.0603	0.3923
968	SLU 51	1.15	0.49	39.43	-6.5319	1.0595	0.3891
968	SLU 52	1.16	0.6	42.04	-6.9047	1.1298	0.3914
968	SLU 53	1.2	0.62	42.79	-7.0208	1.1499	0.4052
968	SLU 54	1.19	0.61	42.76	-7.0128	1.1491	0.402
968	SLU 55	1.18	0.6	42.48	-6.9686	1.1414	0.3978
968	SLU 56	1.22	0.62	43.22	-7.0847	1.1615	0.4115
968	SLU 57	1.21	0.61	43.2	-7.0767	1.1607	0.4083

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
968	SLU 58	1.21	0.62	42.96	-7.0459	1.1544	0.4094
968	SLU 59	1.2	0.6	42.93	-7.0379	1.1536	0.4062
968	SLU 60	1.2	0.67	43.58	-7.135	1.1715	0.4041
968	SLU 61	1.19	0.65	43.56	-7.1269	1.1707	0.4009
968	SLU 62	1.22	0.67	44.02	-7.1989	1.1831	0.4104
968	SLU 63	1.21	0.65	43.99	-7.1908	1.1823	0.4072
968	SLU 64	1.19	0.62	42.14	-6.9257	1.1326	0.4017
968	SLU 65	1.17	0.6	42.1	-6.9123	1.1312	0.3964
968	SLU 66	1.22	0.62	42.84	-7.0284	1.1513	0.4101
968	SLU 67	1.21	0.61	42.82	-7.0204	1.1505	0.4069
968	SLU 68	1.19	0.6	42.53	-6.9762	1.1428	0.4027
968	SLU 69	1.23	0.62	43.28	-7.0923	1.1629	0.4165
968	SLU 70	1.22	0.61	43.25	-7.0843	1.1621	0.4133
968	SLU 71	1.23	0.61	43.01	-7.0535	1.1558	0.4144
968	SLU 72	1.22	0.6	42.98	-7.0454	1.155	0.4112
968	SLU 73	1.23	0.71	45.59	-7.4183	1.2253	0.4135
968	SLU 74	1.27	0.74	46.34	-7.5344	1.2453	0.4272
968	SLU 75	1.26	0.73	46.31	-7.5263	1.2445	0.424
968	SLU 76	1.25	0.71	46.03	-7.4821	1.2369	0.4198
968	SLU 77	1.29	0.74	46.77	-7.5983	1.2569	0.4336
968	SLU 78	1.28	0.73	46.75	-7.5902	1.2561	0.4304
968	SLU 79	1.28	0.73	46.51	-7.5594	1.2498	0.4315
968	SLU 80	1.27	0.72	46.48	-7.5514	1.249	0.4283
968	SLU 81	1.27	0.78	47.13	-7.6485	1.2669	0.4261
968	SLU 82	1.26	0.77	47.11	-7.6405	1.2661	0.4229
968	SLU 83	1.29	0.78	47.57	-7.7124	1.2785	0.4325
968	SLU 84	1.28	0.77	47.54	-7.7044	1.2777	0.4293
968	SLE RA 1	0.9	0.45	31.64	-5.2146	0.8502	0.3042
968	SLE RA 2	0.89	0.43	31.61	-5.2056	0.8493	0.3006
968	SLE RA 3	0.92	0.45	32.1	-5.2831	0.8627	0.3098
968	SLE RA 4	0.91	0.45	32.09	-5.2777	0.8622	0.3077
968	SLE RA 5	0.9	0.43	31.9	-5.2482	0.8571	0.3048
968	SLE RA 6	0.93	0.45	32.39	-5.3257	0.8705	0.314
968	SLE RA 7	0.92	0.44	32.38	-5.3203	0.8699	0.3119
968	SLE RA 8	0.92	0.45	32.22	-5.2998	0.8657	0.3126
968	SLE RA 9	0.92	0.44	32.2	-5.2944	0.8652	0.3105
968	SLE RA 10	0.93	0.51	33.94	-5.543	0.912	0.312
968	SLE RA 11	0.96	0.53	34.43	-5.6204	0.9254	0.3212
968	SLE RA 12	0.95	0.52	34.42	-5.615	0.9249	0.319
968	SLE RA 13	0.94	0.51	34.23	-5.5856	0.9198	0.3162
968	SLE RA 14	0.97	0.53	34.72	-5.663	0.9331	0.3254
968	SLE RA 15	0.96	0.52	34.71	-5.6576	0.9326	0.3233
968	SLE RA 16	0.96	0.52	34.55	-5.6371	0.9284	0.324
968	SLE RA 17	0.96	0.52	34.53	-5.6317	0.9279	0.3219
968	SLE RA 18	0.95	0.56	34.96	-5.6965	0.9398	0.3204
968	SLE RA 19	0.95	0.55	34.95	-5.6911	0.9393	0.3183
968	SLE RA 20	0.97	0.56	35.25	-5.7391	0.9475	0.3247
968	SLE RA 21	0.96	0.55	35.24	-5.7337	0.947	0.3225
968	SLE FR 1	0.9	0.45	31.64	-5.2146	0.8502	0.3042
968	SLE FR 2	0.9	0.45	31.63	-5.2128	0.85	0.3035
968	SLE FR 3	0.91	0.45	31.75	-5.2316	0.8533	0.3058
968	SLE FR 4	0.91	0.48	32.63	-5.3574	0.8769	0.3083
968	SLE FR 5	0.92	0.48	32.75	-5.3762	0.8802	0.3107
968	SLE FR 6	0.93	0.5	33.3	-5.4555	0.895	0.3123
968	SLE QP 1	0.9	0.45	31.64	-5.2146	0.8502	0.3042
968	SLE QP 2	0.92	0.48	32.63	-5.3591	0.8771	0.309
968	SLD 1	4.12	0.9	24.06	-3.9254	0.6625	1.4304
968	SLD 2	3.79	1.44	23.61	-3.8735	0.6506	1.2998
968	SLD 3	4.17	-0.19	24.71	-3.9848	0.679	1.4661
968	SLD 4	3.84	0.35	24.26	-3.9329	0.667	1.3355
968	SLD 5	1.86	2.16	29.16	-4.8483	0.7899	0.6151
968	SLD 6	1.64	2.52	28.87	-4.8139	0.782	0.5285
968	SLD 7	2.03	-1.47	31.32	-5.0464	0.8448	0.734
968	SLD 8	1.81	-1.11	31.02	-5.012	0.8369	0.6473
968	SLD 9	0.02	2.07	34.25	-5.7063	0.9173	-0.0292
968	SLD 10	-0.2	2.43	33.95	-5.6719	0.9094	-0.1159
968	SLD 11	0.19	-1.56	36.4	-5.9044	0.9722	0.0896
968	SLD 12	-0.03	-1.19	36.1	-5.87	0.9643	0.0029
968	SLD 13	-2	0.61	41.01	-6.7854	1.0872	-0.7174
968	SLD 14	-2.34	1.15	40.56	-6.7335	1.0752	-0.848
968	SLD 15	-1.95	-0.48	41.65	-6.8448	1.1036	-0.6818
968	SLD 16	-2.28	0.06	41.21	-6.7929	1.0917	-0.8124
968	SLV 1	8.4	1.42	12.6	-2.0051	0.3756	2.9312
968	SLV 2	7.63	2.68	11.56	-1.8843	0.3478	2.6271
968	SLV 3	8.52	-1.05	14.07	-2.1431	0.4129	3.0127
968	SLV 4	7.75	0.22	13.02	-2.0224	0.3851	2.7087
968	SLV 5	3.12	4.28	24.59	-4.1648	0.675	1.0255
968	SLV 6	2.61	5.1	23.91	-4.0861	0.6569	0.8273
968	SLV 7	3.52	-3.94	29.47	-4.6249	0.7993	1.2973
968	SLV 8	3.01	-3.11	28.79	-4.5462	0.7812	1.0991
968	SLV 9	-1.18	4.08	36.48	-6.172	0.973	-0.4811
968	SLV 10	-1.68	4.9	35.8	-6.0934	0.9549	-0.6792
968	SLV 11	-0.78	-4.14	41.36	-6.6322	1.0973	-0.2093
968	SLV 12	-1.28	-3.32	40.68	-6.5535	1.0792	-0.4074
968	SLV 13	-5.91	0.74	52.25	-8.6959	1.3691	-2.0906
968	SLV 14	-6.69	2.01	51.2	-8.5752	1.3413	-2.3946
968	SLV 15	-5.79	-1.72	53.71	-8.834	1.4063	-2.009
968	SLV 16	-6.57	-0.46	52.66	-8.7132	1.3786	-2.3131
968	CRTFP Ux+	0	0	0	0	0	0
968	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
968	CRTFP Uy+	0	0	0	0	0	0
968	CRTFP Uy-	0	0	0	0	0	0
969	SLU 1	0.65	0.34	23.26	-4.087	3.0406	0.183
969	SLU 2	0.64	0.32	23.23	-4.0777	3.0368	0.181
969	SLU 3	0.67	0.34	23.79	-4.172	3.1107	0.1886
969	SLU 4	0.66	0.33	23.78	-4.1664	3.1084	0.1874
969	SLU 5	0.65	0.32	23.56	-4.1306	3.0803	0.1857
969	SLU 6	0.68	0.34	24.12	-4.2249	3.1542	0.1933
969	SLU 7	0.67	0.33	24.11	-4.2193	3.1519	0.1921
969	SLU 8	0.67	0.34	23.92	-4.1927	3.1275	0.1924
969	SLU 9	0.67	0.33	23.9	-4.1871	3.1252	0.1912
969	SLU 10	0.68	0.41	25.88	-4.4925	3.3838	0.1837
969	SLU 11	0.71	0.43	26.45	-4.5868	3.4577	0.1913
969	SLU 12	0.7	0.42	26.43	-4.5812	3.4554	0.1901
969	SLU 13	0.69	0.41	26.21	-4.5453	3.4272	0.1884
969	SLU 14	0.72	0.43	26.78	-4.6397	3.5011	0.196
969	SLU 15	0.71	0.42	26.76	-4.6341	3.4988	0.1948
969	SLU 16	0.72	0.43	26.57	-4.6075	3.4745	0.1951
969	SLU 17	0.71	0.42	26.56	-4.6019	3.4722	0.1939
969	SLU 18	0.71	0.47	27.05	-4.6796	3.5363	0.1868
969	SLU 19	0.7	0.46	27.03	-4.674	3.534	0.1857
969	SLU 20	0.72	0.47	27.38	-4.7324	3.5797	0.1915
969	SLU 21	0.71	0.46	27.36	-4.7268	3.5774	0.1904
969	SLU 22	0.7	0.43	25.95	-4.5082	3.3933	0.1896
969	SLU 23	0.69	0.41	25.92	-4.4989	3.3895	0.1877
969	SLU 24	0.72	0.43	26.49	-4.5932	3.4634	0.1953
969	SLU 25	0.71	0.42	26.47	-4.5876	3.4611	0.1941
969	SLU 26	0.7	0.41	26.26	-4.5517	3.4329	0.1924
969	SLU 27	0.73	0.43	26.82	-4.6461	3.5069	0.2
969	SLU 28	0.72	0.42	26.81	-4.6405	3.5046	0.1988
969	SLU 29	0.73	0.43	26.62	-4.6139	3.4802	0.199
969	SLU 30	0.72	0.42	26.6	-4.6083	3.4779	0.1978
969	SLU 31	0.73	0.5	28.58	-4.9137	3.7364	0.1904
969	SLU 32	0.76	0.52	29.14	-5.008	3.8104	0.198
969	SLU 33	0.75	0.51	29.13	-5.0024	3.8081	0.1968
969	SLU 34	0.74	0.5	28.91	-4.9665	3.7799	0.1951
969	SLU 35	0.77	0.52	29.48	-5.0608	3.8538	0.2027
969	SLU 36	0.77	0.51	29.46	-5.0553	3.8515	0.2015
969	SLU 37	0.77	0.52	29.27	-5.0287	3.8272	0.2017
969	SLU 38	0.76	0.51	29.25	-5.0231	3.8249	0.2006
969	SLU 39	0.76	0.56	29.74	-5.1007	3.889	0.1935
969	SLU 40	0.75	0.55	29.73	-5.0952	3.8867	0.1923
969	SLU 41	0.77	0.56	30.08	-5.1536	3.9324	0.1982
969	SLU 42	0.77	0.55	30.06	-5.148	3.9301	0.197
969	SLU 43	0.82	0.41	29.31	-5.1687	3.8319	0.2356
969	SLU 44	0.81	0.39	29.28	-5.1594	3.8281	0.2336
969	SLU 45	0.84	0.41	29.84	-5.2537	3.902	0.2412
969	SLU 46	0.83	0.4	29.83	-5.2481	3.8997	0.24
969	SLU 47	0.83	0.39	29.61	-5.2123	3.8715	0.2383
969	SLU 48	0.86	0.41	30.18	-5.3066	3.9454	0.2459
969	SLU 49	0.85	0.4	30.16	-5.301	3.9431	0.2447
969	SLU 50	0.85	0.41	29.97	-5.2744	3.9188	0.245
969	SLU 51	0.84	0.4	29.96	-5.2688	3.9165	0.2438
969	SLU 52	0.85	0.48	31.93	-5.5742	4.175	0.2363
969	SLU 53	0.88	0.5	32.5	-5.6685	4.249	0.2439
969	SLU 54	0.88	0.49	32.48	-5.6629	4.2467	0.2427
969	SLU 55	0.87	0.48	32.26	-5.627	4.2185	0.241
969	SLU 56	0.9	0.5	32.83	-5.7214	4.2924	0.2486
969	SLU 57	0.89	0.49	32.81	-5.7158	4.2901	0.2474
969	SLU 58	0.89	0.5	32.63	-5.6892	4.2658	0.2477
969	SLU 59	0.89	0.49	32.61	-5.6836	4.2635	0.2465
969	SLU 60	0.88	0.54	33.1	-5.7613	4.3276	0.2394
969	SLU 61	0.88	0.53	33.08	-5.7557	4.3253	0.2383
969	SLU 62	0.9	0.54	33.43	-5.8141	4.371	0.2441
969	SLU 63	0.89	0.53	33.41	-5.8085	4.3687	0.243
969	SLU 64	0.88	0.5	32.01	-5.5899	4.1846	0.2422
969	SLU 65	0.86	0.48	31.98	-5.5806	4.1808	0.2403
969	SLU 66	0.89	0.5	32.54	-5.6749	4.2547	0.2479
969	SLU 67	0.89	0.49	32.52	-5.6693	4.2524	0.2467
969	SLU 68	0.88	0.48	32.31	-5.6334	4.2242	0.245
969	SLU 69	0.91	0.5	32.87	-5.7278	4.2981	0.2526
969	SLU 70	0.9	0.49	32.86	-5.7222	4.2958	0.2514
969	SLU 71	0.9	0.5	32.67	-5.6956	4.2715	0.2516
969	SLU 72	0.9	0.49	32.65	-5.69	4.2692	0.2505
969	SLU 73	0.91	0.57	34.63	-5.9954	4.5277	0.243
969	SLU 74	0.94	0.6	35.2	-6.0897	4.6016	0.2506
969	SLU 75	0.93	0.58	35.18	-6.0841	4.5993	0.2494
969	SLU 76	0.92	0.57	34.96	-6.0482	4.5712	0.2477
969	SLU 77	0.95	0.59	35.53	-6.1425	4.6451	0.2553
969	SLU 78	0.94	0.58	35.51	-6.137	4.6428	0.2541
969	SLU 79	0.94	0.59	35.32	-6.1104	4.6185	0.2543
969	SLU 80	0.94	0.58	35.31	-6.1048	4.6162	0.2532
969	SLU 81	0.94	0.63	35.8	-6.1824	4.6802	0.2461
969	SLU 82	0.93	0.62	35.78	-6.1768	4.6779	0.2449
969	SLU 83	0.95	0.63	36.13	-6.2353	4.7237	0.2508
969	SLU 84	0.94	0.62	36.11	-6.2297	4.7214	0.2496
969	SLE RA 1	0.66	0.36	24.03	-4.2073	3.1414	0.1849
969	SLE RA 2	0.65	0.35	24.01	-4.2011	3.1388	0.1836
969	SLE RA 3	0.67	0.37	24.38	-4.264	3.1881	0.1886
969	SLE RA 4	0.67	0.36	24.37	-4.2603	3.1866	0.1878

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
969	SLE RA 5	0.66	0.35	24.23	-4.2364	3.1678	0.1867
969	SLE RA 6	0.68	0.37	24.61	-4.2993	3.2171	0.1918
969	SLE RA 7	0.68	0.36	24.59	-4.2955	3.2156	0.191
969	SLE RA 8	0.68	0.36	24.47	-4.2778	3.1993	0.1911
969	SLE RA 9	0.68	0.36	24.46	-4.2741	3.1978	0.1904
969	SLE RA 10	0.68	0.41	25.78	-4.4777	3.3702	0.1854
969	SLE RA 11	0.7	0.43	26.15	-4.5405	3.4194	0.1904
969	SLE RA 12	0.7	0.42	26.14	-4.5368	3.4179	0.1896
969	SLE RA 13	0.69	0.41	26	-4.5129	3.3991	0.1885
969	SLE RA 14	0.71	0.43	26.37	-4.5758	3.4484	0.1936
969	SLE RA 15	0.71	0.42	26.36	-4.5721	3.4469	0.1928
969	SLE RA 16	0.71	0.42	26.24	-4.5544	3.4306	0.1929
969	SLE RA 17	0.7	0.42	26.23	-4.5506	3.4291	0.1922
969	SLE RA 18	0.7	0.45	26.55	-4.6024	3.4718	0.1875
969	SLE RA 19	0.7	0.44	26.54	-4.5987	3.4703	0.1867
969	SLE RA 20	0.71	0.45	26.78	-4.6376	3.5008	0.1906
969	SLE RA 21	0.71	0.44	26.76	-4.6339	3.4993	0.1898
969	SLE FR 1	0.66	0.36	24.03	-4.2073	3.1414	0.1849
969	SLE FR 2	0.66	0.36	24.02	-4.2061	3.1409	0.1846
969	SLE FR 3	0.67	0.36	24.12	-4.2214	3.153	0.1861
969	SLE FR 4	0.67	0.39	24.78	-4.3246	3.24	0.1854
969	SLE FR 5	0.68	0.39	24.87	-4.34	3.2521	0.1869
969	SLE FR 6	0.68	0.41	25.29	-4.4049	3.3066	0.1862
969	SLE QP 1	0.66	0.36	24.03	-4.2073	3.1414	0.1849
969	SLE QP 2	0.67	0.39	24.78	-4.3259	3.2405	0.1857
969	SLD 1	3.03	0.71	17.93	-3.0902	2.3502	0.9875
969	SLD 2	2.78	1.13	17.58	-3.0492	2.3051	0.8466
969	SLD 3	3.07	-0.14	18.44	-3.1347	2.4168	1.1006
969	SLD 4	2.82	0.29	18.1	-3.0937	2.3718	0.9596
969	SLD 5	1.37	1.69	22.01	-3.8951	2.8806	0.2803
969	SLD 6	1.21	1.97	21.78	-3.8679	2.8507	0.1868
969	SLD 7	1.49	-1.13	23.72	-4.0435	3.1026	0.6573
969	SLD 8	1.33	-0.85	23.49	-4.0163	3.0727	0.5637
969	SLD 9	0.02	1.63	26.08	-4.6354	3.4083	-0.1924
969	SLD 10	-0.15	1.91	25.85	-4.6082	3.3784	-0.286
969	SLD 11	0.14	-1.2	27.79	-4.7838	3.6304	0.1845
969	SLD 12	-0.02	-0.91	27.56	-4.7566	3.6005	0.091
969	SLD 13	-1.47	0.49	31.47	-5.558	4.1093	-0.5883
969	SLD 14	-1.72	0.92	31.13	-5.517	4.0643	-0.7293
969	SLD 15	-1.44	-0.35	31.99	-5.6025	4.1759	-0.4753
969	SLD 16	-1.68	0.07	31.64	-5.5615	4.1309	-0.6162
969	SLV 1	6.18	1.11	8.76	-1.4355	1.1599	2.0636
969	SLV 2	5.61	2.1	7.96	-1.3401	1.0551	1.7355
969	SLV 3	6.27	-0.81	9.92	-1.5383	1.3106	2.3201
969	SLV 4	5.7	0.18	9.12	-1.4429	1.2057	1.992
969	SLV 5	2.29	3.34	18.36	-3.3196	2.4063	0.4178
969	SLV 6	1.92	3.98	17.84	-3.2575	2.3379	0.204
969	SLV 7	2.59	-3.05	22.22	-3.6622	2.9085	1.2726
969	SLV 8	2.22	-2.41	21.7	-3.6001	2.8402	1.0588
969	SLV 9	-0.87	3.19	27.87	-5.0516	3.6409	-0.6875
969	SLV 10	-1.24	3.83	27.34	-4.9895	3.5726	-0.9013
969	SLV 11	-0.57	-3.21	31.73	-5.3942	4.1431	0.1674
969	SLV 12	-0.94	-2.56	31.21	-5.3321	4.0748	-0.0464
969	SLV 13	-4.35	0.6	40.45	-7.2088	5.2753	-1.6207
969	SLV 14	-4.92	1.59	39.65	-7.1134	5.1705	-1.9488
969	SLV 15	-4.26	-1.32	41.61	-7.3116	5.426	-1.3642
969	SLV 16	-4.83	-0.33	40.81	-7.2162	5.3212	-1.6923
969	CRTFP Ux+	0	0	0	0	0	0
969	CRTFP Ux-	0	0	0	0	0	0
969	CRTFP Uy+	0	0	0	0	0	0
969	CRTFP Uy-	0	0	0	0	0	0
971	SLU 1	0.51	0.05	28.92	0.5672	7.2553	-0.0204
971	SLU 2	0.49	0.04	28.93	0.5676	7.258	-0.0166
971	SLU 3	0.52	0.06	29.6	0.5807	7.4282	-0.0215
971	SLU 4	0.51	0.05	29.61	0.581	7.4298	-0.0193
971	SLU 5	0.5	0.04	29.35	0.5757	7.3615	-0.0164
971	SLU 6	0.53	0.06	30.02	0.5888	7.5317	-0.0214
971	SLU 7	0.52	0.05	30.02	0.5891	7.5332	-0.0191
971	SLU 8	0.53	0.05	29.75	0.5834	7.4623	-0.0201
971	SLU 9	0.52	0.04	29.75	0.5837	7.4639	-0.0178
971	SLU 10	0.52	0.08	32.52	0.6384	8.1615	-0.0278
971	SLU 11	0.55	0.1	33.19	0.6515	8.3317	-0.0327
971	SLU 12	0.54	0.09	33.19	0.6518	8.3333	-0.0304
971	SLU 13	0.53	0.08	32.93	0.6466	8.265	-0.0276
971	SLU 14	0.56	0.1	33.6	0.6596	8.4352	-0.0325
971	SLU 15	0.55	0.09	33.61	0.6599	8.4368	-0.0303
971	SLU 16	0.56	0.1	33.33	0.6542	8.3659	-0.0312
971	SLU 17	0.55	0.09	33.34	0.6545	8.3675	-0.0289
971	SLU 18	0.55	0.12	34.04	0.6684	8.5461	-0.0363
971	SLU 19	0.54	0.11	34.05	0.6686	8.5477	-0.0341
971	SLU 20	0.56	0.11	34.45	0.6765	8.6496	-0.0362
971	SLU 21	0.55	0.11	34.46	0.6767	8.6512	-0.0339
971	SLU 22	0.55	0.11	32.55	0.6389	8.1674	-0.0348
971	SLU 23	0.53	0.1	32.56	0.6394	8.1701	-0.031
971	SLU 24	0.56	0.11	33.23	0.6524	8.3402	-0.0359
971	SLU 25	0.55	0.11	33.24	0.6527	8.3418	-0.0336
971	SLU 26	0.54	0.09	32.97	0.6475	8.2736	-0.0308
971	SLU 27	0.57	0.11	33.64	0.6606	8.4437	-0.0357
971	SLU 28	0.56	0.1	33.65	0.6608	8.4453	-0.0335
971	SLU 29	0.57	0.11	33.37	0.6551	8.3744	-0.0344

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
971	SLU 30	0.56	0.1	33.38	0.6554	8.376	-0.0321
971	SLU 31	0.56	0.14	36.14	0.7102	9.0736	-0.0421
971	SLU 32	0.6	0.16	36.81	0.7233	9.2438	-0.0471
971	SLU 33	0.58	0.15	36.82	0.7235	9.2454	-0.0448
971	SLU 34	0.57	0.14	36.55	0.7183	9.1771	-0.042
971	SLU 35	0.61	0.16	37.22	0.7314	9.3473	-0.0469
971	SLU 36	0.59	0.15	37.23	0.7316	9.3489	-0.0446
971	SLU 37	0.6	0.15	36.96	0.7259	9.278	-0.0456
971	SLU 38	0.59	0.14	36.96	0.7262	9.2795	-0.0433
971	SLU 39	0.6	0.17	37.67	0.7401	9.4582	-0.0507
971	SLU 40	0.58	0.16	37.67	0.7403	9.4598	-0.0484
971	SLU 41	0.61	0.17	38.08	0.7482	9.5617	-0.0505
971	SLU 42	0.6	0.16	38.09	0.7484	9.5633	-0.0483
971	SLU 43	0.64	0.05	36.36	0.7128	9.1192	-0.0216
971	SLU 44	0.63	0.04	36.37	0.7132	9.1219	-0.0178
971	SLU 45	0.66	0.06	37.04	0.7263	9.292	-0.0227
971	SLU 46	0.65	0.05	37.04	0.7266	9.2936	-0.0205
971	SLU 47	0.64	0.04	36.78	0.7213	9.2254	-0.0176
971	SLU 48	0.67	0.05	37.45	0.7344	9.3955	-0.0226
971	SLU 49	0.66	0.05	37.46	0.7347	9.3971	-0.0203
971	SLU 50	0.67	0.05	37.18	0.729	9.3262	-0.0212
971	SLU 51	0.65	0.04	37.19	0.7292	9.3278	-0.019
971	SLU 52	0.66	0.08	39.95	0.784	10.0254	-0.029
971	SLU 53	0.69	0.1	40.62	0.7971	10.1956	-0.0339
971	SLU 54	0.68	0.09	40.63	0.7974	10.1972	-0.0316
971	SLU 55	0.67	0.08	40.36	0.7921	10.1289	-0.0288
971	SLU 56	0.7	0.1	41.03	0.8052	10.2991	-0.0337
971	SLU 57	0.69	0.09	41.04	0.8055	10.3007	-0.0315
971	SLU 58	0.7	0.09	40.76	0.7998	10.2298	-0.0324
971	SLU 59	0.69	0.08	40.77	0.8001	10.2314	-0.0301
971	SLU 60	0.69	0.11	41.48	0.8139	10.41	-0.0375
971	SLU 61	0.68	0.11	41.48	0.8142	10.4116	-0.0353
971	SLU 62	0.7	0.11	41.89	0.822	10.5135	-0.0374
971	SLU 63	0.69	0.1	41.89	0.8223	10.5151	-0.0351
971	SLU 64	0.69	0.11	39.98	0.7845	10.0313	-0.0359
971	SLU 65	0.67	0.09	39.99	0.7849	10.034	-0.0322
971	SLU 66	0.7	0.11	40.66	0.798	10.2041	-0.0371
971	SLU 67	0.69	0.1	40.67	0.7983	10.2057	-0.0348
971	SLU 68	0.68	0.09	40.4	0.793	10.1375	-0.032
971	SLU 69	0.71	0.11	41.07	0.8061	10.3076	-0.0369
971	SLU 70	0.7	0.1	41.08	0.8064	10.3092	-0.0347
971	SLU 71	0.71	0.1	40.81	0.8007	10.2383	-0.0356
971	SLU 72	0.7	0.1	40.81	0.801	10.2399	-0.0333
971	SLU 73	0.7	0.14	43.58	0.8557	10.9375	-0.0433
971	SLU 74	0.73	0.15	44.25	0.8688	11.1077	-0.0483
971	SLU 75	0.72	0.15	44.25	0.8691	11.1093	-0.046
971	SLU 76	0.71	0.14	43.99	0.8638	11.041	-0.0432
971	SLU 77	0.74	0.15	44.66	0.8769	11.2112	-0.0481
971	SLU 78	0.73	0.14	44.66	0.8772	11.2128	-0.0458
971	SLU 79	0.74	0.15	44.39	0.8715	11.1418	-0.0468
971	SLU 80	0.73	0.14	44.4	0.8718	11.1434	-0.0445
971	SLU 81	0.73	0.17	45.1	0.8856	11.3221	-0.0519
971	SLU 82	0.72	0.16	45.11	0.8859	11.3237	-0.0496
971	SLU 83	0.74	0.17	45.51	0.8938	11.4256	-0.0517
971	SLU 84	0.73	0.16	45.52	0.894	11.4272	-0.0495
971	SLE RA 1	0.52	0.07	29.96	0.5877	7.5159	-0.0245
971	SLE RA 2	0.51	0.06	29.97	0.588	7.5177	-0.022
971	SLE RA 3	0.53	0.07	30.41	0.5967	7.6311	-0.0253
971	SLE RA 4	0.52	0.07	30.42	0.5969	7.6322	-0.0237
971	SLE RA 5	0.51	0.06	30.24	0.5934	7.5867	-0.0219
971	SLE RA 6	0.53	0.07	30.69	0.6021	7.7001	-0.0252
971	SLE RA 7	0.53	0.07	30.69	0.6023	7.7012	-0.0236
971	SLE RA 8	0.53	0.07	30.51	0.5985	7.6539	-0.0243
971	SLE RA 9	0.53	0.06	30.51	0.5987	7.655	-0.0228
971	SLE RA 10	0.53	0.09	32.35	0.6352	8.1201	-0.0294
971	SLE RA 11	0.55	0.1	32.8	0.6439	8.2335	-0.0327
971	SLE RA 12	0.54	0.1	32.81	0.6441	8.2346	-0.0312
971	SLE RA 13	0.54	0.09	32.63	0.6406	8.1891	-0.0293
971	SLE RA 14	0.56	0.1	33.08	0.6493	8.3025	-0.0326
971	SLE RA 15	0.55	0.1	33.08	0.6495	8.3036	-0.0311
971	SLE RA 16	0.56	0.1	32.9	0.6457	8.2563	-0.0317
971	SLE RA 17	0.55	0.09	32.9	0.6459	8.2574	-0.0302
971	SLE RA 18	0.55	0.11	33.37	0.6551	8.3765	-0.0351
971	SLE RA 19	0.54	0.11	33.38	0.6553	8.3775	-0.0336
971	SLE RA 20	0.56	0.11	33.65	0.6605	8.4455	-0.035
971	SLE RA 21	0.55	0.11	33.65	0.6607	8.4465	-0.0335
971	SLE FR 1	0.52	0.07	29.96	0.5877	7.5159	-0.0245
971	SLE FR 2	0.52	0.07	29.96	0.5877	7.5163	-0.024
971	SLE FR 3	0.52	0.07	30.07	0.5899	7.5435	-0.0244
971	SLE FR 4	0.53	0.08	30.98	0.608	7.7744	-0.0272
971	SLE FR 5	0.53	0.08	31.09	0.6101	7.8017	-0.0276
971	SLE FR 6	0.53	0.09	31.66	0.6214	7.9462	-0.0298
971	SLE QP 1	0.52	0.07	29.96	0.5877	7.5159	-0.0245
971	SLE QP 2	0.53	0.08	30.98	0.6079	7.7741	-0.0277
971	SLD 1	3.15	0.42	26.22	0.4902	6.2916	-0.1621
971	SLD 2	2.87	0.61	26	0.4875	6.2812	-0.2027
971	SLD 3	3.18	-0.21	26.98	0.5065	6.4367	-0.0027
971	SLD 4	2.91	-0.03	26.76	0.5038	6.4264	-0.0433
971	SLD 5	1.3	1.12	28.44	0.5484	7.1111	-0.3024
971	SLD 6	1.12	1.24	28.29	0.5466	7.1042	-0.3293

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
971	SLD 7	1.43	-1	30.97	0.6027	7.5949	0.2289
971	SLD 8	1.25	-0.88	30.83	0.6009	7.588	0.202
971	SLD 9	-0.19	1.05	31.14	0.6149	7.9601	-0.2573
971	SLD 10	-0.38	1.17	30.99	0.6132	7.9533	-0.2843
971	SLD 11	-0.07	-1.07	33.67	0.6692	8.444	0.2739
971	SLD 12	-0.25	-0.95	33.52	0.6675	8.4371	0.247
971	SLD 13	-1.85	0.19	35.21	0.712	9.1218	-0.012
971	SLD 14	-2.13	0.38	34.98	0.7093	9.1115	-0.0526
971	SLD 15	-1.81	-0.44	35.97	0.7283	9.2669	0.1473
971	SLD 16	-2.09	-0.26	35.74	0.7256	9.2566	0.1067
971	SLV 1	6.65	0.86	19.87	0.333	4.3089	-0.3366
971	SLV 2	6.01	1.29	19.35	0.3268	4.2849	-0.4311
971	SLV 3	6.74	-0.58	21.59	0.37	4.6401	0.0245
971	SLV 4	6.1	-0.15	21.07	0.3638	4.6161	-0.07
971	SLV 5	2.34	2.43	25.13	0.4705	6.2365	-0.6514
971	SLV 6	1.92	2.71	24.79	0.4664	6.2208	-0.713
971	SLV 7	2.64	-2.38	30.87	0.5937	7.3404	0.5522
971	SLV 8	2.22	-2.1	30.52	0.5896	7.3248	0.4906
971	SLV 9	-1.17	2.27	31.44	0.6262	8.2234	-0.546
971	SLV 10	-1.58	2.55	31.1	0.6221	8.2078	-0.6076
971	SLV 11	-0.87	-2.54	37.17	0.7494	9.3274	0.6576
971	SLV 12	-1.28	-2.26	36.83	0.7454	9.3117	0.596
971	SLV 13	-5.04	0.32	40.9	0.8521	10.9321	0.0146
971	SLV 14	-5.68	0.75	40.37	0.8459	10.9081	-0.0799
971	SLV 15	-4.95	-1.12	42.62	0.889	11.2633	0.3757
971	SLV 16	-5.59	-0.7	42.09	0.8828	11.2393	0.2812
971	CRTFP Ux+	0	0	0	0	0	0
971	CRTFP Ux-	0	0	0	0	0	0
971	CRTFP Uy+	0	0	0	0	0	0
971	CRTFP Uy-	0	0	0	0	0	0
974	SLU 1	-0.37	-0.22	20.79	0.015	-5.5885	-0.0734
974	SLU 2	-0.38	-0.25	20.8	0.015	-5.596	-0.0812
974	SLU 3	-0.38	-0.23	21.28	0.0154	-5.7193	-0.0742
974	SLU 4	-0.38	-0.24	21.29	0.0154	-5.7239	-0.0789
974	SLU 5	-0.38	-0.25	21.1	0.0151	-5.6727	-0.0819
974	SLU 6	-0.38	-0.23	21.58	0.0155	-5.796	-0.0749
974	SLU 7	-0.39	-0.24	21.59	0.0155	-5.8006	-0.0796
974	SLU 8	-0.38	-0.23	21.37	0.0153	-5.7419	-0.0749
974	SLU 9	-0.38	-0.24	21.38	0.0153	-5.7464	-0.0795
974	SLU 10	-0.42	-0.25	23.41	0.0171	-6.3208	-0.0832
974	SLU 11	-0.42	-0.23	23.89	0.0175	-6.4441	-0.0762
974	SLU 12	-0.42	-0.25	23.9	0.0175	-6.4486	-0.0809
974	SLU 13	-0.42	-0.26	23.7	0.0173	-6.3974	-0.0839
974	SLU 14	-0.42	-0.24	24.19	0.0176	-6.5208	-0.0769
974	SLU 15	-0.43	-0.25	24.19	0.0176	-6.5253	-0.0816
974	SLU 16	-0.42	-0.23	23.98	0.0174	-6.4666	-0.0768
974	SLU 17	-0.42	-0.25	23.99	0.0174	-6.4711	-0.0815
974	SLU 18	-0.42	-0.23	24.51	0.0181	-6.6238	-0.0762
974	SLU 19	-0.43	-0.25	24.52	0.0181	-6.6283	-0.0809
974	SLU 20	-0.43	-0.24	24.81	0.0182	-6.7005	-0.0769
974	SLU 21	-0.44	-0.25	24.82	0.0182	-6.705	-0.0816
974	SLU 22	-0.41	-0.22	23.42	0.0171	-6.3098	-0.0717
974	SLU 23	-0.42	-0.24	23.43	0.0171	-6.3174	-0.0795
974	SLU 24	-0.42	-0.22	23.92	0.0175	-6.4407	-0.0725
974	SLU 25	-0.42	-0.24	23.92	0.0175	-6.4452	-0.0772
974	SLU 26	-0.42	-0.25	23.73	0.0172	-6.3941	-0.0802
974	SLU 27	-0.42	-0.22	24.21	0.0176	-6.5174	-0.0732
974	SLU 28	-0.43	-0.24	24.22	0.0176	-6.5219	-0.0779
974	SLU 29	-0.42	-0.22	24.01	0.0174	-6.4632	-0.0731
974	SLU 30	-0.42	-0.24	24.01	0.0174	-6.4678	-0.0778
974	SLU 31	-0.46	-0.25	26.04	0.0192	-7.0421	-0.0814
974	SLU 32	-0.46	-0.23	26.52	0.0196	-7.1654	-0.0745
974	SLU 33	-0.46	-0.24	26.53	0.0196	-7.1699	-0.0792
974	SLU 34	-0.46	-0.25	26.33	0.0193	-7.1188	-0.0822
974	SLU 35	-0.46	-0.23	26.82	0.0197	-7.2421	-0.0752
974	SLU 36	-0.47	-0.24	26.83	0.0197	-7.2466	-0.0799
974	SLU 37	-0.46	-0.23	26.61	0.0195	-7.1879	-0.0751
974	SLU 38	-0.46	-0.24	26.62	0.0195	-7.1925	-0.0798
974	SLU 39	-0.47	-0.23	27.14	0.0202	-7.3451	-0.0745
974	SLU 40	-0.47	-0.24	27.15	0.0201	-7.3497	-0.0792
974	SLU 41	-0.47	-0.23	27.44	0.0203	-7.4218	-0.0752
974	SLU 42	-0.48	-0.24	27.45	0.0203	-7.4264	-0.0799
974	SLU 43	-0.46	-0.29	26.12	0.0188	-7.0177	-0.096
974	SLU 44	-0.47	-0.32	26.14	0.0188	-7.0253	-0.1038
974	SLU 45	-0.47	-0.3	26.62	0.0192	-7.1486	-0.0968
974	SLU 46	-0.48	-0.31	26.63	0.0192	-7.1531	-0.1015
974	SLU 47	-0.48	-0.32	26.43	0.0189	-7.102	-0.1045
974	SLU 48	-0.48	-0.3	26.91	0.0193	-7.2253	-0.0975
974	SLU 49	-0.48	-0.31	26.92	0.0193	-7.2298	-0.1022
974	SLU 50	-0.47	-0.3	26.71	0.0191	-7.1711	-0.0975
974	SLU 51	-0.48	-0.31	26.72	0.0191	-7.1756	-0.1021
974	SLU 52	-0.51	-0.32	28.74	0.0209	-7.75	-0.1057
974	SLU 53	-0.51	-0.3	29.23	0.0213	-7.8733	-0.0988
974	SLU 54	-0.52	-0.32	29.24	0.0213	-7.8778	-0.1035
974	SLU 55	-0.52	-0.33	29.04	0.0211	-7.8267	-0.1065
974	SLU 56	-0.52	-0.3	29.52	0.0214	-7.95	-0.0995
974	SLU 57	-0.52	-0.32	29.53	0.0214	-7.9545	-0.1042
974	SLU 58	-0.51	-0.3	29.32	0.0212	-7.8958	-0.0994
974	SLU 59	-0.52	-0.32	29.33	0.0212	-7.9003	-0.1041
974	SLU 60	-0.52	-0.3	29.85	0.0219	-8.053	-0.0988

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
974	SLU 61	-0.53	-0.32	29.86	0.0219	-8.0575	-0.1035
974	SLU 62	-0.53	-0.3	30.14	0.022	-8.1297	-0.0995
974	SLU 63	-0.53	-0.32	30.15	0.022	-8.1342	-0.1042
974	SLU 64	-0.5	-0.29	28.75	0.0209	-7.7391	-0.0943
974	SLU 65	-0.51	-0.31	28.77	0.0209	-7.7466	-0.1021
974	SLU 66	-0.51	-0.29	29.25	0.0213	-7.8699	-0.0951
974	SLU 67	-0.52	-0.3	29.26	0.0213	-7.8745	-0.0998
974	SLU 68	-0.52	-0.31	29.06	0.021	-7.8233	-0.1028
974	SLU 69	-0.52	-0.29	29.54	0.0214	-7.9466	-0.0958
974	SLU 70	-0.52	-0.31	29.55	0.0214	-7.9511	-0.1005
974	SLU 71	-0.51	-0.29	29.34	0.0212	-7.8924	-0.0957
974	SLU 72	-0.52	-0.31	29.35	0.0212	-7.897	-0.1004
974	SLU 73	-0.55	-0.32	31.37	0.023	-8.4713	-0.104
974	SLU 74	-0.55	-0.3	31.86	0.0234	-8.5946	-0.0971
974	SLU 75	-0.56	-0.31	31.87	0.0234	-8.5992	-0.1017
974	SLU 76	-0.56	-0.32	31.67	0.0231	-8.548	-0.1048
974	SLU 77	-0.56	-0.3	32.15	0.0235	-8.6713	-0.0978
974	SLU 78	-0.56	-0.31	32.16	0.0235	-8.6759	-0.1025
974	SLU 79	-0.55	-0.3	31.95	0.0233	-8.6172	-0.0977
974	SLU 80	-0.56	-0.31	31.96	0.0233	-8.6217	-0.1024
974	SLU 81	-0.56	-0.3	32.48	0.024	-8.7744	-0.0971
974	SLU 82	-0.57	-0.31	32.49	0.0239	-8.7789	-0.1018
974	SLU 83	-0.57	-0.3	32.77	0.0241	-8.8511	-0.0978
974	SLU 84	-0.57	-0.31	32.78	0.0241	-8.8556	-0.1025
974	SLE RA 1	-0.38	-0.22	21.54	0.0156	-5.7946	-0.0729
974	SLE RA 2	-0.39	-0.24	21.55	0.0156	-5.7996	-0.0781
974	SLE RA 3	-0.38	-0.22	21.87	0.0159	-5.8818	-0.0734
974	SLE RA 4	-0.39	-0.23	21.88	0.0159	-5.8848	-0.0766
974	SLE RA 5	-0.39	-0.24	21.74	0.0157	-5.8507	-0.0786
974	SLE RA 6	-0.39	-0.23	22.07	0.0159	-5.933	-0.0739
974	SLE RA 7	-0.39	-0.24	22.07	0.0159	-5.936	-0.0771
974	SLE RA 8	-0.38	-0.23	21.93	0.0158	-5.8968	-0.0739
974	SLE RA 9	-0.39	-0.24	21.94	0.0158	-5.8999	-0.077
974	SLE RA 10	-0.41	-0.24	23.29	0.017	-6.2828	-0.0794
974	SLE RA 11	-0.41	-0.23	23.61	0.0173	-6.365	-0.0748
974	SLE RA 12	-0.42	-0.24	23.61	0.0173	-6.368	-0.0779
974	SLE RA 13	-0.42	-0.24	23.48	0.0171	-6.3339	-0.0799
974	SLE RA 14	-0.41	-0.23	23.8	0.0174	-6.4161	-0.0752
974	SLE RA 15	-0.42	-0.24	23.81	0.0174	-6.4191	-0.0784
974	SLE RA 16	-0.41	-0.23	23.67	0.0172	-6.38	-0.0752
974	SLE RA 17	-0.42	-0.24	23.67	0.0172	-6.383	-0.0783
974	SLE RA 18	-0.42	-0.23	24.02	0.0177	-6.4848	-0.0748
974	SLE RA 19	-0.42	-0.24	24.03	0.0176	-6.4878	-0.0779
974	SLE RA 20	-0.42	-0.23	24.22	0.0177	-6.5359	-0.0753
974	SLE RA 21	-0.42	-0.24	24.22	0.0177	-6.5389	-0.0784
974	SLE FR 1	-0.38	-0.22	21.54	0.0156	-5.7946	-0.0729
974	SLE FR 2	-0.38	-0.23	21.54	0.0156	-5.7956	-0.0739
974	SLE FR 3	-0.38	-0.22	21.62	0.0157	-5.815	-0.0731
974	SLE FR 4	-0.39	-0.23	22.29	0.0162	-6.0026	-0.0745
974	SLE FR 5	-0.39	-0.23	22.36	0.0163	-6.0221	-0.0736
974	SLE FR 6	-0.4	-0.23	22.78	0.0166	-6.1397	-0.0738
974	SLE QP 1	-0.38	-0.22	21.54	0.0156	-5.7946	-0.0729
974	SLE QP 2	-0.39	-0.22	22.28	0.0162	-6.0016	-0.0734
974	SLD 1	1.46	-0.15	25.59	0.0285	-6.9644	-0.05
974	SLD 2	1.26	-0.27	25.68	0.0277	-6.9923	-0.0891
974	SLD 3	1.42	-0.61	25.93	0.0288	-7.1053	-0.1988
974	SLD 4	1.23	-0.73	26.02	0.028	-7.1332	-0.2379
974	SLD 5	0.26	0.51	22.73	0.0197	-6.0716	0.1664
974	SLD 6	0.13	0.43	22.79	0.0191	-6.0901	0.1404
974	SLD 7	0.13	-1.01	23.89	0.0206	-6.5415	-0.3296
974	SLD 8	0	-1.09	23.95	0.02	-6.56	-0.3555
974	SLD 9	-0.78	0.64	20.62	0.0125	-5.4433	0.2087
974	SLD 10	-0.91	0.56	20.68	0.0119	-5.4618	0.1827
974	SLD 11	-0.91	-0.88	21.77	0.0134	-5.9132	-0.2873
974	SLD 12	-1.04	-0.96	21.83	0.0128	-5.9317	-0.3132
974	SLD 13	-2.01	0.28	18.54	0.0045	-4.8701	0.091
974	SLD 14	-2.2	0.16	18.64	0.0037	-4.898	0.0519
974	SLD 15	-2.04	-0.18	18.89	0.0048	-5.011	-0.0577
974	SLD 16	-2.24	-0.3	18.98	0.0039	-5.0389	-0.0969
974	SLV 1	3.93	-0.07	30.02	0.045	-8.2587	-0.0245
974	SLV 2	3.48	-0.35	30.24	0.043	-8.3236	-0.1157
974	SLV 3	3.84	-1.1	30.81	0.0457	-8.5791	-0.3611
974	SLV 4	3.39	-1.39	31.02	0.0437	-8.644	-0.4522
974	SLV 5	1.12	1.44	23.38	0.0242	-6.1815	0.4677
974	SLV 6	0.82	1.26	23.52	0.0229	-6.2238	0.4083
974	SLV 7	0.82	-2.01	25.99	0.0264	-7.2494	-0.6542
974	SLV 8	0.53	-2.19	26.13	0.0251	-7.2917	-0.7135
974	SLV 9	-1.31	1.74	18.43	0.0074	-4.7116	0.5667
974	SLV 10	-1.61	1.56	18.57	0.0061	-4.7539	0.5073
974	SLV 11	-1.6	-1.71	21.05	0.0096	-5.7795	-0.5552
974	SLV 12	-1.9	-1.89	21.19	0.0082	-5.8218	-0.6146
974	SLV 13	-4.17	0.94	13.55	-0.0112	-3.3593	0.3054
974	SLV 14	-4.62	0.66	13.76	-0.0132	-3.4242	0.2142
974	SLV 15	-4.26	-0.1	14.33	-0.0105	-3.6797	-0.0312
974	SLV 16	-4.71	-0.38	14.55	-0.0125	-3.7446	-0.1223
974	CRTFP Ux+	0	0	0	0	0	0
974	CRTFP Ux-	0	0	0	0	0	0
974	CRTFP Uy+	0	0	0	0	0	0
974	CRTFP Uy-	0	0	0	0	0	0
977	SLU 1	-0.4	0.79	52.57	-1.4061	0.404	0.0114

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
977	SLU 2	-0.43	0.74	52.65	-1.4078	0.4027	0.0109
977	SLU 3	-0.41	0.83	53.81	-1.4389	0.4151	0.0117
977	SLU 4	-0.43	0.79	53.86	-1.44	0.4144	0.0114
977	SLU 5	-0.43	0.75	53.35	-1.4265	0.4089	0.0112
977	SLU 6	-0.41	0.84	54.51	-1.4577	0.4213	0.012
977	SLU 7	-0.43	0.81	54.56	-1.4587	0.4205	0.0118
977	SLU 8	-0.4	0.82	53.98	-1.4436	0.4163	0.012
977	SLU 9	-0.42	0.78	54.02	-1.4446	0.4156	0.0117
977	SLU 10	-0.5	0.86	59.56	-1.5929	0.4643	0.0123
977	SLU 11	-0.48	0.95	60.71	-1.6241	0.4766	0.0131
977	SLU 12	-0.5	0.92	60.76	-1.6251	0.4759	0.0128
977	SLU 13	-0.5	0.87	60.26	-1.6117	0.4705	0.0126
977	SLU 14	-0.48	0.97	61.42	-1.6428	0.4828	0.0134
977	SLU 15	-0.5	0.93	61.47	-1.6439	0.4821	0.0131
977	SLU 16	-0.47	0.94	60.88	-1.6287	0.4779	0.0133
977	SLU 17	-0.49	0.91	60.93	-1.6298	0.4771	0.0131
977	SLU 18	-0.5	0.97	62.44	-1.6706	0.4919	0.0133
977	SLU 19	-0.52	0.94	62.48	-1.6716	0.4911	0.013
977	SLU 20	-0.5	0.98	63.14	-1.6893	0.4981	0.0136
977	SLU 21	-0.52	0.95	63.19	-1.6904	0.4973	0.0133
977	SLU 22	-0.46	1	59.41	-1.5885	0.4651	0.013
977	SLU 23	-0.49	0.94	59.49	-1.5902	0.4639	0.0125
977	SLU 24	-0.47	1.03	60.64	-1.6214	0.4762	0.0133
977	SLU 25	-0.49	1	60.69	-1.6224	0.4755	0.0131
977	SLU 26	-0.49	0.95	60.19	-1.609	0.4701	0.0128
977	SLU 27	-0.47	1.05	61.35	-1.6401	0.4824	0.0137
977	SLU 28	-0.49	1.01	61.39	-1.6412	0.4817	0.0134
977	SLU 29	-0.46	1.02	60.81	-1.626	0.4775	0.0136
977	SLU 30	-0.48	0.99	60.86	-1.627	0.4767	0.0133
977	SLU 31	-0.56	1.07	66.39	-1.7754	0.5254	0.0139
977	SLU 32	-0.54	1.16	67.55	-1.8065	0.5378	0.0147
977	SLU 33	-0.55	1.12	67.6	-1.8076	0.537	0.0144
977	SLU 34	-0.56	1.08	67.09	-1.7941	0.5316	0.0142
977	SLU 35	-0.54	1.17	68.25	-1.8253	0.544	0.015
977	SLU 36	-0.55	1.14	68.3	-1.8263	0.5432	0.0147
977	SLU 37	-0.53	1.15	67.72	-1.8112	0.539	0.0149
977	SLU 38	-0.54	1.12	67.77	-1.8122	0.5383	0.0147
977	SLU 39	-0.56	1.18	69.27	-1.853	0.553	0.0149
977	SLU 40	-0.57	1.14	69.32	-1.8541	0.5523	0.0146
977	SLU 41	-0.56	1.19	69.97	-1.8718	0.5592	0.0152
977	SLU 42	-0.57	1.16	70.02	-1.8728	0.5585	0.015
977	SLU 43	-0.51	0.96	66	-1.7653	0.5042	0.0142
977	SLU 44	-0.53	0.9	66.08	-1.767	0.503	0.0137
977	SLU 45	-0.51	0.99	67.24	-1.7982	0.5153	0.0146
977	SLU 46	-0.53	0.96	67.28	-1.7992	0.5146	0.0143
977	SLU 47	-0.53	0.92	66.78	-1.7858	0.5091	0.0141
977	SLU 48	-0.51	1.01	67.94	-1.8169	0.5215	0.0149
977	SLU 49	-0.53	0.97	67.99	-1.818	0.5208	0.0146
977	SLU 50	-0.5	0.99	67.41	-1.8028	0.5166	0.0148
977	SLU 51	-0.52	0.95	67.45	-1.8039	0.5158	0.0145
977	SLU 52	-0.6	1.03	72.99	-1.9522	0.5645	0.0151
977	SLU 53	-0.58	1.12	74.14	-1.9834	0.5769	0.0159
977	SLU 54	-0.6	1.09	74.19	-1.9844	0.5761	0.0157
977	SLU 55	-0.6	1.04	73.69	-1.971	0.5707	0.0154
977	SLU 56	-0.58	1.13	74.85	-2.0021	0.5831	0.0162
977	SLU 57	-0.6	1.1	74.89	-2.0031	0.5823	0.016
977	SLU 58	-0.57	1.11	74.31	-1.988	0.5781	0.0162
977	SLU 59	-0.59	1.08	74.36	-1.989	0.5774	0.0159
977	SLU 60	-0.6	1.14	75.86	-2.0298	0.5921	0.0161
977	SLU 61	-0.62	1.1	75.91	-2.0309	0.5914	0.0159
977	SLU 62	-0.6	1.15	76.57	-2.0486	0.5983	0.0165
977	SLU 63	-0.62	1.12	76.62	-2.0496	0.5976	0.0162
977	SLU 64	-0.56	1.17	72.83	-1.9478	0.5653	0.0158
977	SLU 65	-0.59	1.11	72.91	-1.9495	0.5641	0.0154
977	SLU 66	-0.57	1.2	74.07	-1.9806	0.5765	0.0162
977	SLU 67	-0.59	1.17	74.12	-1.9817	0.5757	0.0159
977	SLU 68	-0.59	1.12	73.62	-1.9682	0.5703	0.0157
977	SLU 69	-0.57	1.21	74.77	-1.9994	0.5826	0.0165
977	SLU 70	-0.59	1.18	74.82	-2.0004	0.5819	0.0162
977	SLU 71	-0.56	1.19	74.24	-1.9853	0.5777	0.0164
977	SLU 72	-0.58	1.16	74.29	-1.9863	0.577	0.0162
977	SLU 73	-0.66	1.23	79.82	-2.1347	0.6256	0.0167
977	SLU 74	-0.64	1.33	80.98	-2.1658	0.638	0.0176
977	SLU 75	-0.66	1.29	81.03	-2.1668	0.6372	0.0173
977	SLU 76	-0.66	1.25	80.52	-2.1534	0.6318	0.017
977	SLU 77	-0.64	1.34	81.68	-2.1845	0.6442	0.0179
977	SLU 78	-0.66	1.3	81.73	-2.1856	0.6434	0.0176
977	SLU 79	-0.63	1.32	81.15	-2.1704	0.6392	0.0178
977	SLU 80	-0.65	1.28	81.19	-2.1715	0.6385	0.0175
977	SLU 81	-0.66	1.34	82.7	-2.2123	0.6532	0.0178
977	SLU 82	-0.68	1.31	82.75	-2.2133	0.6525	0.0175
977	SLU 83	-0.66	1.36	83.4	-2.231	0.6594	0.0181
977	SLU 84	-0.68	1.32	83.45	-2.2321	0.6587	0.0178
977	SLE RA 1	-0.42	0.85	54.52	-1.4582	0.4214	0.0118
977	SLE RA 2	-0.44	0.81	54.58	-1.4593	0.4206	0.0115
977	SLE RA 3	-0.43	0.87	55.35	-1.4801	0.4288	0.0121
977	SLE RA 4	-0.44	0.85	55.38	-1.4808	0.4284	0.0119
977	SLE RA 5	-0.44	0.82	55.05	-1.4718	0.4247	0.0117
977	SLE RA 6	-0.43	0.88	55.82	-1.4926	0.433	0.0123
977	SLE RA 7	-0.44	0.86	55.85	-1.4933	0.4325	0.0121

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
977	SLE RA 8	-0.42	0.87	55.46	-1.4832	0.4297	0.0122
977	SLE RA 9	-0.43	0.85	55.49	-1.4839	0.4292	0.012
977	SLE RA 10	-0.48	0.9	59.18	-1.5828	0.4616	0.0124
977	SLE RA 11	-0.47	0.96	59.95	-1.6035	0.4699	0.013
977	SLE RA 12	-0.48	0.94	59.98	-1.6042	0.4694	0.0128
977	SLE RA 13	-0.48	0.91	59.65	-1.5953	0.4658	0.0126
977	SLE RA 14	-0.47	0.97	60.42	-1.616	0.474	0.0132
977	SLE RA 15	-0.48	0.94	60.45	-1.6167	0.4735	0.013
977	SLE RA 16	-0.46	0.95	60.07	-1.6066	0.4707	0.0131
977	SLE RA 17	-0.48	0.93	60.1	-1.6073	0.4702	0.013
977	SLE RA 18	-0.48	0.97	61.1	-1.6345	0.48	0.0131
977	SLE RA 19	-0.5	0.95	61.13	-1.6352	0.4795	0.0129
977	SLE RA 20	-0.48	0.98	61.57	-1.647	0.4842	0.0133
977	SLE RA 21	-0.5	0.96	61.6	-1.6477	0.4837	0.0131
977	SLE FR 1	-0.42	0.85	54.52	-1.4582	0.4214	0.0118
977	SLE FR 2	-0.42	0.84	54.53	-1.4584	0.4213	0.0118
977	SLE FR 3	-0.42	0.85	54.71	-1.4632	0.4231	0.0119
977	SLE FR 4	-0.44	0.88	56.51	-1.5113	0.4388	0.0121
977	SLE FR 5	-0.44	0.89	56.68	-1.5161	0.4407	0.0123
977	SLE FR 6	-0.45	0.91	57.81	-1.5464	0.4507	0.0125
977	SLE QP 1	-0.42	0.85	54.52	-1.4582	0.4214	0.0118
977	SLE QP 2	-0.44	0.89	56.5	-1.5111	0.439	0.0122
977	SLD 1	5.06	2.03	60.66	-1.6206	0.5339	0.1447
977	SLD 2	4.52	1.84	60.55	-1.6175	0.5339	0.1377
977	SLD 3	4.96	0.62	61.96	-1.6506	0.5235	0.1422
977	SLD 4	4.42	0.43	61.85	-1.6475	0.5235	0.1352
977	SLD 5	1.46	3.41	55.79	-1.4989	0.4832	0.0571
977	SLD 6	1.1	3.29	55.72	-1.4969	0.4832	0.0524
977	SLD 7	1.13	-1.31	60.13	-1.599	0.4486	0.0486
977	SLD 8	0.77	-1.43	60.06	-1.597	0.4486	0.044
977	SLD 9	-1.65	3.21	52.94	-1.4252	0.4294	-0.0196
977	SLD 10	-2.01	3.08	52.87	-1.4231	0.4294	-0.0242
977	SLD 11	-1.98	-1.51	57.27	-1.5253	0.3948	-0.028
977	SLD 12	-2.34	-1.64	57.2	-1.5232	0.3948	-0.0326
977	SLD 13	-5.3	1.35	51.14	-1.3747	0.3545	-0.1108
977	SLD 14	-5.84	1.16	51.04	-1.3716	0.3545	-0.1178
977	SLD 15	-5.4	-0.07	52.44	-1.4047	0.3441	-0.1133
977	SLD 16	-5.94	-0.26	52.34	-1.4016	0.3441	-0.1203
977	SLV 1	12.42	3.52	66.28	-1.7686	0.6608	0.3219
977	SLV 2	11.16	3.07	66.03	-1.7615	0.6608	0.3057
977	SLV 3	12.19	0.31	69.23	-1.8365	0.6372	0.3161
977	SLV 4	10.94	-0.13	68.98	-1.8294	0.6372	0.2999
977	SLV 5	3.98	6.61	55.02	-1.4866	0.5414	0.1168
977	SLV 6	3.16	6.33	54.85	-1.4819	0.5414	0.1062
977	SLV 7	3.23	-4.07	64.82	-1.713	0.4626	0.0975
977	SLV 8	2.41	-4.36	64.66	-1.7083	0.4626	0.0869
977	SLV 9	-3.29	6.13	48.34	-1.3138	0.4154	-0.0624
977	SLV 10	-4.11	5.84	48.17	-1.3092	0.4154	-0.073
977	SLV 11	-4.04	-4.55	58.14	-1.5403	0.3366	-0.0818
977	SLV 12	-4.86	-4.84	57.98	-1.5356	0.3366	-0.0923
977	SLV 13	-11.82	1.91	44.02	-1.1928	0.2408	-0.2754
977	SLV 14	-13.07	1.46	43.77	-1.1857	0.2408	-0.2917
977	SLV 15	-12.04	-1.3	46.96	-1.2607	0.2172	-0.2812
977	SLV 16	-13.3	-1.74	46.71	-1.2536	0.2172	-0.2975
977	CRTFP Ux+	0	0	0	0	0	0
977	CRTFP Ux-	0	0	0	0	0	0
977	CRTFP Uy+	0	0	0	0	0	0
977	CRTFP Uy-	0	0	0	0	0	0
980	SLU 1	0.36	1.49	50.78	-1.3481	-0.1678	0.0049
980	SLU 2	0.33	1.46	50.86	-1.3498	-0.1668	0.0044
980	SLU 3	0.37	1.55	51.98	-1.3797	-0.1722	0.005
980	SLU 4	0.35	1.53	52.03	-1.3807	-0.1716	0.0047
980	SLU 5	0.34	1.48	51.57	-1.3687	-0.1697	0.0046
980	SLU 6	0.39	1.57	52.69	-1.3985	-0.1751	0.0052
980	SLU 7	0.36	1.55	52.74	-1.3996	-0.1746	0.0049
980	SLU 8	0.39	1.54	52.21	-1.3858	-0.1736	0.0053
980	SLU 9	0.37	1.52	52.26	-1.3869	-0.1731	0.005
980	SLU 10	0.33	1.69	57.4	-1.5237	-0.1895	0.0055
980	SLU 11	0.38	1.77	58.52	-1.5535	-0.1949	0.0061
980	SLU 12	0.36	1.75	58.57	-1.5546	-0.1943	0.0058
980	SLU 13	0.34	1.71	58.11	-1.5425	-0.1925	0.0057
980	SLU 14	0.39	1.8	59.23	-1.5724	-0.1978	0.0063
980	SLU 15	0.37	1.78	59.28	-1.5734	-0.1973	0.006
980	SLU 16	0.39	1.77	58.74	-1.5597	-0.1963	0.0063
980	SLU 17	0.37	1.75	58.79	-1.5607	-0.1958	0.0061
980	SLU 18	0.37	1.82	60.12	-1.5965	-0.2002	0.0064
980	SLU 19	0.35	1.8	60.17	-1.5975	-0.1996	0.0061
980	SLU 20	0.38	1.84	60.83	-1.6153	-0.2031	0.0066
980	SLU 21	0.36	1.82	60.88	-1.6164	-0.2026	0.0063
980	SLU 22	0.38	1.78	57.32	-1.5214	-0.193	0.0057
980	SLU 23	0.35	1.75	57.4	-1.5231	-0.192	0.0053
980	SLU 24	0.39	1.84	58.52	-1.5529	-0.1974	0.0059
980	SLU 25	0.37	1.81	58.57	-1.554	-0.1969	0.0056
980	SLU 26	0.36	1.77	58.12	-1.5419	-0.195	0.0055
980	SLU 27	0.41	1.86	59.24	-1.5718	-0.2004	0.0061
980	SLU 28	0.38	1.84	59.28	-1.5728	-0.1998	0.0058
980	SLU 29	0.41	1.83	58.75	-1.5591	-0.1989	0.0061
980	SLU 30	0.39	1.81	58.8	-1.5601	-0.1983	0.0059
980	SLU 31	0.35	1.97	63.94	-1.6969	-0.2147	0.0063
980	SLU 32	0.4	2.06	65.06	-1.7268	-0.2201	0.0069

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
980	SLU 33	0.38	2.04	65.11	-1.7278	-0.2196	0.0067
980	SLU 34	0.36	2	64.65	-1.7158	-0.2177	0.0065
980	SLU 35	0.41	2.08	65.77	-1.7456	-0.2231	0.0071
980	SLU 36	0.39	2.06	65.82	-1.7467	-0.2225	0.0069
980	SLU 37	0.41	2.05	65.29	-1.7329	-0.2216	0.0072
980	SLU 38	0.39	2.03	65.34	-1.734	-0.221	0.0069
980	SLU 39	0.39	2.1	66.66	-1.7697	-0.2254	0.0072
980	SLU 40	0.37	2.08	66.71	-1.7708	-0.2249	0.007
980	SLU 41	0.4	2.13	67.38	-1.7886	-0.2284	0.0075
980	SLU 42	0.38	2.11	67.42	-1.7896	-0.2278	0.0072
980	SLU 43	0.46	1.84	63.77	-1.6931	-0.2094	0.006
980	SLU 44	0.43	1.81	63.85	-1.6949	-0.2085	0.0056
980	SLU 45	0.47	1.9	64.97	-1.7247	-0.2139	0.0062
980	SLU 46	0.45	1.88	65.02	-1.7257	-0.2133	0.0059
980	SLU 47	0.44	1.83	64.56	-1.7137	-0.2114	0.0058
980	SLU 48	0.49	1.92	65.68	-1.7436	-0.2168	0.0064
980	SLU 49	0.47	1.9	65.73	-1.7446	-0.2162	0.0061
980	SLU 50	0.49	1.89	65.2	-1.7309	-0.2153	0.0064
980	SLU 51	0.47	1.87	65.25	-1.7319	-0.2147	0.0062
980	SLU 52	0.43	2.04	70.39	-1.8687	-0.2312	0.0066
980	SLU 53	0.48	2.12	71.51	-1.8986	-0.2366	0.0072
980	SLU 54	0.46	2.1	71.56	-1.8996	-0.236	0.007
980	SLU 55	0.45	2.06	71.1	-1.8876	-0.2341	0.0068
980	SLU 56	0.49	2.15	72.22	-1.9174	-0.2395	0.0074
980	SLU 57	0.47	2.13	72.27	-1.9184	-0.239	0.0072
980	SLU 58	0.49	2.12	71.74	-1.9047	-0.238	0.0075
980	SLU 59	0.47	2.1	71.78	-1.9057	-0.2374	0.0072
980	SLU 60	0.47	2.17	73.11	-1.9415	-0.2419	0.0075
980	SLU 61	0.45	2.15	73.16	-1.9425	-0.2413	0.0073
980	SLU 62	0.48	2.19	73.82	-1.9604	-0.2448	0.0078
980	SLU 63	0.46	2.17	73.87	-1.9614	-0.2442	0.0075
980	SLU 64	0.49	2.13	70.31	-1.8664	-0.2347	0.0069
980	SLU 65	0.45	2.1	70.39	-1.8681	-0.2337	0.0064
980	SLU 66	0.5	2.19	71.51	-1.898	-0.2391	0.007
980	SLU 67	0.47	2.16	71.56	-1.899	-0.2385	0.0067
980	SLU 68	0.46	2.12	71.11	-1.887	-0.2367	0.0066
980	SLU 69	0.51	2.21	72.23	-1.9168	-0.242	0.0072
980	SLU 70	0.49	2.19	72.28	-1.9179	-0.2415	0.007
980	SLU 71	0.51	2.18	71.74	-1.9041	-0.2405	0.0073
980	SLU 72	0.49	2.16	71.79	-1.9051	-0.24	0.007
980	SLU 73	0.45	2.32	76.93	-2.042	-0.2564	0.0075
980	SLU 74	0.5	2.41	78.05	-2.0718	-0.2618	0.0081
980	SLU 75	0.48	2.39	78.1	-2.0729	-0.2613	0.0078
980	SLU 76	0.47	2.35	77.64	-2.0608	-0.2594	0.0077
980	SLU 77	0.51	2.43	78.76	-2.0907	-0.2648	0.0083
980	SLU 78	0.49	2.41	78.81	-2.0917	-0.2642	0.008
980	SLU 79	0.52	2.4	78.28	-2.078	-0.2632	0.0084
980	SLU 80	0.49	2.38	78.33	-2.079	-0.2627	0.0081
980	SLU 81	0.49	2.45	79.65	-2.1148	-0.2671	0.0084
980	SLU 82	0.47	2.43	79.7	-2.1158	-0.2665	0.0081
980	SLU 83	0.51	2.48	80.37	-2.1336	-0.27	0.0086
980	SLU 84	0.48	2.46	80.41	-2.1346	-0.2695	0.0083
980	SLE RA 1	0.37	1.58	52.65	-1.3976	-0.175	0.0051
980	SLE RA 2	0.34	1.55	52.7	-1.3988	-0.1743	0.0048
980	SLE RA 3	0.38	1.61	53.45	-1.4187	-0.1779	0.0052
980	SLE RA 4	0.36	1.6	53.48	-1.4193	-0.1776	0.005
980	SLE RA 5	0.35	1.57	53.18	-1.4113	-0.1763	0.0049
980	SLE RA 6	0.38	1.63	53.92	-1.4312	-0.1799	0.0053
980	SLE RA 7	0.37	1.61	53.96	-1.4319	-0.1795	0.0052
980	SLE RA 8	0.39	1.61	53.6	-1.4228	-0.1789	0.0054
980	SLE RA 9	0.37	1.59	53.63	-1.4234	-0.1785	0.0052
980	SLE RA 10	0.35	1.7	57.06	-1.5147	-0.1895	0.0055
980	SLE RA 11	0.38	1.76	57.81	-1.5346	-0.1931	0.0059
980	SLE RA 12	0.36	1.75	57.84	-1.5352	-0.1927	0.0057
980	SLE RA 13	0.36	1.72	57.54	-1.5272	-0.1914	0.0056
980	SLE RA 14	0.39	1.78	58.28	-1.5471	-0.195	0.0061
980	SLE RA 15	0.37	1.76	58.32	-1.5478	-0.1946	0.0059
980	SLE RA 16	0.39	1.76	57.96	-1.5387	-0.194	0.0061
980	SLE RA 17	0.37	1.74	57.99	-1.5393	-0.1936	0.0059
980	SLE RA 18	0.37	1.79	58.88	-1.5632	-0.1966	0.0061
980	SLE RA 19	0.36	1.78	58.91	-1.5639	-0.1962	0.0059
980	SLE RA 20	0.38	1.81	59.35	-1.5758	-0.1986	0.0063
980	SLE RA 21	0.37	1.79	59.38	-1.5764	-0.1982	0.0061
980	SLE FR 1	0.37	1.58	52.65	-1.3976	-0.175	0.0051
980	SLE FR 2	0.36	1.57	52.66	-1.3978	-0.1748	0.005
980	SLE FR 3	0.37	1.58	52.84	-1.4026	-0.1758	0.0052
980	SLE FR 4	0.37	1.64	54.53	-1.4475	-0.1813	0.0053
980	SLE FR 5	0.37	1.65	54.71	-1.4523	-0.1822	0.0055
980	SLE FR 6	0.37	1.68	55.76	-1.4804	-0.1858	0.0056
980	SLE QP 1	0.37	1.58	52.65	-1.3976	-0.175	0.0051
980	SLE QP 2	0.37	1.64	54.52	-1.4473	-0.1815	0.0054
980	SLD 1	5.87	2.12	49.62	-1.3163	0.043	0.1358
980	SLD 2	5.32	2.28	49.55	-1.315	0.0408	0.129
980	SLD 3	5.96	0.78	51.01	-1.3481	0.0513	0.1377
980	SLD 4	5.41	0.94	50.94	-1.3469	0.0491	0.131
980	SLD 5	1.98	3.79	50.95	-1.3599	-0.1263	0.0428
980	SLD 6	1.62	3.89	50.9	-1.3591	-0.1277	0.0383
980	SLD 7	2.28	-0.67	55.59	-1.4661	-0.0987	0.0493
980	SLD 8	1.92	-0.57	55.54	-1.4653	-0.1001	0.0448
980	SLD 9	-1.18	3.85	53.49	-1.4293	-0.2628	-0.034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
980	SLD 10	-1.54	3.96	53.45	-1.4285	-0.2642	-0.0385
980	SLD 11	-0.88	-0.61	58.13	-1.5355	-0.2352	-0.0275
980	SLD 12	-1.24	-0.51	58.08	-1.5347	-0.2366	-0.032
980	SLD 13	-4.67	2.35	58.09	-1.5477	-0.4121	-0.1201
980	SLD 14	-5.22	2.5	58.02	-1.5464	-0.4142	-0.1269
980	SLD 15	-4.58	1.01	59.48	-1.5795	-0.4038	-0.1182
980	SLD 16	-5.13	1.16	59.41	-1.5783	-0.4059	-0.125
980	SLV 1	13.22	2.71	43.11	-1.1419	0.344	0.3102
980	SLV 2	11.95	3.07	42.95	-1.1391	0.3389	0.2945
980	SLV 3	13.43	-0.33	46.26	-1.2141	0.363	0.3147
980	SLV 4	12.16	0.03	46.1	-1.2113	0.358	0.299
980	SLV 5	4.14	6.5	46.34	-1.2467	-0.0518	0.0928
980	SLV 6	3.31	6.73	46.24	-1.2449	-0.055	0.0825
980	SLV 7	4.82	-3.61	56.85	-1.4873	0.0116	0.1078
980	SLV 8	3.99	-3.38	56.74	-1.4854	0.0083	0.0976
980	SLV 9	-3.25	6.66	52.29	-1.4091	-0.3712	-0.0867
980	SLV 10	-4.08	6.89	52.19	-1.4073	-0.3745	-0.097
980	SLV 11	-2.57	-3.45	62.8	-1.6497	-0.3079	-0.0717
980	SLV 12	-3.4	-3.21	62.69	-1.6479	-0.3111	-0.082
980	SLV 13	-11.42	3.25	62.94	-1.6833	-0.7209	-0.2882
980	SLV 14	-12.69	3.61	62.77	-1.6805	-0.7259	-0.3039
980	SLV 15	-11.21	0.22	66.09	-1.7555	-0.7019	-0.2837
980	SLV 16	-12.48	0.58	65.92	-1.7526	-0.7069	-0.2994
980	CRTFP Ux+	0	0	0	0	0	0
980	CRTFP Ux-	0	0	0	0	0	0
980	CRTFP Uy+	0	0	0	0	0	0
980	CRTFP Uy-	0	0	0	0	0	0
1019	SLU 1	-0.34	-0.22	21.61	0.0163	-5.7582	-0.0734
1019	SLU 2	-0.35	-0.25	21.62	0.0163	-5.7665	-0.0812
1019	SLU 3	-0.35	-0.23	22.12	0.0167	-5.8941	-0.0742
1019	SLU 4	-0.36	-0.24	22.13	0.0166	-5.8991	-0.0789
1019	SLU 5	-0.35	-0.25	21.92	0.0164	-5.8463	-0.0819
1019	SLU 6	-0.35	-0.23	22.42	0.0168	-5.9738	-0.075
1019	SLU 7	-0.36	-0.24	22.43	0.0168	-5.9788	-0.0796
1019	SLU 8	-0.35	-0.23	22.21	0.0165	-5.9176	-0.0749
1019	SLU 9	-0.36	-0.24	22.22	0.0165	-5.9226	-0.0795
1019	SLU 10	-0.39	-0.25	24.35	0.0186	-6.5063	-0.0832
1019	SLU 11	-0.39	-0.23	24.85	0.019	-6.6339	-0.0762
1019	SLU 12	-0.39	-0.25	24.86	0.019	-6.6389	-0.0809
1019	SLU 13	-0.39	-0.26	24.65	0.0187	-6.586	-0.0839
1019	SLU 14	-0.39	-0.24	25.15	0.0191	-6.7136	-0.077
1019	SLU 15	-0.4	-0.25	25.16	0.0191	-6.7186	-0.0817
1019	SLU 16	-0.39	-0.24	24.93	0.0189	-6.6574	-0.0769
1019	SLU 17	-0.39	-0.25	24.94	0.0189	-6.6624	-0.0816
1019	SLU 18	-0.4	-0.23	25.5	0.0196	-6.8151	-0.0763
1019	SLU 19	-0.4	-0.25	25.51	0.0196	-6.8201	-0.0809
1019	SLU 20	-0.4	-0.24	25.8	0.0198	-6.8948	-0.077
1019	SLU 21	-0.41	-0.25	25.81	0.0198	-6.8998	-0.0817
1019	SLU 22	-0.38	-0.22	24.35	0.0186	-6.4973	-0.0717
1019	SLU 23	-0.39	-0.24	24.37	0.0186	-6.5057	-0.0795
1019	SLU 24	-0.39	-0.22	24.87	0.0189	-6.6332	-0.0725
1019	SLU 25	-0.39	-0.24	24.88	0.0189	-6.6382	-0.0772
1019	SLU 26	-0.39	-0.25	24.67	0.0187	-6.5854	-0.0802
1019	SLU 27	-0.39	-0.22	25.17	0.0191	-6.7129	-0.0733
1019	SLU 28	-0.4	-0.24	25.18	0.0191	-6.7179	-0.078
1019	SLU 29	-0.39	-0.22	24.95	0.0188	-6.6567	-0.0732
1019	SLU 30	-0.39	-0.24	24.96	0.0188	-6.6617	-0.0779
1019	SLU 31	-0.43	-0.25	27.09	0.0209	-7.2454	-0.0815
1019	SLU 32	-0.43	-0.23	27.59	0.0213	-7.373	-0.0746
1019	SLU 33	-0.43	-0.24	27.6	0.0213	-7.378	-0.0792
1019	SLU 34	-0.43	-0.25	27.39	0.021	-7.3251	-0.0823
1019	SLU 35	-0.43	-0.23	27.89	0.0214	-7.4527	-0.0753
1019	SLU 36	-0.44	-0.24	27.9	0.0214	-7.4577	-0.08
1019	SLU 37	-0.43	-0.23	27.68	0.0212	-7.3965	-0.0752
1019	SLU 38	-0.43	-0.24	27.69	0.0212	-7.4015	-0.0799
1019	SLU 39	-0.44	-0.23	28.25	0.0219	-7.5542	-0.0746
1019	SLU 40	-0.44	-0.24	28.25	0.0219	-7.5592	-0.0793
1019	SLU 41	-0.44	-0.23	28.55	0.0221	-7.6339	-0.0753
1019	SLU 42	-0.45	-0.24	28.55	0.022	-7.6389	-0.08
1019	SLU 43	-0.43	-0.29	27.15	0.0204	-7.2323	-0.096
1019	SLU 44	-0.44	-0.32	27.16	0.0204	-7.2406	-0.1038
1019	SLU 45	-0.44	-0.3	27.66	0.0207	-7.3682	-0.0968
1019	SLU 46	-0.44	-0.31	27.67	0.0207	-7.3732	-0.1015
1019	SLU 47	-0.44	-0.32	27.46	0.0205	-7.3203	-0.1045
1019	SLU 48	-0.44	-0.3	27.96	0.0209	-7.4479	-0.0976
1019	SLU 49	-0.45	-0.31	27.97	0.0209	-7.4529	-0.1022
1019	SLU 50	-0.44	-0.3	27.75	0.0206	-7.3917	-0.0975
1019	SLU 51	-0.44	-0.31	27.76	0.0206	-7.3967	-0.1021
1019	SLU 52	-0.48	-0.32	29.89	0.0227	-7.9804	-0.1058
1019	SLU 53	-0.48	-0.3	30.39	0.0231	-8.108	-0.0988
1019	SLU 54	-0.48	-0.32	30.4	0.0231	-8.113	-0.1035
1019	SLU 55	-0.48	-0.33	30.19	0.0228	-8.0601	-0.1065
1019	SLU 56	-0.48	-0.3	30.69	0.0232	-8.1877	-0.0996
1019	SLU 57	-0.49	-0.32	30.7	0.0232	-8.1927	-0.1042
1019	SLU 58	-0.48	-0.3	30.47	0.023	-8.1315	-0.0995
1019	SLU 59	-0.48	-0.32	30.48	0.023	-8.1365	-0.1042
1019	SLU 60	-0.49	-0.3	31.04	0.0237	-8.2891	-0.0989
1019	SLU 61	-0.49	-0.32	31.05	0.0237	-8.2941	-0.1035
1019	SLU 62	-0.49	-0.3	31.34	0.0239	-8.3688	-0.0996
1019	SLU 63	-0.5	-0.32	31.35	0.0239	-8.3738	-0.1043

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1019	SLU 64	-0.47	-0.29	29.89	0.0227	-7.9714	-0.0943
1019	SLU 65	-0.48	-0.31	29.91	0.0227	-7.9797	-0.1021
1019	SLU 66	-0.48	-0.29	30.41	0.023	-8.1073	-0.0951
1019	SLU 67	-0.48	-0.31	30.42	0.023	-8.1123	-0.0998
1019	SLU 68	-0.48	-0.31	30.21	0.0228	-8.0594	-0.1028
1019	SLU 69	-0.48	-0.29	30.71	0.0232	-8.187	-0.0959
1019	SLU 70	-0.49	-0.31	30.72	0.0232	-8.192	-0.1005
1019	SLU 71	-0.48	-0.29	30.49	0.0229	-8.1308	-0.0958
1019	SLU 72	-0.48	-0.31	30.5	0.0229	-8.1358	-0.1005
1019	SLU 73	-0.52	-0.32	32.63	0.025	-8.7195	-0.1041
1019	SLU 74	-0.52	-0.3	33.14	0.0254	-8.8471	-0.0971
1019	SLU 75	-0.52	-0.31	33.14	0.0254	-8.8521	-0.1018
1019	SLU 76	-0.52	-0.32	32.93	0.0251	-8.7992	-0.1048
1019	SLU 77	-0.52	-0.3	33.44	0.0255	-8.9268	-0.0979
1019	SLU 78	-0.53	-0.31	33.44	0.0255	-8.9318	-0.1026
1019	SLU 79	-0.52	-0.3	33.22	0.0253	-8.8706	-0.0978
1019	SLU 80	-0.52	-0.31	33.23	0.0253	-8.8756	-0.1025
1019	SLU 81	-0.53	-0.3	33.79	0.026	-9.0282	-0.0972
1019	SLU 82	-0.53	-0.31	33.79	0.026	-9.0332	-0.1018
1019	SLU 83	-0.53	-0.3	34.09	0.0262	-9.1079	-0.0979
1019	SLU 84	-0.54	-0.31	34.1	0.0261	-9.1129	-0.1026
1019	SLE RA 1	-0.35	-0.22	22.39	0.0169	-5.9694	-0.0729
1019	SLE RA 2	-0.36	-0.24	22.4	0.0169	-5.9749	-0.0781
1019	SLE RA 3	-0.36	-0.22	22.74	0.0172	-6.06	-0.0735
1019	SLE RA 4	-0.36	-0.23	22.74	0.0172	-6.0633	-0.0766
1019	SLE RA 5	-0.36	-0.24	22.6	0.017	-6.0281	-0.0786
1019	SLE RA 6	-0.36	-0.23	22.94	0.0173	-6.1131	-0.074
1019	SLE RA 7	-0.36	-0.24	22.94	0.0173	-6.1165	-0.0771
1019	SLE RA 8	-0.36	-0.23	22.79	0.0171	-6.0757	-0.0739
1019	SLE RA 9	-0.36	-0.24	22.8	0.0171	-6.079	-0.077
1019	SLE RA 10	-0.39	-0.24	24.22	0.0185	-6.4681	-0.0794
1019	SLE RA 11	-0.38	-0.23	24.55	0.0187	-6.5532	-0.0748
1019	SLE RA 12	-0.39	-0.24	24.56	0.0187	-6.5565	-0.0779
1019	SLE RA 13	-0.39	-0.24	24.42	0.0186	-6.5213	-0.0799
1019	SLE RA 14	-0.39	-0.23	24.75	0.0188	-6.6063	-0.0753
1019	SLE RA 15	-0.39	-0.24	24.76	0.0188	-6.6097	-0.0784
1019	SLE RA 16	-0.38	-0.23	24.61	0.0187	-6.5689	-0.0752
1019	SLE RA 17	-0.39	-0.24	24.61	0.0187	-6.5722	-0.0784
1019	SLE RA 18	-0.39	-0.23	24.99	0.0192	-6.674	-0.0748
1019	SLE RA 19	-0.39	-0.24	24.99	0.0192	-6.6773	-0.0779
1019	SLE RA 20	-0.39	-0.23	25.19	0.0193	-6.7271	-0.0753
1019	SLE RA 21	-0.4	-0.24	25.19	0.0193	-6.7304	-0.0784
1019	SLE FR 1	-0.35	-0.22	22.39	0.0169	-5.9694	-0.0729
1019	SLE FR 2	-0.35	-0.23	22.39	0.0169	-5.9705	-0.0739
1019	SLE FR 3	-0.35	-0.22	22.47	0.017	-5.9907	-0.0731
1019	SLE FR 4	-0.36	-0.23	23.17	0.0176	-6.1819	-0.0745
1019	SLE FR 5	-0.36	-0.23	23.25	0.0176	-6.202	-0.0737
1019	SLE FR 6	-0.37	-0.23	23.69	0.0181	-6.3217	-0.0739
1019	SLE QP 1	-0.35	-0.22	22.39	0.0169	-5.9694	-0.0729
1019	SLE QP 2	-0.36	-0.22	23.17	0.0176	-6.1808	-0.0735
1019	SLD 1	1.52	-0.15	27.17	0.0315	-7.2485	-0.0493
1019	SLD 2	1.32	-0.27	27.21	0.0305	-7.2693	-0.0885
1019	SLD 3	1.48	-0.61	27.52	0.0318	-7.3786	-0.1979
1019	SLD 4	1.28	-0.73	27.57	0.0308	-7.3994	-0.237
1019	SLD 5	0.29	0.51	23.82	0.0215	-6.2999	0.1662
1019	SLD 6	0.16	0.43	23.85	0.0208	-6.3137	0.1402
1019	SLD 7	0.17	-1.01	25.01	0.0225	-6.7337	-0.329
1019	SLD 8	0.04	-1.09	25.03	0.0219	-6.7475	-0.3549
1019	SLD 9	-0.76	0.64	21.31	0.0133	-5.614	0.208
1019	SLD 10	-0.9	0.56	21.33	0.0127	-5.6278	0.182
1019	SLD 11	-0.89	-0.88	22.49	0.0144	-6.0478	-0.2871
1019	SLD 12	-1.02	-0.96	22.52	0.0137	-6.0616	-0.3131
1019	SLD 13	-2.01	0.28	18.77	0.0044	-4.9621	0.0901
1019	SLD 14	-2.21	0.16	18.82	0.0034	-4.9829	0.0509
1019	SLD 15	-2.04	-0.18	19.13	0.0047	-5.0923	-0.0585
1019	SLD 16	-2.24	-0.3	19.17	0.0037	-5.1131	-0.0976
1019	SLV 1	4.03	-0.07	32.54	0.0501	-8.6825	-0.0229
1019	SLV 2	3.57	-0.35	32.63	0.0478	-8.731	-0.1141
1019	SLV 3	3.95	-1.1	33.34	0.0509	-8.9792	-0.3589
1019	SLV 4	3.48	-1.38	33.44	0.0485	-9.0277	-0.4501
1019	SLV 5	1.16	1.44	24.74	0.0267	-6.4728	0.4673
1019	SLV 6	0.86	1.26	24.8	0.0251	-6.5044	0.4079
1019	SLV 7	0.88	-2.01	27.43	0.0291	-7.4617	-0.6527
1019	SLV 8	0.58	-2.19	27.49	0.0276	-7.4933	-0.7121
1019	SLV 9	-1.31	1.74	18.85	0.0076	-4.8682	0.5652
1019	SLV 10	-1.61	1.56	18.91	0.0061	-4.8998	0.5057
1019	SLV 11	-1.59	-1.71	21.54	0.0101	-5.8572	-0.5549
1019	SLV 12	-1.89	-1.89	21.6	0.0086	-5.8887	-0.6143
1019	SLV 13	-4.21	0.93	12.9	-0.0133	-3.3339	0.3032
1019	SLV 14	-4.67	0.65	13	-0.0157	-3.3824	0.212
1019	SLV 15	-4.29	-0.1	13.71	-0.0126	-3.6306	-0.0328
1019	SLV 16	-4.76	-0.38	13.81	-0.0149	-3.679	-0.1241
1019	CRTFP Ux+	0	0	0	0	0	0
1019	CRTFP Ux-	0	0	0	0	0	0
1019	CRTFP Uy+	0	0	0	0	0	0
1019	CRTFP Uy-	0	0	0	0	0	0
1021	SLU 1	-0.57	-0.4	38.66	-9.4378	-6.7105	-0.2242
1021	SLU 2	-0.59	-0.44	38.68	-9.4441	-6.7153	-0.2363
1021	SLU 3	-0.59	-0.4	39.58	-9.6641	-6.8705	-0.2287
1021	SLU 4	-0.6	-0.43	39.6	-9.6679	-6.8734	-0.236

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1021	SLU 5	-0.6	-0.44	39.22	-9.5805	-6.8084	-0.2388
1021	SLU 6	-0.59	-0.41	40.12	-9.8005	-6.9635	-0.2312
1021	SLU 7	-0.6	-0.43	40.14	-9.8043	-6.9664	-0.2384
1021	SLU 8	-0.59	-0.41	39.74	-9.7106	-6.8966	-0.2291
1021	SLU 9	-0.6	-0.43	39.75	-9.7144	-6.8995	-0.2363
1021	SLU 10	-0.66	-0.45	43.56	-10.6167	-7.5635	-0.2563
1021	SLU 11	-0.65	-0.41	44.46	-10.8368	-7.7187	-0.2487
1021	SLU 12	-0.66	-0.44	44.47	-10.8406	-7.7216	-0.256
1021	SLU 13	-0.66	-0.46	44.1	-10.7531	-7.6566	-0.2588
1021	SLU 14	-0.66	-0.42	45	-10.9732	-7.8117	-0.2511
1021	SLU 15	-0.67	-0.44	45.01	-10.977	-7.8146	-0.2584
1021	SLU 16	-0.65	-0.42	44.61	-10.8832	-7.7448	-0.2491
1021	SLU 17	-0.66	-0.44	44.63	-10.887	-7.7477	-0.2563
1021	SLU 18	-0.67	-0.41	45.62	-11.1129	-7.9222	-0.2528
1021	SLU 19	-0.68	-0.44	45.64	-11.1167	-7.9251	-0.2601
1021	SLU 20	-0.68	-0.42	46.16	-11.2493	-8.0152	-0.2552
1021	SLU 21	-0.69	-0.44	46.18	-11.2531	-8.0181	-0.2625
1021	SLU 22	-0.64	-0.39	43.57	-10.624	-7.5641	-0.2403
1021	SLU 23	-0.66	-0.43	43.6	-10.6303	-7.5689	-0.2524
1021	SLU 24	-0.65	-0.39	44.5	-10.8504	-7.7241	-0.2448
1021	SLU 25	-0.66	-0.42	44.51	-10.8542	-7.727	-0.252
1021	SLU 26	-0.66	-0.44	44.14	-10.7667	-7.662	-0.2548
1021	SLU 27	-0.66	-0.4	45.04	-10.9868	-7.8172	-0.2472
1021	SLU 28	-0.67	-0.42	45.05	-10.9906	-7.8201	-0.2545
1021	SLU 29	-0.65	-0.4	44.65	-10.8968	-7.7502	-0.2451
1021	SLU 30	-0.66	-0.42	44.67	-10.9006	-7.7531	-0.2524
1021	SLU 31	-0.72	-0.44	48.47	-11.8029	-8.4171	-0.2724
1021	SLU 32	-0.72	-0.41	49.38	-12.023	-8.5723	-0.2648
1021	SLU 33	-0.73	-0.43	49.39	-12.0268	-8.5752	-0.272
1021	SLU 34	-0.73	-0.45	49.01	-11.9393	-8.5102	-0.2748
1021	SLU 35	-0.73	-0.41	49.91	-12.1594	-8.6653	-0.2672
1021	SLU 36	-0.74	-0.43	49.93	-12.1632	-8.6682	-0.2744
1021	SLU 37	-0.72	-0.41	49.53	-12.0694	-8.5984	-0.2651
1021	SLU 38	-0.73	-0.43	49.54	-12.0732	-8.6013	-0.2724
1021	SLU 39	-0.74	-0.41	50.54	-12.2992	-8.7758	-0.2688
1021	SLU 40	-0.75	-0.43	50.55	-12.303	-8.7787	-0.2761
1021	SLU 41	-0.74	-0.41	51.08	-12.4356	-8.8688	-0.2712
1021	SLU 42	-0.75	-0.44	51.09	-12.4394	-8.8717	-0.2785
1021	SLU 43	-0.72	-0.52	48.57	-11.8624	-8.431	-0.286
1021	SLU 44	-0.74	-0.56	48.6	-11.8687	-8.4358	-0.2981
1021	SLU 45	-0.74	-0.53	49.5	-12.0888	-8.591	-0.2905
1021	SLU 46	-0.75	-0.55	49.51	-12.0926	-8.5939	-0.2978
1021	SLU 47	-0.74	-0.57	49.13	-12.0051	-8.5288	-0.3005
1021	SLU 48	-0.74	-0.53	50.04	-12.2252	-8.684	-0.2929
1021	SLU 49	-0.75	-0.56	50.05	-12.229	-8.6869	-0.3002
1021	SLU 50	-0.73	-0.53	49.65	-12.1352	-8.6171	-0.2908
1021	SLU 51	-0.74	-0.55	49.66	-12.139	-8.62	-0.2981
1021	SLU 52	-0.81	-0.57	53.47	-13.0413	-9.284	-0.3181
1021	SLU 53	-0.8	-0.54	54.37	-13.2614	-9.4392	-0.3105
1021	SLU 54	-0.81	-0.56	54.39	-13.2652	-9.4421	-0.3178
1021	SLU 55	-0.81	-0.58	54.01	-13.1777	-9.377	-0.3205
1021	SLU 56	-0.81	-0.54	54.91	-13.3978	-9.5322	-0.3129
1021	SLU 57	-0.82	-0.57	54.93	-13.4016	-9.5351	-0.3202
1021	SLU 58	-0.8	-0.54	54.53	-13.3078	-9.4653	-0.3108
1021	SLU 59	-0.81	-0.57	54.54	-13.3116	-9.4682	-0.3181
1021	SLU 60	-0.82	-0.54	55.54	-13.5376	-9.6427	-0.3146
1021	SLU 61	-0.83	-0.56	55.55	-13.5414	-9.6456	-0.3218
1021	SLU 62	-0.82	-0.54	56.08	-13.674	-9.7357	-0.317
1021	SLU 63	-0.83	-0.57	56.09	-13.6778	-9.7386	-0.3242
1021	SLU 64	-0.79	-0.51	53.49	-13.0486	-9.2846	-0.302
1021	SLU 65	-0.8	-0.55	53.51	-13.0549	-9.2894	-0.3141
1021	SLU 66	-0.8	-0.52	54.41	-13.275	-9.4446	-0.3065
1021	SLU 67	-0.81	-0.54	54.43	-13.2788	-9.4475	-0.3138
1021	SLU 68	-0.81	-0.56	54.05	-13.1914	-9.3825	-0.3166
1021	SLU 69	-0.81	-0.52	54.95	-13.4114	-9.5376	-0.309
1021	SLU 70	-0.82	-0.55	54.97	-13.4152	-9.5405	-0.3162
1021	SLU 71	-0.8	-0.52	54.57	-13.3214	-9.4707	-0.3069
1021	SLU 72	-0.81	-0.55	54.58	-13.3252	-9.4736	-0.3141
1021	SLU 73	-0.87	-0.57	58.39	-14.2276	-10.1376	-0.3341
1021	SLU 74	-0.87	-0.53	59.29	-14.4476	-10.2928	-0.3265
1021	SLU 75	-0.88	-0.55	59.3	-14.4514	-10.2957	-0.3338
1021	SLU 76	-0.88	-0.57	58.93	-14.364	-10.2306	-0.3366
1021	SLU 77	-0.88	-0.53	59.83	-14.584	-10.3858	-0.3289
1021	SLU 78	-0.89	-0.56	59.84	-14.5878	-10.3887	-0.3362
1021	SLU 79	-0.87	-0.53	59.44	-14.494	-10.3189	-0.3269
1021	SLU 80	-0.88	-0.56	59.46	-14.4978	-10.3218	-0.3341
1021	SLU 81	-0.88	-0.53	60.45	-14.7238	-10.4963	-0.3306
1021	SLU 82	-0.89	-0.55	60.47	-14.7276	-10.4992	-0.3379
1021	SLU 83	-0.89	-0.53	60.99	-14.8602	-10.5893	-0.333
1021	SLU 84	-0.9	-0.56	61.01	-14.864	-10.5922	-0.3403
1021	SLE RA 1	-0.59	-0.4	40.06	-9.7767	-6.9544	-0.2288
1021	SLE RA 2	-0.6	-0.42	40.08	-9.7809	-6.9576	-0.2369
1021	SLE RA 3	-0.6	-0.4	40.68	-9.9276	-7.0611	-0.2318
1021	SLE RA 4	-0.61	-0.42	40.69	-9.9301	-7.063	-0.2367
1021	SLE RA 5	-0.61	-0.43	40.44	-9.8718	-7.0196	-0.2385
1021	SLE RA 6	-0.6	-0.4	41.04	-10.0185	-7.1231	-0.2334
1021	SLE RA 7	-0.61	-0.42	41.05	-10.0211	-7.125	-0.2383
1021	SLE RA 8	-0.6	-0.4	40.78	-9.9586	-7.0784	-0.232
1021	SLE RA 9	-0.61	-0.42	40.79	-9.9611	-7.0804	-0.2369
1021	SLE RA 10	-0.65	-0.43	43.33	-10.5627	-7.5231	-0.2502

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1021	SLE RA 11	-0.65	-0.41	43.93	-10.7093	-7.6265	-0.2451
1021	SLE RA 12	-0.65	-0.42	43.94	-10.7119	-7.6284	-0.25
1021	SLE RA 13	-0.65	-0.43	43.69	-10.6536	-7.5851	-0.2518
1021	SLE RA 14	-0.65	-0.41	44.29	-10.8003	-7.6885	-0.2468
1021	SLE RA 15	-0.66	-0.43	44.3	-10.8028	-7.6905	-0.2516
1021	SLE RA 16	-0.64	-0.41	44.03	-10.7403	-7.6439	-0.2454
1021	SLE RA 17	-0.65	-0.43	44.04	-10.7428	-7.6458	-0.2502
1021	SLE RA 18	-0.66	-0.41	44.71	-10.8935	-7.7622	-0.2478
1021	SLE RA 19	-0.66	-0.42	44.72	-10.896	-7.7641	-0.2527
1021	SLE RA 20	-0.66	-0.41	45.07	-10.9844	-7.8242	-0.2495
1021	SLE RA 21	-0.67	-0.43	45.08	-10.9869	-7.8261	-0.2543
1021	SLE FR 1	-0.59	-0.4	40.06	-9.7767	-6.9544	-0.2288
1021	SLE FR 2	-0.59	-0.4	40.07	-9.7775	-6.955	-0.2304
1021	SLE FR 3	-0.59	-0.4	40.21	-9.8131	-6.9792	-0.2294
1021	SLE FR 4	-0.61	-0.4	41.46	-10.1126	-7.1974	-0.2361
1021	SLE FR 5	-0.61	-0.4	41.6	-10.1481	-7.2215	-0.2352
1021	SLE FR 6	-0.62	-0.4	42.39	-10.3351	-7.3583	-0.2383
1021	SLE QP 1	-0.59	-0.4	40.06	-9.7767	-6.9544	-0.2288
1021	SLE QP 2	-0.61	-0.4	41.46	-10.1117	-7.1967	-0.2345
1021	SLD 1	2.72	-0.25	48.67	-11.342	-8.4537	0.6789
1021	SLD 2	2.37	-0.47	48.76	-11.4159	-8.4662	0.5472
1021	SLD 3	2.66	-1.06	49.31	-11.4967	-8.568	0.524
1021	SLD 4	2.31	-1.28	49.39	-11.5706	-8.5805	0.3923
1021	SLD 5	0.55	0.91	42.64	-10.2327	-7.3982	0.2984
1021	SLD 6	0.32	0.76	42.7	-10.2818	-7.4065	0.211
1021	SLD 7	0.34	-1.78	44.76	-10.7484	-7.7791	-0.218
1021	SLD 8	0.11	-1.92	44.82	-10.7975	-7.7874	-0.3054
1021	SLD 9	-1.33	1.13	38.09	-9.426	-6.606	-0.1637
1021	SLD 10	-1.56	0.98	38.15	-9.475	-6.6143	-0.2511
1021	SLD 11	-1.54	-1.56	40.22	-9.9417	-6.9869	-0.6801
1021	SLD 12	-1.77	-1.7	40.27	-9.9907	-6.9952	-0.7674
1021	SLD 13	-3.53	0.48	33.52	-8.6529	-5.813	-0.8614
1021	SLD 14	-3.88	0.26	33.6	-8.7268	-5.8255	-0.993
1021	SLD 15	-3.6	-0.33	34.16	-8.8076	-5.9272	-1.0163
1021	SLD 16	-3.94	-0.54	34.24	-8.8815	-5.9397	-1.1479
1021	SLV 1	7.18	-0.09	58.36	-12.9953	-10.1409	1.8944
1021	SLV 2	6.37	-0.6	58.56	-13.1674	-10.1701	1.5879
1021	SLV 3	7.03	-1.91	59.81	-13.3466	-10.4009	1.5442
1021	SLV 4	6.22	-2.42	60.01	-13.5187	-10.43	1.2377
1021	SLV 5	2.09	2.55	44.3	-10.4137	-7.6805	0.9891
1021	SLV 6	1.56	2.21	44.43	-10.5258	-7.6995	0.7894
1021	SLV 7	1.6	-3.53	49.12	-11.5848	-8.5472	-0.1781
1021	SLV 8	1.07	-3.86	49.25	-11.6969	-8.5662	-0.3778
1021	SLV 9	-2.3	3.06	33.66	-8.5265	-5.8273	-0.0912
1021	SLV 10	-2.83	2.73	33.79	-8.6387	-5.8462	-0.2909
1021	SLV 11	-2.78	-3.01	38.49	-9.6976	-6.6939	-1.2584
1021	SLV 12	-3.31	-3.34	38.62	-9.8097	-6.7129	-1.4582
1021	SLV 13	-7.44	1.63	22.91	-6.7047	-3.9634	-1.7067
1021	SLV 14	-8.26	1.12	23.1	-6.8768	-3.9925	-2.0133
1021	SLV 15	-7.59	-0.2	24.36	-7.056	-4.2234	-2.0569
1021	SLV 16	-8.4	-0.71	24.55	-7.2281	-4.2525	-2.3634
1021	CRTFP Ux+	0	0	0	0	0	0
1021	CRTFP Ux-	0	0	0	0	0	0
1021	CRTFP Uy+	0	0	0	0	0	0
1021	CRTFP Uy-	0	0	0	0	0	0
1023	SLU 1	-0.53	-0.37	34.64	-10.1944	-0.9134	-0.1944
1023	SLU 2	-0.54	-0.41	34.66	-10.1999	-0.9141	-0.2011
1023	SLU 3	-0.54	-0.37	35.47	-10.4366	-0.9351	-0.199
1023	SLU 4	-0.55	-0.4	35.48	-10.4399	-0.9355	-0.203
1023	SLU 5	-0.55	-0.41	35.15	-10.3496	-0.9268	-0.2032
1023	SLU 6	-0.55	-0.38	35.95	-10.5863	-0.9478	-0.2011
1023	SLU 7	-0.56	-0.4	35.97	-10.5896	-0.9482	-0.2051
1023	SLU 8	-0.54	-0.38	35.61	-10.4938	-0.9388	-0.1986
1023	SLU 9	-0.55	-0.4	35.62	-10.4971	-0.9392	-0.2026
1023	SLU 10	-0.61	-0.42	39.02	-11.4377	-1.0286	-0.2234
1023	SLU 11	-0.6	-0.38	39.82	-11.6744	-1.0496	-0.2214
1023	SLU 12	-0.61	-0.41	39.83	-11.6777	-1.05	-0.2253
1023	SLU 13	-0.61	-0.42	39.5	-11.5874	-1.0413	-0.2255
1023	SLU 14	-0.61	-0.39	40.3	-11.8241	-1.0623	-0.2234
1023	SLU 15	-0.62	-0.41	40.32	-11.8274	-1.0627	-0.2274
1023	SLU 16	-0.6	-0.39	39.96	-11.7316	-1.0533	-0.221
1023	SLU 17	-0.61	-0.41	39.97	-11.7349	-1.0537	-0.225
1023	SLU 18	-0.62	-0.38	40.86	-11.9627	-1.077	-0.2264
1023	SLU 19	-0.63	-0.41	40.87	-11.966	-1.0774	-0.2303
1023	SLU 20	-0.62	-0.39	41.34	-12.1124	-1.0897	-0.2285
1023	SLU 21	-0.63	-0.41	41.36	-12.1157	-1.0901	-0.2324
1023	SLU 22	-0.59	-0.36	39.03	-11.4516	-1.0287	-0.2156
1023	SLU 23	-0.6	-0.4	39.05	-11.4572	-1.0294	-0.2223
1023	SLU 24	-0.6	-0.36	39.85	-11.6939	-1.0504	-0.2202
1023	SLU 25	-0.61	-0.39	39.87	-11.6972	-1.0508	-0.2242
1023	SLU 26	-0.61	-0.4	39.53	-11.6069	-1.0421	-0.2244
1023	SLU 27	-0.61	-0.37	40.34	-11.8436	-1.0631	-0.2223
1023	SLU 28	-0.62	-0.39	40.35	-11.8469	-1.0635	-0.2263
1023	SLU 29	-0.6	-0.37	40	-11.7511	-1.0541	-0.2198
1023	SLU 30	-0.61	-0.39	40.01	-11.7544	-1.0546	-0.2238
1023	SLU 31	-0.67	-0.41	43.4	-12.695	-1.1439	-0.2446
1023	SLU 32	-0.66	-0.37	44.21	-12.9317	-1.1649	-0.2425
1023	SLU 33	-0.67	-0.4	44.22	-12.935	-1.1653	-0.2465
1023	SLU 34	-0.67	-0.41	43.89	-12.8447	-1.1566	-0.2467
1023	SLU 35	-0.67	-0.38	44.69	-13.0814	-1.1776	-0.2446

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1023	SLU 36	-0.68	-0.4	44.7	-13.0847	-1.178	-0.2486
1023	SLU 37	-0.66	-0.38	44.35	-12.9889	-1.1686	-0.2422
1023	SLU 38	-0.67	-0.4	44.36	-12.9922	-1.1691	-0.2462
1023	SLU 39	-0.68	-0.37	45.24	-13.2199	-1.1923	-0.2476
1023	SLU 40	-0.69	-0.4	45.26	-13.2233	-1.1927	-0.2515
1023	SLU 41	-0.68	-0.38	45.73	-13.3696	-1.205	-0.2497
1023	SLU 42	-0.69	-0.4	45.74	-13.373	-1.2054	-0.2536
1023	SLU 43	-0.66	-0.48	43.53	-12.8216	-1.1479	-0.2455
1023	SLU 44	-0.68	-0.52	43.55	-12.8272	-1.1486	-0.2521
1023	SLU 45	-0.68	-0.49	44.36	-13.0638	-1.1696	-0.2501
1023	SLU 46	-0.69	-0.51	44.37	-13.0672	-1.17	-0.2541
1023	SLU 47	-0.69	-0.53	44.04	-12.9769	-1.1613	-0.2542
1023	SLU 48	-0.68	-0.49	44.84	-13.2136	-1.1823	-0.2522
1023	SLU 49	-0.69	-0.51	44.85	-13.2169	-1.1827	-0.2562
1023	SLU 50	-0.68	-0.49	44.5	-13.121	-1.1733	-0.2497
1023	SLU 51	-0.69	-0.51	44.51	-13.1244	-1.1737	-0.2537
1023	SLU 52	-0.74	-0.53	47.9	-14.065	-1.2631	-0.2745
1023	SLU 53	-0.74	-0.5	48.71	-14.3016	-1.2841	-0.2724
1023	SLU 54	-0.75	-0.52	48.72	-14.305	-1.2845	-0.2764
1023	SLU 55	-0.75	-0.54	48.39	-14.2147	-1.2758	-0.2766
1023	SLU 56	-0.75	-0.5	49.19	-14.4514	-1.2968	-0.2745
1023	SLU 57	-0.76	-0.52	49.21	-14.4547	-1.2972	-0.2785
1023	SLU 58	-0.74	-0.5	48.85	-14.3588	-1.2878	-0.2721
1023	SLU 59	-0.75	-0.52	48.86	-14.3622	-1.2882	-0.276
1023	SLU 60	-0.75	-0.5	49.75	-14.5899	-1.3115	-0.2774
1023	SLU 61	-0.76	-0.52	49.76	-14.5932	-1.3119	-0.2814
1023	SLU 62	-0.76	-0.5	50.23	-14.7396	-1.3242	-0.2795
1023	SLU 63	-0.77	-0.53	50.24	-14.743	-1.3246	-0.2835
1023	SLU 64	-0.73	-0.47	47.91	-14.0789	-1.2632	-0.2667
1023	SLU 65	-0.74	-0.51	47.94	-14.0844	-1.2639	-0.2733
1023	SLU 66	-0.74	-0.48	48.74	-14.3211	-1.2849	-0.2713
1023	SLU 67	-0.75	-0.5	48.76	-14.3244	-1.2853	-0.2752
1023	SLU 68	-0.75	-0.52	48.42	-14.2341	-1.2766	-0.2754
1023	SLU 69	-0.74	-0.48	49.23	-14.4708	-1.2976	-0.2734
1023	SLU 70	-0.75	-0.51	49.24	-14.4741	-1.298	-0.2773
1023	SLU 71	-0.74	-0.48	48.88	-14.3783	-1.2886	-0.2709
1023	SLU 72	-0.75	-0.5	48.9	-14.3816	-1.289	-0.2749
1023	SLU 73	-0.8	-0.52	52.29	-15.3222	-1.3784	-0.2957
1023	SLU 74	-0.8	-0.49	53.09	-15.5589	-1.3994	-0.2936
1023	SLU 75	-0.81	-0.51	53.11	-15.5622	-1.3998	-0.2976
1023	SLU 76	-0.81	-0.53	52.77	-15.472	-1.3911	-0.2978
1023	SLU 77	-0.81	-0.49	53.58	-15.7086	-1.4121	-0.2957
1023	SLU 78	-0.82	-0.52	53.59	-15.7119	-1.4125	-0.2997
1023	SLU 79	-0.8	-0.49	53.24	-15.6161	-1.4031	-0.2932
1023	SLU 80	-0.81	-0.52	53.25	-15.6194	-1.4035	-0.2972
1023	SLU 81	-0.82	-0.49	54.13	-15.8472	-1.4268	-0.2986
1023	SLU 82	-0.83	-0.51	54.15	-15.8505	-1.4272	-0.3026
1023	SLU 83	-0.82	-0.49	54.62	-15.9969	-1.4395	-0.3007
1023	SLU 84	-0.83	-0.52	54.63	-16.0002	-1.4399	-0.3047
1023	SLE RA 1	-0.54	-0.37	35.89	-10.5536	-0.9464	-0.2005
1023	SLE RA 2	-0.56	-0.39	35.91	-10.5573	-0.9468	-0.2049
1023	SLE RA 3	-0.55	-0.37	36.44	-10.7151	-0.9608	-0.2035
1023	SLE RA 4	-0.56	-0.39	36.45	-10.7173	-0.9611	-0.2062
1023	SLE RA 5	-0.56	-0.4	36.23	-10.6571	-0.9553	-0.2063
1023	SLE RA 6	-0.56	-0.37	36.77	-10.8149	-0.9693	-0.2049
1023	SLE RA 7	-0.56	-0.39	36.78	-10.8171	-0.9696	-0.2076
1023	SLE RA 8	-0.55	-0.37	36.54	-10.7532	-0.9633	-0.2033
1023	SLE RA 9	-0.56	-0.39	36.55	-10.7554	-0.9636	-0.206
1023	SLE RA 10	-0.6	-0.4	38.81	-11.3825	-1.0232	-0.2198
1023	SLE RA 11	-0.6	-0.38	39.35	-11.5403	-1.0372	-0.2184
1023	SLE RA 12	-0.6	-0.39	39.36	-11.5425	-1.0374	-0.2211
1023	SLE RA 13	-0.6	-0.4	39.13	-11.4823	-1.0316	-0.2212
1023	SLE RA 14	-0.6	-0.38	39.67	-11.6401	-1.0456	-0.2198
1023	SLE RA 15	-0.61	-0.39	39.68	-11.6423	-1.0459	-0.2225
1023	SLE RA 16	-0.59	-0.38	39.44	-11.5784	-1.0396	-0.2182
1023	SLE RA 17	-0.6	-0.39	39.45	-11.5806	-1.0399	-0.2208
1023	SLE RA 18	-0.6	-0.38	40.04	-11.7325	-1.0554	-0.2218
1023	SLE RA 19	-0.61	-0.39	40.05	-11.7347	-1.0557	-0.2244
1023	SLE RA 20	-0.61	-0.38	40.36	-11.8323	-1.0639	-0.2232
1023	SLE RA 21	-0.62	-0.39	40.37	-11.8345	-1.0642	-0.2258
1023	SLE FR 1	-0.54	-0.37	35.89	-10.5536	-0.9464	-0.2005
1023	SLE FR 2	-0.55	-0.37	35.9	-10.5543	-0.9465	-0.2014
1023	SLE FR 3	-0.55	-0.37	36.02	-10.5935	-0.9498	-0.2011
1023	SLE FR 4	-0.56	-0.37	37.14	-10.908	-0.9792	-0.2078
1023	SLE FR 5	-0.56	-0.37	37.27	-10.9472	-0.9825	-0.2074
1023	SLE FR 6	-0.57	-0.37	37.97	-11.143	-1.0009	-0.2111
1023	SLE QP 1	-0.54	-0.37	35.89	-10.5536	-0.9464	-0.2005
1023	SLE QP 2	-0.56	-0.37	37.14	-10.9072	-0.9791	-0.2069
1023	SLD 1	2.6	-0.23	43.01	-11.741	-1.1248	0.9006
1023	SLD 2	2.27	-0.43	43.12	-11.8666	-1.1276	0.7809
1023	SLD 3	2.54	-0.99	43.58	-11.8875	-1.1396	0.8646
1023	SLD 4	2.21	-1.19	43.69	-12.0131	-1.1425	0.7449
1023	SLD 5	0.54	0.86	38.02	-10.9124	-0.9997	0.2018
1023	SLD 6	0.32	0.73	38.09	-10.9957	-1.0016	0.1224
1023	SLD 7	0.34	-1.67	39.91	-11.4006	-1.0492	0.0816
1023	SLD 8	0.12	-1.81	39.98	-11.484	-1.0512	0.0022
1023	SLD 9	-1.25	1.07	34.29	-10.3305	-0.907	-0.416
1023	SLD 10	-1.46	0.94	34.36	-10.4139	-0.9089	-0.4954
1023	SLD 11	-1.44	-1.47	36.18	-10.8188	-0.9565	-0.5361
1023	SLD 12	-1.66	-1.6	36.25	-10.9021	-0.9584	-0.6156

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1023	SLD 13	-3.34	0.46	30.58	-9.8014	-0.8157	-1.1586
1023	SLD 14	-3.66	0.26	30.69	-9.927	-0.8185	-1.2784
1023	SLD 15	-3.4	-0.31	31.15	-9.9479	-0.8305	-1.1947
1023	SLD 16	-3.72	-0.5	31.26	-10.0735	-0.8334	-1.3144
1023	SLV 1	6.83	-0.08	50.9	-12.8626	-1.3204	2.3808
1023	SLV 2	6.06	-0.55	51.16	-13.1551	-1.3271	2.1021
1023	SLV 3	6.69	-1.8	52.2	-13.1961	-1.3541	2.299
1023	SLV 4	5.93	-2.27	52.45	-13.4885	-1.3609	2.0203
1023	SLV 5	1.99	2.41	39.27	-10.9368	-1.029	0.7425
1023	SLV 6	1.5	2.11	39.43	-11.1273	-1.0334	0.5608
1023	SLV 7	1.54	-3.33	43.57	-12.0482	-1.1417	0.4699
1023	SLV 8	1.04	-3.63	43.73	-12.2387	-1.146	0.2882
1023	SLV 9	-2.17	2.89	30.54	-9.5758	-0.8121	-0.702
1023	SLV 10	-2.66	2.59	30.71	-9.7663	-0.8165	-0.8836
1023	SLV 11	-2.62	-2.85	34.84	-10.6872	-0.9247	-0.9746
1023	SLV 12	-3.12	-3.15	35.01	-10.8777	-0.9291	-1.1562
1023	SLV 13	-7.05	1.53	21.82	-8.326	-0.5973	-2.434
1023	SLV 14	-7.81	1.07	22.08	-8.6184	-0.604	-2.7128
1023	SLV 15	-7.19	-0.19	23.11	-8.6594	-0.6311	-2.5158
1023	SLV 16	-7.95	-0.66	23.37	-8.9519	-0.6378	-2.7946
1023	CRTFP Ux+	0	0	0	0	0	0
1023	CRTFP Ux-	0	0	0	0	0	0
1023	CRTFP Uy+	0	0	0	0	0	0
1023	CRTFP Uy-	0	0	0	0	0	0
1024	SLU 1	-0.6	-0.41	38.14	-10.2399	0.0766	-0.2082
1024	SLU 2	-0.62	-0.45	38.17	-10.2459	0.0765	-0.2146
1024	SLU 3	-0.61	-0.41	39.04	-10.4795	0.0786	-0.2132
1024	SLU 4	-0.62	-0.44	39.06	-10.4831	0.0786	-0.217
1024	SLU 5	-0.62	-0.46	38.7	-10.3958	0.0778	-0.2168
1024	SLU 6	-0.62	-0.41	39.57	-10.6294	0.0798	-0.2153
1024	SLU 7	-0.63	-0.44	39.59	-10.6331	0.0798	-0.2192
1024	SLU 8	-0.61	-0.41	39.2	-10.5397	0.0791	-0.2125
1024	SLU 9	-0.62	-0.44	39.21	-10.5433	0.079	-0.2164
1024	SLU 10	-0.69	-0.46	42.95	-11.4673	0.0863	-0.24
1024	SLU 11	-0.69	-0.42	43.83	-11.7009	0.0884	-0.2385
1024	SLU 12	-0.7	-0.45	43.84	-11.7045	0.0883	-0.2424
1024	SLU 13	-0.7	-0.47	43.48	-11.6172	0.0875	-0.2422
1024	SLU 14	-0.69	-0.42	44.36	-11.8508	0.0896	-0.2407
1024	SLU 15	-0.7	-0.45	44.37	-11.8544	0.0896	-0.2446
1024	SLU 16	-0.68	-0.42	43.98	-11.7611	0.0888	-0.2379
1024	SLU 17	-0.69	-0.45	44	-11.7647	0.0888	-0.2417
1024	SLU 18	-0.7	-0.42	44.97	-11.9847	0.0906	-0.2444
1024	SLU 19	-0.71	-0.45	44.99	-11.9883	0.0905	-0.2483
1024	SLU 20	-0.71	-0.43	45.5	-12.1346	0.0918	-0.2466
1024	SLU 21	-0.72	-0.45	45.52	-12.1382	0.0917	-0.2505
1024	SLU 22	-0.67	-0.39	42.95	-11.4815	0.0867	-0.2327
1024	SLU 23	-0.69	-0.44	42.98	-11.4875	0.0866	-0.2391
1024	SLU 24	-0.68	-0.4	43.86	-11.7211	0.0887	-0.2376
1024	SLU 25	-0.69	-0.42	43.88	-11.7248	0.0886	-0.2415
1024	SLU 26	-0.69	-0.44	43.51	-11.6375	0.0878	-0.2413
1024	SLU 27	-0.69	-0.4	44.39	-11.8711	0.0899	-0.2398
1024	SLU 28	-0.7	-0.43	44.41	-11.8747	0.0898	-0.2437
1024	SLU 29	-0.68	-0.4	44.01	-11.7813	0.0891	-0.237
1024	SLU 30	-0.69	-0.43	44.03	-11.785	0.0891	-0.2408
1024	SLU 31	-0.76	-0.45	47.77	-12.7089	0.0964	-0.2645
1024	SLU 32	-0.76	-0.41	48.64	-12.9425	0.0984	-0.263
1024	SLU 33	-0.77	-0.43	48.66	-12.9461	0.0984	-0.2669
1024	SLU 34	-0.77	-0.45	48.3	-12.8588	0.0976	-0.2666
1024	SLU 35	-0.76	-0.41	49.17	-13.0924	0.0997	-0.2652
1024	SLU 36	-0.77	-0.44	49.19	-13.096	0.0996	-0.269
1024	SLU 37	-0.75	-0.41	48.8	-13.0027	0.0989	-0.2623
1024	SLU 38	-0.76	-0.44	48.81	-13.0063	0.0988	-0.2662
1024	SLU 39	-0.77	-0.41	49.79	-13.2263	0.1006	-0.2689
1024	SLU 40	-0.78	-0.44	49.8	-13.2299	0.1006	-0.2728
1024	SLU 41	-0.78	-0.41	50.32	-13.3762	0.1019	-0.2711
1024	SLU 42	-0.79	-0.44	50.33	-13.3798	0.1018	-0.2749
1024	SLU 43	-0.75	-0.53	47.93	-12.8861	0.0962	-0.2622
1024	SLU 44	-0.77	-0.58	47.96	-12.8922	0.0961	-0.2687
1024	SLU 45	-0.77	-0.54	48.83	-13.1258	0.0982	-0.2672
1024	SLU 46	-0.78	-0.56	48.85	-13.1294	0.0981	-0.2711
1024	SLU 47	-0.78	-0.58	48.49	-13.0421	0.0973	-0.2708
1024	SLU 48	-0.77	-0.54	49.36	-13.2757	0.0994	-0.2694
1024	SLU 49	-0.78	-0.57	49.38	-13.2793	0.0993	-0.2733
1024	SLU 50	-0.77	-0.54	48.99	-13.186	0.0986	-0.2666
1024	SLU 51	-0.78	-0.57	49	-13.1896	0.0985	-0.2704
1024	SLU 52	-0.84	-0.59	52.74	-14.1135	0.1058	-0.2941
1024	SLU 53	-0.84	-0.55	53.62	-14.3471	0.1079	-0.2926
1024	SLU 54	-0.85	-0.58	53.63	-14.3508	0.1079	-0.2965
1024	SLU 55	-0.85	-0.59	53.27	-14.2635	0.1071	-0.2962
1024	SLU 56	-0.85	-0.55	54.15	-14.497	0.1091	-0.2948
1024	SLU 57	-0.86	-0.58	54.16	-14.5007	0.1091	-0.2986
1024	SLU 58	-0.84	-0.55	53.77	-14.4073	0.1084	-0.2919
1024	SLU 59	-0.85	-0.58	53.79	-14.411	0.1083	-0.2958
1024	SLU 60	-0.86	-0.55	54.76	-14.6309	0.1101	-0.2985
1024	SLU 61	-0.87	-0.58	54.78	-14.6345	0.1101	-0.3024
1024	SLU 62	-0.86	-0.55	55.29	-14.7808	0.1113	-0.3007
1024	SLU 63	-0.87	-0.58	55.31	-14.7845	0.1113	-0.3045
1024	SLU 64	-0.82	-0.52	52.74	-14.1277	0.1062	-0.2867
1024	SLU 65	-0.84	-0.56	52.77	-14.1338	0.1061	-0.2932
1024	SLU 66	-0.84	-0.52	53.65	-14.3674	0.1082	-0.2917

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1024	SLU 67	-0.85	-0.55	53.67	-14.371	0.1082	-0.2956
1024	SLU 68	-0.85	-0.57	53.3	-14.2837	0.1074	-0.2953
1024	SLU 69	-0.84	-0.53	54.18	-14.5173	0.1094	-0.2939
1024	SLU 70	-0.86	-0.55	54.2	-14.5209	0.1094	-0.2977
1024	SLU 71	-0.84	-0.53	53.8	-14.4276	0.1087	-0.291
1024	SLU 72	-0.85	-0.55	53.82	-14.4312	0.1086	-0.2949
1024	SLU 73	-0.91	-0.58	57.56	-15.3552	0.1159	-0.3185
1024	SLU 74	-0.91	-0.53	58.43	-15.5887	0.118	-0.3171
1024	SLU 75	-0.92	-0.56	58.45	-15.5924	0.1179	-0.321
1024	SLU 76	-0.92	-0.58	58.09	-15.5051	0.1171	-0.3207
1024	SLU 77	-0.92	-0.54	58.96	-15.7387	0.1192	-0.3192
1024	SLU 78	-0.93	-0.56	58.98	-15.7423	0.1191	-0.3231
1024	SLU 79	-0.91	-0.54	58.59	-15.6489	0.1184	-0.3164
1024	SLU 80	-0.92	-0.56	58.6	-15.6526	0.1184	-0.3203
1024	SLU 81	-0.93	-0.53	59.58	-15.8725	0.1202	-0.323
1024	SLU 82	-0.94	-0.56	59.6	-15.8762	0.1201	-0.3268
1024	SLU 83	-0.93	-0.54	60.11	-16.0225	0.1214	-0.3251
1024	SLU 84	-0.94	-0.57	60.12	-16.0261	0.1213	-0.329
1024	SLE RA 1	-0.62	-0.4	39.51	-10.5946	0.0795	-0.2152
1024	SLE RA 2	-0.63	-0.43	39.53	-10.5986	0.0794	-0.2195
1024	SLE RA 3	-0.63	-0.4	40.12	-10.7544	0.0808	-0.2185
1024	SLE RA 4	-0.64	-0.42	40.13	-10.7568	0.0808	-0.2211
1024	SLE RA 5	-0.63	-0.44	39.89	-10.6986	0.0803	-0.2209
1024	SLE RA 6	-0.63	-0.41	40.47	-10.8543	0.0816	-0.2199
1024	SLE RA 7	-0.64	-0.43	40.48	-10.8567	0.0816	-0.2225
1024	SLE RA 8	-0.63	-0.41	40.22	-10.7945	0.0811	-0.218
1024	SLE RA 9	-0.63	-0.43	40.23	-10.7969	0.0811	-0.2206
1024	SLE RA 10	-0.68	-0.44	42.72	-11.4129	0.086	-0.2364
1024	SLE RA 11	-0.68	-0.41	43.31	-11.5686	0.0873	-0.2354
1024	SLE RA 12	-0.68	-0.43	43.32	-11.571	0.0873	-0.238
1024	SLE RA 13	-0.68	-0.44	43.08	-11.5128	0.0868	-0.2378
1024	SLE RA 14	-0.68	-0.41	43.66	-11.6686	0.0882	-0.2369
1024	SLE RA 15	-0.69	-0.43	43.67	-11.671	0.0881	-0.2394
1024	SLE RA 16	-0.67	-0.41	43.41	-11.6087	0.0876	-0.235
1024	SLE RA 17	-0.68	-0.43	43.42	-11.6112	0.0876	-0.2375
1024	SLE RA 18	-0.69	-0.41	44.07	-11.7578	0.0888	-0.2393
1024	SLE RA 19	-0.69	-0.43	44.08	-11.7602	0.0888	-0.2419
1024	SLE RA 20	-0.69	-0.42	44.42	-11.8578	0.0896	-0.2408
1024	SLE RA 21	-0.7	-0.43	44.43	-11.8602	0.0896	-0.2434
1024	SLE FR 1	-0.62	-0.4	39.51	-10.5946	0.0795	-0.2152
1024	SLE FR 2	-0.62	-0.41	39.52	-10.5954	0.0795	-0.216
1024	SLE FR 3	-0.62	-0.4	39.66	-10.6346	0.0798	-0.2158
1024	SLE FR 4	-0.64	-0.41	40.88	-10.9444	0.0823	-0.2233
1024	SLE FR 5	-0.64	-0.41	41.02	-10.9835	0.0826	-0.223
1024	SLE FR 6	-0.65	-0.41	41.79	-11.1762	0.0842	-0.2273
1024	SLE QP 1	-0.62	-0.4	39.51	-10.5946	0.0795	-0.2152
1024	SLE QP 2	-0.64	-0.41	40.88	-10.9436	0.0823	-0.2224
1024	SLD 1	3.07	-0.23	46.98	-11.4768	0.1061	1.0757
1024	SLD 2	2.69	-0.45	47.09	-11.6225	0.1068	0.9424
1024	SLD 3	3	-1.11	47.6	-11.6107	0.1074	1.0516
1024	SLD 4	2.62	-1.33	47.71	-11.7564	0.1082	0.9183
1024	SLD 5	0.65	1.03	41.75	-10.874	0.0872	0.2278
1024	SLD 6	0.39	0.88	41.82	-10.9707	0.0877	0.1393
1024	SLD 7	0.42	-1.92	43.82	-11.3202	0.0918	0.1475
1024	SLD 8	0.16	-2.07	43.89	-11.417	0.0923	0.0591
1024	SLD 9	-1.44	1.26	37.87	-10.4702	0.0723	-0.5039
1024	SLD 10	-1.69	1.11	37.94	-10.5669	0.0728	-0.5924
1024	SLD 11	-1.67	-1.69	39.94	-10.9164	0.0769	-0.5842
1024	SLD 12	-1.92	-1.84	40.02	-11.0131	0.0774	-0.6726
1024	SLD 13	-3.89	0.52	34.05	-10.1307	0.0564	-1.3632
1024	SLD 14	-4.28	0.3	34.16	-10.2765	0.0571	-1.4965
1024	SLD 15	-3.96	-0.36	34.67	-10.2646	0.0578	-1.3873
1024	SLD 16	-4.34	-0.58	34.78	-10.4103	0.0585	-1.5206
1024	SLV 1	8.02	-0.03	55.17	-12.1951	0.138	2.8117
1024	SLV 2	7.13	-0.54	55.43	-12.5344	0.1397	2.5014
1024	SLV 3	7.86	-2.03	56.58	-12.5009	0.1411	2.7563
1024	SLV 4	6.97	-2.54	56.84	-12.8402	0.1428	2.446
1024	SLV 5	2.36	2.83	42.97	-10.7955	0.094	0.8264
1024	SLV 6	1.78	2.5	43.15	-11.0166	0.0951	0.6242
1024	SLV 7	1.83	-3.84	47.69	-11.8149	0.1044	0.6417
1024	SLV 8	1.25	-4.17	47.86	-12.036	0.1055	0.4395
1024	SLV 9	-2.53	3.36	33.9	-9.8511	0.0591	-0.8843
1024	SLV 10	-3.1	3.03	34.07	-10.0722	0.0602	-1.0865
1024	SLV 11	-3.06	-3.31	38.62	-10.8705	0.0695	-1.0691
1024	SLV 12	-3.63	-3.65	38.79	-11.0916	0.0706	-1.2713
1024	SLV 13	-8.25	1.73	24.92	-9.0469	0.0218	-2.8908
1024	SLV 14	-9.14	1.22	25.18	-9.3862	0.0235	-3.2011
1024	SLV 15	-8.41	-0.27	26.33	-9.3527	0.0249	-2.9463
1024	SLV 16	-9.3	-0.78	26.59	-9.6921	0.0266	-3.2566
1024	CRTFP Ux+	0	0	0	0	0	0
1024	CRTFP Ux-	0	0	0	0	0	0
1024	CRTFP Uy+	0	0	0	0	0	0
1024	CRTFP Uy-	0	0	0	0	0	0
1025	SLU 1	-0.58	-0.36	35.94	-8.7741	0.061	-0.2002
1025	SLU 2	-0.6	-0.41	35.97	-8.7806	0.0609	-0.2066
1025	SLU 3	-0.59	-0.36	36.79	-8.9755	0.0626	-0.2049
1025	SLU 4	-0.6	-0.39	36.81	-8.9794	0.0625	-0.2088
1025	SLU 5	-0.6	-0.41	36.47	-8.9072	0.0619	-0.2086
1025	SLU 6	-0.6	-0.37	37.28	-9.1022	0.0636	-0.2069
1025	SLU 7	-0.61	-0.39	37.3	-9.1061	0.0635	-0.2107

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1025	SLU 8	-0.59	-0.37	36.93	-9.0274	0.063	-0.2041
1025	SLU 9	-0.6	-0.4	36.95	-9.0313	0.0629	-0.2079
1025	SLU 10	-0.67	-0.42	40.48	-9.8118	0.0684	-0.2315
1025	SLU 11	-0.66	-0.37	41.3	-10.0068	0.0701	-0.2298
1025	SLU 12	-0.67	-0.4	41.32	-10.0107	0.07	-0.2336
1025	SLU 13	-0.67	-0.42	40.97	-9.9385	0.0694	-0.2334
1025	SLU 14	-0.67	-0.38	41.79	-10.1335	0.0711	-0.2317
1025	SLU 15	-0.68	-0.4	41.81	-10.1374	0.071	-0.2356
1025	SLU 16	-0.66	-0.38	41.44	-10.0587	0.0705	-0.2289
1025	SLU 17	-0.67	-0.4	41.46	-10.0626	0.0704	-0.2328
1025	SLU 18	-0.68	-0.37	42.38	-10.2473	0.0717	-0.2357
1025	SLU 19	-0.69	-0.4	42.4	-10.2512	0.0716	-0.2395
1025	SLU 20	-0.68	-0.38	42.87	-10.374	0.0727	-0.2376
1025	SLU 21	-0.7	-0.4	42.89	-10.3779	0.0726	-0.2415
1025	SLU 22	-0.65	-0.34	40.47	-9.821	0.0688	-0.2239
1025	SLU 23	-0.66	-0.39	40.5	-9.8275	0.0687	-0.2304
1025	SLU 24	-0.66	-0.34	41.32	-10.0225	0.0704	-0.2287
1025	SLU 25	-0.67	-0.37	41.34	-10.0263	0.0703	-0.2326
1025	SLU 26	-0.67	-0.39	41	-9.9542	0.0697	-0.2323
1025	SLU 27	-0.66	-0.35	41.81	-10.1491	0.0714	-0.2306
1025	SLU 28	-0.68	-0.38	41.83	-10.153	0.0713	-0.2345
1025	SLU 29	-0.66	-0.35	41.46	-10.0744	0.0708	-0.2278
1025	SLU 30	-0.67	-0.38	41.48	-10.0783	0.0707	-0.2317
1025	SLU 31	-0.74	-0.4	45.01	-10.8588	0.0762	-0.2552
1025	SLU 32	-0.73	-0.35	45.83	-11.0537	0.0779	-0.2535
1025	SLU 33	-0.74	-0.38	45.85	-11.0576	0.0778	-0.2574
1025	SLU 34	-0.74	-0.4	45.51	-10.9855	0.0772	-0.2572
1025	SLU 35	-0.74	-0.36	46.32	-11.1804	0.0789	-0.2555
1025	SLU 36	-0.75	-0.38	46.34	-11.1843	0.0788	-0.2594
1025	SLU 37	-0.73	-0.36	45.97	-11.1057	0.0783	-0.2527
1025	SLU 38	-0.74	-0.38	45.99	-11.1095	0.0783	-0.2566
1025	SLU 39	-0.75	-0.35	46.91	-11.2943	0.0795	-0.2594
1025	SLU 40	-0.76	-0.38	46.93	-11.2982	0.0795	-0.2633
1025	SLU 41	-0.75	-0.36	47.4	-11.421	0.0805	-0.2614
1025	SLU 42	-0.76	-0.38	47.42	-11.4248	0.0805	-0.2653
1025	SLU 43	-0.73	-0.48	45.17	-11.0474	0.0766	-0.2521
1025	SLU 44	-0.74	-0.52	45.2	-11.0538	0.0765	-0.2585
1025	SLU 45	-0.74	-0.48	46.02	-11.2488	0.0782	-0.2568
1025	SLU 46	-0.75	-0.51	46.04	-11.2527	0.0781	-0.2607
1025	SLU 47	-0.75	-0.53	45.7	-11.1805	0.0775	-0.2605
1025	SLU 48	-0.75	-0.48	46.51	-11.3755	0.0792	-0.2588
1025	SLU 49	-0.76	-0.51	46.53	-11.3793	0.0791	-0.2626
1025	SLU 50	-0.74	-0.48	46.16	-11.3007	0.0786	-0.256
1025	SLU 51	-0.75	-0.51	46.18	-11.3046	0.0785	-0.2598
1025	SLU 52	-0.82	-0.53	49.71	-12.0851	0.084	-0.2834
1025	SLU 53	-0.81	-0.49	50.52	-12.2801	0.0857	-0.2817
1025	SLU 54	-0.82	-0.51	50.54	-12.284	0.0856	-0.2855
1025	SLU 55	-0.82	-0.53	50.2	-12.2118	0.085	-0.2853
1025	SLU 56	-0.82	-0.49	51.02	-12.4068	0.0867	-0.2836
1025	SLU 57	-0.83	-0.52	51.04	-12.4106	0.0866	-0.2875
1025	SLU 58	-0.81	-0.49	50.66	-12.332	0.0861	-0.2808
1025	SLU 59	-0.82	-0.52	50.68	-12.3359	0.086	-0.2847
1025	SLU 60	-0.83	-0.49	51.61	-12.5206	0.0873	-0.2876
1025	SLU 61	-0.84	-0.52	51.63	-12.5245	0.0873	-0.2914
1025	SLU 62	-0.83	-0.49	52.1	-12.6473	0.0883	-0.2895
1025	SLU 63	-0.84	-0.52	52.12	-12.6512	0.0883	-0.2934
1025	SLU 64	-0.79	-0.46	49.7	-12.0943	0.0844	-0.2758
1025	SLU 65	-0.81	-0.5	49.73	-12.1008	0.0843	-0.2823
1025	SLU 66	-0.81	-0.46	50.55	-12.2957	0.086	-0.2806
1025	SLU 67	-0.82	-0.49	50.57	-12.2996	0.0859	-0.2845
1025	SLU 68	-0.82	-0.51	50.23	-12.2274	0.0853	-0.2842
1025	SLU 69	-0.81	-0.46	51.04	-12.4224	0.087	-0.2825
1025	SLU 70	-0.83	-0.49	51.06	-12.4263	0.0869	-0.2864
1025	SLU 71	-0.81	-0.46	50.69	-12.3476	0.0864	-0.2797
1025	SLU 72	-0.82	-0.49	50.71	-12.3515	0.0863	-0.2836
1025	SLU 73	-0.88	-0.51	54.24	-13.1321	0.0918	-0.3071
1025	SLU 74	-0.88	-0.47	55.05	-13.327	0.0935	-0.3054
1025	SLU 75	-0.89	-0.5	55.07	-13.3309	0.0934	-0.3093
1025	SLU 76	-0.89	-0.51	54.73	-13.2587	0.0928	-0.3091
1025	SLU 77	-0.89	-0.47	55.55	-13.4537	0.0945	-0.3074
1025	SLU 78	-0.9	-0.5	55.57	-13.4576	0.0944	-0.3113
1025	SLU 79	-0.88	-0.47	55.2	-13.3789	0.0939	-0.3046
1025	SLU 80	-0.89	-0.5	55.21	-13.3828	0.0939	-0.3085
1025	SLU 81	-0.9	-0.47	56.14	-13.5676	0.0951	-0.3113
1025	SLU 82	-0.91	-0.5	56.16	-13.5714	0.0951	-0.3152
1025	SLU 83	-0.9	-0.47	56.63	-13.6942	0.0961	-0.3133
1025	SLU 84	-0.91	-0.5	56.65	-13.6981	0.0961	-0.3172
1025	SLE RA 1	-0.6	-0.36	37.23	-9.0732	0.0632	-0.2069
1025	SLE RA 2	-0.61	-0.39	37.26	-9.0775	0.0631	-0.2112
1025	SLE RA 3	-0.61	-0.36	37.8	-9.2075	0.0643	-0.2101
1025	SLE RA 4	-0.61	-0.38	37.81	-9.2101	0.0642	-0.2127
1025	SLE RA 5	-0.61	-0.39	37.59	-9.162	0.0638	-0.2126
1025	SLE RA 6	-0.61	-0.36	38.13	-9.2919	0.0649	-0.2114
1025	SLE RA 7	-0.62	-0.38	38.14	-9.2945	0.0649	-0.214
1025	SLE RA 8	-0.6	-0.36	37.89	-9.2421	0.0645	-0.2096
1025	SLE RA 9	-0.61	-0.38	37.91	-9.2447	0.0645	-0.2121
1025	SLE RA 10	-0.66	-0.39	40.26	-9.765	0.0681	-0.2278
1025	SLE RA 11	-0.65	-0.36	40.8	-9.895	0.0693	-0.2267
1025	SLE RA 12	-0.66	-0.38	40.82	-9.8976	0.0692	-0.2293
1025	SLE RA 13	-0.66	-0.39	40.59	-9.8495	0.0688	-0.2291

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1025	SLE RA 14	-0.66	-0.37	41.13	-9.9795	0.0699	-0.228
1025	SLE RA 15	-0.66	-0.38	41.15	-9.9821	0.0699	-0.2306
1025	SLE RA 16	-0.65	-0.37	40.9	-9.9296	0.0696	-0.2261
1025	SLE RA 17	-0.66	-0.38	40.91	-9.9322	0.0695	-0.2287
1025	SLE RA 18	-0.66	-0.36	41.53	-10.0554	0.0704	-0.2306
1025	SLE RA 19	-0.67	-0.38	41.54	-10.058	0.0703	-0.2332
1025	SLE RA 20	-0.67	-0.37	41.86	-10.1398	0.071	-0.2319
1025	SLE RA 21	-0.68	-0.38	41.87	-10.1424	0.071	-0.2345
1025	SLE FR 1	-0.6	-0.36	37.23	-9.0732	0.0632	-0.2069
1025	SLE FR 2	-0.6	-0.36	37.24	-9.0741	0.0632	-0.2078
1025	SLE FR 3	-0.6	-0.36	37.37	-9.107	0.0635	-0.2075
1025	SLE FR 4	-0.62	-0.36	38.53	-9.3687	0.0653	-0.2149
1025	SLE FR 5	-0.62	-0.36	38.65	-9.4016	0.0656	-0.2146
1025	SLE FR 6	-0.63	-0.36	39.38	-9.5643	0.0668	-0.2188
1025	SLE QP 1	-0.6	-0.36	37.23	-9.0732	0.0632	-0.2069
1025	SLE QP 2	-0.62	-0.36	38.52	-9.3679	0.0654	-0.2141
1025	SLD 1	3.1	-0.13	43.94	-9.6207	0.0844	1.087
1025	SLD 2	2.71	-0.34	44.03	-9.7503	0.0853	0.954
1025	SLD 3	3.03	-1.01	44.53	-9.7293	0.0853	1.0631
1025	SLD 4	2.65	-1.22	44.62	-9.8589	0.0862	0.9301
1025	SLD 5	0.67	1.08	39.24	-9.2554	0.0695	0.2367
1025	SLD 6	0.42	0.94	39.29	-9.3414	0.0702	0.1484
1025	SLD 7	0.44	-1.85	41.2	-9.6174	0.0725	0.157
1025	SLD 8	0.19	-1.99	41.26	-9.7035	0.0731	0.0687
1025	SLD 9	-1.42	1.27	35.78	-9.0323	0.0576	-0.4968
1025	SLD 10	-1.67	1.13	35.84	-9.1183	0.0582	-0.5851
1025	SLD 11	-1.65	-1.66	37.75	-9.3943	0.0605	-0.5765
1025	SLD 12	-1.9	-1.8	37.81	-9.4803	0.0612	-0.6648
1025	SLD 13	-3.88	0.51	32.43	-8.8768	0.0445	-1.3582
1025	SLD 14	-4.26	0.3	32.51	-9.0064	0.0455	-1.4912
1025	SLD 15	-3.95	-0.37	33.02	-8.9854	0.0454	-1.3821
1025	SLD 16	-4.33	-0.58	33.1	-9.115	0.0463	-1.5151
1025	SLV 1	8.06	0.13	51.22	-9.9621	0.1099	2.827
1025	SLV 2	7.17	-0.36	51.42	-10.2639	0.112	2.5172
1025	SLV 3	7.9	-1.86	52.56	-10.2112	0.1119	2.7719
1025	SLV 4	7.01	-2.35	52.76	-10.5129	0.1141	2.4621
1025	SLV 5	2.38	2.89	40.26	-9.1153	0.0752	0.8362
1025	SLV 6	1.8	2.57	40.39	-9.3119	0.0767	0.6344
1025	SLV 7	1.86	-3.74	44.73	-9.9456	0.082	0.6527
1025	SLV 8	1.28	-4.06	44.87	-10.1422	0.0834	0.4508
1025	SLV 9	-2.51	3.34	32.18	-8.5935	0.0473	-0.8789
1025	SLV 10	-3.09	3.02	32.31	-8.7901	0.0487	-1.0808
1025	SLV 11	-3.04	-3.29	36.65	-9.4238	0.0541	-1.0625
1025	SLV 12	-3.61	-3.61	36.78	-9.6204	0.0555	-1.2643
1025	SLV 13	-8.25	1.63	24.28	-8.2228	0.0167	-2.8902
1025	SLV 14	-9.13	1.14	24.48	-8.5245	0.0188	-3.2
1025	SLV 15	-8.41	-0.36	25.63	-8.4719	0.0187	-2.9453
1025	SLV 16	-9.29	-0.85	25.82	-8.7736	0.0209	-3.2551
1025	CRTFP Ux+	0	0	0	0	0	0
1025	CRTFP Ux-	0	0	0	0	0	0
1025	CRTFP Uy+	0	0	0	0	0	0
1025	CRTFP Uy-	0	0	0	0	0	0
1026	SLU 1	-0.55	-0.3	34.3	-7.742	0.0422	-0.1916
1026	SLU 2	-0.57	-0.34	34.33	-7.7493	0.0421	-0.1981
1026	SLU 3	-0.57	-0.3	35.1	-7.9163	0.0433	-0.1961
1026	SLU 4	-0.58	-0.33	35.12	-7.9207	0.0432	-0.2
1026	SLU 5	-0.58	-0.35	34.8	-7.8585	0.0428	-0.1999
1026	SLU 6	-0.57	-0.3	35.57	-8.0256	0.044	-0.1979
1026	SLU 7	-0.58	-0.33	35.59	-8.03	0.0439	-0.2018
1026	SLU 8	-0.56	-0.31	35.23	-7.9606	0.0436	-0.1951
1026	SLU 9	-0.58	-0.33	35.25	-7.9649	0.0435	-0.199
1026	SLU 10	-0.64	-0.35	38.64	-8.653	0.0469	-0.2224
1026	SLU 11	-0.64	-0.3	39.41	-8.8201	0.0481	-0.2204
1026	SLU 12	-0.65	-0.33	39.43	-8.8245	0.0481	-0.2243
1026	SLU 13	-0.65	-0.35	39.11	-8.7623	0.0477	-0.2241
1026	SLU 14	-0.64	-0.31	39.88	-8.9294	0.0489	-0.2222
1026	SLU 15	-0.65	-0.33	39.9	-8.9338	0.0488	-0.226
1026	SLU 16	-0.63	-0.31	39.54	-8.8644	0.0485	-0.2194
1026	SLU 17	-0.65	-0.34	39.56	-8.8687	0.0484	-0.2233
1026	SLU 18	-0.65	-0.31	40.45	-9.0331	0.0491	-0.2263
1026	SLU 19	-0.66	-0.33	40.47	-9.0374	0.0491	-0.2302
1026	SLU 20	-0.66	-0.31	40.92	-9.1424	0.0499	-0.228
1026	SLU 21	-0.67	-0.33	40.94	-9.1467	0.0498	-0.2319
1026	SLU 22	-0.62	-0.27	38.62	-8.656	0.0474	-0.2146
1026	SLU 23	-0.64	-0.32	38.66	-8.6633	0.0473	-0.2211
1026	SLU 24	-0.63	-0.27	39.42	-8.8304	0.0485	-0.2191
1026	SLU 25	-0.64	-0.3	39.45	-8.8347	0.0484	-0.223
1026	SLU 26	-0.64	-0.32	39.12	-8.7726	0.048	-0.2229
1026	SLU 27	-0.64	-0.28	39.89	-8.9396	0.0492	-0.2209
1026	SLU 28	-0.65	-0.3	39.91	-8.944	0.0491	-0.2248
1026	SLU 29	-0.63	-0.28	39.55	-8.8746	0.0488	-0.2181
1026	SLU 30	-0.64	-0.3	39.57	-8.879	0.0487	-0.222
1026	SLU 31	-0.71	-0.32	42.96	-9.567	0.0521	-0.2454
1026	SLU 32	-0.7	-0.28	43.73	-9.7341	0.0533	-0.2434
1026	SLU 33	-0.71	-0.3	43.76	-9.7385	0.0533	-0.2473
1026	SLU 34	-0.71	-0.32	43.43	-9.6763	0.0528	-0.2471
1026	SLU 35	-0.71	-0.28	44.2	-9.8434	0.0541	-0.2451
1026	SLU 36	-0.72	-0.31	44.22	-9.8478	0.054	-0.249
1026	SLU 37	-0.7	-0.28	43.86	-9.7784	0.0537	-0.2424
1026	SLU 38	-0.71	-0.31	43.88	-9.7827	0.0536	-0.2463

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1026	SLU 39	-0.72	-0.28	44.78	-9.9471	0.0543	-0.2493
1026	SLU 40	-0.73	-0.3	44.8	-9.9515	0.0543	-0.2532
1026	SLU 41	-0.73	-0.28	45.24	-10.0564	0.055	-0.251
1026	SLU 42	-0.74	-0.31	45.26	-10.0607	0.055	-0.2549
1026	SLU 43	-0.7	-0.4	43.1	-9.7512	0.0531	-0.2412
1026	SLU 44	-0.72	-0.44	43.14	-9.7585	0.0529	-0.2477
1026	SLU 45	-0.71	-0.4	43.91	-9.9256	0.0542	-0.2457
1026	SLU 46	-0.72	-0.43	43.93	-9.9299	0.0541	-0.2496
1026	SLU 47	-0.72	-0.45	43.61	-9.8678	0.0537	-0.2495
1026	SLU 48	-0.72	-0.4	44.37	-10.0349	0.0549	-0.2475
1026	SLU 49	-0.73	-0.43	44.4	-10.0392	0.0548	-0.2514
1026	SLU 50	-0.71	-0.4	44.04	-9.9698	0.0545	-0.2447
1026	SLU 51	-0.72	-0.43	44.06	-9.9742	0.0544	-0.2486
1026	SLU 52	-0.79	-0.45	47.45	-10.6622	0.0578	-0.272
1026	SLU 53	-0.78	-0.4	48.22	-10.8293	0.059	-0.27
1026	SLU 54	-0.79	-0.43	48.24	-10.8337	0.059	-0.2739
1026	SLU 55	-0.79	-0.45	47.92	-10.7715	0.0585	-0.2737
1026	SLU 56	-0.79	-0.41	48.68	-10.9386	0.0597	-0.2718
1026	SLU 57	-0.8	-0.43	48.71	-10.943	0.0597	-0.2756
1026	SLU 58	-0.78	-0.41	48.35	-10.8736	0.0594	-0.269
1026	SLU 59	-0.79	-0.43	48.37	-10.8779	0.0593	-0.2729
1026	SLU 60	-0.8	-0.4	49.26	-11.0423	0.06	-0.2759
1026	SLU 61	-0.81	-0.43	49.28	-11.0467	0.0599	-0.2798
1026	SLU 62	-0.8	-0.41	49.73	-11.1516	0.0607	-0.2776
1026	SLU 63	-0.81	-0.43	49.75	-11.156	0.0607	-0.2815
1026	SLU 64	-0.76	-0.37	47.43	-10.6652	0.0582	-0.2642
1026	SLU 65	-0.78	-0.42	47.46	-10.6725	0.0581	-0.2707
1026	SLU 66	-0.78	-0.37	48.23	-10.8396	0.0593	-0.2687
1026	SLU 67	-0.79	-0.4	48.25	-10.8439	0.0593	-0.2726
1026	SLU 68	-0.79	-0.42	47.93	-10.7818	0.0589	-0.2725
1026	SLU 69	-0.78	-0.38	48.7	-10.9489	0.0601	-0.2705
1026	SLU 70	-0.79	-0.4	48.72	-10.9532	0.06	-0.2744
1026	SLU 71	-0.77	-0.38	48.36	-10.8838	0.0597	-0.2677
1026	SLU 72	-0.79	-0.4	48.38	-10.8882	0.0596	-0.2716
1026	SLU 73	-0.85	-0.42	51.77	-11.5763	0.063	-0.295
1026	SLU 74	-0.85	-0.38	52.54	-11.7433	0.0642	-0.293
1026	SLU 75	-0.86	-0.4	52.56	-11.7477	0.0641	-0.2969
1026	SLU 76	-0.86	-0.42	52.24	-11.6855	0.0637	-0.2967
1026	SLU 77	-0.85	-0.38	53.01	-11.8526	0.0649	-0.2947
1026	SLU 78	-0.86	-0.41	53.03	-11.857	0.0649	-0.2986
1026	SLU 79	-0.84	-0.38	52.67	-11.7876	0.0645	-0.292
1026	SLU 80	-0.85	-0.41	52.69	-11.7919	0.0645	-0.2959
1026	SLU 81	-0.86	-0.38	53.58	-11.9563	0.0652	-0.2989
1026	SLU 82	-0.87	-0.4	53.6	-11.9607	0.0651	-0.3028
1026	SLU 83	-0.87	-0.38	54.05	-12.0656	0.0659	-0.3006
1026	SLU 84	-0.88	-0.41	54.07	-12.07	0.0659	-0.3045
1026	SLE RA 1	-0.57	-0.29	35.53	-8.0031	0.0437	-0.1982
1026	SLE RA 2	-0.59	-0.32	35.56	-8.008	0.0436	-0.2025
1026	SLE RA 3	-0.58	-0.29	36.07	-8.1194	0.0444	-0.2012
1026	SLE RA 4	-0.59	-0.31	36.08	-8.1223	0.0444	-0.2038
1026	SLE RA 5	-0.59	-0.32	35.87	-8.0808	0.0441	-0.2037
1026	SLE RA 6	-0.58	-0.29	36.38	-8.1922	0.0449	-0.2024
1026	SLE RA 7	-0.59	-0.31	36.39	-8.1951	0.0448	-0.205
1026	SLE RA 8	-0.58	-0.3	36.15	-8.1489	0.0446	-0.2005
1026	SLE RA 9	-0.59	-0.31	36.17	-8.1518	0.0446	-0.2031
1026	SLE RA 10	-0.63	-0.32	38.43	-8.6105	0.0468	-0.2187
1026	SLE RA 11	-0.63	-0.3	38.94	-8.7219	0.0476	-0.2174
1026	SLE RA 12	-0.64	-0.31	38.96	-8.7248	0.0476	-0.22
1026	SLE RA 13	-0.64	-0.33	38.74	-8.6834	0.0473	-0.2199
1026	SLE RA 14	-0.63	-0.3	39.25	-8.7947	0.0481	-0.2185
1026	SLE RA 15	-0.64	-0.31	39.27	-8.7976	0.0481	-0.2211
1026	SLE RA 16	-0.63	-0.3	39.03	-8.7514	0.0479	-0.2167
1026	SLE RA 17	-0.63	-0.32	39.04	-8.7543	0.0478	-0.2193
1026	SLE RA 18	-0.64	-0.3	39.64	-8.8639	0.0483	-0.2213
1026	SLE RA 19	-0.65	-0.31	39.65	-8.8668	0.0483	-0.2239
1026	SLE RA 20	-0.64	-0.3	39.95	-8.9367	0.0488	-0.2225
1026	SLE RA 21	-0.65	-0.31	39.96	-8.9396	0.0487	-0.2251
1026	SLE FR 1	-0.57	-0.29	35.53	-8.0031	0.0437	-0.1982
1026	SLE FR 2	-0.58	-0.3	35.54	-8.0041	0.0436	-0.1991
1026	SLE FR 3	-0.57	-0.29	35.66	-8.0323	0.0439	-0.1987
1026	SLE FR 4	-0.6	-0.3	36.77	-8.2623	0.045	-0.206
1026	SLE FR 5	-0.59	-0.29	36.89	-8.2905	0.0452	-0.2056
1026	SLE FR 6	-0.61	-0.29	37.58	-8.4335	0.046	-0.2097
1026	SLE QP 1	-0.57	-0.29	35.53	-8.0031	0.0437	-0.1982
1026	SLE QP 2	-0.59	-0.29	36.76	-8.2614	0.0451	-0.2051
1026	SLD 1	3.13	0	41.64	-8.3674	0.0603	1.0986
1026	SLD 2	2.74	-0.2	41.69	-8.4747	0.0613	0.9658
1026	SLD 3	3.06	-0.88	42.21	-8.4629	0.0608	1.0748
1026	SLD 4	2.68	-1.08	42.27	-8.5701	0.0618	0.942
1026	SLD 5	0.69	1.16	37.34	-8.1289	0.0487	0.2462
1026	SLD 6	0.44	1.03	37.38	-8.2001	0.0493	0.1581
1026	SLD 7	0.47	-1.76	39.26	-8.4471	0.0504	0.1669
1026	SLD 8	0.22	-1.89	39.3	-8.5183	0.051	0.0788
1026	SLD 9	-1.4	1.31	34.23	-8.0045	0.0391	-0.489
1026	SLD 10	-1.65	1.17	34.27	-8.0756	0.0397	-0.5772
1026	SLD 11	-1.63	-1.61	36.15	-8.3226	0.0408	-0.5683
1026	SLD 12	-1.88	-1.75	36.18	-8.3938	0.0414	-0.6565
1026	SLD 13	-3.86	0.49	31.26	-7.9526	0.0283	-1.3522
1026	SLD 14	-4.24	0.29	31.31	-8.0598	0.0293	-1.485
1026	SLD 15	-3.93	-0.38	31.83	-8.048	0.0288	-1.376

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1026	SLD 16	-4.31	-0.59	31.89	-8.1553	0.0298	-1.5088
1026	SLV 1	8.1	0.36	48.19	-8.5119	0.0807	2.8421
1026	SLV 2	7.21	-0.11	48.31	-8.7615	0.0829	2.5329
1026	SLV 3	7.94	-1.62	49.49	-8.7314	0.0819	2.7873
1026	SLV 4	7.06	-2.1	49.62	-8.981	0.0841	2.4781
1026	SLV 5	2.41	2.99	38.18	-7.9598	0.0536	0.8465
1026	SLV 6	1.83	2.68	38.27	-8.1224	0.055	0.6451
1026	SLV 7	1.88	-3.61	42.54	-8.6913	0.0575	0.6638
1026	SLV 8	1.31	-3.92	42.63	-8.854	0.059	0.4624
1026	SLV 9	-2.49	3.34	30.9	-7.6687	0.0312	-0.8726
1026	SLV 10	-3.07	3.03	30.98	-7.8314	0.0326	-1.0741
1026	SLV 11	-3.02	-3.27	35.26	-8.4003	0.0351	-1.0553
1026	SLV 12	-3.59	-3.58	35.34	-8.563	0.0365	-1.2568
1026	SLV 13	-8.24	1.51	23.9	-7.5417	0.006	-2.8883
1026	SLV 14	-9.13	1.04	24.03	-7.7914	0.0082	-3.1975
1026	SLV 15	-8.4	-0.47	25.21	-7.7612	0.0072	-2.9431
1026	SLV 16	-9.28	-0.94	25.34	-8.0108	0.0094	-3.2523
1026	CRTFP Ux+	0	0	0	0	0	0
1026	CRTFP Ux-	0	0	0	0	0	0
1026	CRTFP Uy+	0	0	0	0	0	0
1026	CRTFP Uy-	0	0	0	0	0	0
1027	SLU 1	-0.53	-0.22	33.27	-7.181	0.0224	-0.1825
1027	SLU 2	-0.55	-0.27	33.31	-7.1892	0.0223	-0.189
1027	SLU 3	-0.54	-0.22	34.05	-7.3404	0.023	-0.1867
1027	SLU 4	-0.55	-0.25	34.07	-7.3453	0.0229	-0.1906
1027	SLU 5	-0.55	-0.27	33.76	-7.2879	0.0227	-0.1905
1027	SLU 6	-0.55	-0.22	34.5	-7.4392	0.0234	-0.1883
1027	SLU 7	-0.56	-0.25	34.52	-7.4441	0.0234	-0.1922
1027	SLU 8	-0.54	-0.22	34.17	-7.3785	0.0233	-0.1856
1027	SLU 9	-0.55	-0.25	34.19	-7.3834	0.0232	-0.1895
1027	SLU 10	-0.62	-0.26	37.51	-8.0316	0.0244	-0.2126
1027	SLU 11	-0.61	-0.22	38.25	-8.1828	0.0251	-0.2103
1027	SLU 12	-0.62	-0.24	38.27	-8.1877	0.0251	-0.2142
1027	SLU 13	-0.62	-0.26	37.96	-8.1304	0.0248	-0.2141
1027	SLU 14	-0.61	-0.22	38.69	-8.2816	0.0255	-0.2119
1027	SLU 15	-0.63	-0.24	38.72	-8.2865	0.0255	-0.2158
1027	SLU 16	-0.61	-0.22	38.37	-8.221	0.0254	-0.2091
1027	SLU 17	-0.62	-0.25	38.39	-8.2259	0.0253	-0.2131
1027	SLU 18	-0.63	-0.22	39.27	-8.3844	0.0254	-0.2162
1027	SLU 19	-0.64	-0.24	39.29	-8.3893	0.0254	-0.2201
1027	SLU 20	-0.63	-0.22	39.72	-8.4832	0.0259	-0.2177
1027	SLU 21	-0.64	-0.25	39.74	-8.4881	0.0258	-0.2216
1027	SLU 22	-0.59	-0.18	37.47	-8.028	0.0249	-0.2046
1027	SLU 23	-0.61	-0.23	37.51	-8.0362	0.0247	-0.2111
1027	SLU 24	-0.61	-0.18	38.25	-8.1874	0.0254	-0.2088
1027	SLU 25	-0.62	-0.21	38.27	-8.1924	0.0254	-0.2128
1027	SLU 26	-0.62	-0.23	37.96	-8.135	0.0252	-0.2127
1027	SLU 27	-0.61	-0.18	38.7	-8.2862	0.0259	-0.2104
1027	SLU 28	-0.62	-0.21	38.72	-8.2911	0.0258	-0.2143
1027	SLU 29	-0.6	-0.19	38.37	-8.2256	0.0257	-0.2077
1027	SLU 30	-0.61	-0.21	38.39	-8.2305	0.0256	-0.2116
1027	SLU 31	-0.68	-0.23	41.71	-8.8786	0.0269	-0.2347
1027	SLU 32	-0.67	-0.18	42.45	-9.0299	0.0276	-0.2324
1027	SLU 33	-0.68	-0.21	42.47	-9.0348	0.0275	-0.2363
1027	SLU 34	-0.68	-0.23	42.16	-8.9774	0.0273	-0.2363
1027	SLU 35	-0.68	-0.18	42.9	-9.1286	0.028	-0.234
1027	SLU 36	-0.69	-0.21	42.92	-9.1336	0.0279	-0.2379
1027	SLU 37	-0.67	-0.18	42.57	-9.068	0.0278	-0.2313
1027	SLU 38	-0.68	-0.21	42.59	-9.0729	0.0277	-0.2352
1027	SLU 39	-0.69	-0.18	43.47	-9.2315	0.0279	-0.2383
1027	SLU 40	-0.7	-0.21	43.49	-9.2364	0.0278	-0.2422
1027	SLU 41	-0.69	-0.18	43.92	-9.3303	0.0283	-0.2398
1027	SLU 42	-0.71	-0.21	43.94	-9.3352	0.0282	-0.2438
1027	SLU 43	-0.67	-0.3	41.81	-9.0448	0.0283	-0.2296
1027	SLU 44	-0.68	-0.34	41.85	-9.053	0.0282	-0.2361
1027	SLU 45	-0.68	-0.3	42.59	-9.2043	0.0289	-0.2339
1027	SLU 46	-0.69	-0.33	42.61	-9.2092	0.0288	-0.2378
1027	SLU 47	-0.69	-0.35	42.3	-9.1518	0.0286	-0.2377
1027	SLU 48	-0.68	-0.3	43.04	-9.303	0.0293	-0.2354
1027	SLU 49	-0.69	-0.33	43.06	-9.308	0.0293	-0.2393
1027	SLU 50	-0.67	-0.3	42.71	-9.2424	0.0291	-0.2327
1027	SLU 51	-0.69	-0.33	42.73	-9.2473	0.0291	-0.2366
1027	SLU 52	-0.75	-0.34	46.05	-9.8955	0.0303	-0.2597
1027	SLU 53	-0.75	-0.3	46.79	-10.0467	0.031	-0.2574
1027	SLU 54	-0.76	-0.32	46.81	-10.0516	0.031	-0.2614
1027	SLU 55	-0.76	-0.34	46.5	-9.9942	0.0307	-0.2613
1027	SLU 56	-0.75	-0.3	47.23	-10.1455	0.0314	-0.259
1027	SLU 57	-0.76	-0.32	47.26	-10.1504	0.0314	-0.2629
1027	SLU 58	-0.74	-0.3	46.91	-10.0848	0.0313	-0.2563
1027	SLU 59	-0.75	-0.33	46.93	-10.0897	0.0312	-0.2602
1027	SLU 60	-0.76	-0.3	47.81	-10.2483	0.0313	-0.2633
1027	SLU 61	-0.77	-0.32	47.83	-10.2532	0.0313	-0.2672
1027	SLU 62	-0.77	-0.3	48.26	-10.3471	0.0318	-0.2649
1027	SLU 63	-0.78	-0.32	48.28	-10.352	0.0317	-0.2688
1027	SLU 64	-0.73	-0.26	46.01	-9.8919	0.0307	-0.2517
1027	SLU 65	-0.75	-0.31	46.05	-9.9001	0.0306	-0.2583
1027	SLU 66	-0.74	-0.26	46.79	-10.0513	0.0313	-0.256
1027	SLU 67	-0.75	-0.29	46.81	-10.0562	0.0313	-0.2599
1027	SLU 68	-0.75	-0.31	46.5	-9.9989	0.0311	-0.2598
1027	SLU 69	-0.75	-0.26	47.24	-10.1501	0.0317	-0.2575

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1027	SLU 70	-0.76	-0.29	47.26	-10.155	0.0317	-0.2615
1027	SLU 71	-0.74	-0.27	46.91	-10.0894	0.0316	-0.2548
1027	SLU 72	-0.75	-0.29	46.93	-10.0944	0.0315	-0.2588
1027	SLU 73	-0.82	-0.3	50.25	-10.7425	0.0328	-0.2819
1027	SLU 74	-0.81	-0.26	50.99	-10.8937	0.0334	-0.2796
1027	SLU 75	-0.82	-0.29	51.01	-10.8987	0.0334	-0.2835
1027	SLU 76	-0.82	-0.31	50.7	-10.8413	0.0332	-0.2834
1027	SLU 77	-0.81	-0.26	51.44	-10.9925	0.0339	-0.2811
1027	SLU 78	-0.83	-0.29	51.46	-10.9974	0.0338	-0.285
1027	SLU 79	-0.81	-0.26	51.11	-10.9319	0.0337	-0.2784
1027	SLU 80	-0.82	-0.29	51.13	-10.9368	0.0336	-0.2823
1027	SLU 81	-0.83	-0.26	52.01	-11.0953	0.0338	-0.2854
1027	SLU 82	-0.84	-0.29	52.03	-11.1003	0.0337	-0.2894
1027	SLU 83	-0.83	-0.26	52.46	-11.1941	0.0342	-0.287
1027	SLU 84	-0.84	-0.29	52.48	-11.199	0.0341	-0.2909
1027	SLE RA 1	-0.55	-0.21	34.47	-7.423	0.0231	-0.1888
1027	SLE RA 2	-0.56	-0.24	34.5	-7.4284	0.023	-0.1931
1027	SLE RA 3	-0.56	-0.21	34.99	-7.5293	0.0235	-0.1916
1027	SLE RA 4	-0.56	-0.23	35	-7.5325	0.0235	-0.1942
1027	SLE RA 5	-0.56	-0.24	34.79	-7.4943	0.0233	-0.1942
1027	SLE RA 6	-0.56	-0.21	35.29	-7.5951	0.0238	-0.1927
1027	SLE RA 7	-0.57	-0.23	35.3	-7.5984	0.0237	-0.1953
1027	SLE RA 8	-0.55	-0.21	35.07	-7.5547	0.0237	-0.1908
1027	SLE RA 9	-0.56	-0.23	35.08	-7.558	0.0236	-0.1935
1027	SLE RA 10	-0.61	-0.24	37.29	-7.9901	0.0245	-0.2089
1027	SLE RA 11	-0.6	-0.21	37.79	-8.0909	0.0249	-0.2073
1027	SLE RA 12	-0.61	-0.23	37.8	-8.0942	0.0249	-0.21
1027	SLE RA 13	-0.61	-0.24	37.59	-8.0559	0.0247	-0.2099
1027	SLE RA 14	-0.6	-0.21	38.09	-8.1567	0.0252	-0.2084
1027	SLE RA 15	-0.61	-0.23	38.1	-8.16	0.0252	-0.211
1027	SLE RA 16	-0.6	-0.21	37.87	-8.1163	0.0251	-0.2066
1027	SLE RA 17	-0.61	-0.23	37.88	-8.1196	0.025	-0.2092
1027	SLE RA 18	-0.61	-0.21	38.47	-8.2253	0.0251	-0.2112
1027	SLE RA 19	-0.62	-0.23	38.48	-8.2286	0.0251	-0.2139
1027	SLE RA 20	-0.62	-0.21	38.77	-8.2911	0.0254	-0.2123
1027	SLE RA 21	-0.62	-0.23	38.78	-8.2944	0.0254	-0.2149
1027	SLE FR 1	-0.55	-0.21	34.47	-7.423	0.0231	-0.1888
1027	SLE FR 2	-0.55	-0.22	34.47	-7.4241	0.0231	-0.1897
1027	SLE FR 3	-0.55	-0.21	34.59	-7.4493	0.0232	-0.1892
1027	SLE FR 4	-0.57	-0.22	35.67	-7.6648	0.0237	-0.1964
1027	SLE FR 5	-0.57	-0.21	35.79	-7.69	0.0238	-0.1959
1027	SLE FR 6	-0.58	-0.21	36.47	-7.8241	0.0241	-0.2
1027	SLE QP 1	-0.55	-0.21	34.47	-7.423	0.0231	-0.1888
1027	SLE QP 2	-0.57	-0.21	35.67	-7.6637	0.0237	-0.1955
1027	SLD 1	3.16	0.17	40.1	-7.7184	0.0357	1.1105
1027	SLD 2	2.78	-0.03	40.13	-7.8019	0.0366	0.978
1027	SLD 3	3.09	-0.71	40.68	-7.8094	0.0364	1.0868
1027	SLD 4	2.71	-0.91	40.71	-7.8928	0.0373	0.9543
1027	SLD 5	0.72	1.27	36.12	-7.527	0.026	0.2563
1027	SLD 6	0.47	1.14	36.13	-7.5824	0.0266	0.1684
1027	SLD 7	0.5	-1.66	38.04	-7.8301	0.0285	0.1773
1027	SLD 8	0.24	-1.79	38.06	-7.8855	0.0291	0.0894
1027	SLD 9	-1.38	1.36	33.28	-7.4418	0.0184	-0.4804
1027	SLD 10	-1.63	1.23	33.29	-7.4972	0.019	-0.5684
1027	SLD 11	-1.6	-1.56	35.2	-7.7449	0.0208	-0.5594
1027	SLD 12	-1.86	-1.69	35.22	-7.8003	0.0214	-0.6474
1027	SLD 13	-3.84	0.49	30.63	-7.4345	0.0101	-1.3453
1027	SLD 14	-4.22	0.29	30.66	-7.518	0.011	-1.4778
1027	SLD 15	-3.91	-0.39	31.21	-7.5254	0.0109	-1.369
1027	SLD 16	-4.29	-0.59	31.24	-7.6089	0.0118	-1.5015
1027	SLV 1	8.14	0.63	46.06	-7.7946	0.0517	2.8571
1027	SLV 2	7.25	0.17	46.12	-7.9889	0.0538	2.5485
1027	SLV 3	7.98	-1.35	47.38	-8.0037	0.0534	2.8025
1027	SLV 4	7.1	-1.81	47.43	-8.1981	0.0555	2.4939
1027	SLV 5	2.44	3.13	36.78	-7.3516	0.0292	0.8573
1027	SLV 6	1.86	2.83	36.82	-7.4782	0.0306	0.6563
1027	SLV 7	1.92	-3.48	41.16	-8.0487	0.0348	0.6753
1027	SLV 8	1.34	-3.78	41.2	-8.1753	0.0361	0.4742
1027	SLV 9	-2.47	3.36	30.14	-7.152	0.0113	-0.8653
1027	SLV 10	-3.05	3.06	30.17	-7.2786	0.0127	-1.0663
1027	SLV 11	-2.99	-3.25	34.52	-7.8491	0.0169	-1.0473
1027	SLV 12	-3.57	-3.55	34.55	-7.9758	0.0182	-1.2484
1027	SLV 13	-8.23	1.39	23.9	-7.1293	-0.008	-2.8849
1027	SLV 14	-9.11	0.93	23.96	-7.3236	-0.0059	-3.1935
1027	SLV 15	-8.39	-0.6	25.22	-7.3384	-0.0063	-2.9395
1027	SLV 16	-9.27	-1.05	25.28	-7.5328	-0.0042	-3.2481
1027	CRTFP Ux+	0	0	0	0	0	0
1027	CRTFP Ux-	0	0	0	0	0	0
1027	CRTFP Uy+	0	0	0	0	0	0
1027	CRTFP Uy-	0	0	0	0	0	0
1028	SLU 1	-0.5	-0.13	32.86	-7.086	0.0035	-0.1726
1028	SLU 2	-0.52	-0.17	32.9	-7.0952	0.0034	-0.1792
1028	SLU 3	-0.51	-0.13	33.63	-7.2426	0.0036	-0.1766
1028	SLU 4	-0.53	-0.15	33.65	-7.2481	0.0035	-0.1806
1028	SLU 5	-0.52	-0.17	33.34	-7.1905	0.0035	-0.1805
1028	SLU 6	-0.52	-0.13	34.07	-7.3379	0.0037	-0.1779
1028	SLU 7	-0.53	-0.15	34.09	-7.3434	0.0037	-0.1819
1028	SLU 8	-0.51	-0.13	33.74	-7.2766	0.0037	-0.1753
1028	SLU 9	-0.52	-0.16	33.77	-7.2821	0.0037	-0.1792
1028	SLU 10	-0.59	-0.16	37.08	-7.9409	0.0029	-0.202

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1028	SLU 11	-0.58	-0.11	37.8	-8.0883	0.0031	-0.1994
1028	SLU 12	-0.59	-0.14	37.83	-8.0938	0.003	-0.2034
1028	SLU 13	-0.59	-0.16	37.52	-8.0362	0.003	-0.2034
1028	SLU 14	-0.58	-0.11	38.24	-8.1836	0.0032	-0.2008
1028	SLU 15	-0.59	-0.14	38.27	-8.1891	0.0032	-0.2047
1028	SLU 16	-0.58	-0.12	37.91	-8.1223	0.0032	-0.1981
1028	SLU 17	-0.59	-0.14	37.94	-8.1278	0.0032	-0.2021
1028	SLU 18	-0.6	-0.11	38.82	-8.2942	0.0028	-0.2052
1028	SLU 19	-0.61	-0.14	38.85	-8.2997	0.0027	-0.2092
1028	SLU 20	-0.6	-0.11	39.26	-8.3895	0.0029	-0.2066
1028	SLU 21	-0.61	-0.14	39.29	-8.395	0.0028	-0.2105
1028	SLU 22	-0.56	-0.08	37.03	-7.9308	0.0033	-0.1938
1028	SLU 23	-0.58	-0.12	37.07	-7.94	0.0032	-0.2004
1028	SLU 24	-0.58	-0.08	37.8	-8.0874	0.0034	-0.1978
1028	SLU 25	-0.59	-0.1	37.82	-8.0929	0.0033	-0.2017
1028	SLU 26	-0.59	-0.12	37.51	-8.0352	0.0033	-0.2017
1028	SLU 27	-0.58	-0.08	38.24	-8.1827	0.0035	-0.1991
1028	SLU 28	-0.59	-0.1	38.26	-8.1882	0.0035	-0.2031
1028	SLU 29	-0.57	-0.08	37.91	-8.1214	0.0035	-0.1965
1028	SLU 30	-0.58	-0.11	37.93	-8.1269	0.0035	-0.2004
1028	SLU 31	-0.65	-0.11	41.24	-8.7857	0.0027	-0.2232
1028	SLU 32	-0.64	-0.07	41.97	-8.9331	0.0029	-0.2206
1028	SLU 33	-0.65	-0.09	41.99	-8.9386	0.0028	-0.2246
1028	SLU 34	-0.65	-0.11	41.68	-8.881	0.0028	-0.2246
1028	SLU 35	-0.65	-0.07	42.41	-9.0284	0.003	-0.2219
1028	SLU 36	-0.66	-0.09	42.43	-9.0339	0.0029	-0.2259
1028	SLU 37	-0.64	-0.07	42.08	-8.9671	0.003	-0.2193
1028	SLU 38	-0.65	-0.1	42.11	-8.9726	0.003	-0.2233
1028	SLU 39	-0.66	-0.06	42.99	-9.139	0.0026	-0.2264
1028	SLU 40	-0.67	-0.09	43.02	-9.1445	0.0025	-0.2304
1028	SLU 41	-0.66	-0.07	43.43	-9.2343	0.0027	-0.2277
1028	SLU 42	-0.67	-0.09	43.46	-9.2398	0.0026	-0.2317
1028	SLU 43	-0.63	-0.19	41.29	-8.9222	0.0046	-0.2171
1028	SLU 44	-0.65	-0.23	41.33	-8.9313	0.0045	-0.2237
1028	SLU 45	-0.64	-0.18	42.06	-9.0788	0.0047	-0.2211
1028	SLU 46	-0.65	-0.21	42.08	-9.0843	0.0047	-0.2251
1028	SLU 47	-0.65	-0.23	41.77	-9.0266	0.0047	-0.2251
1028	SLU 48	-0.65	-0.18	42.5	-9.1741	0.0048	-0.2225
1028	SLU 49	-0.66	-0.21	42.52	-9.1796	0.0048	-0.2264
1028	SLU 50	-0.64	-0.19	42.17	-9.1128	0.0049	-0.2198
1028	SLU 51	-0.65	-0.21	42.2	-9.1183	0.0048	-0.2238
1028	SLU 52	-0.72	-0.22	45.51	-9.7771	0.004	-0.2466
1028	SLU 53	-0.71	-0.17	46.23	-9.9245	0.0042	-0.2439
1028	SLU 54	-0.72	-0.2	46.26	-9.93	0.0042	-0.2479
1028	SLU 55	-0.72	-0.22	45.95	-9.8723	0.0041	-0.2479
1028	SLU 56	-0.71	-0.17	46.67	-10.0198	0.0043	-0.2453
1028	SLU 57	-0.72	-0.2	46.7	-10.0253	0.0043	-0.2492
1028	SLU 58	-0.71	-0.17	46.34	-9.9585	0.0044	-0.2426
1028	SLU 59	-0.72	-0.2	46.37	-9.964	0.0043	-0.2466
1028	SLU 60	-0.73	-0.17	47.25	-10.1304	0.0039	-0.2497
1028	SLU 61	-0.74	-0.2	47.28	-10.1359	0.0038	-0.2537
1028	SLU 62	-0.73	-0.17	47.69	-10.2257	0.004	-0.2511
1028	SLU 63	-0.74	-0.2	47.72	-10.2311	0.004	-0.255
1028	SLU 64	-0.69	-0.14	45.46	-9.767	0.0044	-0.2383
1028	SLU 65	-0.71	-0.18	45.5	-9.7761	0.0043	-0.2449
1028	SLU 66	-0.7	-0.13	46.22	-9.9236	0.0045	-0.2423
1028	SLU 67	-0.72	-0.16	46.25	-9.9291	0.0045	-0.2463
1028	SLU 68	-0.72	-0.18	45.94	-9.8714	0.0044	-0.2463
1028	SLU 69	-0.71	-0.13	46.66	-10.0189	0.0046	-0.2437
1028	SLU 70	-0.72	-0.16	46.69	-10.0243	0.0046	-0.2476
1028	SLU 71	-0.7	-0.14	46.34	-9.9576	0.0047	-0.241
1028	SLU 72	-0.71	-0.16	46.36	-9.963	0.0046	-0.245
1028	SLU 73	-0.78	-0.17	49.67	-10.6218	0.0038	-0.2677
1028	SLU 74	-0.77	-0.12	50.4	-10.7693	0.004	-0.2651
1028	SLU 75	-0.78	-0.15	50.42	-10.7748	0.004	-0.2691
1028	SLU 76	-0.78	-0.17	50.11	-10.7171	0.0039	-0.2691
1028	SLU 77	-0.77	-0.12	50.84	-10.8646	0.0041	-0.2665
1028	SLU 78	-0.79	-0.15	50.86	-10.8701	0.0041	-0.2704
1028	SLU 79	-0.77	-0.13	50.51	-10.8033	0.0042	-0.2638
1028	SLU 80	-0.78	-0.15	50.54	-10.8088	0.0041	-0.2678
1028	SLU 81	-0.79	-0.12	51.42	-10.9752	0.0037	-0.2709
1028	SLU 82	-0.8	-0.15	51.44	-10.9806	0.0036	-0.2749
1028	SLU 83	-0.79	-0.12	51.86	-11.0705	0.0038	-0.2723
1028	SLU 84	-0.8	-0.15	51.89	-11.0759	0.0038	-0.2762
1028	SLE RA 1	-0.52	-0.12	34.05	-7.3274	0.0034	-0.1787
1028	SLE RA 2	-0.53	-0.14	34.08	-7.3335	0.0034	-0.1831
1028	SLE RA 3	-0.53	-0.11	34.56	-7.4318	0.0035	-0.1813
1028	SLE RA 4	-0.54	-0.13	34.58	-7.4355	0.0035	-0.184
1028	SLE RA 5	-0.53	-0.14	34.37	-7.397	0.0035	-0.184
1028	SLE RA 6	-0.53	-0.11	34.86	-7.4953	0.0036	-0.1822
1028	SLE RA 7	-0.54	-0.13	34.87	-7.499	0.0035	-0.1849
1028	SLE RA 8	-0.52	-0.12	34.64	-7.4545	0.0036	-0.1805
1028	SLE RA 9	-0.53	-0.13	34.66	-7.4581	0.0036	-0.1831
1028	SLE RA 10	-0.58	-0.14	36.86	-7.8973	0.003	-0.1983
1028	SLE RA 11	-0.57	-0.11	37.35	-7.9956	0.0032	-0.1965
1028	SLE RA 12	-0.58	-0.12	37.36	-7.9993	0.0031	-0.1992
1028	SLE RA 13	-0.58	-0.14	37.16	-7.9608	0.0031	-0.1992
1028	SLE RA 14	-0.57	-0.11	37.64	-8.0591	0.0032	-0.1974
1028	SLE RA 15	-0.58	-0.12	37.66	-8.0628	0.0032	-0.2001
1028	SLE RA 16	-0.57	-0.11	37.42	-8.0183	0.0033	-0.1957

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1028	SLE RA 17	-0.58	-0.13	37.44	-8.0219	0.0032	-0.1983
1028	SLE RA 18	-0.58	-0.11	38.03	-8.1329	0.003	-0.2004
1028	SLE RA 19	-0.59	-0.12	38.04	-8.1365	0.0029	-0.203
1028	SLE RA 20	-0.59	-0.11	38.32	-8.1964	0.003	-0.2013
1028	SLE RA 21	-0.59	-0.12	38.34	-8.2	0.003	-0.2039
1028	SLE FR 1	-0.52	-0.12	34.05	-7.3274	0.0034	-0.1787
1028	SLE FR 2	-0.52	-0.12	34.06	-7.3286	0.0034	-0.1796
1028	SLE FR 3	-0.52	-0.12	34.17	-7.3528	0.0035	-0.179
1028	SLE FR 4	-0.54	-0.12	35.25	-7.5703	0.0033	-0.1861
1028	SLE FR 5	-0.54	-0.11	35.36	-7.5945	0.0033	-0.1856
1028	SLE FR 6	-0.55	-0.11	36.04	-7.7301	0.0032	-0.1895
1028	SLE QP 1	-0.52	-0.12	34.05	-7.3274	0.0034	-0.1787
1028	SLE QP 2	-0.54	-0.11	35.24	-7.569	0.0033	-0.1852
1028	SLD 1	3.19	0.34	39.32	-7.6345	0.0137	1.1227
1028	SLD 2	2.81	0.15	39.32	-7.6953	0.0145	0.9905
1028	SLD 3	3.12	-0.54	39.92	-7.7282	0.0124	1.0991
1028	SLD 4	2.74	-0.73	39.92	-7.789	0.0132	0.9669
1028	SLD 5	0.75	1.4	35.55	-7.4356	0.0082	0.2671
1028	SLD 6	0.5	1.27	35.55	-7.476	0.0087	0.1793
1028	SLD 7	0.53	-1.54	37.56	-7.7477	0.004	0.1883
1028	SLD 8	0.28	-1.67	37.56	-7.7881	0.0045	0.1006
1028	SLD 9	-1.35	1.45	32.93	-7.35	0.0021	-0.4709
1028	SLD 10	-1.6	1.32	32.93	-7.3904	0.0026	-0.5587
1028	SLD 11	-1.58	-1.5	34.93	-7.6621	-0.0021	-0.5497
1028	SLD 12	-1.83	-1.62	34.93	-7.7025	-0.0016	-0.6375
1028	SLD 13	-3.82	0.51	30.57	-7.3491	-0.0066	-1.3373
1028	SLD 14	-4.2	0.31	30.57	-7.4099	-0.0058	-1.4695
1028	SLD 15	-3.89	-0.38	31.17	-7.4428	-0.0079	-1.3609
1028	SLD 16	-4.27	-0.57	31.17	-7.5036	-0.0071	-1.4931
1028	SLV 1	8.18	0.92	44.8	-7.7264	0.0276	2.8719
1028	SLV 2	7.3	0.47	44.79	-7.868	0.0294	2.564
1028	SLV 3	8.02	-1.08	46.16	-7.9413	0.0247	2.8175
1028	SLV 4	7.14	-1.53	46.16	-8.0829	0.0265	2.5096
1028	SLV 5	2.47	3.3	36.04	-7.2654	0.0146	0.8686
1028	SLV 6	1.89	3.01	36.04	-7.3576	0.0158	0.668
1028	SLV 7	1.95	-3.35	40.59	-7.9818	0.005	0.6871
1028	SLV 8	1.38	-3.64	40.59	-8.0741	0.0062	0.4865
1028	SLV 9	-2.45	3.42	29.9	-7.064	0.0004	-0.8569
1028	SLV 10	-3.03	3.13	29.9	-7.1563	0.0016	-1.0575
1028	SLV 11	-2.97	-3.24	34.45	-7.7805	-0.0092	-1.0384
1028	SLV 12	-3.54	-3.53	34.45	-7.8727	-0.008	-1.239
1028	SLV 13	-8.22	1.3	24.33	-7.0552	-0.0199	-2.88
1028	SLV 14	-9.1	0.85	24.33	-7.1968	-0.0181	-3.1879
1028	SLV 15	-8.37	-0.7	25.69	-7.2701	-0.0228	-2.9344
1028	SLV 16	-9.25	-1.14	25.69	-7.4117	-0.021	-3.2423
1028	CRTFP Ux+	0	0	0	0	0	0
1028	CRTFP Ux-	0	0	0	0	0	0
1028	CRTFP Uy+	0	0	0	0	0	0
1028	CRTFP Uy-	0	0	0	0	0	0
1029	SLU 1	-0.47	-0.03	33.02	-7.4157	-0.0129	-0.1621
1029	SLU 2	-0.49	-0.07	33.06	-7.4257	-0.013	-0.1688
1029	SLU 3	-0.48	-0.02	33.79	-7.5805	-0.0132	-0.1658
1029	SLU 4	-0.5	-0.04	33.82	-7.5865	-0.0133	-0.1698
1029	SLU 5	-0.5	-0.07	33.5	-7.524	-0.0131	-0.1699
1029	SLU 6	-0.49	-0.02	34.23	-7.6788	-0.0134	-0.1669
1029	SLU 7	-0.5	-0.04	34.26	-7.6848	-0.0134	-0.1709
1029	SLU 8	-0.48	-0.02	33.9	-7.6123	-0.0132	-0.1643
1029	SLU 9	-0.49	-0.05	33.93	-7.6183	-0.0132	-0.1683
1029	SLU 10	-0.56	-0.05	37.29	-8.333	-0.0157	-0.1907
1029	SLU 11	-0.55	0	38.02	-8.4877	-0.016	-0.1878
1029	SLU 12	-0.56	-0.02	38.04	-8.4937	-0.016	-0.1918
1029	SLU 13	-0.56	-0.05	37.73	-8.4313	-0.0159	-0.1919
1029	SLU 14	-0.55	0	38.46	-8.586	-0.0161	-0.1889
1029	SLU 15	-0.56	-0.02	38.48	-8.592	-0.0162	-0.1929
1029	SLU 16	-0.54	0	38.13	-8.5196	-0.0159	-0.1863
1029	SLU 17	-0.55	-0.03	38.15	-8.5256	-0.016	-0.1903
1029	SLU 18	-0.56	0	39.06	-8.7118	-0.0168	-0.1935
1029	SLU 19	-0.58	-0.02	39.08	-8.7178	-0.0169	-0.1975
1029	SLU 20	-0.57	0	39.5	-8.8101	-0.017	-0.1946
1029	SLU 21	-0.58	-0.02	39.52	-8.8161	-0.017	-0.1986
1029	SLU 22	-0.53	0.04	37.23	-8.3167	-0.0154	-0.1823
1029	SLU 23	-0.55	0	37.27	-8.3267	-0.0154	-0.1889
1029	SLU 24	-0.54	0.04	38	-8.4815	-0.0157	-0.186
1029	SLU 25	-0.55	0.02	38.03	-8.4875	-0.0157	-0.19
1029	SLU 26	-0.55	0	37.71	-8.425	-0.0156	-0.1901
1029	SLU 27	-0.55	0.05	38.44	-8.5798	-0.0158	-0.1871
1029	SLU 28	-0.56	0.02	38.47	-8.5858	-0.0159	-0.1911
1029	SLU 29	-0.54	0.04	38.11	-8.5133	-0.0156	-0.1845
1029	SLU 30	-0.55	0.01	38.14	-8.5193	-0.0157	-0.1885
1029	SLU 31	-0.61	0.02	41.5	-9.234	-0.0182	-0.2109
1029	SLU 32	-0.61	0.07	42.23	-9.3888	-0.0184	-0.208
1029	SLU 33	-0.62	0.04	42.25	-9.3947	-0.0185	-0.2119
1029	SLU 34	-0.62	0.02	41.94	-9.3323	-0.0183	-0.212
1029	SLU 35	-0.61	0.07	42.67	-9.4871	-0.0186	-0.2091
1029	SLU 36	-0.62	0.04	42.69	-9.493	-0.0186	-0.2131
1029	SLU 37	-0.6	0.06	42.34	-9.4206	-0.0184	-0.2065
1029	SLU 38	-0.61	0.03	42.36	-9.4266	-0.0184	-0.2105
1029	SLU 39	-0.62	0.07	43.27	-9.6128	-0.0193	-0.2137
1029	SLU 40	-0.63	0.04	43.29	-9.6188	-0.0193	-0.2177
1029	SLU 41	-0.63	0.07	43.71	-9.7111	-0.0194	-0.2148

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1029	SLU 42	-0.64	0.04	43.73	-9.7171	-0.0195	-0.2188
1029	SLU 43	-0.59	-0.05	41.48	-9.3315	-0.0159	-0.2038
1029	SLU 44	-0.61	-0.1	41.52	-9.3415	-0.016	-0.2105
1029	SLU 45	-0.61	-0.05	42.25	-9.4963	-0.0163	-0.2075
1029	SLU 46	-0.62	-0.07	42.28	-9.5022	-0.0163	-0.2115
1029	SLU 47	-0.62	-0.1	41.97	-9.4398	-0.0161	-0.2116
1029	SLU 48	-0.61	-0.05	42.69	-9.5946	-0.0164	-0.2086
1029	SLU 49	-0.62	-0.07	42.72	-9.6005	-0.0164	-0.2126
1029	SLU 50	-0.6	-0.05	42.36	-9.5281	-0.0162	-0.2061
1029	SLU 51	-0.61	-0.08	42.39	-9.5341	-0.0162	-0.2101
1029	SLU 52	-0.68	-0.08	45.75	-10.2488	-0.0187	-0.2325
1029	SLU 53	-0.67	-0.03	46.48	-10.4035	-0.019	-0.2295
1029	SLU 54	-0.68	-0.05	46.5	-10.4095	-0.0191	-0.2335
1029	SLU 55	-0.68	-0.08	46.19	-10.3471	-0.0189	-0.2336
1029	SLU 56	-0.67	-0.03	46.92	-10.5018	-0.0191	-0.2306
1029	SLU 57	-0.68	-0.05	46.95	-10.5078	-0.0192	-0.2346
1029	SLU 58	-0.67	-0.03	46.59	-10.4354	-0.0189	-0.228
1029	SLU 59	-0.68	-0.06	46.61	-10.4414	-0.019	-0.232
1029	SLU 60	-0.69	-0.03	47.52	-10.6276	-0.0198	-0.2352
1029	SLU 61	-0.7	-0.05	47.54	-10.6336	-0.0199	-0.2392
1029	SLU 62	-0.69	-0.02	47.96	-10.7259	-0.02	-0.2363
1029	SLU 63	-0.7	-0.05	47.98	-10.7319	-0.02	-0.2403
1029	SLU 64	-0.65	0.01	45.69	-10.2325	-0.0184	-0.224
1029	SLU 65	-0.67	-0.03	45.73	-10.2425	-0.0185	-0.2307
1029	SLU 66	-0.66	0.02	46.46	-10.3973	-0.0187	-0.2277
1029	SLU 67	-0.68	-0.01	46.49	-10.4033	-0.0188	-0.2317
1029	SLU 68	-0.68	-0.03	46.18	-10.3408	-0.0186	-0.2318
1029	SLU 69	-0.67	0.02	46.9	-10.4956	-0.0189	-0.2288
1029	SLU 70	-0.68	-0.01	46.93	-10.5016	-0.0189	-0.2328
1029	SLU 71	-0.66	0.01	46.57	-10.4291	-0.0187	-0.2262
1029	SLU 72	-0.67	-0.02	46.6	-10.4351	-0.0187	-0.2302
1029	SLU 73	-0.74	-0.01	49.96	-11.1498	-0.0212	-0.2526
1029	SLU 74	-0.73	0.04	50.69	-11.3045	-0.0215	-0.2497
1029	SLU 75	-0.74	0.01	50.72	-11.3105	-0.0215	-0.2537
1029	SLU 76	-0.74	-0.01	50.4	-11.2481	-0.0214	-0.2537
1029	SLU 77	-0.73	0.04	51.13	-11.4028	-0.0216	-0.2508
1029	SLU 78	-0.74	0.01	51.16	-11.4088	-0.0217	-0.2548
1029	SLU 79	-0.72	0.03	50.8	-11.3364	-0.0214	-0.2482
1029	SLU 80	-0.74	0.01	50.82	-11.3424	-0.0215	-0.2522
1029	SLU 81	-0.74	0.04	51.73	-11.5286	-0.0223	-0.2554
1029	SLU 82	-0.76	0.01	51.75	-11.5346	-0.0224	-0.2594
1029	SLU 83	-0.75	0.04	52.17	-11.6269	-0.0224	-0.2565
1029	SLU 84	-0.76	0.01	52.2	-11.6329	-0.0225	-0.2605
1029	SLE RA 1	-0.49	-0.01	34.22	-7.6732	-0.0136	-0.1679
1029	SLE RA 2	-0.5	-0.04	34.25	-7.6798	-0.0137	-0.1723
1029	SLE RA 3	-0.5	0	34.73	-7.783	-0.0138	-0.1703
1029	SLE RA 4	-0.5	-0.02	34.75	-7.787	-0.0139	-0.173
1029	SLE RA 5	-0.5	-0.03	34.54	-7.7453	-0.0137	-0.1731
1029	SLE RA 6	-0.5	0	35.03	-7.8485	-0.0139	-0.1711
1029	SLE RA 7	-0.51	-0.02	35.05	-7.8525	-0.0139	-0.1737
1029	SLE RA 8	-0.49	-0.01	34.81	-7.8042	-0.0138	-0.1694
1029	SLE RA 9	-0.5	-0.02	34.83	-7.8082	-0.0138	-0.172
1029	SLE RA 10	-0.55	-0.02	37.07	-8.2847	-0.0155	-0.187
1029	SLE RA 11	-0.54	0.01	37.55	-8.3878	-0.0157	-0.185
1029	SLE RA 12	-0.55	-0.01	37.57	-8.3918	-0.0157	-0.1877
1029	SLE RA 13	-0.55	-0.02	37.36	-8.3502	-0.0156	-0.1877
1029	SLE RA 14	-0.54	0.01	37.85	-8.4534	-0.0157	-0.1857
1029	SLE RA 15	-0.55	-0.01	37.86	-8.4574	-0.0158	-0.1884
1029	SLE RA 16	-0.54	0.01	37.63	-8.4091	-0.0156	-0.184
1029	SLE RA 17	-0.54	-0.01	37.64	-8.4131	-0.0157	-0.1867
1029	SLE RA 18	-0.55	0.01	38.25	-8.5372	-0.0162	-0.1888
1029	SLE RA 19	-0.56	0	38.26	-8.5412	-0.0162	-0.1915
1029	SLE RA 20	-0.55	0.01	38.54	-8.6028	-0.0163	-0.1895
1029	SLE RA 21	-0.56	0	38.56	-8.6067	-0.0163	-0.1922
1029	SLE FR 1	-0.49	-0.01	34.22	-7.6732	-0.0136	-0.1679
1029	SLE FR 2	-0.49	-0.01	34.23	-7.6745	-0.0136	-0.1688
1029	SLE FR 3	-0.49	-0.01	34.34	-7.6994	-0.0136	-0.1682
1029	SLE FR 4	-0.51	-0.01	35.43	-7.9337	-0.0144	-0.175
1029	SLE FR 5	-0.51	0	35.55	-7.9586	-0.0144	-0.1745
1029	SLE FR 6	-0.52	0	36.23	-8.1052	-0.0149	-0.1783
1029	SLE QP 1	-0.49	-0.01	34.22	-7.6732	-0.0136	-0.1679
1029	SLE QP 2	-0.51	0	35.43	-7.9324	-0.0144	-0.1742
1029	SLD 1	3.23	0.61	39.21	-8.052	-0.0058	1.1353
1029	SLD 2	2.85	0.42	39.18	-8.0924	-0.0051	1.0034
1029	SLD 3	3.16	-0.29	39.85	-8.1575	-0.0076	1.1117
1029	SLD 4	2.78	-0.48	39.82	-8.1978	-0.0069	0.9798
1029	SLD 5	0.78	1.57	35.59	-7.801	-0.0092	0.2784
1029	SLD 6	0.53	1.44	35.58	-7.8278	-0.0088	0.1909
1029	SLD 7	0.56	-1.41	37.73	-8.1525	-0.0152	0.1998
1029	SLD 8	0.31	-1.53	37.71	-8.1793	-0.0147	0.1123
1029	SLD 9	-1.32	1.53	33.14	-7.6854	-0.014	-0.4606
1029	SLD 10	-1.58	1.4	33.12	-7.7122	-0.0136	-0.5482
1029	SLD 11	-1.55	-1.45	35.28	-8.037	-0.02	-0.5392
1029	SLD 12	-1.8	-1.57	35.26	-8.0638	-0.0195	-0.6267
1029	SLD 13	-3.8	0.47	31.03	-7.6669	-0.0218	-1.3281
1029	SLD 14	-4.17	0.28	31.01	-7.7072	-0.0212	-1.46
1029	SLD 15	-3.86	-0.42	31.67	-7.7724	-0.0236	-1.3517
1029	SLD 16	-4.24	-0.61	31.65	-7.8127	-0.023	-1.4836
1029	SLV 1	8.22	1.38	44.29	-8.2182	0.0057	2.8865
1029	SLV 2	7.34	0.95	44.24	-8.312	0.0071	2.5794

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1029	SLV 3	8.06	-0.64	45.75	-8.4593	0.0016	2.8321
1029	SLV 4	7.19	-1.07	45.69	-8.5532	0.0031	2.525
1029	SLV 5	2.5	3.56	35.89	-7.6359	-0.0025	0.8804
1029	SLV 6	1.93	3.27	35.85	-7.6971	-0.0016	0.6803
1029	SLV 7	1.98	-3.18	40.74	-8.4396	-0.0159	0.6993
1029	SLV 8	1.41	-3.47	40.7	-8.5008	-0.015	0.4992
1029	SLV 9	-2.43	3.46	30.15	-7.3639	-0.0138	-0.8475
1029	SLV 10	-3	3.18	30.12	-7.4251	-0.0128	-1.0476
1029	SLV 11	-2.94	-3.28	35	-8.1677	-0.0272	-1.0286
1029	SLV 12	-3.51	-3.56	34.97	-8.2288	-0.0262	-1.2287
1029	SLV 13	-8.2	1.07	25.16	-7.3116	-0.0319	-2.8733
1029	SLV 14	-9.08	0.63	25.11	-7.4055	-0.0304	-3.1804
1029	SLV 15	-8.36	-0.95	26.62	-7.5527	-0.0359	-2.9277
1029	SLV 16	-9.23	-1.39	26.56	-7.6466	-0.0344	-3.2348
1029	CRTFP Ux+	0	0	0	0	0	0
1029	CRTFP Ux-	0	0	0	0	0	0
1029	CRTFP Uy+	0	0	0	0	0	0
1029	CRTFP Uy-	0	0	0	0	0	0
1030	SLU 1	-0.44	0.09	33.63	-8.093	-0.0249	-0.1509
1030	SLU 2	-0.46	0.05	33.68	-8.1038	-0.0249	-0.1577
1030	SLU 3	-0.45	0.1	34.42	-8.2749	-0.0255	-0.1543
1030	SLU 4	-0.46	0.07	34.45	-8.2814	-0.0256	-0.1584
1030	SLU 5	-0.46	0.05	34.13	-8.2105	-0.0253	-0.1586
1030	SLU 6	-0.45	0.1	34.87	-8.3817	-0.0258	-0.1552
1030	SLU 7	-0.47	0.08	34.89	-8.3881	-0.0259	-0.1593
1030	SLU 8	-0.45	0.09	34.53	-8.3065	-0.0255	-0.1527
1030	SLU 9	-0.46	0.07	34.56	-8.3129	-0.0256	-0.1568
1030	SLU 10	-0.52	0.08	38.02	-9.1196	-0.0293	-0.1787
1030	SLU 11	-0.51	0.13	38.76	-9.2907	-0.0298	-0.1754
1030	SLU 12	-0.52	0.11	38.79	-9.2972	-0.0299	-0.1794
1030	SLU 13	-0.52	0.08	38.47	-9.2263	-0.0296	-0.1796
1030	SLU 14	-0.52	0.13	39.21	-9.3975	-0.0302	-0.1763
1030	SLU 15	-0.53	0.11	39.24	-9.4039	-0.0302	-0.1803
1030	SLU 16	-0.51	0.12	38.87	-9.3223	-0.0299	-0.1738
1030	SLU 17	-0.52	0.1	38.9	-9.3287	-0.0299	-0.1778
1030	SLU 18	-0.53	0.13	39.83	-9.5442	-0.0311	-0.181
1030	SLU 19	-0.54	0.11	39.86	-9.5506	-0.0311	-0.1851
1030	SLU 20	-0.53	0.14	40.28	-9.6509	-0.0314	-0.1819
1030	SLU 21	-0.54	0.11	40.31	-9.6573	-0.0314	-0.1859
1030	SLU 22	-0.5	0.17	37.95	-9.0976	-0.0289	-0.17
1030	SLU 23	-0.52	0.12	37.99	-9.1084	-0.029	-0.1767
1030	SLU 24	-0.51	0.18	38.73	-9.2795	-0.0296	-0.1734
1030	SLU 25	-0.52	0.15	38.76	-9.286	-0.0296	-0.1775
1030	SLU 26	-0.52	0.13	38.44	-9.2151	-0.0293	-0.1776
1030	SLU 27	-0.51	0.18	39.18	-9.3862	-0.0299	-0.1743
1030	SLU 28	-0.52	0.15	39.21	-9.3927	-0.03	-0.1783
1030	SLU 29	-0.5	0.17	38.84	-9.3111	-0.0296	-0.1718
1030	SLU 30	-0.51	0.15	38.87	-9.3175	-0.0296	-0.1758
1030	SLU 31	-0.58	0.16	42.33	-10.1242	-0.0333	-0.1978
1030	SLU 32	-0.57	0.21	43.07	-10.2953	-0.0339	-0.1945
1030	SLU 33	-0.58	0.18	43.1	-10.3018	-0.034	-0.1985
1030	SLU 34	-0.58	0.16	42.78	-10.2309	-0.0337	-0.1987
1030	SLU 35	-0.57	0.21	43.52	-10.402	-0.0343	-0.1954
1030	SLU 36	-0.58	0.19	43.55	-10.4085	-0.0343	-0.1994
1030	SLU 37	-0.56	0.2	43.18	-10.3269	-0.0339	-0.1929
1030	SLU 38	-0.58	0.18	43.21	-10.3333	-0.034	-0.1969
1030	SLU 39	-0.59	0.21	44.15	-10.5487	-0.0351	-0.2001
1030	SLU 40	-0.6	0.19	44.18	-10.5552	-0.0352	-0.2041
1030	SLU 41	-0.59	0.21	44.6	-10.6555	-0.0355	-0.201
1030	SLU 42	-0.6	0.19	44.62	-10.6619	-0.0355	-0.205
1030	SLU 43	-0.56	0.09	42.24	-10.1765	-0.0309	-0.1897
1030	SLU 44	-0.57	0.05	42.29	-10.1873	-0.031	-0.1964
1030	SLU 45	-0.57	0.1	43.03	-10.3584	-0.0316	-0.1931
1030	SLU 46	-0.58	0.07	43.06	-10.3649	-0.0316	-0.1971
1030	SLU 47	-0.58	0.05	42.74	-10.294	-0.0313	-0.1973
1030	SLU 48	-0.57	0.1	43.47	-10.4651	-0.0319	-0.194
1030	SLU 49	-0.58	0.08	43.5	-10.4716	-0.0319	-0.198
1030	SLU 50	-0.56	0.09	43.14	-10.39	-0.0316	-0.1915
1030	SLU 51	-0.57	0.07	43.16	-10.3964	-0.0316	-0.1955
1030	SLU 52	-0.64	0.08	46.63	-11.2031	-0.0353	-0.2175
1030	SLU 53	-0.63	0.13	47.37	-11.3742	-0.0359	-0.2141
1030	SLU 54	-0.64	0.1	47.4	-11.3807	-0.036	-0.2182
1030	SLU 55	-0.64	0.08	47.08	-11.3098	-0.0357	-0.2183
1030	SLU 56	-0.63	0.13	47.82	-11.4809	-0.0362	-0.215
1030	SLU 57	-0.64	0.11	47.85	-11.4874	-0.0363	-0.2191
1030	SLU 58	-0.62	0.12	47.48	-11.4058	-0.0359	-0.2125
1030	SLU 59	-0.63	0.1	47.51	-11.4122	-0.036	-0.2166
1030	SLU 60	-0.64	0.13	48.44	-11.6276	-0.0371	-0.2198
1030	SLU 61	-0.65	0.11	48.47	-11.6341	-0.0372	-0.2238
1030	SLU 62	-0.65	0.14	48.89	-11.7344	-0.0375	-0.2207
1030	SLU 63	-0.66	0.11	48.92	-11.7408	-0.0375	-0.2247
1030	SLU 64	-0.61	0.16	46.55	-11.1811	-0.035	-0.2088
1030	SLU 65	-0.63	0.12	46.6	-11.1918	-0.0351	-0.2155
1030	SLU 66	-0.62	0.18	47.34	-11.363	-0.0356	-0.2122
1030	SLU 67	-0.63	0.15	47.37	-11.3694	-0.0357	-0.2162
1030	SLU 68	-0.63	0.13	47.05	-11.2986	-0.0354	-0.2164
1030	SLU 69	-0.62	0.18	47.79	-11.4697	-0.036	-0.2131
1030	SLU 70	-0.64	0.15	47.82	-11.4762	-0.036	-0.2171
1030	SLU 71	-0.62	0.17	47.45	-11.3945	-0.0357	-0.2105
1030	SLU 72	-0.63	0.15	47.48	-11.401	-0.0357	-0.2146

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1030	SLU 73	-0.69	0.16	50.94	-12.2076	-0.0394	-0.2365
1030	SLU 74	-0.68	0.21	51.68	-12.3788	-0.04	-0.2332
1030	SLU 75	-0.69	0.18	51.71	-12.3852	-0.04	-0.2373
1030	SLU 76	-0.69	0.16	51.39	-12.3144	-0.0397	-0.2374
1030	SLU 77	-0.69	0.21	52.13	-12.4855	-0.0403	-0.2341
1030	SLU 78	-0.7	0.19	52.16	-12.492	-0.0404	-0.2381
1030	SLU 79	-0.68	0.2	51.79	-12.4103	-0.04	-0.2316
1030	SLU 80	-0.69	0.18	51.82	-12.4168	-0.04	-0.2356
1030	SLU 81	-0.7	0.21	52.76	-12.6322	-0.0412	-0.2388
1030	SLU 82	-0.71	0.19	52.78	-12.6387	-0.0412	-0.2429
1030	SLU 83	-0.7	0.21	53.2	-12.7389	-0.0415	-0.2397
1030	SLU 84	-0.71	0.19	53.23	-12.7454	-0.0416	-0.2438
1030	SLE RA 1	-0.46	0.11	34.86	-8.38	-0.026	-0.1564
1030	SLE RA 2	-0.47	0.08	34.89	-8.3872	-0.0261	-0.1609
1030	SLE RA 3	-0.46	0.12	35.39	-8.5013	-0.0265	-0.1587
1030	SLE RA 4	-0.47	0.1	35.41	-8.5056	-0.0265	-0.1613
1030	SLE RA 5	-0.47	0.08	35.19	-8.4584	-0.0263	-0.1615
1030	SLE RA 6	-0.47	0.12	35.69	-8.5725	-0.0267	-0.1593
1030	SLE RA 7	-0.47	0.1	35.71	-8.5768	-0.0267	-0.1619
1030	SLE RA 8	-0.46	0.11	35.46	-8.5224	-0.0265	-0.1576
1030	SLE RA 9	-0.47	0.1	35.48	-8.5267	-0.0265	-0.1603
1030	SLE RA 10	-0.51	0.1	37.79	-9.0644	-0.029	-0.1749
1030	SLE RA 11	-0.51	0.14	38.28	-9.1785	-0.0294	-0.1727
1030	SLE RA 12	-0.51	0.12	38.3	-9.1828	-0.0294	-0.1754
1030	SLE RA 13	-0.51	0.11	38.09	-9.1356	-0.0292	-0.1755
1030	SLE RA 14	-0.51	0.14	38.58	-9.2497	-0.0296	-0.1733
1030	SLE RA 15	-0.51	0.12	38.6	-9.254	-0.0296	-0.176
1030	SLE RA 16	-0.5	0.13	38.35	-9.1995	-0.0294	-0.1716
1030	SLE RA 17	-0.51	0.12	38.37	-9.2039	-0.0294	-0.1743
1030	SLE RA 18	-0.52	0.14	39	-9.3475	-0.0302	-0.1764
1030	SLE RA 19	-0.52	0.12	39.02	-9.3518	-0.0302	-0.1791
1030	SLE RA 20	-0.52	0.14	39.3	-9.4186	-0.0304	-0.177
1030	SLE RA 21	-0.53	0.13	39.32	-9.4229	-0.0304	-0.1797
1030	SLE FR 1	-0.46	0.11	34.86	-8.38	-0.026	-0.1564
1030	SLE FR 2	-0.46	0.1	34.87	-8.3815	-0.026	-0.1573
1030	SLE FR 3	-0.46	0.11	34.98	-8.4085	-0.0261	-0.1566
1030	SLE FR 4	-0.48	0.11	36.11	-8.6717	-0.0273	-0.1633
1030	SLE FR 5	-0.48	0.12	36.22	-8.6987	-0.0274	-0.1626
1030	SLE FR 6	-0.49	0.12	36.93	-8.8638	-0.0281	-0.1664
1030	SLE QP 1	-0.46	0.11	34.86	-8.38	-0.026	-0.1564
1030	SLE QP 2	-0.48	0.12	36.1	-8.6703	-0.0273	-0.1624
1030	SLD 1	3.26	0.79	39.64	-8.8847	-0.0201	1.1481
1030	SLD 2	2.89	0.61	39.6	-8.9071	-0.0196	1.0165
1030	SLD 3	3.2	-0.11	40.33	-9.0128	-0.0222	1.1246
1030	SLD 4	2.82	-0.3	40.29	-9.0352	-0.0218	0.993
1030	SLD 5	0.82	1.73	36.11	-8.5363	-0.022	0.2903
1030	SLD 6	0.57	1.61	36.09	-8.5511	-0.0216	0.203
1030	SLD 7	0.59	-1.29	38.44	-8.9632	-0.0291	0.2119
1030	SLD 8	0.34	-1.42	38.41	-8.9781	-0.0288	0.1246
1030	SLD 9	-1.29	1.65	33.8	-8.3625	-0.0258	-0.4495
1030	SLD 10	-1.54	1.53	33.77	-8.3773	-0.0254	-0.5367
1030	SLD 11	-1.52	-1.37	36.12	-8.7894	-0.0329	-0.5278
1030	SLD 12	-1.77	-1.49	36.09	-8.8043	-0.0326	-0.6151
1030	SLD 13	-3.77	0.53	31.91	-8.3054	-0.0328	-1.3179
1030	SLD 14	-4.15	0.35	31.87	-8.3277	-0.0323	-1.4494
1030	SLD 15	-3.84	-0.37	32.61	-8.4335	-0.0349	-1.3414
1030	SLD 16	-4.21	-0.56	32.57	-8.4558	-0.0344	-1.4729
1030	SLV 1	8.26	1.66	44.4	-9.1794	-0.0106	2.9006
1030	SLV 2	7.38	1.24	44.3	-9.2314	-0.0094	2.5944
1030	SLV 3	8.11	-0.39	45.98	-9.4709	-0.0154	2.8464
1030	SLV 4	7.23	-0.82	45.88	-9.523	-0.0143	2.5402
1030	SLV 5	2.53	3.77	36.21	-8.3716	-0.0151	0.8926
1030	SLV 6	1.96	3.49	36.15	-8.4055	-0.0144	0.693
1030	SLV 7	2.02	-3.07	41.48	-9.3435	-0.0312	0.7118
1030	SLV 8	1.45	-3.35	41.41	-9.3775	-0.0305	0.5123
1030	SLV 9	-2.4	3.59	30.79	-7.9631	-0.024	-0.8371
1030	SLV 10	-2.97	3.31	30.73	-7.997	-0.0233	-1.0367
1030	SLV 11	-2.91	-3.26	36.06	-8.935	-0.0401	-1.0179
1030	SLV 12	-3.48	-3.53	35.99	-8.9689	-0.0394	-1.2174
1030	SLV 13	-8.18	1.05	26.32	-7.8175	-0.0402	-2.865
1030	SLV 14	-9.06	0.63	26.23	-7.8696	-0.0391	-3.1712
1030	SLV 15	-8.34	-1	27.9	-8.1091	-0.0451	-2.9193
1030	SLV 16	-9.21	-1.43	27.81	-8.1612	-0.0439	-3.2255
1030	CRTFP Ux+	0	0	0	0	0	0
1030	CRTFP Ux-	0	0	0	0	0	0
1030	CRTFP Uy+	0	0	0	0	0	0
1030	CRTFP Uy-	0	0	0	0	0	0
1031	SLU 1	-0.41	0.21	34.52	-9.0042	-0.0301	-0.1391
1031	SLU 2	-0.43	0.17	34.57	-9.0157	-0.0301	-0.1459
1031	SLU 3	-0.42	0.22	35.33	-9.2093	-0.0309	-0.1422
1031	SLU 4	-0.43	0.2	35.36	-9.2162	-0.0309	-0.1462
1031	SLU 5	-0.43	0.17	35.03	-9.1346	-0.0306	-0.1465
1031	SLU 6	-0.42	0.23	35.79	-9.3282	-0.0313	-0.1428
1031	SLU 7	-0.43	0.2	35.82	-9.3351	-0.0313	-0.1469
1031	SLU 8	-0.41	0.22	35.44	-9.2419	-0.0309	-0.1404
1031	SLU 9	-0.42	0.19	35.47	-9.2488	-0.031	-0.1445
1031	SLU 10	-0.49	0.21	39.06	-10.1702	-0.0351	-0.1659
1031	SLU 11	-0.48	0.27	39.82	-10.3638	-0.0358	-0.1622
1031	SLU 12	-0.49	0.24	39.85	-10.3707	-0.0358	-0.1663
1031	SLU 13	-0.49	0.22	39.52	-10.2891	-0.0355	-0.1666

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1031	SLU 14	-0.48	0.27	40.28	-10.4827	-0.0362	-0.1629
1031	SLU 15	-0.49	0.25	40.31	-10.4896	-0.0363	-0.167
1031	SLU 16	-0.47	0.26	39.93	-10.3965	-0.0359	-0.1605
1031	SLU 17	-0.48	0.24	39.96	-10.4034	-0.0359	-0.1645
1031	SLU 18	-0.49	0.27	40.94	-10.6535	-0.0371	-0.1678
1031	SLU 19	-0.5	0.25	40.97	-10.6604	-0.0372	-0.1718
1031	SLU 20	-0.49	0.28	41.4	-10.7724	-0.0375	-0.1684
1031	SLU 21	-0.51	0.25	41.43	-10.7793	-0.0376	-0.1725
1031	SLU 22	-0.46	0.3	38.98	-10.1431	-0.0348	-0.157
1031	SLU 23	-0.48	0.26	39.03	-10.1546	-0.0348	-0.1638
1031	SLU 24	-0.47	0.32	39.79	-10.3482	-0.0356	-0.1601
1031	SLU 25	-0.48	0.29	39.82	-10.3551	-0.0356	-0.1642
1031	SLU 26	-0.48	0.26	39.49	-10.2735	-0.0353	-0.1645
1031	SLU 27	-0.47	0.32	40.25	-10.4671	-0.036	-0.1608
1031	SLU 28	-0.48	0.3	40.28	-10.474	-0.036	-0.1648
1031	SLU 29	-0.47	0.31	39.9	-10.3809	-0.0356	-0.1583
1031	SLU 30	-0.48	0.29	39.93	-10.3878	-0.0357	-0.1624
1031	SLU 31	-0.54	0.31	43.52	-11.3092	-0.0398	-0.1839
1031	SLU 32	-0.53	0.36	44.28	-11.5028	-0.0405	-0.1802
1031	SLU 33	-0.54	0.34	44.31	-11.5097	-0.0405	-0.1843
1031	SLU 34	-0.54	0.31	43.98	-11.428	-0.0402	-0.1845
1031	SLU 35	-0.53	0.36	44.74	-11.6216	-0.0409	-0.1808
1031	SLU 36	-0.54	0.34	44.77	-11.6286	-0.041	-0.1849
1031	SLU 37	-0.52	0.35	44.39	-11.5354	-0.0406	-0.1784
1031	SLU 38	-0.54	0.33	44.42	-11.5423	-0.0406	-0.1825
1031	SLU 39	-0.54	0.37	45.39	-11.7924	-0.0418	-0.1857
1031	SLU 40	-0.56	0.34	45.42	-11.7994	-0.0419	-0.1898
1031	SLU 41	-0.55	0.37	45.86	-11.9113	-0.0422	-0.1864
1031	SLU 42	-0.56	0.34	45.89	-11.9182	-0.0423	-0.1904
1031	SLU 43	-0.51	0.24	43.35	-11.3149	-0.0375	-0.1747
1031	SLU 44	-0.53	0.2	43.4	-11.3264	-0.0376	-0.1814
1031	SLU 45	-0.52	0.25	44.16	-11.52	-0.0383	-0.1777
1031	SLU 46	-0.53	0.23	44.19	-11.5269	-0.0383	-0.1818
1031	SLU 47	-0.53	0.2	43.86	-11.4453	-0.038	-0.1821
1031	SLU 48	-0.52	0.26	44.62	-11.6389	-0.0387	-0.1784
1031	SLU 49	-0.54	0.23	44.65	-11.6458	-0.0387	-0.1825
1031	SLU 50	-0.52	0.25	44.27	-11.5527	-0.0383	-0.176
1031	SLU 51	-0.53	0.22	44.3	-11.5596	-0.0384	-0.18
1031	SLU 52	-0.59	0.24	47.89	-12.481	-0.0425	-0.2015
1031	SLU 53	-0.58	0.3	48.65	-12.6746	-0.0432	-0.1978
1031	SLU 54	-0.59	0.27	48.68	-12.6815	-0.0432	-0.2019
1031	SLU 55	-0.59	0.25	48.35	-12.5999	-0.0429	-0.2022
1031	SLU 56	-0.58	0.3	49.11	-12.7935	-0.0436	-0.1985
1031	SLU 57	-0.59	0.28	49.14	-12.8004	-0.0437	-0.2026
1031	SLU 58	-0.58	0.29	48.76	-12.7072	-0.0433	-0.196
1031	SLU 59	-0.59	0.27	48.79	-12.7141	-0.0433	-0.2001
1031	SLU 60	-0.6	0.3	49.76	-12.9643	-0.0445	-0.2033
1031	SLU 61	-0.61	0.28	49.79	-12.9712	-0.0446	-0.2074
1031	SLU 62	-0.6	0.31	50.22	-13.0832	-0.045	-0.204
1031	SLU 63	-0.61	0.28	50.26	-13.0901	-0.045	-0.2081
1031	SLU 64	-0.57	0.33	47.81	-12.4538	-0.0422	-0.1926
1031	SLU 65	-0.59	0.29	47.86	-12.4654	-0.0423	-0.1994
1031	SLU 66	-0.57	0.35	48.62	-12.659	-0.043	-0.1957
1031	SLU 67	-0.59	0.32	48.65	-12.6659	-0.043	-0.1998
1031	SLU 68	-0.59	0.29	48.32	-12.5843	-0.0427	-0.2
1031	SLU 69	-0.58	0.35	49.08	-12.7779	-0.0434	-0.1963
1031	SLU 70	-0.59	0.33	49.11	-12.7848	-0.0434	-0.2004
1031	SLU 71	-0.57	0.34	48.73	-12.6916	-0.043	-0.1939
1031	SLU 72	-0.58	0.32	48.76	-12.6985	-0.0431	-0.198
1031	SLU 73	-0.64	0.34	52.35	-13.6199	-0.0472	-0.2195
1031	SLU 74	-0.63	0.39	53.11	-13.8135	-0.0479	-0.2158
1031	SLU 75	-0.64	0.37	53.14	-13.8204	-0.0479	-0.2198
1031	SLU 76	-0.65	0.34	52.81	-13.7388	-0.0476	-0.2201
1031	SLU 77	-0.64	0.39	53.57	-13.9324	-0.0483	-0.2164
1031	SLU 78	-0.65	0.37	53.6	-13.9393	-0.0484	-0.2205
1031	SLU 79	-0.63	0.38	53.22	-13.8462	-0.048	-0.214
1031	SLU 80	-0.64	0.36	53.25	-13.8531	-0.048	-0.2181
1031	SLU 81	-0.65	0.4	54.22	-14.1032	-0.0492	-0.2213
1031	SLU 82	-0.66	0.37	54.25	-14.1101	-0.0493	-0.2253
1031	SLU 83	-0.65	0.4	54.68	-14.2221	-0.0497	-0.2219
1031	SLU 84	-0.66	0.37	54.71	-14.229	-0.0497	-0.226
1031	SLE RA 1	-0.42	0.23	35.79	-9.3296	-0.0314	-0.1442
1031	SLE RA 2	-0.44	0.21	35.83	-9.3372	-0.0315	-0.1487
1031	SLE RA 3	-0.43	0.24	36.34	-9.4663	-0.0319	-0.1463
1031	SLE RA 4	-0.44	0.23	36.36	-9.4709	-0.032	-0.149
1031	SLE RA 5	-0.44	0.21	36.14	-9.4165	-0.0318	-0.1492
1031	SLE RA 6	-0.43	0.25	36.64	-9.5456	-0.0322	-0.1467
1031	SLE RA 7	-0.44	0.23	36.66	-9.5502	-0.0323	-0.1494
1031	SLE RA 8	-0.43	0.24	36.41	-9.4881	-0.032	-0.1451
1031	SLE RA 9	-0.43	0.22	36.43	-9.4927	-0.032	-0.1478
1031	SLE RA 10	-0.48	0.24	38.82	-10.1069	-0.0348	-0.1621
1031	SLE RA 11	-0.47	0.27	39.33	-10.236	-0.0352	-0.1597
1031	SLE RA 12	-0.48	0.26	39.35	-10.2406	-0.0353	-0.1624
1031	SLE RA 13	-0.48	0.24	39.13	-10.1862	-0.035	-0.1626
1031	SLE RA 14	-0.47	0.28	39.64	-10.3153	-0.0355	-0.1601
1031	SLE RA 15	-0.48	0.26	39.66	-10.3199	-0.0355	-0.1628
1031	SLE RA 16	-0.47	0.27	39.4	-10.2578	-0.0353	-0.1585
1031	SLE RA 17	-0.47	0.25	39.42	-10.2624	-0.0353	-0.1612
1031	SLE RA 18	-0.48	0.28	40.07	-10.4291	-0.0361	-0.1633
1031	SLE RA 19	-0.49	0.26	40.09	-10.4337	-0.0361	-0.166

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1031	SLE RA 20	-0.48	0.28	40.38	-10.5084	-0.0364	-0.1638
1031	SLE RA 21	-0.49	0.26	40.4	-10.513	-0.0364	-0.1665
1031	SLE FR 1	-0.42	0.23	35.79	-9.3296	-0.0314	-0.1442
1031	SLE FR 2	-0.43	0.23	35.8	-9.3311	-0.0314	-0.1451
1031	SLE FR 3	-0.42	0.24	35.92	-9.3613	-0.0315	-0.1444
1031	SLE FR 4	-0.44	0.24	37.08	-9.661	-0.0328	-0.1508
1031	SLE FR 5	-0.44	0.25	37.2	-9.6911	-0.0329	-0.1501
1031	SLE FR 6	-0.45	0.26	37.93	-9.8794	-0.0338	-0.1538
1031	SLE QP 1	-0.42	0.23	35.79	-9.3296	-0.0314	-0.1442
1031	SLE QP 2	-0.44	0.25	37.08	-9.6594	-0.0328	-0.1499
1031	SLD 1	3.3	0.99	40.41	-10.0044	-0.0268	1.1611
1031	SLD 2	2.93	0.81	40.35	-10.0113	-0.0264	1.03
1031	SLD 3	3.23	0.07	41.17	-10.1636	-0.0291	1.1376
1031	SLD 4	2.86	-0.11	41.11	-10.1705	-0.0287	1.0066
1031	SLD 5	0.85	1.9	36.93	-9.5203	-0.0277	0.3028
1031	SLD 6	0.6	1.79	36.89	-9.5248	-0.0274	0.2158
1031	SLD 7	0.63	-1.18	39.47	-10.0509	-0.0352	0.2246
1031	SLD 8	0.38	-1.29	39.43	-10.0554	-0.035	0.1376
1031	SLD 9	-1.26	1.79	34.72	-9.2635	-0.0307	-0.4375
1031	SLD 10	-1.51	1.67	34.68	-9.268	-0.0305	-0.5245
1031	SLD 11	-1.48	-1.29	37.26	-9.794	-0.0383	-0.5157
1031	SLD 12	-1.73	-1.41	37.22	-9.7986	-0.038	-0.6027
1031	SLD 13	-3.74	0.6	33.04	-9.1484	-0.037	-1.3065
1031	SLD 14	-4.11	0.43	32.99	-9.1553	-0.0366	-1.4375
1031	SLD 15	-3.81	-0.32	33.8	-9.3076	-0.0392	-1.3299
1031	SLD 16	-4.18	-0.5	33.75	-9.3144	-0.0389	-1.461
1031	SLV 1	8.3	1.95	44.9	-10.4755	-0.0188	2.9144
1031	SLV 2	7.43	1.54	44.77	-10.4915	-0.0179	2.6093
1031	SLV 3	8.15	-0.14	46.62	-10.8367	-0.0239	2.8604
1031	SLV 4	7.28	-0.55	46.5	-10.8527	-0.0231	2.5552
1031	SLV 5	2.57	4	36.83	-9.3537	-0.021	0.905
1031	SLV 6	2	3.73	36.75	-9.3641	-0.0205	0.7062
1031	SLV 7	2.06	-2.97	42.58	-10.5576	-0.038	0.7248
1031	SLV 8	1.49	-3.24	42.5	-10.568	-0.0375	0.5259
1031	SLV 9	-2.37	3.73	31.66	-8.7509	-0.0282	-0.8258
1031	SLV 10	-2.94	3.46	31.57	-8.7613	-0.0276	-1.0246
1031	SLV 11	-2.88	-3.24	37.41	-9.9548	-0.0452	-1.0061
1031	SLV 12	-3.45	-3.51	37.33	-9.9652	-0.0446	-1.2049
1031	SLV 13	-8.16	1.05	27.66	-8.4662	-0.0426	-2.8551
1031	SLV 14	-9.03	0.63	27.53	-8.4822	-0.0418	-3.1602
1031	SLV 15	-8.31	-1.05	29.39	-8.8274	-0.0477	-2.9092
1031	SLV 16	-9.18	-1.46	29.26	-8.8433	-0.0469	-3.2143
1031	CRTFP Ux+	0	0	0	0	0	0
1031	CRTFP Ux-	0	0	0	0	0	0
1031	CRTFP Uy+	0	0	0	0	0	0
1031	CRTFP Uy-	0	0	0	0	0	0
1032	SLU 1	-0.37	0.33	35.43	-9.9933	-0.0255	-0.1263
1032	SLU 2	-0.39	0.29	35.48	-10.0056	-0.0256	-0.1332
1032	SLU 3	-0.38	0.35	36.26	-10.2236	-0.0262	-0.1291
1032	SLU 4	-0.39	0.32	36.3	-10.231	-0.0262	-0.1332
1032	SLU 5	-0.39	0.3	35.96	-10.138	-0.0259	-0.1336
1032	SLU 6	-0.38	0.35	36.74	-10.356	-0.0265	-0.1295
1032	SLU 7	-0.39	0.33	36.77	-10.3634	-0.0266	-0.1336
1032	SLU 8	-0.37	0.34	36.38	-10.2581	-0.0262	-0.1272
1032	SLU 9	-0.39	0.32	36.41	-10.2655	-0.0263	-0.1313
1032	SLU 10	-0.45	0.35	40.12	-11.3061	-0.0296	-0.1522
1032	SLU 11	-0.44	0.41	40.9	-11.524	-0.0302	-0.1481
1032	SLU 12	-0.45	0.38	40.93	-11.5314	-0.0303	-0.1522
1032	SLU 13	-0.45	0.35	40.59	-11.4385	-0.03	-0.1526
1032	SLU 14	-0.44	0.41	41.38	-11.6564	-0.0306	-0.1485
1032	SLU 15	-0.45	0.39	41.41	-11.6638	-0.0306	-0.1526
1032	SLU 16	-0.43	0.4	41.01	-11.5586	-0.0303	-0.1462
1032	SLU 17	-0.44	0.38	41.05	-11.566	-0.0303	-0.1503
1032	SLU 18	-0.45	0.41	42.05	-11.8511	-0.0313	-0.1535
1032	SLU 19	-0.46	0.39	42.09	-11.8585	-0.0314	-0.1576
1032	SLU 20	-0.45	0.42	42.53	-11.9835	-0.0317	-0.1539
1032	SLU 21	-0.46	0.4	42.56	-11.9909	-0.0317	-0.158
1032	SLU 22	-0.42	0.44	40.03	-11.2746	-0.0294	-0.1431
1032	SLU 23	-0.44	0.4	40.08	-11.2869	-0.0295	-0.1499
1032	SLU 24	-0.43	0.46	40.86	-11.5049	-0.0301	-0.1458
1032	SLU 25	-0.44	0.43	40.89	-11.5123	-0.0301	-0.1499
1032	SLU 26	-0.44	0.41	40.55	-11.4193	-0.0298	-0.1503
1032	SLU 27	-0.43	0.46	41.34	-11.6373	-0.0304	-0.1462
1032	SLU 28	-0.44	0.44	41.37	-11.6447	-0.0305	-0.1504
1032	SLU 29	-0.42	0.45	40.98	-11.5394	-0.0301	-0.1439
1032	SLU 30	-0.44	0.43	41.01	-11.5468	-0.0302	-0.148
1032	SLU 31	-0.5	0.46	44.72	-12.5874	-0.0335	-0.1689
1032	SLU 32	-0.49	0.52	45.5	-12.8054	-0.0341	-0.1648
1032	SLU 33	-0.5	0.49	45.53	-12.8127	-0.0342	-0.1689
1032	SLU 34	-0.5	0.47	45.19	-12.7198	-0.0339	-0.1693
1032	SLU 35	-0.49	0.52	45.97	-12.9378	-0.0345	-0.1652
1032	SLU 36	-0.5	0.5	46.01	-12.9451	-0.0345	-0.1694
1032	SLU 37	-0.48	0.51	45.61	-12.8399	-0.0342	-0.1629
1032	SLU 38	-0.49	0.49	45.65	-12.8473	-0.0342	-0.167
1032	SLU 39	-0.5	0.52	46.65	-13.1324	-0.0352	-0.1702
1032	SLU 40	-0.51	0.5	46.69	-13.1398	-0.0353	-0.1743
1032	SLU 41	-0.5	0.53	47.13	-13.2648	-0.0356	-0.1706
1032	SLU 42	-0.51	0.51	47.16	-13.2722	-0.0356	-0.1747
1032	SLU 43	-0.47	0.39	44.48	-12.552	-0.0318	-0.1585
1032	SLU 44	-0.49	0.35	44.53	-12.5643	-0.0319	-0.1654

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1032	SLU 45	-0.47	0.41	45.32	-12.7823	-0.0325	-0.1613
1032	SLU 46	-0.49	0.38	45.35	-12.7897	-0.0325	-0.1654
1032	SLU 47	-0.49	0.36	45.01	-12.6967	-0.0323	-0.1658
1032	SLU 48	-0.48	0.42	45.79	-12.9147	-0.0329	-0.1617
1032	SLU 49	-0.49	0.39	45.82	-12.9221	-0.0329	-0.1658
1032	SLU 50	-0.47	0.4	45.43	-12.8168	-0.0326	-0.1594
1032	SLU 51	-0.48	0.38	45.46	-12.8242	-0.0326	-0.1635
1032	SLU 52	-0.54	0.41	49.17	-13.8648	-0.036	-0.1844
1032	SLU 53	-0.53	0.47	49.95	-14.0827	-0.0366	-0.1803
1032	SLU 54	-0.54	0.44	49.99	-14.0901	-0.0366	-0.1844
1032	SLU 55	-0.54	0.42	49.65	-13.9972	-0.0363	-0.1848
1032	SLU 56	-0.53	0.47	50.43	-14.2151	-0.0369	-0.1807
1032	SLU 57	-0.54	0.45	50.46	-14.2225	-0.037	-0.1848
1032	SLU 58	-0.52	0.46	50.07	-14.1173	-0.0366	-0.1784
1032	SLU 59	-0.54	0.44	50.1	-14.1246	-0.0367	-0.1825
1032	SLU 60	-0.55	0.47	51.11	-14.4098	-0.0376	-0.1857
1032	SLU 61	-0.56	0.45	51.14	-14.4172	-0.0377	-0.1898
1032	SLU 62	-0.55	0.48	51.58	-14.5422	-0.038	-0.1861
1032	SLU 63	-0.56	0.46	51.61	-14.5496	-0.038	-0.1902
1032	SLU 64	-0.52	0.5	49.08	-13.8333	-0.0357	-0.1752
1032	SLU 65	-0.54	0.46	49.13	-13.8456	-0.0358	-0.1821
1032	SLU 66	-0.52	0.52	49.92	-14.0636	-0.0364	-0.178
1032	SLU 67	-0.54	0.5	49.95	-14.071	-0.0364	-0.1821
1032	SLU 68	-0.54	0.47	49.61	-13.978	-0.0362	-0.1825
1032	SLU 69	-0.53	0.53	50.39	-14.196	-0.0368	-0.1784
1032	SLU 70	-0.54	0.5	50.42	-14.2034	-0.0368	-0.1825
1032	SLU 71	-0.52	0.51	50.03	-14.0981	-0.0365	-0.1761
1032	SLU 72	-0.53	0.49	50.06	-14.1055	-0.0365	-0.1802
1032	SLU 73	-0.59	0.52	53.77	-15.1461	-0.0399	-0.2011
1032	SLU 74	-0.58	0.58	54.55	-15.364	-0.0404	-0.197
1032	SLU 75	-0.59	0.55	54.58	-15.3714	-0.0405	-0.2011
1032	SLU 76	-0.59	0.53	54.24	-15.2785	-0.0402	-0.2015
1032	SLU 77	-0.58	0.58	55.03	-15.4964	-0.0408	-0.1974
1032	SLU 78	-0.59	0.56	55.06	-15.5038	-0.0409	-0.2015
1032	SLU 79	-0.57	0.57	54.67	-15.3986	-0.0405	-0.1951
1032	SLU 80	-0.59	0.55	54.7	-15.406	-0.0406	-0.1992
1032	SLU 81	-0.6	0.59	55.71	-15.6911	-0.0415	-0.2024
1032	SLU 82	-0.61	0.56	55.74	-15.6985	-0.0416	-0.2065
1032	SLU 83	-0.6	0.59	56.18	-15.8235	-0.0419	-0.2028
1032	SLU 84	-0.61	0.57	56.21	-15.8309	-0.0419	-0.2069
1032	SLE RA 1	-0.39	0.36	36.74	-10.3594	-0.0266	-0.1311
1032	SLE RA 2	-0.4	0.33	36.78	-10.3676	-0.0267	-0.1357
1032	SLE RA 3	-0.39	0.37	37.3	-10.5129	-0.0271	-0.133
1032	SLE RA 4	-0.4	0.36	37.32	-10.5178	-0.0271	-0.1357
1032	SLE RA 5	-0.4	0.34	37.09	-10.4559	-0.0269	-0.136
1032	SLE RA 6	-0.39	0.38	37.62	-10.6012	-0.0273	-0.1332
1032	SLE RA 7	-0.4	0.36	37.64	-10.6061	-0.0273	-0.136
1032	SLE RA 8	-0.39	0.37	37.38	-10.5359	-0.0271	-0.1317
1032	SLE RA 9	-0.4	0.35	37.4	-10.5409	-0.0271	-0.1344
1032	SLE RA 10	-0.44	0.37	39.87	-11.2346	-0.0294	-0.1484
1032	SLE RA 11	-0.43	0.41	40.39	-11.3799	-0.0298	-0.1456
1032	SLE RA 12	-0.44	0.4	40.41	-11.3848	-0.0298	-0.1484
1032	SLE RA 13	-0.44	0.38	40.19	-11.3228	-0.0296	-0.1486
1032	SLE RA 14	-0.43	0.42	40.71	-11.4682	-0.03	-0.1459
1032	SLE RA 15	-0.44	0.4	40.73	-11.4731	-0.03	-0.1487
1032	SLE RA 16	-0.42	0.41	40.47	-11.4029	-0.0298	-0.1443
1032	SLE RA 17	-0.43	0.39	40.49	-11.4078	-0.0298	-0.1471
1032	SLE RA 18	-0.44	0.42	41.16	-11.5979	-0.0305	-0.1492
1032	SLE RA 19	-0.45	0.4	41.18	-11.6028	-0.0305	-0.152
1032	SLE RA 20	-0.44	0.42	41.48	-11.6862	-0.0307	-0.1495
1032	SLE RA 21	-0.45	0.41	41.5	-11.6911	-0.0308	-0.1522
1032	SLE FR 1	-0.39	0.36	36.74	-10.3594	-0.0266	-0.1311
1032	SLE FR 2	-0.39	0.36	36.75	-10.361	-0.0266	-0.132
1032	SLE FR 3	-0.39	0.36	36.87	-10.3947	-0.0267	-0.1312
1032	SLE FR 4	-0.4	0.37	38.08	-10.7326	-0.0278	-0.1375
1032	SLE FR 5	-0.4	0.38	38.19	-10.7663	-0.0279	-0.1367
1032	SLE FR 6	-0.41	0.39	38.95	-10.9787	-0.0286	-0.1402
1032	SLE QP 1	-0.39	0.36	36.74	-10.3594	-0.0266	-0.1311
1032	SLE QP 2	-0.4	0.38	38.07	-10.731	-0.0278	-0.1365
1032	SLD 1	3.34	1.17	41.22	-11.2361	-0.0225	1.1746
1032	SLD 2	2.97	1	41.16	-11.2299	-0.0223	1.0441
1032	SLD 3	3.28	0.23	42.05	-11.4289	-0.0246	1.1512
1032	SLD 4	2.9	0.06	41.99	-11.4226	-0.0243	1.0207
1032	SLD 5	0.89	2.07	37.77	-10.5913	-0.0231	0.316
1032	SLD 6	0.64	1.96	37.73	-10.5871	-0.023	0.2294
1032	SLD 7	0.67	-1.06	40.53	-11.2338	-0.03	0.2381
1032	SLD 8	0.42	-1.17	40.49	-11.2297	-0.0298	0.1514
1032	SLD 9	-1.22	1.93	35.65	-10.2322	-0.0258	-0.4245
1032	SLD 10	-1.47	1.82	35.61	-10.2281	-0.0256	-0.5112
1032	SLD 11	-1.45	-1.2	38.41	-10.8748	-0.0326	-0.5025
1032	SLD 12	-1.69	-1.31	38.36	-10.8706	-0.0324	-0.5891
1032	SLD 13	-3.71	0.69	34.15	-10.0393	-0.0312	-1.2938
1032	SLD 14	-4.08	0.53	34.09	-10.033	-0.031	-1.4243
1032	SLD 15	-3.77	-0.25	34.98	-10.232	-0.0333	-1.3172
1032	SLD 16	-4.15	-0.41	34.91	-10.2258	-0.0331	-1.4477
1032	SLV 1	8.35	2.19	45.48	-11.9231	-0.0156	2.9282
1032	SLV 2	7.48	1.8	45.33	-11.9085	-0.015	2.6242
1032	SLV 3	8.2	0.06	47.36	-12.3598	-0.0202	2.8742
1032	SLV 4	7.32	-0.32	47.21	-12.3451	-0.0196	2.5702
1032	SLV 5	2.61	4.22	37.48	-10.4289	-0.0172	0.9181

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1032	SLV 6	2.04	3.97	37.38	-10.4194	-0.0168	0.72
1032	SLV 7	2.1	-2.87	43.72	-11.8844	-0.0326	0.7383
1032	SLV 8	1.53	-3.13	43.62	-11.8749	-0.0323	0.5403
1032	SLV 9	-2.33	3.88	32.51	-9.587	-0.0233	-0.8134
1032	SLV 10	-2.9	3.63	32.42	-9.5775	-0.023	-1.0114
1032	SLV 11	-2.84	-3.21	38.76	-11.0425	-0.0387	-0.9931
1032	SLV 12	-3.41	-3.46	38.66	-11.033	-0.0384	-1.1912
1032	SLV 13	-8.13	1.08	28.93	-9.1168	-0.036	-2.8433
1032	SLV 14	-9	0.69	28.78	-9.1022	-0.0354	-3.1473
1032	SLV 15	-8.28	-1.05	30.8	-9.5534	-0.0406	-2.8973
1032	SLV 16	-9.15	-1.43	30.65	-9.5388	-0.04	-3.2013
1032	CRTFP Ux+	0	0	0	0	0	0
1032	CRTFP Ux-	0	0	0	0	0	0
1032	CRTFP Uy+	0	0	0	0	0	0
1032	CRTFP Uy-	0	0	0	0	0	0
1033	SLU 1	-0.3	0.4	32.49	-9.7983	0.5974	-0.11
1033	SLU 2	-0.32	0.36	32.54	-9.8102	0.5983	-0.1156
1033	SLU 3	-0.31	0.42	33.26	-10.0258	0.6115	-0.1126
1033	SLU 4	-0.32	0.4	33.29	-10.0329	0.612	-0.1159
1033	SLU 5	-0.32	0.37	32.98	-9.9403	0.6063	-0.1159
1033	SLU 6	-0.31	0.42	33.69	-10.1559	0.6195	-0.1128
1033	SLU 7	-0.32	0.4	33.72	-10.163	0.62	-0.1162
1033	SLU 8	-0.3	0.41	33.36	-10.0586	0.6134	-0.1106
1033	SLU 9	-0.31	0.39	33.39	-10.0657	0.6139	-0.1139
1033	SLU 10	-0.37	0.43	36.81	-11.0947	0.6766	-0.1329
1033	SLU 11	-0.35	0.48	37.53	-11.3103	0.6898	-0.1299
1033	SLU 12	-0.36	0.46	37.56	-11.3174	0.6903	-0.1333
1033	SLU 13	-0.37	0.43	37.24	-11.2248	0.6846	-0.1332
1033	SLU 14	-0.35	0.49	37.96	-11.4404	0.6978	-0.1302
1033	SLU 15	-0.37	0.47	37.99	-11.4476	0.6983	-0.1336
1033	SLU 16	-0.35	0.48	37.63	-11.3431	0.6917	-0.128
1033	SLU 17	-0.36	0.46	37.66	-11.3502	0.6922	-0.1313
1033	SLU 18	-0.37	0.49	38.59	-11.6333	0.7093	-0.1348
1033	SLU 19	-0.38	0.47	38.62	-11.6404	0.7098	-0.1382
1033	SLU 20	-0.37	0.5	39.02	-11.7635	0.7173	-0.1351
1033	SLU 21	-0.38	0.48	39.05	-11.7706	0.7178	-0.1385
1033	SLU 22	-0.34	0.51	36.72	-11.0635	0.675	-0.1261
1033	SLU 23	-0.36	0.48	36.77	-11.0754	0.6759	-0.1317
1033	SLU 24	-0.35	0.53	37.49	-11.291	0.6891	-0.1287
1033	SLU 25	-0.36	0.51	37.52	-11.2981	0.6897	-0.132
1033	SLU 26	-0.36	0.48	37.2	-11.2055	0.6839	-0.132
1033	SLU 27	-0.35	0.54	37.92	-11.4211	0.6971	-0.129
1033	SLU 28	-0.36	0.52	37.95	-11.4282	0.6977	-0.1323
1033	SLU 29	-0.34	0.53	37.59	-11.3238	0.691	-0.1267
1033	SLU 30	-0.35	0.5	37.62	-11.3309	0.6916	-0.13
1033	SLU 31	-0.41	0.54	41.04	-12.3599	0.7542	-0.1491
1033	SLU 32	-0.4	0.6	41.75	-12.5755	0.7674	-0.146
1033	SLU 33	-0.41	0.58	41.78	-12.5826	0.7679	-0.1494
1033	SLU 34	-0.41	0.55	41.47	-12.49	0.7622	-0.1493
1033	SLU 35	-0.4	0.6	42.19	-12.7056	0.7754	-0.1463
1033	SLU 36	-0.41	0.58	42.22	-12.7128	0.7759	-0.1497
1033	SLU 37	-0.39	0.59	41.86	-12.6083	0.7693	-0.1441
1033	SLU 38	-0.4	0.57	41.89	-12.6154	0.7698	-0.1474
1033	SLU 39	-0.41	0.61	42.82	-12.8985	0.7869	-0.1509
1033	SLU 40	-0.42	0.58	42.85	-12.9056	0.7874	-0.1543
1033	SLU 41	-0.41	0.61	43.25	-13.0287	0.7949	-0.1512
1033	SLU 42	-0.42	0.59	43.28	-13.0358	0.7954	-0.1546
1033	SLU 43	-0.38	0.48	40.79	-12.304	0.75	-0.1375
1033	SLU 44	-0.39	0.44	40.84	-12.3159	0.7509	-0.143
1033	SLU 45	-0.38	0.5	41.56	-12.5315	0.7641	-0.14
1033	SLU 46	-0.39	0.48	41.59	-12.5386	0.7647	-0.1434
1033	SLU 47	-0.39	0.45	41.27	-12.446	0.7589	-0.1433
1033	SLU 48	-0.38	0.51	41.99	-12.6616	0.7721	-0.1403
1033	SLU 49	-0.39	0.48	42.02	-12.6687	0.7727	-0.1437
1033	SLU 50	-0.38	0.49	41.66	-12.5643	0.766	-0.138
1033	SLU 51	-0.39	0.47	41.69	-12.5714	0.7666	-0.1414
1033	SLU 52	-0.44	0.51	45.11	-13.6004	0.8292	-0.1604
1033	SLU 53	-0.43	0.56	45.82	-13.816	0.8424	-0.1574
1033	SLU 54	-0.44	0.54	45.85	-13.8231	0.8429	-0.1607
1033	SLU 55	-0.44	0.52	45.54	-13.7305	0.8372	-0.1607
1033	SLU 56	-0.43	0.57	46.26	-13.9461	0.8504	-0.1577
1033	SLU 57	-0.44	0.55	46.29	-13.9533	0.8509	-0.161
1033	SLU 58	-0.42	0.56	45.93	-13.8488	0.8443	-0.1554
1033	SLU 59	-0.44	0.54	45.96	-13.8559	0.8448	-0.1588
1033	SLU 60	-0.44	0.57	46.89	-14.139	0.8619	-0.1623
1033	SLU 61	-0.45	0.55	46.92	-14.1461	0.8624	-0.1656
1033	SLU 62	-0.44	0.58	47.32	-14.2692	0.8699	-0.1626
1033	SLU 63	-0.46	0.56	47.35	-14.2763	0.8704	-0.1659
1033	SLU 64	-0.42	0.59	45.02	-13.5692	0.8277	-0.1536
1033	SLU 65	-0.44	0.56	45.07	-13.5811	0.8285	-0.1591
1033	SLU 66	-0.42	0.61	45.78	-13.7967	0.8418	-0.1561
1033	SLU 67	-0.43	0.59	45.81	-13.8038	0.8423	-0.1595
1033	SLU 68	-0.44	0.56	45.5	-13.7112	0.8365	-0.1594
1033	SLU 69	-0.42	0.62	46.22	-13.9268	0.8498	-0.1564
1033	SLU 70	-0.44	0.6	46.25	-13.9339	0.8503	-0.1598
1033	SLU 71	-0.42	0.61	45.89	-13.8295	0.8437	-0.1542
1033	SLU 72	-0.43	0.59	45.92	-13.8366	0.8442	-0.1575
1033	SLU 73	-0.48	0.62	49.33	-14.8656	0.9068	-0.1765
1033	SLU 74	-0.47	0.68	50.05	-15.0812	0.92	-0.1735
1033	SLU 75	-0.48	0.66	50.08	-15.0883	0.9206	-0.1769

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1033	SLU 76	-0.48	0.63	49.77	-14.9957	0.9148	-0.1768
1033	SLU 77	-0.47	0.68	50.49	-15.2113	0.928	-0.1738
1033	SLU 78	-0.48	0.66	50.52	-15.2185	0.9286	-0.1772
1033	SLU 79	-0.47	0.67	50.16	-15.114	0.9219	-0.1715
1033	SLU 80	-0.48	0.65	50.18	-15.1211	0.9225	-0.1749
1033	SLU 81	-0.48	0.69	51.11	-15.4042	0.9395	-0.1784
1033	SLU 82	-0.5	0.66	51.14	-15.4113	0.94	-0.1817
1033	SLU 83	-0.49	0.69	51.55	-15.5344	0.9475	-0.1787
1033	SLU 84	-0.5	0.67	51.58	-15.5415	0.948	-0.182
1033	SLE RA 1	-0.31	0.43	33.7	-10.1598	0.6196	-0.1146
1033	SLE RA 2	-0.32	0.41	33.73	-10.1677	0.6202	-0.1183
1033	SLE RA 3	-0.32	0.44	34.21	-10.3114	0.629	-0.1163
1033	SLE RA 4	-0.32	0.43	34.23	-10.3162	0.6293	-0.1185
1033	SLE RA 5	-0.32	0.41	34.02	-10.2545	0.6255	-0.1185
1033	SLE RA 6	-0.32	0.45	34.5	-10.3982	0.6343	-0.1165
1033	SLE RA 7	-0.32	0.43	34.52	-10.4029	0.6347	-0.1187
1033	SLE RA 8	-0.31	0.44	34.28	-10.3333	0.6303	-0.115
1033	SLE RA 9	-0.32	0.43	34.3	-10.3381	0.6306	-0.1172
1033	SLE RA 10	-0.36	0.45	36.58	-11.024	0.6724	-0.1299
1033	SLE RA 11	-0.35	0.49	37.06	-11.1678	0.6812	-0.1279
1033	SLE RA 12	-0.36	0.47	37.08	-11.1725	0.6815	-0.1301
1033	SLE RA 13	-0.36	0.46	36.87	-11.1108	0.6777	-0.1301
1033	SLE RA 14	-0.35	0.49	37.35	-11.2545	0.6865	-0.1281
1033	SLE RA 15	-0.36	0.48	37.37	-11.2593	0.6869	-0.1303
1033	SLE RA 16	-0.34	0.48	37.12	-11.1897	0.6825	-0.1266
1033	SLE RA 17	-0.35	0.47	37.14	-11.1944	0.6828	-0.1288
1033	SLE RA 18	-0.36	0.49	37.76	-11.3831	0.6942	-0.1311
1033	SLE RA 19	-0.36	0.48	37.78	-11.3879	0.6945	-0.1334
1033	SLE RA 20	-0.36	0.5	38.05	-11.4699	0.6995	-0.1313
1033	SLE RA 21	-0.36	0.48	38.07	-11.4746	0.6998	-0.1336
1033	SLE FR 1	-0.31	0.43	33.7	-10.1598	0.6196	-0.1146
1033	SLE FR 2	-0.31	0.43	33.71	-10.1614	0.6197	-0.1153
1033	SLE FR 3	-0.31	0.43	33.82	-10.1945	0.6217	-0.1147
1033	SLE FR 4	-0.33	0.45	34.93	-10.5284	0.6421	-0.1203
1033	SLE FR 5	-0.33	0.45	35.04	-10.5615	0.6441	-0.1196
1033	SLE FR 6	-0.33	0.46	35.73	-10.7714	0.6569	-0.1229
1033	SLE QP 1	-0.31	0.43	33.7	-10.1598	0.6196	-0.1146
1033	SLE QP 2	-0.33	0.45	34.92	-10.5268	0.642	-0.1196
1033	SLD 1	3.06	1.18	37.63	-11.145	0.696	1.0385
1033	SLD 2	2.72	1.04	37.57	-11.13	0.6949	0.9235
1033	SLD 3	3	0.32	38.43	-11.3442	0.7097	1.0586
1033	SLD 4	2.66	0.18	38.36	-11.3292	0.7086	0.9436
1033	SLD 5	0.84	2	34.54	-10.4128	0.6376	0.2183
1033	SLD 6	0.62	1.91	34.5	-10.4029	0.6368	0.142
1033	SLD 7	0.64	-0.87	37.19	-11.0769	0.6833	0.2853
1033	SLD 8	0.42	-0.96	37.14	-11.0669	0.6826	0.209
1033	SLD 9	-1.07	1.86	32.7	-9.9867	0.6014	-0.4481
1033	SLD 10	-1.29	1.77	32.65	-9.9767	0.6006	-0.5244
1033	SLD 11	-1.27	-1.01	35.34	-10.6507	0.6471	-0.3811
1033	SLD 12	-1.49	-1.1	35.3	-10.6407	0.6464	-0.4574
1033	SLD 13	-3.31	0.72	31.48	-9.7244	0.5753	-1.1827
1033	SLD 14	-3.65	0.58	31.41	-9.7094	0.5742	-1.2977
1033	SLD 15	-3.37	-0.14	32.27	-9.9236	0.589	-1.1626
1033	SLD 16	-3.71	-0.28	32.21	-9.9086	0.5879	-1.2776
1033	SLV 1	7.58	2.12	41.3	-11.9831	0.7689	2.5877
1033	SLV 2	6.8	1.8	41.15	-11.9481	0.7664	2.32
1033	SLV 3	7.44	0.17	43.1	-12.4339	0.8	2.6345
1033	SLV 4	6.66	-0.15	42.95	-12.3989	0.7975	2.3668
1033	SLV 5	2.39	3.96	34.14	-10.2861	0.6334	0.6688
1033	SLV 6	1.88	3.75	34.04	-10.2633	0.6317	0.4944
1033	SLV 7	1.93	-2.53	40.12	-11.7888	0.737	0.8246
1033	SLV 8	1.42	-2.74	40.02	-11.766	0.7353	0.6502
1033	SLV 9	-2.07	3.64	29.81	-9.2875	0.5486	-0.8893
1033	SLV 10	-2.59	3.43	29.72	-9.2647	0.547	-1.0637
1033	SLV 11	-2.53	-2.85	35.8	-10.7903	0.6522	-0.7335
1033	SLV 12	-3.05	-3.06	35.7	-10.7675	0.6506	-0.9079
1033	SLV 13	-7.31	1.05	26.89	-8.6546	0.4865	-2.6059
1033	SLV 14	-8.1	0.73	26.74	-8.6196	0.4839	-2.8736
1033	SLV 15	-7.45	-0.9	28.69	-9.1055	0.5176	-2.5592
1033	SLV 16	-8.23	-1.22	28.54	-9.0705	0.515	-2.8269
1033	CRTFP Ux+	0	0	0	0	0	0
1033	CRTFP Ux-	0	0	0	0	0	0
1033	CRTFP Uy+	0	0	0	0	0	0
1033	CRTFP Uy-	0	0	0	0	0	0
1035	SLU 1	-0.73	1.26	84.92	-19.2485	0.0708	-0.1475
1035	SLU 2	-0.78	1.17	85.06	-19.2749	0.0694	-0.1589
1035	SLU 3	-0.74	1.31	86.92	-19.6986	0.0738	-0.1505
1035	SLU 4	-0.77	1.26	87.01	-19.7144	0.0729	-0.1573
1035	SLU 5	-0.78	1.19	86.2	-19.5312	0.0709	-0.1586
1035	SLU 6	-0.74	1.33	88.06	-19.9548	0.0754	-0.1502
1035	SLU 7	-0.77	1.28	88.14	-19.9707	0.0745	-0.157
1035	SLU 8	-0.73	1.3	87.19	-19.761	0.074	-0.1469
1035	SLU 9	-0.76	1.25	87.28	-19.7768	0.0731	-0.1538
1035	SLU 10	-0.89	1.37	96.2	-21.8011	0.0854	-0.1839
1035	SLU 11	-0.86	1.51	98.06	-22.2247	0.0898	-0.1754
1035	SLU 12	-0.89	1.46	98.15	-22.2406	0.089	-0.1823
1035	SLU 13	-0.9	1.39	97.34	-22.0573	0.087	-0.1836
1035	SLU 14	-0.86	1.53	99.2	-22.481	0.0914	-0.1751
1035	SLU 15	-0.89	1.48	99.28	-22.4968	0.0905	-0.182
1035	SLU 16	-0.85	1.5	98.33	-22.2871	0.09	-0.1719

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1035	SLU 17	-0.88	1.44	98.42	-22.303	0.0891	-0.1787
1035	SLU 18	-0.9	1.54	100.83	-22.8573	0.0938	-0.1832
1035	SLU 19	-0.93	1.49	100.92	-22.8731	0.0929	-0.19
1035	SLU 20	-0.9	1.56	101.97	-23.1135	0.0953	-0.1829
1035	SLU 21	-0.93	1.51	102.05	-23.1294	0.0944	-0.1897
1035	SLU 22	-0.83	1.59	95.97	-21.7423	0.0869	-0.168
1035	SLU 23	-0.88	1.5	96.11	-21.7687	0.0854	-0.1794
1035	SLU 24	-0.85	1.64	97.97	-22.1924	0.0898	-0.1709
1035	SLU 25	-0.87	1.59	98.06	-22.2082	0.089	-0.1778
1035	SLU 26	-0.88	1.52	97.25	-22.025	0.087	-0.1791
1035	SLU 27	-0.85	1.66	99.11	-22.4486	0.0914	-0.1706
1035	SLU 28	-0.88	1.61	99.19	-22.4645	0.0905	-0.1775
1035	SLU 29	-0.83	1.63	98.24	-22.2548	0.09	-0.1674
1035	SLU 30	-0.86	1.57	98.33	-22.2707	0.0891	-0.1742
1035	SLU 31	-1	1.69	107.25	-24.2949	0.1014	-0.2043
1035	SLU 32	-0.97	1.84	109.11	-24.7185	0.1059	-0.1959
1035	SLU 33	-0.99	1.78	109.2	-24.7344	0.105	-0.2027
1035	SLU 34	-1	1.71	108.39	-24.5511	0.103	-0.204
1035	SLU 35	-0.97	1.86	110.25	-24.9748	0.1075	-0.1956
1035	SLU 36	-0.99	1.81	110.33	-24.9907	0.1066	-0.2024
1035	SLU 37	-0.95	1.82	109.38	-24.781	0.1061	-0.1923
1035	SLU 38	-0.98	1.77	109.47	-24.7968	0.1052	-0.1992
1035	SLU 39	-1	1.87	111.88	-25.3511	0.1098	-0.2036
1035	SLU 40	-1.03	1.81	111.97	-25.367	0.1089	-0.2105
1035	SLU 41	-1	1.89	113.02	-25.6073	0.1114	-0.2033
1035	SLU 42	-1.03	1.83	113.1	-25.6232	0.1105	-0.2102
1035	SLU 43	-0.91	1.53	106.6	-24.168	0.0866	-0.1848
1035	SLU 44	-0.96	1.44	106.75	-24.1944	0.0851	-0.1962
1035	SLU 45	-0.93	1.58	108.61	-24.6181	0.0895	-0.1877
1035	SLU 46	-0.96	1.53	108.69	-24.634	0.0887	-0.1946
1035	SLU 47	-0.96	1.46	107.88	-24.4507	0.0867	-0.1959
1035	SLU 48	-0.93	1.6	109.75	-24.8743	0.0911	-0.1874
1035	SLU 49	-0.96	1.55	109.83	-24.8902	0.0902	-0.1943
1035	SLU 50	-0.91	1.57	108.88	-24.6805	0.0897	-0.1842
1035	SLU 51	-0.94	1.51	108.96	-24.6964	0.0888	-0.191
1035	SLU 52	-1.08	1.63	117.89	-26.7206	0.1012	-0.2211
1035	SLU 53	-1.05	1.78	119.75	-27.1443	0.1056	-0.2127
1035	SLU 54	-1.07	1.72	119.83	-27.1601	0.1047	-0.2195
1035	SLU 55	-1.08	1.65	119.02	-26.9768	0.1027	-0.2208
1035	SLU 56	-1.05	1.8	120.89	-27.4005	0.1072	-0.2124
1035	SLU 57	-1.08	1.74	120.97	-27.4164	0.1063	-0.2192
1035	SLU 58	-1.03	1.76	120.02	-27.2067	0.1058	-0.2091
1035	SLU 59	-1.06	1.71	120.1	-27.2225	0.1049	-0.216
1035	SLU 60	-1.08	1.81	122.52	-27.7768	0.1095	-0.2204
1035	SLU 61	-1.11	1.75	122.6	-27.7927	0.1086	-0.2273
1035	SLU 62	-1.08	1.83	123.66	-28.0331	0.1111	-0.2201
1035	SLU 63	-1.11	1.77	123.74	-28.0489	0.1102	-0.227
1035	SLU 64	-1.01	1.85	117.66	-26.6618	0.1026	-0.2052
1035	SLU 65	-1.06	1.76	117.8	-26.6882	0.1011	-0.2166
1035	SLU 66	-1.03	1.91	119.66	-27.1119	0.1056	-0.2082
1035	SLU 67	-1.06	1.85	119.74	-27.1278	0.1047	-0.215
1035	SLU 68	-1.06	1.78	118.93	-26.9445	0.1027	-0.2163
1035	SLU 69	-1.03	1.93	120.8	-27.3682	0.1072	-0.2079
1035	SLU 70	-1.06	1.87	120.88	-27.384	0.1063	-0.2147
1035	SLU 71	-1.01	1.89	119.93	-27.1743	0.1058	-0.2046
1035	SLU 72	-1.04	1.84	120.01	-27.1902	0.1049	-0.2115
1035	SLU 73	-1.18	1.96	128.94	-29.2144	0.1172	-0.2416
1035	SLU 74	-1.15	2.1	130.8	-29.6381	0.1216	-0.2331
1035	SLU 75	-1.18	2.05	130.88	-29.6539	0.1207	-0.24
1035	SLU 76	-1.18	1.98	130.07	-29.4707	0.1188	-0.2413
1035	SLU 77	-1.15	2.13	131.94	-29.8943	0.1232	-0.2328
1035	SLU 78	-1.18	2.07	132.02	-29.9102	0.1223	-0.2397
1035	SLU 79	-1.13	2.09	131.07	-29.7005	0.1218	-0.2296
1035	SLU 80	-1.16	2.04	131.15	-29.7163	0.1209	-0.2364
1035	SLU 81	-1.18	2.13	133.57	-30.2706	0.1256	-0.2409
1035	SLU 82	-1.21	2.08	133.65	-30.2865	0.1247	-0.2477
1035	SLU 83	-1.19	2.16	134.71	-30.5269	0.1271	-0.2406
1035	SLU 84	-1.21	2.1	134.79	-30.5427	0.1262	-0.2474
1035	SLE RA 1	-0.76	1.35	88.08	-19.961	0.0754	-0.1534
1035	SLE RA 2	-0.79	1.29	88.17	-19.9786	0.0744	-0.161
1035	SLE RA 3	-0.77	1.39	89.41	-20.2611	0.0774	-0.1553
1035	SLE RA 4	-0.79	1.35	89.47	-20.2716	0.0768	-0.1599
1035	SLE RA 5	-0.79	1.31	88.93	-20.1495	0.0755	-0.1608
1035	SLE RA 6	-0.77	1.4	90.17	-20.4319	0.0784	-0.1551
1035	SLE RA 7	-0.79	1.37	90.23	-20.4425	0.0778	-0.1597
1035	SLE RA 8	-0.76	1.38	89.59	-20.3027	0.0775	-0.153
1035	SLE RA 9	-0.78	1.34	89.65	-20.3132	0.0769	-0.1575
1035	SLE RA 10	-0.87	1.42	95.6	-21.6627	0.0851	-0.1776
1035	SLE RA 11	-0.85	1.52	96.84	-21.9452	0.0881	-0.172
1035	SLE RA 12	-0.87	1.49	96.9	-21.9557	0.0875	-0.1765
1035	SLE RA 13	-0.87	1.44	96.35	-21.8336	0.0862	-0.1774
1035	SLE RA 14	-0.85	1.54	97.6	-22.116	0.0891	-0.1718
1035	SLE RA 15	-0.87	1.5	97.65	-22.1266	0.0885	-0.1763
1035	SLE RA 16	-0.84	1.51	97.02	-21.9868	0.0882	-0.1696
1035	SLE RA 17	-0.86	1.48	97.07	-21.9973	0.0876	-0.1742
1035	SLE RA 18	-0.87	1.54	98.68	-22.3669	0.0907	-0.1771
1035	SLE RA 19	-0.89	1.51	98.74	-22.3774	0.0901	-0.1817
1035	SLE RA 20	-0.87	1.55	99.44	-22.5377	0.0917	-0.1769
1035	SLE RA 21	-0.89	1.52	99.5	-22.5483	0.0912	-0.1815
1035	SLE FR 1	-0.76	1.35	88.08	-19.961	0.0754	-0.1534

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1035	SLE FR 2	-0.76	1.34	88.09	-19.9645	0.0752	-0.1549
1035	SLE FR 3	-0.76	1.36	88.38	-20.0293	0.0758	-0.1533
1035	SLE FR 4	-0.8	1.4	91.28	-20.6863	0.0798	-0.162
1035	SLE FR 5	-0.79	1.41	91.56	-20.7511	0.0804	-0.1604
1035	SLE FR 6	-0.81	1.45	93.38	-21.1639	0.0831	-0.1652
1035	SLE QP 1	-0.76	1.35	88.08	-19.961	0.0754	-0.1534
1035	SLE QP 2	-0.79	1.41	91.26	-20.6828	0.08	-0.1605
1035	SLD 1	7.99	3.22	98.03	-22.1834	0.1463	1.9651
1035	SLD 2	7.11	2.92	97.86	-22.1432	0.1469	1.7569
1035	SLD 3	7.84	0.98	100.28	-22.6229	0.1314	1.9243
1035	SLD 4	6.95	0.68	100.11	-22.5827	0.132	1.716
1035	SLD 5	2.24	5.39	89.92	-20.4737	0.1224	0.5771
1035	SLD 6	1.65	5.2	89.81	-20.4471	0.1227	0.4389
1035	SLD 7	1.72	-2.05	97.4	-21.9386	0.0727	0.4408
1035	SLD 8	1.13	-2.25	97.29	-21.9119	0.0731	0.3026
1035	SLD 9	-2.72	5.07	85.23	-19.4536	0.0869	-0.6236
1035	SLD 10	-3.3	4.87	85.12	-19.4269	0.0873	-0.7617
1035	SLD 11	-3.24	-2.38	92.71	-20.9185	0.0373	-0.7599
1035	SLD 12	-3.82	-2.58	92.6	-20.8918	0.0377	-0.8981
1035	SLD 13	-8.53	2.13	82.41	-18.7829	0.028	-2.037
1035	SLD 14	-9.42	1.83	82.24	-18.7427	0.0286	-2.2452
1035	SLD 15	-8.69	-0.1	84.65	-19.2223	0.0132	-2.0779
1035	SLD 16	-9.57	-0.4	84.48	-19.1821	0.0137	-2.2861
1035	SLV 1	19.74	5.56	107.2	-24.213	0.2346	4.8077
1035	SLV 2	17.68	4.86	106.8	-24.1194	0.236	4.3228
1035	SLV 3	19.38	0.5	112.27	-25.2073	0.2008	4.7138
1035	SLV 4	17.32	-0.2	111.88	-25.1137	0.2022	4.2289
1035	SLV 5	6.27	10.45	88.4	-20.2501	0.1774	1.5576
1035	SLV 6	4.93	9.99	88.15	-20.1891	0.1783	1.2417
1035	SLV 7	5.08	-6.41	105.34	-23.5647	0.0648	1.2446
1035	SLV 8	3.74	-6.86	105.08	-23.5037	0.0657	0.9287
1035	SLV 9	-5.32	9.68	77.44	-17.8618	0.0943	-1.2497
1035	SLV 10	-6.66	9.23	77.18	-17.8008	0.0952	-1.5656
1035	SLV 11	-6.51	-7.17	94.37	-21.1764	-0.0183	-1.5627
1035	SLV 12	-7.86	-7.63	94.11	-21.1154	-0.0174	-1.8786
1035	SLV 13	-18.9	3.02	70.63	-16.2518	-0.0422	-4.5499
1035	SLV 14	-20.96	2.32	70.24	-16.1582	-0.0408	-5.0347
1035	SLV 15	-19.26	-2.04	75.71	-17.2462	-0.076	-4.6438
1035	SLV 16	-21.32	-2.74	75.32	-17.1526	-0.0746	-5.1286
1035	CRTFP Ux+	0	0	0	0	0	0
1035	CRTFP Ux-	0	0	0	0	0	0
1035	CRTFP Uy+	0	0	0	0	0	0
1035	CRTFP Uy-	0	0	0	0	0	0
1037	SLU 1	-0.24	0.58	33.54	-9.8276	-0.5908	-0.0716
1037	SLU 2	-0.26	0.55	33.6	-9.8405	-0.5919	-0.0791
1037	SLU 3	-0.24	0.61	34.33	-10.0522	-0.6046	-0.0729
1037	SLU 4	-0.26	0.59	34.37	-10.06	-0.6053	-0.0773
1037	SLU 5	-0.26	0.56	34.05	-9.9685	-0.5998	-0.0786
1037	SLU 6	-0.24	0.62	34.78	-10.1802	-0.6124	-0.0724
1037	SLU 7	-0.25	0.6	34.81	-10.1879	-0.6131	-0.0769
1037	SLU 8	-0.24	0.6	34.44	-10.0835	-0.6065	-0.0707
1037	SLU 9	-0.25	0.58	34.47	-10.0913	-0.6072	-0.0752
1037	SLU 10	-0.3	0.64	37.99	-11.1142	-0.6685	-0.0923
1037	SLU 11	-0.29	0.7	38.72	-11.3259	-0.6811	-0.086
1037	SLU 12	-0.3	0.68	38.75	-11.3336	-0.6818	-0.0905
1037	SLU 13	-0.3	0.65	38.43	-11.2421	-0.6763	-0.0918
1037	SLU 14	-0.29	0.71	39.16	-11.4538	-0.689	-0.0856
1037	SLU 15	-0.3	0.69	39.2	-11.4616	-0.6897	-0.0901
1037	SLU 16	-0.28	0.69	38.82	-11.3572	-0.6831	-0.0839
1037	SLU 17	-0.29	0.67	38.86	-11.3649	-0.6837	-0.0884
1037	SLU 18	-0.3	0.71	39.81	-11.6471	-0.7002	-0.0905
1037	SLU 19	-0.31	0.69	39.84	-11.6549	-0.7009	-0.0949
1037	SLU 20	-0.3	0.72	40.25	-11.7751	-0.708	-0.09
1037	SLU 21	-0.31	0.7	40.29	-11.7828	-0.7087	-0.0945
1037	SLU 22	-0.27	0.73	37.89	-11.0804	-0.6667	-0.0813
1037	SLU 23	-0.29	0.69	37.94	-11.0933	-0.6678	-0.0887
1037	SLU 24	-0.28	0.75	38.67	-11.305	-0.6805	-0.0825
1037	SLU 25	-0.29	0.73	38.71	-11.3127	-0.6812	-0.087
1037	SLU 26	-0.29	0.7	38.39	-11.2212	-0.6757	-0.0882
1037	SLU 27	-0.28	0.76	39.12	-11.4329	-0.6883	-0.082
1037	SLU 28	-0.29	0.74	39.16	-11.4407	-0.689	-0.0865
1037	SLU 29	-0.27	0.75	38.78	-11.3363	-0.6824	-0.0803
1037	SLU 30	-0.28	0.72	38.82	-11.344	-0.6831	-0.0848
1037	SLU 31	-0.34	0.78	42.33	-12.3669	-0.7444	-0.1019
1037	SLU 32	-0.32	0.84	43.06	-12.5786	-0.7571	-0.0957
1037	SLU 33	-0.33	0.82	43.09	-12.5864	-0.7577	-0.1002
1037	SLU 34	-0.34	0.79	42.78	-12.4949	-0.7523	-0.1014
1037	SLU 35	-0.32	0.85	43.51	-12.7066	-0.7649	-0.0952
1037	SLU 36	-0.33	0.83	43.54	-12.7143	-0.7656	-0.0997
1037	SLU 37	-0.32	0.84	43.17	-12.6099	-0.759	-0.0935
1037	SLU 38	-0.33	0.81	43.2	-12.6177	-0.7596	-0.098
1037	SLU 39	-0.34	0.86	44.15	-12.8999	-0.7761	-0.1001
1037	SLU 40	-0.35	0.83	44.18	-12.9076	-0.7768	-0.1046
1037	SLU 41	-0.33	0.87	44.6	-13.0278	-0.7839	-0.0996
1037	SLU 42	-0.35	0.84	44.63	-13.0356	-0.7846	-0.1041
1037	SLU 43	-0.3	0.71	42.12	-12.3464	-0.742	-0.0898
1037	SLU 44	-0.32	0.67	42.18	-12.3593	-0.7432	-0.0972
1037	SLU 45	-0.3	0.73	42.91	-12.571	-0.7558	-0.091
1037	SLU 46	-0.31	0.71	42.94	-12.5788	-0.7565	-0.0955
1037	SLU 47	-0.32	0.68	42.62	-12.4873	-0.751	-0.0968

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1037	SLU 48	-0.3	0.74	43.35	-12.699	-0.7636	-0.0906
1037	SLU 49	-0.31	0.72	43.39	-12.7067	-0.7643	-0.095
1037	SLU 50	-0.3	0.73	43.01	-12.6023	-0.7577	-0.0889
1037	SLU 51	-0.31	0.71	43.05	-12.61	-0.7584	-0.0933
1037	SLU 52	-0.36	0.76	46.56	-13.633	-0.8197	-0.1104
1037	SLU 53	-0.35	0.83	47.29	-13.8447	-0.8324	-0.1042
1037	SLU 54	-0.36	0.8	47.32	-13.8524	-0.833	-0.1087
1037	SLU 55	-0.36	0.77	47.01	-13.7609	-0.8276	-0.11
1037	SLU 56	-0.35	0.83	47.74	-13.9726	-0.8402	-0.1038
1037	SLU 57	-0.36	0.81	47.77	-13.9803	-0.8409	-0.1082
1037	SLU 58	-0.34	0.82	47.4	-13.8759	-0.8343	-0.1021
1037	SLU 59	-0.35	0.8	47.43	-13.8837	-0.8349	-0.1065
1037	SLU 60	-0.36	0.84	48.38	-14.1659	-0.8514	-0.1086
1037	SLU 61	-0.37	0.82	48.42	-14.1736	-0.8521	-0.1131
1037	SLU 62	-0.36	0.85	48.83	-14.2938	-0.8592	-0.1082
1037	SLU 63	-0.37	0.83	48.86	-14.3016	-0.8599	-0.1127
1037	SLU 64	-0.33	0.85	46.46	-13.5991	-0.8179	-0.0994
1037	SLU 65	-0.35	0.82	46.52	-13.6121	-0.8191	-0.1069
1037	SLU 66	-0.34	0.88	47.25	-13.8238	-0.8317	-0.1007
1037	SLU 67	-0.35	0.86	47.28	-13.8315	-0.8324	-0.1051
1037	SLU 68	-0.35	0.83	46.97	-13.74	-0.8269	-0.1064
1037	SLU 69	-0.34	0.89	47.7	-13.9517	-0.8395	-0.1002
1037	SLU 70	-0.35	0.87	47.73	-13.9595	-0.8402	-0.1047
1037	SLU 71	-0.33	0.87	47.36	-13.855	-0.8336	-0.0985
1037	SLU 72	-0.34	0.85	47.39	-13.8628	-0.8343	-0.103
1037	SLU 73	-0.4	0.91	50.9	-14.8857	-0.8956	-0.1201
1037	SLU 74	-0.38	0.97	51.63	-15.0974	-0.9083	-0.1139
1037	SLU 75	-0.39	0.95	51.67	-15.1052	-0.909	-0.1183
1037	SLU 76	-0.4	0.92	51.35	-15.0137	-0.9035	-0.1196
1037	SLU 77	-0.38	0.98	52.08	-15.2253	-0.9161	-0.1134
1037	SLU 78	-0.39	0.96	52.11	-15.2331	-0.9168	-0.1179
1037	SLU 79	-0.37	0.96	51.74	-15.1287	-0.9102	-0.1117
1037	SLU 80	-0.39	0.94	51.77	-15.1364	-0.9109	-0.1162
1037	SLU 81	-0.39	0.98	52.72	-15.4186	-0.9273	-0.1183
1037	SLU 82	-0.41	0.96	52.76	-15.4264	-0.928	-0.1228
1037	SLU 83	-0.39	0.99	53.17	-15.5466	-0.9352	-0.1178
1037	SLU 84	-0.41	0.97	53.21	-15.5543	-0.9358	-0.1223
1037	SLE RA 1	-0.25	0.62	34.79	-10.1856	-0.6125	-0.0744
1037	SLE RA 2	-0.26	0.6	34.82	-10.1942	-0.6132	-0.0793
1037	SLE RA 3	-0.25	0.64	35.31	-10.3353	-0.6217	-0.0752
1037	SLE RA 4	-0.26	0.63	35.33	-10.3405	-0.6221	-0.0782
1037	SLE RA 5	-0.26	0.61	35.12	-10.2795	-0.6185	-0.079
1037	SLE RA 6	-0.25	0.65	35.61	-10.4206	-0.6269	-0.0749
1037	SLE RA 7	-0.26	0.63	35.63	-10.4258	-0.6274	-0.0779
1037	SLE RA 8	-0.25	0.64	35.38	-10.3561	-0.6229	-0.0738
1037	SLE RA 9	-0.26	0.62	35.4	-10.3613	-0.6234	-0.0767
1037	SLE RA 10	-0.29	0.66	37.75	-11.0433	-0.6643	-0.0881
1037	SLE RA 11	-0.28	0.7	38.23	-11.1844	-0.6727	-0.084
1037	SLE RA 12	-0.29	0.69	38.26	-11.1896	-0.6732	-0.087
1037	SLE RA 13	-0.29	0.67	38.04	-11.1286	-0.6695	-0.0878
1037	SLE RA 14	-0.28	0.71	38.53	-11.2697	-0.6779	-0.0837
1037	SLE RA 15	-0.29	0.69	38.55	-11.2749	-0.6784	-0.0867
1037	SLE RA 16	-0.28	0.7	38.3	-11.2052	-0.674	-0.0825
1037	SLE RA 17	-0.28	0.68	38.33	-11.2104	-0.6744	-0.0855
1037	SLE RA 18	-0.29	0.71	38.96	-11.3985	-0.6854	-0.0869
1037	SLE RA 19	-0.3	0.7	38.98	-11.4037	-0.6859	-0.0899
1037	SLE RA 20	-0.29	0.72	39.26	-11.4838	-0.6906	-0.0866
1037	SLE RA 21	-0.3	0.7	39.28	-11.489	-0.6911	-0.0896
1037	SLE FR 1	-0.25	0.62	34.79	-10.1856	-0.6125	-0.0744
1037	SLE FR 2	-0.25	0.62	34.79	-10.1873	-0.6126	-0.0754
1037	SLE FR 3	-0.25	0.63	34.9	-10.2197	-0.6146	-0.0742
1037	SLE FR 4	-0.26	0.65	36.05	-10.5512	-0.6345	-0.0791
1037	SLE FR 5	-0.26	0.65	36.16	-10.5836	-0.6365	-0.078
1037	SLE FR 6	-0.27	0.67	36.87	-10.7921	-0.649	-0.0807
1037	SLE QP 1	-0.25	0.62	34.79	-10.1856	-0.6125	-0.0744
1037	SLE QP 2	-0.26	0.65	36.04	-10.5495	-0.6344	-0.0781
1037	SLD 1	3.37	1.35	38.54	-11.3968	-0.6727	1.2006
1037	SLD 2	3.01	1.25	38.47	-11.3745	-0.6714	1.0733
1037	SLD 3	3.3	0.43	39.41	-11.6186	-0.6884	1.1674
1037	SLD 4	2.94	0.33	39.34	-11.5963	-0.6872	1.0402
1037	SLD 5	0.99	2.27	35.47	-10.4713	-0.6222	0.3789
1037	SLD 6	0.75	2.21	35.43	-10.4565	-0.6213	0.2944
1037	SLD 7	0.78	-0.79	38.39	-11.2107	-0.6747	0.2684
1037	SLD 8	0.54	-0.86	38.34	-11.1959	-0.6739	0.184
1037	SLD 9	-1.06	2.16	33.73	-9.903	-0.5948	-0.3403
1037	SLD 10	-1.3	2.09	33.69	-9.8882	-0.594	-0.4247
1037	SLD 11	-1.27	-0.91	36.65	-10.6424	-0.6474	-0.4507
1037	SLD 12	-1.51	-0.97	36.6	-10.6276	-0.6466	-0.5351
1037	SLD 13	-3.47	0.97	32.73	-9.5026	-0.5815	-1.1965
1037	SLD 14	-3.83	0.87	32.66	-9.4803	-0.5803	-1.3237
1037	SLD 15	-3.53	0.05	33.61	-9.7245	-0.5973	-1.2296
1037	SLD 16	-3.89	-0.05	33.54	-9.7021	-0.5961	-1.3568
1037	SLV 1	8.22	2.26	41.92	-12.5422	-0.7246	2.91
1037	SLV 2	7.39	2.02	41.76	-12.4901	-0.7217	2.6137
1037	SLV 3	8.08	0.17	43.9	-13.0442	-0.7603	2.8345
1037	SLV 4	7.24	-0.06	43.74	-12.9921	-0.7574	2.5383
1037	SLV 5	2.65	4.33	34.83	-10.3951	-0.6078	0.9848
1037	SLV 6	2.11	4.18	34.72	-10.3612	-0.6059	0.7917
1037	SLV 7	2.16	-2.61	41.43	-12.0683	-0.7268	0.7334
1037	SLV 8	1.62	-2.76	41.32	-12.0344	-0.7249	0.5403

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1037	SLV 9	-2.14	4.06	30.75	-9.0645	-0.5438	-0.6966
1037	SLV 10	-2.69	3.91	30.65	-9.0306	-0.5419	-0.8896
1037	SLV 11	-2.63	-2.88	37.35	-10.7377	-0.6628	-0.948
1037	SLV 12	-3.18	-3.03	37.25	-10.7038	-0.661	-1.141
1037	SLV 13	-7.76	1.36	28.33	-8.1068	-0.5113	-2.6946
1037	SLV 14	-8.6	1.13	28.17	-8.0547	-0.5085	-2.9908
1037	SLV 15	-7.91	-0.72	30.32	-8.6088	-0.547	-2.77
1037	SLV 16	-8.75	-0.95	30.16	-8.5567	-0.5442	-3.0663
1037	CRTFP Ux+	0	0	0	0	0	0
1037	CRTFP Ux-	0	0	0	0	0	0
1037	CRTFP Uy+	0	0	0	0	0	0
1037	CRTFP Uy-	0	0	0	0	0	0
1038	SLU 1	-0.22	0.67	35.48	-9.4737	0.0543	-0.076
1038	SLU 2	-0.24	0.63	35.54	-9.4875	0.0542	-0.0835
1038	SLU 3	-0.22	0.7	36.31	-9.6857	0.0557	-0.0774
1038	SLU 4	-0.24	0.68	36.35	-9.6939	0.0557	-0.082
1038	SLU 5	-0.24	0.64	36.02	-9.6082	0.055	-0.083
1038	SLU 6	-0.22	0.71	36.78	-9.8064	0.0565	-0.0769
1038	SLU 7	-0.23	0.69	36.82	-9.8146	0.0564	-0.0814
1038	SLU 8	-0.22	0.69	36.42	-9.7151	0.0559	-0.0748
1038	SLU 9	-0.23	0.67	36.46	-9.7234	0.0558	-0.0793
1038	SLU 10	-0.28	0.74	40.15	-10.6954	0.0624	-0.0987
1038	SLU 11	-0.27	0.8	40.92	-10.8936	0.0639	-0.0926
1038	SLU 12	-0.28	0.78	40.96	-10.9018	0.0638	-0.0972
1038	SLU 13	-0.28	0.75	40.62	-10.8161	0.0631	-0.0981
1038	SLU 14	-0.27	0.81	41.39	-11.0143	0.0646	-0.092
1038	SLU 15	-0.28	0.79	41.43	-11.0226	0.0646	-0.0966
1038	SLU 16	-0.26	0.8	41.03	-10.9231	0.064	-0.09
1038	SLU 17	-0.27	0.77	41.07	-10.9313	0.0639	-0.0945
1038	SLU 18	-0.28	0.82	42.06	-11.1994	0.0659	-0.0976
1038	SLU 19	-0.29	0.8	42.1	-11.2076	0.0659	-0.1022
1038	SLU 20	-0.28	0.83	42.53	-11.3201	0.0667	-0.097
1038	SLU 21	-0.29	0.81	42.57	-11.3283	0.0666	-0.1016
1038	SLU 22	-0.25	0.83	40.05	-10.6604	0.0623	-0.0881
1038	SLU 23	-0.28	0.79	40.11	-10.6741	0.0622	-0.0957
1038	SLU 24	-0.26	0.86	40.88	-10.8723	0.0637	-0.0896
1038	SLU 25	-0.27	0.84	40.92	-10.8805	0.0636	-0.0942
1038	SLU 26	-0.27	0.8	40.59	-10.7948	0.0629	-0.0951
1038	SLU 27	-0.26	0.87	41.35	-10.993	0.0644	-0.0891
1038	SLU 28	-0.27	0.85	41.39	-11.0012	0.0644	-0.0936
1038	SLU 29	-0.25	0.85	40.99	-10.9018	0.0638	-0.087
1038	SLU 30	-0.26	0.83	41.03	-10.91	0.0637	-0.0915
1038	SLU 31	-0.32	0.9	44.72	-11.8821	0.0703	-0.1109
1038	SLU 32	-0.3	0.96	45.49	-12.0802	0.0718	-0.1048
1038	SLU 33	-0.31	0.94	45.53	-12.0885	0.0717	-0.1094
1038	SLU 34	-0.32	0.91	45.19	-12.0028	0.0711	-0.1103
1038	SLU 35	-0.3	0.97	45.96	-12.2009	0.0726	-0.1042
1038	SLU 36	-0.31	0.95	46	-12.2092	0.0725	-0.1088
1038	SLU 37	-0.29	0.96	45.6	-12.1097	0.0719	-0.1022
1038	SLU 38	-0.31	0.93	45.64	-12.118	0.0719	-0.1067
1038	SLU 39	-0.32	0.98	46.63	-12.386	0.0739	-0.1098
1038	SLU 40	-0.33	0.96	46.67	-12.3943	0.0738	-0.1144
1038	SLU 41	-0.31	0.99	47.1	-12.5067	0.0746	-0.1092
1038	SLU 42	-0.33	0.97	47.14	-12.515	0.0746	-0.1138
1038	SLU 43	-0.27	0.82	44.56	-11.909	0.0679	-0.0946
1038	SLU 44	-0.29	0.78	44.62	-11.9228	0.0678	-0.1021
1038	SLU 45	-0.28	0.85	45.38	-12.1209	0.0693	-0.0961
1038	SLU 46	-0.29	0.82	45.42	-12.1292	0.0693	-0.1006
1038	SLU 47	-0.29	0.79	45.09	-12.0435	0.0686	-0.1016
1038	SLU 48	-0.28	0.86	45.86	-12.2416	0.0701	-0.0955
1038	SLU 49	-0.29	0.83	45.9	-12.2499	0.07	-0.1
1038	SLU 50	-0.27	0.84	45.5	-12.1504	0.0694	-0.0934
1038	SLU 51	-0.28	0.82	45.54	-12.1587	0.0694	-0.098
1038	SLU 52	-0.34	0.88	49.23	-13.1307	0.0759	-0.1173
1038	SLU 53	-0.32	0.95	49.99	-13.3289	0.0774	-0.1112
1038	SLU 54	-0.33	0.93	50.03	-13.3371	0.0774	-0.1158
1038	SLU 55	-0.34	0.89	49.7	-13.2514	0.0767	-0.1167
1038	SLU 56	-0.32	0.96	50.47	-13.4496	0.0782	-0.1106
1038	SLU 57	-0.33	0.94	50.5	-13.4578	0.0781	-0.1152
1038	SLU 58	-0.31	0.94	50.11	-13.3584	0.0776	-0.1086
1038	SLU 59	-0.33	0.92	50.15	-13.3666	0.0775	-0.1131
1038	SLU 60	-0.33	0.96	51.14	-13.6347	0.0795	-0.1162
1038	SLU 61	-0.35	0.94	51.18	-13.6429	0.0795	-0.1208
1038	SLU 62	-0.33	0.98	51.61	-13.7554	0.0803	-0.1156
1038	SLU 63	-0.35	0.95	51.65	-13.7636	0.0802	-0.1202
1038	SLU 64	-0.31	0.98	49.12	-13.0956	0.0758	-0.1068
1038	SLU 65	-0.33	0.94	49.19	-13.1094	0.0757	-0.1143
1038	SLU 66	-0.31	1.01	49.95	-13.3076	0.0772	-0.1082
1038	SLU 67	-0.32	0.98	49.99	-13.3158	0.0772	-0.1128
1038	SLU 68	-0.33	0.95	49.66	-13.2301	0.0765	-0.1138
1038	SLU 69	-0.31	1.02	50.43	-13.4283	0.078	-0.1077
1038	SLU 70	-0.32	0.99	50.46	-13.4365	0.078	-0.1122
1038	SLU 71	-0.3	1	50.07	-13.3371	0.0774	-0.1056
1038	SLU 72	-0.32	0.98	50.11	-13.3453	0.0773	-0.1101
1038	SLU 73	-0.37	1.04	53.8	-14.3173	0.0839	-0.1295
1038	SLU 74	-0.36	1.11	54.56	-14.5155	0.0854	-0.1234
1038	SLU 75	-0.37	1.09	54.6	-14.5238	0.0853	-0.128
1038	SLU 76	-0.37	1.05	54.27	-14.438	0.0846	-0.1289
1038	SLU 77	-0.35	1.12	55.03	-14.6362	0.0861	-0.1228
1038	SLU 78	-0.37	1.1	55.07	-14.6445	0.0861	-0.1274

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1038	SLU 79	-0.35	1.1	54.68	-14.545	0.0855	-0.1208
1038	SLU 80	-0.36	1.08	54.72	-14.5532	0.0854	-0.1253
1038	SLU 81	-0.37	1.13	55.71	-14.8213	0.0875	-0.1284
1038	SLU 82	-0.38	1.1	55.75	-14.8295	0.0874	-0.133
1038	SLU 83	-0.37	1.14	56.18	-14.942	0.0882	-0.1278
1038	SLU 84	-0.38	1.11	56.22	-14.9502	0.0882	-0.1324
1038	SLE RA 1	-0.23	0.72	36.78	-9.8128	0.0566	-0.0794
1038	SLE RA 2	-0.24	0.69	36.83	-9.8219	0.0565	-0.0845
1038	SLE RA 3	-0.23	0.74	37.34	-9.9541	0.0575	-0.0804
1038	SLE RA 4	-0.24	0.72	37.36	-9.9596	0.0575	-0.0835
1038	SLE RA 5	-0.24	0.7	37.14	-9.9024	0.057	-0.0841
1038	SLE RA 6	-0.23	0.74	37.65	-10.0345	0.058	-0.08
1038	SLE RA 7	-0.24	0.73	37.68	-10.04	0.058	-0.0831
1038	SLE RA 8	-0.23	0.73	37.41	-9.9737	0.0576	-0.0787
1038	SLE RA 9	-0.24	0.72	37.44	-9.9792	0.0576	-0.0817
1038	SLE RA 10	-0.27	0.76	39.9	-10.6272	0.0619	-0.0946
1038	SLE RA 11	-0.26	0.8	40.41	-10.7594	0.0629	-0.0905
1038	SLE RA 12	-0.27	0.79	40.44	-10.7649	0.0629	-0.0936
1038	SLE RA 13	-0.27	0.77	40.21	-10.7077	0.0625	-0.0942
1038	SLE RA 14	-0.26	0.81	40.72	-10.8398	0.0635	-0.0902
1038	SLE RA 15	-0.27	0.8	40.75	-10.8453	0.0634	-0.0932
1038	SLE RA 16	-0.26	0.8	40.49	-10.779	0.063	-0.0888
1038	SLE RA 17	-0.26	0.78	40.51	-10.7845	0.063	-0.0918
1038	SLE RA 18	-0.27	0.82	41.17	-10.9632	0.0643	-0.0939
1038	SLE RA 19	-0.28	0.8	41.2	-10.9687	0.0643	-0.0969
1038	SLE RA 20	-0.27	0.82	41.49	-11.0437	0.0648	-0.0935
1038	SLE RA 21	-0.28	0.81	41.51	-11.0492	0.0648	-0.0965
1038	SLE FR 1	-0.23	0.72	36.78	-9.8128	0.0566	-0.0794
1038	SLE FR 2	-0.23	0.71	36.79	-9.8146	0.0566	-0.0804
1038	SLE FR 3	-0.23	0.72	36.91	-9.845	0.0568	-0.0793
1038	SLE FR 4	-0.24	0.74	38.11	-10.1597	0.0589	-0.0848
1038	SLE FR 5	-0.24	0.75	38.23	-10.1901	0.0591	-0.0836
1038	SLE FR 6	-0.25	0.77	38.98	-10.388	0.0605	-0.0867
1038	SLE QP 1	-0.23	0.72	36.78	-9.8128	0.0566	-0.0794
1038	SLE QP 2	-0.24	0.75	38.1	-10.1579	0.0589	-0.0838
1038	SLD 1	3.77	1.48	40.48	-11.0223	0.0733	1.3185
1038	SLD 2	3.37	1.39	40.41	-10.9997	0.0732	1.1802
1038	SLD 3	3.7	0.48	41.42	-11.2428	0.075	1.2943
1038	SLD 4	3.3	0.39	41.34	-11.2203	0.0749	1.1559
1038	SLD 5	1.14	2.49	37.42	-10.0868	0.0607	0.3988
1038	SLD 6	0.88	2.44	37.37	-10.0718	0.0607	0.307
1038	SLD 7	0.91	-0.83	40.52	-10.822	0.0663	0.3181
1038	SLD 8	0.64	-0.89	40.47	-10.807	0.0662	0.2262
1038	SLD 9	-1.13	2.38	35.73	-9.5088	0.0516	-0.3938
1038	SLD 10	-1.39	2.33	35.68	-9.4938	0.0516	-0.4856
1038	SLD 11	-1.36	-0.94	38.83	-10.244	0.0572	-0.4745
1038	SLD 12	-1.62	-1	38.79	-10.229	0.0571	-0.5664
1038	SLD 13	-3.78	1.1	34.86	-9.0955	0.043	-1.3235
1038	SLD 14	-4.18	1.02	34.79	-9.073	0.0429	-1.4619
1038	SLD 15	-3.85	0.11	35.79	-9.3161	0.0446	-1.3477
1038	SLD 16	-4.25	0.02	35.72	-9.2935	0.0445	-1.4861
1038	SLV 1	9.13	2.41	43.71	-12.1902	0.0927	3.194
1038	SLV 2	8.21	2.21	43.54	-12.1378	0.0924	2.8719
1038	SLV 3	8.97	0.16	45.82	-12.6896	0.0965	3.1381
1038	SLV 4	8.05	-0.05	45.65	-12.6372	0.0962	2.8159
1038	SLV 5	2.98	4.71	36.62	-10.0194	0.0634	1.041
1038	SLV 6	2.38	4.58	36.51	-9.9852	0.0632	0.8311
1038	SLV 7	2.44	-2.82	43.65	-11.6841	0.0759	0.8546
1038	SLV 8	1.84	-2.95	43.53	-11.6499	0.0758	0.6447
1038	SLV 9	-2.32	4.45	32.67	-8.6659	0.0421	-0.8122
1038	SLV 10	-2.92	4.31	32.56	-8.6317	0.0419	-1.0221
1038	SLV 11	-2.86	-3.08	39.7	-10.3306	0.0546	-0.9986
1038	SLV 12	-3.46	-3.22	39.59	-10.2964	0.0545	-1.2086
1038	SLV 13	-8.53	1.54	30.55	-7.6787	0.0217	-2.9835
1038	SLV 14	-9.45	1.34	30.38	-7.6262	0.0214	-3.3056
1038	SLV 15	-8.69	-0.72	32.66	-8.1781	0.0254	-3.0394
1038	SLV 16	-9.62	-0.92	32.49	-8.1256	0.0251	-3.3616
1038	CRTFP Ux+	0	0	0	0	0	0
1038	CRTFP Ux-	0	0	0	0	0	0
1038	CRTFP Uy+	0	0	0	0	0	0
1038	CRTFP Uy-	0	0	0	0	0	0
1039	SLU 1	-0.18	0.69	33.86	-8.1552	0.0526	-0.0613
1039	SLU 2	-0.2	0.65	33.92	-8.1689	0.0525	-0.069
1039	SLU 3	-0.18	0.72	34.64	-8.3329	0.054	-0.0624
1039	SLU 4	-0.19	0.69	34.68	-8.3411	0.0539	-0.0671
1039	SLU 5	-0.2	0.66	34.37	-8.2702	0.0533	-0.0682
1039	SLU 6	-0.18	0.73	35.09	-8.4342	0.0547	-0.0616
1039	SLU 7	-0.19	0.7	35.13	-8.4424	0.0546	-0.0662
1039	SLU 8	-0.17	0.71	34.75	-8.3579	0.0541	-0.0596
1039	SLU 9	-0.19	0.69	34.79	-8.3661	0.054	-0.0643
1039	SLU 10	-0.24	0.76	38.29	-9.1857	0.0604	-0.083
1039	SLU 11	-0.22	0.82	39.01	-9.3497	0.0619	-0.0764
1039	SLU 12	-0.23	0.8	39.05	-9.3579	0.0618	-0.081
1039	SLU 13	-0.24	0.77	38.74	-9.287	0.0612	-0.0822
1039	SLU 14	-0.22	0.83	39.46	-9.4511	0.0626	-0.0755
1039	SLU 15	-0.23	0.81	39.5	-9.4592	0.0625	-0.0802
1039	SLU 16	-0.21	0.82	39.12	-9.3748	0.062	-0.0736
1039	SLU 17	-0.23	0.79	39.16	-9.3829	0.0619	-0.0782
1039	SLU 18	-0.23	0.84	40.09	-9.6079	0.0639	-0.0812
1039	SLU 19	-0.25	0.82	40.13	-9.616	0.0639	-0.0859

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1039	SLU 20	-0.23	0.85	40.54	-9.7092	0.0646	-0.0804
1039	SLU 21	-0.24	0.83	40.58	-9.7174	0.0646	-0.085
1039	SLU 22	-0.21	0.85	38.19	-9.1532	0.0603	-0.0721
1039	SLU 23	-0.23	0.81	38.26	-9.1668	0.0602	-0.0799
1039	SLU 24	-0.21	0.88	38.98	-9.3308	0.0617	-0.0733
1039	SLU 25	-0.22	0.85	39.02	-9.339	0.0616	-0.0779
1039	SLU 26	-0.23	0.82	38.71	-9.2681	0.0609	-0.079
1039	SLU 27	-0.21	0.89	39.42	-9.4322	0.0624	-0.0724
1039	SLU 28	-0.22	0.87	39.47	-9.4403	0.0623	-0.0771
1039	SLU 29	-0.2	0.87	39.09	-9.3559	0.0618	-0.0705
1039	SLU 30	-0.22	0.85	39.13	-9.364	0.0617	-0.0751
1039	SLU 31	-0.27	0.92	42.62	-10.1836	0.0681	-0.0938
1039	SLU 32	-0.25	0.98	43.34	-10.3476	0.0695	-0.0872
1039	SLU 33	-0.26	0.96	43.38	-10.3558	0.0695	-0.0919
1039	SLU 34	-0.27	0.93	43.07	-10.285	0.0688	-0.093
1039	SLU 35	-0.25	0.99	43.79	-10.449	0.0703	-0.0864
1039	SLU 36	-0.26	0.97	43.83	-10.4572	0.0702	-0.091
1039	SLU 37	-0.24	0.98	43.45	-10.3727	0.0696	-0.0844
1039	SLU 38	-0.26	0.95	43.49	-10.3809	0.0696	-0.0891
1039	SLU 39	-0.26	1	44.43	-10.6058	0.0716	-0.0921
1039	SLU 40	-0.28	0.98	44.47	-10.614	0.0715	-0.0967
1039	SLU 41	-0.26	1.01	44.87	-10.7071	0.0723	-0.0912
1039	SLU 42	-0.28	0.99	44.92	-10.7153	0.0723	-0.0959
1039	SLU 43	-0.22	0.84	42.53	-10.2597	0.0658	-0.076
1039	SLU 44	-0.24	0.8	42.6	-10.2733	0.0657	-0.0837
1039	SLU 45	-0.22	0.87	43.31	-10.4373	0.0671	-0.0771
1039	SLU 46	-0.24	0.85	43.36	-10.4455	0.0671	-0.0817
1039	SLU 47	-0.24	0.81	43.04	-10.3746	0.0664	-0.0829
1039	SLU 48	-0.22	0.88	43.76	-10.5387	0.0679	-0.0763
1039	SLU 49	-0.23	0.86	43.8	-10.5468	0.0678	-0.0809
1039	SLU 50	-0.21	0.86	43.43	-10.4624	0.0672	-0.0743
1039	SLU 51	-0.23	0.84	43.47	-10.4705	0.0672	-0.0789
1039	SLU 52	-0.28	0.91	46.96	-11.2901	0.0736	-0.0977
1039	SLU 53	-0.26	0.97	47.68	-11.4541	0.075	-0.0911
1039	SLU 54	-0.28	0.95	47.72	-11.4623	0.075	-0.0957
1039	SLU 55	-0.28	0.92	47.41	-11.3915	0.0743	-0.0968
1039	SLU 56	-0.26	0.98	48.13	-11.5555	0.0758	-0.0902
1039	SLU 57	-0.27	0.96	48.17	-11.5637	0.0757	-0.0949
1039	SLU 58	-0.25	0.97	47.79	-11.4792	0.0751	-0.0883
1039	SLU 59	-0.27	0.94	47.83	-11.4874	0.0751	-0.0929
1039	SLU 60	-0.28	0.99	48.76	-11.7123	0.0771	-0.0959
1039	SLU 61	-0.29	0.97	48.81	-11.7204	0.077	-0.1006
1039	SLU 62	-0.27	1	49.21	-11.8136	0.0778	-0.0951
1039	SLU 63	-0.29	0.98	49.25	-11.8218	0.0777	-0.0997
1039	SLU 64	-0.25	1	46.86	-11.2576	0.0735	-0.0868
1039	SLU 65	-0.27	0.96	46.93	-11.2712	0.0734	-0.0945
1039	SLU 66	-0.25	1.03	47.65	-11.4352	0.0748	-0.0879
1039	SLU 67	-0.27	1.01	47.69	-11.4434	0.0748	-0.0926
1039	SLU 68	-0.27	0.97	47.38	-11.3726	0.0741	-0.0937
1039	SLU 69	-0.25	1.04	48.1	-11.5366	0.0755	-0.0871
1039	SLU 70	-0.26	1.02	48.14	-11.5448	0.0755	-0.0917
1039	SLU 71	-0.25	1.02	47.76	-11.4603	0.0749	-0.0851
1039	SLU 72	-0.26	1	47.8	-11.4685	0.0749	-0.0898
1039	SLU 73	-0.31	1.07	51.29	-12.288	0.0813	-0.1085
1039	SLU 74	-0.29	1.13	52.01	-12.4521	0.0827	-0.1019
1039	SLU 75	-0.31	1.11	52.05	-12.4602	0.0826	-0.1065
1039	SLU 76	-0.31	1.08	51.74	-12.3894	0.082	-0.1077
1039	SLU 77	-0.29	1.14	52.46	-12.5534	0.0834	-0.1011
1039	SLU 78	-0.3	1.12	52.5	-12.5616	0.0834	-0.1057
1039	SLU 79	-0.29	1.13	52.12	-12.4771	0.0828	-0.0991
1039	SLU 80	-0.3	1.11	52.16	-12.4853	0.0827	-0.1037
1039	SLU 81	-0.31	1.15	53.1	-12.7102	0.0847	-0.1067
1039	SLU 82	-0.32	1.13	53.14	-12.7184	0.0847	-0.1114
1039	SLU 83	-0.3	1.16	53.55	-12.8116	0.0855	-0.1059
1039	SLU 84	-0.32	1.14	53.59	-12.8197	0.0854	-0.1105
1039	SLE RA 1	-0.19	0.73	35.09	-8.4404	0.0548	-0.0644
1039	SLE RA 2	-0.2	0.71	35.14	-8.4494	0.0548	-0.0695
1039	SLE RA 3	-0.19	0.75	35.62	-8.5588	0.0557	-0.0651
1039	SLE RA 4	-0.2	0.74	35.65	-8.5642	0.0557	-0.0682
1039	SLE RA 5	-0.2	0.72	35.44	-8.517	0.0552	-0.069
1039	SLE RA 6	-0.19	0.76	35.92	-8.6264	0.0562	-0.0646
1039	SLE RA 7	-0.19	0.75	35.95	-8.6318	0.0562	-0.0677
1039	SLE RA 8	-0.18	0.75	35.69	-8.5755	0.0558	-0.0633
1039	SLE RA 9	-0.19	0.73	35.72	-8.581	0.0558	-0.0664
1039	SLE RA 10	-0.23	0.78	38.05	-9.1273	0.06	-0.0789
1039	SLE RA 11	-0.21	0.82	38.53	-9.2367	0.061	-0.0744
1039	SLE RA 12	-0.22	0.81	38.56	-9.2421	0.0609	-0.0775
1039	SLE RA 13	-0.23	0.79	38.35	-9.1949	0.0605	-0.0783
1039	SLE RA 14	-0.21	0.83	38.83	-9.3042	0.0615	-0.0739
1039	SLE RA 15	-0.22	0.82	38.86	-9.3097	0.0614	-0.077
1039	SLE RA 16	-0.21	0.82	38.6	-9.2534	0.0611	-0.0726
1039	SLE RA 17	-0.22	0.8	38.63	-9.2588	0.061	-0.0757
1039	SLE RA 18	-0.22	0.83	39.25	-9.4088	0.0623	-0.0777
1039	SLE RA 19	-0.23	0.82	39.28	-9.4142	0.0623	-0.0808
1039	SLE RA 20	-0.22	0.84	39.55	-9.4763	0.0628	-0.0771
1039	SLE RA 21	-0.23	0.83	39.58	-9.4818	0.0628	-0.0802
1039	SLE FR 1	-0.19	0.73	35.09	-8.4404	0.0548	-0.0644
1039	SLE FR 2	-0.19	0.73	35.1	-8.4422	0.0548	-0.0654
1039	SLE FR 3	-0.18	0.74	35.21	-8.4674	0.055	-0.0642
1039	SLE FR 4	-0.2	0.76	36.35	-8.7327	0.0571	-0.0694

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1039	SLE FR 5	-0.2	0.77	36.46	-8.7579	0.0573	-0.0682
1039	SLE FR 6	-0.2	0.78	37.17	-8.9246	0.0586	-0.071
1039	SLE QP 1	-0.19	0.73	35.09	-8.4404	0.0548	-0.0644
1039	SLE QP 2	-0.2	0.76	36.34	-8.7309	0.0571	-0.0684
1039	SLD 1	3.83	1.45	38.25	-9.4711	0.0736	1.3392
1039	SLD 2	3.43	1.39	38.19	-9.451	0.0735	1.2003
1039	SLD 3	3.76	0.48	39.14	-9.6604	0.0755	1.3151
1039	SLD 4	3.36	0.41	39.07	-9.6403	0.0754	1.1762
1039	SLD 5	1.19	2.47	35.59	-8.6695	0.0592	0.4157
1039	SLD 6	0.92	2.42	35.54	-8.6562	0.0591	0.3235
1039	SLD 7	0.96	-0.79	38.53	-9.3005	0.0655	0.3353
1039	SLD 8	0.69	-0.84	38.49	-9.2871	0.0654	0.2432
1039	SLD 9	-1.09	2.37	34.19	-8.1746	0.0488	-0.38
1039	SLD 10	-1.35	2.32	34.15	-8.1613	0.0487	-0.4721
1039	SLD 11	-1.32	-0.89	37.14	-8.8056	0.0551	-0.4603
1039	SLD 12	-1.58	-0.94	37.1	-8.7923	0.055	-0.5524
1039	SLD 13	-3.75	1.12	33.61	-7.8215	0.0388	-1.313
1039	SLD 14	-4.15	1.05	33.54	-7.8014	0.0387	-1.4518
1039	SLD 15	-3.82	0.14	34.5	-8.0108	0.0407	-1.3371
1039	SLD 16	-4.22	0.08	34.43	-7.9907	0.0406	-1.4759
1039	SLV 1	9.21	2.34	40.85	-10.4711	0.0958	3.2216
1039	SLV 2	8.28	2.18	40.69	-10.4243	0.0955	2.8984
1039	SLV 3	9.05	0.13	42.86	-10.9003	0.1001	3.1659
1039	SLV 4	8.12	-0.03	42.7	-10.8535	0.0998	2.8427
1039	SLV 5	3.03	4.62	34.68	-8.6102	0.0623	1.0598
1039	SLV 6	2.43	4.52	34.58	-8.5797	0.0621	0.8492
1039	SLV 7	2.5	-2.76	41.36	-10.0409	0.0765	0.8743
1039	SLV 8	1.89	-2.86	41.26	-10.0104	0.0763	0.6637
1039	SLV 9	-2.29	4.39	31.42	-7.4514	0.0379	-0.8005
1039	SLV 10	-2.89	4.29	31.32	-7.4209	0.0376	-1.0111
1039	SLV 11	-2.82	-2.99	38.1	-8.8821	0.0521	-0.986
1039	SLV 12	-3.43	-3.09	38	-8.8515	0.0519	-1.1966
1039	SLV 13	-8.52	1.56	29.99	-6.6083	0.0144	-2.9795
1039	SLV 14	-9.44	1.4	29.82	-6.5614	0.0141	-3.3027
1039	SLV 15	-8.68	-0.65	31.99	-7.0375	0.0186	-3.0351
1039	SLV 16	-9.6	-0.81	31.83	-6.9907	0.0183	-3.3583
1039	CRTFP Ux+	0	0	0	0	0	0
1039	CRTFP Ux-	0	0	0	0	0	0
1039	CRTFP Uy+	0	0	0	0	0	0
1039	CRTFP Uy-	0	0	0	0	0	0
1040	SLU 1	-0.14	0.71	32.41	-7.0494	0.0428	-0.0467
1040	SLU 2	-0.16	0.67	32.48	-7.0631	0.0427	-0.0546
1040	SLU 3	-0.14	0.73	33.16	-7.1986	0.0439	-0.0475
1040	SLU 4	-0.15	0.71	33.21	-7.2068	0.0438	-0.0522
1040	SLU 5	-0.16	0.68	32.91	-7.1486	0.0433	-0.0535
1040	SLU 6	-0.13	0.75	33.59	-7.284	0.0445	-0.0464
1040	SLU 7	-0.15	0.72	33.64	-7.2923	0.0444	-0.0511
1040	SLU 8	-0.13	0.73	33.27	-7.2203	0.0439	-0.0445
1040	SLU 9	-0.14	0.71	33.31	-7.2285	0.0439	-0.0493
1040	SLU 10	-0.19	0.78	36.63	-7.9191	0.0492	-0.0673
1040	SLU 11	-0.17	0.84	37.31	-8.0545	0.0504	-0.0602
1040	SLU 12	-0.19	0.82	37.36	-8.0628	0.0503	-0.0649
1040	SLU 13	-0.19	0.79	37.06	-8.0046	0.0498	-0.0662
1040	SLU 14	-0.17	0.85	37.74	-8.14	0.0509	-0.0591
1040	SLU 15	-0.18	0.83	37.78	-8.1482	0.0509	-0.0638
1040	SLU 16	-0.17	0.84	37.42	-8.0763	0.0504	-0.0572
1040	SLU 17	-0.18	0.81	37.46	-8.0845	0.0504	-0.062
1040	SLU 18	-0.19	0.86	38.34	-8.2722	0.052	-0.0648
1040	SLU 19	-0.2	0.84	38.38	-8.2805	0.052	-0.0696
1040	SLU 20	-0.18	0.87	38.77	-8.3577	0.0526	-0.0638
1040	SLU 21	-0.2	0.85	38.81	-8.3659	0.0526	-0.0685
1040	SLU 22	-0.16	0.87	36.53	-7.8891	0.0491	-0.0561
1040	SLU 23	-0.19	0.83	36.61	-7.9028	0.049	-0.064
1040	SLU 24	-0.16	0.9	37.29	-8.0382	0.0501	-0.0569
1040	SLU 25	-0.18	0.87	37.33	-8.0465	0.0501	-0.0616
1040	SLU 26	-0.18	0.84	37.04	-7.9883	0.0495	-0.063
1040	SLU 27	-0.16	0.91	37.71	-8.1237	0.0507	-0.0558
1040	SLU 28	-0.18	0.89	37.76	-8.1319	0.0507	-0.0606
1040	SLU 29	-0.16	0.89	37.39	-8.06	0.0502	-0.054
1040	SLU 30	-0.17	0.87	37.44	-8.0682	0.0501	-0.0587
1040	SLU 31	-0.22	0.94	40.75	-8.7588	0.0554	-0.0767
1040	SLU 32	-0.2	1	41.43	-8.8942	0.0566	-0.0696
1040	SLU 33	-0.21	0.98	41.48	-8.9025	0.0566	-0.0743
1040	SLU 34	-0.22	0.95	41.18	-8.8442	0.056	-0.0757
1040	SLU 35	-0.2	1.01	41.86	-8.9797	0.0572	-0.0685
1040	SLU 36	-0.21	0.99	41.91	-8.9879	0.0571	-0.0733
1040	SLU 37	-0.19	1	41.54	-8.9159	0.0566	-0.0667
1040	SLU 38	-0.21	0.97	41.59	-8.9242	0.0566	-0.0714
1040	SLU 39	-0.21	1.02	42.46	-9.1119	0.0583	-0.0743
1040	SLU 40	-0.23	1	42.5	-9.1201	0.0582	-0.079
1040	SLU 41	-0.21	1.03	42.89	-9.1974	0.0589	-0.0732
1040	SLU 42	-0.23	1.01	42.93	-9.2056	0.0588	-0.0779
1040	SLU 43	-0.17	0.86	40.72	-8.8763	0.0535	-0.0575
1040	SLU 44	-0.19	0.83	40.79	-8.8901	0.0534	-0.0654
1040	SLU 45	-0.17	0.89	41.47	-9.0255	0.0546	-0.0582
1040	SLU 46	-0.18	0.87	41.52	-9.0337	0.0545	-0.063
1040	SLU 47	-0.19	0.84	41.22	-8.9755	0.054	-0.0643
1040	SLU 48	-0.17	0.9	41.9	-9.1109	0.0552	-0.0571
1040	SLU 49	-0.18	0.88	41.95	-9.1192	0.0551	-0.0619
1040	SLU 50	-0.16	0.89	41.58	-9.0472	0.0546	-0.0553

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1040	SLU 51	-0.17	0.86	41.63	-9.0555	0.0546	-0.0601
1040	SLU 52	-0.23	0.93	44.94	-9.7461	0.0599	-0.0781
1040	SLU 53	-0.21	1	45.62	-9.8815	0.0611	-0.0709
1040	SLU 54	-0.22	0.98	45.67	-9.8897	0.061	-0.0757
1040	SLU 55	-0.22	0.95	45.37	-9.8315	0.0605	-0.077
1040	SLU 56	-0.2	1.01	46.05	-9.9669	0.0616	-0.0699
1040	SLU 57	-0.22	0.99	46.1	-9.9752	0.0616	-0.0746
1040	SLU 58	-0.2	0.99	45.73	-9.9032	0.0611	-0.068
1040	SLU 59	-0.21	0.97	45.77	-9.9115	0.0611	-0.0728
1040	SLU 60	-0.22	1.02	46.65	-10.0992	0.0627	-0.0756
1040	SLU 61	-0.23	0.99	46.69	-10.1074	0.0627	-0.0804
1040	SLU 62	-0.22	1.03	47.08	-10.1846	0.0633	-0.0745
1040	SLU 63	-0.23	1.01	47.12	-10.1929	0.0633	-0.0793
1040	SLU 64	-0.19	1.02	44.85	-9.716	0.0598	-0.0669
1040	SLU 65	-0.22	0.99	44.92	-9.7298	0.0597	-0.0748
1040	SLU 66	-0.2	1.05	45.6	-9.8652	0.0608	-0.0677
1040	SLU 67	-0.21	1.03	45.64	-9.8734	0.0608	-0.0724
1040	SLU 68	-0.21	1	45.35	-9.8152	0.0602	-0.0737
1040	SLU 69	-0.19	1.06	46.03	-9.9506	0.0614	-0.0666
1040	SLU 70	-0.21	1.04	46.07	-9.9589	0.0614	-0.0713
1040	SLU 71	-0.19	1.05	45.7	-9.8869	0.0609	-0.0647
1040	SLU 72	-0.2	1.02	45.75	-9.8951	0.0608	-0.0695
1040	SLU 73	-0.25	1.1	49.07	-10.5857	0.0661	-0.0875
1040	SLU 74	-0.23	1.16	49.74	-10.7211	0.0673	-0.0804
1040	SLU 75	-0.25	1.14	49.79	-10.7294	0.0673	-0.0851
1040	SLU 76	-0.25	1.11	49.5	-10.6712	0.0667	-0.0864
1040	SLU 77	-0.23	1.17	50.17	-10.8066	0.0679	-0.0793
1040	SLU 78	-0.24	1.15	50.22	-10.8148	0.0678	-0.084
1040	SLU 79	-0.22	1.15	49.85	-10.7429	0.0673	-0.0774
1040	SLU 80	-0.24	1.13	49.9	-10.7511	0.0673	-0.0822
1040	SLU 81	-0.25	1.18	50.77	-10.9388	0.069	-0.085
1040	SLU 82	-0.26	1.16	50.82	-10.9471	0.0689	-0.0898
1040	SLU 83	-0.24	1.19	51.2	-11.0243	0.0696	-0.084
1040	SLU 84	-0.26	1.17	51.24	-11.0325	0.0695	-0.0887
1040	SLE RA 1	-0.14	0.75	33.59	-7.2893	0.0446	-0.0494
1040	SLE RA 2	-0.16	0.73	33.64	-7.2985	0.0445	-0.0547
1040	SLE RA 3	-0.14	0.77	34.09	-7.3887	0.0453	-0.0499
1040	SLE RA 4	-0.15	0.76	34.12	-7.3942	0.0453	-0.0531
1040	SLE RA 5	-0.16	0.74	33.92	-7.3554	0.0449	-0.0539
1040	SLE RA 6	-0.14	0.78	34.38	-7.4457	0.0457	-0.0492
1040	SLE RA 7	-0.15	0.76	34.41	-7.4512	0.0457	-0.0523
1040	SLE RA 8	-0.14	0.77	34.16	-7.4032	0.0453	-0.0479
1040	SLE RA 9	-0.15	0.75	34.19	-7.4087	0.0453	-0.0511
1040	SLE RA 10	-0.18	0.8	36.4	-7.8691	0.0489	-0.0631
1040	SLE RA 11	-0.17	0.84	36.86	-7.9594	0.0496	-0.0584
1040	SLE RA 12	-0.18	0.83	36.89	-7.9649	0.0496	-0.0615
1040	SLE RA 13	-0.18	0.81	36.69	-7.9261	0.0492	-0.0624
1040	SLE RA 14	-0.17	0.85	37.14	-8.0164	0.05	-0.0576
1040	SLE RA 15	-0.18	0.84	37.17	-8.0219	0.05	-0.0608
1040	SLE RA 16	-0.16	0.84	36.93	-7.9739	0.0497	-0.0564
1040	SLE RA 17	-0.17	0.82	36.96	-7.9794	0.0496	-0.0596
1040	SLE RA 18	-0.18	0.85	37.54	-8.1045	0.0508	-0.0615
1040	SLE RA 19	-0.19	0.84	37.57	-8.11	0.0507	-0.0647
1040	SLE RA 20	-0.18	0.86	37.83	-8.1615	0.0511	-0.0608
1040	SLE RA 21	-0.18	0.85	37.86	-8.167	0.0511	-0.0639
1040	SLE FR 1	-0.14	0.75	33.59	-7.2893	0.0446	-0.0494
1040	SLE FR 2	-0.15	0.75	33.6	-7.2911	0.0446	-0.0504
1040	SLE FR 3	-0.14	0.76	33.7	-7.3121	0.0447	-0.0491
1040	SLE FR 4	-0.16	0.78	34.79	-7.5357	0.0464	-0.0541
1040	SLE FR 5	-0.15	0.79	34.89	-7.5567	0.0466	-0.0527
1040	SLE FR 6	-0.16	0.8	35.57	-7.6969	0.0477	-0.0554
1040	SLE QP 1	-0.14	0.75	33.59	-7.2893	0.0446	-0.0494
1040	SLE QP 2	-0.15	0.78	34.78	-7.5339	0.0464	-0.053
1040	SLD 1	3.88	1.44	36.17	-8.1138	0.0641	1.359
1040	SLD 2	3.48	1.39	36.11	-8.0963	0.064	1.2197
1040	SLD 3	3.81	0.48	37.01	-8.2738	0.0657	1.335
1040	SLD 4	3.41	0.43	36.95	-8.2563	0.0656	1.1957
1040	SLD 5	1.24	2.44	33.93	-7.4684	0.0493	0.4323
1040	SLD 6	0.97	2.41	33.89	-7.4568	0.0492	0.3399
1040	SLD 7	1	-0.75	36.73	-8.0017	0.0548	0.3523
1040	SLD 8	0.74	-0.78	36.69	-7.99	0.0547	0.2599
1040	SLD 9	-1.05	2.35	32.86	-7.0777	0.0382	-0.3659
1040	SLD 10	-1.31	2.32	32.82	-7.0661	0.0381	-0.4583
1040	SLD 11	-1.28	-0.84	35.66	-7.611	0.0437	-0.4459
1040	SLD 12	-1.54	-0.87	35.62	-7.5993	0.0436	-0.5383
1040	SLD 13	-3.72	1.14	32.6	-6.8115	0.0273	-1.3018
1040	SLD 14	-4.12	1.09	32.54	-6.7939	0.0271	-1.441
1040	SLD 15	-3.79	0.18	33.44	-6.9714	0.0289	-1.3257
1040	SLD 16	-4.19	0.13	33.38	-6.9539	0.0288	-1.465
1040	SLV 1	9.28	2.28	38.08	-8.8974	0.0878	3.2474
1040	SLV 2	8.35	2.16	37.92	-8.8566	0.0875	2.9232
1040	SLV 3	9.12	0.11	39.98	-9.2609	0.0915	3.1919
1040	SLV 4	8.19	-0.01	39.83	-9.2202	0.0912	2.8678
1040	SLV 5	3.08	4.54	32.9	-7.3988	0.0532	1.0781
1040	SLV 6	2.48	4.46	32.81	-7.3722	0.0531	0.8669
1040	SLV 7	2.55	-2.68	39.25	-8.6105	0.0657	0.8934
1040	SLV 8	1.94	-2.76	39.15	-8.5839	0.0655	0.6822
1040	SLV 9	-2.25	4.33	30.4	-6.4838	0.0274	-0.7882
1040	SLV 10	-2.86	4.25	30.3	-6.4573	0.0272	-0.9994
1040	SLV 11	-2.78	-2.9	36.75	-7.6955	0.0398	-0.9729

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1040	SLV 12	-3.39	-2.97	36.65	-7.669	0.0396	-1.1841
1040	SLV 13	-8.5	1.57	29.72	-5.8476	0.0017	-2.9738
1040	SLV 14	-9.43	1.45	29.57	-5.8068	0.0014	-3.298
1040	SLV 15	-8.66	-0.59	31.63	-6.2111	0.0054	-3.0292
1040	SLV 16	-9.59	-0.71	31.48	-6.1703	0.0051	-3.3534
1040	CRTFP Ux+	0	0	0	0	0	0
1040	CRTFP Ux-	0	0	0	0	0	0
1040	CRTFP Uy+	0	0	0	0	0	0
1040	CRTFP Uy-	0	0	0	0	0	0
1041	SLU 1	-0.09	0.73	31.34	-6.2629	0.028	-0.0319
1041	SLU 2	-0.12	0.7	31.42	-6.2768	0.028	-0.04
1041	SLU 3	-0.1	0.76	32.07	-6.392	0.0287	-0.0323
1041	SLU 4	-0.11	0.74	32.11	-6.4004	0.0287	-0.0372
1041	SLU 5	-0.11	0.71	31.83	-6.3513	0.0283	-0.0387
1041	SLU 6	-0.09	0.77	32.48	-6.4664	0.029	-0.031
1041	SLU 7	-0.11	0.75	32.53	-6.4748	0.029	-0.0359
1041	SLU 8	-0.09	0.75	32.18	-6.4118	0.0287	-0.0293
1041	SLU 9	-0.1	0.73	32.22	-6.4202	0.0286	-0.0341
1041	SLU 10	-0.15	0.81	35.4	-7.0179	0.0323	-0.0514
1041	SLU 11	-0.13	0.87	36.05	-7.133	0.033	-0.0437
1041	SLU 12	-0.14	0.85	36.1	-7.1414	0.033	-0.0486
1041	SLU 13	-0.15	0.82	35.82	-7.0923	0.0326	-0.0501
1041	SLU 14	-0.12	0.88	36.47	-7.2075	0.0333	-0.0424
1041	SLU 15	-0.14	0.86	36.51	-7.2158	0.0333	-0.0472
1041	SLU 16	-0.12	0.86	36.16	-7.1528	0.033	-0.0406
1041	SLU 17	-0.13	0.84	36.21	-7.1612	0.033	-0.0455
1041	SLU 18	-0.14	0.89	37.04	-7.3215	0.0342	-0.0482
1041	SLU 19	-0.15	0.87	37.08	-7.3299	0.0341	-0.053
1041	SLU 20	-0.14	0.9	37.46	-7.3959	0.0345	-0.0468
1041	SLU 21	-0.15	0.88	37.5	-7.4043	0.0345	-0.0517
1041	SLU 22	-0.12	0.89	35.31	-6.9899	0.0321	-0.0399
1041	SLU 23	-0.14	0.86	35.38	-7.0039	0.0321	-0.048
1041	SLU 24	-0.12	0.92	36.03	-7.119	0.0328	-0.0403
1041	SLU 25	-0.13	0.9	36.08	-7.1274	0.0328	-0.0451
1041	SLU 26	-0.14	0.87	35.8	-7.0783	0.0324	-0.0467
1041	SLU 27	-0.11	0.93	36.45	-7.1935	0.0331	-0.0389
1041	SLU 28	-0.13	0.91	36.49	-7.2019	0.0331	-0.0438
1041	SLU 29	-0.11	0.92	36.14	-7.1389	0.0328	-0.0372
1041	SLU 30	-0.12	0.89	36.19	-7.1472	0.0327	-0.0421
1041	SLU 31	-0.17	0.97	39.37	-7.7449	0.0364	-0.0594
1041	SLU 32	-0.15	1.03	40.02	-7.86	0.0371	-0.0516
1041	SLU 33	-0.16	1.01	40.06	-7.8684	0.0371	-0.0565
1041	SLU 34	-0.17	0.98	39.79	-7.8194	0.0367	-0.058
1041	SLU 35	-0.15	1.04	40.44	-7.9345	0.0375	-0.0503
1041	SLU 36	-0.16	1.02	40.48	-7.9429	0.0374	-0.0552
1041	SLU 37	-0.14	1.03	40.13	-7.8799	0.0371	-0.0486
1041	SLU 38	-0.16	1	40.17	-7.8883	0.0371	-0.0535
1041	SLU 39	-0.16	1.05	41	-8.0485	0.0383	-0.0561
1041	SLU 40	-0.18	1.03	41.05	-8.0569	0.0382	-0.061
1041	SLU 41	-0.16	1.06	41.42	-8.123	0.0386	-0.0548
1041	SLU 42	-0.17	1.04	41.47	-8.1314	0.0386	-0.0597
1041	SLU 43	-0.11	0.89	39.39	-7.8925	0.035	-0.0387
1041	SLU 44	-0.14	0.86	39.46	-7.9064	0.0349	-0.0469
1041	SLU 45	-0.12	0.92	40.11	-8.0216	0.0357	-0.0392
1041	SLU 46	-0.13	0.9	40.16	-8.0299	0.0357	-0.044
1041	SLU 47	-0.13	0.87	39.88	-7.9809	0.0353	-0.0455
1041	SLU 48	-0.11	0.93	40.53	-8.096	0.036	-0.0378
1041	SLU 49	-0.13	0.91	40.57	-8.1044	0.036	-0.0427
1041	SLU 50	-0.11	0.92	40.22	-8.0414	0.0357	-0.0361
1041	SLU 51	-0.12	0.9	40.26	-8.0498	0.0356	-0.041
1041	SLU 52	-0.17	0.97	43.45	-8.6474	0.0393	-0.0582
1041	SLU 53	-0.15	1.03	44.1	-8.7626	0.04	-0.0505
1041	SLU 54	-0.16	1.01	44.14	-8.771	0.04	-0.0554
1041	SLU 55	-0.17	0.98	43.86	-8.7219	0.0396	-0.0569
1041	SLU 56	-0.14	1.04	44.51	-8.837	0.0403	-0.0492
1041	SLU 57	-0.16	1.02	44.56	-8.8454	0.0403	-0.0541
1041	SLU 58	-0.14	1.03	44.21	-8.7824	0.04	-0.0475
1041	SLU 59	-0.15	1.01	44.25	-8.7908	0.0399	-0.0524
1041	SLU 60	-0.16	1.05	45.08	-8.9511	0.0412	-0.055
1041	SLU 61	-0.18	1.03	45.13	-8.9594	0.0411	-0.0599
1041	SLU 62	-0.16	1.06	45.5	-9.0255	0.0415	-0.0537
1041	SLU 63	-0.17	1.04	45.54	-9.0339	0.0415	-0.0586
1041	SLU 64	-0.14	1.06	43.35	-8.6195	0.0391	-0.0467
1041	SLU 65	-0.16	1.02	43.43	-8.6335	0.0391	-0.0548
1041	SLU 66	-0.14	1.09	44.08	-8.7486	0.0398	-0.0471
1041	SLU 67	-0.15	1.06	44.12	-8.757	0.0398	-0.052
1041	SLU 68	-0.16	1.03	43.84	-8.7079	0.0394	-0.0535
1041	SLU 69	-0.13	1.1	44.49	-8.8231	0.0401	-0.0458
1041	SLU 70	-0.15	1.08	44.54	-8.8315	0.0401	-0.0507
1041	SLU 71	-0.13	1.08	44.19	-8.7684	0.0398	-0.0441
1041	SLU 72	-0.14	1.06	44.23	-8.7768	0.0397	-0.0489
1041	SLU 73	-0.19	1.13	47.41	-9.3745	0.0434	-0.0662
1041	SLU 74	-0.17	1.2	48.06	-9.4896	0.0441	-0.0585
1041	SLU 75	-0.19	1.17	48.11	-9.498	0.0441	-0.0634
1041	SLU 76	-0.19	1.14	47.83	-9.449	0.0437	-0.0649
1041	SLU 77	-0.17	1.21	48.48	-9.5641	0.0444	-0.0572
1041	SLU 78	-0.18	1.19	48.52	-9.5725	0.0444	-0.062
1041	SLU 79	-0.16	1.19	48.17	-9.5095	0.0441	-0.0554
1041	SLU 80	-0.18	1.17	48.22	-9.5178	0.0441	-0.0603
1041	SLU 81	-0.18	1.21	49.05	-9.6781	0.0453	-0.063

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1041	SLU 82	-0.2	1.19	49.09	-9.6865	0.0452	-0.0678
1041	SLU 83	-0.18	1.22	49.46	-9.7526	0.0456	-0.0616
1041	SLU 84	-0.19	1.2	49.51	-9.761	0.0456	-0.0665
1041	SLE RA 1	-0.1	0.78	32.48	-6.4706	0.0292	-0.0342
1041	SLE RA 2	-0.12	0.75	32.53	-6.4799	0.0291	-0.0396
1041	SLE RA 3	-0.1	0.8	32.96	-6.5567	0.0296	-0.0344
1041	SLE RA 4	-0.11	0.78	32.99	-6.5623	0.0296	-0.0377
1041	SLE RA 5	-0.11	0.76	32.8	-6.5296	0.0294	-0.0387
1041	SLE RA 6	-0.1	0.8	33.24	-6.6063	0.0299	-0.0336
1041	SLE RA 7	-0.11	0.79	33.27	-6.6119	0.0298	-0.0368
1041	SLE RA 8	-0.1	0.79	33.03	-6.5699	0.0296	-0.0324
1041	SLE RA 9	-0.1	0.78	33.06	-6.5755	0.0296	-0.0357
1041	SLE RA 10	-0.14	0.83	35.18	-6.9739	0.032	-0.0472
1041	SLE RA 11	-0.12	0.87	35.62	-7.0507	0.0325	-0.042
1041	SLE RA 12	-0.13	0.86	35.65	-7.0563	0.0325	-0.0453
1041	SLE RA 13	-0.14	0.83	35.46	-7.0236	0.0322	-0.0463
1041	SLE RA 14	-0.12	0.88	35.89	-7.1003	0.0327	-0.0412
1041	SLE RA 15	-0.13	0.86	35.92	-7.1059	0.0327	-0.0444
1041	SLE RA 16	-0.12	0.87	35.69	-7.0639	0.0325	-0.04
1041	SLE RA 17	-0.13	0.85	35.72	-7.0695	0.0325	-0.0432
1041	SLE RA 18	-0.13	0.88	36.27	-7.1763	0.0333	-0.045
1041	SLE RA 19	-0.14	0.87	36.3	-7.1819	0.0333	-0.0483
1041	SLE RA 20	-0.13	0.89	36.55	-7.226	0.0335	-0.0441
1041	SLE RA 21	-0.14	0.88	36.58	-7.2316	0.0335	-0.0474
1041	SLE FR 1	-0.1	0.78	32.48	-6.4706	0.0292	-0.0342
1041	SLE FR 2	-0.1	0.77	32.49	-6.4725	0.0292	-0.0353
1041	SLE FR 3	-0.1	0.78	32.59	-6.4905	0.0293	-0.0338
1041	SLE FR 4	-0.11	0.8	33.63	-6.6842	0.0304	-0.0385
1041	SLE FR 5	-0.11	0.81	33.73	-6.7022	0.0305	-0.0371
1041	SLE FR 6	-0.12	0.83	34.38	-6.8235	0.0312	-0.0396
1041	SLE QP 1	-0.1	0.78	32.48	-6.4706	0.0292	-0.0342
1041	SLE QP 2	-0.11	0.81	33.62	-6.6823	0.0304	-0.0374
1041	SLD 1	3.94	1.43	34.47	-7.0783	0.0486	1.3782
1041	SLD 2	3.54	1.4	34.41	-7.0634	0.0485	1.2386
1041	SLD 3	3.87	0.49	35.28	-7.2174	0.0497	1.3543
1041	SLD 4	3.47	0.46	35.22	-7.2025	0.0496	1.2147
1041	SLD 5	1.28	2.43	32.66	-6.5928	0.0342	0.4489
1041	SLD 6	1.02	2.4	32.62	-6.583	0.0342	0.3562
1041	SLD 7	1.05	-0.7	35.35	-7.0565	0.0379	0.3692
1041	SLD 8	0.79	-0.73	35.31	-7.0467	0.0378	0.2766
1041	SLD 9	-1.01	2.35	31.92	-6.318	0.023	-0.3515
1041	SLD 10	-1.27	2.32	31.88	-6.3081	0.0229	-0.4441
1041	SLD 11	-1.24	-0.79	34.61	-6.7817	0.0267	-0.4311
1041	SLD 12	-1.5	-0.81	34.57	-6.7718	0.0266	-0.5237
1041	SLD 13	-3.69	1.16	32.02	-6.1621	0.0112	-1.2896
1041	SLD 14	-4.09	1.12	31.95	-6.1472	0.0111	-1.4291
1041	SLD 15	-3.76	0.22	32.82	-6.3012	0.0123	-1.3134
1041	SLD 16	-4.16	0.18	32.76	-6.2863	0.0122	-1.453
1041	SLV 1	9.35	2.24	35.65	-7.6142	0.0731	3.2714
1041	SLV 2	8.42	2.15	35.5	-7.5795	0.0728	2.9465
1041	SLV 3	9.19	0.11	37.48	-7.9311	0.0756	3.2162
1041	SLV 4	8.26	0.03	37.33	-7.8964	0.0753	2.8913
1041	SLV 5	3.13	4.48	31.48	-6.4873	0.0395	1.096
1041	SLV 6	2.53	4.42	31.38	-6.4647	0.0393	0.8843
1041	SLV 7	2.6	-2.61	37.58	-7.5437	0.0478	0.9121
1041	SLV 8	2	-2.67	37.48	-7.5211	0.0476	0.7004
1041	SLV 9	-2.21	4.28	29.75	-5.8435	0.0132	-0.7752
1041	SLV 10	-2.82	4.23	29.66	-5.8209	0.013	-0.987
1041	SLV 11	-2.75	-2.81	35.85	-6.8999	0.0215	-0.9592
1041	SLV 12	-3.35	-2.86	35.76	-6.8774	0.0214	-1.1709
1041	SLV 13	-8.48	1.59	29.9	-5.4682	-0.0145	-2.9661
1041	SLV 14	-9.41	1.51	29.76	-5.4335	-0.0147	-3.2911
1041	SLV 15	-8.64	-0.54	31.73	-5.7851	-0.012	-3.0213
1041	SLV 16	-9.57	-0.62	31.59	-5.7505	-0.0122	-3.3463
1041	CRTFP Ux+	0	0	0	0	0	0
1041	CRTFP Ux-	0	0	0	0	0	0
1041	CRTFP Uy+	0	0	0	0	0	0
1041	CRTFP Uy-	0	0	0	0	0	0
1042	SLU 1	-0.05	0.76	30.76	-5.8583	0.0106	-0.0169
1042	SLU 2	-0.08	0.73	30.84	-5.8724	0.0106	-0.0252
1042	SLU 3	-0.05	0.79	31.47	-5.9773	0.0108	-0.0169
1042	SLU 4	-0.07	0.77	31.52	-5.9858	0.0108	-0.0219
1042	SLU 5	-0.07	0.74	31.25	-5.9417	0.0107	-0.0236
1042	SLU 6	-0.05	0.81	31.88	-6.0466	0.0109	-0.0154
1042	SLU 7	-0.06	0.79	31.93	-6.0551	0.0109	-0.0203
1042	SLU 8	-0.04	0.79	31.58	-5.9969	0.0107	-0.0138
1042	SLU 9	-0.06	0.77	31.63	-6.0053	0.0107	-0.0188
1042	SLU 10	-0.1	0.84	34.73	-6.5535	0.0124	-0.0352
1042	SLU 11	-0.08	0.91	35.37	-6.6584	0.0126	-0.0269
1042	SLU 12	-0.1	0.89	35.41	-6.6669	0.0126	-0.0319
1042	SLU 13	-0.1	0.86	35.14	-6.6228	0.0124	-0.0336
1042	SLU 14	-0.08	0.92	35.78	-6.7277	0.0127	-0.0253
1042	SLU 15	-0.09	0.9	35.82	-6.7361	0.0127	-0.0303
1042	SLU 16	-0.07	0.9	35.48	-6.6779	0.0125	-0.0237
1042	SLU 17	-0.09	0.88	35.52	-6.6864	0.0125	-0.0287
1042	SLU 18	-0.09	0.93	36.33	-6.8313	0.0131	-0.0311
1042	SLU 19	-0.11	0.91	36.37	-6.8398	0.0131	-0.0361
1042	SLU 20	-0.09	0.94	36.74	-6.9006	0.0132	-0.0296
1042	SLU 21	-0.1	0.92	36.78	-6.909	0.0132	-0.0346
1042	SLU 22	-0.07	0.93	34.64	-6.5273	0.0122	-0.0233

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1042	SLU 23	-0.09	0.89	34.72	-6.5414	0.0122	-0.0316
1042	SLU 24	-0.07	0.96	35.35	-6.6463	0.0124	-0.0233
1042	SLU 25	-0.09	0.94	35.4	-6.6547	0.0124	-0.0283
1042	SLU 26	-0.09	0.91	35.13	-6.6107	0.0122	-0.0301
1042	SLU 27	-0.07	0.97	35.76	-6.7155	0.0125	-0.0218
1042	SLU 28	-0.08	0.95	35.81	-6.724	0.0125	-0.0268
1042	SLU 29	-0.06	0.95	35.46	-6.6658	0.0123	-0.0202
1042	SLU 30	-0.08	0.93	35.51	-6.6743	0.0123	-0.0252
1042	SLU 31	-0.12	1.01	38.61	-7.2225	0.0139	-0.0416
1042	SLU 32	-0.1	1.07	39.25	-7.3273	0.0142	-0.0333
1042	SLU 33	-0.11	1.05	39.29	-7.3358	0.0142	-0.0383
1042	SLU 34	-0.12	1.02	39.02	-7.2917	0.014	-0.04
1042	SLU 35	-0.1	1.08	39.66	-7.3966	0.0143	-0.0317
1042	SLU 36	-0.11	1.06	39.7	-7.4051	0.0143	-0.0367
1042	SLU 37	-0.09	1.07	39.36	-7.3469	0.0141	-0.0302
1042	SLU 38	-0.1	1.05	39.4	-7.3554	0.0141	-0.0351
1042	SLU 39	-0.11	1.09	40.21	-7.5002	0.0147	-0.0376
1042	SLU 40	-0.13	1.07	40.25	-7.5087	0.0147	-0.0425
1042	SLU 41	-0.11	1.1	40.62	-7.5695	0.0148	-0.036
1042	SLU 42	-0.12	1.08	40.66	-7.578	0.0148	-0.041
1042	SLU 43	-0.06	0.94	38.66	-7.3865	0.0132	-0.0197
1042	SLU 44	-0.08	0.9	38.74	-7.4006	0.0132	-0.0281
1042	SLU 45	-0.06	0.97	39.37	-7.5055	0.0135	-0.0198
1042	SLU 46	-0.08	0.95	39.42	-7.5139	0.0135	-0.0248
1042	SLU 47	-0.08	0.92	39.15	-7.4699	0.0133	-0.0265
1042	SLU 48	-0.06	0.98	39.78	-7.5747	0.0135	-0.0182
1042	SLU 49	-0.07	0.96	39.83	-7.5832	0.0135	-0.0232
1042	SLU 50	-0.05	0.96	39.48	-7.525	0.0134	-0.0166
1042	SLU 51	-0.07	0.94	39.53	-7.5335	0.0134	-0.0216
1042	SLU 52	-0.11	1.02	42.63	-8.0817	0.015	-0.038
1042	SLU 53	-0.09	1.08	43.27	-8.1865	0.0153	-0.0298
1042	SLU 54	-0.1	1.06	43.31	-8.195	0.0152	-0.0347
1042	SLU 55	-0.11	1.03	43.04	-8.1509	0.0151	-0.0365
1042	SLU 56	-0.09	1.09	43.68	-8.2558	0.0153	-0.0282
1042	SLU 57	-0.1	1.07	43.72	-8.2643	0.0153	-0.0332
1042	SLU 58	-0.08	1.07	43.38	-8.2061	0.0151	-0.0266
1042	SLU 59	-0.1	1.05	43.42	-8.2146	0.0151	-0.0316
1042	SLU 60	-0.1	1.1	44.23	-8.3594	0.0158	-0.034
1042	SLU 61	-0.12	1.08	44.27	-8.3679	0.0158	-0.039
1042	SLU 62	-0.1	1.11	44.64	-8.4287	0.0158	-0.0324
1042	SLU 63	-0.11	1.09	44.68	-8.4372	0.0158	-0.0374
1042	SLU 64	-0.08	1.1	42.54	-8.0554	0.0148	-0.0262
1042	SLU 65	-0.1	1.07	42.62	-8.0695	0.0148	-0.0345
1042	SLU 66	-0.08	1.13	43.25	-8.1744	0.0151	-0.0262
1042	SLU 67	-0.09	1.11	43.3	-8.1829	0.0151	-0.0312
1042	SLU 68	-0.1	1.08	43.03	-8.1388	0.0149	-0.0329
1042	SLU 69	-0.08	1.14	43.66	-8.2437	0.0151	-0.0246
1042	SLU 70	-0.09	1.12	43.71	-8.2521	0.0151	-0.0296
1042	SLU 71	-0.07	1.13	43.36	-8.194	0.015	-0.023
1042	SLU 72	-0.09	1.11	43.41	-8.2024	0.015	-0.028
1042	SLU 73	-0.13	1.18	46.51	-8.7506	0.0166	-0.0445
1042	SLU 74	-0.11	1.24	47.15	-8.8555	0.0168	-0.0362
1042	SLU 75	-0.12	1.22	47.19	-8.8639	0.0168	-0.0412
1042	SLU 76	-0.13	1.19	46.92	-8.8199	0.0166	-0.0429
1042	SLU 77	-0.1	1.26	47.56	-8.9247	0.0169	-0.0346
1042	SLU 78	-0.12	1.24	47.6	-8.9332	0.0169	-0.0396
1042	SLU 79	-0.1	1.24	47.26	-8.875	0.0167	-0.033
1042	SLU 80	-0.11	1.22	47.3	-8.8835	0.0167	-0.038
1042	SLU 81	-0.12	1.26	48.11	-9.0284	0.0174	-0.0404
1042	SLU 82	-0.14	1.24	48.15	-9.0368	0.0173	-0.0454
1042	SLU 83	-0.12	1.28	48.52	-9.0976	0.0174	-0.0389
1042	SLU 84	-0.13	1.25	48.56	-9.1061	0.0174	-0.0438
1042	SLE RA 1	-0.06	0.81	31.87	-6.0494	0.0111	-0.0187
1042	SLE RA 2	-0.07	0.79	31.92	-6.0589	0.011	-0.0243
1042	SLE RA 3	-0.06	0.83	32.34	-6.1288	0.0112	-0.0187
1042	SLE RA 4	-0.07	0.82	32.37	-6.1344	0.0112	-0.0221
1042	SLE RA 5	-0.07	0.8	32.19	-6.105	0.0111	-0.0232
1042	SLE RA 6	-0.05	0.84	32.62	-6.175	0.0113	-0.0177
1042	SLE RA 7	-0.06	0.83	32.65	-6.1806	0.0113	-0.021
1042	SLE RA 8	-0.05	0.83	32.42	-6.1418	0.0111	-0.0166
1042	SLE RA 9	-0.06	0.81	32.45	-6.1475	0.0111	-0.02
1042	SLE RA 10	-0.09	0.86	34.52	-6.5129	0.0122	-0.0309
1042	SLE RA 11	-0.08	0.91	34.94	-6.5828	0.0124	-0.0254
1042	SLE RA 12	-0.09	0.89	34.97	-6.5885	0.0124	-0.0287
1042	SLE RA 13	-0.09	0.87	34.79	-6.5591	0.0123	-0.0299
1042	SLE RA 14	-0.07	0.91	35.21	-6.629	0.0124	-0.0243
1042	SLE RA 15	-0.08	0.9	35.24	-6.6347	0.0124	-0.0277
1042	SLE RA 16	-0.07	0.9	35.01	-6.5959	0.0123	-0.0233
1042	SLE RA 17	-0.08	0.89	35.04	-6.6015	0.0123	-0.0266
1042	SLE RA 18	-0.08	0.92	35.58	-6.6981	0.0127	-0.0282
1042	SLE RA 19	-0.09	0.91	35.61	-6.7037	0.0127	-0.0315
1042	SLE RA 20	-0.08	0.93	35.85	-6.7443	0.0128	-0.0272
1042	SLE RA 21	-0.09	0.91	35.88	-6.7499	0.0128	-0.0305
1042	SLE FR 1	-0.06	0.81	31.87	-6.0494	0.0111	-0.0187
1042	SLE FR 2	-0.06	0.81	31.88	-6.0513	0.0111	-0.0198
1042	SLE FR 3	-0.06	0.81	31.98	-6.0679	0.0111	-0.0183
1042	SLE FR 4	-0.07	0.84	32.99	-6.2459	0.0116	-0.0227
1042	SLE FR 5	-0.06	0.85	33.09	-6.2625	0.0116	-0.0212
1042	SLE FR 6	-0.07	0.87	33.73	-6.3738	0.0119	-0.0235
1042	SLE QP 1	-0.06	0.81	31.87	-6.0494	0.0111	-0.0187

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1042	SLE QP 2	-0.07	0.84	32.98	-6.244	0.0116	-0.0216
1042	SLD 1	3.99	1.45	33.29	-6.4417	0.0301	1.3967
1042	SLD 2	3.59	1.42	33.23	-6.4292	0.03	1.2569
1042	SLD 3	3.92	0.52	34.08	-6.5712	0.0305	1.3729
1042	SLD 4	3.52	0.5	34.02	-6.5587	0.0305	1.2331
1042	SLD 5	1.33	2.43	31.88	-6.1092	0.0164	0.4654
1042	SLD 6	1.06	2.42	31.85	-6.1009	0.0164	0.3726
1042	SLD 7	1.1	-0.66	34.52	-6.5408	0.018	0.3861
1042	SLD 8	0.83	-0.67	34.48	-6.5326	0.0179	0.2933
1042	SLD 9	-0.96	2.36	31.48	-5.9555	0.0052	-0.3365
1042	SLD 10	-1.23	2.34	31.44	-5.9472	0.0052	-0.4293
1042	SLD 11	-1.19	-0.73	34.12	-6.3871	0.0067	-0.4158
1042	SLD 12	-1.46	-0.75	34.08	-6.3789	0.0067	-0.5086
1042	SLD 13	-3.65	1.19	31.95	-5.9294	-0.0073	-1.2763
1042	SLD 14	-4.05	1.17	31.89	-5.9169	-0.0074	-1.4161
1042	SLD 15	-3.72	0.26	32.74	-6.0588	-0.0069	-1.3001
1042	SLD 16	-4.12	0.24	32.68	-6.0464	-0.0069	-1.4399
1042	SLV 1	9.41	2.22	33.72	-6.7112	0.0549	3.2936
1042	SLV 2	8.48	2.17	33.58	-6.6822	0.0547	2.9681
1042	SLV 3	9.25	0.12	35.52	-7.0068	0.0559	3.2387
1042	SLV 4	8.32	0.07	35.38	-6.9778	0.0558	2.9132
1042	SLV 5	3.18	4.45	30.5	-5.941	0.023	1.1135
1042	SLV 6	2.57	4.41	30.41	-5.9221	0.0229	0.9015
1042	SLV 7	2.65	-2.55	36.49	-6.9263	0.0265	0.9304
1042	SLV 8	2.05	-2.58	36.4	-6.9074	0.0264	0.7183
1042	SLV 9	-2.18	4.27	29.56	-5.5807	-0.0033	-0.7614
1042	SLV 10	-2.79	4.23	29.47	-5.5618	-0.0034	-0.9735
1042	SLV 11	-2.7	-2.73	35.55	-6.566	0.0002	-0.9446
1042	SLV 12	-3.31	-2.76	35.46	-6.5471	0.0001	-1.1567
1042	SLV 13	-8.45	1.62	30.59	-5.5103	-0.0326	-2.9563
1042	SLV 14	-9.38	1.57	30.45	-5.4813	-0.0328	-3.2818
1042	SLV 15	-8.61	-0.48	32.38	-5.8059	-0.0316	-3.0112
1042	SLV 16	-9.54	-0.53	32.25	-5.7769	-0.0318	-3.3367
1042	CRTFP Ux+	0	0	0	0	0	0
1042	CRTFP Ux-	0	0	0	0	0	0
1042	CRTFP Uy+	0	0	0	0	0	0
1042	CRTFP Uy-	0	0	0	0	0	0
1043	SLU 1	-0.01	0.81	30.72	-5.8611	-0.0075	-0.0017
1043	SLU 2	-0.03	0.77	30.79	-5.8752	-0.0075	-0.0102
1043	SLU 3	-0.01	0.84	31.43	-5.9806	-0.0077	-0.0013
1043	SLU 4	-0.02	0.82	31.47	-5.989	-0.0077	-0.0064
1043	SLU 5	-0.03	0.79	31.2	-5.9455	-0.0077	-0.0084
1043	SLU 6	0	0.85	31.84	-6.0508	-0.0079	0.0005
1043	SLU 7	-0.02	0.83	31.88	-6.0592	-0.0079	-0.0046
1043	SLU 8	0	0.83	31.54	-6.0016	-0.0079	0.0019
1043	SLU 9	-0.01	0.81	31.59	-6.01	-0.0079	-0.0032
1043	SLU 10	-0.06	0.89	34.67	-6.555	-0.0083	-0.0187
1043	SLU 11	-0.03	0.96	35.31	-6.6603	-0.0086	-0.0098
1043	SLU 12	-0.05	0.94	35.35	-6.6687	-0.0086	-0.0149
1043	SLU 13	-0.05	0.91	35.08	-6.6252	-0.0085	-0.0169
1043	SLU 14	-0.03	0.97	35.72	-6.7305	-0.0088	-0.008
1043	SLU 15	-0.04	0.95	35.76	-6.739	-0.0088	-0.0131
1043	SLU 16	-0.02	0.95	35.42	-6.6813	-0.0088	-0.0066
1043	SLU 17	-0.04	0.93	35.47	-6.6898	-0.0088	-0.0117
1043	SLU 18	-0.04	0.98	36.26	-6.8322	-0.0087	-0.0138
1043	SLU 19	-0.06	0.96	36.31	-6.8406	-0.0087	-0.0189
1043	SLU 20	-0.04	0.99	36.67	-6.9024	-0.0089	-0.012
1043	SLU 21	-0.05	0.97	36.72	-6.9109	-0.0089	-0.0171
1043	SLU 22	-0.02	0.98	34.59	-6.53	-0.0085	-0.0065
1043	SLU 23	-0.05	0.94	34.66	-6.5441	-0.0085	-0.015
1043	SLU 24	-0.02	1.01	35.3	-6.6494	-0.0087	-0.0062
1043	SLU 25	-0.04	0.99	35.34	-6.6579	-0.0087	-0.0113
1043	SLU 26	-0.04	0.95	35.07	-6.6143	-0.0087	-0.0132
1043	SLU 27	-0.02	1.02	35.71	-6.7197	-0.0089	-0.0044
1043	SLU 28	-0.03	1	35.75	-6.7281	-0.0089	-0.0095
1043	SLU 29	-0.01	1	35.41	-6.6705	-0.0089	-0.0029
1043	SLU 30	-0.03	0.98	35.46	-6.6789	-0.0089	-0.008
1043	SLU 31	-0.07	1.06	38.54	-7.2238	-0.0094	-0.0235
1043	SLU 32	-0.05	1.12	39.18	-7.3292	-0.0096	-0.0147
1043	SLU 33	-0.06	1.1	39.22	-7.3376	-0.0096	-0.0198
1043	SLU 34	-0.07	1.07	38.96	-7.2941	-0.0096	-0.0217
1043	SLU 35	-0.04	1.14	39.59	-7.3994	-0.0098	-0.0129
1043	SLU 36	-0.06	1.12	39.64	-7.4079	-0.0098	-0.018
1043	SLU 37	-0.04	1.12	39.29	-7.3502	-0.0098	-0.0114
1043	SLU 38	-0.05	1.1	39.34	-7.3587	-0.0098	-0.0165
1043	SLU 39	-0.06	1.14	40.13	-7.5011	-0.0098	-0.0186
1043	SLU 40	-0.07	1.12	40.18	-7.5095	-0.0097	-0.0238
1043	SLU 41	-0.05	1.16	40.55	-7.5713	-0.01	-0.0168
1043	SLU 42	-0.07	1.14	40.59	-7.5797	-0.01	-0.022
1043	SLU 43	-0.01	0.99	38.6	-7.3901	-0.0094	-0.0005
1043	SLU 44	-0.03	0.96	38.68	-7.4042	-0.0094	-0.009
1043	SLU 45	-0.01	1.02	39.31	-7.5096	-0.0096	-0.0002
1043	SLU 46	-0.02	1	39.36	-7.518	-0.0096	-0.0053
1043	SLU 47	-0.03	0.97	39.09	-7.4745	-0.0096	-0.0072
1043	SLU 48	0	1.04	39.73	-7.5798	-0.0098	0.0016
1043	SLU 49	-0.02	1.02	39.77	-7.5883	-0.0098	-0.0035
1043	SLU 50	0	1.02	39.43	-7.5306	-0.0098	0.0031
1043	SLU 51	-0.01	1	39.47	-7.5391	-0.0098	-0.002
1043	SLU 52	-0.06	1.08	42.56	-8.084	-0.0102	-0.0175
1043	SLU 53	-0.03	1.14	43.19	-8.1893	-0.0105	-0.0087

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1043	SLU 54	-0.05	1.12	43.24	-8.1978	-0.0105	-0.0138
1043	SLU 55	-0.05	1.09	42.97	-8.1542	-0.0104	-0.0157
1043	SLU 56	-0.03	1.15	43.61	-8.2595	-0.0107	-0.0069
1043	SLU 57	-0.04	1.13	43.65	-8.268	-0.0107	-0.012
1043	SLU 58	-0.02	1.14	43.31	-8.2103	-0.0107	-0.0054
1043	SLU 59	-0.04	1.12	43.35	-8.2188	-0.0107	-0.0105
1043	SLU 60	-0.04	1.16	44.15	-8.3612	-0.0106	-0.0127
1043	SLU 61	-0.06	1.14	44.19	-8.3696	-0.0106	-0.0178
1043	SLU 62	-0.04	1.17	44.56	-8.4314	-0.0108	-0.0109
1043	SLU 63	-0.05	1.15	44.61	-8.4399	-0.0108	-0.016
1043	SLU 64	-0.02	1.16	42.48	-8.059	-0.0104	-0.0053
1043	SLU 65	-0.05	1.13	42.55	-8.0731	-0.0104	-0.0139
1043	SLU 66	-0.02	1.19	43.18	-8.1785	-0.0106	-0.005
1043	SLU 67	-0.04	1.17	43.23	-8.1869	-0.0106	-0.0101
1043	SLU 68	-0.04	1.14	42.96	-8.1433	-0.0106	-0.0121
1043	SLU 69	-0.02	1.2	43.6	-8.2487	-0.0108	-0.0032
1043	SLU 70	-0.03	1.18	43.64	-8.2571	-0.0108	-0.0083
1043	SLU 71	-0.01	1.18	43.3	-8.1995	-0.0108	-0.0018
1043	SLU 72	-0.03	1.17	43.34	-8.2079	-0.0108	-0.0069
1043	SLU 73	-0.07	1.24	46.43	-8.7528	-0.0113	-0.0224
1043	SLU 74	-0.05	1.31	47.07	-8.8582	-0.0115	-0.0135
1043	SLU 75	-0.06	1.29	47.11	-8.8666	-0.0115	-0.0186
1043	SLU 76	-0.07	1.26	46.84	-8.8231	-0.0115	-0.0206
1043	SLU 77	-0.04	1.32	47.48	-8.9284	-0.0117	-0.0117
1043	SLU 78	-0.05	1.3	47.52	-8.9369	-0.0117	-0.0168
1043	SLU 79	-0.04	1.3	47.18	-8.8792	-0.0117	-0.0102
1043	SLU 80	-0.05	1.28	47.23	-8.8877	-0.0117	-0.0154
1043	SLU 81	-0.06	1.33	48.02	-9.0301	-0.0117	-0.0175
1043	SLU 82	-0.07	1.31	48.07	-9.0385	-0.0116	-0.0226
1043	SLU 83	-0.05	1.34	48.43	-9.1003	-0.0119	-0.0157
1043	SLU 84	-0.07	1.32	48.48	-9.1088	-0.0119	-0.0208
1043	SLE RA 1	-0.01	0.86	31.82	-6.0522	-0.0078	-0.0031
1043	SLE RA 2	-0.03	0.83	31.87	-6.0616	-0.0078	-0.0087
1043	SLE RA 3	-0.01	0.88	32.3	-6.1319	-0.0079	-0.0028
1043	SLE RA 4	-0.02	0.86	32.33	-6.1375	-0.0079	-0.0062
1043	SLE RA 5	-0.03	0.84	32.15	-6.1085	-0.0079	-0.0075
1043	SLE RA 6	-0.01	0.88	32.57	-6.1787	-0.0081	-0.0016
1043	SLE RA 7	-0.02	0.87	32.6	-6.1843	-0.0081	-0.005
1043	SLE RA 8	-0.01	0.87	32.37	-6.1459	-0.0081	-0.0007
1043	SLE RA 9	-0.02	0.86	32.4	-6.1515	-0.008	-0.0041
1043	SLE RA 10	-0.05	0.91	34.46	-6.5148	-0.0083	-0.0144
1043	SLE RA 11	-0.03	0.95	34.88	-6.585	-0.0085	-0.0085
1043	SLE RA 12	-0.04	0.94	34.91	-6.5907	-0.0085	-0.0119
1043	SLE RA 13	-0.04	0.92	34.73	-6.5616	-0.0085	-0.0132
1043	SLE RA 14	-0.03	0.96	35.16	-6.6318	-0.0087	-0.0073
1043	SLE RA 15	-0.04	0.95	35.19	-6.6375	-0.0086	-0.0107
1043	SLE RA 16	-0.02	0.95	34.96	-6.599	-0.0086	-0.0063
1043	SLE RA 17	-0.03	0.94	34.99	-6.6047	-0.0086	-0.0097
1043	SLE RA 18	-0.04	0.97	35.52	-6.6996	-0.0086	-0.0111
1043	SLE RA 19	-0.05	0.95	35.55	-6.7052	-0.0086	-0.0146
1043	SLE RA 20	-0.03	0.98	35.79	-6.7464	-0.0088	-0.0099
1043	SLE RA 21	-0.04	0.96	35.82	-6.7521	-0.0087	-0.0134
1043	SLE FR 1	-0.01	0.86	31.82	-6.0522	-0.0078	-0.0031
1043	SLE FR 2	-0.02	0.85	31.83	-6.0541	-0.0078	-0.0042
1043	SLE FR 3	-0.01	0.86	31.93	-6.071	-0.0078	-0.0026
1043	SLE FR 4	-0.02	0.88	32.94	-6.2483	-0.008	-0.0066
1043	SLE FR 5	-0.02	0.89	33.04	-6.2652	-0.0081	-0.005
1043	SLE FR 6	-0.03	0.91	33.67	-6.3759	-0.0082	-0.0071
1043	SLE QP 1	-0.01	0.86	31.82	-6.0522	-0.0078	-0.0031
1043	SLE QP 2	-0.02	0.89	32.93	-6.2465	-0.008	-0.0055
1043	SLD 1	4.04	1.47	32.69	-6.2419	0.0109	1.4146
1043	SLD 2	3.64	1.46	32.63	-6.2313	0.0109	1.2746
1043	SLD 3	3.97	0.55	33.48	-6.3731	0.0103	1.3909
1043	SLD 4	3.57	0.54	33.43	-6.3625	0.0103	1.2509
1043	SLD 5	1.37	2.46	31.66	-6.048	-0.0014	0.4819
1043	SLD 6	1.11	2.46	31.62	-6.041	-0.0014	0.389
1043	SLD 7	1.15	-0.61	34.32	-6.4853	-0.0035	0.403
1043	SLD 8	0.88	-0.61	34.28	-6.4783	-0.0035	0.3101
1043	SLD 9	-0.92	2.39	31.58	-6.0146	-0.0126	-0.321
1043	SLD 10	-1.19	2.38	31.55	-6.0076	-0.0126	-0.4139
1043	SLD 11	-1.15	-0.68	34.24	-6.4519	-0.0146	-0.4
1043	SLD 12	-1.41	-0.68	34.2	-6.4449	-0.0147	-0.4929
1043	SLD 13	-3.61	1.23	32.44	-6.1304	-0.0263	-1.2619
1043	SLD 14	-4.01	1.23	32.38	-6.1198	-0.0264	-1.4019
1043	SLD 15	-3.68	0.31	33.23	-6.2616	-0.0269	-1.2856
1043	SLD 16	-4.08	0.31	33.18	-6.251	-0.027	-1.4255
1043	SLV 1	9.47	2.22	32.39	-6.2412	0.0363	3.3138
1043	SLV 2	8.53	2.2	32.26	-6.2166	0.0362	2.988
1043	SLV 3	9.31	0.14	34.2	-6.5407	0.0349	3.2591
1043	SLV 4	8.38	0.12	34.07	-6.5161	0.0348	2.9333
1043	SLV 5	3.23	4.45	30.05	-5.7949	0.0075	1.1306
1043	SLV 6	2.62	4.44	29.96	-5.7789	0.0074	0.9182
1043	SLV 7	2.71	-2.49	36.08	-6.7933	0.0027	0.9482
1043	SLV 8	2.1	-2.51	36	-6.7773	0.0026	0.7359
1043	SLV 9	-2.14	4.28	29.87	-5.7156	-0.0187	-0.7469
1043	SLV 10	-2.75	4.27	29.78	-5.6996	-0.0187	-0.9592
1043	SLV 11	-2.66	-2.66	35.9	-6.714	-0.0235	-0.9292
1043	SLV 12	-3.27	-2.67	35.82	-6.698	-0.0235	-1.1415
1043	SLV 13	-8.42	1.66	31.79	-5.9768	-0.0508	-2.9442
1043	SLV 14	-9.35	1.64	31.66	-5.9522	-0.0509	-3.2701

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1043	SLV 15	-8.57	-0.42	33.6	-6.2763	-0.0523	-2.9989
1043	SLV 16	-9.51	-0.44	33.47	-6.2517	-0.0524	-3.3248
1043	CRTFP Ux+	0	0	0	0	0	0
1043	CRTFP Ux-	0	0	0	0	0	0
1043	CRTFP Uy+	0	0	0	0	0	0
1043	CRTFP Uy-	0	0	0	0	0	0
1044	SLU 1	0.03	0.86	31.2	-6.2656	-0.0245	0.0136
1044	SLU 2	0.01	0.83	31.27	-6.2794	-0.0244	0.0049
1044	SLU 3	0.04	0.89	31.92	-6.3958	-0.0252	0.0144
1044	SLU 4	0.02	0.87	31.97	-6.4041	-0.0251	0.0091
1044	SLU 5	0.01	0.84	31.69	-6.3567	-0.0249	0.007
1044	SLU 6	0.04	0.9	32.34	-6.4731	-0.0256	0.0164
1044	SLU 7	0.03	0.89	32.39	-6.4814	-0.0256	0.0112
1044	SLU 8	0.05	0.89	32.04	-6.4201	-0.0254	0.0177
1044	SLU 9	0.03	0.87	32.09	-6.4284	-0.0254	0.0125
1044	SLU 10	-0.01	0.95	35.22	-7.0155	-0.0278	-0.0021
1044	SLU 11	0.02	1.02	35.87	-7.1319	-0.0285	0.0074
1044	SLU 12	0	1	35.91	-7.1402	-0.0285	0.0022
1044	SLU 13	-0.01	0.96	35.64	-7.0927	-0.0283	0
1044	SLU 14	0.02	1.03	36.29	-7.2091	-0.029	0.0094
1044	SLU 15	0.01	1.01	36.33	-7.2174	-0.0289	0.0042
1044	SLU 16	0.02	1.01	35.99	-7.1561	-0.0288	0.0107
1044	SLU 17	0.01	0.99	36.03	-7.1644	-0.0287	0.0055
1044	SLU 18	0	1.04	36.84	-7.3171	-0.0293	0.0037
1044	SLU 19	-0.01	1.02	36.88	-7.3254	-0.0293	-0.0016
1044	SLU 20	0.01	1.05	37.26	-7.3943	-0.0298	0.0057
1044	SLU 21	-0.01	1.03	37.3	-7.4026	-0.0297	0.0005
1044	SLU 22	0.02	1.03	35.14	-6.9916	-0.028	0.0104
1044	SLU 23	0	1	35.21	-7.0054	-0.0279	0.0017
1044	SLU 24	0.03	1.06	35.86	-7.1218	-0.0286	0.0112
1044	SLU 25	0.01	1.05	35.91	-7.1301	-0.0286	0.0059
1044	SLU 26	0	1.01	35.63	-7.0827	-0.0284	0.0037
1044	SLU 27	0.03	1.08	36.28	-7.1991	-0.0291	0.0132
1044	SLU 28	0.02	1.06	36.33	-7.2074	-0.0291	0.008
1044	SLU 29	0.04	1.06	35.98	-7.1461	-0.0289	0.0145
1044	SLU 30	0.02	1.04	36.03	-7.1544	-0.0289	0.0093
1044	SLU 31	-0.02	1.12	39.16	-7.7415	-0.0313	-0.0053
1044	SLU 32	0.01	1.19	39.81	-7.8579	-0.032	0.0042
1044	SLU 33	-0.01	1.17	39.85	-7.8662	-0.032	-0.001
1044	SLU 34	-0.02	1.14	39.58	-7.8187	-0.0317	-0.0032
1044	SLU 35	0.01	1.2	40.23	-7.9351	-0.0325	0.0062
1044	SLU 36	0	1.18	40.27	-7.9434	-0.0324	0.001
1044	SLU 37	0.01	1.18	39.93	-7.8821	-0.0323	0.0075
1044	SLU 38	0	1.16	39.97	-7.8904	-0.0322	0.0023
1044	SLU 39	-0.01	1.21	40.78	-8.0431	-0.0328	0.0005
1044	SLU 40	-0.02	1.19	40.82	-8.0514	-0.0327	-0.0048
1044	SLU 41	0	1.22	41.2	-8.1203	-0.0332	0.0025
1044	SLU 42	-0.01	1.2	41.24	-8.1286	-0.0332	-0.0027
1044	SLU 43	0.05	1.06	39.21	-7.8963	-0.0306	0.0188
1044	SLU 44	0.02	1.03	39.28	-7.9102	-0.0306	0.0101
1044	SLU 45	0.05	1.09	39.93	-8.0266	-0.0313	0.0196
1044	SLU 46	0.03	1.07	39.98	-8.0349	-0.0313	0.0143
1044	SLU 47	0.03	1.04	39.7	-7.9874	-0.0311	0.0121
1044	SLU 48	0.05	1.1	40.35	-8.1038	-0.0318	0.0216
1044	SLU 49	0.04	1.08	40.4	-8.1121	-0.0317	0.0164
1044	SLU 50	0.06	1.08	40.05	-8.0508	-0.0316	0.0229
1044	SLU 51	0.04	1.06	40.1	-8.0591	-0.0315	0.0177
1044	SLU 52	0	1.15	43.23	-8.6462	-0.034	0.0031
1044	SLU 53	0.03	1.21	43.88	-8.7626	-0.0347	0.0126
1044	SLU 54	0.01	1.19	43.92	-8.7709	-0.0346	0.0074
1044	SLU 55	0.01	1.16	43.65	-8.7235	-0.0344	0.0052
1044	SLU 56	0.03	1.23	44.3	-8.8398	-0.0351	0.0146
1044	SLU 57	0.02	1.21	44.34	-8.8482	-0.0351	0.0094
1044	SLU 58	0.04	1.21	44	-8.7868	-0.0349	0.0159
1044	SLU 59	0.02	1.19	44.04	-8.7952	-0.0349	0.0107
1044	SLU 60	0.02	1.23	44.85	-8.9478	-0.0355	0.0089
1044	SLU 61	0	1.22	44.89	-8.9561	-0.0354	0.0036
1044	SLU 62	0.02	1.25	45.27	-9.0251	-0.0359	0.0109
1044	SLU 63	0.01	1.23	45.31	-9.0334	-0.0359	0.0057
1044	SLU 64	0.04	1.23	43.15	-8.6223	-0.0341	0.0156
1044	SLU 65	0.01	1.2	43.22	-8.6362	-0.0341	0.0069
1044	SLU 66	0.04	1.26	43.87	-8.7526	-0.0348	0.0164
1044	SLU 67	0.02	1.24	43.91	-8.7609	-0.0348	0.0111
1044	SLU 68	0.02	1.21	43.64	-8.7134	-0.0345	0.0089
1044	SLU 69	0.05	1.28	44.29	-8.8298	-0.0353	0.0184
1044	SLU 70	0.03	1.26	44.34	-8.8381	-0.0352	0.0132
1044	SLU 71	0.05	1.26	43.99	-8.7768	-0.0351	0.0197
1044	SLU 72	0.03	1.24	44.04	-8.7851	-0.035	0.0145
1044	SLU 73	-0.01	1.32	47.17	-9.3722	-0.0374	-0.0001
1044	SLU 74	0.02	1.39	47.82	-9.4886	-0.0382	0.0094
1044	SLU 75	0	1.37	47.86	-9.4969	-0.0381	0.0041
1044	SLU 76	0	1.34	47.59	-9.4495	-0.0379	0.002
1044	SLU 77	0.02	1.4	48.24	-9.5659	-0.0386	0.0114
1044	SLU 78	0.01	1.38	48.28	-9.5742	-0.0386	0.0062
1044	SLU 79	0.03	1.38	47.94	-9.5129	-0.0384	0.0127
1044	SLU 80	0.01	1.36	47.98	-9.5212	-0.0384	0.0075
1044	SLU 81	0.01	1.41	48.78	-9.6738	-0.0389	0.0057
1044	SLU 82	-0.01	1.39	48.83	-9.6821	-0.0389	0.0004
1044	SLU 83	0.01	1.42	49.21	-9.7511	-0.0394	0.0077
1044	SLU 84	0	1.4	49.25	-9.7594	-0.0394	0.0025

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1044	SLE RA 1	0.03	0.91	32.32	-6.473	-0.0255	0.0127
1044	SLE RA 2	0.01	0.89	32.37	-6.4822	-0.0254	0.0069
1044	SLE RA 3	0.03	0.93	32.81	-6.5598	-0.0259	0.0132
1044	SLE RA 4	0.02	0.92	32.84	-6.5654	-0.0259	0.0097
1044	SLE RA 5	0.02	0.9	32.66	-6.5337	-0.0258	0.0083
1044	SLE RA 6	0.04	0.94	33.09	-6.6113	-0.0262	0.0146
1044	SLE RA 7	0.03	0.93	33.12	-6.6169	-0.0262	0.0111
1044	SLE RA 8	0.04	0.93	32.89	-6.576	-0.0261	0.0154
1044	SLE RA 9	0.03	0.91	32.92	-6.5815	-0.0261	0.0119
1044	SLE RA 10	0	0.97	35	-6.9729	-0.0277	0.0023
1044	SLE RA 11	0.02	1.01	35.44	-7.0505	-0.0282	0.0086
1044	SLE RA 12	0.01	1	35.47	-7.0561	-0.0281	0.0051
1044	SLE RA 13	0	0.98	35.29	-7.0244	-0.028	0.0036
1044	SLE RA 14	0.02	1.02	35.72	-7.102	-0.0285	0.0099
1044	SLE RA 15	0.01	1.01	35.75	-7.1076	-0.0285	0.0064
1044	SLE RA 16	0.02	1.01	35.52	-7.0667	-0.0283	0.0108
1044	SLE RA 17	0.01	1	35.55	-7.0722	-0.0283	0.0073
1044	SLE RA 18	0.01	1.03	36.08	-7.174	-0.0287	0.0061
1044	SLE RA 19	0	1.01	36.11	-7.1795	-0.0287	0.0026
1044	SLE RA 20	0.02	1.04	36.36	-7.2255	-0.029	0.0074
1044	SLE RA 21	0.01	1.02	36.39	-7.231	-0.029	0.0039
1044	SLE FR 1	0.03	0.91	32.32	-6.473	-0.0255	0.0127
1044	SLE FR 2	0.03	0.9	32.33	-6.4748	-0.0255	0.0116
1044	SLE FR 3	0.03	0.91	32.44	-6.4936	-0.0256	0.0133
1044	SLE FR 4	0.02	0.94	33.46	-6.6851	-0.0264	0.0096
1044	SLE FR 5	0.03	0.95	33.57	-6.7039	-0.0266	0.0113
1044	SLE FR 6	0.02	0.97	34.2	-6.8235	-0.0271	0.0094
1044	SLE QP 1	0.03	0.91	32.32	-6.473	-0.0255	0.0127
1044	SLE QP 2	0.03	0.94	33.45	-6.6833	-0.0264	0.0107
1044	SLD 1	4.09	1.51	32.62	-6.4651	-0.0072	1.4316
1044	SLD 2	3.68	1.52	32.56	-6.4556	-0.0072	1.2916
1044	SLD 3	4.02	0.59	33.44	-6.6093	-0.0085	1.4081
1044	SLD 4	3.62	0.6	33.38	-6.5997	-0.0085	1.268
1044	SLD 5	1.42	2.51	31.96	-6.401	-0.0187	0.4982
1044	SLD 6	1.15	2.51	31.92	-6.3947	-0.0187	0.4053
1044	SLD 7	1.19	-0.56	34.71	-6.8814	-0.0231	0.4197
1044	SLD 8	0.93	-0.56	34.67	-6.8751	-0.0231	0.3267
1044	SLD 9	-0.88	2.44	32.23	-6.4915	-0.0298	-0.3053
1044	SLD 10	-1.14	2.45	32.2	-6.4852	-0.0298	-0.3982
1044	SLD 11	-1.1	-0.63	34.98	-6.9719	-0.0342	-0.3838
1044	SLD 12	-1.37	-0.62	34.94	-6.9656	-0.0342	-0.4767
1044	SLD 13	-3.57	1.29	33.52	-6.7668	-0.0444	-1.2465
1044	SLD 14	-3.97	1.3	33.47	-6.7573	-0.0444	-1.3866
1044	SLD 15	-3.63	0.37	34.35	-6.911	-0.0457	-1.2701
1044	SLD 16	-4.04	0.37	34.29	-6.9015	-0.0457	-1.4101
1044	SLV 1	9.52	2.24	31.52	-6.1773	0.0185	3.332
1044	SLV 2	8.58	2.26	31.39	-6.1551	0.0185	3.0059
1044	SLV 3	9.36	0.16	33.39	-6.5058	0.0155	3.2775
1044	SLV 4	8.43	0.17	33.26	-6.4836	0.0155	2.9515
1044	SLV 5	3.27	4.49	30.06	-6.0371	-0.0084	1.147
1044	SLV 6	2.66	4.5	29.97	-6.0226	-0.0084	0.9345
1044	SLV 7	2.75	-2.46	36.29	-7.1322	-0.0184	0.9655
1044	SLV 8	2.15	-2.45	36.21	-7.1178	-0.0184	0.7531
1044	SLV 9	-2.1	4.34	30.7	-6.2488	-0.0345	-0.7316
1044	SLV 10	-2.7	4.34	30.61	-6.2344	-0.0345	-0.944
1044	SLV 11	-2.61	-2.62	36.93	-7.344	-0.0445	-0.9131
1044	SLV 12	-3.22	-2.61	36.85	-7.3295	-0.0445	-1.1255
1044	SLV 13	-8.38	1.72	33.65	-6.883	-0.0684	-2.93
1044	SLV 14	-9.31	1.73	33.51	-6.8608	-0.0684	-3.256
1044	SLV 15	-8.53	-0.37	35.52	-7.2115	-0.0714	-2.9845
1044	SLV 16	-9.47	-0.36	35.39	-7.1893	-0.0714	-3.3105
1044	CRTFP Ux+	0	0	0	0	0	0
1044	CRTFP Ux-	0	0	0	0	0	0
1044	CRTFP Uy+	0	0	0	0	0	0
1044	CRTFP Uy-	0	0	0	0	0	0
1045	SLU 1	0.08	0.92	32.15	-7.035	-0.0385	0.029
1045	SLU 2	0.05	0.89	32.22	-7.0485	-0.0384	0.0201
1045	SLU 3	0.08	0.95	32.9	-7.1855	-0.0395	0.0301
1045	SLU 4	0.06	0.93	32.94	-7.1936	-0.0394	0.0248
1045	SLU 5	0.06	0.9	32.66	-7.1383	-0.039	0.0224
1045	SLU 6	0.09	0.97	33.34	-7.2752	-0.0402	0.0324
1045	SLU 7	0.07	0.95	33.38	-7.2834	-0.0401	0.027
1045	SLU 8	0.09	0.95	33.03	-7.2145	-0.0398	0.0335
1045	SLU 9	0.07	0.93	33.07	-7.2226	-0.0397	0.0282
1045	SLU 10	0.04	1.02	36.3	-7.8931	-0.0438	0.0147
1045	SLU 11	0.06	1.08	36.98	-8.0301	-0.0449	0.0247
1045	SLU 12	0.05	1.06	37.02	-8.0382	-0.0448	0.0193
1045	SLU 13	0.04	1.03	36.74	-7.9829	-0.0444	0.0169
1045	SLU 14	0.07	1.1	37.42	-8.1199	-0.0456	0.0269
1045	SLU 15	0.05	1.08	37.46	-8.128	-0.0455	0.0216
1045	SLU 16	0.07	1.08	37.11	-8.0591	-0.0452	0.0281
1045	SLU 17	0.06	1.06	37.15	-8.0673	-0.0452	0.0227
1045	SLU 18	0.05	1.11	37.98	-8.2416	-0.0462	0.0213
1045	SLU 19	0.04	1.09	38.02	-8.2497	-0.0461	0.0159
1045	SLU 20	0.06	1.12	38.42	-8.3313	-0.0468	0.0235
1045	SLU 21	0.04	1.1	38.46	-8.3395	-0.0468	0.0182
1045	SLU 22	0.07	1.1	36.23	-7.8701	-0.044	0.0274
1045	SLU 23	0.05	1.07	36.3	-7.8836	-0.0439	0.0185
1045	SLU 24	0.07	1.13	36.97	-8.0206	-0.045	0.0285
1045	SLU 25	0.06	1.11	37.02	-8.0287	-0.0449	0.0232

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1045	SLU 26	0.05	1.08	36.74	-7.9734	-0.0445	0.0208
1045	SLU 27	0.08	1.15	37.41	-8.1103	-0.0456	0.0308
1045	SLU 28	0.07	1.13	37.46	-8.1185	-0.0456	0.0254
1045	SLU 29	0.08	1.13	37.11	-8.0496	-0.0453	0.0319
1045	SLU 30	0.07	1.11	37.15	-8.0577	-0.0452	0.0266
1045	SLU 31	0.03	1.2	40.38	-8.7282	-0.0493	0.0131
1045	SLU 32	0.06	1.26	41.05	-8.8652	-0.0504	0.0231
1045	SLU 33	0.04	1.24	41.1	-8.8733	-0.0503	0.0178
1045	SLU 34	0.04	1.21	40.82	-8.818	-0.0499	0.0153
1045	SLU 35	0.06	1.28	41.49	-8.955	-0.0511	0.0253
1045	SLU 36	0.05	1.26	41.54	-8.9631	-0.051	0.02
1045	SLU 37	0.07	1.26	41.18	-8.8942	-0.0507	0.0265
1045	SLU 38	0.05	1.24	41.23	-8.9024	-0.0506	0.0212
1045	SLU 39	0.05	1.29	42.05	-9.0767	-0.0517	0.0197
1045	SLU 40	0.03	1.27	42.1	-9.0848	-0.0516	0.0143
1045	SLU 41	0.05	1.3	42.49	-9.1664	-0.0523	0.0219
1045	SLU 42	0.04	1.28	42.53	-9.1746	-0.0523	0.0166
1045	SLU 43	0.1	1.13	40.4	-8.8591	-0.0481	0.0383
1045	SLU 44	0.08	1.1	40.47	-8.8727	-0.048	0.0294
1045	SLU 45	0.1	1.16	41.15	-9.0096	-0.0491	0.0394
1045	SLU 46	0.09	1.15	41.19	-9.0178	-0.0491	0.034
1045	SLU 47	0.08	1.11	40.91	-8.9625	-0.0487	0.0316
1045	SLU 48	0.11	1.18	41.59	-9.0994	-0.0498	0.0416
1045	SLU 49	0.1	1.16	41.63	-9.1075	-0.0498	0.0363
1045	SLU 50	0.11	1.16	41.28	-9.0387	-0.0494	0.0428
1045	SLU 51	0.1	1.14	41.32	-9.0468	-0.0494	0.0374
1045	SLU 52	0.06	1.23	44.55	-9.7173	-0.0534	0.0239
1045	SLU 53	0.09	1.3	45.23	-9.8543	-0.0545	0.0339
1045	SLU 54	0.07	1.28	45.27	-9.8624	-0.0545	0.0286
1045	SLU 55	0.07	1.25	44.99	-9.8071	-0.0541	0.0262
1045	SLU 56	0.09	1.31	45.67	-9.944	-0.0552	0.0362
1045	SLU 57	0.08	1.29	45.71	-9.9522	-0.0552	0.0308
1045	SLU 58	0.1	1.29	45.36	-9.8833	-0.0549	0.0373
1045	SLU 59	0.08	1.27	45.4	-9.8914	-0.0548	0.032
1045	SLU 60	0.08	1.32	46.23	-10.0657	-0.0558	0.0305
1045	SLU 61	0.06	1.3	46.27	-10.0739	-0.0558	0.0252
1045	SLU 62	0.09	1.33	46.67	-10.1555	-0.0565	0.0327
1045	SLU 63	0.07	1.31	46.71	-10.1636	-0.0564	0.0274
1045	SLU 64	0.1	1.31	44.47	-9.6943	-0.0536	0.0367
1045	SLU 65	0.07	1.28	44.55	-9.7078	-0.0535	0.0278
1045	SLU 66	0.1	1.34	45.22	-9.8448	-0.0546	0.0378
1045	SLU 67	0.08	1.33	45.27	-9.8529	-0.0546	0.0324
1045	SLU 68	0.08	1.29	44.98	-9.7976	-0.0542	0.03
1045	SLU 69	0.11	1.36	45.66	-9.9345	-0.0553	0.04
1045	SLU 70	0.09	1.34	45.7	-9.9426	-0.0552	0.0347
1045	SLU 71	0.11	1.34	45.35	-9.8738	-0.0549	0.0412
1045	SLU 72	0.09	1.32	45.4	-9.8819	-0.0549	0.0358
1045	SLU 73	0.05	1.41	48.62	-10.5524	-0.0589	0.0223
1045	SLU 74	0.08	1.48	49.3	-10.6894	-0.06	0.0323
1045	SLU 75	0.07	1.46	49.34	-10.6975	-0.06	0.027
1045	SLU 76	0.06	1.43	49.06	-10.6422	-0.0596	0.0246
1045	SLU 77	0.09	1.49	49.74	-10.7791	-0.0607	0.0346
1045	SLU 78	0.07	1.47	49.78	-10.7873	-0.0607	0.0292
1045	SLU 79	0.09	1.47	49.43	-10.7184	-0.0604	0.0357
1045	SLU 80	0.08	1.45	49.47	-10.7265	-0.0603	0.0304
1045	SLU 81	0.07	1.5	50.3	-10.9009	-0.0613	0.0289
1045	SLU 82	0.06	1.48	50.34	-10.909	-0.0613	0.0236
1045	SLU 83	0.08	1.51	50.74	-10.9906	-0.062	0.0312
1045	SLU 84	0.06	1.49	50.78	-10.9987	-0.0619	0.0258
1045	SLE RA 1	0.08	0.97	33.32	-7.2736	-0.04	0.0286
1045	SLE RA 2	0.06	0.95	33.36	-7.2826	-0.04	0.0226
1045	SLE RA 3	0.08	0.99	33.81	-7.3739	-0.0407	0.0293
1045	SLE RA 4	0.07	0.98	33.84	-7.3793	-0.0407	0.0257
1045	SLE RA 5	0.06	0.96	33.66	-7.3425	-0.0404	0.0241
1045	SLE RA 6	0.08	1	34.11	-7.4338	-0.0412	0.0308
1045	SLE RA 7	0.07	0.99	34.14	-7.4392	-0.0411	0.0272
1045	SLE RA 8	0.08	0.99	33.9	-7.3933	-0.0409	0.0316
1045	SLE RA 9	0.07	0.98	33.93	-7.3987	-0.0409	0.028
1045	SLE RA 10	0.05	1.04	36.08	-7.8457	-0.0436	0.019
1045	SLE RA 11	0.07	1.08	36.53	-7.937	-0.0443	0.0257
1045	SLE RA 12	0.06	1.07	36.56	-7.9424	-0.0443	0.0221
1045	SLE RA 13	0.05	1.05	36.37	-7.9055	-0.044	0.0205
1045	SLE RA 14	0.07	1.09	36.83	-7.9968	-0.0448	0.0272
1045	SLE RA 15	0.06	1.08	36.85	-8.0023	-0.0447	0.0236
1045	SLE RA 16	0.07	1.08	36.62	-7.9564	-0.0445	0.0279
1045	SLE RA 17	0.06	1.06	36.65	-7.9618	-0.0445	0.0244
1045	SLE RA 18	0.06	1.09	37.2	-8.078	-0.0452	0.0234
1045	SLE RA 19	0.05	1.08	37.23	-8.0834	-0.0451	0.0198
1045	SLE RA 20	0.06	1.1	37.49	-8.1378	-0.0456	0.0249
1045	SLE RA 21	0.05	1.09	37.52	-8.1432	-0.0456	0.0213
1045	SLE FR 1	0.08	0.97	33.32	-7.2736	-0.04	0.0286
1045	SLE FR 2	0.07	0.96	33.32	-7.2754	-0.04	0.0274
1045	SLE FR 3	0.08	0.97	33.43	-7.2975	-0.0402	0.0292
1045	SLE FR 4	0.07	1	34.49	-7.5167	-0.0416	0.0258
1045	SLE FR 5	0.07	1.01	34.6	-7.5388	-0.0417	0.0276
1045	SLE FR 6	0.07	1.03	35.26	-7.6758	-0.0426	0.026
1045	SLE QP 1	0.08	0.97	33.32	-7.2736	-0.04	0.0286
1045	SLE QP 2	0.07	1.01	34.48	-7.5149	-0.0416	0.027
1045	SLD 1	4.07	1.57	33.07	-7.0929	-0.0221	1.4478
1045	SLD 2	3.66	1.59	33.01	-7.0834	-0.0221	1.3078

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1045	SLD 3	4.13	0.64	33.94	-7.2609	-0.024	1.4243
1045	SLD 4	3.73	0.66	33.88	-7.2515	-0.024	1.2843
1045	SLD 5	1.24	2.58	32.75	-7.1351	-0.0329	0.5142
1045	SLD 6	0.97	2.59	32.71	-7.1288	-0.0329	0.4213
1045	SLD 7	1.46	-0.51	35.65	-7.6953	-0.0391	0.4361
1045	SLD 8	1.2	-0.5	35.61	-7.689	-0.0391	0.3432
1045	SLD 9	-1.06	2.51	33.35	-7.3408	-0.044	-0.2892
1045	SLD 10	-1.32	2.53	33.32	-7.3345	-0.044	-0.3821
1045	SLD 11	-0.83	-0.58	36.25	-7.901	-0.0503	-0.3673
1045	SLD 12	-1.1	-0.56	36.21	-7.8947	-0.0502	-0.4602
1045	SLD 13	-3.59	1.35	35.08	-7.7783	-0.0591	-1.2303
1045	SLD 14	-3.99	1.37	35.02	-7.7689	-0.0591	-1.3703
1045	SLD 15	-3.52	0.43	35.95	-7.9464	-0.061	-1.2537
1045	SLD 16	-3.92	0.45	35.89	-7.9369	-0.061	-1.3938
1045	SLV 1	9.41	2.28	31.21	-6.5331	0.0039	3.348
1045	SLV 2	8.47	2.33	31.07	-6.5111	0.0039	3.022
1045	SLV 3	9.56	0.18	33.18	-6.9153	-0.0004	3.2938
1045	SLV 4	8.63	0.23	33.04	-6.8933	-0.0004	2.9679
1045	SLV 5	2.8	4.57	30.53	-6.6446	-0.0215	1.1627
1045	SLV 6	2.19	4.6	30.45	-6.6302	-0.0215	0.9503
1045	SLV 7	3.32	-2.44	37.1	-7.9186	-0.0356	0.9823
1045	SLV 8	2.71	-2.4	37.02	-7.9042	-0.0356	0.7699
1045	SLV 9	-2.57	4.42	31.95	-7.1256	-0.0475	-0.7159
1045	SLV 10	-3.18	4.45	31.86	-7.1112	-0.0475	-0.9282
1045	SLV 11	-2.05	-2.59	38.51	-8.3996	-0.0616	-0.8963
1045	SLV 12	-2.66	-2.55	38.43	-8.3852	-0.0616	-1.1087
1045	SLV 13	-8.49	1.78	35.92	-8.1365	-0.0828	-2.9138
1045	SLV 14	-9.42	1.83	35.79	-8.1145	-0.0828	-3.2398
1045	SLV 15	-8.33	-0.32	37.89	-8.5187	-0.087	-2.968
1045	SLV 16	-9.27	-0.27	37.76	-8.4966	-0.087	-3.2939
1045	CRTFP Ux+	0	0	0	0	0	0
1045	CRTFP Ux-	0	0	0	0	0	0
1045	CRTFP Uy+	0	0	0	0	0	0
1045	CRTFP Uy-	0	0	0	0	0	0
1046	SLU 1	0.12	0.98	33.44	-8.0952	-0.0469	0.0444
1046	SLU 2	0.1	0.95	33.51	-8.1085	-0.0468	0.0354
1046	SLU 3	0.13	1.02	34.23	-8.2735	-0.0482	0.0459
1046	SLU 4	0.11	1	34.27	-8.2815	-0.0481	0.0405
1046	SLU 5	0.1	0.97	33.97	-8.2152	-0.0476	0.0378
1046	SLU 6	0.13	1.03	34.69	-8.3802	-0.049	0.0484
1046	SLU 7	0.12	1.01	34.73	-8.3882	-0.0489	0.0429
1046	SLU 8	0.13	1.01	34.37	-8.3085	-0.0485	0.0494
1046	SLU 9	0.12	0.99	34.41	-8.3165	-0.0485	0.0439
1046	SLU 10	0.08	1.09	37.77	-9.1032	-0.0535	0.0315
1046	SLU 11	0.11	1.16	38.49	-9.2682	-0.0548	0.042
1046	SLU 12	0.1	1.14	38.53	-9.2761	-0.0548	0.0366
1046	SLU 13	0.09	1.11	38.24	-9.2098	-0.0543	0.034
1046	SLU 14	0.12	1.17	38.95	-9.3748	-0.0556	0.0445
1046	SLU 15	0.1	1.15	38.99	-9.3828	-0.0555	0.0391
1046	SLU 16	0.12	1.15	38.63	-9.3032	-0.0552	0.0455
1046	SLU 17	0.11	1.13	38.67	-9.3112	-0.0551	0.0401
1046	SLU 18	0.1	1.18	39.53	-9.5161	-0.0564	0.0389
1046	SLU 19	0.09	1.16	39.57	-9.5241	-0.0564	0.0335
1046	SLU 20	0.11	1.2	39.99	-9.6228	-0.0572	0.0414
1046	SLU 21	0.1	1.18	40.03	-9.6308	-0.0572	0.0359
1046	SLU 22	0.12	1.17	37.7	-9.0808	-0.0537	0.0445
1046	SLU 23	0.09	1.14	37.77	-9.0941	-0.0536	0.0354
1046	SLU 24	0.12	1.2	38.49	-9.2591	-0.0549	0.046
1046	SLU 25	0.11	1.19	38.53	-9.2671	-0.0548	0.0405
1046	SLU 26	0.1	1.15	38.23	-9.2008	-0.0543	0.0379
1046	SLU 27	0.13	1.22	38.95	-9.3658	-0.0557	0.0484
1046	SLU 28	0.12	1.2	38.99	-9.3738	-0.0556	0.043
1046	SLU 29	0.13	1.2	38.63	-9.2941	-0.0552	0.0494
1046	SLU 30	0.12	1.18	38.67	-9.3021	-0.0552	0.044
1046	SLU 31	0.08	1.28	42.03	-10.0888	-0.0602	0.0316
1046	SLU 32	0.11	1.34	42.75	-10.2538	-0.0615	0.0421
1046	SLU 33	0.1	1.33	42.79	-10.2618	-0.0615	0.0367
1046	SLU 34	0.09	1.29	42.5	-10.1954	-0.061	0.034
1046	SLU 35	0.12	1.36	43.21	-10.3604	-0.0623	0.0446
1046	SLU 36	0.1	1.34	43.25	-10.3684	-0.0623	0.0391
1046	SLU 37	0.12	1.34	42.89	-10.2888	-0.0619	0.0455
1046	SLU 38	0.11	1.32	42.93	-10.2968	-0.0618	0.0401
1046	SLU 39	0.1	1.37	43.79	-10.5017	-0.0631	0.039
1046	SLU 40	0.09	1.35	43.83	-10.5097	-0.0631	0.0335
1046	SLU 41	0.11	1.38	44.25	-10.6084	-0.0639	0.0414
1046	SLU 42	0.09	1.37	44.29	-10.6164	-0.0639	0.036
1046	SLU 43	0.16	1.21	42.02	-10.1858	-0.0587	0.0578
1046	SLU 44	0.13	1.18	42.09	-10.1991	-0.0586	0.0487
1046	SLU 45	0.16	1.24	42.8	-10.3641	-0.0599	0.0592
1046	SLU 46	0.15	1.23	42.84	-10.3721	-0.0599	0.0538
1046	SLU 47	0.14	1.19	42.55	-10.3058	-0.0594	0.0512
1046	SLU 48	0.17	1.26	43.26	-10.4708	-0.0607	0.0617
1046	SLU 49	0.15	1.24	43.3	-10.4788	-0.0607	0.0562
1046	SLU 50	0.17	1.24	42.94	-10.3992	-0.0603	0.0627
1046	SLU 51	0.16	1.22	42.98	-10.4072	-0.0602	0.0572
1046	SLU 52	0.12	1.32	46.35	-11.1938	-0.0652	0.0448
1046	SLU 53	0.15	1.38	47.06	-11.3588	-0.0666	0.0554
1046	SLU 54	0.13	1.37	47.1	-11.3668	-0.0665	0.0499
1046	SLU 55	0.13	1.34	46.81	-11.3005	-0.066	0.0473
1046	SLU 56	0.16	1.4	47.52	-11.4655	-0.0674	0.0578

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1046	SLU 57	0.14	1.38	47.56	-11.4735	-0.0673	0.0524
1046	SLU 58	0.16	1.38	47.2	-11.3938	-0.0669	0.0588
1046	SLU 59	0.14	1.36	47.24	-11.4018	-0.0669	0.0534
1046	SLU 60	0.14	1.41	48.1	-11.6068	-0.0682	0.0522
1046	SLU 61	0.12	1.39	48.15	-11.6148	-0.0681	0.0468
1046	SLU 62	0.15	1.42	48.57	-11.7134	-0.069	0.0547
1046	SLU 63	0.13	1.41	48.61	-11.7214	-0.0689	0.0493
1046	SLU 64	0.16	1.4	46.28	-11.1714	-0.0654	0.0578
1046	SLU 65	0.13	1.37	46.35	-11.1848	-0.0653	0.0487
1046	SLU 66	0.16	1.43	47.06	-11.3497	-0.0667	0.0593
1046	SLU 67	0.15	1.41	47.1	-11.3577	-0.0666	0.0538
1046	SLU 68	0.14	1.38	46.81	-11.2914	-0.0661	0.0512
1046	SLU 69	0.17	1.45	47.52	-11.4564	-0.0675	0.0617
1046	SLU 70	0.15	1.43	47.56	-11.4644	-0.0674	0.0563
1046	SLU 71	0.17	1.43	47.2	-11.3848	-0.067	0.0627
1046	SLU 72	0.16	1.41	47.24	-11.3928	-0.0669	0.0573
1046	SLU 73	0.12	1.51	50.61	-12.1794	-0.072	0.0449
1046	SLU 74	0.15	1.57	51.32	-12.3444	-0.0733	0.0554
1046	SLU 75	0.13	1.56	51.36	-12.3524	-0.0732	0.05
1046	SLU 76	0.13	1.52	51.07	-12.2861	-0.0728	0.0473
1046	SLU 77	0.16	1.59	51.78	-12.4511	-0.0741	0.0579
1046	SLU 78	0.14	1.57	51.82	-12.4591	-0.074	0.0524
1046	SLU 79	0.16	1.57	51.46	-12.3794	-0.0737	0.0589
1046	SLU 80	0.14	1.55	51.5	-12.3874	-0.0736	0.0534
1046	SLU 81	0.14	1.6	52.36	-12.5924	-0.0749	0.0523
1046	SLU 82	0.12	1.58	52.41	-12.6004	-0.0749	0.0468
1046	SLU 83	0.15	1.61	52.83	-12.699	-0.0757	0.0547
1046	SLU 84	0.13	1.6	52.87	-12.707	-0.0756	0.0493
1046	SLE RA 1	0.12	1.03	34.66	-8.3768	-0.0488	0.0445
1046	SLE RA 2	0.1	1.01	34.71	-8.3857	-0.0488	0.0384
1046	SLE RA 3	0.12	1.06	35.18	-8.4957	-0.0497	0.0454
1046	SLE RA 4	0.11	1.05	35.21	-8.501	-0.0496	0.0418
1046	SLE RA 5	0.11	1.02	35.01	-8.4568	-0.0493	0.0401
1046	SLE RA 6	0.13	1.07	35.49	-8.5668	-0.0502	0.0471
1046	SLE RA 7	0.12	1.06	35.52	-8.5721	-0.0502	0.0434
1046	SLE RA 8	0.13	1.05	35.28	-8.519	-0.0499	0.0477
1046	SLE RA 9	0.12	1.04	35.3	-8.5243	-0.0499	0.0441
1046	SLE RA 10	0.1	1.11	37.55	-9.0488	-0.0532	0.0358
1046	SLE RA 11	0.12	1.15	38.02	-9.1588	-0.0541	0.0429
1046	SLE RA 12	0.11	1.14	38.05	-9.1641	-0.0541	0.0392
1046	SLE RA 13	0.1	1.12	37.86	-9.1199	-0.0537	0.0375
1046	SLE RA 14	0.12	1.16	38.33	-9.2299	-0.0546	0.0445
1046	SLE RA 15	0.11	1.15	38.36	-9.2352	-0.0546	0.0409
1046	SLE RA 16	0.12	1.15	38.12	-9.1821	-0.0543	0.0452
1046	SLE RA 17	0.11	1.14	38.15	-9.1875	-0.0543	0.0415
1046	SLE RA 18	0.11	1.17	38.72	-9.3241	-0.0552	0.0408
1046	SLE RA 19	0.1	1.16	38.75	-9.3294	-0.0551	0.0372
1046	SLE RA 20	0.11	1.18	39.03	-9.3952	-0.0557	0.0424
1046	SLE RA 21	0.1	1.17	39.05	-9.4005	-0.0557	0.0388
1046	SLE FR 1	0.12	1.03	34.66	-8.3768	-0.0488	0.0445
1046	SLE FR 2	0.12	1.03	34.67	-8.3786	-0.0488	0.0432
1046	SLE FR 3	0.12	1.04	34.78	-8.4052	-0.0491	0.0451
1046	SLE FR 4	0.11	1.07	35.89	-8.6627	-0.0507	0.0421
1046	SLE FR 5	0.12	1.08	36	-8.6894	-0.051	0.044
1046	SLE FR 6	0.12	1.1	36.69	-8.8504	-0.052	0.0426
1046	SLE QP 1	0.12	1.03	34.66	-8.3768	-0.0488	0.0445
1046	SLE QP 2	0.12	1.07	35.88	-8.661	-0.0507	0.0434
1046	SLD 1	4.11	1.62	33.89	-8.04	-0.0314	1.4399
1046	SLD 2	3.71	1.66	33.83	-8.0298	-0.0314	1.2999
1046	SLD 3	4.18	0.68	34.81	-8.24	-0.0335	1.4631
1046	SLD 4	3.77	0.72	34.76	-8.2299	-0.0335	1.3232
1046	SLD 5	1.29	2.65	33.89	-8.173	-0.0417	0.4525
1046	SLD 6	1.02	2.68	33.85	-8.1663	-0.0417	0.3596
1046	SLD 7	1.51	-0.47	36.97	-8.84	-0.0488	0.53
1046	SLD 8	1.24	-0.45	36.93	-8.8333	-0.0488	0.4371
1046	SLD 9	-1.01	2.59	34.82	-8.4887	-0.0527	-0.3504
1046	SLD 10	-1.27	2.62	34.79	-8.4819	-0.0527	-0.4433
1046	SLD 11	-0.79	-0.53	37.91	-9.1556	-0.0598	-0.2729
1046	SLD 12	-1.05	-0.51	37.87	-9.1489	-0.0598	-0.3658
1046	SLD 13	-3.54	1.42	37	-9.0921	-0.068	-1.2365
1046	SLD 14	-3.94	1.46	36.94	-9.0819	-0.068	-1.3764
1046	SLD 15	-3.47	0.49	37.93	-9.2922	-0.0701	-1.2132
1046	SLD 16	-3.88	0.53	37.87	-9.282	-0.0701	-1.3532
1046	SLV 1	9.45	2.32	31.25	-7.2152	-0.0056	3.3082
1046	SLV 2	8.52	2.41	31.12	-7.1915	-0.0056	2.9825
1046	SLV 3	9.6	0.2	33.35	-7.6693	-0.0104	3.362
1046	SLV 4	8.67	0.29	33.22	-7.6456	-0.0104	3.0363
1046	SLV 5	2.85	4.66	31.33	-7.5426	-0.03	0.9985
1046	SLV 6	2.24	4.71	31.25	-7.5272	-0.0299	0.7863
1046	SLV 7	3.36	-2.43	38.32	-9.0564	-0.0459	1.1777
1046	SLV 8	2.75	-2.37	38.24	-9.041	-0.0459	0.9655
1046	SLV 9	-2.52	4.52	33.52	-8.281	-0.0556	-0.8788
1046	SLV 10	-3.13	4.57	33.43	-8.2656	-0.0556	-1.091
1046	SLV 11	-2.01	-2.57	40.51	-9.7947	-0.0715	-0.6996
1046	SLV 12	-2.62	-2.51	40.42	-9.7793	-0.0715	-0.9118
1046	SLV 13	-8.44	1.86	38.54	-9.6763	-0.0911	-2.9496
1046	SLV 14	-9.37	1.95	38.41	-9.6527	-0.0911	-3.2753
1046	SLV 15	-8.28	-0.27	40.64	-10.1304	-0.0959	-2.8958
1046	SLV 16	-9.22	-0.18	40.5	-10.1068	-0.0959	-3.2215
1046	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1046	CRTFP Ux-	0	0	0	0	0	0
1046	CRTFP Uy+	0	0	0	0	0	0
1046	CRTFP Uy-	0	0	0	0	0	0
1047	SLU 1	0.17	1.04	34.87	-9.3269	-0.0466	0.0601
1047	SLU 2	0.14	1.01	34.93	-9.3404	-0.0465	0.0509
1047	SLU 3	0.17	1.08	35.69	-9.5375	-0.0479	0.062
1047	SLU 4	0.16	1.06	35.73	-9.5456	-0.0478	0.0565
1047	SLU 5	0.15	1.03	35.42	-9.4665	-0.0473	0.0536
1047	SLU 6	0.18	1.09	36.17	-9.6636	-0.0486	0.0646
1047	SLU 7	0.16	1.07	36.21	-9.6717	-0.0486	0.0591
1047	SLU 8	0.18	1.07	35.84	-9.5791	-0.0482	0.0655
1047	SLU 9	0.17	1.05	35.88	-9.5872	-0.0481	0.06
1047	SLU 10	0.13	1.16	39.4	-10.5093	-0.0532	0.0487
1047	SLU 11	0.16	1.23	40.15	-10.7064	-0.0545	0.0597
1047	SLU 12	0.15	1.21	40.19	-10.7145	-0.0544	0.0542
1047	SLU 13	0.14	1.18	39.88	-10.6354	-0.0539	0.0514
1047	SLU 14	0.17	1.24	40.64	-10.8325	-0.0553	0.0624
1047	SLU 15	0.16	1.22	40.68	-10.8406	-0.0552	0.0569
1047	SLU 16	0.17	1.22	40.3	-10.748	-0.0548	0.0632
1047	SLU 17	0.16	1.2	40.34	-10.7561	-0.0547	0.0577
1047	SLU 18	0.16	1.25	41.24	-10.9968	-0.0561	0.0569
1047	SLU 19	0.14	1.24	41.28	-11.0049	-0.056	0.0514
1047	SLU 20	0.16	1.27	41.73	-11.1229	-0.0569	0.0596
1047	SLU 21	0.15	1.25	41.77	-11.131	-0.0568	0.0541
1047	SLU 22	0.17	1.23	39.33	-10.4875	-0.0533	0.0618
1047	SLU 23	0.14	1.21	39.4	-10.5009	-0.0532	0.0526
1047	SLU 24	0.18	1.27	40.15	-10.6981	-0.0546	0.0637
1047	SLU 25	0.16	1.26	40.19	-10.7061	-0.0545	0.0581
1047	SLU 26	0.15	1.22	39.88	-10.627	-0.054	0.0553
1047	SLU 27	0.18	1.29	40.64	-10.8242	-0.0553	0.0663
1047	SLU 28	0.17	1.27	40.68	-10.8322	-0.0553	0.0608
1047	SLU 29	0.19	1.27	40.3	-10.7397	-0.0549	0.0672
1047	SLU 30	0.17	1.25	40.34	-10.7477	-0.0548	0.0617
1047	SLU 31	0.14	1.36	43.86	-11.6698	-0.0599	0.0504
1047	SLU 32	0.17	1.42	44.62	-11.867	-0.0612	0.0614
1047	SLU 33	0.15	1.4	44.65	-11.875	-0.0611	0.0559
1047	SLU 34	0.14	1.37	44.35	-11.7959	-0.0606	0.0531
1047	SLU 35	0.18	1.44	45.1	-11.9931	-0.062	0.0641
1047	SLU 36	0.16	1.42	45.14	-12.0011	-0.0619	0.0586
1047	SLU 37	0.18	1.42	44.77	-11.9086	-0.0615	0.0649
1047	SLU 38	0.16	1.4	44.81	-11.9167	-0.0614	0.0594
1047	SLU 39	0.16	1.45	45.71	-12.1574	-0.0628	0.0586
1047	SLU 40	0.14	1.43	45.75	-12.1654	-0.0627	0.0531
1047	SLU 41	0.17	1.46	46.19	-12.2835	-0.0636	0.0613
1047	SLU 42	0.15	1.45	46.23	-12.2915	-0.0635	0.0558
1047	SLU 43	0.22	1.28	43.8	-11.7271	-0.0583	0.0776
1047	SLU 44	0.19	1.25	43.86	-11.7405	-0.0582	0.0684
1047	SLU 45	0.22	1.32	44.62	-11.9377	-0.0596	0.0794
1047	SLU 46	0.2	1.3	44.66	-11.9458	-0.0595	0.0739
1047	SLU 47	0.2	1.27	44.35	-11.8666	-0.059	0.0711
1047	SLU 48	0.23	1.34	45.1	-12.0638	-0.0603	0.0821
1047	SLU 49	0.21	1.32	45.14	-12.0719	-0.0603	0.0766
1047	SLU 50	0.23	1.31	44.77	-11.9793	-0.0599	0.0829
1047	SLU 51	0.21	1.3	44.81	-11.9874	-0.0598	0.0774
1047	SLU 52	0.18	1.4	48.33	-12.9094	-0.0649	0.0661
1047	SLU 53	0.21	1.47	49.08	-13.1066	-0.0662	0.0772
1047	SLU 54	0.2	1.45	49.12	-13.1147	-0.0661	0.0717
1047	SLU 55	0.19	1.42	48.81	-13.0355	-0.0656	0.0688
1047	SLU 56	0.22	1.49	49.57	-13.2327	-0.067	0.0799
1047	SLU 57	0.2	1.47	49.61	-13.2408	-0.0669	0.0743
1047	SLU 58	0.22	1.46	49.23	-13.1482	-0.0665	0.0807
1047	SLU 59	0.21	1.45	49.27	-13.1563	-0.0664	0.0752
1047	SLU 60	0.2	1.5	50.17	-13.397	-0.0678	0.0744
1047	SLU 61	0.19	1.48	50.21	-13.405	-0.0677	0.0689
1047	SLU 62	0.21	1.51	50.66	-13.5231	-0.0686	0.077
1047	SLU 63	0.2	1.5	50.7	-13.5311	-0.0685	0.0715
1047	SLU 64	0.22	1.48	48.26	-12.8877	-0.065	0.0793
1047	SLU 65	0.19	1.45	48.33	-12.9011	-0.0649	0.0701
1047	SLU 66	0.22	1.52	49.08	-13.0983	-0.0663	0.0811
1047	SLU 67	0.21	1.5	49.12	-13.1063	-0.0662	0.0756
1047	SLU 68	0.2	1.47	48.81	-13.0272	-0.0657	0.0728
1047	SLU 69	0.23	1.53	49.57	-13.2244	-0.067	0.0838
1047	SLU 70	0.22	1.52	49.61	-13.2324	-0.067	0.0783
1047	SLU 71	0.23	1.51	49.23	-13.1399	-0.0666	0.0846
1047	SLU 72	0.22	1.49	49.27	-13.1479	-0.0665	0.0791
1047	SLU 73	0.19	1.6	52.79	-14.07	-0.0716	0.0678
1047	SLU 74	0.22	1.67	53.55	-14.2672	-0.0729	0.0789
1047	SLU 75	0.2	1.65	53.58	-14.2752	-0.0728	0.0734
1047	SLU 76	0.19	1.62	53.28	-14.1961	-0.0723	0.0705
1047	SLU 77	0.22	1.68	54.03	-14.3933	-0.0736	0.0815
1047	SLU 78	0.21	1.67	54.07	-14.4013	-0.0736	0.076
1047	SLU 79	0.23	1.66	53.7	-14.3088	-0.0732	0.0824
1047	SLU 80	0.21	1.64	53.74	-14.3168	-0.0731	0.0769
1047	SLU 81	0.21	1.69	54.64	-14.5575	-0.0745	0.0761
1047	SLU 82	0.19	1.68	54.68	-14.5656	-0.0744	0.0706
1047	SLU 83	0.22	1.71	55.12	-14.6836	-0.0753	0.0787
1047	SLU 84	0.2	1.69	55.16	-14.6917	-0.0752	0.0732
1047	SLE RA 1	0.17	1.09	36.14	-9.6585	-0.0486	0.0606
1047	SLE RA 2	0.15	1.08	36.19	-9.6675	-0.0485	0.0545
1047	SLE RA 3	0.17	1.12	36.69	-9.7989	-0.0494	0.0618

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1047	SLE RA 4	0.16	1.11	36.72	-9.8043	-0.0493	0.0582
1047	SLE RA 5	0.16	1.09	36.51	-9.7515	-0.049	0.0563
1047	SLE RA 6	0.18	1.13	37.01	-9.883	-0.0499	0.0636
1047	SLE RA 7	0.17	1.12	37.04	-9.8884	-0.0499	0.0599
1047	SLE RA 8	0.18	1.12	36.79	-9.8267	-0.0496	0.0642
1047	SLE RA 9	0.17	1.1	36.82	-9.832	-0.0495	0.0605
1047	SLE RA 10	0.15	1.18	39.16	-10.4467	-0.0529	0.053
1047	SLE RA 11	0.17	1.22	39.67	-10.5782	-0.0538	0.0603
1047	SLE RA 12	0.16	1.21	39.69	-10.5836	-0.0537	0.0567
1047	SLE RA 13	0.15	1.19	39.49	-10.5308	-0.0534	0.0548
1047	SLE RA 14	0.17	1.23	39.99	-10.6623	-0.0543	0.0621
1047	SLE RA 15	0.16	1.22	40.02	-10.6676	-0.0543	0.0584
1047	SLE RA 16	0.17	1.22	39.77	-10.6059	-0.054	0.0627
1047	SLE RA 17	0.16	1.2	39.79	-10.6113	-0.054	0.059
1047	SLE RA 18	0.16	1.24	40.39	-10.7718	-0.0549	0.0585
1047	SLE RA 19	0.15	1.23	40.42	-10.7771	-0.0548	0.0548
1047	SLE RA 20	0.17	1.25	40.72	-10.8558	-0.0554	0.0603
1047	SLE RA 21	0.16	1.24	40.74	-10.8612	-0.0553	0.0566
1047	SLE FR 1	0.17	1.09	36.14	-9.6585	-0.0486	0.0606
1047	SLE FR 2	0.16	1.09	36.15	-9.6603	-0.0485	0.0594
1047	SLE FR 3	0.17	1.1	36.27	-9.6922	-0.0488	0.0613
1047	SLE FR 4	0.16	1.13	37.43	-9.9943	-0.0504	0.0587
1047	SLE FR 5	0.17	1.14	37.55	-10.0261	-0.0507	0.0607
1047	SLE FR 6	0.16	1.17	38.27	-10.2151	-0.0517	0.0595
1047	SLE QP 1	0.17	1.09	36.14	-9.6585	-0.0486	0.0606
1047	SLE QP 2	0.17	1.14	37.42	-9.9925	-0.0504	0.06
1047	SLD 1	4.15	1.67	34.86	-9.1833	-0.0319	1.4549
1047	SLD 2	3.75	1.73	34.8	-9.1722	-0.0319	1.3151
1047	SLD 3	4.22	0.72	35.84	-9.417	-0.0338	1.4779
1047	SLD 4	3.82	0.78	35.79	-9.4059	-0.0338	1.3382
1047	SLD 5	1.34	2.73	35.17	-9.3973	-0.042	0.4689
1047	SLD 6	1.07	2.77	35.13	-9.3899	-0.042	0.3761
1047	SLD 7	1.55	-0.44	38.45	-10.1763	-0.0483	0.5457
1047	SLD 8	1.29	-0.4	38.41	-10.1689	-0.0483	0.453
1047	SLD 9	-0.96	2.68	36.43	-9.8161	-0.0526	-0.3331
1047	SLD 10	-1.22	2.71	36.39	-9.8087	-0.0526	-0.4258
1047	SLD 11	-0.74	-0.49	39.7	-10.595	-0.0589	-0.2562
1047	SLD 12	-1	-0.45	39.66	-10.5877	-0.0589	-0.3489
1047	SLD 13	-3.49	1.5	39.05	-10.5791	-0.0671	-1.2182
1047	SLD 14	-3.89	1.55	38.99	-10.568	-0.0671	-1.358
1047	SLD 15	-3.42	0.55	40.03	-10.8128	-0.069	-1.1952
1047	SLD 16	-3.82	0.6	39.98	-10.8017	-0.069	-1.3349
1047	SLV 1	9.49	2.35	31.47	-8.1078	-0.0072	3.3211
1047	SLV 2	8.56	2.49	31.34	-8.082	-0.0072	2.9957
1047	SLV 3	9.64	0.2	33.7	-8.6376	-0.0114	3.3744
1047	SLV 4	8.71	0.34	33.56	-8.6117	-0.0114	3.049
1047	SLV 5	2.9	4.74	32.28	-8.6282	-0.031	1.0146
1047	SLV 6	2.29	4.83	32.2	-8.6113	-0.031	0.8027
1047	SLV 7	3.4	-2.43	39.7	-10.394	-0.0452	1.1923
1047	SLV 8	2.79	-2.34	39.61	-10.3772	-0.0452	0.9804
1047	SLV 9	-2.46	4.62	35.22	-9.6078	-0.0557	-0.8604
1047	SLV 10	-3.07	4.71	35.14	-9.591	-0.0557	-1.0724
1047	SLV 11	-1.96	-2.56	42.64	-11.3736	-0.0699	-0.6827
1047	SLV 12	-2.57	-2.47	42.55	-11.3568	-0.0699	-0.8947
1047	SLV 13	-8.38	1.94	41.27	-11.3733	-0.0894	-2.9291
1047	SLV 14	-9.31	2.07	41.14	-11.3474	-0.0895	-3.2544
1047	SLV 15	-8.23	-0.22	43.5	-11.903	-0.0937	-2.8758
1047	SLV 16	-9.16	-0.08	43.37	-11.8772	-0.0937	-3.2011
1047	CRTFP Ux+	0	0	0	0	0	0
1047	CRTFP Ux-	0	0	0	0	0	0
1047	CRTFP Uy+	0	0	0	0	0	0
1047	CRTFP Uy-	0	0	0	0	0	0
1048	SLU 1	0.19	0.98	32.76	-9.5701	0.5839	0.0505
1048	SLU 2	0.17	0.96	32.82	-9.5828	0.585	0.0425
1048	SLU 3	0.2	1.01	33.53	-9.7902	0.5976	0.0519
1048	SLU 4	0.19	1	33.57	-9.7978	0.5983	0.0471
1048	SLU 5	0.18	0.97	33.27	-9.7145	0.5931	0.0449
1048	SLU 6	0.21	1.03	33.99	-9.9219	0.6057	0.0542
1048	SLU 7	0.19	1.02	34.03	-9.9295	0.6064	0.0494
1048	SLU 8	0.21	1.01	33.68	-9.8335	0.6001	0.0552
1048	SLU 9	0.19	1	33.71	-9.8411	0.6008	0.0504
1048	SLU 10	0.17	1.1	37.02	-10.7994	0.6597	0.0393
1048	SLU 11	0.2	1.16	37.74	-11.0068	0.6723	0.0486
1048	SLU 12	0.18	1.14	37.77	-11.0144	0.6729	0.0438
1048	SLU 13	0.18	1.11	37.48	-10.9311	0.6678	0.0416
1048	SLU 14	0.21	1.17	38.2	-11.1385	0.6804	0.051
1048	SLU 15	0.19	1.16	38.23	-11.1461	0.6811	0.0462
1048	SLU 16	0.21	1.15	37.88	-11.0501	0.6748	0.0519
1048	SLU 17	0.19	1.14	37.92	-11.0578	0.6754	0.0471
1048	SLU 18	0.19	1.18	38.77	-11.3081	0.6905	0.0459
1048	SLU 19	0.18	1.17	38.8	-11.3158	0.6912	0.0411
1048	SLU 20	0.2	1.2	39.23	-11.4399	0.6987	0.0482
1048	SLU 21	0.18	1.18	39.26	-11.4475	0.6993	0.0434
1048	SLU 22	0.2	1.16	36.97	-10.7802	0.6585	0.0501
1048	SLU 23	0.18	1.14	37.03	-10.7929	0.6597	0.0421
1048	SLU 24	0.21	1.2	37.74	-11.0003	0.6723	0.0515
1048	SLU 25	0.19	1.18	37.78	-11.0079	0.6729	0.0467
1048	SLU 26	0.19	1.16	37.49	-10.9246	0.6678	0.0444
1048	SLU 27	0.22	1.21	38.2	-11.132	0.6804	0.0538
1048	SLU 28	0.2	1.2	38.24	-11.1396	0.681	0.049

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1048	SLU 29	0.22	1.19	37.89	-11.0436	0.6748	0.0548
1048	SLU 30	0.2	1.18	37.92	-11.0513	0.6754	0.05
1048	SLU 31	0.18	1.28	41.23	-12.0096	0.7343	0.0388
1048	SLU 32	0.21	1.34	41.95	-12.217	0.7469	0.0482
1048	SLU 33	0.19	1.33	41.98	-12.2246	0.7476	0.0434
1048	SLU 34	0.18	1.3	41.69	-12.1413	0.7424	0.0412
1048	SLU 35	0.21	1.36	42.41	-12.3487	0.755	0.0505
1048	SLU 36	0.2	1.34	42.44	-12.3563	0.7557	0.0457
1048	SLU 37	0.22	1.34	42.1	-12.2603	0.7494	0.0515
1048	SLU 38	0.2	1.32	42.13	-12.2679	0.7501	0.0467
1048	SLU 39	0.2	1.37	42.98	-12.5183	0.7652	0.0455
1048	SLU 40	0.18	1.35	43.01	-12.5259	0.7659	0.0407
1048	SLU 41	0.21	1.38	43.44	-12.65	0.7733	0.0478
1048	SLU 42	0.19	1.37	43.47	-12.6576	0.774	0.043
1048	SLU 43	0.25	1.21	41.14	-12.0262	0.7334	0.0659
1048	SLU 44	0.23	1.19	41.2	-12.0389	0.7346	0.0579
1048	SLU 45	0.26	1.24	41.92	-12.2463	0.7472	0.0672
1048	SLU 46	0.24	1.23	41.95	-12.2539	0.7478	0.0624
1048	SLU 47	0.23	1.2	41.66	-12.1706	0.7427	0.0602
1048	SLU 48	0.26	1.26	42.37	-12.378	0.7553	0.0695
1048	SLU 49	0.25	1.25	42.41	-12.3856	0.7559	0.0647
1048	SLU 50	0.27	1.24	42.06	-12.2896	0.7497	0.0705
1048	SLU 51	0.25	1.23	42.09	-12.2972	0.7503	0.0657
1048	SLU 52	0.22	1.33	45.41	-13.2555	0.8092	0.0546
1048	SLU 53	0.25	1.39	46.12	-13.4629	0.8218	0.0639
1048	SLU 54	0.24	1.37	46.16	-13.4706	0.8225	0.0591
1048	SLU 55	0.23	1.34	45.87	-13.3872	0.8173	0.0569
1048	SLU 56	0.26	1.4	46.58	-13.5946	0.8299	0.0663
1048	SLU 57	0.25	1.39	46.62	-13.6023	0.8306	0.0615
1048	SLU 58	0.26	1.38	46.27	-13.5062	0.8243	0.0673
1048	SLU 59	0.25	1.37	46.3	-13.5139	0.825	0.0625
1048	SLU 60	0.25	1.41	47.15	-13.7643	0.8401	0.0612
1048	SLU 61	0.23	1.4	47.19	-13.7719	0.8408	0.0564
1048	SLU 62	0.25	1.43	47.61	-13.896	0.8482	0.0635
1048	SLU 63	0.24	1.42	47.65	-13.9036	0.8489	0.0587
1048	SLU 64	0.26	1.39	45.35	-13.2363	0.8081	0.0654
1048	SLU 65	0.23	1.37	45.41	-13.249	0.8092	0.0574
1048	SLU 66	0.26	1.43	46.13	-13.4564	0.8218	0.0668
1048	SLU 67	0.25	1.42	46.16	-13.464	0.8225	0.062
1048	SLU 68	0.24	1.39	45.87	-13.3807	0.8173	0.0598
1048	SLU 69	0.27	1.44	46.59	-13.5881	0.8299	0.0691
1048	SLU 70	0.26	1.43	46.62	-13.5958	0.8306	0.0643
1048	SLU 71	0.27	1.42	46.27	-13.4997	0.8243	0.0701
1048	SLU 72	0.26	1.41	46.31	-13.5074	0.825	0.0653
1048	SLU 73	0.23	1.51	49.62	-14.4657	0.8839	0.0542
1048	SLU 74	0.26	1.57	50.33	-14.6731	0.8965	0.0635
1048	SLU 75	0.25	1.56	50.37	-14.6807	0.8972	0.0587
1048	SLU 76	0.24	1.53	50.08	-14.5974	0.892	0.0565
1048	SLU 77	0.27	1.59	50.79	-14.8048	0.9046	0.0658
1048	SLU 78	0.25	1.57	50.83	-14.8124	0.9053	0.061
1048	SLU 79	0.27	1.57	50.48	-14.7164	0.899	0.0668
1048	SLU 80	0.26	1.55	50.51	-14.724	0.8997	0.062
1048	SLU 81	0.26	1.6	51.36	-14.9744	0.9148	0.0608
1048	SLU 82	0.24	1.58	51.4	-14.982	0.9154	0.056
1048	SLU 83	0.26	1.61	51.82	-15.1061	0.9229	0.0631
1048	SLU 84	0.25	1.6	51.86	-15.1137	0.9236	0.0583
1048	SLE RA 1	0.2	1.03	33.96	-9.9158	0.6052	0.0504
1048	SLE RA 2	0.18	1.02	34	-9.9243	0.606	0.0451
1048	SLE RA 3	0.2	1.06	34.48	-10.0626	0.6144	0.0513
1048	SLE RA 4	0.19	1.05	34.5	-10.0676	0.6148	0.0481
1048	SLE RA 5	0.19	1.03	34.31	-10.0121	0.6114	0.0466
1048	SLE RA 6	0.21	1.07	34.78	-10.1504	0.6198	0.0529
1048	SLE RA 7	0.2	1.06	34.81	-10.1554	0.6202	0.0497
1048	SLE RA 8	0.21	1.05	34.57	-10.0914	0.616	0.0535
1048	SLE RA 9	0.2	1.04	34.6	-10.0965	0.6165	0.0503
1048	SLE RA 10	0.18	1.11	36.8	-10.7354	0.6557	0.0429
1048	SLE RA 11	0.2	1.15	37.28	-10.8737	0.6641	0.0491
1048	SLE RA 12	0.19	1.14	37.3	-10.8787	0.6646	0.0459
1048	SLE RA 13	0.18	1.12	37.11	-10.8232	0.6611	0.0445
1048	SLE RA 14	0.2	1.16	37.59	-10.9615	0.6695	0.0507
1048	SLE RA 15	0.19	1.15	37.61	-10.9665	0.67	0.0475
1048	SLE RA 16	0.21	1.15	37.38	-10.9025	0.6658	0.0514
1048	SLE RA 17	0.2	1.14	37.4	-10.9076	0.6663	0.0482
1048	SLE RA 18	0.19	1.17	37.97	-11.0745	0.6763	0.0473
1048	SLE RA 19	0.19	1.16	37.99	-11.0796	0.6768	0.0441
1048	SLE RA 20	0.2	1.18	38.27	-11.1623	0.6817	0.0489
1048	SLE RA 21	0.19	1.17	38.3	-11.1674	0.6822	0.0457
1048	SLE FR 1	0.2	1.03	33.96	-9.9158	0.6052	0.0504
1048	SLE FR 2	0.19	1.03	33.97	-9.9175	0.6054	0.0494
1048	SLE FR 3	0.2	1.04	34.08	-9.9509	0.6074	0.051
1048	SLE FR 4	0.19	1.07	35.17	-10.2651	0.6267	0.0484
1048	SLE FR 5	0.2	1.08	35.29	-10.2986	0.6287	0.0501
1048	SLE FR 6	0.2	1.1	35.97	-10.4952	0.6408	0.0489
1048	SLE QP 1	0.2	1.03	33.96	-9.9158	0.6052	0.0504
1048	SLE QP 2	0.2	1.07	35.16	-10.2634	0.6265	0.0495
1048	SLD 1	3.82	1.54	32.38	-9.3805	0.5873	1.3153
1048	SLD 2	3.45	1.61	32.33	-9.3701	0.5863	1.187
1048	SLD 3	3.88	0.67	33.31	-9.6158	0.6038	1.3363
1048	SLD 4	3.51	0.74	33.26	-9.6055	0.6028	1.208
1048	SLD 5	1.26	2.52	32.93	-9.6435	0.5898	0.4207

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1048	SLD 6	1.02	2.57	32.89	-9.6366	0.5892	0.3356
1048	SLD 7	1.46	-0.38	36.03	-10.428	0.645	0.4907
1048	SLD 8	1.21	-0.33	35.99	-10.4211	0.6443	0.4056
1048	SLD 9	-0.82	2.48	34.33	-10.1058	0.6087	-0.3066
1048	SLD 10	-1.06	2.53	34.3	-10.0989	0.6081	-0.3917
1048	SLD 11	-0.62	-0.42	37.43	-10.8903	0.6639	-0.2366
1048	SLD 12	-0.87	-0.38	37.4	-10.8834	0.6632	-0.3217
1048	SLD 13	-3.12	1.4	37.07	-10.9214	0.6503	-1.109
1048	SLD 14	-3.48	1.48	37.01	-10.9111	0.6493	-1.2373
1048	SLD 15	-3.06	0.53	38	-11.1568	0.6668	-1.088
1048	SLD 16	-3.42	0.61	37.94	-11.1464	0.6658	-1.2163
1048	SLV 1	8.66	2.14	28.69	-8.2063	0.5352	3.0087
1048	SLV 2	7.81	2.31	28.57	-8.1822	0.5329	2.71
1048	SLV 3	8.8	0.17	30.8	-8.7395	0.5727	3.0575
1048	SLV 4	7.95	0.34	30.68	-8.7154	0.5704	2.7588
1048	SLV 5	2.68	4.36	30.05	-8.8418	0.5427	0.9157
1048	SLV 6	2.12	4.47	29.97	-8.8261	0.5412	0.7211
1048	SLV 7	3.13	-2.22	37.07	-10.6192	0.6677	1.0784
1048	SLV 8	2.58	-2.11	36.99	-10.6035	0.6662	0.8838
1048	SLV 9	-2.19	4.26	33.34	-9.9234	0.5869	-0.7848
1048	SLV 10	-2.74	4.37	33.26	-9.9077	0.5854	-0.9794
1048	SLV 11	-1.73	-2.32	40.36	-11.7008	0.7119	-0.6221
1048	SLV 12	-2.28	-2.21	40.28	-11.685	0.7104	-0.8167
1048	SLV 13	-7.55	1.81	39.65	-11.8115	0.6827	-2.6598
1048	SLV 14	-8.4	1.98	39.53	-11.7874	0.6803	-2.9585
1048	SLV 15	-7.42	-0.17	41.76	-12.3447	0.7202	-2.611
1048	SLV 16	-8.27	0.01	41.64	-12.3206	0.7178	-2.9097
1048	CRTFP Ux+	0	0	0	0	0	0
1048	CRTFP Ux-	0	0	0	0	0	0
1048	CRTFP Uy+	0	0	0	0	0	0
1048	CRTFP Uy-	0	0	0	0	0	0
1050	SLU 1	0.6	2.37	82.62	-18.6114	0.0437	0.1324
1050	SLU 2	0.54	2.32	82.76	-18.638	0.0448	0.1183
1050	SLU 3	0.61	2.46	84.58	-19.0478	0.0443	0.1361
1050	SLU 4	0.58	2.43	84.67	-19.0638	0.045	0.1276
1050	SLU 5	0.56	2.36	83.93	-18.8982	0.0449	0.1229
1050	SLU 6	0.63	2.49	85.75	-19.308	0.0444	0.1407
1050	SLU 7	0.6	2.46	85.83	-19.3239	0.0451	0.1322
1050	SLU 8	0.64	2.45	84.95	-19.1318	0.0439	0.1416
1050	SLU 9	0.6	2.41	85.04	-19.1478	0.0446	0.1331
1050	SLU 10	0.54	2.68	93.39	-21.0305	0.0497	0.1193
1050	SLU 11	0.62	2.82	95.21	-21.4403	0.0492	0.1371
1050	SLU 12	0.58	2.78	95.3	-21.4562	0.0499	0.1287
1050	SLU 13	0.56	2.71	94.56	-21.2907	0.0498	0.1239
1050	SLU 14	0.64	2.85	96.37	-21.7005	0.0494	0.1417
1050	SLU 15	0.6	2.82	96.46	-21.7164	0.05	0.1333
1050	SLU 16	0.64	2.8	95.58	-21.5243	0.0488	0.1426
1050	SLU 17	0.6	2.77	95.66	-21.5402	0.0495	0.1342
1050	SLU 18	0.6	2.89	97.8	-22.0293	0.0507	0.1338
1050	SLU 19	0.57	2.85	97.89	-22.0452	0.0514	0.1254
1050	SLU 20	0.62	2.92	98.97	-22.2895	0.0508	0.1384
1050	SLU 21	0.59	2.89	99.05	-22.3054	0.0515	0.13
1050	SLU 22	0.63	2.83	93.28	-21.0003	0.0465	0.139
1050	SLU 23	0.57	2.77	93.42	-21.0268	0.0477	0.125
1050	SLU 24	0.64	2.91	95.24	-21.4367	0.0472	0.1427
1050	SLU 25	0.61	2.88	95.33	-21.4526	0.0479	0.1343
1050	SLU 26	0.59	2.81	94.59	-21.287	0.0478	0.1296
1050	SLU 27	0.66	2.95	96.41	-21.6969	0.0473	0.1473
1050	SLU 28	0.63	2.92	96.49	-21.7128	0.048	0.1389
1050	SLU 29	0.67	2.9	95.61	-21.5207	0.0468	0.1482
1050	SLU 30	0.63	2.87	95.7	-21.5366	0.0475	0.1398
1050	SLU 31	0.57	3.13	104.05	-23.4193	0.0526	0.126
1050	SLU 32	0.65	3.27	105.87	-23.8292	0.0521	0.1437
1050	SLU 33	0.61	3.24	105.96	-23.8451	0.0528	0.1353
1050	SLU 34	0.59	3.17	105.22	-23.6795	0.0527	0.1306
1050	SLU 35	0.67	3.31	107.03	-24.0894	0.0522	0.1483
1050	SLU 36	0.63	3.28	107.12	-24.1053	0.0529	0.1399
1050	SLU 37	0.67	3.26	106.24	-23.9132	0.0517	0.1493
1050	SLU 38	0.64	3.23	106.32	-23.9291	0.0524	0.1408
1050	SLU 39	0.63	3.34	108.46	-24.4181	0.0536	0.1405
1050	SLU 40	0.6	3.31	108.55	-24.434	0.0542	0.1321
1050	SLU 41	0.65	3.38	109.63	-24.6783	0.0537	0.1451
1050	SLU 42	0.62	3.34	109.71	-24.6942	0.0544	0.1367
1050	SLU 43	0.76	2.93	103.75	-23.3758	0.0558	0.1698
1050	SLU 44	0.7	2.87	103.9	-23.4024	0.0569	0.1557
1050	SLU 45	0.78	3.01	105.71	-23.8122	0.0564	0.1735
1050	SLU 46	0.74	2.98	105.8	-23.8281	0.0571	0.1651
1050	SLU 47	0.72	2.91	105.06	-23.6626	0.057	0.1603
1050	SLU 48	0.8	3.05	106.88	-24.0724	0.0566	0.1781
1050	SLU 49	0.76	3.02	106.96	-24.0883	0.0572	0.1696
1050	SLU 50	0.8	3	106.08	-23.8962	0.056	0.179
1050	SLU 51	0.77	2.97	106.17	-23.9121	0.0567	0.1706
1050	SLU 52	0.71	3.23	114.52	-25.7949	0.0618	0.1568
1050	SLU 53	0.79	3.37	116.34	-26.2047	0.0614	0.1745
1050	SLU 54	0.75	3.34	116.43	-26.2206	0.062	0.1661
1050	SLU 55	0.73	3.27	115.69	-26.0551	0.062	0.1614
1050	SLU 56	0.81	3.41	117.51	-26.4649	0.0615	0.1791
1050	SLU 57	0.77	3.38	117.59	-26.4808	0.0622	0.1707
1050	SLU 58	0.81	3.36	116.71	-26.2887	0.061	0.18
1050	SLU 59	0.77	3.33	116.8	-26.3046	0.0616	0.1716

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1050	SLU 60	0.77	3.44	118.94	-26.7937	0.0628	0.1713
1050	SLU 61	0.73	3.41	119.02	-26.8096	0.0635	0.1628
1050	SLU 62	0.79	3.48	120.1	-27.0539	0.0629	0.1759
1050	SLU 63	0.75	3.44	120.19	-27.0698	0.0636	0.1674
1050	SLU 64	0.8	3.38	114.41	-25.7647	0.0586	0.1765
1050	SLU 65	0.74	3.33	114.56	-25.7912	0.0598	0.1624
1050	SLU 66	0.81	3.47	116.37	-26.2011	0.0593	0.1801
1050	SLU 67	0.78	3.44	116.46	-26.217	0.06	0.1717
1050	SLU 68	0.76	3.37	115.72	-26.0514	0.0599	0.167
1050	SLU 69	0.83	3.5	117.54	-26.4613	0.0594	0.1847
1050	SLU 70	0.8	3.47	117.62	-26.4772	0.0601	0.1763
1050	SLU 71	0.84	3.46	116.74	-26.2851	0.0589	0.1857
1050	SLU 72	0.8	3.42	116.83	-26.301	0.0596	0.1772
1050	SLU 73	0.74	3.69	125.18	-28.1837	0.0647	0.1634
1050	SLU 74	0.82	3.83	127	-28.5936	0.0642	0.1812
1050	SLU 75	0.78	3.79	127.09	-28.6095	0.0649	0.1727
1050	SLU 76	0.76	3.72	126.35	-28.4439	0.0648	0.168
1050	SLU 77	0.84	3.86	128.17	-28.8538	0.0643	0.1858
1050	SLU 78	0.8	3.83	128.25	-28.8697	0.065	0.1773
1050	SLU 79	0.84	3.81	127.37	-28.6776	0.0638	0.1867
1050	SLU 80	0.8	3.78	127.45	-28.6935	0.0645	0.1782
1050	SLU 81	0.8	3.9	129.6	-29.1825	0.0657	0.1779
1050	SLU 82	0.77	3.86	129.68	-29.1984	0.0664	0.1695
1050	SLU 83	0.82	3.93	130.76	-29.4427	0.0658	0.1825
1050	SLU 84	0.79	3.9	130.85	-29.4586	0.0665	0.1741
1050	SLE RA 1	0.61	2.5	85.67	-19.294	0.0445	0.1343
1050	SLE RA 2	0.56	2.47	85.76	-19.3117	0.0452	0.1249
1050	SLE RA 3	0.62	2.56	86.97	-19.5849	0.0449	0.1367
1050	SLE RA 4	0.59	2.54	87.03	-19.5955	0.0454	0.1311
1050	SLE RA 5	0.58	2.49	86.54	-19.4851	0.0453	0.128
1050	SLE RA 6	0.63	2.58	87.75	-19.7584	0.045	0.1398
1050	SLE RA 7	0.61	2.56	87.81	-19.769	0.0455	0.1342
1050	SLE RA 8	0.63	2.55	87.22	-19.6409	0.0446	0.1404
1050	SLE RA 9	0.61	2.53	87.28	-19.6515	0.0451	0.1348
1050	SLE RA 10	0.57	2.71	92.85	-20.9067	0.0485	0.1256
1050	SLE RA 11	0.62	2.8	94.06	-21.1799	0.0482	0.1374
1050	SLE RA 12	0.6	2.78	94.12	-21.1905	0.0487	0.1318
1050	SLE RA 13	0.58	2.73	93.62	-21.0801	0.0486	0.1287
1050	SLE RA 14	0.63	2.82	94.84	-21.3533	0.0483	0.1405
1050	SLE RA 15	0.61	2.8	94.89	-21.364	0.0487	0.1349
1050	SLE RA 16	0.63	2.79	94.3	-21.2359	0.0479	0.1411
1050	SLE RA 17	0.61	2.77	94.36	-21.2465	0.0484	0.1355
1050	SLE RA 18	0.61	2.84	95.79	-21.5725	0.0492	0.1353
1050	SLE RA 19	0.59	2.82	95.85	-21.5831	0.0496	0.1296
1050	SLE RA 20	0.62	2.87	96.56	-21.746	0.0493	0.1383
1050	SLE RA 21	0.6	2.85	96.62	-21.7566	0.0497	0.1327
1050	SLE FR 1	0.61	2.5	85.67	-19.294	0.0445	0.1343
1050	SLE FR 2	0.6	2.5	85.69	-19.2975	0.0446	0.1324
1050	SLE FR 3	0.61	2.51	85.98	-19.3633	0.0445	0.1355
1050	SLE FR 4	0.6	2.6	88.72	-19.9811	0.046	0.1327
1050	SLE FR 5	0.61	2.61	89.01	-20.0469	0.0459	0.1358
1050	SLE FR 6	0.61	2.67	90.73	-20.4332	0.0468	0.1348
1050	SLE QP 1	0.61	2.5	85.67	-19.294	0.0445	0.1343
1050	SLE QP 2	0.61	2.6	88.7	-19.9775	0.0459	0.1346
1050	SLD 1	9.42	3.37	80.77	-18.1815	0.2199	2.266
1050	SLD 2	8.52	3.61	80.64	-18.1606	0.2179	2.0544
1050	SLD 3	9.57	1.25	83.19	-18.6521	0.2305	2.2991
1050	SLD 4	8.66	1.49	83.06	-18.6312	0.2286	2.0874
1050	SLD 5	3.2	6	82.68	-18.7288	0.0823	0.7624
1050	SLD 6	2.6	6.17	82.59	-18.715	0.0809	0.6219
1050	SLD 7	3.68	-1.06	90.74	-20.2974	0.1178	0.8725
1050	SLD 8	3.08	-0.9	90.65	-20.2835	0.1165	0.732
1050	SLD 9	-1.86	6.11	86.76	-19.6715	-0.0248	-0.4629
1050	SLD 10	-2.46	6.27	86.67	-19.6577	-0.0261	-0.6033
1050	SLD 11	-1.39	-0.96	94.81	-21.2401	0.0108	-0.3528
1050	SLD 12	-1.98	-0.79	94.73	-21.2262	0.0095	-0.4933
1050	SLD 13	-7.45	3.72	94.35	-21.3239	-0.1368	-1.8183
1050	SLD 14	-8.35	3.96	94.22	-21.303	-0.1388	-2.0299
1050	SLD 15	-7.31	1.6	96.77	-21.7944	-0.1261	-1.7853
1050	SLD 16	-8.21	1.84	96.64	-21.7736	-0.1281	-1.9969
1050	SLV 1	21.22	4.29	70.23	-15.7923	0.4533	5.1175
1050	SLV 2	19.12	4.86	69.92	-15.7437	0.4488	4.6248
1050	SLV 3	21.55	-0.51	75.71	-16.8583	0.4776	5.1942
1050	SLV 4	19.45	0.06	75.4	-16.8097	0.4731	4.7015
1050	SLV 5	6.65	10.29	74.91	-17.1137	0.1321	1.5998
1050	SLV 6	5.29	10.66	74.71	-17.082	0.1291	1.2788
1050	SLV 7	7.76	-5.71	93.16	-20.6671	0.213	1.8553
1050	SLV 8	6.39	-5.34	92.96	-20.6355	0.2101	1.5343
1050	SLV 9	-5.18	10.55	84.45	-19.3196	-0.1183	-1.2652
1050	SLV 10	-6.55	10.92	84.24	-19.2879	-0.1213	-1.5862
1050	SLV 11	-4.07	-5.45	102.7	-22.873	-0.0373	-1.0096
1050	SLV 12	-5.44	-5.08	102.5	-22.8414	-0.0403	-1.3307
1050	SLV 13	-18.24	5.15	102.01	-23.1453	-0.3813	-4.4323
1050	SLV 14	-20.33	5.72	101.7	-23.0968	-0.3858	-4.925
1050	SLV 15	-17.9	0.35	107.49	-24.2114	-0.357	-4.3557
1050	SLV 16	-20	0.92	107.18	-24.1628	-0.3616	-4.8484
1050	CRTFP Ux+	0	0	0	0	0	0
1050	CRTFP Ux-	0	0	0	0	0	0
1050	CRTFP Uy+	0	0	0	0	0	0
1050	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1052	SLU 1	0.27	0.88	31.76	-9.4197	-0.5801	0.1086
1052	SLU 2	0.25	0.86	31.81	-9.4316	-0.581	0.1
1052	SLU 3	0.28	0.92	32.51	-9.6375	-0.5938	0.1117
1052	SLU 4	0.26	0.9	32.54	-9.6446	-0.5944	0.1065
1052	SLU 5	0.25	0.88	32.26	-9.5618	-0.5892	0.1031
1052	SLU 6	0.28	0.93	32.96	-9.7677	-0.602	0.1148
1052	SLU 7	0.27	0.92	32.99	-9.7749	-0.6025	0.1096
1052	SLU 8	0.29	0.91	32.65	-9.6802	-0.5964	0.1148
1052	SLU 9	0.27	0.9	32.68	-9.6873	-0.597	0.1096
1052	SLU 10	0.25	1	35.89	-10.637	-0.6552	0.1047
1052	SLU 11	0.28	1.05	36.59	-10.8429	-0.668	0.1164
1052	SLU 12	0.27	1.04	36.62	-10.8501	-0.6685	0.1112
1052	SLU 13	0.26	1.02	36.34	-10.7673	-0.6634	0.1078
1052	SLU 14	0.29	1.07	37.04	-10.9731	-0.6761	0.1195
1052	SLU 15	0.28	1.06	37.07	-10.9803	-0.6767	0.1143
1052	SLU 16	0.29	1.05	36.73	-10.8856	-0.6706	0.1194
1052	SLU 17	0.28	1.04	36.76	-10.8927	-0.6711	0.1143
1052	SLU 18	0.28	1.08	37.59	-11.1417	-0.6861	0.1153
1052	SLU 19	0.26	1.07	37.62	-11.1489	-0.6866	0.1101
1052	SLU 20	0.29	1.1	38.03	-11.272	-0.6942	0.1184
1052	SLU 21	0.27	1.08	38.06	-11.2791	-0.6948	0.1132
1052	SLU 22	0.29	1.06	35.85	-10.6215	-0.6546	0.1174
1052	SLU 23	0.26	1.04	35.9	-10.6334	-0.6555	0.1088
1052	SLU 24	0.29	1.09	36.6	-10.8393	-0.6683	0.1205
1052	SLU 25	0.28	1.08	36.63	-10.8464	-0.6688	0.1154
1052	SLU 26	0.27	1.05	36.35	-10.7636	-0.6637	0.1119
1052	SLU 27	0.3	1.1	37.05	-10.9695	-0.6764	0.1236
1052	SLU 28	0.29	1.09	37.08	-10.9767	-0.677	0.1185
1052	SLU 29	0.3	1.09	36.74	-10.882	-0.6709	0.1236
1052	SLU 30	0.29	1.07	36.77	-10.8891	-0.6714	0.1185
1052	SLU 31	0.27	1.18	39.98	-11.8388	-0.7297	0.1135
1052	SLU 32	0.3	1.23	40.68	-12.0447	-0.7424	0.1252
1052	SLU 33	0.29	1.22	40.71	-12.0519	-0.743	0.1201
1052	SLU 34	0.28	1.19	40.43	-11.9691	-0.7378	0.1166
1052	SLU 35	0.31	1.24	41.13	-12.1749	-0.7506	0.1283
1052	SLU 36	0.29	1.23	41.16	-12.1821	-0.7512	0.1232
1052	SLU 37	0.31	1.22	40.82	-12.0874	-0.7451	0.1283
1052	SLU 38	0.29	1.21	40.85	-12.0945	-0.7456	0.1231
1052	SLU 39	0.29	1.26	41.68	-12.3435	-0.7605	0.1241
1052	SLU 40	0.28	1.25	41.71	-12.3507	-0.7611	0.119
1052	SLU 41	0.3	1.27	42.12	-12.4737	-0.7687	0.1272
1052	SLU 42	0.29	1.26	42.15	-12.4809	-0.7692	0.122
1052	SLU 43	0.34	1.09	39.88	-11.8336	-0.7286	0.1381
1052	SLU 44	0.32	1.07	39.93	-11.8455	-0.7295	0.1295
1052	SLU 45	0.35	1.12	40.63	-12.0514	-0.7423	0.1412
1052	SLU 46	0.34	1.11	40.66	-12.0585	-0.7429	0.1361
1052	SLU 47	0.33	1.08	40.38	-11.9757	-0.7377	0.1326
1052	SLU 48	0.36	1.13	41.08	-12.1816	-0.7505	0.1443
1052	SLU 49	0.35	1.12	41.11	-12.1887	-0.751	0.1392
1052	SLU 50	0.36	1.12	40.78	-12.094	-0.7449	0.1443
1052	SLU 51	0.35	1.1	40.81	-12.1012	-0.7455	0.1392
1052	SLU 52	0.33	1.21	44.01	-13.0509	-0.8037	0.1342
1052	SLU 53	0.36	1.26	44.71	-13.2568	-0.8165	0.1459
1052	SLU 54	0.34	1.25	44.74	-13.2639	-0.817	0.1408
1052	SLU 55	0.33	1.22	44.46	-13.1811	-0.8119	0.1373
1052	SLU 56	0.37	1.27	45.16	-13.387	-0.8246	0.149
1052	SLU 57	0.35	1.26	45.19	-13.3942	-0.8252	0.1439
1052	SLU 58	0.37	1.25	44.86	-13.2994	-0.8191	0.149
1052	SLU 59	0.35	1.24	44.89	-13.3066	-0.8196	0.1438
1052	SLU 60	0.35	1.29	45.71	-13.5556	-0.8346	0.1448
1052	SLU 61	0.34	1.28	45.74	-13.5627	-0.8351	0.1397
1052	SLU 62	0.36	1.3	46.16	-13.6858	-0.8427	0.1479
1052	SLU 63	0.35	1.29	46.19	-13.693	-0.8433	0.1427
1052	SLU 64	0.36	1.26	43.97	-13.0353	-0.8031	0.147
1052	SLU 65	0.34	1.24	44.02	-13.0473	-0.804	0.1384
1052	SLU 66	0.37	1.3	44.72	-13.2531	-0.8168	0.1501
1052	SLU 67	0.35	1.28	44.76	-13.2603	-0.8173	0.1449
1052	SLU 68	0.35	1.26	44.47	-13.1775	-0.8122	0.1415
1052	SLU 69	0.38	1.31	45.17	-13.3834	-0.8249	0.1532
1052	SLU 70	0.36	1.3	45.2	-13.3905	-0.8255	0.148
1052	SLU 71	0.38	1.29	44.87	-13.2958	-0.8194	0.1531
1052	SLU 72	0.36	1.28	44.9	-13.303	-0.8199	0.148
1052	SLU 73	0.34	1.38	48.1	-14.2527	-0.8782	0.1431
1052	SLU 74	0.37	1.43	48.8	-14.4586	-0.8909	0.1548
1052	SLU 75	0.36	1.42	48.83	-14.4657	-0.8915	0.1496
1052	SLU 76	0.35	1.4	48.55	-14.3829	-0.8863	0.1461
1052	SLU 77	0.38	1.45	49.25	-14.5888	-0.8991	0.1579
1052	SLU 78	0.37	1.44	49.28	-14.596	-0.8997	0.1527
1052	SLU 79	0.38	1.43	48.95	-14.5012	-0.8936	0.1578
1052	SLU 80	0.37	1.42	48.98	-14.5084	-0.8941	0.1527
1052	SLU 81	0.37	1.46	49.8	-14.7574	-0.909	0.1536
1052	SLU 82	0.36	1.45	49.83	-14.7645	-0.9096	0.1485
1052	SLU 83	0.38	1.48	50.25	-14.8876	-0.9172	0.1567
1052	SLU 84	0.36	1.46	50.28	-14.8948	-0.9177	0.1516
1052	SLE RA 1	0.27	0.93	32.93	-9.7631	-0.6014	0.1111
1052	SLE RA 2	0.26	0.92	32.96	-9.771	-0.602	0.1054
1052	SLE RA 3	0.28	0.95	33.43	-9.9083	-0.6105	0.1132
1052	SLE RA 4	0.27	0.95	33.45	-9.913	-0.6109	0.1097
1052	SLE RA 5	0.26	0.93	33.26	-9.8578	-0.6074	0.1074
1052	SLE RA 6	0.28	0.96	33.73	-9.9951	-0.616	0.1152

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1052	SLE RA 7	0.27	0.96	33.75	-9.9999	-0.6163	0.1118
1052	SLE RA 8	0.28	0.95	33.52	-9.9367	-0.6123	0.1152
1052	SLE RA 9	0.28	0.94	33.54	-9.9415	-0.6126	0.1118
1052	SLE RA 10	0.26	1.01	35.68	-10.5746	-0.6514	0.1085
1052	SLE RA 11	0.28	1.05	36.15	-10.7119	-0.66	0.1163
1052	SLE RA 12	0.27	1.04	36.17	-10.7166	-0.6603	0.1129
1052	SLE RA 13	0.27	1.02	35.98	-10.6614	-0.6569	0.1106
1052	SLE RA 14	0.29	1.06	36.45	-10.7987	-0.6654	0.1184
1052	SLE RA 15	0.28	1.05	36.47	-10.8035	-0.6658	0.1149
1052	SLE RA 16	0.29	1.04	36.24	-10.7403	-0.6617	0.1183
1052	SLE RA 17	0.28	1.04	36.26	-10.7451	-0.6621	0.1149
1052	SLE RA 18	0.28	1.07	36.81	-10.9111	-0.672	0.1156
1052	SLE RA 19	0.27	1.06	36.83	-10.9158	-0.6724	0.1121
1052	SLE RA 20	0.29	1.08	37.11	-10.9979	-0.6775	0.1176
1052	SLE RA 21	0.28	1.07	37.13	-11.0027	-0.6778	0.1142
1052	SLE FR 1	0.27	0.93	32.93	-9.7631	-0.6014	0.1111
1052	SLE FR 2	0.27	0.93	32.93	-9.7647	-0.6015	0.11
1052	SLE FR 3	0.28	0.94	33.05	-9.7978	-0.6036	0.1119
1052	SLE FR 4	0.27	0.97	34.1	-10.1091	-0.6227	0.1113
1052	SLE FR 5	0.28	0.98	34.21	-10.1422	-0.6248	0.1133
1052	SLE FR 6	0.28	1	34.87	-10.3371	-0.6367	0.1133
1052	SLE QP 1	0.27	0.93	32.93	-9.7631	-0.6014	0.1111
1052	SLE QP 2	0.28	0.97	34.09	-10.1075	-0.6226	0.1124
1052	SLD 1	3.73	1.24	30.72	-9.1694	-0.5533	1.3415
1052	SLD 2	3.38	1.36	30.67	-9.1618	-0.5525	1.2222
1052	SLD 3	3.78	0.41	31.6	-9.3838	-0.5689	1.3127
1052	SLD 4	3.43	0.53	31.55	-9.3761	-0.5681	1.1934
1052	SLD 5	1.29	2.29	31.76	-9.5023	-0.5783	0.5464
1052	SLD 6	1.06	2.37	31.73	-9.4972	-0.5778	0.4673
1052	SLD 7	1.48	-0.47	34.68	-10.2169	-0.6303	0.4506
1052	SLD 8	1.24	-0.39	34.65	-10.2118	-0.6297	0.3715
1052	SLD 9	-0.69	2.34	33.53	-10.0031	-0.6154	-0.1466
1052	SLD 10	-0.92	2.42	33.5	-9.998	-0.6149	-0.2258
1052	SLD 11	-0.51	-0.42	36.46	-10.7177	-0.6674	-0.2424
1052	SLD 12	-0.74	-0.34	36.43	-10.7126	-0.6669	-0.3216
1052	SLD 13	-2.88	1.42	36.63	-10.8388	-0.6771	-0.9686
1052	SLD 14	-3.23	1.54	36.59	-10.8311	-0.6763	-1.0879
1052	SLD 15	-2.83	0.59	37.51	-11.0532	-0.6927	-0.9973
1052	SLD 16	-3.18	0.71	37.47	-11.0455	-0.6919	-1.1166
1052	SLV 1	8.34	1.56	26.23	-7.9205	-0.461	2.9847
1052	SLV 2	7.53	1.83	26.13	-7.9027	-0.4592	2.707
1052	SLV 3	8.47	-0.32	28.22	-8.4063	-0.4963	2.9192
1052	SLV 4	7.66	-0.04	28.11	-8.3885	-0.4945	2.6414
1052	SLV 5	2.64	3.94	28.74	-8.7176	-0.5208	1.1224
1052	SLV 6	2.11	4.12	28.67	-8.706	-0.5196	0.9414
1052	SLV 7	3.07	-2.31	35.36	-10.3372	-0.6386	0.9039
1052	SLV 8	2.54	-2.12	35.29	-10.3256	-0.6374	0.7229
1052	SLV 9	-1.99	4.07	32.89	-9.8894	-0.6077	-0.498
1052	SLV 10	-2.52	4.25	32.82	-9.8778	-0.6065	-0.679
1052	SLV 11	-1.56	-2.18	39.52	-11.509	-0.7255	-0.7165
1052	SLV 12	-2.09	-1.99	39.45	-11.4974	-0.7243	-0.8975
1052	SLV 13	-7.11	1.99	40.07	-11.8264	-0.7506	-2.4165
1052	SLV 14	-7.92	2.27	39.97	-11.8086	-0.7488	-2.6943
1052	SLV 15	-6.98	0.11	42.06	-12.3123	-0.786	-2.4821
1052	SLV 16	-7.79	0.39	41.96	-12.2945	-0.7842	-2.7598
1052	CRTFP Ux+	0	0	0	0	0	0
1052	CRTFP Ux-	0	0	0	0	0	0
1052	CRTFP Uy+	0	0	0	0	0	0
1052	CRTFP Uy-	0	0	0	0	0	0
1053	SLU 1	0.34	0.88	34.46	-9.5183	0.0271	0.1151
1053	SLU 2	0.31	0.86	34.51	-9.5305	0.0272	0.1059
1053	SLU 3	0.35	0.91	35.27	-9.7357	0.0279	0.1182
1053	SLU 4	0.33	0.9	35.3	-9.743	0.0279	0.1127
1053	SLU 5	0.32	0.87	35	-9.6607	0.0276	0.1092
1053	SLU 6	0.36	0.92	35.75	-9.8658	0.0283	0.1215
1053	SLU 7	0.34	0.91	35.79	-9.8732	0.0283	0.116
1053	SLU 8	0.36	0.9	35.43	-9.7785	0.028	0.1217
1053	SLU 9	0.34	0.89	35.46	-9.7859	0.028	0.1162
1053	SLU 10	0.32	1	38.92	-10.7376	0.0315	0.1094
1053	SLU 11	0.36	1.06	39.68	-10.9428	0.0322	0.1217
1053	SLU 12	0.34	1.04	39.71	-10.9501	0.0322	0.1162
1053	SLU 13	0.33	1.02	39.4	-10.8678	0.0319	0.1127
1053	SLU 14	0.37	1.07	40.16	-11.0729	0.0326	0.125
1053	SLU 15	0.35	1.06	40.19	-11.0802	0.0326	0.1195
1053	SLU 16	0.37	1.05	39.83	-10.9856	0.0323	0.1253
1053	SLU 17	0.35	1.04	39.86	-10.993	0.0323	0.1197
1053	SLU 18	0.36	1.09	40.75	-11.2427	0.0333	0.1201
1053	SLU 19	0.34	1.07	40.78	-11.25	0.0333	0.1146
1053	SLU 20	0.37	1.1	41.24	-11.3728	0.0337	0.1234
1053	SLU 21	0.35	1.09	41.27	-11.3802	0.0337	0.1179
1053	SLU 22	0.36	1.06	38.88	-10.7222	0.0313	0.1225
1053	SLU 23	0.34	1.04	38.93	-10.7344	0.0313	0.1133
1053	SLU 24	0.37	1.09	39.69	-10.9396	0.032	0.1256
1053	SLU 25	0.36	1.08	39.73	-10.9469	0.0321	0.1201
1053	SLU 26	0.35	1.05	39.42	-10.8646	0.0318	0.1166
1053	SLU 27	0.38	1.11	40.18	-11.0697	0.0325	0.1289
1053	SLU 28	0.37	1.09	40.21	-11.0771	0.0325	0.1234
1053	SLU 29	0.38	1.09	39.85	-10.9824	0.0322	0.1292
1053	SLU 30	0.37	1.07	39.88	-10.9898	0.0322	0.1236
1053	SLU 31	0.35	1.19	43.34	-11.9415	0.0357	0.1168

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1053	SLU 32	0.38	1.24	44.1	-12.1466	0.0363	0.1291
1053	SLU 33	0.37	1.23	44.13	-12.154	0.0364	0.1236
1053	SLU 34	0.36	1.2	43.82	-12.0717	0.0361	0.1201
1053	SLU 35	0.39	1.25	44.58	-12.2768	0.0368	0.1324
1053	SLU 36	0.38	1.24	44.62	-12.2841	0.0368	0.1269
1053	SLU 37	0.39	1.23	44.25	-12.1895	0.0365	0.1327
1053	SLU 38	0.38	1.22	44.29	-12.1969	0.0365	0.1271
1053	SLU 39	0.38	1.27	45.17	-12.4466	0.0375	0.1275
1053	SLU 40	0.36	1.26	45.21	-12.4539	0.0375	0.122
1053	SLU 41	0.39	1.28	45.66	-12.5767	0.0379	0.1309
1053	SLU 42	0.37	1.27	45.69	-12.5841	0.0379	0.1253
1053	SLU 43	0.43	1.08	43.28	-11.961	0.0339	0.1471
1053	SLU 44	0.41	1.06	43.33	-11.9733	0.0339	0.1379
1053	SLU 45	0.44	1.11	44.09	-12.1784	0.0346	0.1502
1053	SLU 46	0.43	1.1	44.12	-12.1858	0.0346	0.1447
1053	SLU 47	0.42	1.07	43.82	-12.1034	0.0343	0.1412
1053	SLU 48	0.45	1.12	44.58	-12.3085	0.035	0.1535
1053	SLU 49	0.44	1.11	44.61	-12.3159	0.035	0.148
1053	SLU 50	0.45	1.11	44.25	-12.2213	0.0347	0.1537
1053	SLU 51	0.44	1.09	44.28	-12.2286	0.0347	0.1482
1053	SLU 52	0.42	1.2	47.74	-13.1803	0.0382	0.1414
1053	SLU 53	0.45	1.26	48.5	-13.3855	0.0389	0.1537
1053	SLU 54	0.44	1.25	48.53	-13.3928	0.0389	0.1482
1053	SLU 55	0.43	1.22	48.22	-13.3105	0.0386	0.1447
1053	SLU 56	0.46	1.27	48.98	-13.5156	0.0393	0.157
1053	SLU 57	0.45	1.26	49.01	-13.523	0.0393	0.1515
1053	SLU 58	0.46	1.25	48.65	-13.4283	0.039	0.1572
1053	SLU 59	0.45	1.24	48.69	-13.4357	0.039	0.1517
1053	SLU 60	0.45	1.29	49.57	-13.6854	0.04	0.1521
1053	SLU 61	0.43	1.28	49.61	-13.6928	0.04	0.1466
1053	SLU 62	0.46	1.3	50.06	-13.8155	0.0404	0.1554
1053	SLU 63	0.44	1.29	50.09	-13.8229	0.0404	0.1499
1053	SLU 64	0.46	1.26	47.7	-13.1649	0.038	0.1545
1053	SLU 65	0.43	1.24	47.76	-13.1772	0.0381	0.1453
1053	SLU 66	0.47	1.29	48.51	-13.3823	0.0387	0.1576
1053	SLU 67	0.45	1.28	48.55	-13.3897	0.0388	0.1521
1053	SLU 68	0.44	1.25	48.24	-13.3073	0.0385	0.1486
1053	SLU 69	0.48	1.31	49	-13.5124	0.0392	0.1609
1053	SLU 70	0.46	1.29	49.03	-13.5198	0.0392	0.1554
1053	SLU 71	0.48	1.29	48.67	-13.4252	0.0389	0.1611
1053	SLU 72	0.46	1.28	48.7	-13.4325	0.0389	0.1556
1053	SLU 73	0.44	1.39	52.16	-14.3842	0.0424	0.1488
1053	SLU 74	0.48	1.44	52.92	-14.5894	0.0431	0.1611
1053	SLU 75	0.46	1.43	52.95	-14.5967	0.0431	0.1556
1053	SLU 76	0.45	1.4	52.65	-14.5144	0.0428	0.1521
1053	SLU 77	0.49	1.45	53.4	-14.7195	0.0435	0.1644
1053	SLU 78	0.47	1.44	53.44	-14.7269	0.0435	0.1589
1053	SLU 79	0.49	1.43	53.07	-14.6322	0.0432	0.1647
1053	SLU 80	0.47	1.42	53.11	-14.6396	0.0432	0.1591
1053	SLU 81	0.47	1.47	53.99	-14.8893	0.0442	0.1595
1053	SLU 82	0.46	1.46	54.03	-14.8966	0.0442	0.154
1053	SLU 83	0.48	1.48	54.48	-15.0194	0.0446	0.1628
1053	SLU 84	0.47	1.47	54.51	-15.0268	0.0446	0.1573
1053	SLE RA 1	0.35	0.93	35.72	-9.8622	0.0283	0.1172
1053	SLE RA 2	0.33	0.92	35.76	-9.8704	0.0284	0.1111
1053	SLE RA 3	0.35	0.95	36.26	-10.0072	0.0288	0.1193
1053	SLE RA 4	0.34	0.94	36.28	-10.0121	0.0288	0.1156
1053	SLE RA 5	0.34	0.93	36.08	-9.9572	0.0286	0.1133
1053	SLE RA 6	0.36	0.96	36.59	-10.0939	0.0291	0.1215
1053	SLE RA 7	0.35	0.95	36.61	-10.0988	0.0291	0.1178
1053	SLE RA 8	0.36	0.95	36.37	-10.0358	0.0289	0.1216
1053	SLE RA 9	0.35	0.94	36.39	-10.0407	0.0289	0.118
1053	SLE RA 10	0.34	1.01	38.69	-10.6751	0.0312	0.1134
1053	SLE RA 11	0.36	1.05	39.2	-10.8119	0.0317	0.1216
1053	SLE RA 12	0.35	1.04	39.22	-10.8168	0.0317	0.1179
1053	SLE RA 13	0.34	1.02	39.02	-10.7619	0.0315	0.1156
1053	SLE RA 14	0.37	1.06	39.52	-10.8987	0.032	0.1238
1053	SLE RA 15	0.36	1.05	39.55	-10.9036	0.032	0.1202
1053	SLE RA 16	0.37	1.05	39.3	-10.8405	0.0318	0.124
1053	SLE RA 17	0.36	1.04	39.33	-10.8454	0.0318	0.1203
1053	SLE RA 18	0.36	1.07	39.92	-11.0118	0.0324	0.1206
1053	SLE RA 19	0.35	1.06	39.94	-11.0168	0.0325	0.1169
1053	SLE RA 20	0.36	1.08	40.24	-11.0986	0.0327	0.1228
1053	SLE RA 21	0.35	1.07	40.26	-11.1035	0.0327	0.1191
1053	SLE FR 1	0.35	0.93	35.72	-9.8622	0.0283	0.1172
1053	SLE FR 2	0.34	0.93	35.73	-9.8639	0.0283	0.116
1053	SLE FR 3	0.35	0.93	35.85	-9.897	0.0284	0.1181
1053	SLE FR 4	0.35	0.97	36.99	-10.2088	0.0296	0.117
1053	SLE FR 5	0.35	0.98	37.11	-10.2418	0.0297	0.1191
1053	SLE FR 6	0.35	1	37.82	-10.437	0.0304	0.1189
1053	SLE QP 1	0.35	0.93	35.72	-9.8622	0.0283	0.1172
1053	SLE QP 2	0.35	0.97	36.98	-10.2071	0.0296	0.1182
1053	SLD 1	4.17	1.24	33.02	-9.2472	0.0363	1.4555
1053	SLD 2	3.78	1.4	32.97	-9.2382	0.0363	1.3205
1053	SLD 3	4.23	0.34	33.95	-9.4572	0.0379	1.4768
1053	SLD 4	3.84	0.49	33.91	-9.4482	0.038	1.3419
1053	SLD 5	1.47	2.4	34.39	-9.6023	0.029	0.5116
1053	SLD 6	1.22	2.5	34.35	-9.5963	0.029	0.422
1053	SLD 7	1.68	-0.62	37.5	-10.3023	0.0346	0.5827
1053	SLD 8	1.42	-0.52	37.46	-10.2963	0.0346	0.4932

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1053	SLD 9	-0.72	2.46	36.49	-10.1179	0.0245	-0.2567
1053	SLD 10	-0.98	2.56	36.46	-10.112	0.0245	-0.3463
1053	SLD 11	-0.52	-0.55	39.61	-10.8179	0.0301	-0.1855
1053	SLD 12	-0.77	-0.45	39.57	-10.812	0.0301	-0.2751
1053	SLD 13	-3.15	1.45	40.05	-10.966	0.0212	-1.1054
1053	SLD 14	-3.53	1.6	40	-10.957	0.0212	-1.2404
1053	SLD 15	-3.08	0.55	40.99	-11.176	0.0228	-1.0841
1053	SLD 16	-3.47	0.7	40.94	-11.167	0.0229	-1.219
1053	SLV 1	9.28	1.57	27.75	-7.9687	0.0453	3.2446
1053	SLV 2	8.38	1.92	27.64	-7.9477	0.0453	2.9303
1053	SLV 3	9.42	-0.48	29.87	-8.445	0.0491	3.294
1053	SLV 4	8.52	-0.13	29.75	-8.4241	0.0491	2.9798
1053	SLV 5	2.97	4.2	31.02	-8.8168	0.0285	1.0364
1053	SLV 6	2.38	4.42	30.95	-8.8031	0.0285	0.8316
1053	SLV 7	3.45	-2.63	38.07	-10.4047	0.0412	1.2012
1053	SLV 8	2.86	-2.4	38	-10.391	0.0412	0.9964
1053	SLV 9	-2.16	4.35	35.96	-10.0232	0.0179	-0.76
1053	SLV 10	-2.75	4.57	35.88	-10.0096	0.018	-0.9647
1053	SLV 11	-1.69	-2.48	43.01	-11.6111	0.0306	-0.5952
1053	SLV 12	-2.27	-2.25	42.94	-11.5975	0.0306	-0.7999
1053	SLV 13	-7.82	2.07	44.21	-11.9902	0.01	-2.7433
1053	SLV 14	-8.73	2.42	44.09	-11.9692	0.01	-3.0575
1053	SLV 15	-7.68	0.02	46.32	-12.4665	0.0138	-2.6939
1053	SLV 16	-8.58	0.37	46.21	-12.4456	0.0138	-3.0081
1053	CRTFP Ux+	0	0	0	0	0	0
1053	CRTFP Ux-	0	0	0	0	0	0
1053	CRTFP Uy+	0	0	0	0	0	0
1053	CRTFP Uy-	0	0	0	0	0	0
1054	SLU 1	0.38	0.75	33.57	-8.5783	0.0279	0.1286
1054	SLU 2	0.35	0.73	33.63	-8.5899	0.0279	0.1192
1054	SLU 3	0.39	0.78	34.36	-8.7711	0.0287	0.132
1054	SLU 4	0.37	0.77	34.4	-8.7781	0.0287	0.1264
1054	SLU 5	0.36	0.74	34.1	-8.7055	0.0284	0.1227
1054	SLU 6	0.4	0.79	34.83	-8.8867	0.0291	0.1355
1054	SLU 7	0.38	0.78	34.87	-8.8936	0.0291	0.1299
1054	SLU 8	0.4	0.77	34.51	-8.8095	0.0288	0.1356
1054	SLU 9	0.38	0.76	34.55	-8.8164	0.0288	0.13
1054	SLU 10	0.37	0.86	37.89	-9.6616	0.0325	0.1239
1054	SLU 11	0.4	0.91	38.63	-9.8428	0.0332	0.1367
1054	SLU 12	0.39	0.9	38.66	-9.8497	0.0332	0.1311
1054	SLU 13	0.38	0.87	38.36	-9.7771	0.0329	0.1274
1054	SLU 14	0.41	0.92	39.1	-9.9583	0.0336	0.1402
1054	SLU 15	0.4	0.91	39.13	-9.9653	0.0337	0.1346
1054	SLU 16	0.41	0.91	38.78	-9.8812	0.0333	0.1403
1054	SLU 17	0.4	0.89	38.81	-9.8881	0.0333	0.1347
1054	SLU 18	0.4	0.94	39.66	-10.1093	0.0344	0.1353
1054	SLU 19	0.38	0.93	39.7	-10.1162	0.0344	0.1297
1054	SLU 20	0.41	0.95	40.14	-10.2248	0.0349	0.1388
1054	SLU 21	0.39	0.94	40.17	-10.2318	0.0349	0.1332
1054	SLU 22	0.41	0.92	37.86	-9.6478	0.0323	0.1372
1054	SLU 23	0.38	0.9	37.91	-9.6594	0.0324	0.1279
1054	SLU 24	0.42	0.95	38.65	-9.8406	0.0331	0.1407
1054	SLU 25	0.4	0.93	38.68	-9.8476	0.0331	0.1351
1054	SLU 26	0.39	0.91	38.38	-9.775	0.0328	0.1314
1054	SLU 27	0.43	0.96	39.12	-9.9562	0.0335	0.1442
1054	SLU 28	0.41	0.94	39.15	-9.9631	0.0335	0.1386
1054	SLU 29	0.43	0.94	38.8	-9.879	0.0332	0.1442
1054	SLU 30	0.41	0.93	38.83	-9.8859	0.0332	0.1386
1054	SLU 31	0.39	1.03	42.18	-10.7311	0.0369	0.1326
1054	SLU 32	0.43	1.08	42.91	-10.9123	0.0376	0.1454
1054	SLU 33	0.41	1.07	42.94	-10.9192	0.0377	0.1398
1054	SLU 34	0.4	1.04	42.65	-10.8466	0.0374	0.1361
1054	SLU 35	0.44	1.09	43.38	-11.0278	0.0381	0.1489
1054	SLU 36	0.43	1.08	43.41	-11.0348	0.0381	0.1433
1054	SLU 37	0.44	1.07	43.06	-10.9506	0.0378	0.149
1054	SLU 38	0.43	1.06	43.1	-10.9576	0.0378	0.1434
1054	SLU 39	0.43	1.11	43.95	-11.1788	0.0388	0.144
1054	SLU 40	0.41	1.1	43.98	-11.1857	0.0389	0.1384
1054	SLU 41	0.44	1.12	44.42	-11.2943	0.0393	0.1475
1054	SLU 42	0.42	1.11	44.45	-11.3013	0.0393	0.1419
1054	SLU 43	0.48	0.92	42.18	-10.7852	0.0348	0.1642
1054	SLU 44	0.46	0.9	42.23	-10.7967	0.0348	0.1548
1054	SLU 45	0.49	0.95	42.97	-10.9779	0.0355	0.1676
1054	SLU 46	0.48	0.93	43	-10.9849	0.0355	0.162
1054	SLU 47	0.47	0.91	42.7	-10.9123	0.0352	0.1583
1054	SLU 48	0.51	0.96	43.44	-11.0935	0.0359	0.1711
1054	SLU 49	0.49	0.94	43.47	-11.1005	0.036	0.1655
1054	SLU 50	0.51	0.94	43.12	-11.0163	0.0356	0.1712
1054	SLU 51	0.49	0.93	43.15	-11.0233	0.0356	0.1655
1054	SLU 52	0.47	1.03	46.49	-11.8684	0.0393	0.1595
1054	SLU 53	0.51	1.08	47.23	-12.0496	0.0401	0.1723
1054	SLU 54	0.49	1.07	47.26	-12.0565	0.0401	0.1667
1054	SLU 55	0.48	1.04	46.97	-11.984	0.0398	0.163
1054	SLU 56	0.52	1.09	47.7	-12.1652	0.0405	0.1758
1054	SLU 57	0.5	1.08	47.73	-12.1721	0.0405	0.1702
1054	SLU 58	0.52	1.07	47.38	-12.088	0.0402	0.1759
1054	SLU 59	0.5	1.06	47.41	-12.0949	0.0402	0.1703
1054	SLU 60	0.51	1.11	48.27	-12.3161	0.0413	0.1709
1054	SLU 61	0.49	1.1	48.3	-12.323	0.0413	0.1653
1054	SLU 62	0.52	1.12	48.74	-12.4317	0.0417	0.1744

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1054	SLU 63	0.5	1.11	48.77	-12.4386	0.0417	0.1688
1054	SLU 64	0.51	1.08	46.46	-11.8547	0.0392	0.1728
1054	SLU 65	0.48	1.06	46.52	-11.8662	0.0392	0.1635
1054	SLU 66	0.52	1.11	47.25	-12.0474	0.0399	0.1763
1054	SLU 67	0.51	1.1	47.28	-12.0544	0.0399	0.1706
1054	SLU 68	0.49	1.08	46.99	-11.9818	0.0396	0.167
1054	SLU 69	0.53	1.12	47.72	-12.163	0.0404	0.1798
1054	SLU 70	0.52	1.11	47.75	-12.17	0.0404	0.1741
1054	SLU 71	0.53	1.11	47.4	-12.0858	0.04	0.1798
1054	SLU 72	0.52	1.09	47.43	-12.0928	0.0401	0.1742
1054	SLU 73	0.5	1.2	50.78	-12.9379	0.0438	0.1682
1054	SLU 74	0.54	1.25	51.51	-13.1191	0.0445	0.181
1054	SLU 75	0.52	1.23	51.55	-13.126	0.0445	0.1754
1054	SLU 76	0.51	1.21	51.25	-13.0535	0.0442	0.1717
1054	SLU 77	0.55	1.26	51.99	-13.2347	0.0449	0.1845
1054	SLU 78	0.53	1.25	52.02	-13.2416	0.0449	0.1789
1054	SLU 79	0.55	1.24	51.67	-13.1575	0.0446	0.1846
1054	SLU 80	0.53	1.23	51.7	-13.1644	0.0446	0.1789
1054	SLU 81	0.53	1.28	52.55	-13.3856	0.0457	0.1796
1054	SLU 82	0.52	1.26	52.58	-13.3925	0.0457	0.174
1054	SLU 83	0.54	1.29	53.02	-13.5012	0.0461	0.1831
1054	SLU 84	0.53	1.27	53.06	-13.5081	0.0461	0.1775
1054	SLE RA 1	0.39	0.8	34.8	-8.8839	0.0292	0.131
1054	SLE RA 2	0.37	0.78	34.83	-8.8916	0.0292	0.1248
1054	SLE RA 3	0.39	0.82	35.32	-9.0124	0.0297	0.1333
1054	SLE RA 4	0.38	0.81	35.35	-9.0171	0.0297	0.1296
1054	SLE RA 5	0.38	0.79	35.15	-8.9687	0.0295	0.1271
1054	SLE RA 6	0.4	0.82	35.64	-9.0895	0.03	0.1357
1054	SLE RA 7	0.39	0.82	35.66	-9.0941	0.03	0.1319
1054	SLE RA 8	0.4	0.81	35.42	-9.038	0.0297	0.1357
1054	SLE RA 9	0.39	0.8	35.45	-9.0427	0.0298	0.132
1054	SLE RA 10	0.38	0.87	37.68	-9.6061	0.0322	0.128
1054	SLE RA 11	0.4	0.91	38.17	-9.7269	0.0327	0.1365
1054	SLE RA 12	0.39	0.9	38.19	-9.7315	0.0327	0.1327
1054	SLE RA 13	0.39	0.88	37.99	-9.6831	0.0325	0.1303
1054	SLE RA 14	0.41	0.91	38.48	-9.8039	0.033	0.1388
1054	SLE RA 15	0.4	0.9	38.5	-9.8085	0.033	0.1351
1054	SLE RA 16	0.41	0.9	38.27	-9.7525	0.0328	0.1389
1054	SLE RA 17	0.4	0.89	38.29	-9.7571	0.0328	0.1351
1054	SLE RA 18	0.4	0.93	38.86	-9.9045	0.0335	0.1355
1054	SLE RA 19	0.39	0.92	38.88	-9.9092	0.0335	0.1318
1054	SLE RA 20	0.41	0.93	39.17	-9.9816	0.0338	0.1379
1054	SLE RA 21	0.4	0.92	39.19	-9.9862	0.0338	0.1341
1054	SLE FR 1	0.39	0.8	34.8	-8.8839	0.0292	0.131
1054	SLE FR 2	0.38	0.79	34.8	-8.8855	0.0292	0.1298
1054	SLE FR 3	0.39	0.8	34.92	-8.9147	0.0293	0.132
1054	SLE FR 4	0.39	0.83	36.02	-9.1916	0.0305	0.1311
1054	SLE FR 5	0.39	0.84	36.14	-9.2209	0.0306	0.1333
1054	SLE FR 6	0.39	0.86	36.83	-9.3942	0.0313	0.1333
1054	SLE QP 1	0.39	0.8	34.8	-8.8839	0.0292	0.131
1054	SLE QP 2	0.39	0.84	36.02	-9.1901	0.0305	0.1324
1054	SLD 1	4.22	1.1	31.85	-8.3172	0.0367	1.4718
1054	SLD 2	3.83	1.27	31.8	-8.3057	0.0368	1.3362
1054	SLD 3	4.28	0.21	32.74	-8.4986	0.0384	1.4931
1054	SLD 4	3.89	0.38	32.69	-8.4871	0.0385	1.3574
1054	SLD 5	1.52	2.24	33.43	-8.6552	0.0297	0.5266
1054	SLD 6	1.26	2.35	33.39	-8.6476	0.0298	0.4366
1054	SLD 7	1.72	-0.73	36.39	-9.2598	0.0354	0.5975
1054	SLD 8	1.46	-0.62	36.36	-9.2522	0.0355	0.5075
1054	SLD 9	-0.68	2.29	35.67	-9.128	0.0254	-0.2427
1054	SLD 10	-0.94	2.4	35.64	-9.1204	0.0255	-0.3327
1054	SLD 11	-0.48	-0.67	38.64	-9.7326	0.0312	-0.1718
1054	SLD 12	-0.73	-0.56	38.6	-9.725	0.0312	-0.2619
1054	SLD 13	-3.11	1.29	39.34	-9.8931	0.0224	-1.0926
1054	SLD 14	-3.49	1.46	39.29	-9.8816	0.0225	-1.2283
1054	SLD 15	-3.04	0.4	40.23	-10.0745	0.0241	-1.0714
1054	SLD 16	-3.43	0.57	40.18	-10.063	0.0243	-1.207
1054	SLV 1	9.33	1.43	26.31	-7.1538	0.0451	3.2638
1054	SLV 2	8.43	1.81	26.19	-7.1271	0.0454	2.9479
1054	SLV 3	9.48	-0.59	28.33	-7.5659	0.049	3.313
1054	SLV 4	8.57	-0.2	28.21	-7.5392	0.0493	2.9972
1054	SLV 5	3.02	4	30.06	-7.9588	0.0289	1.0527
1054	SLV 6	2.43	4.26	29.99	-7.9414	0.029	0.8469
1054	SLV 7	3.49	-2.72	36.79	-9.3327	0.0419	1.2168
1054	SLV 8	2.9	-2.47	36.71	-9.3153	0.0421	1.011
1054	SLV 9	-2.12	4.14	35.32	-9.0649	0.0188	-0.7462
1054	SLV 10	-2.71	4.39	35.24	-9.0475	0.019	-0.952
1054	SLV 11	-1.65	-2.58	42.05	-10.4388	0.0319	-0.5821
1054	SLV 12	-2.24	-2.33	41.97	-10.4214	0.0321	-0.7879
1054	SLV 13	-7.79	1.88	43.82	-10.841	0.0116	-2.7324
1054	SLV 14	-8.69	2.26	43.71	-10.8143	0.0119	-3.0482
1054	SLV 15	-7.65	-0.14	45.84	-11.2531	0.0156	-2.6831
1054	SLV 16	-8.55	0.24	45.72	-11.2264	0.0159	-2.999
1054	CRTFP Ux+	0	0	0	0	0	0
1054	CRTFP Ux-	0	0	0	0	0	0
1054	CRTFP Uy+	0	0	0	0	0	0
1054	CRTFP Uy-	0	0	0	0	0	0
1055	SLU 1	0.42	0.61	32.81	-7.7912	0.0196	0.1415
1055	SLU 2	0.39	0.59	32.87	-7.8022	0.0197	0.132
1055	SLU 3	0.43	0.63	33.58	-7.9632	0.0202	0.1452

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1055	SLU 4	0.41	0.62	33.62	-7.9698	0.0202	0.1395
1055	SLU 5	0.4	0.6	33.33	-7.9056	0.02	0.1357
1055	SLU 6	0.44	0.64	34.04	-8.0666	0.0205	0.1489
1055	SLU 7	0.42	0.63	34.07	-8.0732	0.0205	0.1432
1055	SLU 8	0.44	0.63	33.73	-7.998	0.0202	0.1489
1055	SLU 9	0.42	0.61	33.76	-8.0045	0.0203	0.1432
1055	SLU 10	0.41	0.71	37	-8.7571	0.0231	0.1379
1055	SLU 11	0.45	0.75	37.72	-8.9181	0.0237	0.1511
1055	SLU 12	0.43	0.74	37.75	-8.9247	0.0237	0.1455
1055	SLU 13	0.42	0.72	37.46	-8.8605	0.0235	0.1416
1055	SLU 14	0.46	0.76	38.18	-9.0215	0.024	0.1548
1055	SLU 15	0.44	0.75	38.21	-9.0281	0.024	0.1491
1055	SLU 16	0.46	0.75	37.87	-8.9529	0.0237	0.1548
1055	SLU 17	0.44	0.74	37.9	-8.9595	0.0238	0.1491
1055	SLU 18	0.44	0.78	38.72	-9.1554	0.0246	0.1499
1055	SLU 19	0.43	0.77	38.75	-9.1619	0.0246	0.1443
1055	SLU 20	0.45	0.79	39.18	-9.2587	0.0249	0.1536
1055	SLU 21	0.44	0.78	39.21	-9.2653	0.0249	0.1479
1055	SLU 22	0.45	0.76	36.97	-8.7452	0.023	0.1515
1055	SLU 23	0.42	0.74	37.03	-8.7562	0.023	0.142
1055	SLU 24	0.46	0.78	37.74	-8.9172	0.0235	0.1552
1055	SLU 25	0.44	0.77	37.78	-8.9238	0.0235	0.1495
1055	SLU 26	0.43	0.75	37.49	-8.8596	0.0233	0.1456
1055	SLU 27	0.47	0.79	38.2	-9.0206	0.0238	0.1589
1055	SLU 28	0.45	0.78	38.23	-9.0272	0.0239	0.1532
1055	SLU 29	0.47	0.78	37.89	-8.952	0.0236	0.1588
1055	SLU 30	0.45	0.77	37.92	-8.9586	0.0236	0.1531
1055	SLU 31	0.44	0.86	41.16	-9.7111	0.0265	0.1479
1055	SLU 32	0.48	0.9	41.88	-9.8721	0.027	0.1611
1055	SLU 33	0.46	0.89	41.91	-9.8787	0.027	0.1554
1055	SLU 34	0.45	0.87	41.62	-9.8145	0.0268	0.1515
1055	SLU 35	0.49	0.91	42.34	-9.9755	0.0273	0.1648
1055	SLU 36	0.47	0.9	42.37	-9.9821	0.0273	0.1591
1055	SLU 37	0.49	0.9	42.03	-9.9069	0.0271	0.1647
1055	SLU 38	0.47	0.89	42.06	-9.9135	0.0271	0.159
1055	SLU 39	0.47	0.93	42.88	-10.1094	0.028	0.1599
1055	SLU 40	0.46	0.92	42.91	-10.116	0.028	0.1542
1055	SLU 41	0.48	0.94	43.34	-10.2127	0.0283	0.1636
1055	SLU 42	0.47	0.93	43.37	-10.2193	0.0283	0.1579
1055	SLU 43	0.53	0.74	41.23	-9.8015	0.0243	0.1806
1055	SLU 44	0.51	0.72	41.29	-9.8124	0.0244	0.1711
1055	SLU 45	0.54	0.77	42	-9.9735	0.0249	0.1843
1055	SLU 46	0.53	0.75	42.03	-9.9801	0.0249	0.1786
1055	SLU 47	0.52	0.73	41.74	-9.9158	0.0247	0.1748
1055	SLU 48	0.55	0.77	42.46	-10.0768	0.0252	0.188
1055	SLU 49	0.54	0.76	42.49	-10.0834	0.0252	0.1823
1055	SLU 50	0.55	0.76	42.15	-10.0082	0.025	0.1879
1055	SLU 51	0.54	0.75	42.18	-10.0148	0.025	0.1822
1055	SLU 52	0.52	0.84	45.42	-10.7674	0.0279	0.177
1055	SLU 53	0.56	0.89	46.14	-10.9284	0.0284	0.1902
1055	SLU 54	0.55	0.87	46.17	-10.935	0.0284	0.1845
1055	SLU 55	0.53	0.85	45.88	-10.8707	0.0282	0.1807
1055	SLU 56	0.57	0.89	46.6	-11.0318	0.0287	0.1939
1055	SLU 57	0.56	0.88	46.63	-11.0383	0.0287	0.1882
1055	SLU 58	0.57	0.88	46.28	-10.9631	0.0285	0.1938
1055	SLU 59	0.56	0.87	46.32	-10.9697	0.0285	0.1881
1055	SLU 60	0.56	0.91	47.14	-11.1656	0.0293	0.189
1055	SLU 61	0.54	0.9	47.17	-11.1722	0.0294	0.1833
1055	SLU 62	0.57	0.92	47.6	-11.269	0.0296	0.1927
1055	SLU 63	0.55	0.91	47.63	-11.2756	0.0297	0.187
1055	SLU 64	0.56	0.89	45.39	-10.7555	0.0277	0.1905
1055	SLU 65	0.54	0.87	45.45	-10.7665	0.0277	0.181
1055	SLU 66	0.57	0.92	46.16	-10.9275	0.0282	0.1942
1055	SLU 67	0.56	0.9	46.19	-10.9341	0.0283	0.1885
1055	SLU 68	0.55	0.88	45.9	-10.8698	0.0281	0.1847
1055	SLU 69	0.58	0.92	46.62	-11.0309	0.0286	0.1979
1055	SLU 70	0.57	0.91	46.65	-11.0374	0.0286	0.1922
1055	SLU 71	0.58	0.91	46.31	-10.9622	0.0283	0.1979
1055	SLU 72	0.57	0.9	46.34	-10.9688	0.0283	0.1922
1055	SLU 73	0.55	0.99	49.58	-11.7214	0.0312	0.1869
1055	SLU 74	0.59	1.04	50.3	-11.8824	0.0317	0.2001
1055	SLU 75	0.58	1.02	50.33	-11.889	0.0318	0.1944
1055	SLU 76	0.56	1	50.04	-11.8247	0.0315	0.1906
1055	SLU 77	0.6	1.04	50.76	-11.9858	0.0321	0.2038
1055	SLU 78	0.59	1.03	50.79	-11.9924	0.0321	0.1981
1055	SLU 79	0.6	1.03	50.45	-11.9171	0.0318	0.2038
1055	SLU 80	0.59	1.02	50.48	-11.9237	0.0318	0.1981
1055	SLU 81	0.59	1.06	51.3	-12.1196	0.0327	0.1989
1055	SLU 82	0.57	1.05	51.33	-12.1262	0.0327	0.1932
1055	SLU 83	0.6	1.07	51.76	-12.223	0.033	0.2026
1055	SLU 84	0.58	1.06	51.79	-12.2296	0.033	0.1969
1055	SLE RA 1	0.43	0.65	34	-8.0638	0.0206	0.1444
1055	SLE RA 2	0.41	0.64	34.04	-8.0711	0.0206	0.138
1055	SLE RA 3	0.43	0.67	34.52	-8.1784	0.0209	0.1468
1055	SLE RA 4	0.42	0.66	34.54	-8.1828	0.021	0.143
1055	SLE RA 5	0.41	0.65	34.34	-8.14	0.0208	0.1405
1055	SLE RA 6	0.44	0.67	34.82	-8.2474	0.0211	0.1493
1055	SLE RA 7	0.43	0.67	34.84	-8.2518	0.0212	0.1455
1055	SLE RA 8	0.44	0.66	34.61	-8.2016	0.021	0.1493
1055	SLE RA 9	0.43	0.66	34.64	-8.206	0.021	0.1455

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1055	SLE RA 10	0.42	0.72	36.8	-8.7077	0.0229	0.142
1055	SLE RA 11	0.45	0.75	37.27	-8.815	0.0233	0.1508
1055	SLE RA 12	0.43	0.74	37.29	-8.8194	0.0233	0.147
1055	SLE RA 13	0.43	0.73	37.1	-8.7766	0.0231	0.1444
1055	SLE RA 14	0.45	0.75	37.58	-8.884	0.0235	0.1532
1055	SLE RA 15	0.44	0.75	37.6	-8.8884	0.0235	0.1494
1055	SLE RA 16	0.45	0.74	37.37	-8.8382	0.0233	0.1532
1055	SLE RA 17	0.44	0.74	37.39	-8.8426	0.0233	0.1494
1055	SLE RA 18	0.44	0.77	37.94	-8.9732	0.0239	0.15
1055	SLE RA 19	0.43	0.76	37.96	-8.9776	0.0239	0.1462
1055	SLE RA 20	0.45	0.77	38.25	-9.0421	0.0241	0.1524
1055	SLE RA 21	0.44	0.77	38.27	-9.0465	0.0241	0.1486
1055	SLE FR 1	0.43	0.65	34	-8.0638	0.0206	0.1444
1055	SLE FR 2	0.42	0.65	34.01	-8.0652	0.0206	0.1431
1055	SLE FR 3	0.43	0.66	34.13	-8.0913	0.0207	0.1453
1055	SLE FR 4	0.43	0.68	35.19	-8.3381	0.0216	0.1448
1055	SLE FR 5	0.43	0.69	35.31	-8.3642	0.0217	0.147
1055	SLE FR 6	0.43	0.71	35.97	-8.5185	0.0222	0.1472
1055	SLE QP 1	0.43	0.65	34	-8.0638	0.0206	0.1444
1055	SLE QP 2	0.43	0.69	35.18	-8.3366	0.0216	0.146
1055	SLD 1	4.26	0.96	30.81	-7.5353	0.0285	1.4869
1055	SLD 2	3.87	1.14	30.76	-7.519	0.0288	1.3506
1055	SLD 3	4.32	0.08	31.67	-7.6939	0.0299	1.508
1055	SLD 4	3.93	0.26	31.61	-7.6777	0.0302	1.3717
1055	SLD 5	1.56	2.07	32.59	-7.8585	0.0214	0.541
1055	SLD 6	1.3	2.19	32.55	-7.8478	0.0216	0.4505
1055	SLD 7	1.76	-0.86	35.43	-8.3874	0.0262	0.6115
1055	SLD 8	1.5	-0.74	35.4	-8.3766	0.0264	0.5211
1055	SLD 9	-0.64	2.11	34.97	-8.2966	0.0168	-0.229
1055	SLD 10	-0.9	2.23	34.94	-8.2858	0.0169	-0.3194
1055	SLD 11	-0.44	-0.81	37.82	-8.8254	0.0215	-0.1584
1055	SLD 12	-0.7	-0.69	37.78	-8.8147	0.0217	-0.2489
1055	SLD 13	-3.07	1.11	38.76	-8.9955	0.0129	-1.0797
1055	SLD 14	-3.46	1.29	38.7	-8.9793	0.0132	-1.2159
1055	SLD 15	-3.01	0.24	39.61	-9.1542	0.0144	-1.0585
1055	SLD 16	-3.4	0.41	39.56	-9.1379	0.0147	-1.1948
1055	SLV 1	9.38	1.29	24.99	-6.4665	0.0378	3.2807
1055	SLV 2	8.47	1.71	24.85	-6.4287	0.0384	2.9634
1055	SLV 3	9.52	-0.69	26.92	-6.8279	0.0411	3.3297
1055	SLV 4	8.61	-0.28	26.79	-6.7901	0.0417	3.0124
1055	SLV 5	3.06	3.81	29.21	-7.2341	0.0214	1.0679
1055	SLV 6	2.47	4.08	29.13	-7.2094	0.0218	0.8611
1055	SLV 7	3.53	-2.81	35.66	-8.4388	0.0323	1.2313
1055	SLV 8	2.94	-2.54	35.58	-8.4141	0.0327	1.0245
1055	SLV 9	-2.08	3.92	34.79	-8.2591	0.0105	-0.7324
1055	SLV 10	-2.67	4.19	34.7	-8.2344	0.0109	-0.9392
1055	SLV 11	-1.61	-2.71	41.24	-9.4638	0.0214	-0.569
1055	SLV 12	-2.2	-2.44	41.16	-9.4391	0.0218	-0.7758
1055	SLV 13	-7.75	1.65	43.58	-9.8831	0.0014	-2.7203
1055	SLV 14	-8.66	2.07	43.45	-9.8453	0.0021	-3.0376
1055	SLV 15	-7.61	-0.33	45.52	-10.2445	0.0047	-2.6713
1055	SLV 16	-8.52	0.08	45.38	-10.2067	0.0054	-2.9886
1055	CRTFP Ux+	0	0	0	0	0	0
1055	CRTFP Ux-	0	0	0	0	0	0
1055	CRTFP Uy+	0	0	0	0	0	0
1055	CRTFP Uy-	0	0	0	0	0	0
1056	SLU 1	0.45	0.47	32.42	-7.2961	0.0052	0.1541
1056	SLU 2	0.43	0.45	32.47	-7.3064	0.0053	0.1445
1056	SLU 3	0.46	0.49	33.17	-7.4548	0.0054	0.1582
1056	SLU 4	0.45	0.48	33.2	-7.461	0.0054	0.1524
1056	SLU 5	0.44	0.46	32.92	-7.4021	0.0054	0.1484
1056	SLU 6	0.48	0.5	33.63	-7.5505	0.0055	0.162
1056	SLU 7	0.46	0.48	33.66	-7.5567	0.0055	0.1563
1056	SLU 8	0.48	0.48	33.32	-7.4875	0.0054	0.1619
1056	SLU 9	0.46	0.47	33.35	-7.4937	0.0054	0.1561
1056	SLU 10	0.45	0.56	36.52	-8.1834	0.0068	0.1516
1056	SLU 11	0.49	0.6	37.23	-8.3318	0.0069	0.1653
1056	SLU 12	0.47	0.58	37.26	-8.338	0.007	0.1595
1056	SLU 13	0.46	0.56	36.97	-8.2791	0.0069	0.1555
1056	SLU 14	0.5	0.6	37.68	-8.4275	0.007	0.1691
1056	SLU 15	0.48	0.59	37.71	-8.4337	0.0071	0.1633
1056	SLU 16	0.5	0.59	37.38	-8.3645	0.0069	0.1689
1056	SLU 17	0.48	0.58	37.41	-8.3707	0.007	0.1632
1056	SLU 18	0.48	0.62	38.21	-8.549	0.0074	0.1643
1056	SLU 19	0.47	0.61	38.24	-8.5552	0.0075	0.1585
1056	SLU 20	0.49	0.63	38.66	-8.6447	0.0075	0.1681
1056	SLU 21	0.48	0.62	38.69	-8.6509	0.0075	0.1623
1056	SLU 22	0.49	0.6	36.5	-8.1737	0.0066	0.1653
1056	SLU 23	0.46	0.58	36.55	-8.184	0.0067	0.1557
1056	SLU 24	0.5	0.62	37.26	-8.3324	0.0068	0.1694
1056	SLU 25	0.48	0.61	37.29	-8.3386	0.0068	0.1636
1056	SLU 26	0.47	0.59	37	-8.2797	0.0068	0.1596
1056	SLU 27	0.51	0.63	37.71	-8.4281	0.0069	0.1732
1056	SLU 28	0.49	0.62	37.74	-8.4343	0.0069	0.1674
1056	SLU 29	0.51	0.62	37.4	-8.3651	0.0068	0.173
1056	SLU 30	0.49	0.6	37.44	-8.3713	0.0068	0.1673
1056	SLU 31	0.48	0.69	40.61	-9.061	0.0082	0.1628
1056	SLU 32	0.52	0.73	41.31	-9.2094	0.0083	0.1764
1056	SLU 33	0.5	0.72	41.34	-9.2156	0.0084	0.1707
1056	SLU 34	0.49	0.7	41.06	-9.1567	0.0083	0.1666

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1056	SLU 35	0.53	0.74	41.77	-9.3051	0.0084	0.1803
1056	SLU 36	0.51	0.72	41.8	-9.3113	0.0085	0.1745
1056	SLU 37	0.53	0.72	41.46	-9.2421	0.0083	0.1801
1056	SLU 38	0.51	0.71	41.49	-9.2483	0.0084	0.1743
1056	SLU 39	0.52	0.76	42.29	-9.4266	0.0088	0.1754
1056	SLU 40	0.5	0.74	42.32	-9.4328	0.0089	0.1697
1056	SLU 41	0.53	0.76	42.75	-9.5223	0.0089	0.1793
1056	SLU 42	0.51	0.75	42.78	-9.5284	0.0089	0.1735
1056	SLU 43	0.58	0.57	40.74	-9.1841	0.0063	0.1966
1056	SLU 44	0.55	0.55	40.79	-9.1944	0.0064	0.1869
1056	SLU 45	0.59	0.59	41.5	-9.3428	0.0065	0.2006
1056	SLU 46	0.57	0.57	41.53	-9.3489	0.0065	0.1948
1056	SLU 47	0.56	0.55	41.24	-9.2901	0.0064	0.1908
1056	SLU 48	0.6	0.59	41.95	-9.4385	0.0066	0.2044
1056	SLU 49	0.58	0.58	41.98	-9.4446	0.0066	0.1987
1056	SLU 50	0.6	0.58	41.64	-9.3755	0.0065	0.2043
1056	SLU 51	0.58	0.57	41.68	-9.3816	0.0065	0.1985
1056	SLU 52	0.57	0.65	44.85	-10.0714	0.0079	0.194
1056	SLU 53	0.61	0.69	45.55	-10.2198	0.008	0.2077
1056	SLU 54	0.59	0.68	45.58	-10.2259	0.0081	0.2019
1056	SLU 55	0.58	0.66	45.3	-10.1671	0.008	0.1979
1056	SLU 56	0.62	0.7	46	-10.3155	0.0081	0.2115
1056	SLU 57	0.61	0.69	46.04	-10.3216	0.0081	0.2058
1056	SLU 58	0.62	0.68	45.7	-10.2525	0.008	0.2113
1056	SLU 59	0.6	0.67	45.73	-10.2586	0.0081	0.2056
1056	SLU 60	0.61	0.72	46.53	-10.4369	0.0085	0.2067
1056	SLU 61	0.59	0.71	46.56	-10.4431	0.0085	0.2009
1056	SLU 62	0.62	0.72	46.99	-10.5326	0.0086	0.2105
1056	SLU 63	0.6	0.71	47.02	-10.5388	0.0086	0.2048
1056	SLU 64	0.61	0.7	44.82	-10.0617	0.0077	0.2077
1056	SLU 65	0.58	0.68	44.88	-10.072	0.0078	0.1981
1056	SLU 66	0.62	0.72	45.58	-10.2204	0.0079	0.2118
1056	SLU 67	0.61	0.71	45.61	-10.2265	0.0079	0.206
1056	SLU 68	0.59	0.68	45.33	-10.1677	0.0078	0.202
1056	SLU 69	0.63	0.72	46.03	-10.3161	0.008	0.2156
1056	SLU 70	0.62	0.71	46.07	-10.3222	0.008	0.2099
1056	SLU 71	0.63	0.71	45.73	-10.2531	0.0079	0.2154
1056	SLU 72	0.62	0.7	45.76	-10.2592	0.0079	0.2097
1056	SLU 73	0.6	0.78	48.93	-10.949	0.0093	0.2052
1056	SLU 74	0.64	0.82	49.64	-11.0974	0.0094	0.2188
1056	SLU 75	0.63	0.81	49.67	-11.1035	0.0095	0.2131
1056	SLU 76	0.62	0.79	49.38	-11.0447	0.0094	0.2091
1056	SLU 77	0.66	0.83	50.09	-11.1931	0.0095	0.2227
1056	SLU 78	0.64	0.82	50.12	-11.1992	0.0095	0.2169
1056	SLU 79	0.65	0.82	49.78	-11.1301	0.0094	0.2225
1056	SLU 80	0.64	0.81	49.82	-11.1362	0.0095	0.2168
1056	SLU 81	0.64	0.85	50.62	-11.3145	0.0099	0.2178
1056	SLU 82	0.63	0.84	50.65	-11.3207	0.0099	0.2121
1056	SLU 83	0.65	0.86	51.07	-11.4102	0.01	0.2217
1056	SLU 84	0.64	0.84	51.1	-11.4164	0.01	0.2159
1056	SLE RA 1	0.46	0.51	33.58	-7.5469	0.0056	0.1573
1056	SLE RA 2	0.44	0.49	33.62	-7.5537	0.0056	0.1509
1056	SLE RA 3	0.47	0.52	34.09	-7.6527	0.0057	0.16
1056	SLE RA 4	0.46	0.51	34.11	-7.6568	0.0058	0.1562
1056	SLE RA 5	0.45	0.5	33.92	-7.6175	0.0057	0.1535
1056	SLE RA 6	0.48	0.53	34.39	-7.7165	0.0058	0.1626
1056	SLE RA 7	0.47	0.52	34.41	-7.7206	0.0058	0.1588
1056	SLE RA 8	0.48	0.52	34.19	-7.6745	0.0057	0.1625
1056	SLE RA 9	0.47	0.51	34.21	-7.6786	0.0058	0.1586
1056	SLE RA 10	0.46	0.57	36.32	-8.1384	0.0067	0.1556
1056	SLE RA 11	0.48	0.59	36.79	-8.2373	0.0068	0.1647
1056	SLE RA 12	0.47	0.58	36.81	-8.2414	0.0068	0.1609
1056	SLE RA 13	0.47	0.57	36.62	-8.2022	0.0067	0.1582
1056	SLE RA 14	0.49	0.6	37.09	-8.3011	0.0068	0.1673
1056	SLE RA 15	0.48	0.59	37.11	-8.3052	0.0068	0.1635
1056	SLE RA 16	0.49	0.59	36.89	-8.2591	0.0068	0.1672
1056	SLE RA 17	0.48	0.58	36.91	-8.2632	0.0068	0.1634
1056	SLE RA 18	0.48	0.61	37.44	-8.3821	0.0071	0.1641
1056	SLE RA 19	0.47	0.6	37.47	-8.3862	0.0071	0.1602
1056	SLE RA 20	0.49	0.61	37.75	-8.4459	0.0071	0.1666
1056	SLE RA 21	0.48	0.61	37.77	-8.45	0.0072	0.1628
1056	SLE FR 1	0.46	0.51	33.58	-7.5469	0.0056	0.1573
1056	SLE FR 2	0.46	0.51	33.59	-7.5482	0.0056	0.1561
1056	SLE FR 3	0.47	0.51	33.7	-7.5724	0.0056	0.1584
1056	SLE FR 4	0.46	0.54	34.75	-7.7988	0.0061	0.1581
1056	SLE FR 5	0.47	0.54	34.86	-7.823	0.0061	0.1604
1056	SLE FR 6	0.47	0.56	35.51	-7.9645	0.0063	0.1607
1056	SLE QP 1	0.46	0.51	33.58	-7.5469	0.0056	0.1573
1056	SLE QP 2	0.47	0.54	34.74	-7.7974	0.006	0.1594
1056	SLD 1	4.3	0.94	30.13	-7.0343	0.0144	1.5007
1056	SLD 2	3.91	1.13	30.06	-7.0103	0.0149	1.3639
1056	SLD 3	4.36	0.07	30.96	-7.1804	0.0154	1.5218
1056	SLD 4	3.97	0.26	30.89	-7.1563	0.0158	1.385
1056	SLD 5	1.6	1.94	32.11	-7.3513	0.0071	0.5547
1056	SLD 6	1.34	2.07	32.07	-7.3354	0.0074	0.4639
1056	SLD 7	1.8	-0.95	34.88	-7.8383	0.0101	0.6249
1056	SLD 8	1.54	-0.83	34.83	-7.8223	0.0105	0.5341
1056	SLD 9	-0.6	1.9	34.65	-7.7726	0.0016	-0.2154
1056	SLD 10	-0.86	2.03	34.61	-7.7566	0.002	-0.3062
1056	SLD 11	-0.4	-0.99	37.42	-8.2595	0.0047	-0.1452

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1056	SLD 12	-0.66	-0.87	37.37	-8.2436	0.005	-0.236
1056	SLD 13	-3.03	0.81	38.59	-8.4385	-0.0037	-1.0662
1056	SLD 14	-3.42	1	38.53	-8.4145	-0.0033	-1.203
1056	SLD 15	-2.97	-0.05	39.42	-8.5846	-0.0028	-1.0452
1056	SLD 16	-3.36	0.13	39.36	-8.5606	-0.0023	-1.182
1056	SLV 1	9.42	1.46	23.97	-6.0159	0.0257	3.2952
1056	SLV 2	8.51	1.9	23.81	-5.9599	0.0268	2.9767
1056	SLV 3	9.56	-0.51	25.85	-6.3494	0.0278	3.344
1056	SLV 4	8.65	-0.07	25.69	-6.2934	0.0289	3.0255
1056	SLV 5	3.1	3.72	28.68	-6.7669	0.0086	1.0821
1056	SLV 6	2.51	4.01	28.57	-6.7304	0.0093	0.8746
1056	SLV 7	3.57	-2.84	34.96	-7.8788	0.0156	1.2448
1056	SLV 8	2.97	-2.55	34.86	-7.8423	0.0163	1.0372
1056	SLV 9	-2.04	3.63	34.62	-7.7526	-0.0042	-0.7185
1056	SLV 10	-2.63	3.91	34.52	-7.7161	-0.0035	-0.926
1056	SLV 11	-1.57	-2.93	40.91	-8.8645	0.0028	-0.5558
1056	SLV 12	-2.16	-2.64	40.8	-8.828	0.0035	-0.7634
1056	SLV 13	-7.71	1.15	43.79	-9.3015	-0.0168	-2.7068
1056	SLV 14	-8.62	1.59	43.63	-9.2455	-0.0157	-3.0253
1056	SLV 15	-7.57	-0.82	45.67	-9.635	-0.0147	-2.658
1056	SLV 16	-8.48	-0.38	45.51	-9.579	-0.0136	-2.9765
1056	CRTFP Ux+	0	0	0	0	0	0
1056	CRTFP Ux-	0	0	0	0	0	0
1056	CRTFP Uy+	0	0	0	0	0	0
1056	CRTFP Uy-	0	0	0	0	0	0
1057	SLU 1	0.49	0.34	32.53	-7.1927	-0.013	0.1664
1057	SLU 2	0.46	0.32	32.58	-7.202	-0.0129	0.1567
1057	SLU 3	0.5	0.35	33.29	-7.3481	-0.0133	0.1708
1057	SLU 4	0.48	0.34	33.32	-7.3536	-0.0132	0.1649
1057	SLU 5	0.47	0.32	33.03	-7.2961	-0.0131	0.1607
1057	SLU 6	0.51	0.36	33.74	-7.4421	-0.0135	0.1748
1057	SLU 7	0.49	0.35	33.77	-7.4477	-0.0134	0.169
1057	SLU 8	0.51	0.35	33.44	-7.3808	-0.0134	0.1745
1057	SLU 9	0.49	0.33	33.47	-7.3864	-0.0133	0.1687
1057	SLU 10	0.48	0.41	36.63	-8.0541	-0.0139	0.1649
1057	SLU 11	0.52	0.45	37.34	-8.2001	-0.0143	0.179
1057	SLU 12	0.51	0.43	37.37	-8.2057	-0.0142	0.1732
1057	SLU 13	0.5	0.42	37.08	-8.1481	-0.0141	0.169
1057	SLU 14	0.54	0.45	37.79	-8.2942	-0.0145	0.183
1057	SLU 15	0.52	0.44	37.82	-8.2998	-0.0144	0.1772
1057	SLU 16	0.54	0.44	37.48	-8.2329	-0.0144	0.1827
1057	SLU 17	0.52	0.43	37.51	-8.2385	-0.0143	0.1769
1057	SLU 18	0.52	0.47	38.31	-8.41	-0.0144	0.1782
1057	SLU 19	0.51	0.46	38.34	-8.4155	-0.0143	0.1724
1057	SLU 20	0.53	0.48	38.76	-8.504	-0.0146	0.1822
1057	SLU 21	0.52	0.46	38.79	-8.5096	-0.0145	0.1764
1057	SLU 22	0.52	0.46	36.61	-8.0472	-0.0141	0.1788
1057	SLU 23	0.5	0.44	36.66	-8.0565	-0.014	0.1691
1057	SLU 24	0.54	0.47	37.37	-8.2025	-0.0144	0.1832
1057	SLU 25	0.52	0.46	37.4	-8.2081	-0.0144	0.1773
1057	SLU 26	0.51	0.44	37.11	-8.1505	-0.0142	0.1731
1057	SLU 27	0.55	0.48	37.82	-8.2966	-0.0146	0.1872
1057	SLU 28	0.53	0.46	37.85	-8.3021	-0.0145	0.1814
1057	SLU 29	0.55	0.46	37.52	-8.2353	-0.0145	0.1869
1057	SLU 30	0.53	0.45	37.55	-8.2409	-0.0145	0.1811
1057	SLU 31	0.52	0.53	40.71	-8.9086	-0.015	0.1774
1057	SLU 32	0.56	0.56	41.42	-9.0546	-0.0154	0.1914
1057	SLU 33	0.54	0.55	41.44	-9.0602	-0.0153	0.1856
1057	SLU 34	0.53	0.53	41.16	-9.0026	-0.0152	0.1814
1057	SLU 35	0.57	0.57	41.87	-9.1486	-0.0156	0.1955
1057	SLU 36	0.56	0.56	41.9	-9.1542	-0.0155	0.1896
1057	SLU 37	0.57	0.56	41.56	-9.0873	-0.0155	0.1951
1057	SLU 38	0.56	0.54	41.59	-9.0929	-0.0154	0.1893
1057	SLU 39	0.56	0.59	42.39	-9.2644	-0.0155	0.1906
1057	SLU 40	0.54	0.58	42.42	-9.27	-0.0154	0.1848
1057	SLU 41	0.57	0.59	42.84	-9.3585	-0.0157	0.1946
1057	SLU 42	0.55	0.58	42.87	-9.364	-0.0156	0.1888
1057	SLU 43	0.62	0.4	40.89	-9.0576	-0.0165	0.2121
1057	SLU 44	0.59	0.38	40.94	-9.0669	-0.0165	0.2024
1057	SLU 45	0.63	0.42	41.65	-9.2129	-0.0168	0.2164
1057	SLU 46	0.62	0.4	41.68	-9.2185	-0.0168	0.2106
1057	SLU 47	0.6	0.38	41.4	-9.161	-0.0166	0.2064
1057	SLU 48	0.64	0.42	42.11	-9.307	-0.017	0.2205
1057	SLU 49	0.63	0.41	42.13	-9.3126	-0.017	0.2146
1057	SLU 50	0.64	0.41	41.8	-9.2457	-0.0169	0.2202
1057	SLU 51	0.63	0.4	41.83	-9.2513	-0.0169	0.2143
1057	SLU 52	0.62	0.47	44.99	-9.919	-0.0174	0.2106
1057	SLU 53	0.66	0.51	45.7	-10.065	-0.0178	0.2247
1057	SLU 54	0.64	0.5	45.73	-10.0706	-0.0177	0.2189
1057	SLU 55	0.63	0.48	45.44	-10.013	-0.0176	0.2147
1057	SLU 56	0.67	0.51	46.15	-10.159	-0.018	0.2287
1057	SLU 57	0.65	0.5	46.18	-10.1646	-0.0179	0.2229
1057	SLU 58	0.67	0.5	45.85	-10.0978	-0.0179	0.2284
1057	SLU 59	0.65	0.49	45.87	-10.1033	-0.0178	0.2226
1057	SLU 60	0.66	0.53	46.67	-10.2748	-0.0179	0.2239
1057	SLU 61	0.64	0.52	46.7	-10.2804	-0.0179	0.218
1057	SLU 62	0.67	0.54	47.13	-10.3689	-0.0181	0.2279
1057	SLU 63	0.65	0.52	47.15	-10.3745	-0.018	0.2221
1057	SLU 64	0.66	0.52	44.97	-9.9121	-0.0177	0.2245
1057	SLU 65	0.63	0.5	45.02	-9.9214	-0.0176	0.2148

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1057	SLU 66	0.67	0.53	45.73	-10.0674	-0.0179	0.2288
1057	SLU 67	0.65	0.52	45.76	-10.073	-0.0179	0.223
1057	SLU 68	0.64	0.5	45.47	-10.0154	-0.0178	0.2188
1057	SLU 69	0.68	0.54	46.18	-10.1614	-0.0181	0.2329
1057	SLU 70	0.66	0.52	46.21	-10.167	-0.0181	0.227
1057	SLU 71	0.68	0.53	45.88	-10.1001	-0.018	0.2326
1057	SLU 72	0.66	0.51	45.91	-10.1057	-0.018	0.2267
1057	SLU 73	0.65	0.59	49.07	-10.7734	-0.0185	0.223
1057	SLU 74	0.69	0.63	49.78	-10.9194	-0.0189	0.2371
1057	SLU 75	0.68	0.61	49.81	-10.925	-0.0188	0.2313
1057	SLU 76	0.67	0.59	49.52	-10.8675	-0.0187	0.2271
1057	SLU 77	0.71	0.63	50.23	-11.0135	-0.0191	0.2411
1057	SLU 78	0.69	0.62	50.26	-11.0191	-0.019	0.2353
1057	SLU 79	0.71	0.62	49.92	-10.9522	-0.019	0.2408
1057	SLU 80	0.69	0.61	49.95	-10.9578	-0.0189	0.235
1057	SLU 81	0.69	0.65	50.75	-11.1293	-0.019	0.2363
1057	SLU 82	0.68	0.64	50.78	-11.1349	-0.019	0.2304
1057	SLU 83	0.7	0.65	51.2	-11.2233	-0.0192	0.2403
1057	SLU 84	0.69	0.64	51.23	-11.2289	-0.0192	0.2345
1057	SLE RA 1	0.5	0.37	33.7	-7.4369	-0.0133	0.17
1057	SLE RA 2	0.48	0.36	33.73	-7.4431	-0.0133	0.1635
1057	SLE RA 3	0.51	0.38	34.2	-7.5404	-0.0135	0.1729
1057	SLE RA 4	0.49	0.37	34.22	-7.5441	-0.0135	0.169
1057	SLE RA 5	0.49	0.36	34.03	-7.5058	-0.0134	0.1662
1057	SLE RA 6	0.51	0.39	34.51	-7.6031	-0.0137	0.1756
1057	SLE RA 7	0.5	0.38	34.53	-7.6068	-0.0136	0.1717
1057	SLE RA 8	0.51	0.38	34.3	-7.5623	-0.0136	0.1753
1057	SLE RA 9	0.5	0.37	34.32	-7.566	-0.0136	0.1715
1057	SLE RA 10	0.5	0.42	36.43	-8.0111	-0.0139	0.169
1057	SLE RA 11	0.52	0.44	36.9	-8.1085	-0.0142	0.1784
1057	SLE RA 12	0.51	0.44	36.92	-8.1122	-0.0141	0.1745
1057	SLE RA 13	0.5	0.42	36.73	-8.0738	-0.014	0.1717
1057	SLE RA 14	0.53	0.45	37.2	-8.1712	-0.0143	0.1811
1057	SLE RA 15	0.52	0.44	37.22	-8.1749	-0.0143	0.1772
1057	SLE RA 16	0.53	0.44	37	-8.1303	-0.0142	0.1808
1057	SLE RA 17	0.52	0.43	37.02	-8.134	-0.0142	0.177
1057	SLE RA 18	0.52	0.46	37.55	-8.2484	-0.0142	0.1778
1057	SLE RA 19	0.51	0.45	37.57	-8.2521	-0.0142	0.1739
1057	SLE RA 20	0.53	0.46	37.85	-8.3111	-0.0144	0.1805
1057	SLE RA 21	0.52	0.46	37.87	-8.3148	-0.0143	0.1766
1057	SLE FR 1	0.5	0.37	33.7	-7.4369	-0.0133	0.17
1057	SLE FR 2	0.49	0.37	33.7	-7.4381	-0.0133	0.1687
1057	SLE FR 3	0.5	0.37	33.82	-7.4619	-0.0134	0.171
1057	SLE FR 4	0.5	0.4	34.86	-7.6816	-0.0136	0.171
1057	SLE FR 5	0.51	0.4	34.97	-7.7054	-0.0137	0.1734
1057	SLE FR 6	0.51	0.42	35.62	-7.8426	-0.0138	0.1739
1057	SLE QP 1	0.5	0.37	33.7	-7.4369	-0.0133	0.17
1057	SLE QP 2	0.5	0.4	34.85	-7.6803	-0.0136	0.1723
1057	SLD 1	4.33	0.81	29.94	-6.9123	-0.0029	1.5133
1057	SLD 2	3.94	1.01	29.85	-6.8765	-0.0022	1.3761
1057	SLD 3	4.39	-0.05	30.76	-7.0573	-0.0034	1.5343
1057	SLD 4	4	0.14	30.68	-7.0215	-0.0027	1.3971
1057	SLD 5	1.63	1.8	32.14	-7.2365	-0.0098	0.5678
1057	SLD 6	1.37	1.93	32.08	-7.2128	-0.0094	0.4767
1057	SLD 7	1.83	-1.08	34.89	-7.7198	-0.0114	0.6376
1057	SLD 8	1.57	-0.95	34.84	-7.696	-0.0109	0.5466
1057	SLD 9	-0.56	1.75	34.87	-7.6646	-0.0163	-0.2019
1057	SLD 10	-0.82	1.88	34.81	-7.6408	-0.0159	-0.293
1057	SLD 11	-0.36	-1.13	37.62	-8.1478	-0.0179	-0.1321
1057	SLD 12	-0.62	-1	37.56	-8.1241	-0.0174	-0.2232
1057	SLD 13	-2.99	0.65	39.03	-8.3391	-0.0246	-1.0524
1057	SLD 14	-3.38	0.85	38.94	-8.3034	-0.0239	-1.1896
1057	SLD 15	-2.93	-0.21	39.85	-8.4841	-0.025	-1.0314
1057	SLD 16	-3.32	-0.01	39.77	-8.4483	-0.0243	-1.1687
1057	SLV 1	9.45	1.33	23.38	-5.887	0.0115	3.3074
1057	SLV 2	8.54	1.79	23.18	-5.8037	0.0131	2.9879
1057	SLV 3	9.59	-0.63	25.26	-6.2183	0.0104	3.356
1057	SLV 4	8.68	-0.17	25.06	-6.135	0.012	3.0364
1057	SLV 5	3.14	3.56	28.6	-6.6544	-0.0047	1.0954
1057	SLV 6	2.54	3.87	28.47	-6.6001	-0.0037	0.8872
1057	SLV 7	3.6	-2.96	34.86	-7.7589	-0.0083	1.2572
1057	SLV 8	3.01	-2.66	34.73	-7.7047	-0.0073	1.049
1057	SLV 9	-2	3.46	34.98	-7.656	-0.0199	-0.7044
1057	SLV 10	-2.59	3.76	34.85	-7.6017	-0.0189	-0.9126
1057	SLV 11	-1.53	-3.07	41.24	-8.7605	-0.0236	-0.5425
1057	SLV 12	-2.13	-2.77	41.11	-8.7062	-0.0225	-0.7507
1057	SLV 13	-7.67	0.96	44.65	-9.2256	-0.0392	-2.6918
1057	SLV 14	-8.58	1.43	44.45	-9.1423	-0.0376	-3.0113
1057	SLV 15	-7.53	-0.99	46.53	-9.557	-0.0403	-2.6432
1057	SLV 16	-8.44	-0.53	46.33	-9.4737	-0.0387	-2.9627
1057	CRTFP Ux+	0	0	0	0	0	0
1057	CRTFP Ux-	0	0	0	0	0	0
1057	CRTFP Uy+	0	0	0	0	0	0
1057	CRTFP Uy-	0	0	0	0	0	0
1058	SLU 1	0.52	0.23	33.25	-7.5448	-0.0331	0.1783
1058	SLU 2	0.49	0.2	33.3	-7.5527	-0.033	0.1685
1058	SLU 3	0.53	0.24	34.03	-7.7083	-0.0339	0.183
1058	SLU 4	0.52	0.22	34.05	-7.713	-0.0338	0.1771
1058	SLU 5	0.5	0.21	33.76	-7.6521	-0.0335	0.1727
1058	SLU 6	0.54	0.24	34.49	-7.8077	-0.0344	0.1872

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1058	SLU 7	0.53	0.23	34.52	-7.8124	-0.0343	0.1813
1058	SLU 8	0.54	0.23	34.18	-7.7436	-0.0341	0.1868
1058	SLU 9	0.53	0.22	34.21	-7.7483	-0.034	0.1809
1058	SLU 10	0.52	0.29	37.41	-8.4416	-0.0367	0.1779
1058	SLU 11	0.56	0.32	38.14	-8.5973	-0.0376	0.1924
1058	SLU 12	0.54	0.31	38.17	-8.602	-0.0375	0.1865
1058	SLU 13	0.53	0.29	37.88	-8.541	-0.0372	0.1821
1058	SLU 14	0.57	0.32	38.61	-8.6967	-0.0381	0.1966
1058	SLU 15	0.56	0.31	38.64	-8.7014	-0.038	0.1907
1058	SLU 16	0.57	0.31	38.3	-8.6325	-0.0378	0.1961
1058	SLU 17	0.55	0.3	38.33	-8.6373	-0.0377	0.1903
1058	SLU 18	0.56	0.34	39.13	-8.8147	-0.0384	0.1917
1058	SLU 19	0.54	0.33	39.16	-8.8194	-0.0383	0.1859
1058	SLU 20	0.57	0.34	39.6	-8.9141	-0.0389	0.196
1058	SLU 21	0.55	0.33	39.63	-8.9188	-0.0388	0.1901
1058	SLU 22	0.56	0.33	37.41	-8.4383	-0.037	0.1919
1058	SLU 23	0.53	0.31	37.45	-8.4462	-0.0368	0.1821
1058	SLU 24	0.57	0.34	38.18	-8.6018	-0.0378	0.1966
1058	SLU 25	0.56	0.33	38.21	-8.6066	-0.0377	0.1907
1058	SLU 26	0.54	0.31	37.92	-8.5456	-0.0373	0.1863
1058	SLU 27	0.58	0.34	38.65	-8.7012	-0.0383	0.2008
1058	SLU 28	0.57	0.33	38.68	-8.706	-0.0382	0.1949
1058	SLU 29	0.58	0.33	38.34	-8.6371	-0.038	0.2004
1058	SLU 30	0.57	0.32	38.36	-8.6418	-0.0379	0.1945
1058	SLU 31	0.56	0.39	41.57	-9.3351	-0.0406	0.1915
1058	SLU 32	0.6	0.42	42.3	-9.4908	-0.0415	0.206
1058	SLU 33	0.58	0.41	42.33	-9.4955	-0.0414	0.2001
1058	SLU 34	0.57	0.39	42.04	-9.4345	-0.0411	0.1957
1058	SLU 35	0.61	0.42	42.77	-9.5902	-0.042	0.2102
1058	SLU 36	0.6	0.41	42.79	-9.5949	-0.0419	0.2043
1058	SLU 37	0.61	0.41	42.45	-9.5261	-0.0417	0.2098
1058	SLU 38	0.59	0.4	42.48	-9.5308	-0.0416	0.2039
1058	SLU 39	0.6	0.44	43.29	-9.7082	-0.0423	0.2053
1058	SLU 40	0.58	0.43	43.32	-9.713	-0.0422	0.1995
1058	SLU 41	0.61	0.44	43.76	-9.8077	-0.0428	0.2096
1058	SLU 42	0.59	0.43	43.78	-9.8124	-0.0427	0.2037
1058	SLU 43	0.66	0.26	41.8	-9.5019	-0.0417	0.2272
1058	SLU 44	0.63	0.24	41.85	-9.5097	-0.0416	0.2174
1058	SLU 45	0.67	0.27	42.58	-9.6654	-0.0425	0.2318
1058	SLU 46	0.66	0.26	42.6	-9.6701	-0.0424	0.2259
1058	SLU 47	0.65	0.24	42.31	-9.6091	-0.0421	0.2216
1058	SLU 48	0.69	0.27	43.04	-9.7648	-0.043	0.236
1058	SLU 49	0.67	0.26	43.07	-9.7695	-0.0429	0.2301
1058	SLU 50	0.69	0.26	42.73	-9.7007	-0.0427	0.2356
1058	SLU 51	0.67	0.25	42.76	-9.7054	-0.0426	0.2297
1058	SLU 52	0.66	0.32	45.96	-10.3987	-0.0453	0.2267
1058	SLU 53	0.7	0.35	46.69	-10.5543	-0.0462	0.2412
1058	SLU 54	0.69	0.34	46.72	-10.5591	-0.0461	0.2353
1058	SLU 55	0.67	0.32	46.43	-10.4981	-0.0458	0.231
1058	SLU 56	0.71	0.35	47.16	-10.6537	-0.0467	0.2454
1058	SLU 57	0.7	0.34	47.19	-10.6585	-0.0466	0.2395
1058	SLU 58	0.71	0.34	46.85	-10.5896	-0.0464	0.245
1058	SLU 59	0.7	0.33	46.88	-10.5943	-0.0463	0.2391
1058	SLU 60	0.7	0.37	47.68	-10.7718	-0.047	0.2406
1058	SLU 61	0.68	0.36	47.71	-10.7765	-0.0469	0.2347
1058	SLU 62	0.71	0.37	48.15	-10.8712	-0.0475	0.2448
1058	SLU 63	0.7	0.36	48.18	-10.8759	-0.0474	0.2389
1058	SLU 64	0.7	0.36	45.96	-10.3954	-0.0456	0.2408
1058	SLU 65	0.67	0.34	46	-10.4033	-0.0454	0.231
1058	SLU 66	0.71	0.37	46.73	-10.5589	-0.0464	0.2454
1058	SLU 67	0.7	0.36	46.76	-10.5636	-0.0463	0.2395
1058	SLU 68	0.69	0.34	46.47	-10.5027	-0.0459	0.2352
1058	SLU 69	0.73	0.37	47.2	-10.6583	-0.0469	0.2496
1058	SLU 70	0.71	0.36	47.23	-10.663	-0.0468	0.2438
1058	SLU 71	0.73	0.36	46.89	-10.5942	-0.0466	0.2492
1058	SLU 72	0.71	0.35	46.91	-10.5989	-0.0465	0.2433
1058	SLU 73	0.7	0.42	50.12	-11.2922	-0.0491	0.2403
1058	SLU 74	0.74	0.45	50.85	-11.4479	-0.0501	0.2548
1058	SLU 75	0.73	0.44	50.88	-11.4526	-0.05	0.2489
1058	SLU 76	0.71	0.42	50.59	-11.3916	-0.0497	0.2446
1058	SLU 77	0.75	0.45	51.32	-11.5473	-0.0506	0.259
1058	SLU 78	0.74	0.44	51.34	-11.552	-0.0505	0.2531
1058	SLU 79	0.75	0.44	51	-11.4831	-0.0503	0.2586
1058	SLU 80	0.74	0.43	51.03	-11.4879	-0.0502	0.2527
1058	SLU 81	0.74	0.48	51.84	-11.6653	-0.0509	0.2542
1058	SLU 82	0.72	0.46	51.87	-11.6701	-0.0508	0.2483
1058	SLU 83	0.75	0.48	52.31	-11.7647	-0.0514	0.2584
1058	SLU 84	0.74	0.46	52.33	-11.7695	-0.0513	0.2525
1058	SLE RA 1	0.53	0.26	34.44	-7.8001	-0.0342	0.1822
1058	SLE RA 2	0.51	0.24	34.47	-7.8053	-0.0341	0.1757
1058	SLE RA 3	0.54	0.26	34.96	-7.9091	-0.0347	0.1853
1058	SLE RA 4	0.53	0.25	34.97	-7.9122	-0.0347	0.1814
1058	SLE RA 5	0.52	0.24	34.78	-7.8716	-0.0344	0.1785
1058	SLE RA 6	0.55	0.26	35.27	-7.9754	-0.0351	0.1881
1058	SLE RA 7	0.54	0.26	35.28	-7.9785	-0.035	0.1842
1058	SLE RA 8	0.55	0.26	35.06	-7.9326	-0.0349	0.1878
1058	SLE RA 9	0.54	0.25	35.08	-7.9358	-0.0348	0.1839
1058	SLE RA 10	0.53	0.29	37.21	-8.398	-0.0366	0.1819
1058	SLE RA 11	0.56	0.32	37.7	-8.5017	-0.0372	0.1916
1058	SLE RA 12	0.55	0.31	37.72	-8.5049	-0.0372	0.1877

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1058	SLE RA 13	0.54	0.3	37.52	-8.4642	-0.0369	0.1847
1058	SLE RA 14	0.57	0.32	38.01	-8.568	-0.0375	0.1944
1058	SLE RA 15	0.55	0.31	38.03	-8.5711	-0.0375	0.1905
1058	SLE RA 16	0.57	0.31	37.8	-8.5252	-0.0373	0.1941
1058	SLE RA 17	0.55	0.3	37.82	-8.5284	-0.0373	0.1902
1058	SLE RA 18	0.56	0.33	38.36	-8.6467	-0.0377	0.1912
1058	SLE RA 19	0.55	0.32	38.38	-8.6498	-0.0377	0.1872
1058	SLE RA 20	0.57	0.33	38.67	-8.713	-0.0381	0.194
1058	SLE RA 21	0.55	0.32	38.69	-8.7161	-0.038	0.19
1058	SLE FR 1	0.53	0.26	34.44	-7.8001	-0.0342	0.1822
1058	SLE FR 2	0.53	0.25	34.44	-7.8011	-0.0342	0.1809
1058	SLE FR 3	0.53	0.26	34.56	-7.8266	-0.0343	0.1833
1058	SLE FR 4	0.53	0.28	35.62	-8.0551	-0.0352	0.1836
1058	SLE FR 5	0.54	0.28	35.74	-8.0806	-0.0354	0.186
1058	SLE FR 6	0.54	0.29	36.4	-8.2234	-0.036	0.1867
1058	SLE QP 1	0.53	0.26	34.44	-7.8001	-0.0342	0.1822
1058	SLE QP 2	0.54	0.28	35.62	-8.0541	-0.0353	0.1849
1058	SLD 1	4.36	0.71	30.34	-7.2347	-0.0225	1.5247
1058	SLD 2	3.97	0.92	30.22	-7.1823	-0.0216	1.3871
1058	SLD 3	4.42	-0.15	31.18	-7.3905	-0.0235	1.5456
1058	SLD 4	4.03	0.06	31.07	-7.3381	-0.0225	1.408
1058	SLD 5	1.67	1.68	32.77	-7.5816	-0.0302	0.5803
1058	SLD 6	1.41	1.82	32.7	-7.5468	-0.0296	0.489
1058	SLD 7	1.87	-1.2	35.58	-8.1007	-0.0333	0.6497
1058	SLD 8	1.6	-1.06	35.51	-8.066	-0.0327	0.5584
1058	SLD 9	-0.53	1.62	35.72	-8.0421	-0.0378	-0.1886
1058	SLD 10	-0.79	1.76	35.65	-8.0074	-0.0372	-0.2799
1058	SLD 11	-0.33	-1.27	38.53	-8.5613	-0.041	-0.1192
1058	SLD 12	-0.59	-1.13	38.46	-8.5266	-0.0403	-0.2105
1058	SLD 13	-2.95	0.5	40.16	-8.77	-0.048	-1.0382
1058	SLD 14	-3.35	0.71	40.05	-8.7176	-0.0471	-1.1758
1058	SLD 15	-2.89	-0.37	41.01	-8.9258	-0.0489	-1.0173
1058	SLD 16	-3.29	-0.16	40.89	-8.8734	-0.048	-1.1549
1058	SLV 1	9.48	1.26	23.29	-6.1411	-0.0055	3.3172
1058	SLV 2	8.56	1.75	23.03	-6.0191	-0.0033	2.9968
1058	SLV 3	9.62	-0.7	25.21	-6.4967	-0.0076	3.3655
1058	SLV 4	8.7	-0.21	24.95	-6.3747	-0.0054	3.0451
1058	SLV 5	3.17	3.46	29.06	-6.9623	-0.0235	1.1077
1058	SLV 6	2.58	3.78	28.89	-6.8829	-0.0221	0.8989
1058	SLV 7	3.63	-3.07	35.45	-8.1476	-0.0306	1.2686
1058	SLV 8	3.03	-2.75	35.28	-8.0681	-0.0291	1.0599
1058	SLV 9	-1.96	3.31	35.95	-8.04	-0.0414	-0.6901
1058	SLV 10	-2.56	3.63	35.78	-7.9606	-0.0399	-0.8988
1058	SLV 11	-1.5	-3.22	42.34	-9.2253	-0.0485	-0.5291
1058	SLV 12	-2.1	-2.9	42.17	-9.1458	-0.047	-0.7379
1058	SLV 13	-7.62	0.76	46.28	-9.7334	-0.0651	-2.6753
1058	SLV 14	-8.54	1.25	46.02	-9.6114	-0.0629	-2.9957
1058	SLV 15	-7.49	-1.2	48.2	-10.089	-0.0672	-2.627
1058	SLV 16	-8.4	-0.71	47.94	-9.967	-0.065	-2.9474
1058	CRTFP Ux+	0	0	0	0	0	0
1058	CRTFP Ux-	0	0	0	0	0	0
1058	CRTFP Uy+	0	0	0	0	0	0
1058	CRTFP Uy-	0	0	0	0	0	0
1059	SLU 1	0.55	0.14	34.6	-8.38	-0.0531	0.1898
1059	SLU 2	0.52	0.12	34.64	-8.386	-0.0529	0.18
1059	SLU 3	0.56	0.15	35.41	-8.564	-0.0544	0.1948
1059	SLU 4	0.55	0.13	35.43	-8.5676	-0.0543	0.1889
1059	SLU 5	0.53	0.12	35.13	-8.4982	-0.0537	0.1843
1059	SLU 6	0.58	0.15	35.89	-8.6762	-0.0552	0.1992
1059	SLU 7	0.56	0.13	35.92	-8.6798	-0.0551	0.1933
1059	SLU 8	0.57	0.14	35.57	-8.6044	-0.0547	0.1986
1059	SLU 9	0.56	0.12	35.6	-8.608	-0.0546	0.1927
1059	SLU 10	0.55	0.19	38.92	-9.3775	-0.0594	0.1904
1059	SLU 11	0.59	0.22	39.69	-9.5555	-0.0609	0.2053
1059	SLU 12	0.58	0.2	39.71	-9.5591	-0.0608	0.1994
1059	SLU 13	0.56	0.19	39.4	-9.4897	-0.0602	0.1948
1059	SLU 14	0.61	0.22	40.17	-9.6677	-0.0617	0.2097
1059	SLU 15	0.59	0.2	40.2	-9.6713	-0.0616	0.2037
1059	SLU 16	0.61	0.21	39.85	-9.5959	-0.0612	0.2091
1059	SLU 17	0.59	0.19	39.87	-9.5995	-0.0611	0.2032
1059	SLU 18	0.59	0.24	40.71	-9.7964	-0.0623	0.2048
1059	SLU 19	0.58	0.23	40.74	-9.8	-0.0622	0.1989
1059	SLU 20	0.61	0.24	41.2	-9.9086	-0.0631	0.2092
1059	SLU 21	0.59	0.23	41.22	-9.9122	-0.063	0.2033
1059	SLU 22	0.59	0.23	38.92	-9.3787	-0.0597	0.2046
1059	SLU 23	0.56	0.21	38.96	-9.3847	-0.0596	0.1947
1059	SLU 24	0.61	0.24	39.73	-9.5627	-0.061	0.2096
1059	SLU 25	0.59	0.22	39.76	-9.5663	-0.0609	0.2036
1059	SLU 26	0.58	0.21	39.45	-9.4969	-0.0604	0.1991
1059	SLU 27	0.62	0.24	40.22	-9.6749	-0.0618	0.214
1059	SLU 28	0.6	0.22	40.24	-9.6785	-0.0617	0.208
1059	SLU 29	0.62	0.23	39.89	-9.6031	-0.0614	0.2134
1059	SLU 30	0.6	0.21	39.92	-9.6067	-0.0613	0.2075
1059	SLU 31	0.59	0.28	43.24	-10.3762	-0.066	0.2052
1059	SLU 32	0.64	0.31	44.01	-10.5542	-0.0675	0.2201
1059	SLU 33	0.62	0.29	44.03	-10.5578	-0.0674	0.2141
1059	SLU 34	0.61	0.28	43.73	-10.4884	-0.0668	0.2096
1059	SLU 35	0.65	0.31	44.49	-10.6664	-0.0683	0.2244
1059	SLU 36	0.63	0.29	44.52	-10.67	-0.0682	0.2185
1059	SLU 37	0.65	0.3	44.17	-10.5946	-0.0678	0.2239

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1059	SLU 38	0.63	0.29	44.19	-10.5982	-0.0677	0.218
1059	SLU 39	0.64	0.33	45.03	-10.7951	-0.069	0.2196
1059	SLU 40	0.62	0.32	45.06	-10.7987	-0.0689	0.2137
1059	SLU 41	0.65	0.33	45.52	-10.9073	-0.0698	0.224
1059	SLU 42	0.63	0.32	45.54	-10.9109	-0.0697	0.2181
1059	SLU 43	0.7	0.15	43.5	-10.5516	-0.0667	0.2417
1059	SLU 44	0.67	0.13	43.54	-10.5575	-0.0666	0.2318
1059	SLU 45	0.71	0.16	44.31	-10.7356	-0.068	0.2467
1059	SLU 46	0.7	0.14	44.33	-10.7392	-0.0679	0.2408
1059	SLU 47	0.68	0.13	44.03	-10.6697	-0.0674	0.2362
1059	SLU 48	0.73	0.16	44.79	-10.8478	-0.0689	0.2511
1059	SLU 49	0.71	0.14	44.82	-10.8513	-0.0687	0.2451
1059	SLU 50	0.72	0.15	44.47	-10.776	-0.0684	0.2505
1059	SLU 51	0.71	0.13	44.49	-10.7795	-0.0683	0.2446
1059	SLU 52	0.7	0.2	47.82	-11.549	-0.073	0.2423
1059	SLU 53	0.74	0.23	48.59	-11.7271	-0.0745	0.2572
1059	SLU 54	0.73	0.21	48.61	-11.7307	-0.0744	0.2512
1059	SLU 55	0.71	0.2	48.3	-11.6612	-0.0738	0.2467
1059	SLU 56	0.76	0.23	49.07	-11.8393	-0.0753	0.2616
1059	SLU 57	0.74	0.21	49.1	-11.8428	-0.0752	0.2556
1059	SLU 58	0.76	0.22	48.75	-11.7675	-0.0748	0.261
1059	SLU 59	0.74	0.2	48.77	-11.771	-0.0747	0.2551
1059	SLU 60	0.74	0.25	49.61	-11.968	-0.076	0.2567
1059	SLU 61	0.73	0.24	49.63	-11.9716	-0.0759	0.2508
1059	SLU 62	0.76	0.25	50.1	-12.0802	-0.0768	0.2611
1059	SLU 63	0.74	0.23	50.12	-12.0838	-0.0767	0.2552
1059	SLU 64	0.74	0.24	47.82	-11.5503	-0.0734	0.2565
1059	SLU 65	0.71	0.22	47.86	-11.5563	-0.0732	0.2466
1059	SLU 66	0.76	0.25	48.63	-11.7343	-0.0747	0.2615
1059	SLU 67	0.74	0.23	48.65	-11.7379	-0.0746	0.2555
1059	SLU 68	0.73	0.22	48.35	-11.6685	-0.074	0.251
1059	SLU 69	0.77	0.25	49.11	-11.8465	-0.0755	0.2658
1059	SLU 70	0.75	0.23	49.14	-11.8501	-0.0754	0.2599
1059	SLU 71	0.77	0.24	48.79	-11.7747	-0.075	0.2653
1059	SLU 72	0.75	0.22	48.82	-11.7783	-0.0749	0.2594
1059	SLU 73	0.74	0.29	52.14	-12.5478	-0.0797	0.2571
1059	SLU 74	0.79	0.32	52.91	-12.7258	-0.0811	0.2719
1059	SLU 75	0.77	0.3	52.93	-12.7294	-0.081	0.266
1059	SLU 76	0.76	0.29	52.62	-12.66	-0.0805	0.2615
1059	SLU 77	0.8	0.32	53.39	-12.838	-0.082	0.2763
1059	SLU 78	0.78	0.3	53.42	-12.8416	-0.0819	0.2704
1059	SLU 79	0.8	0.31	53.07	-12.7662	-0.0815	0.2758
1059	SLU 80	0.78	0.3	53.09	-12.7698	-0.0814	0.2698
1059	SLU 81	0.79	0.34	53.93	-12.9667	-0.0826	0.2715
1059	SLU 82	0.77	0.33	53.96	-12.9703	-0.0825	0.2656
1059	SLU 83	0.8	0.34	54.42	-13.0789	-0.0834	0.2759
1059	SLU 84	0.78	0.33	54.44	-13.0825	-0.0833	0.2699
1059	SLE RA 1	0.56	0.16	35.84	-8.6653	-0.055	0.1941
1059	SLE RA 2	0.54	0.15	35.86	-8.6693	-0.0549	0.1875
1059	SLE RA 3	0.57	0.17	36.37	-8.788	-0.0559	0.1974
1059	SLE RA 4	0.56	0.16	36.39	-8.7904	-0.0558	0.1934
1059	SLE RA 5	0.55	0.15	36.19	-8.7441	-0.0554	0.1904
1059	SLE RA 6	0.58	0.17	36.7	-8.8628	-0.0564	0.2003
1059	SLE RA 7	0.57	0.16	36.71	-8.8652	-0.0563	0.1963
1059	SLE RA 8	0.58	0.16	36.48	-8.8149	-0.0561	0.1999
1059	SLE RA 9	0.57	0.15	36.5	-8.8173	-0.056	0.196
1059	SLE RA 10	0.56	0.2	38.71	-9.3303	-0.0592	0.1945
1059	SLE RA 11	0.59	0.22	39.23	-9.449	-0.0602	0.2044
1059	SLE RA 12	0.58	0.21	39.24	-9.4514	-0.0601	0.2004
1059	SLE RA 13	0.57	0.2	39.04	-9.4051	-0.0597	0.1974
1059	SLE RA 14	0.6	0.22	39.55	-9.5238	-0.0607	0.2073
1059	SLE RA 15	0.59	0.21	39.57	-9.5262	-0.0606	0.2033
1059	SLE RA 16	0.6	0.21	39.33	-9.4759	-0.0604	0.2069
1059	SLE RA 17	0.59	0.2	39.35	-9.4783	-0.0603	0.203
1059	SLE RA 18	0.59	0.23	39.91	-9.6096	-0.0611	0.204
1059	SLE RA 19	0.58	0.22	39.93	-9.612	-0.0611	0.2001
1059	SLE RA 20	0.6	0.23	40.23	-9.6844	-0.0617	0.207
1059	SLE RA 21	0.59	0.22	40.25	-9.6868	-0.0616	0.203
1059	SLE FR 1	0.56	0.16	35.84	-8.6653	-0.055	0.1941
1059	SLE FR 2	0.56	0.16	35.84	-8.6661	-0.055	0.1927
1059	SLE FR 3	0.56	0.16	35.96	-8.6953	-0.0552	0.1952
1059	SLE FR 4	0.57	0.18	37.06	-8.9494	-0.0568	0.1957
1059	SLE FR 5	0.57	0.18	37.19	-8.9785	-0.0571	0.1982
1059	SLE FR 6	0.58	0.2	37.87	-9.1375	-0.0581	0.1991
1059	SLE QP 1	0.56	0.16	35.84	-8.6653	-0.055	0.1941
1059	SLE QP 2	0.57	0.18	37.06	-8.9486	-0.0568	0.1971
1059	SLD 1	4.39	0.65	31.35	-8.0292	-0.042	1.5349
1059	SLD 2	4	0.87	31.2	-7.9547	-0.0408	1.397
1059	SLD 3	4.45	-0.23	32.23	-8.2091	-0.0438	1.5556
1059	SLD 4	4.05	0	32.09	-8.1347	-0.0426	1.4177
1059	SLD 5	1.7	1.6	34.03	-8.4134	-0.05	0.5921
1059	SLD 6	1.44	1.75	33.94	-8.364	-0.0491	0.5006
1059	SLD 7	1.9	-1.3	36.98	-9.0132	-0.0558	0.6611
1059	SLD 8	1.63	-1.15	36.88	-8.9638	-0.055	0.5695
1059	SLD 9	-0.49	1.52	37.24	-8.9334	-0.0587	-0.1754
1059	SLD 10	-0.75	1.67	37.14	-8.884	-0.0579	-0.2669
1059	SLD 11	-0.3	-1.38	40.18	-9.5332	-0.0645	-0.1065
1059	SLD 12	-0.56	-1.24	40.08	-9.4838	-0.0637	-0.198
1059	SLD 13	-2.91	0.37	42.03	-9.7626	-0.0711	-1.0236
1059	SLD 14	-3.31	0.59	41.88	-9.6881	-0.0699	-1.1615

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1059	SLD 15	-2.85	-0.5	42.91	-9.9425	-0.0729	-1.0029
1059	SLD 16	-3.25	-0.28	42.77	-9.8681	-0.0716	-1.1408
1059	SLV 1	9.5	1.24	23.73	-6.8024	-0.0222	3.3247
1059	SLV 2	8.58	1.75	23.39	-6.6291	-0.0194	3.0037
1059	SLV 3	9.64	-0.74	25.74	-7.2121	-0.0262	3.3727
1059	SLV 4	8.72	-0.22	25.4	-7.0388	-0.0233	3.0516
1059	SLV 5	3.2	3.4	30.08	-7.714	-0.041	1.1191
1059	SLV 6	2.6	3.74	29.85	-7.6011	-0.0391	0.9099
1059	SLV 7	3.66	-3.18	36.76	-9.0794	-0.0542	1.2789
1059	SLV 8	3.06	-2.84	36.54	-8.9665	-0.0523	1.0697
1059	SLV 9	-1.92	3.21	37.57	-8.9308	-0.0614	-0.6756
1059	SLV 10	-2.52	3.54	37.35	-8.8179	-0.0595	-0.8848
1059	SLV 11	-1.46	-3.37	44.26	-10.2962	-0.0746	-0.5157
1059	SLV 12	-2.06	-3.04	44.04	-10.1833	-0.0727	-0.7249
1059	SLV 13	-7.58	0.59	48.72	-10.8585	-0.0903	-2.6575
1059	SLV 14	-8.5	1.1	48.38	-10.6852	-0.0875	-2.9786
1059	SLV 15	-7.44	-1.38	50.73	-11.2681	-0.0943	-2.6095
1059	SLV 16	-8.36	-0.87	50.39	-11.0948	-0.0914	-2.9306
1059	CRTFP Ux+	0	0	0	0	0	0
1059	CRTFP Ux-	0	0	0	0	0	0
1059	CRTFP Uy+	0	0	0	0	0	0
1059	CRTFP Uy-	0	0	0	0	0	0
1060	SLU 1	0.58	0.08	36.55	-9.6907	-0.0708	0.201
1060	SLU 2	0.55	0.06	36.58	-9.6943	-0.0706	0.1911
1060	SLU 3	0.59	0.09	37.4	-9.9073	-0.0726	0.2063
1060	SLU 4	0.58	0.07	37.42	-9.9094	-0.0725	0.2003
1060	SLU 5	0.56	0.06	37.1	-9.8266	-0.0717	0.1956
1060	SLU 6	0.61	0.09	37.92	-10.0396	-0.0737	0.2108
1060	SLU 7	0.59	0.07	37.94	-10.0417	-0.0735	0.2049
1060	SLU 8	0.6	0.08	37.58	-9.9553	-0.073	0.2101
1060	SLU 9	0.59	0.07	37.6	-9.9574	-0.0729	0.2042
1060	SLU 10	0.58	0.12	41.1	-10.8529	-0.0795	0.2026
1060	SLU 11	0.63	0.15	41.92	-11.0659	-0.0815	0.2178
1060	SLU 12	0.61	0.14	41.94	-11.068	-0.0814	0.2119
1060	SLU 13	0.6	0.12	41.62	-10.9852	-0.0806	0.2072
1060	SLU 14	0.64	0.15	42.44	-11.1982	-0.0826	0.2224
1060	SLU 15	0.62	0.14	42.46	-11.2003	-0.0824	0.2164
1060	SLU 16	0.64	0.14	42.1	-11.1139	-0.0819	0.2217
1060	SLU 17	0.62	0.13	42.12	-11.1161	-0.0818	0.2157
1060	SLU 18	0.63	0.17	43	-11.3459	-0.0836	0.2175
1060	SLU 19	0.61	0.16	43.02	-11.348	-0.0834	0.2115
1060	SLU 20	0.64	0.17	43.52	-11.4781	-0.0846	0.2221
1060	SLU 21	0.62	0.16	43.54	-11.4803	-0.0845	0.2161
1060	SLU 22	0.62	0.16	41.12	-10.8597	-0.0799	0.2169
1060	SLU 23	0.6	0.14	41.15	-10.8633	-0.0797	0.207
1060	SLU 24	0.64	0.17	41.97	-11.0763	-0.0817	0.2222
1060	SLU 25	0.62	0.16	41.99	-11.0784	-0.0816	0.2162
1060	SLU 26	0.61	0.14	41.66	-10.9956	-0.0808	0.2115
1060	SLU 27	0.65	0.17	42.49	-11.2086	-0.0828	0.2267
1060	SLU 28	0.64	0.16	42.51	-11.2107	-0.0826	0.2208
1060	SLU 29	0.65	0.16	42.14	-11.1243	-0.0821	0.226
1060	SLU 30	0.63	0.15	42.17	-11.1264	-0.082	0.2201
1060	SLU 31	0.63	0.21	45.67	-12.0219	-0.0886	0.2185
1060	SLU 32	0.67	0.23	46.49	-12.2349	-0.0906	0.2337
1060	SLU 33	0.66	0.22	46.51	-12.2371	-0.0905	0.2278
1060	SLU 34	0.64	0.21	46.18	-12.1542	-0.0897	0.2231
1060	SLU 35	0.69	0.23	47.01	-12.3672	-0.0917	0.2383
1060	SLU 36	0.67	0.22	47.03	-12.3693	-0.0915	0.2323
1060	SLU 37	0.68	0.22	46.66	-12.2829	-0.091	0.2376
1060	SLU 38	0.67	0.21	46.68	-12.2851	-0.0909	0.2316
1060	SLU 39	0.67	0.25	47.57	-12.5149	-0.0926	0.2334
1060	SLU 40	0.65	0.24	47.59	-12.517	-0.0925	0.2274
1060	SLU 41	0.68	0.25	48.09	-12.6472	-0.0937	0.238
1060	SLU 42	0.67	0.24	48.11	-12.6493	-0.0936	0.232
1060	SLU 43	0.74	0.08	45.94	-12.1971	-0.089	0.2559
1060	SLU 44	0.71	0.06	45.98	-12.2007	-0.0888	0.2459
1060	SLU 45	0.75	0.08	46.8	-12.4137	-0.0907	0.2611
1060	SLU 46	0.73	0.07	46.82	-12.4158	-0.0906	0.2552
1060	SLU 47	0.72	0.05	46.49	-12.333	-0.0898	0.2505
1060	SLU 48	0.76	0.08	47.32	-12.546	-0.0918	0.2657
1060	SLU 49	0.75	0.07	47.34	-12.5481	-0.0917	0.2597
1060	SLU 50	0.76	0.07	46.97	-12.4617	-0.0912	0.265
1060	SLU 51	0.74	0.06	46.99	-12.4638	-0.091	0.259
1060	SLU 52	0.74	0.12	50.5	-13.3593	-0.0977	0.2575
1060	SLU 53	0.78	0.15	51.32	-13.5723	-0.0996	0.2727
1060	SLU 54	0.77	0.13	51.34	-13.5744	-0.0995	0.2667
1060	SLU 55	0.75	0.12	51.01	-13.4916	-0.0987	0.262
1060	SLU 56	0.8	0.15	51.83	-13.7046	-0.1007	0.2772
1060	SLU 57	0.78	0.13	51.86	-13.7067	-0.1006	0.2713
1060	SLU 58	0.8	0.14	51.49	-13.6203	-0.1001	0.2765
1060	SLU 59	0.78	0.12	51.51	-13.6225	-0.0999	0.2706
1060	SLU 60	0.78	0.17	52.4	-13.8523	-0.1017	0.2723
1060	SLU 61	0.77	0.15	52.42	-13.8544	-0.1016	0.2664
1060	SLU 62	0.8	0.17	52.91	-13.9846	-0.1028	0.2769
1060	SLU 63	0.78	0.15	52.94	-13.9867	-0.1026	0.271
1060	SLU 64	0.78	0.16	50.51	-13.3661	-0.0981	0.2717
1060	SLU 65	0.75	0.14	50.55	-13.3697	-0.0978	0.2618
1060	SLU 66	0.8	0.17	51.37	-13.5827	-0.0998	0.277
1060	SLU 67	0.78	0.15	51.39	-13.5848	-0.0997	0.2711
1060	SLU 68	0.77	0.14	51.06	-13.502	-0.0989	0.2664

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1060	SLU 69	0.81	0.16	51.88	-13.715	-0.1009	0.2816
1060	SLU 70	0.79	0.15	51.9	-13.7171	-0.1008	0.2756
1060	SLU 71	0.81	0.16	51.54	-13.6307	-0.1002	0.2809
1060	SLU 72	0.79	0.14	51.56	-13.6329	-0.1001	0.2749
1060	SLU 73	0.79	0.2	55.07	-14.5283	-0.1067	0.2734
1060	SLU 74	0.83	0.23	55.89	-14.7413	-0.1087	0.2886
1060	SLU 75	0.81	0.22	55.91	-14.7435	-0.1086	0.2826
1060	SLU 76	0.8	0.2	55.58	-14.6606	-0.1078	0.2779
1060	SLU 77	0.84	0.23	56.4	-14.8736	-0.1098	0.2931
1060	SLU 78	0.83	0.22	56.42	-14.8757	-0.1097	0.2872
1060	SLU 79	0.84	0.22	56.06	-14.7893	-0.1091	0.2924
1060	SLU 80	0.82	0.21	56.08	-14.7915	-0.109	0.2865
1060	SLU 81	0.83	0.25	56.97	-15.0213	-0.1108	0.2882
1060	SLU 82	0.81	0.24	56.99	-15.0234	-0.1106	0.2823
1060	SLU 83	0.84	0.25	57.48	-15.1536	-0.1119	0.2928
1060	SLU 84	0.83	0.24	57.5	-15.1557	-0.1117	0.2869
1060	SLE RA 1	0.59	0.1	37.85	-10.0247	-0.0734	0.2055
1060	SLE RA 2	0.57	0.09	37.87	-10.0271	-0.0733	0.1989
1060	SLE RA 3	0.6	0.11	38.42	-10.1691	-0.0746	0.209
1060	SLE RA 4	0.59	0.1	38.44	-10.1705	-0.0745	0.2051
1060	SLE RA 5	0.58	0.09	38.22	-10.1153	-0.074	0.202
1060	SLE RA 6	0.61	0.11	38.77	-10.2573	-0.0753	0.2121
1060	SLE RA 7	0.6	0.1	38.78	-10.2587	-0.0752	0.2081
1060	SLE RA 8	0.61	0.1	38.54	-10.2011	-0.0749	0.2116
1060	SLE RA 9	0.6	0.09	38.55	-10.2025	-0.0748	0.2077
1060	SLE RA 10	0.59	0.13	40.89	-10.7995	-0.0792	0.2066
1060	SLE RA 11	0.62	0.15	41.44	-10.9415	-0.0805	0.2167
1060	SLE RA 12	0.61	0.14	41.45	-10.9429	-0.0805	0.2128
1060	SLE RA 13	0.6	0.13	41.23	-10.8877	-0.08	0.2097
1060	SLE RA 14	0.63	0.15	41.78	-11.0297	-0.0813	0.2198
1060	SLE RA 15	0.62	0.14	41.79	-11.0311	-0.0812	0.2158
1060	SLE RA 16	0.63	0.14	41.55	-10.9735	-0.0808	0.2193
1060	SLE RA 17	0.62	0.14	41.56	-10.9749	-0.0807	0.2154
1060	SLE RA 18	0.62	0.16	42.16	-11.1281	-0.0819	0.2165
1060	SLE RA 19	0.61	0.16	42.17	-11.1296	-0.0818	0.2126
1060	SLE RA 20	0.63	0.16	42.5	-11.2163	-0.0826	0.2196
1060	SLE RA 21	0.62	0.16	42.51	-11.2178	-0.0826	0.2156
1060	SLE FR 1	0.59	0.1	37.85	-10.0247	-0.0734	0.2055
1060	SLE FR 2	0.59	0.1	37.86	-10.0252	-0.0734	0.2042
1060	SLE FR 3	0.59	0.1	37.99	-10.06	-0.0737	0.2068
1060	SLE FR 4	0.6	0.12	39.15	-10.3562	-0.076	0.2075
1060	SLE FR 5	0.6	0.12	39.28	-10.391	-0.0763	0.2101
1060	SLE FR 6	0.61	0.13	40	-10.5764	-0.0777	0.211
1060	SLE QP 1	0.59	0.1	37.85	-10.0247	-0.0734	0.2055
1060	SLE QP 2	0.6	0.12	39.14	-10.3557	-0.076	0.2088
1060	SLD 1	4.41	0.61	32.95	-9.2832	-0.0595	1.5439
1060	SLD 2	4.02	0.84	32.76	-9.1816	-0.058	1.4058
1060	SLD 3	4.47	-0.27	33.89	-9.5025	-0.062	1.5644
1060	SLD 4	4.08	-0.04	33.7	-9.4009	-0.0605	1.4263
1060	SLD 5	1.73	1.56	35.89	-9.7198	-0.0675	0.6034
1060	SLD 6	1.47	1.72	35.76	-9.6524	-0.0665	0.5117
1060	SLD 7	1.92	-1.38	39.03	-10.4509	-0.0759	0.6717
1060	SLD 8	1.66	-1.22	38.91	-10.3835	-0.0749	0.5801
1060	SLD 9	-0.46	1.47	39.38	-10.328	-0.077	-0.1624
1060	SLD 10	-0.72	1.62	39.25	-10.2605	-0.076	-0.2541
1060	SLD 11	-0.26	-1.47	42.52	-11.0591	-0.0855	-0.094
1060	SLD 12	-0.53	-1.32	42.4	-10.9917	-0.0845	-0.1857
1060	SLD 13	-2.88	0.29	44.58	-11.3105	-0.0914	-1.0086
1060	SLD 14	-3.27	0.52	44.39	-11.2089	-0.0899	-1.1468
1060	SLD 15	-2.82	-0.6	45.53	-11.5298	-0.094	-0.9881
1060	SLD 16	-3.21	-0.36	45.34	-11.4283	-0.0925	-1.1263
1060	SLV 1	9.52	1.23	24.68	-7.8532	-0.0375	3.33
1060	SLV 2	8.59	1.77	24.24	-7.6167	-0.034	3.0084
1060	SLV 3	9.65	-0.77	26.82	-8.351	-0.0433	3.3776
1060	SLV 4	8.73	-0.23	26.38	-8.1145	-0.0398	3.056
1060	SLV 5	3.23	3.39	31.63	-8.8915	-0.0564	1.1296
1060	SLV 6	2.63	3.74	31.34	-8.7374	-0.0541	0.92
1060	SLV 7	3.68	-3.27	38.78	-10.5509	-0.0755	1.2882
1060	SLV 8	3.08	-2.92	38.49	-10.3968	-0.0732	1.0786
1060	SLV 9	-1.88	3.16	39.8	-10.3146	-0.0788	-0.6609
1060	SLV 10	-2.48	3.52	39.51	-10.1605	-0.0765	-0.8705
1060	SLV 11	-1.43	-3.5	46.94	-11.9741	-0.0979	-0.5023
1060	SLV 12	-2.03	-3.14	46.66	-11.82	-0.0956	-0.7119
1060	SLV 13	-7.53	0.47	51.9	-12.5969	-0.1122	-2.6383
1060	SLV 14	-8.45	1.02	51.46	-12.3604	-0.1087	-2.9599
1060	SLV 15	-7.39	-1.53	54.05	-13.0948	-0.1179	-2.5907
1060	SLV 16	-8.32	-0.98	53.61	-12.8583	-0.1144	-2.9123
1060	CRTFP Ux+	0	0	0	0	0	0
1060	CRTFP Ux-	0	0	0	0	0	0
1060	CRTFP Uy+	0	0	0	0	0	0
1060	CRTFP Uy-	0	0	0	0	0	0
1061	SLU 1	0.61	0.06	38.98	-11.4453	-0.0836	0.212
1061	SLU 2	0.58	0.04	39	-11.4464	-0.0833	0.2021
1061	SLU 3	0.62	0.07	39.89	-11.7059	-0.0857	0.2176
1061	SLU 4	0.6	0.05	39.91	-11.7066	-0.0855	0.2116
1061	SLU 5	0.59	0.04	39.56	-11.6057	-0.0846	0.2068
1061	SLU 6	0.64	0.06	40.44	-11.8652	-0.0869	0.2223
1061	SLU 7	0.62	0.05	40.46	-11.8658	-0.0868	0.2164
1061	SLU 8	0.63	0.06	40.08	-11.7638	-0.0862	0.2215
1061	SLU 9	0.62	0.05	40.1	-11.7645	-0.086	0.2155

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1061	SLU 10	0.61	0.1	43.83	-12.8327	-0.094	0.2147
1061	SLU 11	0.66	0.13	44.72	-13.0922	-0.0963	0.2302
1061	SLU 12	0.64	0.12	44.74	-13.0929	-0.0962	0.2242
1061	SLU 13	0.63	0.1	44.38	-12.992	-0.0953	0.2194
1061	SLU 14	0.67	0.13	45.27	-13.2515	-0.0976	0.2349
1061	SLU 15	0.65	0.11	45.29	-13.2521	-0.0974	0.229
1061	SLU 16	0.67	0.12	44.91	-13.1501	-0.0968	0.2341
1061	SLU 17	0.65	0.11	44.92	-13.1508	-0.0967	0.2281
1061	SLU 18	0.66	0.15	45.87	-13.4257	-0.0988	0.23
1061	SLU 19	0.64	0.14	45.89	-13.4264	-0.0986	0.224
1061	SLU 20	0.67	0.15	46.42	-13.585	-0.1001	0.2347
1061	SLU 21	0.65	0.13	46.44	-13.5857	-0.0999	0.2288
1061	SLU 22	0.65	0.14	43.86	-12.8457	-0.0944	0.229
1061	SLU 23	0.63	0.12	43.89	-12.8468	-0.0942	0.2191
1061	SLU 24	0.67	0.15	44.77	-13.1063	-0.0965	0.2346
1061	SLU 25	0.65	0.13	44.79	-13.107	-0.0964	0.2286
1061	SLU 26	0.64	0.12	44.44	-13.0061	-0.0955	0.2238
1061	SLU 27	0.68	0.14	45.33	-13.2656	-0.0978	0.2393
1061	SLU 28	0.67	0.13	45.34	-13.2663	-0.0976	0.2334
1061	SLU 29	0.68	0.14	44.96	-13.1643	-0.097	0.2385
1061	SLU 30	0.66	0.12	44.98	-13.1649	-0.0969	0.2325
1061	SLU 31	0.66	0.18	48.71	-14.2332	-0.1048	0.2317
1061	SLU 32	0.71	0.21	49.6	-14.4927	-0.1071	0.2472
1061	SLU 33	0.69	0.19	49.62	-14.4933	-0.107	0.2412
1061	SLU 34	0.68	0.18	49.26	-14.3924	-0.1061	0.2364
1061	SLU 35	0.72	0.2	50.15	-14.6519	-0.1084	0.2519
1061	SLU 36	0.7	0.19	50.17	-14.6526	-0.1083	0.246
1061	SLU 37	0.72	0.2	49.79	-14.5506	-0.1077	0.2511
1061	SLU 38	0.7	0.19	49.81	-14.5512	-0.1075	0.2451
1061	SLU 39	0.71	0.23	50.75	-14.8262	-0.1096	0.247
1061	SLU 40	0.69	0.21	50.77	-14.8268	-0.1095	0.241
1061	SLU 41	0.72	0.23	51.31	-14.9854	-0.1109	0.2517
1061	SLU 42	0.7	0.21	51.32	-14.9861	-0.1108	0.2458
1061	SLU 43	0.77	0.05	48.99	-14.3987	-0.105	0.2698
1061	SLU 44	0.74	0.03	49.02	-14.3998	-0.1047	0.2599
1061	SLU 45	0.79	0.06	49.91	-14.6593	-0.107	0.2753
1061	SLU 46	0.77	0.05	49.93	-14.66	-0.1069	0.2694
1061	SLU 47	0.76	0.03	49.57	-14.5591	-0.106	0.2646
1061	SLU 48	0.8	0.06	50.46	-14.8186	-0.1083	0.2801
1061	SLU 49	0.78	0.04	50.48	-14.8193	-0.1082	0.2741
1061	SLU 50	0.8	0.05	50.1	-14.7172	-0.1075	0.2793
1061	SLU 51	0.78	0.04	50.12	-14.7179	-0.1074	0.2733
1061	SLU 52	0.78	0.09	53.85	-15.7861	-0.1153	0.2724
1061	SLU 53	0.82	0.12	54.74	-16.0456	-0.1177	0.2879
1061	SLU 54	0.81	0.11	54.75	-16.0463	-0.1175	0.282
1061	SLU 55	0.79	0.09	54.4	-15.9454	-0.1166	0.2772
1061	SLU 56	0.84	0.12	55.29	-16.2049	-0.119	0.2927
1061	SLU 57	0.82	0.1	55.31	-16.2056	-0.1188	0.2867
1061	SLU 58	0.83	0.11	54.93	-16.1035	-0.1182	0.2919
1061	SLU 59	0.82	0.1	54.94	-16.1042	-0.118	0.2859
1061	SLU 60	0.82	0.14	55.89	-16.3792	-0.1202	0.2878
1061	SLU 61	0.81	0.13	55.91	-16.3798	-0.12	0.2818
1061	SLU 62	0.84	0.14	56.44	-16.5384	-0.1214	0.2925
1061	SLU 63	0.82	0.13	56.46	-16.5391	-0.1213	0.2866
1061	SLU 64	0.82	0.13	53.88	-15.7992	-0.1158	0.2868
1061	SLU 65	0.79	0.11	53.9	-15.8003	-0.1156	0.2769
1061	SLU 66	0.84	0.14	54.79	-16.0598	-0.1179	0.2923
1061	SLU 67	0.82	0.12	54.81	-16.0604	-0.1177	0.2864
1061	SLU 68	0.8	0.11	54.46	-15.9595	-0.1168	0.2816
1061	SLU 69	0.85	0.13	55.35	-16.219	-0.1192	0.2971
1061	SLU 70	0.83	0.12	55.36	-16.2197	-0.119	0.2911
1061	SLU 71	0.85	0.13	54.98	-16.1177	-0.1184	0.2963
1061	SLU 72	0.83	0.12	55	-16.1184	-0.1182	0.2903
1061	SLU 73	0.83	0.17	58.73	-17.1866	-0.1262	0.2895
1061	SLU 74	0.87	0.2	59.62	-17.4461	-0.1285	0.3049
1061	SLU 75	0.85	0.19	59.64	-17.4468	-0.1284	0.299
1061	SLU 76	0.84	0.17	59.28	-17.3458	-0.1275	0.2942
1061	SLU 77	0.89	0.2	60.17	-17.6053	-0.1298	0.3097
1061	SLU 78	0.87	0.18	60.19	-17.606	-0.1296	0.3037
1061	SLU 79	0.88	0.19	59.81	-17.504	-0.129	0.3089
1061	SLU 80	0.87	0.18	59.82	-17.5047	-0.1289	0.3029
1061	SLU 81	0.87	0.22	60.77	-17.7796	-0.131	0.3048
1061	SLU 82	0.85	0.21	60.79	-17.7803	-0.1308	0.2988
1061	SLU 83	0.88	0.22	61.32	-17.9389	-0.1323	0.3095
1061	SLU 84	0.87	0.2	61.34	-17.9395	-0.1321	0.3036
1061	SLE RA 1	0.62	0.08	40.37	-11.8454	-0.0867	0.2169
1061	SLE RA 2	0.6	0.07	40.39	-11.8462	-0.0865	0.2102
1061	SLE RA 3	0.63	0.09	40.98	-12.0192	-0.0881	0.2206
1061	SLE RA 4	0.62	0.08	40.99	-12.0196	-0.088	0.2166
1061	SLE RA 5	0.61	0.07	40.76	-11.9523	-0.0874	0.2134
1061	SLE RA 6	0.64	0.09	41.35	-12.1253	-0.0889	0.2237
1061	SLE RA 7	0.63	0.08	41.36	-12.1258	-0.0888	0.2198
1061	SLE RA 8	0.64	0.08	41.11	-12.0578	-0.0884	0.2232
1061	SLE RA 9	0.63	0.07	41.12	-12.0582	-0.0883	0.2192
1061	SLE RA 10	0.62	0.11	43.61	-12.7704	-0.0936	0.2186
1061	SLE RA 11	0.65	0.13	44.2	-12.9434	-0.0952	0.229
1061	SLE RA 12	0.64	0.12	44.21	-12.9438	-0.0951	0.225
1061	SLE RA 13	0.63	0.11	43.97	-12.8765	-0.0945	0.2218
1061	SLE RA 14	0.66	0.13	44.57	-13.0495	-0.096	0.2321
1061	SLE RA 15	0.65	0.12	44.58	-13.05	-0.0959	0.2282

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1061	SLE RA 16	0.66	0.12	44.32	-12.982	-0.0955	0.2316
1061	SLE RA 17	0.65	0.11	44.34	-12.9824	-0.0954	0.2276
1061	SLE RA 18	0.65	0.14	44.97	-13.1657	-0.0968	0.2289
1061	SLE RA 19	0.64	0.13	44.98	-13.1662	-0.0967	0.2249
1061	SLE RA 20	0.66	0.14	45.34	-13.2719	-0.0977	0.232
1061	SLE RA 21	0.65	0.13	45.35	-13.2723	-0.0976	0.2281
1061	SLE FR 1	0.62	0.08	40.37	-11.8454	-0.0867	0.2169
1061	SLE FR 2	0.62	0.08	40.37	-11.8456	-0.0867	0.2155
1061	SLE FR 3	0.62	0.08	40.52	-11.8879	-0.087	0.2181
1061	SLE FR 4	0.63	0.1	41.75	-12.2417	-0.0897	0.2191
1061	SLE FR 5	0.63	0.1	41.9	-12.284	-0.0901	0.2217
1061	SLE FR 6	0.64	0.11	42.67	-12.5056	-0.0918	0.2229
1061	SLE QP 1	0.62	0.08	40.37	-11.8454	-0.0867	0.2169
1061	SLE QP 2	0.63	0.1	41.75	-12.2415	-0.0897	0.2205
1061	SLD 1	4.44	0.59	35.03	-10.9388	-0.0723	1.552
1061	SLD 2	4.04	0.84	34.79	-10.8081	-0.0706	1.4137
1061	SLD 3	4.49	-0.3	36.05	-11.2126	-0.0755	1.5723
1061	SLD 4	4.1	-0.05	35.81	-11.0819	-0.0737	1.434
1061	SLD 5	1.76	1.56	38.22	-11.4592	-0.0801	0.6143
1061	SLD 6	1.49	1.73	38.06	-11.3725	-0.0789	0.5225
1061	SLD 7	1.95	-1.42	41.64	-12.3719	-0.0905	0.682
1061	SLD 8	1.69	-1.26	41.48	-12.2851	-0.0894	0.5902
1061	SLD 9	-0.43	1.46	42.02	-12.1979	-0.0901	-0.1492
1061	SLD 10	-0.69	1.62	41.86	-12.1111	-0.0889	-0.241
1061	SLD 11	-0.23	-1.52	45.44	-13.1106	-0.1006	-0.0815
1061	SLD 12	-0.5	-1.36	45.28	-13.0238	-0.0994	-0.1733
1061	SLD 13	-2.84	0.26	47.69	-13.4011	-0.1057	-0.993
1061	SLD 14	-3.23	0.5	47.45	-13.2704	-0.104	-1.1314
1061	SLD 15	-2.78	-0.64	48.71	-13.6749	-0.1089	-0.9727
1061	SLD 16	-3.18	-0.39	48.47	-13.5442	-0.1071	-1.1111
1061	SLV 1	9.53	1.22	26.06	-9.2028	-0.0492	3.3333
1061	SLV 2	8.6	1.8	25.5	-8.8984	-0.0451	3.0112
1061	SLV 3	9.66	-0.8	28.38	-9.8229	-0.0563	3.3804
1061	SLV 4	8.74	-0.23	27.82	-9.5185	-0.0522	3.0584
1061	SLV 5	3.26	3.41	33.61	-10.4429	-0.0675	1.1394
1061	SLV 6	2.66	3.79	33.25	-10.2446	-0.0648	0.9296
1061	SLV 7	3.7	-3.35	41.36	-12.5099	-0.0912	1.2966
1061	SLV 8	3.1	-2.97	41	-12.3116	-0.0885	1.0867
1061	SLV 9	-1.84	3.17	42.5	-12.1714	-0.0909	-0.6458
1061	SLV 10	-2.44	3.55	42.14	-11.9731	-0.0883	-0.8556
1061	SLV 11	-1.4	-3.59	50.25	-14.2384	-0.1146	-0.4886
1061	SLV 12	-2	-3.21	49.88	-14.0401	-0.112	-0.6985
1061	SLV 13	-7.48	0.43	55.68	-14.9645	-0.1273	-2.6174
1061	SLV 14	-8.4	1.01	55.12	-14.6601	-0.1232	-2.9395
1061	SLV 15	-7.34	-1.6	58	-15.5846	-0.1344	-2.5703
1061	SLV 16	-8.27	-1.02	57.44	-15.2802	-0.1303	-2.8924
1061	CRTFP Ux+	0	0	0	0	0	0
1061	CRTFP Ux-	0	0	0	0	0	0
1061	CRTFP Uy+	0	0	0	0	0	0
1061	CRTFP Uy-	0	0	0	0	0	0
1062	SLU 1	0.71	0.08	47.72	-10.5314	1.6279	0.1648
1062	SLU 2	0.67	0.06	47.75	-10.5342	1.63	0.1581
1062	SLU 3	0.73	0.09	48.85	-10.7775	1.6662	0.1689
1062	SLU 4	0.71	0.08	48.87	-10.7791	1.6675	0.1649
1062	SLU 5	0.69	0.06	48.43	-10.6835	1.6528	0.1619
1062	SLU 6	0.74	0.09	49.53	-10.9268	1.689	0.1728
1062	SLU 7	0.72	0.08	49.55	-10.9284	1.6902	0.1688
1062	SLU 8	0.74	0.08	49.08	-10.83	1.6734	0.1724
1062	SLU 9	0.72	0.07	49.1	-10.8317	1.6747	0.1684
1062	SLU 10	0.72	0.13	53.68	-11.8325	1.8313	0.1654
1062	SLU 11	0.77	0.16	54.78	-12.0757	1.8674	0.1762
1062	SLU 12	0.75	0.15	54.8	-12.0774	1.8687	0.1722
1062	SLU 13	0.73	0.13	54.36	-11.9817	1.854	0.1692
1062	SLU 14	0.78	0.16	55.46	-12.225	1.8902	0.1801
1062	SLU 15	0.76	0.14	55.48	-12.2267	1.8915	0.1761
1062	SLU 16	0.78	0.15	55.01	-12.1283	1.8747	0.1797
1062	SLU 17	0.76	0.14	55.03	-12.1299	1.8759	0.1757
1062	SLU 18	0.77	0.18	56.2	-12.3861	1.9154	0.1752
1062	SLU 19	0.75	0.17	56.21	-12.3877	1.9167	0.1712
1062	SLU 20	0.78	0.18	56.88	-12.5354	1.9382	0.179
1062	SLU 21	0.76	0.17	56.89	-12.537	1.9394	0.175
1062	SLU 22	0.76	0.17	53.72	-11.8446	1.8309	0.1747
1062	SLU 23	0.73	0.15	53.75	-11.8473	1.833	0.168
1062	SLU 24	0.78	0.18	54.86	-12.0906	1.8692	0.1788
1062	SLU 25	0.76	0.17	54.87	-12.0923	1.8704	0.1748
1062	SLU 26	0.75	0.15	54.43	-11.9966	1.8558	0.1718
1062	SLU 27	0.8	0.18	55.54	-12.2399	1.8919	0.1827
1062	SLU 28	0.78	0.16	55.55	-12.2416	1.8932	0.1787
1062	SLU 29	0.8	0.17	55.09	-12.1432	1.8764	0.1823
1062	SLU 30	0.78	0.16	55.1	-12.1448	1.8777	0.1783
1062	SLU 31	0.78	0.22	59.69	-13.1456	2.0343	0.1753
1062	SLU 32	0.83	0.25	60.79	-13.3889	2.0704	0.1861
1062	SLU 33	0.81	0.24	60.81	-13.3905	2.0717	0.1821
1062	SLU 34	0.79	0.22	60.37	-13.2949	2.057	0.1791
1062	SLU 35	0.84	0.25	61.47	-13.5382	2.0932	0.19
1062	SLU 36	0.82	0.23	61.49	-13.5398	2.0944	0.186
1062	SLU 37	0.84	0.24	61.02	-13.4414	2.0777	0.1896
1062	SLU 38	0.82	0.23	61.04	-13.4431	2.0789	0.1856
1062	SLU 39	0.83	0.27	62.2	-13.6992	2.1184	0.1851
1062	SLU 40	0.81	0.26	62.22	-13.7009	2.1197	0.1811

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1062	SLU 41	0.84	0.27	62.88	-13.8485	2.1411	0.1889
1062	SLU 42	0.82	0.26	62.9	-13.8502	2.1424	0.1849
1062	SLU 43	0.9	0.08	59.97	-13.2406	2.0467	0.2108
1062	SLU 44	0.87	0.06	60	-13.2434	2.0488	0.2041
1062	SLU 45	0.92	0.09	61.1	-13.4867	2.085	0.215
1062	SLU 46	0.9	0.07	61.12	-13.4883	2.0862	0.211
1062	SLU 47	0.88	0.05	60.68	-13.3927	2.0716	0.208
1062	SLU 48	0.93	0.08	61.78	-13.636	2.1077	0.2188
1062	SLU 49	0.91	0.07	61.8	-13.6376	2.109	0.2148
1062	SLU 50	0.93	0.07	61.33	-13.5392	2.0922	0.2185
1062	SLU 51	0.91	0.06	61.35	-13.5409	2.0935	0.2145
1062	SLU 52	0.91	0.13	65.94	-14.5417	2.2501	0.2114
1062	SLU 53	0.96	0.15	67.04	-14.7849	2.2862	0.2223
1062	SLU 54	0.94	0.14	67.06	-14.7866	2.2875	0.2183
1062	SLU 55	0.93	0.12	66.62	-14.691	2.2728	0.2153
1062	SLU 56	0.98	0.15	67.72	-14.9342	2.309	0.2261
1062	SLU 57	0.96	0.14	67.74	-14.9359	2.3102	0.2221
1062	SLU 58	0.97	0.14	67.27	-14.8375	2.2935	0.2258
1062	SLU 59	0.95	0.13	67.29	-14.8391	2.2947	0.2218
1062	SLU 60	0.96	0.18	68.45	-15.0953	2.3342	0.2212
1062	SLU 61	0.94	0.17	68.47	-15.097	2.3355	0.2172
1062	SLU 62	0.98	0.18	69.13	-15.2446	2.3569	0.2251
1062	SLU 63	0.96	0.16	69.15	-15.2462	2.3582	0.2211
1062	SLU 64	0.96	0.17	65.98	-14.5538	2.2497	0.2207
1062	SLU 65	0.92	0.15	66.01	-14.5566	2.2518	0.214
1062	SLU 66	0.98	0.17	67.11	-14.7998	2.288	0.2249
1062	SLU 67	0.96	0.16	67.13	-14.8015	2.2892	0.2209
1062	SLU 68	0.94	0.14	66.69	-14.7058	2.2746	0.2178
1062	SLU 69	0.99	0.17	67.79	-14.9491	2.3107	0.2287
1062	SLU 70	0.97	0.16	67.81	-14.9508	2.312	0.2247
1062	SLU 71	0.99	0.16	67.34	-14.8524	2.2952	0.2284
1062	SLU 72	0.97	0.15	67.36	-14.854	2.2965	0.2244
1062	SLU 73	0.97	0.22	71.94	-15.8548	2.453	0.2213
1062	SLU 74	1.02	0.24	73.05	-16.0981	2.4892	0.2322
1062	SLU 75	1	0.23	73.06	-16.0998	2.4905	0.2282
1062	SLU 76	0.98	0.21	72.62	-16.0041	2.4758	0.2251
1062	SLU 77	1.03	0.24	73.73	-16.2474	2.512	0.236
1062	SLU 78	1.01	0.23	73.74	-16.249	2.5132	0.232
1062	SLU 79	1.03	0.23	73.28	-16.1506	2.4964	0.2357
1062	SLU 80	1.01	0.22	73.29	-16.1523	2.4977	0.2317
1062	SLU 81	1.02	0.27	74.46	-16.4084	2.5372	0.2311
1062	SLU 82	1	0.25	74.48	-16.4101	2.5384	0.2271
1062	SLU 83	1.03	0.27	75.14	-16.5577	2.5599	0.235
1062	SLU 84	1.01	0.25	75.16	-16.5594	2.5612	0.2309
1062	SLE RA 1	0.72	0.11	49.43	-10.9066	1.6859	0.1676
1062	SLE RA 2	0.7	0.1	49.45	-10.9085	1.6873	0.1631
1062	SLE RA 3	0.74	0.11	50.19	-11.0707	1.7114	0.1704
1062	SLE RA 4	0.72	0.11	50.2	-11.0718	1.7123	0.1677
1062	SLE RA 5	0.71	0.09	49.91	-11.008	1.7025	0.1657
1062	SLE RA 6	0.75	0.11	50.64	-11.1702	1.7266	0.1729
1062	SLE RA 7	0.73	0.1	50.65	-11.1713	1.7275	0.1703
1062	SLE RA 8	0.74	0.11	50.34	-11.1057	1.7163	0.1727
1062	SLE RA 9	0.73	0.1	50.35	-11.1068	1.7171	0.17
1062	SLE RA 10	0.73	0.14	53.41	-11.774	1.8215	0.168
1062	SLE RA 11	0.76	0.16	54.14	-11.9362	1.8456	0.1752
1062	SLE RA 12	0.75	0.15	54.16	-11.9373	1.8464	0.1726
1062	SLE RA 13	0.74	0.14	53.86	-11.8735	1.8367	0.1706
1062	SLE RA 14	0.78	0.16	54.6	-12.0357	1.8608	0.1778
1062	SLE RA 15	0.76	0.15	54.61	-12.0368	1.8616	0.1751
1062	SLE RA 16	0.77	0.15	54.3	-11.9712	1.8504	0.1776
1062	SLE RA 17	0.76	0.14	54.31	-11.9723	1.8513	0.1749
1062	SLE RA 18	0.76	0.18	55.09	-12.1431	1.8776	0.1745
1062	SLE RA 19	0.75	0.17	55.1	-12.1442	1.8784	0.1719
1062	SLE RA 20	0.77	0.17	55.54	-12.2426	1.8927	0.1771
1062	SLE RA 21	0.76	0.17	55.55	-12.2437	1.8936	0.1744
1062	SLE FR 1	0.72	0.11	49.43	-10.9066	1.6859	0.1676
1062	SLE FR 2	0.72	0.11	49.44	-10.907	1.6862	0.1667
1062	SLE FR 3	0.73	0.11	49.61	-10.9464	1.692	0.1686
1062	SLE FR 4	0.73	0.13	51.13	-11.2779	1.7437	0.1688
1062	SLE FR 5	0.74	0.13	51.31	-11.3174	1.7495	0.1707
1062	SLE FR 6	0.74	0.14	52.26	-11.5248	1.7817	0.1711
1062	SLE QP 1	0.72	0.11	49.43	-10.9066	1.6859	0.1676
1062	SLE QP 2	0.74	0.13	51.13	-11.2776	1.7434	0.1697
1062	SLD 1	5.05	0.68	42.22	-9.7001	1.4211	1.1721
1062	SLD 2	4.59	0.97	41.93	-9.6054	1.4228	1.0527
1062	SLD 3	5.11	-0.35	43.53	-9.971	1.4558	1.2149
1062	SLD 4	4.65	-0.05	43.24	-9.8764	1.4574	1.0955
1062	SLD 5	2.01	1.8	46.53	-10.4105	1.5939	0.4273
1062	SLD 6	1.71	1.99	46.34	-10.3477	1.595	0.348
1062	SLD 7	2.23	-1.63	50.88	-11.3138	1.7094	0.5698
1062	SLD 8	1.93	-1.43	50.69	-11.251	1.7105	0.4906
1062	SLD 9	-0.46	1.69	51.57	-11.3041	1.7764	-0.1512
1062	SLD 10	-0.76	1.88	51.38	-11.2413	1.7774	-0.2304
1062	SLD 11	-0.24	-1.74	55.92	-12.2074	1.8919	-0.0087
1062	SLD 12	-0.54	-1.54	55.73	-12.1446	1.8929	-0.0879
1062	SLD 13	-3.18	0.31	59.02	-12.6787	2.0294	-0.7561
1062	SLD 14	-3.64	0.61	58.73	-12.5841	2.031	-0.8755
1062	SLD 15	-3.12	-0.72	60.32	-12.9497	2.0641	-0.7134
1062	SLD 16	-3.57	-0.42	60.03	-12.855	2.0657	-0.8328
1062	SLV 1	10.81	1.38	30.33	-7.5958	0.9901	2.5142

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
1062	SLV 2	9.75	2.07	29.66	-7.3754	0.9938	2.2362
1062	SLV 3	10.96	-0.95	33.29	-8.2094	1.0695	2.6116
1062	SLV 4	9.9	-0.26	32.62	-7.989	1.0732	2.3337
1062	SLV 5	3.72	3.91	40.52	-9.2811	1.3963	0.7741
1062	SLV 6	3.03	4.36	40.08	-9.1375	1.3988	0.5929
1062	SLV 7	4.22	-3.84	50.38	-11.3265	1.661	1.099
1062	SLV 8	3.53	-3.4	49.95	-11.1829	1.6634	0.9178
1062	SLV 9	-2.06	3.65	52.31	-11.3722	1.8234	-0.5785
1062	SLV 10	-2.75	4.1	51.87	-11.2286	1.8258	-0.7596
1062	SLV 11	-1.56	-4.1	62.17	-13.4176	2.088	-0.2536
1062	SLV 12	-2.25	-3.65	61.74	-13.274	2.0905	-0.4347
1062	SLV 13	-8.43	0.52	69.64	-14.5661	2.4136	-1.9943
1062	SLV 14	-9.49	1.21	68.96	-14.3457	2.4173	-2.2723
1062	SLV 15	-8.28	-1.81	72.6	-15.1797	2.493	-1.8968
1062	SLV 16	-9.34	-1.12	71.92	-14.9593	2.4967	-2.1748
1062	CRTFP Ux+	0	0	0	0	0	0
1062	CRTFP Ux-	0	0	0	0	0	0
1062	CRTFP Uy+	0	0	0	0	0	0
1062	CRTFP Uy-	0	0	0	0	0	0
18410	SLU 1	0.74	-26.14	29.24	5.1586	0.0709	-0.0017
18410	SLU 2	0.7	-30.62	29.33	5.1553	0.07	-0.0013
18410	SLU 3	0.85	-27.67	36.54	5.449	0.1096	-0.0021
18410	SLU 4	0.83	-30.36	36.6	5.447	0.109	-0.0019
18410	SLU 5	0.83	-29.55	37.68	5.3541	0.1157	-0.0017
18410	SLU 6	0.98	-26.6	44.89	5.6478	0.1553	-0.0025
18410	SLU 7	0.96	-29.28	44.94	5.6458	0.1547	-0.0023
18410	SLU 8	1	-24	45.94	5.5562	0.1623	-0.0026
18410	SLU 9	0.98	-26.68	45.99	5.5542	0.1618	-0.0023
18410	SLU 10	0.79	-48.11	31.82	5.9884	0.0739	-0.0016
18410	SLU 11	0.95	-45.15	39.03	6.2821	0.1135	-0.0024
18410	SLU 12	0.92	-47.84	39.08	6.2801	0.113	-0.0022
18410	SLU 13	0.92	-47.03	40.17	6.1872	0.1196	-0.002
18410	SLU 14	1.08	-44.08	47.38	6.4809	0.1592	-0.0028
18410	SLU 15	1.05	-46.77	47.43	6.4789	0.1587	-0.0026
18410	SLU 16	1.09	-41.48	48.43	6.3893	0.1662	-0.0029
18410	SLU 17	1.07	-44.17	48.48	6.3873	0.1657	-0.0026
18410	SLU 18	0.87	-51.12	32.8	6.3488	0.0765	-0.0021
18410	SLU 19	0.84	-53.81	32.85	6.3468	0.0759	-0.0019
18410	SLU 20	1	-50.05	41.15	6.5476	0.1222	-0.0026
18410	SLU 21	0.98	-52.74	41.2	6.5456	0.1216	-0.0023
18410	SLU 22	0.91	-48.74	36.5	6.1216	0.1018	-0.0021
18410	SLU 23	0.88	-53.22	36.59	6.1183	0.1009	-0.0018
18410	SLU 24	1.03	-50.27	43.81	6.412	0.1405	-0.0026
18410	SLU 25	1.01	-52.96	43.86	6.41	0.1399	-0.0023
18410	SLU 26	1.01	-52.15	44.94	6.3171	0.1466	-0.0022
18410	SLU 27	1.16	-49.2	52.15	6.6108	0.1862	-0.003
18410	SLU 28	1.14	-51.89	52.2	6.6088	0.1856	-0.0028
18410	SLU 29	1.18	-46.6	53.2	6.5192	0.1932	-0.003
18410	SLU 30	1.16	-49.29	53.25	6.5172	0.1926	-0.0028
18410	SLU 31	0.97	-70.71	39.08	6.9514	0.1048	-0.0021
18410	SLU 32	1.12	-67.76	46.29	7.2452	0.1444	-0.0029
18410	SLU 33	1.1	-70.44	46.34	7.2432	0.1438	-0.0026
18410	SLU 34	1.1	-69.63	47.43	7.1502	0.1505	-0.0025
18410	SLU 35	1.26	-66.68	54.64	7.444	0.1901	-0.0033
18410	SLU 36	1.23	-69.37	54.69	7.442	0.1895	-0.0031
18410	SLU 37	1.27	-64.08	55.69	7.3524	0.1971	-0.0033
18410	SLU 38	1.25	-66.77	55.74	7.3504	0.1966	-0.0031
18410	SLU 39	1.05	-73.72	40.06	7.3118	0.1074	-0.0026
18410	SLU 40	1.02	-76.41	40.11	7.3098	0.1068	-0.0024
18410	SLU 41	1.18	-72.65	48.41	7.5106	0.1531	-0.003
18410	SLU 42	1.16	-75.34	48.46	7.5086	0.1525	-0.0028
18410	SLU 43	0.89	-26.23	35.53	6.376	0.0816	-0.002
18410	SLU 44	0.86	-30.71	35.61	6.3726	0.0807	-0.0016
18410	SLU 45	1.01	-27.76	42.83	6.6664	0.1203	-0.0024
18410	SLU 46	0.99	-30.45	42.88	6.6644	0.1197	-0.0022
18410	SLU 47	0.99	-29.64	43.96	6.5715	0.1264	-0.0021
18410	SLU 48	1.14	-26.69	51.18	6.8652	0.166	-0.0029
18410	SLU 49	1.12	-29.38	51.23	6.8632	0.1654	-0.0026
18410	SLU 50	1.16	-24.09	52.22	6.7736	0.173	-0.0029
18410	SLU 51	1.14	-26.78	52.28	6.7716	0.1724	-0.0027
18410	SLU 52	0.95	-48.2	38.1	7.2058	0.0846	-0.0019
18410	SLU 53	1.1	-45.25	45.32	7.4995	0.1242	-0.0027
18410	SLU 54	1.08	-47.94	45.37	7.4975	0.1236	-0.0025
18410	SLU 55	1.08	-47.13	46.45	7.4046	0.1303	-0.0024
18410	SLU 56	1.24	-44.18	53.67	7.6983	0.1699	-0.0032
18410	SLU 57	1.21	-46.86	53.72	7.6963	0.1693	-0.0029
18410	SLU 58	1.25	-41.58	54.71	7.6067	0.1769	-0.0032
18410	SLU 59	1.23	-44.26	54.76	7.6047	0.1764	-0.003
18410	SLU 60	1.03	-51.21	39.08	7.5662	0.0872	-0.0024
18410	SLU 61	1	-53.9	39.13	7.5642	0.0866	-0.0022
18410	SLU 62	1.16	-50.14	47.43	7.765	0.1329	-0.0029
18410	SLU 63	1.14	-52.83	47.48	7.763	0.1323	-0.0027
18410	SLU 64	1.07	-48.83	42.79	7.339	0.1125	-0.0025
18410	SLU 65	1.04	-53.31	42.87	7.3357	0.1116	-0.0021
18410	SLU 66	1.19	-50.36	50.09	7.6294	0.1512	-0.0029
18410	SLU 67	1.17	-53.05	50.14	7.6274	0.1506	-0.0027
18410	SLU 68	1.17	-52.24	51.22	7.5345	0.1573	-0.0025
18410	SLU 69	1.32	-49.29	58.44	7.8282	0.1969	-0.0033
18410	SLU 70	1.3	-51.98	58.49	7.8262	0.1963	-0.0031
18410	SLU 71	1.34	-46.69	59.49	7.7366	0.2039	-0.0034

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18410	SLU 72	1.31	-49.38	59.54	7.7346	0.2033	-0.0031
18410	SLU 73	1.13	-70.8	45.36	8.1688	0.1155	-0.0024
18410	SLU 74	1.28	-67.85	52.58	8.4625	0.1551	-0.0032
18410	SLU 75	1.26	-70.54	52.63	8.4606	0.1545	-0.003
18410	SLU 76	1.26	-69.73	53.71	8.3676	0.1612	-0.0029
18410	SLU 77	1.42	-66.78	60.93	8.6613	0.2008	-0.0036
18410	SLU 78	1.39	-69.46	60.98	8.6594	0.2002	-0.0034
18410	SLU 79	1.43	-64.18	61.97	8.5697	0.2078	-0.0037
18410	SLU 80	1.41	-66.86	62.02	8.5678	0.2072	-0.0034
18410	SLU 81	1.21	-73.81	46.34	8.5292	0.1181	-0.0029
18410	SLU 82	1.18	-76.5	46.39	8.5272	0.1175	-0.0027
18410	SLU 83	1.34	-72.74	54.69	8.728	0.1638	-0.0034
18410	SLU 84	1.31	-75.43	54.74	8.726	0.1632	-0.0031
18410	SLE RA 1	0.79	-32.6	31.32	5.4337	0.0797	-0.0018
18410	SLE RA 2	0.76	-35.58	31.37	5.4315	0.0791	-0.0015
18410	SLE RA 3	0.86	-33.62	36.19	5.6273	0.1055	-0.0021
18410	SLE RA 4	0.85	-35.41	36.22	5.626	0.1052	-0.0019
18410	SLE RA 5	0.85	-34.87	36.94	5.5641	0.1096	-0.0018
18410	SLE RA 6	0.95	-32.9	41.75	5.7599	0.136	-0.0024
18410	SLE RA 7	0.94	-34.69	41.79	5.7585	0.1356	-0.0022
18410	SLE RA 8	0.96	-31.17	42.45	5.6988	0.1407	-0.0024
18410	SLE RA 9	0.95	-32.96	42.48	5.6975	0.1403	-0.0022
18410	SLE RA 10	0.82	-47.24	33.03	5.9869	0.0817	-0.0018
18410	SLE RA 11	0.93	-45.27	37.84	6.1828	0.1081	-0.0023
18410	SLE RA 12	0.91	-47.07	37.88	6.1814	0.1078	-0.0021
18410	SLE RA 13	0.91	-46.53	38.6	6.1195	0.1122	-0.002
18410	SLE RA 14	1.01	-44.56	43.41	6.3153	0.1386	-0.0026
18410	SLE RA 15	1	-46.35	43.44	6.314	0.1382	-0.0024
18410	SLE RA 16	1.02	-42.83	44.11	6.2542	0.1433	-0.0026
18410	SLE RA 17	1.01	-44.62	44.14	6.2529	0.1429	-0.0024
18410	SLE RA 18	0.87	-49.25	33.69	6.2272	0.0835	-0.0021
18410	SLE RA 19	0.86	-51.04	33.72	6.2259	0.0831	-0.0019
18410	SLE RA 20	0.96	-48.54	39.25	6.3597	0.1139	-0.0024
18410	SLE RA 21	0.95	-50.33	39.29	6.3584	0.1136	-0.0022
18410	SLE FR 1	0.79	-32.6	31.32	5.4337	0.0797	-0.0018
18410	SLE FR 2	0.78	-33.2	31.33	5.4333	0.0796	-0.0017
18410	SLE FR 3	0.82	-32.31	33.54	5.4867	0.0919	-0.0019
18410	SLE FR 4	0.81	-38.19	32.04	5.6713	0.0807	-0.0018
18410	SLE FR 5	0.85	-37.31	34.26	5.7248	0.093	-0.002
18410	SLE FR 6	0.83	-40.92	32.5	5.8305	0.0816	-0.0019
18410	SLE QP 1	0.79	-32.6	31.32	5.4337	0.0797	-0.0018
18410	SLE QP 2	0.81	-37.59	32.03	5.6718	0.0809	-0.0019
18410	SLD 1	29.78	-48.59	31.12	5.0173	1.5573	0.0181
18410	SLD 2	29.08	88.6	30.45	3.7546	1.5262	0.0255
18410	SLD 3	30.16	-274.75	32.17	7.1045	1.5339	0.0188
18410	SLD 4	29.46	-137.55	31.5	5.8418	1.5028	0.0263
18410	SLD 5	9.06	277.17	30.28	2.5394	0.565	0.0016
18410	SLD 6	8.59	368.21	29.83	1.7015	0.5443	0.0066
18410	SLD 7	10.32	-476.69	33.79	9.4968	0.4869	0.0041
18410	SLD 8	9.86	-385.64	33.35	8.6588	0.4662	0.0091
18410	SLD 9	-8.23	310.45	30.71	2.6848	-0.3045	-0.0128
18410	SLD 10	-8.69	401.5	30.27	1.8468	-0.3252	-0.0079
18410	SLD 11	-6.97	-443.4	34.22	9.6421	-0.3826	-0.0103
18410	SLD 12	-7.43	-352.35	33.78	8.8041	-0.4033	-0.0054
18410	SLD 13	-27.84	62.37	32.56	5.5017	-1.3411	-0.0301
18410	SLD 14	-28.54	199.56	31.89	4.239	-1.3722	-0.0226
18410	SLD 15	-27.46	-163.79	33.61	7.5889	-1.3645	-0.0293
18410	SLD 16	-28.16	-26.6	32.94	6.3262	-1.3956	-0.0219
18410	SLV 1	68.59	-70.78	29.92	4.2071	3.5349	0.0449
18410	SLV 2	66.96	248.63	28.36	1.2673	3.4623	0.0622
18410	SLV 3	69.47	-583.78	32.31	8.9415	3.4806	0.0466
18410	SLV 4	67.85	-264.38	30.76	6.0017	3.4081	0.064
18410	SLV 5	20.09	674.35	28.04	-1.4314	1.2121	0.0064
18410	SLV 6	19.03	882.47	27.03	-3.3469	1.1648	0.0177
18410	SLV 7	23.04	-1035.65	36.02	14.35	1.0312	0.0123
18410	SLV 8	21.98	-827.53	35	12.4345	0.984	0.0236
18410	SLV 9	-20.36	752.34	29.06	-1.091	-0.8223	-0.0274
18410	SLV 10	-21.41	960.46	28.04	-3.0065	-0.8695	-0.0161
18410	SLV 11	-17.4	-957.66	37.03	14.6904	-1.0031	-0.0215
18410	SLV 12	-18.46	-749.54	36.01	12.7749	-1.0504	-0.0102
18410	SLV 13	-66.22	189.19	33.3	5.3418	-3.2464	-0.0678
18410	SLV 14	-67.85	508.6	31.74	2.402	-3.3189	-0.0504
18410	SLV 15	-65.34	-323.81	35.69	10.0762	-3.3006	-0.066
18410	SLV 16	-66.96	-4.41	34.14	7.1364	-3.3732	-0.0487
18410	CRTFP Ux+	0	0	0	0	0	0
18410	CRTFP Ux-	0	0	0	0	0	0
18410	CRTFP Uy+	0	0	0	0	0	0
18410	CRTFP Uy-	0	0	0	0	0	0
18411	SLU 1	0.54	29.39	26.87	11.6115	-0.0115	-0.0149
18411	SLU 2	0.48	9.21	27.06	11.7263	-0.0152	-0.0136
18411	SLU 3	0.41	27.71	33.63	11.799	-0.045	-0.0162
18411	SLU 4	0.38	15.6	33.74	11.8679	-0.0473	-0.0154
18411	SLU 5	0.33	8.17	34.79	11.644	-0.0553	-0.0149
18411	SLU 6	0.25	26.67	41.36	11.7167	-0.0851	-0.0174
18411	SLU 7	0.22	14.56	41.47	11.7856	-0.0874	-0.0167
18411	SLU 8	0.22	27.31	42.34	11.4468	-0.0917	-0.0174
18411	SLU 9	0.19	15.2	42.46	11.5157	-0.0939	-0.0166
18411	SLU 10	0.59	4.7	29.27	13.5134	-0.0108	-0.0159
18411	SLU 11	0.52	23.21	35.84	13.586	-0.0406	-0.0185
18411	SLU 12	0.49	11.09	35.95	13.6549	-0.0428	-0.0177

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18411	SLU 13	0.43	3.66	37.01	13.431	-0.0508	-0.0172
18411	SLU 14	0.36	22.17	43.58	13.5037	-0.0807	-0.0198
18411	SLU 15	0.33	10.05	43.69	13.5726	-0.0829	-0.019
18411	SLU 16	0.33	22.81	44.56	13.2338	-0.0872	-0.0197
18411	SLU 17	0.3	10.7	44.67	13.3027	-0.0894	-0.019
18411	SLU 18	0.7	22.96	30.04	14.1643	-0.0051	-0.0182
18411	SLU 19	0.66	10.85	30.15	14.2333	-0.0074	-0.0174
18411	SLU 20	0.54	21.92	37.77	14.082	-0.0452	-0.0195
18411	SLU 21	0.5	9.81	37.88	14.1509	-0.0475	-0.0187
18411	SLU 22	0.57	15.78	33.51	13.3583	-0.0303	-0.018
18411	SLU 23	0.51	-4.4	33.7	13.4732	-0.034	-0.0167
18411	SLU 24	0.44	14.1	40.26	13.5459	-0.0638	-0.0193
18411	SLU 25	0.41	1.99	40.37	13.6148	-0.0661	-0.0185
18411	SLU 26	0.35	-5.44	41.43	13.3909	-0.0741	-0.018
18411	SLU 27	0.28	13.06	48	13.4635	-0.1039	-0.0205
18411	SLU 28	0.25	0.95	48.11	13.5325	-0.1062	-0.0198
18411	SLU 29	0.25	13.7	48.98	13.1937	-0.1105	-0.0205
18411	SLU 30	0.21	1.59	49.09	13.2626	-0.1127	-0.0197
18411	SLU 31	0.62	-8.91	35.91	15.2602	-0.0296	-0.019
18411	SLU 32	0.55	9.59	42.48	15.3329	-0.0594	-0.0216
18411	SLU 33	0.51	-2.52	42.59	15.4018	-0.0616	-0.0208
18411	SLU 34	0.46	-9.95	43.65	15.1779	-0.0696	-0.0203
18411	SLU 35	0.39	8.55	50.21	15.2505	-0.0995	-0.0229
18411	SLU 36	0.35	-3.56	50.32	15.3195	-0.1017	-0.0221
18411	SLU 37	0.36	9.2	51.19	14.9807	-0.106	-0.0228
18411	SLU 38	0.32	-2.91	51.31	15.0496	-0.1082	-0.0221
18411	SLU 39	0.72	9.35	36.67	15.9112	-0.0239	-0.0213
18411	SLU 40	0.69	-2.76	36.78	15.9801	-0.0262	-0.0205
18411	SLU 41	0.56	8.31	44.41	15.8289	-0.064	-0.0226
18411	SLU 42	0.53	-3.8	44.52	15.8978	-0.0663	-0.0218
18411	SLU 43	0.69	42.88	32.66	14.496	-0.0085	-0.0183
18411	SLU 44	0.64	22.69	32.85	14.6108	-0.0122	-0.017
18411	SLU 45	0.57	41.19	39.41	14.6835	-0.042	-0.0196
18411	SLU 46	0.53	29.08	39.52	14.7524	-0.0443	-0.0188
18411	SLU 47	0.48	21.65	40.58	14.5285	-0.0523	-0.0183
18411	SLU 48	0.41	40.15	47.15	14.6012	-0.0821	-0.0208
18411	SLU 49	0.37	28.04	47.26	14.6701	-0.0844	-0.0201
18411	SLU 50	0.37	40.8	48.13	14.3313	-0.0886	-0.0208
18411	SLU 51	0.34	28.69	48.24	14.4002	-0.0909	-0.02
18411	SLU 52	0.75	18.19	35.06	16.3979	-0.0078	-0.0193
18411	SLU 53	0.68	36.69	41.63	16.4705	-0.0376	-0.0219
18411	SLU 54	0.64	24.58	41.74	16.5394	-0.0398	-0.0211
18411	SLU 55	0.59	17.15	42.8	16.3155	-0.0478	-0.0206
18411	SLU 56	0.52	35.65	49.36	16.3882	-0.0777	-0.0232
18411	SLU 57	0.48	23.54	49.47	16.4571	-0.0799	-0.0224
18411	SLU 58	0.48	36.29	50.35	16.1183	-0.0842	-0.0231
18411	SLU 59	0.45	24.18	50.46	16.1872	-0.0864	-0.0224
18411	SLU 60	0.85	36.44	35.82	17.0488	-0.0021	-0.0216
18411	SLU 61	0.82	24.33	35.94	17.1178	-0.0044	-0.0208
18411	SLU 62	0.69	35.4	43.56	16.9665	-0.0422	-0.0229
18411	SLU 63	0.66	23.29	43.67	17.0354	-0.0445	-0.0221
18411	SLU 64	0.72	29.27	39.3	16.2428	-0.0273	-0.0214
18411	SLU 65	0.66	9.08	39.48	16.3577	-0.031	-0.0201
18411	SLU 66	0.59	27.58	46.05	16.4304	-0.0608	-0.0226
18411	SLU 67	0.56	15.47	46.16	16.4993	-0.0631	-0.0219
18411	SLU 68	0.5	8.04	47.22	16.2754	-0.0711	-0.0214
18411	SLU 69	0.43	26.54	53.78	16.348	-0.1009	-0.0239
18411	SLU 70	0.4	14.43	53.89	16.417	-0.1032	-0.0232
18411	SLU 71	0.4	27.19	54.77	16.0782	-0.1074	-0.0239
18411	SLU 72	0.37	15.07	54.88	16.1471	-0.1097	-0.0231
18411	SLU 73	0.77	4.58	41.7	18.1447	-0.0266	-0.0224
18411	SLU 74	0.7	23.08	48.26	18.2174	-0.0564	-0.025
18411	SLU 75	0.67	10.97	48.37	18.2863	-0.0586	-0.0242
18411	SLU 76	0.61	3.54	49.43	18.0624	-0.0666	-0.0237
18411	SLU 77	0.54	22.04	56	18.1351	-0.0965	-0.0263
18411	SLU 78	0.51	9.93	56.11	18.204	-0.0987	-0.0255
18411	SLU 79	0.51	22.68	56.98	17.8652	-0.103	-0.0262
18411	SLU 80	0.48	10.57	57.09	17.9341	-0.1052	-0.0255
18411	SLU 81	0.87	22.83	42.46	18.7957	-0.0209	-0.0247
18411	SLU 82	0.84	10.72	42.57	18.8646	-0.0232	-0.0239
18411	SLU 83	0.72	21.79	50.2	18.7134	-0.061	-0.026
18411	SLU 84	0.68	9.68	50.31	18.7823	-0.0633	-0.0252
18411	SLE RA 1	0.55	25.5	28.77	12.1106	-0.0168	-0.0157
18411	SLE RA 2	0.51	12.05	28.89	12.1872	-0.0193	-0.0149
18411	SLE RA 3	0.46	24.38	33.27	12.2356	-0.0392	-0.0166
18411	SLE RA 4	0.44	16.31	33.34	12.2815	-0.0407	-0.0161
18411	SLE RA 5	0.4	11.35	34.05	12.1323	-0.0461	-0.0157
18411	SLE RA 6	0.36	23.69	38.43	12.1807	-0.0659	-0.0175
18411	SLE RA 7	0.33	15.61	38.5	12.2267	-0.0674	-0.0169
18411	SLE RA 8	0.33	24.12	39.08	12.0008	-0.0703	-0.0174
18411	SLE RA 9	0.31	16.04	39.16	12.0468	-0.0718	-0.0169
18411	SLE RA 10	0.58	9.04	30.37	13.3785	-0.0164	-0.0164
18411	SLE RA 11	0.54	21.38	34.75	13.4269	-0.0363	-0.0182
18411	SLE RA 12	0.51	13.31	34.82	13.4729	-0.0378	-0.0176
18411	SLE RA 13	0.48	8.35	35.53	13.3236	-0.0431	-0.0173
18411	SLE RA 14	0.43	20.69	39.9	13.372	-0.063	-0.019
18411	SLE RA 15	0.41	12.61	39.98	13.418	-0.0645	-0.0185
18411	SLE RA 16	0.41	21.12	40.56	13.1921	-0.0673	-0.019
18411	SLE RA 17	0.38	13.04	40.63	13.2381	-0.0688	-0.0185
18411	SLE RA 18	0.65	21.22	30.88	13.8125	-0.0126	-0.018

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18411	SLE RA 19	0.63	13.14	30.95	13.8584	-0.0141	-0.0174
18411	SLE RA 20	0.54	20.52	36.04	13.7576	-0.0393	-0.0188
18411	SLE RA 21	0.52	12.45	36.11	13.8035	-0.0408	-0.0183
18411	SLE FR 1	0.55	25.5	28.77	12.1106	-0.0168	-0.0157
18411	SLE FR 2	0.54	22.81	28.79	12.1259	-0.0173	-0.0156
18411	SLE FR 3	0.5	25.23	30.83	12.0886	-0.0275	-0.0161
18411	SLE FR 4	0.57	21.53	29.43	12.6365	-0.0161	-0.0162
18411	SLE FR 5	0.54	23.94	31.46	12.5992	-0.0263	-0.0167
18411	SLE FR 6	0.6	23.36	29.82	12.9615	-0.0147	-0.0169
18411	SLE QP 1	0.55	25.5	28.77	12.1106	-0.0168	-0.0157
18411	SLE QP 2	0.58	24.22	29.4	12.6211	-0.0156	-0.0164
18411	SLD 1	33.62	255.23	28.29	12.3032	1.3206	-0.4258
18411	SLD 2	32.8	117.19	28.97	13.6398	1.289	-0.4033
18411	SLD 3	34.05	25.4	29	14.86	1.3401	-0.4311
18411	SLD 4	33.23	-112.64	29.68	16.1966	1.3084	-0.4086
18411	SLD 5	9.99	467.19	27.86	8.4049	0.3615	-0.1353
18411	SLD 6	9.45	375.59	28.31	9.2919	0.3405	-0.1203
18411	SLD 7	11.41	-298.91	30.24	16.9276	0.4264	-0.153
18411	SLD 8	10.87	-390.52	30.7	17.8146	0.4054	-0.138
18411	SLD 9	-9.72	438.95	28.11	7.4277	-0.4365	0.1052
18411	SLD 10	-10.26	347.34	28.56	8.3147	-0.4575	0.1202
18411	SLD 11	-8.29	-327.15	30.49	15.9504	-0.3717	0.0875
18411	SLD 12	-8.83	-418.76	30.95	16.8374	-0.3927	0.1025
18411	SLD 13	-32.07	161.08	29.12	9.0457	-1.3396	0.3758
18411	SLD 14	-32.89	23.04	29.8	10.3823	-1.3713	0.3983
18411	SLD 15	-31.65	-68.75	29.84	11.6025	-1.3202	0.3705
18411	SLD 16	-32.46	-206.79	30.52	12.9391	-1.3518	0.393
18411	SLV 1	77.88	556.38	26.81	11.976	3.1107	-0.9742
18411	SLV 2	75.98	235	28.4	15.0878	3.037	-0.9217
18411	SLV 3	78.87	34.58	28.45	17.7733	3.1559	-0.9866
18411	SLV 4	76.98	-286.79	30.03	20.8851	3.0822	-0.9341
18411	SLV 5	22.59	1031.75	25.86	3.088	0.8666	-0.2942
18411	SLV 6	21.35	822.34	26.9	5.1156	0.8186	-0.26
18411	SLV 7	25.91	-707.56	31.32	22.4123	1.0175	-0.3355
18411	SLV 8	24.68	-916.97	32.35	24.4399	0.9694	-0.3013
18411	SLV 9	-23.52	965.4	26.45	0.8024	-1.0006	0.2685
18411	SLV 10	-24.76	756	27.48	2.8299	-1.0486	0.3027
18411	SLV 11	-20.2	-773.91	31.91	20.1267	-0.8498	0.2271
18411	SLV 12	-21.43	-983.31	32.94	22.1543	-0.8978	0.2613
18411	SLV 13	-75.82	335.23	28.77	4.3572	-3.1134	0.9013
18411	SLV 14	-77.72	13.85	30.36	7.469	-3.1871	0.9538
18411	SLV 15	-74.82	-186.57	30.41	10.1545	-3.0681	0.8889
18411	SLV 16	-76.72	-507.94	31.99	13.2663	-3.1418	0.9414
18411	CRTFP Ux+	0	0	0	0	0	0
18411	CRTFP Ux-	0	0	0	0	0	0
18411	CRTFP Uy+	0	0	0	0.0001	0	0
18411	CRTFP Uy-	0	0	0	-0.0001	0	0

1.3 Pressioni massime sul terreno

Nodo: *Nodo che interagisce col terreno.*
Ind.: *indice del nodo.*
Pressione minima: *situazione in cui si verifica la pressione minima nel nodo.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce la pressione minima.*
uz: *spostamento massimo verticale del nodo. [m]*
Valore: *pressione minima sul terreno del nodo. [kN/m²]*
Pressione massima: *situazione in cui si verifica la pressione massima nel nodo.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce la pressione massima.*
uz: *spostamento minimo verticale del nodo. [m]*
Valore: *pressione massima sul terreno del nodo. [kN/m²]*

Compressione estrema massima -167.492 al nodo di indice 246, di coordinate x = -24.4, y = -3.28, z = -1.56, nel contesto SLV 1.
Spostamento estremo minimo -0.0055831 al nodo di indice 246, di coordinate x = -24.4, y = -3.28, z = -1.56, nel contesto SLV 1.
Spostamento estremo massimo -0.0006819 al nodo di indice 927, di coordinate x = -0.47, y = 5.53, z = -1.56, nel contesto SLV 2.

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
11	SLU 83	-0.0040192	-120.575	SLU 2	-0.0025628	-76.884
12	SLU 83	-0.0040097	-120.29	SLU 2	-0.0025608	-76.825
13	SLU 83	-0.0039993	-119.979	SLU 2	-0.0025585	-76.754
14	SLU 83	-0.0039883	-119.648	SLU 2	-0.0025559	-76.678
15	SLU 83	-0.0039756	-119.269	SLU 2	-0.0025524	-76.572
16	SLU 83	-0.0039571	-118.713	SLV 4	-0.0025448	-76.343
17	SLU 83	-0.0039318	-117.955	SLV 4	-0.0024837	-74.511
18	SLU 83	-0.0039638	-118.913	SLU 2	-0.0025245	-75.734
20	SLU 83	-0.0039529	-118.586	SLU 2	-0.0025214	-75.641
22	SLU 83	-0.0039361	-118.082	SLU 2	-0.0025148	-75.443
24	SLU 83	-0.0039203	-117.61	SLU 2	-0.002509	-75.269
26	SLU 83	-0.0039062	-117.185	SLU 2	-0.0025041	-75.124
27	SLU 83	-0.0038889	-116.667	SLU 2	-0.0024972	-74.917
28	SLU 83	-0.003861	-115.83	SLV 4	-0.002445	-73.35
29	SLU 83	-0.0038204	-114.613	SLU 2	-0.0024501	-73.502
30	SLU 83	-0.0037948	-113.843	SLV 4	-0.0024075	-72.226
31	SLU 83	-0.003824	-114.719	SLU 2	-0.0024485	-73.456
32	SLU 84	-0.0039002	-117.005	SLU 1	-0.0024809	-74.427

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
33	SLU 84	-0.0038825	-116.476	SLU 1	-0.0024734	-74.203
34	SLU 84	-0.0038512	-115.537	SLU 1	-0.0024573	-73.718
35	SLU 84	-0.0038144	-114.432	SLU 1	-0.0024377	-73.131
36	SLU 84	-0.0037464	-112.393	SLU 1	-0.0023992	-71.977
37	SLU 83	-0.003721	-111.629	SLV 4	-0.0023625	-70.874
38	SLU 84	-0.0037517	-112.551	SLU 1	-0.0023998	-71.994
39	SLU 84	-0.0037542	-112.625	SLU 1	-0.0023989	-71.966
41	SLU 84	-0.0038318	-114.953	SLU 1	-0.0024344	-73.031
42	SLU 84	-0.0038089	-114.266	SLU 1	-0.0024232	-72.695
43	SLU 84	-0.003774	-113.221	SLU 1	-0.002404	-72.121
44	SLU 84	-0.003735	-112.05	SLU 1	-0.0023818	-71.455
45	SLU 84	-0.0037014	-111.043	SLU 1	-0.002362	-70.861
46	SLU 84	-0.0036731	-110.193	SLU 1	-0.0023483	-70.45
47	SLU 84	-0.0036446	-109.339	SLV 2	-0.0023091	-69.274
48	SLU 84	-0.0036853	-110.56	SLU 1	-0.0023538	-70.613
49	SLU 84	-0.0037618	-112.853	SLU 1	-0.0023866	-71.599
50	SLU 84	-0.0037368	-112.104	SLU 1	-0.0023738	-71.213
51	SLU 84	-0.0037036	-111.109	SLU 1	-0.0023551	-70.653
52	SLU 84	-0.0036697	-110.092	SLU 1	-0.0023358	-70.074
53	SLU 84	-0.0036408	-109.223	SLU 1	-0.0023192	-69.577
54	SLU 84	-0.0036203	-108.61	SLU 1	-0.0023083	-69.25
55	SLU 84	-0.0036013	-108.039	SLU 1	-0.0022984	-68.953
56	SLU 84	-0.0035684	-107.051	SLV 2	-0.0022507	-67.521
57	SLU 84	-0.0036893	-110.679	SLV 10	-0.0023189	-69.566
58	SLU 84	-0.0036648	-109.944	SLU 1	-0.0023242	-69.727
59	SLU 84	-0.0036381	-109.144	SLU 1	-0.0023094	-69.281
60	SLU 84	-0.0036092	-108.276	SLU 1	-0.002293	-68.79
61	SLU 84	-0.0035817	-107.452	SLU 1	-0.0022775	-68.326
62	SLU 84	-0.0035562	-106.687	SLU 1	-0.0022634	-67.902
63	SLU 84	-0.0035304	-105.911	SLU 1	-0.0022492	-67.475
64	SLU 84	-0.0034933	-104.8	SLV 2	-0.0021906	-65.718
65	SLU 84	-0.003649	-109.471	SLV 10	-0.0022667	-68.001
66	SLU 84	-0.0036241	-108.722	SLV 10	-0.0022754	-68.263
67	SLU 84	-0.0035983	-107.949	SLV 6	-0.002274	-68.22
68	SLU 84	-0.0035691	-107.073	SLV 6	-0.0022611	-67.832
69	SLU 84	-0.0035397	-106.191	SLV 6	-0.0022453	-67.358
70	SLU 84	-0.003511	-105.329	SLV 6	-0.0022285	-66.854
71	SLU 84	-0.0034818	-104.455	SLV 2	-0.0022086	-66.257
72	SLU 84	-0.0034433	-103.299	SLV 2	-0.0021496	-64.489
130	SLU 83	-0.0046871	-140.613	SLV 16	-0.0026772	-80.315
131	SLU 83	-0.0046842	-140.527	SLV 12	-0.0027154	-81.463
132	SLU 83	-0.0046996	-140.989	SLV 12	-0.0027486	-82.459
133	SLU 83	-0.0047304	-141.912	SLV 12	-0.0027885	-83.655
134	SLU 83	-0.0047708	-143.125	SLV 12	-0.0028313	-84.939
135	SLU 83	-0.0047769	-143.308	SLV 12	-0.0028479	-85.437
136	SLU 83	-0.0048013	-144.039	SLV 16	-0.0025018	-75.053
137	SLU 83	-0.0047452	-142.357	SLV 16	-0.0025539	-76.617
138	SLU 83	-0.0047055	-141.166	SLV 16	-0.0026156	-78.467
151	SLU 83	-0.0044837	-134.511	SLV 7	-0.0026495	-79.486
153	SLU 83	-0.0045422	-136.266	SLV 7	-0.0026709	-80.126
155	SLU 83	-0.0045716	-137.148	SLV 7	-0.0026768	-80.305
157	SLU 83	-0.0045825	-137.476	SLV 7	-0.0026687	-80.06
159	SLU 83	-0.0045856	-137.569	SLV 7	-0.0026534	-79.602
161	SLU 83	-0.0045884	-137.653	SLV 7	-0.0026358	-79.074
163	SLU 83	-0.0045964	-137.893	SLV 7	-0.0026196	-78.587
165	SLU 83	-0.0046129	-138.386	SLV 3	-0.0025665	-76.994
166	SLU 83	-0.0046364	-139.093	SLV 3	-0.0025188	-75.565
167	SLU 83	-0.0046746	-140.237	SLV 3	-0.0024691	-74.072
168	SLU 83	-0.0047226	-141.678	SLV 3	-0.0024249	-72.747
169	SLU 83	-0.0044848	-134.544	SLV 12	-0.0027144	-81.432
170	SLU 83	-0.00438	-131.401	SLV 12	-0.0026545	-79.634
171	SLU 83	-0.0042832	-128.496	SLV 12	-0.0025956	-77.869
172	SLU 83	-0.0042231	-126.692	SLV 8	-0.002557	-76.711
173	SLU 83	-0.0042123	-126.369	SLV 7	-0.0025448	-76.345
174	SLU 83	-0.004248	-127.441	SLV 7	-0.0025593	-76.779
175	SLU 83	-0.0043116	-129.347	SLV 7	-0.0025894	-77.683
176	SLU 83	-0.0043684	-131.052	SLV 7	-0.0026136	-78.408
177	SLU 83	-0.0045605	-136.814	SLV 16	-0.0024958	-74.873
178	SLU 83	-0.0044954	-134.862	SLV 16	-0.0025355	-76.064
179	SLU 83	-0.0044542	-133.625	SLV 16	-0.0025861	-77.582
180	SLU 83	-0.0044419	-133.258	SLV 12	-0.0026233	-78.7
181	SLU 83	-0.0044601	-133.804	SLV 12	-0.002655	-79.651
182	SLU 83	-0.0045047	-135.14	SLV 12	-0.0027006	-81.018
183	SLU 83	-0.0045606	-136.818	SLV 12	-0.0027506	-82.519
184	SLU 83	-0.0046074	-138.221	SLV 12	-0.0027923	-83.77
185	SLU 83	-0.0046396	-139.189	SLV 16	-0.0024618	-73.855
187	SLU 83	-0.0043264	-129.792	SLV 7	-0.0026009	-78.028
189	SLU 83	-0.0043733	-131.199	SLV 7	-0.0026162	-78.486
190	SLU 83	-0.004394	-131.82	SLV 7	-0.0026183	-78.548
191	SLU 83	-0.004397	-131.909	SLV 7	-0.0026072	-78.215
192	SLU 83	-0.0043941	-131.822	SLV 7	-0.0025904	-77.713
193	SLU 83	-0.0043961	-131.883	SLV 7	-0.0025748	-77.244
194	SLU 83	-0.0044103	-132.308	SLV 3	-0.0025588	-76.764
195	SLU 83	-0.0044396	-133.187	SLV 3	-0.0025139	-75.416
196	SLU 83	-0.004483	-134.49	SLV 3	-0.002476	-74.281
197	SLU 83	-0.0045367	-136.102	SLV 3	-0.0024439	-73.317
198	SLU 83	-0.0045956	-137.869	SLV 3	-0.0024145	-72.436
199	SLU 83	-0.0043694	-131.081	SLV 16	-0.0024371	-73.114
200	SLU 83	-0.0042776	-128.327	SLV 16	-0.0024573	-73.719
201	SLU 83	-0.004218	-126.541	SLV 16	-0.0024914	-74.742

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
202	SLU 83	-0.0041987	-125.962	SLV 12	-0.0025289	-75.867
203	SLU 83	-0.0042222	-126.665	SLV 12	-0.0025607	-76.822
204	SLU 83	-0.0042844	-128.531	SLV 12	-0.0026147	-78.441
205	SLU 83	-0.0043748	-131.244	SLV 12	-0.0026843	-80.529
206	SLU 83	-0.0044833	-134.499	SLV 12	-0.0027616	-82.848
207	SLU 83	-0.0044814	-134.443	SLV 16	-0.0024235	-72.704
210	SLU 83	-0.0041968	-125.905	SLV 7	-0.0025665	-76.996
212	SLU 83	-0.0042232	-126.696	SLV 7	-0.002572	-77.161
213	SLU 83	-0.0042292	-126.876	SLV 7	-0.0025664	-76.993
214	SLU 83	-0.0042192	-126.576	SLV 7	-0.0025492	-76.476
215	SLU 83	-0.0042072	-126.216	SLV 7	-0.0025291	-75.872
216	SLU 83	-0.0042068	-126.203	SLV 7	-0.0025144	-75.431
217	SLU 83	-0.0042267	-126.802	SLV 3	-0.0024953	-74.859
218	SLU 83	-0.0042692	-128.077	SLV 3	-0.002462	-73.861
219	SLU 83	-0.0043296	-129.888	SLV 3	-0.0024384	-73.151
220	SLU 83	-0.0043988	-131.964	SLV 3	-0.0024206	-72.618
221	SLU 83	-0.0044713	-134.14	SLV 3	-0.002405	-72.15
222	SLU 83	-0.004161	-124.829	SLV 16	-0.0023678	-71.035
223	SLU 83	-0.004048	-121.44	SLV 16	-0.0023705	-71.115
224	SLU 83	-0.0039757	-119.272	SLV 16	-0.0023907	-71.722
225	SLU 83	-0.0039529	-118.587	SLV 12	-0.0024304	-72.912
226	SLU 83	-0.0039832	-119.496	SLV 12	-0.0024635	-73.905
227	SLU 83	-0.0040655	-121.966	SLV 12	-0.0025275	-75.824
228	SLU 83	-0.0041928	-125.784	SLV 12	-0.0026179	-78.538
229	SLU 83	-0.0043454	-130.362	SLV 8	-0.0027129	-81.387
230	SLU 83	-0.0043089	-129.267	SLV 16	-0.0023735	-71.204
232	SLU 83	-0.0040749	-122.248	SLV 11	-0.002524	-75.72
234	SLU 83	-0.0040837	-122.511	SLV 7	-0.0025317	-75.952
235	SLU 83	-0.0040756	-122.269	SLV 7	-0.0025195	-75.584
236	SLU 83	-0.0040495	-121.486	SLV 7	-0.0024942	-74.825
237	SLU 83	-0.004025	-120.749	SLV 7	-0.0024686	-74.057
238	SLU 83	-0.0040199	-120.596	SLV 7	-0.0024534	-73.603
239	SLU 83	-0.0040439	-121.318	SLV 3	-0.0024303	-72.91
240	SLU 83	-0.004099	-122.971	SLV 3	-0.0024075	-72.224
241	SLU 83	-0.0041766	-125.298	SLV 3	-0.0023968	-71.904
242	SLU 83	-0.0042557	-127.67	SLV 3	-0.0023906	-71.718
243	SLU 83	-0.0043348	-130.043	SLV 3	-0.0023848	-71.543
246	SLV 1	-0.0055831	-167.492	SLV 16	-0.0008381	-25.142
262	SLU 83	-0.0040954	-122.862	SLV 16	-0.0020116	-60.349
264	SLU 83	-0.0041669	-125.008	SLV 16	-0.0021152	-63.457
268	SLU 83	-0.0040809	-122.428	SLV 16	-0.0022836	-68.509
269	SLU 83	-0.0039087	-117.262	SLV 16	-0.0022746	-68.237
270	SLU 83	-0.0037978	-113.935	SLV 16	-0.0022691	-68.073
271	SLU 83	-0.0037241	-111.723	SLV 16	-0.0022817	-68.451
272	SLU 83	-0.0037021	-111.064	SLV 16	-0.0023224	-69.671
273	SLU 83	-0.0037391	-112.174	SLV 12	-0.0023605	-70.814
274	SLU 83	-0.0038361	-115.082	SLV 12	-0.0024306	-72.917
275	SLU 83	-0.0039894	-119.682	SLV 12	-0.0025327	-75.981
276	SLU 83	-0.0040403	-121.21	SLV 8	-0.0025622	-76.867
277	SLU 83	-0.0041525	-124.574	SLV 8	-0.0026243	-78.728
279	SLU 83	-0.0039412	-118.237	SLV 11	-0.0024685	-74.055
281	SLU 83	-0.0039396	-118.189	SLV 7	-0.0024833	-74.5
282	SLU 83	-0.0039272	-117.816	SLV 7	-0.0024726	-74.179
283	SLU 83	-0.0038825	-116.476	SLV 7	-0.0024384	-73.153
284	SLU 83	-0.0038445	-115.335	SLV 7	-0.0024072	-72.215
285	SLU 83	-0.0038328	-114.985	SLV 7	-0.0023905	-71.715
286	SLU 83	-0.0038582	-115.747	SLV 3	-0.0023614	-70.841
287	SLU 83	-0.003922	-117.661	SLV 3	-0.0023446	-70.338
288	SLU 83	-0.0040167	-120.502	SLV 3	-0.0023414	-70.243
289	SLU 83	-0.0040875	-122.625	SLV 3	-0.0023388	-70.163
290	SLU 83	-0.0041555	-124.664	SLV 3	-0.002332	-69.961
294	SLU 83	-0.0042121	-126.363	SLV 3	-0.0021625	-64.876
296	SLU 83	-0.0041288	-123.864	SLV 3	-0.0020579	-61.736
311	SLV 14	-0.0051987	-155.96	SLV 3	-0.0008138	-24.415
315	SLV 14	-0.0053654	-160.963	SLV 3	-0.0007827	-23.48
316	SLV 14	-0.0047836	-143.507	SLV 3	-0.0007871	-23.613
317	SLV 14	-0.0042782	-128.347	SLV 3	-0.0008021	-24.063
318	SLV 14	-0.0038598	-115.793	SLV 3	-0.0008291	-24.874
319	SLV 1	-0.0055149	-165.448	SLV 16	-0.0007902	-23.705
320	SLV 1	-0.0049838	-149.513	SLV 16	-0.0007977	-23.931
321	SLV 1	-0.0045042	-135.127	SLV 16	-0.0008117	-24.352
322	SLV 1	-0.0040906	-122.718	SLV 16	-0.000834	-25.019
323	SLV 1	-0.0037478	-112.434	SLV 16	-0.0008654	-25.961
324	SLV 1	-0.0034752	-104.255	SLV 16	-0.0009065	-27.195
325	SLV 1	-0.0032689	-98.067	SLV 16	-0.000958	-28.741
326	SLV 1	-0.0031237	-93.712	SLV 16	-0.0010207	-30.622
327	SLV 1	-0.0030341	-91.023	SLV 16	-0.0010955	-32.864
328	SLU 83	-0.0030364	-91.092	SLV 16	-0.001183	-35.489
329	SLU 83	-0.0031152	-93.457	SLV 16	-0.0012836	-38.508
330	SLU 83	-0.0032319	-96.957	SLV 16	-0.001397	-41.909
331	SLU 83	-0.0033795	-101.385	SLV 16	-0.0015214	-45.641
332	SLU 83	-0.0035469	-106.408	SLV 16	-0.0016529	-49.586
333	SLU 83	-0.0037167	-111.5	SLV 16	-0.0017845	-53.535
334	SLU 83	-0.0038618	-115.854	SLV 16	-0.0019048	-57.144
335	SLU 83	-0.0039456	-118.368	SLV 16	-0.0019974	-59.923
336	SLU 83	-0.003978	-119.341	SLV 16	-0.002066	-61.98
337	SLU 83	-0.0039616	-118.849	SLV 16	-0.0021177	-63.531
338	SLU 83	-0.0039086	-117.259	SLV 16	-0.002153	-64.59
339	SLU 83	-0.0038232	-114.697	SLV 16	-0.0021687	-65.061
340	SLU 83	-0.0036758	-110.275	SLV 16	-0.0021735	-65.206

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
341	SLU 83	-0.0035668	-107.005	SLV 16	-0.0021672	-65.015
342	SLU 83	-0.0034896	-104.687	SLV 16	-0.0021739	-65.216
343	SLU 83	-0.0034653	-103.959	SLV 16	-0.0022087	-66.26
344	SLU 83	-0.0035037	-105.111	SLU 2	-0.0022467	-67.4
345	SLU 83	-0.003605	-108.149	SLU 2	-0.0023077	-69.231
346	SLU 83	-0.0037604	-112.812	SLU 2	-0.0024027	-72.081
347	SLU 83	-0.0040042	-120.126	SLV 8	-0.0025523	-76.569
348	SLV 14	-0.0035285	-105.855	SLV 3	-0.0008689	-26.067
349	SLV 14	-0.0032796	-98.389	SLV 3	-0.000922	-27.659
350	SLV 14	-0.0031061	-93.184	SLV 3	-0.000989	-29.669
351	SLV 14	-0.0030004	-90.011	SLV 3	-0.0010708	-32.125
352	SLU 83	-0.0029986	-89.957	SLV 3	-0.0011683	-35.049
353	SLU 83	-0.0030889	-92.668	SLV 3	-0.0012818	-38.454
354	SLU 83	-0.003224	-96.719	SLV 3	-0.0014106	-42.317
355	SLU 83	-0.0033944	-101.833	SLV 3	-0.001552	-46.559
356	SLU 83	-0.0035853	-107.56	SLV 3	-0.0017003	-51.008
357	SLU 83	-0.0037727	-113.181	SLV 3	-0.001845	-55.351
358	SLU 83	-0.0039539	-118.616	SLV 3	-0.0020066	-60.197
359	SLU 83	-0.0039191	-117.572	SLV 3	-0.0019691	-59.072
360	SLU 83	-0.0040527	-121.58	SLV 3	-0.002134	-64.019
361	SLU 83	-0.0040372	-121.115	SLV 3	-0.0021112	-63.336
362	SLU 83	-0.0040632	-121.897	SLV 3	-0.002194	-65.82
363	SLU 83	-0.0040288	-120.863	SLV 3	-0.0022369	-67.108
364	SLU 83	-0.0039591	-118.774	SLV 3	-0.0022614	-67.842
365	SLU 83	-0.0038998	-116.994	SLV 3	-0.0022735	-68.205
366	SLU 83	-0.0038332	-114.995	SLV 3	-0.0022783	-68.348
367	SLU 83	-0.0037426	-112.277	SLV 3	-0.0022824	-68.471
368	SLU 83	-0.0036799	-110.396	SLV 3	-0.0022967	-68.9
369	SLU 83	-0.0036577	-109.732	SLV 3	-0.0023301	-69.902
370	SLU 83	-0.0036767	-110.3	SLV 7	-0.0023493	-70.479
371	SLU 83	-0.0037256	-111.768	SLV 7	-0.0023843	-71.529
372	SLU 83	-0.0037811	-113.432	SLU 2	-0.0024187	-72.56
373	SLU 83	-0.0038105	-114.314	SLV 11	-0.0024255	-72.764
374	SLU 83	-0.0039055	-117.164	SLV 16	-0.0019456	-58.368
376	SLU 83	-0.003975	-119.249	SLV 16	-0.0020475	-61.424
377	SLV 14	-0.0048269	-144.807	SLV 3	-0.0007835	-23.505
378	SLU 83	-0.0040309	-120.928	SLV 3	-0.0021105	-63.316
381	SLU 83	-0.00395	-118.5	SLV 3	-0.0020084	-60.251
383	SLV 1	-0.0051135	-153.405	SLV 16	-0.0007906	-23.718
384	SLU 83	-0.0037993	-113.979	SLV 11	-0.0024095	-72.286
388	SLU 83	-0.0037726	-113.178	SLV 16	-0.0019039	-57.116
390	SLU 83	-0.0038366	-115.097	SLV 16	-0.0020011	-60.033
391	SLV 14	-0.0045306	-135.917	SLV 3	-0.0007654	-22.963
392	SLU 83	-0.0039002	-117.006	SLV 3	-0.0020779	-62.338
395	SLU 83	-0.0038257	-114.771	SLV 3	-0.0019825	-59.476
397	SLV 1	-0.0047493	-142.479	SLV 16	-0.0007597	-22.791
398	SLU 83	-0.0037097	-111.29	SLU 2	-0.0023662	-70.985
402	SLU 83	-0.0036807	-110.421	SLV 16	-0.001879	-56.37
404	SLU 83	-0.0037392	-112.176	SLV 16	-0.0019717	-59.152
405	SLV 14	-0.0043237	-129.711	SLV 3	-0.0007614	-22.843
406	SLU 83	-0.0038076	-114.227	SLV 3	-0.0020605	-61.815
409	SLU 83	-0.0037395	-112.184	SLV 3	-0.0019717	-59.152
411	SLV 1	-0.0044961	-134.884	SLV 16	-0.0007451	-22.354
412	SLU 83	-0.0036817	-110.452	SLU 2	-0.0023464	-70.393
416	SLU 83	-0.0033502	-100.506	SLU 2	-0.0021357	-64.071
417	SLU 83	-0.0036178	-108.535	SLV 16	-0.0018662	-55.985
419	SLU 83	-0.0036709	-110.128	SLV 16	-0.0019544	-58.633
420	SLV 14	-0.0042105	-126.315	SLV 3	-0.0007717	-23.151
421	SLU 83	-0.0037401	-112.202	SLV 3	-0.0020522	-61.565
424	SLU 83	-0.0036782	-110.346	SLV 3	-0.0019699	-59.098
427	SLV 1	-0.0043498	-130.495	SLV 16	-0.0007451	-22.354
428	SLU 83	-0.0037102	-111.307	SLU 2	-0.0023623	-70.869
431	SLU 83	-0.0035765	-107.294	SLV 16	-0.0018625	-55.874
433	SLU 83	-0.0036242	-108.727	SLV 16	-0.0019463	-58.388
434	SLV 14	-0.0041883	-125.649	SLV 3	-0.0007954	-23.861
435	SLU 84	-0.0036886	-110.659	SLV 3	-0.0020485	-61.454
438	SLU 84	-0.0036329	-108.987	SLV 3	-0.0019728	-59.183
441	SLV 1	-0.0043015	-129.046	SLV 16	-0.0007575	-22.726
442	SLU 83	-0.0037753	-113.258	SLU 2	-0.0024012	-72.036
446	SLU 83	-0.0035521	-106.563	SLV 16	-0.001866	-55.981
448	SLU 83	-0.0035946	-107.837	SLV 16	-0.0019447	-58.342
449	SLV 14	-0.0042485	-127.454	SLV 3	-0.0008307	-24.921
450	SLU 84	-0.0036475	-109.425	SLV 3	-0.0020461	-61.384
453	SLU 84	-0.0035979	-107.936	SLV 3	-0.0019771	-59.314
460	SLV 1	-0.0043386	-130.159	SLV 16	-0.0007798	-23.395
461	SLU 83	-0.0038422	-115.266	SLU 2	-0.0024413	-73.238
465	SLU 83	-0.0035419	-106.256	SLV 16	-0.0018732	-56.197
467	SLU 83	-0.0035791	-107.372	SLV 16	-0.0019437	-58.31
468	SLV 14	-0.0043756	-131.267	SLV 3	-0.0008745	-26.236
469	SLU 84	-0.0036136	-108.409	SLV 3	-0.0020392	-61.177
472	SLU 84	-0.00357	-107.099	SLV 3	-0.0019803	-59.408
475	SLV 1	-0.0044439	-133.318	SLV 16	-0.0008091	-24.274
477	SLU 84	-0.0035568	-106.705	SLU 1	-0.0022553	-67.658
478	SLU 84	-0.0037385	-112.156	SLU 1	-0.0023676	-71.028
479	SLU 84	-0.0039821	-119.462	SLU 1	-0.0025183	-75.549
480	SLU 83	-0.0040065	-120.194	SLU 2	-0.0025351	-76.053
481	SLU 84	-0.003881	-116.431	SLU 1	-0.0024634	-73.901
483	SLU 84	-0.0035432	-106.296	SLV 16	-0.0018792	-56.375
485	SLU 84	-0.0035752	-107.256	SLV 14	-0.0019439	-58.317
486	SLV 14	-0.0045456	-136.368	SLV 3	-0.0009222	-27.666

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
487	SLU 84	-0.0035864	-107.592	SLV 1	-0.0020214	-60.642
490	SLU 84	-0.0035487	-106.46	SLV 3	-0.0019731	-59.192
493	SLU 84	-0.0038613	-115.838	SLU 1	-0.0024493	-73.48
496	SLV 1	-0.0045925	-137.776	SLV 16	-0.0008416	-25.247
500	SLU 84	-0.0035518	-106.553	SLV 13	-0.0018879	-56.638
502	SLU 84	-0.0035785	-107.356	SLV 13	-0.0019474	-58.423
503	SLV 14	-0.0047225	-141.675	SLV 3	-0.0009669	-29.008
504	SLU 84	-0.0035675	-107.026	SLV 2	-0.0020011	-60.034
507	SLU 84	-0.0035357	-106.071	SLV 1	-0.0019598	-58.793
509	SLU 84	-0.0038075	-114.225	SLU 1	-0.0024141	-72.423
512	SLV 1	-0.0047457	-142.371	SLV 16	-0.0008731	-26.193
516	SLV 14	-0.0048534	-145.601	SLV 3	-0.0009996	-29.989
517	SLU 84	-0.00356	-106.8	SLV 13	-0.0018948	-56.844
519	SLU 84	-0.0035816	-107.448	SLV 13	-0.0019503	-58.509
520	SLU 84	-0.0035615	-106.845	SLV 2	-0.0019759	-59.278
523	SLU 84	-0.0035355	-106.066	SLV 2	-0.0019434	-58.303
525	SLU 84	-0.0037283	-111.848	SLU 1	-0.002363	-70.891
527	SLV 4	-0.0050066	-150.199	SLV 13	-0.0008293	-24.878
528	SLV 4	-0.0048226	-144.679	SLV 13	-0.0009218	-27.654
529	SLV 4	-0.0046705	-140.116	SLV 13	-0.0010173	-30.518
530	SLV 2	-0.0045332	-135.996	SLV 15	-0.0011129	-33.388
531	SLV 2	-0.0044002	-132.007	SLV 15	-0.0012071	-36.213
532	SLV 2	-0.004267	-128.01	SLV 15	-0.0012992	-38.976
533	SLV 2	-0.0041316	-123.949	SLV 15	-0.0013891	-41.672
534	SLU 84	-0.0040123	-120.369	SLV 15	-0.0014765	-44.294
535	SLU 84	-0.0039727	-119.182	SLV 15	-0.0015608	-46.825
536	SLU 84	-0.0039278	-117.835	SLV 15	-0.0016407	-49.222
537	SLU 84	-0.0038764	-116.292	SLV 15	-0.0017137	-51.411
538	SLU 84	-0.0038175	-114.525	SLV 15	-0.0017761	-53.282
539	SLU 84	-0.003752	-112.559	SLV 15	-0.0018233	-54.699
540	SLU 84	-0.0036847	-110.54	SLV 15	-0.0018516	-55.548
541	SLU 84	-0.0036251	-108.754	SLV 13	-0.0018608	-55.824
542	SLU 84	-0.0035718	-107.154	SLV 13	-0.0019244	-57.732
543	SLU 84	-0.0035987	-107.962	SLV 13	-0.0019903	-59.708
544	SLU 84	-0.0036278	-108.835	SLV 13	-0.0020761	-62.283
545	SLU 84	-0.0036511	-109.532	SLV 13	-0.0021719	-65.157
546	SLU 84	-0.0036633	-109.899	SLV 13	-0.0022667	-68.001
547	SLU 84	-0.0036621	-109.862	SLU 1	-0.0023199	-69.598
548	SLU 84	-0.0036469	-109.407	SLU 1	-0.0023091	-69.274
549	SLU 84	-0.003621	-108.631	SLU 1	-0.0022919	-68.757
550	SLU 84	-0.0036009	-108.027	SLU 1	-0.0022786	-68.359
551	SLU 84	-0.0035875	-107.625	SLU 1	-0.00227	-68.099
552	SLU 84	-0.0036193	-108.579	SLU 1	-0.0022898	-68.695
553	SLU 84	-0.0036232	-108.696	SLU 1	-0.0023069	-69.207
554	SLU 84	-0.0036263	-108.788	SLV 2	-0.0022641	-67.922
555	SLU 84	-0.003631	-108.929	SLV 2	-0.0021953	-65.858
556	SLU 84	-0.0036295	-108.885	SLV 2	-0.002125	-63.749
557	SLU 84	-0.0036188	-108.564	SLV 2	-0.0020625	-61.875
558	SLU 84	-0.003601	-108.03	SLV 2	-0.0020187	-60.562
559	SLU 84	-0.0035622	-106.865	SLV 2	-0.001967	-59.011
560	SLU 84	-0.0035383	-106.149	SLV 2	-0.0019369	-58.108
561	SLU 84	-0.0035301	-105.902	SLV 2	-0.0019132	-57.396
562	SLU 84	-0.0035714	-107.141	SLV 2	-0.0019169	-57.506
563	SLU 84	-0.0036483	-109.45	SLV 2	-0.0019137	-57.412
564	SLU 84	-0.003717	-111.511	SLV 2	-0.001884	-56.52
565	SLU 84	-0.003785	-113.55	SLV 2	-0.0018289	-54.868
566	SLU 84	-0.0038479	-115.437	SLV 1	-0.001757	-52.709
567	SLU 84	-0.003905	-117.149	SLV 1	-0.0016744	-50.233
568	SLU 84	-0.0039569	-118.707	SLV 1	-0.0015861	-47.584
569	SLU 84	-0.0040049	-120.146	SLV 1	-0.0014944	-44.833
570	SLV 16	-0.0041297	-123.89	SLV 1	-0.0014004	-42.012
571	SLV 16	-0.0042911	-128.734	SLV 1	-0.0013045	-39.135
572	SLV 14	-0.0044611	-133.834	SLV 3	-0.0012074	-36.221
573	SLV 14	-0.0046517	-139.55	SLV 3	-0.0011109	-33.327
574	SLV 14	-0.0048849	-146.548	SLV 3	-0.0010195	-30.586
575	SLV 14	-0.0051945	-155.834	SLV 3	-0.0009411	-28.234
577	SLV 4	-0.0048497	-145.491	SLV 13	-0.0008929	-26.787
585	SLV 4	-0.0048563	-145.688	SLV 13	-0.0008985	-26.955
599	SLU 84	-0.0036454	-109.362	SLV 15	-0.0018675	-56.026
603	SLU 84	-0.0035549	-106.647	SLV 13	-0.0018959	-56.878
606	SLU 84	-0.0035746	-107.238	SLV 13	-0.0019501	-58.504
615	SLU 84	-0.0035529	-106.588	SLU 1	-0.0022467	-67.401
617	SLU 84	-0.0035238	-105.713	SLU 1	-0.0022285	-66.855
619	SLU 84	-0.0035483	-106.45	SLU 1	-0.002244	-67.319
625	SLU 84	-0.0036254	-108.762	SLV 10	-0.0022849	-68.548
630	SLU 84	-0.0034837	-104.51	SLU 1	-0.0022156	-66.468
639	SLU 84	-0.0035768	-107.304	SLV 2	-0.0019581	-58.742
642	SLU 84	-0.0035529	-106.588	SLV 2	-0.0019281	-57.842
645	SLU 84	-0.0035827	-107.48	SLV 2	-0.001913	-57.389
658	SLV 14	-0.0048732	-146.196	SLV 3	-0.0010092	-30.277
660	SLU 84	-0.0034787	-104.362	SLV 2	-0.0019037	-57.11
662	SLU 84	-0.003557	-106.709	SLV 2	-0.0019075	-57.225
664	SLV 4	-0.0049787	-149.362	SLV 13	-0.0008401	-25.204
665	SLV 4	-0.0047939	-143.816	SLV 13	-0.0009331	-27.994
666	SLV 4	-0.0046397	-139.192	SLV 13	-0.0010294	-30.881
667	SLV 4	-0.0045004	-135.011	SLV 13	-0.0011257	-33.772
668	SLV 2	-0.0043654	-130.963	SLV 15	-0.0012205	-36.616
669	SLV 2	-0.0042301	-126.904	SLV 15	-0.0013132	-39.397
670	SLV 2	-0.0040927	-122.781	SLV 15	-0.0014036	-42.109
671	SLU 84	-0.0039941	-119.824	SLV 15	-0.0014915	-44.746

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
672	SLU 84	-0.0039533	-118.6	SLV 15	-0.0015764	-47.291
673	SLU 84	-0.0039071	-117.213	SLV 15	-0.0016567	-49.7
674	SLU 84	-0.0038543	-115.628	SLV 15	-0.00173	-51.9
675	SLU 84	-0.0037939	-113.817	SLV 15	-0.0017928	-53.783
676	SLU 84	-0.0037268	-111.804	SLV 15	-0.0018405	-55.214
677	SLU 84	-0.0036579	-109.738	SLV 15	-0.0018694	-56.083
678	SLU 84	-0.0035974	-107.923	SLV 13	-0.0018797	-56.392
679	SLU 84	-0.0035633	-106.899	SLV 13	-0.0018816	-56.448
680	SLU 84	-0.0035478	-106.435	SLV 13	-0.0018945	-56.836
681	SLU 84	-0.0035572	-106.716	SLV 13	-0.0019258	-57.775
682	SLU 84	-0.003572	-107.159	SLV 13	-0.0019786	-59.359
683	SLU 84	-0.0035923	-107.768	SLV 13	-0.0020546	-61.639
684	SLU 84	-0.0036066	-108.198	SLV 13	-0.0021405	-64.215
685	SLU 84	-0.0036098	-108.295	SLV 13	-0.0022253	-66.759
686	SLU 84	-0.0035995	-107.984	SLU 1	-0.0022769	-68.306
687	SLU 83	-0.003575	-107.251	SLU 2	-0.0022602	-67.807
688	SLU 83	-0.0035398	-106.193	SLU 2	-0.0022371	-67.112
689	SLU 83	-0.0034983	-104.949	SLU 2	-0.0022108	-66.323
690	SLU 84	-0.0034691	-104.072	SLU 1	-0.0021927	-65.78
691	SLU 84	-0.0035138	-105.414	SLU 1	-0.0022212	-66.635
692	SLU 84	-0.0035443	-106.328	SLU 1	-0.0022408	-67.224
693	SLU 84	-0.0035487	-106.46	SLV 6	-0.0022096	-66.289
694	SLU 84	-0.0035509	-106.528	SLV 10	-0.0022033	-66.098
695	SLU 84	-0.0035414	-106.241	SLV 10	-0.0022146	-66.438
696	SLU 84	-0.0034929	-104.786	SLU 1	-0.0022151	-66.454
697	SLU 84	-0.0034422	-103.267	SLU 1	-0.0021845	-65.535
698	SLU 84	-0.0033693	-101.08	SLU 1	-0.0021402	-64.206
699	SLU 84	-0.0033423	-100.27	SLV 2	-0.0021057	-63.171
700	SLU 84	-0.0033374	-100.122	SLV 2	-0.0020645	-61.936
701	SLU 84	-0.0033405	-100.215	SLV 2	-0.0020021	-60.064
702	SLU 84	-0.0033449	-100.347	SLV 2	-0.001934	-58.02
703	SLU 84	-0.0033428	-100.285	SLV 2	-0.0018644	-55.933
704	SLU 84	-0.0033312	-99.935	SLV 2	-0.0018027	-54.081
705	SLU 84	-0.003312	-99.361	SLV 2	-0.0017595	-52.784
706	SLU 84	-0.0033012	-99.036	SLV 2	-0.001786	-53.581
707	SLU 84	-0.0034701	-104.102	SLV 2	-0.0018991	-56.974
708	SLU 84	-0.0035527	-106.58	SLV 2	-0.0019051	-57.153
709	SLU 84	-0.0035871	-107.612	SLV 2	-0.0019038	-57.113
710	SLU 84	-0.0036602	-109.807	SLV 2	-0.0018739	-56.216
711	SLU 84	-0.0037325	-111.975	SLV 2	-0.0018193	-54.579
712	SLU 84	-0.0037996	-113.988	SLV 2	-0.0017483	-52.448
713	SLU 84	-0.0038607	-115.821	SLV 2	-0.0016672	-50.015
714	SLU 84	-0.0039166	-117.497	SLV 2	-0.0015803	-47.408
715	SLU 84	-0.0039683	-119.05	SLV 2	-0.0014899	-44.697
716	SLV 15	-0.0040887	-122.661	SLV 2	-0.0013971	-41.912
717	SLV 15	-0.0042538	-127.615	SLV 2	-0.0013023	-39.068
718	SLV 13	-0.0044274	-132.821	SLV 4	-0.0012062	-36.185
719	SLV 13	-0.0046213	-138.639	SLV 4	-0.0011108	-33.325
720	SLV 13	-0.0048576	-145.729	SLV 4	-0.0010208	-30.625
721	SLV 14	-0.0051683	-155.05	SLV 3	-0.0009428	-28.285
722	SLV 15	-0.0048128	-144.385	SLV 2	-0.0010015	-30.044
725	SLU 84	-0.0034574	-103.722	SLV 2	-0.0019019	-57.058
727	SLU 84	-0.0035339	-106.016	SLV 2	-0.0019038	-57.113
728	SLV 15	-0.0046439	-139.317	SLV 2	-0.000971	-29.13
730	SLU 83	-0.0033026	-99.078	SLV 16	-0.0020789	-62.367
732	SLU 83	-0.0031552	-94.655	SLV 16	-0.0019837	-59.512
733	SLU 83	-0.0029207	-87.621	SLV 3	-0.0017221	-51.663
735	SLU 83	-0.0029649	-88.947	SLV 3	-0.0016615	-49.846
736	SLV 15	-0.0044215	-132.645	SLV 2	-0.0009308	-27.924
739	SLV 4	-0.0044494	-133.481	SLV 13	-0.0008762	-26.287
740	SLU 84	-0.0035083	-105.249	SLV 13	-0.0019342	-58.026
742	SLU 84	-0.0035591	-106.773	SLV 13	-0.0019657	-58.971
743	SLU 84	-0.0034787	-104.361	SLV 4	-0.0019276	-57.828
745	SLU 83	-0.0034629	-103.887	SLV 4	-0.0018959	-56.876
746	SLU 83	-0.0032223	-96.668	SLV 16	-0.0019439	-58.317
748	SLU 83	-0.0030672	-92.017	SLV 16	-0.0018425	-55.274
749	SLU 83	-0.0028201	-84.602	SLV 3	-0.0015801	-47.404
751	SLU 83	-0.0028702	-86.106	SLV 3	-0.0015234	-45.701
753	SLV 4	-0.0042735	-128.206	SLV 13	-0.0008588	-25.763
754	SLV 15	-0.0041886	-125.657	SLV 2	-0.0008884	-26.652
756	SLU 84	-0.003507	-105.209	SLV 4	-0.0019518	-58.554
758	SLU 83	-0.003479	-104.371	SLV 4	-0.0019167	-57.502
759	SLU 84	-0.0034977	-104.93	SLV 13	-0.0019779	-59.337
761	SLU 84	-0.0035573	-106.719	SLV 13	-0.0020067	-60.202
762	SLU 83	-0.003174	-95.221	SLV 16	-0.0018518	-55.553
764	SLU 83	-0.0030112	-90.336	SLV 16	-0.001744	-52.321
765	SLU 83	-0.0027801	-83.404	SLV 3	-0.001508	-45.24
767	SLU 83	-0.0028363	-85.088	SLV 3	-0.0014549	-43.648
769	SLV 4	-0.0041313	-123.94	SLV 13	-0.000843	-25.29
770	SLV 15	-0.00397	-119.099	SLV 2	-0.0008483	-25.448
772	SLU 84	-0.0035443	-106.33	SLV 2	-0.0019798	-59.394
774	SLU 83	-0.0035041	-105.123	SLV 2	-0.0019429	-58.287
775	SLU 84	-0.0034825	-104.476	SLV 13	-0.0020045	-60.136
777	SLU 84	-0.0035511	-106.534	SLV 13	-0.0020298	-60.894
778	SLU 83	-0.0030718	-92.153	SLV 16	-0.0017621	-52.862
779	SLU 83	-0.0026321	-78.962	SLV 16	-0.0014318	-42.954
780	SLU 83	-0.0025116	-75.347	SLV 16	-0.0013675	-41.026
781	SLU 83	-0.0024423	-73.269	SLV 16	-0.0013667	-41.002
782	SLU 83	-0.0024171	-72.513	SLV 16	-0.0014181	-42.542
783	SLU 83	-0.0024264	-72.792	SLV 16	-0.0015052	-45.157

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
784	SLU 83	-0.0024622	-73.865	SLU 2	-0.0015649	-46.947
785	SLU 83	-0.0025183	-75.55	SLU 2	-0.0015986	-47.958
786	SLU 83	-0.0025894	-77.681	SLV 3	-0.0015835	-47.505
787	SLU 83	-0.0026682	-80.047	SLV 3	-0.0015438	-46.315
788	SLU 83	-0.0027447	-82.34	SLV 3	-0.0015067	-45.202
789	SLU 83	-0.0028041	-84.122	SLV 3	-0.0014665	-43.995
790	SLU 83	-0.0031688	-95.065	SLV 16	-0.0018113	-54.338
793	SLU 83	-0.0029979	-89.938	SLV 16	-0.0016971	-50.912
805	SLU 83	-0.0027957	-83.87	SLV 3	-0.0015013	-45.039
807	SLU 83	-0.0028551	-85.653	SLV 3	-0.0014502	-43.506
809	SLV 4	-0.0040407	-121.22	SLV 13	-0.0008315	-24.944
810	SLV 15	-0.0037772	-113.315	SLV 2	-0.0008126	-24.377
812	SLU 84	-0.0035851	-107.554	SLV 2	-0.0020017	-60.052
814	SLU 83	-0.0035325	-105.976	SLV 2	-0.0019658	-58.974
815	SLU 84	-0.0034595	-103.784	SLV 13	-0.002005	-60.15
817	SLU 84	-0.0035372	-106.116	SLV 13	-0.0020324	-60.973
818	SLU 83	-0.0030949	-92.848	SLV 14	-0.0017459	-52.376
819	SLU 83	-0.0026646	-79.939	SLV 14	-0.0014566	-43.698
820	SLU 83	-0.0025449	-76.346	SLV 14	-0.0013954	-41.862
821	SLU 83	-0.0024764	-74.293	SLV 14	-0.0013978	-41.934
822	SLU 83	-0.0024521	-73.564	SLV 14	-0.0014524	-43.573
823	SLU 83	-0.0024624	-73.871	SLV 14	-0.0015428	-46.284
824	SLU 83	-0.0024992	-74.975	SLU 2	-0.001588	-47.639
825	SLU 83	-0.0025564	-76.693	SLU 2	-0.0016223	-48.67
826	SLU 83	-0.0026286	-78.858	SLV 1	-0.0016067	-48.202
827	SLU 83	-0.0027087	-81.262	SLV 1	-0.001565	-46.95
828	SLU 83	-0.0027865	-83.595	SLV 1	-0.0015261	-45.783
829	SLU 83	-0.0028467	-85.4	SLV 3	-0.0014849	-44.547
830	SLU 83	-0.0032048	-96.145	SLV 14	-0.0018133	-54.4
832	SLU 83	-0.0030459	-91.378	SLV 14	-0.0017105	-51.316
833	SLU 83	-0.0028442	-85.326	SLV 1	-0.001529	-45.87
835	SLU 83	-0.0029017	-87.052	SLV 1	-0.0014782	-44.345
837	SLV 4	-0.0040156	-120.468	SLV 13	-0.0008271	-24.812
838	SLV 15	-0.0036124	-108.373	SLV 2	-0.0007818	-23.454
840	SLU 84	-0.0036295	-108.885	SLV 2	-0.0020124	-60.371
842	SLU 83	-0.0035644	-106.933	SLV 2	-0.0019747	-59.241
843	SLU 84	-0.0034355	-103.066	SLV 13	-0.0019865	-59.595
845	SLU 84	-0.0035226	-105.677	SLV 13	-0.0020166	-60.499
846	SLU 83	-0.003271	-98.131	SLV 14	-0.0018311	-54.932
848	SLU 83	-0.003124	-93.719	SLV 14	-0.0017382	-52.147
849	SLU 83	-0.002926	-87.78	SLV 1	-0.0015753	-47.26
851	SLU 83	-0.00298	-89.401	SLV 1	-0.0015279	-45.838
853	SLV 4	-0.0040688	-122.064	SLV 13	-0.0008337	-25.012
854	SLV 15	-0.0034717	-104.15	SLV 2	-0.0007551	-22.654
856	SLU 84	-0.0036822	-110.465	SLV 2	-0.0020133	-60.4
858	SLU 83	-0.0036045	-108.135	SLV 2	-0.0019718	-59.155
859	SLU 84	-0.0034288	-102.863	SLV 13	-0.0019527	-58.582
861	SLU 84	-0.0035253	-105.759	SLV 13	-0.0019857	-59.57
862	SLU 84	-0.003351	-100.529	SLV 14	-0.0018526	-55.579
864	SLU 84	-0.0032156	-96.468	SLV 14	-0.0017719	-53.157
865	SLU 84	-0.0030279	-90.838	SLV 1	-0.0016336	-49.009
867	SLU 84	-0.0030785	-92.354	SLV 1	-0.0015863	-47.588
869	SLV 4	-0.0042143	-126.428	SLV 13	-0.0008559	-25.678
870	SLV 15	-0.0033466	-100.399	SLV 2	-0.000731	-21.931
872	SLU 84	-0.0037521	-112.564	SLV 2	-0.0020044	-60.131
874	SLU 83	-0.0036618	-109.854	SLV 2	-0.0019587	-58.762
875	SLU 84	-0.0034688	-104.065	SLV 13	-0.0019077	-57.231
877	SLU 84	-0.0035751	-107.252	SLV 13	-0.0019435	-58.304
878	SLU 84	-0.0034385	-103.156	SLV 14	-0.0018767	-56.301
880	SLU 84	-0.0033146	-99.439	SLV 14	-0.0018081	-54.244
881	SLU 84	-0.0031432	-94.296	SLV 1	-0.0017018	-51.055
883	SLU 84	-0.0031904	-95.711	SLV 1	-0.0016541	-49.624
885	SLV 4	-0.0044681	-134.044	SLV 13	-0.0008988	-26.963
886	SLV 15	-0.0032267	-96.802	SLV 2	-0.0007074	-21.222
888	SLU 84	-0.0038528	-115.583	SLV 2	-0.0019825	-59.474
890	SLU 83	-0.0037496	-112.489	SLV 2	-0.0019327	-57.98
891	SLV 4	-0.0049519	-148.556	SLV 13	-0.0009135	-27.404
892	SLV 4	-0.0043637	-130.912	SLV 13	-0.0009128	-27.383
893	SLV 4	-0.0038295	-114.886	SLV 13	-0.0009223	-27.668
894	SLV 4	-0.0033708	-101.125	SLV 13	-0.0009468	-28.403
895	SLV 4	-0.0029989	-89.966	SLV 13	-0.0009894	-29.681
896	SLU 83	-0.0027471	-82.414	SLV 13	-0.0010519	-31.556
897	SLU 83	-0.0026691	-80.074	SLV 13	-0.001135	-34.049
898	SLU 83	-0.0026692	-80.077	SLV 13	-0.0012378	-37.134
899	SLU 83	-0.0027404	-82.213	SLV 13	-0.0013575	-40.724
900	SLU 83	-0.0028719	-86.158	SLV 13	-0.0014881	-44.643
901	SLU 84	-0.0030483	-91.448	SLV 13	-0.0016204	-48.612
902	SLU 84	-0.0032472	-97.417	SLV 13	-0.0017408	-52.225
903	SLU 84	-0.0034384	-103.151	SLV 13	-0.0018311	-54.932
904	SLU 84	-0.003497	-104.911	SLV 13	-0.0018517	-55.551
905	SLU 84	-0.0035359	-106.077	SLV 14	-0.0019033	-57.099
907	SLU 84	-0.0034233	-102.699	SLV 14	-0.0018469	-55.406
908	SLU 84	-0.003272	-98.16	SLV 2	-0.0017761	-53.283
910	SLU 84	-0.0033159	-99.478	SLV 2	-0.001729	-51.87
912	SLV 4	-0.0048481	-145.442	SLV 13	-0.0009676	-29.029
913	SLU 84	-0.0039942	-119.827	SLV 2	-0.0019425	-58.274
915	SLU 83	-0.0038862	-116.585	SLV 2	-0.0018909	-56.727
916	SLU 83	-0.0038317	-114.951	SLV 2	-0.0018632	-55.895
917	SLU 83	-0.0036899	-110.698	SLV 2	-0.0017755	-53.266
918	SLU 83	-0.0035258	-105.775	SLV 2	-0.0016572	-49.717

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
919	SLU 83	-0.0033714	-101.142	SLV 2	-0.001527	-45.811
920	SLU 83	-0.0032466	-97.399	SLV 2	-0.0013974	-41.922
921	SLU 83	-0.0031629	-94.887	SLV 2	-0.0012755	-38.264
922	SLU 83	-0.0031255	-93.764	SLV 2	-0.0011646	-34.937
923	SLV 15	-0.0032346	-97.039	SLV 2	-0.0010654	-31.961
924	SLV 15	-0.0034008	-102.023	SLV 2	-0.0009768	-29.303
925	SLV 15	-0.0036136	-108.409	SLV 2	-0.0008968	-26.905
926	SLV 15	-0.0038649	-115.948	SLV 2	-0.0008231	-24.692
927	SLV 15	-0.0031001	-93.004	SLV 2	-0.0006819	-20.456
928	SLV 15	-0.0041402	-124.205	SLV 2	-0.0007527	-22.58
931	SLU 84	-0.0036534	-109.603	SLV 14	-0.0019373	-58.12
933	SLU 84	-0.003552	-106.559	SLV 14	-0.001893	-56.79
934	SLU 84	-0.0034224	-102.673	SLV 2	-0.0018601	-55.802
936	SLU 84	-0.0034632	-103.895	SLV 2	-0.0018124	-54.373
937	SLU 84	-0.0041046	-123.139	SLV 2	-0.0018988	-56.965
940	SLV 4	-0.0053665	-160.996	SLV 13	-0.0010667	-32.001
953	SLU 84	-0.0038931	-116.794	SLV 13	-0.0017565	-52.695
956	SLU 84	-0.0040952	-122.856	SLV 13	-0.0018192	-54.577
970	SLU 84	-0.004233	-126.991	SLV 2	-0.0018115	-54.346
975	SLU 84	-0.0042568	-127.704	SLV 13	-0.0017604	-52.811
976	SLU 84	-0.00381	-114.299	SLV 14	-0.0019888	-59.663
978	SLU 84	-0.0037196	-111.587	SLV 14	-0.0019564	-58.693
979	SLU 84	-0.0036112	-108.336	SLV 2	-0.0019629	-58.888
981	SLU 84	-0.0036488	-109.465	SLV 2	-0.0019147	-57.442
982	SLU 84	-0.0045595	-136.784	SLV 13	-0.0017245	-51.734
983	SLU 84	-0.004265	-127.951	SLV 13	-0.0016991	-50.972
984	SLU 84	-0.0039895	-119.685	SLV 13	-0.001654	-49.619
985	SLU 84	-0.0037584	-112.752	SLV 13	-0.0016113	-48.339
986	SLU 84	-0.0035868	-107.603	SLV 13	-0.0015858	-47.573
987	SLU 84	-0.0034812	-104.437	SLV 13	-0.0015856	-47.569
988	SLU 84	-0.0034419	-103.257	SLV 14	-0.0016138	-48.413
989	SLU 84	-0.003463	-103.889	SLV 14	-0.0016659	-49.977
990	SLU 84	-0.0035327	-105.98	SLV 14	-0.0017406	-52.218
991	SLU 84	-0.003632	-108.961	SLV 14	-0.0018277	-54.832
992	SLU 84	-0.0037331	-111.992	SLV 14	-0.0019116	-57.349
993	SLU 84	-0.003796	-113.879	SLV 14	-0.0019695	-59.086
994	SLU 84	-0.00377	-113.099	SLV 14	-0.0019726	-59.177
995	SLU 84	-0.0036704	-110.113	SLV 14	-0.0019416	-58.248
996	SLU 84	-0.0035165	-105.494	SLV 14	-0.0018997	-56.991
997	SLU 84	-0.0033506	-100.517	SLV 14	-0.0018645	-55.934
998	SLU 84	-0.0032033	-96.099	SLV 14	-0.0018484	-55.451
999	SLU 84	-0.0030943	-92.828	SLV 10	-0.0018536	-55.608
1000	SLU 84	-0.0030347	-91.042	SLV 10	-0.001842	-55.261
1001	SLU 84	-0.0030296	-90.888	SLV 10	-0.0018612	-55.837
1002	SLU 84	-0.0030782	-92.347	SLV 6	-0.0018734	-56.202
1003	SLU 84	-0.0031745	-95.236	SLV 6	-0.0019033	-57.098
1004	SLU 84	-0.0033057	-99.172	SLV 2	-0.0019458	-58.375
1005	SLU 84	-0.0034506	-103.518	SLV 2	-0.0019602	-58.805
1006	SLU 84	-0.0035764	-107.293	SLV 2	-0.0019675	-59.026
1007	SLU 84	-0.0036386	-109.159	SLV 2	-0.001944	-58.321
1008	SLU 84	-0.0036338	-109.014	SLV 2	-0.0018903	-56.71
1009	SLU 84	-0.00356	-106.799	SLV 2	-0.0018048	-54.143
1010	SLU 84	-0.0034634	-103.902	SLV 2	-0.0017096	-51.288
1011	SLU 84	-0.0033799	-101.396	SLV 2	-0.0016219	-48.656
1012	SLU 84	-0.0033341	-100.024	SLV 2	-0.0015534	-46.602
1013	SLU 84	-0.0033425	-100.274	SLV 2	-0.001512	-45.359
1014	SLU 84	-0.0034141	-102.422	SLV 2	-0.0015022	-45.066
1015	SLU 84	-0.0035519	-106.557	SLV 2	-0.0015258	-45.773
1016	SLU 84	-0.0037523	-112.57	SLV 2	-0.0015814	-47.443
1017	SLU 84	-0.0040037	-120.11	SLV 2	-0.0016641	-49.923
1018	SLU 84	-0.0042845	-128.535	SLV 2	-0.0017635	-52.904
1020	SLU 84	-0.0044271	-132.814	SLV 13	-0.0016755	-50.264
1022	SLV 3	-0.0046898	-140.695	SLV 14	-0.0015835	-47.506
1034	SLU 84	-0.004034	-121.021	SLV 14	-0.0020748	-62.245
1036	SLU 84	-0.0039476	-118.427	SLV 14	-0.0020468	-61.404
1049	SLU 84	-0.0038603	-115.81	SLV 2	-0.0020964	-62.891
1051	SLU 84	-0.0038968	-116.905	SLV 2	-0.002048	-61.439
1062	SLU 84	-0.0045216	-135.648	SLV 2	-0.001631	-48.93

1.4 Cedimenti fondazioni superficiali

Nodo: *nodo che interagisce col terreno.*
Ind.: *indice del nodo.*
spostamento nodale massimo: *situazione in cui si verifica lo spostamento massimo verticale nel nodo calcolato dal solutore ad elementi finiti. Lo spostamento massimo con segno è quello con valore massimo lungo l'asse Z, dove valori positivi rappresentano spostamenti verso l'alto.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
spostamento nodale minimo: *situazione in cui si verifica lo spostamento minimo verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento minimo con segno è quello con valore minimo lungo l'asse Z, dove valori negativi rappresentano spostamenti verso il basso.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [kN/m²]*
Cedimento elastico: *cedimento teorico elastico massimo.*

Cont.: nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico elastico massimo.
v.: valore del cedimento teorico elastico massimo. [m]
***Cedimento edometrico**: cedimento teorico edometrico massimo.*
Cont.: nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico edometrico massimo.
v.: valore del cedimento teorico edometrico massimo. [m]
***Cedimento di consolidazione**: cedimento teorico di consolidazione massimo.*
Cont.: nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico di consolidazione massimo.
v.: valore del cedimento teorico di consolidazione massimo. [m]

Spostamento estremo minimo -0.0042258 al nodo di indice 246, di coordinate x = -24.4, y = -3.28, z = -1.56, nel contesto SLD 1.
Spostamento estremo massimo -0.0013732 al nodo di indice 927, di coordinate x = -0.47, y = 5.53, z = -1.56, nel contesto SLD 2.
Cedimento elastico estremo massimo 0.0018882 al nodo di indice 509, di coordinate x = -11.36, y = 0.36, z = -1.56, nel contesto SLE rara 21.

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
11	SLE RA 2	-2.6E-03	-79.296	SLE RA 20	-3.0E-03	-89.353	SLE RA 20	1.23E-03				
12	SLE RA 2	-2.6E-03	-79.23	SLE RA 20	-3.0E-03	-89.16	SLE RA 20	1.25E-03				
13	SLE RA 2	-2.6E-03	-79.152	SLE RA 20	-3.0E-03	-88.947	SLE RA 20	1.25E-03				
14	SLE RA 2	-2.6E-03	-79.067	SLE RA 20	-3.0E-03	-88.722	SLE RA 20	1.22E-03				
15	SLE RA 2	-2.6E-03	-78.95	SLE RA 20	-2.9E-03	-88.462	SLE RA 20	1.17E-03				
16	SLE RA 2	-2.6E-03	-78.712	SLE RA 20	-2.9E-03	-88.069	SLE RA 20	1.10E-03				
17	SLD 4	-2.6E-03	-78.171	SLE RA 20	-2.9E-03	-87.525	SLE RA 20	1.01E-03				
18	SLE RA 2	-2.6E-03	-78.127	SLE RA 20	-2.9E-03	-88.098	SLE RA 20	1.35E-03				
20	SLE RA 2	-2.6E-03	-78.027	SLE RA 20	-2.9E-03	-87.872	SLE RA 20	1.38E-03				
22	SLE RA 2	-2.6E-03	-77.818	SLE RA 20	-2.9E-03	-87.517	SLE RA 20	1.36E-03				
24	SLE RA 2	-2.6E-03	-77.633	SLE RA 20	-2.9E-03	-87.185	SLE RA 20	1.34E-03				
26	SLE RA 2	-2.6E-03	-77.479	SLE RA 20	-2.9E-03	-86.889	SLE RA 20	1.31E-03				
27	SLE RA 2	-2.6E-03	-77.26	SLE RA 20	-2.9E-03	-86.523	SLE RA 20	1.24E-03				
28	SLD 4	-2.6E-03	-76.796	SLE RA 20	-2.9E-03	-85.92	SLE RA 20	1.14E-03				
29	SLE RA 2	-2.5E-03	-75.819	SLE RA 20	-2.8E-03	-84.976	SLE RA 20	1.30E-03				
30	SLE RA 2	-2.5E-03	-75.425	SLE RA 20	-2.8E-03	-84.421	SLE RA 20	1.22E-03				
31	SLE RA 2	-2.5E-03	-75.776	SLE RA 20	-2.8E-03	-85.037	SLE RA 20	1.37E-03				
32	SLE RA 1	-2.6E-03	-76.798	SLE RA 21	-2.9E-03	-86.663	SLE RA 20	1.43E-03				
33	SLE RA 1	-2.6E-03	-76.562	SLE RA 21	-2.9E-03	-86.286	SLE RA 20	1.45E-03				
34	SLE RA 1	-2.5E-03	-76.058	SLE RA 21	-2.9E-03	-85.606	SLE RA 20	1.45E-03				
35	SLE RA 1	-2.5E-03	-75.45	SLE RA 21	-2.8E-03	-84.802	SLE RA 20	1.44E-03				
36	SLE RA 1	-2.5E-03	-74.265	SLE RA 21	-2.8E-03	-83.306	SLE RA 20	1.35E-03				
37	SLE RA 2	-2.5E-03	-73.869	SLE RA 20	-2.8E-03	-82.754	SLE RA 20	1.28E-03				
38	SLE RA 1	-2.5E-03	-74.286	SLE RA 21	-2.8E-03	-83.411	SLE RA 20	1.40E-03				
39	SLE RA 1	-2.5E-03	-74.26	SLE RA 21	-2.8E-03	-83.455	SLE RA 20	1.44E-03				
41	SLE RA 1	-2.5E-03	-75.376	SLE RA 21	-2.8E-03	-85.122	SLE RA 20	1.47E-03				
42	SLE RA 1	-2.5E-03	-75.027	SLE RA 21	-2.8E-03	-84.626	SLE RA 20	1.50E-03				
43	SLE RA 1	-2.5E-03	-74.433	SLE RA 21	-2.8E-03	-83.863	SLE RA 20	1.50E-03				
44	SLE RA 1	-2.5E-03	-73.747	SLE RA 21	-2.8E-03	-83.006	SLE RA 20	1.49E-03				
45	SLE RA 1	-2.4E-03	-73.137	SLE RA 21	-2.7E-03	-82.263	SLE RA 20	1.46E-03				
46	SLE RA 1	-2.4E-03	-72.713	SLE RA 21	-2.7E-03	-81.649	SLE RA 21	1.38E-03				
47	SLE RA 1	-2.4E-03	-72.254	SLE RA 21	-2.7E-03	-81.03	SLE RA 21	1.30E-03				
48	SLE RA 1	-2.4E-03	-72.882	SLE RA 21	-2.7E-03	-81.912	SLE RA 21	1.43E-03				
49	SLE RA 1	-2.5E-03	-73.919	SLE RA 21	-2.8E-03	-83.544	SLE RA 21	1.48E-03				
50	SLE RA 1	-2.5E-03	-73.52	SLE RA 21	-2.8E-03	-83	SLE RA 21	1.50E-03				
51	SLE RA 1	-2.4E-03	-72.943	SLE RA 21	-2.7E-03	-82.272	SLE RA 21	1.51E-03				
52	SLE RA 1	-2.4E-03	-72.345	SLE RA 21	-2.7E-03	-81.526	SLE RA 21	1.49E-03				
53	SLE RA 1	-2.4E-03	-71.835	SLE RA 21	-2.7E-03	-80.888	SLE RA 21	1.47E-03				
54	SLE RA 1	-2.4E-03	-71.498	SLE RA 21	-2.7E-03	-80.441	SLE RA 21	0.001427				
55	SLE RA 1	-2.4E-03	-71.191	SLE RA 21	-2.7E-03	-80.026	SLE RA 21	0.001377				
56	SLE RA 1	-2.4E-03	-70.639	SLE RA 21	-2.6E-03	-79.307	SLE RA 21	1.30E-03				
57	SLE RA 1	-2.4E-03	-72.407	SLE RA 21	-2.7E-03	-81.91	SLE RA 21	1.45E-03				
58	SLE RA 1	-2.4E-03	-72.01	SLE RA 21	-2.7E-03	-81.376	SLE RA 21	0.001471				
59	SLE RA 1	-2.4E-03	-71.55	SLE RA 21	-2.7E-03	-80.79	SLE RA 21	1.47E-03				
60	SLE RA 1	-2.4E-03	-71.044	SLE RA 21	-2.7E-03	-80.154	SLE RA 21	1.46E-03				
61	SLE RA 1	-2.4E-03	-70.566	SLE RA 21	-2.7E-03	-79.55	SLE RA 21	1.44E-03				
62	SLE RA 1	-2.3E-03	-70.129	SLE RA 21	-2.6E-03	-78.99	SLE RA 21	1.40E-03				
63	SLE RA 1	-2.3E-03	-69.689	SLE RA 21	-2.6E-03	-78.423	SLE RA 21	1.35E-03				
64	SLD 2	-2.3E-03	-68.985	SLE RA 21	-2.6E-03	-77.612	SLE RA 21	1.28E-03				
65	SLD 10	-2.4E-03	-71.451	SLE RA 21	-2.7E-03	-81.003	SLE RA 21	0.001423				
66	SLE RA 1	-2.4E-03	-71.156	SLE RA 21	-2.7E-03	-80.457	SLE RA 21	1.44E-03				
67	SLE RA 1	-2.4E-03	-70.71	SLE RA 21	-2.7E-03	-79.89	SLE RA 21	1.44E-03				
68	SLE RA 1	-2.3E-03	-70.194	SLE RA 21	-2.6E-03	-79.247	SLE RA 21	0.001428				
69	SLE RA 1	-2.3E-03	-69.674	SLE RA 21	-0.00262	-78.599	SLE RA 21	1.40E-03				
70	SLE RA 1	-2.3E-03	-69.171	SLE RA 21	-2.6E-03	-77.967	SLE RA 21	1.37E-03				
71	SLE RA 1	-2.3E-03	-68.663	SLE RA 21	-2.6E-03	-77.327	SLE RA 21	1.32E-03				
72	SLD 2	-2.3E-03	-67.84	SLE RA 21	-2.5E-03	-76.482	SLE RA 21	1.25E-03				
130	SLD 16	-3.0E-03	-89.36	SLE RA 20	-3.5E-03	-104.325	SLE RA 20	1.43E-05				
131	SLD 12	-3.0E-03	-89.681	SLE RA 20	-3.5E-03	-104.256	SLE RA 20	1.64E-05				
132	SLD 12	-3.0E-03	-90.261	SLE RA 20	-3.5E-03	-104.591	SLE RA 20	3.02E-05				
133	SLD 12	-3.0E-03	-91.1	SLE RA 20	-3.5E-03	-105.263	SLE RA 20	4.27E-05				
134	SLD 12	-3.1E-03	-92.086	SLE RA 20	-3.5E-03	-106.149	SLE RA 20	5.12E-05				
135	SLD 12	-3.1E-03	-92.342	SLE RA 20	-3.5E-03	-106.275	SLE RA 20	6.15E-05				
136	SLD 16	-2.9E-03	-88.478	SLD 1	-3.6E-03	-108.71						
137	SLD 16	-2.9E-03	-88.484	SLD 1	-3.5E-03	-106.386	SLE RA 20	3.20E-06				
138	SLD 16	-0.00296	-88.8	SLE RA 20	-3.5E-03	-104.737	SLE RA 20	1.02E-05				
151	SLD 7	-2.9E-03	-86.376	SLE RA 20	-3.3E-03	-99.773	SLE RA 20	0.000223				
153	SLD 7	-2.9E-03	-87.358	SLE RA 20	-3.4E-03	-101.083	SLE RA 20	1.86E-04				
155	SLD 7	-2.9E-03	-87.799	SLE RA 20	-3.4E-03	-101.744	SLE RA 20	0.000135				
157	SLD 7	-2.9E-03	-87.846	SLE RA 20	-3.4E-03	-101.996	SLE RA 20	1.01E-04				
159	SLD 7	-2.9E-03	-87.709	SLE RA 20	-3.4E-03	-102.073	SLE RA 20	7.23E-05				
161	SLD 7	-2.9E-03	-87.538	SLE RA 20	-3.4E-03	-102.142	SLE RA 20	4.52E-05				
163	SLD 7	-2.9E-03	-87.441	SLE RA 20	-3.4E-03	-102.324	SLE RA 20	1.79E-05				
165	SLD 3	-2.9E-03	-87.09	SLE RA 20	-3.4E-03	-102.692	SLE RA 20	1.25E-05				
166	SLD 3	-2.9E-03	-86.764	SLD 14	-3.5E-03	-103.672	SLE RA 20	8.33E-06				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
167	SLD 3	-2.9E-03	-86.579	SLD 14	-3.5E-03	-105.443	SLE RA 20	7.57E-07				
168	SLD 3	-2.9E-03	-86.578	SLD 14	-3.6E-03	-107.424						
169	SLD 12	-2.9E-03	-87.225	SLE RA 20	-3.3E-03	-99.771	SLE RA 20	0.000224				
170	SLD 12	-2.8E-03	-85.226	SLE RA 20	-3.2E-03	-97.442	SLE RA 20	2.32E-04				
171	SLD 12	-2.8E-03	-83.339	SLE RA 20	-3.2E-03	-95.292	SLE RA 20	2.50E-04				
172	SLD 8	-2.7E-03	-82.141	SLE RA 20	-3.1E-03	-93.958	SLE RA 20	2.80E-04				
173	SLD 7	-2.7E-03	-81.859	SLE RA 20	-3.1E-03	-93.722	SLE RA 20	3.21E-04				
174	SLD 7	-2.7E-03	-82.463	SLE RA 20	-3.2E-03	-94.519	SLE RA 20	0.000363				
175	SLD 7	-2.8E-03	-83.598	SLE RA 20	-3.2E-03	-95.935	SLE RA 20	3.87E-04				
176	SLD 7	-2.8E-03	-84.588	SLE RA 20	-3.2E-03	-97.205	SLE RA 20	3.80E-04				
177	SLD 16	-2.9E-03	-85.58	SLD 1	-3.4E-03	-101.722	SLE RA 20	6.35E-05				
178	SLD 16	-2.8E-03	-85.318	SLE RA 20	-3.3E-03	-100.058	SLE RA 20	1.08E-04				
179	SLD 16	-2.8E-03	-85.469	SLE RA 20	-3.3E-03	-99.14	SLE RA 20	1.39E-04				
180	SLD 12	-2.9E-03	-85.685	SLE RA 20	-3.3E-03	-98.862	SLE RA 20	1.66E-04				
181	SLD 12	-2.9E-03	-86.276	SLE RA 20	-3.3E-03	-99.258	SLE RA 20	0.000194				
182	SLD 12	-2.9E-03	-87.346	SLE RA 20	-3.3E-03	-100.235	SLE RA 20	2.14E-04				
183	SLD 12	-3.0E-03	-88.605	SLE RA 20	-3.4E-03	-101.465	SLE RA 20	2.27E-04				
184	SLD 12	-3.0E-03	-89.65	SLE RA 20	-3.4E-03	-102.491	SLE RA 20	2.51E-04				
185	SLD 16	-2.9E-03	-86.078	SLD 1	-3.5E-03	-104.487	SLE RA 20	2.87E-06				
187	SLD 7	-2.8E-03	-83.916	SLE RA 20	-3.2E-03	-96.264	SLE RA 20	4.01E-04				
189	SLD 7	-2.8E-03	-84.689	SLE RA 20	-3.2E-03	-97.317	SLE RA 20	0.00038				
190	SLD 7	-2.8E-03	-84.98	SLE RA 20	-3.3E-03	-97.785	SLE RA 20	3.48E-04				
191	SLD 7	-2.8E-03	-84.898	SLE RA 20	-3.3E-03	-97.861	SLE RA 20	3.04E-04				
192	SLD 7	-2.8E-03	-84.675	SLE RA 20	-3.3E-03	-97.804	SLE RA 20	2.62E-04				
193	SLD 7	-2.8E-03	-84.521	SLE RA 20	-3.3E-03	-97.856	SLE RA 20	2.19E-04				
194	SLD 7	-2.8E-03	-84.579	SLE RA 20	-3.3E-03	-98.176	SLE RA 20	0.000175				
195	SLD 3	-2.8E-03	-84.387	SLE RA 20	-3.3E-03	-98.829	SLE RA 20	1.31E-04				
196	SLD 3	-2.8E-03	-84.42	SLE RA 20	-3.3E-03	-99.793	SLE RA 20	9.58E-05				
197	SLD 3	-2.8E-03	-84.643	SLD 14	-3.4E-03	-101.717	SLE RA 20	0.000048				
198	SLD 3	-2.8E-03	-84.96	SLD 14	-3.5E-03	-103.825	SLE RA 20	2.05E-06				
199	SLD 16	-2.8E-03	-82.595	SLE RA 20	-3.2E-03	-97.247	SLE RA 20	1.95E-04				
200	SLD 16	-2.7E-03	-81.769	SLE RA 20	-3.2E-03	-95.208	SLE RA 20	0.000251				
201	SLD 16	-2.7E-03	-81.494	SLE RA 20	-3.1E-03	-93.883	SLE RA 20	2.92E-04				
202	SLD 12	-2.7E-03	-81.647	SLE RA 20	-3.1E-03	-93.448	SLE RA 20	3.26E-04				
203	SLD 12	-2.7E-03	-82.298	SLE RA 20	-3.1E-03	-93.959	SLE RA 20	3.54E-04				
204	SLD 12	-2.8E-03	-83.68	SLE RA 20	-3.2E-03	-95.328	SLE RA 20	3.81E-04				
205	SLD 12	-2.9E-03	-85.588	SLE RA 20	-3.2E-03	-97.322	SLE RA 20	3.92E-04				
206	SLD 12	-2.9E-03	-87.806	SLE RA 20	-3.3E-03	-99.717	SLE RA 20	3.76E-04				
207	SLD 16	-2.8E-03	-83.736	SLD 1	-3.3E-03	-100.341	SLE RA 20	1.06E-04				
210	SLD 7	-2.7E-03	-81.959	SLE RA 20	-3.1E-03	-93.37	SLE RA 20	5.68E-04				
212	SLD 7	-2.7E-03	-82.37	SLE RA 20	-3.1E-03	-93.968	SLE RA 20	5.61E-04				
213	SLD 7	-2.7E-03	-82.394	SLE RA 20	-3.1E-03	-94.111	SLE RA 20	5.33E-04				
214	SLD 7	-2.7E-03	-82.085	SLE RA 20	-3.1E-03	-93.898	SLE RA 20	4.91E-04				
215	SLD 7	-2.7E-03	-81.714	SLE RA 20	-3.1E-03	-93.64	SLE RA 20	4.43E-04				
216	SLD 7	-2.7E-03	-81.546	SLE RA 20	-3.1E-03	-93.637	SLE RA 20	3.92E-04				
217	SLD 3	-2.7E-03	-81.643	SLE RA 20	-3.1E-03	-94.085	SLE RA 20	3.37E-04				
218	SLD 3	-2.7E-03	-81.729	SLE RA 20	-3.2E-03	-95.031	SLE RA 20	2.84E-04				
219	SLD 3	-2.7E-03	-82.142	SLE RA 20	-3.2E-03	-96.372	SLE RA 20	2.34E-04				
220	SLD 3	-2.8E-03	-82.73	SLD 14	-3.3E-03	-97.962	SLE RA 20	1.72E-04				
221	SLD 3	-2.8E-03	-83.382	SLD 14	-3.3E-03	-100.29	SLE RA 20	9.09E-05				
222	SLD 16	-2.6E-03	-79.268	SLE RA 20	-3.1E-03	-92.606	SLE RA 20	3.35E-04				
223	SLD 16	-2.6E-03	-77.971	SLE RA 20	-3.0E-03	-90.097	SLE RA 20	3.90E-04				
224	SLD 16	-2.6E-03	-77.369	SLE RA 20	-2.9E-03	-88.489	SLE RA 20	4.33E-04				
225	SLD 12	-2.6E-03	-77.524	SLE RA 20	-2.9E-03	-87.975	SLE RA 20	4.65E-04				
226	SLD 12	-2.6E-03	-78.27	SLE RA 20	-3.0E-03	-88.638	SLE RA 20	4.99E-04				
227	SLD 12	-2.7E-03	-80.011	SLE RA 20	-3.0E-03	-90.453	SLE RA 20	5.22E-04				
228	SLD 12	-2.8E-03	-82.613	SLE RA 20	-3.1E-03	-93.264	SLE RA 20	5.29E-04				
229	SLD 8	-2.9E-03	-85.567	SLE RA 20	-3.2E-03	-96.636	SLE RA 20	5.30E-04				
230	SLD 16	-2.7E-03	-81.077	SLD 1	-3.2E-03	-95.923	SLE RA 20	2.60E-04				
232	SLD 11	-2.7E-03	-79.986	SLE RA 20	-3.0E-03	-90.647	SLE RA 20	6.89E-04				
234	SLD 7	-2.7E-03	-80.224	SLE RA 20	-3.0E-03	-90.854	SLE RA 20	6.96E-04				
235	SLD 7	-2.7E-03	-79.999	SLE RA 20	-3.0E-03	-90.684	SLE RA 20	6.71E-04				
236	SLD 7	-2.6E-03	-79.401	SLE RA 20	-3.0E-03	-90.115	SLE RA 20	6.38E-04				
237	SLD 7	-2.6E-03	-78.818	SLE RA 20	-3.0E-03	-89.578	SLE RA 20	5.93E-04				
238	SLD 7	-2.6E-03	-78.592	SLE RA 20	-3.0E-03	-89.472	SLE RA 20	5.43E-04				
239	SLD 3	-2.6E-03	-78.669	SLE RA 20	-3.0E-03	-90.012	SLE RA 20	4.90E-04				
240	SLD 3	-2.6E-03	-79.036	SLE RA 20	-3.0E-03	-91.237	SLE RA 20	4.35E-04				
241	SLD 3	-2.7E-03	-79.817	SLE RA 20	-3.1E-03	-92.959	SLE RA 20	3.78E-04				
242	SLD 3	-2.7E-03	-80.667	SLE RA 20	-3.2E-03	-94.713	SLE RA 20	3.17E-04				
243	SLD 3	-2.7E-03	-81.521	SLD 14	-3.2E-03	-96.528	SLE RA 20	2.43E-04				
246	SLD 16	-2.2E-03	-65.858	SLD 1	-4.2E-03	-126.775	SLE RA 20	0.000048				
262	SLD 16	-2.5E-03	-73.959	SLD 1	-3.1E-03	-94.383	SLE RA 20	3.07E-04				
264	SLD 16	-2.5E-03	-76.113	SLD 1	-3.2E-03	-95.11	SLE RA 20	0.000376				
268	SLD 16	-2.6E-03	-77.258	SLE RA 20	-3.0E-03	-90.813	SLE RA 20	4.43E-04				
269	SLD 16	-2.5E-03	-75.122	SLE RA 20	-2.9E-03	-86.991	SLE RA 20	4.70E-04				
270	SLD 16	-2.5E-03	-73.745	SLE RA 20	-2.8E-03	-84.528	SLE RA 20	5.01E-04				
271	SLD 16	-2.4E-03	-73.026	SLE RA 20	-2.8E-03	-82.887	SLE RA 20	5.36E-04				
272	SLD 16	-2.4E-03	-73.264	SLE RA 20	-2.7E-03	-82.392	SLE RA 20	0.000572				
273	SLD 12	-2.5E-03	-74.106	SLE RA 20	-2.8E-03	-83.204	SLE RA 20	5.78E-04				
274	SLE RA 2	-2.5E-03	-75.959	SLE RA 20	-2.8E-03	-85.342	SLE RA 20	6.04E-04				
275	SLE RA 2	-2.6E-03	-78.872	SLE RA 20	-3.0E-03	-88.731	SLE RA 20	6.45E-04				
276	SLE RA 2	-2.7E-03	-79.843	SLE RA 20	-3.0E-03	-89.857	SLE RA 20	6.43E-04				
277	SLE RA 2	-2.7E-03	-81.989	SLE RA 20	-3.1E-03	-92.337	SLE RA 20	6.37E-04				
279	SLD 11	-2.6E-03	-77.712	SLE RA 20	-2.9E-03	-87.663	SLE RA 20	8.17E-04				
281	SLE RA 2	-2.6E-03	-77.899	SLE RA 20	-2.9E-03	-87.64	SLE RA 20	0.00081				
282	SLD 7	-2.6E-03	-77.664	SLE RA 20	-2.9E-03	-87.372	SLE RA 20	0.000821				
283	SLD 7	-2.6E-03	-76.739	SLE RA 20	-2.9E-03	-86.391	SLE RA 20	7.81E-04				
284	SLD 7	-2.5E-03	-75.929	SLE RA 20	-2.9E-03	-85.556	SLE RA 20	7.27E-04				
285	SLD 7	-2.5E-03	-75.609	SLE RA 20	-2.8E-03	-85.304	SLE RA 20	6.66E-04				
286	SLD 3	-2.5E-03	-75.609	SLE RA 20	-2.9E-03	-85.873	SLE RA 20	6.01E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
287	SLD 3	-2.5E-03	-76.157	SLE RA 20	-2.9E-03	-87.291	SLE RA 20	5.43E-04				
288	SLD 3	-2.6E-03	-77.234	SLE RA 20	-3.0E-03	-89.393	SLE RA 20	4.93E-04				
289	SLD 3	-2.6E-03	-78.031	SLE RA 20	-3.0E-03	-90.962	SLE RA 20	4.60E-04				
290	SLD 3	-2.6E-03	-78.741	SLE RA 20	-3.1E-03	-92.468	SLE RA 20	4.41E-04				
294	SLD 3	-2.6E-03	-77.225	SLD 14	-3.2E-03	-95.762	SLE RA 20	3.06E-04				
296	SLD 3	-2.5E-03	-74.911	SLD 14	-3.2E-03	-94.686	SLE RA 20	2.34E-04				
311	SLD 3	-2.1E-03	-62.042	SLD 14	-3.9E-03	-118.333	SLE RA 21	5.01E-05				
315	SLD 3	-2.1E-03	-62.808	SLD 14	-4.1E-03	-121.635	SLE RA 21	5.25E-05				
316	SLD 3	-1.9E-03	-57.91	SLD 14	-3.6E-03	-109.21	SLE RA 21	6.56E-05				
317	SLD 3	-1.8E-03	-53.895	SLD 14	-3.3E-03	-98.515	SLE RA 21	6.05E-05				
318	SLD 3	-1.7E-03	-50.883	SLD 14	-3.0E-03	-89.784	SLE RA 21	4.54E-05				
319	SLD 16	-2.1E-03	-64.251	SLD 1	-4.2E-03	-124.902	SLE RA 20	5.17E-05				
320	SLD 16	-2.0E-03	-59.854	SLD 1	-3.8E-03	-113.59	SLE RA 20	6.17E-05				
321	SLD 16	-1.9E-03	-56.04	SLD 1	-3.4E-03	-103.439	SLE RA 20	5.72E-05				
322	SLD 16	-1.8E-03	-52.967	SLD 1	-3.2E-03	-94.77	SLE RA 20	0.000045				
323	SLD 16	-1.7E-03	-50.697	SLD 1	-2.9E-03	-87.698	SLE RA 20	0.000033				
324	SLD 16	-1.6E-03	-49.239	SLD 1	-2.7E-03	-82.212	SLE RA 20	0.000024				
325	SLD 16	-1.6E-03	-48.572	SLD 1	-2.6E-03	-78.236	SLE RA 20	1.83E-05				
326	SLD 16	-1.6E-03	-48.668	SLD 1	-2.5E-03	-75.665	SLE RA 20	1.56E-05				
327	SLD 16	-0.00165	-49.499	SLD 1	-2.5E-03	-74.388	SLE RA 20	1.54E-05				
328	SLD 16	-1.7E-03	-51.033	SLD 1	-2.5E-03	-74.295	SLE RA 20	1.78E-05				
329	SLD 16	-1.8E-03	-53.231	SLD 1	-2.5E-03	-75.273	SLE RA 20	0.000023				
330	SLD 16	-1.9E-03	-56.035	SLD 1	-2.6E-03	-77.191	SLE RA 20	3.18E-05				
331	SLD 16	-2.0E-03	-59.341	SLD 1	-2.7E-03	-79.867	SLE RA 20	9.22E-05				
332	SLD 16	-2.1E-03	-62.969	SLD 1	-2.8E-03	-83.03	SLE RA 20	1.90E-04				
333	SLD 16	-2.2E-03	-66.627	SLD 1	-2.9E-03	-86.258	SLE RA 20	3.10E-04				
334	SLD 16	-2.3E-03	-69.854	SLD 1	-3.0E-03	-88.917	SLE RA 20	3.76E-04				
335	SLD 16	-2.4E-03	-72.012	SLD 1	-3.0E-03	-90.148	SLE RA 20	4.54E-04				
336	SLD 16	-2.4E-03	-73.265	SLD 1	-3.0E-03	-90.195	SLE RA 20	4.99E-04				
337	SLD 16	-2.5E-03	-73.735	SLD 1	-3.0E-03	-89.044	SLE RA 20	5.50E-04				
338	SLD 16	-2.5E-03	-73.568	SLD 1	-2.9E-03	-87.037	SLE RA 20	5.42E-04				
339	SLD 16	-2.4E-03	-72.77	SLE RA 20	-2.8E-03	-85.076	SLE RA 20	5.35E-04				
340	SLD 16	-2.4E-03	-71.103	SLE RA 20	-2.7E-03	-81.807	SLE RA 20	0.000542				
341	SLD 16	-2.3E-03	-69.737	SLE RA 20	-2.6E-03	-79.386	SLE RA 20	5.60E-04				
342	SLD 16	-2.3E-03	-68.901	SLE RA 20	-2.6E-03	-77.666	SLE RA 20	6.00E-04				
343	SLE RA 2	-2.3E-03	-68.815	SLE RA 20	-2.6E-03	-77.121	SLE RA 20	6.26E-04				
344	SLE RA 2	-2.3E-03	-69.49	SLE RA 20	-2.6E-03	-77.963	SLE RA 20	6.66E-04				
345	SLE RA 2	-2.4E-03	-71.388	SLE RA 20	-2.7E-03	-80.198	SLE RA 20	6.99E-04				
346	SLE RA 2	-2.5E-03	-74.341	SLE RA 20	-2.8E-03	-83.634	SLE RA 20	7.40E-04				
347	SLE RA 2	-2.6E-03	-79.001	SLE RA 20	-3.0E-03	-89.025	SLE RA 20	7.23E-04				
348	SLD 3	-1.6E-03	-48.892	SLD 14	-2.8E-03	-83.03	SLE RA 21	3.11E-05				
349	SLD 3	-1.6E-03	-47.892	SLD 14	-2.6E-03	-78.156	SLE RA 20	2.14E-05				
350	SLD 3	-1.6E-03	-47.838	SLD 14	-2.5E-03	-75.016	SLE RA 20	0.000016				
351	SLD 3	-1.6E-03	-48.682	SLD 14	-2.4E-03	-73.453	SLE RA 20	1.47E-05				
352	SLD 3	-1.7E-03	-50.379	SLD 14	-2.4E-03	-73.319	SLE RA 20	1.57E-05				
353	SLD 3	-1.8E-03	-52.874	SLD 14	-2.5E-03	-74.461	SLE RA 20	2.01E-05				
354	SLD 3	-1.9E-03	-56.086	SLD 14	-2.6E-03	-76.708	SLE RA 20	2.78E-05				
355	SLD 3	-2.0E-03	-59.874	SLD 14	-2.7E-03	-79.824	SLE RA 20	5.13E-05				
356	SLD 3	-2.1E-03	-63.99	SLD 14	-2.8E-03	-83.451	SLE RA 20	1.26E-04				
357	SLD 3	-2.3E-03	-68.022	SLD 14	-2.9E-03	-87.024	SLE RA 20	2.33E-04				
358	SLD 3	-2.4E-03	-72.2	SLD 14	-3.0E-03	-90.207	SLE RA 20	3.71E-04				
359	SLD 3	-2.4E-03	-71.314	SLD 14	-3.0E-03	-89.678	SLE RA 20	3.37E-04				
360	SLD 3	-2.5E-03	-74.986	SLD 14	-3.0E-03	-91.442	SLE RA 20	4.72E-04				
361	SLD 3	-2.5E-03	-74.514	SLD 14	-3.0E-03	-91.284	SLE RA 20	4.60E-04				
362	SLD 3	-2.5E-03	-75.882	SLD 14	-3.0E-03	-90.979	SLE RA 20	4.98E-04				
363	SLD 3	-2.5E-03	-76.032	SLE RA 20	-3.0E-03	-89.632	SLE RA 20	5.15E-04				
364	SLD 3	-2.5E-03	-75.533	SLE RA 20	-2.9E-03	-88.092	SLE RA 20	5.33E-04				
365	SLD 3	-2.5E-03	-74.994	SLE RA 20	-2.9E-03	-86.779	SLE RA 20	5.57E-04				
366	SLD 3	-2.5E-03	-74.273	SLE RA 20	-2.8E-03	-85.301	SLE RA 20	5.92E-04				
367	SLD 3	-2.4E-03	-73.256	SLE RA 20	-2.8E-03	-83.291	SLE RA 20	6.49E-04				
368	SLD 3	-2.4E-03	-72.688	SLE RA 20	-2.7E-03	-81.897	SLE RA 20	7.10E-04				
369	SLE RA 2	-2.4E-03	-72.608	SLE RA 20	-2.7E-03	-81.402	SLE RA 20	7.73E-04				
370	SLE RA 2	-2.4E-03	-72.907	SLE RA 20	-2.7E-03	-81.815	SLE RA 20	8.34E-04				
371	SLE RA 2	-2.5E-03	-73.79	SLE RA 20	-2.8E-03	-82.892	SLE RA 20	0.000888				
372	SLE RA 2	-2.5E-03	-74.802	SLE RA 20	-2.8E-03	-84.114	SLE RA 20	9.27E-04				
373	SLE RA 2	-2.5E-03	-75.294	SLE RA 20	-2.8E-03	-84.754	SLE RA 20	9.39E-04				
374	SLD 16	-2.4E-03	-70.881	SLD 1	-3.0E-03	-89.651	SLE RA 20	4.22E-04				
376	SLD 16	-2.4E-03	-72.99	SLD 1	-3.0E-03	-90.34	SLE RA 20	5.05E-04				
377	SLD 3	-1.9E-03	-58.205	SLD 14	-3.7E-03	-110.107	SLE RA 21	6.58E-05				
378	SLD 3	-2.5E-03	-74.429	SLD 14	-3.0E-03	-91.103	SLE RA 20	4.77E-04				
381	SLD 3	-2.4E-03	-72.175	SLD 14	-3.0E-03	-90.064	SLE RA 20	3.87E-04				
383	SLD 16	-2.0E-03	-60.816	SLD 1	-3.9E-03	-116.307	SLE RA 20	0.000061				
384	SLE RA 2	-2.5E-03	-75.006	SLE RA 20	-2.8E-03	-84.496	SLE RA 20	9.31E-04				
388	SLD 16	-2.3E-03	-68.78	SLD 1	-2.9E-03	-86.264	SLE RA 20	0.000548				
390	SLD 16	-2.4E-03	-70.763	SLD 1	-2.9E-03	-86.849	SLE RA 20	6.23E-04				
391	SLD 3	-1.8E-03	-55.278	SLD 14	-3.5E-03	-103.602	SLE RA 21	6.58E-05				
392	SLD 3	-2.4E-03	-72.469	SLD 14	-2.9E-03	-87.657	SLE RA 20	5.65E-04				
395	SLD 3	-2.3E-03	-70.376	SLD 14	-2.9E-03	-86.719	SLE RA 20	4.82E-04				
397	SLD 16	-1.9E-03	-57.032	SLD 1	-3.6E-03	-108.238	SLE RA 20	5.81E-05				
398	SLE RA 2	-2.4E-03	-73.196	SLE RA 20	-2.7E-03	-82.491	SLE RA 20	1.04E-03				
402	SLD 16	-2.2E-03	-67.37	SLD 1	-2.8E-03	-83.848	SLE RA 20	6.36E-04				
404	SLD 16	-2.3E-03	-69.231	SLD 1	-2.8E-03	-84.331	SLE RA 20	0.000703				
405	SLD 3	-1.8E-03	-53.421	SLD 14	-3.3E-03	-99.133	SLE RA 21	0.000057				
406	SLD 3	-2.4E-03	-71.145	SLD 14	-2.8E-03	-85.124	SLE RA 20	6.63E-04				
409	SLD 3	-2.3E-03	-69.212	SLD 14	-2.8E-03	-84.286	SLE RA 20	5.76E-04				
411	SLD 16	-1.8E-03	-54.551	SLD 1	-3.4E-03	-102.686	SLE RA 20	4.71E-05				
412	SLE RA 2	-2.4E-03	-72.593	SLE RA 20	-2.7E-03	-81.856	SLE RA 20	1.19E-03				
416	SLE RA 2	-2.2E-03	-66.09	SLE RA 20	-2.5E-03	-74.475	SLE RA 20	9.51E-04				
417	SLD 16	-2.2E-03	-66.45	SLD 1	-2.7E-03	-82.117	SLE RA 20	7.11E-04				
419	SLD 16	-2.3E-03	-68.191	SLD 1	-2.7E-03	-82.497	SLE RA 20	7.95E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
420	SLD 3	-1.8E-03	-52.673	SLD 14	-3.2E-03	-96.793	SLE RA 21	4.92E-05				
421	SLD 3	-2.3E-03	-70.23	SLD 14	-2.8E-03	-83.202	SLE RA 20	7.65E-04				
424	SLD 3	-2.3E-03	-68.454	SLD 14	-2.7E-03	-82.462	SLE RA 20	6.65E-04				
427	SLD 16	-1.8E-03	-53.3	SLD 1	-3.3E-03	-99.549	SLE RA 20	3.86E-05				
428	SLE RA 2	-2.4E-03	-73.095	SLE RA 20	-2.7E-03	-82.473	SLE RA 20	1.37E-03				
431	SLD 16	-2.2E-03	-65.896	SLD 1	-2.7E-03	-80.886	SLE RA 20	8.09E-04				
433	SLD 16	-2.3E-03	-67.516	SLD 1	-2.7E-03	-81.167	SLE RA 20	8.84E-04				
434	SLD 3	-1.8E-03	-52.993	SLD 14	-3.2E-03	-96.517	SLE RA 21	4.69E-05				
435	SLD 3	-2.3E-03	-69.561	SLE RA 21	-2.7E-03	-81.993	SLE RA 20	8.76E-04				
438	SLD 3	-2.3E-03	-67.94	SLD 14	-2.7E-03	-81.04	SLE RA 20	7.83E-04				
441	SLD 16	-1.8E-03	-53.154	SLD 1	-3.3E-03	-98.617	SLE RA 20	3.62E-05				
442	SLE RA 2	-2.5E-03	-74.311	SLE RA 20	-2.8E-03	-83.9	SLE RA 20	1.59E-03				
446	SLD 16	-2.2E-03	-65.629	SLD 1	-2.7E-03	-80.049	SLE RA 20	9.14E-04				
448	SLD 16	-2.2E-03	-67.122	SLD 1	-2.7E-03	-80.238	SLE RA 20	9.81E-04				
449	SLD 3	-1.8E-03	-54.269	SLD 14	-3.3E-03	-98.105	SLE RA 21	7.65E-05				
450	SLD 3	-2.3E-03	-69.027	SLE RA 21	-2.7E-03	-81.062	SLE RA 21	9.69E-04				
453	SLD 3	-2.3E-03	-67.563	SLE RA 21	-2.7E-03	-79.952	SLE RA 21	8.67E-04				
460	SLD 16	-1.8E-03	-53.955	SLD 1	-0.00332	-99.599	SLE RA 20	4.08E-05				
461	SLE RA 2	-2.5E-03	-75.565	SLE RA 20	-2.8E-03	-85.369	SLE RA 20	1.80E-03				
465	SLD 16	-2.2E-03	-65.57	SLD 1	-2.7E-03	-79.568	SLE RA 20	1.03E-03				
467	SLD 16	-2.2E-03	-66.891	SLD 1	-2.7E-03	-79.712	SLE RA 20	1.09E-03				
468	SLD 3	-1.9E-03	-56.303	SLD 14	-3.4E-03	-101.2	SLE RA 21	1.30E-04				
469	SLD 3	-2.3E-03	-68.516	SLE RA 21	-2.7E-03	-80.291	SLE RA 21	1.05E-03				
472	SLD 3	-2.2E-03	-67.252	SLE RA 21	-2.6E-03	-79.314	SLE RA 21	9.74E-04				
475	SLD 16	-1.8E-03	-55.489	SLD 1	-3.4E-03	-102.102	SLE RA 20	7.89E-05				
477	SLE RA 1	-2.3E-03	-69.863	SLE RA 21	-2.6E-03	-78.982	SLE RA 20	1.36E-03				
478	SLE RA 1	-2.4E-03	-73.333	SLE RA 21	-2.8E-03	-83.011	SLE RA 20	1.42E-03				
479	SLE RA 1	-2.6E-03	-77.984	SLE RA 21	-2.9E-03	-88.416	SLE RA 20	1.48E-03				
480	SLE RA 2	-2.6E-03	-78.492	SLE RA 20	-3.0E-03	-88.97	SLE RA 20	1.57E-03				
481	SLE RA 1	-2.5E-03	-76.266	SLE RA 21	-2.9E-03	-86.212	SLE RA 20	1.84E-03				
483	SLD 16	-2.2E-03	-65.618	SLD 1	-2.6E-03	-79.433	SLE RA 20	0.001147				
485	SLD 14	-2.2E-03	-66.804	SLD 3	-2.6E-03	-79.495	SLE RA 20	1.20E-03				
486	SLD 3	-2.0E-03	-58.786	SLD 14	-3.5E-03	-105.248	SLE RA 21	2.01E-04				
487	SLD 1	-2.3E-03	-67.936	SLE RA 21	-2.7E-03	-79.668	SLE RA 21	1.14E-03				
490	SLD 3	-2.2E-03	-66.88	SLE RA 21	-2.6E-03	-78.822	SLE RA 21	1.08E-03				
493	SLE RA 1	-2.5E-03	-75.846	SLE RA 21	-2.9E-03	-85.761	SLE RA 20	1.88E-03				
496	SLD 16	-1.9E-03	-57.463	SLD 1	-3.5E-03	-105.561	SLE RA 20	1.51E-04				
500	SLD 13	-2.2E-03	-65.787	SLD 4	-2.6E-03	-79.464	SLE RA 21	1.13E-03				
502	SLD 13	-2.2E-03	-66.843	SLE RA 21	-2.6E-03	-79.458	SLE RA 21	1.29E-03				
503	SLD 3	-2.0E-03	-61.264	SLD 14	-3.6E-03	-109.419	SLE RA 21	2.79E-04				
504	SLD 2	-2.2E-03	-67.422	SLE RA 21	-2.6E-03	-79.23	SLE RA 21	1.22E-03				
507	SLD 1	-2.2E-03	-66.524	SLE RA 21	-2.6E-03	-78.515	SLE RA 21	1.17E-03				
509	SLE RA 1	-2.5E-03	-74.769	SLE RA 21	-2.8E-03	-84.555	SLE RA 21	1.89E-03				
512	SLD 16	-2.0E-03	-59.454	SLD 1	-3.6E-03	-109.11	SLE RA 21	2.22E-04				
516	SLD 3	-2.1E-03	-63.088	SLD 14	-3.8E-03	-112.502	SLE RA 21	2.95E-04				
517	SLD 13	-2.2E-03	-65.929	SLD 4	-2.7E-03	-79.516	SLE RA 21	1.16E-03				
519	SLD 13	-2.2E-03	-66.873	SLE RA 21	-2.6E-03	-79.498	SLE RA 21	1.21E-03				
520	SLD 2	-2.2E-03	-66.993	SLE RA 21	-2.6E-03	-79.077	SLE RA 21	1.26E-03				
523	SLD 2	-2.2E-03	-66.277	SLE RA 21	-2.6E-03	-78.492	SLE RA 21	1.22E-03				
525	SLE RA 1	-0.00244	-73.201	SLE RA 21	-2.8E-03	-82.786	SLE RA 21	1.86E-03				
527	SLD 13	-2.0E-03	-60.755	SLD 4	-3.8E-03	-114.321	SLE RA 21	1.89E-04				
528	SLD 13	-2.0E-03	-61.157	SLD 4	-3.7E-03	-111.176	SLE RA 21	2.85E-04				
529	SLD 13	-2.1E-03	-61.894	SLD 4	-3.6E-03	-108.741	SLE RA 21	2.98E-04				
530	SLD 15	-2.1E-03	-62.761	SLD 2	-3.6E-03	-106.622	SLE RA 21	3.91E-04				
531	SLD 15	-2.1E-03	-63.635	SLD 2	-3.5E-03	-104.585	SLE RA 21	4.13E-04				
532	SLD 15	-2.1E-03	-64.462	SLD 2	-3.4E-03	-102.524	SLE RA 21	0.000427				
533	SLD 15	-2.2E-03	-65.223	SLD 2	-3.3E-03	-100.398	SLE RA 21	4.49E-04				
534	SLD 15	-2.2E-03	-65.91	SLD 2	-3.3E-03	-98.196	SLE RA 21	4.94E-04				
535	SLD 15	-2.2E-03	-66.508	SLD 2	-3.2E-03	-95.912	SLE RA 21	5.52E-04				
536	SLD 15	-2.2E-03	-66.991	SLD 2	-3.1E-03	-93.536	SLE RA 21	6.24E-04				
537	SLD 15	-2.2E-03	-67.311	SLD 2	-3.0E-03	-91.068	SLE RA 21	7.13E-04				
538	SLD 15	-2.2E-03	-67.413	SLD 2	-3.0E-03	-88.528	SLE RA 21	7.94E-04				
539	SLD 15	-2.2E-03	-67.247	SLD 2	-2.9E-03	-85.996	SLE RA 21	9.21E-04				
540	SLD 15	-2.2E-03	-66.821	SLD 2	-2.8E-03	-83.665	SLE RA 21	1.04E-03				
541	SLD 13	-2.2E-03	-66.242	SLD 4	-2.7E-03	-81.805	SLE RA 21	0.001161				
542	SLD 13	-2.2E-03	-66.423	SLD 4	-2.6E-03	-79.423	SLE RA 21	0.001194				
543	SLD 13	-2.3E-03	-67.56	SLE RA 21	-2.7E-03	-79.864	SLE RA 21	1.23E-03				
544	SLD 13	-2.3E-03	-68.977	SLE RA 21	-2.7E-03	-80.499	SLE RA 21	1.33E-03				
545	SLD 13	-2.3E-03	-70.454	SLE RA 21	-2.7E-03	-81.004	SLE RA 21	1.31E-03				
546	SLD 13	-2.4E-03	-71.792	SLE RA 21	-2.7E-03	-81.267	SLE RA 21	0.001307				
547	SLE RA 1	-2.4E-03	-72.015	SLE RA 21	-2.7E-03	-81.232	SLE RA 21	1.32E-03				
548	SLE RA 1	-2.4E-03	-71.679	SLE RA 21	-2.7E-03	-80.892	SLE RA 20	1.36E-03				
549	SLE RA 1	-2.4E-03	-71.139	SLE RA 21	-2.7E-03	-80.318	SLE RA 20	1.41E-03				
550	SLE RA 1	-2.4E-03	-70.716	SLE RA 21	-2.7E-03	-79.875	SLE RA 20	1.47E-03				
551	SLE RA 1	-2.3E-03	-70.432	SLE RA 21	-2.7E-03	-79.585	SLE RA 20	1.53E-03				
552	SLE RA 1	-2.4E-03	-70.982	SLE RA 21	-2.7E-03	-80.326	SLE RA 21	1.59E-03				
553	SLE RA 1	-2.4E-03	-71.482	SLE RA 21	-2.7E-03	-80.478	SLE RA 21	1.76E-03				
554	SLD 2	-2.4E-03	-71.415	SLE RA 21	-2.7E-03	-80.538	SLE RA 21	1.67E-03				
555	SLD 2	-2.4E-03	-70.58	SLE RA 21	-2.7E-03	-80.633	SLE RA 21	1.61E-03				
556	SLD 2	-2.3E-03	-69.657	SLE RA 21	-2.7E-03	-80.595	SLE RA 21	1.46E-03				
557	SLD 2	-2.3E-03	-68.733	SLE RA 21	-2.7E-03	-80.354	SLE RA 21	1.37E-03				
558	SLD 2	-2.3E-03	-67.971	SLE RA 21	-2.7E-03	-79.957	SLE RA 21	1.31E-03				
559	SLD 2	-2.2E-03	-66.873	SLE RA 21	-2.6E-03	-79.085	SLE RA 21	0.001263				
560	SLD 2	-2.2E-03	-66.213	SLE RA 21	-2.6E-03	-78.546	SLE RA 21	1.23E-03				
561	SLD 2	-2.2E-03	-65.818	SLD 15	-2.6E-03	-78.414	SLE RA 21	1.14E-03				
562	SLD 2	-2.2E-03	-66.351	SLD 15	-2.7E-03	-79.575	SLE RA 21	1.08E-03				
563	SLD 2	-2.2E-03	-67.217	SLD 15	-2.7E-03	-81.866	SLE RA 21	9.55E-04				
564	SLD 2	-2.3E-03	-67.645	SLD 15	-2.8E-03	-84.26	SLE RA 21	8.35E-04				
565	SLD 2	-2.3E-03	-67.742	SLD 15	-2.9E-03	-86.966	SLE RA 21	7.21E-04				
566	SLD 1	-2.3E-03	-67.567	SLD 16	-3.0E-03	-89.752	SLE RA 21	6.56E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
567	SLD 1	-2.2E-03	-67.192	SLD 16	-3.1E-03	-92.515	SLE RA 21	5.88E-04				
568	SLD 1	-2.2E-03	-66.688	SLD 16	-3.2E-03	-95.212	SLE RA 21	5.39E-04				
569	SLD 1	-2.2E-03	-66.098	SLD 16	-3.3E-03	-97.848	SLE RA 21	5.07E-04				
570	SLD 1	-2.2E-03	-65.453	SLD 16	-3.3E-03	-100.45	SLE RA 21	4.89E-04				
571	SLD 1	-2.2E-03	-64.786	SLD 16	-3.4E-03	-103.083	SLE RA 21	4.95E-04				
572	SLD 3	-2.1E-03	-64.166	SLD 14	-3.5E-03	-105.888	SLE RA 21	4.47E-04				
573	SLD 3	-2.1E-03	-63.738	SLD 14	-3.6E-03	-109.139	SLE RA 21	4.02E-04				
574	SLD 3	-2.1E-03	-63.785	SLD 14	-3.8E-03	-113.349	SLE RA 21	3.15E-04				
575	SLD 3	-2.2E-03	-64.765	SLD 14	-4.0E-03	-119.303	SLE RA 21	2.53E-04				
577	SLD 13	-2.0E-03	-60.77	SLD 4	-3.7E-03	-111.508	SLE RA 21	2.63E-04				
585	SLD 13	-2.0E-03	-60.946	SLD 4	-3.7E-03	-111.696	SLE RA 21	2.64E-04				
599	SLD 15	-2.2E-03	-66.56	SLD 2	-2.7E-03	-82.297	SLE RA 21	1.11E-03				
603	SLD 13	-2.2E-03	-65.851	SLD 4	-2.6E-03	-79.267	SLE RA 21	1.17E-03				
606	SLD 13	-2.2E-03	-66.756	SLE RA 21	-2.6E-03	-79.319	SLE RA 21	1.21E-03				
615	SLE RA 1	-2.3E-03	-69.74	SLE RA 21	-2.6E-03	-78.798	SLE RA 20	1.51E-03				
617	SLE RA 1	-2.3E-03	-69.151	SLE RA 21	-2.6E-03	-78.164	SLE RA 21	1.47E-03				
619	SLE RA 1	-2.3E-03	-69.592	SLE RA 21	-2.6E-03	-78.73	SLE RA 21	1.60E-03				
625	SLE RA 1	-2.4E-03	-71.174	SLE RA 21	-2.7E-03	-80.492	SLE RA 21	1.79E-03				
630	SLE RA 1	-2.3E-03	-68.665	SLE RA 21	-2.6E-03	-77.364	SLE RA 21	1.75E-03				
639	SLD 2	-2.2E-03	-66.906	SLE RA 21	-2.6E-03	-79.397	SLE RA 21	1.25E-03				
642	SLD 2	-2.2E-03	-66.247	SLE RA 21	-2.6E-03	-78.858	SLE RA 21	1.23E-03				
645	SLD 2	-2.2E-03	-66.443	SLD 15	-2.7E-03	-79.97	SLE RA 21	1.04E-03				
658	SLD 3	-2.1E-03	-63.464	SLD 14	-3.8E-03	-113.009	SLE RA 21	3.11E-04				
660	SLD 2	-2.2E-03	-65.109	SLE RA 21	-2.6E-03	-77.213	SLE RA 21	1.01E-03				
662	SLD 2	-2.2E-03	-66.08	SLD 15	-2.6E-03	-79.302	SLE RA 21	1.04E-03				
664	SLD 13	-2.0E-03	-60.748	SLD 4	-3.8E-03	-113.818	SLE RA 21	1.78E-04				
665	SLD 13	-2.0E-03	-61.152	SLD 4	-3.7E-03	-110.658	SLE RA 21	2.73E-04				
666	SLD 13	-2.1E-03	-61.889	SLD 4	-3.6E-03	-108.185	SLE RA 21	3.36E-04				
667	SLD 13	-2.1E-03	-62.754	SLD 4	-3.5E-03	-106.029	SLE RA 21	3.85E-04				
668	SLD 15	-2.1E-03	-63.624	SLD 2	-3.5E-03	-103.955	SLE RA 21	4.12E-04				
669	SLD 15	-2.1E-03	-64.446	SLD 2	-3.4E-03	-101.855	SLE RA 21	4.29E-04				
670	SLD 15	-2.2E-03	-65.201	SLD 2	-3.3E-03	-99.689	SLE RA 21	4.57E-04				
671	SLD 15	-2.2E-03	-65.88	SLD 2	-3.2E-03	-97.446	SLE RA 21	5.08E-04				
672	SLD 15	-2.2E-03	-66.469	SLD 2	-3.2E-03	-95.118	SLE RA 21	5.71E-04				
673	SLD 15	-2.2E-03	-66.941	SLD 2	-3.1E-03	-92.698	SLE RA 21	6.50E-04				
674	SLD 15	-2.2E-03	-67.25	SLD 2	-3.0E-03	-90.183	SLE RA 21	7.23E-04				
675	SLD 15	-2.2E-03	-67.338	SLD 2	-2.9E-03	-87.594	SLE RA 21	8.30E-04				
676	SLD 15	-2.2E-03	-67.16	SLD 2	-2.8E-03	-85.01	SLE RA 21	9.58E-04				
677	SLD 15	-2.2E-03	-66.724	SLD 2	-2.8E-03	-82.622	SLE RA 21	1.08E-03				
678	SLD 13	-2.2E-03	-66.147	SLD 4	-2.7E-03	-80.719	SLE RA 21	1.04E-03				
679	SLD 13	-2.2E-03	-65.771	SLD 4	-2.7E-03	-79.695	SLE RA 21	1.08E-03				
680	SLD 13	-2.2E-03	-65.732	SLD 4	-2.6E-03	-79.03	SLE RA 21	1.15E-03				
681	SLD 13	-2.2E-03	-66.23	SLE RA 21	-2.6E-03	-78.919	SLE RA 21	1.18E-03				
682	SLD 13	-2.2E-03	-67.061	SLE RA 21	-2.6E-03	-79.239	SLE RA 21	1.30E-03				
683	SLD 13	-2.3E-03	-68.252	SLE RA 21	-2.7E-03	-79.68	SLE RA 21	1.28E-03				
684	SLD 13	-2.3E-03	-69.499	SLE RA 21	-2.7E-03	-79.988	SLE RA 21	1.28E-03				
685	SLD 13	-2.4E-03	-70.605	SLE RA 21	-2.7E-03	-80.051	SLE RA 21	1.29E-03				
686	SLE RA 1	-2.4E-03	-70.71	SLE RA 21	-2.7E-03	-79.814	SLE RA 21	1.32E-03				
687	SLE RA 2	-2.3E-03	-70.194	SLE RA 20	-2.6E-03	-79.269	SLE RA 21	1.37E-03				
688	SLE RA 2	-2.3E-03	-69.47	SLE RA 20	-2.6E-03	-78.487	SLE RA 21	1.44E-03				
689	SLE RA 2	-2.3E-03	-68.639	SLE RA 20	-2.6E-03	-77.575	SLE RA 21	1.42E-03				
690	SLE RA 1	-2.3E-03	-68.052	SLE RA 21	-2.6E-03	-76.94	SLE RA 21	1.46E-03				
691	SLE RA 1	-2.3E-03	-68.9	SLE RA 21	-2.6E-03	-77.953	SLE RA 21	1.51E-03				
692	SLE RA 1	-2.3E-03	-69.481	SLE RA 21	-2.6E-03	-78.645	SLE RA 21	1.57E-03				
693	SLD 6	-2.3E-03	-69.546	SLE RA 21	-2.6E-03	-78.768	SLE RA 21	1.55E-03				
694	SLD 10	-2.3E-03	-69.494	SLE RA 21	-2.6E-03	-78.825	SLE RA 21	1.58E-03				
695	SLE RA 1	-2.3E-03	-69.534	SLE RA 21	-2.6E-03	-78.621	SLE RA 21	1.74E-03				
696	SLE RA 1	-2.3E-03	-68.647	SLE RA 21	-2.6E-03	-77.548	SLE RA 21	1.78E-03				
697	SLE RA 1	-2.3E-03	-67.7	SLE RA 21	-2.5E-03	-76.428	SLE RA 21	1.78E-03				
698	SLE RA 1	-2.2E-03	-66.336	SLE RA 21	-2.5E-03	-74.812	SLE RA 21	1.57E-03				
699	SLE RA 1	-2.2E-03	-65.842	SLE RA 21	-2.5E-03	-74.208	SLE RA 21	1.52E-03				
700	SLD 2	-2.2E-03	-65.447	SLE RA 21	-2.5E-03	-74.095	SLE RA 21	1.62E-03				
701	SLD 2	-2.2E-03	-64.68	SLE RA 21	-2.5E-03	-74.155	SLE RA 21	1.53E-03				
702	SLD 2	-2.1E-03	-63.85	SLE RA 21	-2.5E-03	-74.245	SLE RA 21	1.44E-03				
703	SLD 2	-2.1E-03	-62.93	SLE RA 21	-2.5E-03	-74.193	SLE RA 21	1.36E-03				
704	SLD 2	-2.1E-03	-62.004	SLE RA 21	-2.5E-03	-73.931	SLE RA 21	1.28E-03				
705	SLD 2	-2.0E-03	-61.234	SLD 15	-2.5E-03	-73.87	SLE RA 21	1.23E-03				
706	SLD 2	-2.0E-03	-61.489	SLD 15	-2.4E-03	-73.317	SLE RA 21	1.11E-03				
707	SLD 2	-2.2E-03	-64.95	SLE RA 21	-2.6E-03	-77.021	SLE RA 21	1.01E-03				
708	SLD 2	-2.2E-03	-65.998	SLD 15	-2.6E-03	-79.207	SLE RA 21	1.04E-03				
709	SLD 2	-2.2E-03	-66.386	SLD 15	-2.7E-03	-80.231	SLE RA 21	0.000984				
710	SLD 2	-2.2E-03	-66.861	SLD 15	-2.8E-03	-82.756	SLE RA 21	0.000868				
711	SLD 2	-2.2E-03	-67.013	SLD 15	-2.9E-03	-85.579	SLE RA 21	0.000751				
712	SLD 2	-2.2E-03	-66.898	SLD 15	-2.9E-03	-88.473	SLE RA 21	6.83E-04				
713	SLD 2	-2.2E-03	-66.588	SLD 15	-3.0E-03	-91.333	SLE RA 21	6.07E-04				
714	SLD 2	-2.2E-03	-66.147	SLD 15	-3.1E-03	-94.125	SLE RA 21	0.000551				
715	SLD 2	-2.2E-03	-65.618	SLD 15	-3.2E-03	-96.852	SLE RA 21	0.000514				
716	SLD 2	-2.2E-03	-65.03	SLD 15	-3.3E-03	-99.544	SLE RA 21	4.91E-04				
717	SLD 2	-2.1E-03	-64.418	SLD 15	-3.4E-03	-102.265	SLE RA 21	4.93E-04				
718	SLD 4	-2.1E-03	-63.851	SLD 13	-3.5E-03	-105.155	SLE RA 21	4.42E-04				
719	SLD 4	-2.1E-03	-63.476	SLD 13	-3.6E-03	-108.489	SLE RA 21	3.97E-04				
720	SLD 4	-2.1E-03	-63.579	SLD 13	-3.8E-03	-112.776	SLE RA 21	3.09E-04				
721	SLD 3	-2.2E-03	-64.577	SLD 14	-4.0E-03	-118.758	SLE RA 21	2.49E-04				
722	SLD 2	-2.1E-03	-62.778	SLD 15	-3.7E-03	-111.65	SLE RA 21	2.87E-04				
725	SLD 2	-2.2E-03	-64.846	SLE RA 21	-2.6E-03	-76.74	SLE RA 21	9.92E-04				
727	SLD 2	-2.2E-03	-65.77	SLD 15	-2.6E-03	-78.694	SLE RA 21	1.02E-03				
728	SLD 2	-2.0E-03	-60.674	SLD 15	-3.6E-03	-107.773	SLE RA 21	0.000259				
730	SLE RA 2	-2.2E-03	-64.649	SLE RA 20	-2.4E-03	-73.187	SLE RA 20	1.29E-03				
732	SLE RA 2	-2.1E-03	-61.836	SLE RA 20	-2.3E-03	-69.945	SLE RA 21	1.31E-03				
733	SLD 3	-1.9E-03	-56.127	SLE RA 20	-2.2E-03	-64.794	SLE RA 20	1.25E-03				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
735	SLD 3	-1.9E-03	-55.854	SLE RA 20	-2.2E-03	-65.764	SLE RA 20	0.001215				
736	SLD 2	-0.00193	-57.901	SLD 15	-3.4E-03	-102.667	SLE RA 21	1.69E-04				
739	SLD 13	-1.9E-03	-56.974	SLD 4	-3.4E-03	-102.794	SLE RA 21	9.68E-05				
740	SLD 13	-2.2E-03	-65.801	SLE RA 21	-2.6E-03	-77.828	SLE RA 21	9.13E-04				
742	SLD 13	-2.2E-03	-66.776	SLE RA 21	-2.6E-03	-78.943	SLE RA 21	9.99E-04				
743	SLD 4	-2.2E-03	-65.445	SLE RA 21	-2.6E-03	-77.21	SLE RA 21	9.08E-04				
745	SLD 4	-2.2E-03	-64.868	SLE RA 20	-2.6E-03	-76.868	SLE RA 21	8.35E-04				
746	SLD 16	-2.1E-03	-62.391	SLE RA 20	-2.4E-03	-71.391	SLE RA 21	1.20E-03				
748	SLD 16	-2.0E-03	-59.322	SLE RA 20	-2.3E-03	-67.981	SLE RA 21	1.22E-03				
749	SLD 3	-1.8E-03	-53.115	SLE RA 20	-2.1E-03	-62.54	SLE RA 20	1.11E-03				
751	SLD 3	-1.8E-03	-52.958	SLD 14	-2.1E-03	-63.822	SLE RA 20	1.09E-03				
753	SLD 13	-1.8E-03	-55.089	SLD 4	-3.3E-03	-98.879	SLE RA 21	4.53E-05				
754	SLD 2	-1.8E-03	-54.99	SLD 15	-3.2E-03	-97.319	SLE RA 21	8.56E-05				
756	SLD 4	-2.2E-03	-66.096	SLE RA 21	-2.6E-03	-77.836	SLE RA 21	7.74E-04				
758	SLD 4	-2.2E-03	-65.336	SLE RA 20	-2.6E-03	-77.226	SLE RA 21	7.08E-04				
759	SLD 13	-2.2E-03	-66.234	SLE RA 21	-2.6E-03	-77.585	SLE RA 21	7.78E-04				
761	SLD 13	-2.2E-03	-67.272	SLE RA 21	-2.6E-03	-78.895	SLE RA 21	8.55E-04				
762	SLD 16	-2.0E-03	-60.646	SLE RA 20	-2.3E-03	-70.31	SLE RA 21	0.001106				
764	SLD 16	-1.9E-03	-57.407	SLE RA 20	-2.2E-03	-66.728	SLE RA 21	1.13E-03				
765	SLD 3	-1.7E-03	-51.717	SLE RA 20	-2.1E-03	-61.639	SLE RA 20	9.94E-04				
767	SLD 3	-1.7E-03	-51.675	SLD 14	-2.1E-03	-63.69	SLE RA 21	0.001032				
769	SLD 13	-1.8E-03	-53.53	SLD 4	-0.00319	-95.7	SLE RA 21	3.56E-05				
770	SLD 2	-1.7E-03	-52.25	SLD 15	-3.1E-03	-92.296	SLE RA 21	3.92E-05				
772	SLD 2	-0.00223	-66.899	SLE RA 21	-2.6E-03	-78.662	SLE RA 21	6.59E-04				
774	SLD 2	-2.2E-03	-65.974	SLE RA 20	-2.6E-03	-77.782	SLE RA 21	6.08E-04				
775	SLD 13	-2.2E-03	-66.393	SLE RA 21	-2.6E-03	-77.245	SLE RA 21	6.45E-04				
777	SLD 13	-2.2E-03	-67.486	SLE RA 21	-2.6E-03	-78.753	SLE RA 21	7.31E-04				
778	SLD 16	-1.9E-03	-58.325	SLE RA 20	-2.3E-03	-68.054	SLE RA 21	1.08E-03				
779	SLD 16	-1.6E-03	-49.087	SLE RA 20	-1.9E-03	-58.384	SLE RA 20	0.000923				
780	SLD 16	-1.6E-03	-46.898	SLE RA 20	-1.9E-03	-55.736	SLE RA 20	7.30E-04				
781	SLD 16	-1.5E-03	-46.104	SLE RA 20	-1.8E-03	-54.214	SLE RA 20	7.06E-04				
782	SLD 16	-1.5E-03	-46.479	SLE RA 20	-1.8E-03	-53.661	SLE RA 20	7.01E-04				
783	SLD 16	-1.6E-03	-47.706	SLE RA 20	-1.8E-03	-53.864	SLE RA 20	7.09E-04				
784	SLE RA 2	-1.6E-03	-48.564	SLE RA 20	-1.8E-03	-54.65	SLE RA 20	7.27E-04				
785	SLE RA 2	-1.7E-03	-49.622	SLE RA 20	-1.9E-03	-55.883	SLE RA 20	7.52E-04				
786	SLD 3	-1.7E-03	-50.532	SLE RA 20	-1.9E-03	-57.443	SLE RA 21	9.30E-04				
787	SLD 3	-1.7E-03	-50.91	SLE RA 20	-2.0E-03	-59.175	SLE RA 21	9.45E-04				
788	SLD 3	-1.7E-03	-51.297	SLE RA 20	-2.0E-03	-60.854	SLE RA 21	9.51E-04				
789	SLD 3	-1.7E-03	-51.455	SLD 14	-2.1E-03	-62.617	SLE RA 21	1.01E-03				
790	SLD 16	-2.0E-03	-60.066	SLE RA 20	-2.3E-03	-70.186	SLE RA 21	0.00106				
793	SLD 16	-1.9E-03	-56.653	SLE RA 20	-2.2E-03	-66.426	SLE RA 21	1.02E-03				
805	SLD 3	-1.7E-03	-51.811	SLE RA 20	-2.1E-03	-61.972	SLE RA 21	9.54E-04				
807	SLD 3	-1.7E-03	-51.832	SLD 14	-2.1E-03	-64.285	SLE RA 21	9.06E-04				
809	SLD 13	-1.8E-03	-52.502	SLD 4	-3.1E-03	-93.663	SLE RA 21	3.05E-05				
810	SLD 2	-1.7E-03	-49.827	SLD 15	-2.9E-03	-87.866	SLE RA 20	0.00003				
812	SLD 2	-2.3E-03	-67.656	SLE RA 21	-2.7E-03	-79.564	SLE RA 21	5.47E-04				
814	SLD 2	-2.2E-03	-66.606	SLE RA 20	-2.6E-03	-78.411	SLE RA 20	5.19E-04				
815	SLD 13	-2.2E-03	-66.123	SLE RA 21	-2.6E-03	-76.731	SLE RA 21	5.68E-04				
817	SLD 13	-2.2E-03	-67.348	SLE RA 21	-2.6E-03	-78.44	SLE RA 21	6.04E-04				
818	SLD 14	-1.9E-03	-58.388	SLE RA 20	-2.3E-03	-68.557	SLE RA 21	9.49E-04				
819	SLD 14	-1.7E-03	-49.785	SLE RA 20	-2.0E-03	-59.094	SLE RA 21	8.17E-04				
820	SLD 14	-1.6E-03	-47.643	SLE RA 20	-1.9E-03	-56.463	SLE RA 21	7.83E-04				
821	SLD 14	-1.6E-03	-46.9	SLE RA 20	-1.8E-03	-54.959	SLE RA 21	7.62E-04				
822	SLD 14	-1.6E-03	-47.328	SLE RA 20	-1.8E-03	-54.426	SLE RA 21	6.18E-04				
823	SLE RA 2	-0.00162	-48.601	SLE RA 20	-1.8E-03	-54.651	SLE RA 21	7.58E-04				
824	SLE RA 2	-1.6E-03	-49.294	SLE RA 20	-1.8E-03	-55.458	SLE RA 21	7.70E-04				
825	SLE RA 2	-1.7E-03	-50.373	SLE RA 20	-1.9E-03	-56.716	SLE RA 21	7.88E-04				
826	SLD 1	-1.7E-03	-51.286	SLE RA 20	-1.9E-03	-58.301	SLE RA 21	8.06E-04				
827	SLD 1	-1.7E-03	-51.653	SLE RA 20	-2.0E-03	-60.061	SLE RA 21	8.91E-04				
828	SLD 1	-1.7E-03	-52.033	SLE RA 20	-2.1E-03	-61.769	SLE RA 21	8.86E-04				
829	SLD 3	-1.7E-03	-52.188	SLD 14	-2.1E-03	-63.607	SLE RA 21	8.58E-04				
830	SLD 14	-2.0E-03	-60.512	SLE RA 20	-2.4E-03	-70.976	SLE RA 21	9.41E-04				
832	SLD 14	-1.9E-03	-57.381	SLE RA 20	-2.2E-03	-67.48	SLE RA 21	9.20E-04				
833	SLD 1	-1.8E-03	-52.733	SLE RA 20	-2.1E-03	-63.039	SLE RA 21	8.37E-04				
835	SLD 1	-1.8E-03	-52.736	SLD 16	-2.2E-03	-65.272	SLE RA 21	8.30E-04				
837	SLD 13	-1.7E-03	-52.189	SLD 4	-3.1E-03	-93.091	SLE RA 21	3.09E-05				
838	SLD 2	-1.6E-03	-47.75	SLD 15	-2.8E-03	-84.077	SLE RA 20	2.49E-05				
840	SLD 2	-2.3E-03	-68.304	SLE RA 21	-2.7E-03	-80.545	SLE RA 21	0.000472				
842	SLD 2	-2.2E-03	-67.089	SLE RA 20	-2.6E-03	-79.116	SLE RA 20	4.46E-04				
843	SLD 13	-2.2E-03	-65.604	SLE RA 21	-0.00254	-76.2	SLE RA 21	4.72E-04				
845	SLD 13	-2.2E-03	-66.972	SLE RA 21	-2.6E-03	-78.115	SLE RA 21	0.000524				
846	SLD 14	-2.1E-03	-61.502	SLE RA 20	-2.4E-03	-72.437	SLE RA 21	8.30E-04				
848	SLD 14	-2.0E-03	-58.633	SLE RA 20	-2.3E-03	-69.2	SLE RA 21	8.93E-04				
849	SLD 1	-1.8E-03	-54.275	SLE RA 20	-2.2E-03	-64.843	SLE RA 21	7.95E-04				
851	SLD 1	-1.8E-03	-54.285	SLD 16	-2.2E-03	-66.907	SLE RA 21	7.17E-04				
853	SLD 13	-1.8E-03	-52.785	SLD 4	-3.1E-03	-94.291	SLE RA 21	3.71E-05				
854	SLD 2	-1.5E-03	-45.967	SLD 15	-2.7E-03	-80.838	SLE RA 20	2.33E-05				
856	SLD 2	-2.3E-03	-68.924	SLE RA 21	-2.7E-03	-81.709	SLE RA 21	4.09E-04				
858	SLD 2	-2.3E-03	-67.514	SLD 15	-2.7E-03	-80.031	SLE RA 20	3.86E-04				
859	SLD 13	-2.2E-03	-65.097	SLE RA 21	-2.5E-03	-76.052	SLE RA 21	4.02E-04				
861	SLD 13	-2.2E-03	-66.609	SLE RA 21	-2.6E-03	-78.177	SLE RA 21	4.57E-04				
862	SLD 14	-0.00209	-62.701	SLE RA 21	-2.5E-03	-74.203	SLE RA 21	7.18E-04				
864	SLD 14	-2.0E-03	-60.119	SLE RA 21	-2.4E-03	-71.224	SLE RA 21	7.69E-04				
865	SLD 1	-1.9E-03	-56.202	SLE RA 21	-2.2E-03	-67.096	SLE RA 21	0.000672				
867	SLD 1	-1.9E-03	-56.174	SLD 16	-2.3E-03	-69.023	SLE RA 21	6.07E-04				
869	SLD 13	-1.8E-03	-54.506	SLD 4	-3.3E-03	-97.601	SLE RA 21	4.77E-05				
870	SLD 2	-1.5E-03	-44.373	SLD 15	-2.6E-03	-77.957	SLE RA 20	2.45E-05				
872	SLD 2	-2.3E-03	-69.616	SLD 15	-2.8E-03	-83.842	SLE RA 21	3.50E-04				
874	SLD 2	-2.3E-03	-68.007	SLD 15	-2.7E-03	-81.869	SLE RA 20	3.42E-04				
875	SLD 13	-2.2E-03	-64.998	SLE RA 21	-2.6E-03	-76.944	SLE RA 21	3.38E-04				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
877	SLD 13	-2.2E-03	-66.659	SLE RA 21	-2.6E-03	-79.283	SLE RA 21	0.00039				
878	SLD 14	-2.1E-03	-64.023	SLE RA 21	-2.5E-03	-76.141	SLE RA 21	6.03E-04				
880	SLD 14	-2.1E-03	-61.727	SLE RA 21	-2.4E-03	-73.414	SLE RA 21	6.42E-04				
881	SLD 1	-1.9E-03	-58.412	SLE RA 21	-2.3E-03	-69.645	SLE RA 21	5.48E-04				
883	SLD 1	-1.9E-03	-58.343	SLD 16	-2.4E-03	-71.408	SLE RA 21	5.03E-04				
885	SLD 13	-1.9E-03	-57.598	SLD 4	-3.4E-03	-103.409	SLE RA 21	5.61E-05				
886	SLD 2	-1.4E-03	-42.834	SLD 15	-2.5E-03	-75.19	SLE RA 20	0.000025				
888	SLD 2	-2.3E-03	-70.497	SLD 15	-2.9E-03	-87.039	SLE RA 21	3.09E-04				
890	SLD 2	-2.3E-03	-68.687	SLD 15	-2.8E-03	-84.75	SLE RA 20	2.98E-04				
891	SLD 13	-2.1E-03	-62.063	SLD 4	-3.8E-03	-113.898	SLE RA 21	4.78E-05				
892	SLD 13	-0.0019	-57	SLD 4	-3.4E-03	-101.294	SLE RA 21	5.59E-05				
893	SLD 13	-1.8E-03	-52.62	SLD 4	-3.0E-03	-89.934	SLE RA 21	4.86E-05				
894	SLD 13	-1.6E-03	-49.209	SLD 4	-2.7E-03	-80.32	SLE RA 21	3.42E-05				
895	SLD 13	-1.6E-03	-46.929	SLD 4	-2.4E-03	-72.718	SLE RA 21	2.11E-05				
896	SLD 13	-1.5E-03	-45.855	SLD 4	-2.2E-03	-67.234	SLE RA 21	1.26E-05				
897	SLD 13	-1.5E-03	-45.994	SLD 4	-2.1E-03	-63.857	SLE RA 20	1.03E-05				
898	SLD 13	-1.6E-03	-47.295	SLD 4	-2.1E-03	-62.491	SLE RA 20	1.07E-05				
899	SLD 13	-1.7E-03	-49.636	SLD 4	-2.1E-03	-62.97	SLE RA 21	1.64E-05				
900	SLD 13	-1.8E-03	-52.816	SLD 4	-2.2E-03	-65.053	SLE RA 21	3.67E-05				
901	SLD 13	-1.9E-03	-56.534	SLD 4	-2.3E-03	-68.405	SLE RA 21	1.13E-04				
902	SLD 13	-2.0E-03	-60.36	SLD 4	-2.4E-03	-72.558	SLE RA 21	1.95E-04				
903	SLD 13	-2.1E-03	-63.705	SLD 4	-2.6E-03	-76.866	SLE RA 21	2.52E-04				
904	SLD 13	-2.2E-03	-64.639	SLD 4	-2.6E-03	-78.274	SLE RA 21	2.72E-04				
905	SLD 14	-2.2E-03	-65.494	SLE RA 21	-2.6E-03	-78.298	SLE RA 21	0.000517				
907	SLD 14	-2.1E-03	-63.483	SLE RA 21	-2.5E-03	-75.819	SLE RA 21	5.37E-04				
908	SLD 2	-2.0E-03	-60.861	SLE RA 21	-2.4E-03	-72.496	SLE RA 21	4.57E-04				
910	SLD 2	-2.0E-03	-60.763	SLD 15	-2.5E-03	-74.105	SLE RA 21	4.27E-04				
912	SLD 13	-2.1E-03	-62.331	SLD 4	-3.7E-03	-112.141	SLE RA 21	5.26E-05				
913	SLD 2	-2.4E-03	-71.619	SLD 15	-3.1E-03	-91.642	SLE RA 21	2.46E-04				
915	SLD 2	-2.3E-03	-69.729	SLD 15	-3.0E-03	-89.235	SLE RA 20	2.31E-04				
916	SLD 2	-2.3E-03	-68.753	SLD 15	-2.9E-03	-88.038	SLE RA 20	2.06E-04				
917	SLD 2	-2.2E-03	-66.004	SLD 15	-2.8E-03	-85.101	SLE RA 20	1.41E-04				
918	SLD 2	-2.1E-03	-62.601	SLD 15	-2.7E-03	-81.91	SLE RA 20	7.09E-05				
919	SLD 2	-2.0E-03	-59.159	SLD 15	-2.6E-03	-79.151	SLE RA 20	3.52E-05				
920	SLD 2	-1.9E-03	-56.066	SLD 15	-2.6E-03	-77.244	SLE RA 20	2.65E-05				
921	SLD 2	-1.8E-03	-53.549	SLD 15	-2.5E-03	-76.428	SLE RA 20	2.17E-05				
922	SLD 2	-1.7E-03	-51.71	SLD 15	-2.6E-03	-76.813	SLE RA 20	2.03E-05				
923	SLD 2	-1.7E-03	-50.573	SLD 15	-2.6E-03	-78.426	SLE RA 20	2.21E-05				
924	SLD 2	-0.00167	-50.101	SLD 15	-2.7E-03	-81.225	SLE RA 20	2.63E-05				
925	SLD 2	-1.7E-03	-50.215	SLD 15	-2.8E-03	-85.099	SLE RA 20	3.03E-05				
926	SLD 2	-1.7E-03	-50.791	SLD 15	-3.0E-03	-89.849	SLE RA 20	2.76E-05				
927	SLD 2	-1.4E-03	-41.197	SLD 15	-2.4E-03	-72.263	SLE RA 20	0.000017				
928	SLD 2	-1.7E-03	-51.645	SLD 15	-3.2E-03	-95.141	SLE RA 20	0.00002				
931	SLD 14	-2.2E-03	-67.297	SLD 3	-2.7E-03	-81.06	SLE RA 21	4.11E-04				
933	SLD 14	-2.2E-03	-65.567	SLD 3	-2.6E-03	-78.738	SLE RA 21	4.23E-04				
934	SLD 2	-2.1E-03	-63.685	SLE RA 21	-2.5E-03	-75.826	SLE RA 21	3.50E-04				
936	SLD 2	-2.1E-03	-63.545	SLD 15	-2.6E-03	-77.322	SLE RA 21	3.34E-04				
937	SLD 2	-2.4E-03	-72.333	SLD 15	-3.2E-03	-95.387	SLE RA 21	2.04E-04				
940	SLD 13	-2.3E-03	-68.899	SLD 4	-4.1E-03	-124.098	SLE RA 21	5.34E-05				
953	SLD 13	-2.3E-03	-68.028	SLD 4	-3.0E-03	-90.985	SLE RA 21	2.02E-04				
956	SLD 13	-2.4E-03	-71.136	SLD 4	-3.2E-03	-95.936	SLE RA 21	2.39E-04				
970	SLD 2	-2.4E-03	-72.689	SLD 15	-3.3E-03	-100.189	SLE RA 21	1.47E-04				
975	SLD 13	-2.4E-03	-72.258	SLD 4	-3.4E-03	-101.37	SLE RA 21	1.99E-04				
976	SLD 14	-2.3E-03	-69.774	SLD 3	-2.8E-03	-84.963	SLE RA 21	2.98E-04				
978	SLD 14	-2.3E-03	-68.324	SLD 3	-0.00276	-82.799	SLE RA 21	3.00E-04				
979	SLD 2	-2.2E-03	-67.196	SLE RA 21	-2.7E-03	-80.004	SLE RA 21	2.47E-04				
981	SLD 2	-2.2E-03	-67.014	SLD 15	-2.7E-03	-81.404	SLE RA 21	2.38E-04				
982	SLD 13	-2.5E-03	-75.311	SLD 4	-3.7E-03	-110.592	SLE RA 21	1.51E-04				
983	SLD 13	-2.4E-03	-71.567	SLD 4	-3.4E-03	-102.389	SLE RA 21	1.73E-04				
984	SLD 13	-2.3E-03	-67.784	SLD 4	-3.2E-03	-94.972	SLE RA 21	1.59E-04				
985	SLD 13	-2.2E-03	-64.542	SLD 4	-3.0E-03	-88.797	SLE RA 21	1.24E-04				
986	SLD 13	-2.1E-03	-62.206	SLD 4	-2.8E-03	-84.112	SLE RA 21	0.000088				
987	SLD 13	-2.0E-03	-60.957	SLD 4	-2.7E-03	-81.005	SLE RA 21	6.43E-05				
988	SLD 14	-2.0E-03	-60.835	SLD 3	-2.6E-03	-79.442	SLE RA 21	5.92E-05				
989	SLD 14	-2.1E-03	-61.718	SLD 3	-2.6E-03	-79.312	SLE RA 21	7.52E-05				
990	SLD 14	-2.1E-03	-63.452	SLD 3	-2.7E-03	-80.298	SLE RA 21	1.12E-04				
991	SLD 14	-2.2E-03	-65.692	SLD 3	-2.7E-03	-81.986	SLE RA 21	1.73E-04				
992	SLD 14	-2.3E-03	-67.914	SLD 3	-2.8E-03	-83.776	SLE RA 21	2.49E-04				
993	SLD 14	-2.3E-03	-69.372	SLD 3	-2.8E-03	-84.82	SLE RA 21	2.73E-04				
994	SLD 14	-2.3E-03	-69.11	SLD 3	-2.8E-03	-84.038	SLE RA 21	2.92E-04				
995	SLD 14	-2.3E-03	-67.572	SLD 3	-2.7E-03	-81.59	SLE RA 21	2.74E-04				
996	SLD 14	-2.2E-03	-65.268	SLE RA 21	-2.6E-03	-77.9	SLE RA 21	2.47E-04				
997	SLD 14	-2.1E-03	-62.913	SLE RA 21	-2.5E-03	-74.24	SLE RA 21	1.67E-04				
998	SLD 14	-2.0E-03	-61.018	SLE RA 21	-2.4E-03	-70.993	SLE RA 21	9.54E-05				
999	SLD 10	-2.0E-03	-59.781	SLE RA 21	-2.3E-03	-68.588	SLE RA 21	4.83E-05				
1000	SLD 10	-2.0E-03	-58.954	SLE RA 21	-2.2E-03	-67.276	SLE RA 21	2.54E-05				
1001	SLD 10	-2.0E-03	-59.144	SLE RA 21	-2.2E-03	-67.164	SLE RA 21	2.34E-05				
1002	SLD 6	-2.0E-03	-59.859	SLE RA 21	-2.3E-03	-68.239	SLE RA 21	4.02E-05				
1003	SLD 6	-2.0E-03	-61.347	SLE RA 21	-2.3E-03	-70.365	SLE RA 21	7.71E-05				
1004	SLD 2	-2.1E-03	-63.463	SLE RA 21	-2.4E-03	-73.262	SLE RA 21	1.35E-04				
1005	SLD 2	-2.2E-03	-65.313	SLE RA 21	-2.5E-03	-76.46	SLE RA 21	2.04E-04				
1006	SLD 2	-2.2E-03	-66.857	SLE RA 21	-2.6E-03	-79.238	SLE RA 21	0.000225				
1007	SLD 2	-2.2E-03	-67.273	SLD 15	-2.7E-03	-80.74	SLE RA 21	2.36E-04				
1008	SLD 2	-2.2E-03	-66.534	SLD 15	-0.00271	-81.3	SLE RA 21	2.13E-04				
1009	SLD 2	-2.2E-03	-64.598	SLD 15	-2.7E-03	-80.299	SLE RA 21	1.88E-04				
1010	SLD 2	-2.1E-03	-62.282	SLD 15	-2.6E-03	-78.782	SLE RA 21	1.27E-04				
1011	SLD 2	-2.0E-03	-60.215	SLD 15	-2.6E-03	-77.553	SLE RA 21	7.43E-05				
1012	SLD 2	-2.0E-03	-58.834	SLD 15	-2.6E-03	-77.171	SLE RA 21	3.96E-05				
1013	SLD 2	-1.9E-03	-58.424	SLD 15	-2.6E-03	-78.003	SLE RA 21	0.000034				
1014	SLD 2	-2.0E-03	-59.152	SLD 15	-2.7E-03	-80.256	SLE RA 21	3.76E-05				

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
1015	SLD 2	-2.0E-03	-61.072	SLD 15	-2.8E-03	-83.993	SLE RA 21	5.23E-05				
1016	SLD 2	-2.1E-03	-64.127	SLD 15	-3.0E-03	-89.126	SLE RA 21	8.31E-05				
1017	SLD 2	-2.3E-03	-68.117	SLD 15	-3.2E-03	-95.382	SLE RA 21	1.10E-04				
1018	SLD 2	-2.4E-03	-72.662	SLD 15	-3.4E-03	-102.276	SLE RA 21	1.17E-04				
1020	SLD 13	-2.4E-03	-73.142	SLD 4	-3.6E-03	-107.373	SLE RA 21	0.000143				
1022	SLD 14	-2.5E-03	-74.163	SLD 3	-3.8E-03	-114.038	SLE RA 21	7.46E-05				
1034	SLD 14	-2.4E-03	-73.473	SLD 3	-3.0E-03	-90.358	SLE RA 21	1.94E-04				
1036	SLD 14	-2.4E-03	-72.123	SLD 3	-2.9E-03	-88.25	SLE RA 21	1.91E-04				
1049	SLD 2	-2.4E-03	-71.795	SLE RA 21	-2.9E-03	-85.515	SLE RA 21	1.62E-04				
1051	SLD 2	-2.4E-03	-71.598	SLD 15	-2.9E-03	-86.882	SLE RA 21	1.61E-04				
1062	SLD 2	-2.5E-03	-73.685	SLD 15	-3.7E-03	-110.763	SLE RA 21	5.57E-05				

1.5 Baricentri delle rigidezze

Quota: *quota alla quale è stato valutato il baricentro delle rigidezze. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]*
Posizione: *posizione in pianta del baricentro delle rigidezze.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Baricentro masse: *posizione in pianta del baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Distanza: *distanza in pianta tra il baricentro delle rigidezze e il baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*

Quota	Posizione		Baricentro masse		Distanza	
	X	Y	X	Y	X	Y
Terra	-12.179	-4.055	-12.423	-3.304	0.244	-0.752
Rialzato	-12.189	1.125	-12.349	1.283	0.16	-0.158
Primo	-12.384	1.758	-12.337	3.499	-0.048	-1.74
Secondo	-12.475	1.029	-12.386	1.235	-0.089	-0.205
Terzo	-12.502	0.687	-12.377	1.235	-0.125	-0.548
Sottotetto	-12.464	0.403	-12.366	1.822	-0.098	-1.419

1.6 Risposta modale

Modo: *identificativo del modo di vibrare.*
Periodo: *periodo. [s]*
Massa X: *massa partecipante in direzione globale X. Il valore è adimensionale.*
Massa Y: *massa partecipante in direzione globale Y. Il valore è adimensionale.*
Massa Z: *massa partecipante in direzione globale Z. Il valore è adimensionale.*
Massa rot. X: *massa rotazionale partecipante attorno la direzione globale X. Il valore è adimensionale.*
Massa rot. Y: *massa rotazionale partecipante attorno la direzione globale Y. Il valore è adimensionale.*
Massa rot. Z: *massa rotazionale partecipante attorno la direzione globale Z. Il valore è adimensionale.*
Massa sX: *massa partecipante in direzione Sisma X. Il valore è adimensionale.*
Massa sY: *massa partecipante in direzione Sisma Y. Il valore è adimensionale.*

Totale masse partecipanti:

Traslazione X: 0.991566
Traslazione Y: 0.980843
Traslazione Z: 0
Rotazione X: 0.706501
Rotazione Y: 0.960694
Rotazione Z: 0.692526

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	1.387988694	0.000004176	0.000000001	0	0.000000001	0.000000417	0.000000684	0.000004176	0.000000001
2	1.256181269	0.000006733	0	0	0	0.000000879	0.000001038	0.000006733	0
3	1.134749983	0.001957641	0.000249627	0	0.000071743	0.000643589	0.000442943	0.001957641	0.000249627
4	1.041116403	0.001458363	0.001165299	0	0.000337585	0.000482248	0.000054684	0.001458363	0.001165299
5	1.001897385	0.000178277	0.000000002	0	0.000000013	0.00003817	0.00001906	0.000178277	0.000000002
6	0.963937025	0.000572556	0.003930261	0	0.001138021	0.000145076	0.009208678	0.000572556	0.003930261
7	0.944756211	0.001660849	0.003093762	0	0.000900666	0.000463367	0.000046245	0.001660849	0.003093762
8	0.9298101	0.00028595	0.00000007	0	0.000000109	0.000042979	0.000028761	0.00028595	0.00000007
9	0.915430141	0.000001412	0.000000067	0	0	0.00005294	0.000000791	0.000001412	0.000000067
10	0.875944715	0.000086815	0.000000006	0	0.000000009	0.000001415	0.000012087	0.000086815	0.000000006
11	0.860519562	0.000016769	0.000000107	0	0.000000184	0.000047196	0.000000037	0.000016769	0.000000107
12	0.802819532	0.000534086	0.000005196	0	0.000001561	0.000246008	0.000031919	0.000534086	0.000005196
13	0.799523182	0.000852762	0.000000101	0	0.00000005	0.000769398	0.0000346	0.000852762	0.000000101
14	0.768854117	0.000871338	0.000000024	0	0.000000016	0.0020908	0.000069065	0.000871338	0.000000024
15	0.731660996	0.007657075	0.000000019	0	0.000000034	0.011207526	0.000579573	0.007657075	0.000000019
16	0.715322169	0.000063544	0.000016338	0	0.000009053	0.000226613	0.000059844	0.000063544	0.000016338
17	0.684558178	0.00596922	0.00000001	0	0.000000415	0.005646374	0.000411697	0.00596922	0.00000001
18	0.627640866	0.000146367	0.010875094	0	0.003181298	0.000122121	0.007803635	0.000146367	0.010875094
19	0.626726899	0.017645661	0.000090154	0	0.000021171	0.014350939	0.000186544	0.017645661	0.000090154
20	0.578877317	0.018609738	0.000050089	0	0.000013406	0.013043772	0.000048804	0.018609738	0.000050089

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
21	0.577815343	0.000361064	0.003892237	0	0.001156466	0.000251834	0.002937235	0.000361064	0.003892237
22	0.522840733	0.004060011	0.000000836	0	0.000000928	0.005607304	0.000007605	0.004060011	0.000000836
23	0.498484793	0.000000771	0.002973766	0	0.00156467	0.000000124	0.001354605	0.000000771	0.002973766
24	0.432200139	0.014602627	0.000107727	0	0.000052384	0.014990916	0.000047814	0.014602627	0.000107727
25	0.424208996	0.000272693	0.008630886	0	0.003390341	0.000336529	0.007418666	0.000272693	0.008630886
26	0.352873488	0.09967467	0.000157853	0	0.000118561	0.092257103	0.000449679	0.09967467	0.000157853
27	0.336154833	0.000027839	0.052530226	0	0.050864151	0.000018922	0.034664712	0.000027839	0.052530226
28	0.309211352	0.370900558	0.000205284	0	0.000175671	0.455363948	0.002166486	0.370900558	0.000205284
29	0.293378567	0.000243654	0.106165649	0	0.104732778	0.000401387	0.079309675	0.000243654	0.106165649
30	0.243246444	0.288785198	0.000538211	0	0.000410887	0.320181963	0.000124294	0.288785198	0.000538211
31	0.220542134	0.000980021	0.073391002	0	0.042849317	0.000895104	0.05042693	0.000980021	0.073391002
32	0.161594632	0.022214927	0.000497883	0	0.000133203	0.001242466	0.000132326	0.022214927	0.000497883
33	0.136489869	0.000068248	0.545240343	0	0.330155439	0.000023246	0.366594982	0.000068248	0.545240343
34	0.097797206	0.00000967	0.167032227	0	0.165212151	0.000001214	0.127130174	0.00000967	0.167032227
35	0.076639338	0.130784285	0.000002819	0	0.000008502	0.019499879	0.000720007	0.130784285	0.000002819

1.7 Equilibrio globale forze

Contributo: Nome attribuito al sistema risultante.
Fx: Componente X di forza del sistema risultante. [kN]
Fy: Componente Y di forza del sistema risultante. [kN]
Fz: Componente Z di forza del sistema risultante. [kN]
*Mx: Componente di momento attorno l'asse X del sistema risultante. [kN*m]*
*My: Componente di momento attorno l'asse Y del sistema risultante. [kN*m]*
*Mz: Componente di momento attorno l'asse Z del sistema risultante. [kN*m]*

Bilancio in condizione di carico: Pesi strutturali

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	-0.42264	6.51539	-14293.76803	-14134.0044	-176816.1374	-78.5069
Reazioni	0.42264	-6.51539	14293.76803	14129.5926	176817.5651	78.5069
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-4.4118	1.4277	0

Bilancio in condizione di carico: Permanenti portati

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-2784.25614	-4329.2797	-34552.5319	0
Reazioni	0	0	2784.25614	4321.6257	34551.4872	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-7.6539	-1.0447	0

Bilancio in condizione di carico: Variabile A

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-1929.16719	-2525.2086	-23906.9314	0
Reazioni	0	0	1929.16719	2520.2151	23906.594	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-4.9935	-0.3374	0

Bilancio in condizione di carico: Neve

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-342.81634	-384.7313	-4263.1468	0
Reazioni	0	0	342.81634	385.1049	4261.9073	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.3736	-1.2395	0

Bilancio in condizione di carico: Variabile H

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-269.60923	-335.9307	-3349.0361	0
Reazioni	0	0	269.60923	334.9471	3348.387	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.9835	-0.6491	0

Bilancio in condizione di carico: Vento

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	27.91672	0	-248.4155	0	-445.4061
Reazioni	0	-27.91672	0	248.6472	-0.0134	445.4061
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.2317	-0.0134	0

Bilancio in condizione di carico: Sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	5589.28487	0	0	0	59995.0012	-6182.1743
Reazioni	-5589.28487	0	0	-76.2678	-59980.7688	6182.1743
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-76.2678	14.2324	0

Bilancio in condizione di carico: Sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	5221.98697	0	-56052.4507	0	-64804.631
Reazioni	0	-5221.98697	0	56045.5888	2.2348	64804.631
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-6.8618	2.2348	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-2670.5688
Reazioni	0	0	0	-1.4466	0.071	2670.5688
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-1.4466	0.071	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	1167.0504
Reazioni	0	0	0	0.6322	-0.031	-1167.0504
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.6322	-0.031	0

Bilancio in condizione di carico: Sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	2389.9353	0	0	0	25653.4019	-2643.4503
Reazioni	-2389.9353	0	0	-32.6115	-25647.3162	2643.4503
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-32.6115	6.0857	0

Bilancio in condizione di carico: Sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	2319.84799	0	-24901.0895	0	-28789.2125
Reazioni	0	-2319.84799	0	24898.0411	0.9928	28789.2125
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-3.0483	0.9928	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-1141.9147
Reazioni	0	0	0	-0.6185	0.0304	1141.9147
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.6185	0.0304	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	518.4577
Reazioni	0	0	0	0.2808	-0.0138	-518.4577
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0.2808	-0.0138	0

Bilancio in condizione di carico: Rig Ux

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0.01	0	0	0	0.1503	-0.0182
Reazioni	-0.01	0	0	-0.0002	-0.1503	0.0182
P-Delta	0	0	0	0	0	0
Totale	0	0	0	-0.0002	0	0

Bilancio in condizione di carico: Rig Uy

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0.01	0	-0.1503	0	-0.1237
Reazioni	0	-0.01	0	0.1503	0	0.1237
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Rz

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0.0001
Reazioni	0	0	0	0	0	-0.0001
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

1.8 Risposta di spettro

Spettro: condizione elementare corrispondente allo spettro.
N.b.: nome breve della condizione elementare.
Fx: componente della forza lungo l'asse X. [kN]
Fy: componente della forza lungo l'asse Y. [kN]
Fz: componente della forza lungo l'asse Z. [kN]
*Mx: componente della coppia attorno all'asse X. [kN*m]*
*My: componente della coppia attorno all'asse Y. [kN*m]*
*Mz: componente della coppia attorno all'asse Z. [kN*m]*
Max X: massima reazione lungo l'asse X.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Y: massima reazione lungo l'asse Y.
Valore: valore massimo della reazione. [kN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Z: massima reazione lungo l'asse Z.
Valore: valore massimo della reazione. [kN]

Angolo: *angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]*

Spettro	Fx	Fy	Fz	Mx	My	Mz	Max X		Max Y		Max Z	
N.b.							Valore	Angolo	Valore	Angolo	Valore	Angolo
SLV X	3661.549	89.1933	0	6.792E02	3.482E04	3.955E03	3661.692	178	3731.1473	90	0	0
SLV Y	89.1933	3731.1473	0	2.722E04	7.734E02	4.601E04	3661.692	178	3731.1473	90	0	0
X SLD	1565.7763	38.3602	0	2.920E02	1.488E04	1.690E03	1565.837	178	1650.2354	90	0	0
Y SLD	38.3602	1650.2354	0	1.202E04	3.315E02	2.035E04	1565.837	178	1650.2354	90	0	0

1.9 Annotazioni solutore

Informazioni: *informazioni fornite dal solutore al termine del calcolo del modello.*

Informazioni

1.10 Statistiche soluzione

Tipo di equazioni	Lineari
Tecnica di soluzione	Intel MKL PARDISO
Numero equazioni	101868
Elemento min. diagonale	705.64419331
Elemento max diagonale	135832250210736
Rapporto max/min	192493967211.443
Elementi non nulli	4353282

SIDEL
INGEGNERIA

TABULATI DI CALCOLO – VERIFICHE
CIVICO 41
STATO DI PROGETTO

Sommario

1 Verifiche 3
1.1 Verifica regolarità strutturale 3
1.2 Verifiche travate C.A. 6
1.3 Verifiche pareti C.A. 192
1.4 Verifiche piastre C.A. 201
1.5 Verifiche aste in legno 207
1.6 Verifiche superelementi in legno 453
1.7 Verifica sismica globale 506
1.8 Verifiche maschi in muratura 533
1.9 Verifiche travi di accoppiamento in muratura 909

1 Verifiche

1.1 Verifica regolarità strutturale

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Livello:
Descr: *descrizione livello.*
Quota: *quota livello. [m]*
Q: *quota livello. [m]*
Qinf: *quota livello precedente. [m]*
Comb: *combinazione.*
A1: *a1 (Distribuzione masse).*
A1n: *a1 numeratore (distanza tra centro massa vs. centro rigidezza [se presente] o centro dell'ingombro del piano). [m]*
A1d: *a1 denominatore (ingombro del piano nella medesima direzione [x o y globale]). [m]*
A1r: *a1 rapporto (distanza centro massa/rigidezza su ingombro del piano).*
A2: *a2 (Distribuzione rigidezze).*
A2n: *a2 numeratore (rigidezza max [x o y globale]).*
A2d: *a2 denominatore (rigidezza min [x o y globale]).*
A2r: *a2 rapporto (rigidezza max/min).*
A3: *a3 (Forma compatta).*
A3n: *a3 numeratore (area convessa). [m²]*
A3d: *a3 denominatore (area piano). [m²]*
A3r: *a3 rapporto (area convessa/area piano).*
B: *b (Rapporto lati).*
Bn: *b numeratore (lato max [x o y globale]). [m]*
Bd: *b denominatore (lato min [x o y globale]). [m]*
Br: *b rapporto (lato max/min).*
C: *c (Rapporto rigidezze piano).*
Cn: *c numeratore (rigidezza elementi verticali).*
Cd: *c denominatore (rigidezza piano).*
Cr: *c rapporto (rigidezza elementi verticali/rigidezza piano).*
E1: *e1 (Variazione masse).*
E1n: *e1 numeratore (massa max). [daN]*
E1d: *e1 denominatore (massa min). [daN]*
E1r: *e1 rapporto (massa max/min).*
E2: *e2 (Riduzione rigidezze).*
E2n: *e2 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E2d: *e2 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E2r: *e2 rapporto (variazione massima in decremento Kmax/Kmin).*
E3: *e3 (Incremento rigidezze).*
E3n: *e3 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E3d: *e3 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E3r: *e3 rapporto (variazione massima in incremento Kmax/Kmin).*
F: *f (Rapporto Capacità/Domanda).*
Fn: *f numeratore (rapporto capacità/domanda massimo [c/d max]). [daN]*
Fd: *f denominatore (rapporto capacità/domanda minimo [c/d min]). [daN]*
Fr: *f rapporto (variazione massima [rapporto (c/d max)/(c/d min)]).*
G1: *g1 (Rastremazione di piano).*
G1n: *g1 numeratore (L1). [m]*
G1d: *g1 denominatore (L2). [m]*
G1r: *g1 rapporto (L1/L2).*
G2: *g2 (Rastremazione totale).*
G2n: *g2 numeratore (L0). [m]*
G2d: *g2 denominatore (Li). [m]*
G2r: *g2 rapporto (L0/Li).*
Capacità/Domanda in X:
VrdX: *taglio resistente complessivo in direzione X. [daN]*
VedX: *taglio agente complessivo in direzione X). [daN]*
|Rd/Ed|: *|Rd/Ed| (rapporto capacità/domanda in termini di resistenza a taglio).*
Capacità/Domanda in Y:
VrdY: *taglio resistente complessivo in direzione Y. [daN]*
VedY: *taglio agente complessivo in direzione Y). [daN]*

Verifica regolarità strutturale

Controllo regolarità edificio secondo D.M. 17-01-18 (N.T.C.) §7.2.1 - §C7.2.1

Avvertenze

La seguente procedura valuta la regolarità della costruzione secondo quanto indicato nelle NTC 2018 §7.2.1.
Tali valutazioni sono a carattere puramente informativo e vengono condotte sulla base del modello e delle verifiche presenti alla sua generazione, con le limitazioni indicate nella manualistica.
In ogni caso l'impostazione di regolarità della costruzione, in pianta ed elevazione, va indicata nelle preferenze di analisi dall'utente utilizzatore del software.

Sintesi dei risultati

Orizzontamenti considerati nella valutazione
Livelli di fondazione o di struttura scatolare non dissipativa: Fondazione ascensore(L1), Fondazione(L2),
Livelli di elevazione considerati: Rialzato(L4), Primo(L5), Secondo(L6), Terzo(L7), Sottotetto(L8),

Regolarità in pianta - NO
L'edificio risulta NON regolare in pianta, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio A1 (Distribuzione masse) rispettato, con rapporto massimo 0,17 (limite=0,2) al livello Primo
N.V. - Criterio A2 (Distribuzione rigidezze) non valutabile al livello Rialzato
No - Criterio A3 (Forma compatta) NON rispettato, con rapporto massimo 1978460.2/1568733.8=1.3 (limite=1,05) al livello Primo
Ok - Criterio B (Rapporto lati) rispettato, con rapporto massimo 2,48 (limite=4) al livello Primo
Ok - Criterio C (Rapporto rigidezze piano) rispettato, con rapporto massimo 0 (limite=0,1) al livello Rialzato

Regolarità in altezza - NO
L'edificio risulta NON regolare in altezza, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio D (Altezza elementi sismoresistenti) rispettato, con rapporto massimo 1 (limite=1,01)
No - Criterio E1 (Variazione masse) NON rispettato, con rapporto massimo 172890.9/87373.1=2 (limite=1,25) tra il livello Primo ed il precedente
N.V. - Criterio E2 (Riduzione rigidezze) non valutabile tra il livello Primo ed il precedente
N.V. - Criterio E3 (Incremento rigidezze) non valutabile tra il livello Primo ed il precedente
No - Criterio F (Rapporto Capacità/Domanda) NON rispettato, con rapporto massimo 514.9/30.3=17 (limite=1) tra il livello Terzo ed il precedente
No - Criterio G1 (Rastremazione di piano) NON rispettato, con rapporto massimo 166/998=0.2 (limite=0,1) tra il livello Secondo ed il precedente
Ok - Criterio G2 (Rastremazione totale) rispettato, con rapporto massimo 0,01 (limite=0,3) tra il livello Terzo ed il precedente

Valori per piano

Verifiche di regolarità in pianta

Livello		A1			A2			A3			B			C		
Descr	Quota	A1n	A1d	A1r	A2n	A2d	A2r	A3n	A3d	A3r	Bn	Bd	Br	Cn	Cd	Cr
Rialzato	1.41	0.16	11.81	0.01				280.1458	255.2282	1.1	24.98	11.81	2.12	0	+∞	0
Primo	4.83	1.74	9.98	0.17				197.846	156.8734	1.26	24.78	9.98	2.48	0	+∞	0
Secondo	8.35	0.21	11.64	0.02				273.4594	258.49	1.06	24.78	11.64	2.13	0	+∞	0
Terzo	11.87	0.55	11.64	0.05				273.4594	254.3484	1.08	24.78	11.64	2.13	0	+∞	0
Sottotetto	15.03	1.42	11.74	0.12				275.6451	259.1989	1.06	24.89	11.73	2.12	0	+∞	0

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 16.59/16.59=0.01.

Livello			E1			E2			E3			F			G1			G2		
Descr	Q	Qinf	E1n	E1d	E1r	E2n	E2d	E2r	E3n	E3d	E3r	Fn	Fd	Fr	G1n	G1d	G1r	G2n	G2d	G2r
Primo	4.83	1.41	172891	87373	1.98							13.9	8.1	1.72	0.13	11.81	0.01	0.13	11.81	0.01
Secondo	8.35	4.83	141511	87373	1.62							514.9	33.8	15.25	1.66	9.98	0.17	0.13	11.81	0.01
Terzo	11.87	8.35	141511	141511	1							514.9	30.3	17	0	11.64	0	0.13	11.81	0.01
Sottotetto	15.03	11.87	190591	141511	1.35							182.8	51.7	3.54	0.04	11.64	0	0	0.01	0

Dettaglio delle resistenze di piano a taglio (per valutazione punto F)

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Rialzato	1.41	SLD 1	1316733	-143803	9.2	1111722	-20716	53.7
Rialzato	1.41	SLD 2	1316605	-143954	9.1	1111412	-20801	53.4
Rialzato	1.41	SLD 3	1316178	-142502	9.2	1111483	21358	52
Rialzato	1.41	SLD 4	1316153	-142654	9.2	1111184	21273	52.2
Rialzato	1.41	SLD 5	1315791	-45029	29.2	1115750	-70537	15.8
Rialzato	1.41	SLD 6	1315652	-45129	29.2	1115547	-70593	15.8
Rialzato	1.41	SLD 7	1323076	-40693	32.5	1114776	69708	16
Rialzato	1.41	SLD 8	1323144	-40793	32.4	1114600	69652	16
Rialzato	1.41	SLD 9	1316520	40957	32.1	1117704	-71155	15.7
Rialzato	1.41	SLD 10	1316589	40857	32.2	1117592	-71211	15.7
Rialzato	1.41	SLD 11	1323729	45293	29.2	1116613	69090	16.2
Rialzato	1.41	SLD 12	1323798	45193	29.3	1116404	69034	16.2
Rialzato	1.41	SLD 13	1318524	142818	9.2	1117521	-22776	49.1
Rialzato	1.41	SLD 14	1318775	142667	9.2	1117488	-22861	48.9
Rialzato	1.41	SLD 15	1320655	144119	9.2	1117502	19298	57.9
Rialzato	1.41	SLD 16	1320937	143967	9.2	1117181	19213	58.1
Rialzato	1.41	SLV 1	1305077	-336660	3.9	1104835	-45820	24.1
Rialzato	1.41	SLV 2	1304903	-337012	3.9	1104132	-46017	24
Rialzato	1.41	SLV 3	1312399	-333584	3.9	1104407	49347	22.4
Rialzato	1.41	SLV 4	1312281	-333936	3.9	1103762	49150	22.5
Rialzato	1.41	SLV 5	1306726	-105544	12.4	1114402	-158573	7
Rialzato	1.41	SLV 6	1306661	-105773	12.4	1114100	-158702	7
Rialzato	1.41	SLV 7	1327350	-95290	13.9	1112440	158649	7
Rialzato	1.41	SLV 8	1327507	-95520	13.9	1112075	158520	7
Rialzato	1.41	SLV 9	1311696	95684	13.7	1096914	-160023	6.9
Rialzato	1.41	SLV 10	1311698	95455	13.7	1118031	-160152	7
Rialzato	1.41	SLV 11	1327265	105938	12.5	1116818	157199	7.1
Rialzato	1.41	SLV 12	1327813	105708	12.6	1116398	157070	7.1
Rialzato	1.41	SLV 13	1303063	334100	3.9	1089454	-50653	21.5
Rialzato	1.41	SLV 14	1303675	333748	3.9	1089861	-50850	21.4
Rialzato	1.41	SLV 15	1307563	337176	3.9	1093332	44514	24.6

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Rialzato	1.41	SLV 16	1308146	336824	3.9	1093255	44317	24.7
Primo	4.83	SLD 1	692642	-123812	5.6	558322	-16459	33.9
Primo	4.83	SLD 2	692642	-123963	5.6	558339	-16544	33.7
Primo	4.83	SLD 3	692642	-123345	5.6	558188	16621	33.6
Primo	4.83	SLD 4	692642	-123497	5.6	558205	16536	33.8
Primo	4.83	SLD 5	692642	-37726	18.4	559949	-56031	10
Primo	4.83	SLD 6	692642	-37826	18.3	559959	-56087	10
Primo	4.83	SLD 7	692642	-36171	19.1	559101	54236	10.3
Primo	4.83	SLD 8	692642	-36272	19.1	559111	54180	10.3
Primo	4.83	SLD 9	692642	36550	19	559658	-56857	9.8
Primo	4.83	SLD 10	692642	36450	19	559657	-56913	9.8
Primo	4.83	SLD 11	692642	38104	18.2	559164	53410	10.5
Primo	4.83	SLD 12	692642	38004	18.2	559173	53354	10.5
Primo	4.83	SLD 13	692642	123775	5.6	558076	-19213	29
Primo	4.83	SLD 14	692642	123624	5.6	558074	-19297	28.9
Primo	4.83	SLD 15	692642	124241	5.6	557956	13867	40.2
Primo	4.83	SLD 16	692642	124090	5.6	557954	13783	40.5
Primo	4.83	SLV 1	670308	-289791	2.3	555502	-35365	15.7
Primo	4.83	SLV 2	670308	-290143	2.3	555541	-35562	15.6
Primo	4.83	SLV 3	680695	-288771	2.4	555189	39531	14
Primo	4.83	SLV 4	680695	-289123	2.4	555229	39334	14.1
Primo	4.83	SLV 5	692642	-88325	7.8	559416	-125104	4.5
Primo	4.83	SLV 6	692642	-88554	7.8	559442	-125232	4.5
Primo	4.83	SLV 7	686955	-84925	8.1	558375	124549	4.5
Primo	4.83	SLV 8	686955	-85155	8.1	558400	124421	4.5
Primo	4.83	SLV 9	692642	85433	8.1	559095	-127097	4.4
Primo	4.83	SLV 10	692642	85203	8.1	559092	-127226	4.4
Primo	4.83	SLV 11	692642	88833	7.8	558167	122556	4.6
Primo	4.83	SLV 12	692642	88603	7.8	558164	122427	4.6
Primo	4.83	SLV 13	686305	289401	2.4	555397	-42010	13.2
Primo	4.83	SLV 14	686121	289049	2.4	555393	-42207	13.2
Primo	4.83	SLV 15	685894	290421	2.4	555119	32886	16.9
Primo	4.83	SLV 16	685710	290069	2.4	555115	32689	17
Secondo	8.35	SLD 1	902898	-97742	9.2	535727	-4186	128
Secondo	8.35	SLD 2	902911	-97893	9.2	535718	-4270	125.4
Secondo	8.35	SLD 3	904252	-98065	9.2	535485	1125	476.2
Secondo	8.35	SLD 4	902752	-98216	9.2	535477	1040	514.9
Secondo	8.35	SLD 5	907604	-28708	31.6	536707	-10231	52.5
Secondo	8.35	SLD 6	907566	-28808	31.5	536706	-10287	52.2
Secondo	8.35	SLD 7	906672	-29784	30.4	535785	7470	71.7
Secondo	8.35	SLD 8	906635	-29884	30.3	535789	7414	72.3
Secondo	8.35	SLD 9	907277	30163	30.1	537241	-10090	53.2
Secondo	8.35	SLD 10	907239	30063	30.2	537239	-10147	52.9
Secondo	8.35	SLD 11	906345	29087	31.2	536230	7611	70.5
Secondo	8.35	SLD 12	906307	28987	31.3	536233	7555	71
Secondo	8.35	SLD 13	906575	98495	9.2	537451	-3716	144.6
Secondo	8.35	SLD 14	906506	98344	9.2	537463	-3801	141.4
Secondo	8.35	SLD 15	906299	98172	9.2	537193	1594	337
Secondo	8.35	SLD 16	906242	98021	9.2	537205	1509	355.9
Secondo	8.35	SLV 1	882236	-228564	3.9	533787	-7654	69.7
Secondo	8.35	SLV 2	882266	-228916	3.9	532600	-7851	67.8
Secondo	8.35	SLV 3	868269	-229331	3.8	533238	4099	130.1
Secondo	8.35	SLV 4	868393	-229684	3.8	533219	3902	136.6
Secondo	8.35	SLV 5	906450	-67245	13.5	528704	-21025	25.1
Secondo	8.35	SLV 6	897182	-67475	13.3	527413	-21153	24.9
Secondo	8.35	SLV 7	894673	-69804	12.8	502568	18154	27.7
Secondo	8.35	SLV 8	894587	-70034	12.8	502728	18026	27.9
Secondo	8.35	SLV 9	907257	70313	12.9	530857	-20702	25.6
Secondo	8.35	SLV 10	907151	70083	12.9	529940	-20831	25.4
Secondo	8.35	SLV 11	899746	67754	13.3	508460	18477	27.5
Secondo	8.35	SLV 12	899660	67524	13.3	523055	18348	28.5
Secondo	8.35	SLV 13	897174	229963	3.9	537688	-6579	81.7
Secondo	8.35	SLV 14	896163	229611	3.9	537716	-6776	79.4
Secondo	8.35	SLV 15	886133	229195	3.9	537106	5175	103.8
Secondo	8.35	SLV 16	891374	228843	3.9	537133	4978	107.9
Terzo	11.87	SLD 1	902754	-60119	15	565378	16040	35.2
Terzo	11.87	SLD 2	902732	-60270	15	565392	15956	35.4
Terzo	11.87	SLD 3	902483	-59944	15.1	565212	-18581	30.4
Terzo	11.87	SLD 4	902461	-60095	15	565226	-18665	30.3
Terzo	11.87	SLD 5	910362	-18176	50.1	565664	56400	10
Terzo	11.87	SLD 6	910347	-18276	49.8	565674	56344	10
Terzo	11.87	SLD 7	909458	-17593	51.7	565110	-59005	9.6
Terzo	11.87	SLD 8	909443	-17693	51.4	565120	-59061	9.6
Terzo	11.87	SLD 9	910243	17972	50.6	565741	56384	10
Terzo	11.87	SLD 10	910228	17872	50.9	565750	56328	10
Terzo	11.87	SLD 11	909339	18555	49	565187	-59020	9.6
Terzo	11.87	SLD 12	909324	18455	49.3	565197	-59076	9.6
Terzo	11.87	SLD 13	909791	60374	15.1	565634	15989	35.4
Terzo	11.87	SLD 14	909768	60223	15.1	565649	15904	35.6
Terzo	11.87	SLD 15	909520	60549	15	565468	-18632	30.3
Terzo	11.87	SLD 16	909497	60398	15.1	565483	-18717	30.2
Terzo	11.87	SLV 1	861137	-140566	6.1	556094	38082	14.6
Terzo	11.87	SLV 2	861726	-140918	6.1	556128	37885	14.7
Terzo	11.87	SLV 3	844288	-140180	6	555718	-40417	13.7
Terzo	11.87	SLV 4	861069	-140532	6.1	555752	-40614	13.7
Terzo	11.87	SLV 5	896384	-42595	21	548348	129579	4.2
Terzo	11.87	SLV 6	896350	-42825	20.9	548273	129450	4.2
Terzo	11.87	SLV 7	894640	-41309	21.7	537936	-132084	4.1

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Terzo	11.87	SLV 8	894606	-41539	21.5	524760	-132212	4
Terzo	11.87	SLV 9	904273	41818	21.6	543183	129535	4.2
Terzo	11.87	SLV 10	904239	41588	21.7	543195	129407	4.2
Terzo	11.87	SLV 11	896229	43104	20.8	535662	-132127	4.1
Terzo	11.87	SLV 12	896195	42874	20.9	535971	-132255	4.1
Terzo	11.87	SLV 13	880131	140811	6.3	565902	37937	14.9
Terzo	11.87	SLV 14	879375	140459	6.3	565936	37740	15
Terzo	11.87	SLV 15	881967	141197	6.2	565525	-40561	13.9
Terzo	11.87	SLV 16	885751	140845	6.3	565559	-40758	13.9
Sottotetto	15.03	SLD 1	718019	-14081	51	542479	24685	22
Sottotetto	15.03	SLD 2	718025	-14232	50.5	542248	24606	22
Sottotetto	15.03	SLD 3	711511	-14017	50.8	537493	-26837	20
Sottotetto	15.03	SLD 4	711517	-14168	50.2	537630	-26916	20
Sottotetto	15.03	SLD 5	728910	-4195	173.8	548011	84446	6.5
Sottotetto	15.03	SLD 6	728914	-4295	169.7	547933	84393	6.5
Sottotetto	15.03	SLD 7	728082	-3982	182.8	541965	-87294	6.2
Sottotetto	15.03	SLD 8	728087	-4082	178.3	541984	-87346	6.2
Sottotetto	15.03	SLD 9	735015	4365	168.4	536528	84159	6.4
Sottotetto	15.03	SLD 10	735019	4265	172.4	536755	84106	6.4
Sottotetto	15.03	SLD 11	728667	4577	159.2	542778	-87581	6.2
Sottotetto	15.03	SLD 12	728671	4477	162.8	542798	-87633	6.2
Sottotetto	15.03	SLD 13	726618	14450	50.3	531278	23728	22.4
Sottotetto	15.03	SLD 14	726624	14299	50.8	531160	23649	22.5
Sottotetto	15.03	SLD 15	726370	14514	50	552006	-27794	19.9
Sottotetto	15.03	SLD 16	726376	14363	50.6	552073	-27873	19.8
Sottotetto	15.03	SLV 1	685755	-32950	20.8	528333	57955	9.1
Sottotetto	15.03	SLV 2	685726	-33300	20.6	528272	57771	9.1
Sottotetto	15.03	SLV 3	678477	-32811	20.7	526951	-58738	9
Sottotetto	15.03	SLV 4	678745	-33161	20.5	526863	-58922	8.9
Sottotetto	15.03	SLV 5	715224	-9935	72	501667	193287	2.6
Sottotetto	15.03	SLV 6	715233	-10163	70.4	501494	193167	2.6
Sottotetto	15.03	SLV 7	702424	-9472	74.2	540813	-195688	2.8
Sottotetto	15.03	SLV 8	708646	-9701	73	540817	-195808	2.8
Sottotetto	15.03	SLV 9	729118	9983	73	514347	192621	2.7
Sottotetto	15.03	SLV 10	729128	9755	74.7	513523	192501	2.7
Sottotetto	15.03	SLV 11	717734	10446	68.7	521065	-196354	2.7
Sottotetto	15.03	SLV 12	717627	10217	70.2	520597	-196474	2.6
Sottotetto	15.03	SLV 13	707991	33444	21.2	532961	55734	9.6
Sottotetto	15.03	SLV 14	707914	33093	21.4	532758	55550	9.6
Sottotetto	15.03	SLV 15	704646	33582	21	508228	-60958	8.3
Sottotetto	15.03	SLV 16	704652	33232	21.2	507184	-61142	8.3

1.2 Verifiche travate C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

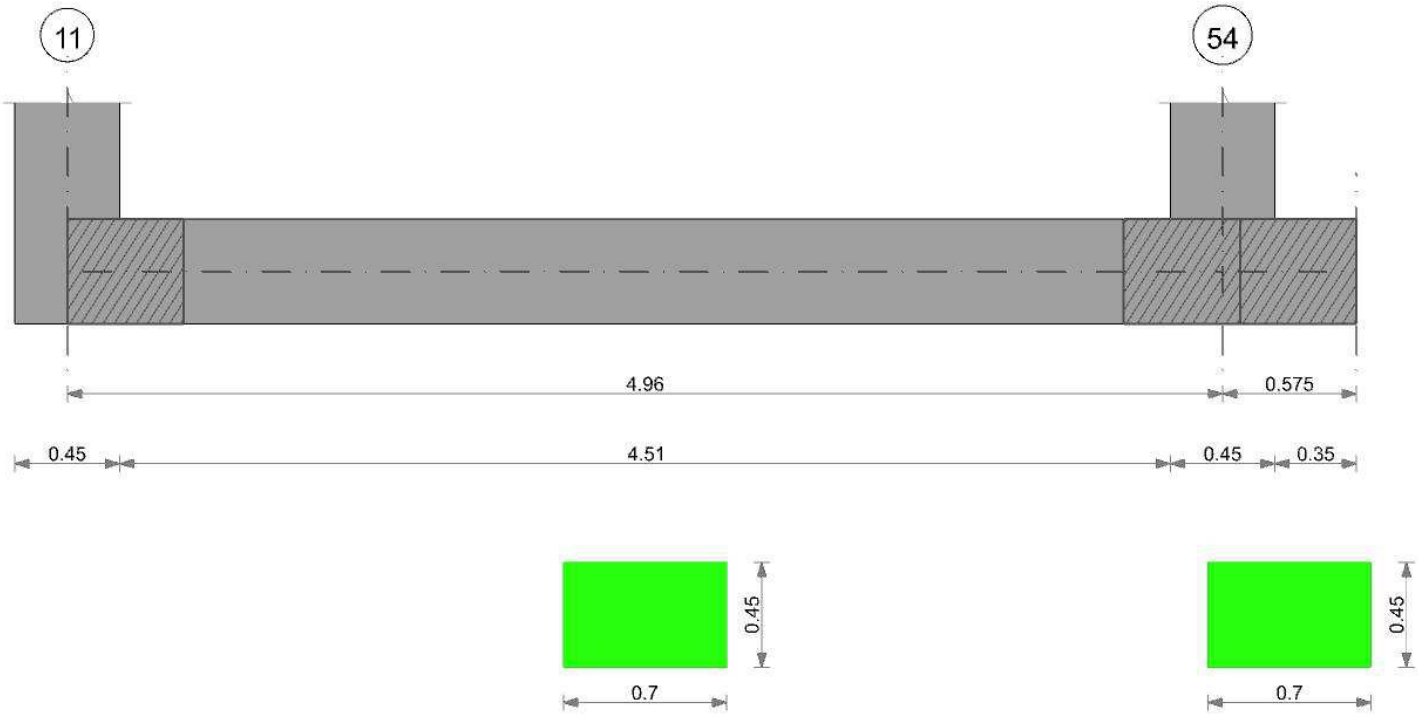
N°: *indice progressivo della sezione.*
Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Copriferro sup.: *distanza del bordo della staffa dalla superficie superiore del getto. [m]*
Copriferro inf.: *distanza del bordo della staffa dalla superficie inferiore del getto. [m]*
Copriferro lat.: *distanza del bordo della staffa dalle superfici laterali del getto. [m]*
x: *distanza da asse appoggio sinistro. [m]*
A sup.: *area efficace di armatura longitudinale superiore. [m²]*
C.b. sup.: *distanza dal bordo del baricentro dell'armatura longitudinale superiore. [m]*
A inf.: *area efficace di armatura longitudinale inferiore. [m²]*
C.b. inf.: *distanza dal bordo del baricentro dell'armatura longitudinale inferiore. [m]*
M+ela: *momento flettente desunto dal solutore che tende le fibre inferiori. [daN*m]*
Comb.: *combinazione.*
M+des: *momento flettente di progetto che tende le fibre inferiori. [daN*m]*
M+ult: *momento ultimo per trazione delle fibre inferiori. [daN*m]*
x/d: *rapporto tra posizione asse neutro e altezza utile.*
coeff: *coefficiente di sicurezza.*
M-ela: *momento flettente desunto dal solutore che tende le fibre superiori. [daN*m]*
M-des: *momento flettente di progetto che tende le fibre superiori. [daN*m]*
M-ult: *momento ultimo per trazione delle fibre superiori. [daN*m]*
Verifica: *stato di verifica.*
A st: *area di staffe per unità di lunghezza. [m²]*
A sl: *area di armatura longitudinale tesa per valutazione resistenza taglio in assenza di armature a taglio. [m²]*
A sag: *area equivalente di barre piegate per unità di lunghezza. [m²]*
Vela: *taglio elastico. [daN]*
Vdes: *taglio di progetto. [daN]*
Vrd: *resistenza a taglio della sezione senza armature. [daN]*
Vrcd: *sforzo di taglio che produce il cedimento delle bielle. [daN]*

Vrsd: *resistenza a taglio per la presenza delle armature. [daN]*
Vult: *taglio ultimo. [daN]*
cotgϑ: *cotg dell'angolo di inclinazione dei puntoni in calcestruzzo.*
Rara: *famiglia di combinazione di verifica.*
Mela: *momento elastico. [daN*m]*
Mdes: *momento di progetto. [daN*m]*
σ c: *tensione di compressione nel calcestruzzo. [daN/m²]*
σ c lim.: *tensione limite di compressione nel calcestruzzo. [daN/m²]*
σ f.: *tensione di trazione nell'acciaio. [daN/m²]*
σ f lim.: *tensione limite di trazione nell'acciaio. [daN/m²]*
σ c limite: *tensione di compressione limite nel calcestruzzo. [daN/m²]*
σ f: *tensione di trazione nell'acciaio. [daN/m²]*
σ f limite: *tensione di trazione limite nell'acciaio. [daN/m²]*
Quasi permanente: *famiglia di combinazione di verifica.*
σ FRP: *tensione di trazione nell'FRP. [daN/m²]*
σ FRP lim.: *tensione limite di trazione nell'FRP. [daN/m²]*
d: *altezza utile. [m]*
Af: *area di armatura inferiore per unità di lunghezza. [m]*
M: *momento flettente. [daN*m/m]*
Comb: *combinazione.*
Mult: *momento ultimo. [daN*m/m]*
V: *sforzo di taglio. [daN/m]*
Vult: *sforzo di taglio ultimo. [daN/m]*
Af: *area di armatura. [m²]*
Size X: *misura dell'impronta al suolo lungo X. [m]*
Size Y: *misura dell'impronta al suolo lungo Y. [m]*
Sis.: *indicazione combinazione sismica.*
Cnd: *indicazione condizione di carico (BT breve termine o LT lungo termine).*
Fx: *componente orizzontale del carico lungo x. [daN]*
Fy: *componente orizzontale del carico lungo y. [daN]*
Fz: *componente verticale del carico. [daN]*
IncX: *inclinazione del carico lungo x. [deg]*
IncY: *inclinazione del carico lungo y. [deg]*
Phi: *angolo di attrito di progetto. [deg]*
Ad: *adesione di progetto. [daN/m²]*
RPl: *resistenza passiva laterale unitaria di progetto. [daN/m]*
γR: *coefficiente parziale sulla resistenza di progetto.*
Rd: *resistenza di progetto. [daN]*
Ed: *azione di progetto. [daN]*
Rd/Ed: *coefficiente di sicurezza allo scorrimento.*
Aste: *numero delle aste del tratto in verifica.*
Size X: *misura dell'impronta al suolo lungo la direzione X locale. [m]*
Size Y: *misura dell'impronta al suolo lungo la direzione Y locale. [m]*
Type: *indicazione del tipo di combinazione statica o sismica.*
Cond: *indicazione della condizione di carico (BT breve termine o LT lungo termine).*
Rd/Ed: *coefficiente di sicurezza alla capacità portante.*
Mx: *momento risultante agente attorno x. [daN*m]*
My: *momento risultante agente attorno y. [daN*m]*
Inc.x: *inclinazione del carico lungo x. [deg]*
Inc.y: *inclinazione del carico lungo y. [deg]*
Ecc.x: *eccentricità del carico lungo x. [m]*
Ecc.y: *eccentricità del carico lungo y. [m]*
B': *larghezza efficace. [m]*
L': *lunghezza efficace. [m]*
qd: *sovraccarico di progetto. [daN/m²]*
γs: *peso specifico di progetto del suolo. [daN/m³]*
Fi: *angolo di attrito di progetto. [deg]*
Coes: *coesione di progetto. [daN/m²]*
Amax: *accelerazione normalizzata max al suolo.*
N:
Nq: *fattore di capacità portante per il termine di sovraccarico.*
Nc: *fattore di capacità portante per il termine coesivo.*
Ng: *fattore di capacità portante per il termine attritivo.*
S:
Sq: *fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.*
Sc: *fattore correttivo di capacità portante per forma (shape), per il termine coesivo.*
Sg: *fattore correttivo di capacità portante per forma (shape), per il termine attritivo.*
D:
Dq: *fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.*
Dc: *fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.*
Dg: *fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.*
I:

Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.
Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.
Tipo: tipologia di cedimento considerato (E = elastico, D = edometrico, Z = consolidazione primaria).
Assoluto: cedimento assoluto massimo.
Sa adm: cedimento assoluto ammissibile. [m]
Sa: cedimento assoluto massimo. [m]
Nodo: nodo dove avviene il cedimento assoluto massimo.
Differenziale: cedimento differenziale massimo.
Sd adm: cedimento differenziale ammissibile. [m]
Sd: cedimento differenziale massimo. [m]
Nodo I: nodo dove avviene il cedimento differenziale massimo.
Nodo j: nodo dove avviene il cedimento differenziale massimo.
Relativo: cedimento relativo massimo.
Sr adm: cedimento relativo ammissibile. [m]
Sr: cedimento relativo massimo. [m]
Nodo: nodo dove avviene il cedimento relativo massimo.
Rapp. inflessione: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).
RI adm: rapporto di inflessione ammissibile.
RI: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).
Rotazione rigida: rotazione rigida valutata tra primo ed ultimo punto.
RR adm: rotazione rigida ammissibile. [deg]
RR: rotazione rigida massima (tra primo ed ultimo punto). [deg]
Rotazione assoluta: rotazione assoluta dei singoli tratti.
R Adm: rotazione assoluta ammissibile. [deg]
R Max: rotazione assoluta massima. [deg]
Nodo I: dal nodo.
Nodo J: al nodo.
Distorsione angolare positiva: distorsione angolare positiva (concavità verso l'alto).
D+ adm: distorsione angolare ammissibile. [deg]
D+: distorsione angolare massima positiva (concavità verso l'alto). [deg]
Nodo: nodo dove avviene la distorsione angolare massima positiva (concavità verso l'alto).
Distorsione angolare negativa: distorsione angolare negativa (concavità verso il basso).
D- adm: distorsione angolare ammissibile. [deg]
D-: distorsione angolare massima negativa (concavità verso il basso). [deg]
Nodo: nodo dove avviene la distorsione angolare massima negativa (concavità verso il basso).
Bordo: bordo interessato dalla fessura.
Rara: famiglia di combinazione per verifica inferiore.
Dmax: distanza massima tra le fessure. [m]
Esm: dilatazione media delle barre di armatura.
Wd: valore di calcolo di apertura delle fessure. [m]
Frequente: famiglia di combinazione per verifica inferiore.
Quasi permanente: famiglia di combinazione per verifica inferiore.
Frequente: famiglia di combinazione di verifica.

CORDOLO 1

Geometria



Caratteristiche dei materiali

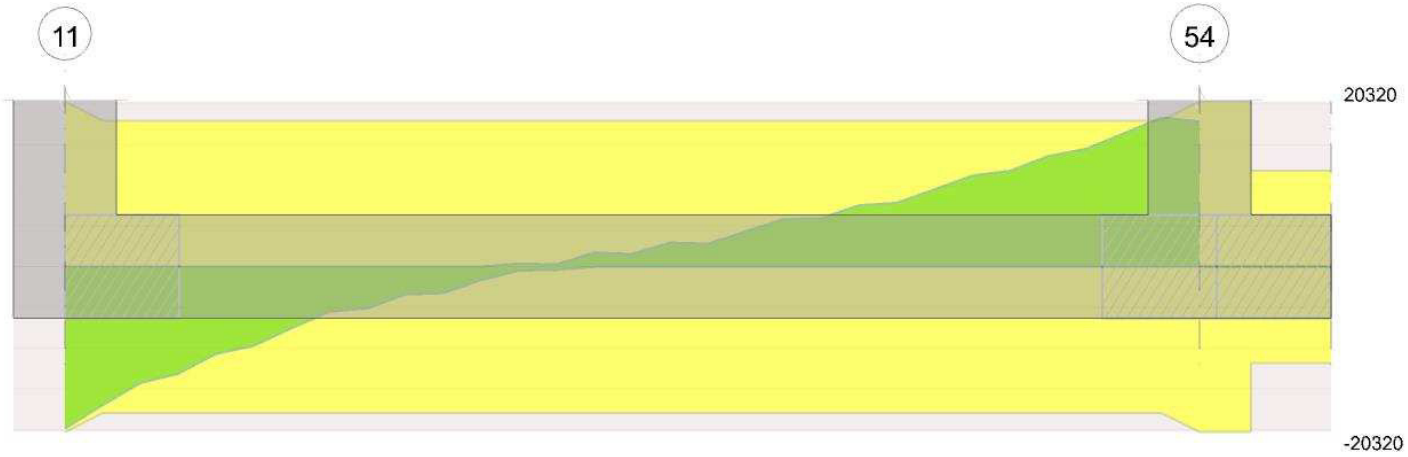
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 11 - 54, sezione R 70x45, aste 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.001018	0.052	0.000763	0.052							-4385.88	SLU 84	-5803.91	-15057.39	0.129	2.59	Si
2.48	0.001018	0.052	0.000763	0.052							-8657.24	SLU 84	-8914.09	-15057.39	0.129	1.69	Si
4.74	0.001018	0.052	0.000763	0.052	4805.39	SLU 83	4805.39	11571.27	0.119	2.41							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.001018	0.052	0.000763	0.052							-4999.47	SLV 4	-6540.64	-14321.38	0.232	2.19	Si
2.48	0.001018	0.052	0.000763	0.052							-9595.72	SLV 4	-9797.06	-14321.38	0.232	1.46	Si
4.74	0.001018	0.052	0.000763	0.052	5976.44	SLV 16	5976.44	10866.85	0.2	1.82	543.33	SLV 1	-1639.78	-14321.38	0.232	8.73	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.001018	0.052	0.000763	0.052							-3841.88	SLD 4	-5050.85	-14321.38	0.232	2.84	Si
2.48	0.001018	0.052	0.000763	0.052							-7454.49	SLD 4	-7641.1	-14321.38	0.232	1.87	Si
4.74	0.001018	0.052	0.000763	0.052	4421.76	SLD 16	4421.76	10866.85	0.2	2.46							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000128	0.001018	0	-17957	SLU 84	-17957	-12624	-100005	-20320	-20320	1	1.13	Si
0.23	0.0000128	0.001018	0	-14655	SLU 84	-14655	-11926	-88449	-17972	-17972	1	1.23	Si
2.48	0.0000128	0.001018	0	1366	SLU 84	1366	11926	88449	17972	17972	1	13.15	Si
4.74	0.0000128	0.000763	0	17628	SLU 84	17628	10870	88449	17972	17972	1	1.02	Si
4.79	0.0000128	0.000763	0	18335	SLU 84	18335	10870	88449	17972	17972	1	0.98	Si
4.96	0.0000128	0.000763	0	17848	SLU 84	17848	11837	100005	20320	20320	1	1.14	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000128	0.001018	0	-19886	SLV 4	-19886	-12624	-100005	-20320	-20320	1	1.02	Si
0.23	0.0000128	0.001018	0	-16009	SLV 4	-16009	-11926	-88449	-17972	-17972	1	1.12	Si
2.48	0.0000128	0.001018	0	1555	SLV 4	1555	11926	88449	17972	17972	1	11.56	Si
4.74	0.0000128	0.000763	0	14715	SLV 4	14715	10870	88449	17972	17972	1	1.22	Si
4.96	0.0000128	0.000763	0	15320	SLV 4	15320	11837	100005	20320	20320	1	1.33	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000128	0.001018	0	-15470	SLD 4	-15470	-12624	-100005	-20320	-20320	1	1.31	Si
0.23	0.0000128	0.001018	0	-12529	SLD 4	-12529	-11926	-88449	-17972	-17972	1	1.43	Si
2.48	0.0000128	0.001018	0	1199	SLD 4	1199	11926	88449	17972	17972	1	14.98	Si
4.74	0.0000128	0.000763	0	13109	SLD 4	13109	10870	88449	17972	17972	1	1.37	Si
4.96	0.0000128	0.000763	0	13447	SLD 4	13447	11837	100005	20320	20320	1	1.51	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-629.82	20	-629.82	-26659	1494000	0	36000000	-581.1	2	-581.1	-24597	1120500			Si
0.23	-3239.63	21	-4286.47	159100	1494000	2345849	36000000	-2976.63	2	-3936.93	146126	1120500			Si
2.48	-6387.72	21	-6577.86	244148	1494000	3599855	36000000	-5850.04	2	-6025.78	223657	1120500			Si
4.74	3548.16	20	3548.16	129453	1494000	1975436	36000000	3259.88	2	3259.88	118935	1120500			Si
4.96	4748	20	4748	200974	1494000	0	36000000	4358.2	2	4358.2	184474	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.19	1.3	SLU 2	ST	LT	1002	374	-42281	1	1	19	0	0	1.1	12861	1069	12.03	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
521,522,523,524,525,526,527,528,529,530,531,532,533	5.19	1.3	SLU 84	ST	BT	2.3	221775	64592	3.43	Si
521,522,523,524,525,526,527,528,529,530,531,532,533	5.19	1.3	SLV 4	SIS	BT	2.3	187480	61188	3.06	Si
521,522,523,524,525,526,527,528,529,530,531,532,533	5.19	1.3	SLD 4	SIS	BT	2.3	204781	51795	3.95	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	401	-64592	-8046.6	-3728.62	0	0	-0.06	-0.12	1.05	5.07	1496	2060	0	14430	
0	2970	-61188	-9633.32	-17347.3	0	3	-0.28	-0.16	0.99	4.62	1496	2060	0	14430	0.07
0	1456	-51795	-7252.66	-8919.39	0	2	-0.17	-0.14	1.02	4.84	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

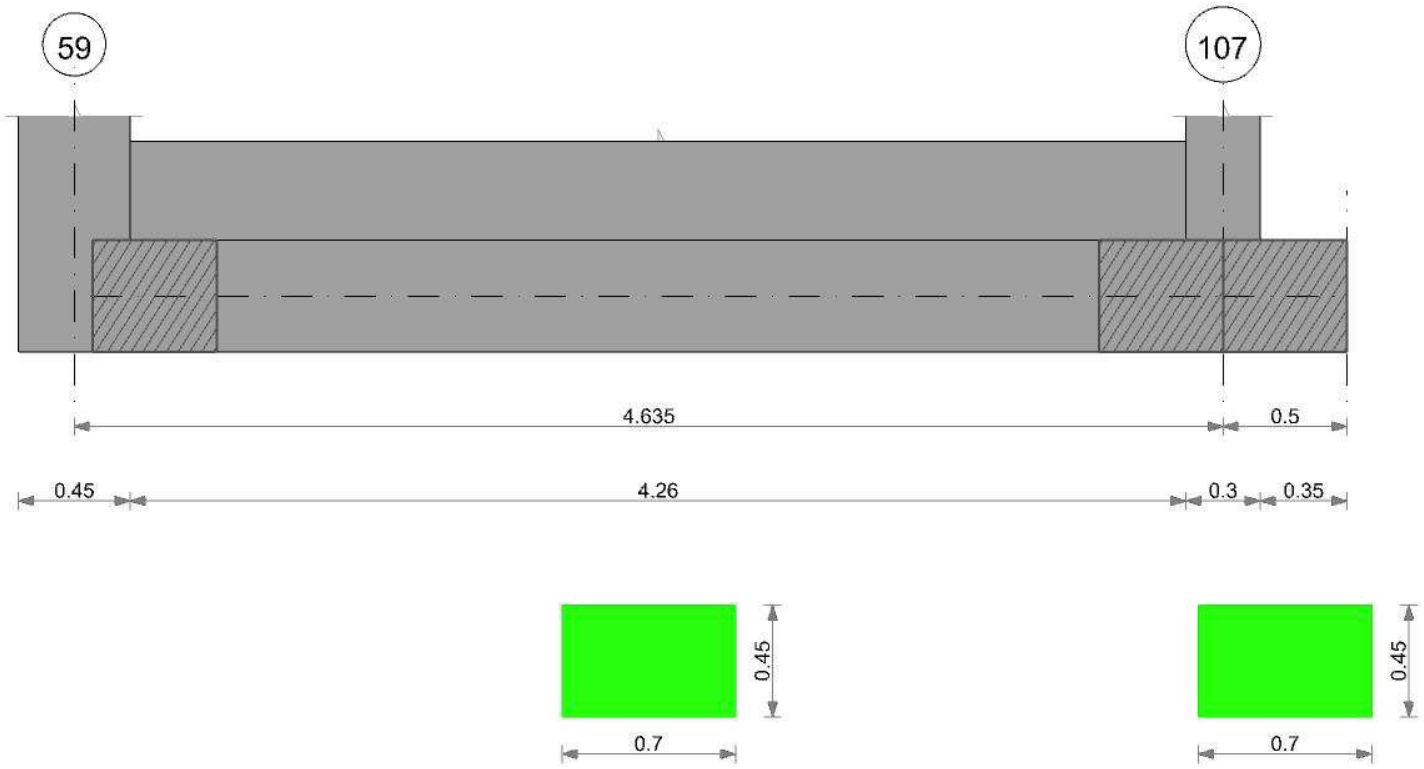
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	904	SLE RA 21	0.05	0	904	891	SLE RA 21	0.05	0	904	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	904	SLE RA 1	0.05	0	904	904	SLE RA 1	0.05	0	904	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	904	SLE RA 1	0.05	0	904	904	SLE RA 1	0.05	0	904	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	904	891	SLE RA 21	0.19	0	904	SLE RA 1	0.1	0	904	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	904	891	SLE RA 1	0.19	0	904	SLE RA 1	0.1	0	904	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	904	891	SLE RA 1	0.19	0	904	SLE RA 1	0.1	0	904	SLE RA 1	Si

CORDOLO 2

Geometria



Caratteristiche dei materiali

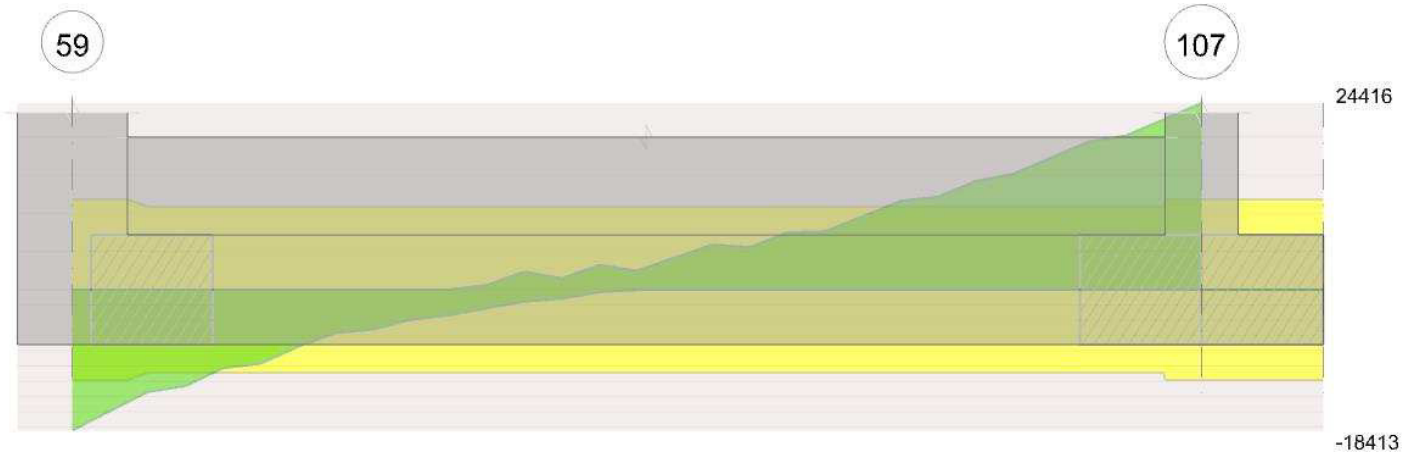
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 59 - 107, sezione R 70x45, aste 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3691	SLV 4	0.119	5227	9526	SLV 4	15877	Si
0.23	0.41	0.0003	3492	SLV 4	0.119	5227	9067	SLU 84	15877	Si
2.32	0.41	0.0003	2662	SLU 84	0.029	5426	6869	SLU 84	15877	Si
4.49	0.41	0.0003	2978	SLU 84	0.029	5426	7686	SLU 84	15877	Si
4.64	0.41	0.0003	2957	SLU 84	0.029	5426	7632	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2983	SLD 4	0.098	6064	7699	SLD 4	15877	Si
0.23	0.41	0.0003	2838	SLD 4	0.098	6064	7324	SLD 4	15877	Si
2.32	0.41	0.0003	2048	SLD 3	0.098	6064	5285	SLD 3	15877	Si
4.49	0.41	0.0003	2203	SLD 3	0.098	6064	5686	SLD 3	15877	Si
4.64	0.41	0.0003	2186	SLD 3	0.098	6064	5641	SLD 3	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000341	2697	SLE RA 21	76359	1494000	946853	36000000	2454	SLE QP 2	69459	1120500	Si
0.23	0.41	0.00000341	2583	SLE RA 21	73121	1494000	906703	36000000	2349	SLE QP 2	66491	1120500	Si
2.32	0.41	0.00000341	1953	SLE RA 21	55297	1494000	685688	36000000	1768	SLE QP 2	50064	1120500	Si
4.49	0.41	0.00000341	2185	SLE RA 21	61850	1494000	766938	36000000	1976	SLE QP 2	55931	1120500	Si
4.64	0.41	0.00000341	2169	SLE RA 21	61414	1494000	761537	36000000	1962	SLE QP 2	55536	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.86	1.3	SLU 10	ST	LT	687	104	-52968	1	0	19	0	0	1.1	16112	695	23.19	Si
4.86	1.3	SLV 14	SIS	LT	10893	-1094	-36054	17	-2	19	0	0	1.1	10967	10948	1	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
544,545,546,547,548,549,550,551,552,553,554,555	4.86	1.3	SLU 84	ST	BT	2.3	226556	73687	3.07	Si
544,545,546,547,548,549,550,551,552,553,554,555	4.86	1.3	SLV 4	SIS	BT	2.3	196359	65142	3.01	Si
544,545,546,547,548,549,550,551,552,553,554,555	4.86	1.3	SLD 4	SIS	BT	2.3	211766	56815	3.73	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	49	-73687	-6167.97	-3063.92	0	0	-0.04	-0.08	1.13	4.78	1496	2060	0	14430	
0	1732	-65142	-8242.02	-11311.87	0	2	-0.17	-0.13	1.05	4.51	1496	2060	0	14430	0.07
0	788	-56815	-5913.15	-6082.63	0	1	-0.11	-0.1	1.09	4.65	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

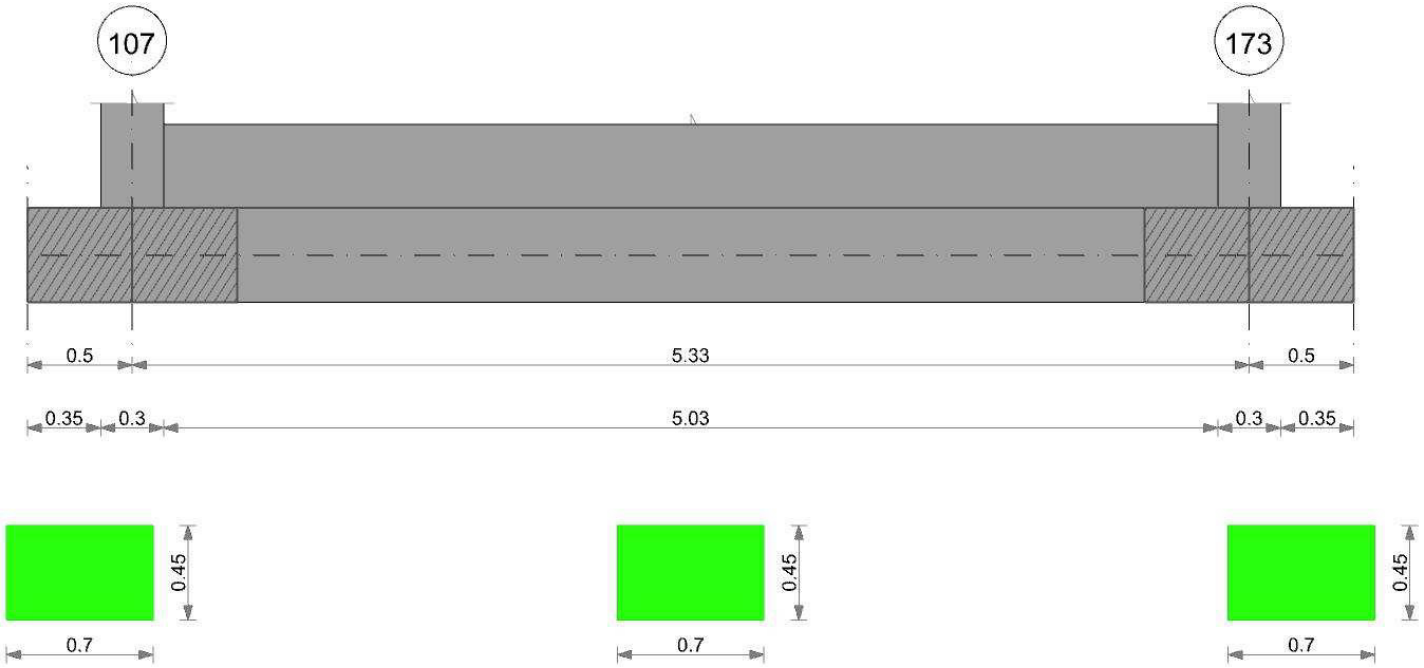
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	994	SLE RA 21	0.05	0	994	982	SLE RA 21	0.05	0	994	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	994	SLE RA 1	0.05	0	994	994	SLE RA 1	0.05	0	994	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	994	SLE RA 1	0.05	0	994	994	SLE RA 1	0.05	0	994	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	994	982	SLE RA 21	0.19	0	994	SLE RA 1	0.1	0	994	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	994	982	SLE RA 1	0.19	0	994	SLE RA 1	0.1	0	994	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	994	982	SLE RA 1	0.19	0	994	SLE RA 1	0.1	0	994	SLE RA 1	Si

CORDOLO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

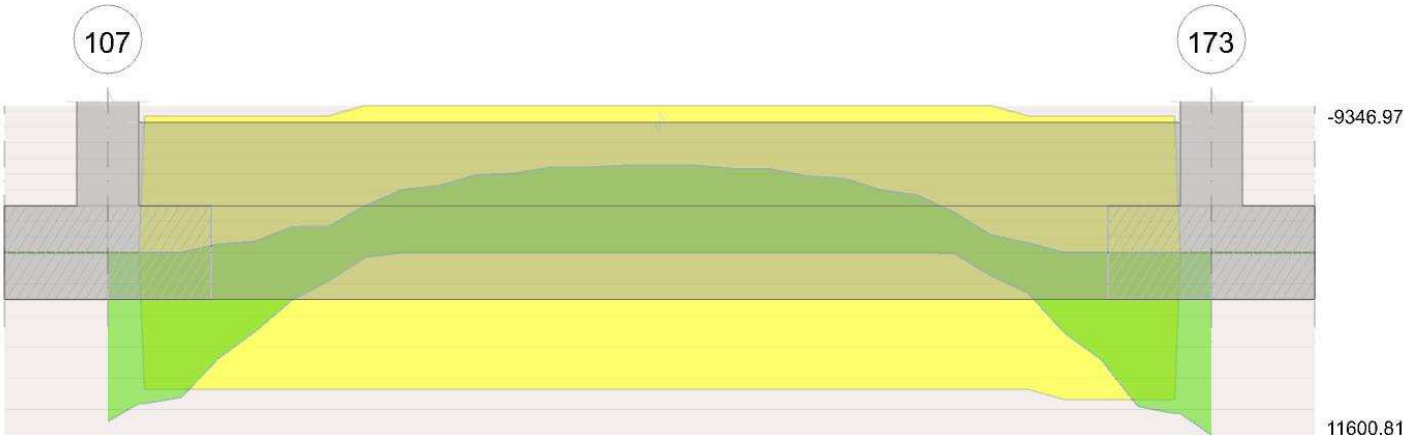
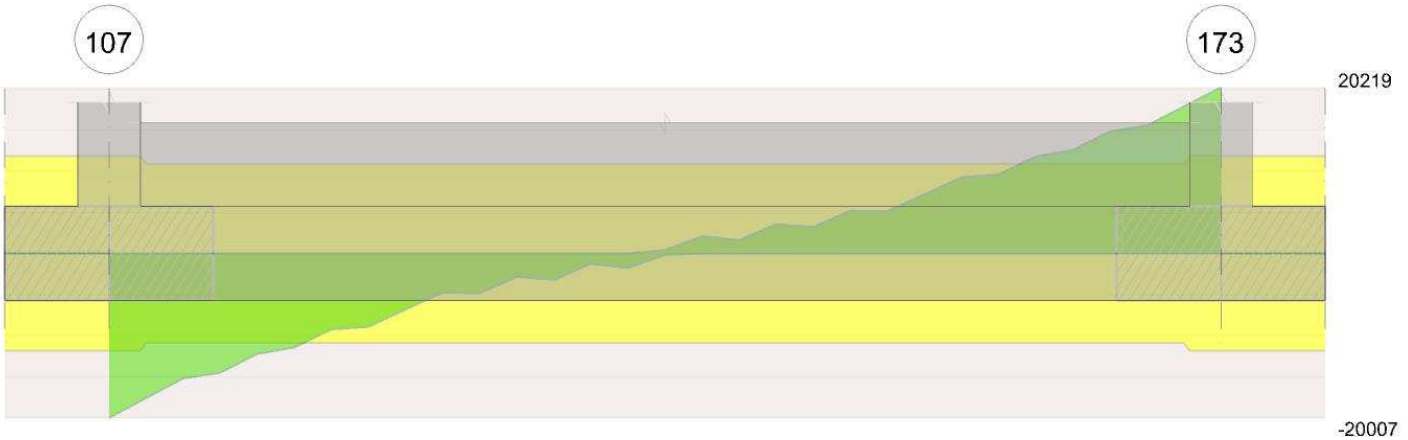


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 107 - 173, sezione R 70x45, aste 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2957	SLU 84	0.023	4058	7632	SLU 84	15877	Si
0.15	0.41	0.0003	2932	SLU 84	0.023	4058	7568	SLU 84	15877	Si
2.66	0.41	0.0003	2286	SLU 84	0.023	4058	5900	SLU 84	15877	Si
5.18	0.41	0.0003	2827	SLU 84	0.023	4058	7297	SLU 84	15877	Si
5.33	0.41	0.0003	2839	SLU 84	0.023	4058	7326	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2186	SLD 3	0.085	4549	5641	SLD 3	15877	Si
0.15	0.41	0.0003	2166	SLD 3	0.085	4549	5589	SLD 3	15877	Si
2.66	0.41	0.0003	1596	SLD 7	0.085	4549	4118	SLD 7	15877	Si
5.18	0.41	0.0003	2071	SLD 15	0.085	4549	5343	SLD 15	15877	Si
5.33	0.41	0.0003	2087	SLD 15	0.085	4549	5386	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000255	2169	SLE RA 21	62117	1494000	770255	36000000	1962	SLE QP 2	56172	1120500	Si
0.15	0.41	0.00000255	2151	SLE RA 21	61594	1494000	763764	36000000	1945	SLE QP 2	55696	1120500	Si
2.66	0.41	0.00000255	1676	SLE RA 21	47998	1494000	595170	36000000	1514	SLE QP 2	43341	1120500	Si
5.18	0.41	0.00000255	2074	SLE RA 21	59399	1494000	736542	36000000	1877	SLE QP 2	53741	1120500	Si
5.33	0.41	0.00000255	2083	SLE RA 21	59642	1494000	739562	36000000	1885	SLE QP 2	53964	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.33	1.3	SLU 35	ST	LT	83	-1514	-61626	0	-1	19	0	0	1.1	18745	1516	12.36	Si
5.33	1.3	SLV 14	SIS	LT	12194	-2179	-49539	14	-3	19	0	0	1.1	15069	12387	1.22	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
564,565,566,567,568,569,570,571,572,573,574,575,576	5.33	1.3	SLU 84	ST	BT	2.3	247931	75803	3.27	Si
564,565,566,567,568,569,570,571,572,573,574,575,576	5.33	1.3	SLV 7	SIS	BT	2.3	223071	56826	3.93	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
564,565,566,567,568,569,570,571,572,573,574,575,576	5.33	1.3	SLD 7	SIS	BT	2.3	238155	54147	4.4	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1759	-75803	-6585.25	-903.94	0	-1	-0.01	-0.09	1.13	5.31	1496	2060	0	14430	
0	3374	-56826	-7077.65	-4951.54	0	3	-0.09	-0.12	1.05	5.16	1496	2060	0	14430	0.07
0	832	-54147	-5599.52	-2458.55	0	1	-0.05	-0.1	1.09	5.24	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

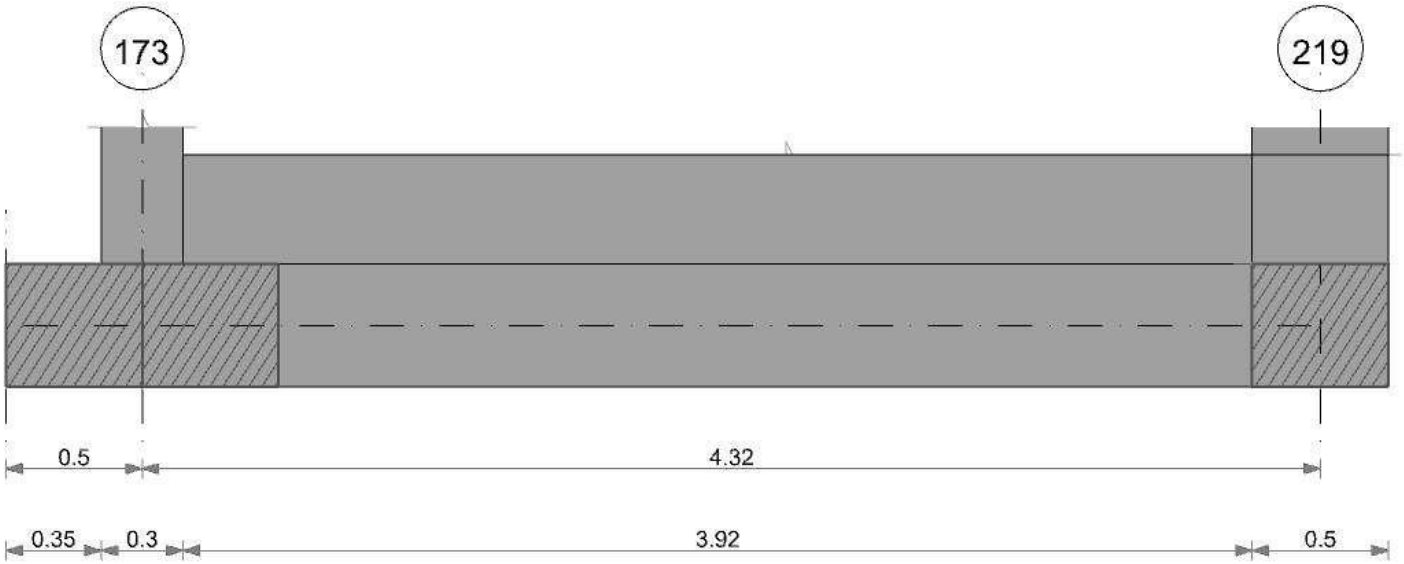
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	994	SLE RA 21	0.05	0	994	1007	SLE RA 21	0.05	0	1007	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	1007	SLE RA 1	0.05	0	1007	1007	SLE RA 1	0.05	0	1007	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	1007	SLE RA 1	0.05	0	1007	1007	SLE RA 1	0.05	0	1007	SLE RA 1	0.0033	0	SLE RA 1	Si

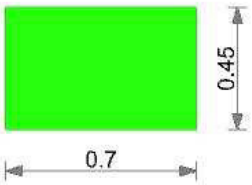
Verifiche geotecniche - Rotazioni assolute e differenziali

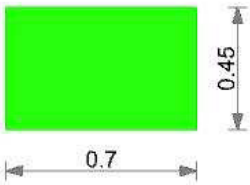
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	1007	994	SLE RA 21	0.19	0	1007	SLE RA 1	0.1	0	1007	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	1007	994	SLE RA 1	0.19	0	1007	SLE RA 1	0.1	0	1007	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	1007	994	SLE RA 1	0.19	0	1007	SLE RA 1	0.1	0	1007	SLE RA 1	Si

CORDOLO 4

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 173 - 219, sezione R 70x45, aste 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2839	SLU 84	0.02	3335	7326	SLU 84	15877	Si
0.15	0.41	0.0002	2847	SLU 84	0.02	3335	7347	SLU 84	15877	Si
2.16	0.41	0.0002	2562	SLU 84	0.02	3335	6611	SLU 84	15877	Si
4.07	0.41	0.0002	3164	SLV 15	0.094	3235	8408	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2087	SLD 15	0.077	3746	5386	SLD 15	15877	Si
0.15	0.41	0.0002	2101	SLD 15	0.077	3746	5421	SLD 15	15877	Si
2.16	0.41	0.0002	1987	SLD 15	0.077	3746	5128	SLD 15	15877	Si
4.07	0.41	0.0002	2601	SLD 15	0.077	3746	6711	SLD 15	15877	Si
4.32	0.41	0.0002	2734	SLD 15	0.077	3746	7055	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000209	2083	SLE RA 21	60004	1494000	744048	36000000	1885	SLE QP 2	54291	1120500	Si
0.15	0.41	0.00000209	2089	SLE RA 21	60172	1494000	746132	36000000	1890	SLE QP 2	54446	1120500	Si
2.16	0.41	0.00000209	1880	SLE RA 21	54162	1494000	671614	36000000	1703	SLE QP 2	49057	1120500	Si
4.07	0.41	0.00000209	2395	SLE RA 21	69000	1494000	855594	36000000	2178	SLE QP 2	62752	1120500	Si
4.32	0.41	0.00000209	2516	SLE RA 21	72464	1494000	898557	36000000	2289	SLE QP 2	65937	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.57	1.3	SLU 35	ST	LT	-595	-793	-53762	-1	-1	19	0	0	1.1	16353	991	16.5	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
577,578,579,580,581,582,583,584,585,586,587	4.57	1.3	SLU 84	ST	BT	2.3	216669	66103	3.28	Si
577,578,579,580,581,582,583,584,585,586,587	4.57	1.3	SLV 15	SIS	BT	2.3	195318	58554	3.34	Si
577,578,579,580,581,582,583,584,585,586,587	4.57	1.3	SLD 15	SIS	BT	2.3	206849	51064	4.05	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-910	-66103	-4980.73	2198.37	0	-1	0.03	-0.08	1.15	4.5	1496	2060	0	14430	
0	861	-58554	-5994.11	9093.18	0	1	0.16	-0.1	1.1	4.26	1496	2060	0	14430	0.07
0	51	-51064	-4501.16	4774.76	0	0	0.09	-0.09	1.12	4.38	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

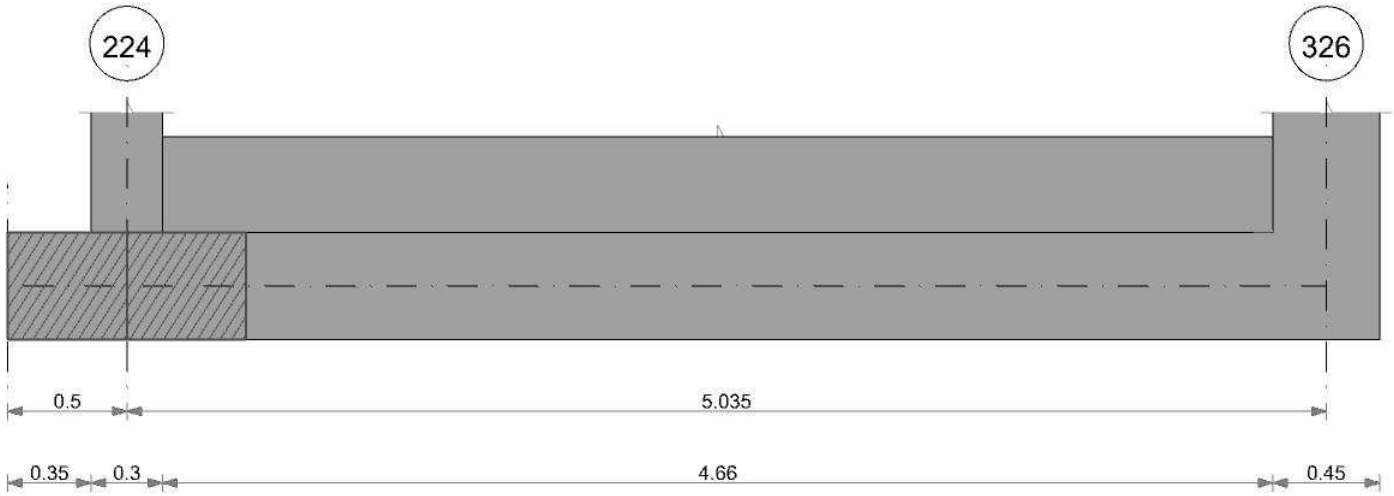
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	1007	SLE RA 21	0.05	0	1007	1018	SLE RA 21	0.05	0	1018	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	1018	SLE RA 1	0.05	0	1018	1018	SLE RA 1	0.05	0	1018	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	1018	SLE RA 1	0.05	0	1018	1018	SLE RA 1	0.05	0	1018	SLE RA 1	0.0033	0	SLE RA 1	Si

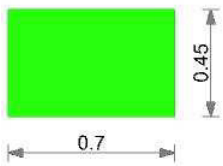
Verifiche geotecniche - Rotazioni assolute e differenziali

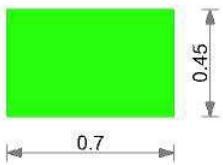
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	1018	1007	SLE RA 21	0.19	0	1018	SLE RA 1	0.1	0	1018	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	1018	1007	SLE RA 1	0.19	0	1018	SLE RA 1	0.1	0	1018	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	1018	1007	SLE RA 1	0.19	0	1018	SLE RA 1	0.1	0	1018	SLE RA 1	Si

CORDOLO 5

Geometria







Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 224 - 326, sezione R 70x45, aste 618, 617, 616, 615, 614, 613, 612, 611, 610, 609, 608, 607

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
2.52	0.41	0.0002	2425	SLV 15	0.085	2672	6258	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2342	SLD 15	0.07	3092	6044	SLD 15	15877	Si
0.15	0.41	0.0002	2321	SLD 15	0.07	3092	5989	SLD 15	15877	Si
2.52	0.41	0.0002	1957	SLD 15	0.07	3092	5050	SLD 15	15877	Si
4.81	0.41	0.0002	2436	SLD 15	0.07	3092	6287	SLD 15	15877	Si
5.03	0.41	0.0002	2519	SLD 15	0.07	3092	6502	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	2252	SLE RA 20	65185	1494000	808292	36000000	2049	SLE QP 2	59319	1120500	Si
0.15	0.41	0.00000172	2231	SLE RA 20	64577	1494000	800752	36000000	2030	SLE QP 2	58769	1120500	Si
2.52	0.41	0.00000172	1765	SLE RA 20	51085	1494000	633460	36000000	1606	SLE QP 2	46505	1120500	Si
4.81	0.41	0.00000172	1991	SLE RA 20	57632	1494000	714641	36000000	1818	SLE QP 2	52621	1120500	Si
5.03	0.41	0.00000172	2043	SLE RA 20	59151	1494000	733474	36000000	1866	SLE QP 2	54025	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.26	1.3	SLU 6	ST	LT	-1204	-318	-46969	-1	0	19	0	0	1.1	14287	1246	11.47	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
618,617,616,615,614,613,612,611,610,609,608,607	5.26	1.3	SLU 83	ST	BT	2.3	216403	69606	3.11	Si
618,617,616,615,614,613,612,611,610,609,608,607	5.26	1.3	SLV 15	SIS	BT	2.3	198585	67212	2.95	Si
618,617,616,615,614,613,612,611,610,609,608,607	5.26	1.3	SLD 15	SIS	BT	2.3	212648	56344	3.77	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-625	-69606	-9976.21	-4093.86	0	-1	-0.06	-0.14	1.01	5.14	1496	2060	0	14430	
0	1119	-67212	-11523.29	8334.34	0	1	0.12	-0.17	0.96	5.01	1496	2060	0	14430	0.07
0	285	-56344	-8823.87	2019.66	0	0	0.04	-0.16	0.99	5.19	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

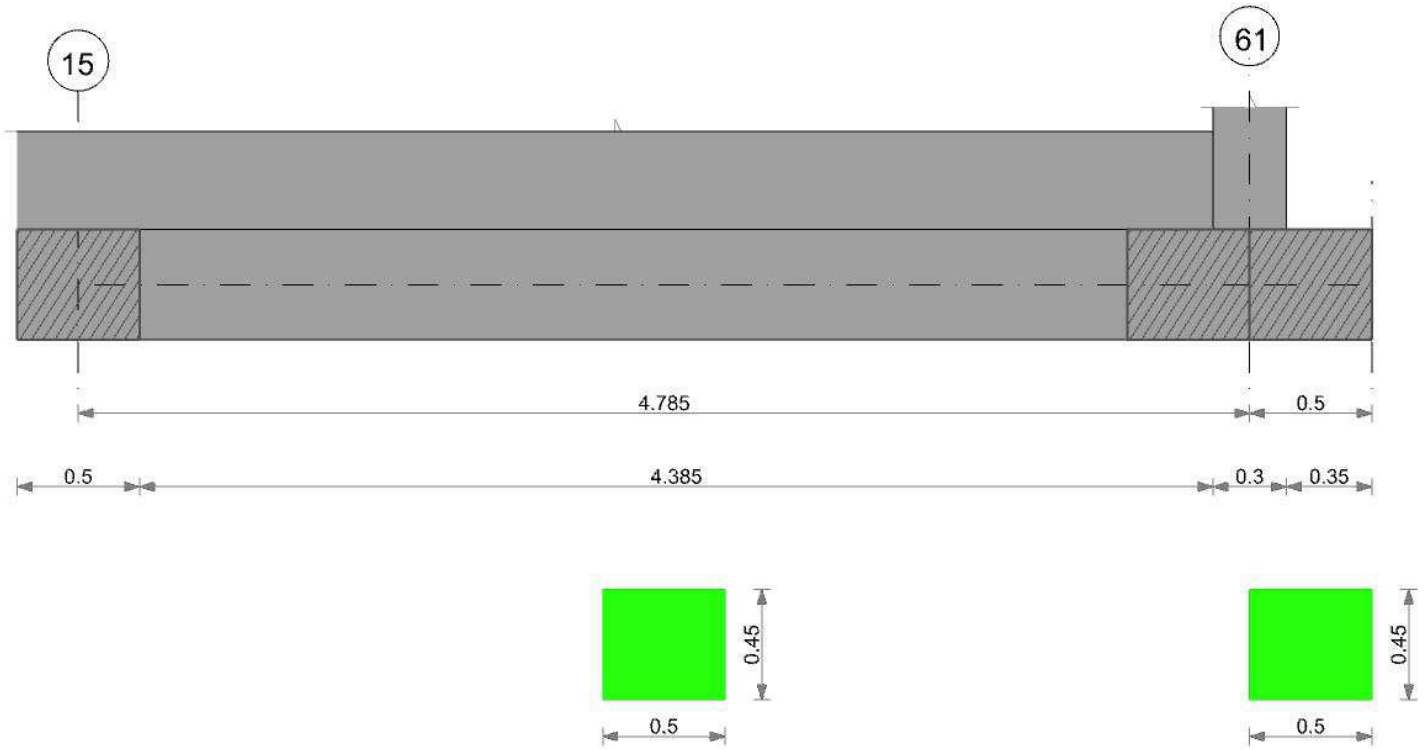
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	915	SLE RA 20	0.05	0	915	928	SLE RA 20	0.05	0	928	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	928	SLE RA 1	0.05	0	928	928	SLE RA 1	0.05	0	928	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	928	SLE RA 1	0.05	0	928	928	SLE RA 1	0.05	0	928	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	928	915	SLE RA 20	0.19	0	928	SLE RA 1	0.1	0	928	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	928	915	SLE RA 1	0.19	0	928	SLE RA 1	0.1	0	928	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	928	915	SLE RA 1	0.19	0	928	SLE RA 1	0.1	0	928	SLE RA 1	Si

CORDOLO 6

Geometria



Caratteristiche dei materiali

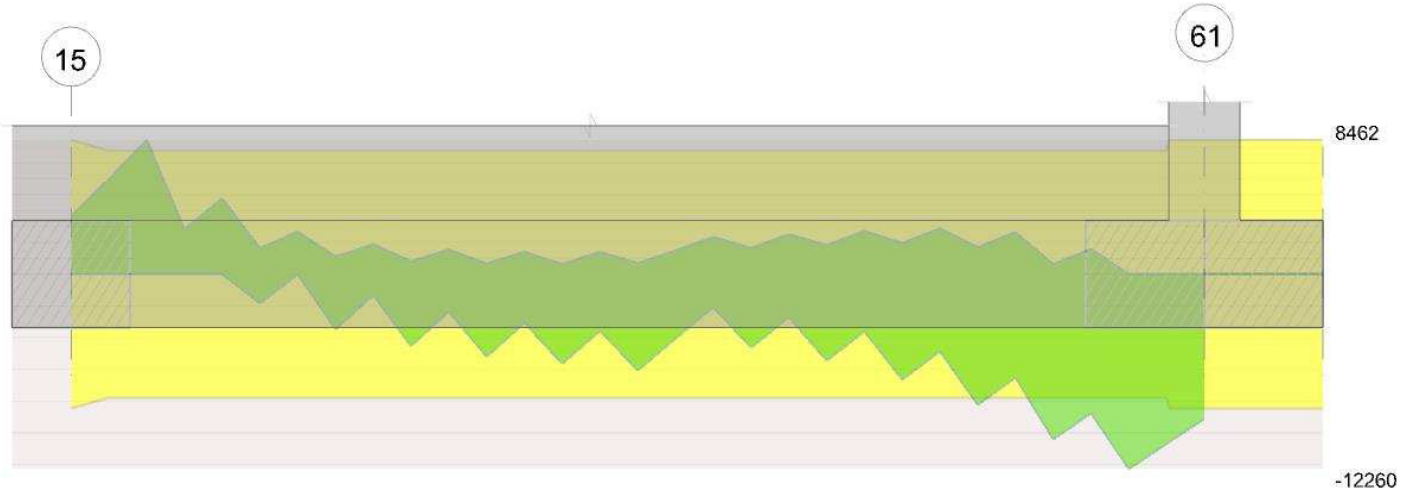
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 15 - 61, sezione R 50x45, aste 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2283	SLV 4	0.085	2637	7941	SLV 4	15877	Si
0.25	0.41	0.0002	2214	SLV 4	0.085	2637	7701	SLV 4	15877	Si
2.39	0.41	0.0002	1772	SLV 2	0.085	2637	6165	SLV 2	15877	Si
4.63	0.41	0.0002	1553	SLU 84	0.017	2711	5403	SLU 84	15877	Si
4.78	0.41	0.0002	1542	SLU 84	0.017	2711	5365	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1696	SLD 4	0.07	3051	5898	SLD 4	15877	Si
0.25	0.41	0.0002	1656	SLD 4	0.07	3051	5759	SLD 4	15877	Si
2.39	0.41	0.0002	1424	SLD 2	0.07	3051	4953	SLD 2	15877	Si
4.63	0.41	0.0002	1160	SLD 2	0.07	3051	4034	SLD 2	15877	Si
4.78	0.41	0.0002	1148	SLD 4	0.07	3051	3994	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	1376	SLE RA 21	39845	1494000	494075	36000000	1257	SLE QP 2	36398	1120500	Si
0.25	0.41	0.0000017	1357	SLE RA 21	39301	1494000	487326	36000000	1239	SLE QP 2	35884	1120500	Si
2.39	0.41	0.0000017	1279	SLE RA 21	37040	1494000	459294	36000000	1164	SLE QP 2	33697	1120500	Si
4.63	0.41	0.0000017	1142	SLE RA 21	33061	1494000	409959	36000000	1036	SLE QP 2	29988	1120500	Si
4.78	0.41	0.0000017	1133	SLE RA 21	32824	1494000	407014	36000000	1028	SLE QP 2	29768	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.03	1.1	SLU 44	ST	LT	670	408	-58203	1	0	19	0	0	1.1	17704	785	22.56	Si
5.03	1.1	SLV 13	SIS	LT	8027	-2666	-28736	16	-5	19	0	0	1.1	8741	8458	1.03	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
353,354,355,356,357,358,359,360,361,362,363,364,365,366	5.03	1.1	SLU 84	ST	BT	2.3	233050	71185	3.27	Si
353,354,355,356,357,358,359,360,361,362,363,364,365,366	5.03	1.1	SLV 4	SIS	BT	2.3	206159	69282	2.98	Si
353,354,355,356,357,358,359,360,361,362,363,364,365,366	5.03	1.1	SLD 4	SIS	BT	2.3	219153	57675	3.8	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	307	-71185	-77.44	-3896.75	0	0	-0.05	0	1.1	4.93	1496	2060	0	14430	
0	3123	-69282	-1281.7	-17105.2	0	3	-0.25	-0.02	1.06	4.54	1496	2060	0	14430	0.07
0	1487	-57675	-591.27	-8886.84	0	1	-0.15	-0.01	1.08	4.73	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

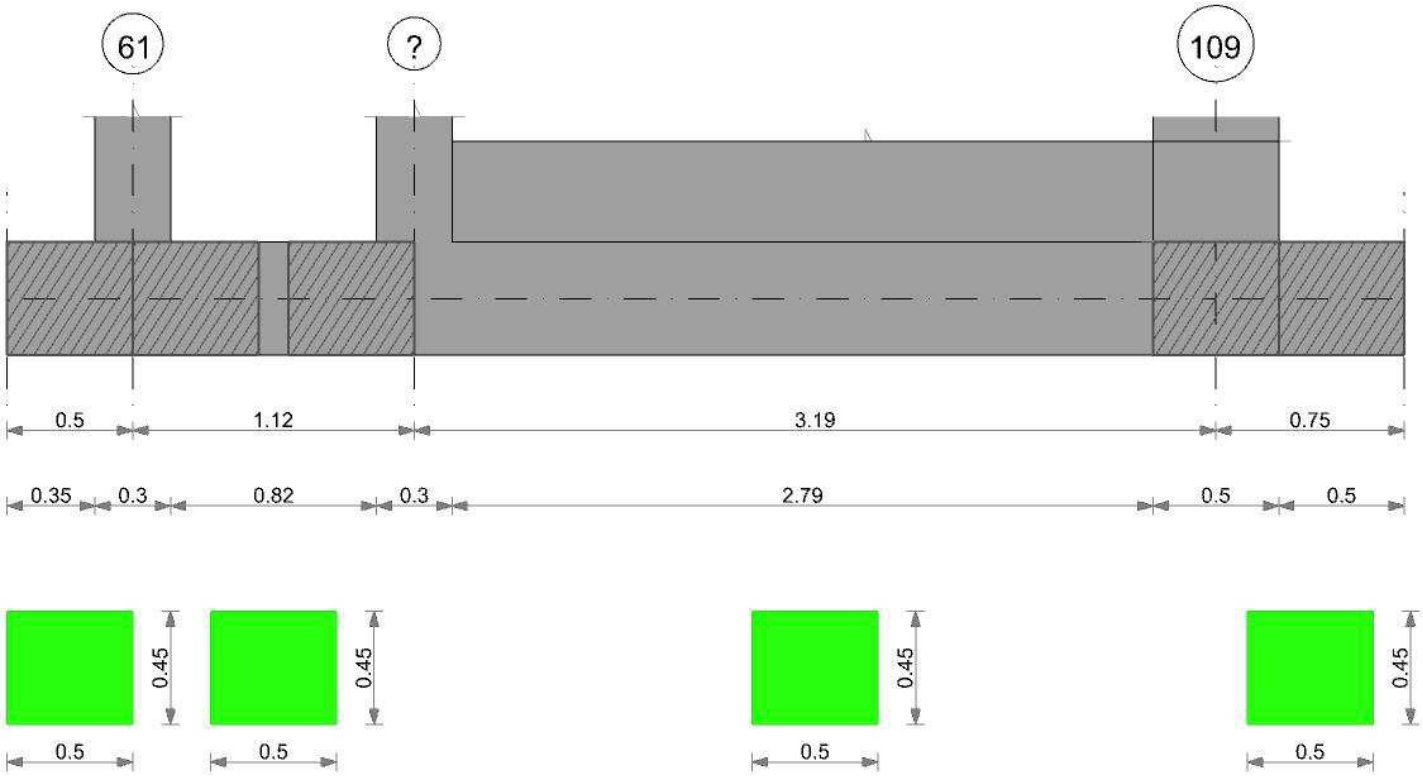
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	678	SLE RA 21	0.05	0.001	678	664	SLE RA 21	0.05	0	678	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	678	SLE RA 1	0.05	0	678	678	SLE RA 1	0.05	0	678	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	678	SLE RA 1	0.05	0	678	678	SLE RA 1	0.05	0	678	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	678	664	SLE RA 21	0.19	0	678	SLE RA 1	0.1	0	678	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	678	664	SLE RA 1	0.19	0	678	SLE RA 1	0.1	0	678	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	678	664	SLE RA 1	0.19	0	678	SLE RA 1	0.1	0	678	SLE RA 1	Si

CORDOLO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

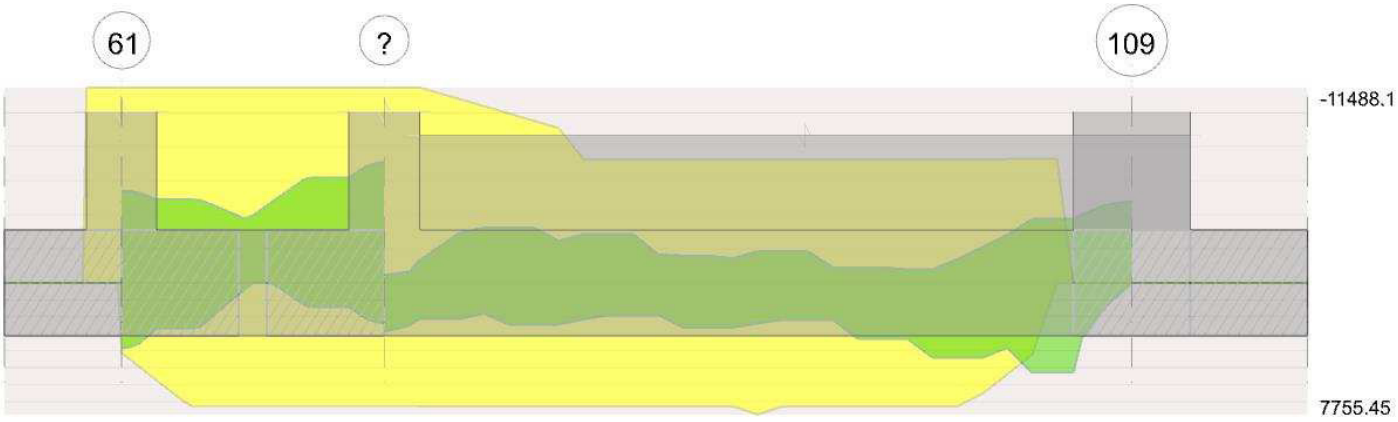
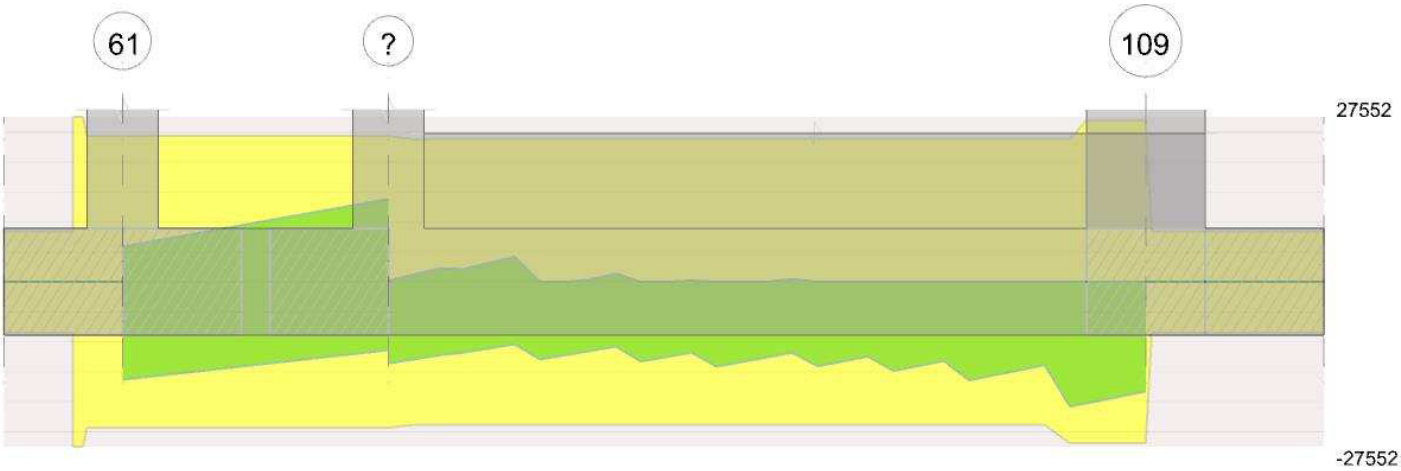


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 534

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052							-898.11	SLU 82	-898.11	-12063.16	0.138	13.43	Si
0.15	0.000823	0.052	0.0004	0.052							-1702.64	SLU 83	-2476.94	-12061.17	0.137	4.87	Si
0.56	0.000823	0.052	0.000509	0.052							-3157.77	SLU 83	-3443.02	-12059.84	0.137	3.5	Si
0.75	0.000823	0.052	0.000509	0.052							-3450.67	SLU 83	-3519.05	-12059.84	0.137	3.43	Si
0.97	0.000823	0.052	0.000509	0.052							-3498.23	SLU 83	-3519.05	-12059.84	0.137	3.43	Si
1.12	0.000823	0.052	0.000509	0.052							-3345.09	SLU 83	-3345.09	-12059.84	0.137	3.61	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	4538.45	SLV 14	3856.59	4127.78	0.15	1.07	-5624.09	SLV 3	-5406.67	-11479.46	0.252	2.12	Si
0.15	0.000823	0.052	0.0004	0.052	2682.03	SLV 14	2682.03	5753.79	0.174	2.15	-4887.49	SLV 3	-4887.49	-11484.22	0.249	2.35	Si
0.56	0.000823	0.052	0.000509	0.052	-1701.77	SLV 12	5.35	7261.11	0.193	1357.38	-2531.04	SLV 5	-3952.18	-11488.1	0.247	2.91	Si
0.97	0.000823	0.052	0.000509	0.052	1423.85	SLV 3	1423.85	7261.11	0.193	5.1	-6180.39	SLV 14	-6180.39	-11488.1	0.247	1.86	Si
1.12	0.000823	0.052	0.000509	0.052	2966.77	SLV 3	2380.33	7261.11	0.193	3.05	-7540.41	SLV 14	-7083.7	-11488.1	0.247	1.62	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000283	0.052	1631.96	SLD 14	1207.17	4127.78	0.15	3.42	-2717.6	SLD 3	-2717.6	-11479.46	0.252	4.22	Si
0.15	0.000823	0.052	0.0004	0.052	516.75	SLD 14	516.75	5753.79	0.174	11.13	-2722.21	SLD 3	-2722.21	-11484.22	0.249	4.22	Si
0.56	0.000823	0.052	0.000509	0.052							-2297.86	SLD 5	-3022.02	-11488.1	0.247	3.8	Si
0.97	0.000823	0.052	0.000509	0.052							-4008	SLD 14	-4008	-11488.1	0.247	2.87	Si
1.12	0.000823	0.052	0.000509	0.052							-4538.14	SLD 14	-4379.64	-11488.1	0.247	2.62	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.000823	0	-7622	SLU 83	-7622	-8875	-63117	-24344	-24344	1	3.19	Si
0.15	0.0000174	0.000823	0	-6328	SLU 83	-6328	-8875	-63117	-24344	-24344	1	3.85	Si
0.56	0.0000174	0.000823	0	-2836	SLU 77	-2836	-8875	-63117	-24344	-24344	1	8.58	Si
0.97	0.0000174	0.000823	0	710	SLU 82	710	8875	63117	24344	24344	1	34.31	Si
1.12	0.0000174	0.000823	0	1975	SLU 82	1975	8875	63117	24344	24344	1	12.33	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.000823	0	5840	SLV 3	5840	8875	63117	24344	24344	1	4.17	Si
0	0.0000174	0.0004	0	-16325	SLV 14	-16325	-7764	-63178	-24368	-24368	1	1.49	Si
0.15	0.0000174	0.000823	0	6922	SLV 3	6922	8875	63117	24344	24344	1	3.52	Si
0.15	0.0000174	0.0004	0	-15661	SLV 14	-15661	-7764	-63178	-24368	-24368	1	1.56	Si
0.56	0.0000174	0.000823	0	9850	SLV 3	9850	8875	63117	24344	24344	1	2.47	Si
0.56	0.0000174	0.000823	0	-13850	SLV 14	-13850	-8875	-63117	-24344	-24344	1	1.76	Si
0.97	0.0000174	0.000509	0	12753	SLV 3	12753	7764	63178	24368	24368	1	1.91	Si
0.97	0.0000174	0.000823	0	-12044	SLV 14	-12044	-8875	-63117	-24344	-24344	1	2.02	Si
1.12	0.0000174	0.000509	0	13811	SLV 3	13811	7764	63178	24368	24368	1	1.76	Si
1.12	0.0000174	0.000823	0	-11379	SLV 14	-11379	-8875	-63117	-24344	-24344	1	2.14	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000174	0.0004	0	-9990	SLD 14	-9990	-7764	-63178	-24368	-24368	1	2.44	Si
0.15	0.0000174	0.000823	0	467	SLD 3	467	8875	63117	24344	24344	1	52.12	Si
0.15	0.0000174	0.0004	0	-9205	SLD 14	-9205	-7764	-63178	-24368	-24368	1	2.65	Si
0.56	0.0000174	0.000823	0	3075	SLD 3	3075	8875	63117	24344	24344	1	7.92	Si
0.56	0.0000174	0.000823	0	-7075	SLD 14	-7075	-8875	-63117	-24344	-24344	1	3.44	Si
0.97	0.0000174	0.000823	0	5664	SLD 3	5664	8875	63117	24344	24344	1	4.3	Si
0.97	0.0000174	0.000823	0	-4955	SLD 14	-4955	-8875	-63117	-24344	-24344	1	4.91	Si
1.12	0.0000174	0.000823	0	6610	SLD 3	6610	8875	63117	24344	24344	1	3.68	Si
1.12	0.0000174	0.000823	0	-4178	SLD 14	-4178	-8875	-63117	-24344	-24344	1	5.83	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-644.98	19	-644.98	34745	1494000	495084	36000000	-542.82	2	-542.82	29242	1120500			Si
0.15	-1242.72	20	-1818.32	96165	1494000	1385979	36000000	-1102.73	2	-1639.1	86687	1120500			Si
0.56	-2326.24	20	-2541.11	132137	1494000	1924609	36000000	-2116.41	2	-2322.9	120791	1120500			Si
0.97	-2587.56	20	-2601.08	135256	1494000	1970033	36000000	-2378.27	2	-2386.49	124097	1120500			Si
1.12	-2478.34	20	-2478.34	128873	1494000	1877069	36000000	-2286.82	2	-2286.82	118914	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - ?, sezione R 50x45, asta 534

Campata 3 tra i fili ? - 109, sezione R 50x45, aste 535, 536, 537, 538, 539, 540, 541, 542, 543

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1518	SLU 84	0.073	13570	5279	SLU 84	34033	Si
0.15	0.41	0.0009	1521	SLU 84	0.072	13292	5289	SLU 84	33314	Si
1.59	0.41	0.0009	1548	SLU 84	0.072	13292	5386	SLU 84	33314	Si
2.94	0.41	0.0009	1506	SLU 83	0.072	13292	5237	SLU 83	33314	Si
3.19	0.41	0.0009	1493	SLU 83	0.072	13292	5194	SLU 83	33314	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1120	SLD 4	0.155	15077	3897	SLD 4	39138	Si
0.15	0.41	0.0009	1119	SLD 4	0.154	14769	3894	SLD 4	38311	Si
1.59	0.41	0.0009	1082	SLD 4	0.154	14769	3765	SLD 4	38311	Si
2.94	0.41	0.0009	1007	SLD 15	0.154	14769	3501	SLD 15	38311	Si
3.19	0.41	0.0009	1000	SLD 15	0.154	14769	3479	SLD 15	38311	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000869	1115	SLE RA 21	29536	1494000	366247	36000000	1011	SLE QP 2	26763	1120500	Si
0.15	0.41	0.00000851	1117	SLE RA 21	29659	1494000	367774	36000000	1012	SLE QP 2	26872	1120500	Si
1.59	0.41	0.00000851	1137	SLE RA 21	30190	1494000	374353	36000000	1029	SLE QP 2	27310	1120500	Si
2.94	0.41	0.00000851	1106	SLE RA 20	29345	1494000	363877	36000000	998	SLE QP 2	26499	1120500	Si
3.19	0.41	0.00000851	1096	SLE RA 20	29102	1494000	360871	36000000	990	SLE QP 2	26272	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.31	1.1	SLU 44	ST	LT	313	318	-45128	0	0	19	0	0	1.1	13727	446	30.74	Si
4.31	1.1	SLV 13	SIS	LT	6787	-1343	-33696	11	-2	19	0	0	1.1	10250	6918	1.48	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
534,535,536,537,538,539,540,541,542,543	4.31	1.1	SLU 83	ST	BT	2.3	204738	55418	3.69	Si
534,535,536,537,538,539,540,541,542,543	4.31	1.1	SLV 4	SIS	BT	2.3	184709	42405	4.36	Si
534,535,536,537,538,539,540,541,542,543	4.31	1.1	SLD 4	SIS	BT	2.3	196062	39913	4.91	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	215	-55418	58.54	131.76	0	0	0	0	1.1	4.31	1496	2060	0	14430	
0	1711	-42405	-657.37	-6413.51	0	2	-0.15	-0.02	1.07	4.01	1496	2060	0	14430	0.07
0	852	-39913	-271.13	-2719.22	0	1	-0.07	-0.01	1.09	4.17	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

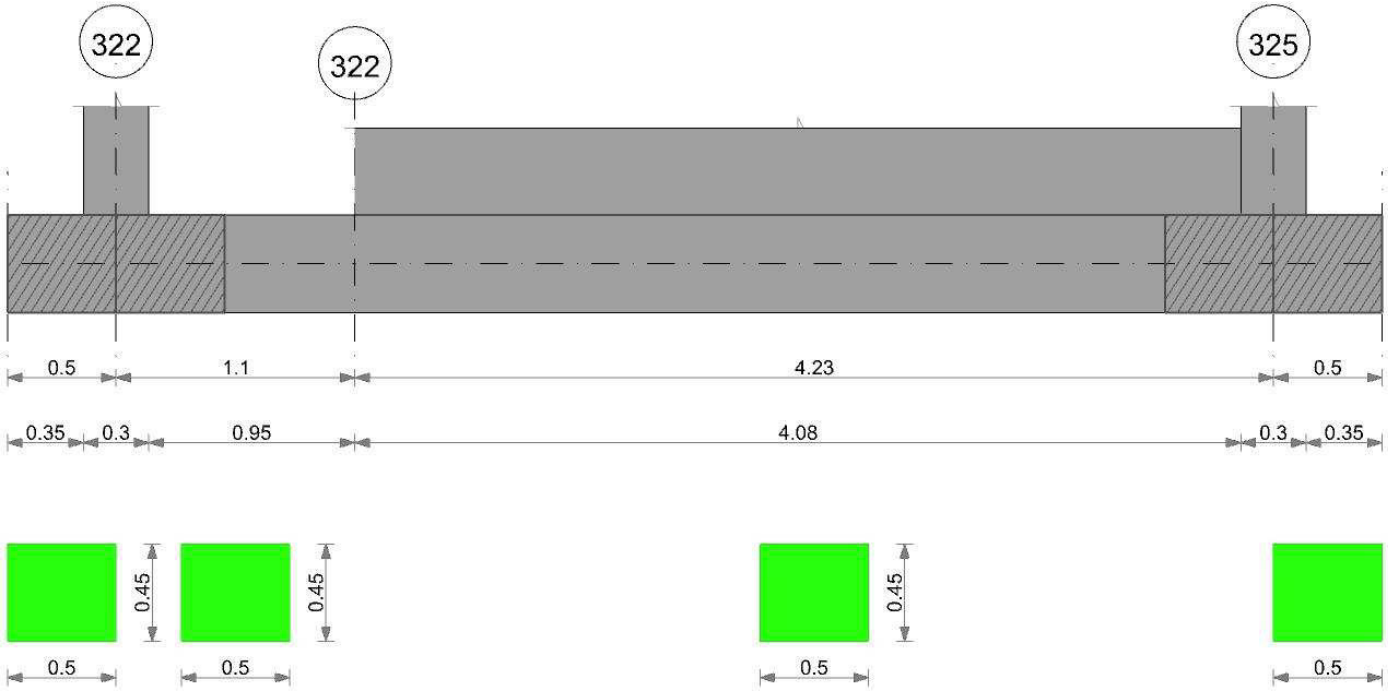
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	689	SLE RA 21	0.05	0	689	678	SLE RA 20	0.05	0	680	SLE FR 4	0.0033	0	SLE RA 1	Si
D	0.05	0	689	SLE RA 1	0.05	0	689	689	SLE RA 1	0.05	0	680	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	689	SLE RA 1	0.05	0	689	689	SLE RA 1	0.05	0	680	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.01	680	678	SLE RA 21	0.19	0	680	SLE FR 4	0.1	0	689	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	689	680	SLE RA 1	0.19	0	689	SLE RA 1	0.1	0	680	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	689	680	SLE RA 1	0.19	0	689	SLE RA 1	0.1	0	680	SLE RA 1	Si

CORDOLO 8

Geometria



Caratteristiche dei materiali

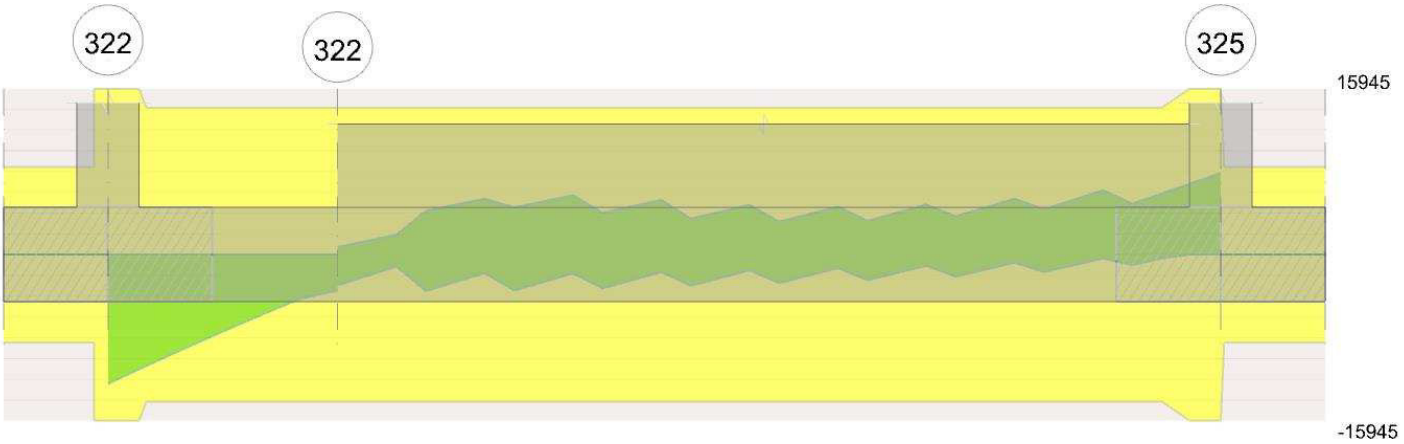
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 322 - 322, sezione R 50x45, asta 844

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	-59.26	SLU 19	1385.25	9071.72	0.119	6.55	-106.43	SLU 71	-1274.26	-9071.72	0.119	7.12	Si
1.1	0.000603	0.051	0.000603	0.051							-2864.24	SLU 84	-2864.24	-9071.72	0.119	3.17	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	92.46	SLV 7	1168.41	8578.86	0.211	7.34	-245.88	SLV 10	-1118.23	-8578.86	0.211	7.67	Si
1.1	0.000603	0.051	0.000603	0.051							-2660.56	SLV 16	-2660.56	-8578.86	0.211	3.22	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	-2.74	SLD 7	1009.84	8578.86	0.211	8.5	-150.68	SLD 10	-969.67	-8578.86	0.211	8.85	Si
1.1	0.000603	0.051	0.000603	0.051							-2221.83	SLD 16	-2221.83	-8578.86	0.211	3.86	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-12423	SLU 84	-12423	-8455	-71432	-15945	-15945	1	1.28	Si
0.15	0.0000101	0	0	-11014	SLU 84	-11014	-8455	-71432	-15945	-15945	1	1.45	Si
0.55	0.0000101	0	0	-7396	SLU 84	-7396	-7777	-63336	-14138	-14138	1	1.91	Si
1.1	0.0000101	0.000603	0	-2774	SLU 84	-2774	-8014	-63336	-14138	-14138	1	5.1	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-9108	SLV 4	-9108	-8455	-71432	-15945	-15945	1	1.75	Si
0.15	0.0000101	0	0	-8203	SLV 16	-8203	-8455	-71432	-15945	-15945	1	1.94	Si
0.55	0.0000101	0	0	-6025	SLV 16	-6025	-7777	-63336	-14138	-14138	1	2.35	Si
1.1	0.0000101	0.000603	0	-3445	SLV 16	-3445	-8014	-63336	-14138	-14138	1	4.1	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0	0	-8605	SLD 4	-8605	-8455	-71432	-15945	-15945	1	1.85	Si
0.15	0.0000101	0	0	-7680	SLD 16	-7680	-8455	-71432	-15945	-15945	1	2.08	Si
0.55	0.0000101	0	0	-5366	SLD 16	-5366	-7777	-63336	-14138	-14138	1	2.63	Si
1.1	0.0000101	0.000603	0	-2490	SLD 16	-2490	-8014	-63336	-14138	-14138	1	5.68	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	3918.51	21	3234.94	191700	1494000	0	36000000	3518.73	2	2900.99	171910	1120500			Si
0.15	2628.59	21	2628.59	155769	1494000	0	36000000	2353.52	2	2353.52	139468	1120500			Si
0.55	-80.93	8	-937.75	48563	1494000	728449	36000000	-80.43	1	-857.78	44422	1120500			Si
1.1	-2099.38	21	-2099.38	108720	1494000	1630805	36000000	-1893.29	2	-1893.29	98047	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 322 - 322, sezione R 50x45, asta 844

Campata 3 tra i fili 322 - 325, sezione R 50x45, aste 845, 846, 847, 848, 849, 850, 851, 852, 853, 854

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1380	SLU 83	0.042	7953	4245	SLU 83	17882	Si
2.11	0.41	0.0005	1275	SLU 83	0.042	7953	3923	SLU 83	17882	Si
4.08	0.41	0.0005	1483	SLU 83	0.042	7953	4564	SLU 83	17882	Si
4.23	0.41	0.0005	1495	SLU 83	0.042	7953	4600	SLU 83	17882	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1005	SLD 3	0.119	8861	3092	SLD 3	20565	Si
2.11	0.41	0.0005	855	SLD 3	0.119	8861	2630	SLD 3	20565	Si
4.08	0.41	0.0005	1091	SLD 14	0.119	8861	3356	SLD 14	20565	Si
4.23	0.41	0.0005	1106	SLD 14	0.119	8861	3403	SLD 14	20565	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000503	1011	SLE RA 20	28020	1494000	347453	36000000	909	SLE QP 2	25212	1120500	Si
2.11	0.41	0.00000503	934	SLE RA 20	25891	1494000	321048	36000000	840	SLE QP 2	23297	1120500	Si
4.08	0.41	0.00000503	1087	SLE RA 20	30124	1494000	373541	36000000	978	SLE QP 2	27104	1120500	Si
4.23	0.41	0.00000503	1095	SLE RA 20	30361	1494000	376478	36000000	985	SLE QP 2	27319	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.33	1.1	SLU 35	ST	LT	-323	-1031	-42352	0	-1	19	0	0	1.1	12883	1081	11.92	Si
5.33	1.1	SLV 1	SIS	LT	-8867	-2269	-37320	-13	-3	19	0	0	1.1	11352	9152	1.24	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
844,845,846,847,848,849,850,851,852,853,854	5.33	1.1	SLU 83	ST	BT	2.3	245665	52263	4.7	Si
844,845,846,847,848,849,850,851,852,853,854	5.33	1.1	SLV 1	SIS	BT	2.3	211370	37320	5.66	Si
844,845,846,847,848,849,850,851,852,853,854	5.33	1.1	SLD 1	SIS	BT	2.3	230771	36570	6.31	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1207	-52263	427.31	-1058.96	0	-1	-0.02	0.01	1.08	5.29	1496	2060	0	14430	
0	-2269	-37320	978.92	-11434.14	0	-3	-0.31	0.03	1.05	4.72	1496	2060	0	14430	0.07
0	-1436	-36570	583.86	-5282.01	0	-2	-0.14	0.02	1.07	5.04	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

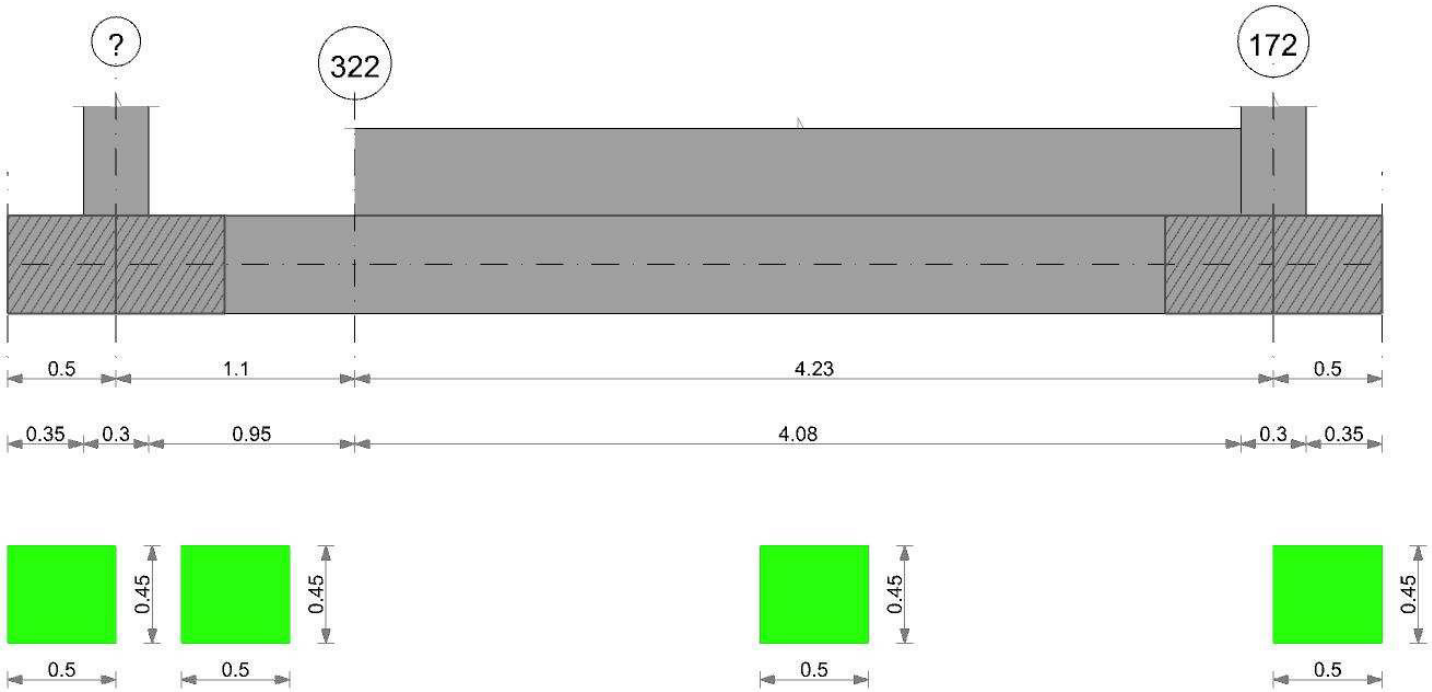
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	818	SLE RA 21	0.05	0	818	819	SLE RA 12	0.05	0	819	SLE RA 12	0.0033	0	SLE RA 12	Si
D	0.05	0	829	SLE RA 1	0.05	0	829	829	SLE RA 1	0.05	0	819	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	829	SLE RA 1	0.05	0	829	829	SLE RA 1	0.05	0	819	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.01	819	818	SLE RA 12	0.19	0	829	SLE RA 1	0.1	0.01	819	SLE RA 12	Si
D	0.19	0	SLE RA 1	0.19	0	829	819	SLE RA 1	0.19	0	829	SLE RA 1	0.1	0	819	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	829	819	SLE RA 1	0.19	0	829	SLE RA 1	0.1	0	819	SLE RA 1	Si

CORDOLO 9

Geometria



Caratteristiche dei materiali

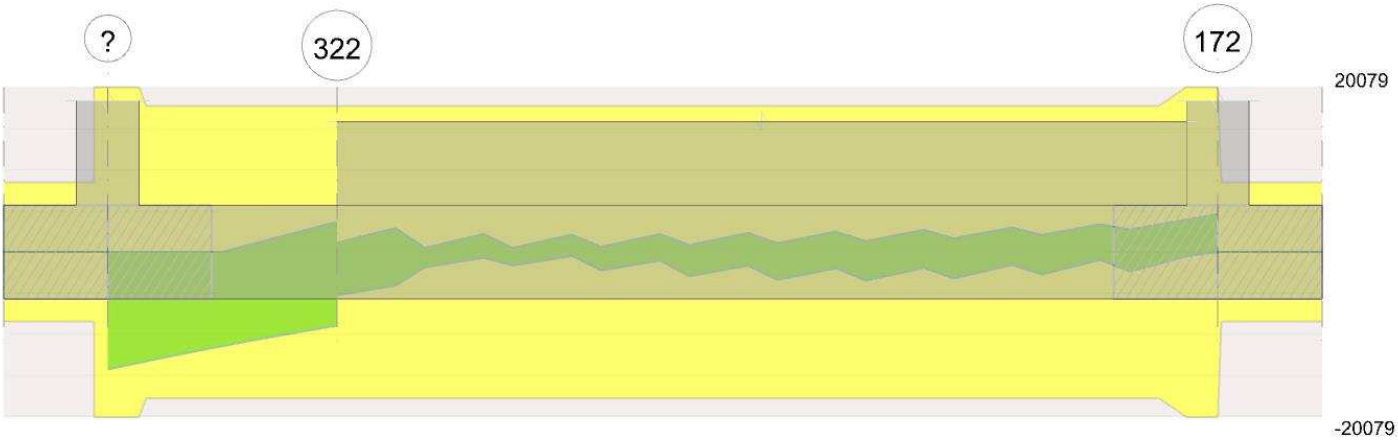
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili ? - 322, sezione R 50x45, asta 833

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	-21.03	SLU 42	1657.11	9071.72	0.119	5.47	-61.57	SLU 43	-1448.42	-9071.72	0.119	6.26	Si
1.1	0.000603	0.051	0.000603	0.051							-3512.17	SLU 83	-3512.17	-9071.72	0.119	2.58	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	179.82	SLV 15	2281.53	8578.86	0.211	3.76	-264.56	SLV 2	-1914.18	-8578.86	0.211	4.48	Si
1.1	0.000603	0.051	0.000603	0.051	843.92	SLV 3	843.92	8578.86	0.211	10.17	-5508.4	SLV 14	-5508.4	-8578.86	0.211	1.56	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.55	0.000603	0.051	0.000603	0.051	52.46	SLD 15	1593.65	8578.86	0.211	5.38	-137.2	SLD 2	-1377.45	-8578.86	0.211	6.23	Si
1.1	0.000603	0.051	0.000603	0.051							-3690.57	SLD 14	-3690.57	-8578.86	0.211	2.32	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000127	0	0	-13621	SLU 83	-13621	-8455	-71432	-20079	-20079	1	1.47	Si
0.15	0.0000127	0	0	-12223	SLU 83	-12223	-8455	-71432	-20079	-20079	1	1.64	Si
0.55	0.0000127	0	0	-8637	SLU 83	-8637	-7777	-63336	-17804	-17804	1	2.06	Si
1.1	0.0000127	0.000603	0	-4070	SLU 84	-4070	-8014	-63336	-17804	-17804	1	4.37	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000127	0	0	-14284	SLV 13	-14284	-8455	-71432	-20079	-20079	1	1.41	Si
0.15	0.0000127	0	0	-13479	SLV 13	-13479	-8455	-71432	-20079	-20079	1	1.49	Si
0.18	0.0000127	0	0	-13303	SLV 13	-13303	-7777	-63336	-17804	-17804	1	1.34	Si
0.55	0.0000127	0	0	11	SLV 4	11	7777	63336	17804	17804	1	1577.7	Si
0.55	0.0000127	0	0	-11447	SLV 13	-11447	-7777	-63336	-17804	-17804	1	1.56	Si
1.1	0.0000127	0.000603	0	3647	SLV 4	3647	8014	63336	17804	17804	1	4.88	Si
1.1	0.0000127	0.000603	0	-8956	SLV 13	-8956	-8014	-63336	-17804	-17804	1	1.99	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000127	0	0	-11292	SLD 13	-11292	-8455	-71432	-20079	-20079	1	1.78	Si
0.15	0.0000127	0	0	-10412	SLD 13	-10412	-8455	-71432	-20079	-20079	1	1.93	Si
0.18	0.0000127	0	0	-10219	SLD 13	-10219	-7777	-63336	-17804	-17804	1	1.74	Si
0.55	0.0000127	0	0	-8167	SLD 13	-8167	-7777	-63336	-17804	-17804	1	2.18	Si
1.1	0.0000127	0.000603	0	39	SLD 4	39	8014	63336	17804	17804	1	455.44	Si
1.1	0.0000127	0.000603	0	-5348	SLD 13	-5348	-8014	-63336	-17804	-17804	1	3.33	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4450.5	21	3700.65	219298	1494000	0	36000000	4007.96	2	3329.27	197290	1120500			Si
0.15	3027.4	21	3027.4	179401	1494000	0	36000000	2720.27	2	2720.27	161201	1120500			Si
0.55	-47.06	1	-1066.41	55226	1494000	828388	36000000	-47.06	1	-975.72	50530	1120500			Si
1.1	-2577.8	20	-2577.8	133496	1494000	2002438	36000000	-2332.24	2	-2332.24	120779	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili ? - 322, sezione R 50x45, asta 833

Campata 3 tra i fili 322 - 172, sezione R 50x45, aste 834, 835, 836, 837, 838, 839, 840, 841, 842, 843

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1359	SLU 83	0.053	9971	4182	SLU 83	22519	Si
2.11	0.41	0.0006	1251	SLU 83	0.053	9971	3851	SLU 83	22519	Si
4.08	0.41	0.0006	1457	SLU 83	0.053	9971	4482	SLU 83	22519	Si
4.23	0.41	0.0006	1468	SLU 83	0.053	9971	4517	SLU 83	22519	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	992	SLD 1	0.133	11092	3052	SLD 1	25896	Si
2.11	0.41	0.0006	843	SLD 1	0.133	11092	2593	SLD 1	25896	Si
4.08	0.41	0.0006	1070	SLD 14	0.133	11092	3292	SLD 14	25896	Si
4.23	0.41	0.0006	1085	SLD 14	0.133	11092	3339	SLD 14	25896	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000634	996	SLE RA 20	27151	1494000	336676	36000000	896	SLE QP 2	24420	1120500	Si
2.11	0.41	0.00000634	917	SLE RA 20	25000	1494000	310006	36000000	825	SLE QP 2	22485	1120500	Si
4.08	0.41	0.00000634	1067	SLE RA 20	29094	1494000	360770	36000000	960	SLE QP 2	26165	1120500	Si
4.23	0.41	0.00000634	1075	SLE RA 20	29326	1494000	363645	36000000	967	SLE QP 2	26375	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
5.33	1.1	SLU 35	ST	LT	-390	-1031	-41829	-1	-1	19	0	0	1.1	12723	1102	11.54	Si
5.33	1.1	SLV 1	SIS	LT	-8791	-2269	-37212	-13	-3	19	0	0	1.1	11319	9079	1.25	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
833,834,835,836,837,838,839,840,841,842,843	5.33	1.1	SLU 83	ST	BT	2.3	245305	51642	4.75	Si
833,834,835,836,837,838,839,840,841,842,843	5.33	1.1	SLV 1	SIS	BT	2.3	211951	37212	5.7	Si
833,834,835,836,837,838,839,840,841,842,843	5.33	1.1	SLD 1	SIS	BT	2.3	230768	36288	6.36	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1207	-51642	427.31	-1226.06	0	-1	-0.02	0.01	1.08	5.28	1496	2060	0	14430	
0	-2269	-37212	978.92	-11139.64	0	-3	-0.3	0.03	1.05	4.73	1496	2060	0	14430	0.07
0	-1436	-36288	583.86	-5219.68	0	-2	-0.14	0.02	1.07	5.04	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

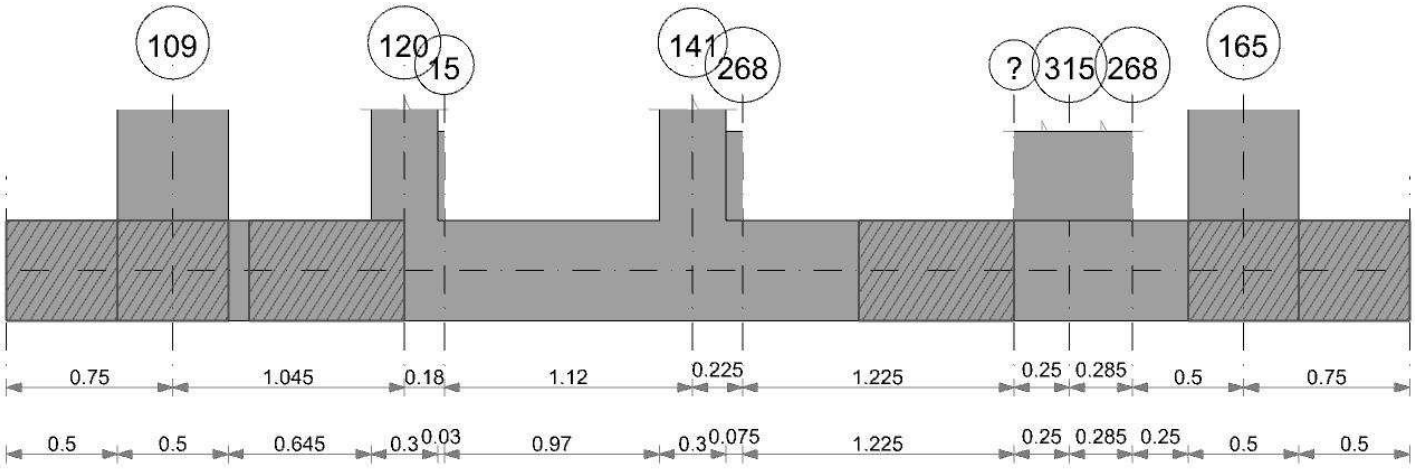
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	778	SLE RA 21	0.05	0	778	779	SLE RA 21	0.05	0	779	SLE RA 21	0.0033	0	SLE RA 21	Si
D	0.05	0	789	SLE RA 1	0.05	0	789	789	SLE RA 1	0.05	0	779	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	789	SLE RA 1	0.05	0	789	789	SLE RA 1	0.05	0	779	SLE RA 1	0.0033	0	SLE RA 1	Si

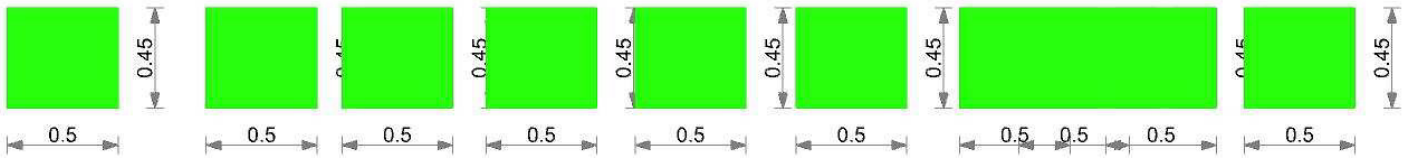
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.01	779	778	SLE RA 21	0.19	0	789	SLE RA 1	0.1	0.01	779	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	789	779	SLE RA 1	0.19	0	789	SLE RA 1	0.1	0	779	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	789	779	SLE RA 1	0.19	0	789	SLE RA 1	0.1	0	779	SLE RA 1	Si

CORDOLO 10

Geometria





Caratteristiche dei materiali

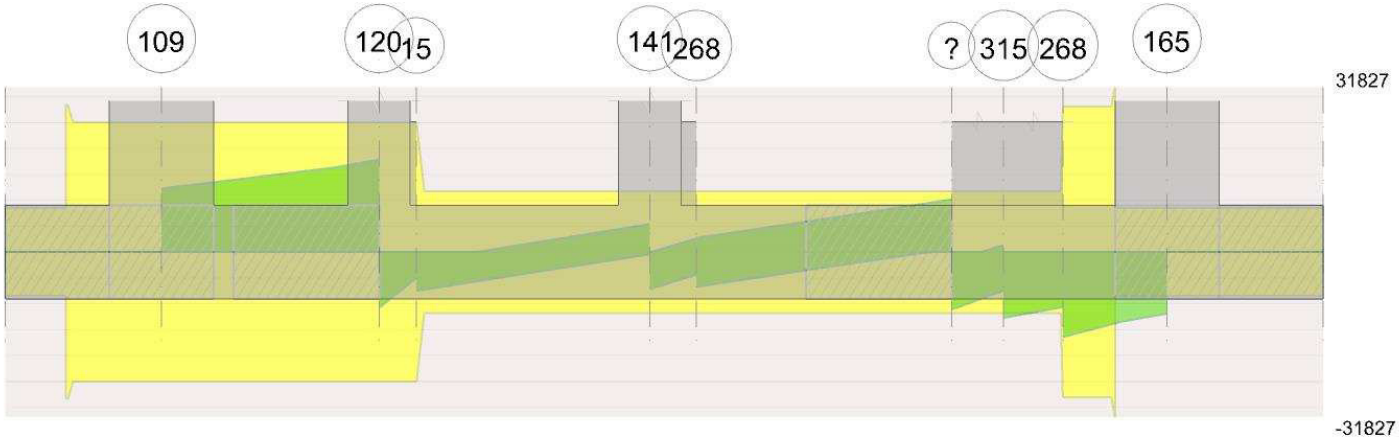
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 556

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-7025.9	SLU 84	-6672.56	-13662.92	0.147	2.05	Si
0.25	0.000942	0.053	0.000628	0.053							-5155.26	SLU 84	-5155.26	-13662.92	0.147	2.65	Si
0.52	0.000942	0.053	0.000628	0.053							-2779.8	SLU 84	-4376.85	-13662.92	0.147	3.12	Si
0.9	0.000942	0.053	0.000628	0.053	1040.04	SLU 84	1040.04	9390.61	0.127	9.03	657.4	SLU 1	-874.17	-13662.92	0.147	15.63	Si
1.05	0.000942	0.053	0.000628	0.053	2764.77	SLU 84	2296.6	9390.61	0.127	4.09							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-7554.39	SLV 8	-7108.89	-13063.86	0.261	1.84	Si
0.25	0.000942	0.053	0.000628	0.053							-5426.94	SLV 8	-5426.94	-13063.86	0.261	2.41	Si
0.52	0.000942	0.053	0.000628	0.053							-2886.89	SLV 8	-4577.97	-13063.86	0.261	2.85	Si
0.9	0.000942	0.053	0.000628	0.053	1348.59	SLV 16	1348.59	8866.46	0.211	6.57	55.37	SLV 1	-1228.29	-13063.86	0.261	10.64	Si
1.05	0.000942	0.053	0.000628	0.053	2922.58	SLV 12	2461.03	8866.46	0.211	3.6							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053							-5979.99	SLD 8	-5649.59	-13063.86	0.261	2.31	Si
0.25	0.000942	0.053	0.000628	0.053							-4335.7	SLD 8	-4335.7	-13063.86	0.261	3.01	Si
0.52	0.000942	0.053	0.000628	0.053							-2319.17	SLD 8	-3667.57	-13063.86	0.261	3.56	Si
0.9	0.000942	0.053	0.000628	0.053	978.7	SLD 16	978.7	8866.46	0.211	9.06	425.26	SLD 1	-863.09	-13063.86	0.261	15.14	Si
1.05	0.000942	0.053	0.000628	0.053	2329.57	SLD 12	1951.29	8866.46	0.211	4.54							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	10358	SLU 84	10358	9278	63019	25025	25025	1	2.42	Si
0.25	0.0000179	0.000942	0	12138	SLU 84	12138	9278	63019	25025	25025	1	2.06	Si
0.52	0.0000179	0.000942	0	14082	SLU 84	14082	9278	63019	25025	25025	1	1.78	Si
0.9	0.0000179	0.000628	0	16754	SLU 84	16754	8105	63019	25025	25025	1	1.49	Si
1.05	0.0000179	0.000628	0	17836	SLU 84	17836	8105	63019	25025	25025	1	1.4	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	12246	SLV 8	12246	9278	63019	25025	25025	1	2.04	Si
0.25	0.0000179	0.000942	0	13456	SLV 8	13456	9278	63019	25025	25025	1	1.86	Si
0.52	0.0000179	0.000942	0	14784	SLV 8	14784	9278	63019	25025	25025	1	1.69	Si
0.9	0.0000179	0.000628	0	16626	SLV 8	16626	8105	63019	25025	25025	1	1.51	Si
1.05	0.0000179	0.000628	0	17378	SLV 8	17378	8105	63019	25025	25025	1	1.44	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000942	0	9309	SLD 8	9309	9278	63019	25025	25025	1	2.69	Si
0.25	0.0000179	0.000942	0	10511	SLD 8	10511	9278	63019	25025	25025	1	2.38	Si
0.52	0.0000179	0.000942	0	11826	SLD 8	11826	9278	63019	25025	25025	1	2.12	Si
0.9	0.0000179	0.000628	0	13641	SLD 8	13641	8105	63019	25025	25025	1	1.83	Si
1.05	0.0000179	0.000628	0	14379	SLD 8	14379	8105	63019	25025	25025	1	1.74	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-5201.7	21	-4939.47	251039	1494000	3657992	36000000	-4744.38	2	-4505	228958	1120500			Si
0.25	-3815.57	21	-3815.57	193919	1494000	2825671	36000000	-3479.79	2	-3479.79	176853	1120500			Si
0.52	-2056.6	21	-3239.05	164618	1494000	2398724	36000000	-1875.49	2	-2953.92	150127	1120500			Si
0.9	770.1	21	770.1	38021	1494000	587085	36000000	701.98	2	701.98	34658	1120500			Si
1.05	2045.94	21	1699.71	83916	1494000	1295765	36000000	1865.12	2	1549.51	76501	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 558

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1695.54	SLU 84	1695.54	9390.61	0.127	5.54							Si
0.04	0.000942	0.053	0.000628	0.053	1476.6	SLU 84	1695.54	9390.61	0.127	5.54							Si
0.56	0.000942	0.053	0.000628	0.053	-236.65	SLU 2	35.87	9390.61	0.127	261.8	-389.35	SLU 83	-509.99	-13662.92	0.147	26.79	Si
0.97	0.000942	0.053	0.000628	0.053							-292.56	SLU 69	-497.1	-13662.92	0.147	27.49	Si
1.12	0.000942	0.053	0.000628	0.053	182.33	SLU 61	107.87	9390.61	0.127	87.06							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	2362.03	SLV 16	2362.03	8866.46	0.211	3.75	-106.29	SLV 1	-345.82	-13063.86	0.261	37.78	Si
0.56	0.000942	0.053	0.000628	0.053	489.24	SLV 7	660.79	8866.46	0.211	13.42	-1028.69	SLV 10	-1331.12	-13063.86	0.261	9.81	Si
0.97	0.000942	0.053	0.000628	0.053	1234.05	SLV 3	1234.05	8866.46	0.211	7.18	-1623.56	SLV 14	-1623.56	-13063.86	0.261	8.05	Si
1.12	0.000942	0.053	0.000628	0.053	1869.01	SLV 3	1564.98	8866.46	0.211	5.67	-1739.75	SLV 14	-1726.71	-13063.86	0.261	7.57	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1657.35	SLD 16	1657.35	8866.46	0.211	5.35							Si
0.56	0.000942	0.053	0.000628	0.053	65.43	SLD 7	285.4	8866.46	0.211	31.07	-604.89	SLD 10	-781.92	-13063.86	0.261	16.71	Si
0.97	0.000942	0.053	0.000628	0.053	420.46	SLD 3	420.46	8866.46	0.211	21.09	-809.96	SLD 14	-815.45	-13063.86	0.261	16.02	Si
1.12	0.000942	0.053	0.000628	0.053	840.88	SLD 3	627.38	8866.46	0.211	14.13	-711.62	SLD 14	-711.62	-13063.86	0.261	18.36	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-6952	SLU 83	-6952	-8105	-63019	-25025	-25025	1	3.6	Si
0.04	0.0000084	0.000628	0	-6597	SLU 83	-6597	-8105	-63019	-11771	-11771	1	1.78	Si
0.56	0.0000084	0.000942	0	-1634	SLU 83	-1634	-9278	-63019	-11771	-11771	1	7.2	Si
0.97	0.0000084	0.000942	0	2265	SLU 84	2265	9278	63019	11771	11771	1	5.2	Si
1.12	0.0000084	0.000628	0	3691	SLU 84	3691	8105	63019	11771	11771	1	3.19	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-7487	SLV 14	-7487	-8105	-63019	-25025	-25025	1	3.34	Si
0.04	0.0000084	0.000628	0	-7249	SLV 14	-7249	-8105	-63019	-11771	-11771	1	1.62	Si
0.56	0.0000084	0.000628	0	1747	SLV 3	1747	8105	63019	11771	11771	1	6.74	Si
0.56	0.0000084	0.000942	0	-3939	SLV 14	-3939	-9278	-63019	-11771	-11771	1	2.99	Si
0.97	0.0000084	0.000628	0	4412	SLV 3	4412	8105	63019	11771	11771	1	2.67	Si
0.97	0.0000084	0.000942	0	-1375	SLV 14	-1375	-9278	-63019	-11771	-11771	1	8.56	Si
1.12	0.0000084	0.000628	0	5394	SLV 3	5394	8105	63019	11771	11771	1	2.18	Si
1.12	0.0000084	0.000942	0	-442	SLV 14	-442	-9278	-63019	-11771	-11771	1	26.63	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000179	0.000628	0	-5874	SLD 14	-5874	-8105	-63019	-25025	-25025	1	4.26	Si
0.04	0.0000084	0.000628	0	-5636	SLD 14	-5636	-8105	-63019	-11771	-11771	1	2.09	Si
0.56	0.0000084	0.000942	0	121	SLD 3	121	9278	63019	11771	11771	1	96.98	Si
0.56	0.0000084	0.000942	0	-2314	SLD 14	-2314	-9278	-63019	-11771	-11771	1	5.09	Si
0.97	0.0000084	0.000628	0	2759	SLD 3	2759	8105	63019	11771	11771	1	4.27	Si
1.12	0.0000084	0.000628	0	3727	SLD 3	3727	8105	63019	11771	11771	1	3.16	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1252.3	21	1252.3	61827	1494000	954683	36000000	1127.87	2	1127.87	55684	1120500			Si
0.56	-280.68	20	-368.06	18706	1494000	272576	36000000	-269.73	2	-350.57	17817	1120500			Si
0.97	-204.5	6	-357.98	18194	1494000	265110	36000000	-196.12	1	-340.99	17330	1120500			Si
1.12	97.59	19	77.82	3842	1494000	59325	36000000	64.63	2	64.63	3191	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 560

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	323.48	SLU 63	323.48	9390.61	0.127	29.03	138.63	SLU 22	-78.26	-13662.92	0.147	174.57	Si
0.61	0.000942	0.053	0.000628	0.053	196.16	SLU 63	656.41	9390.61	0.127	14.31	73.99	SLU 22	-106.79	-13662.92	0.147	127.94	Si
1.06	0.000942	0.053	0.000628	0.053	1829.15	SLU 84	2797.16	9390.61	0.127	3.36							Si
1.23	0.000942	0.053	0.000628	0.053	2797.16	SLU 84	2797.16	9390.61	0.127	3.36							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1581.74	SLV 15	1581.74	8866.46	0.211	5.61	-1228.56	SLV 2	-1228.56	-13063.86	0.261	10.63	Si
0.61	0.000942	0.053	0.000628	0.053	1455.53	SLV 3	2446.88	8866.46	0.211	3.62	-1254.3	SLV 14	-1593.11	-13063.86	0.261	8.2	Si
1.06	0.000942	0.053	0.000628	0.053	4261.1	SLV 3	5540.69	8866.46	0.211	1.6	-1826.63	SLV 14	-1832.22	-13063.86	0.261	7.13	Si
1.23	0.000942	0.053	0.000628	0.053	5540.69	SLV 3	5540.69	8866.46	0.211	1.6	-1802.46	SLV 14	-1832.22	-13063.86	0.261	7.13	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	780.22	SLD 15	780.22	8866.46	0.211	11.36	-427.04	SLD 2	-445.87	-13063.86	0.261	29.3	Si
0.61	0.000942	0.053	0.000628	0.053	682.95	SLD 3	1293.42	8866.46	0.211	6.86	-481.72	SLD 14	-485.8	-13063.86	0.261	26.89	Si
1.06	0.000942	0.053	0.000628	0.053	2521.33	SLD 3	3441.52	8866.46	0.211	2.58	-86.86	SLD 14	-358.9	-13063.86	0.261	36.4	Si
1.23	0.000942	0.053	0.000628	0.053	3441.52	SLD 3	3441.52	8866.46	0.211	2.58	296.71	SLD 14	-115.33	-13063.86	0.261	113.27	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000628	0	-2989	SLU 84	-2989	-8105	-63019	-11771	-11771	1	3.94	Si
0.61	0.0000084	0.000628	0	2505	SLU 83	2505	8105	63019	11771	11771	1	4.7	Si
1.23	0.0000084	0.000628	0	7991	SLU 84	7991	8105	63019	11771	11771	1	1.47	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000942	0	2721	SLV 1	2721	9278	63019	11771	11771	1	4.33	Si
0	0.0000084	0.000628	0	-6714	SLV 16	-6714	-8105	-63019	-11771	-11771	1	1.75	Si
0.61	0.0000084	0.000628	0	6381	SLV 1	6381	8105	63019	11771	11771	1	1.84	Si
0.61	0.0000084	0.000942	0	-2996	SLV 16	-2996	-9278	-63019	-11771	-11771	1	3.93	Si
1.23	0.0000084	0.000628	0	10144	SLV 3	10144	8105	63019	11771	11771	1	1.16	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.000942	0	22	SLD 1	22	9278	63019	11771	11771	1	542.53	Si
0	0.0000084	0.000628	0	-4015	SLD 16	-4015	-8105	-63019	-11771	-11771	1	2.93	Si
0.61	0.0000084	0.000628	0	3697	SLD 1	3697	8105	63019	11771	11771	1	3.18	Si
0.61	0.0000084	0.000942	0	-312	SLD 16	-312	-9278	-63019	-11771	-11771	1	37.75	Si
1.23	0.0000084	0.000628	0	7416	SLD 3	7416	8105	63019	11771	11771	1	1.59	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	223.17	21	223.17	11018	1494000	170136	36000000	176.59	2	176.59	8718	1120500			Si
0.61	131.87	21	488.07	24096	1494000	372076	36000000	100.61	2	426.89	21076	1120500			Si
1.23	2066.9	21	2066.9	102045	1494000	1575693	36000000	1869.12	2	1869.12	92280	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 563

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	435.78	SLU 78	435.78	9390.61	0.127	21.55	291.96	SLU 1	-2326.36	-13662.92	0.147	5.87	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	1165.67	SLV 3	1165.67	8866.46	0.211	7.61	-561.39	SLV 14	-2338.34	-13063.86	0.261	5.59	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000628	0.053	672.32	SLD 3	672.32	8866.46	0.211	13.19	-68.03	SLD 14	-1877.52	-13063.86	0.261	6.96	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-16406	SLU 84	-16406	-7751	-63019	-28078	-28078	1	1.71	Si
0.25	0.0000201	0	0	-13767	SLU 84	-13767	-8455	-71432	-31827	-31827	1	2.31	Si
0.25	0.0000201	0	0	-13765	SLU 84	-13765	-8455	-71432	-31827	-31827	1	2.31	Si
0.27	0	0	0	-13592	SLU 84	-13592	-8455	-71432	0	-8455	1	0.62	Si
0.5	0	0	0	-11159	SLU 84	-11159	-8455	-71432	0	-8455	1	0.76	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-15541	SLV 7	-15541	-7751	-63019	-28078	-28078	1	1.81	Si
0.25	0.0000201	0	0	-13683	SLV 7	-13683	-8455	-71432	-31827	-31827	1	2.33	Si
0.25	0.0000201	0	0	-13682	SLV 7	-13682	-8455	-71432	-31827	-31827	1	2.33	Si
0.27	0	0	0	-13561	SLV 7	-13561	-8455	-71432	0	-8455	1	0.62	Si
0.5	0	0	0	-11869	SLV 7	-11869	-8455	-71432	0	-8455	1	0.71	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000201	0	0	-12950	SLD 7	-12950	-7751	-63019	-28078	-28078	1	2.17	Si
0.25	0.0000201	0	0	-11137	SLD 7	-11137	-8455	-71432	-31827	-31827	1	2.86	Si
0.25	0.0000201	0	0	-11136	SLD 7	-11136	-8455	-71432	-31827	-31827	1	2.86	Si
0.27	0	0	0	-11018	SLD 7	-11018	-8455	-71432	0	-8455	1	0.77	Si
0.5	0	0	0	-9356	SLD 7	-9356	-8455	-71432	0	-8455	1	0.9	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	328.07	15	328.07	16197	1494000	250106	36000000	302.14	2	302.14	14917	1120500			Si
0.25	-2454.19	21	-2455.66	-145520	1494000	0	36000000	-2202.15	2	-2203.47	-130576	1120500			Si
0.25	-2455.66	21	-2455.66	-145520	1494000	0	36000000	-2203.47	2	-2203.47	-130576	1120500			Si
0.5	-4751.92	21	-3724.21	-220694	1494000	0	36000000	-4264.86	2	-3343.99	-198163	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 120, sezione R 50x45, asta 556

Campata 3 tra i fili 120 - 15, sezione R 50x45, asta 557

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1501	SLU 84	0.075	13958	5220	SLU 84	35038	Si
0.09	0.41	0.0009	1512	SLU 84	0.075	13958	5259	SLU 84	35038	Si
0.15	0.41	0.0009	1515	SLU 84	0.075	13958	5270	SLU 84	35038	Si
0.18	0.41	0.0009	1516	SLU 84	0.075	13958	5273	SLU 84	35038	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0009	1018	SLD 11	0.158	15508	3541	SLD 11	40294	Si
0.09	0.41	0.0009	1031	SLD 11	0.158	15508	3585	SLD 11	40294	Si
0.15	0.41	0.0009	1036	SLD 11	0.158	15508	3603	SLD 11	40294	Si
0.18	0.41	0.0009	1038	SLD 11	0.158	15508	3610	SLD 11	40294	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000895	1103	SLE RA 21	29111	1494000	360982	36000000	995	SLE QP 2	26259	1120500	Si
0.09	0.41	0.00000895	1111	SLE RA 21	29330	1494000	363687	36000000	1002	SLE QP 2	26452	1120500	Si
0.15	0.41	0.00000895	1113	SLE RA 21	29395	1494000	364494	36000000	1004	SLE QP 2	26509	1120500	Si
0.18	0.41	0.00000895	1114	SLE RA 21	29413	1494000	364727	36000000	1005	SLE QP 2	26525	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 15 - 141, sezione R 50x45, asta 558

Campata 5 tra i fili 141 - 268, sezione R 50x45, asta 559

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1518	SLU 84	0.036	6674	5281	SLU 84	16481	Si
0.11	0.41	0.0004	1519	SLU 84	0.036	6674	5284	SLU 84	16481	Si
0.15	0.41	0.0004	1519	SLU 84	0.036	6674	5284	SLU 84	16481	Si
0.22	0.41	0.0004	1519	SLU 84	0.036	6674	5284	SLU 84	16481	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1049	SLD 11	0.109	7446	3649	SLD 11	18953	Si
0.11	0.41	0.0004	1051	SLD 11	0.109	7446	3655	SLD 11	18953	Si
0.15	0.41	0.0004	1051	SLD 11	0.109	7446	3657	SLD 11	18953	Si
0.22	0.41	0.0004	1052	SLD 7	0.109	7446	3659	SLD 7	18953	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1116	SLE RA 21	31272	1494000	387776	36000000	1006	SLE QP 2	28197	1120500	Si
0.11	0.41	0.00000421	1117	SLE RA 21	31294	1494000	388049	36000000	1007	SLE QP 2	28218	1120500	Si
0.15	0.41	0.00000421	1117	SLE RA 21	31297	1494000	388084	36000000	1007	SLE QP 2	28221	1120500	Si
0.22	0.41	0.00000421	1117	SLE RA 21	31298	1494000	388099	36000000	1007	SLE QP 2	28224	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 6 tra i fili 268 - ?, sezione R 50x45, asta 560

Campata 7 tra i fili ? - 315, sezione R 50x45, asta 561

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1515	SLU 84	0.036	6674	5268	SLU 84	16481	Si
0.12	0.41	0.0004	1507	SLU 84	0.036	6674	5242	SLU 84	16481	Si
0.25	0.41	0.0004	1490	SLU 84	0.036	6674	5184	SLU 84	16481	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1046	SLD 7	0.109	7446	3639	SLD 7	18953	Si
0.12	0.41	0.0004	1038	SLD 7	0.109	7446	3611	SLD 7	18953	Si
0.25	0.41	0.0004	1022	SLD 7	0.109	7446	3556	SLD 7	18953	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1114	SLE RA 21	31204	1494000	386928	36000000	1005	SLE QP 2	28164	1120500	Si
0.12	0.41	0.00000421	1108	SLE RA 21	31053	1494000	385051	36000000	1001	SLE QP 2	28035	1120500	Si
0.25	0.41	0.00000421	1096	SLE RA 21	30707	1494000	380768	36000000	990	SLE QP 2	27730	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 8 tra i fili 315 - 268, sezione R 50x45, asta 562

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1490	SLU 84	0.036	6674	5184	SLU 84	16481	Si
0.14	0.41	0.0004	1479	SLU 84	0.036	6674	5143	SLU 84	16481	Si
0.28	0.41	0.001	1465	SLU 84	0.085	15602	5097	SLU 84	39314	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1022	SLD 7	0.109	7446	3556	SLD 7	18953	Si
0.14	0.41	0.0004	1011	SLD 7	0.109	7446	3518	SLD 7	18953	Si
0.28	0.41	0.001	1000	SLD 11	0.167	17333	3478	SLD 11	45211	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000421	1096	SLE RA 21	30707	1494000	380768	36000000	990	SLE QP 2	27730	1120500	Si
0.14	0.41	0.00000421	1087	SLE RA 21	30460	1494000	377703	36000000	982	SLE QP 2	27511	1120500	Si
0.28	0.41	0.00001004	1077	SLE RA 21	28072	1494000	348099	36000000	973	SLE QP 2	25359	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 9 tra i fili 268 - 165, sezione R 50x45, asta 563

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.83	1.1	SLU 41	ST	LT	-185	-162	-50767	0	0	19	0	0	1.1	15442	246	62.83	Si
4.83	1.1	SLV 1	SIS	LT	-7518	-1534	-41196	-10	-2	19	0	0	1.1	12531	7673	1.63	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
556,557,558,559,560,561,562,563	4.83	1.1	SLU 83	ST	BT	2.3	219975	61184	3.6	Si
556,557,558,559,560,561,562,563	4.83	1.1	SLV 7	SIS	BT	2.3	214755	44189	4.86	Si
556,557,558,559,560,561,562,563	4.83	1.1	SLD 5	SIS	BT	2.3	209816	40958	5.12	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-125	-61184	1228.23	-462.28	0	0	-0.01	0.02	1.06	4.81	1496	2060	0	14430	
0	3886	-44189	-1040.42	-713.92	0	5	-0.02	-0.02	1.05	4.8	1496	2060	0	14430	0.07
0	-1847	-40958	1566.13	-794.02	0	-3	-0.02	0.04	1.02	4.79	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

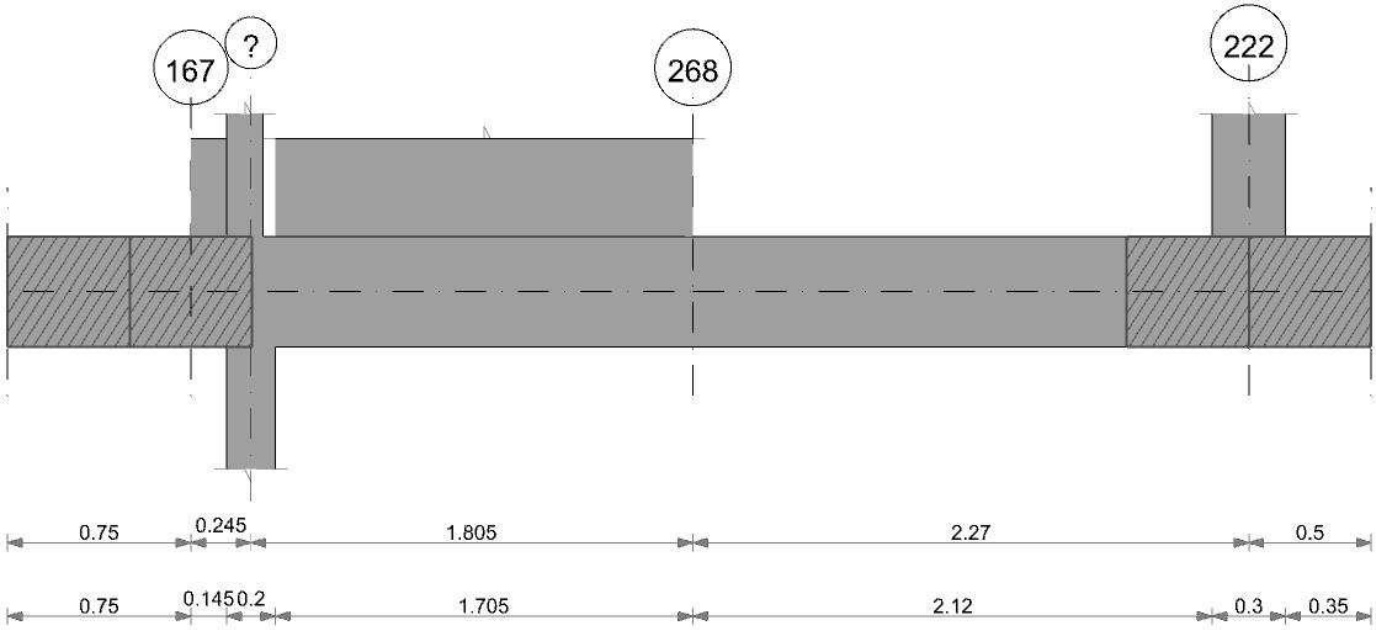
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	697	SLE RA 21	0.05	0	697	690	SLE RA 21	0.05	0	696	SLE RA 21	0.0033	0	SLE RA 20	Si
D	0.05	0	698	SLE RA 1	0.05	0	698	698	SLE RA 1	0.05	0	697	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	698	SLE RA 1	0.05	0	698	698	SLE RA 1	0.05	0	697	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.02	698	697	SLE RA 21	0.19	0.02	697	SLE RA 20	0.1	0.01	693	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	698	697	SLE RA 1	0.19	0	698	SLE RA 1	0.1	0	697	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	698	697	SLE RA 1	0.19	0	698	SLE RA 1	0.1	0	697	SLE RA 1	Si

CORDOLO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

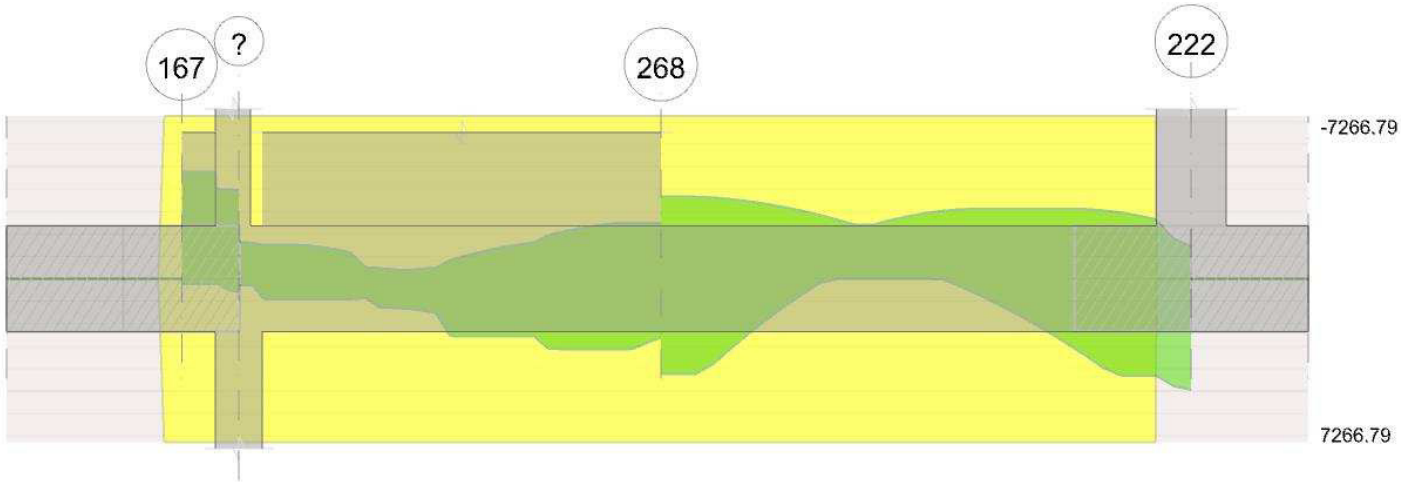
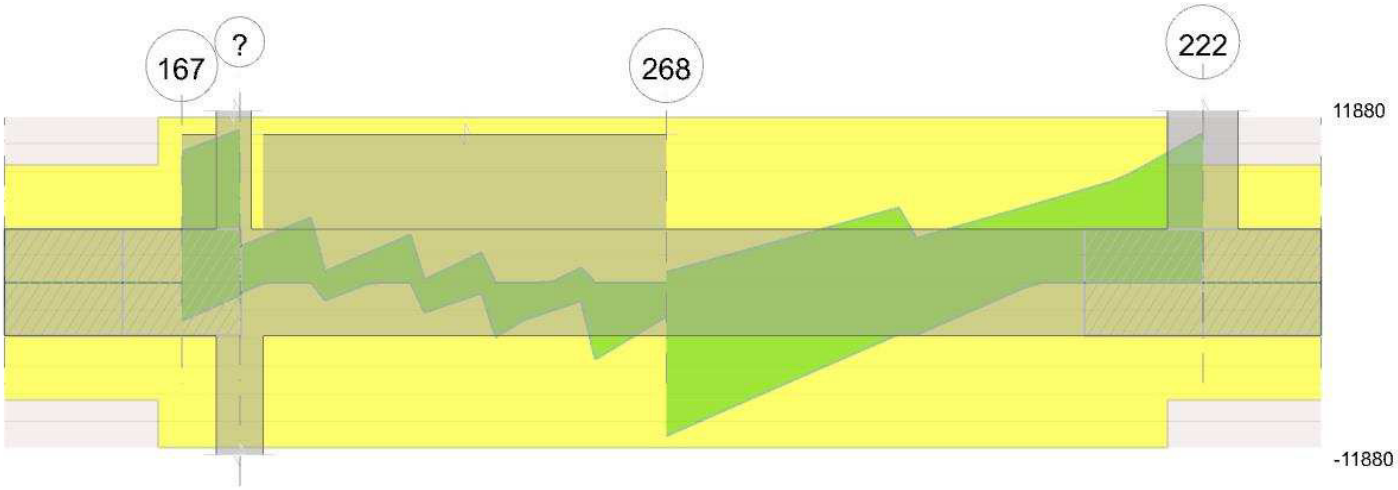


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 594, 595

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	493.31	SLU 83	493.31	7755.45	0.113	15.72	239.39	SLU 2	-605.99	-7755.45	0.113	12.8	Si
1.14	0.000509	0.052	0.000509	0.052							-2562.69	SLU 83	-2562.69	-7755.45	0.113	3.03	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	4227.67	SLV 16	4227.67	7266.79	0.197	1.72	-3656.31	SLV 1	-3656.31	-7266.79	0.197	1.99	Si
1.14	0.000509	0.052	0.000509	0.052							-2547.23	SLV 14	-2931.9	-7266.79	0.197	2.48	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1971.79	SLD 16	1971.79	7266.79	0.197	3.69	-1400.43	SLD 1	-1743.27	-7266.79	0.197	4.17	Si
1.14	0.000509	0.052	0.000509	0.052							-2077.79	SLD 14	-2173.14	-7266.79	0.197	3.34	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-7719	SLU 83	-7719	-7764	-63178	-11880	-11880	1	1.54	Si
1.14	0.0000085	0.000509	0	256	SLU 65	256	7764	63178	11880	11880	1	46.38	Si
2.12	0.0000085	0	0	9324	SLU 84	9324	8455	71432	13432	13432	1	1.44	Si
2.27	0	0	0	10749	SLU 84	10749	8455	71432	0	8455	1	0.79	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	747	SLV 3	747	7764	63178	11880	11880	1	15.91	Si
0	0.0000085	0.000509	0	-11047	SLV 14	-11047	-7764	-63178	-11880	-11880	1	1.08	Si
1.14	0.0000085	0.000509	0	3562	SLV 1	3562	7764	63178	11880	11880	1	3.34	Si
1.14	0.0000085	0.000509	0	-3192	SLV 16	-3192	-7764	-63178	-11880	-11880	1	3.72	Si
2.12	0.0000085	0	0	8480	SLV 1	8480	8455	71432	13432	13432	1	1.58	Si
2.27	0	0	0	9251	SLV 1	9251	8455	71432	0	8455	1	0.91	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000085	0.000509	0	-7671	SLD 14	-7671	-7764	-63178	-11880	-11880	1	1.55	Si
1.14	0.0000085	0.000509	0	1629	SLD 1	1629	7764	63178	11880	11880	1	7.29	Si
1.14	0.0000085	0.000509	0	-1259	SLD 16	-1259	-7764	-63178	-11880	-11880	1	9.43	Si
2.12	0.0000085	0	0	7251	SLD 1	7251	8455	71432	13432	13432	1	1.85	Si
2.27	0	0	0	8132	SLD 1	8132	8455	71432	0	8455	1	1.04	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	350.33	20	350.33	18530	1494000	277950	36000000	285.68	2	285.68	15111	1120500			Si
1.14	-1891.77	20	-1891.77	100062	1494000	1500931	36000000	-1724.98	2	-1724.98	91240	1120500			Si
2.12	1181.19	21	1181.19	69996	1494000	0	36000000	1111.67	2	1111.67	65877	1120500			Si
2.27	2169.6	21	1697.9	100616	1494000	0	36000000	2019.95	2	1586.65	94024	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 167 - ?, sezione R 50x45, asta 588

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1416	SLU 84	0.036	6718	4925	SLU 84	16592	Si
0.12	0.41	0.0004	1414	SLU 84	0.036	6718	4917	SLU 84	16592	Si
0.15	0.41	0.0004	1414	SLU 84	0.036	6718	4917	SLU 84	16592	Si
0.25	0.41	0.0004	1413	SLU 84	0.036	6718	4916	SLU 84	16592	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	976	SLD 15	0.109	7495	3396	SLD 15	19081	Si
0.12	0.41	0.0004	979	SLD 15	0.109	7495	3405	SLD 15	19081	Si
0.15	0.41	0.0004	980	SLD 15	0.109	7495	3407	SLD 15	19081	Si
0.25	0.41	0.0004	983	SLD 15	0.109	7495	3419	SLD 15	19081	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	1041	SLE RA 21	29150	1494000	361455	36000000	941	SLE QP 2	26356	1120500	Si
0.12	0.41	0.00000424	1039	SLE RA 21	29104	1494000	360895	36000000	940	SLE QP 2	26317	1120500	Si
0.15	0.41	0.00000424	1039	SLE RA 21	29101	1494000	360851	36000000	940	SLE QP 2	26314	1120500	Si
0.25	0.41	0.00000424	1039	SLE RA 21	29097	1494000	360802	36000000	939	SLE QP 2	26311	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili ? - 268, sezione R 50x45, aste 589, 590, 591, 592, 593

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1413	SLU 84	0.036	6718	4916	SLU 84	16592	Si
0.1	0.41	0.0004	1413	SLU 84	0.036	6718	4916	SLU 84	16592	Si
0.9	0.41	0.0004	1417	SLU 84	0.036	6718	4929	SLU 84	16592	Si
1.8	0.41	0.0004	1401	SLU 84	0.036	6718	4872	SLU 84	16592	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	983	SLD 15	0.109	7495	3419	SLD 15	19081	Si
0.1	0.41	0.0004	986	SLD 15	0.109	7495	3431	SLD 15	19081	Si
0.9	0.41	0.0004	1021	SLD 15	0.109	7495	3551	SLD 15	19081	Si
1.8	0.41	0.0004	1035	SLD 15	0.109	7495	3601	SLD 15	19081	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000424	1039	SLE RA 21	29097	1494000	360802	36000000	939	SLE QP 2	26311	1120500	Si
0.1	0.41	0.00000424	1039	SLE RA 21	29097	1494000	360804	36000000	939	SLE QP 2	26311	1120500	Si
0.9	0.41	0.00000424	1041	SLE RA 21	29165	1494000	361646	36000000	942	SLE QP 2	26370	1120500	Si
1.8	0.41	0.00000424	1029	SLE RA 21	28824	1494000	357419	36000000	931	SLE QP 2	26068	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 268 - 222, sezione R 50x45, aste 594, 595

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.32	1.1	SLU 27	ST	LT	-525	-274	-36532	-1	0	19	0	0	1.1	11112	592	18.78	Si
4.32	1.1	SLV 2	SIS	LT	-6516	-1612	-28650	-13	-3	19	0	0	1.1	8715	6713	1.3	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
588,589,590,591,592,593,594,595	4.32	1.1	SLU 83	ST	BT	2.3	197300	49474	3.99	Si
588,589,590,591,592,593,594,595	4.32	1.1	SLV 14	SIS	BT	2.3	189563	38988	4.86	Si
588,589,590,591,592,593,594,595	4.32	1.1	SLD 14	SIS	BT	2.3	194082	36168	5.37	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-371	-49474	1044.44	-115.27	0	0	0	0.02	1.06	4.32	1496	2060	0	14430	
0	-998	-38988	707.11	3782.56	0	-1	0.1	0.02	1.06	4.13	1496	2060	0	14430	0.07
0	-566	-36168	707.89	1581.35	0	-1	0.04	0.02	1.06	4.23	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

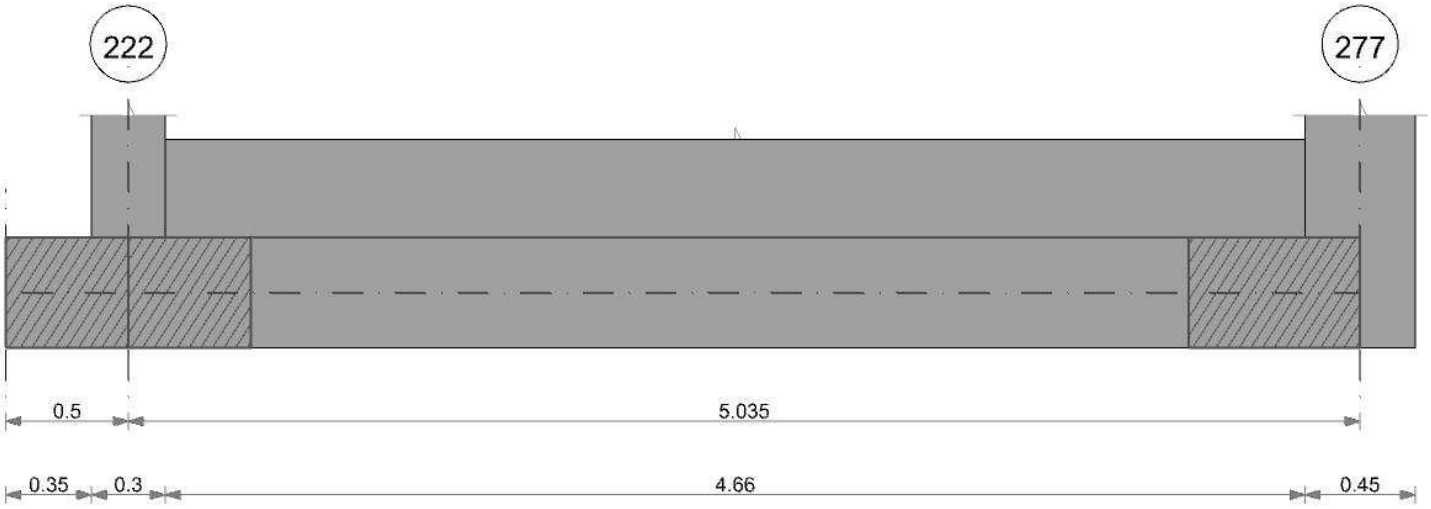
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	700	SLE RA 21	0.05	0.001	700	707	SLE RA 20	0.05	0	700	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	707	SLE RA 1	0.05	0	707	707	SLE RA 1	0.05	0	705	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	707	SLE RA 1	0.05	0	707	707	SLE RA 1	0.05	0	705	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.02	700	699	SLE RA 20	0.19	0.04	700	SLE RA 20	0.1	0.01	705	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	707	705	SLE RA 1	0.19	0	707	SLE RA 1	0.1	0	705	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	707	705	SLE RA 1	0.19	0	707	SLE RA 1	0.1	0	705	SLE RA 1	Si

CORDOLO 12

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

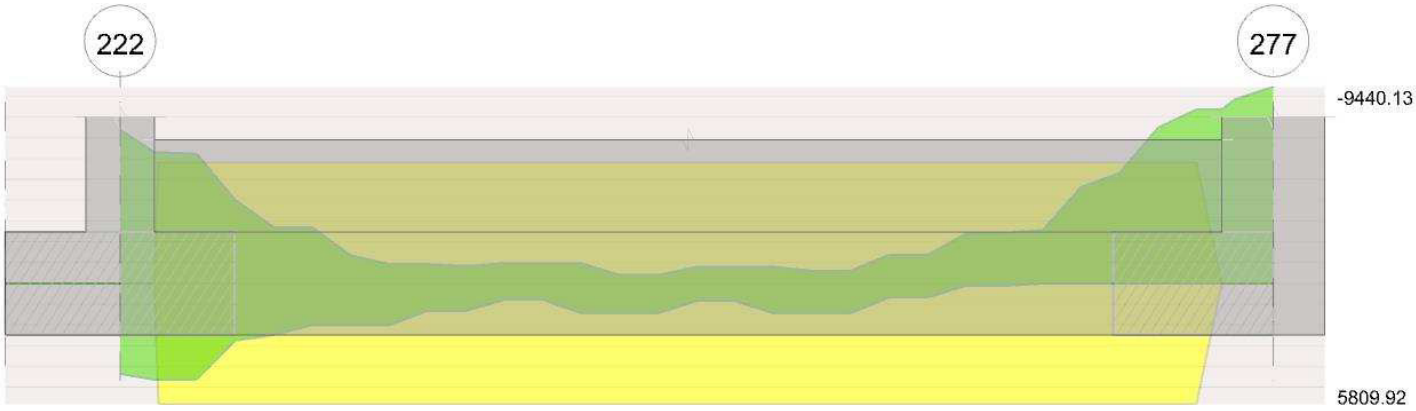
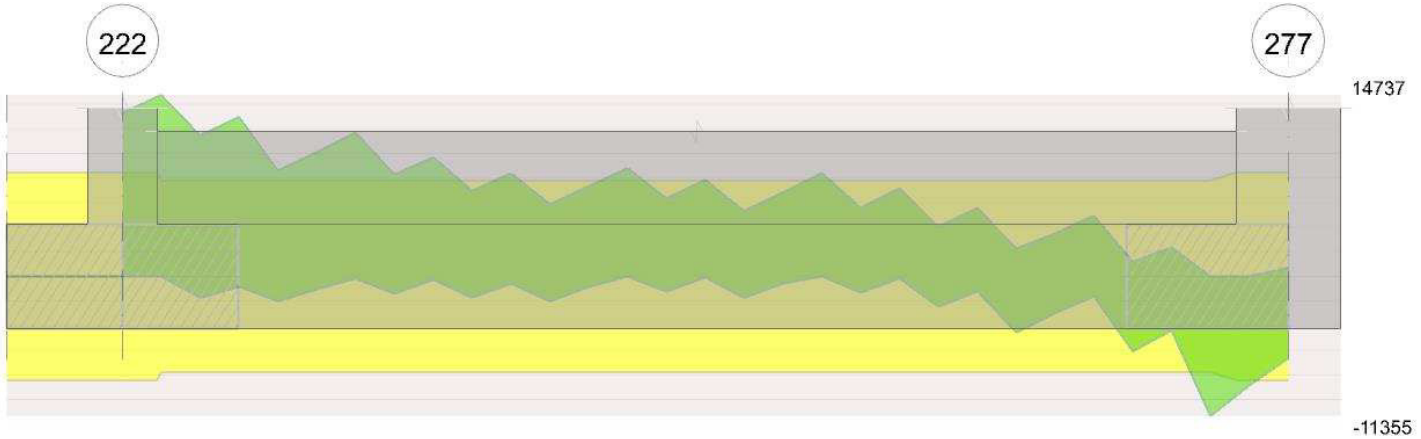


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 222 - 277, sezione R 50x45, aste 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1520	SLU 84	0.017	2681	5287	SLU 84	15877	Si
0.15	0.41	0.0002	1532	SLU 84	0.017	2681	5329	SLU 84	15877	Si
2.52	0.41	0.0002	1740	SLV 15	0.084	2609	6051	SLV 15	15877	Si
4.81	0.41	0.0002	2286	SLV 14	0.084	2609	7950	SLV 14	15877	Si
5.04	0.41	0.0002	2377	SLV 14	0.084	2609	8268	SLV 14	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1123	SLD 15	0.069	3019	3908	SLD 15	15877	Si
0.15	0.41	0.0002	1135	SLD 15	0.069	3019	3947	SLD 15	15877	Si
2.52	0.41	0.0002	1403	SLD 15	0.069	3019	4881	SLD 15	15877	Si
4.81	0.41	0.0002	1718	SLD 14	0.069	3019	5975	SLD 14	15877	Si
5.04	0.41	0.0002	1777	SLD 14	0.069	3019	6182	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1118	SLE RA 21	32369	1494000	401381	36000000	1014	SLE QP 2	29377	1120500	Si
0.15	0.41	0.00000168	1126	SLE RA 21	32623	1494000	404525	36000000	1022	SLE QP 2	29612	1120500	Si
2.52	0.41	0.00000168	1266	SLE RA 21	36662	1494000	454608	36000000	1152	SLE QP 2	33376	1120500	Si
4.81	0.41	0.00000168	1416	SLE RA 21	41005	1494000	508462	36000000	1294	SLE QP 2	37481	1120500	Si
5.04	0.41	0.00000168	1454	SLE RA 21	42107	1494000	522124	36000000	1329	SLE QP 2	38506	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.26	1.1	SLU 6	ST	LT	-805	-87	-45745	-1	0	19	0	0	1.1	13915	809	17.19	Si
5.26	1.1	SLV 2	SIS	LT	-7604	-2307	-27944	-15	-5	19	0	0	1.1	8500	7947	1.07	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
630,631,632,633,634,635,636,637,638,639,640,641,642	5.26	1.1	SLU 83	ST	BT	2.3	241383	68061	3.55	Si
630,631,632,633,634,635,636,637,638,639,640,641,642	5.26	1.1	SLV 15	SIS	BT	2.3	220187	65955	3.34	Si
630,631,632,633,634,635,636,637,638,639,640,641,642	5.26	1.1	SLD 14	SIS	BT	2.3	230278	54985	4.19	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-272	-68061	239.35	4385.92	0	0	0.06	0	1.09	5.13	1496	2060	0	14430	
0	2041	-65955	-777.06	16026.48	0	2	0.24	-0.01	1.08	4.77	1496	2060	0	14430	0.07
0	-764	-54985	446.55	8784.39	0	-1	0.16	0.01	1.08	4.94	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	708	SLE RA 21	0.05	0.001	708	721	SLE RA 21	0.05	0	721	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	721	SLE RA 1	0.05	0	721	721	SLE RA 1	0.05	0	721	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	721	SLE RA 1	0.05	0	721	721	SLE RA 1	0.05	0	721	SLE RA 1	0.0033	0	SLE RA 1	Si

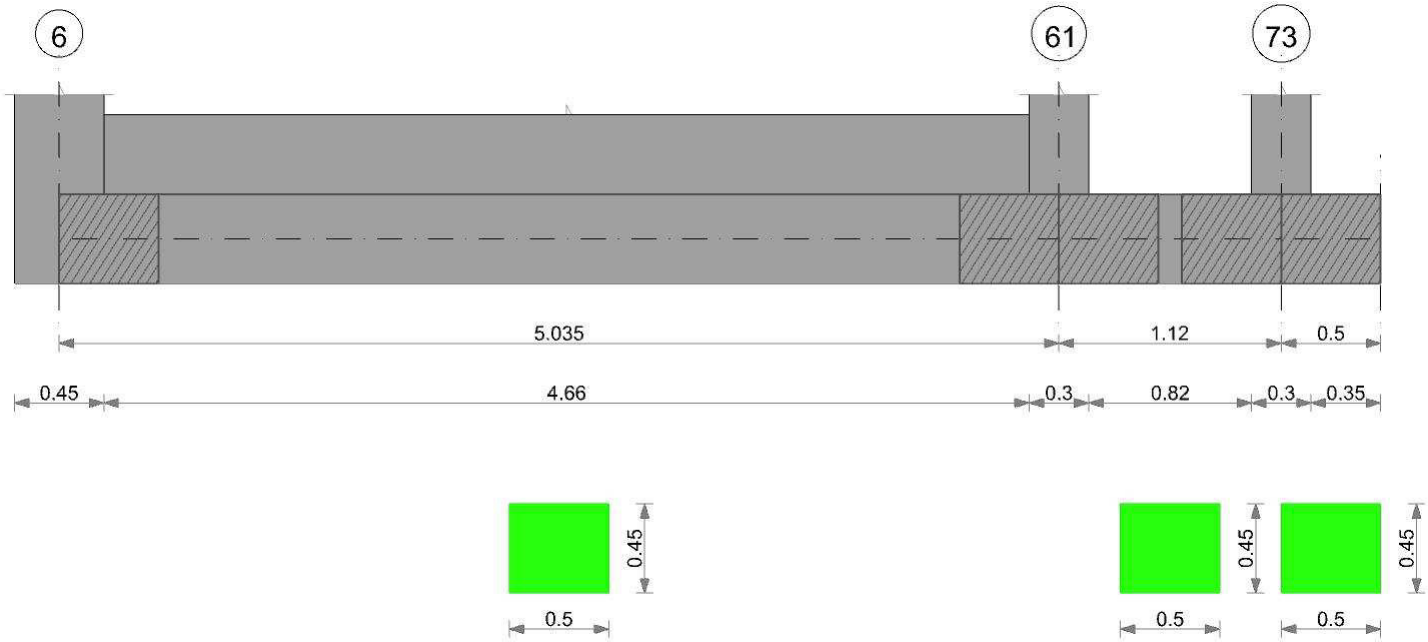
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	721	708	SLE RA 21	0.19	0	721	SLE RA 1	0.1	0	721	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
D	0.19	0	SLE RA 1	0.19	0	721	708	SLE RA 1	0.19	0	721	SLE RA 1	0.1	0	721	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	721	708	SLE RA 1	0.19	0	721	SLE RA 1	0.1	0	721	SLE RA 1	Si

CORDOLO 13

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

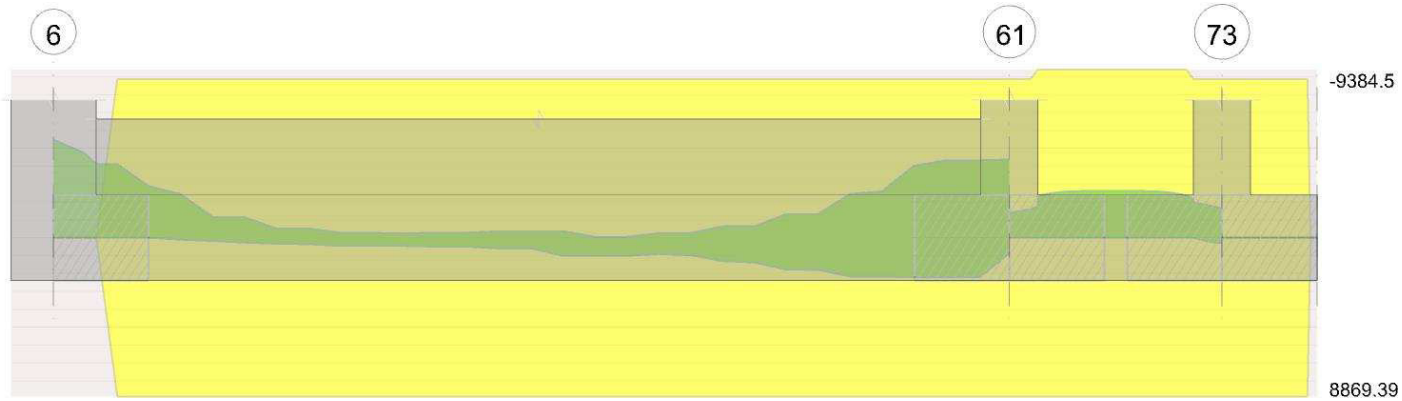
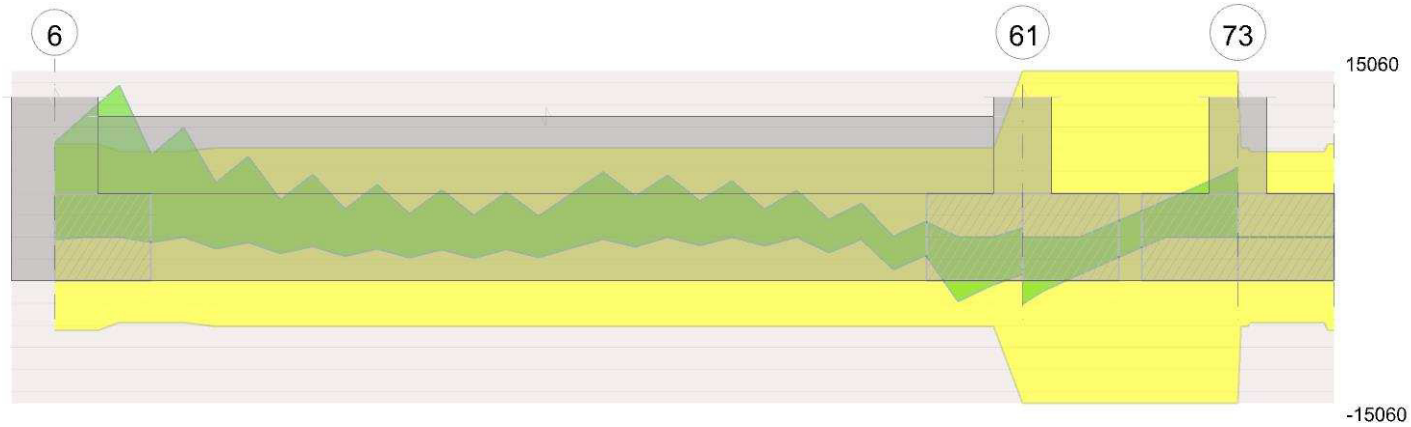


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 731

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-1016.46	SLU 49	-1016.46	-9384.5	0.124	9.23	Si
0.15	0.000628	0.053	0.000628	0.053							-1738.51	SLU 78	-2341.31	-9384.5	0.124	4.01	Si
0.52	0.000628	0.053	0.000628	0.053							-2599.32	SLU 83	-2601	-9384.5	0.124	3.61	Si
0.56	0.000628	0.053	0.000628	0.053							-2601	SLU 83	-2601	-9384.5	0.124	3.61	Si
0.97	0.000628	0.053	0.000628	0.053							-1607.58	SLU 83	-2267.19	-9384.5	0.124	4.14	Si
1.12	0.000628	0.053	0.000628	0.053							-791.51	SLU 81	-791.51	-9384.5	0.124	11.86	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-1383.55	SLV 12	-1383.55	-8869.39	0.216	6.41	Si
0.15	0.000628	0.053	0.000628	0.053							-1632.47	SLV 12	-1784.47	-8869.39	0.216	4.97	Si
0.56	0.000628	0.053	0.000628	0.053							-2059.49	SLV 5	-2167.13	-8869.39	0.216	4.09	Si
0.6	0.000628	0.053	0.000628	0.053							-2100.79	SLV 5	-2167.49	-8869.39	0.216	4.09	Si
0.97	0.000628	0.053	0.000628	0.053							-1969.37	SLV 5	-2155.61	-8869.39	0.216	4.11	Si
1.12	0.000628	0.053	0.000628	0.053	792.75	SLV 12	287.36	8869.39	0.216	30.86	-1637.89	SLV 5	-1637.89	-8869.39	0.216	5.42	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053							-1010.73	SLD 12	-1010.73	-8869.39	0.216	8.78	Si
0.15	0.000628	0.053	0.000628	0.053							-1403.65	SLD 12	-1682.11	-8869.39	0.216	5.27	Si
0.52	0.000628	0.053	0.000628	0.053							-1864.48	SLD 6	-1891.57	-8869.39	0.216	4.69	Si
0.56	0.000628	0.053	0.000628	0.053							-1882.24	SLD 5	-1891.57	-8869.39	0.216	4.69	Si
0.97	0.000628	0.053	0.000628	0.053							-1426.53	SLD 5	-1775.54	-8869.39	0.216	5	Si
1.12	0.000628	0.053	0.000628	0.053	108.14	SLD 12	108.14	8869.39	0.216	82.02	-953.27	SLD 5	-953.27	-8869.39	0.216	9.3	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-6067	SLU 83	-6067	-8105	-63019	-15060	-15060	1	2.48	Si
0.15	0.0000108	0.000628	0	-4387	SLU 83	-4387	-8105	-63019	-15060	-15060	1	3.43	Si
0.56	0.0000108	0.000628	0	614	SLU 51	614	8105	63019	15060	15060	1	24.51	Si
0.56	0.0000108	0.000628	0	-40	SLU 39	-40	-8105	-63019	-15060	-15060	1	380.84	Si
0.97	0.0000108	0.000628	0	4708	SLU 78	4708	8105	63019	15060	15060	1	3.2	Si
1.12	0.0000108	0.000628	0	6351	SLU 84	6351	8105	63019	15060	15060	1	2.37	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-5843	SLV 1	-5843	-8105	-63019	-15060	-15060	1	2.58	Si
0.15	0.0000108	0.000628	0	-4540	SLV 5	-4540	-8105	-63019	-15060	-15060	1	3.32	Si
0.56	0.0000108	0.000628	0	1918	SLV 12	1918	8105	63019	15060	15060	1	7.85	Si
0.56	0.0000108	0.000628	0	-1366	SLV 5	-1366	-8105	-63019	-15060	-15060	1	11.02	Si
0.97	0.0000108	0.000628	0	5054	SLV 8	5054	8105	63019	15060	15060	1	2.98	Si
1.12	0.0000108	0.000628	0	6253	SLV 4	6253	8105	63019	15060	15060	1	2.41	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000108	0.000628	0	-4751	SLD 1	-4751	-8105	-63019	-15060	-15060	1	3.17	Si
0.15	0.0000108	0.000628	0	-3553	SLD 5	-3553	-8105	-63019	-15060	-15060	1	4.24	Si
0.56	0.0000108	0.000628	0	992	SLD 12	992	8105	63019	15060	15060	1	15.19	Si
0.56	0.0000108	0.000628	0	-440	SLD 5	-440	-8105	-63019	-15060	-15060	1	34.26	Si
0.97	0.0000108	0.000628	0	4080	SLD 8	4080	8105	63019	15060	15060	1	3.69	Si
1.12	0.0000108	0.000628	0	5224	SLD 8	5224	8105	63019	15060	15060	1	2.88	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-765.08	7	-765.08	39532	1494000	592983	36000000	-728.02	1	-728.02	37617	1120500			Si
0.15	-1306.1	15	-1739.59	89885	1494000	1348279	36000000	-1229.43	2	-1607.83	83077	1120500			Si
0.56	-1916.42	20	-1917.56	99081	1494000	1486222	36000000	-1744.52	2	-1749.63	90404	1120500			Si

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0.97	-1157.22	20	-1655.34	85532	1494000	1282982	36000000	-1005.52	2	-1480.57	76501	1120500			Si
1.12	-544.74	18	-544.74	28147	1494000	422204	36000000	-422.57	2	-422.57	21834	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 6 - 61, sezione R 50x45, aste 745, 744, 743, 742, 741, 740, 739, 738, 737, 736, 735, 734, 733, 732

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2297	SLV 4	0.085	2672	7990	SLV 4	15877	Si
0.23	0.41	0.0002	2237	SLV 4	0.085	2672	7782	SLV 4	15877	Si
2.52	0.41	0.0002	1793	SLV 2	0.085	2672	6236	SLV 2	15877	Si
4.89	0.41	0.0002	1566	SLU 84	0.017	2747	5449	SLU 84	15877	Si
5.04	0.41	0.0005	1556	SLU 84	0.045	8504	5412	SLU 84	21085	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1704	SLD 4	0.07	3092	5927	SLD 4	15877	Si
0.23	0.41	0.0002	1670	SLD 4	0.07	3092	5807	SLD 4	15877	Si
2.52	0.41	0.0002	1436	SLD 2	0.07	3092	4996	SLD 2	15877	Si
4.89	0.41	0.0002	1177	SLD 2	0.07	3092	4094	SLD 2	15877	Si
5.04	0.41	0.0005	1166	SLD 4	0.123	9470	4057	SLD 4	24248	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	1380	SLE RA 21	39961	1494000	495521	36000000	1261	SLE QP 2	36509	1120500	Si
0.23	0.41	0.00000172	1364	SLE RA 21	39487	1494000	489633	36000000	1246	SLE QP 2	36061	1120500	Si
2.52	0.41	0.00000172	1286	SLE RA 21	37226	1494000	461604	36000000	1170	SLE QP 2	33873	1120500	Si
4.89	0.41	0.00000172	1152	SLE RA 21	33337	1494000	413380	36000000	1045	SLE QP 2	30248	1120500	Si
5.04	0.41	0.00000539	1144	SLE RA 21	31569	1494000	391456	36000000	1038	SLE QP 2	28639	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 61 - 73, sezione R 50x45, asta 731

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.38	1.1	SLU 44	ST	LT	823	581	-70516	1	0	19	0	0	1.1	21449	1007	21.29	Si
6.38	1.1	SLV 13	SIS	LT	10031	-3066	-36672	15	-5	19	0	0	1.1	11155	10489	1.06	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
745,744,743,742,741,740,739,738,737,736,735,734,733,732,731	6.38	1.1	SLU 84	ST	BT	2.3	291295	86167	3.38	Si
745,744,743,742,741,740,739,738,737,736,735,734,733,732,731	6.38	1.1	SLV 4	SIS	BT	2.3	258134	82019	3.15	Si
745,744,743,742,741,740,739,738,737,736,735,734,733,732,731	6.38	1.1	SLD 4	SIS	BT	2.3	274353	69037	3.97	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	481	-86167	-142.72	-7429.2	0	0	-0.09	0	1.1	6.21	1496	2060	0	14430	
0	3772	-82019	-1551.61	-26610.49	0	3	-0.32	-0.02	1.06	5.73	1496	2060	0	14430	0.07
0	1839	-69037	-734.93	-14350.43	0	2	-0.21	-0.01	1.08	5.96	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

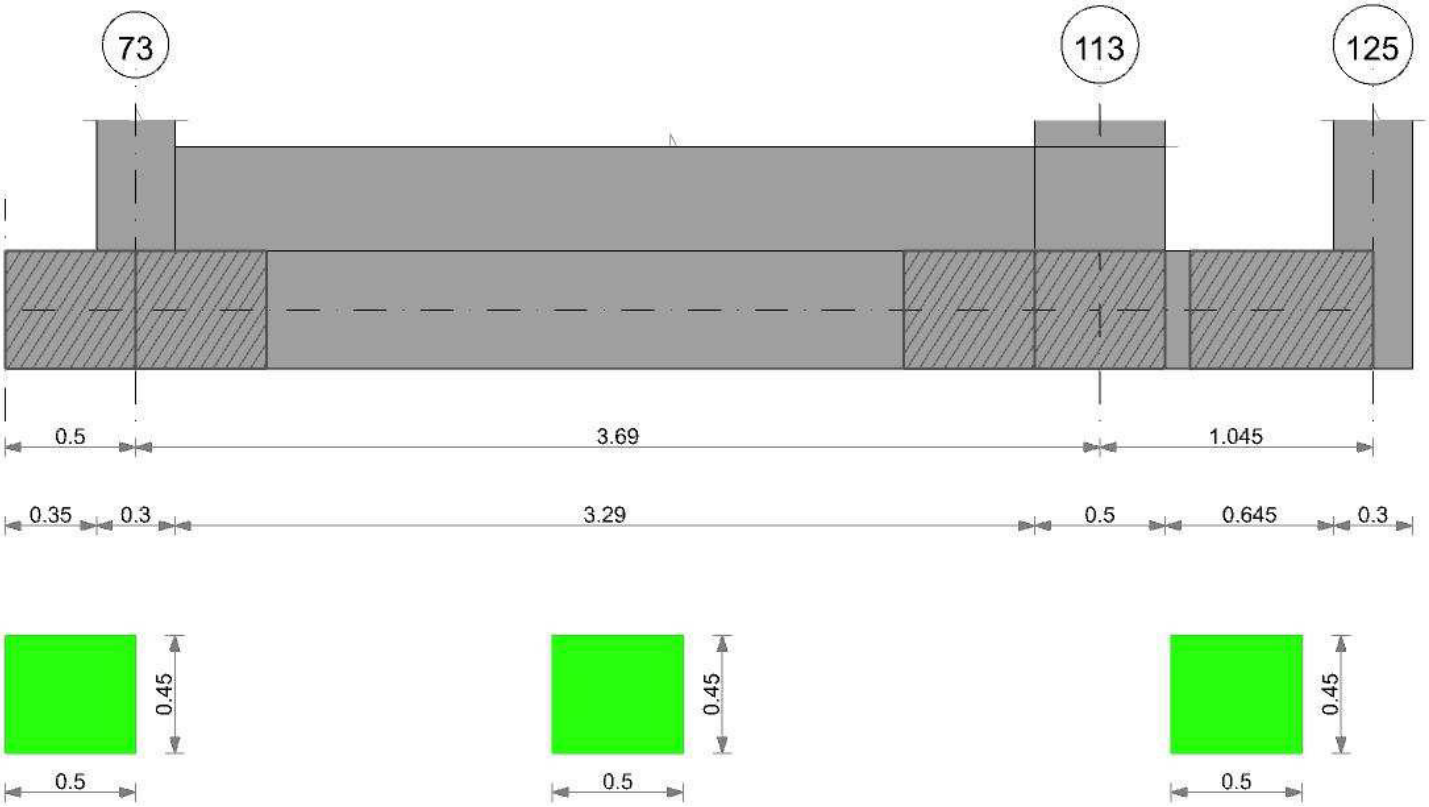
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	542	SLE RA 21	0.05	0.001	542	527	SLE RA 21	0.05	0	541	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	542	SLE RA 1	0.05	0	542	542	SLE RA 1	0.05	0	541	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	542	SLE RA 1	0.05	0	542	542	SLE RA 1	0.05	0	541	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	541	527	SLE RA 21	0.19	0.01	541	SLE RA 21	0.1	0	542	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	542	541	SLE RA 1	0.19	0	542	SLE RA 1	0.1	0	541	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	542	541	SLE RA 1	0.19	0	542	SLE RA 1	0.1	0	541	SLE RA 1	Si

CORDOLO 14

Geometria



Caratteristiche dei materiali

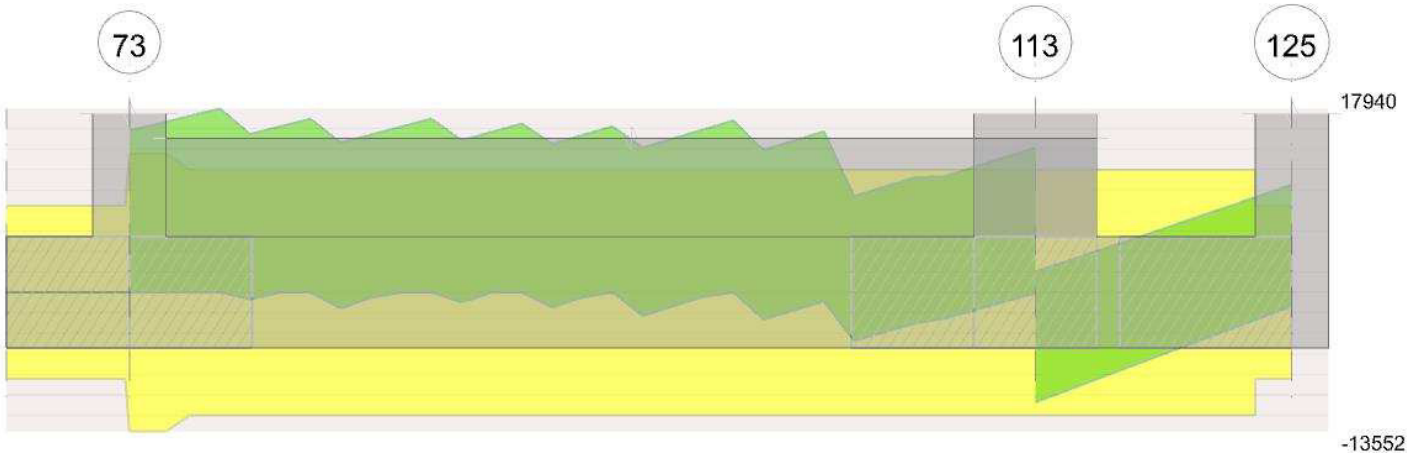
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 710

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-484.09	SLU 60	-484.09	-7755.45	0.113	16.02	Si
0.25	0.000509	0.052	0.000509	0.052							-1838.36	SLU 84	-2267.01	-7755.45	0.113	3.42	Si
0.52	0.000509	0.052	0.000509	0.052							-2306.59	SLU 84	-2307.25	-7755.45	0.113	3.36	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	3459.01	SLV 16	1778.48	7266.79	0.197	4.09	-4024.06	SLV 1	-3674.58	-7266.79	0.197	1.98	Si
0.25	0.000509	0.052	0.000509	0.052	815.41	SLV 13	815.41	7266.79	0.197	8.91	-3266.33	SLV 4	-3266.33	-7266.79	0.197	2.22	Si
0.52	0.000509	0.052	0.000509	0.052	-899.55	SLV 9	31.48	7266.79	0.197	230.82	-2214.52	SLV 8	-2871.66	-7266.79	0.197	2.53	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1315.06	SLD 16	322.46	7266.79	0.197	22.54	-1880.11	SLD 1	-1880.11	-7266.79	0.197	3.87	Si
0.25	0.000509	0.052	0.000509	0.052							-2098.76	SLD 4	-2098.76	-7266.79	0.197	3.46	Si
0.52	0.000509	0.052	0.000509	0.052							-1845.75	SLD 8	-2042.35	-7266.79	0.197	3.56	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-6404	SLU 84	-6404	-7764	-63178	-11986	-11986	1	1.87	Si
0.25	0.0000086	0.000509	0	-3222	SLU 84	-3222	-7764	-63178	-11986	-11986	1	3.72	Si
0.52	0.0000086	0	0	315	SLU 60	315	7764	63178	11986	11986	1	38	Si
0.52	0.0000086	0	0	-10	SLU 28	-10	-7764	-63178	-11986	-11986	1	1256.72	Si
0.9	0.0000086	0	0	4994	SLU 83	4994	8455	71432	13552	13552	1	2.71	Si
1.05	0	0	0	6920	SLU 83	6920	8455	71432	0	8455	1	1.22	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	2005	SLV 1	2005	7764	63178	11986	11986	1	5.98	Si
0	0.0000086	0.000509	0	-10720	SLV 16	-10720	-7764	-63178	-11986	-11986	1	1.12	Si
0.25	0.0000086	0.000509	0	4017	SLV 1	4017	7764	63178	11986	11986	1	2.98	Si
0.25	0.0000086	0.000509	0	-8456	SLV 16	-8456	-7764	-63178	-11986	-11986	1	1.42	Si
0.52	0.0000086	0	0	6216	SLV 1	6216	7764	63178	11986	11986	1	1.93	Si
0.52	0.0000086	0	0	-6005	SLV 16	-6005	-7764	-63178	-11986	-11986	1	2	Si
0.9	0.0000086	0	0	9263	SLV 1	9263	8455	71432	13552	13552	1	1.46	Si
0.9	0.0000086	0	0	-2674	SLV 16	-2674	-8455	-71432	-13552	-13552	1	5.07	Si
1.05	0	0	0	10506	SLV 1	10506	8455	71432	0	8455	1	0.8	Si
1.05	0	0	0	-1329	SLV 16	-1329	-8455	-71432	0	-8455	1	6.36	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000086	0.000509	0	-7075	SLD 16	-7075	-7764	-63178	-11986	-11986	1	1.69	Si
0.25	0.0000086	0.000509	0	444	SLD 1	444	7764	63178	11986	11986	1	26.99	Si
0.25	0.0000086	0.000509	0	-4883	SLD 16	-4883	-7764	-63178	-11986	-11986	1	2.45	Si
0.52	0.0000086	0	0	2715	SLD 1	2715	7764	63178	11986	11986	1	4.42	Si
0.52	0.0000086	0	0	-2504	SLD 16	-2504	-7764	-63178	-11986	-11986	1	4.79	Si
0.9	0.0000086	0	0	5843	SLD 1	5843	8455	71432	13552	13552	1	2.32	Si
1.05	0	0	0	7115	SLD 1	7115	8455	71432	0	8455	1	1.19	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-346.02	18	-346.02	18302	1494000	274533	36000000	-282.53	2	-282.53	14944	1120500			Si
0.25	-1361	21	-1676.61	88681	1494000	1330222	36000000	-1225.46	2	-1524.65	80644	1120500			Si
0.52	-1705.5	21	-1706.1	90242	1494000	1353624	36000000	-1557.04	2	-1557.04	82357	1120500			Si
0.9	-887.09	15	-1463.93	-86752	1494000	0	36000000	-829.54	2	-1349.66	-79980	1120500			Si
1.05	-196.68	7	-196.68	-11655	1494000	0	36000000	-170.06	1	-170.06	-10077	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 73 - 113, sezione R 50x45, aste 719, 718, 717, 716, 715, 714, 713, 712, 711

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1530	SLU 84	0.036	6777	5320	SLU 84	16740	Si
0.15	0.41	0.0004	1533	SLU 84	0.036	6777	5331	SLU 84	16740	Si
1.84	0.41	0.0004	1576	SLU 84	0.036	6777	5480	SLU 84	16740	Si
3.44	0.41	0.0004	1542	SLU 84	0.036	6777	5364	SLU 84	16740	Si
3.69	0.41	0.0004	1537	SLU 84	0.036	6777	5347	SLU 84	16740	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1127	SLD 4	0.11	7560	3920	SLD 4	19251	Si
0.15	0.41	0.0004	1126	SLD 4	0.11	7560	3918	SLD 4	19251	Si
1.84	0.41	0.0004	1087	SLD 4	0.11	7560	3779	SLD 4	19251	Si
3.44	0.41	0.0004	1049	SLD 16	0.11	7560	3648	SLD 16	19251	Si
3.69	0.41	0.0004	1049	SLD 16	0.11	7560	3649	SLD 16	19251	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000428	1125	SLE RA 21	31479	1494000	390342	36000000	1020	SLE QP 2	28540	1120500	Si
0.15	0.41	0.00000428	1127	SLE RA 21	31543	1494000	391139	36000000	1022	SLE QP 2	28596	1120500	Si
1.84	0.41	0.00000428	1158	SLE RA 21	32410	1494000	401890	36000000	1048	SLE QP 2	29332	1120500	Si
3.44	0.41	0.00000428	1133	SLE RA 21	31718	1494000	393300	36000000	1024	SLE QP 2	28655	1120500	Si
3.69	0.41	0.00000428	1130	SLE RA 21	31624	1494000	392133	36000000	1020	SLE QP 2	28563	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 113 - 125, sezione R 50x45, asta 710

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.89	1.1	SLU 44	ST	LT	161	142	-50324	0	0	19	0	0	1.1	15307	215	71.32	Si
4.89	1.1	SLV 13	SIS	LT	7436	-1279	-40458	10	-2	19	0	0	1.1	12306	7545	1.63	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
719,718,717,716,715,714,713,712,711,710	4.89	1.1	SLU 83	ST	BT	2.3	230600	61745	3.73	Si
719,718,717,716,715,714,713,712,711,710	4.89	1.1	SLV 4	SIS	BT	2.3	210017	44317	4.74	Si
719,718,717,716,715,714,713,712,711,710	4.89	1.1	SLD 4	SIS	BT	2.3	222390	43216	5.15	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-19	-61745	141.37	-202.26	0	0	0	0	1.1	4.88	1496	2060	0	14430	
0	1330	-44317	-547.13	-7644.62	0	2	-0.17	-0.01	1.08	4.54	1496	2060	0	14430	0.07
0	600	-43216	-192.35	-3376.07	0	1	-0.08	0	1.09	4.73	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

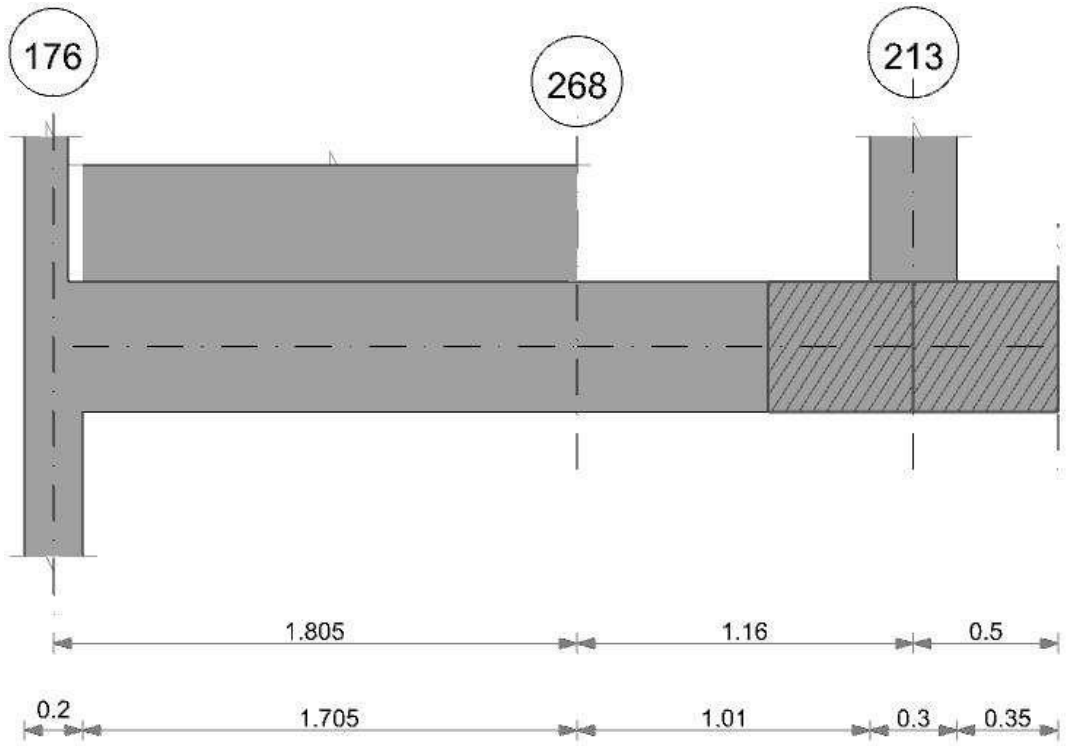
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	552	SLE RA 21	0.05	0	552	542	SLE RA 20	0.05	0	551	SLE RA 20	0.0033	0	SLE RA 1	Si
D	0.05	0	552	SLE RA 1	0.05	0	552	552	SLE RA 1	0.05	0	551	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	552	SLE RA 1	0.05	0	552	552	SLE RA 1	0.05	0	551	SLE RA 1	0.0033	0	SLE RA 1	Si

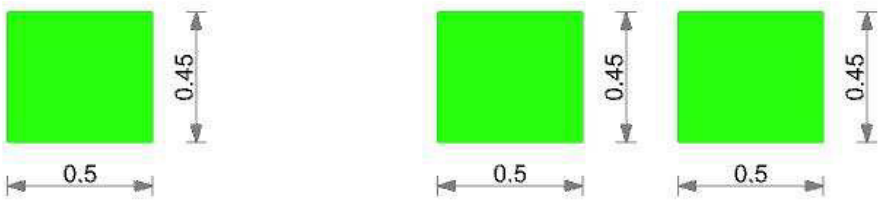
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0.01	551	542	SLE RA 20	0.19	0	551	SLE RA 20	0.1	0	552	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	552	551	SLE RA 1	0.19	0	552	SLE RA 1	0.1	0	551	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	552	551	SLE RA 1	0.19	0	552	SLE RA 1	0.1	0	551	SLE RA 1	Si

CORDOLO 15

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

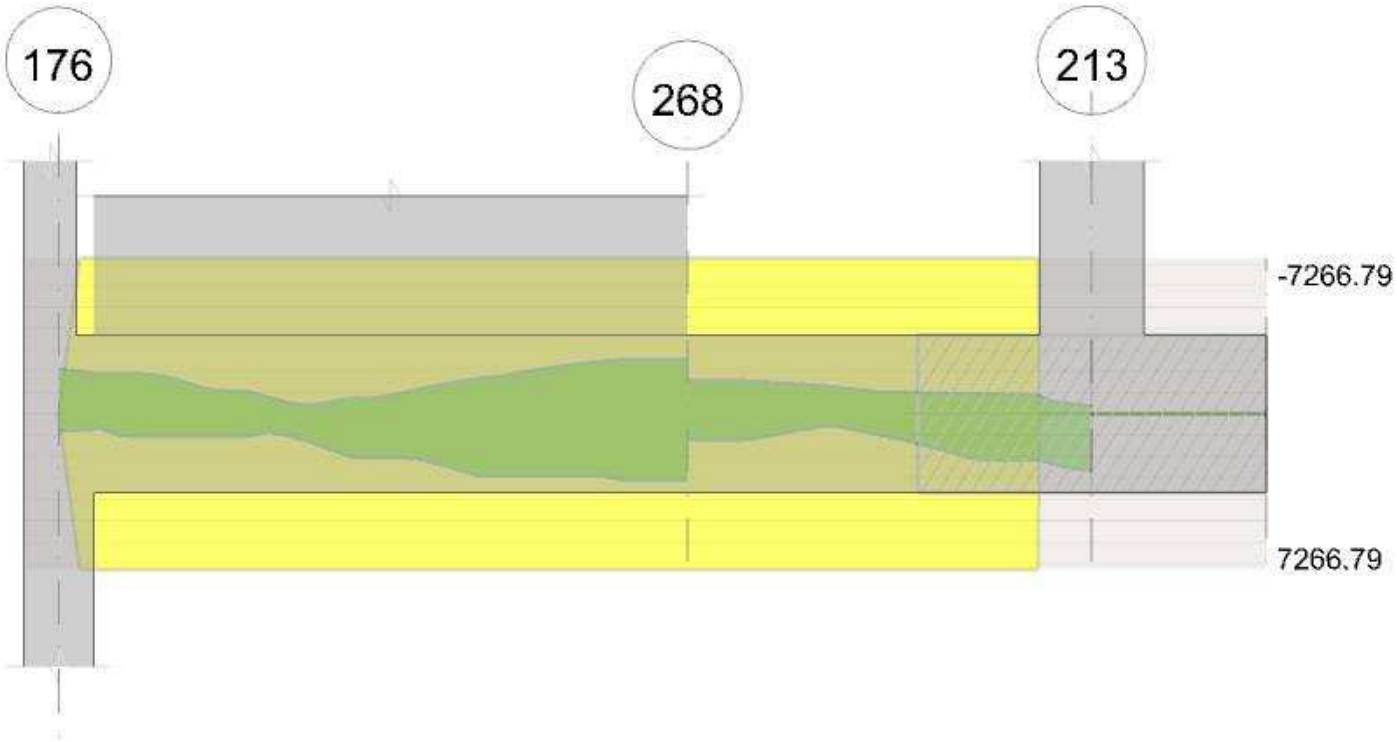
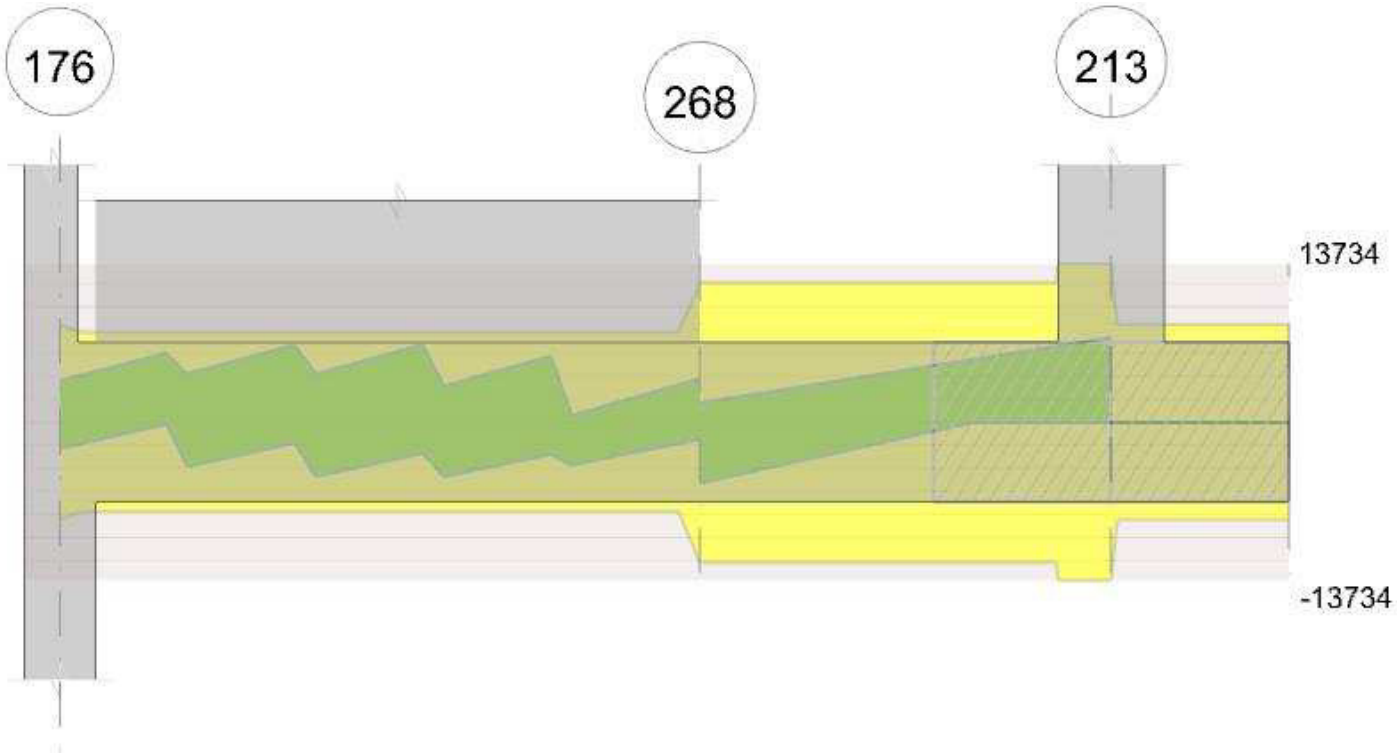


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 654

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-245.43	SLU 79	-519.01	-7755.45	0.113	14.94	Si
0.58	0.000509	0.052	0.000509	0.052	-171.73	SLU 9	156.84	7755.45	0.113	49.45	-352.19	SLU 81	-560.35	-7755.45	0.113	13.84	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1218.13	SLV 15	1218.13	7266.79	0.197	5.97	-1541.24	SLV 2	-1541.24	-7266.79	0.197	4.71	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.58	0.000509	0.052	0.000509	0.052	539.83	SLV 11	1084.05	7266.79	0.197	6.7	-962.37	SLV 6	-1009.44	-7266.79	0.197	7.2	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	428.18	SLD 15	428.18	7266.79	0.197	16.97	-751.29	SLD 2	-778.14	-7266.79	0.197	9.34	Si
0.58	0.000509	0.052	0.000509	0.052	119.62	SLD 11	526.22	7266.79	0.197	13.81	-542.16	SLD 6	-645.64	-7266.79	0.197	11.26	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	-2770	SLU 83	-2770	-7764	-63178	-12147	-12147	1	4.39	Si
0.58	0.0000087	0.000509	0	2298	SLU 78	2298	7764	63178	12147	12147	1	5.28	Si
1.01	0.0000087	0	0	6020	SLU 84	6020	8455	71432	13734	13734	1	2.28	Si
1.16	0.0000087	0	0	7318	SLU 84	7318	8455	71432	13734	13734	1	1.88	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	1654	SLV 3	1654	7764	63178	12147	12147	1	7.34	Si
0	0.0000087	0.000509	0	-5288	SLV 14	-5288	-7764	-63178	-12147	-12147	1	2.3	Si
0.58	0.0000087	0.000509	0	4507	SLV 3	4507	7764	63178	12147	12147	1	2.7	Si
0.58	0.0000087	0.000509	0	-1316	SLV 14	-1316	-7764	-63178	-12147	-12147	1	9.23	Si
1.01	0.0000087	0	0	6585	SLV 3	6585	7764	63178	12147	12147	1	1.84	Si
1.01	0.0000087	0	0	6607	SLV 3	6607	8455	71432	13734	13734	1	2.08	Si
1.16	0.0000087	0	0	7337	SLV 3	7337	8455	71432	13734	13734	1	1.87	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000087	0.000509	0	-3304	SLD 14	-3304	-7764	-63178	-12147	-12147	1	3.68	Si
0.58	0.0000087	0.000509	0	2844	SLD 3	2844	7764	63178	12147	12147	1	4.27	Si
1.01	0.0000087	0	0	5185	SLD 3	5185	8455	71432	13734	13734	1	2.65	Si
1.16	0.0000087	0	0	5999	SLD 3	5999	8455	71432	13734	13734	1	2.29	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-172.84	16	-375.14	19842	1494000	297636	36000000	-161.56	2	-342.12	18096	1120500			Si
0.58	-251.78	18	-405.64	21456	1494000	321834	36000000	-211.27	2	-360.94	19091	1120500			Si
1.01	799.72	15	799.72	47391	1494000	0	36000000	752.17	2	752.17	44573	1120500			Si
1.16	1372.36	15	1129.71	66946	1494000	0	36000000	1287.41	2	1060.72	62858	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 268, sezione R 50x45, aste 659, 658, 657, 656, 655

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1555	SLU 84	0.018	2949	5409	SLU 84	15877	Si
0.1	0.41	0.0002	1555	SLU 84	0.018	2949	5409	SLU 84	15877	Si
0.9	0.41	0.0002	1559	SLU 84	0.018	2949	5423	SLU 84	15877	Si
1.8	0.41	0.0004	1544	SLU 84	0.037	6867	5371	SLU 84	16965	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1068	SLD 11	0.073	3317	3715	SLD 11	15877	Si
0.1	0.41	0.0002	1071	SLD 15	0.073	3317	3724	SLD 15	15877	Si
0.9	0.41	0.0002	1106	SLD 15	0.073	3317	3845	SLD 15	15877	Si
1.8	0.41	0.0004	1121	SLD 15	0.111	7660	3900	SLD 15	19510	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000185	1144	SLE RA 21	33074	1494000	410116	36000000	1037	SLE QP 2	29973	1120500	Si
0.1	0.41	0.00000185	1144	SLE RA 21	33074	1494000	410118	36000000	1037	SLE QP 2	29974	1120500	Si
0.9	0.41	0.00000185	1147	SLE RA 21	33150	1494000	411057	36000000	1039	SLE QP 2	30039	1120500	Si
1.8	0.41	0.00000433	1136	SLE RA 21	31772	1494000	393971	36000000	1029	SLE QP 2	28797	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 268 - 213, sezione R 50x45, asta 654

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.06	1.1	SLU 32	ST	LT	-241	-254	-28593	0	-1	19	0	0	1.1	8697	351	24.8	Si
3.06	1.1	SLV 2	SIS	LT	-4309	-1091	-21393	-11	-3	19	0	0	1.1	6507	4445	1.46	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
659,658,657,656,655,654	3.06	1.1	SLU 83	ST	BT	2.3	143309	35618	4.02	Si
659,658,657,656,655,654	3.06	1.1	SLV 15	SIS	BT	2.3	136936	27681	4.95	Si
659,658,657,656,655,654	3.06	1.1	SLD 14	SIS	BT	2.3	140176	25591	5.48	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-300	-289	-35618	520.86	-274.97	0	0	-0.01	0.01	1.07	3.05	1496	2060	0	14430	
3881	739	-27681	-158.31	2330.1	8	2	0.08	-0.01	1.09	2.9	1496	2060	0	14430	0.07

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
1507	-403	-25591	390.79	869.42	3	-1	0.03	0.02	1.07	3	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

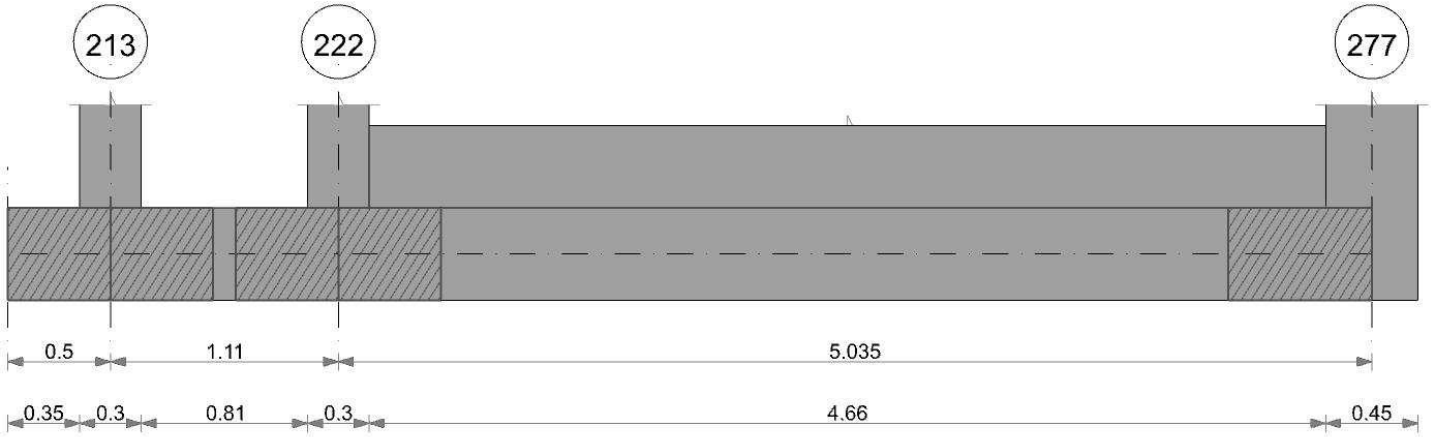
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	553	SLE RA 21	0.05	0.001	553	559	SLE RA 20	0.05	0	558	SLE FR 6	0.0033	0	SLE FR 6	Si
D	0.05	0	559	SLE RA 1	0.05	0	559	559	SLE RA 1	0.05	0	558	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	559	SLE RA 1	0.05	0	559	559	SLE RA 1	0.05	0	558	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	558	553	SLE RA 21	0.19	0	559	SLE RA 1	0.1	0.01	558	SLE FR 6	Si
D	0.19	0	SLE RA 1	0.19	0	559	558	SLE RA 1	0.19	0	559	SLE RA 1	0.1	0	558	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	559	558	SLE RA 1	0.19	0	559	SLE RA 1	0.1	0	558	SLE RA 1	Si

CORDOLO 16

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

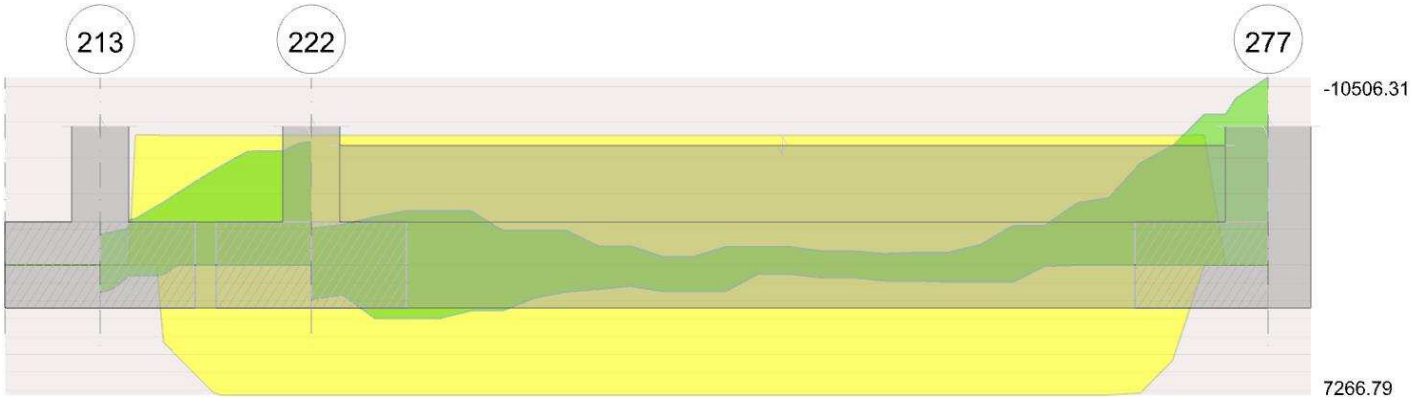
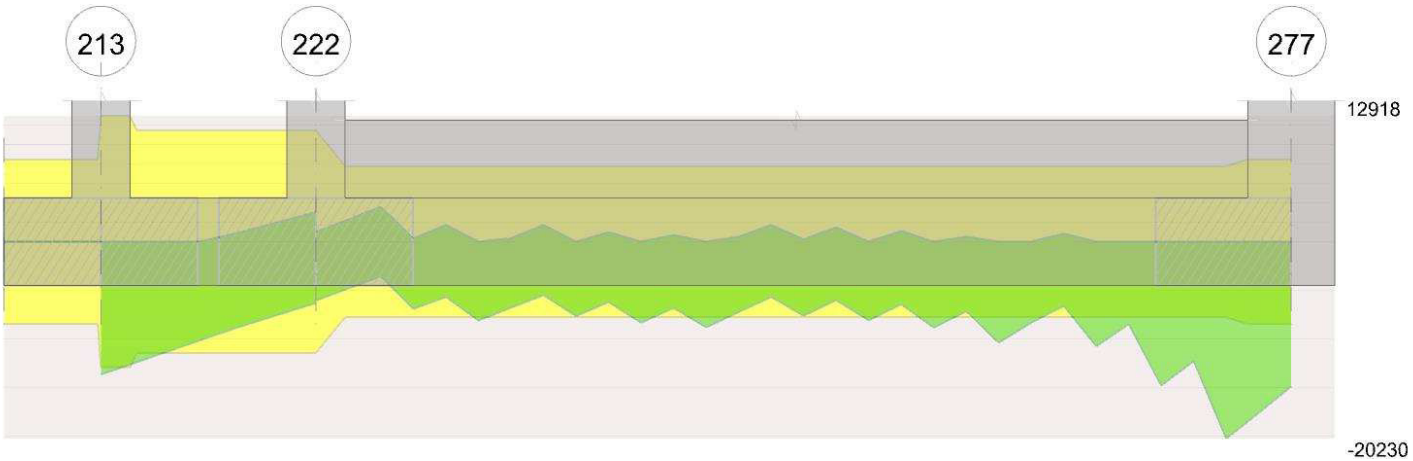


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 450

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3811.53	SLU 83	-4673.91	-7752.71	0.113	1.66	Si
0.96	0.000509	0.052	0.000509	0.052							-5459.64	SLU 84	-5459.64	-7755.45	0.113	1.42	Si
1.11	0.000509	0.052	0.000509	0.052							-5796.92	SLU 84	-5725.12	-7755.45	0.113	1.35	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3815.12	SLV 15	-5022.65	-7267.41	0.198	1.45	Si
0.96	0.000509	0.052	0.000509	0.052							-6369.06	SLV 15	-6369.06	-7266.79	0.197	1.14	Si
1.11	0.000509	0.052	0.000509	0.052							-7119.44	SLV 15	-6896.59	-7266.79	0.197	1.05	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.56	0.000509	0.052	0.000469	0.052							-3116.17	SLD 15	-3976.61	-7267.41	0.198	1.83	Si
0.96	0.000509	0.052	0.000509	0.052							-4869.3	SLD 15	-4869.3	-7266.79	0.197	1.49	Si
1.11	0.000509	0.052	0.000509	0.052							-5329.18	SLD 15	-5203.05	-7266.79	0.197	1.4	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-11670	SLU 84	-11670	-8455	-71432	-12918	-12918	1	1.11	Si
0.15	0.0000082	0	0	-10398	SLU 84	-10398	-8455	-71432	-12918	-12918	1	1.24	Si
0.56	0.0000082	0	0	-6973	SLU 84	-6973	-7764	-63178	-11425	-11425	1	1.64	Si
0.96	0.0000082	0.000509	0	-3556	SLU 78	-3556	-7764	-63178	-11425	-11425	1	3.21	Si
1.11	0.0000082	0.000509	0	-2300	SLU 78	-2300	-7764	-63178	-11425	-11425	1	4.97	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-13647	SLV 15	-13647	-8455	-71432	-12918	-12918	1	0.95	Si
0.15	0.0000082	0	0	-12614	SLV 15	-12614	-8455	-71432	-12918	-12918	1	1.02	Si
0.56	0.0000082	0	0	213	SLV 2	213	7764	63178	11425	11425	1	53.72	Si
0.56	0.0000082	0	0	-9828	SLV 15	-9828	-7764	-63178	-11425	-11425	1	1.16	Si
0.96	0.0000082	0.000509	0	2242	SLV 6	2242	7764	63178	11425	11425	1	5.1	Si
0.96	0.0000082	0.000509	0	-7222	SLV 11	-7222	-7764	-63178	-11425	-11425	1	1.58	Si
1.11	0.0000082	0.000509	0	3040	SLV 6	3040	7764	63178	11425	11425	1	3.76	Si
1.11	0.0000082	0.000509	0	-6289	SLV 11	-6289	-7764	-63178	-11425	-11425	1	1.82	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0	0	-10419	SLD 15	-10419	-8455	-71432	-12918	-12918	1	1.24	Si
0.15	0.0000082	0	0	-9486	SLD 15	-9486	-8455	-71432	-12918	-12918	1	1.36	Si
0.19	0.0000082	0	0	-9269	SLD 15	-9269	-7764	-63178	-11425	-11425	1	1.23	Si
0.56	0.0000082	0	0	-6972	SLD 15	-6972	-7764	-63178	-11425	-11425	1	1.64	Si
0.96	0.0000082	0.000509	0	-4569	SLD 11	-4569	-7764	-63178	-11425	-11425	1	2.5	Si
1.11	0.0000082	0.000509	0	426	SLD 6	426	7764	63178	11425	11425	1	26.85	Si
1.11	0.0000082	0.000509	0	-3675	SLD 11	-3675	-7764	-63178	-11425	-11425	1	3.11	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	196.18	7	175.11	10377	1494000	0	36000000	164	1	164	9718	1120500			Si
0.15	-806.31	18	-1798.96	-106605	1494000	0	36000000	-722.45	2	-1641.71	-97287	1120500			Si
0.56	-2826.51	20	-3468.43	184592	1494000	2758239	36000000	-2594.39	2	-3191.68	169864	1120500			Si
0.96	-4055.09	21	-4055.09	214488	1494000	3217317	36000000	-3739.95	2	-3739.95	197819	1120500			Si
1.11	-4308.52	21	-4253.92	225005	1494000	3375070	36000000	-3979.28	2	-3926.68	207696	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 213 - 222, sezione R 50x45, asta 450

Campata 3 tra i fili 222 - 277, sezione R 50x45, aste 449, 448, 447, 446, 445, 444, 443, 442, 441, 440, 439, 438, 437

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1529	SLU 84	0.034	6464	5320	SLU 84	15957	Si
0.15	0.41	0.0002	1542	SLU 84	0.017	2747	5362	SLU 84	15877	Si
2.52	0.41	0.0002	1736	SLV 16	0.085	2672	6039	SLV 16	15877	Si
4.81	0.41	0.0002	2294	SLV 14	0.085	2672	7981	SLV 14	15877	Si
5.04	0.41	0.0002	2390	SLV 14	0.085	2672	8314	SLV 14	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1129	SLD 15	0.107	7214	3929	SLD 15	18350	Si
0.15	0.41	0.0002	1141	SLD 15	0.07	3092	3969	SLD 15	15877	Si
2.52	0.41	0.0002	1406	SLD 16	0.07	3092	4890	SLD 16	15877	Si
4.81	0.41	0.0002	1724	SLD 14	0.07	3092	5997	SLD 14	15877	Si
5.04	0.41	0.0002	1786	SLD 14	0.07	3092	6213	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000408	1124	SLE RA 21	31558	1494000	391322	36000000	1020	SLE QP 2	28633	1120500	Si
0.15	0.41	0.00000172	1134	SLE RA 21	32814	1494000	406896	36000000	1029	SLE QP 2	29777	1120500	Si
2.52	0.41	0.00000172	1274	SLE RA 21	36872	1494000	457216	36000000	1159	SLE QP 2	33560	1120500	Si
4.81	0.41	0.00000172	1421	SLE RA 21	41128	1494000	509984	36000000	1299	SLE QP 2	37592	1120500	Si
5.04	0.41	0.00000172	1460	SLE RA 21	42276	1494000	524217	36000000	1335	SLE QP 2	38660	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.37	1.1	SLU 48	ST	LT	-1230	-40	-69805	-1	0	19	0	0	1.1	21233	1231	17.25	Si
6.37	1.1	SLV 2	SIS	LT	-9566	-2734	-36021	-15	-4	19	0	0	1.1	10957	9949	1.1	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
450,449,448,447,446,445,444,443,442,441,440,439,438,437	6.37	1.1	SLU 83	ST	BT	2.3	289473	82857	3.49	Si
450,449,448,447,446,445,444,443,442,441,440,439,438,437	6.37	1.1	SLV 15	SIS	BT	2.3	261855	78234	3.35	Si
450,449,448,447,446,445,444,443,442,441,440,439,438,437	6.37	1.1	SLD 14	SIS	BT	2.3	275573	66009	4.17	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-254	-82857	248.81	7882	0	0	0.1	0	1.09	6.18	1496	2060	0	14430	
0	2514	-78234	-975.35	25471.8	0	2	0.33	-0.01	1.08	5.72	1496	2060	0	14430	0.07
0	-828	-66009	490.11	14327.78	0	-1	0.22	0.01	1.09	5.94	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Nγ	Sq	Sc	Sγ	Dq	Dc	Dγ	Iq	Ic	Iγ	Bq	Bc	Bγ	Gq	Gc	Gγ	Pq	Pc	Pγ	Eq	Ec	Eγ
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

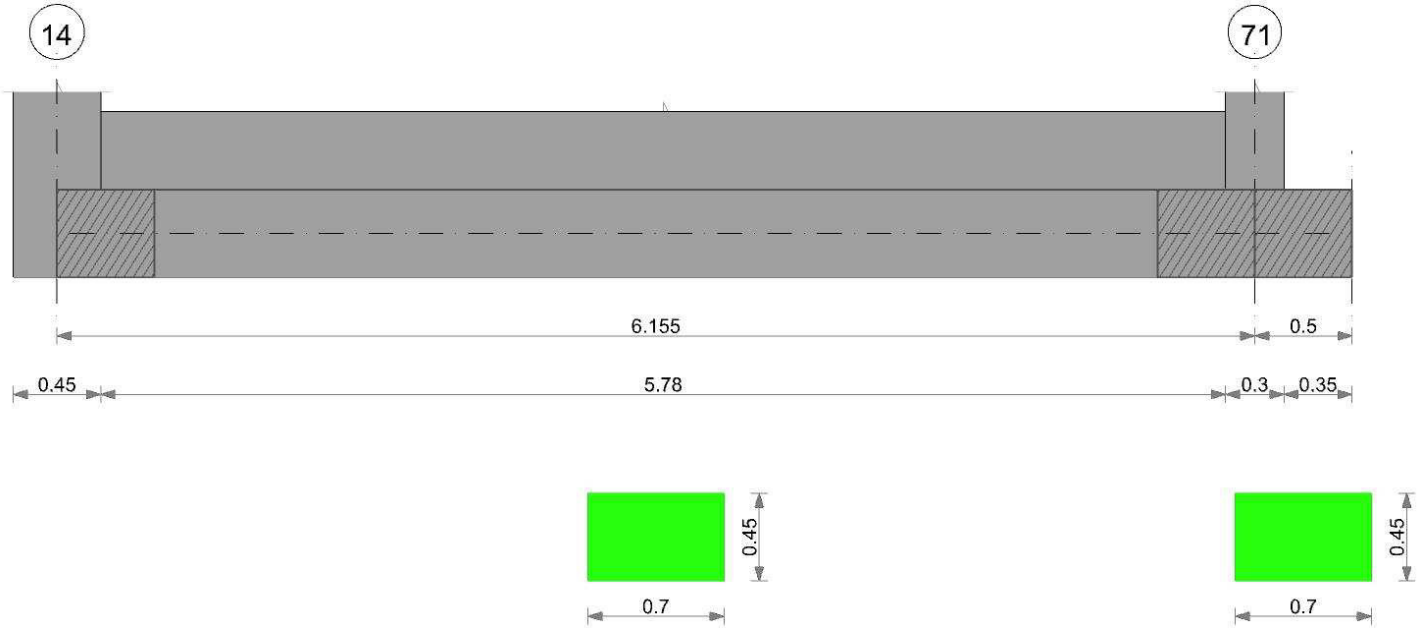
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	560	SLE RA 21	0.05	0.001	560	575	SLE RA 21	0.05	0	562	SLE FR 5	0.0033	0	SLE FR 5	Si
D	0.05	0	575	SLE RA 1	0.05	0	575	575	SLE RA 1	0.05	0	562	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	575	SLE RA 1	0.05	0	575	575	SLE RA 1	0.05	0	562	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	562	560	SLE RA 21	0.19	0	575	SLE RA 1	0.1	0	562	SLE FR 5	Si
D	0.19	0	SLE RA 1	0.19	0	575	562	SLE RA 1	0.19	0	575	SLE RA 1	0.1	0	562	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	575	562	SLE RA 1	0.19	0	575	SLE RA 1	0.1	0	562	SLE RA 1	Si

CORDOLO 17

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

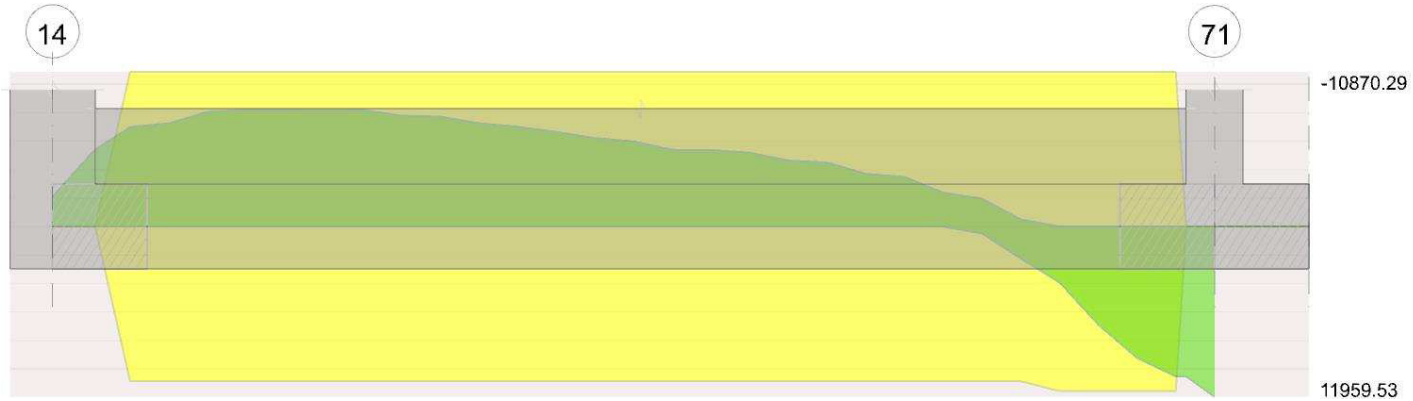
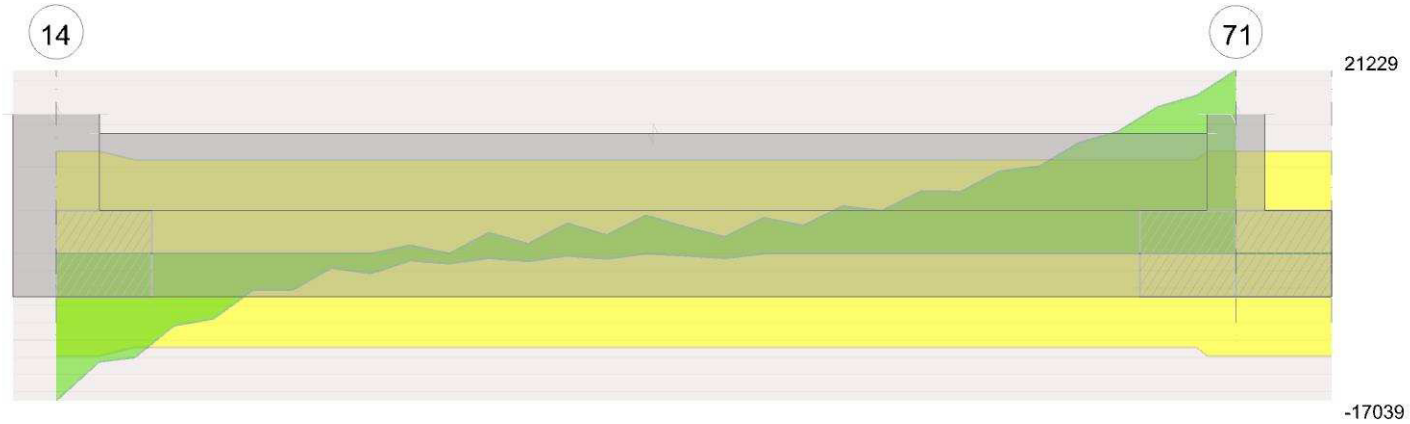


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 71, sezione R 70x45, aste 772, 771, 770, 769, 768, 767, 766, 765, 764, 763, 762, 761, 760, 759, 758, 757

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	4631	SLV 1	0.119	5189	11950	SLV 1	15877	Si
0.23	0.41	0.0003	4346	SLV 1	0.119	5189	11217	SLV 1	15877	Si
3.08	0.41	0.0003	2396	SLV 1	0.119	5189	6182	SLV 1	15877	Si
6.01	0.41	0.0003	3094	SLU 83	0.029	5386	7986	SLU 83	15877	Si
6.16	0.41	0.0003	3116	SLU 83	0.029	5386	8040	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3413	SLD 1	0.098	6020	8808	SLD 1	15877	Si
0.23	0.41	0.0003	3211	SLD 1	0.098	6020	8287	SLD 1	15877	Si
3.08	0.41	0.0003	1896	SLD 1	0.098	6020	4893	SLD 1	15877	Si
6.01	0.41	0.0003	2361	SLD 1	0.098	6020	6094	SLD 1	15877	Si
6.16	0.41	0.0003	2369	SLD 1	0.098	6020	6115	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000339	2730	SLE RA 20	77300	1494000	958515	36000000	2502	SLE QP 2	70864	1120500	Si
0.23	0.41	0.00000339	2577	SLE RA 20	72986	1494000	905025	36000000	2362	SLE QP 2	66886	1120500	Si
3.08	0.41	0.00000339	1669	SLE RA 20	47257	1494000	585983	36000000	1522	SLE QP 2	43112	1120500	Si
6.01	0.41	0.00000339	2283	SLE RA 20	64643	1494000	801578	36000000	2083	SLE QP 2	58985	1120500	Si
6.16	0.41	0.00000339	2298	SLE RA 20	65085	1494000	807057	36000000	2097	SLE QP 2	59386	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.38	1.3	SLU 27	ST	LT	1646	228	-67908	1	0	19	0	0	1.1	20656	1661	12.43	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
772,771,770,769,768,767,766,765,764,763,762,761,760,759,758,757	6.38	1.3	SLU 83	ST	BT	2.3	271977	91184	2.98	Si
772,771,770,769,768,767,766,765,764,763,762,761,760,759,758,757	6.38	1.3	SLV 1	SIS	BT	2.3	242240	91310	2.65	Si
772,771,770,769,768,767,766,765,764,763,762,761,760,759,758,757	6.38	1.3	SLD 1	SIS	BT	2.3	257290	75301	3.42	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	287	-91184	11941.28	-2171.9	0	0	-0.02	0.13	1.04	6.33	1496	2060	0	14430	
0	-989	-91310	13448.67	-25127.82	0	-1	-0.28	0.15	1.01	5.83	1496	2060	0	14430	0.07
0	-298	-75301	10402.55	-11649.72	0	0	-0.15	0.14	1.02	6.07	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

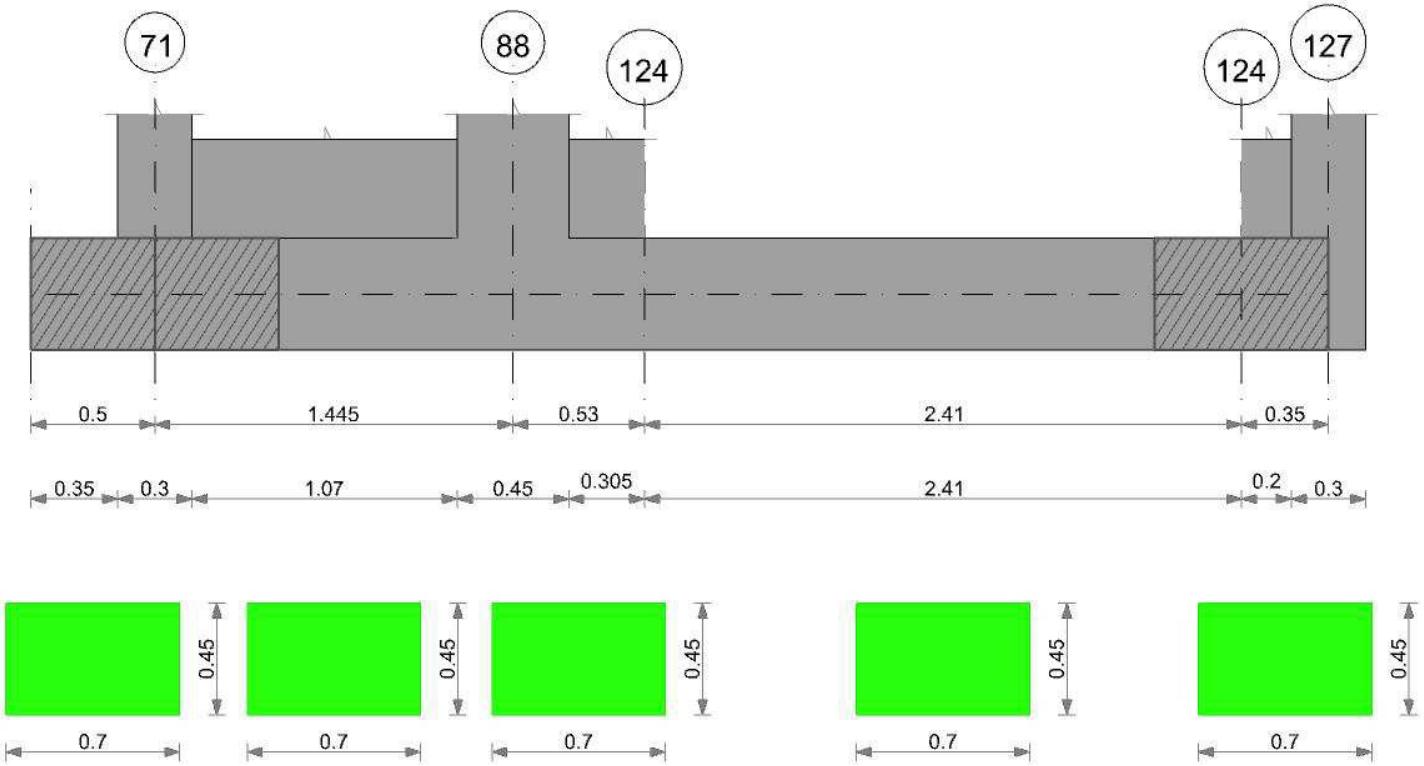
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	335	SLE RA 20	0.05	0	335	319	SLE RA 20	0.05	0	335	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	335	SLE RA 1	0.05	0	335	335	SLE RA 1	0.05	0	335	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	335	SLE RA 1	0.05	0	335	335	SLE RA 1	0.05	0	335	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	335	319	SLE RA 20	0.19	0	335	SLE RA 1	0.1	0	335	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	335	319	SLE RA 1	0.19	0	335	SLE RA 1	0.1	0	335	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	335	319	SLE RA 1	0.19	0	335	SLE RA 1	0.1	0	335	SLE RA 1	Si

CORDOLO 18

Geometria



Caratteristiche dei materiali

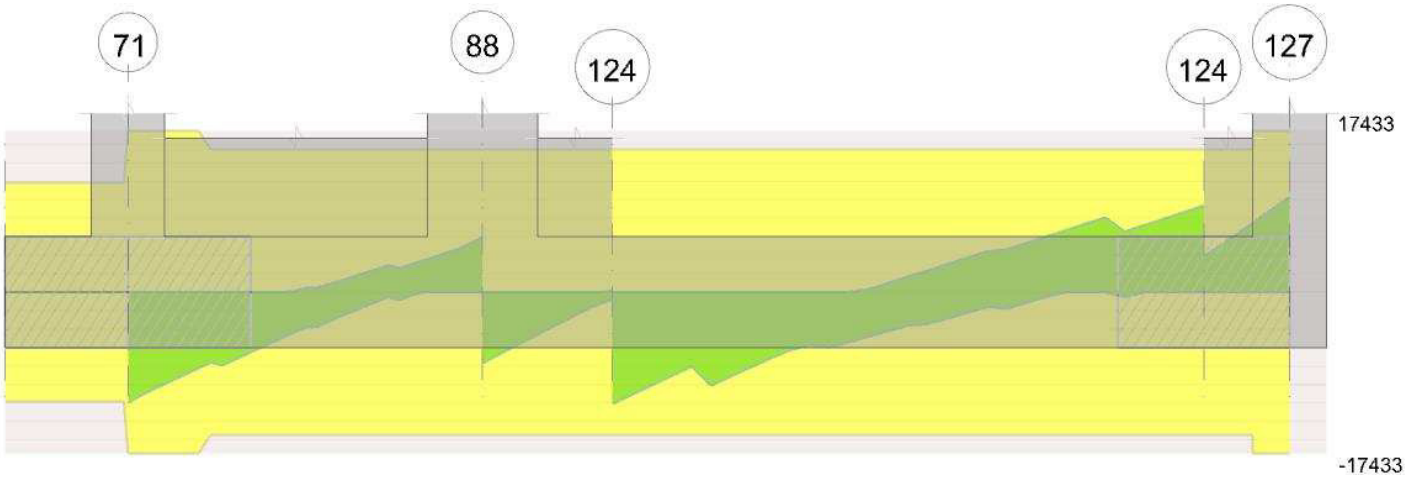
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 701, 700, 699, 698, 697, 696

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	80.07	SLU 44	80.07	11561.07	0.116	144.38	-18.07	SLU 41	-1869.28	-11561.07	0.116	6.18	Si
1.21	0.000763	0.052	0.000763	0.052							-7296.65	SLU 83	-7336.68	-11561.07	0.116	1.58	Si
1.77	0.000763	0.052	0.000763	0.052							-7054.84	SLU 83	-7533.97	-11561.07	0.116	1.53	Si
2.41	0.000763	0.052	0.000465	0.052							-4107.94	SLU 84	-5373.44	-11541.17	0.112	2.15	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	1169.22	SLV 16	1169.22	10870.29	0.203	9.3	-1092.49	SLV 1	-2193.38	-10870.29	0.203	4.96	Si
1.21	0.000763	0.052	0.000763	0.052							-5340.94	SLV 5	-5855.3	-10870.29	0.203	1.86	Si
1.53	0.000763	0.052	0.000763	0.052							-5211.33	SLV 5	-6029.22	-10870.29	0.203	1.8	Si
2.41	0.000763	0.052	0.000465	0.052							-3536.55	SLV 15	-3847.65	-10874.01	0.207	2.83	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	523.5	SLD 16	523.5	10870.29	0.203	20.76	-446.77	SLD 1	-1644.31	-10870.29	0.203	6.61	Si
1.21	0.000763	0.052	0.000763	0.052							-5102.53	SLD 5	-5322.44	-10870.29	0.203	2.04	Si
1.53	0.000763	0.052	0.000763	0.052							-4995.09	SLD 5	-5483.01	-10870.29	0.203	1.98	Si
2.41	0.000763	0.052	0.000465	0.052							-3100.48	SLD 15	-3720.13	-10874.01	0.207	2.92	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-12101	SLU 83	-12101	-10870	-88449	-15418	-15418	1	1.27	Si
1.21	0.000011	0.000763	0	-1392	SLU 84	-1392	-10870	-88449	-15418	-15418	1	11.08	Si
2.41	0.000011	0.000763	0	8590	SLU 83	8590	10870	88449	15418	15418	1	1.8	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-9267	SLV 13	-9267	-10870	-88449	-15418	-15418	1	1.66	Si
1.21	0.000011	0.000763	0	1686	SLV 1	1686	10870	88449	15418	15418	1	9.14	Si
1.21	0.000011	0.000763	0	-3618	SLV 16	-3618	-10870	-88449	-15418	-15418	1	4.26	Si
2.41	0.000011	0.000763	0	9368	SLV 1	9368	10870	88449	15418	15418	1	1.65	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.000011	0.000763	0	-8660	SLD 13	-8660	-10870	-88449	-15418	-15418	1	1.78	Si
1.21	0.000011	0.000763	0	170	SLD 1	170	10870	88449	15418	15418	1	90.62	Si
1.21	0.000011	0.000763	0	-2103	SLD 16	-2103	-10870	-88449	-15418	-15418	1	7.33	Si
2.41	0.000011	0.000763	0	7317	SLD 1	7317	10870	88449	15418	15418	1	2.11	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	53.18	2	53.18	1994	1494000	29911	36000000	49.37	1	49.37	1851	1120500			Si
1.21	-5387.45	20	-5417.31	203113	1494000	3046698	36000000	-4915.53	2	-4938.79	185172	1120500			Si
2.41	-3032.62	21	-3968.48	153814	1494000	2260002	36000000	-2774.26	2	-3624.38	140477	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 71 - 88, sezione R 70x45, aste 706, 705, 704, 703

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3116	SLU 83	0.031	5824	8040	SLU 83	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.15	0.41	0.0004	3134	SLU 83	0.031	5824	8087	SLU 83	15877	Si
0.72	0.41	0.0004	3130	SLU 83	0.031	5824	8077	SLU 83	15877	Si
1.22	0.41	0.0004	3056	SLU 83	0.031	5824	7887	SLU 83	15877	Si
1.45	0.41	0.0004	3005	SLU 83	0.031	5824	7756	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2369	SLD 1	0.102	6505	6115	SLD 1	15877	Si
0.15	0.41	0.0004	2375	SLD 1	0.102	6505	6129	SLD 1	15877	Si
0.72	0.41	0.0004	2336	SLD 1	0.102	6505	6029	SLD 1	15877	Si
1.22	0.41	0.0004	2248	SLD 1	0.102	6505	5800	SLD 1	15877	Si
1.45	0.41	0.0004	2195	SLD 1	0.102	6505	5664	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2298	SLE RA 20	64849	1494000	804127	36000000	2097	SLE QP 2	59170	1120500	Si
0.15	0.41	0.00000367	2312	SLE RA 20	65225	1494000	808796	36000000	2109	SLE QP 2	59512	1120500	Si
0.72	0.41	0.00000367	2309	SLE RA 20	65154	1494000	807911	36000000	2106	SLE QP 2	59433	1120500	Si
1.22	0.41	0.00000367	2255	SLE RA 20	63621	1494000	788905	36000000	2056	SLE QP 2	58014	1120500	Si
1.45	0.41	0.00000367	2217	SLE RA 20	62556	1494000	775697	36000000	2021	SLE QP 2	57029	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 88 - 124, sezione R 70x45, asta 702

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3005	SLU 83	0.031	5824	7756	SLU 83	15877	Si
0.23	0.41	0.0004	2952	SLU 83	0.031	5824	7618	SLU 83	15877	Si
0.27	0.41	0.0004	2942	SLU 83	0.031	5824	7592	SLU 83	15877	Si
0.53	0.41	0.0004	2872	SLU 83	0.031	5824	7413	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2195	SLD 1	0.102	6505	5664	SLD 1	15877	Si
0.23	0.41	0.0004	2141	SLD 1	0.102	6505	5524	SLD 1	15877	Si
0.27	0.41	0.0004	2131	SLD 1	0.102	6505	5499	SLD 1	15877	Si
0.53	0.41	0.0004	2063	SLD 1	0.102	6505	5325	SLD 1	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2217	SLE RA 20	62556	1494000	775697	36000000	2021	SLE QP 2	57029	1120500	Si
0.23	0.41	0.00000367	2178	SLE RA 20	61441	1494000	761865	36000000	1985	SLE QP 2	55998	1120500	Si
0.27	0.41	0.00000367	2170	SLE RA 20	61233	1494000	759285	36000000	1978	SLE QP 2	55806	1120500	Si
0.53	0.41	0.00000367	2119	SLE RA 20	59786	1494000	741348	36000000	1930	SLE QP 2	54467	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 124 - 124, sezione R 70x45, aste 701, 700, 699, 698, 697, 696

Campata 5 tra i fili 124 - 127, sezione R 70x45, asta 695

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2949	SLU 83	0.031	5824	7610	SLU 83	15877	Si
0.18	0.41	0.0004	3052	SLU 83	0.031	5824	7877	SLU 83	15877	Si
0.2	0.41	0.0004	3068	SLU 83	0.031	5824	7918	SLU 83	15877	Si
0.35	0.41	0.0004	3168	SLU 83	0.031	5824	8176	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2030	SLD 9	0.102	6505	5238	SLD 9	15877	Si
0.18	0.41	0.0004	2104	SLD 9	0.102	6505	5430	SLD 9	15877	Si
0.2	0.41	0.0004	2116	SLD 9	0.102	6505	5460	SLD 9	15877	Si
0.35	0.41	0.0004	2188	SLD 9	0.102	6505	5645	SLD 9	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000367	2174	SLE RA 20	61334	1494000	760544	36000000	1973	SLE QP 2	55659	1120500	Si
0.18	0.41	0.00000367	2250	SLE RA 20	63491	1494000	787285	36000000	2042	SLE QP 2	57604	1120500	Si
0.2	0.41	0.00000367	2262	SLE RA 20	63823	1494000	791402	36000000	2052	SLE QP 2	57904	1120500	Si
0.35	0.41	0.00000367	2336	SLE RA 20	65902	1494000	817187	36000000	2119	SLE QP 2	59782	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	346	SLE RA 20	0.05	0	346	335	SLE RA 20	0.05	0	346	SLE RA 20	0.0033	0	SLE RA 20	Si
D	0.05	0	347	SLE RA 1	0.05	0	347	347	SLE RA 1	0.05	0	346	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	347	SLE RA 1	0.05	0	347	347	SLE RA 1	0.05	0	346	SLE RA 1	0.0033	0	SLE RA 1	Si

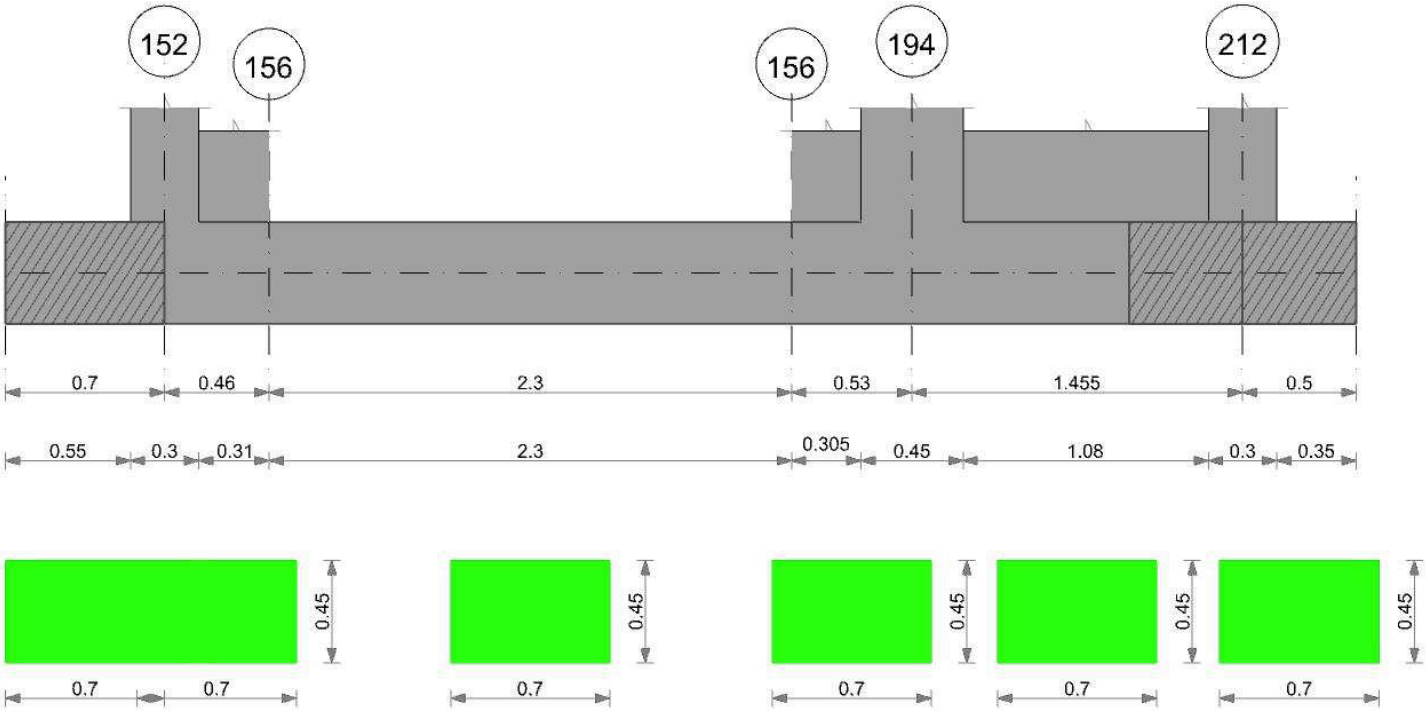
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	346	340	SLE RA 20	0.19	0.01	346	SLE RA 20	0.1	0	340	SLE RA 20	Si
D	0.19	0	SLE RA 1	0.19	0	347	346	SLE RA 1	0.19	0	347	SLE RA 1	0.1	0	346	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
Z	0.19	0	SLE RA 1	0.19	0	347	346	SLE RA 1	0.19	0	347	SLE RA 1	0.1	0	346	SLE RA 1	Si

CORDOLO 19

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

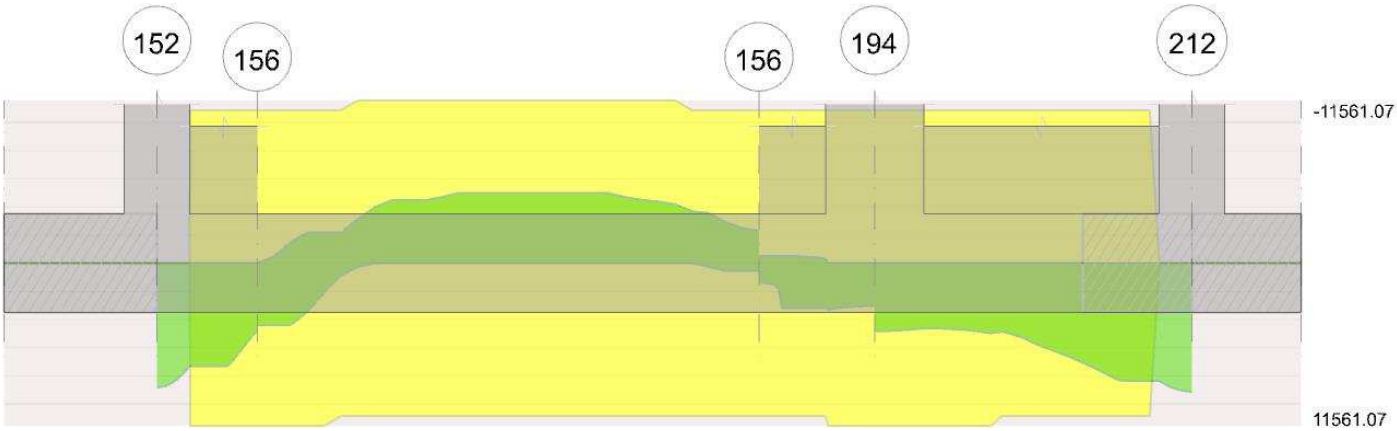
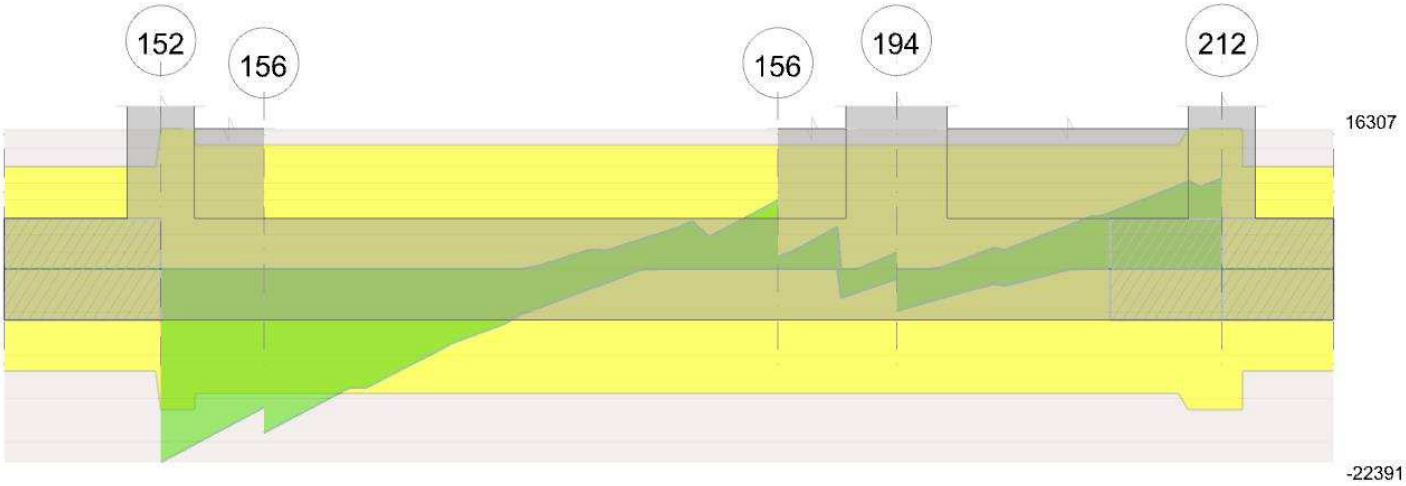


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 671, 670, 669, 668, 667, 666

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	4379.65	SLU 83	4379.65	11561.07	0.116	2.64							Si
1.15	0.000763	0.052	0.000763	0.052							-4337.5	SLU 83	-4975.62	-11561.07	0.116	2.32	Si
1.3	0.000763	0.052	0.000763	0.052							-4815.67	SLU 83	-4982.11	-11561.07	0.116	2.32	Si
2.3	0.000763	0.052	0.000763	0.052							-853.9	SLU 83	-2056.81	-11561.07	0.116	5.62	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	3574.98	SLV 10	3574.98	10870.29	0.203	3.04							Si
1.15	0.000763	0.052	0.000763	0.052							-3339.96	SLV 14	-4427.65	-10870.29	0.203	2.46	Si
1.3	0.000763	0.052	0.000763	0.052							-4025	SLV 14	-4486.6	-10870.29	0.203	2.42	Si
2.3	0.000763	0.052	0.000763	0.052	537.06	SLV 3	537.06	10870.29	0.203	20.24	-1620.72	SLV 14	-2306.47	-10870.29	0.203	4.71	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000763	0.052	3225.63	SLD 10	3225.63	10870.29	0.203	3.37							Si
1.15	0.000763	0.052	0.000763	0.052							-3099.58	SLD 14	-3811.05	-10870.29	0.203	2.85	Si
1.3	0.000763	0.052	0.000763	0.052							-3575.69	SLD 14	-3835.36	-10870.29	0.203	2.83	Si
2.3	0.000763	0.052	0.000763	0.052							-1004.71	SLD 14	-1764.87	-10870.29	0.203	6.16	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.15	0.0000103	0.000763	0	-4134	SLU 83	-4134	-10870	-88449	-14422	-14422	1	3.49	Si
2.3	0.0000103	0.000763	0	7996	SLU 84	7996	10870	88449	14422	14422	1	1.8	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.15	0.0000103	0.000763	0	-5258	SLV 14	-5258	-10870	-88449	-14422	-14422	1	2.74	Si
2.3	0.0000103	0.000763	0	6216	SLV 2	6216	10870	88449	14422	14422	1	2.32	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000103	0.000763	0	-14378	SLD 14	-14378	-10870	-88449	-14422	-14422	1	1	Si
1.15	0.0000103	0.000763	0	-3837	SLD 14	-3837	-10870	-88449	-14422	-14422	1	3.76	Si
2.3	0.0000103	0.000763	0	5762	SLD 2	5762	10870	88449	14422	14422	1	2.5	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	3241.45	20	3241.45	121533	1494000	1822990	36000000	2952.4	2	2952.4	110695	1120500			Si
1.15	-3199.6	20	-3673.07	137716	1494000	2065737	36000000	-2918.47	2	-3347.61	125513	1120500			Si
2.3	-623.65	20	-1512.04	56692	1494000	850374	36000000	-541.83	2	-1357.63	50902	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 152 - 156, sezione R 70x45, asta 672

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2994	SLU 83	0.029	5452	7726	SLU 83	15877	Si
0.15	0.41	0.0003	2992	SLU 83	0.029	5452	7721	SLU 83	15877	Si
0.23	0.41	0.0003	2988	SLU 83	0.029	5452	7711	SLU 83	15877	Si
0.46	0.41	0.0003	2967	SLU 83	0.029	5452	7658	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2071	SLD 6	0.099	6093	5344	SLD 6	15877	Si
0.15	0.41	0.0003	2068	SLD 6	0.099	6093	5338	SLD 6	15877	Si
0.23	0.41	0.0003	2065	SLD 6	0.099	6093	5329	SLD 6	15877	Si
0.46	0.41	0.0003	2050	SLD 10	0.099	6093	5289	SLD 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	2207	SLE RA 20	62477	1494000	774710	36000000	2003	SLE QP 2	56678	1120500	Si
0.15	0.41	0.00000343	2206	SLE RA 20	62444	1494000	774303	36000000	2002	SLE QP 2	56661	1120500	Si
0.23	0.41	0.00000343	2203	SLE RA 20	62362	1494000	773284	36000000	2000	SLE QP 2	56593	1120500	Si
0.46	0.41	0.00000343	2188	SLE RA 20	61932	1494000	767955	36000000	1986	SLE QP 2	56222	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 156 - 156, sezione R 70x45, aste 671, 670, 669, 668, 667, 666

Campata 4 tra i fili 156 - 194, sezione R 70x45, aste 665, 664

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3014	SLU 83	0.029	5452	7778	SLU 83	15877	Si
0.26	0.41	0.0003	3074	SLU 83	0.029	5452	7933	SLU 83	15877	Si
0.3	0.41	0.0003	3083	SLU 83	0.029	5452	7956	SLU 83	15877	Si
0.53	0.41	0.0003	3128	SLU 83	0.029	5452	8071	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2160	SLD 14	0.099	6093	5574	SLD 14	15877	Si
0.26	0.41	0.0003	2220	SLD 14	0.099	6093	5730	SLD 14	15877	Si
0.3	0.41	0.0003	2229	SLD 14	0.099	6093	5753	SLD 14	15877	Si
0.53	0.41	0.0003	2277	SLD 14	0.099	6093	5877	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	2224	SLE RA 20	62939	1494000	780438	36000000	2026	SLE QP 2	57348	1120500	Si
0.26	0.41	0.00000343	2268	SLE RA 20	64194	1494000	796006	36000000	2067	SLE QP 2	58511	1120500	Si
0.3	0.41	0.00000343	2275	SLE RA 20	64376	1494000	798256	36000000	2073	SLE QP 2	58679	1120500	Si
0.53	0.41	0.00000343	2308	SLE RA 20	65310	1494000	809843	36000000	2104	SLE QP 2	59542	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 194 - 212, sezione R 70x45, aste 663, 662, 661, 660

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3128	SLU 83	0.029	5452	8071	SLU 83	15877	Si
0.23	0.41	0.0003	3163	SLU 83	0.029	5452	8163	SLU 83	15877	Si
0.73	0.41	0.0003	3215	SLU 83	0.029	5452	8296	SLU 83	15877	Si
1.3	0.41	0.0003	3213	SLU 83	0.029	5452	8291	SLU 83	15877	Si
1.45	0.41	0.0003	3198	SLU 83	0.029	5452	8253	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2277	SLD 14	0.099	6093	5877	SLD 14	15877	Si
0.23	0.41	0.0003	2316	SLD 14	0.099	6093	5976	SLD 14	15877	Si
0.73	0.41	0.0003	2381	SLD 14	0.099	6093	6145	SLD 14	15877	Si
1.3	0.41	0.0003	2408	SLD 14	0.099	6093	6215	SLD 14	15877	Si
1.45	0.41	0.0003	2403	SLD 14	0.099	6093	6202	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000343	2308	SLE RA 20	65310	1494000	809843	36000000	2104	SLE QP 2	59542	1120500	Si
0.23	0.41	0.00000343	2334	SLE RA 20	66050	1494000	819022	36000000	2128	SLE QP 2	60226	1120500	Si
0.73	0.41	0.00000343	2372	SLE RA 20	67124	1494000	832343	36000000	2163	SLE QP 2	61219	1120500	Si
1.3	0.41	0.00000343	2370	SLE RA 20	67079	1494000	831777	36000000	2162	SLE QP 2	61182	1120500	Si
1.45	0.41	0.00000343	2359	SLE RA 20	66764	1494000	827875	36000000	2152	SLE QP 2	60895	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

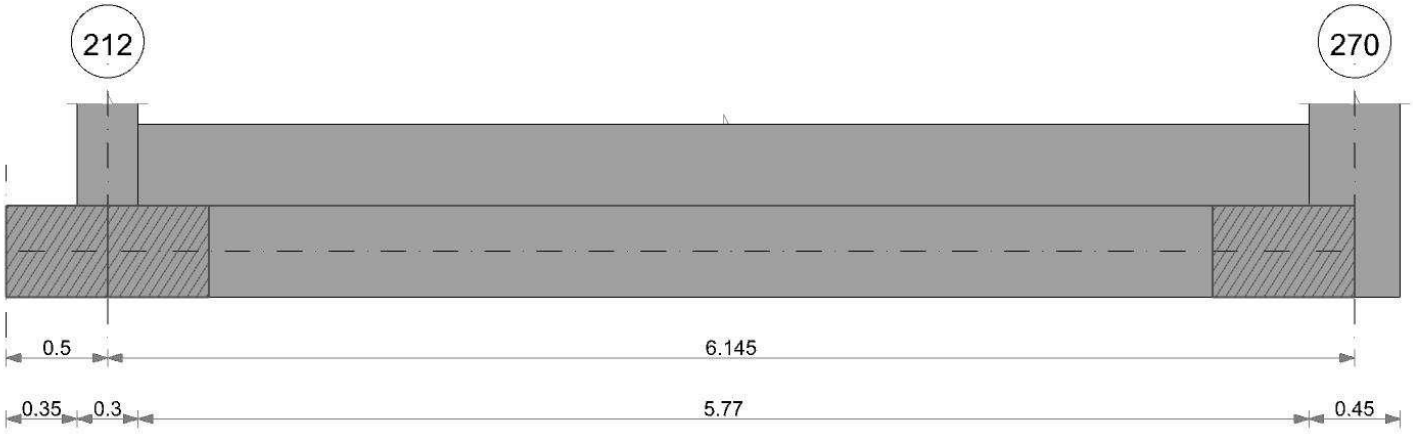
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	373	SLE RA 20	0.05	0	373	361	SLE RA 20	0.05	0	366	SLE RA 15	0.0033	0	SLE RA 16	Si
D	0.05	0	361	SLE RA 1	0.05	0	361	361	SLE RA 1	0.05	0	364	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	361	SLE RA 1	0.05	0	361	361	SLE RA 1	0.05	0	364	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	366	372	SLE RA 20	0.19	0.01	372	SLE RA 20	0.1	0	366	SLE RA 16	Si
D	0.19	0	SLE RA 1	0.19	0	361	364	SLE RA 1	0.19	0	361	SLE RA 1	0.1	0	364	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	361	364	SLE RA 1	0.19	0	361	SLE RA 1	0.1	0	364	SLE RA 1	Si

CORDOLO 20

Geometria



Caratteristiche dei materiali

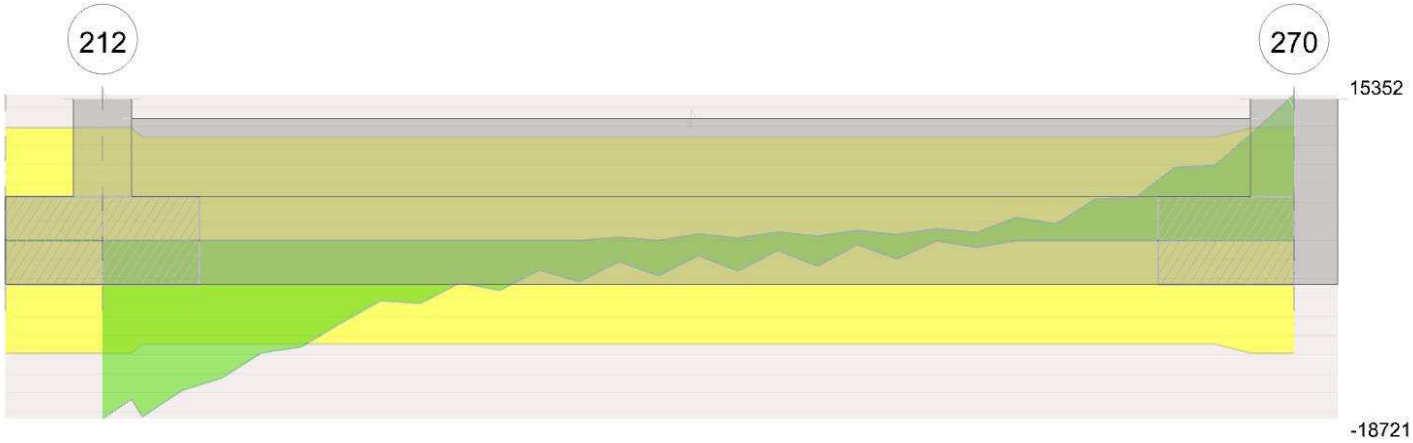
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 212 - 270, sezione R 70x45, aste 314, 313, 312, 311, 310, 309, 308, 307, 306, 305, 304, 303, 302, 301, 300

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
3.07	0.41	0.0002	2353	SLV 14	0.086	2696	6072	SLV 14	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2371	SLD 14	0.071	3120	6119	SLD 14	15877	Si
0.15	0.41	0.0002	2357	SLD 14	0.071	3120	6083	SLD 14	15877	Si
3.07	0.41	0.0002	1864	SLD 14	0.071	3120	4810	SLD 14	15877	Si
5.92	0.41	0.0002	3112	SLD 14	0.071	3120	8033	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000174	2303	SLE RA 20	66661	1494000	826591	36000000	2101	SLE QP 2	60798	1120500	Si
0.15	0.41	0.00000174	2283	SLE RA 20	66068	1494000	819242	36000000	2082	SLE QP 2	60256	1120500	Si
3.07	0.41	0.00000174	1643	SLE RA 20	47557	1494000	589712	36000000	1498	SLE QP 2	43353	1120500	Si
5.92	0.41	0.00000174	2501	SLE RA 21	72385	1494000	897572	36000000	2290	SLE QP 2	66283	1120500	Si
6.15	0.41	0.00000174	2654	SLE RA 21	76818	1494000	952537	36000000	2431	SLE QP 2	70368	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.37	1.3	SLU 23	ST	LT	-528	-112	-62422	0	0	19	0	0	1.1	18988	540	35.17	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
314,313,312,311,310,309,308,307,306,305,304,303,302,301,300	6.37	1.3	SLU 83	ST	BT	2.3	270953	86515	3.13	Si
314,313,312,311,310,309,308,307,306,305,304,303,302,301,300	6.37	1.3	SLV 14	SIS	BT	2.3	239743	86203	2.78	Si
314,313,312,311,310,309,308,307,306,305,304,303,302,301,300	6.37	1.3	SLD 14	SIS	BT	2.3	255410	71262	3.58	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-230	-86515	11557.15	1272.69	0	0	0.01	0.13	1.03	6.34	1496	2060	0	14430	
0	-1683	-86203	13183.24	22361.07	0	-1	0.26	0.15	0.99	5.85	1496	2060	0	14430	0.07
0	-795	-71262	10136.47	10116.01	0	-1	0.14	0.14	1.02	6.09	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

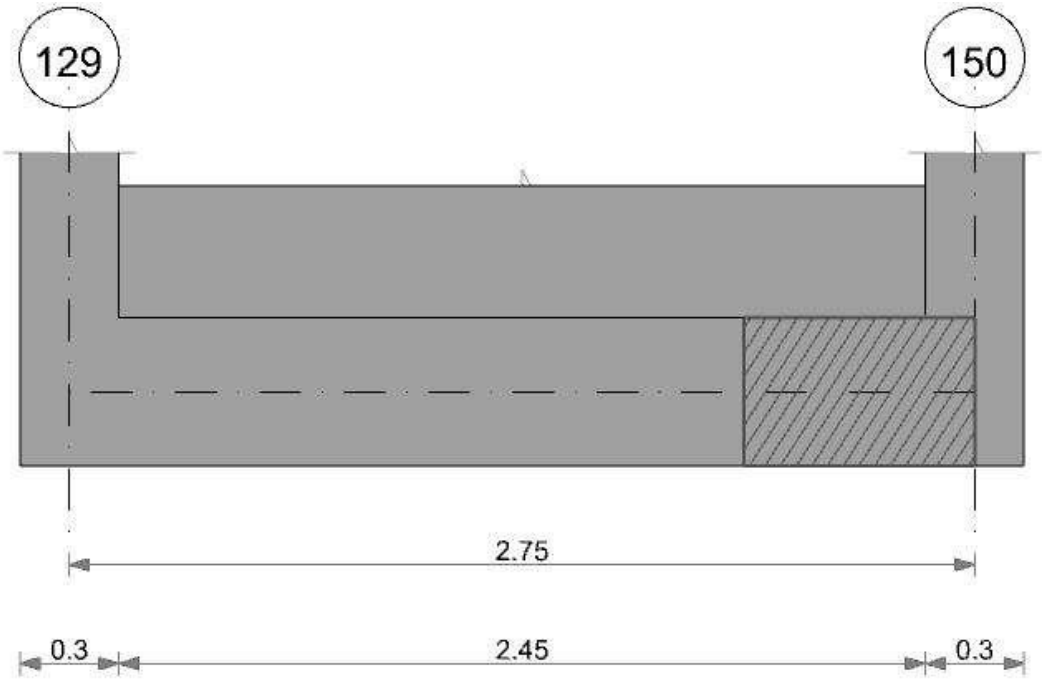
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	358	SLE RA 20	0.05	0	358	315	SLE RA 20	0.05	0	315	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	315	SLE RA 1	0.05	0	315	315	SLE RA 1	0.05	0	315	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	315	SLE RA 1	0.05	0	315	315	SLE RA 1	0.05	0	315	SLE RA 1	0.0033	0	SLE RA 1	Si

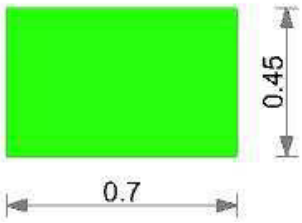
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 20	0.19	0	315	358	SLE RA 20	0.19	0	315	SLE RA 1	0.1	0	315	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	315	358	SLE RA 1	0.19	0	315	SLE RA 1	0.1	0	315	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	315	358	SLE RA 1	0.19	0	315	SLE RA 1	0.1	0	315	SLE RA 1	Si

CORDOLO 21

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

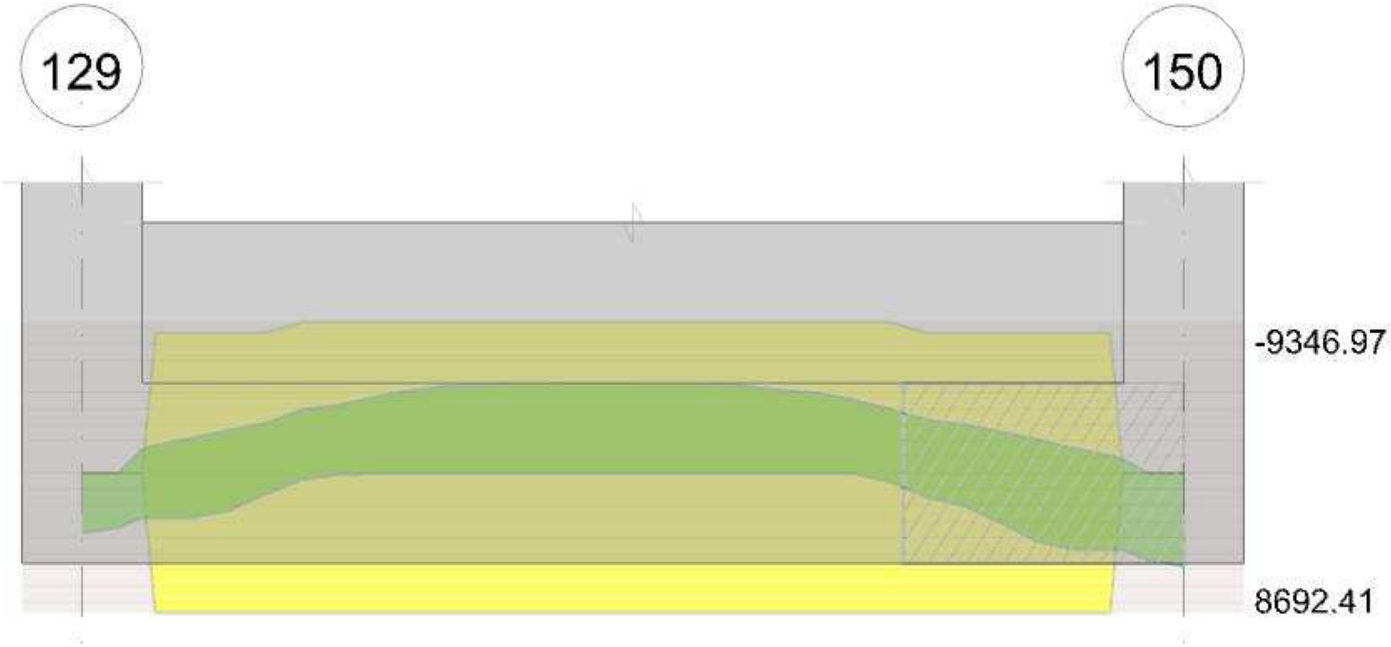
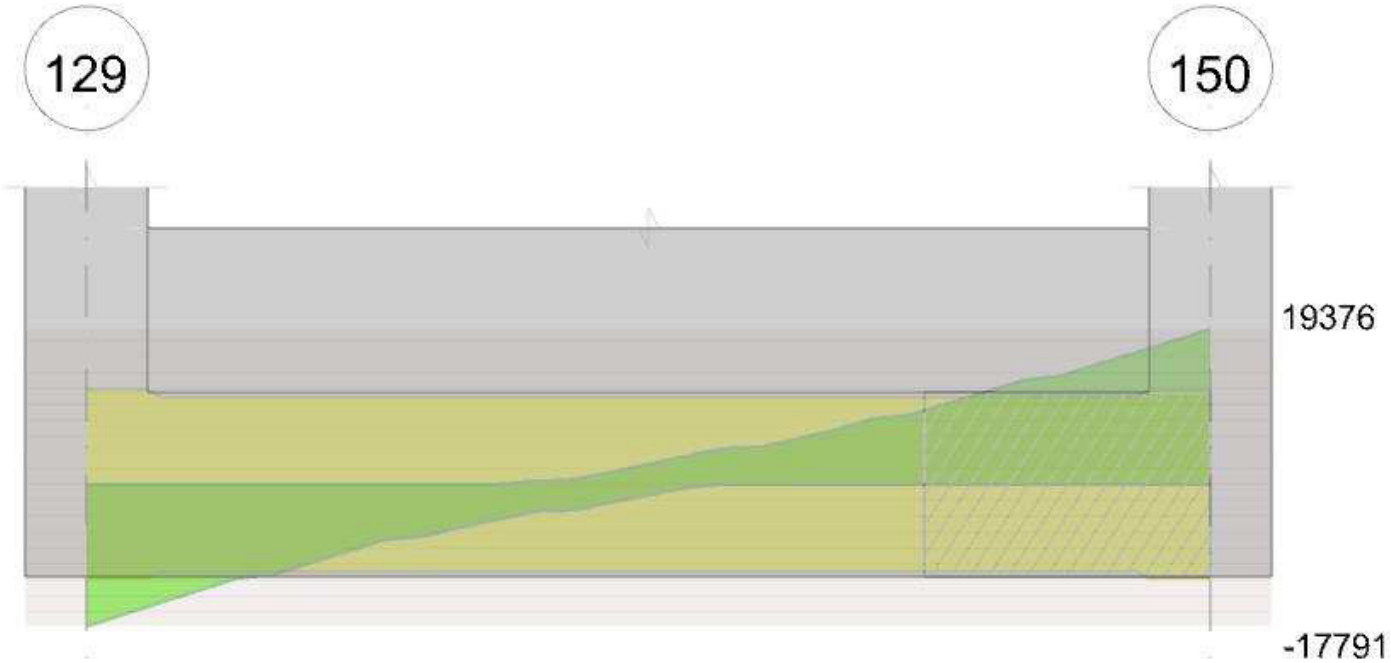


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 129 - 150, sezione R 70x45, aste 688, 689, 690, 691, 692, 693, 694

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	3601	SLU 83	0.029	5501	9294	SLU 83	15877	Si
0.15	0.41	0.0003	3567	SLU 83	0.029	5501	9204	SLU 83	15877	Si
1.38	0.41	0.0003	3355	SLU 83	0.029	5501	8658	SLU 83	15877	Si
2.6	0.41	0.0003	3480	SLU 83	0.029	5501	8980	SLU 83	15877	Si
2.75	0.41	0.0003	3496	SLU 83	0.029	5501	9023	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	2556	SLD 5	0.099	6147	6596	SLD 5	15877	Si
0.15	0.41	0.0003	2530	SLD 5	0.099	6147	6529	SLD 5	15877	Si
1.38	0.41	0.0003	2380	SLD 10	0.099	6147	6142	SLD 10	15877	Si
2.6	0.41	0.0003	2481	SLD 10	0.099	6147	6402	SLD 10	15877	Si
2.75	0.41	0.0003	2495	SLD 10	0.099	6147	6438	SLD 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000346	2658	SLE RA 20	75210	1494000	932605	36000000	2419	SLE QP 2	68432	1120500	Si
0.15	0.41	0.00000346	2633	SLE RA 20	74480	1494000	923556	36000000	2395	SLE QP 2	67755	1120500	Si
1.38	0.41	0.00000346	2476	SLE RA 20	70051	1494000	868628	36000000	2251	SLE QP 2	63672	1120500	Si
2.6	0.41	0.00000346	2569	SLE RA 20	72680	1494000	901235	36000000	2337	SLE QP 2	66116	1120500	Si
2.75	0.41	0.00000346	2581	SLE RA 20	73030	1494000	905571	36000000	2349	SLE QP 2	66447	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.05	1.3	SLU 50	ST	LT	166	91	-42056	0	0	19	0	0	1.1	12792	189	67.64	Si
3.05	1.3	SLV 15	SIS	LT	7285	837	-33486	12	1	19	0	0	1.1	10186	7333	1.39	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
688,689,690,691,692,693,694	3.05	1.3	SLU 83	ST	BT	2.3	161214	49942	3.23	Si
688,689,690,691,692,693,694	3.05	1.3	SLV 6	SIS	BT	2.3	146817	37873	3.88	Si
688,689,690,691,692,693,694	3.05	1.3	SLD 6	SIS	BT	2.3	154808	35940	4.31	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
200	-38	-49942	1658.78	-155.02	0	0	0	0.03	1.23	3.04	1496	2060	0	14430	
-2317	-2679	-37873	2552.23	-1205.18	-4	-4	-0.03	0.07	1.17	2.99	1496	2060	0	14430	0.07
-917	-1171	-35940	1747.12	-574.88	-1	-2	-0.02	0.05	1.2	3.02	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

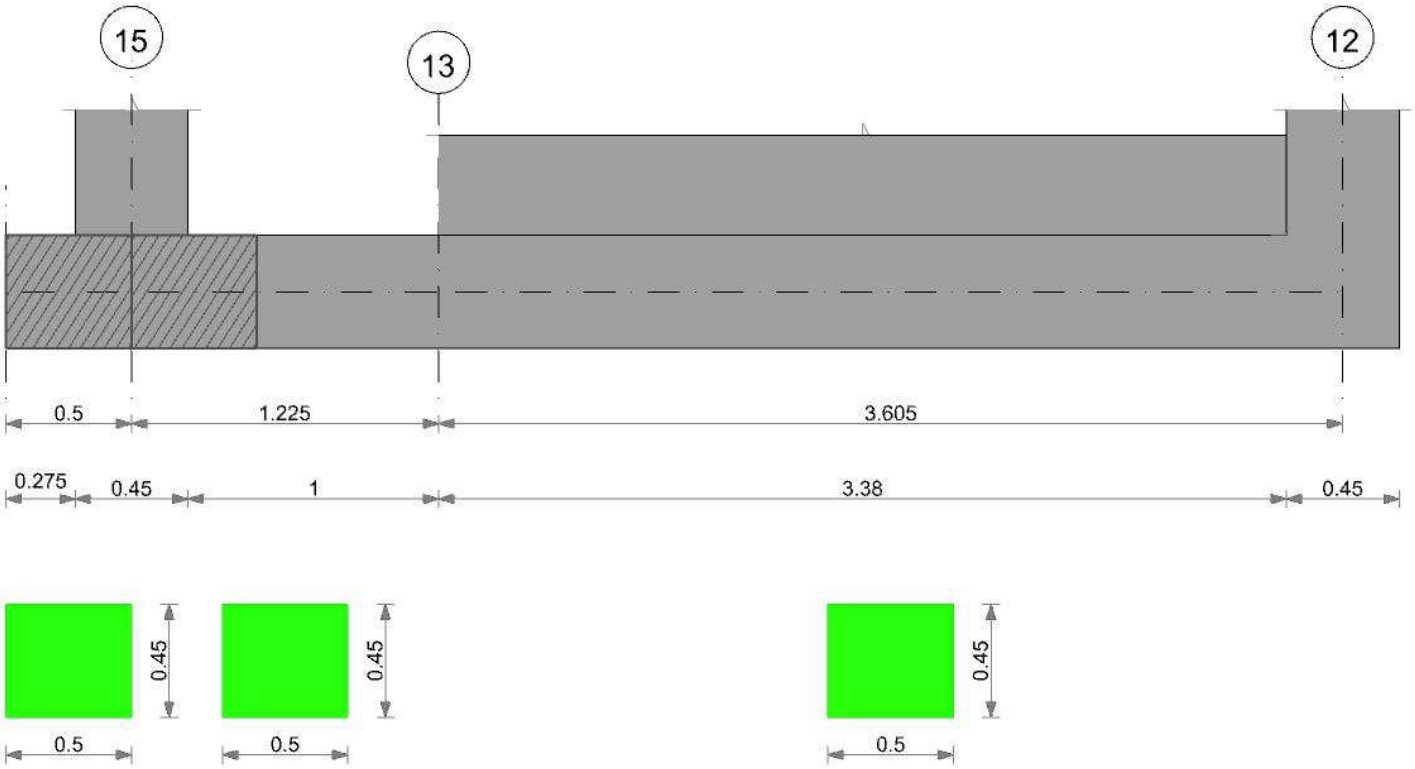
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	176	SLE RA 20	0.05	0	176	169	SLE RA 21	0.05	0	176	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	176	SLE RA 1	0.05	0	176	176	SLE RA 1	0.05	0	176	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	176	SLE RA 1	0.05	0	176	176	SLE RA 1	0.05	0	176	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	176	169	SLE RA 21	0.19	0	176	SLE RA 1	0.1	0	176	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	176	169	SLE RA 1	0.19	0	176	SLE RA 1	0.1	0	176	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	176	169	SLE RA 1	0.19	0	176	SLE RA 1	0.1	0	176	SLE RA 1	Si

CORDOLO 22

Geometria



Caratteristiche dei materiali

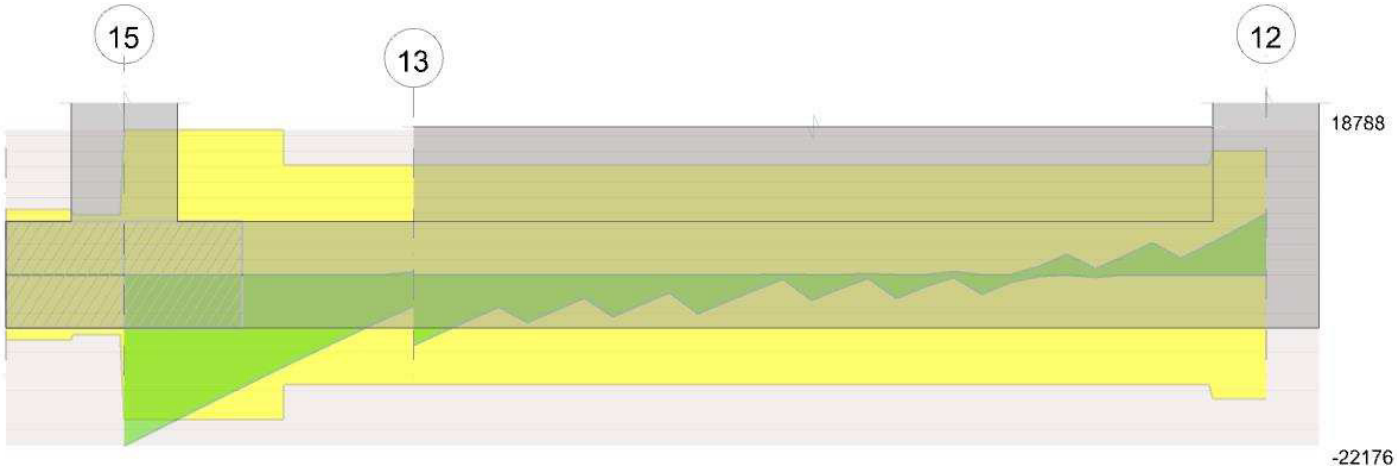
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 299

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000763	0.052	12506.11	SLU 84	10432.89	11254.02	0.132	1.08							Si
0.23	0.000509	0.052	0.000763	0.052	8689.38	SLU 84	8689.38	11254.02	0.132	1.3							Si
0.61	0.000509	0.052	0.000509	0.052	3660.31	SLU 84	5749.31	7755.45	0.113	1.35							Si
1.23	0.000509	0.052	0.000509	0.052	-233.86	SLU 1	321.67	7755.45	0.113	24.11	-385.5	SLU 84	-385.5	-7755.45	0.113	20.12	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000509	0.052	0.000763	0.052	10420.15	SLV 4	10420.15	10716.86	0.238	1.03							Si
0.61	0.000509	0.052	0.000509	0.052	4313.03	SLV 4	6860.52	7266.79	0.197	1.06							Si
1.23	0.000509	0.052	0.000509	0.052	432.71	SLV 9	618.47	7266.79	0.197	11.75	-941.5	SLV 8	-941.5	-7266.79	0.197	7.72	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000763	0.052	11243.56	SLD 4	9376.65	10716.86	0.238	1.14							Si
0.23	0.000509	0.052	0.000763	0.052	7802.41	SLD 4	7802.41	10716.86	0.238	1.37							Si
0.61	0.000509	0.052	0.000509	0.052	3248.84	SLD 4	5144.29	7266.79	0.197	1.41							Si
1.23	0.000509	0.052	0.000509	0.052	46.54	SLD 9	390.96	7266.79	0.197	18.59	-555.32	SLD 8	-555.32	-7266.79	0.197	13.09	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-18454	SLU 84	-18454	-8381	-63178	-18788	-18788	1	1.02	Si
0.23	0.0000134	0.000509	0	-15498	SLU 84	-15498	-7764	-63178	-18788	-18788	1	1.21	Si
0.61	0.0000134	0.000509	0	-10463	SLU 84	-10463	-7764	-63178	-18788	-18788	1	1.8	Si
1.23	0.0000102	0.000509	0	-2822	SLU 84	-2822	-7764	-63178	-14244	-14244	1	5.05	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-22176	SLV 4	-22176	-8381	-63178	-18788	-18788	1	0.85	Si
0.23	0.0000134	0.000509	0	-18714	SLV 4	-18714	-7764	-63178	-18788	-18788	1	1	Si
0.61	0.0000134	0.000509	0	-12836	SLV 4	-12836	-7764	-63178	-18788	-18788	1	1.46	Si
1.23	0.0000102	0.000509	0	345	SLV 13	345	7764	63178	14244	14244	1	41.24	Si
1.23	0.0000102	0.000509	0	-4049	SLV 4	-4049	-7764	-63178	-14244	-14244	1	3.52	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000692	0	-16623	SLD 4	-16623	-8381	-63178	-18788	-18788	1	1.13	Si
0.23	0.0000134	0.000509	0	-13993	SLD 4	-13993	-7764	-63178	-18788	-18788	1	1.34	Si
0.61	0.0000134	0.000509	0	-9523	SLD 4	-9523	-7764	-63178	-18788	-18788	1	1.97	Si
1.23	0.0000102	0.000509	0	-2795	SLD 4	-2795	-7764	-63178	-14244	-14244	1	5.1	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	9217.26	21	7687.61	691667	1494000	27969140	36000000	8423.7	2	7022.68	631842	1120500			Si
0.23	6401.6	21	6401.6	575963	1494000	23290371	36000000	5845.6	2	5845.6	525939	1120500			Si
0.61	2693.53	21	4233.41	223919	1494000	3358792	36000000	2454.41	2	3861.87	204268	1120500			Si
1.23	-283.13	21	-283.13	14976	1494000	224634	36000000	-254.39	2	-254.39	13456	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	inferiore	0.375	0.00081	0.000305	21	0.375	0.00082	0.000309	6	0.375	0.00079	0.000298	2	Si
0.23	inferiore	0.375	0.00068	0.000254	21	0.375	0.00063	0.000238	6	0.375	0.00062	0.000232	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 15 - 13, sezione R 50x45, asta 299

Campata 3 tra i fili 13 - 12, sezione R 50x45, aste 298, 297, 296, 295, 294, 293, 292, 291, 290

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2021	SLV 4	0.145	7698	7028	SLV 4	19893	Si
1.8	0.41	0.0005	1813	SLV 4	0.145	7698	6308	SLV 4	19893	Si
3.38	0.41	0.0005	2323	SLV 4	0.145	7698	8080	SLV 4	19893	Si
3.6	0.41	0.0005	2475	SLV 4	0.145	7698	8610	SLV 4	19893	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1513	SLD 4	0.12	8948	5264	SLD 4	22877	Si
1.8	0.41	0.0005	1359	SLD 4	0.12	8948	4726	SLD 4	22877	Si
3.38	0.41	0.0005	1748	SLD 4	0.12	8948	6081	SLD 4	22877	Si
3.6	0.41	0.0005	1866	SLD 4	0.12	8948	6489	SLD 4	22877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000508	1243	SLE RA 21	34435	1494000	426992	36000000	1135	SLE QP 2	31435	1120500	Si
1.8	0.41	0.00000508	1117	SLE RA 21	30944	1494000	383701	36000000	1019	SLE QP 2	28238	1120500	Si
3.38	0.41	0.00000508	1443	SLE RA 21	39980	1494000	495747	36000000	1318	SLE QP 2	36524	1120500	Si
3.6	0.41	0.00000508	1542	SLE RA 21	42727	1494000	529820	36000000	1409	SLE QP 2	39045	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	1.1	SLU 47	ST	LT	83	-942	-55921	0	-1	19	0	0	1.1	17010	946	17.98	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
299,298,297,296,295,294,293,292,291,290	5.05	1.1	SLU 83	ST	BT	2.3	195906	67081	2.92	Si
299,298,297,296,295,294,293,292,291,290	5.05	1.1	SLV 1	SIS	BT	2.3	165600	73196	2.26	Si
299,298,297,296,295,294,293,292,291,290	5.05	1.1	SLD 1	SIS	BT	2.3	181103	57848	3.13	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-1060	-67081	-6428.69	-55.17	0	-1	0	-0.1	0.91	5.05	1496	2060	0	14430	
0	6552	-73196	-10962.82	-2173.52	0	5	-0.03	-0.15	0.8	5	1496	2060	0	14430	0.07
0	2373	-57848	-7189.21	-948.27	0	2	-0.02	-0.12	0.85	5.02	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

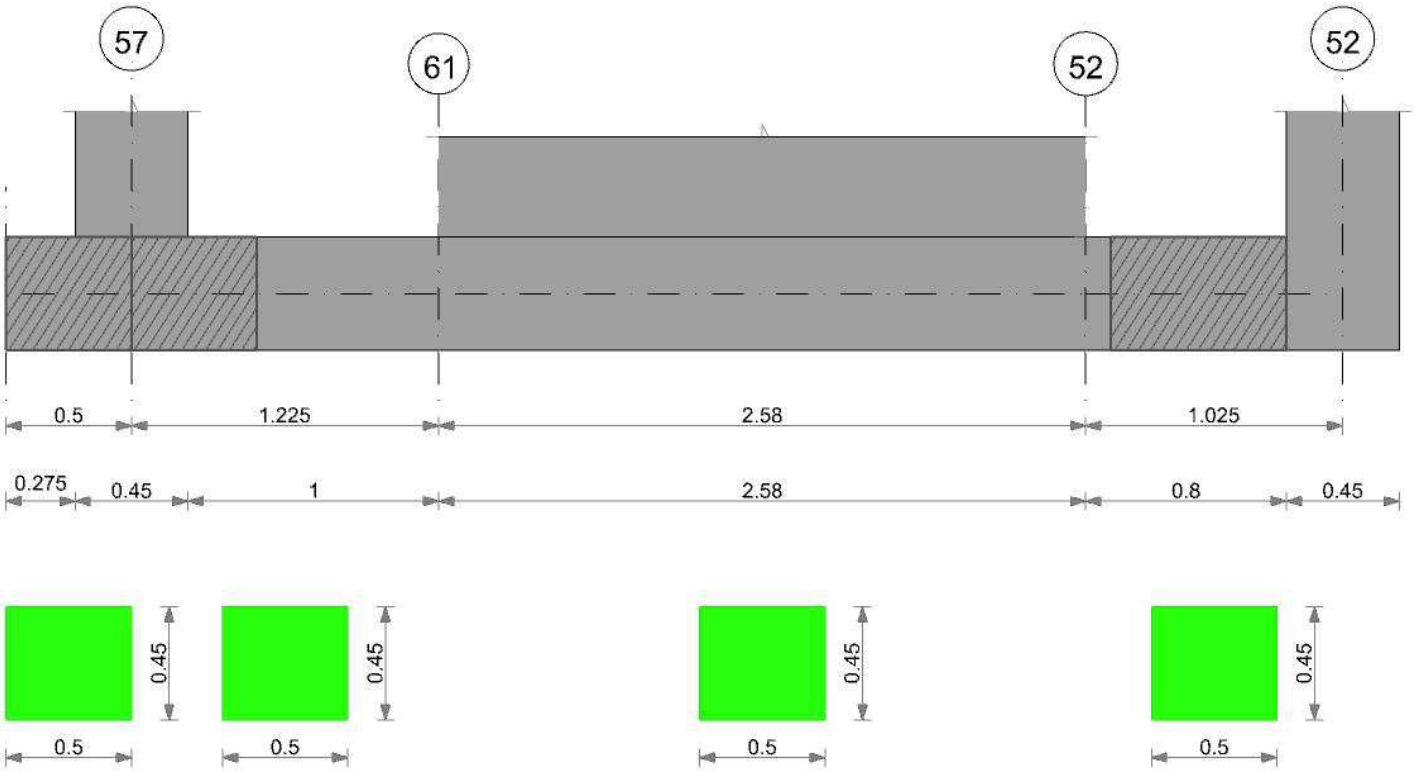
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	585	SLE RA 21	0.05	0	585	940	SLE RA 21	0.05	0	739	SLE FR 6	0.0033	0	SLE FR 6	Si
D	0.05	0	585	SLE RA 1	0.05	0	585	585	SLE RA 1	0.05	0	739	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	585	SLE RA 1	0.05	0	585	585	SLE RA 1	0.05	0	739	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0.01	585	739	SLE RA 20	0.19	0	585	SLE RA 1	0.1	0.01	739	SLE FR 6	Si
D	0.19	0	SLE RA 1	0.19	0	585	739	SLE RA 1	0.19	0	585	SLE RA 1	0.1	0	739	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	585	739	SLE RA 1	0.19	0	585	SLE RA 1	0.1	0	739	SLE RA 1	Si

CORDOLO 23

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

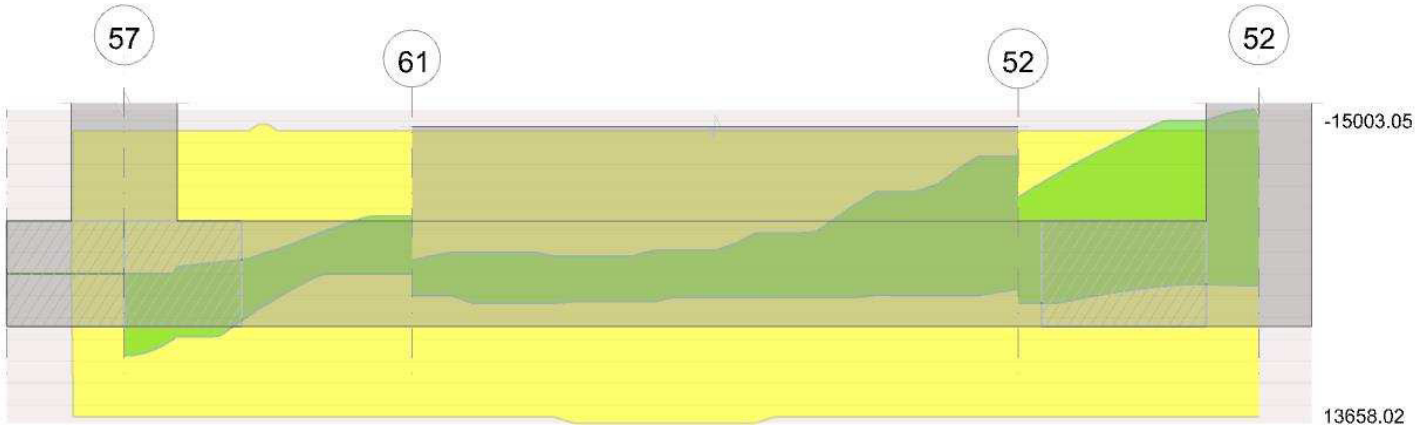
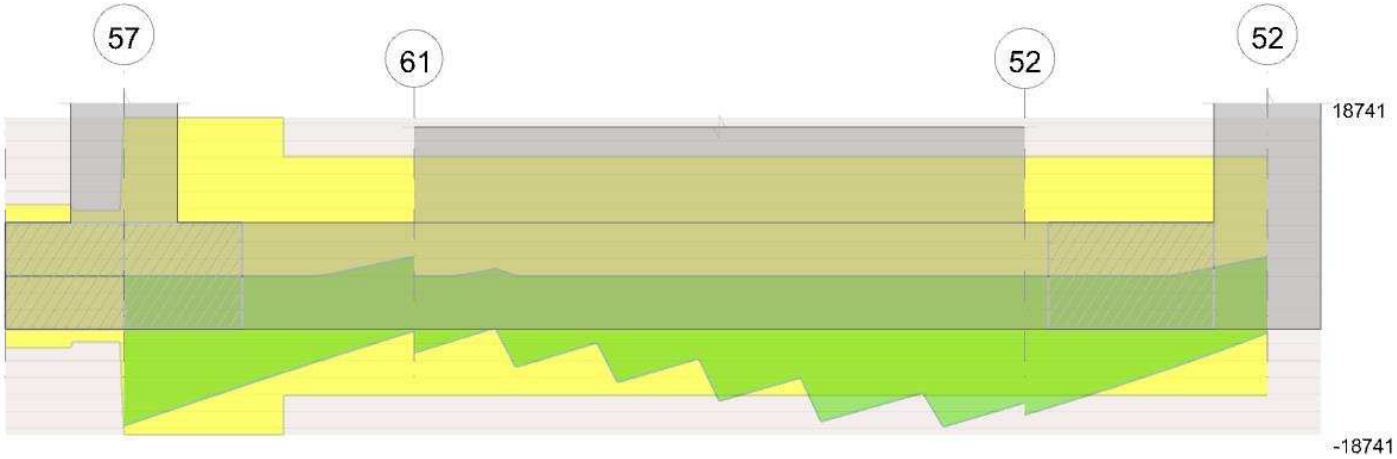


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 374

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	7731.68	SLU 84	5850.53	13658.02	0.143	2.33							Si
0.23	0.000942	0.053	0.000942	0.053	4252.25	SLU 84	4252.25	13658.02	0.143	3.21							Si
0.61	0.000942	0.053	0.000942	0.053	-282.31	SLU 1	1529.7	13658.02	0.143	8.93	-416.01	SLU 78	-2002.15	-13658.02	0.143	6.82	Si
1.23	0.000942	0.053	0.000942	0.053							-4410.44	SLU 84	-4410.44	-13658.02	0.143	3.1	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	9483.29	SLV 3	7494.84	13077.02	0.254	1.74							Si
0.23	0.000942	0.053	0.000942	0.053	5744.15	SLV 3	5744.15	13077.02	0.254	2.28	-69.48	SLV 14	-598.08	-13077.02	0.254	21.87	Si
0.61	0.000942	0.053	0.000942	0.053	538.08	SLV 1	2708.48	13077.02	0.254	4.83	-1124.31	SLV 16	-1905.98	-13077.02	0.254	6.86	Si
1.23	0.000942	0.053	0.000942	0.053							-5266.54	SLV 4	-5266.54	-13077.02	0.254	2.48	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	7018.82	SLD 3	5444.59	13077.02	0.254	2.4							Si
0.23	0.000942	0.053	0.000942	0.053	4081.26	SLD 3	4081.26	13077.02	0.254	3.2							Si
0.61	0.000942	0.053	0.000942	0.053	63.23	SLD 1	1736.49	13077.02	0.254	7.53	-649.46	SLD 16	-1597.75	-13077.02	0.254	8.18	Si
1.23	0.000942	0.053	0.000942	0.053							-3950.83	SLD 4	-3950.83	-13077.02	0.254	3.31	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-16744	SLU 84	-16744	-9278	-63019	-18741	-18741	1	1.12	Si
0.23	0.0000134	0.000942	0	-14207	SLU 84	-14207	-9278	-63019	-18741	-18741	1	1.32	Si
0.61	0.0000134	0.000942	0	-9882	SLU 84	-9882	-9278	-63019	-18741	-18741	1	1.9	Si
1.23	0.0000101	0.000942	0	-3187	SLU 84	-3187	-9278	-63019	-14132	-14132	1	4.43	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-17710	SLV 3	-17710	-9278	-63019	-18741	-18741	1	1.06	Si
0.23	0.0000134	0.000942	0	-15562	SLV 3	-15562	-9278	-63019	-18741	-18741	1	1.2	Si
0.61	0.0000134	0.000942	0	-11943	SLV 3	-11943	-9278	-63019	-18741	-18741	1	1.57	Si
1.23	0.0000101	0.000942	0	2284	SLV 14	2284	9278	63019	14132	14132	1	6.19	Si
1.23	0.0000101	0.000942	0	-6493	SLV 3	-6493	-9278	-63019	-14132	-14132	1	2.18	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000134	0.000942	0	-14017	SLD 3	-14017	-9278	-63019	-18741	-18741	1	1.34	Si
0.23	0.0000134	0.000942	0	-12118	SLD 3	-12118	-9278	-63019	-18741	-18741	1	1.55	Si
0.61	0.0000134	0.000942	0	-8901	SLD 3	-8901	-9278	-63019	-18741	-18741	1	2.11	Si
1.23	0.0000101	0.000942	0	-3987	SLD 3	-3987	-9278	-63019	-14132	-14132	1	3.54	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	5686.68	21	4301.17	208869	1494000	3133038	36000000	5174.15	2	3910.31	189889	1120500			Si
0.23	3124.32	21	3124.32	151720	1494000	2275802	36000000	2837.33	2	2837.33	137784	1120500			Si
0.61	-311.88	15	-1478.66	71805	1494000	1077082	36000000	-293.11	2	-1355.56	65827	1120500			Si
1.23	-3247.31	21	-3247.31	157693	1494000	2365391	36000000	-2960.21	2	-2960.21	143751	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 367

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053							-1235.9	SLU 83	-3738.71	-13658.02	0.143	3.65	Si
0.51	0.000942	0.053	0.000942	0.053							-7489.2	SLU 84	-8992.58	-13658.02	0.143	1.52	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.8	0.000942	0.053	0.000942	0.053							-9730.61	SLU 84	-9730.61	-13658.02	0.143	1.4	Si
1.02	0.000942	0.053	0.000942	0.053							-10818.56	SLU 84	-10423.09	-13658.02	0.143	1.31	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	2662.01	SLV 16	2662.01	13077.02	0.254	4.91	-4393.97	SLV 1	-6967.4	-13077.02	0.254	1.88	Si
0.51	0.000942	0.053	0.000942	0.053	994.81	SLV 16	1384.14	13077.02	0.254	9.45	-11068.18	SLV 1	-12948.58	-13077.02	0.254	1.01	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	647.99	SLD 16	647.99	13077.02	0.254	20.18	-2379.95	SLD 1	-4435.51	-13077.02	0.254	2.95	Si
0.51	0.000942	0.053	0.000942	0.053							-7615.61	SLD 1	-8987.83	-13077.02	0.254	1.45	Si
0.8	0.000942	0.053	0.000942	0.053							-9708.68	SLD 3	-9708.68	-13077.02	0.254	1.35	Si
1.02	0.000942	0.053	0.000942	0.053							-10870.72	SLD 3	-10404.75	-13077.02	0.254	1.26	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.51	0.0000101	0.000942	0	-9426	SLU 84	-9426	-9278	-63019	-14132	-14132	1	1.5	Si
0.8	0.0000101	0.000942	0	-6155	SLU 84	-6155	-9278	-63019	-14132	-14132	1	2.3	Si
1.02	0.0000101	0.000942	0	-3486	SLU 84	-3486	-9278	-63019	-14132	-14132	1	4.05	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.51	0.0000101	0.000942	0	-11855	SLV 3	-11855	-9278	-63019	-14132	-14132	1	1.19	Si
0.8	0.0000101	0.000942	0	1000	SLV 14	1000	9278	63019	14132	14132	1	14.13	Si
0.8	0.0000101	0.000942	0	-9060	SLV 3	-9060	-9278	-63019	-14132	-14132	1	1.56	Si
1.02	0.0000101	0.000942	0	2234	SLV 14	2234	9278	63019	14132	14132	1	6.33	Si
1.02	0.0000101	0.000942	0	-6689	SLV 3	-6689	-9278	-63019	-14132	-14132	1	2.11	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000942	0	-12752	SLD 3	-12752	-9278	-63019	-14132	-14132	1	1.11	Si
0.51	0.0000101	0.000942	0	-8647	SLD 3	-8647	-9278	-63019	-14132	-14132	1	1.63	Si
0.8	0.0000101	0.000942	0	-6187	SLD 3	-6187	-9278	-63019	-14132	-14132	1	2.28	Si
1.02	0.0000101	0.000942	0	-4141	SLD 3	-4141	-9278	-63019	-14132	-14132	1	3.41	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-923.09	20	-2762.18	134134	1494000	2012015	36000000	-865.98	2	-2538.06	123251	1120500			Si
0.51	-5515.61	21	-6617.19	520913	1494000	19711372	36000000	-5036.69	2	-6029.24	474630	1120500			Si
0.8	-7157.12	21	-7157.12	563417	1494000	21319728	36000000	-6513.83	2	-6513.83	512777	1120500			Si
1.02	-7950.47	21	-7663.32	603266	1494000	22827606	36000000	-7219.98	2	-6967.2	548467	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.51	superiore	0.349	0.00057	0.0002	21	0.349	0.00054	0.000187	6	0.349	0.00052	0.000183	2	Si
0.8	superiore	0.349	0.00062	0.000217	21	0.349	0.0006	0.000208	6	0.349	0.00057	0.000199	2	Si
1.02	superiore	0.349	0.00066	0.000232	21	0.349	0.00066	0.000231	6	0.349	0.00064	0.000222	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 57 - 61, sezione R 50x45, asta 374

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 373, 372, 371, 370, 369, 368

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1914	SLU 84	0.043	7989	5891	SLU 84	17964	Si
1.29	0.41	0.0005	1883	SLU 84	0.043	7989	5795	SLU 84	17964	Si
2.58	0.41	0.0005	1889	SLU 84	0.043	7989	5814	SLU 84	17964	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1398	SLD 4	0.119	8901	4301	SLD 4	20659	Si
1.29	0.41	0.0005	1348	SLD 4	0.119	8901	4148	SLD 4	20659	Si
2.58	0.41	0.0005	1382	SLD 4	0.119	8901	4252	SLD 4	20659	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000505	1406	SLE RA 21	38980	1494000	483354	36000000	1275	SLE QP 2	35340	1120500	Si
1.29	0.41	0.00000505	1383	SLE RA 21	38338	1494000	475392	36000000	1254	SLE QP 2	34745	1120500	Si
2.58	0.41	0.00000505	1388	SLE RA 21	38463	1494000	476939	36000000	1259	SLE QP 2	34883	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 52, sezione R 50x45, asta 367

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.05	1.1	SLU 44	ST	LT	678	-741	-50385	1	-1	19	0	0	1.1	15326	1004	15.26	Si
5.05	1.1	SLV 16	SIS	LT	1045	-8136	-36168	2	-13	19	0	0	1.1	11002	8203	1.34	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
374,373,372,371,370,369,368,367	5.05	1.1	SLU 84	ST	BT	2.3	234044	61649	3.8	Si
374,373,372,371,370,369,368,367	5.05	1.1	SLV 16	SIS	LT	2.3	149473	36168	4.13	Si
374,373,372,371,370,369,368,367	5.05	1.1	SLD 4	SIS	BT	2.3	226830	45637	4.97	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-850	-61649	590.79	467	0	-1	0.01	0.01	1.08	5.04	1496	2060	0	14430	
0	-8136	-36168	3774.77	1247.55	0	-13	0.03	0.1	0.89	4.99	1496	2060	37	0	0.07
0	2379	-45637	-906.83	1063.2	0	3	0.02	-0.02	1.06	5.01	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.13	1.14	0.93	1.16	1.27	1	0.62	0.62	0.48	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

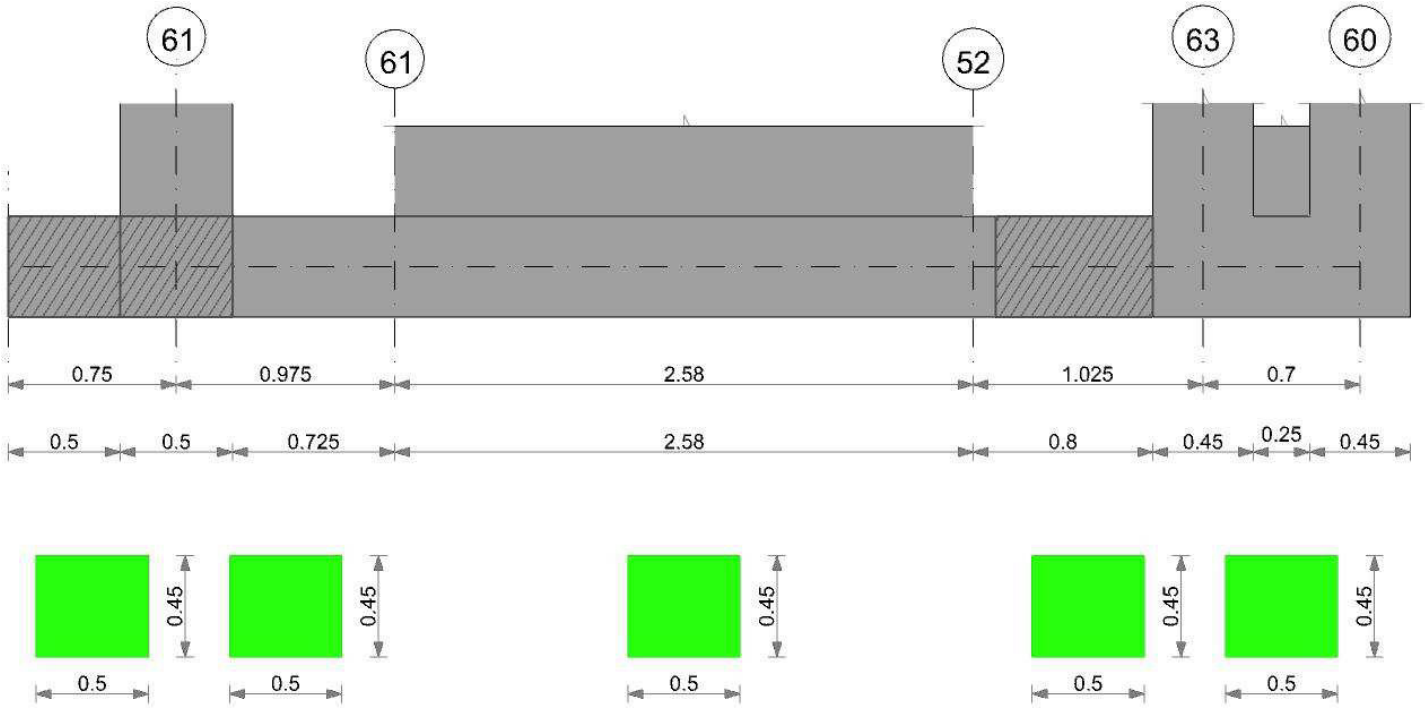
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	599	SLE RA 21	0.05	0.001	599	953	SLE RA 20	0.05	0	875	SLE FR 3	0.0033	0	SLE FR 3	Si
D	0.05	0	599	SLE RA 1	0.05	0	599	599	SLE RA 1	0.05	0	740	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	599	SLE RA 1	0.05	0	599	599	SLE RA 1	0.05	0	740	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	740	875	SLE RA 20	0.19	0	740	SLE RA 21	0.1	0.01	875	SLE FR 3	Si
D	0.19	0	SLE RA 1	0.19	0	599	740	SLE RA 1	0.19	0	599	SLE RA 1	0.1	0	740	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	599	740	SLE RA 1	0.19	0	599	SLE RA 1	0.1	0	740	SLE RA 1	Si

CORDOLO 24

Geometria



Caratteristiche dei materiali

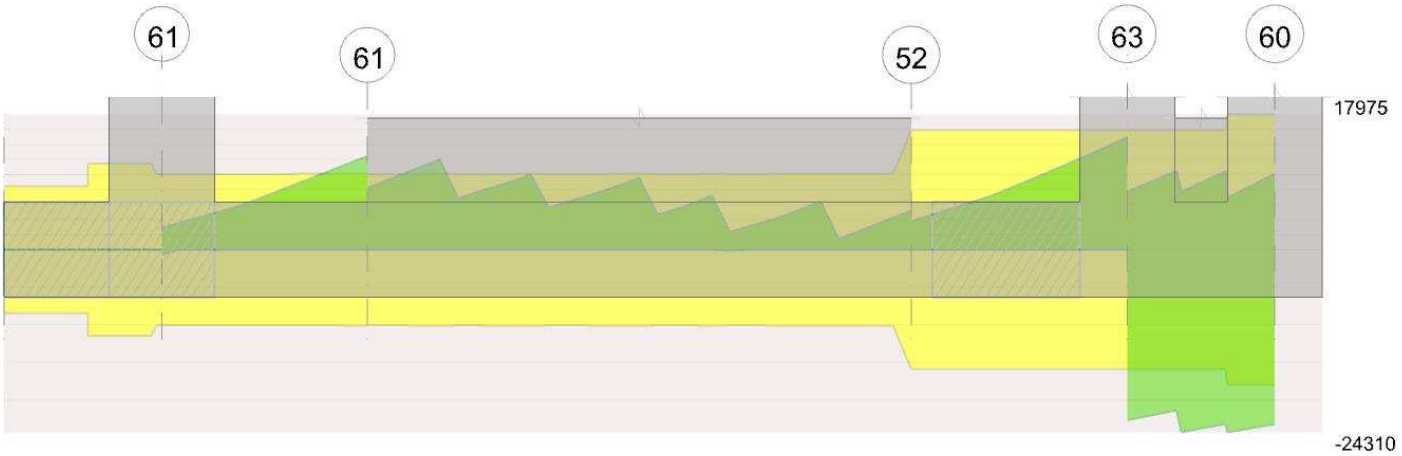
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 385

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-3389.24	SLU 84	-3174.81	-9373.94	0.122	2.95	Si
0.25	0.000628	0.053	0.000509	0.052							-2617.88	SLU 84	-2617.88	-9373.94	0.122	3.58	Si
0.49	0.000628	0.053	0.000509	0.052	-805.74	SLU 1	199.98	7773.51	0.117	38.87	-1251.09	SLU 84	-2341.02	-9373.94	0.122	4	Si
0.85	0.000628	0.053	0.000509	0.052	1979.91	SLU 83	3502.15	7773.51	0.117	2.22							Si
0.98	0.000628	0.053	0.000509	0.052	3502.15	SLU 83	3502.15	7773.51	0.117	2.22							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-2887.5	SLV 5	-2412.79	-8872.37	0.218	3.68	Si
0.25	0.000628	0.053	0.000509	0.052							-2227.81	SLV 16	-2228.77	-8872.37	0.218	3.98	Si
0.49	0.000628	0.053	0.000509	0.052	-124.93	SLV 1	1159.6	7263.39	0.196	6.26	-1588.66	SLV 16	-2097.69	-8872.37	0.218	4.23	Si
0.85	0.000628	0.053	0.000509	0.052	2722.32	SLV 1	4044.66	7263.39	0.196	1.8	-90.21	SLV 16	-932.35	-8872.37	0.218	9.52	Si
0.98	0.000628	0.053	0.000509	0.052	4044.66	SLV 1	4044.66	7263.39	0.196	1.8	638.05	SLV 16	-340.75	-8872.37	0.218	26.04	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000509	0.052							-2550.43	SLD 5	-2264.86	-8872.37	0.218	3.92	Si
0.25	0.000628	0.053	0.000509	0.052							-1968.16	SLD 16	-1968.16	-8872.37	0.218	4.51	Si
0.49	0.000628	0.053	0.000509	0.052	-542.48	SLD 1	564.89	7263.39	0.196	12.86	-1171.11	SLD 16	-1806.6	-8872.37	0.218	4.91	Si
0.85	0.000628	0.053	0.000509	0.052	1919.84	SLD 1	3072.35	7263.39	0.196	2.36	712.27	SLD 16	-339.37	-8872.37	0.218	26.14	Si
0.98	0.000628	0.053	0.000509	0.052	3072.35	SLD 1	3072.35	7263.39	0.196	2.36							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	1704	SLU 84	1704	8105	63019	10078	10078	1	5.91	Si
0.25	0.0000072	0.000628	0	4455	SLU 84	4455	8105	63019	10078	10078	1	2.26	Si
0.49	0.0000072	0.000628	0	7065	SLU 84	7065	8105	63019	10078	10078	1	1.43	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	2912	SLV 5	2912	8105	63019	10078	10078	1	3.46	Si
0	0.0000072	0.000628	0	-637	SLV 12	-637	-8105	-63019	-10078	-10078	1	15.81	Si
0.25	0.0000072	0.000628	0	4843	SLV 5	4843	8105	63019	10078	10078	1	2.08	Si
0.49	0.0000072	0.000628	0	6698	SLV 5	6698	8105	63019	10078	10078	1	1.5	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000628	0	1912	SLD 5	1912	8105	63019	10078	10078	1	5.27	Si
0.25	0.0000072	0.000628	0	3801	SLD 5	3801	8105	63019	10078	10078	1	2.65	Si
0.49	0.0000072	0.000628	0	5601	SLD 5	5601	8105	63019	10078	10078	1	1.8	Si
0.98	0.0000072	0.000509	0	9396	SLD 1	9396	7764	63178	10104	10104	1	1.08	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-2498.37	21	-2341.75	123100	1494000	1826251	36000000	-2293.04	2	-2149.89	113015	1120500			Si
0.25	-1932.52	21	-1932.52	101588	1494000	1507104	36000000	-1775.76	2	-1775.76	93347	1120500			Si
0.49	-927.35	21	-1729.04	90891	1494000	1348414	36000000	-856.79	2	-1589.72	83568	1120500			Si
0.98	2572.12	20	2572.12	133727	1494000	2028154	36000000	2341.36	2	2341.36	121729	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 378

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-9432.77	SLU 83	-9432.77	-16326.36	0.165	1.73	Si
0.14	0.001137	0.053	0.000509	0.052							-8938.1	SLU 83	-9432.77	-16326.36	0.165	1.73	Si
0.51	0.001137	0.053	0.000509	0.052							-6491.11	SLU 83	-7859.81	-16326.36	0.165	2.08	Si
0.8	0.001137	0.053	0.000509	0.052							-3506.99	SLU 84	-5485.66	-16326.36	0.165	2.98	Si
1.02	0.001137	0.053	0.000509	0.052							-479.75	SLU 82	-479.75	-16326.36	0.165	34.03	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052	353.33	SLV 16	483.42	7255.57	0.189	15.01	-13074.87	SLV 1	-13074.87	-15592.05	0.288	1.19	Si
0.14	0.001137	0.053	0.000509	0.052	433.09	SLV 16	719.93	7255.57	0.189	10.08	-12482.86	SLV 1	-13074.87	-15592.05	0.288	1.19	Si
0.51	0.001137	0.053	0.000509	0.052	1268.97	SLV 16	2003.98	7255.57	0.189	3.62	-10005.13	SLV 1	-11345.76	-15592.05	0.288	1.37	Si
0.8	0.001137	0.053	0.000509	0.052	2563.53	SLV 14	2563.53	7255.57	0.189	2.83	-7262	SLV 3	-9042.8	-15592.05	0.288	1.72	Si
1.02	0.001137	0.053	0.000509	0.052	3976.51	SLV 14	3200.64	7255.57	0.189	2.27	-4566.48	SLV 3	-4566.48	-15592.05	0.288	3.41	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.001137	0.053	0.000509	0.052							-9234.92	SLD 1	-9234.92	-15592.05	0.288	1.69	Si
0.14	0.001137	0.053	0.000509	0.052							-8788.64	SLD 1	-9234.92	-15592.05	0.288	1.69	Si
0.51	0.001137	0.053	0.000509	0.052							-6778.62	SLD 1	-7883.06	-15592.05	0.288	1.98	Si
0.8	0.001137	0.053	0.000509	0.052							-4449.74	SLD 3	-5977.33	-15592.05	0.288	2.61	Si
1.02	0.001137	0.053	0.000509	0.052	1532.28	SLD 14	551.48	7255.57	0.189	13.16	-2122.25	SLD 3	-2122.25	-15592.05	0.288	7.35	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	2866	SLU 83	2866	9883	63090	15875	15875	1	5.54	Si
0.51	0.0000113	0.001137	0	8671	SLU 83	8671	9883	63090	15875	15875	1	1.83	Si
0.8	0.0000113	0.001137	0	12113	SLU 83	12113	9883	63090	15875	15875	1	1.31	Si
1.02	0.0000113	0.001137	0	14931	SLU 83	14931	9883	63090	15875	15875	1	1.06	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	3796	SLV 1	3796	9883	63090	15875	15875	1	4.18	Si
0.51	0.0000113	0.001137	0	8391	SLV 1	8391	9883	63090	15875	15875	1	1.89	Si
0.8	0.0000113	0.001137	0	11276	SLV 1	11276	9883	63090	15875	15875	1	1.41	Si
1.02	0.0000113	0.001137	0	13737	SLV 1	13737	9883	63090	15875	15875	1	1.16	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.001137	0	2752	SLD 5	2752	9883	63090	15875	15875	1	5.77	Si
0.51	0.0000113	0.001137	0	6951	SLD 1	6951	9883	63090	15875	15875	1	2.28	Si
0.8	0.0000113	0.001137	0	9514	SLD 1	9514	9883	63090	15875	15875	1	1.67	Si
1.02	0.0000113	0.001137	0	11654	SLD 1	11654	9883	63090	15875	15875	1	1.36	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-6951.6	20	-6951.6	541366	1494000	17308183	36000000	-6360.77	2	-6360.77	495354	1120500			Si
0.51	-4781.59	20	-5791.13	450992	1494000	14418827	36000000	-4368.08	2	-5294.33	412304	1120500			Si
0.8	-2580.64	21	-4040.03	206813	1494000	2928187	36000000	-2349.23	2	-3688	188792	1120500			Si
1.02	-347.27	19	-347.27	17777	1494000	251697	36000000	-294.99	2	-294.99	15101	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	superiore	0.299	0.0005	0.000151	20	0.299	0.00048	0.000143	6	0.299	0.00046	0.000138	2	Si
0.14	superiore	0.299	0.0005	0.000151	20	0.299	0.00048	0.000143	6	0.299	0.00046	0.000138	2	Si
0.51	superiore	0.299	0.00042	0.000126	20	0.299	0.00039	0.000118	6	0.299	0.00038	0.000115	2	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 61 - 61, sezione R 50x45, asta 385

Campata 3 tra i fili 61 - 52, sezione R 50x45, aste 384, 383, 382, 381, 380, 379

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1947	SLU 84	0.03	5726	5990	SLU 84	15877	Si
1.29	0.41	0.0004	1933	SLU 84	0.03	5726	5947	SLU 84	15877	Si
2.58	0.41	0.0006	1957	SLU 84	0.048	8946	6021	SLU 84	20158	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1419	SLD 4	0.101	6396	4366	SLD 4	15877	Si
1.29	0.41	0.0004	1387	SLD 4	0.101	6396	4268	SLD 4	15877	Si
2.58	0.41	0.0006	1436	SLD 4	0.126	9959	4418	SLD 4	23182	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000036	1430	SLE RA 21	40382	1494000	500731	36000000	1296	SLE QP 2	36598	1120500	Si
1.29	0.41	0.0000036	1419	SLE RA 21	40082	1494000	497013	36000000	1286	SLE QP 2	36315	1120500	Si
2.58	0.41	0.00000567	1437	SLE RA 21	39520	1494000	490051	36000000	1303	SLE QP 2	35833	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 52 - 63, sezione R 50x45, asta 378

Campata 5 tra i fili 63 - 60, sezione R 50x45, aste 377, 376, 375

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	2286	SLU 84	0.048	8946	7035	SLU 84	20158	Si
0.23	0.41	0.0006	2308	SLV 4	0.153	8563	7339	SLU 84	20158	Si
0.35	0.41	0.0006	2412	SLV 4	0.153	8563	7513	SLU 84	20158	Si
0.48	0.41	0.0006	2521	SLV 4	0.153	8563	7758	SLV 4	20158	Si
0.7	0.41	0.0006	2735	SLV 3	0.153	8563	8414	SLV 3	20158	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1789	SLD 4	0.126	9959	5505	SLD 4	23182	Si
0.23	0.41	0.0006	1899	SLD 4	0.126	9959	5845	SLD 4	23182	Si
0.35	0.41	0.0006	1966	SLD 4	0.126	9959	6048	SLD 4	23182	Si
0.48	0.41	0.0006	2035	SLD 4	0.126	9959	6263	SLD 4	23182	Si
0.7	0.41	0.0006	2171	SLD 3	0.126	9959	6681	SLD 3	23182	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000567	1680	SLE RA 21	46210	1494000	572999	36000000	1527	SLE QP 2	41991	1120500	Si
0.23	0.41	0.00000567	1753	SLE RA 21	48211	1494000	597811	36000000	1594	SLE QP 2	43826	1120500	Si
0.35	0.41	0.00000567	1795	SLE RA 21	49356	1494000	612015	36000000	1632	SLE QP 2	44875	1120500	Si
0.48	0.41	0.00000567	1838	SLE RA 21	50554	1494000	626867	36000000	1672	SLE QP 2	45971	1120500	Si
0.7	0.41	0.00000567	1924	SLE RA 21	52914	1494000	656132	36000000	1750	SLE QP 2	48128	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
5.51	1.1	SLU 44	ST	LT	690	-851	-57371	1	-1	19	0	0	1.1	17451	1096	15.92	Si
5.51	1.1	SLV 14	SIS	LT	-1424	-8978	-38826	-2	-13	19	0	0	1.1	11810	9090	1.3	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
385,384,383,382,381,380,379,378,377,376,375	5.51	1.1	SLU 84	ST	BT	2.3	250527	70360	3.56	Si
385,384,383,382,381,380,379,378,377,376,375	5.51	1.1	SLV 4	SIS	BT	2.3	212194	58604	3.62	Si
385,384,383,382,381,380,379,378,377,376,375	5.51	1.1	SLD 4	SIS	BT	2.3	234585	52749	4.45	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-987	-70360	213.97	5830.12	0	-1	0.08	0	1.09	5.34	1496	2060	0	14430	
0	7046	-58604	-3359.01	10456.84	0	7	0.18	-0.06	0.99	5.15	1496	2060	0	14430	0.07
0	2617	-52749	-1351.88	6757.05	0	3	0.13	-0.03	1.05	5.25	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

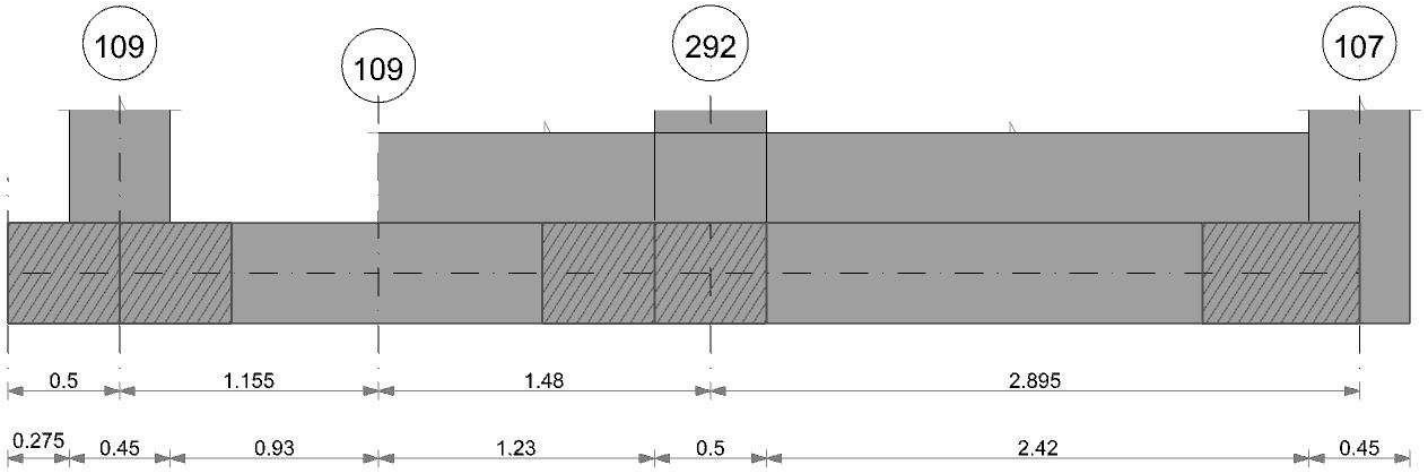
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	679	SLE RA 21	0.05	0.001	679	1022	SLE RA 21	0.05	0	742	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	679	SLE RA 1	0.05	0	679	679	SLE RA 1	0.05	0	742	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	679	SLE RA 1	0.05	0	679	679	SLE RA 1	0.05	0	742	SLE RA 1	0.0033	0	SLE RA 1	Si

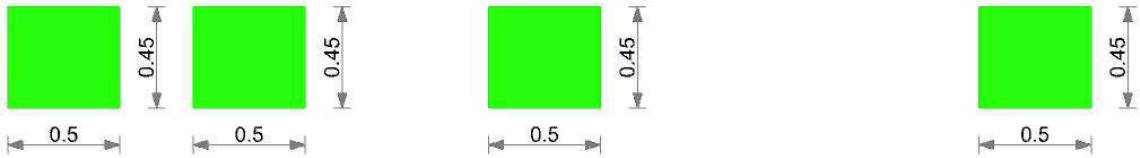
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	742	877	SLE RA 20	0.19	0.01	742	SLE RA 21	0.1	0.01	877	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	679	742	SLE RA 1	0.19	0	679	SLE RA 1	0.1	0	742	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	679	742	SLE RA 1	0.19	0	679	SLE RA 1	0.1	0	742	SLE RA 1	Si

CORDOLO 25

Geometria





Caratteristiche dei materiali

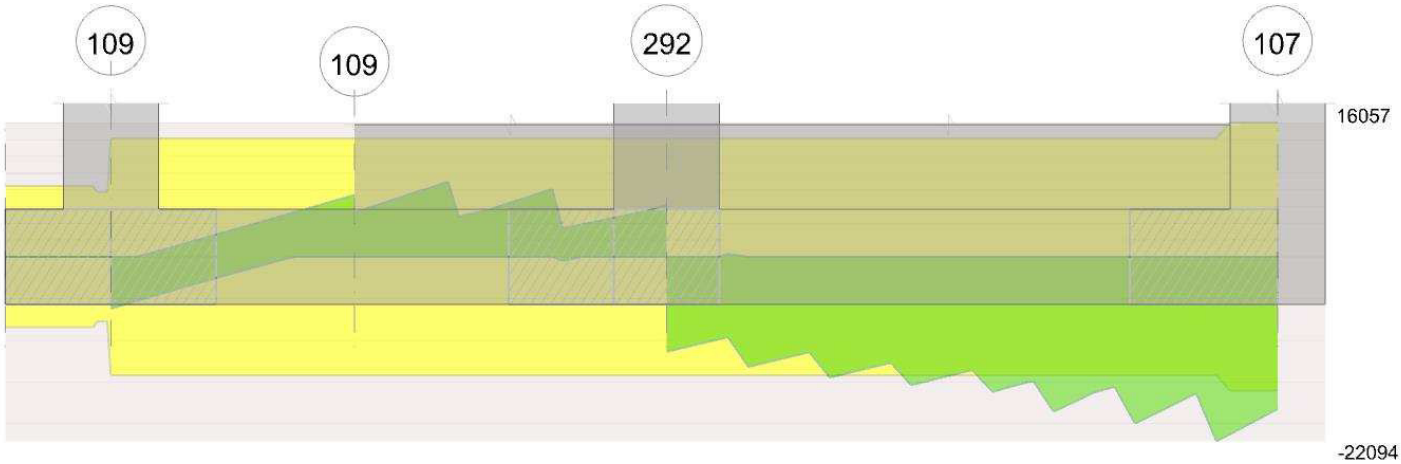
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 109 - 109, sezione R 50x45, asta 397

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	927.84	SLU 70	384	7755.45	0.113	20.2							Si
0.23	0.000509	0.052	0.000509	0.052	100.74	SLU 51	100.74	7755.45	0.113	76.98	-63.23	SLU 39	-339.95	-7755.45	0.113	22.81	Si
0.58	0.000509	0.052	0.000509	0.052	-185.53	SLU 9	70.9	7755.45	0.113	109.39	-305.5	SLU 81	-364.79	-7755.45	0.113	21.26	Si
1	0.000509	0.052	0.000509	0.052	1106.8	SLU 83	2079.66	7755.45	0.113	3.73							Si
1.16	0.000509	0.052	0.000509	0.052	2079.66	SLU 83	2079.66	7755.45	0.113	3.73							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	2898.71	SLV 16	2211.99	7266.79	0.197	3.29	-1613.02	SLV 1	-1613.02	-7266.79	0.197	4.51	Si
0.23	0.000509	0.052	0.000509	0.052	1702.65	SLV 16	1702.65	7266.79	0.197	4.27	-1652.79	SLV 1	-1652.79	-7266.79	0.197	4.4	Si
0.58	0.000509	0.052	0.000509	0.052	607.11	SLV 16	1045.48	7266.79	0.197	6.95	-1020.74	SLV 1	-1444.5	-7266.79	0.197	5.03	Si
1	0.000509	0.052	0.000509	0.052	1387.68	SLV 5	2338.48	7266.79	0.197	3.11	-27.36	SLV 12	-348.94	-7266.79	0.197	20.83	Si
1.16	0.000509	0.052	0.000509	0.052	2338.48	SLV 5	2338.48	7266.79	0.197	3.11	283.83	SLV 12	-27.36	-7266.79	0.197	265.63	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	1594.63	SLD 16	1073.59	7266.79	0.197	6.77	-308.94	SLD 1	-308.94	-7266.79	0.197	23.52	Si
0.23	0.000509	0.052	0.000509	0.052	734.18	SLD 16	734.18	7266.79	0.197	9.9	-684.32	SLD 1	-737.52	-7266.79	0.197	9.85	Si
0.58	0.000509	0.052	0.000509	0.052	139.56	SLD 16	328.13	7266.79	0.197	22.15	-553.2	SLD 1	-727.15	-7266.79	0.197	9.99	Si
1	0.000509	0.052	0.000509	0.052	985.67	SLD 5	1753.89	7266.79	0.197	4.14	374.65	SLD 12	-61.99	-7266.79	0.197	117.22	Si
1.16	0.000509	0.052	0.000509	0.052	1753.89	SLD 5	1753.89	7266.79	0.197	4.14							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-5136	SLU 84	-5136	-7764	-63178	-14201	-14201	1	2.77	Si
0.23	0.0000101	0.000509	0	-2717	SLU 78	-2717	-7764	-63178	-14201	-14201	1	5.23	Si
0.58	0.0000101	0.000509	0	1120	SLU 81	1120	7764	63178	14201	14201	1	12.68	Si
1.16	0.0000101	0.000509	0	7103	SLU 83	7103	7764	63178	14201	14201	1	2	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-6218	SLV 16	-6218	-7764	-63178	-14201	-14201	1	2.28	Si
0.23	0.0000101	0.000509	0	673	SLV 1	673	7764	63178	14201	14201	1	21.09	Si
0.23	0.0000101	0.000509	0	-4527	SLV 16	-4527	-7764	-63178	-14201	-14201	1	3.14	Si
0.58	0.0000101	0.000509	0	3199	SLV 1	3199	7764	63178	14201	14201	1	4.44	Si
0.58	0.0000101	0.000509	0	-1988	SLV 16	-1988	-7764	-63178	-14201	-14201	1	7.14	Si
1.16	0.0000101	0.000509	0	7384	SLV 1	7384	7764	63178	14201	14201	1	1.92	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000101	0.000509	0	-4684	SLD 16	-4684	-7764	-63178	-14201	-14201	1	3.03	Si
0.23	0.0000101	0.000509	0	-3017	SLD 16	-3017	-7764	-63178	-14201	-14201	1	4.71	Si
0.58	0.0000101	0.000509	0	1692	SLD 1	1692	7764	63178	14201	14201	1	8.39	Si
0.58	0.0000101	0.000509	0	-481	SLD 16	-481	-7764	-63178	-14201	-14201	1	29.54	Si
1.16	0.0000101	0.000509	0	5781	SLD 1	5781	7764	63178	14201	14201	1	2.46	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	696.21	7	289.57	15317	1494000	229748	36000000	651.65	1	259.22	13711	1120500			Si
0.23	65.68	9	65.68	3474	1494000	52109	36000000	44.21	1	44.21	2338	1120500			Si
0.23	-20.04	18	-244.94	12956	1494000	194336	36000000								Si
0.58	-225.37	18	-265.21	14028	1494000	210414	36000000	-206.82	2	-232.38	12292	1120500			Si
1.16	1513.2	20	1513.2	80038	1494000	1200572	36000000	1311.15	2	1311.15	69351	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 109 - 109, sezione R 50x45, asta 397

Campata 3 tra i fili 109 - 292, sezione R 50x45, aste 396, 395, 394

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1785	SLU 83	0.043	8008	5490	SLU 83	18005	Si
0.74	0.41	0.0005	1716	SLU 83	0.043	8008	5278	SLU 83	18005	Si
1.23	0.41	0.0005	1697	SLU 83	0.043	8008	5222	SLU 83	18005	Si
1.48	0.41	0.0005	1700	SLU 83	0.043	8008	5229	SLU 83	18005	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1221	SLD 1	0.119	8922	3757	SLD 1	20706	Si
0.74	0.41	0.0005	1204	SLD 1	0.119	8922	3704	SLD 1	20706	Si
1.23	0.41	0.0005	1205	SLD 1	0.119	8922	3706	SLD 1	20706	Si
1.48	0.41	0.0005	1210	SLD 1	0.119	8922	3724	SLD 1	20706	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1309	SLE RA 20	36269	1494000	449741	36000000	1179	SLE QP 2	32676	1120500	Si
0.74	0.41	0.00000507	1257	SLE RA 20	34842	1494000	432042	36000000	1132	SLE QP 2	31364	1120500	Si
1.23	0.41	0.00000507	1244	SLE RA 20	34463	1494000	427338	36000000	1119	SLE QP 2	31019	1120500	Si
1.48	0.41	0.00000507	1245	SLE RA 20	34512	1494000	427946	36000000	1121	SLE QP 2	31065	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 292 - 107, sezione R 50x45, aste 393, 392, 391, 390, 389, 388, 387, 386

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1700	SLU 83	0.043	8008	5229	SLU 83	18005	Si
0.25	0.41	0.0005	1713	SLU 83	0.043	8008	5268	SLU 83	18005	Si
1.45	0.41	0.0005	1871	SLU 84	0.043	8008	5755	SLU 84	18005	Si
2.67	0.41	0.0005	2154	SLU 84	0.043	8008	6628	SLU 84	18005	Si
2.9	0.41	0.0005	2248	SLU 84	0.043	8008	6917	SLU 84	18005	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	1210	SLD 1	0.119	8922	3724	SLD 1	20706	Si
0.25	0.41	0.0005	1223	SLD 3	0.119	8922	3764	SLD 3	20706	Si
1.45	0.41	0.0005	1359	SLD 3	0.119	8922	4180	SLD 3	20706	Si
2.67	0.41	0.0005	1597	SLD 3	0.119	8922	4912	SLD 3	20706	Si
2.9	0.41	0.0005	1672	SLD 3	0.119	8922	5143	SLD 3	20706	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000507	1245	SLE RA 20	34512	1494000	427946	36000000	1121	SLE QP 2	31065	1120500	Si
0.25	0.41	0.00000507	1255	SLE RA 20	34768	1494000	431128	36000000	1130	SLE QP 2	31302	1120500	Si
1.45	0.41	0.00000507	1371	SLE RA 21	37999	1494000	471189	36000000	1237	SLE QP 2	34278	1120500	Si
2.67	0.41	0.00000507	1581	SLE RA 21	43801	1494000	543126	36000000	1430	SLE QP 2	39621	1120500	Si
2.9	0.41	0.00000507	1650	SLE RA 21	45719	1494000	566921	36000000	1493	SLE QP 2	41380	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
5.76	1.1	SLU 35	ST	LT	-734	29	-55593	-1	0	19	0	0	1.1	16910	735	23.02	Si
5.76	1.1	SLV 16	SIS	LT	1649	-9198	-41552	2	-12	19	0	0	1.1	12639	9344	1.35	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
397,396,395,394,393,392,391,390,389,388,387,386	5.76	1.1	SLU 84	ST	BT	2.3	264260	68376	3.86	Si
397,396,395,394,393,392,391,390,389,388,387,386	5.76	1.1	SLV 3	SIS	LT	2.3	198815	52659	3.78	Si
397,396,395,394,393,392,391,390,389,388,387,386	5.76	1.1	SLD 3	SIS	BT	2.3	239348	49325	4.85	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	26	-68376	-435.29	3248.46	0	0	0.05	-0.01	1.09	5.66	1496	2060	0	14430	
0	9164	-52659	-4445.95	8009.45	0	10	0.15	-0.08	0.93	5.45	1496	2060	37	0	0.07
0	3928	-49325	-2066.58	4695.31	0	5	0.1	-0.04	1.02	5.56	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Nγ	Sq	Sc	Sγ	Dq	Dc	Dγ	Iq	Ic	Iγ	Bq	Bc	Bγ	Gq	Gc	Gγ	Pq	Pc	Pγ	Eq	Ec	Eγ
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.13	1.13	0.93	1.16	1.27	1	0.7	0.69	0.58	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

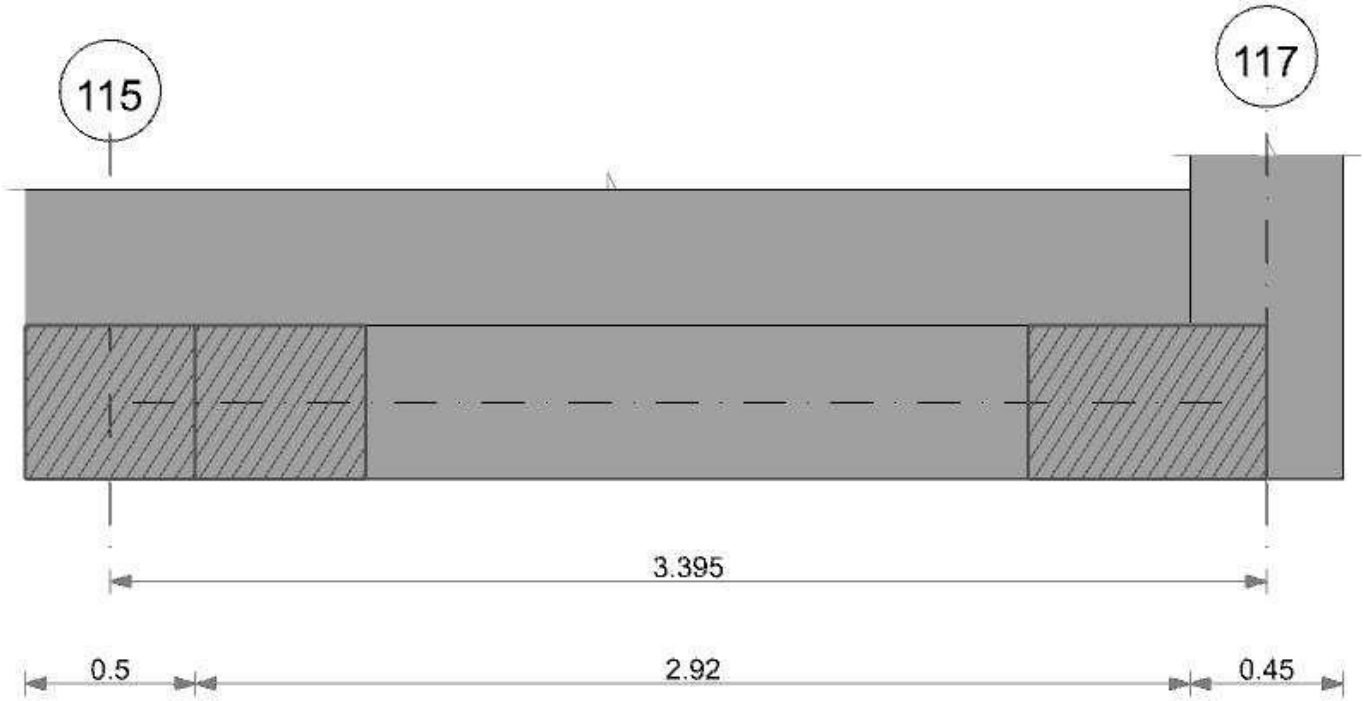
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	615	SLE RA 20	0.05	0.001	615	1034	SLE RA 20	0.05	0	790	SLE RA 21	0.0033	0	SLE FR 5	Si
D	0.05	0	615	SLE RA 1	0.05	0	615	615	SLE RA 1	0.05	0	730	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	615	SLE RA 1	0.05	0	615	615	SLE RA 1	0.05	0	730	SLE RA 1	0.0033	0	SLE RA 1	Si

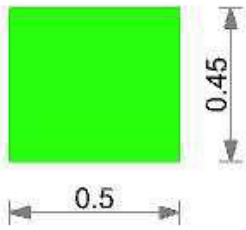
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.02	790	1034	SLE RA 20	0.19	0	790	SLE RA 21	0.1	0	730	SLE FR 5	Si
D	0.19	0	SLE RA 1	0.19	0	615	730	SLE RA 1	0.19	0	615	SLE RA 1	0.1	0	730	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	615	730	SLE RA 1	0.19	0	615	SLE RA 1	0.1	0	730	SLE RA 1	Si

CORDOLO 26

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 115 - 117, sezione R 50x45, aste 405, 404, 403, 402, 401, 400, 399, 398

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.42	0	1165	SLE RA 20	34525	1494000	0	36000000	1049	SLE QP 2	31067	1120500	Si
0.25	0.42	0	1176	SLE RA 20	34847	1494000	0	36000000	1058	SLE QP 2	31362	1120500	Si
1.7	0.42	0	1313	SLE RA 21	38897	1494000	0	36000000	1184	SLE QP 2	35082	1120500	Si
3.17	0.42	0	1548	SLE RA 21	45873	1494000	0	36000000	1400	SLE QP 2	41495	1120500	Si
3.39	0.42	0	1609	SLE RA 21	47662	1494000	0	36000000	1456	SLE QP 2	43135	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.87	1.1	SLU 35	ST	LT	-543	-41	-31662	-1	0	19	0	0	1.1	9631	544	17.69	Si
3.87	1.1	SLV 14	SIS	LT	-767	-5485	-22118	-2	-14	19	0	0	1.1	6728	5539	1.21	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
405,404,403,402,401,400,399,398	3.87	1.1	SLU 84	ST	BT	2.3	178209	38980	4.57	Si
405,404,403,402,401,400,399,398	3.87	1.1	SLV 3	SIS	LT	2.3	140764	31430	4.48	Si
405,404,403,402,401,400,399,398	3.87	1.1	SLD 3	SIS	BT	2.3	163243	28765	5.68	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-59	-38980	-223.96	2179.27	0	0	0.06	-0.01	1.09	3.76	1496	2060	0	14430	
0	5414	-31430	-2636.16	2405.93	0	10	0.08	-0.08	0.93	3.72	1496	2060	37	0	0.07

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	2295	-28765	-1213.41	1885.74	0	5	0.07	-0.04	1.02	3.74	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.06	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.19	1.19	0.9	1.16	1.27	1	0.71	0.7	0.59	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

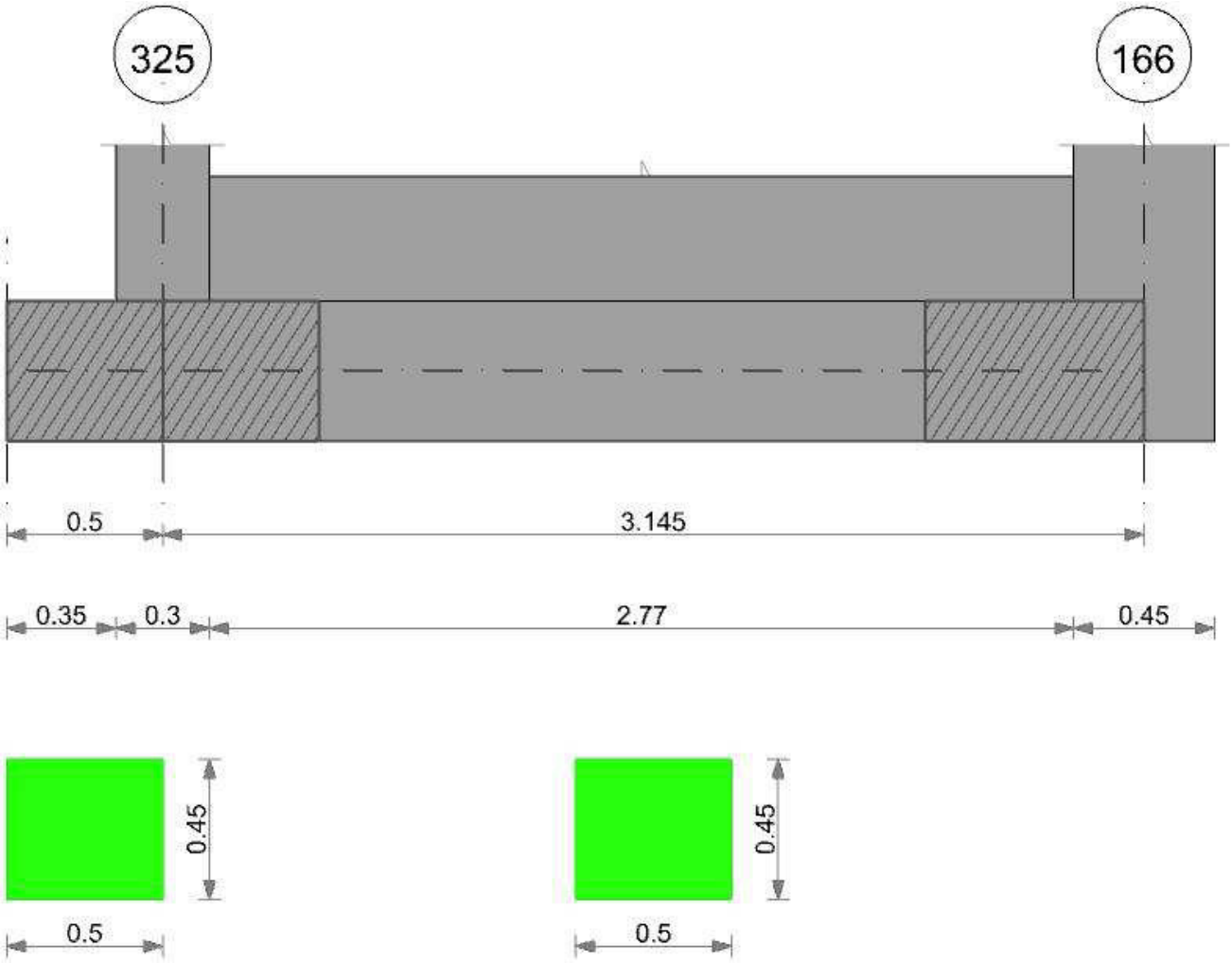
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	793	SLE RA 21	0.05	0.001	793	1036	SLE RA 20	0.05	0	793	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	793	SLE RA 1	0.05	0	793	793	SLE RA 1	0.05	0	793	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	793	SLE RA 1	0.05	0	793	793	SLE RA 1	0.05	0	793	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.02	793	1036	SLE RA 20	0.19	0	793	SLE RA 1	0.1	0	793	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	793	1036	SLE RA 1	0.19	0	793	SLE RA 1	0.1	0	793	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	793	1036	SLE RA 1	0.19	0	793	SLE RA 1	0.1	0	793	SLE RA 1	Si

CORDOLO 27

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

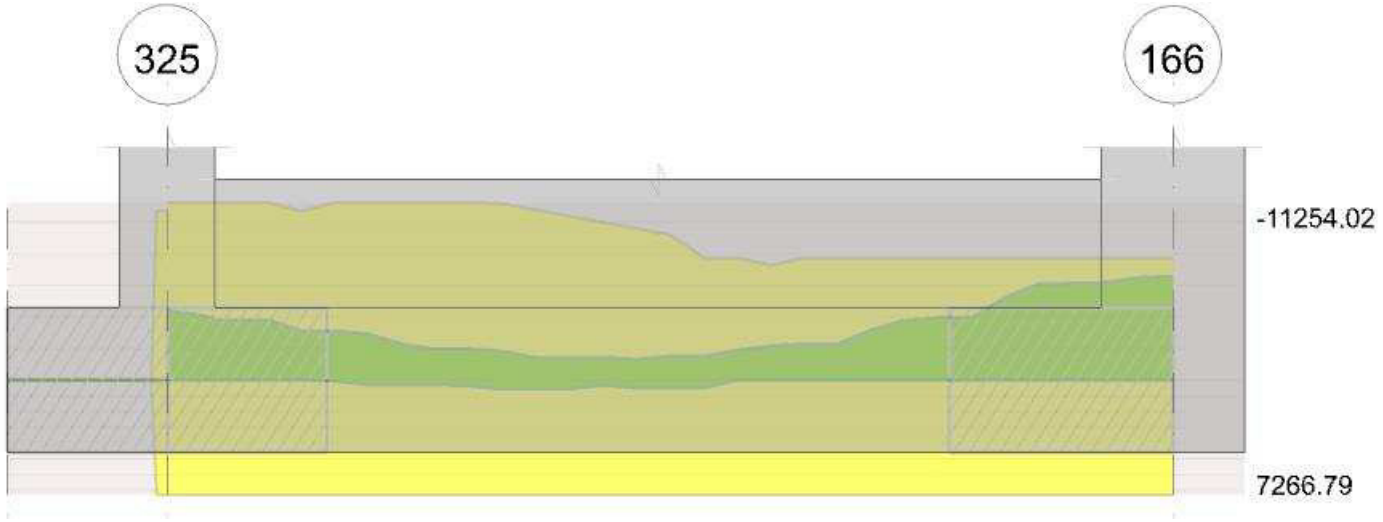
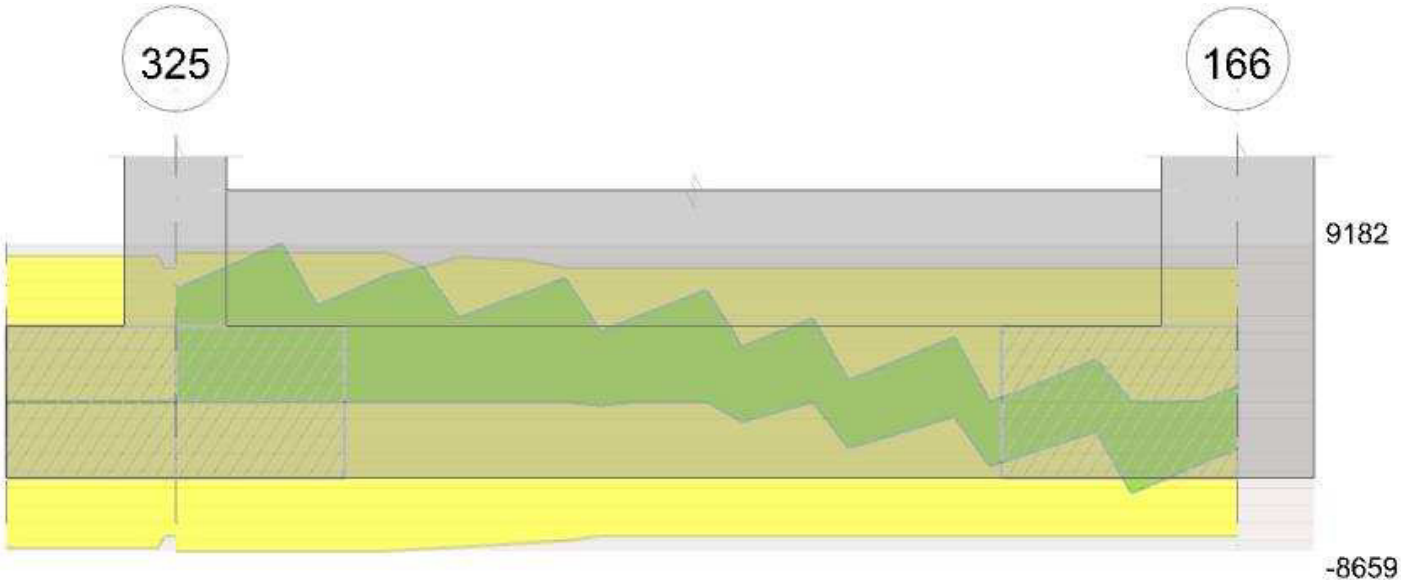


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 325 - 166, sezione R 50x45, aste 425, 424, 423, 422, 421, 420, 419, 418

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.42	0	1072	SLE RA 20	31748	1494000	0	36000000	964	SLE QP 2	28558	1120500	Si
0.15	0.42	0	1078	SLE RA 20	31937	1494000	0	36000000	970	SLE QP 2	28732	1120500	Si
1.57	0.42	0	1234	SLE RA 21	36551	1494000	0	36000000	1113	SLE QP 2	32973	1120500	Si
2.92	0.42	0	1498	SLE RA 21	44396	1494000	0	36000000	1356	SLE QP 2	40180	1120500	Si
3.14	0.42	0	1569	SLE RA 21	46485	1494000	0	36000000	1421	SLE QP 2	42094	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.37	1.1	SLU 35	ST	LT	-927	197	-29874	-2	0	19	0	0	1.1	9087	947	9.59	Si
3.37	1.1	SLV 1	SIS	LT	-1481	5711	-20757	-4	15	19	0	0	1.1	6314	5900	1.07	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
425,424,423,422,421,420,419,418	3.37	1.1	SLU 84	ST	BT	2.3	156413	36765	4.25	Si
425,424,423,422,421,420,419,418	3.37	1.1	SLV 3	SIS	LT	2.3	82537	21470	3.84	Si
425,424,423,422,421,420,419,418	3.37	1.1	SLD 16	SIS	BT	2.3	142200	27185	5.23	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	ys	Fi	Coes	Amax
0	232	-36765	-8.82	2303.46	0	0	0.06	0	1.1	3.24	1496	2060	0	14430	
0	5755	-21470	-2693.03	2087.01	0	15	0.1	-0.13	0.85	3.18	1496	2060	37	0	0.07
0	-2206	-27185	1124.76	1845.49	0	-5	0.07	0.04	1.02	3.23	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.2	1.21	0.89	1.16	1.27	1	0.57	0.56	0.42	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.06	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

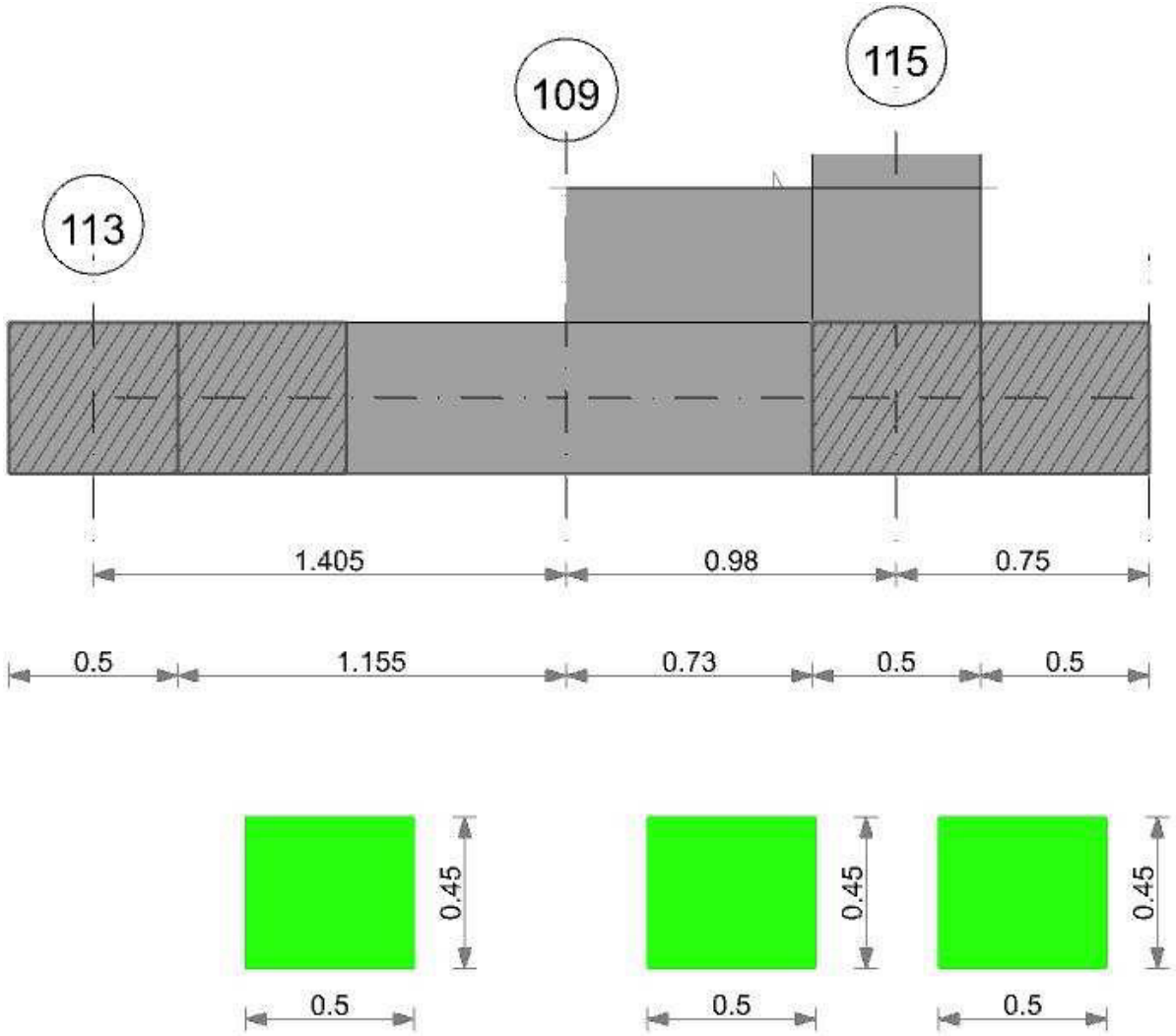
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	805	SLE RA 21	0.05	0.001	805	1049	SLE RA 20	0.05	0	805	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	805	SLE RA 1	0.05	0	805	805	SLE RA 1	0.05	0	805	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	805	SLE RA 1	0.05	0	805	805	SLE RA 1	0.05	0	805	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	805	1049	SLE RA 20	0.19	0	805	SLE RA 1	0.1	0	805	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	805	1049	SLE RA 1	0.19	0	805	SLE RA 1	0.1	0	805	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	805	1049	SLE RA 1	0.19	0	805	SLE RA 1	0.1	0	805	SLE RA 1	Si

CORDOLO 28

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

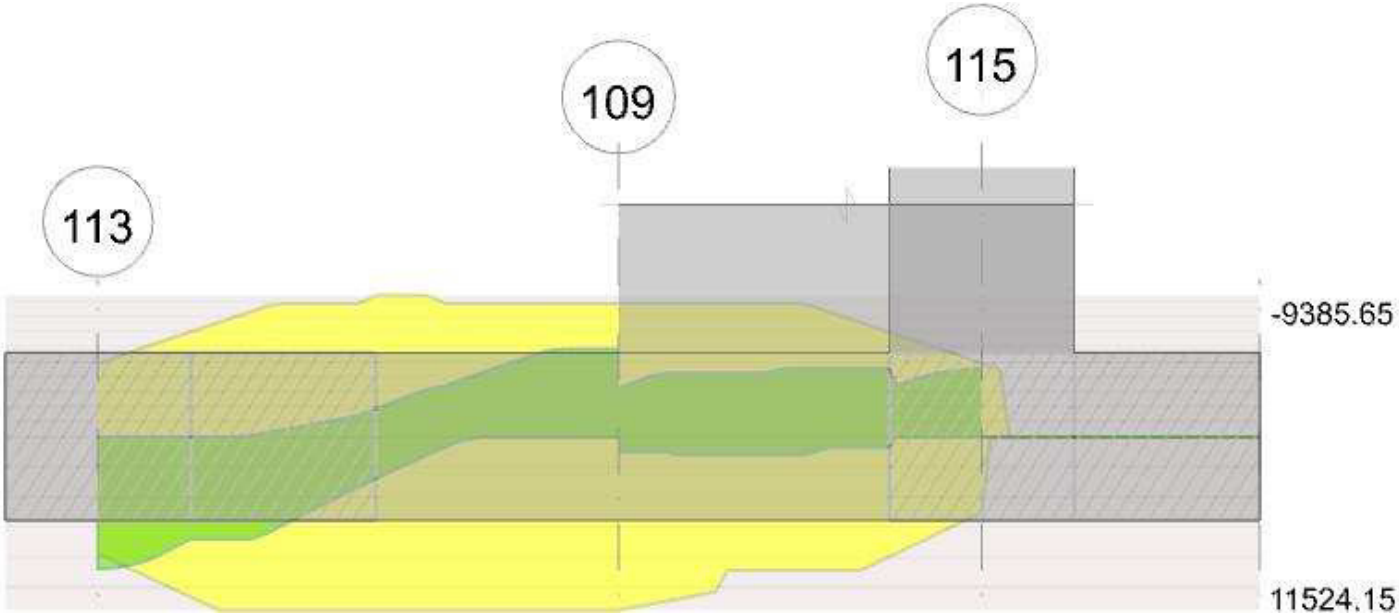
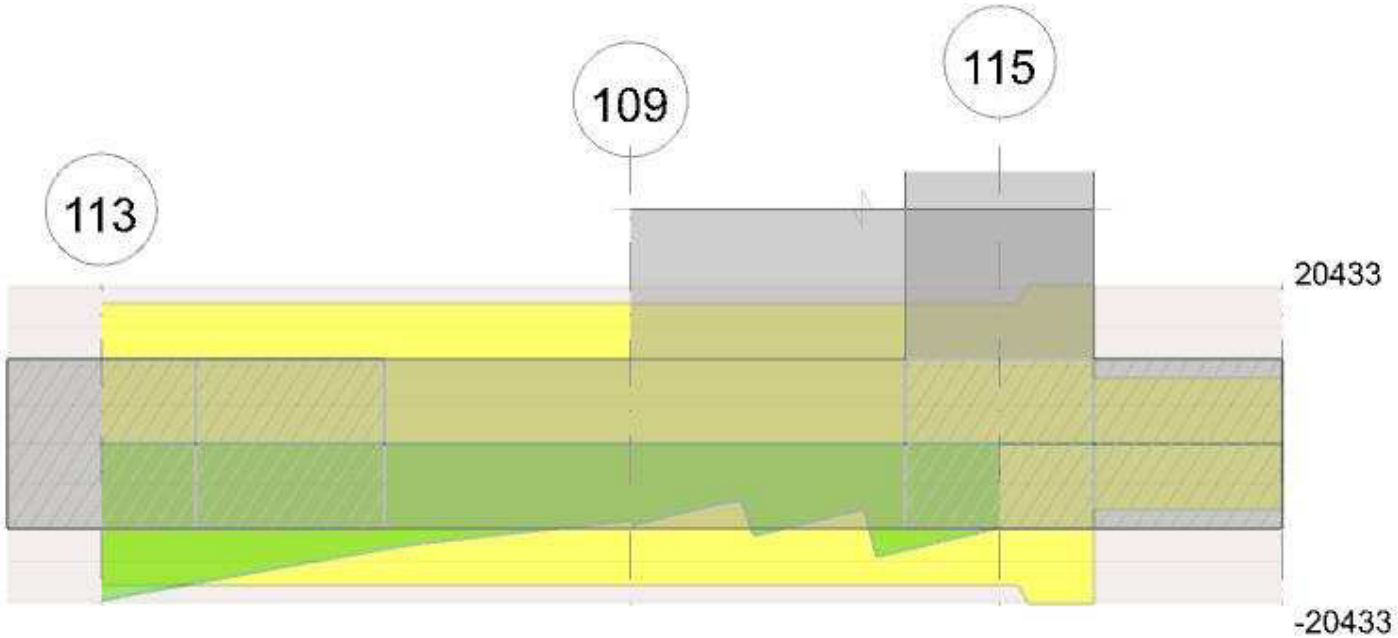


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 113 - 109, sezione R 50x45, asta 828

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.25	0.00049	0.053	0.000764	0.052	6419.56	SLU 84	6419.56	11255.56	0.133	1.75							Si
0.7	0.000628	0.053	0.000829	0.053	551.14	SLU 84	2705.74	12141.39	0.138	4.49	324.82	SLU 1	-1376.56	-9385.65	0.125	6.82	Si
1.4	0.000628	0.053	0.000829	0.053							-5750.75	SLU 84	-5750.75	-9385.65	0.125	1.63	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.25	0.00049	0.053	0.000764	0.052	6770.55	SLV 16	6770.55	10660.91	0.239	1.57							Si
0.7	0.000628	0.053	0.000829	0.053	1270.49	SLV 16	3333.26	11524.15	0.245	3.46	-561.02	SLV 1	-1398.59	-8869.16	0.213	6.34	Si
1.4	0.000628	0.053	0.000829	0.053							-5818.92	SLV 12	-5818.92	-8869.16	0.213	1.52	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000339	0.053	0.000549	0.052	8310.73	SLD 16	7054.19	7775.81	0.207	1.1							Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.25	0.00049	0.053	0.000764	0.052	5342.37	SLD 16	5342.37	10660.91	0.239	2							Si
0.7	0.000628	0.053	0.000829	0.053	745.86	SLD 16	2451.74	11524.15	0.245	4.7	-36.39	SLD 1	-1131.27	-8869.16	0.213	7.84	Si
1.4	0.000628	0.053	0.000829	0.053							-4710.4	SLD 12	-4710.4	-8869.16	0.213	1.88	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000764	0	-19969	SLU 84	-19969	-8659	-63135	-18059	-18059	1	0.9	Si
0.25	0.0000129	0.000764	0	-17745	SLU 84	-17745	-8657	-63102	-18050	-18050	1	1.02	Si
0.7	0.0000129	0.000829	0	-13824	SLU 84	-13824	-8896	-63096	-18048	-18048	1	1.31	Si
1.4	0.0000129	0.000628	0	-8063	SLU 84	-8063	-8105	-63019	-18026	-18026	1	2.24	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000764	0	-17694	SLV 16	-17694	-8659	-63135	-18059	-18059	1	1.02	Si
0.25	0.0000129	0.000764	0	-16145	SLV 16	-16145	-8657	-63102	-18050	-18050	1	1.12	Si
0.7	0.0000129	0.000829	0	-13480	SLV 16	-13480	-8896	-63096	-18048	-18048	1	1.34	Si
1.4	0.0000129	0.000628	0	-9772	SLV 16	-9772	-8105	-63019	-18026	-18026	1	1.84	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000764	0	-15212	SLD 16	-15212	-8659	-63135	-18059	-18059	1	1.19	Si
0.25	0.0000129	0.000764	0	-13695	SLD 16	-13695	-8657	-63102	-18050	-18050	1	1.32	Si
0.7	0.0000129	0.000829	0	-11048	SLD 16	-11048	-8896	-63096	-18048	-18048	1	1.63	Si
1.4	0.0000129	0.000628	0	-7250	SLD 16	-7250	-8105	-63019	-18026	-18026	1	2.49	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	7587.56	21	6367.25	670089	1494000	32004104	36000000	6856.99	2	5751.17	605253	1120500			Si
0.25	4731.65	21	4731.65	247744	1494000	3620529	36000000	4270.21	2	4270.21	223584	1120500			Si
0.7	404.21	21	1993.09	101847	1494000	1499109	36000000	354.74	2	1791.61	91552	1120500			Si
1.4	-4243.99	21	-4243.99	212809	1494000	3253033	36000000	-3839.21	2	-3839.21	192512	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 113 - 109, sezione R 50x45, asta 828

Campata 2 tra i fili 109 - 115, sezione R 50x45, aste 827, 826, 825

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1690	SLU 83	0.054	10142	5201	SLU 83	22918	Si
0.49	0.41	0.0006	1614	SLU 83	0.054	10142	4966	SLU 83	22918	Si
0.73	0.41	0.0006	1594	SLU 83	0.054	10142	4906	SLU 83	22918	Si
0.98	0.41	0.0006	1590	SLU 83	0.054	10142	4895	SLU 83	22918	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1158	SLD 1	0.134	11282	3563	SLD 1	26355	Si
0.49	0.41	0.0006	1136	SLD 1	0.134	11282	3497	SLD 1	26355	Si
0.73	0.41	0.0006	1133	SLD 1	0.134	11282	3488	SLD 1	26355	Si
0.98	0.41	0.0006	1138	SLD 1	0.134	11282	3503	SLD 1	26355	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000645	1240	SLE RA 20	33753	1494000	418536	36000000	1116	SLE QP 2	30400	1120500	Si
0.49	0.41	0.00000645	1183	SLE RA 20	32206	1494000	399350	36000000	1064	SLE QP 2	28982	1120500	Si
0.73	0.41	0.00000645	1168	SLE RA 20	31809	1494000	394435	36000000	1051	SLE QP 2	28621	1120500	Si
0.98	0.41	0.00000645	1165	SLE RA 20	31729	1494000	393445	36000000	1049	SLE QP 2	28552	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.63	1.1	SLU 35	ST	LT	-239	70	-22684	-1	0	19	0	0	1.1	6900	249	27.66	Si
2.63	1.1	SLV 16	SIS	LT	695	-3614	-18064	2	-11	19	0	0	1.1	5495	3680	1.49	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
828,827,826,825	2.63	1.1	SLU 83	ST	BT	2.3	123321	27950	4.41	Si
828,827,826,825	2.63	1.1	SLV 1	SIS	LT	2.3	97245	20321	4.79	Si
828,827,826,825	2.63	1.1	SLD 1	SIS	BT	2.3	114395	19671	5.82	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-265	86	-27950	-211.98	-1027.72	-1	0	-0.04	-0.01	1.08	2.56	1496	2060	0	14430	
-1023	3717	-20321	-1805.19	-345.75	-3	10	-0.02	-0.09	0.92	2.6	1496	2060	37	0	0.07
-540	1619	-19671	-851.34	-549.27	-2	5	-0.03	-0.04	1.01	2.58	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.27	1.27	0.86	1.16	1.27	1	0.7	0.69	0.57	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.08	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	617	SLE RA 21	0.05	0	617	793	SLE RA 20	0.05	0	732	SLE RA 16	0.0033	0	SLE RA 1	Si

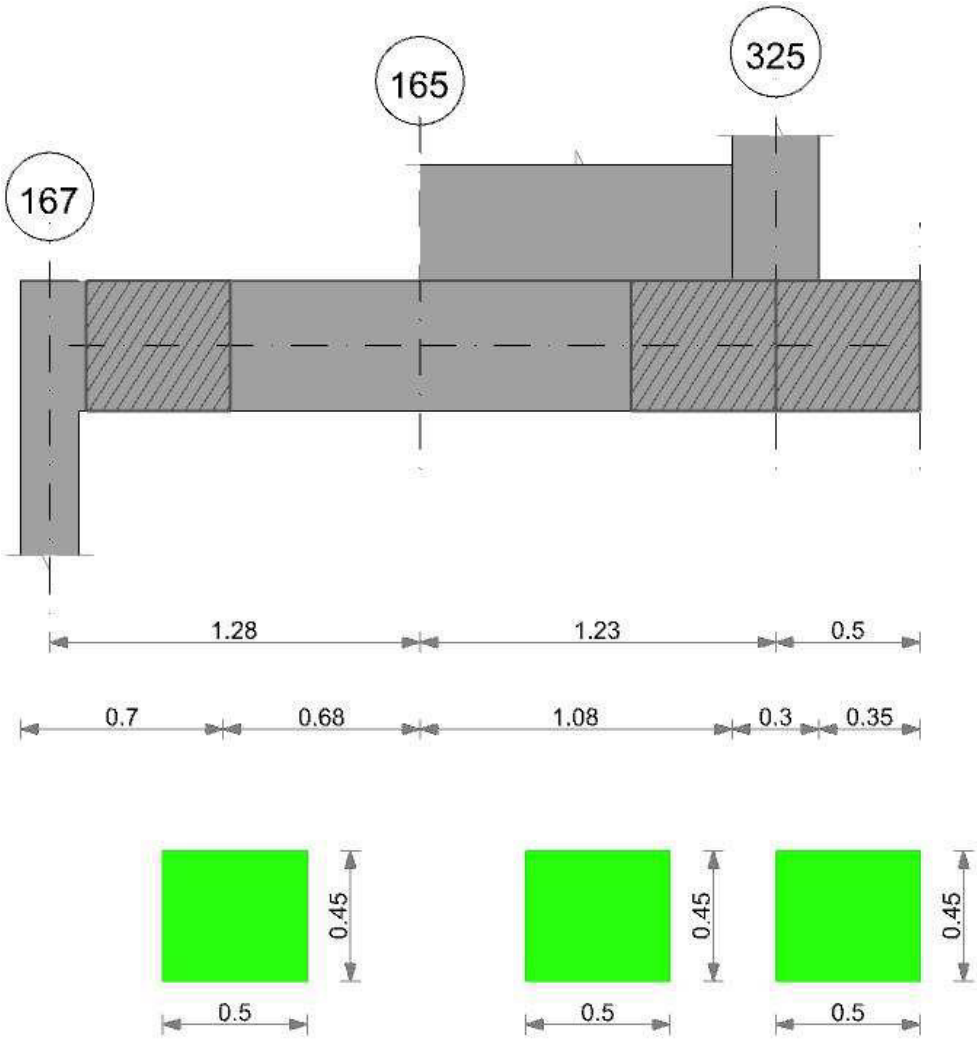
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
D	0.05	0	617	SLE RA 1	0.05	0	617	617	SLE RA 1	0.05	0	732	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	617	SLE RA 1	0.05	0	617	617	SLE RA 1	0.05	0	732	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 20	0.19	0.01	732	793	SLE RA 20	0.19	0.01	732	SLE RA 16	0.1	0	617	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	617	732	SLE RA 1	0.19	0	617	SLE RA 1	0.1	0	732	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	617	732	SLE RA 1	0.19	0	617	SLE RA 1	0.1	0	732	SLE RA 1	Si

CORDOLO 29

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

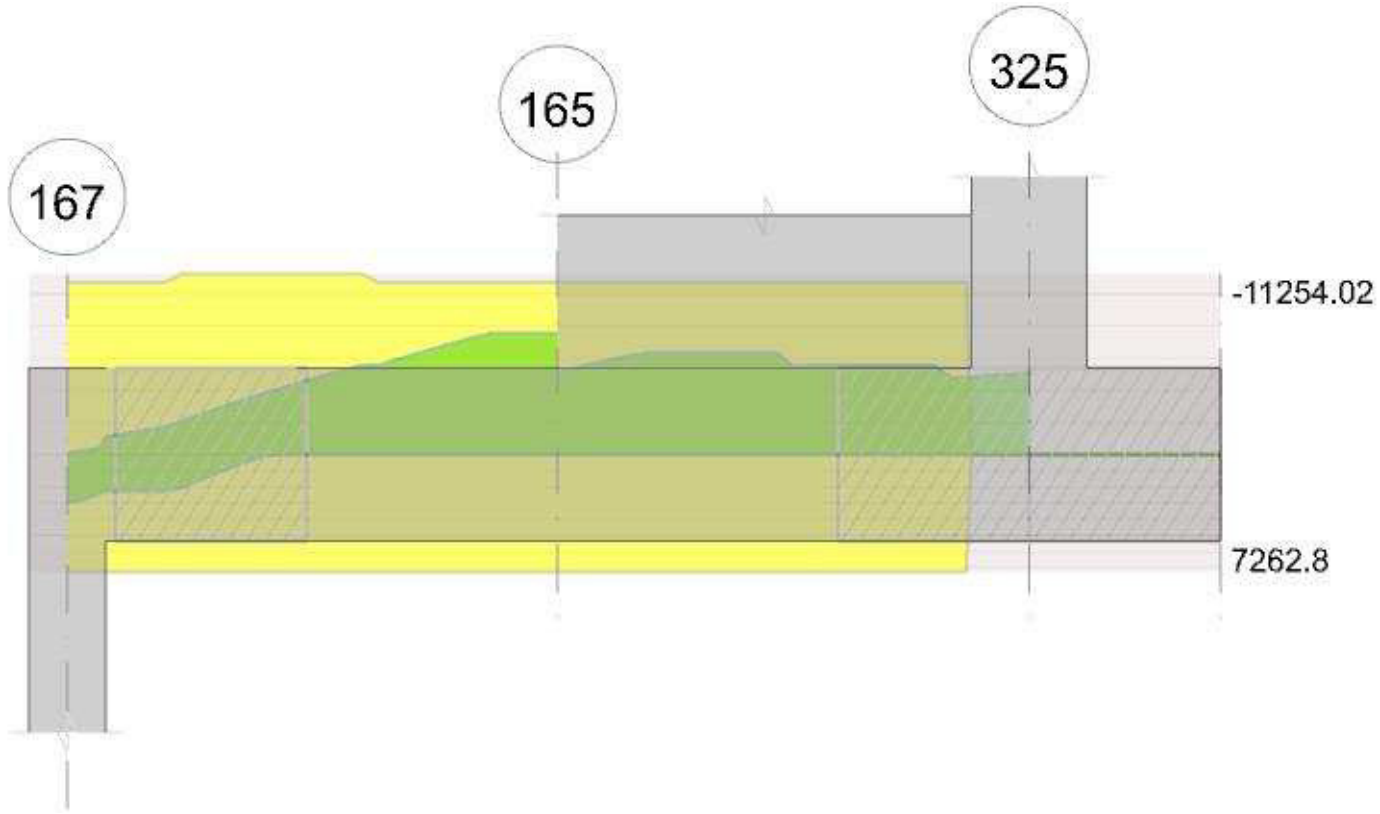
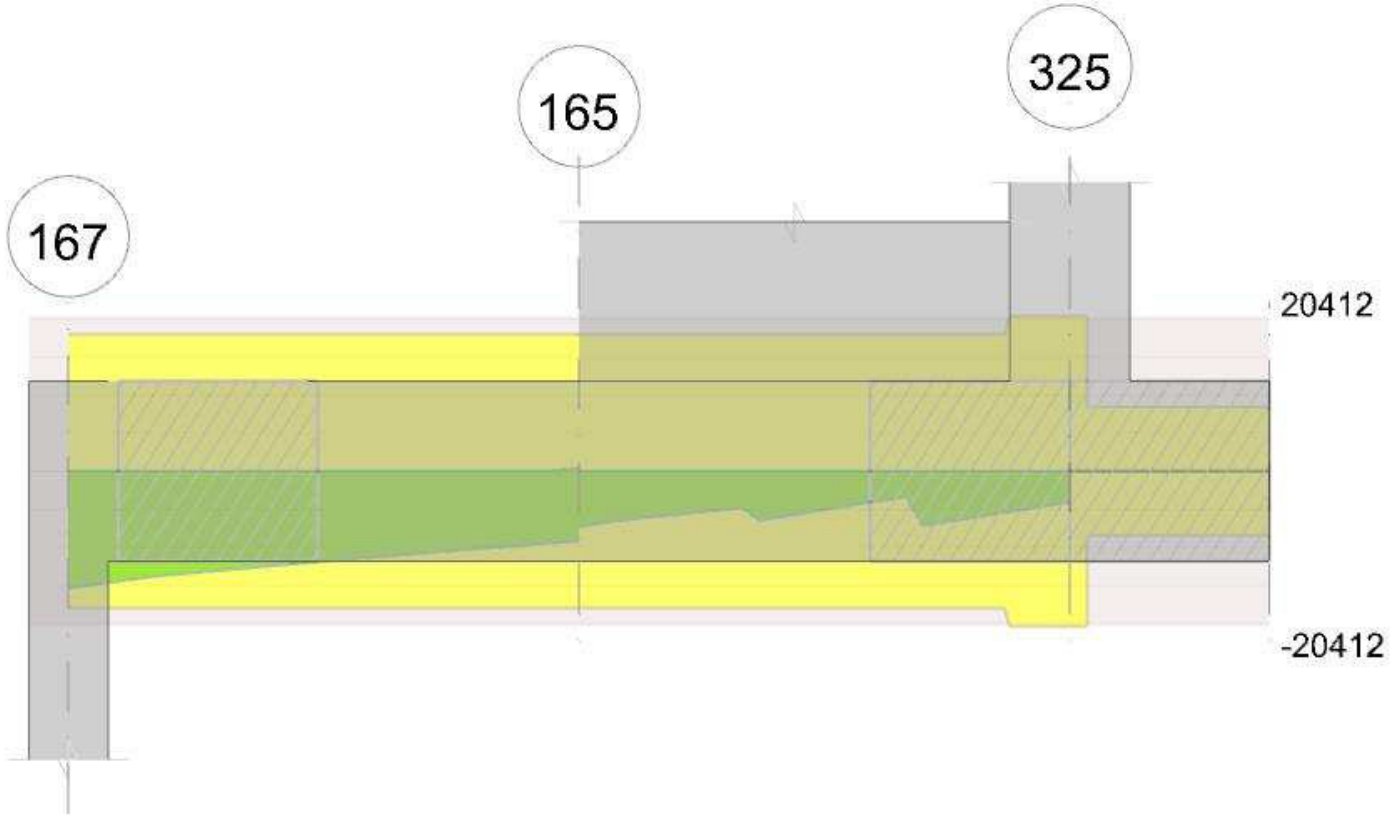


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 832

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	2529.36	SLU 84	2201.43	7767.92	0.117	3.53							Si
0.1	0.000763	0.052	0.000509	0.052	1469.03	SLU 84	1469.03	7767.92	0.117	5.29	790.34	SLU 1	-408.92	-11254.02	0.132	27.52	Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000763	0.052	0.000509	0.052							-3394.27	SLU 84	-4696.78	-11254.02	0.132	2.4	Si
1.15	0.000763	0.052	0.000509	0.052							-6715.27	SLU 84	-7358.5	-11254.02	0.132	1.53	Si
1.28	0.000763	0.052	0.000509	0.052							-7358.5	SLU 84	-7358.5	-11254.02	0.132	1.53	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3259.92	SLV 8	2947.16	7262.8	0.194	2.46	-74.17	SLV 9	-74.17	-10716.86	0.238	144.48	Si
0.1	0.000763	0.052	0.000509	0.052	2229.9	SLV 8	2229.9	7262.8	0.194	3.26	-455.89	SLV 9	-1106.9	-10716.86	0.238	9.68	Si
0.64	0.000763	0.052	0.000509	0.052							-2873.45	SLV 11	-4256.85	-10716.86	0.238	2.52	Si
1.11	0.000763	0.052	0.000509	0.052							-6391.92	SLV 7	-7537.34	-10716.86	0.238	1.42	Si
1.28	0.000763	0.052	0.000509	0.052							-7537.34	SLV 7	-7537.34	-10716.86	0.238	1.42	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	2326.62	SLD 8	2066.58	7262.8	0.194	3.51							Si
0.1	0.000763	0.052	0.000509	0.052	1477.87	SLD 8	1477.87	7262.8	0.194	4.91	296.15	SLD 9	-644.89	-10716.86	0.238	16.62	Si
0.64	0.000763	0.052	0.000509	0.052							-2577.14	SLD 11	-3669.94	-10716.86	0.238	2.92	Si
1.11	0.000763	0.052	0.000509	0.052							-5271.6	SLD 7	-6098.17	-10716.86	0.238	1.76	Si
1.28	0.000763	0.052	0.000509	0.052							-6098.17	SLD 7	-6098.17	-10716.86	0.238	1.76	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-15377	SLU 84	-15377	-7764	-63178	-18053	-18053	1	1.17	Si
0.1	0.0000129	0.000509	0	-14648	SLU 84	-14648	-7764	-63178	-18053	-18053	1	1.23	Si
0.64	0.0000129	0.000763	0	-10868	SLU 84	-10868	-8659	-63178	-18053	-18053	1	1.66	Si
1.28	0.0000129	0.000763	0	-6703	SLU 84	-6703	-8659	-63178	-18053	-18053	1	2.69	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-14906	SLV 7	-14906	-7764	-63178	-18053	-18053	1	1.21	Si
0.1	0.0000129	0.000509	0	-14403	SLV 7	-14403	-7764	-63178	-18053	-18053	1	1.25	Si
0.64	0.0000129	0.000763	0	-11851	SLV 7	-11851	-8659	-63178	-18053	-18053	1	1.52	Si
1.28	0.0000129	0.000763	0	343	SLV 10	343	8659	63178	18053	18053	1	52.61	Si
1.28	0.0000129	0.000763	0	-9159	SLV 7	-9159	-8659	-63178	-18053	-18053	1	1.97	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000129	0.000509	0	-12296	SLD 7	-12296	-7764	-63178	-18053	-18053	1	1.47	Si
0.1	0.0000129	0.000509	0	-11800	SLD 7	-11800	-7764	-63178	-18053	-18053	1	1.53	Si
0.64	0.0000129	0.000763	0	-9252	SLD 7	-9252	-8659	-63178	-18053	-18053	1	1.95	Si
1.28	0.0000129	0.000763	0	-6500	SLD 7	-6500	-8659	-63178	-18053	-18053	1	2.78	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1849.63	21	1607.66	81848	1494000	1257611	36000000	1592.87	2	1374.43	69975	1120500			Si
0.1	1067.25	21	1067.25	54336	1494000	834872	36000000	887.01	2	887.01	45159	1120500			Si
0.64	-2521.22	21	-3482.36	181608	1494000	2659386	36000000	-2344.34	2	-3207.25	167261	1120500			Si
1.28	-5446.89	21	-5446.89	490066	1494000	19816926	36000000	-4964.32	2	-4964.32	446648	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
1.15	superiore	0.375	0.00058	0.000216	21	0.375	0.00054	0.000202	6	0.375	0.00053	0.000197	2	Si
1.28	superiore	0.375	0.00058	0.000216	21	0.375	0.00054	0.000202	6	0.375	0.00053	0.000197	2	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 167 - 165, sezione R 50x45, asta 832

Campata 2 tra i fili 165 - 325, sezione R 50x45, aste 831, 830, 829

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1542	SLU 83	0.054	10132	4745	SLU 83	22892	Si
0.61	0.41	0.0006	1461	SLU 83	0.054	10132	4495	SLU 83	22892	Si
1.08	0.41	0.0006	1455	SLU 83	0.054	10132	4478	SLU 83	22892	Si
1.23	0.41	0.0006	1463	SLU 83	0.054	10132	4501	SLU 83	22892	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1089	SLD 14	0.134	11271	3351	SLD 14	26326	Si
0.61	0.41	0.0006	1060	SLD 14	0.134	11271	3262	SLD 14	26326	Si
1.08	0.41	0.0006	1065	SLD 14	0.134	11271	3277	SLD 14	26326	Si
1.23	0.41	0.0006	1071	SLD 14	0.134	11271	3295	SLD 14	26326	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000644	1131	SLE RA 20	30803	1494000	381961	36000000	1019	SLE QP 2	27737	1120500	Si
0.61	0.41	0.00000644	1071	SLE RA 20	29154	1494000	361512	36000000	963	SLE QP 2	26220	1120500	Si
1.08	0.41	0.00000644	1066	SLE RA 20	29033	1494000	360007	36000000	959	SLE QP 2	26111	1120500	Si
1.23	0.41	0.00000644	1072	SLE RA 20	29180	1494000	361830	36000000	964	SLE QP 2	26247	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.61	1.1	SLU 41	ST	LT	-525	178	-19515	-2	1	19	0	0	1.1	5936	554	10.71	Si
2.61	1.1	SLV 1	SIS	LT	-758	3438	-14455	-3	13	19	0	0	1.1	4397	3521	1.25	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
832,831,830,829	2.61	1.1	SLU 83	ST	BT	2.3	122759	23560	5.21	Si
832,831,830,829	2.61	1.1	SLV 1	SIS	LT	2.3	74206	14455	5.13	Si
832,831,830,829	2.61	1.1	SLD 14	SIS	BT	2.3	114386	17044	6.71	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-604	211	-23560	-51.47	-998.35	-1	1	-0.04	0	1.1	2.53	1496	2060	0	14430	
-758	3438	-14455	-1623.8	-1203.22	-3	13	-0.08	-0.11	0.88	2.44	1496	2060	37	0	0.07
-659	-1241	-17044	637.49	-598.01	-2	-4	-0.04	0.04	1.03	2.54	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.09	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.27	1.28	0.86	1.16	1.27	1	0.62	0.61	0.47	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.08	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

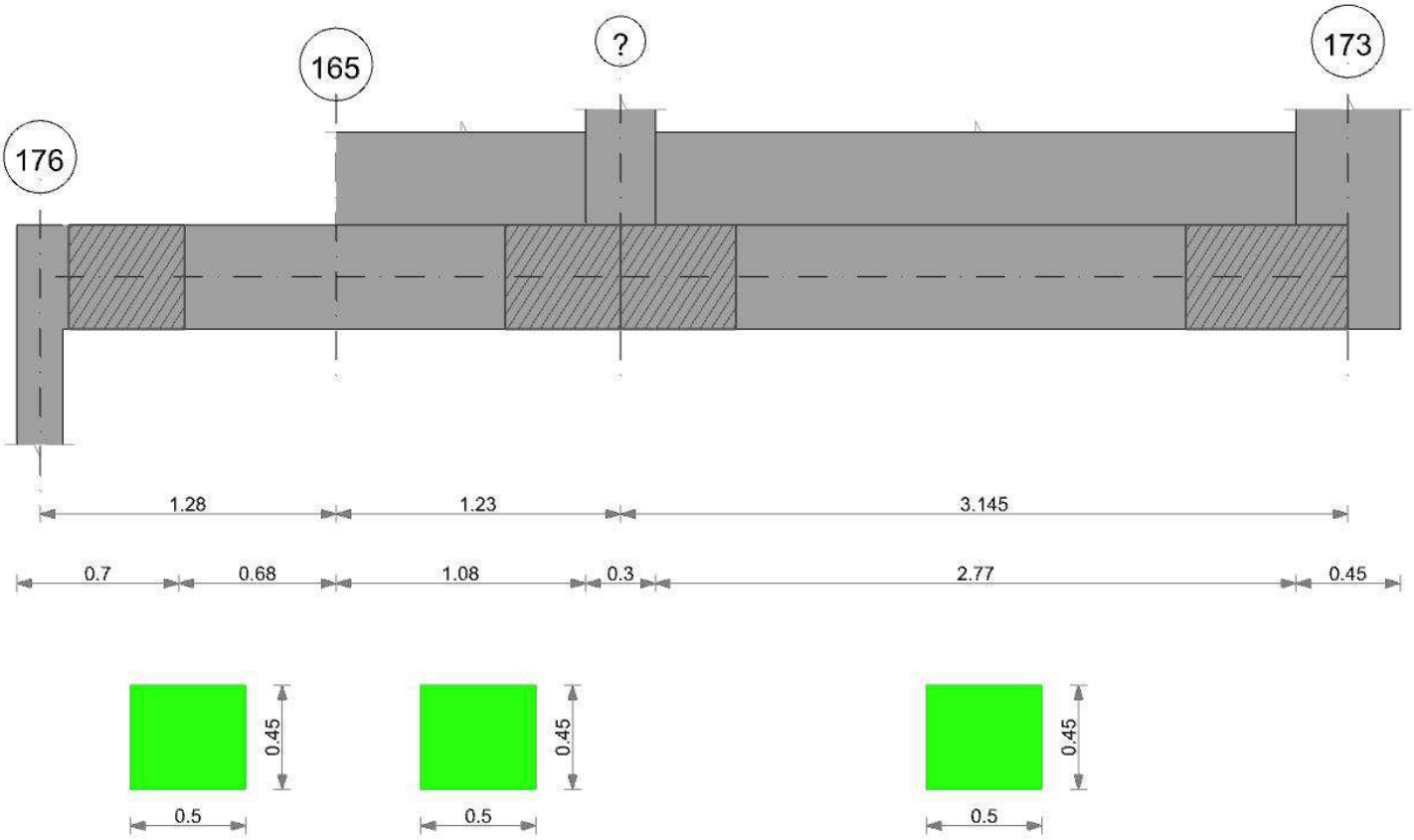
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.002	698	SLE RA 21	0.05	0.001	698	805	SLE RA 21	0.05	0	733	SLE RA 4	0.0033	0	SLE RA 4	Si
D	0.05	0	698	SLE RA 1	0.05	0	698	698	SLE RA 1	0.05	0	733	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	698	SLE RA 1	0.05	0	698	698	SLE RA 1	0.05	0	733	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	698	733	SLE RA 21	0.19	0	698	SLE RA 1	0.1	0.01	733	SLE RA 4	Si
D	0.19	0	SLE RA 1	0.19	0	698	733	SLE RA 1	0.19	0	698	SLE RA 1	0.1	0	733	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	698	733	SLE RA 1	0.19	0	698	SLE RA 1	0.1	0	733	SLE RA 1	Si

CORDOLO 30

Geometria



Caratteristiche dei materiali

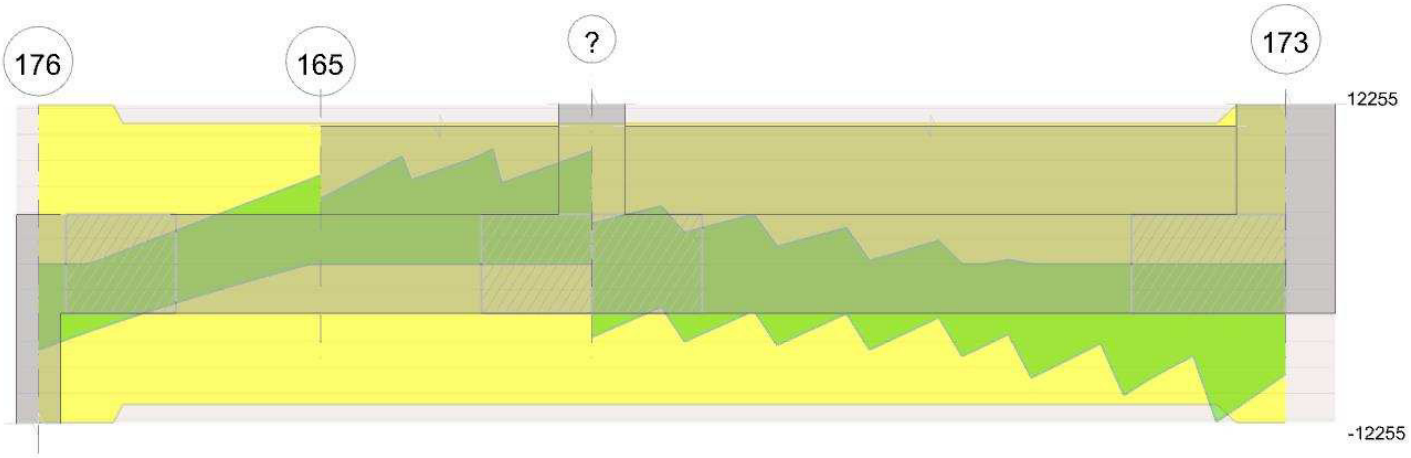
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 417

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-3300.21	SLU 84	-3300.21	-7755.45	0.113	2.35	Si
1.28	0.000509	0.052	0.000509	0.052							-1714.81	SLU 75	-2470.07	-7755.45	0.113	3.14	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-2794.15	SLV 11	-2908.1	-7266.79	0.197	2.5	Si
1.28	0.000509	0.052	0.000509	0.052	479.24	SLV 14	479.24	7266.79	0.197	15.16	-3002.26	SLV 3	-3006.9	-7266.79	0.197	2.42	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.64	0.000509	0.052	0.000509	0.052							-2492.34	SLD 11	-2507.63	-7266.79	0.197	2.9	Si
1.28	0.000509	0.052	0.000509	0.052							-2008.98	SLD 3	-2275.28	-7266.79	0.197	3.19	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-5912	SLU 84	-5912	-8455	-71432	-12255	-12255	1	2.07	Si
0.1	0.0000077	0	0	-4949	SLU 84	-4949	-8455	-71432	-12255	-12255	1	2.48	Si
0.64	0.0000077	0	0	79	SLU 41	79	7764	63178	10839	10839	1	136.45	Si
0.64	0.0000077	0	0	-254	SLU 44	-254	-7764	-63178	-10839	-10839	1	42.73	Si
1.28	0.0000077	0.000509	0	5437	SLU 83	5437	7764	63178	10839	10839	1	1.99	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-6634	SLV 3	-6634	-8455	-71432	-12255	-12255	1	1.85	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.1	0.0000077	0	0	-6009	SLV 3	-6009	-8455	-71432	-12255	-12255	1	2.04	Si
0.64	0.0000077	0	0	2662	SLV 14	2662	7764	63178	10839	10839	1	4.07	Si
0.64	0.0000077	0	0	-2913	SLV 3	-2913	-7764	-63178	-10839	-10839	1	3.72	Si
1.28	0.0000077	0.000509	0	6836	SLV 14	6836	7764	63178	10839	10839	1	1.59	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000077	0	0	-5192	SLD 3	-5192	-8455	-71432	-12255	-12255	1	2.36	Si
0.1	0.0000077	0	0	-4553	SLD 3	-4553	-8455	-71432	-12255	-12255	1	2.69	Si
0.64	0.0000077	0	0	1068	SLD 14	1068	7764	63178	10839	10839	1	10.15	Si
0.64	0.0000077	0	0	-1319	SLD 3	-1319	-7764	-63178	-10839	-10839	1	8.22	Si
1.28	0.0000077	0.000509	0	4938	SLD 14	4938	7764	63178	10839	10839	1	2.19	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1192.49	20	-1192.49	-70666	1494000	0	36000000	-1050.54	2	-1050.54	-62254	1120500			Si
0.1	-1554.82	20	-2048.68	-121403	1494000	0	36000000	-1390.91	2	-1858.79	-110151	1120500			Si
0.64	-2446.1	21	-2446.1	129382	1494000	1940737	36000000	-2254.7	2	-2254.7	119259	1120500			Si
1.28	-1293.79	12	-1846.15	97649	1494000	1464736	36000000	-1261.51	2	-1750.4	92585	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 176 - 165, sezione R 50x45, asta 417

Campata 2 tra i fili 165 - ?, sezione R 50x45, aste 416, 415, 414

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1570	SLU 83	0.033	6137	4831	SLU 83	15877	Si
0.61	0.41	0.0004	1495	SLU 83	0.033	6137	4599	SLU 83	15877	Si
1.08	0.41	0.0004	1493	SLU 83	0.033	6137	4593	SLU 83	15877	Si
1.23	0.41	0.0004	1500	SLU 83	0.033	6137	4617	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1132	SLD 14	0.105	6852	3484	SLD 14	15877	Si
0.61	0.41	0.0004	1107	SLD 14	0.105	6852	3406	SLD 14	15877	Si
1.08	0.41	0.0004	1114	SLD 14	0.105	6852	3429	SLD 14	15877	Si
1.23	0.41	0.0004	1120	SLD 14	0.105	6852	3447	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000387	1152	SLE RA 20	32409	1494000	401868	36000000	1037	SLE QP 2	29190	1120500	Si
0.61	0.41	0.00000387	1095	SLE RA 20	30822	1494000	382190	36000000	985	SLE QP 2	27726	1120500	Si
1.08	0.41	0.00000387	1094	SLE RA 20	30774	1494000	381595	36000000	984	SLE QP 2	27683	1120500	Si
1.23	0.41	0.00000387	1099	SLE RA 20	30931	1494000	383548	36000000	989	SLE QP 2	27828	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili ? - 173, sezione R 50x45, aste 413, 412, 411, 410, 409, 408, 407, 406

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1500	SLU 83	0.033	6137	4617	SLU 83	15877	Si
0.15	0.41	0.0004	1509	SLU 83	0.033	6137	4643	SLU 83	15877	Si
1.57	0.41	0.0004	1713	SLU 84	0.033	6137	5271	SLU 84	15877	Si
2.92	0.41	0.0004	2065	SLU 84	0.033	6137	6355	SLU 84	15877	Si
3.14	0.41	0.0004	2161	SLU 84	0.033	6137	6648	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1120	SLD 14	0.105	6852	3447	SLD 14	15877	Si
0.15	0.41	0.0004	1127	SLD 14	0.105	6852	3467	SLD 14	15877	Si
1.57	0.41	0.0004	1271	SLD 16	0.105	6852	3910	SLD 16	15877	Si
2.92	0.41	0.0004	1527	SLD 15	0.105	6852	4700	SLD 15	15877	Si
3.14	0.41	0.0004	1598	SLD 15	0.105	6852	4916	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000387	1099	SLE RA 20	30931	1494000	383548	36000000	989	SLE QP 2	27828	1120500	Si
0.15	0.41	0.00000387	1105	SLE RA 20	31107	1494000	385728	36000000	995	SLE QP 2	27991	1120500	Si
1.57	0.41	0.00000387	1256	SLE RA 21	35334	1494000	438138	36000000	1133	SLE QP 2	31881	1120500	Si
2.92	0.41	0.00000387	1516	SLE RA 21	42651	1494000	528878	36000000	1372	SLE QP 2	38607	1120500	Si
3.14	0.41	0.00000387	1586	SLE RA 21	44630	1494000	553417	36000000	1436	SLE QP 2	40421	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.98	1.1	SLU 35	ST	LT	-1515	396	-51858	-2	0	19	0	0	1.1	15774	1566	10.08	Si
5.98	1.1	SLV 1	SIS	LT	-1991	9546	-36100	-3	15	19	0	0	1.1	10981	9752	1.13	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
417,416,415,414,413,412,411,410,409,408,407,406	5.98	1.1	SLU 84	ST	BT	2.3	276041	63877	4.32	Si
417,416,415,414,413,412,411,410,409,408,407,406	5.98	1.1	SLV 1	SIS	LT	2.3	146203	36100	4.05	Si
417,416,415,414,413,412,411,410,409,408,407,406	5.98	1.1	SLD 16	SIS	BT	2.3	251665	47251	5.33	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	472	-63877	-72.68	3577.59	0	0	0.06	0	1.1	5.87	1496	2060	0	14430	
0	9546	-36100	-4474.1	-1233.07	0	15	-0.03	-0.12	0.85	5.91	1496	2060	37	0	0.07
0	-3613	-47251	1835.45	3953.64	0	-4	0.08	0.04	1.02	5.81	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Nγ	Sq	Sc	Sγ	Dq	Dc	Dγ	Iq	Ic	Iγ	Bq	Bc	Bγ	Gq	Gc	Gγ	Pq	Pc	Pγ	Eq	Ec	Eγ
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.11	1.11	0.94	1.16	1.27	1	0.56	0.55	0.41	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

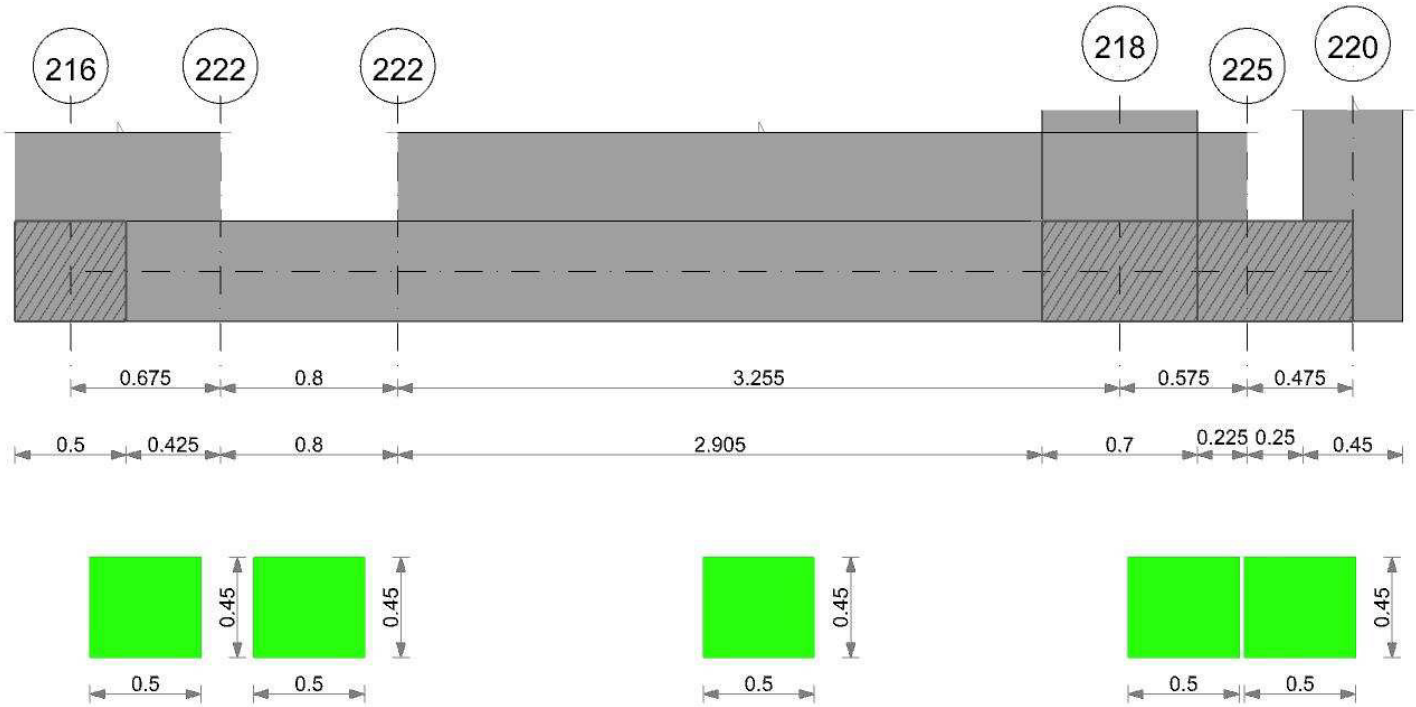
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	630	SLE RA 21	0.05	0.002	630	1051	SLE RA 20	0.05	0	735	SLE RA 7	0.0033	0	SLE RA 21	Si
D	0.05	0	630	SLE RA 1	0.05	0	630	630	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	630	SLE RA 1	0.05	0	630	630	SLE RA 1	0.05	0	735	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 20	0.19	0.03	630	735	SLE RA 21	0.19	0	630	SLE RA 1	0.1	0.01	735	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	630	735	SLE RA 1	0.19	0	630	SLE RA 1	0.1	0	735	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	630	735	SLE RA 1	0.19	0	630	SLE RA 1	0.1	0	735	SLE RA 1	Si

CORDOLO 31

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

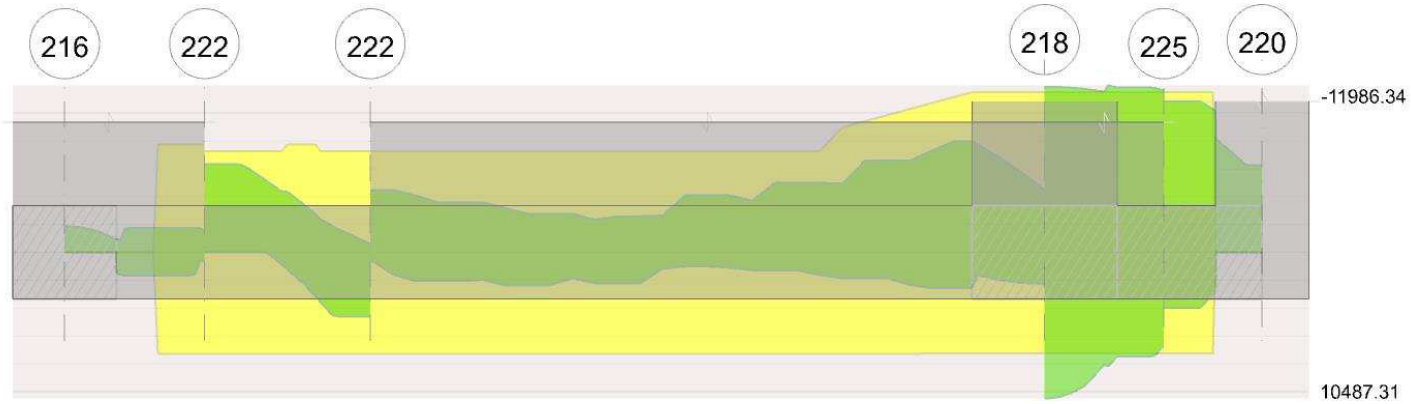
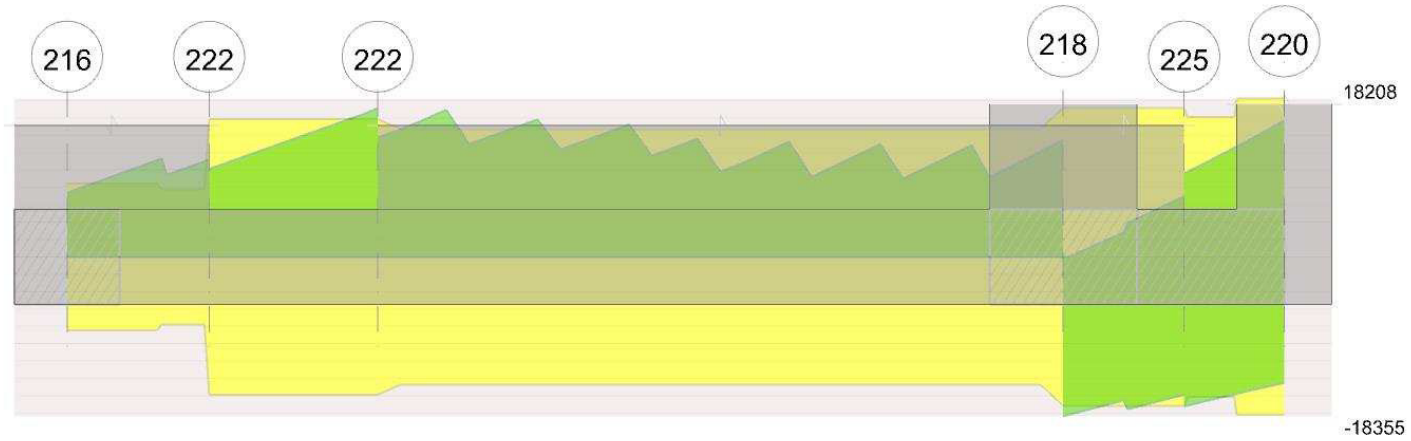


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 326

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-6487.46	SLU 84	-6487.46	-7755.45	0.113	1.2	Si
0.03	0.000509	0.052	0.000509	0.052							-6255.06	SLU 84	-6487.46	-7755.45	0.113	1.2	Si
0.4	0.000509	0.052	0.000509	0.052	-1394.71	SLU 1	271.66	7755.45	0.113	28.55	-2205.78	SLU 84	-4337.79	-7755.45	0.113	1.79	Si
0.8	0.000509	0.052	0.000509	0.052	3783.96	SLU 84	3783.96	7755.45	0.113	2.05							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-6330.34	SLV 14	-6330.34	-7266.79	0.197	1.15	Si
0.03	0.000509	0.052	0.000509	0.052							-6071.59	SLV 16	-6330.34	-7266.79	0.197	1.15	Si
0.4	0.000509	0.052	0.000509	0.052	-783.3	SLV 6	1234.27	7266.79	0.197	5.89	-2207.94	SLV 11	-4048.84	-7266.79	0.197	1.79	Si
0.8	0.000509	0.052	0.000509	0.052	4588.18	SLV 14	4588.18	7266.79	0.197	1.58	484.67	SLV 3	-596.38	-7266.79	0.197	12.18	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-5208.98	SLD 14	-5208.98	-7266.79	0.197	1.4	Si
0.03	0.000509	0.052	0.000509	0.052							-5009.31	SLD 16	-5208.98	-7266.79	0.197	1.4	Si
0.4	0.000509	0.052	0.000509	0.052	-1182.26	SLD 6	637.47	7266.79	0.197	11.4	-1808.98	SLD 11	-3409.04	-7266.79	0.197	2.13	Si
0.8	0.000509	0.052	0.000509	0.052	3415.78	SLD 14	3415.78	7266.79	0.197	2.13							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	8573	SLU 84	8573	7764	63178	15852	15852	1	1.85	Si
0.4	0.0000113	0.000509	0	12835	SLU 84	12835	7764	63178	15852	15852	1	1.24	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	10114	SLV 14	10114	7764	63178	15852	15852	1	1.57	Si
0.4	0.0000113	0.000509	0	13562	SLV 14	13562	7764	63178	15852	15852	1	1.17	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000113	0.000509	0	7619	SLD 14	7619	7764	63178	15852	15852	1	2.08	Si
0.4	0.0000113	0.000509	0	10741	SLD 14	10741	7764	63178	15852	15852	1	1.48	Si
0.8	0.0000113	0.000509	0	13879	SLD 14	13879	7764	63178	15852	15852	1	1.14	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-4780.46	21	-4780.46	252855	1494000	3792828	36000000	-4374	2	-4374	231356	1120500			Si
0.4	-1629.67	21	-3198.98	169205	1494000	2538080	36000000	-1495.62	2	-2929.52	154952	1120500			Si
0.8	2781.39	21	2781.39	147117	1494000	2206762	36000000	2536.42	2	2536.42	134160	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 315

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-5158.17	SLU 84	-5922.95	-12059.84	0.137	2.04	Si
0.24	0.000823	0.052	0.000509	0.052							-6077.34	SLU 84	-6104.26	-12059.84	0.137	1.98	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052	3964.69	SLV 3	3964.69	7261.11	0.193	1.83	-10819.2	SLV 14	-10819.2	-11488.1	0.247	1.06	Si
0.24	0.000823	0.052	0.000509	0.052	150.42	SLV 1	2991.59	7261.11	0.193	2.43	-8299.01	SLV 16	-10256.16	-11488.1	0.247	1.12	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000823	0.052	0.000509	0.052							-6586.42	SLD 14	-6586.42	-11488.1	0.247	1.74	Si
0.24	0.000823	0.052	0.000509	0.052							-5880.82	SLD 16	-6463.17	-11488.1	0.247	1.78	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	-5514	SLU 83	-5514	-7759	-63117	-17138	-17138	1	3.11	Si
0.02	0.0000115	0	0	-5304	SLU 83	-5304	-7759	-63117	-16088	-16088	1	3.03	Si
0.24	0.0000115	0	0	-2321	SLU 83	-2321	-7759	-63117	-16088	-16088	1	6.93	Si
0.25	0.0000115	0	0	-2150	SLU 83	-2150	-8455	-71432	-18208	-18208	1	8.47	Si
0.47	0.0000115	0	0	1045	SLU 84	1045	8455	71432	18208	18208	1	17.42	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	9618	SLV 14	9618	7759	63117	17138	17138	1	1.78	Si
0.02	0.0000115	0	0	9807	SLV 14	9807	7759	63117	16088	16088	1	1.64	Si
0.24	0.0000115	0	0	12543	SLV 14	12543	7759	63117	16088	16088	1	1.28	Si
0.24	0.0000115	0	0	-15820	SLV 3	-15820	-7759	-63117	-16088	-16088	1	1.02	Si
0.25	0.0000115	0	0	12704	SLV 14	12704	8455	71432	18208	18208	1	1.43	Si
0.25	0.0000115	0	0	-15749	SLV 3	-15749	-8455	-71432	-18208	-18208	1	1.16	Si
0.47	0.0000115	0	0	15702	SLV 14	15702	8455	71432	18208	18208	1	1.16	Si
0.47	0.0000115	0	0	-14510	SLV 3	-14510	-8455	-71432	-18208	-18208	1	1.25	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000122	0	0	1943	SLD 14	1943	7759	63117	17138	17138	1	8.82	Si
0	0.0000122	0	0	-9535	SLD 3	-9535	-7759	-63117	-17138	-17138	1	1.8	Si
0.02	0.0000115	0	0	2104	SLD 14	2104	7759	63117	16088	16088	1	7.65	Si
0.02	0.0000115	0	0	-9413	SLD 3	-9413	-7759	-63117	-16088	-16088	1	1.71	Si
0.24	0.0000115	0	0	4427	SLD 14	4427	7759	63117	16088	16088	1	3.63	Si
0.24	0.0000115	0	0	-7704	SLD 3	-7704	-7759	-63117	-16088	-16088	1	2.09	Si
0.25	0.0000115	0	0	4562	SLD 14	4562	8455	71432	18208	18208	1	3.99	Si
0.25	0.0000115	0	0	-7607	SLD 3	-7607	-8455	-71432	-18208	-18208	1	2.39	Si
0.47	0.0000115	0	0	7055	SLD 14	7055	8455	71432	18208	18208	1	2.58	Si
0.47	0.0000115	0	0	-5863	SLD 3	-5863	-8455	-71432	-18208	-18208	1	3.11	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3788.11	21	-4357.35	226581	1494000	3300213	36000000	-3427.25	2	-3963.64	206109	1120500			Si
0.24	-4472.88	21	-4493.1	233640	1494000	3403031	36000000	-4074.3	2	-4093.86	212880	1120500			Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 216 - 222, sezione R 50x45, aste 328, 327

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1928	SLU 84	0.02	3468	5933	SLU 84	15877	Si
0.25	0.41	0.0002	1910	SLU 84	0.02	3468	5877	SLU 84	15877	Si
0.34	0.41	0.0002	1904	SLU 84	0.02	3468	5859	SLU 84	15877	Si
0.68	0.41	0.0006	1882	SLU 84	0.048	8921	5791	SLU 84	20101	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1419	SLD 15	0.079	3893	4366	SLD 15	15877	Si
0.25	0.41	0.0002	1403	SLD 15	0.079	3893	4317	SLD 15	15877	Si
0.34	0.41	0.0002	1398	SLD 15	0.079	3893	4301	SLD 15	15877	Si
0.68	0.41	0.0006	1378	SLD 15	0.126	9932	4240	SLD 15	23116	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000217	1418	SLE RA 21	40789	1494000	505789	36000000	1286	SLE QP 2	36998	1120500	Si
0.25	0.41	0.00000217	1404	SLE RA 21	40399	1494000	500953	36000000	1274	SLE QP 2	36645	1120500	Si
0.34	0.41	0.00000217	1400	SLE RA 21	40276	1494000	499424	36000000	1270	SLE QP 2	36534	1120500	Si
0.68	0.41	0.00000565	1383	SLE RA 21	38051	1494000	471832	36000000	1255	SLE QP 2	34519	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 222 - 222, sezione R 50x45, asta 326

Campata 3 tra i fili 222 - 218, sezione R 50x45, aste 325, 324, 323, 322, 321, 320, 319, 318

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1896	SLU 84	0.048	8921	5833	SLU 84	20101	Si
1.63	0.41	0.0005	1991	SLU 84	0.044	8295	6127	SLU 84	18663	Si
2.91	0.41	0.0005	2143	SLU 84	0.044	8295	6595	SLU 84	18663	Si
3.26	0.41	0.0006	2222	SLU 84	0.052	9638	6838	SLU 84	21752	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1385	SLD 13	0.126	9932	4262	SLD 13	23116	Si
1.63	0.41	0.0005	1456	SLD 15	0.122	9239	4480	SLD 15	21463	Si
2.91	0.41	0.0005	1613	SLD 15	0.122	9239	4962	SLD 15	21463	Si
3.26	0.41	0.0006	1698	SLD 15	0.131	10725	5226	SLD 15	25014	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000565	1393	SLE RA 21	38324	1494000	475216	36000000	1265	SLE QP 2	34792	1120500	Si
1.63	0.41	0.00000525	1464	SLE RA 21	40470	1494000	501823	36000000	1331	SLE QP 2	36785	1120500	Si
2.91	0.41	0.00000525	1576	SLE RA 21	43568	1494000	540243	36000000	1433	SLE QP 2	39630	1120500	Si
3.26	0.41	0.00000612	1634	SLE RA 21	44683	1494000	554064	36000000	1487	SLE QP 2	40653	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 218 - 225, sezione R 50x45, aste 317, 316

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	2222	SLU 84	0.052	9638	6838	SLU 84	21752	Si
0.29	0.41	0.0006	2292	SLU 84	0.052	9638	7053	SLU 84	21752	Si
0.35	0.41	0.0006	2309	SLU 84	0.052	9638	7103	SLU 84	21752	Si
0.57	0.41	0.0006	2374	SLU 84	0.052	9638	7304	SLU 84	21752	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0006	1698	SLD 15	0.131	10725	5226	SLD 15	25014	Si
0.29	0.41	0.0006	1777	SLD 15	0.131	10725	5469	SLD 15	25014	Si
0.35	0.41	0.0006	1797	SLD 15	0.131	10725	5530	SLD 15	25014	Si
0.57	0.41	0.0006	1879	SLD 15	0.131	10725	5781	SLD 15	25014	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000612	1634	SLE RA 21	44683	1494000	554064	36000000	1487	SLE QP 2	40653	1120500	Si
0.29	0.41	0.00000612	1686	SLE RA 21	46091	1494000	571534	36000000	1534	SLE QP 2	41941	1120500	Si
0.35	0.41	0.00000612	1698	SLE RA 21	46419	1494000	575594	36000000	1545	SLE QP 2	42239	1120500	Si
0.57	0.41	0.00000612	1746	SLE RA 21	47728	1494000	591826	36000000	1588	SLE QP 2	43430	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 5 tra i fili 225 - 220, sezione R 50x45, asta 315

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
6.25	1.1	SLU 48	ST	LT	-47	1236	-65154	0	1	19	0	0	1.1	19818	1237	16.02	Si
6.25	1.1	SLV 1	SIS	LT	-1508	10197	-42757	-2	13	19	0	0	1.1	13006	10308	1.26	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
328,327,326,325,324,323,322,321,320,319,318,317,316,315	6.25	1.1	SLU 84	ST	BT	2.3	279594	77573	3.6	Si
328,327,326,325,324,323,322,321,320,319,318,317,316,315	6.25	1.1	SLV 15	SIS	BT	2.3	244093	64745	3.77	Si
328,327,326,325,324,323,322,321,320,319,318,317,316,315	6.25	1.1	SLD 15	SIS	BT	2.3	268766	58281	4.61	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	1371	-77573	-677.16	7960.96	0	1	0.1	-0.01	1.08	6.05	1496	2060	0	14430	
0	-7659	-64745	3348.03	12551.62	0	-7	0.19	0.05	1	5.87	1496	2060	0	14430	0.07
0	-2715	-58281	1159.02	8490.94	0	-3	0.15	0.02	1.06	5.96	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	0	0	0.27	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

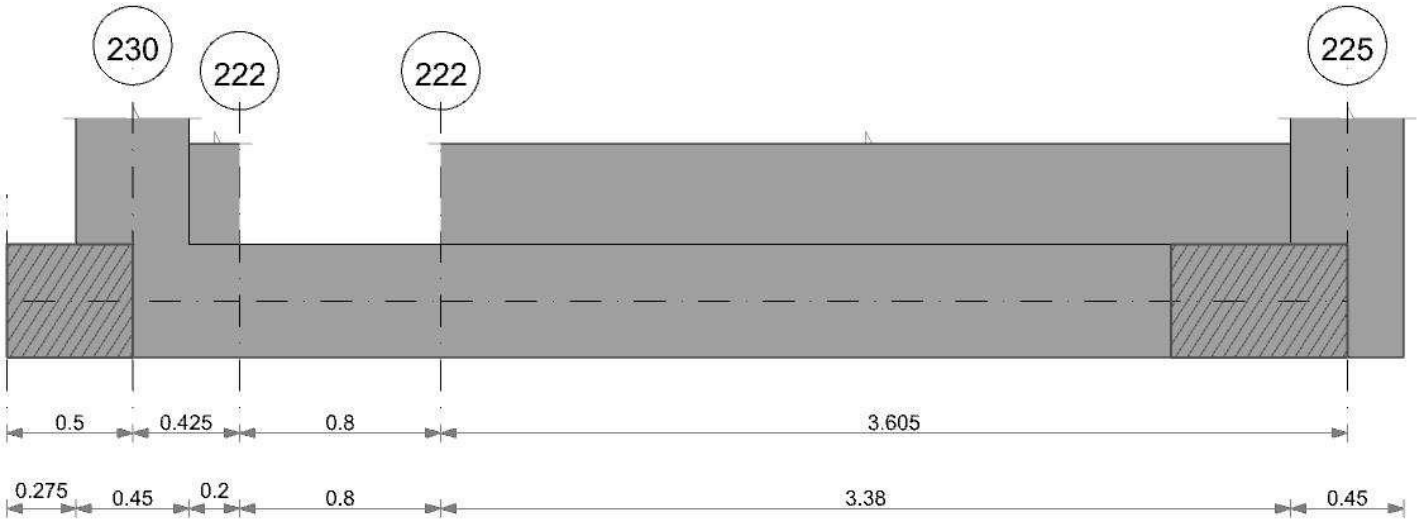
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	561	SLE RA 21	0.05	0.001	561	1062	SLE RA 21	0.05	0	725	SLE RA 7	0.0033	0	SLE RA 6	Si
D	0.05	0	561	SLE RA 1	0.05	0	561	561	SLE RA 1	0.05	0	725	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	561	SLE RA 1	0.05	0	561	561	SLE RA 1	0.05	0	725	SLE RA 1	0.0033	0	SLE RA 1	Si

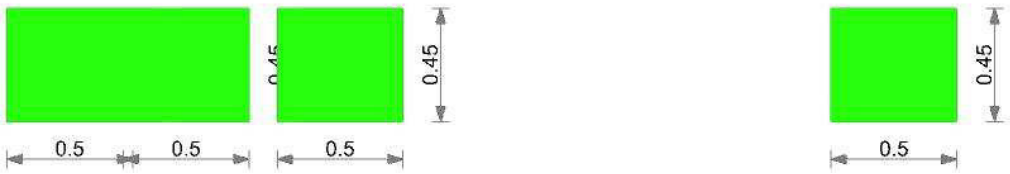
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	561	725	SLE RA 21	0.19	0.01	743	SLE RA 20	0.1	0.01	725	SLE RA 6	Si
D	0.19	0	SLE RA 1	0.19	0	561	725	SLE RA 1	0.19	0	561	SLE RA 1	0.1	0	725	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	561	725	SLE RA 1	0.19	0	561	SLE RA 1	0.1	0	725	SLE RA 1	Si

CORDOLO 32

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

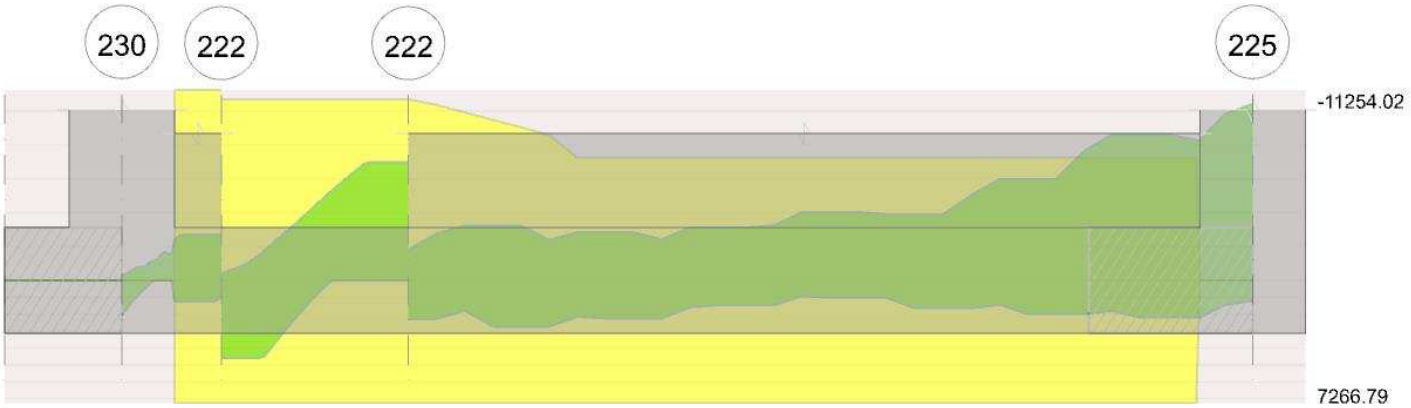
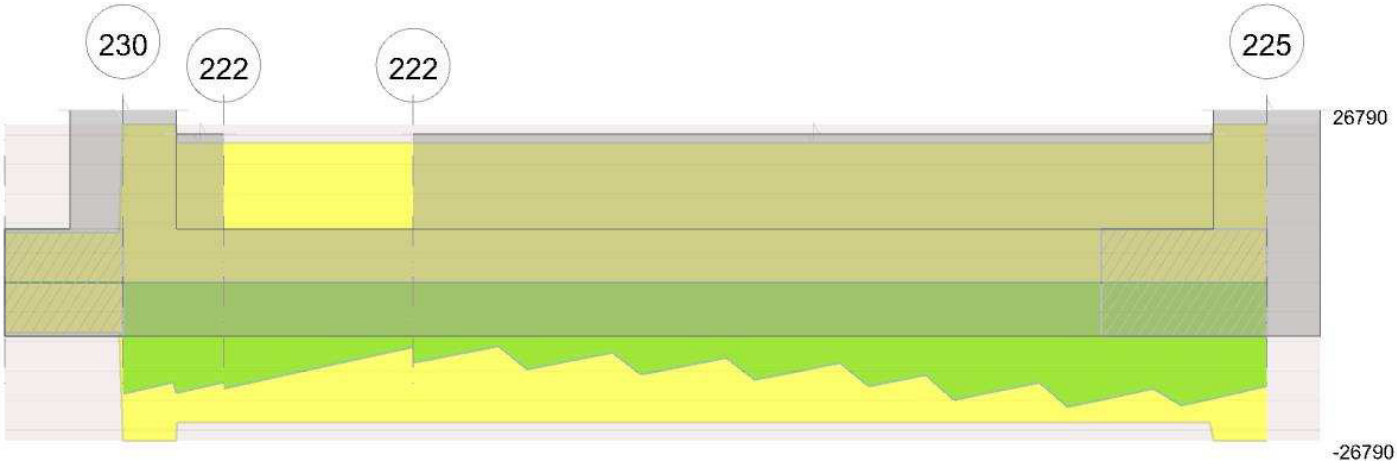


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 459

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3883.76	SLU 84	3883.76	7767.92	0.117	2							Si
0.4	0.000763	0.052	0.000509	0.052	-1396.49	SLU 1	312.24	7767.92	0.117	24.88	-2208.44	SLU 84	-4380.45	-11254.02	0.132	2.57	Si
0.72	0.000763	0.052	0.000509	0.052							-5840	SLU 84	-6576.63	-11254.02	0.132	1.71	Si
0.8	0.000763	0.052	0.000509	0.052							-6576.63	SLU 84	-6576.63	-11254.02	0.132	1.71	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	4592.18	SLV 14	4592.18	7262.8	0.194	1.58	554.32	SLV 3	-389.49	-10716.86	0.238	27.52	Si
0.4	0.000763	0.052	0.000509	0.052	-785.64	SLV 6	976.66	7262.8	0.194	7.44	-2209.35	SLV 11	-4407.69	-10716.86	0.238	2.43	Si
0.72	0.000763	0.052	0.000509	0.052							-6105.6	SLV 15	-6995.98	-10716.86	0.238	1.53	Si
0.8	0.000763	0.052	0.000509	0.052							-6995.98	SLV 15	-6995.98	-10716.86	0.238	1.53	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000763	0.052	0.000509	0.052	3437.11	SLD 14	3437.11	7262.8	0.194	2.11							Si
0.4	0.000763	0.052	0.000509	0.052	-1184.36	SLD 6	524.43	7262.8	0.194	13.85	-1810.63	SLD 11	-3574.21	-10716.86	0.238	3	Si
0.72	0.000763	0.052	0.000509	0.052							-4856.63	SLD 15	-5517.64	-10716.86	0.238	1.94	Si
0.8	0.000763	0.052	0.000509	0.052							-5517.64	SLD 15	-5517.64	-10716.86	0.238	1.94	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-17406	SLU 84	-17406	-7764	-63178	-23694	-23694	1	1.36	Si
0.4	0.0000169	0.000763	0	-13066	SLU 84	-13066	-8659	-63178	-23694	-23694	1	1.81	Si
0.8	0.0000169	0.000763	0	-8780	SLU 84	-8780	-8659	-63178	-23694	-23694	1	2.7	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-17976	SLV 16	-17976	-7764	-63178	-23694	-23694	1	1.32	Si
0.4	0.0000169	0.000763	0	-14416	SLV 16	-14416	-8659	-63178	-23694	-23694	1	1.64	Si
0.8	0.0000169	0.000763	0	-10939	SLV 16	-10939	-8659	-63178	-23694	-23694	1	2.17	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000169	0.000509	0	-14361	SLD 16	-14361	-7764	-63178	-23694	-23694	1	1.65	Si
0.4	0.0000169	0.000763	0	-11160	SLD 16	-11160	-8659	-63178	-23694	-23694	1	2.12	Si
0.8	0.0000169	0.000763	0	-8016	SLD 16	-8016	-8659	-63178	-23694	-23694	1	2.96	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	2848.64	21	2848.64	145029	1494000	2228380	36000000	2573.25	2	2573.25	131008	1120500			Si
0.4	-1631.65	21	-3227.59	168321	1494000	2464825	36000000	-1497.5	2	-2944.62	153564	1120500			Si
0.8	-4839.8	21	-4839.8	252400	1494000	3696031	36000000	-4403.33	2	-4403.33	229637	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 230 - 222, sezione R 50x45, aste 461, 460

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1962	SLU 84	0.071	13206	6036	SLU 84	30044	Si
0.21	0.41	0.0008	1945	SLU 84	0.071	13206	5985	SLU 84	30044	Si
0.23	0.41	0.0008	1944	SLU 84	0.071	13206	5983	SLU 84	30044	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.43	0.41	0.0008	1931	SLU 84	0.071	13206	5940	SLU 84	30044	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1452	SLD 15	0.153	14673	4467	SLD 15	34551	Si
0.21	0.41	0.0008	1438	SLD 15	0.153	14673	4423	SLD 15	34551	Si
0.23	0.41	0.0008	1437	SLD 15	0.153	14673	4421	SLD 15	34551	Si
0.43	0.41	0.0008	1425	SLD 15	0.153	14673	4384	SLD 15	34551	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	1442	SLE RA 21	38305	1494000	474984	36000000	1309	SLE QP 2	34764	1120500	Si
0.21	0.41	0.00000845	1430	SLE RA 21	37985	1494000	471016	36000000	1298	SLE QP 2	34475	1120500	Si
0.23	0.41	0.00000845	1429	SLE RA 21	37968	1494000	470800	36000000	1297	SLE QP 2	34459	1120500	Si
0.43	0.41	0.00000845	1419	SLE RA 21	37698	1494000	467456	36000000	1288	SLE QP 2	34217	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 222 - 222, sezione R 50x45, asta 459

Campata 4 tra i fili 222 - 225, sezione R 50x45, aste 458, 457, 456, 455, 454, 453, 452, 451

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1886	SLU 83	0.071	13206	5802	SLU 83	30044	Si
1.8	0.41	0.0008	1950	SLU 83	0.071	13206	6000	SLU 83	30044	Si
3.38	0.41	0.0008	2107	SLU 83	0.071	13206	6482	SLU 83	30044	Si
3.6	0.41	0.0008	2154	SLU 83	0.071	13206	6627	SLU 83	30044	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0008	1385	SLD 13	0.153	14673	4261	SLD 13	34551	Si
1.8	0.41	0.0008	1427	SLD 15	0.153	14673	4392	SLD 15	34551	Si
3.38	0.41	0.0008	1596	SLD 15	0.153	14673	4910	SLD 15	34551	Si
3.6	0.41	0.0008	1647	SLD 15	0.153	14673	5069	SLD 15	34551	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000845	1386	SLE RA 20	36819	1494000	456552	36000000	1259	SLE QP 2	33436	1120500	Si
1.8	0.41	0.00000845	1434	SLE RA 20	38080	1494000	472194	36000000	1303	SLE QP 2	34622	1120500	Si
3.38	0.41	0.00000845	1549	SLE RA 20	41145	1494000	510193	36000000	1409	SLE QP 2	37437	1120500	Si
3.6	0.41	0.00000845	1584	SLE RA 20	42071	1494000	521682	36000000	1441	SLE QP 2	38285	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.06	1.1	SLU 48	ST	LT	2	968	-49042	0	1	19	0	0	1.1	14917	968	15.41	Si
5.06	1.1	SLV 1	SIS	LT	-1002	7661	-33345	-2	13	19	0	0	1.1	10143	7726	1.31	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
461,460,459,458,457,456,455,454,453,452,451	5.06	1.1	SLU 83	ST	BT	2.3	232034	58235	3.98	Si
461,460,459,458,457,456,455,454,453,452,451	5.06	1.1	SLV 3	SIS	LT	2.3	145552	33689	4.32	Si
461,460,459,458,457,456,455,454,453,452,451	5.06	1.1	SLD 15	SIS	BT	2.3	225732	43314	5.21	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	1080	-58235	-585.07	1488.58	0	1	0.03	-0.01	1.08	5	1496	2060	0	14430	
0	7735	-33689	-3586.89	1775.13	0	13	0.05	-0.11	0.89	4.95	1496	2060	37	0	0.07
0	-2019	-43314	850.16	1739.98	0	-3	0.04	0.02	1.06	4.97	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.14	1.14	0.93	1.16	1.27	1	0.62	0.61	0.48	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

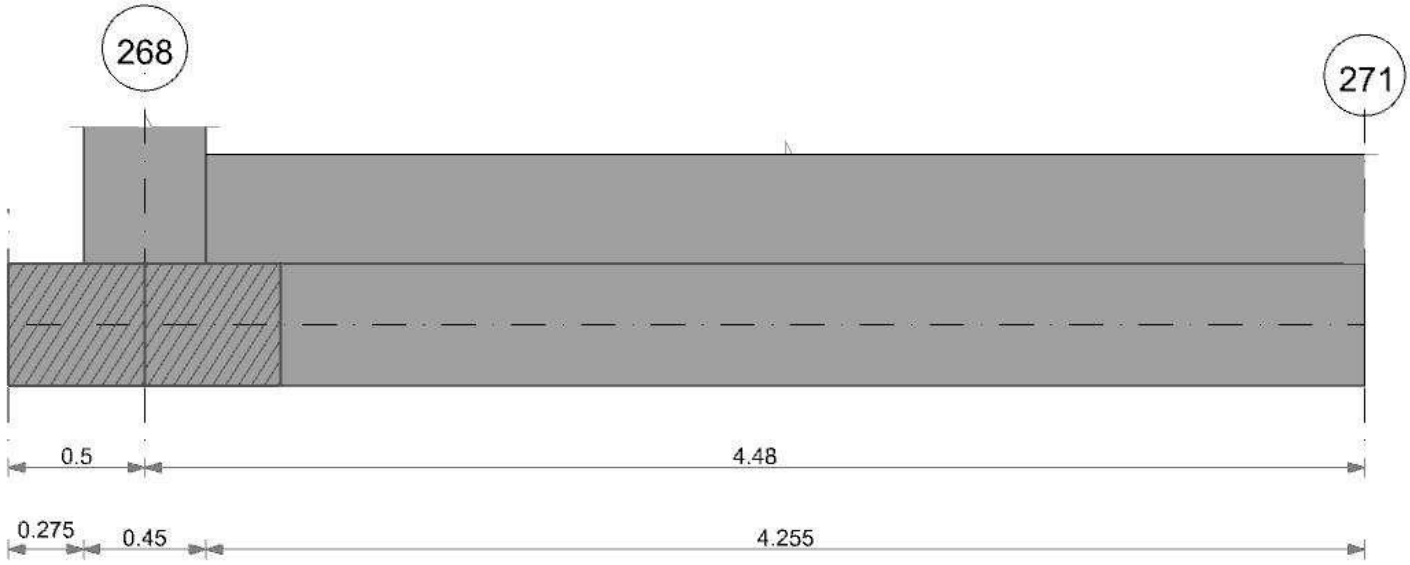
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	645	SLE RA 21	0.05	0.001	645	915	SLE RA 21	0.05	0	727	SLE RA 21	0.0033	0	SLE RA 10	Si
D	0.05	0	645	SLE RA 1	0.05	0	645	645	SLE RA 1	0.05	0	727	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	645	SLE RA 1	0.05	0	645	645	SLE RA 1	0.05	0	727	SLE RA 1	0.0033	0	SLE RA 1	Si

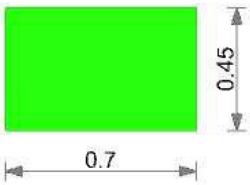
Verifiche geotecniche - Rotazioni assolute e differenziali

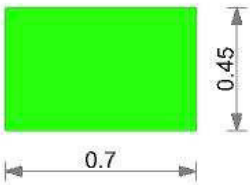
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	727	745	SLE RA 21	0.19	0.01	727	SLE RA 21	0.1	0	745	SLE RA 10	Si
D	0.19	0	SLE RA 1	0.19	0	645	727	SLE RA 1	0.19	0	645	SLE RA 1	0.1	0	727	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	645	727	SLE RA 1	0.19	0	645	SLE RA 1	0.1	0	727	SLE RA 1	Si

CORDOLO 33

Geometria







Caratteristiche dei materiali

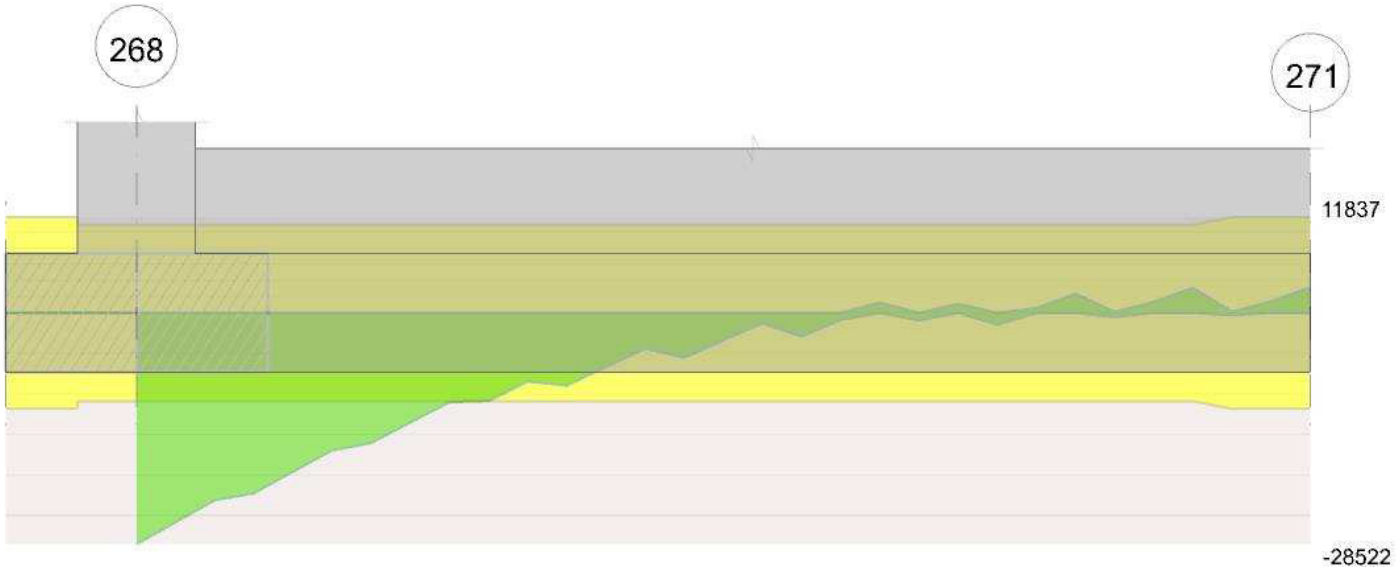
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 268 - 271, sezione R 70x45, aste 606, 605, 604, 603, 602, 601, 600, 599, 598, 597, 596

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
4.48	0.41	0.0002	2455	SLV 15	0.085	2655	6336	SLV 15	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	3056	SLD 14	0.07	3073	7886	SLD 14	15877	Si
0.23	0.41	0.0002	3044	SLD 14	0.07	3073	7856	SLD 14	15877	Si
2.24	0.41	0.0002	2365	SLD 15	0.07	3073	6103	SLD 15	15877	Si
4.48	0.41	0.0002	1832	SLD 15	0.07	3073	4728	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000171	2530	SLE RA 21	73256	1494000	908373	36000000	2312	SLE QP 2	66940	1120500	Si
0.23	0.41	0.00000171	2521	SLE RA 21	72989	1494000	905063	36000000	2304	SLE QP 2	66696	1120500	Si
2.24	0.41	0.00000171	1949	SLE RA 21	56434	1494000	699787	36000000	1779	SLE QP 2	51515	1120500	Si
4.48	0.41	0.00000171	1499	SLE RA 20	43401	1494000	538167	36000000	1366	SLE QP 2	39545	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.48	1.3	SLU 35	ST	LT	-516	1005	-54194	-1	1	19	0	0	1.1	16484	1130	14.59	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
606,605,604,603,602,601,600,599,598,597,596	4.48	1.3	SLU 83	ST	BT	2.3	176939	66741	2.65	Si
606,605,604,603,602,601,600,599,598,597,596	4.48	1.3	SLV 14	SIS	BT	2.3	153570	71954	2.13	Si
606,605,604,603,602,601,600,599,598,597,596	4.48	1.3	SLD 14	SIS	BT	2.3	166142	57234	2.9	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	1227	-66741	9186.31	-11396.66	0	1	-0.17	0.14	1.02	4.14	1496	2060	0	14430	
0	-4860	-71954	13457.83	-14939.31	0	-4	-0.21	0.19	0.93	4.06	1496	2060	0	14430	0.07
0	-1585	-57234	9322.74	-10812.1	0	-2	-0.19	0.16	0.97	4.1	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	658	SLE RA 21	0.05	0	658	927	SLE RA 21	0.05	0	658	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	658	SLE RA 1	0.05	0	658	658	SLE RA 1	0.05	0	658	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	658	SLE RA 1	0.05	0	658	658	SLE RA 1	0.05	0	658	SLE RA 1	0.0033	0	SLE RA 1	Si

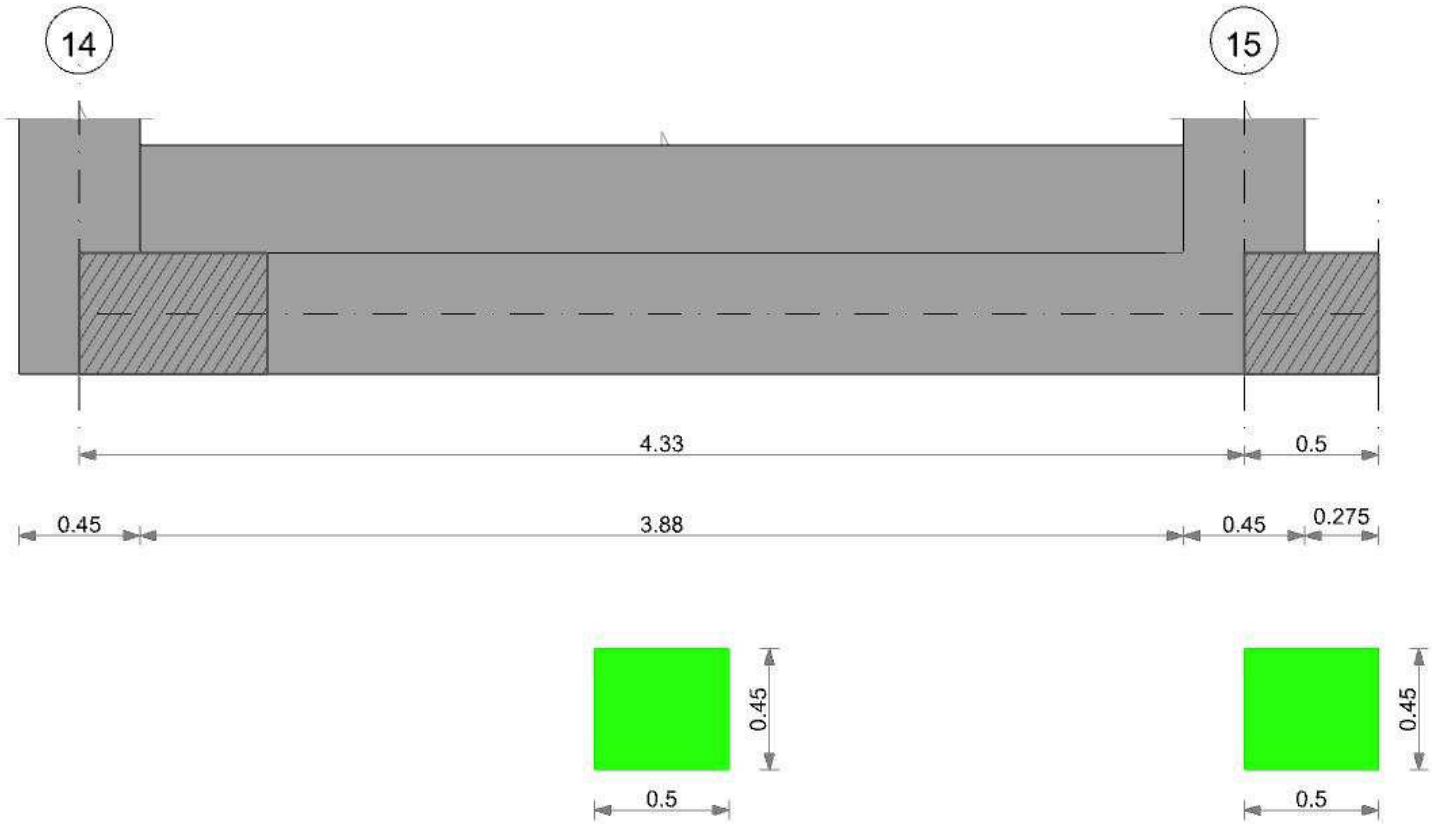
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	658	927	SLE RA 21	0.19	0	658	SLE RA 1	0.1	0	658	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	658	927	SLE RA 1	0.19	0	658	SLE RA 1	0.1	0	658	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
Z	0.19	0	SLE RA 1	0.19	0	658	927	SLE RA 1	0.19	0	658	SLE RA 1	0.1	0	658	SLE RA 1	Si

CORDOLO 34

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

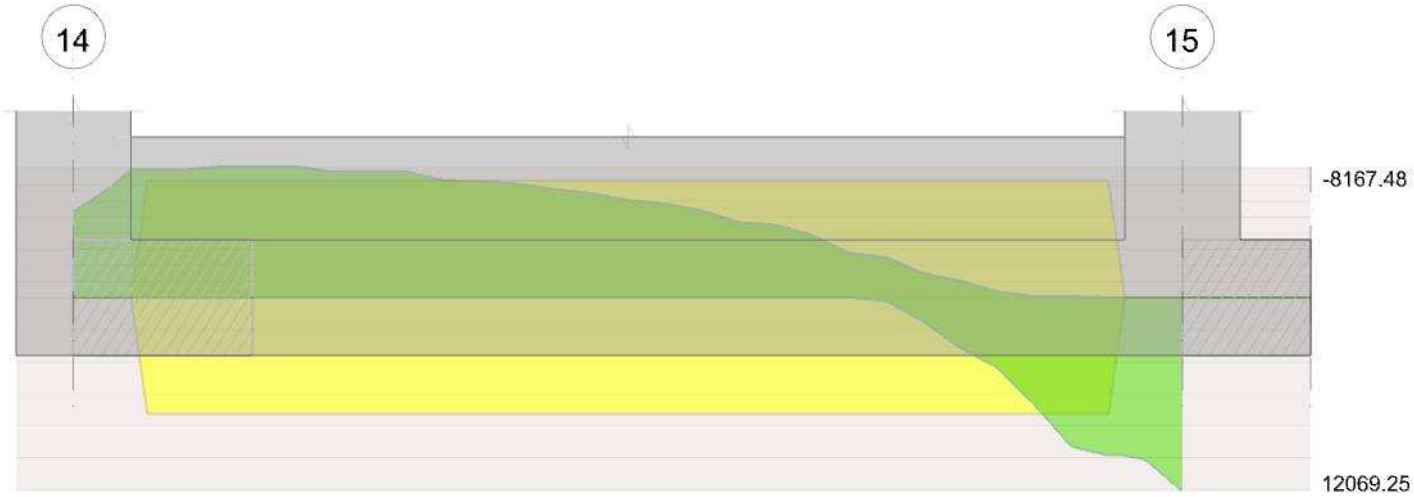


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 14 - 15, sezione R 50x45, aste 783, 782, 781, 780, 779, 778, 777, 776, 775, 774, 773

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2583	SLV 1	0.087	2741	8984	SLV 1	15877	Si
0.23	0.41	0.0002	2451	SLV 1	0.087	2741	8524	SLV 1	15877	Si
2.16	0.41	0.0002	1948	SLV 1	0.087	2741	6776	SLV 1	15877	Si
4.1	0.41	0.0002	2217	SLV 4	0.087	2741	7711	SLV 4	15877	Si
4.33	0.41	0.0002	2222	SLV 4	0.087	2741	7730	SLV 4	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1910	SLD 1	0.071	3173	6643	SLD 1	15877	Si
0.23	0.41	0.0002	1811	SLD 1	0.071	3173	6300	SLD 1	15877	Si
2.16	0.41	0.0002	1445	SLD 1	0.071	3173	5027	SLD 1	15877	Si
4.1	0.41	0.0002	1656	SLD 4	0.071	3173	5758	SLD 4	15877	Si
4.33	0.41	0.0002	1661	SLD 4	0.071	3173	5776	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1534	SLE RA 20	44371	1494000	550194	36000000	1406	SLE QP 2	40685	1120500	Si
0.23	0.41	0.00000177	1455	SLE RA 20	42083	1494000	521828	36000000	1333	SLE QP 2	38573	1120500	Si
2.16	0.41	0.00000177	1171	SLE RA 20	33869	1494000	419976	36000000	1070	SLE QP 2	30955	1120500	Si
4.1	0.41	0.00000177	1354	SLE RA 21	39175	1494000	485765	36000000	1236	SLE QP 2	35774	1120500	Si
4.33	0.41	0.00000177	1359	SLE RA 21	39320	1494000	487569	36000000	1241	SLE QP 2	35905	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.55	1.1	SLU 29	ST	LT	-86	-652	-45540	0	-1	19	0	0	1.1	13852	658	21.06	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
783,782,781,780,779,778,777,776,775,774,773	4.55	1.1	SLU 83	ST	BT	2.3	184112	61547	2.99	Si
783,782,781,780,779,778,777,776,775,774,773	4.55	1.1	SLV 1	SIS	BT	2.3	157825	70009	2.25	Si
783,782,781,780,779,778,777,776,775,774,773	4.55	1.1	SLD 1	SIS	BT	2.3	170909	54336	3.15	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-828	-61547	-4694.07	-787.46	0	-1	-0.01	-0.08	0.95	4.53	1496	2060	0	14430	
0	5979	-70009	-8932.76	-2465.6	0	5	-0.04	-0.13	0.84	4.48	1496	2060	0	14430	0.07
0	2216	-54336	-5648.69	-1407.17	0	2	-0.03	-0.1	0.89	4.5	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	585	SLE RA 21	0.05	0	585	246	SLE RA 21	0.05	0	585	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	585	SLE RA 1	0.05	0	585	585	SLE RA 1	0.05	0	585	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	585	SLE RA 1	0.05	0	585	585	SLE RA 1	0.05	0	585	SLE RA 1	0.0033	0	SLE RA 1	Si

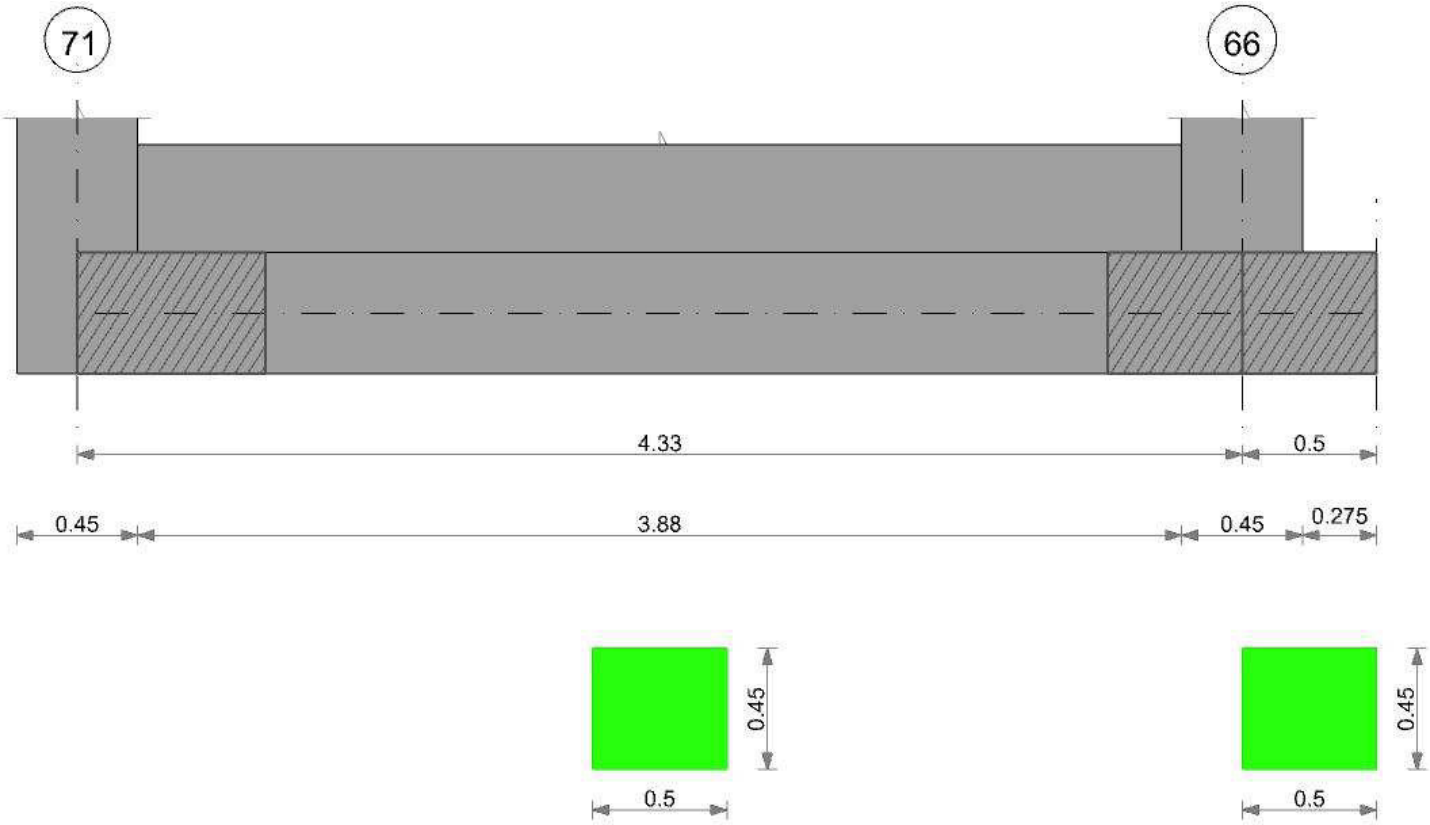
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	585	246	SLE RA 21	0.19	0	585	SLE RA 1	0.1	0	585	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	585	246	SLE RA 1	0.19	0	585	SLE RA 1	0.1	0	585	SLE RA 1	Si

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
Z	0.19	0	SLE RA 1	0.19	0	585	246	SLE RA 1	0.19	0	585	SLE RA 1	0.1	0	585	SLE RA 1	Si

CORDOLO 35

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

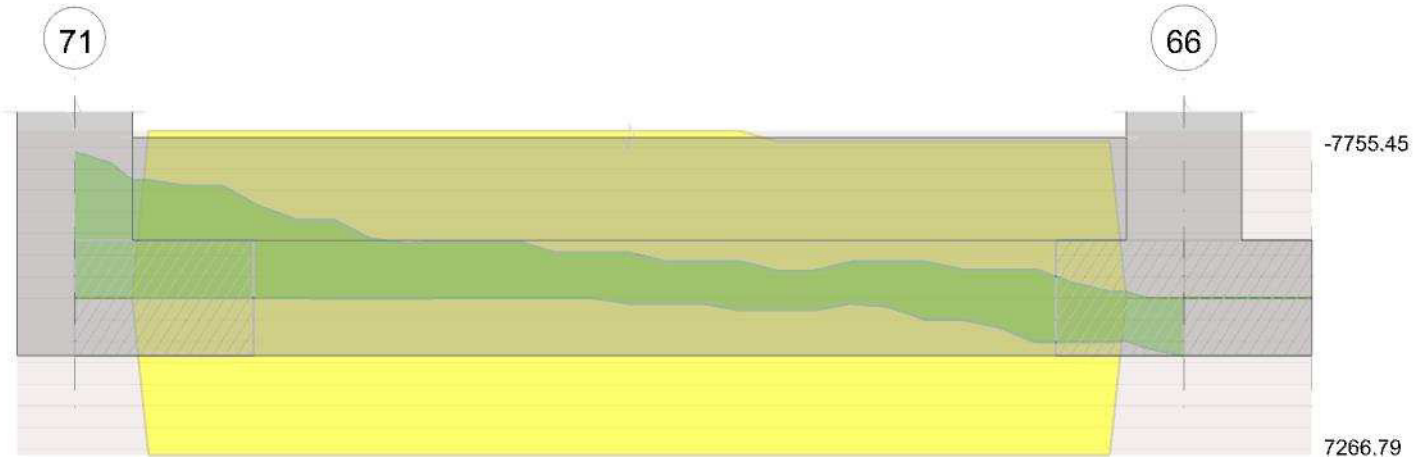
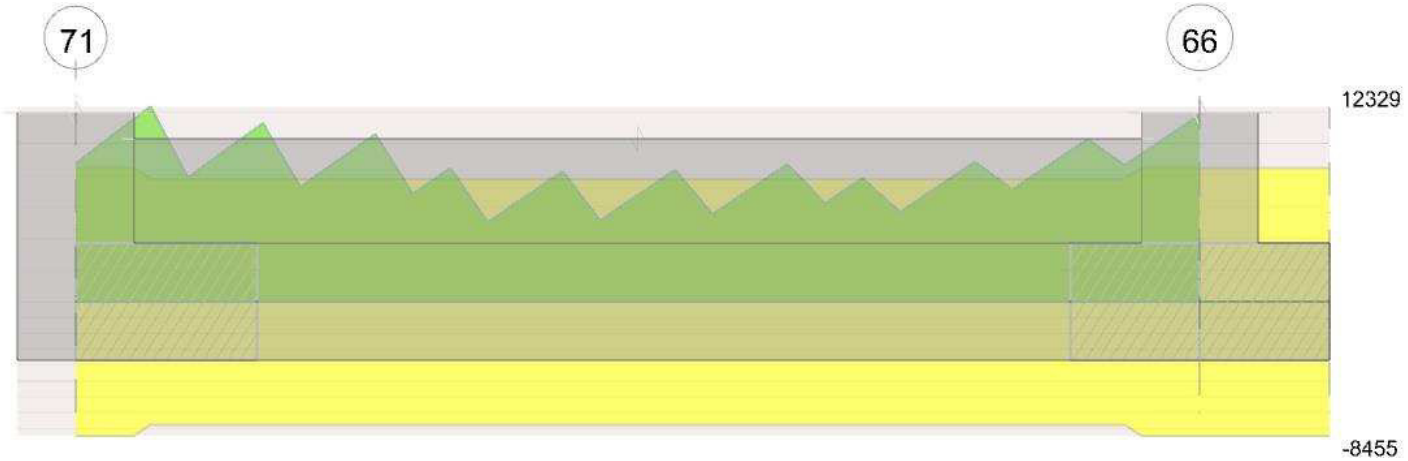


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 71 - 66, sezione R 50x45, aste 756, 755, 754, 753, 752, 751, 750, 749, 748, 747, 746

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2287	SLU 83	0.018	2820	7035	SLU 83	15877	Si
0.23	0.41	0.0002	2213	SLU 83	0.018	2820	6809	SLU 83	15877	Si
2.16	0.41	0.0002	1949	SLU 83	0.018	2820	5996	SLU 83	15877	Si
4.1	0.41	0.0002	1947	SLU 84	0.018	2820	5991	SLU 84	15877	Si
4.33	0.41	0.0002	1944	SLU 84	0.018	2820	5981	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1756	SLD 1	0.071	3173	5404	SLD 1	15877	Si
0.23	0.41	0.0002	1695	SLD 1	0.071	3173	5216	SLD 1	15877	Si
2.16	0.41	0.0002	1461	SLD 1	0.071	3173	4496	SLD 1	15877	Si
4.1	0.41	0.0002	1441	SLD 4	0.071	3173	4433	SLD 4	15877	Si
4.33	0.41	0.0002	1437	SLD 4	0.071	3173	4421	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1687	SLE RA 20	48814	1494000	605295	36000000	1540	SLE QP 2	44567	1120500	Si
0.23	0.41	0.00000177	1633	SLE RA 20	47236	1494000	585729	36000000	1490	SLE QP 2	43112	1120500	Si
2.16	0.41	0.00000177	1435	SLE RA 20	41523	1494000	514884	36000000	1306	SLE QP 2	37786	1120500	Si
4.1	0.41	0.00000177	1431	SLE RA 21	41415	1494000	513542	36000000	1298	SLE QP 2	37554	1120500	Si
4.33	0.41	0.00000177	1429	SLE RA 21	41337	1494000	512582	36000000	1295	SLE QP 2	37471	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.55	1.1	SLU 47	ST	LT	787	-560	-47457	1	-1	19	0	0	1.1	14435	966	14.94	Si
4.55	1.1	SLV 13	SIS	LT	-1593	-7961	-31641	-3	-14	19	0	0	1.1	9625	8118	1.19	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
756,755,754,753,752,751,750,749,748,747,746	4.55	1.1	SLU 83	ST	BT	2.3	210490	56986	3.69	Si
756,755,754,753,752,751,750,749,748,747,746	4.55	1.1	SLV 13	SIS	LT	2.3	118371	31641	3.74	Si
756,755,754,753,752,751,750,749,748,747,746	4.55	1.1	SLD 1	SIS	BT	2.3	200077	42991	4.65	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-640	-56986	413.74	-1773.04	0	-1	-0.03	0.01	1.09	4.49	1496	2060	0	14430	
0	-7961	-31641	3788.61	-1976.16	0	-14	-0.06	0.12	0.86	4.43	1496	2060	37	0	0.07
0	2537	-42991	-1121.75	-1998.32	0	3	-0.05	-0.03	1.05	4.46	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.15	1.15	0.92	1.16	1.27	1	0.59	0.58	0.44	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

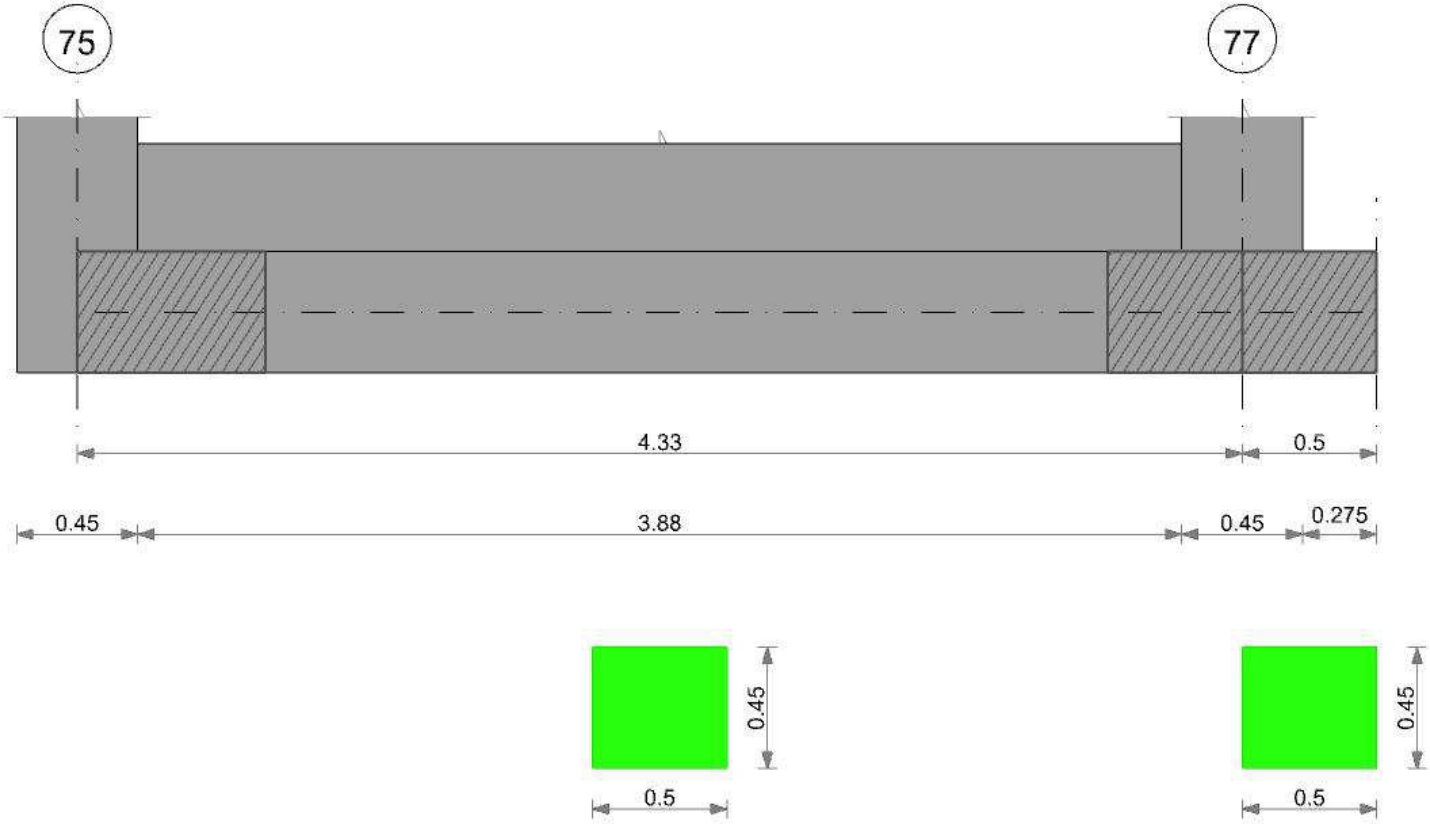
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	603	SLE RA 21	0.05	0.001	603	262	SLE RA 21	0.05	0	603	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	603	SLE RA 1	0.05	0	603	603	SLE RA 1	0.05	0	603	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	603	SLE RA 1	0.05	0	603	603	SLE RA 1	0.05	0	603	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	603	262	SLE RA 21	0.19	0	603	SLE RA 1	0.1	0	603	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	603	262	SLE RA 1	0.19	0	603	SLE RA 1	0.1	0	603	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	603	262	SLE RA 1	0.19	0	603	SLE RA 1	0.1	0	603	SLE RA 1	Si

CORDOLO 36

Geometria



Caratteristiche dei materiali

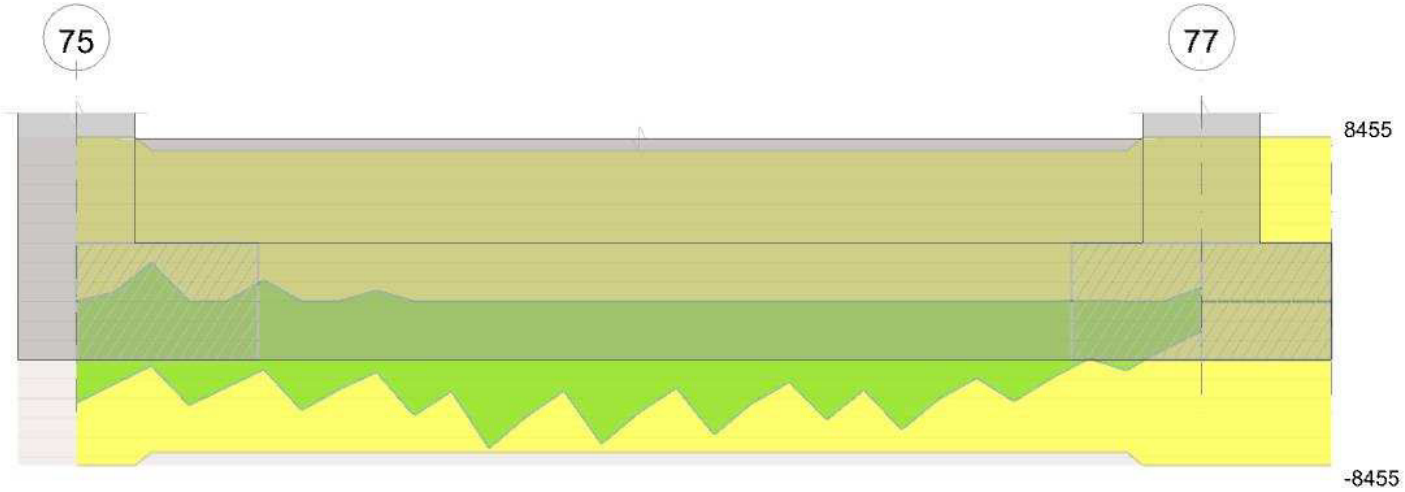
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 75 - 77, sezione R 50x45, aste 730, 729, 728, 727, 726, 725, 724, 723, 722, 721, 720

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2332	SLU 83	0.018	2820	7175	SLU 83	15877	Si
0.23	0.41	0.0002	2258	SLU 83	0.018	2820	6947	SLU 83	15877	Si
2.16	0.41	0.0002	1977	SLU 83	0.018	2820	6084	SLU 83	15877	Si
4.1	0.41	0.0002	1960	SLU 84	0.018	2820	6031	SLU 84	15877	Si
4.33	0.41	0.0002	1956	SLU 84	0.018	2820	6020	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1772	SLD 1	0.071	3173	5451	SLD 1	15877	Si
0.23	0.41	0.0002	1710	SLD 1	0.071	3173	5263	SLD 1	15877	Si
2.16	0.41	0.0002	1466	SLD 1	0.071	3173	4511	SLD 1	15877	Si
4.1	0.41	0.0002	1438	SLD 4	0.071	3173	4424	SLD 4	15877	Si
4.33	0.41	0.0002	1433	SLD 4	0.071	3173	4410	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	1721	SLE RA 20	49785	1494000	617330	36000000	1571	SLE QP 2	45448	1120500	Si
0.23	0.41	0.00000177	1666	SLE RA 20	48197	1494000	597642	36000000	1520	SLE QP 2	43983	1120500	Si
2.16	0.41	0.00000177	1456	SLE RA 20	42134	1494000	522457	36000000	1325	SLE QP 2	38334	1120500	Si
4.1	0.41	0.00000177	1441	SLE RA 21	41688	1494000	516935	36000000	1306	SLE QP 2	37788	1120500	Si
4.33	0.41	0.00000177	1438	SLE RA 21	41602	1494000	515864	36000000	1303	SLE QP 2	37697	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.55	1.1	SLU 47	ST	LT	875	-560	-47966	1	-1	19	0	0	1.1	14590	1038	14.05	Si
4.55	1.1	SLV 13	SIS	LT	-1320	-7961	-32708	-2	-14	19	0	0	1.1	9949	8069	1.23	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
730,729,728,727,726,725,724,723,722,721,720	4.55	1.1	SLU 83	ST	BT	2.3	210169	57634	3.65	Si
730,729,728,727,726,725,724,723,722,721,720	4.55	1.1	SLV 13	SIS	LT	2.3	122679	32708	3.75	Si
730,729,728,727,726,725,724,723,722,721,720	4.55	1.1	SLD 1	SIS	BT	2.3	199764	43100	4.63	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-640	-57634	413.74	-2018.16	0	-1	-0.04	0.01	1.09	4.48	1496	2060	0	14430	
0	-7961	-32708	3788.61	-2095.58	0	-14	-0.06	0.12	0.87	4.43	1496	2060	37	0	0.07
0	2537	-43100	-1121.75	-2171	0	3	-0.05	-0.03	1.05	4.45	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.15	1.15	0.92	1.16	1.27	1	0.6	0.59	0.45	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

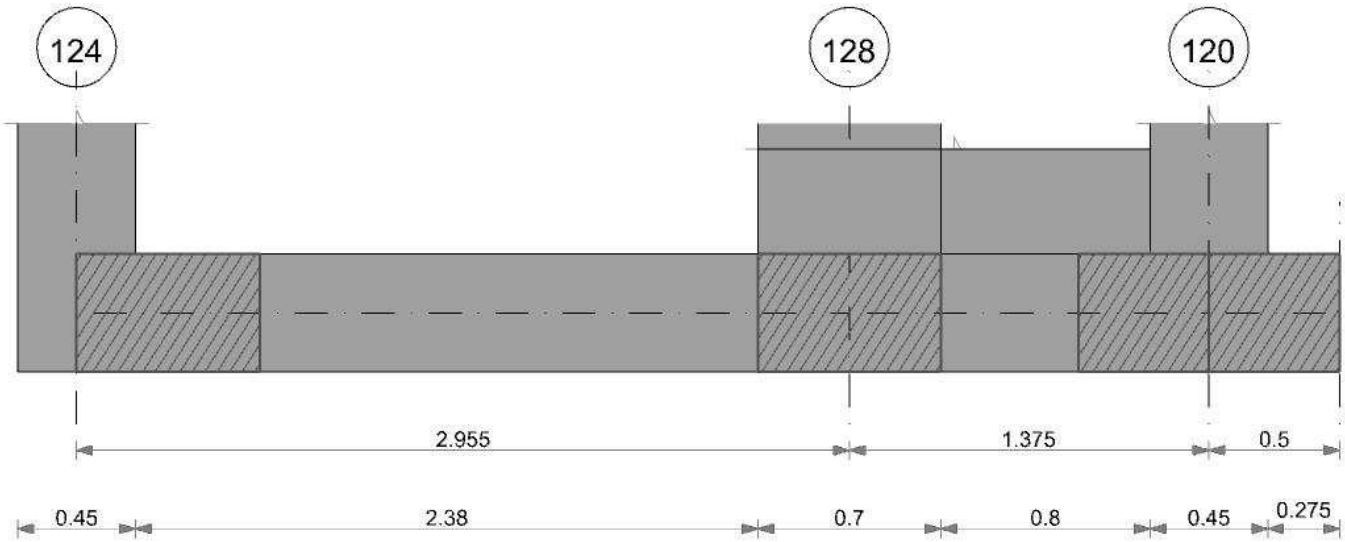
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0.001	606	SLE RA 21	0.05	0.001	606	264	SLE RA 21	0.05	0	606	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	606	SLE RA 1	0.05	0	606	606	SLE RA 1	0.05	0	606	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	606	SLE RA 1	0.05	0	606	606	SLE RA 1	0.05	0	606	SLE RA 1	0.0033	0	SLE RA 1	Si

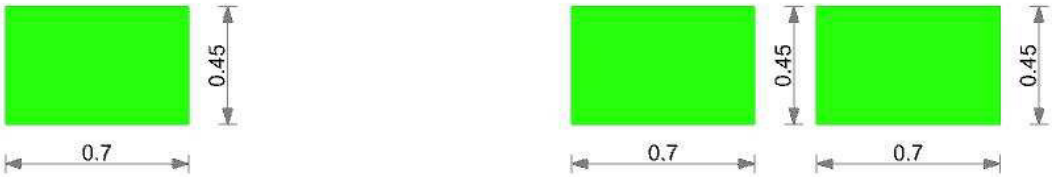
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	606	264	SLE RA 21	0.19	0	606	SLE RA 1	0.1	0	606	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	606	264	SLE RA 1	0.19	0	606	SLE RA 1	0.1	0	606	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	606	264	SLE RA 1	0.19	0	606	SLE RA 1	0.1	0	606	SLE RA 1	Si

CORDOLO 37

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

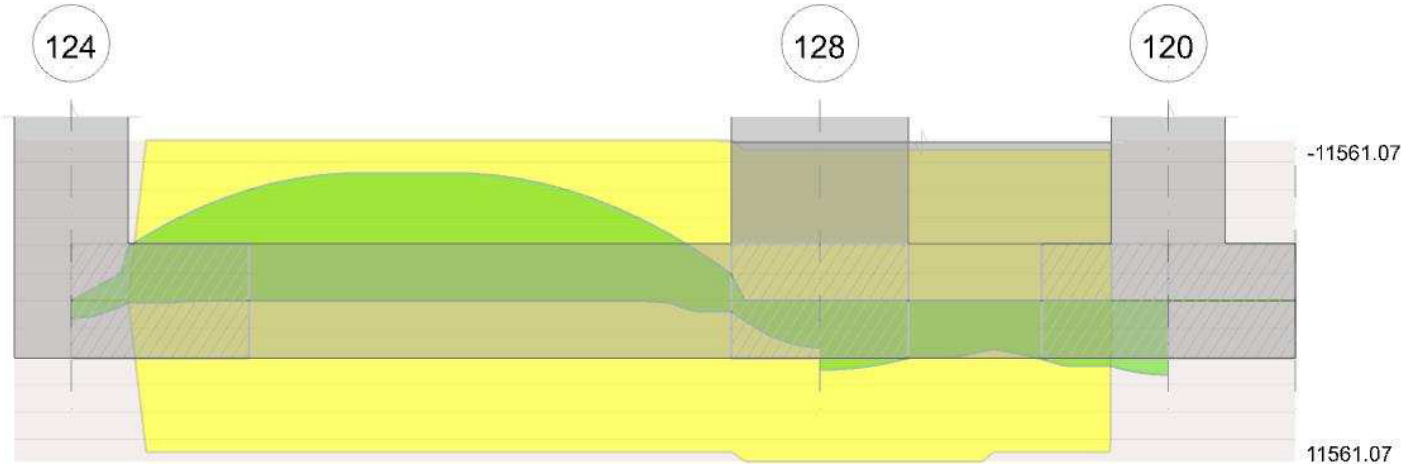
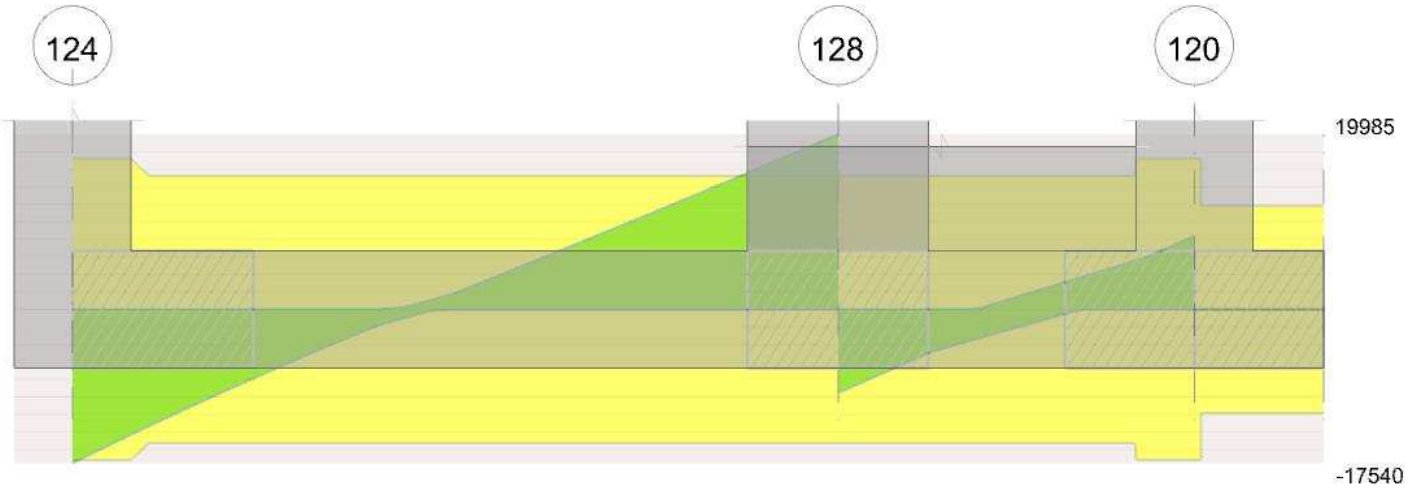


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 709, 708

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.48	0.000763	0.052	0.000763	0.052							-9079.65	SLU 83	-9206.42	-11561.07	0.116	1.26	Si
2.61	0.000763	0.052	0.000763	0.052	661.79	SLU 84	661.79	11561.07	0.116	17.47	357.63	SLU 1	-1916.64	-11561.07	0.116	6.03	Si
2.96	0.000763	0.052	0.000763	0.052	6873.26	SLU 84	3380.68	11561.07	0.116	3.42							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.48	0.000763	0.052	0.000763	0.052							-6769.88	SLV 5	-6927.75	-10870.29	0.203	1.57	Si
2.61	0.000763	0.052	0.000763	0.052	756.25	SLV 4	756.25	10870.29	0.203	14.37	43.07	SLV 13	-1693.58	-10870.29	0.203	6.42	Si
2.96	0.000763	0.052	0.000763	0.052	5019.33	SLV 4	2620.98	10870.29	0.203	4.15							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1
Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
1.48	0.000763	0.052	0.000763	0.052							-6414.94	SLD 5	-6530.49	-10870.29	0.203	1.66	Si
2.61	0.000763	0.052	0.000763	0.052	553.05	SLD 4	553.05	10870.29	0.203	19.66	246.27	SLD 13	-1489.98	-10870.29	0.203	7.3	Si
2.96	0.000763	0.052	0.000763	0.052	4763.01	SLD 4	2395.28	10870.29	0.203	4.54							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-17540	SLU 83	-17540	-11837	-100005	-17220	-17220	1	0.98	Si
0.23	0.0000109	0	0	-14290	SLU 83	-14290	-11837	-100005	-17220	-17220	1	1.21	Si
1.48	0.0000109	0.000763	0	1838	SLU 83	1838	10870	88449	15230	15230	1	8.29	Si
2.96	0.0000109	0.000763	0	19985	SLU 83	19985	10870	88449	15230	15230	1	0.76	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-12662	SLV 13	-12662	-11837	-100005	-17220	-17220	1	1.36	Si
0.23	0.0000109	0	0	-10408	SLV 13	-10408	-11837	-100005	-17220	-17220	1	1.65	Si
1.48	0.0000109	0.000763	0	1792	SLV 2	1792	10870	88449	15230	15230	1	8.5	Si
2.61	0.0000109	0.000763	0	10832	SLV 1	10832	10870	88449	15230	15230	1	1.41	Si
2.96	0.0000109	0.000763	0	13791	SLV 1	13791	10870	88449	15230	15230	1	1.1	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000109	0	0	-12197	SLD 13	-12197	-11837	-100005	-17220	-17220	1	1.41	Si
0.23	0.0000109	0	0	-9976	SLD 13	-9976	-11837	-100005	-17220	-17220	1	1.73	Si
1.48	0.0000109	0.000763	0	1468	SLD 2	1468	10870	88449	15230	15230	1	10.38	Si
2.61	0.0000109	0.000763	0	10604	SLD 1	10604	10870	88449	15230	15230	1	1.44	Si
2.96	0.0000109	0.000763	0	13577	SLD 1	13577	10870	88449	15230	15230	1	1.12	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	1485.97	21	54.74	2317	1494000	0	36000000	1366.56	2	42.74	1809	1120500			Si
0.23	-1157.71	20	-2884.83	-122109	1494000	0	36000000	-1048.04	2	-2627.38	-111212	1120500			Si
1.48	-6710.8	20	-6804.84	255136	1494000	3827043	36000000	-6135.92	2	-6218.68	233159	1120500			Si
2.61	485.1	21	485.1	18188	1494000	272820	36000000	399.66	2	399.66	14984	1120500			Si
2.96	5071.81	21	2492.97	93470	1494000	1402049	36000000	4571.03	2	2225.61	83446	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 124 - 128, sezione R 70x45, aste 709, 708

Campata 2 tra i fili 128 - 120, sezione R 70x45, asta 707

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	3326	SLU 84	0.031	5754	7827	SLU 84	15877	Si
0.35	0.41	0.0004	3368	SLU 84	0.031	5754	7925	SLU 84	15877	Si
0.69	0.41	0.0004	3377	SLU 84	0.031	5754	7945	SLU 84	15877	Si
1.15	0.41	0.0004	3349	SLU 84	0.031	5754	7880	SLU 84	15877	Si
1.37	0.41	0.0004	3317	SLU 84	0.031	5754	7805	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	2250	SLD 15	0.101	6427	5295	SLD 15	15877	Si
0.35	0.41	0.0004	2284	SLD 11	0.101	6427	5373	SLD 11	15877	Si
0.69	0.41	0.0004	2294	SLD 11	0.101	6427	5397	SLD 11	15877	Si
1.15	0.41	0.0004	2276	SLD 11	0.101	6427	5356	SLD 11	15877	Si
1.37	0.41	0.0004	2253	SLD 11	0.101	6427	5301	SLD 11	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000362	2447	SLE RA 21	69078	1494000	856573	36000000	2209	SLE QP 2	62360	1120500	Si
0.35	0.41	0.00000362	2477	SLE RA 21	69932	1494000	867154	36000000	2236	SLE QP 2	63125	1120500	Si
0.69	0.41	0.00000362	2483	SLE RA 21	70093	1494000	869159	36000000	2241	SLE QP 2	63264	1120500	Si
1.15	0.41	0.00000362	2461	SLE RA 21	69493	1494000	861715	36000000	2221	SLE QP 2	62708	1120500	Si
1.37	0.41	0.00000362	2438	SLE RA 21	68822	1494000	853393	36000000	2199	SLE QP 2	62091	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.55	1.3	SLU 47	ST	LT	272	-492	-54308	0	-1	19	0	0	1.1	16519	562	29.38	Si
4.55	1.3	SLV 15	SIS	LT	1556	-8821	-46085	2	-11	19	0	0	1.1	14018	8958	1.56	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
709,708,707	4.55	1.3	SLU 83	ST	BT	2.3	243750	65557	3.72	Si
709,708,707	4.55	1.3	SLV 13	SIS	LT	2.3	202531	46173	4.39	Si
709,708,707	4.55	1.3	SLD 13	SIS	BT	2.3	225811	45543	4.96	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-568	-65557	753.27	-670.17	0	0	-0.01	0.01	1.28	4.53	1496	2060	0	14430	
0	-8849	-46173	4366.1	-1338.58	0	-11	-0.03	0.09	1.11	4.5	1496	2060	37	0	0.07
0	-4020	-45543	2162.72	-898.44	0	-5	-0.02	0.05	1.21	4.52	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.06	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
43	56	66	1.19	1.19	0.9	1.14	1.23	1	0.68	0.67	0.55	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
1	5	0	0	0.05	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

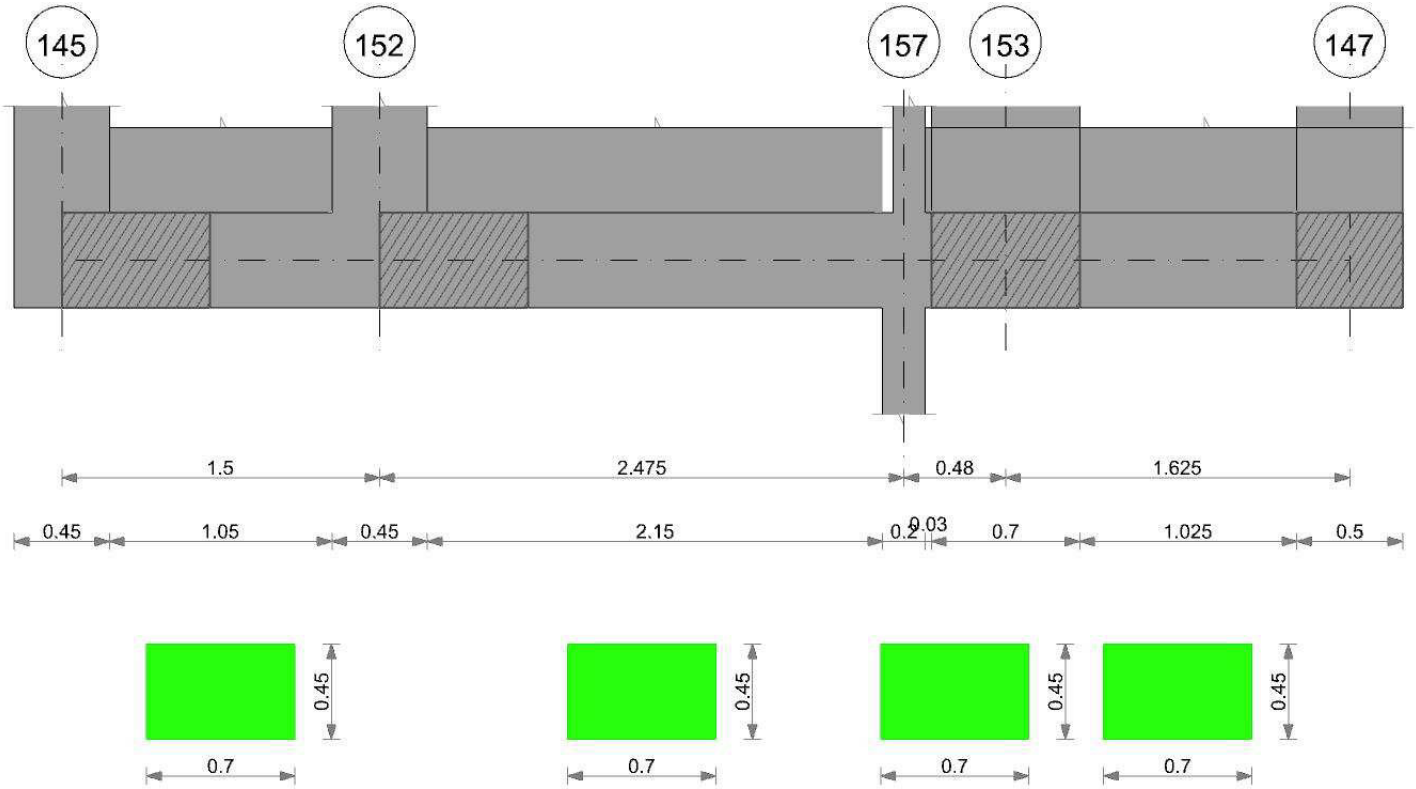
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	619	SLE RA 21	0.05	0.001	619	276	SLE RA 21	0.05	0	477	SLE RA 21	0.0033	0	SLE RA 1	Si
D	0.05	0	619	SLE RA 1	0.05	0	619	619	SLE RA 1	0.05	0	477	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	619	SLE RA 1	0.05	0	619	619	SLE RA 1	0.05	0	477	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	477	276	SLE RA 21	0.19	0	477	SLE RA 21	0.1	0	619	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	619	477	SLE RA 1	0.19	0	619	SLE RA 1	0.1	0	477	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	619	477	SLE RA 1	0.19	0	619	SLE RA 1	0.1	0	477	SLE RA 1	Si

CORDOLO 38

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

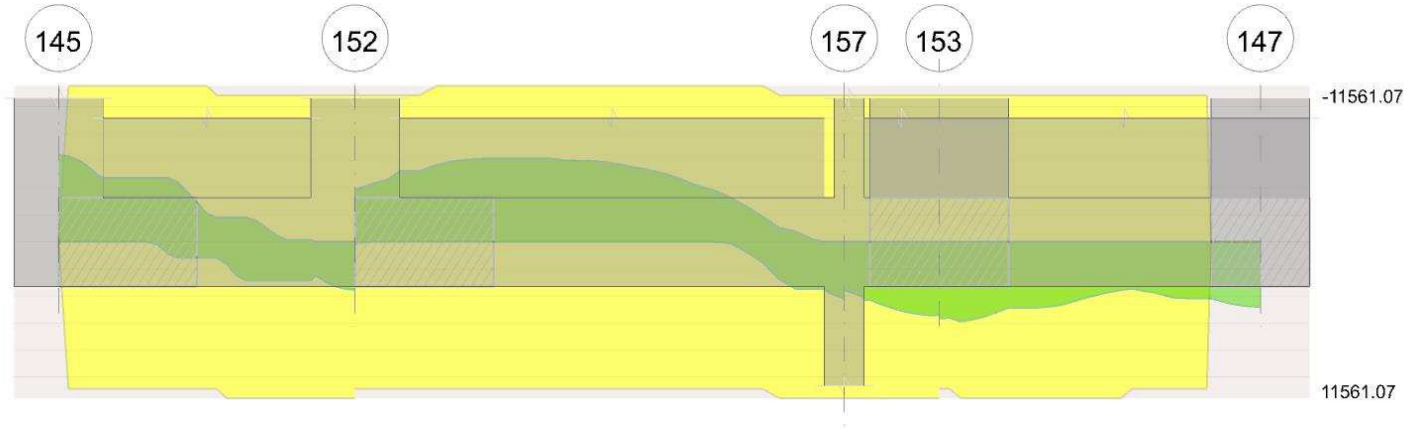
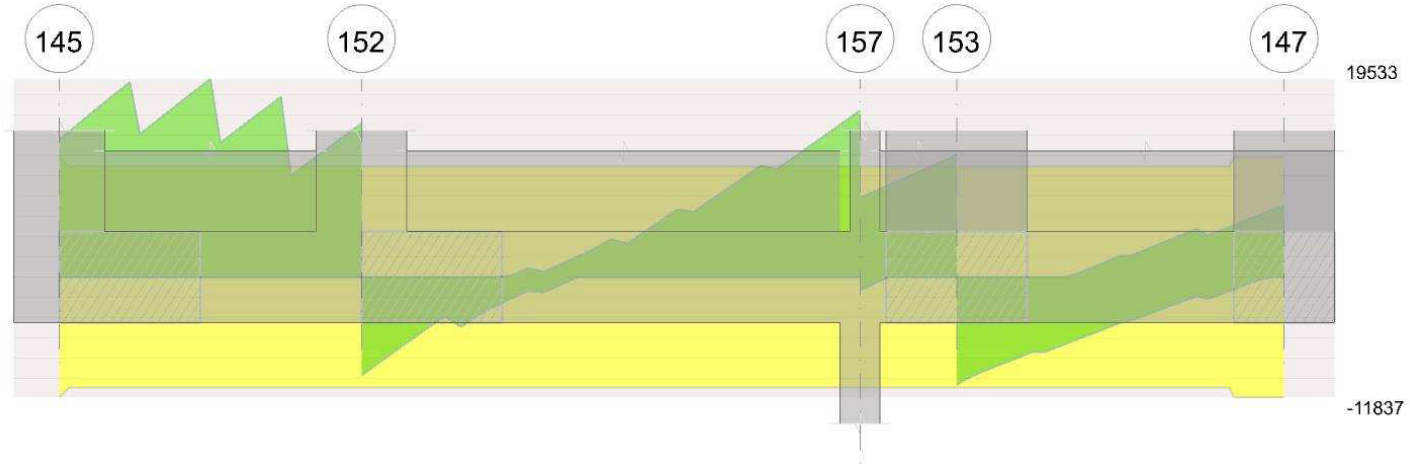


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 145 - 152, sezione R 70x45, aste 687, 686, 685, 684

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	4331	SLU 83	0.043	8001	10190	SLU 83	15877	Si
0.23	0.41	0.0005	4224	SLU 83	0.043	8001	9940	SLU 83	15877	Si
0.75	0.41	0.0005	4020	SLU 83	0.043	8001	9459	SLU 83	15877	Si
1.28	0.41	0.0005	3832	SLU 83	0.043	8001	9017	SLU 83	15877	Si
1.5	0.41	0.0005	3743	SLU 83	0.043	8001	8807	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3107	SLD 10	0.119	8913	7309	SLD 10	15877	Si
0.23	0.41	0.0005	3016	SLD 10	0.119	8913	7097	SLD 10	15877	Si
0.75	0.41	0.0005	2837	SLD 10	0.119	8913	6676	SLD 10	15877	Si
1.28	0.41	0.0005	2681	SLD 6	0.119	8913	6307	SLD 6	15877	Si
1.5	0.41	0.0005	2609	SLD 6	0.119	8913	6138	SLD 6	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	3198	SLE RA 20	88622	1494000	1098915	36000000	2910	SLE QP 2	80650	1120500	Si
0.23	0.41	0.00000506	3119	SLE RA 20	86428	1494000	1071706	36000000	2837	SLE QP 2	78620	1120500	Si
0.75	0.41	0.00000506	2967	SLE RA 20	82212	1494000	1019429	36000000	2696	SLE QP 2	74711	1120500	Si
1.28	0.41	0.00000506	2827	SLE RA 20	78334	1494000	971345	36000000	2566	SLE QP 2	71114	1120500	Si
1.5	0.41	0.00000506	2760	SLE RA 20	76499	1494000	948589	36000000	2505	SLE QP 2	69415	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 2 tra i fili 152 - 157, sezione R 70x45, aste 683, 682, 681, 680, 679, 678

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3743	SLU 83	0.043	8001	8807	SLU 83	15877	Si
0.23	0.41	0.0005	3653	SLU 83	0.043	8001	8596	SLU 83	15877	Si
1.24	0.41	0.0005	3462	SLU 83	0.043	8001	8145	SLU 83	15877	Si
2.37	0.41	0.0005	3620	SLU 83	0.043	8001	8518	SLU 83	15877	Si
2.47	0.41	0.0005	3636	SLU 83	0.043	8001	8554	SLU 83	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2609	SLD 6	0.119	8913	6138	SLD 6	15877	Si
0.23	0.41	0.0005	2537	SLD 6	0.119	8913	5968	SLD 6	15877	Si
1.24	0.41	0.0005	2364	SLD 6	0.119	8913	5562	SLD 6	15877	Si
2.37	0.41	0.0005	2445	SLD 2	0.119	8913	5753	SLD 2	15877	Si
2.47	0.41	0.0005	2453	SLD 2	0.119	8913	5773	SLD 2	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2760	SLE RA 20	76499	1494000	948589	36000000	2505	SLE QP 2	69415	1120500	Si
0.23	0.41	0.00000506	2694	SLE RA 20	74654	1494000	925715	36000000	2443	SLE QP 2	67708	1120500	Si
1.24	0.41	0.00000506	2551	SLE RA 20	70685	1494000	876492	36000000	2309	SLE QP 2	63996	1120500	Si
2.37	0.41	0.00000506	2666	SLE RA 20	73892	1494000	916264	36000000	2412	SLE QP 2	66842	1120500	Si
2.47	0.41	0.00000506	2678	SLE RA 20	74202	1494000	920100	36000000	2422	SLE QP 2	67118	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 3 tra i fili 157 - 153, sezione R 70x45, asta 677

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3636	SLU 83	0.043	8001	8554	SLU 83	15877	Si

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.1	0.41	0.0005	3649	SLU 83	0.043	8001	8587	SLU 83	15877	Si
0.13	0.41	0.0005	3653	SLU 83	0.043	8001	8596	SLU 83	15877	Si
0.24	0.41	0.0005	3665	SLU 84	0.043	8001	8624	SLU 84	15877	Si
0.48	0.41	0.0005	3678	SLU 84	0.043	8001	8654	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2453	SLD 2	0.119	8913	5773	SLD 2	15877	Si
0.1	0.41	0.0005	2461	SLD 2	0.119	8913	5790	SLD 2	15877	Si
0.13	0.41	0.0005	2463	SLD 2	0.119	8913	5795	SLD 2	15877	Si
0.24	0.41	0.0005	2470	SLD 2	0.119	8913	5811	SLD 2	15877	Si
0.48	0.41	0.0005	2477	SLD 4	0.119	8913	5828	SLD 4	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2678	SLE RA 20	74202	1494000	920100	36000000	2422	SLE QP 2	67118	1120500	Si
0.1	0.41	0.00000506	2688	SLE RA 20	74480	1494000	923552	36000000	2431	SLE QP 2	67365	1120500	Si
0.13	0.41	0.00000506	2690	SLE RA 20	74556	1494000	924498	36000000	2433	SLE QP 2	67433	1120500	Si
0.24	0.41	0.00000506	2699	SLE RA 21	74796	1494000	927466	36000000	2441	SLE QP 2	67644	1120500	Si
0.48	0.41	0.00000506	2708	SLE RA 21	75046	1494000	930575	36000000	2449	SLE QP 2	67859	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Campata 4 tra i fili 153 - 147, sezione R 70x45, aste 676, 675, 674, 673

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	3678	SLU 84	0.043	8001	8654	SLU 84	15877	Si
0.35	0.41	0.0005	3662	SLU 84	0.043	8001	8616	SLU 84	15877	Si
0.81	0.41	0.0005	3598	SLU 84	0.043	8001	8466	SLU 84	15877	Si
1.37	0.41	0.0005	3472	SLU 84	0.043	8001	8170	SLU 84	15877	Si
1.62	0.41	0.0005	3401	SLU 84	0.043	8001	8002	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	2477	SLD 4	0.119	8913	5828	SLD 4	15877	Si
0.35	0.41	0.0005	2474	SLD 7	0.119	8913	5820	SLD 7	15877	Si
0.81	0.41	0.0005	2447	SLD 7	0.119	8913	5757	SLD 7	15877	Si
1.37	0.41	0.0005	2382	SLD 7	0.119	8913	5604	SLD 7	15877	Si
1.62	0.41	0.0005	2341	SLD 7	0.119	8913	5509	SLD 7	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000506	2708	SLE RA 21	75046	1494000	930575	36000000	2449	SLE QP 2	67859	1120500	Si
0.35	0.41	0.00000506	2696	SLE RA 21	74708	1494000	926384	36000000	2437	SLE QP 2	67535	1120500	Si
0.81	0.41	0.00000506	2648	SLE RA 21	73387	1494000	910001	36000000	2393	SLE QP 2	66314	1120500	Si
1.37	0.41	0.00000506	2554	SLE RA 21	70790	1494000	877797	36000000	2307	SLE QP 2	63930	1120500	Si
1.62	0.41	0.00000506	2501	SLE RA 21	69320	1494000	859564	36000000	2258	SLE QP 2	62582	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche - Cedimenti assoluti e differenziali

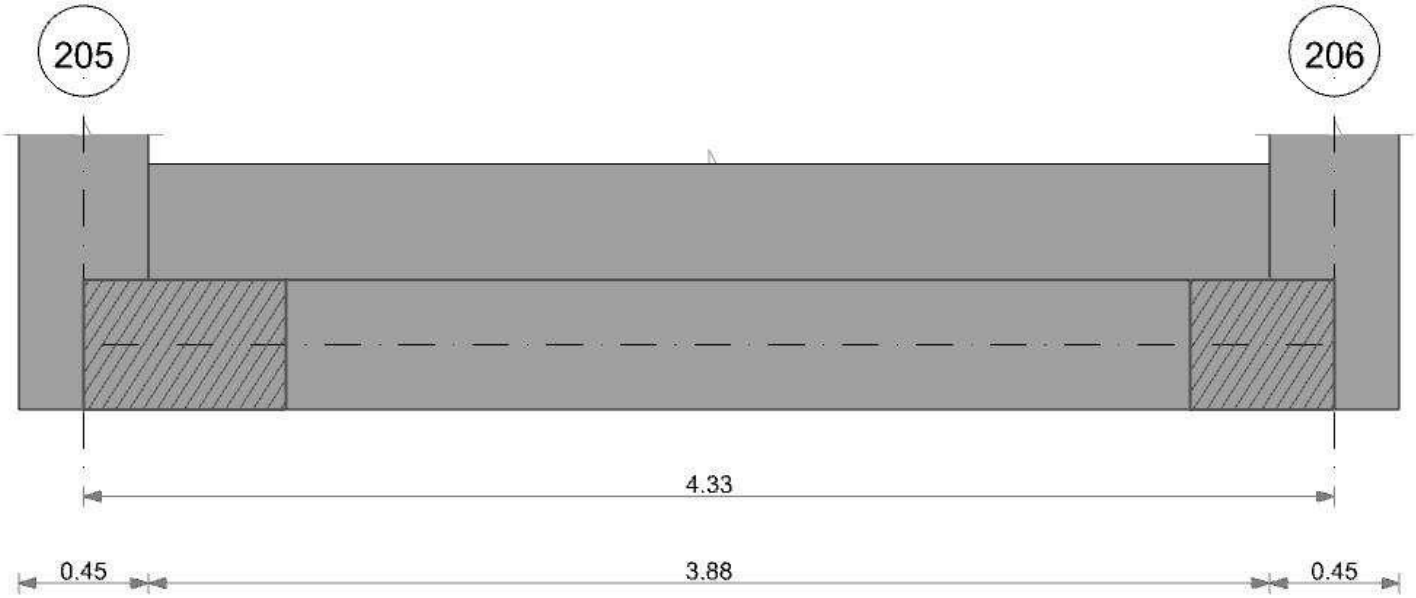
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	481	SLE RA 20	0.05	0.002	481	151	SLE RA 21	0.05	0.001	461	SLE RA 20	0.0033	0	SLE RA 2	Si
D	0.05	0	625	SLE RA 1	0.05	0	625	625	SLE RA 1	0.05	0	481	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	625	SLE RA 1	0.05	0	625	625	SLE RA 1	0.05	0	481	SLE RA 1	0.0033	0	SLE RA 1	Si

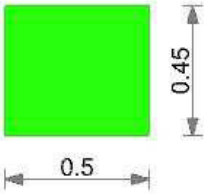
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.02	SLE RA 21	0.19	0.02	279	151	SLE RA 20	0.19	0.02	461	SLE RA 20	0.1	0	279	SLE RA 2	Si
D	0.19	0	SLE RA 1	0.19	0	625	481	SLE RA 1	0.19	0	625	SLE RA 1	0.1	0	481	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	625	481	SLE RA 1	0.19	0	625	SLE RA 1	0.1	0	481	SLE RA 1	Si

CORDOLO 39

Geometria





Caratteristiche dei materiali

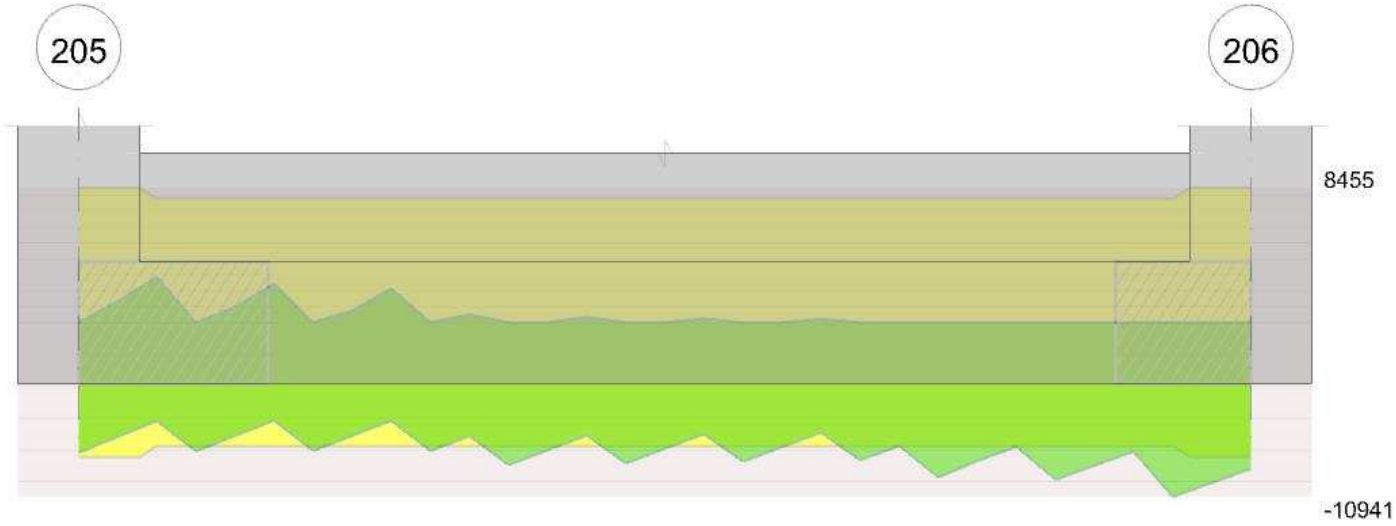
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 205 - 206, sezione R 50x45, aste 436, 435, 434, 433, 432, 431, 430, 429, 428, 427, 426

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2361	SLU 83	0.017	2687	7263	SLU 83	15877	Si
0.23	0.41	0.0002	2291	SLU 83	0.017	2687	7049	SLU 83	15877	Si
2.16	0.41	0.0002	2015	SLU 84	0.017	2687	6201	SLU 84	15877	Si
4.1	0.41	0.0002	1951	SLU 84	0.017	2687	6002	SLU 84	15877	Si
4.33	0.41	0.0002	1959	SLU 84	0.017	2687	6025	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1785	SLD 14	0.07	3025	5493	SLD 14	15877	Si
0.23	0.41	0.0002	1726	SLD 14	0.07	3025	5310	SLD 14	15877	Si
2.16	0.41	0.0002	1474	SLD 14	0.07	3025	4536	SLD 14	15877	Si
4.1	0.41	0.0002	1426	SLD 15	0.07	3025	4387	SLD 15	15877	Si
4.33	0.41	0.0002	1435	SLD 15	0.07	3025	4414	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1742	SLE RA 20	50450	1494000	625576	36000000	1590	SLE QP 2	46040	1120500	Si
0.23	0.41	0.00000168	1690	SLE RA 20	48950	1494000	606981	36000000	1542	SLE QP 2	44656	1120500	Si
2.16	0.41	0.00000168	1484	SLE RA 21	42993	1494000	533114	36000000	1350	SLE QP 2	39109	1120500	Si
4.1	0.41	0.00000168	1435	SLE RA 21	41559	1494000	515330	36000000	1301	SLE QP 2	37685	1120500	Si
4.33	0.41	0.00000168	1440	SLE RA 21	41711	1494000	517217	36000000	1305	SLE QP 2	37812	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.78	1.1	SLU 47	ST	LT	454	397	-48633	1	0	19	0	0	1.1	14793	604	24.51	Si
4.78	1.1	SLV 2	SIS	LT	-1557	7807	-34005	-3	13	19	0	0	1.1	10344	7960	1.3	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
436,435,434,433,432,431,430,429,428,427,426	4.78	1.1	SLU 84	ST	BT	2.3	219966	58408	3.77	Si
436,435,434,433,432,431,430,429,428,427,426	4.78	1.1	SLV 13	SIS	BT	2.3	187284	47029	3.98	Si
436,435,434,433,432,431,430,429,428,427,426	4.78	1.1	SLD 14	SIS	BT	2.3	208283	43321	4.81	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	450	-58408	-349.37	-2715.01	0	0	-0.05	-0.01	1.09	4.69	1496	2060	0	14430	
0	-7035	-47029	3165.36	-3264.23	0	-9	-0.07	0.07	0.97	4.64	1496	2060	0	14430	0.07
0	-2648	-43321	1137.56	-2737.57	0	-3	-0.06	0.03	1.05	4.65	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

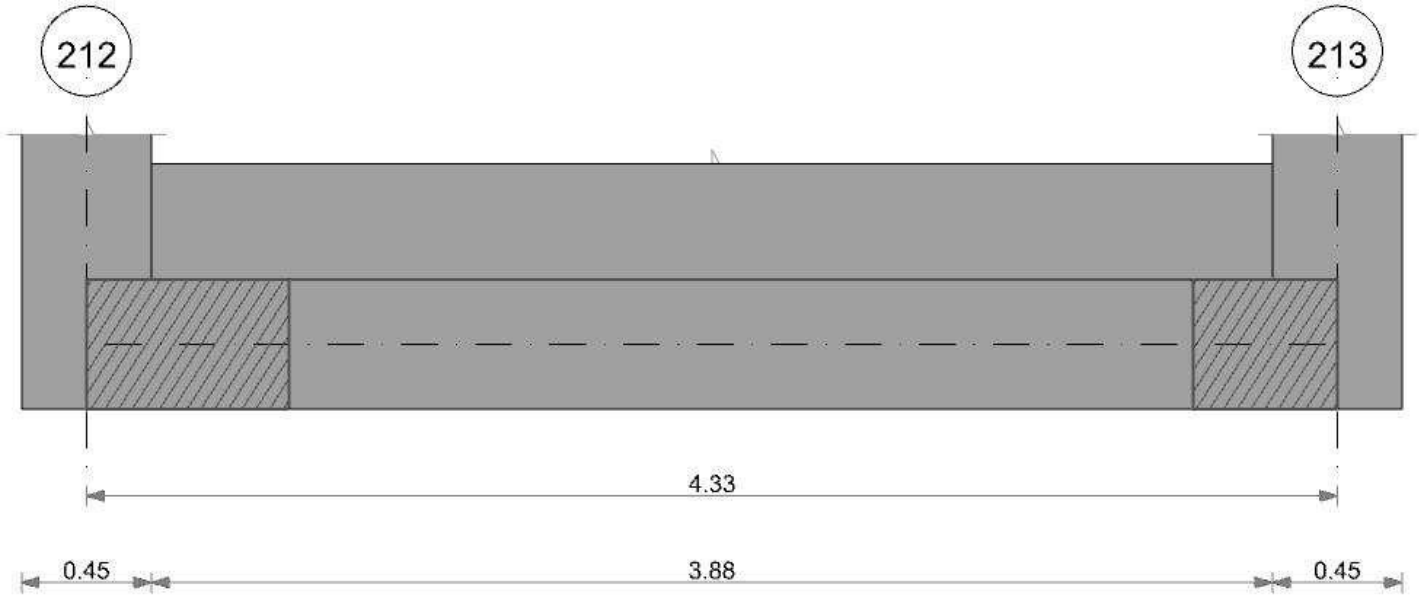
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	639	SLE RA 21	0.05	0.001	639	294	SLE RA 21	0.05	0	639	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	639	SLE RA 1	0.05	0	639	639	SLE RA 1	0.05	0	639	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	639	SLE RA 1	0.05	0	639	639	SLE RA 1	0.05	0	639	SLE RA 1	0.0033	0	SLE RA 1	Si

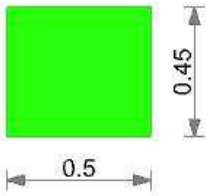
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	639	294	SLE RA 21	0.19	0	639	SLE RA 1	0.1	0	639	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	639	294	SLE RA 1	0.19	0	639	SLE RA 1	0.1	0	639	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	639	294	SLE RA 1	0.19	0	639	SLE RA 1	0.1	0	639	SLE RA 1	Si

CORDOLO 40

Geometria





Caratteristiche dei materiali

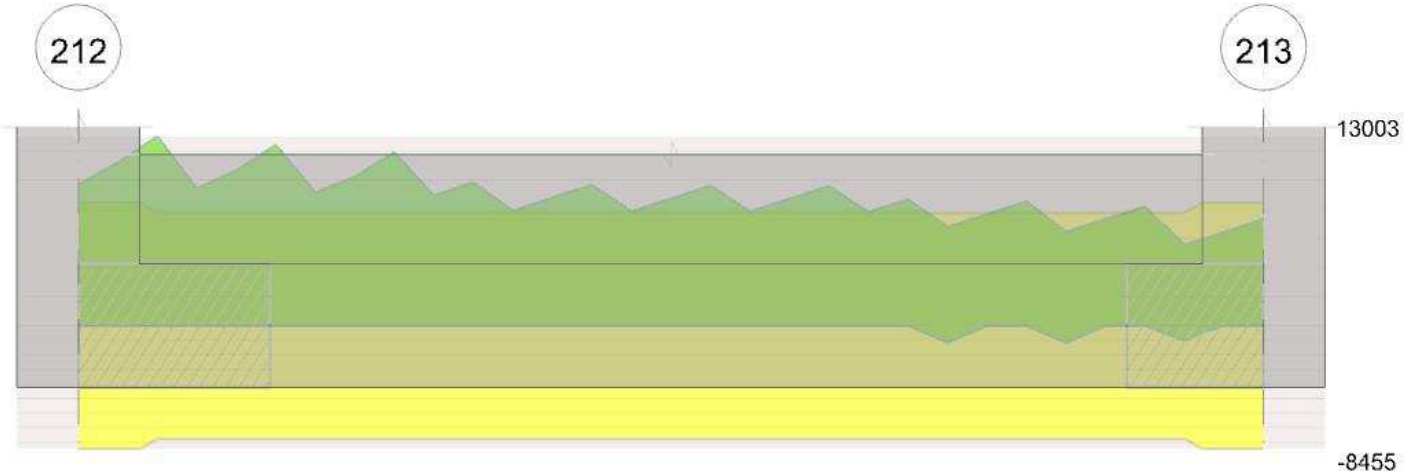
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 212 - 213, sezione R 50x45, aste 653, 652, 651, 650, 649, 648, 647, 646, 645, 644, 643

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2307	SLU 83	0.017	2687	7099	SLU 83	15877	Si
0.23	0.41	0.0002	2237	SLU 83	0.017	2687	6886	SLU 83	15877	Si
2.16	0.41	0.0002	1980	SLU 84	0.017	2687	6095	SLU 84	15877	Si
4.1	0.41	0.0002	1933	SLU 84	0.017	2687	5951	SLU 84	15877	Si
4.33	0.41	0.0002	1941	SLU 84	0.017	2687	5975	SLU 84	15877	Si

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1762	SLD 14	0.07	3025	5422	SLD 14	15877	Si
0.23	0.41	0.0002	1702	SLD 14	0.07	3025	5240	SLD 14	15877	Si
2.16	0.41	0.0002	1461	SLD 14	0.07	3025	4496	SLD 14	15877	Si
4.1	0.41	0.0002	1418	SLD 15	0.07	3025	4364	SLD 15	15877	Si
4.33	0.41	0.0002	1427	SLD 15	0.07	3025	4392	SLD 15	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000168	1702	SLE RA 20	49289	1494000	611187	36000000	1553	SLE QP 2	44980	1120500	Si
0.23	0.41	0.00000168	1650	SLE RA 20	47800	1494000	592724	36000000	1506	SLE QP 2	43606	1120500	Si
2.16	0.41	0.00000168	1458	SLE RA 21	42238	1494000	523748	36000000	1327	SLE QP 2	38423	1120500	Si
4.1	0.41	0.00000168	1422	SLE RA 21	41173	1494000	510547	36000000	1289	SLE QP 2	37339	1120500	Si
4.33	0.41	0.00000168	1427	SLE RA 21	41334	1494000	512540	36000000	1294	SLE QP 2	37474	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.78	1.1	SLU 47	ST	LT	473	397	-48011	1	0	19	0	0	1.1	14604	617	23.65	Si
4.78	1.1	SLV 2	SIS	LT	-1795	7807	-33102	-3	13	19	0	0	1.1	10069	8010	1.26	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
653,652,651,650,649,648,647,646,645,644,643	4.78	1.1	SLU 84	ST	BT	2.3	220425	57650	3.82	Si
653,652,651,650,649,648,647,646,645,644,643	4.78	1.1	SLV 14	SIS	BT	2.3	188788	47328	3.99	Si
653,652,651,650,649,648,647,646,645,644,643	4.78	1.1	SLD 14	SIS	BT	2.3	208609	43034	4.85	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	450	-57650	-349.37	-2367.38	0	0	-0.04	-0.01	1.09	4.7	1496	2060	0	14430	
0	-6620	-47328	2985.1	-3619.84	0	-8	-0.08	0.06	0.97	4.63	1496	2060	0	14430	0.07
0	-2648	-43034	1137.56	-2522.9	0	-4	-0.06	0.03	1.05	4.66	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Nγ	Sq	Sc	Sγ	Dq	Dc	Dγ	Iq	Ic	Iγ	Bq	Bc	Bγ	Gq	Gc	Gγ	Pq	Pc	Pγ	Eq	Ec	Eγ
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

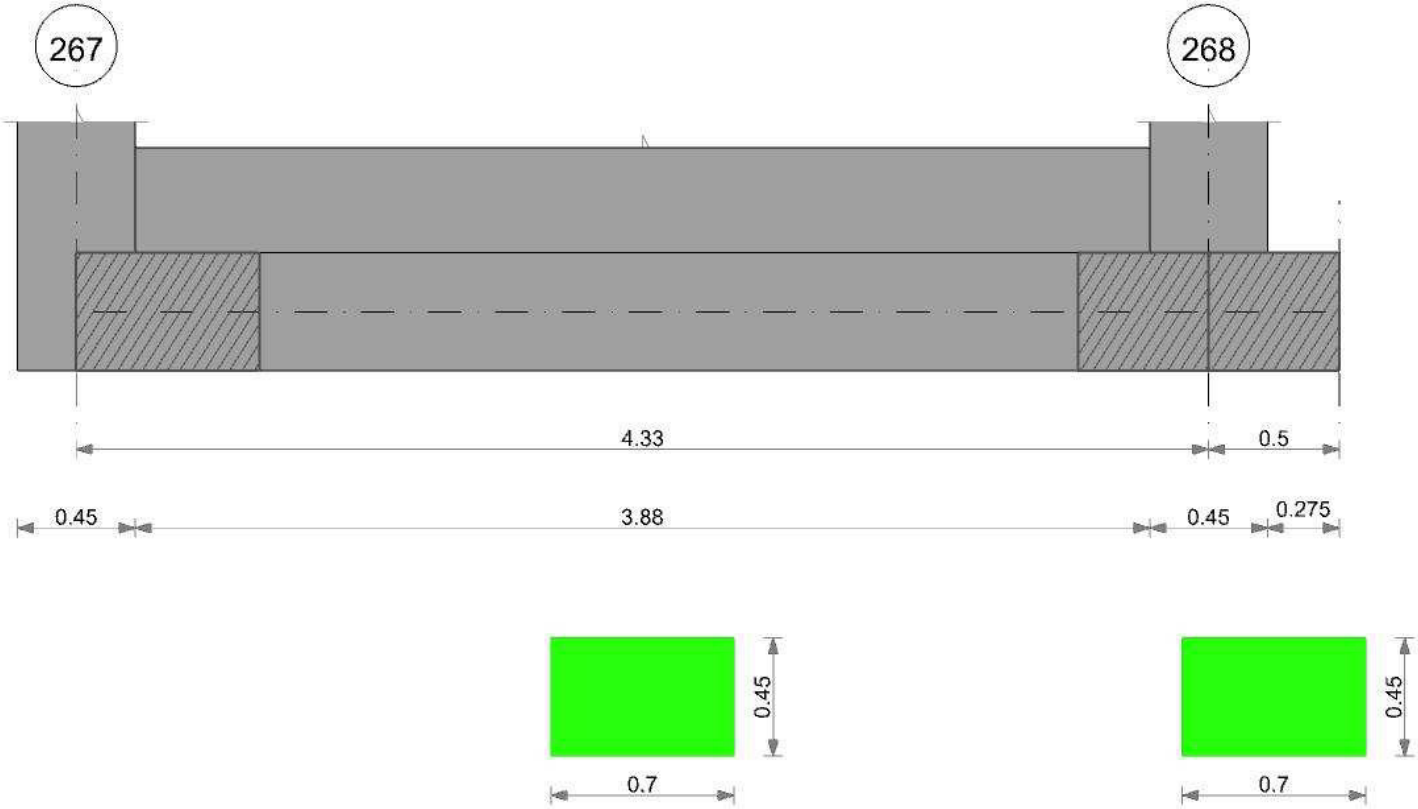
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.001	642	SLE RA 21	0.05	0.001	642	296	SLE RA 21	0.05	0	642	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	642	SLE RA 1	0.05	0	642	642	SLE RA 1	0.05	0	642	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	642	SLE RA 1	0.05	0	642	642	SLE RA 1	0.05	0	642	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	642	296	SLE RA 21	0.19	0	642	SLE RA 1	0.1	0	642	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	642	296	SLE RA 1	0.19	0	642	SLE RA 1	0.1	0	642	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	642	296	SLE RA 1	0.19	0	642	SLE RA 1	0.1	0	642	SLE RA 1	Si

CORDOLO 41

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

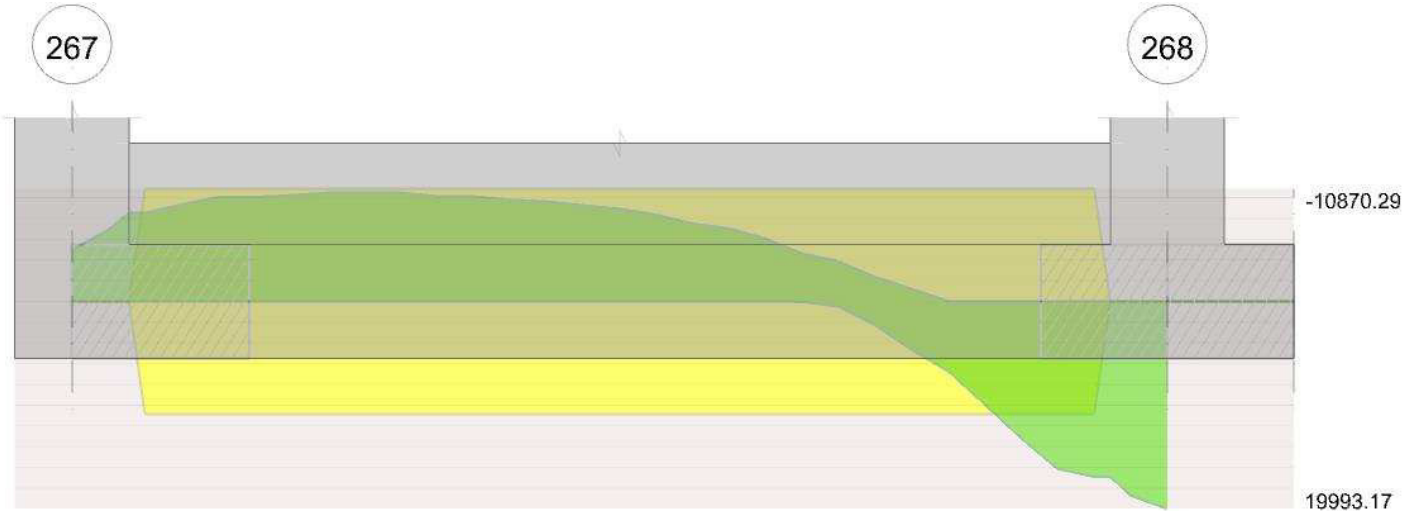
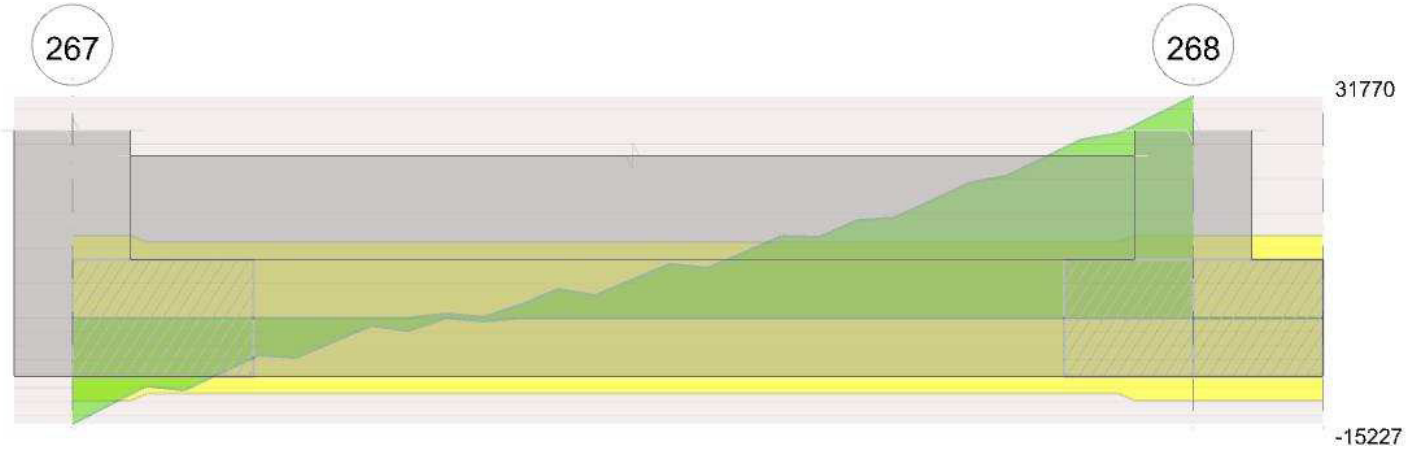


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 267 - 268, sezione R 70x45, aste 629, 628, 627, 626, 625, 624, 623, 622, 621, 620, 619

Verifiche di resistenza della suola di fondazione in condizioni SLD

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0.23	0.41	0.0002	3068	SLD 14	0.071	3173	7920	SLD 14	15877	Si
2.16	0.41	0.0002	2578	SLD 14	0.071	3173	6653	SLD 14	15877	Si
4.1	0.41	0.0002	3058	SLD 14	0.071	3173	7893	SLD 14	15877	Si
4.33	0.41	0.0002	3056	SLD 14	0.071	3173	7886	SLD 14	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000177	2587	SLE RA 21	74855	1494000	928199	36000000	2370	SLE QP 2	68563	1120500	Si
0.23	0.41	0.00000177	2471	SLE RA 21	71482	1494000	886383	36000000	2262	SLE QP 2	65453	1120500	Si
2.16	0.41	0.00000177	2105	SLE RA 21	60905	1494000	755219	36000000	1923	SLE QP 2	55649	1120500	Si
4.1	0.41	0.00000177	2531	SLE RA 21	73235	1494000	908120	36000000	2313	SLE QP 2	66921	1120500	Si
4.33	0.41	0.00000177	2530	SLE RA 21	73201	1494000	907691	36000000	2312	SLE QP 2	66890	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.55	1.3	SLU 39	ST	LT	-495	683	-58904	0	1	19	0	0	1.1	17917	844	21.23	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
629,628,627,626,625,624,623,622,621,620,619	4.55	1.3	SLU 84	ST	BT	2.3	216075	72030	3	Si
629,628,627,626,625,624,623,622,621,620,619	4.55	1.3	SLV 15	SIS	BT	2.3	185284	79048	2.34	Si
629,628,627,626,625,624,623,622,621,620,619	4.55	1.3	SLD 13	SIS	BT	2.3	202457	62854	3.22	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	854	-72030	5620.93	1525.92	0	1	0.02	0.08	1.14	4.51	1496	2060	0	14430	
0	-8015	-79048	10895.5	3288.99	0	-6	0.04	0.14	1.02	4.47	1496	2060	0	14430	0.07

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-2989	-62854	6898.33	954.25	0	-3	0.02	0.11	1.08	4.52	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.04	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

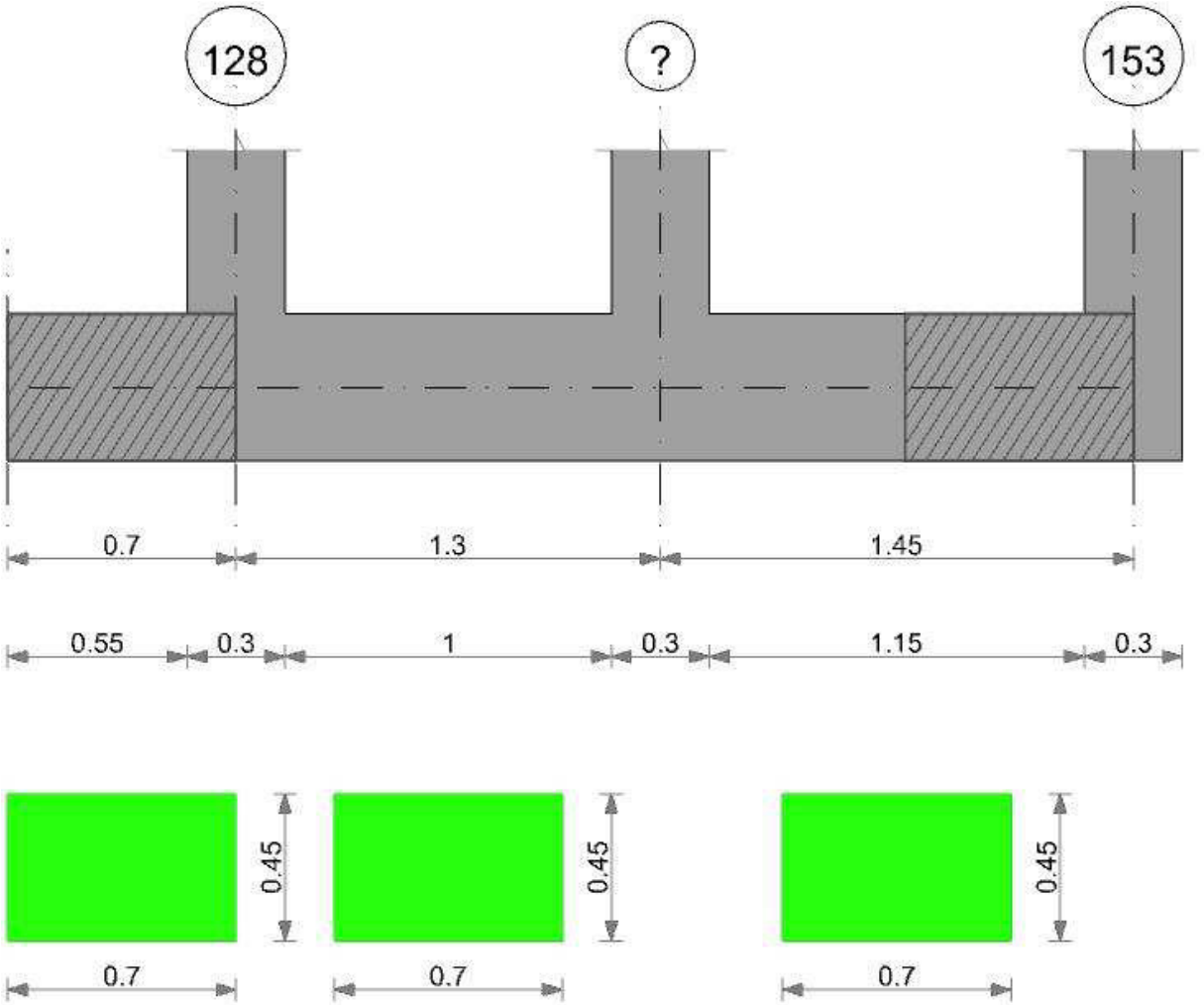
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	658	SLE RA 21	0.05	0	658	311	SLE RA 21	0.05	0	658	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	658	SLE RA 1	0.05	0	658	658	SLE RA 1	0.05	0	658	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	658	SLE RA 1	0.05	0	658	658	SLE RA 1	0.05	0	658	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 21	0.19	0	658	311	SLE RA 21	0.19	0	658	SLE RA 1	0.1	0	658	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	658	311	SLE RA 1	0.19	0	658	SLE RA 1	0.1	0	658	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	658	311	SLE RA 1	0.19	0	658	SLE RA 1	0.1	0	658	SLE RA 1	Si

CORDOLO 42

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

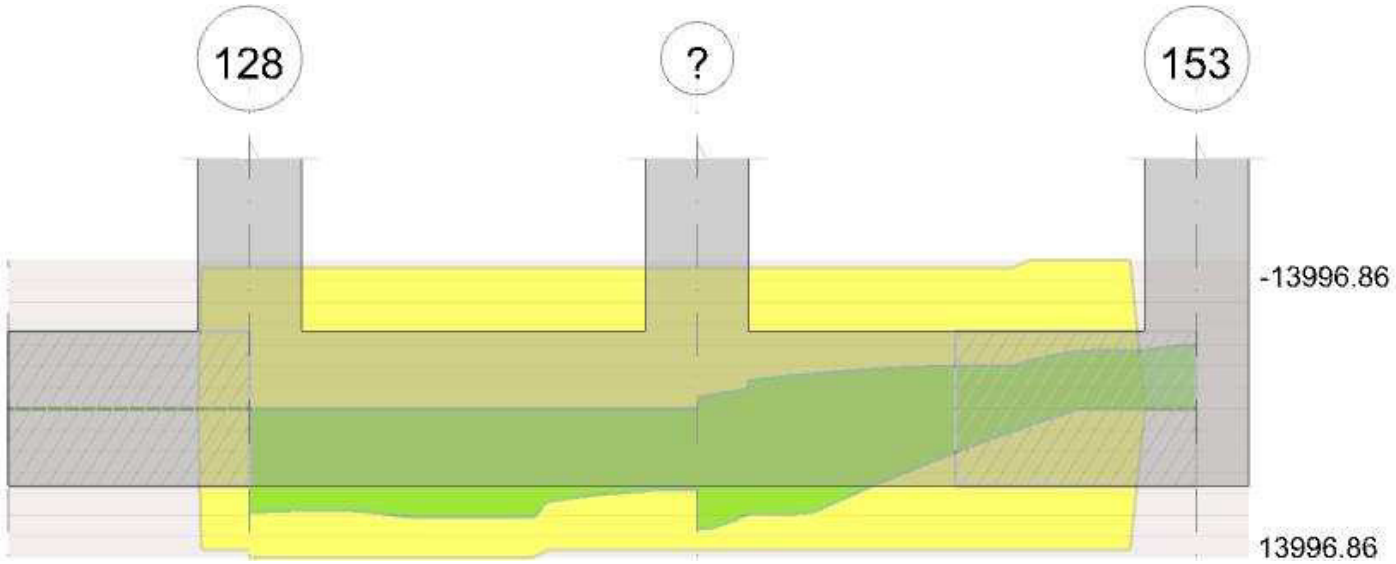
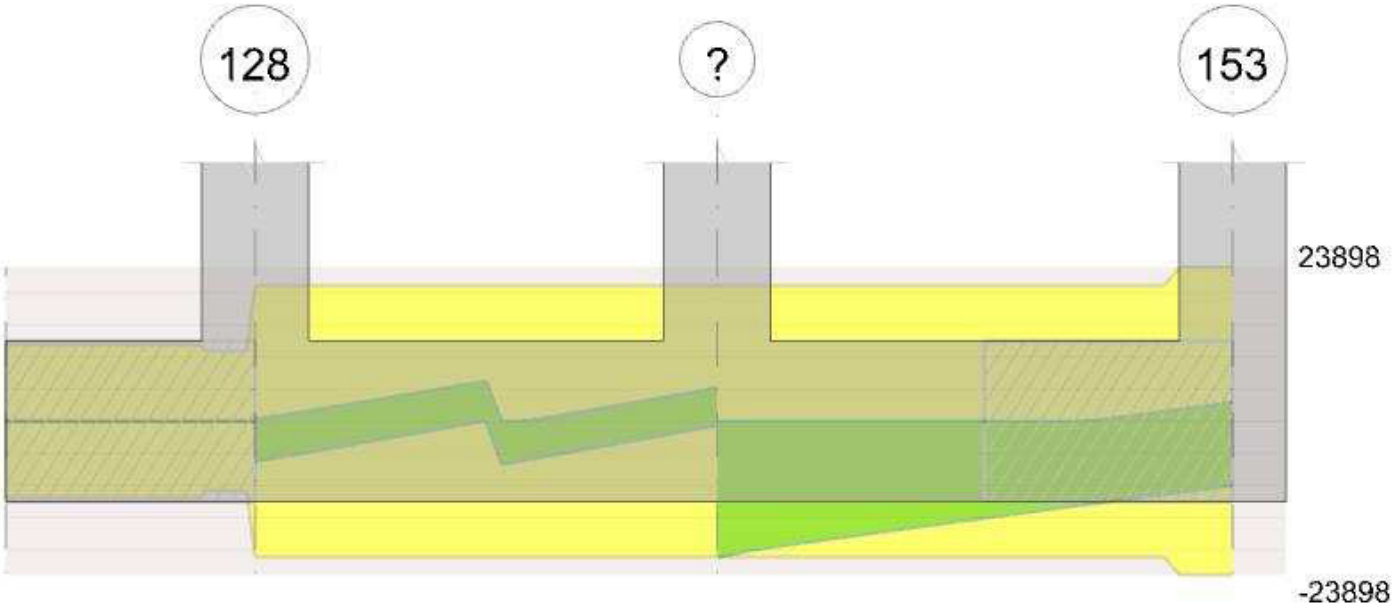


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 128 - ?, sezione R 70x45, aste 467, 468

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	10004.87	SLU 83	9688.5	13996.86	0.128	1.44							Si
0.15	0.000942	0.053	0.000942	0.053	9526.52	SLU 83	9526.52	13996.86	0.128	1.47							Si
0.48	0.000942	0.053	0.000942	0.053	9569.65	SLU 83	10211.01	13996.86	0.128	1.37							Si
0.65	0.000942	0.053	0.000942	0.053	10211.01	SLU 83	10211.01	13996.86	0.128	1.37							Si
1.15	0.000942	0.053	0.000942	0.053	7459.25	SLU 83	7522.32	13996.86	0.128	1.86							Si
1.3	0.000942	0.053	0.000942	0.053	7770.7	SLU 83	7532.8	13996.86	0.128	1.86							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	7293.87	SLV 1	7280.13	13265.61	0.222	1.82							Si
0.15	0.000942	0.053	0.000942	0.053	7397.89	SLV 2	7814.45	13265.61	0.222	1.7							Si
0.65	0.000942	0.053	0.000942	0.053	9300.98	SLV 2	9300.98	13265.61	0.222	1.43							Si
1.15	0.000942	0.053	0.000942	0.053	7568.26	SLV 13	7722.53	13265.61	0.222	1.72							Si
1.3	0.000942	0.053	0.000942	0.053	7697.43	SLV 13	7571.35	13265.61	0.222	1.75							Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	6957.78	SLD 1	6822.86	13265.61	0.222	1.94							Si
0.15	0.000942	0.053	0.000942	0.053	6803.41	SLD 2	6901.99	13265.61	0.222	1.92							Si

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.65	0.000942	0.053	0.000942	0.053	7829.29	SLD 2	7829.29	13265.61	0.222	1.69							Si
1.15	0.000942	0.053	0.000942	0.053	6063.16	SLD 13	6141.63	13265.61	0.222	2.16							Si
1.3	0.000942	0.053	0.000942	0.053	6247.73	SLD 13	6097.59	13265.61	0.222	2.18							Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-4334	SLU 77	-4334	-11611	-88226	-21083	-21083	1	4.86	Si
0.15	0.0000151	0.000942	0	-2439	SLU 69	-2439	-11611	-88226	-21083	-21083	1	8.64	Si
0.65	0.0000151	0.000942	0	4955	SLU 84	4955	11611	88226	21083	21083	1	4.25	Si
0.69	0.0000151	0.000942	0	-5711	SLU 84	-5711	-11611	-88226	-21083	-21083	1	3.69	Si
1.15	0.0000151	0.000942	0	1052	SLU 60	1052	11611	88226	21083	21083	1	20.04	Si
1.3	0.0000151	0.000942	0	3174	SLU 83	3174	11611	88226	21083	21083	1	6.64	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	236	SLV 2	236	11611	88226	21083	21083	1	89.48	Si
0	0.0000151	0.000942	0	-6249	SLV 15	-6249	-11611	-88226	-21083	-21083	1	3.37	Si
0.15	0.0000151	0.000942	0	1570	SLV 2	1570	11611	88226	21083	21083	1	13.43	Si
0.15	0.0000151	0.000942	0	-4824	SLV 15	-4824	-11611	-88226	-21083	-21083	1	4.37	Si
0.65	0.0000151	0.000942	0	6185	SLV 2	6185	11611	88226	21083	21083	1	3.41	Si
0.69	0.0000151	0.000942	0	-6731	SLV 11	-6731	-11611	-88226	-21083	-21083	1	3.13	Si
1.15	0.0000151	0.000942	0	3677	SLV 6	3677	11611	88226	21083	21083	1	5.73	Si
1.15	0.0000151	0.000942	0	-2173	SLV 11	-2173	-11611	-88226	-21083	-21083	1	9.7	Si
1.3	0.0000151	0.000942	0	5126	SLV 6	5126	11611	88226	21083	21083	1	4.11	Si
1.3	0.0000151	0.000942	0	-678	SLV 11	-678	-11611	-88226	-21083	-21083	1	31.08	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-4393	SLD 15	-4393	-11611	-88226	-21083	-21083	1	4.8	Si
0.15	0.0000151	0.000942	0	-2995	SLD 15	-2995	-11611	-88226	-21083	-21083	1	7.04	Si
0.65	0.0000151	0.000942	0	4445	SLD 2	4445	11611	88226	21083	21083	1	4.74	Si
0.69	0.0000151	0.000942	0	-5046	SLD 11	-5046	-11611	-88226	-21083	-21083	1	4.18	Si
1.15	0.0000151	0.000942	0	2037	SLD 6	2037	11611	88226	21083	21083	1	10.35	Si
1.15	0.0000151	0.000942	0	-533	SLD 11	-533	-11611	-88226	-21083	-21083	1	39.58	Si
1.3	0.0000151	0.000942	0	3499	SLD 6	3499	11611	88226	21083	21083	1	6.03	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	7384.75	20	7151.09	474737	1494000	21051359	36000000	6705.4	2	6479.79	430172	1120500			Si
0.15	7031.36	20	7031.36	466789	1494000	20698912	36000000	6357.77	2	6357.77	422071	1120500			Si
0.65	7535.31	20	7535.31	500244	1494000	22182422	36000000	6727.72	2	6727.72	446631	1120500			Si
1.15	5511.57	20	5550.73	203006	1494000	3045094	36000000	4932.2	2	4957.53	181311	1120500			Si
1.3	5747.65	20	5568.95	203673	1494000	3055091	36000000	5155.29	2	4988.62	182448	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0	inferiore	0.442	0.00061	0.000271	20	0.442	0.00057	0.000252	6	0.442	0.00056	0.000246	2	Si
0.15	inferiore	0.442	0.0006	0.000266	20	0.442	0.00056	0.000248	6	0.442	0.00055	0.000241	2	Si
0.48	inferiore	0.442	0.00065	0.000286	20	0.442	0.0006	0.000263	6	0.442	0.00058	0.000255	2	Si
0.65	inferiore	0.442	0.00065	0.000286	20	0.442	0.0006	0.000263	6	0.442	0.00058	0.000255	2	Si

Campata 3 tra i fili ? - 153, sezione R 70x45, asta 469

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	8379.72	SLU 83	7529.48	13996.86	0.128	1.86							Si
0.15	0.000942	0.053	0.000942	0.053	6066.43	SLU 83	6066.43	13996.86	0.128	2.31							Si
0.73	0.000942	0.053	0.000942	0.053	-716.03	SLU 1	877.84	13996.86	0.128	15.94	-1098.51	SLU 78	-2732.26	-13996.86	0.128	5.12	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	12132.02	SLV 13	11305.52	13265.61	0.222	1.17	-1045.57	SLV 4	-1045.57	-13265.61	0.222	12.69	Si
0.15	0.000942	0.053	0.000942	0.053	9833.29	SLV 13	9833.29	13265.61	0.222	1.35	-1837.64	SLV 4	-2625.92	-13265.61	0.222	5.05	Si
0.73	0.000942	0.053	0.000942	0.053	2227.24	SLV 13	4399.42	13265.61	0.222	3.02	-3748.68	SLV 4	-3976.98	-13265.61	0.222	3.34	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000942	0.053	0.000942	0.053	8365.17	SLD 13	7686.38	13265.61	0.222	1.73							Si
0.15	0.000942	0.053	0.000942	0.053	6497.2	SLD 13	6497.2	13265.61	0.222	2.04							Si
0.73	0.000942	0.053	0.000942	0.053	519.27	SLD 13	2186.47	13265.61	0.222	6.07	-2040.71	SLD 4	-2771.84	-13265.61	0.222	4.79	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-21167	SLU 83	-21167	-11611	-88226	-21083	-21083	1	1	Si
0.15	0.0000151	0.000942	0	-19507	SLU 83	-19507	-11611	-88226	-21083	-21083	1	1.08	Si
0.73	0.0000151	0.000942	0	-13201	SLU 83	-13201	-11611	-88226	-21083	-21083	1	1.6	Si
1.3	0.0000151	0	0	-6999	SLU 83	-6999	-11837	-100005	-23898	-23898	1	3.41	Si
1.45	0.0000151	0	0	-5392	SLU 83	-5392	-11837	-100005	-23898	-23898	1	4.43	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-20786	SLV 13	-20786	-11611	-88226	-21083	-21083	1	1.01	Si
0.15	0.0000151	0.000942	0	-19630	SLV 13	-19630	-11611	-88226	-21083	-21083	1	1.07	Si
0.73	0.0000151	0.000942	0	-15267	SLV 13	-15267	-11611	-88226	-21083	-21083	1	1.38	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.3	0.0000151	0	0	1817	SLV 4	1817	11837	100005	23898	23898	1	13.15	Si
1.3	0.0000151	0	0	-11078	SLV 13	-11078	-11837	-100005	-23898	-23898	1	2.16	Si
1.45	0.0000151	0	0	2915	SLV 4	2915	11837	100005	23898	23898	1	8.2	Si
1.45	0.0000151	0	0	-10014	SLV 13	-10014	-11837	-100005	-23898	-23898	1	2.39	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000151	0.000942	0	-16987	SLD 13	-16987	-11611	-88226	-21083	-21083	1	1.24	Si
0.15	0.0000151	0.000942	0	-15856	SLD 13	-15856	-11611	-88226	-21083	-21083	1	1.33	Si
0.73	0.0000151	0.000942	0	-11567	SLD 13	-11567	-11611	-88226	-21083	-21083	1	1.82	Si
1.3	0.0000151	0	0	-7392	SLD 13	-7392	-11837	-100005	-23898	-23898	1	3.23	Si
1.45	0.0000151	0	0	-6319	SLD 13	-6319	-11837	-100005	-23898	-23898	1	3.78	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	6191.25	20	5563.37	203469	1494000	3052029	36000000	5543.23	2	4975.04	181952	1120500			Si
0.15	4482.9	20	4482.9	163953	1494000	2459293	36000000	3997.83	2	3997.83	146212	1120500			Si
0.73	-806.37	15	-2015.29	73705	1494000	1105578	36000000	-760.72	2	-1868.5	68337	1120500			Si
1.3	-4035.82	21	-4035.82	-170828	1494000	0	36000000	-3686.58	2	-3686.58	-156046	1120500			Si
1.45	-4556.87	20	-4423.15	-187223	1494000	0	36000000	-4152.56	2	-4033.84	-170744	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.9	1.3	SLU 44	ST	LT	21	166	-33146	0	0	19	0	0	1.1	10082	168	60.18	Si
2.9	1.3	SLV 2	SIS	LT	-4338	-815	-27245	-9	-2	19	0	0	1.1	8287	4414	1.88	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
467,468,469	2.9	1.3	SLU 84	ST	BT	2.3	162610	40576	4.01	Si
467,468,469	2.9	1.3	SLV 9	SIS	BT	2.3	147794	28264	5.23	Si
467,468,469	2.9	1.3	SLD 15	SIS	BT	2.3	156358	28082	5.57	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
4	83	-40576	-24.53	76.79	0	0	0	0	1.3	2.9	1496	2060	0	14430	
1226	-2280	-28264	1167.91	693.72	2	-5	0.02	0.04	1.22	2.85	1496	2060	0	14430	0.07
1876	469	-28082	-265.26	822.27	4	1	0.03	-0.01	1.28	2.84	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.09	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.09	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.09	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

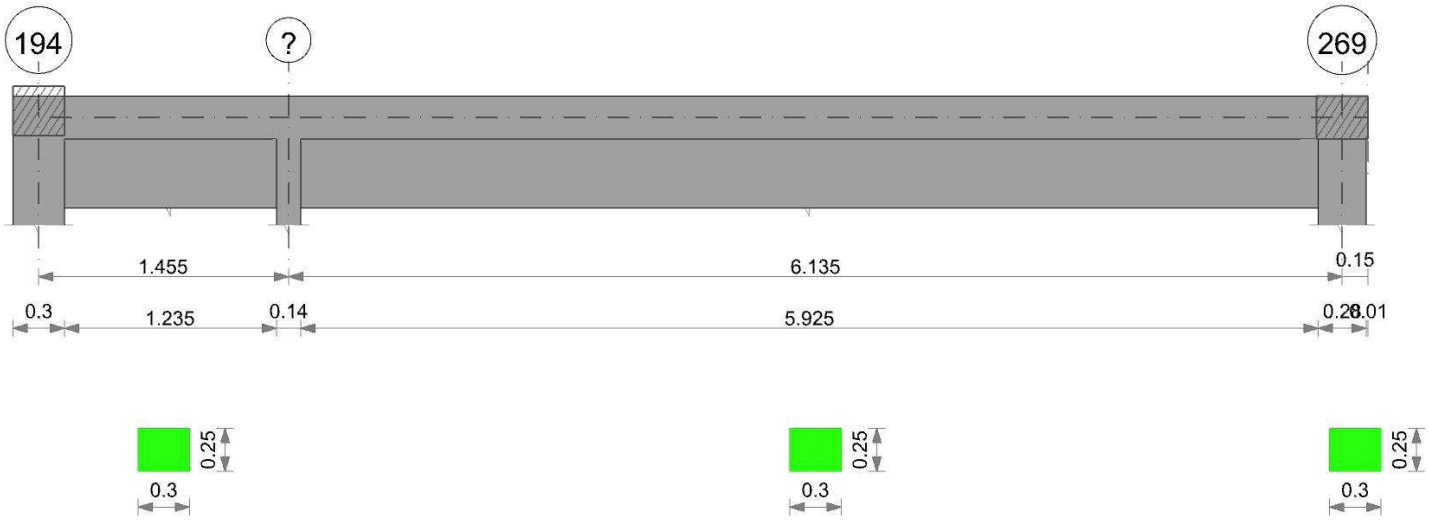
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0.002	481	SLE RA 20	0.05	0	481	478	SLE RA 21	0.05	0	480	SLE RA 21	0.0033	0	SLE RA 21	Si
D	0.05	0	481	SLE RA 1	0.05	0	481	481	SLE RA 1	0.05	0	480	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	481	SLE RA 1	0.05	0	481	481	SLE RA 1	0.05	0	480	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0.01	SLE RA 21	0.19	0.01	481	480	SLE RA 21	0.19	0	481	SLE RA 1	0.1	0.01	480	SLE RA 21	Si
D	0.19	0	SLE RA 1	0.19	0	481	480	SLE RA 1	0.19	0	481	SLE RA 1	0.1	0	480	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	481	480	SLE RA 1	0.19	0	481	SLE RA 1	0.1	0	480	SLE RA 1	Si

CORDOLO SOTTOTETTO 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

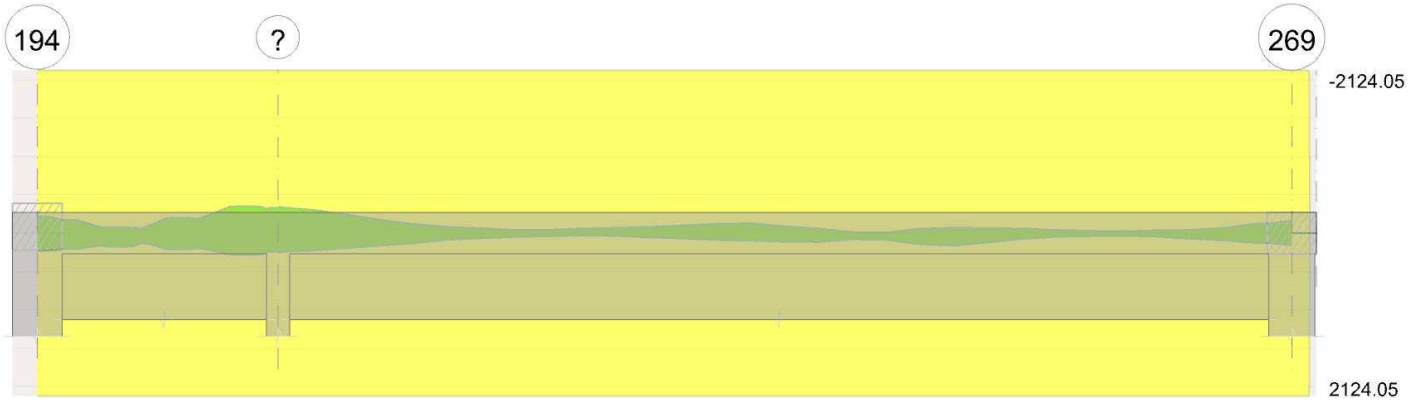


Diagramma verifica stato limite ultimo taglio

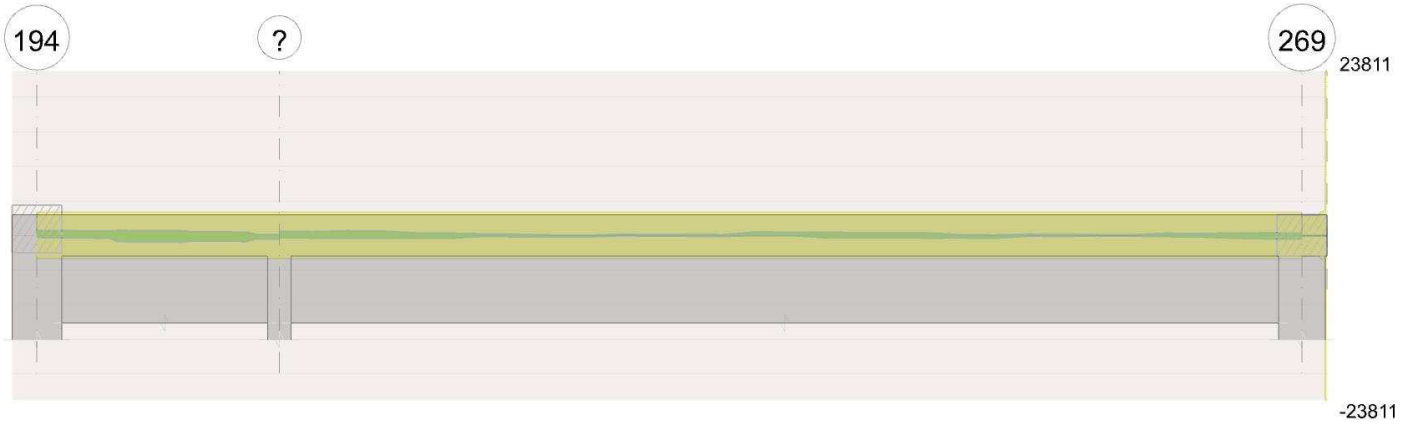
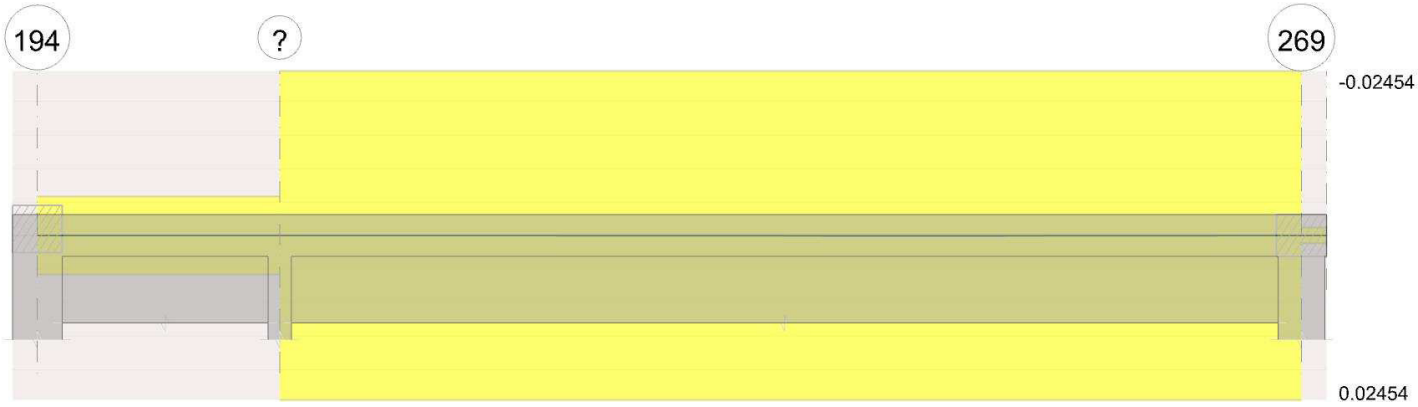


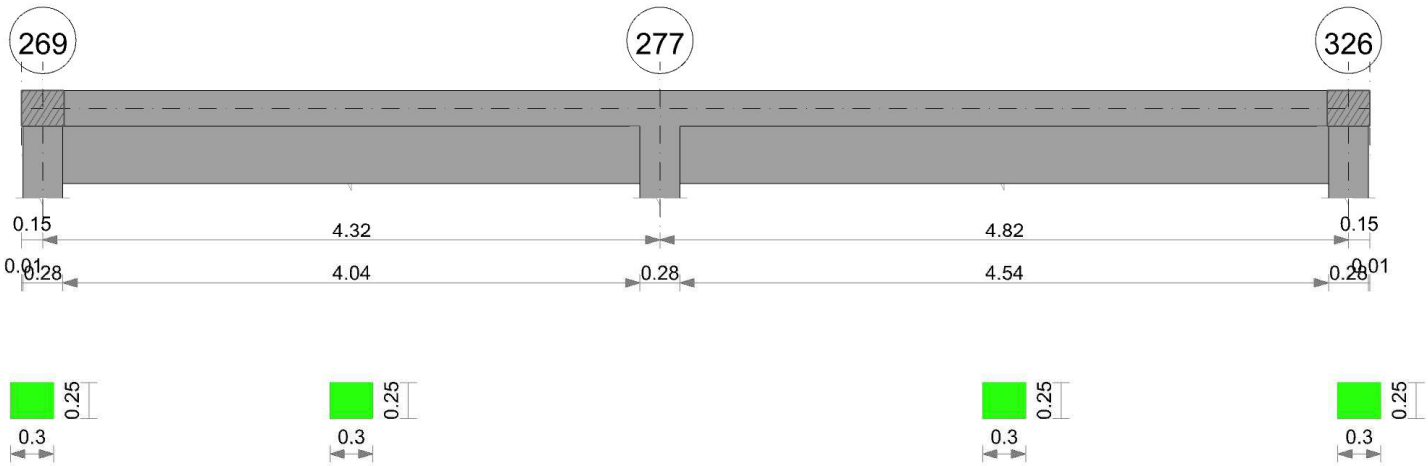
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 2

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

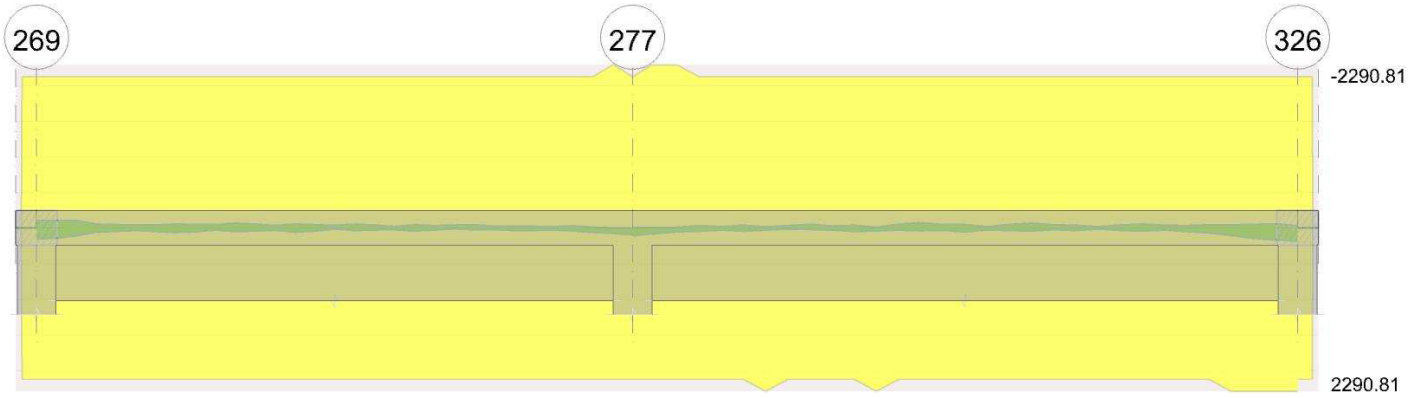


Diagramma verifica stato limite ultimo taglio

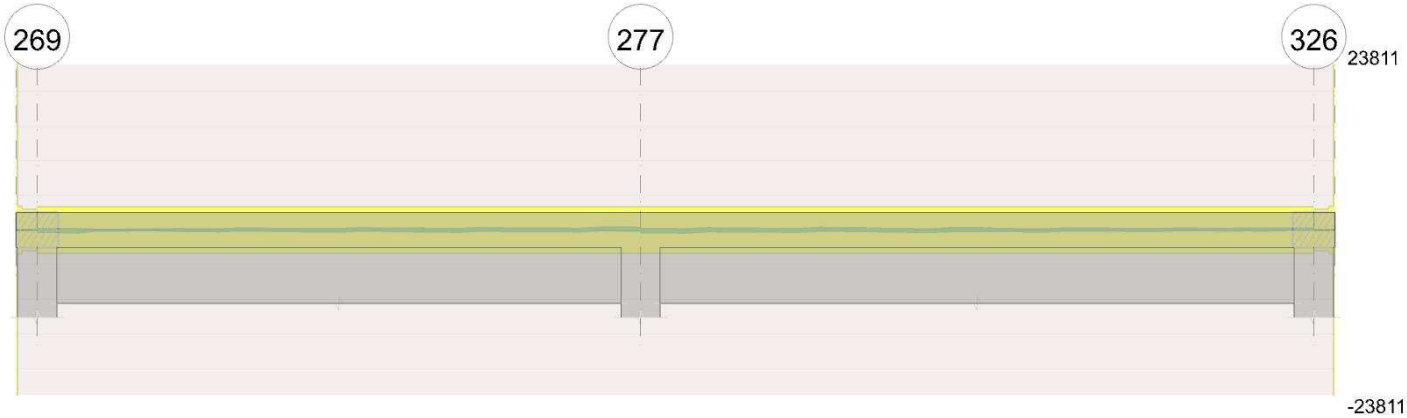
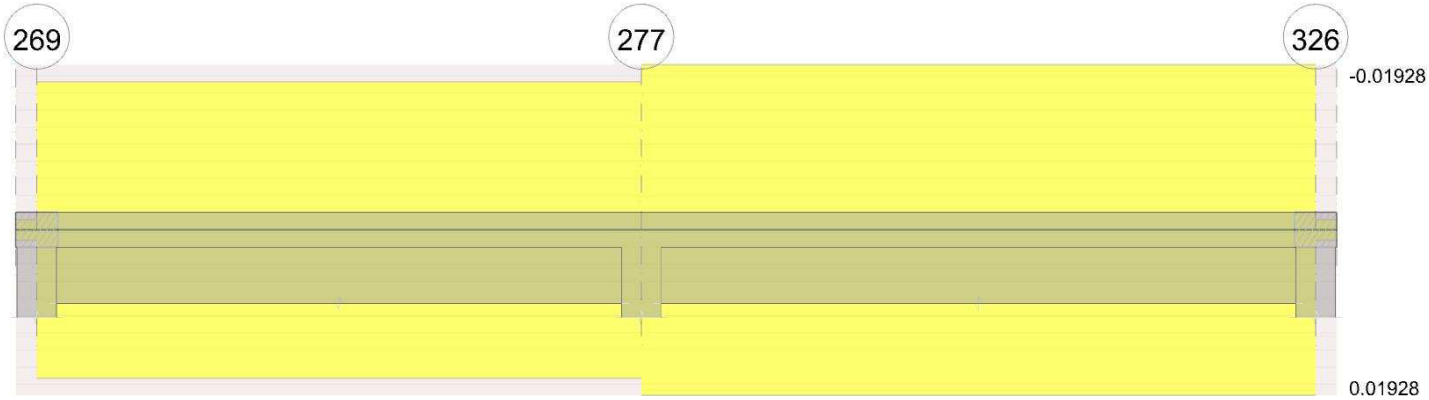


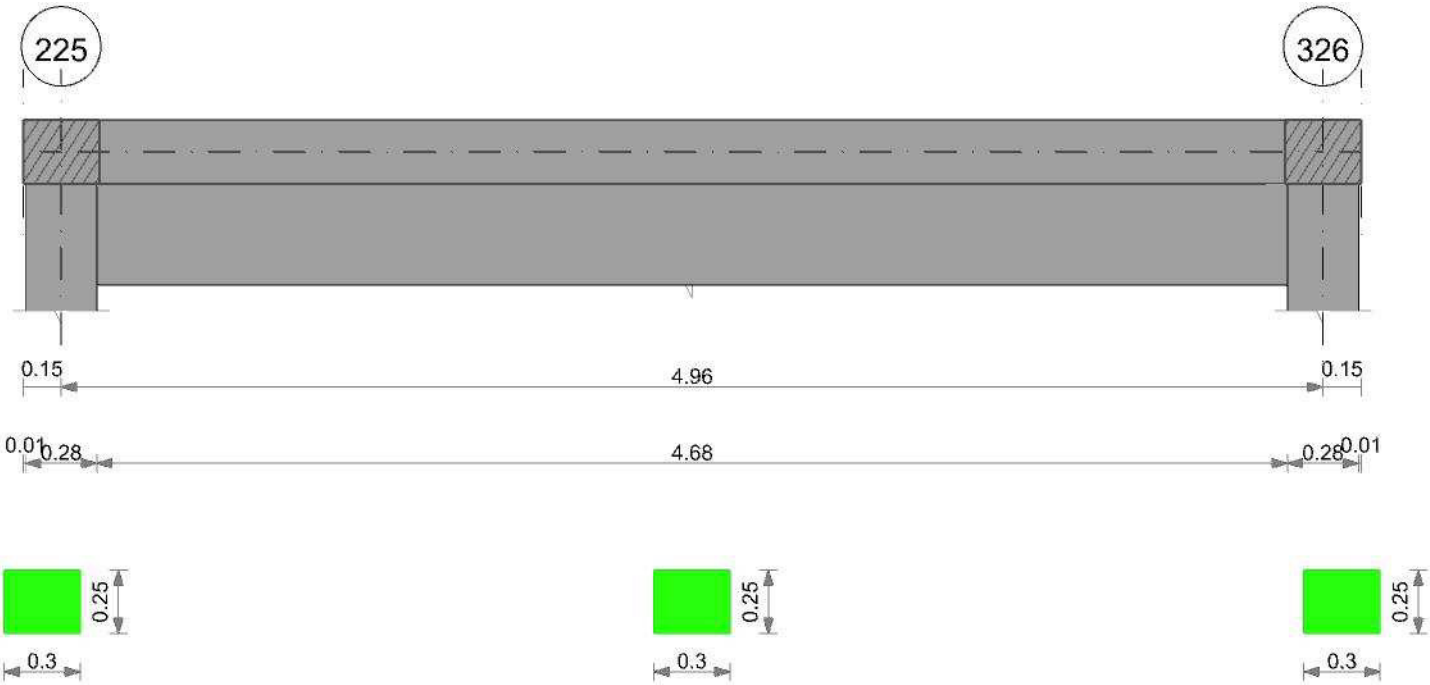
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

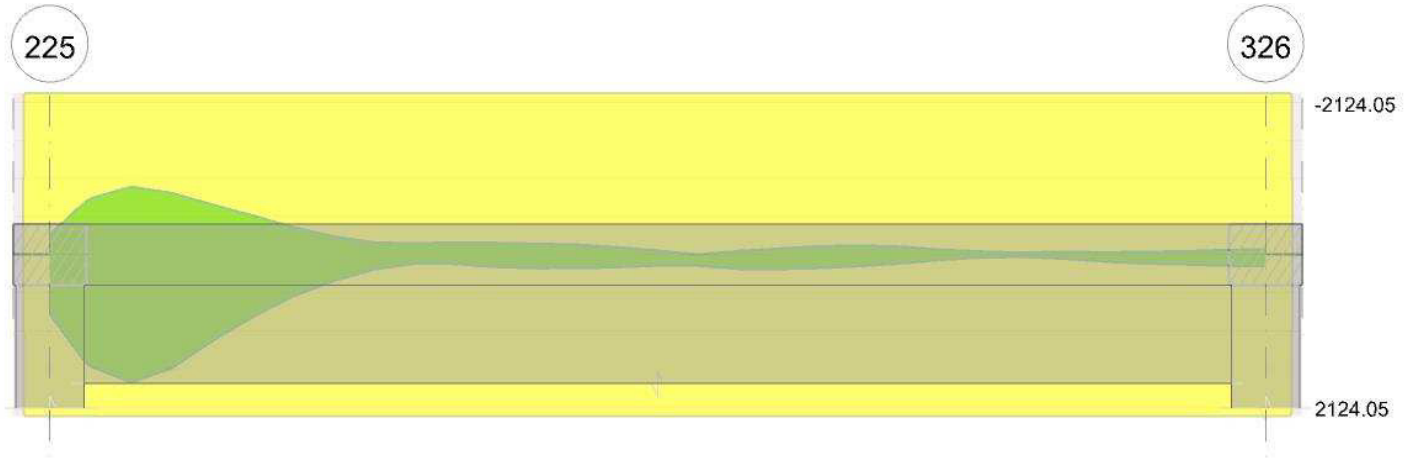


Diagramma verifica stato limite ultimo taglio

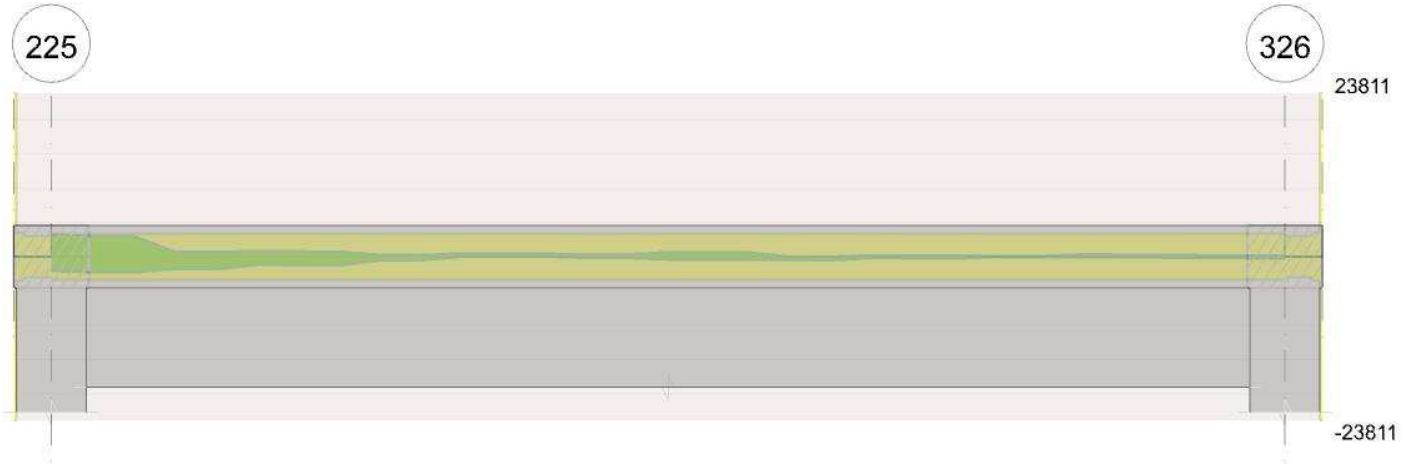
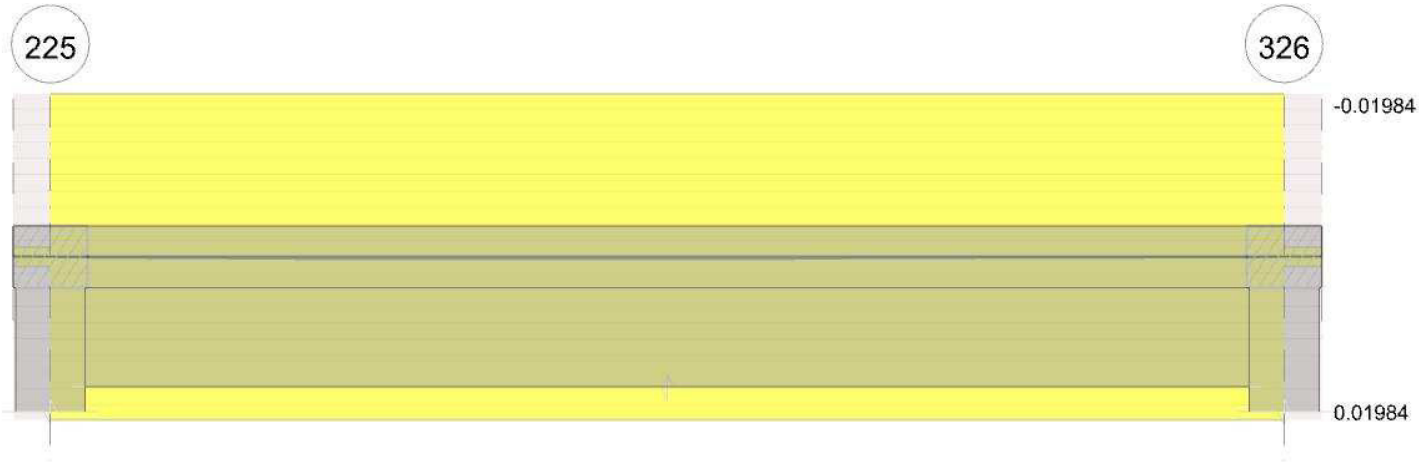


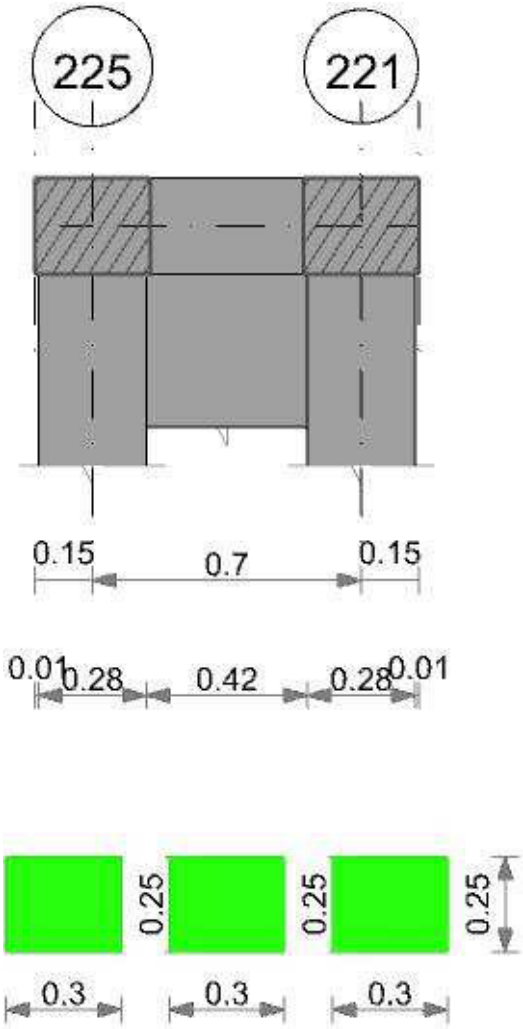
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 4

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

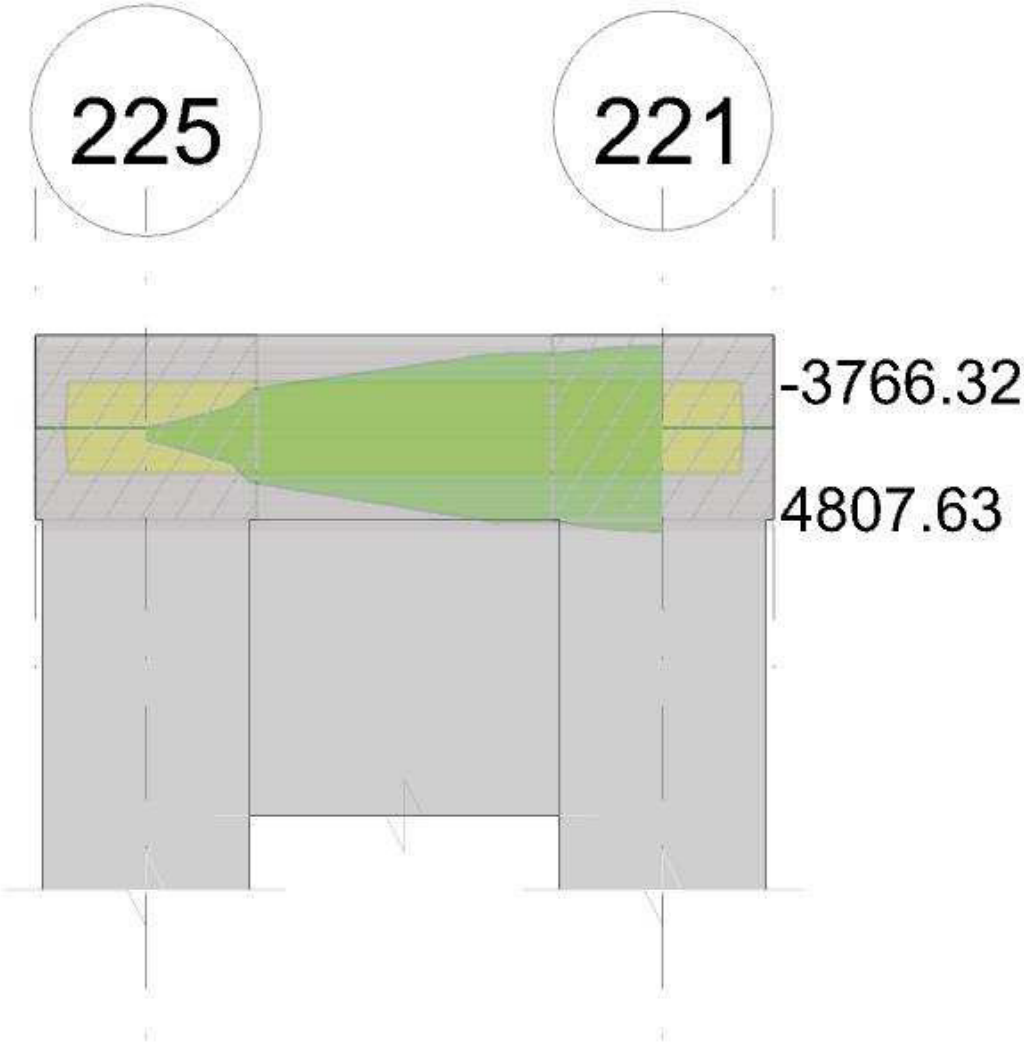
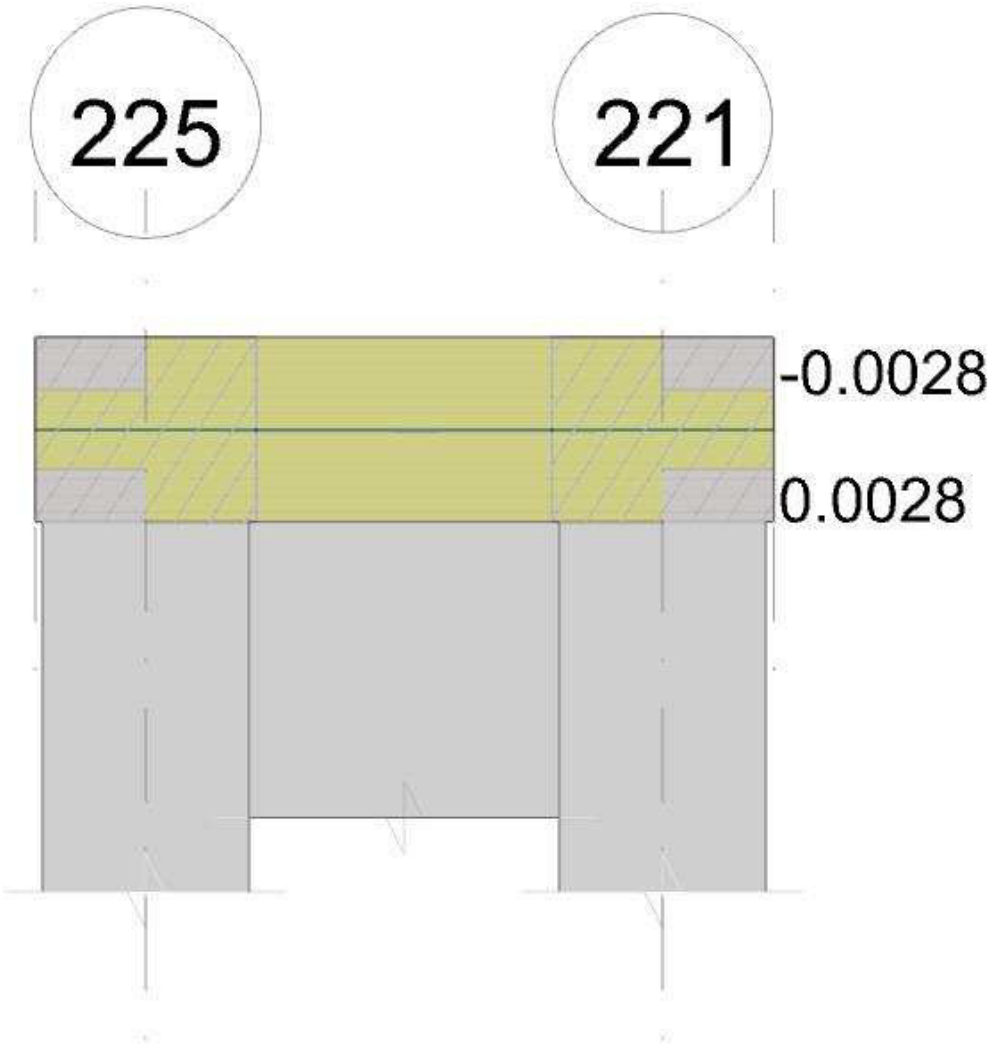


Diagramma verifica stato limite ultimo taglio

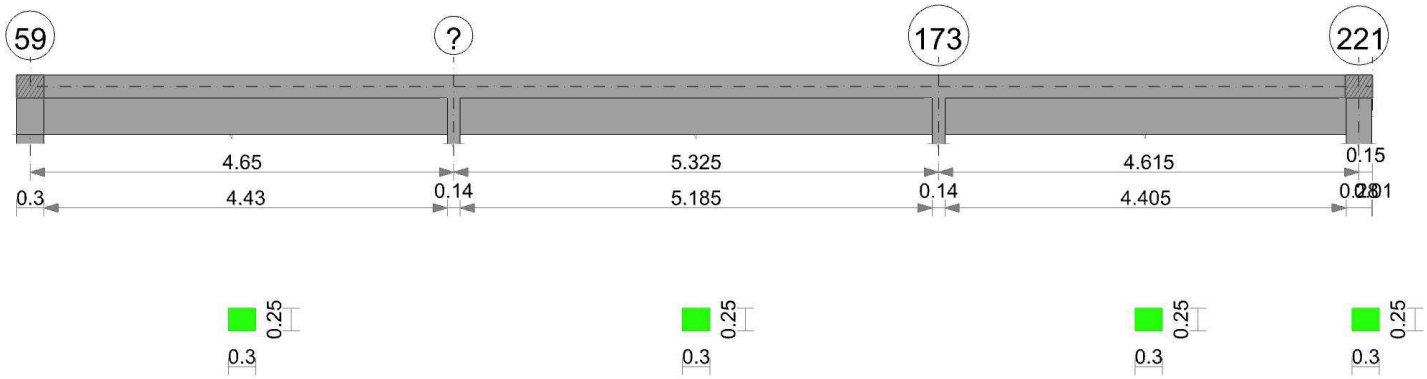
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 5

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

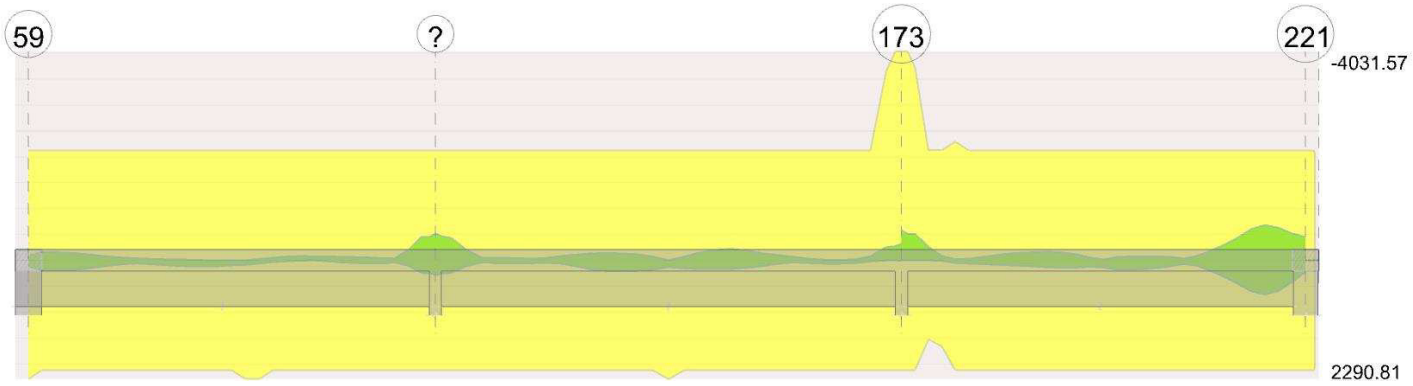


Diagramma verifica stato limite ultimo taglio

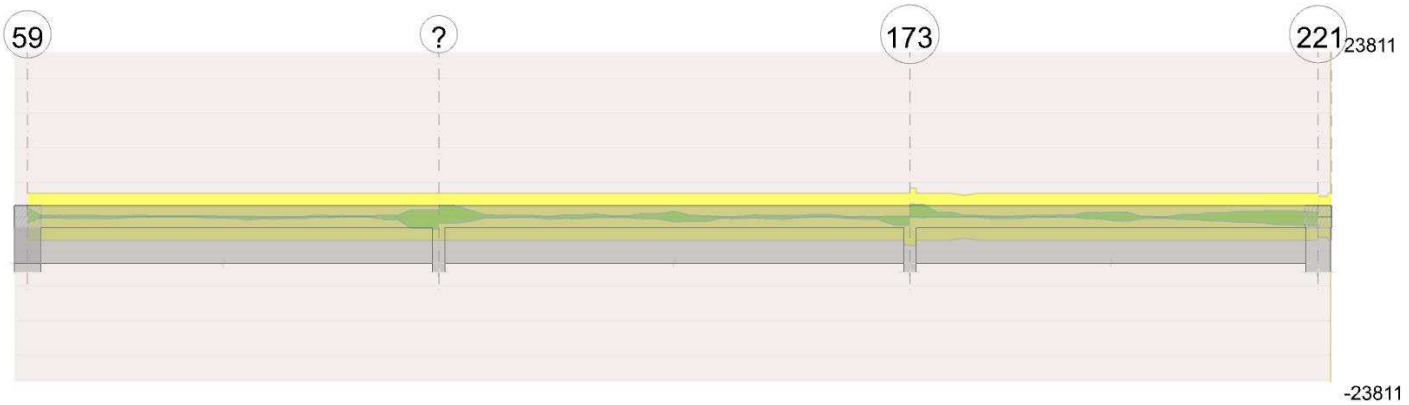
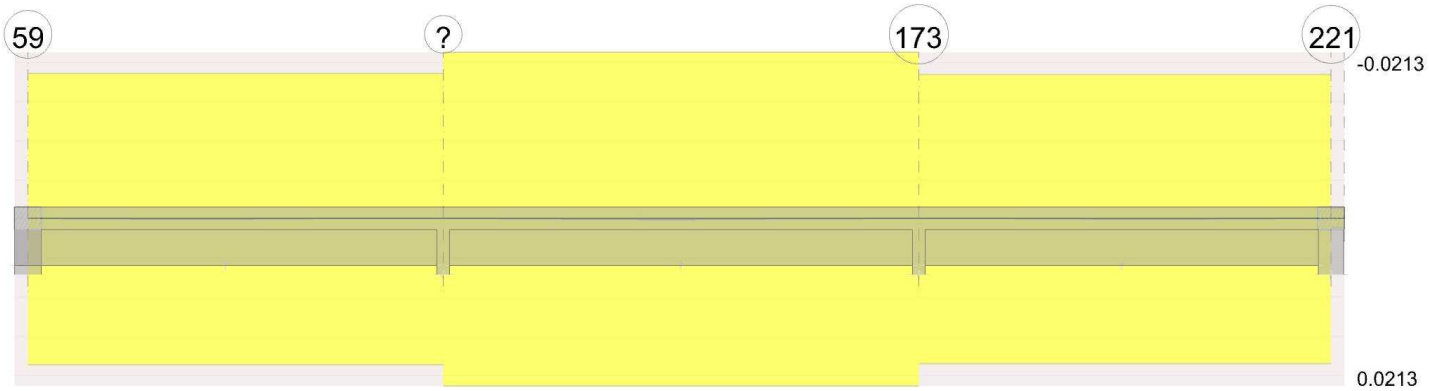


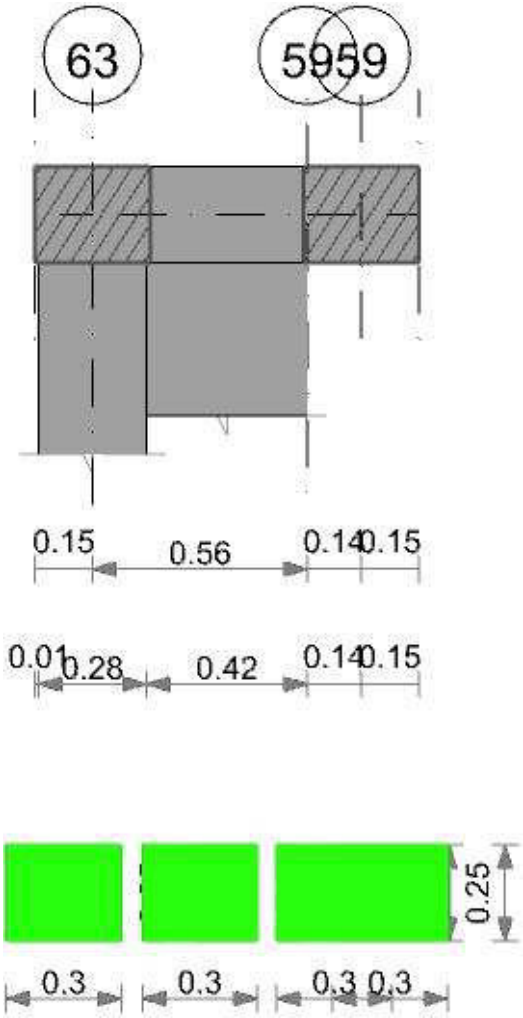
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 6

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

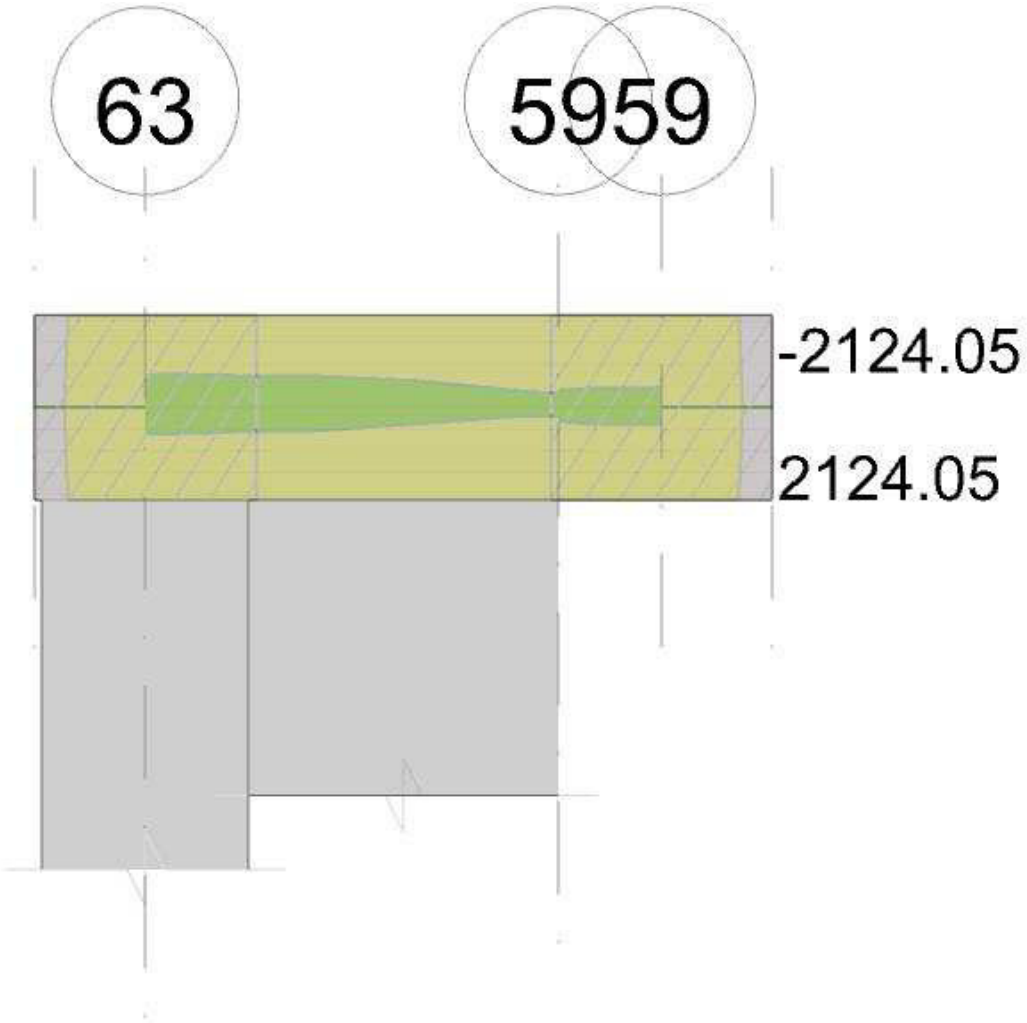


Diagramma verifica stato limite ultimo taglio

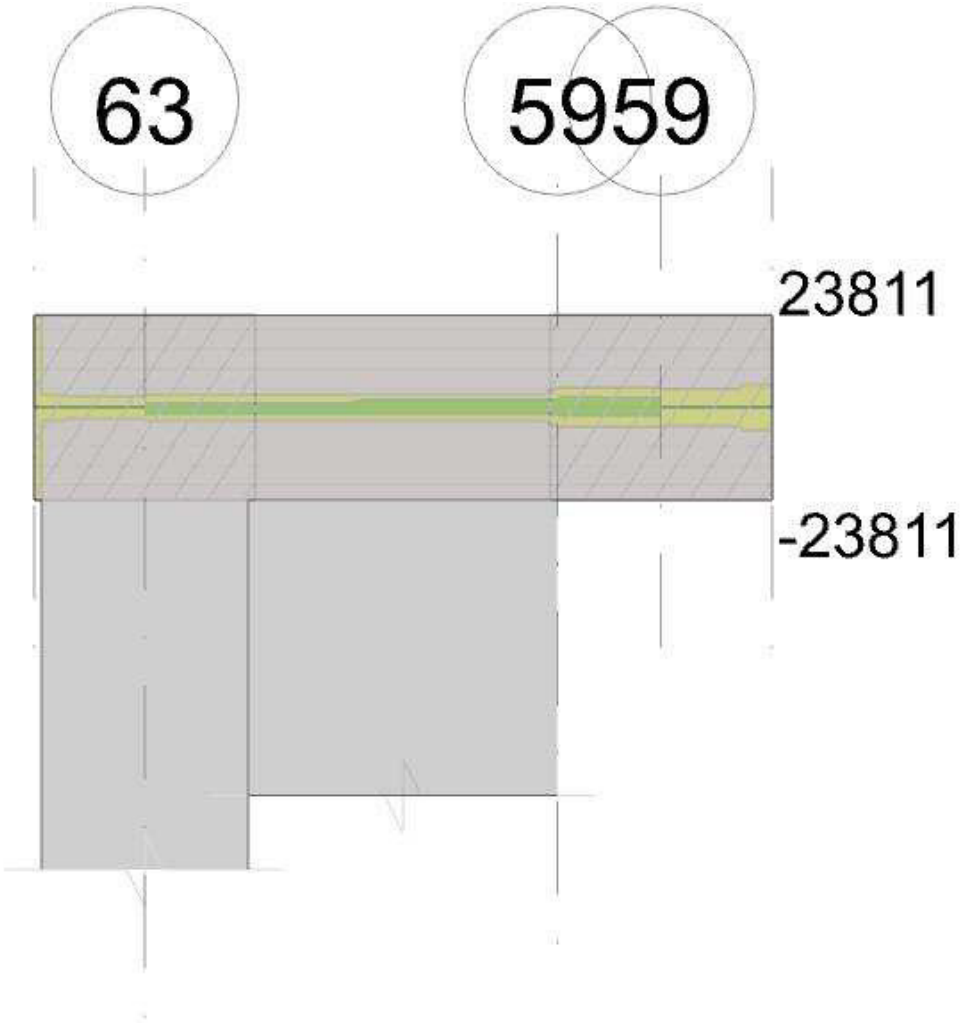
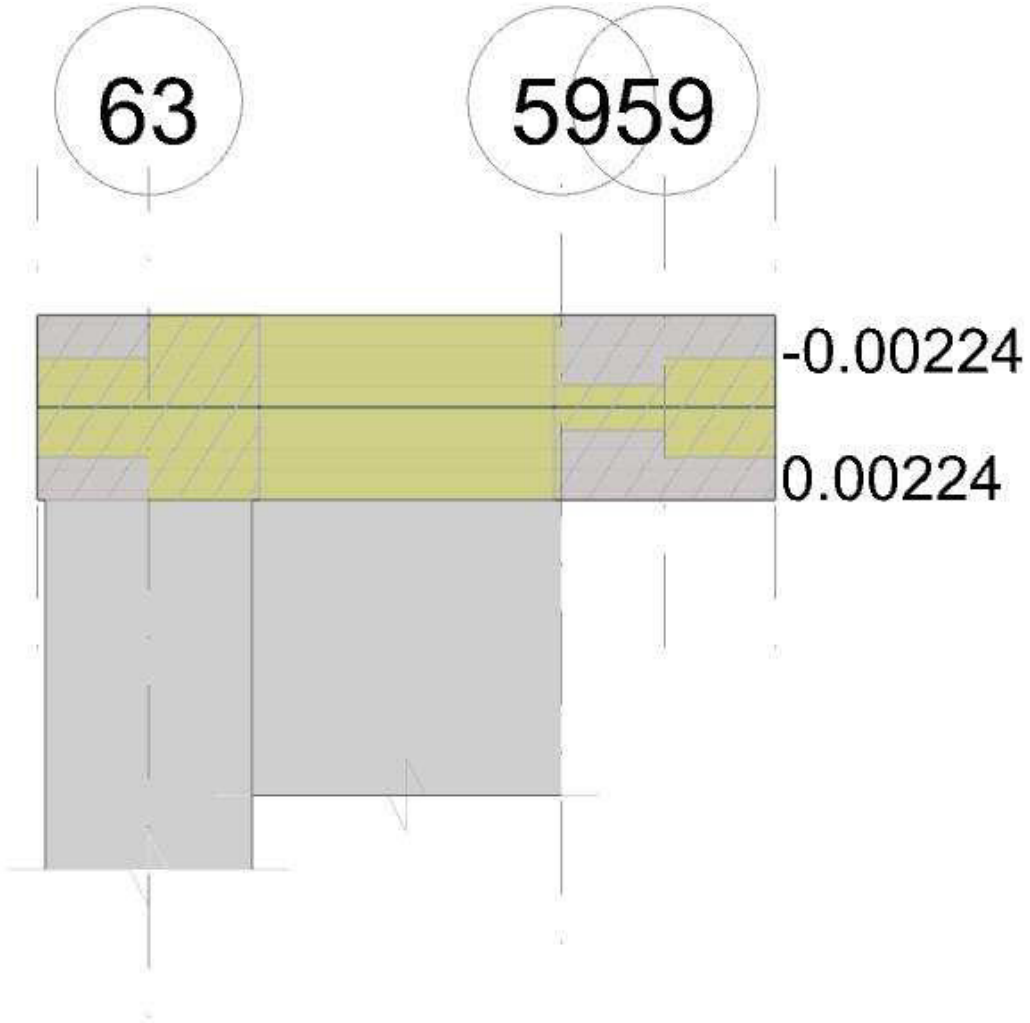


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 59 - 59, sezione R 30x25, asta 894

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	-8.17	SLU 5	104	2290.81	0.221	22.03	-115.67	SLU 81	-115.67	-2290.81	0.221	19.8	Si
0.07	0.000308	0.05	0.000308	0.05	76.28	SLU 30	175.23	2290.81	0.221	13.07	-82.75	SLU 60	-115.67	-2290.81	0.221	19.8	Si
0.14	0.000308	0.05	0.000308	0.05	168.66	SLU 30	175.23	2290.81	0.221	13.07	-65.54	SLU 60	-89.39	-2290.81	0.221	25.63	Si
0.14	0.000308	0.05	0.000308	0.05	175.23	SLU 30	175.23	2290.81	0.221	13.07	-64.35	SLU 60	-88.1	-2290.81	0.221	26	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	201.99	SLV 11	315.61	2124.05	0.281	6.73	-334.33	SLV 6	-394.8	-2124.05	0.281	5.38	Si
0.05	0.000308	0.05	0.000308	0.05	262.38	SLV 7	387.13	2124.05	0.281	5.49	-363.88	SLV 10	-437.69	-2124.05	0.281	4.85	Si
0.07	0.000308	0.05	0.000308	0.05	288.18	SLV 7	387.13	2124.05	0.281	5.49	-378.71	SLV 10	-437.69	-2124.05	0.281	4.85	Si
0.14	0.000308	0.05	0.000308	0.05	387.13	SLV 7	387.13	2124.05	0.281	5.49	-437.69	SLV 10	-437.69	-2124.05	0.281	4.85	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	48.82	SLD 11	112.85	2124.05	0.281	18.82	-181.16	SLD 6	-192.04	-2124.05	0.281	11.06	Si
0.05	0.000308	0.05	0.000308	0.05	83.6	SLD 7	151.76	2124.05	0.281	14	-185.1	SLD 10	-202.32	-2124.05	0.281	10.5	Si
0.07	0.000308	0.05	0.000308	0.05	97.82	SLD 7	151.76	2124.05	0.281	14	-188.35	SLD 10	-202.32	-2124.05	0.281	10.5	Si
0.14	0.000308	0.05	0.000308	0.05	151.76	SLD 7	151.76	2124.05	0.281	14	-202.32	SLD 10	-202.32	-2124.05	0.281	10.5	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	1588	SLU 38	1588	3366	19049	5058	5058	1	3.18	Si
0.07	0.0000072	0.000308	0	1575	SLU 38	1575	3366	19049	5058	5058	1	3.21	Si
0.14	0.0000072	0.000308	0	1562	SLU 38	1562	3366	19049	5058	5058	1	3.24	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	2519	SLV 3	2519	3366	19049	5058	5058	1	2.01	Si
0	0.0000072	0.000308	0	-1909	SLV 14	-1909	-3366	-19049	-5058	-5058	1	2.65	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.07	0.0000072	0.000308	0	2506	SLV 3	2506	3366	19049	5058	5058	1	2.02	Si
0.07	0.0000072	0.000308	0	-1922	SLV 14	-1922	-3366	-19049	-5058	-5058	1	2.63	Si
0.14	0.0000072	0.000308	0	2493	SLV 3	2493	3366	19049	5058	5058	1	2.03	Si
0.14	0.0000072	0.000308	0	-1935	SLV 14	-1935	-3366	-19049	-5058	-5058	1	2.61	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000072	0.000308	0	1253	SLD 3	1253	3366	19049	5058	5058	1	4.04	Si
0	0.0000072	0.000308	0	-642	SLD 14	-642	-3366	-19049	-5058	-5058	1	7.87	Si
0.07	0.0000072	0.000308	0	1240	SLD 3	1240	3366	19049	5058	5058	1	4.08	Si
0.07	0.0000072	0.000308	0	-655	SLD 14	-655	-3366	-19049	-5058	-5058	1	7.72	Si
0.14	0.0000072	0.000308	0	1226	SLD 3	1226	3366	19049	5058	5058	1	4.12	Si
0.14	0.0000072	0.000308	0	-669	SLD 14	-669	-3366	-19049	-5058	-5058	1	7.57	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-82.47	18	-82.47	23292	1494000	349376	36000000	-66.17	2	-66.17	18689	1120500			Si
0.07	30.71	9	89.6	25308	1494000	379613	36000000								Si
0.07	-54.33	18	-82.47	23292	1494000	349376	36000000	-45.27	2	-66.17	18689	1120500			Si
0.14	89.6	9	89.6	25308	1494000	379613	36000000								Si
0.14	-27.12	18	-62.1	17539	1494000	263082	36000000	-25.28	2	-51.01	14408	1120500			Si

Verifica di apertura delle fessure

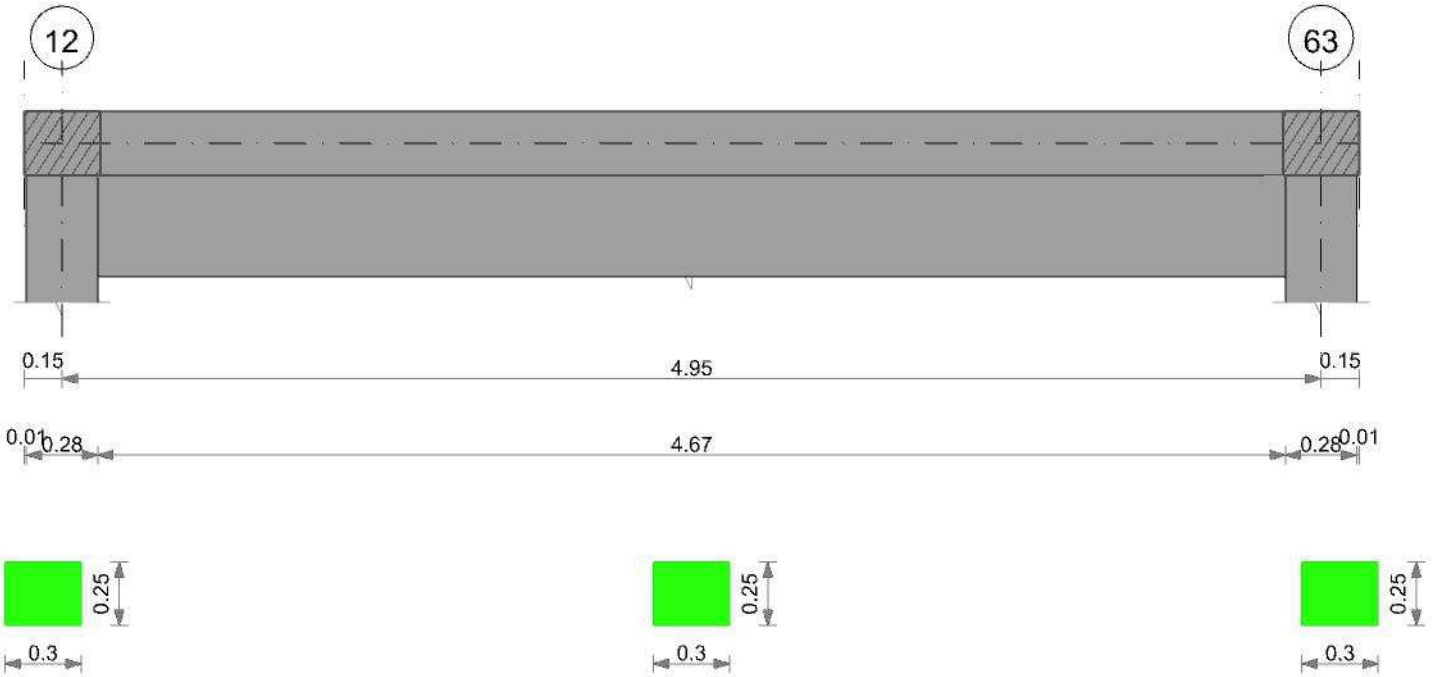
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

CORDOLO SOTTOTETTO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

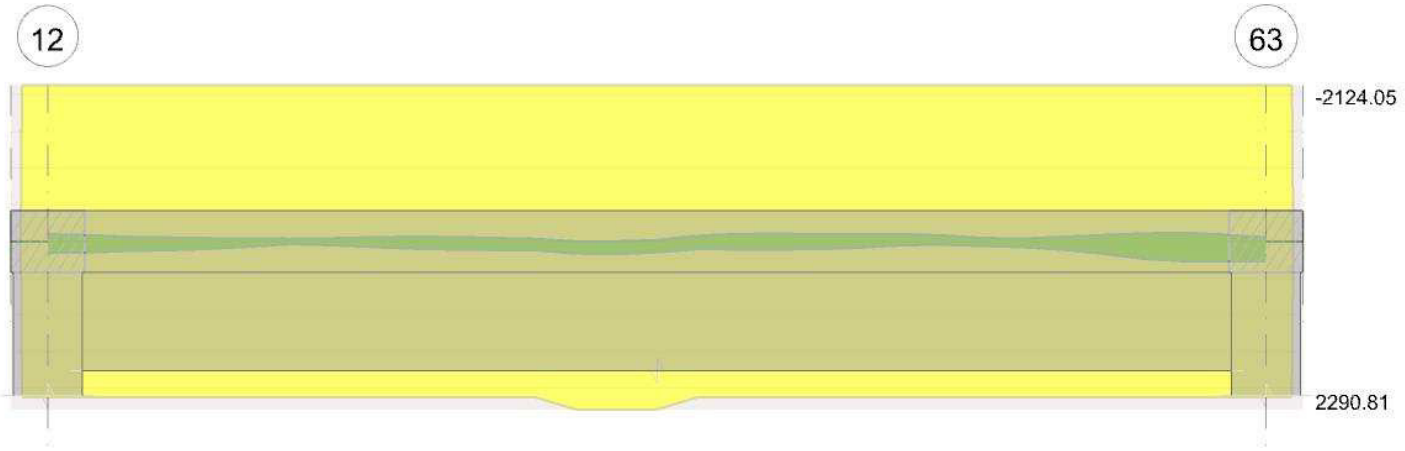


Diagramma verifica stato limite ultimo taglio

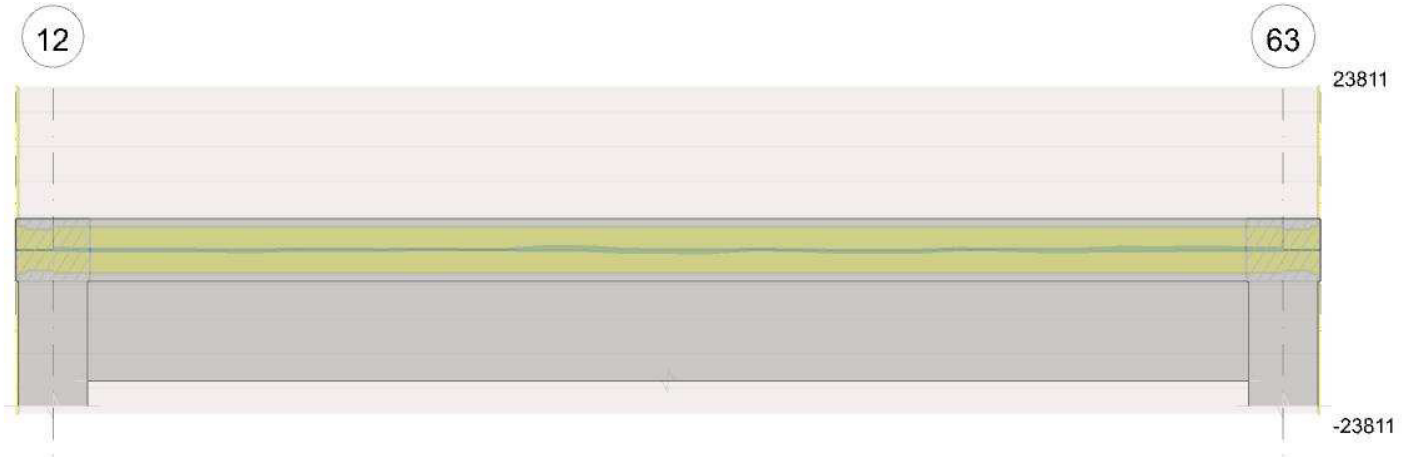
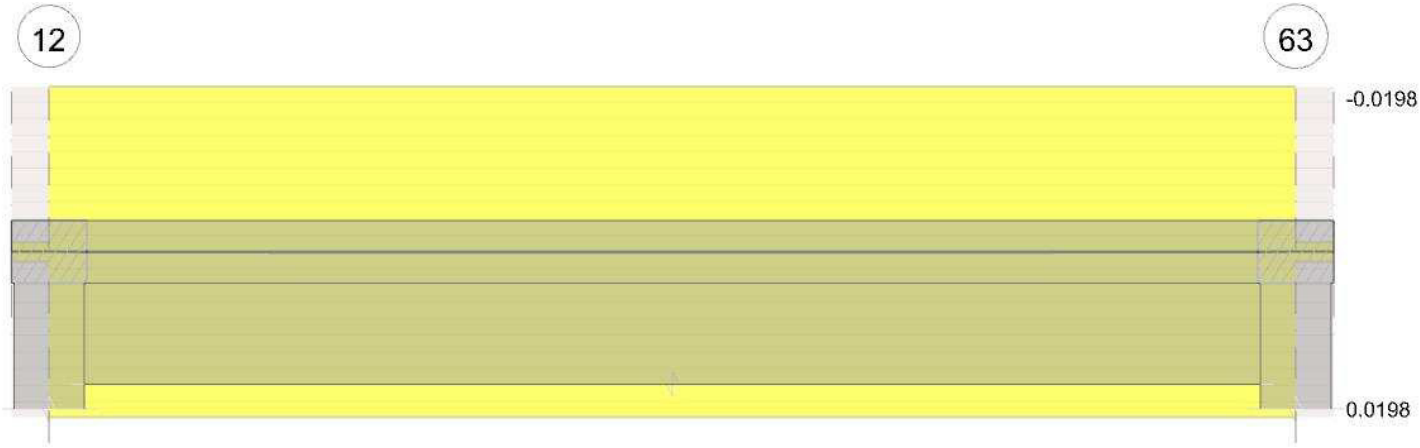


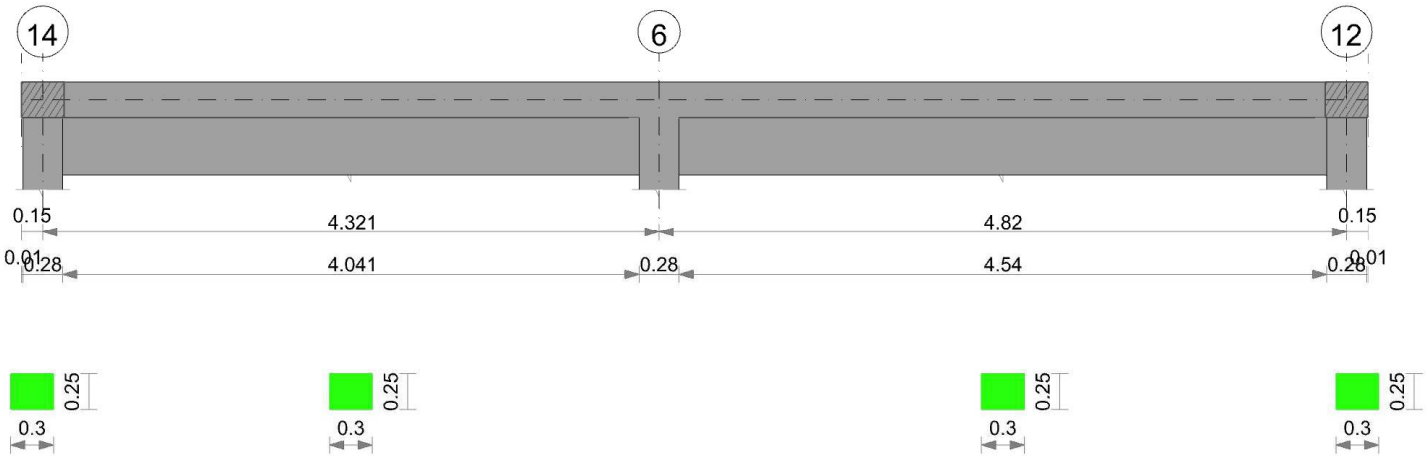
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

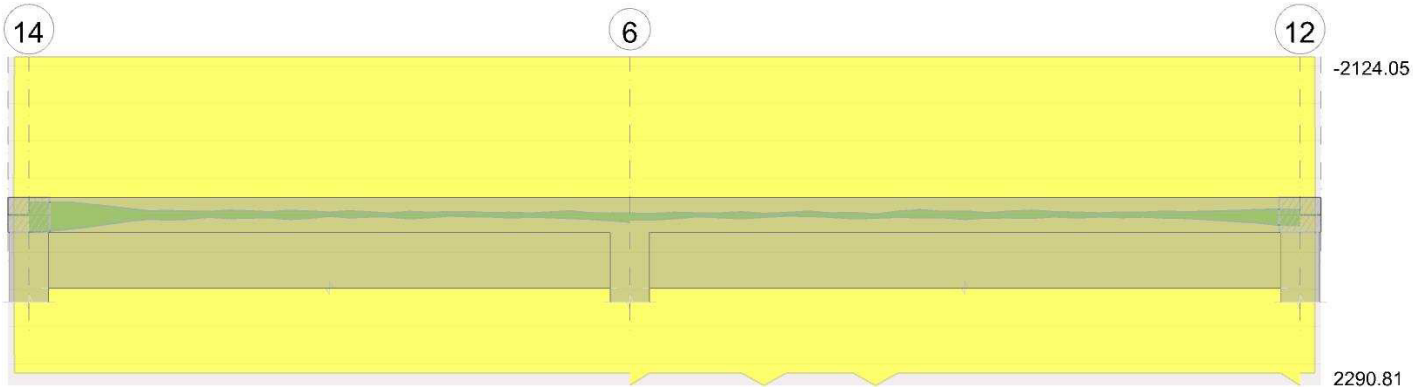


Diagramma verifica stato limite ultimo taglio

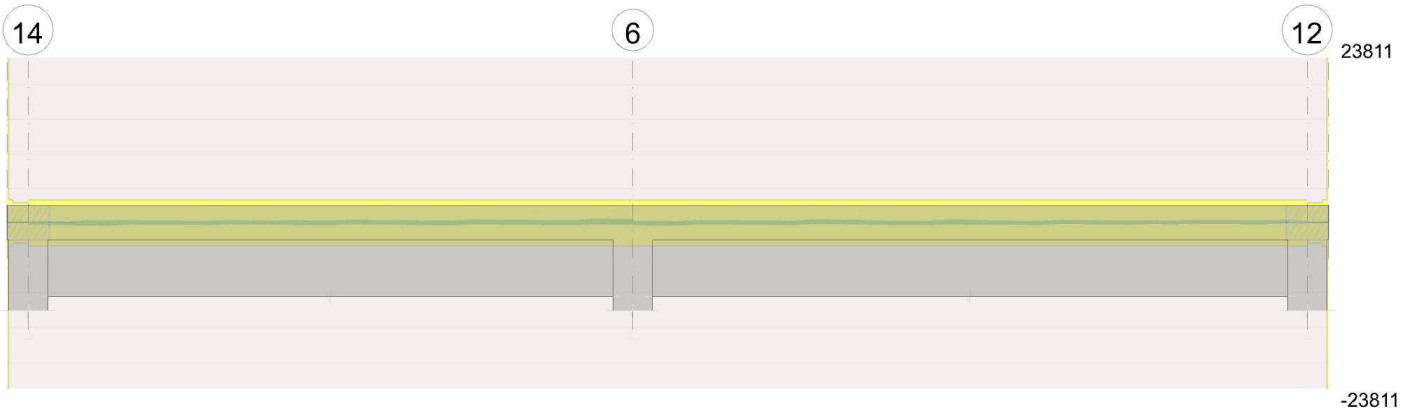
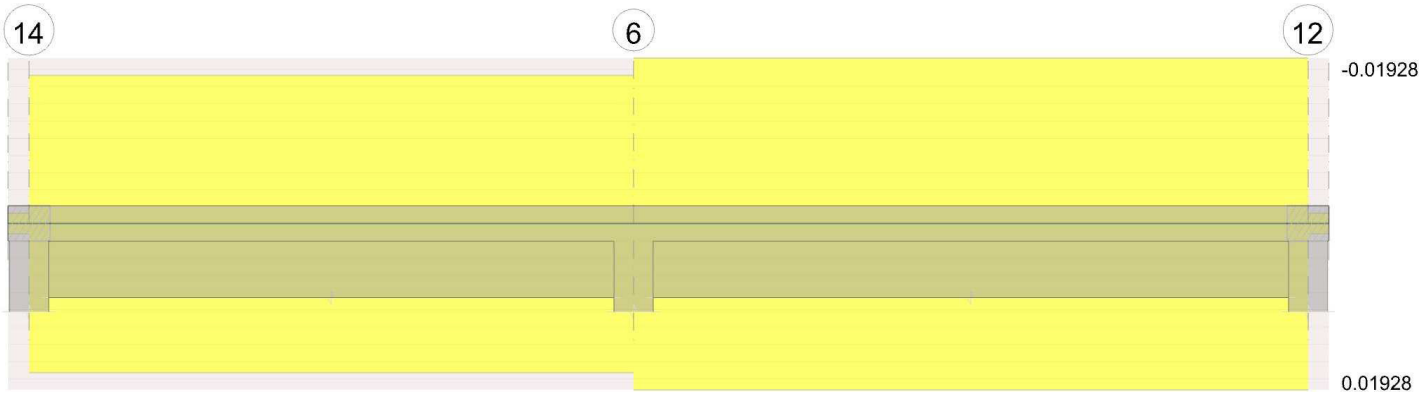


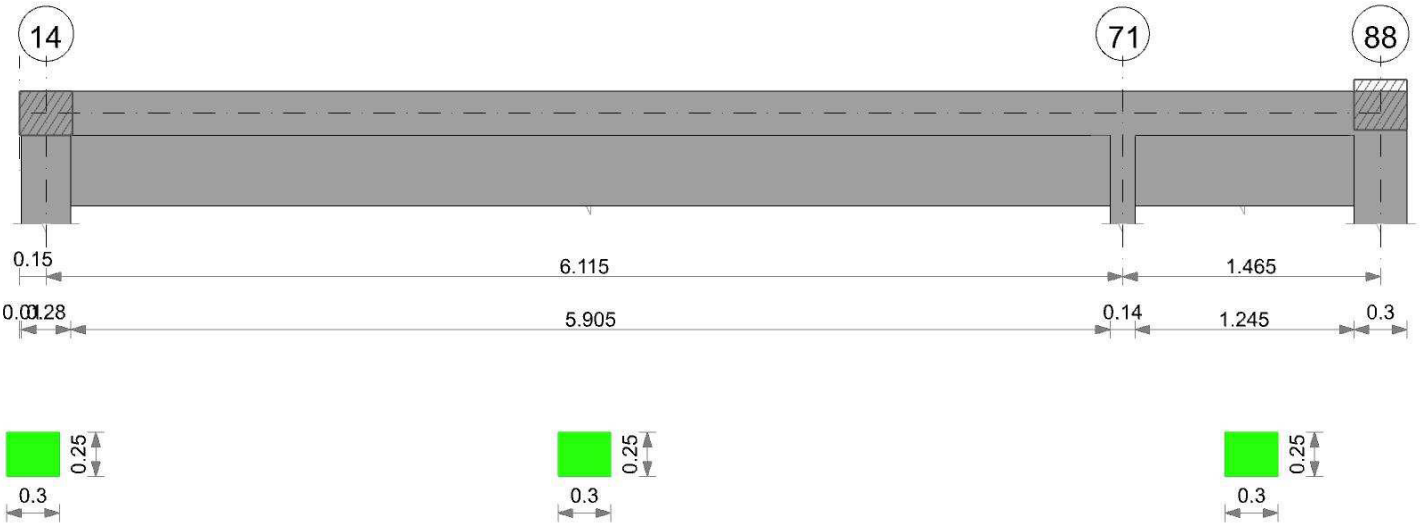
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 9

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

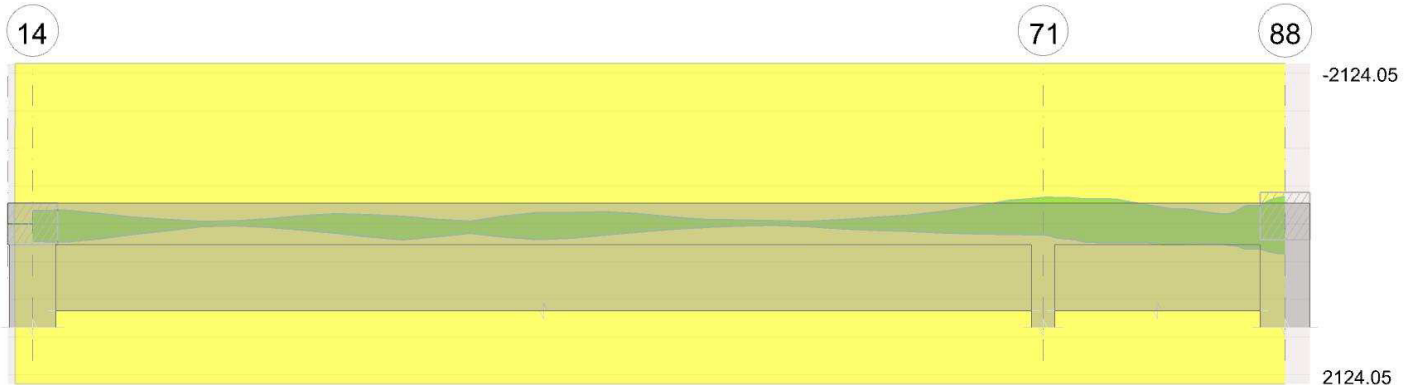


Diagramma verifica stato limite ultimo taglio

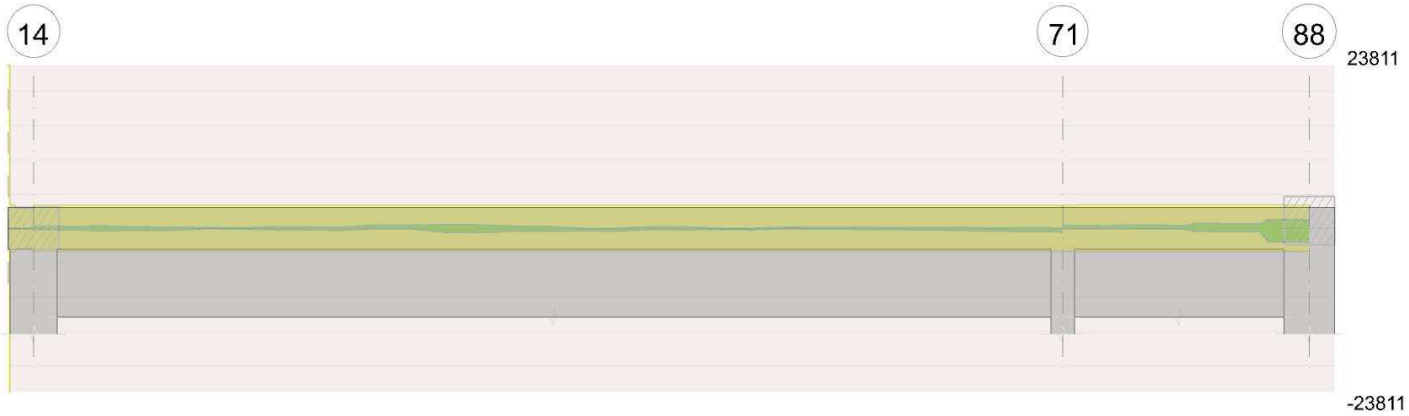
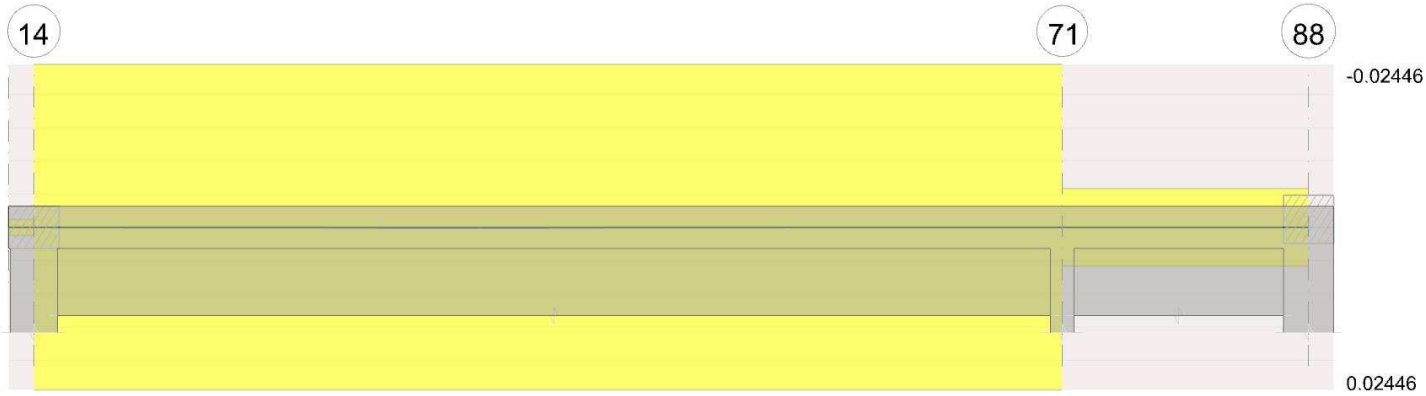


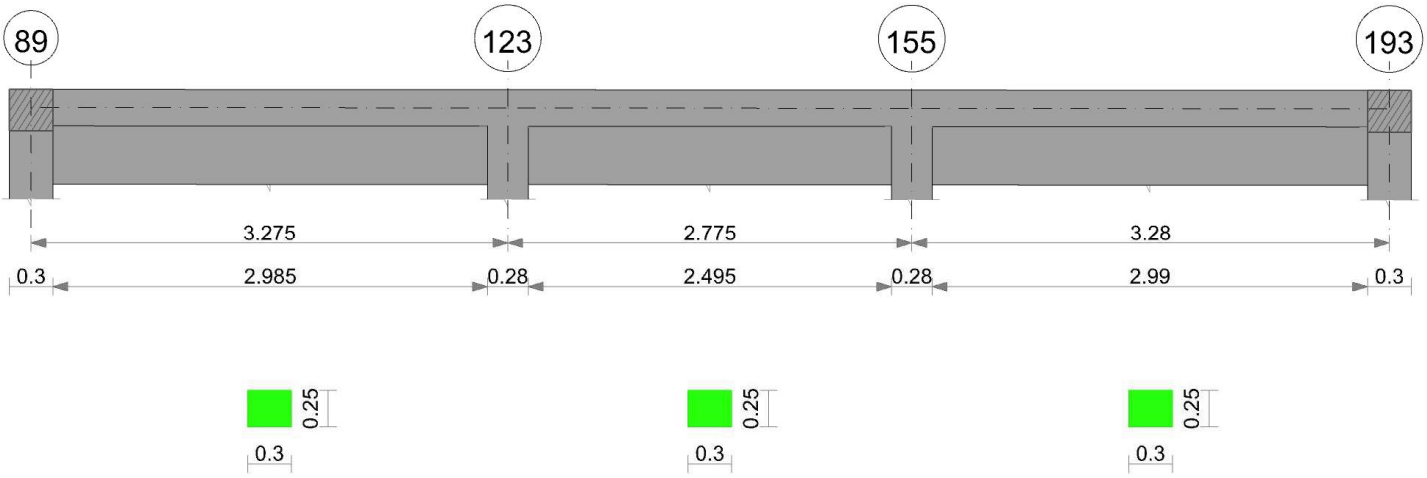
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO SOTTOTETTO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

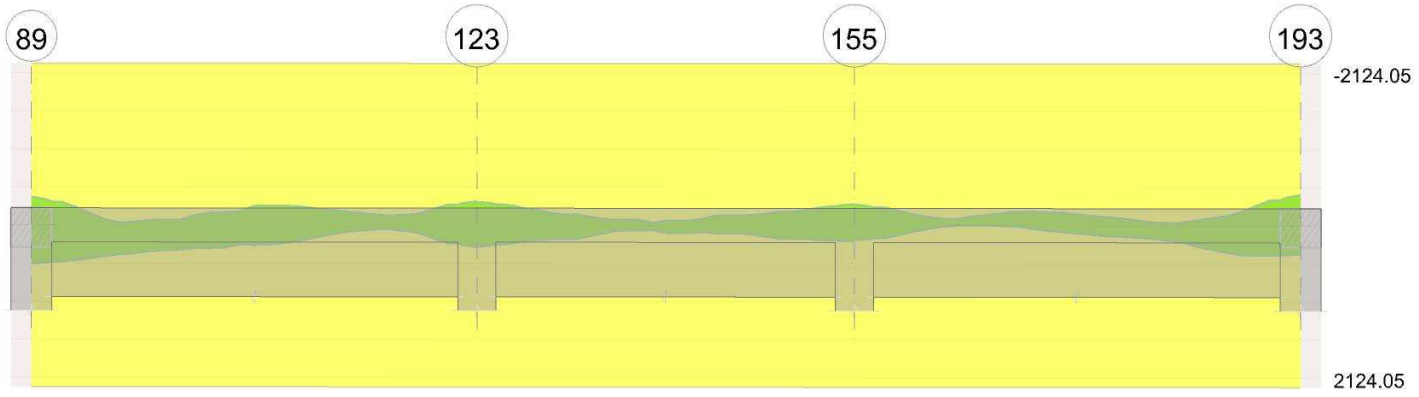


Diagramma verifica stato limite ultimo taglio

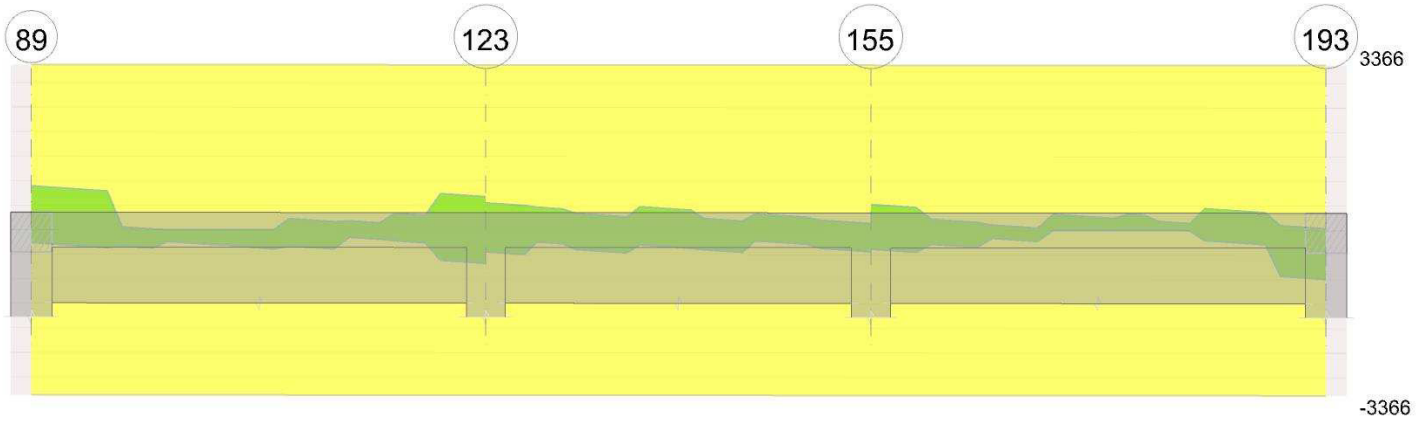
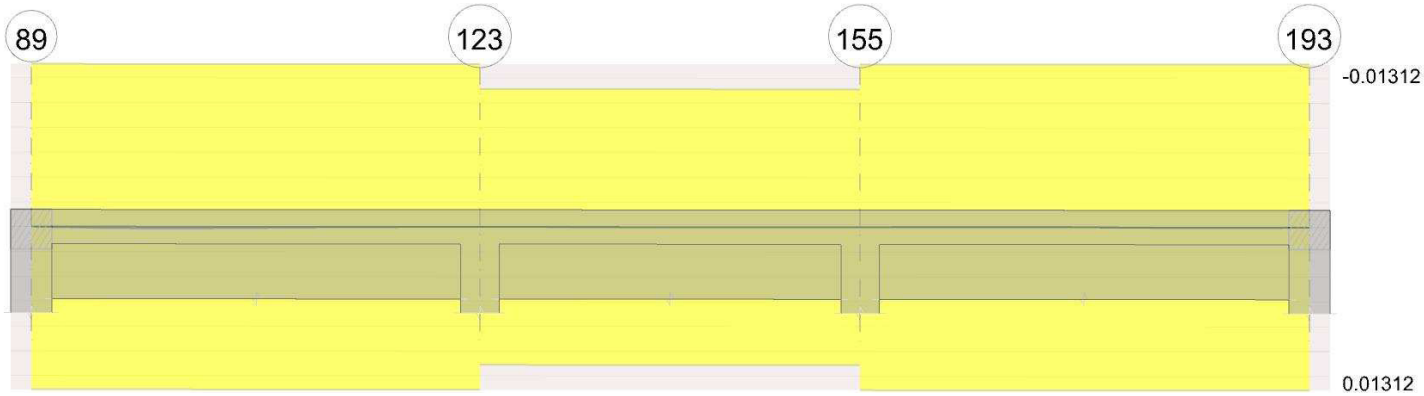


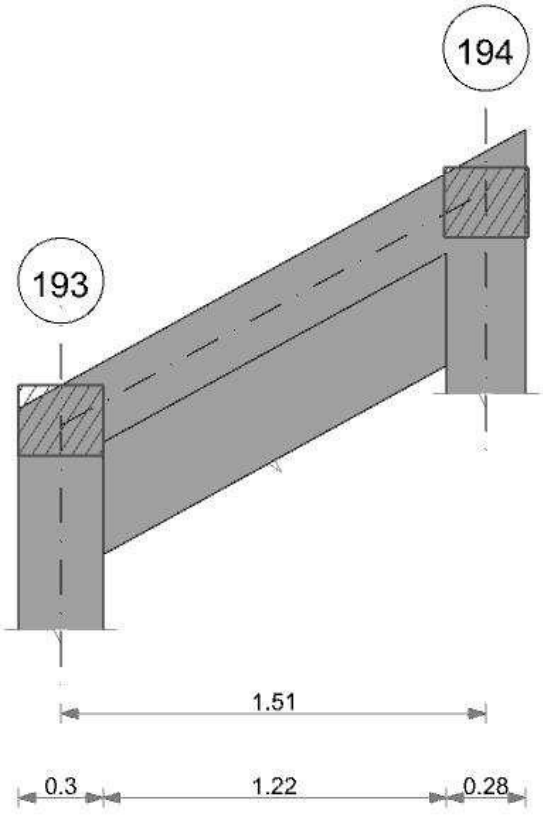
Diagramma verifica stato limite esercizio quasi permanente freccia

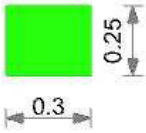


Output campate

CORDOLO SOTTOTETTO 12

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

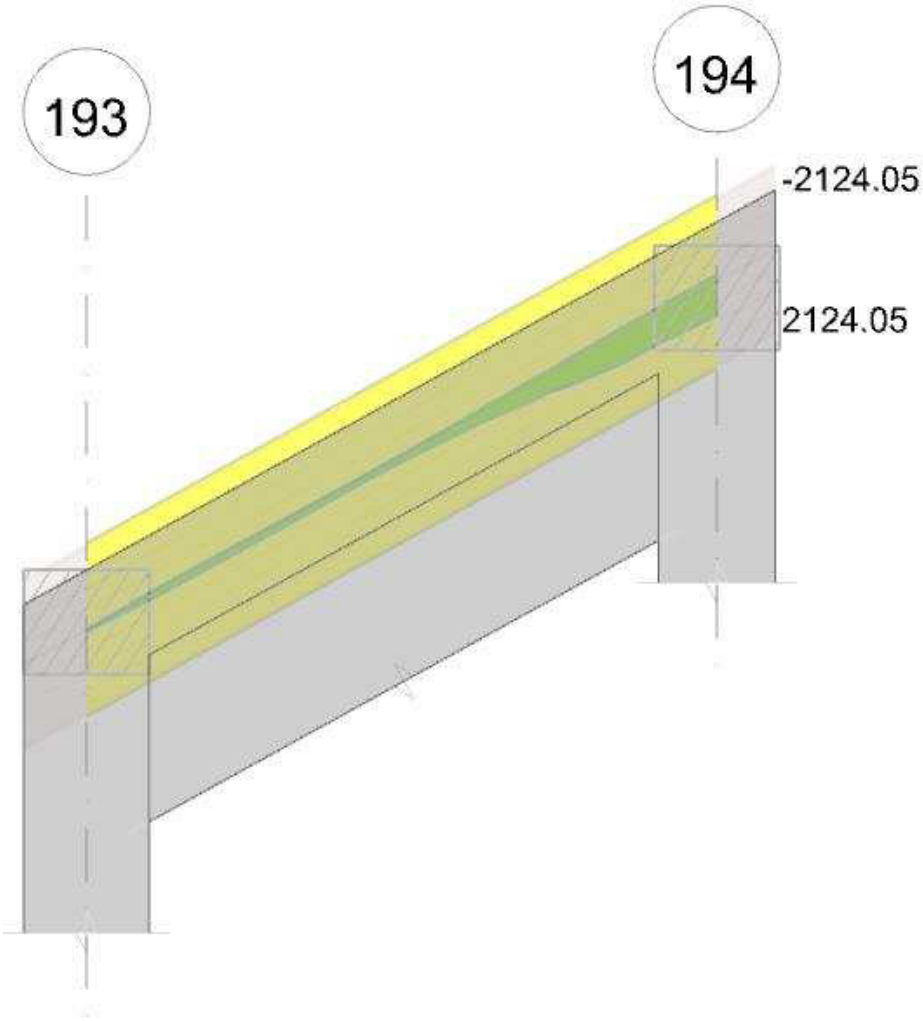


Diagramma verifica stato limite ultimo taglio

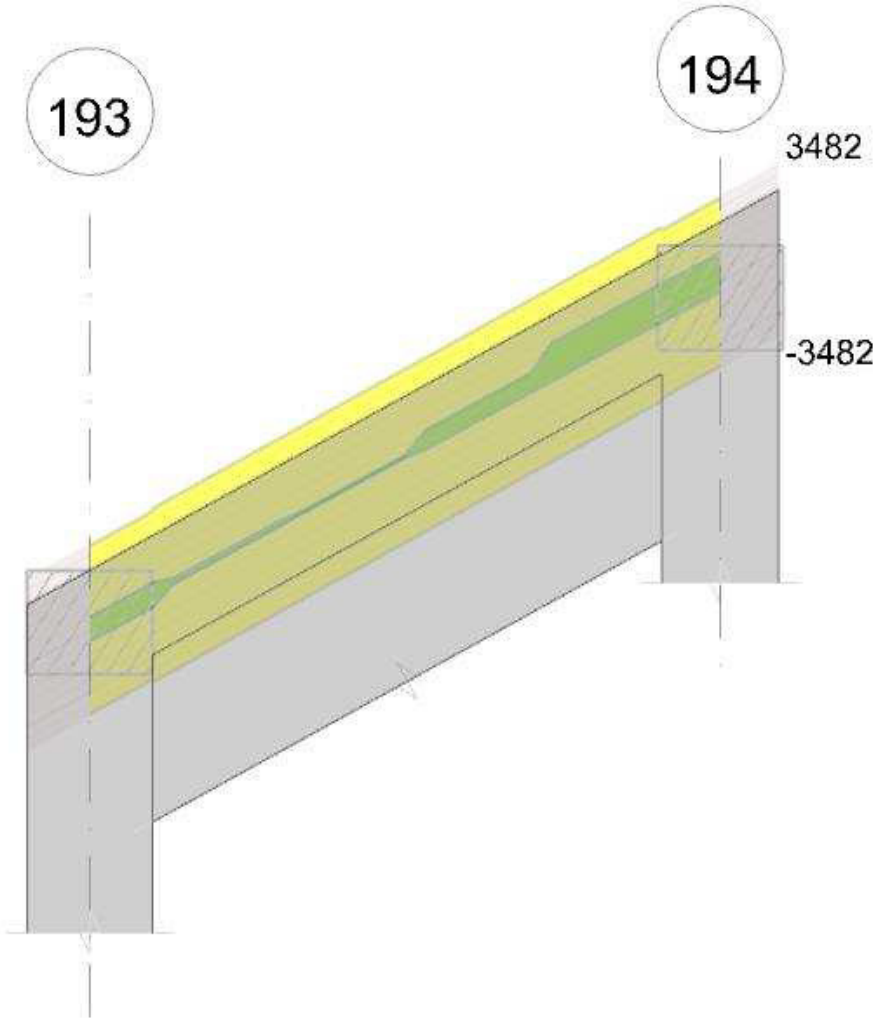
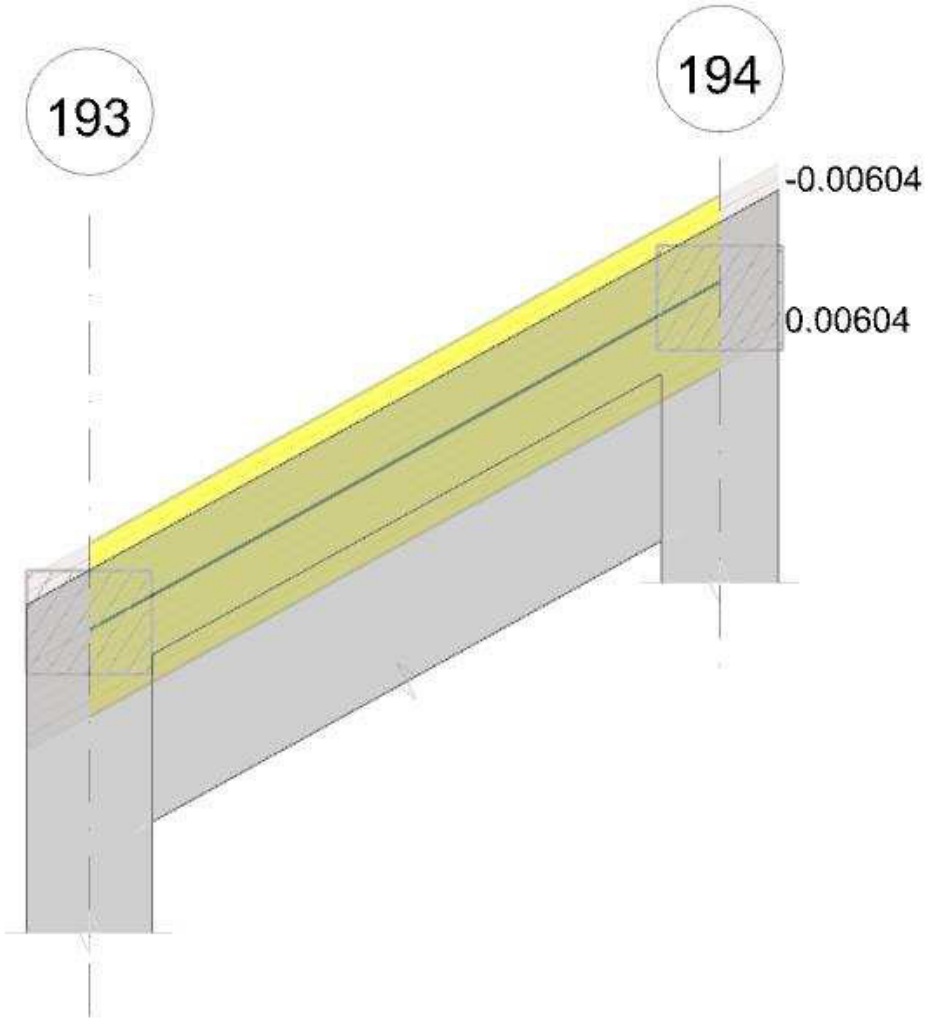


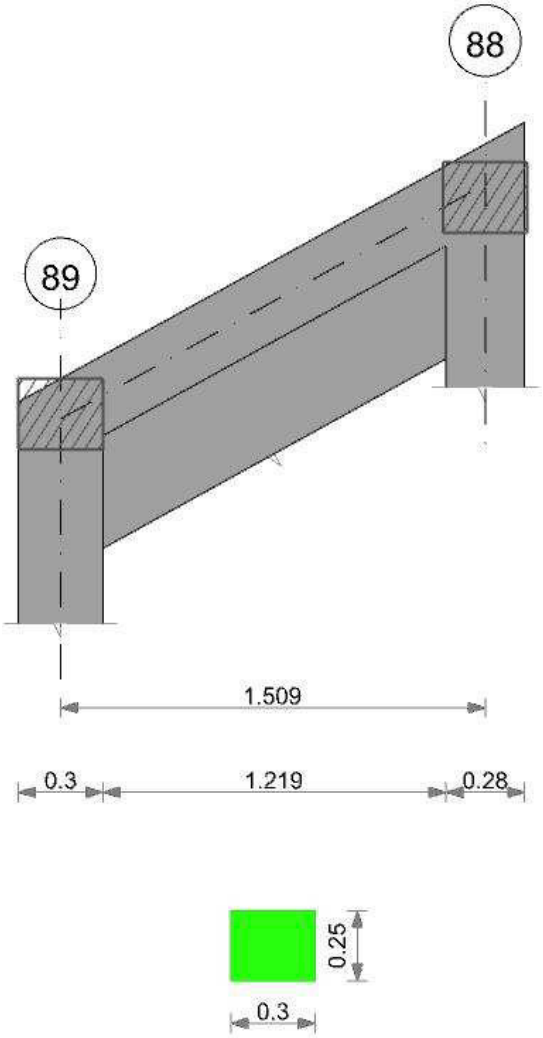
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

CORDOLO STTOTETTO 10

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x25	Rettangolare	0.3	0.25	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

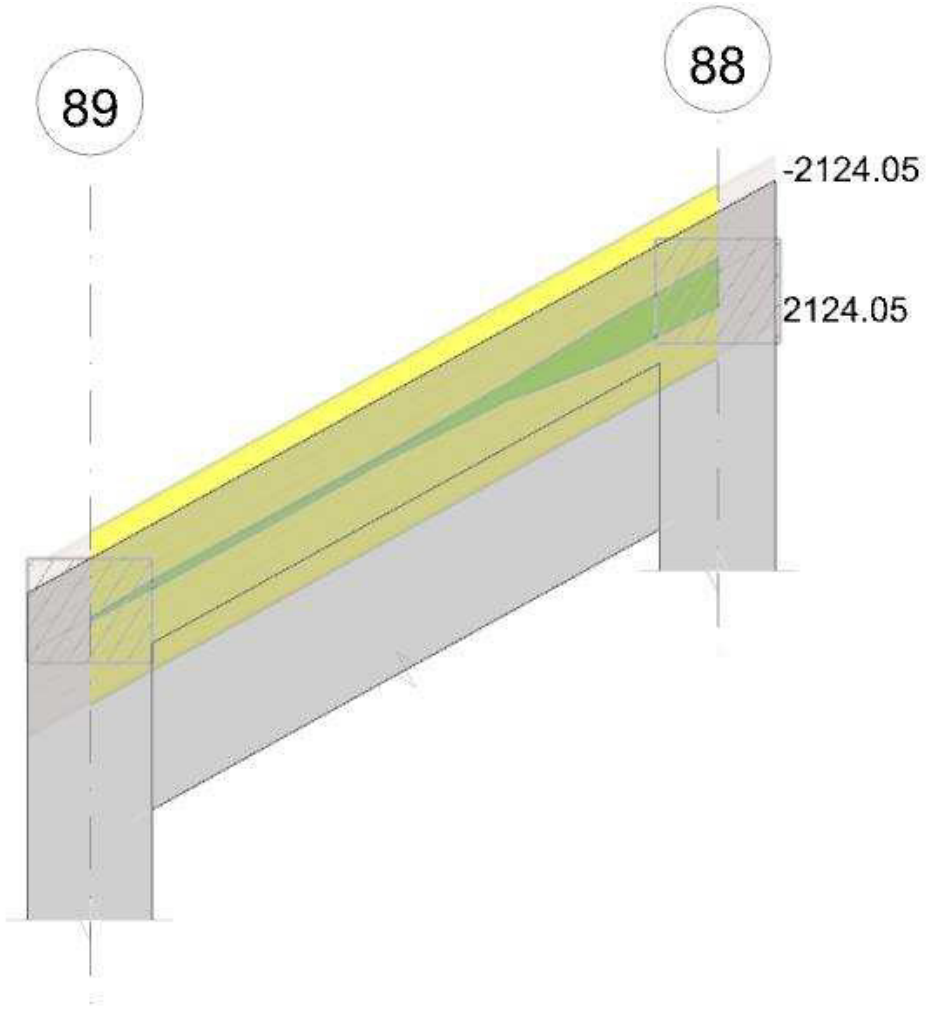


Diagramma verifica stato limite ultimo taglio

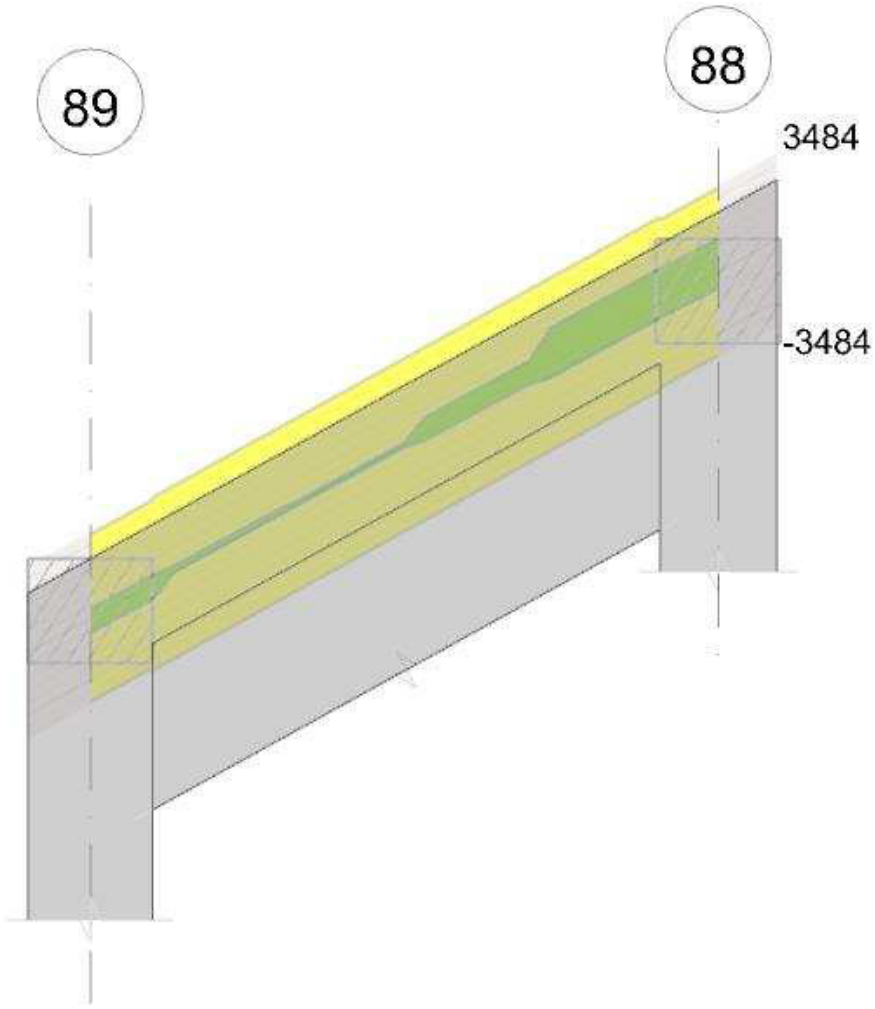
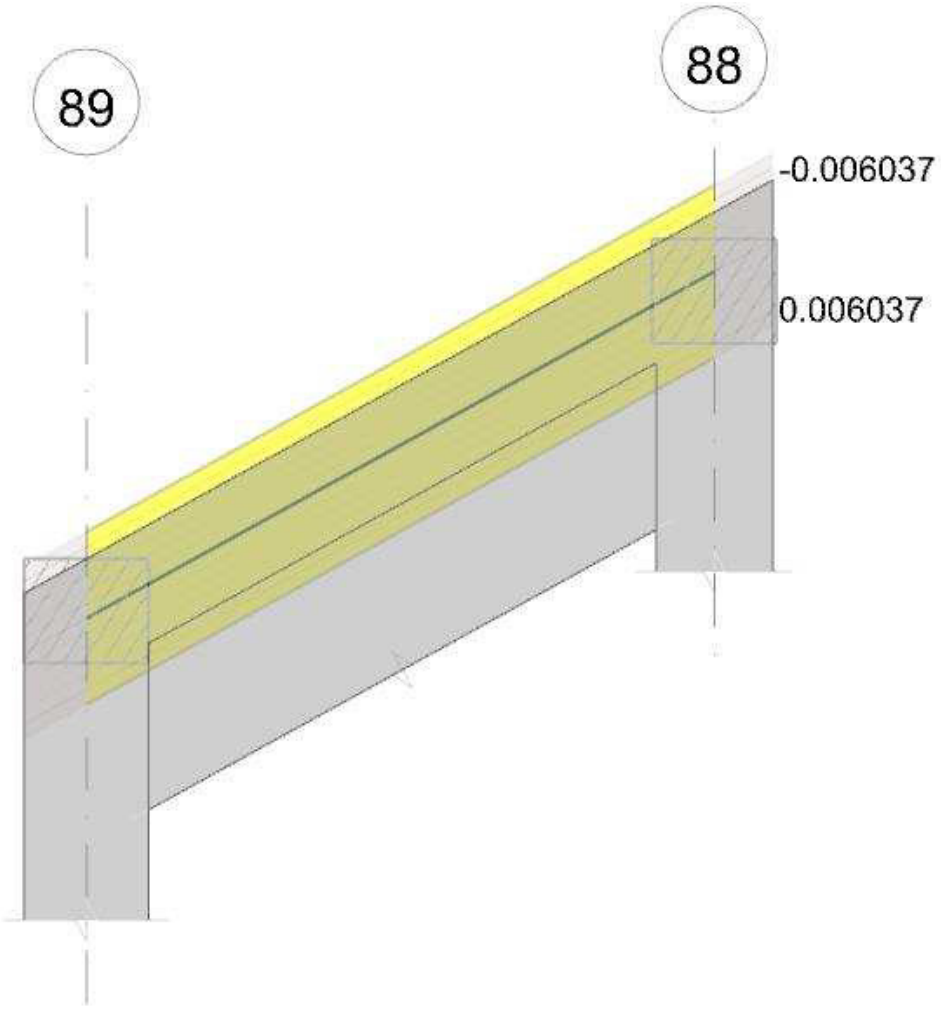


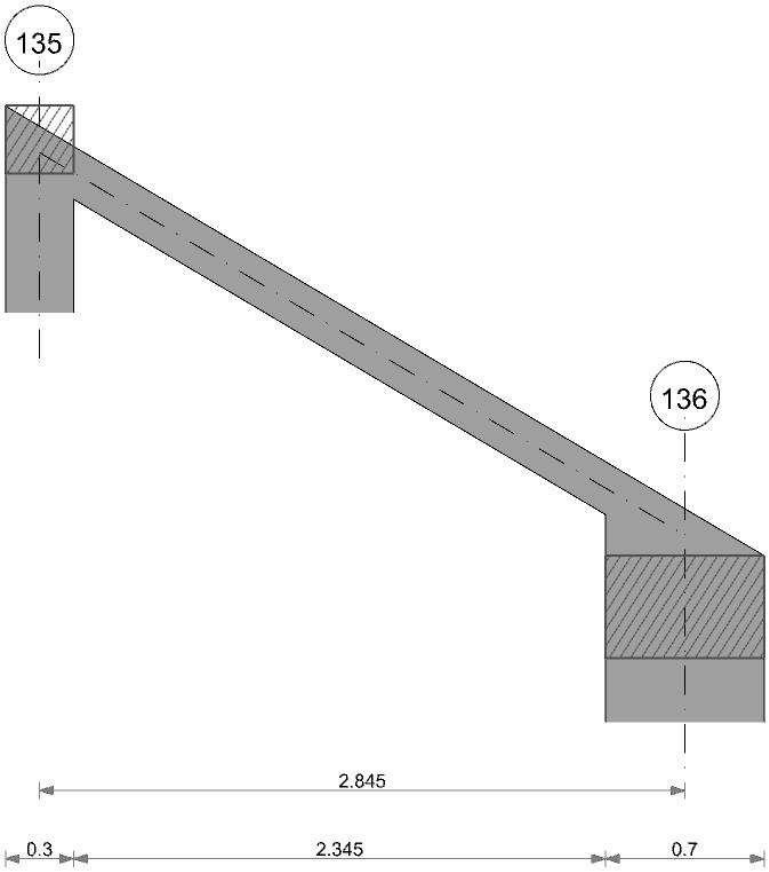
Diagramma verifica stato limite esercizio quasi permanente freccia

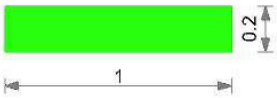


Output campate

RAMPA SCALA

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 100x20	Rettangolare	1	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

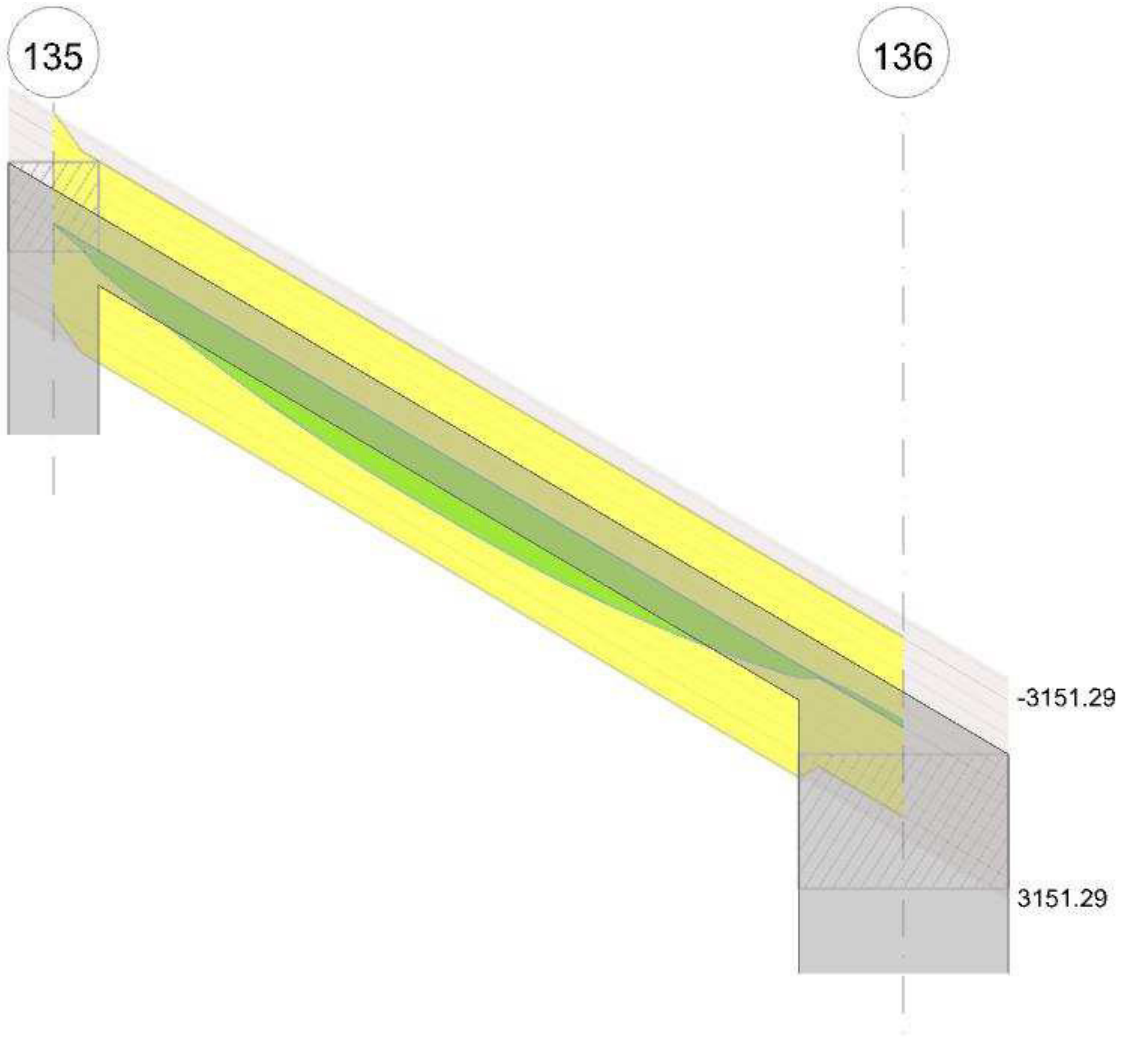


Diagramma verifica stato limite ultimo taglio

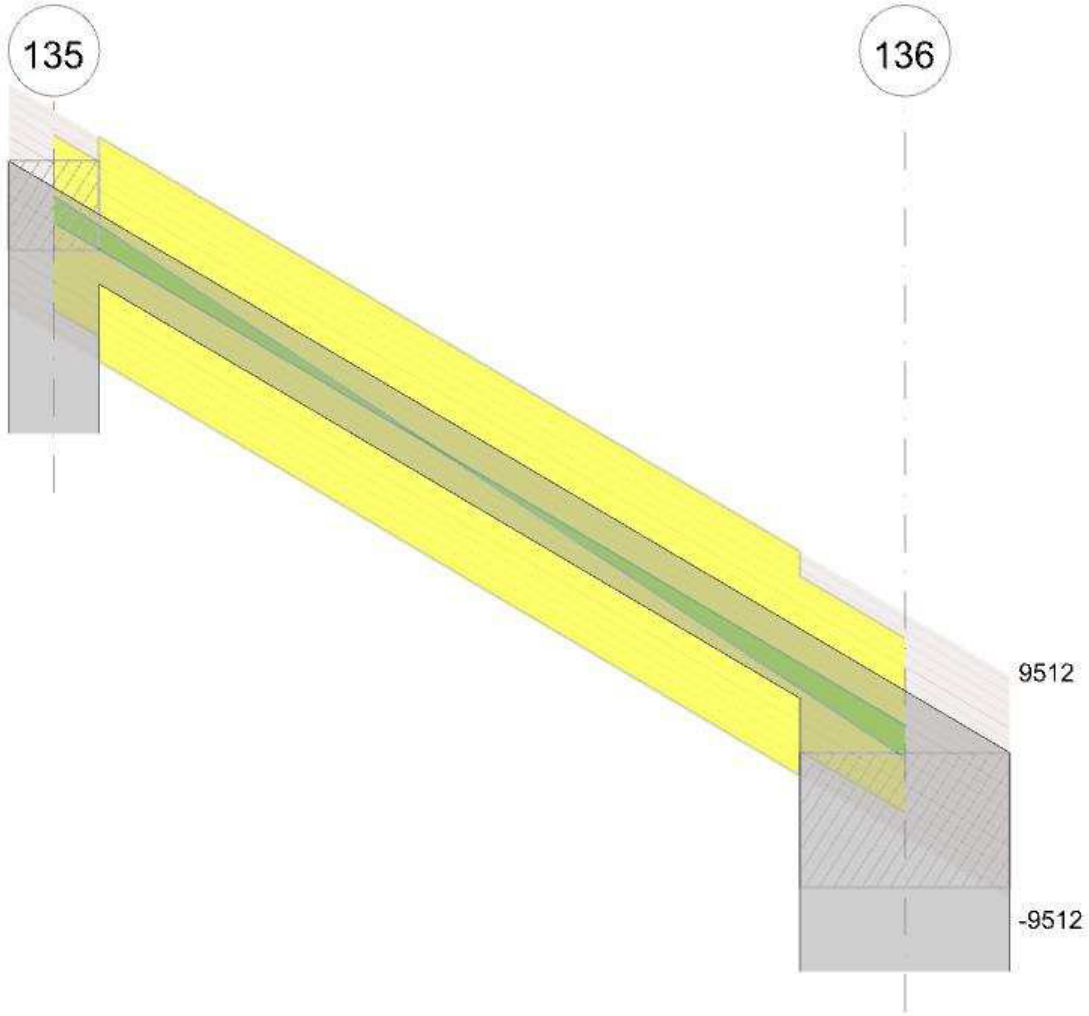
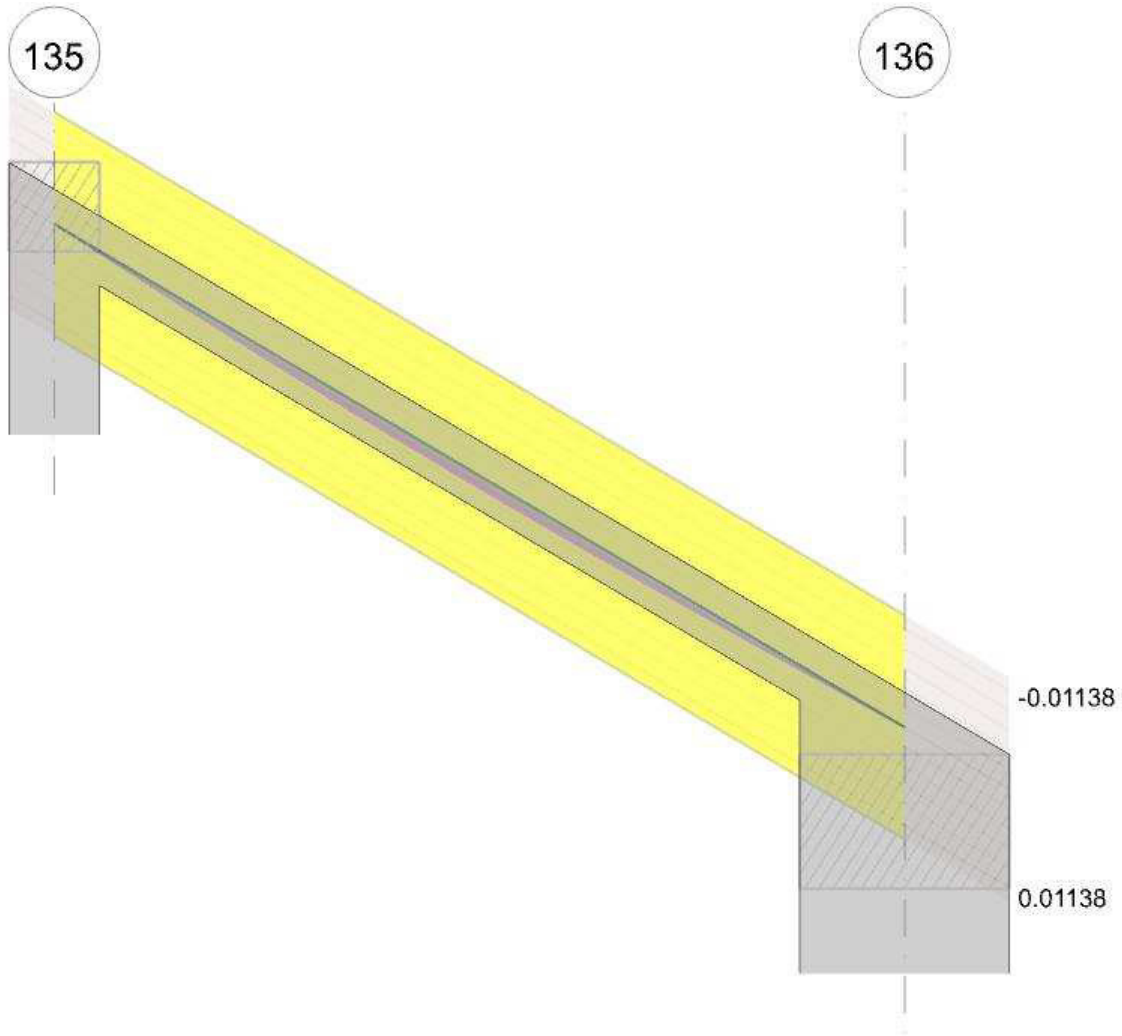


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 135 - 136, sezione R 100x20, asta 855

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000462	0.05	0.000462	0.05							-35.67	SLU 82	-35.67	-3151.29	0.213	88.35	Si
0.15	0.000462	0.05	0.000462	0.05	346.99	SLU 82	504.04	3151.29	0.213	6.25							Si
1.33	0.000462	0.05	0.000462	0.05	1717.7	SLU 82	1717.7	3151.29	0.213	1.83							Si
1.42	0.000462	0.05	0.000462	0.05	1700.23	SLU 82	1712.58	3151.29	0.213	1.84							Si
2.49	0.000462	0.05	0.000462	0.05	176.18	SLU 82	342.4	3151.29	0.213	9.2							Si
2.84	0.000462	0.05	0.000462	0.05							-847.31	SLU 83	-192.59	-3151.29	0.213	16.36	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000462	0.05	0.000462	0.05							-21.22	SLV 8	-21.22	-2533.64	0.238	119.38	Si
0.15	0.000462	0.05	0.000462	0.05	203.24	SLV 4	294.75	2533.64	0.238	8.6							Si
1.33	0.000462	0.05	0.000462	0.05	1009.62	SLV 8	1009.62	2533.64	0.238	2.51							Si
1.42	0.000462	0.05	0.000462	0.05	1000.33	SLV 8	1006.89	2533.64	0.238	2.52							Si
2.49	0.000462	0.05	0.000462	0.05	124.72	SLV 8	220.67	2533.64	0.238	11.48							Si
2.84	0.000462	0.05	0.000462	0.05							-554.51	SLV 9	-169.5	-2533.64	0.238	14.95	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000462	0.05	0.000462	0.05							-20.35	SLD 8	-20.35	-2533.64	0.238	124.52	Si
0.15	0.000462	0.05	0.000462	0.05	202.29	SLD 4	293.37	2533.64	0.238	8.64							Si
1.33	0.000462	0.05	0.000462	0.05	998.34	SLD 8	998.34	2533.64	0.238	2.54							Si
1.42	0.000462	0.05	0.000462	0.05	988.2	SLD 8	995.37	2533.64	0.238	2.55							Si
2.49	0.000462	0.05	0.000462	0.05	102.91	SLD 8	199.47	2533.64	0.238	12.7							Si
2.84	0.000462	0.05	0.000462	0.05							-529.54	SLD 9	-146.4	-2533.64	0.238	17.31	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000462	0	2237	SLU 82	2237	7410	47621	0	7410	1	3.31	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.15	0.000018	0.000462	0	1976	SLU 82	1976	7410	47621	9512	9512	1	4.81	Si
1.42	0.000018	0.000462	0	-234	SLU 83	-234	-7410	-47621	-9512	-9512	1	40.62	Si
2.49	0.000018	0.000462	0	-2097	SLU 83	-2097	-7410	-47621	-9512	-9512	1	4.54	Si
2.84	0	0.000462	0	-2705	SLU 83	-2705	-7410	-47621	0	-7410	1	2.74	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000462	0	1307	SLV 8	1307	7410	47621	0	7410	1	5.67	Si
0.15	0.000018	0.000462	0	1155	SLV 8	1155	7410	47621	9512	9512	1	8.23	Si
1.42	0.000018	0.000462	0	-155	SLV 9	-155	-7410	-47621	-9512	-9512	1	61.5	Si
2.49	0.000018	0.000462	0	-1237	SLV 9	-1237	-7410	-47621	-9512	-9512	1	7.69	Si
2.84	0	0.000462	0	-1590	SLV 9	-1590	-7410	-47621	0	-7410	1	4.66	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000462	0	1299	SLD 8	1299	7410	47621	0	7410	1	5.7	Si
0.15	0.000018	0.000462	0	1148	SLD 8	1148	7410	47621	9512	9512	1	8.29	Si
1.42	0.000018	0.000462	0	-147	SLD 9	-147	-7410	-47621	-9512	-9512	1	64.59	Si
2.49	0.000018	0.000462	0	-1229	SLD 9	-1229	-7410	-47621	-9512	-9512	1	7.74	Si
2.84	0	0.000462	0	-1582	SLD 9	-1582	-7410	-47621	0	-7410	1	4.68	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-25.57	19	-25.57	3647	1494000	54700	36000000	-19.66	2	-19.66	2804	1120500			Si
0.15	250.72	19	364.11	51918	1494000	778776	36000000	201.56	2	292.32	41682	1120500			Si
1.42	1226.85	19	1235.86	176224	1494000	2643361	36000000	978.68	2	986.33	140643	1120500			Si
2.49	124.3	19	244.49	34862	1494000	522927	36000000	85.81	2	182.84	26072	1120500			Si
2.84	-615.54	20	-142.23	20281	1494000	304210	36000000	-509.96	2	-128.28	18292	1120500			Si

Verifica di apertura delle fessure

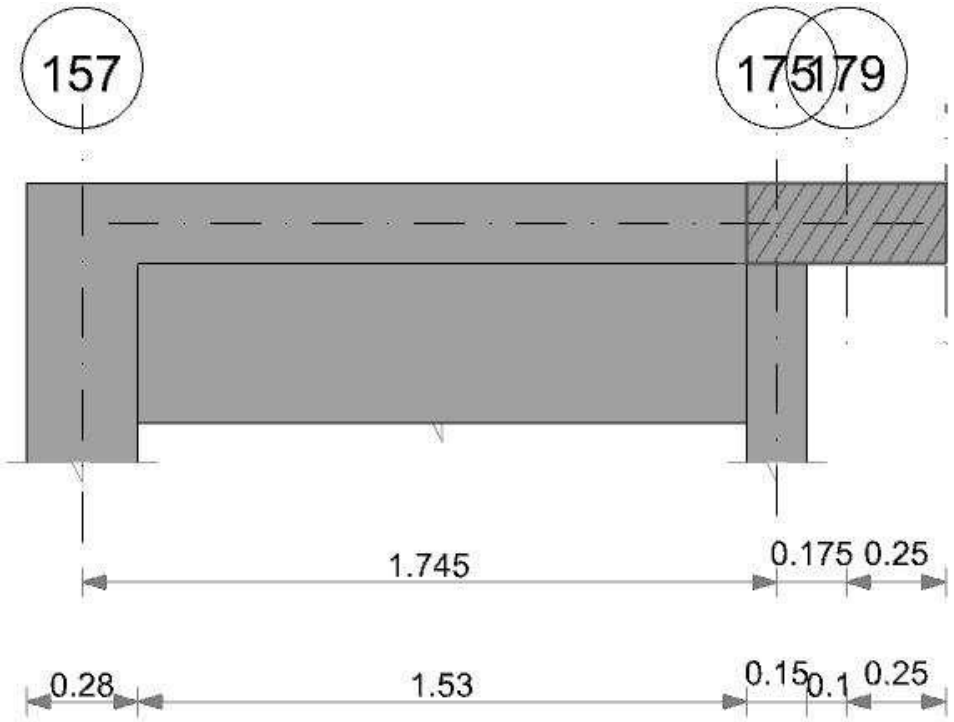
La campata non presenta apertura delle fessure

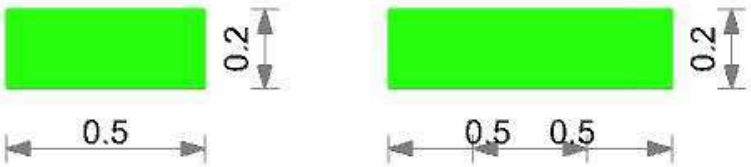
Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	0.0001	0.00007	0.00009	0.00007	0.00009	0.00007	0.00008	0.00007	0.00008	0.00007	0.00021	2	0.00019	2	9999	Si
1.33	0.00057	0.00041	0.00053	0.00038	0.00049	0.00041	0.00045	0.00038	0.00046	0.00041	0.00121	2	0.00108	2	2342	Si
1.42	0.00057	0.00041	0.00053	0.00038	0.00049	0.00041	0.00045	0.00038	0.00046	0.00041	0.00121	2	0.00108	2	2345	Si
2.49	0.00019	0.00013	0.00018	0.00012	0.00016	0.00013	0.00015	0.00012	0.00015	0.00013	0.0004	2	0.00036	2	7083	Si

Trave a "Primo" 157-179

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

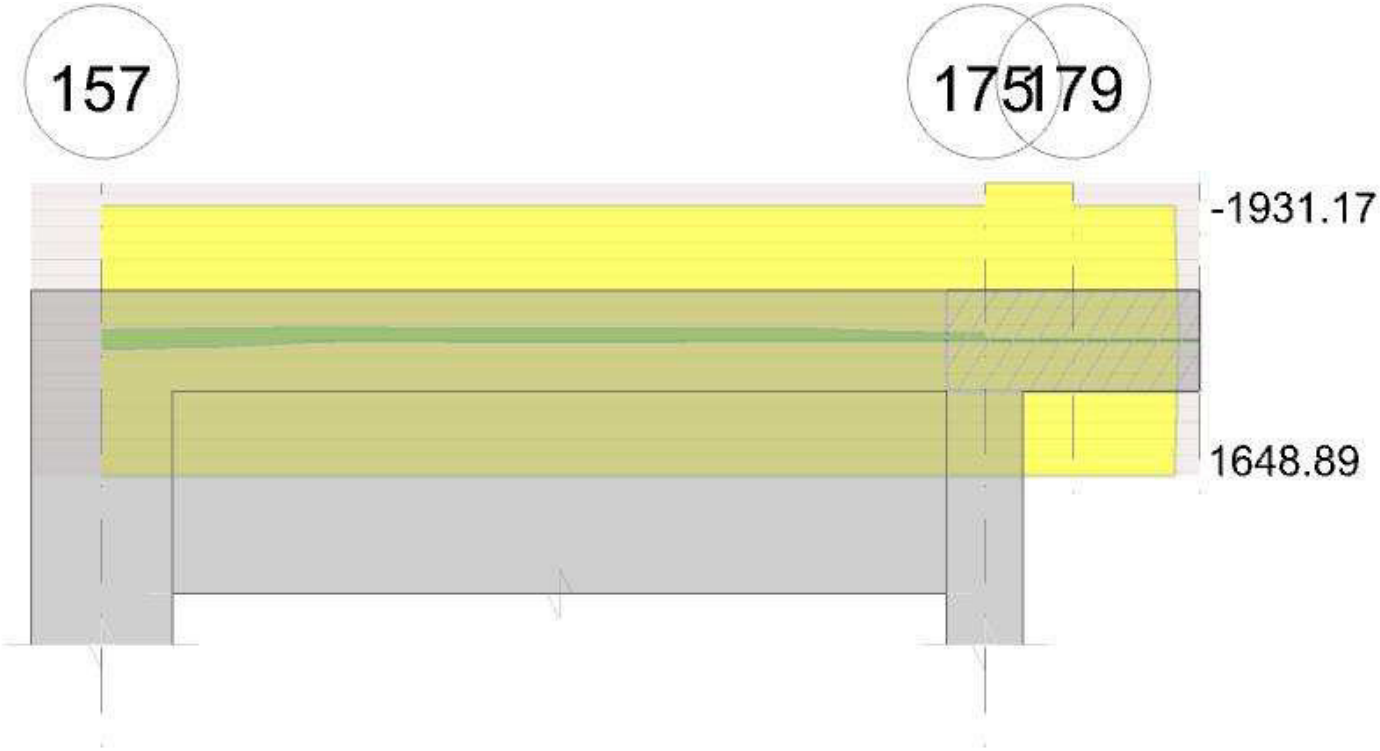
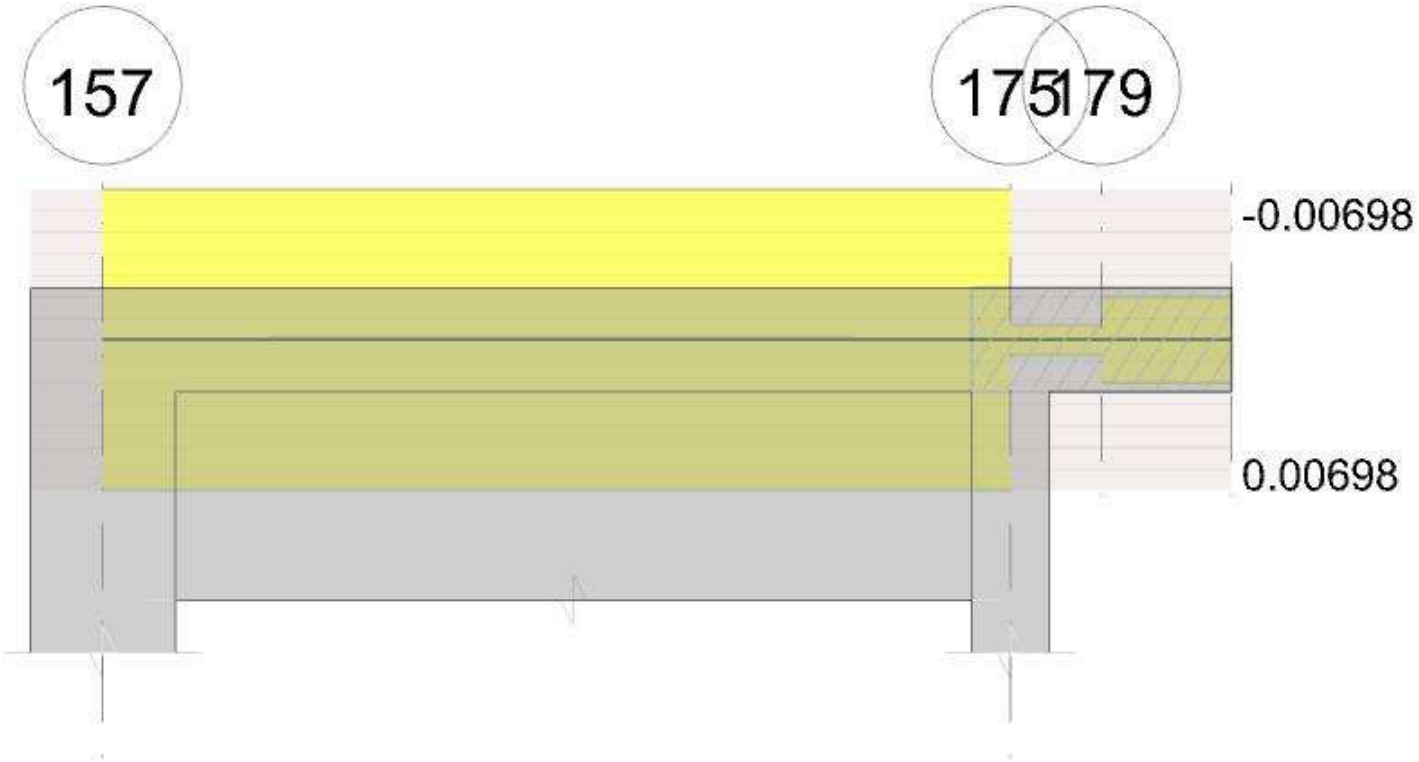


Diagramma verifica stato limite ultimo taglio

Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 2 tra i fili 175 - 179, sezione R 50x20, asta 340

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-4.96	SLU 49	-2.83	-1931.17	0.242	682.23	Si
0.08	0.000308	0.05	0.000308	0.05							-1.61	SLU 49	-1.61	-1931.17	0.242	1198.05	Si
0.09	0.000308	0.05	0.000308	0.05							-1.23	SLU 49	-1.61	-1931.17	0.242	1198.05	Si
0.18	0.000308	0.05	0.000308	0.05	0.01	SLU 61	0.01	1931.17	0.242	+∞	0.01	SLU 27	-0.72	-1931.17	0.242	2688.94	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-3.83	SLV 3	-2.18	-1648.89	0.269	755.02	Si
0.08	0.000308	0.05	0.000308	0.05							-1.24	SLV 3	-1.24	-1648.89	0.269	1326.6	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLV 3	-1.24	-1648.89	0.269	1326.6	Si
0.18	0.000308	0.05	0.000308	0.05	0.02	SLV 13	0.02	1648.89	0.269	+∞	0	SLV 4	-0.55	-1648.89	0.269	2983.19	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-3.82	SLD 3	-2.18	-1648.89	0.269	756.32	Si
0.08	0.000308	0.05	0.000308	0.05							-1.24	SLD 3	-1.24	-1648.89	0.269	1328.46	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLD 15	-1.24	-1648.89	0.269	1328.46	Si
0.18	0.000308	0.05	0.000308	0.05	0.01	SLD 3	0.01	1648.89	0.269	+∞	0.01	SLD 14	-0.55	-1648.89	0.269	2984.04	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	57	SLU 51	57	3906	23811	0	3906	1	68.68	Si
0.08	0.0000115	0.000308	0	32	SLU 51	32	3906	23811	6069	6069	1	186.75	Si
0.09	0.0000115	0.000308	0	28	SLU 51	28	3906	23811	6069	6069	1	213.43	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	44	SLV 3	44	3906	23811	0	3906	1	89.1	Si
0.08	0.0000115	0.000308	0	25	SLV 3	25	3906	23811	6069	6069	1	241.88	Si
0.09	0.0000115	0.000308	0	22	SLV 3	22	3906	23811	6069	6069	1	276.29	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	65753.74	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	65753.74	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000308	0	44	SLD 3	44	3906	23811	0	3906	1	89.21	Si
0.08	0.0000115	0.000308	0	25	SLD 3	25	3906	23811	6069	6069	1	242.4	Si
0.09	0.0000115	0.000308	0	22	SLD 3	22	3906	23811	6069	6069	1	276.96	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	156788.25	Si
0.18	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	156788.25	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-3.82	7	-2.18	611	1494000	9164	36000000	-3.82	1	-2.18	611	1120500			Si
0.08	-1.24	7	-1.24	348	1494000	5218	36000000	-1.24	1	-1.24	348	1120500			Si
0.09	-0.95	7	-1.24	348	1494000	5218	36000000	-0.95	1	-1.24	348	1120500			Si
0.18	0.01	19	0.01	3	1494000	44	36000000	0.01	2	0.01	3	1120500			Si

Verifica di apertura delle fessure

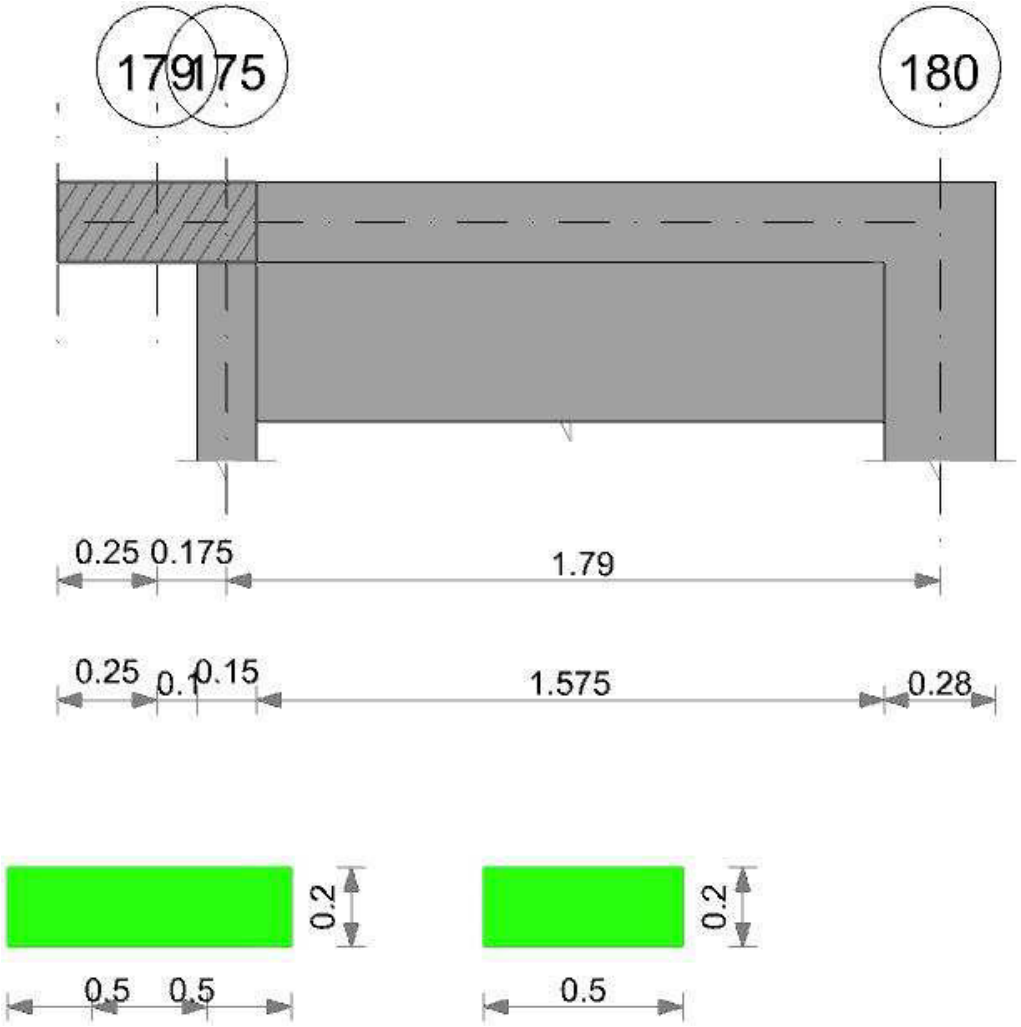
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.06	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.08	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

Trave a "Primo" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

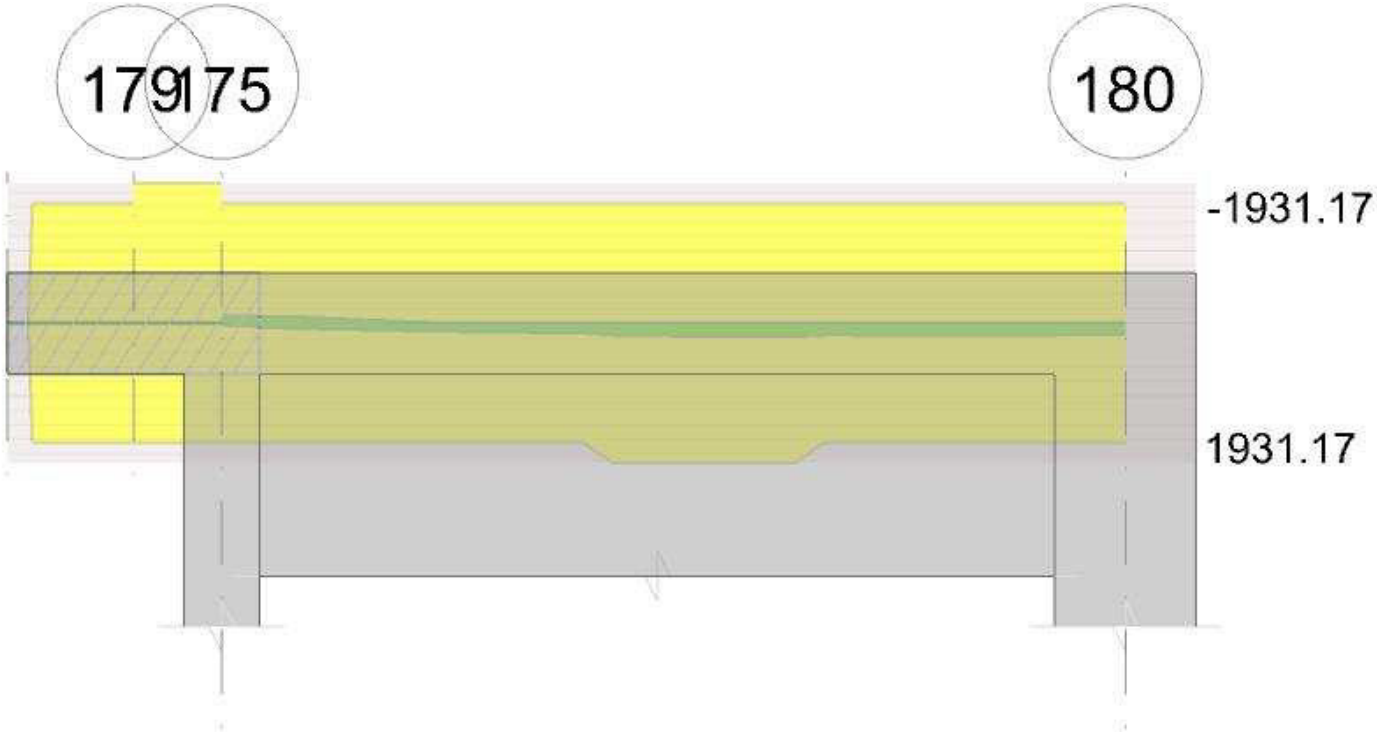


Diagramma verifica stato limite ultimo taglio

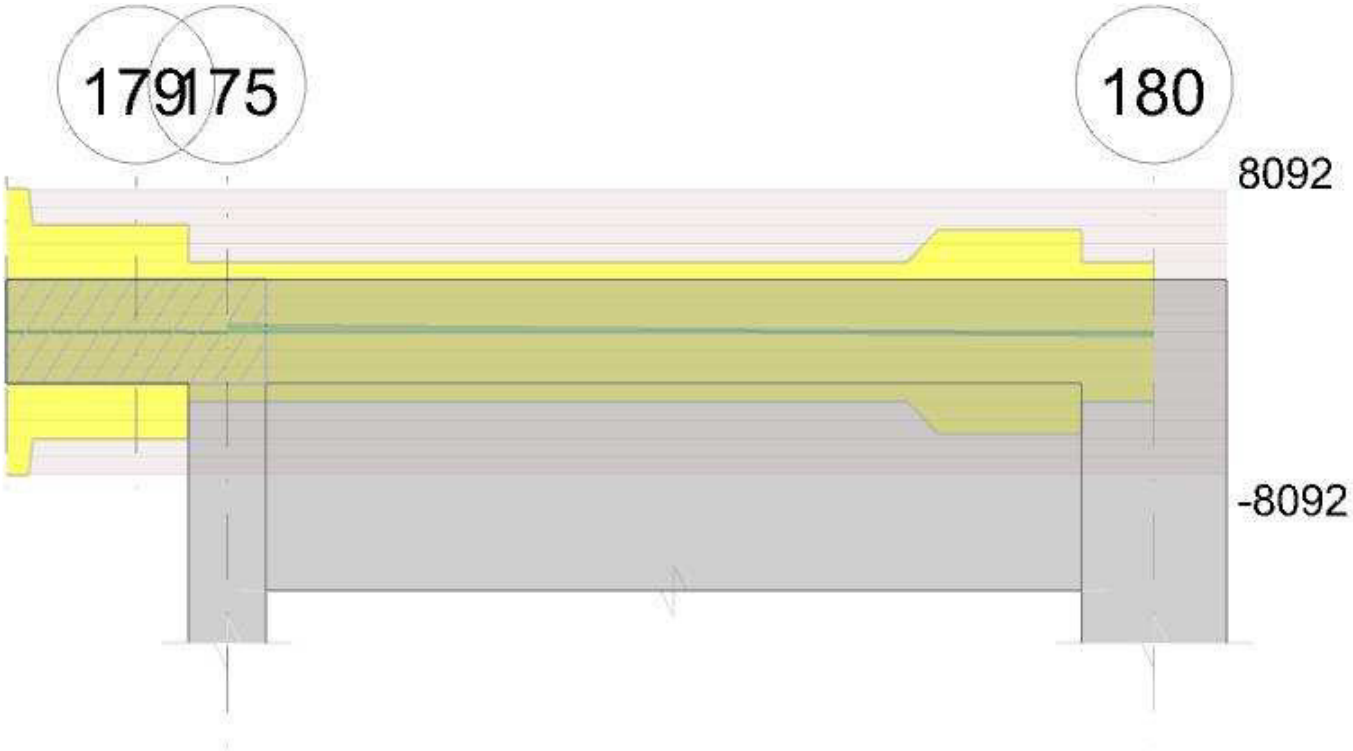
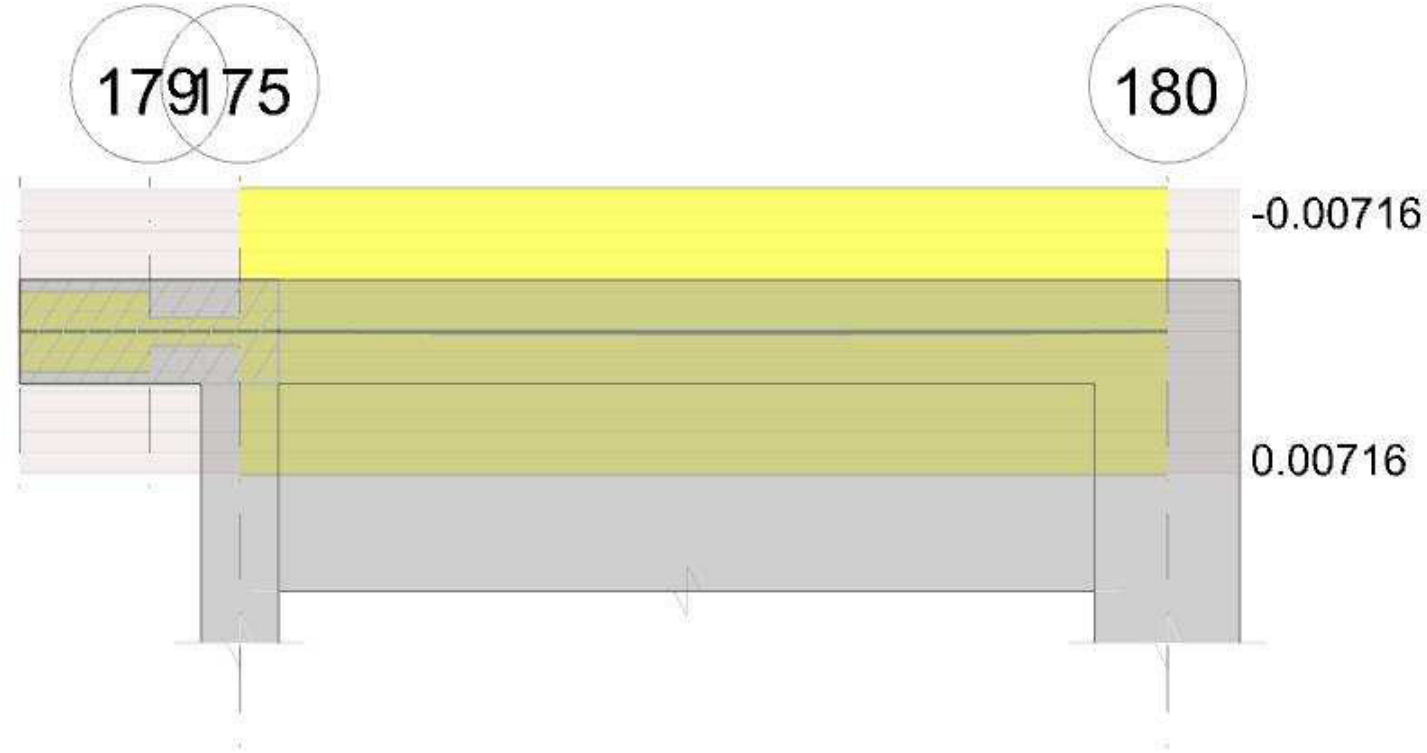


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 2 tra i fili 179 - 175, sezione R 50x20, asta 471

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	0.01	SLU 71	0.01	1931.17	0.242	+∞	0.01	SLU 19	-0.72	-1931.17	0.242	2688.94	Si
0.09	0.000308	0.05	0.000308	0.05							-1.23	SLU 82	-1.61	-1931.17	0.242	1198.05	Si
0.1	0.000308	0.05	0.000308	0.05							-1.61	SLU 82	-1.61	-1931.17	0.242	1198.05	Si
0.18	0.000308	0.05	0.000308	0.05							-4.96	SLU 75	-2.83	-1931.17	0.242	682.23	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	0.02	SLV 15	0.02	1648.89	0.269	+∞	0	SLV 2	-0.55	-1648.89	0.269	2983.19	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLV 2	-1.24	-1648.89	0.269	1326.62	Si
0.1	0.000308	0.05	0.000308	0.05							-1.24	SLV 2	-1.24	-1648.89	0.269	1326.62	Si
0.18	0.000308	0.05	0.000308	0.05							-3.83	SLV 2	-2.18	-1648.89	0.269	757.09	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05	0.01	SLD 4	0.01	1648.89	0.269	+∞	0.01	SLD 13	-0.55	-1648.89	0.269	2984.04	Si
0.09	0.000308	0.05	0.000308	0.05							-0.95	SLD 13	-1.24	-1648.89	0.269	1328.46	Si
0.1	0.000308	0.05	0.000308	0.05							-1.24	SLD 13	-1.24	-1648.89	0.269	1328.46	Si
0.18	0.000308	0.05	0.000308	0.05							-3.82	SLD 3	-2.18	-1648.89	0.269	757.18	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.09	0.0000115	0.000308	0	-28	SLU 71	-28	-3906	-23811	-6069	-6069	1	213.43	Si
0.1	0.0000115	0.000308	0	-32	SLU 71	-32	-3906	-23811	-6069	-6069	1	186.75	Si
0.18	0	0.000308	0	-57	SLU 71	-57	-3906	-23811	0	-3906	1	68.68	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	65643.26	Si
0	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	65643.26	Si
0.09	0.0000115	0.000308	0	-22	SLV 16	-22	-3906	-23811	-6069	-6069	1	276.29	Si
0.1	0.0000115	0.000308	0	-25	SLV 16	-25	-3906	-23811	-6069	-6069	1	241.88	Si
0.18	0	0.000308	0	-44	SLV 16	-44	-3906	-23811	0	-3906	1	89.1	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000115	0.000308	0	0	Ger.	0	3906	23811	6069	6069	1	156524.63	Si
0	0.0000115	0.000308	0	0	Ger.	0	-3906	-23811	-6069	-6069	1	156524.63	Si
0.09	0.0000115	0.000308	0	-22	SLD 4	-22	-3906	-23811	-6069	-6069	1	276.96	Si
0.1	0.0000115	0.000308	0	-25	SLD 4	-25	-3906	-23811	-6069	-6069	1	242.4	Si
0.18	0	0.000308	0	-44	SLD 4	-44	-3906	-23811	0	-3906	1	89.21	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	0.01	8	0.01	3	1494000	44	36000000	0.01	1	0.01	3	1120500			Si
0.09	-0.95	19	-1.24	348	1494000	5218	36000000	-0.95	2	-1.24	348	1120500			Si
0.1	-1.24	19	-1.24	348	1494000	5218	36000000	-1.24	2	-1.24	348	1120500			Si
0.18	-3.82	12	-2.18	611	1494000	9164	36000000	-3.82	2	-2.18	611	1120500			Si

Verifica di apertura delle fessure

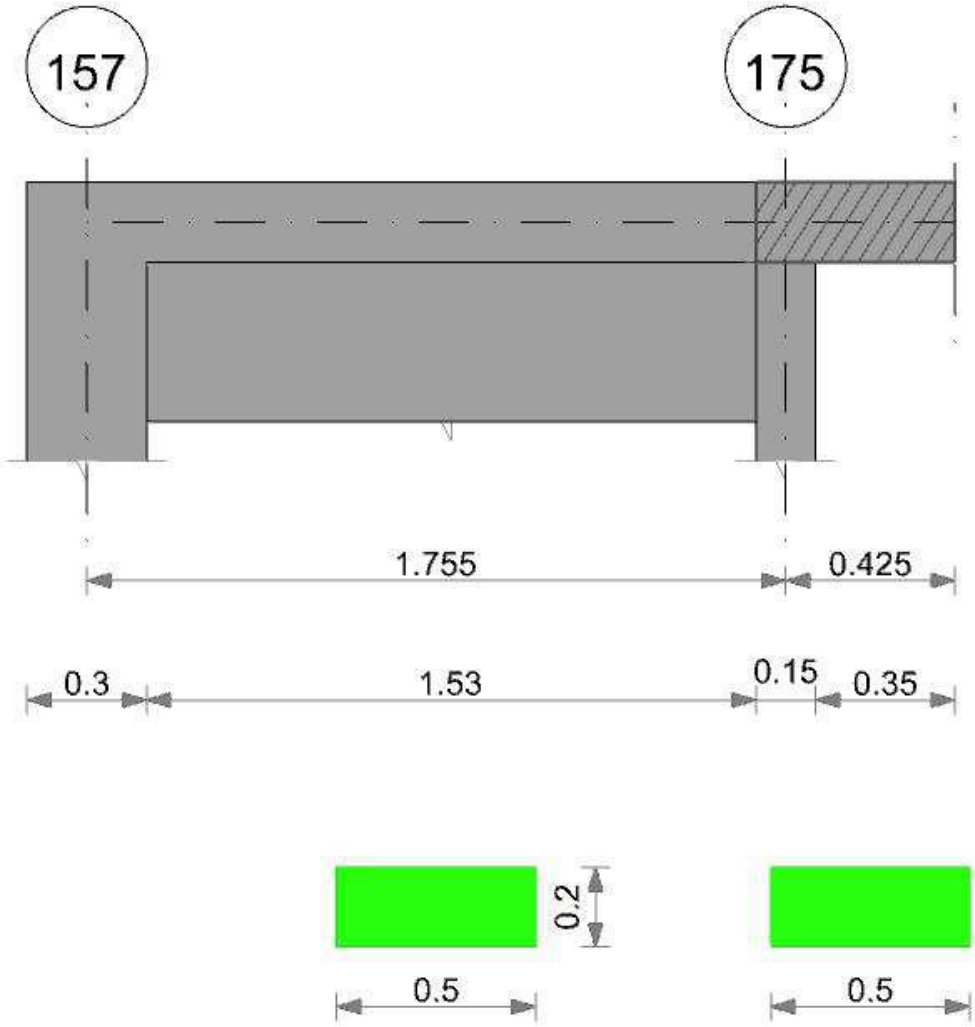
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.1	0	0	0	0	0	0	0	0	0	0	0	2	0	2	9999	Si
0.11	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

Trave a "Rialzato" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

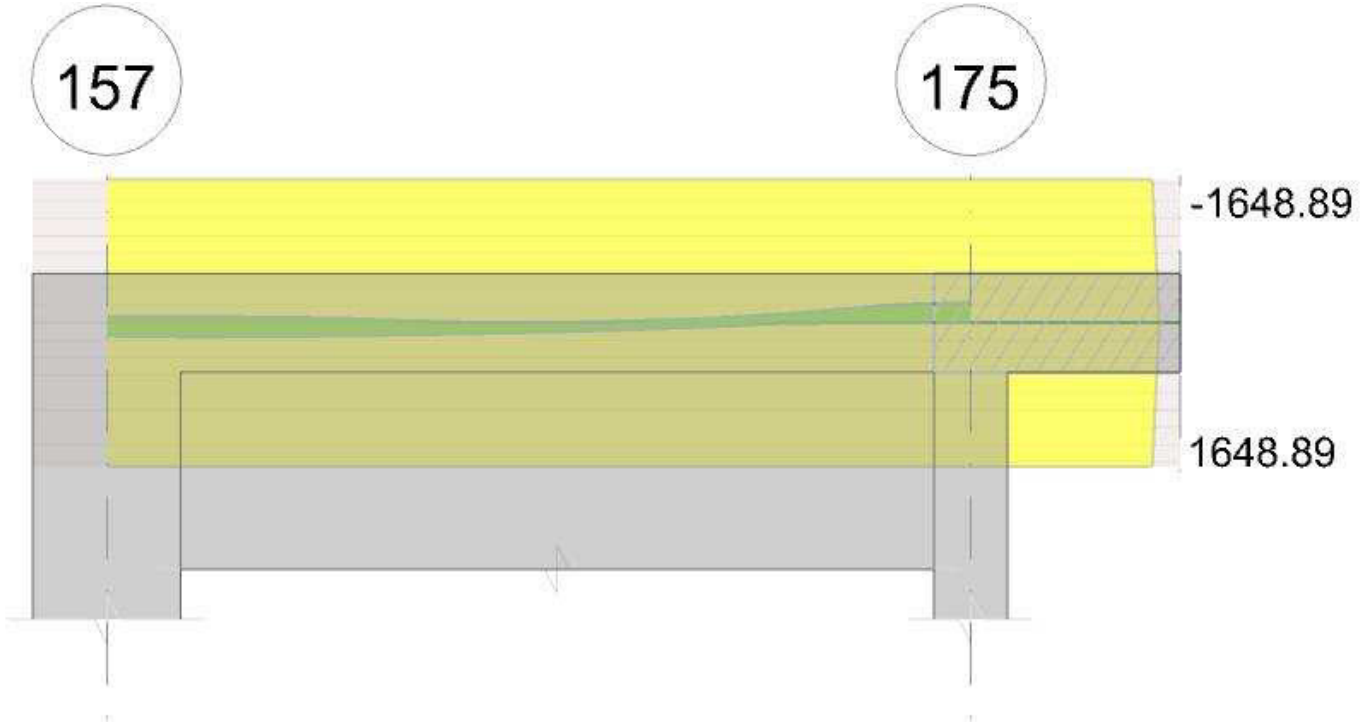


Diagramma verifica stato limite ultimo taglio

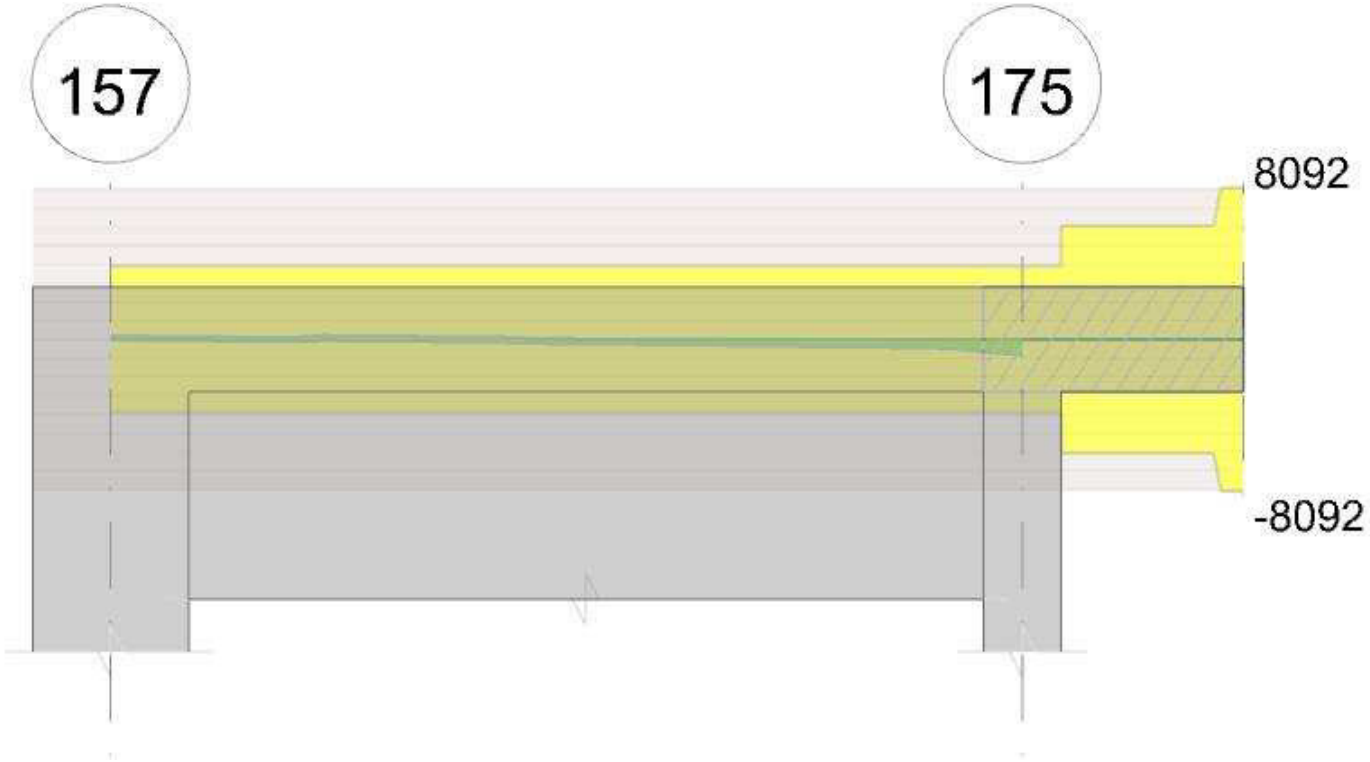
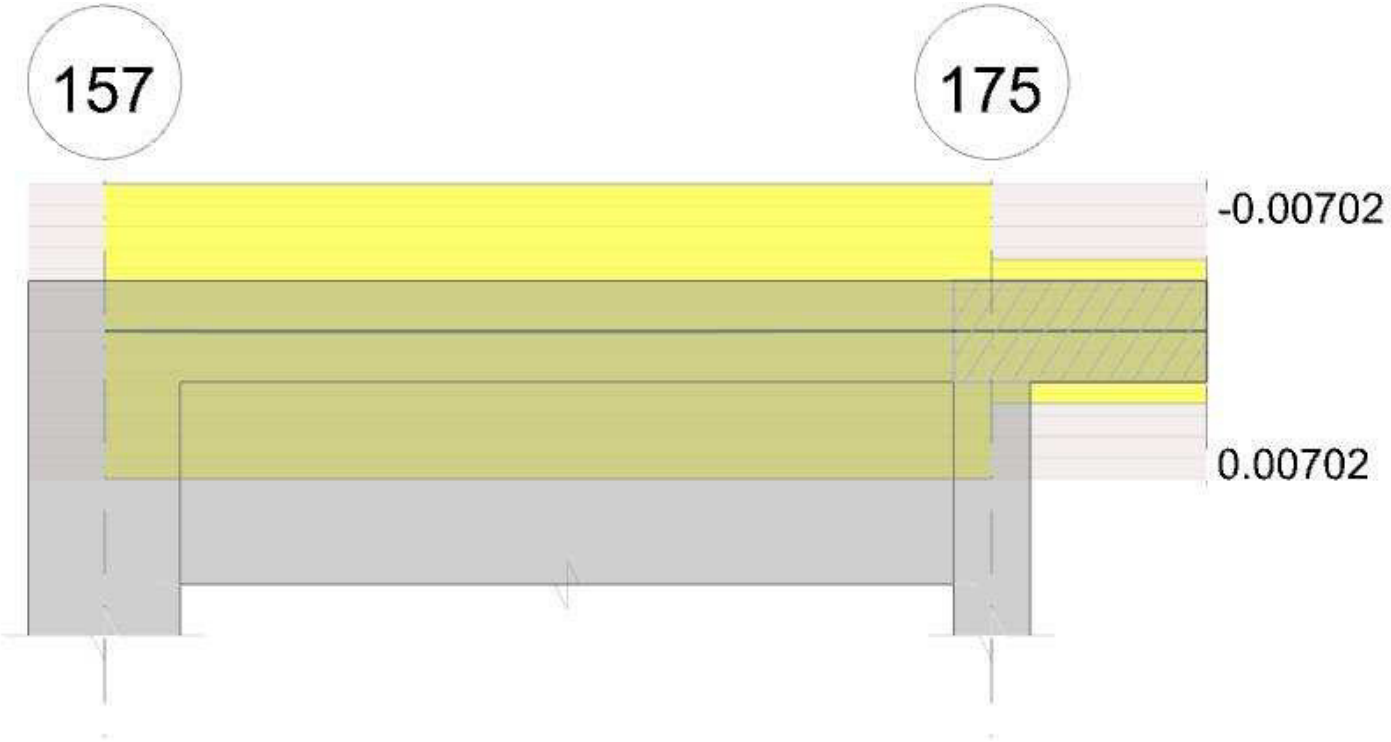


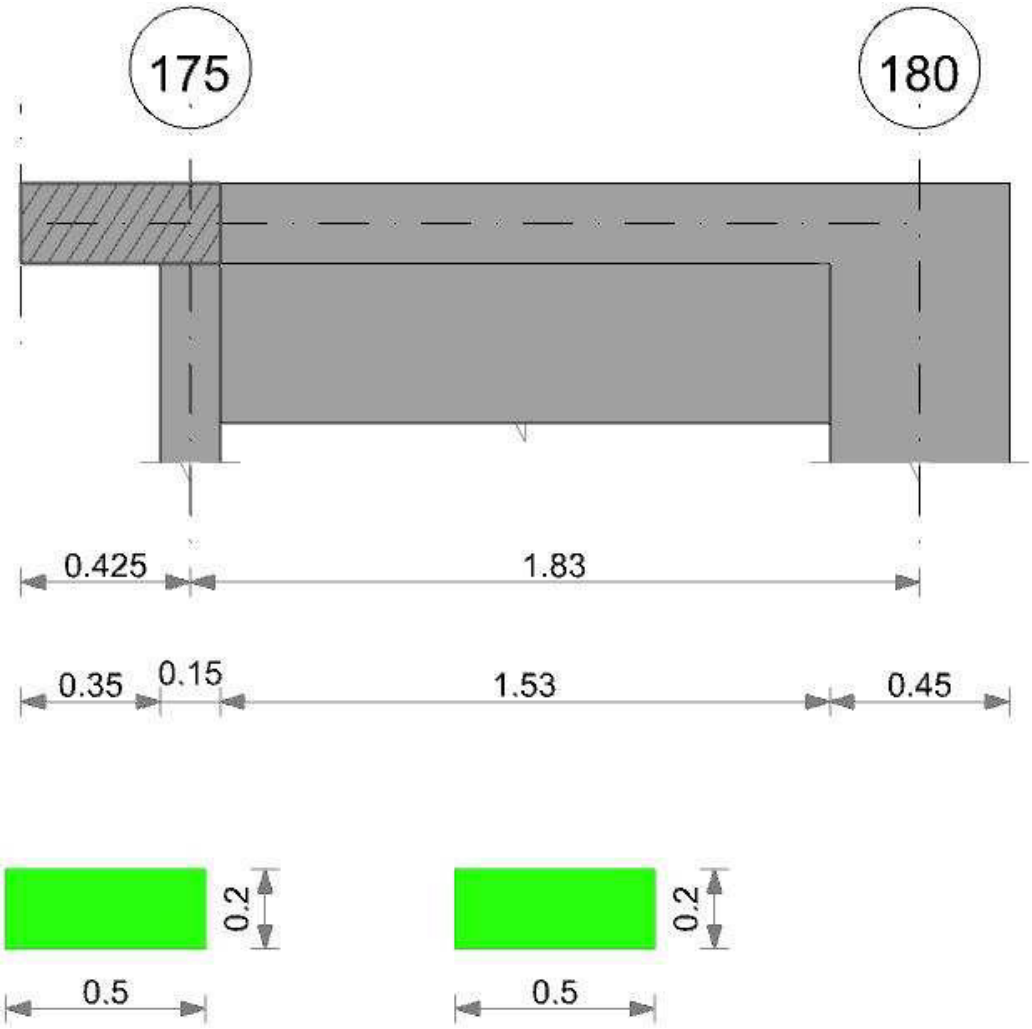
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Rialzato" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

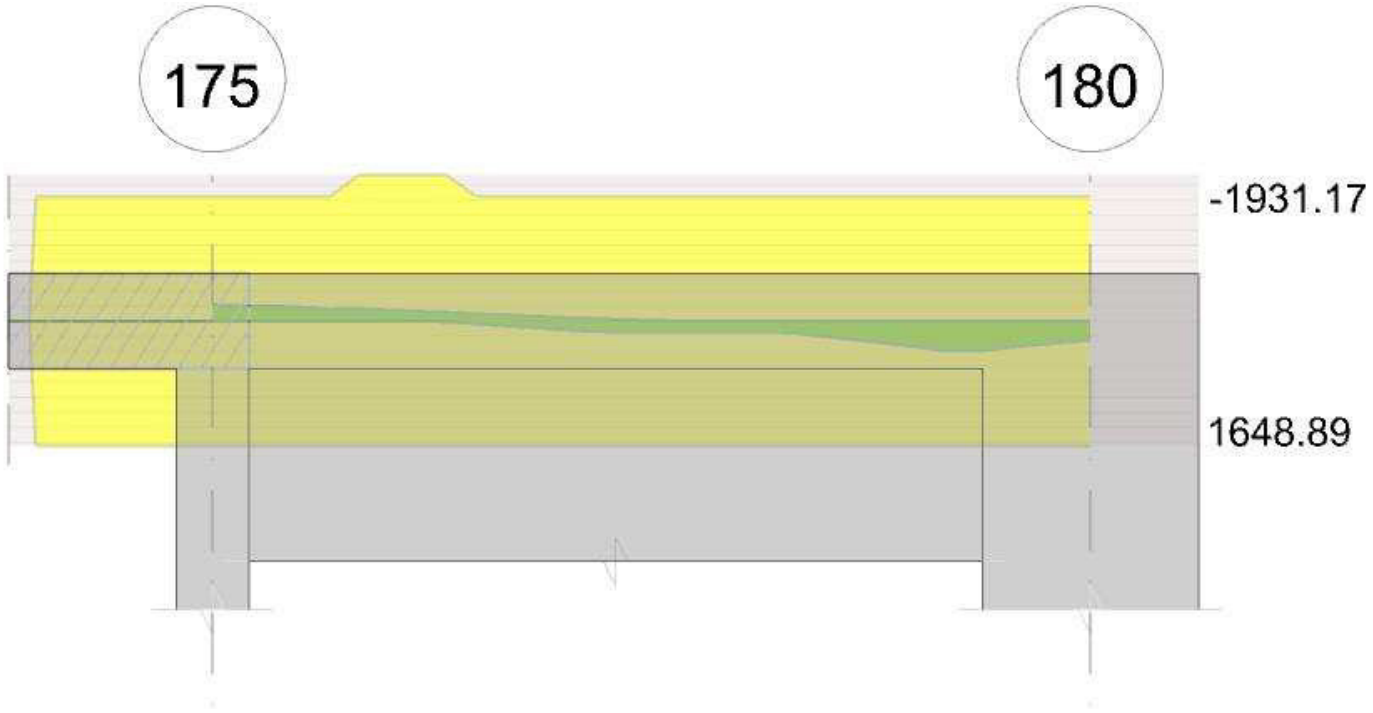


Diagramma verifica stato limite ultimo taglio

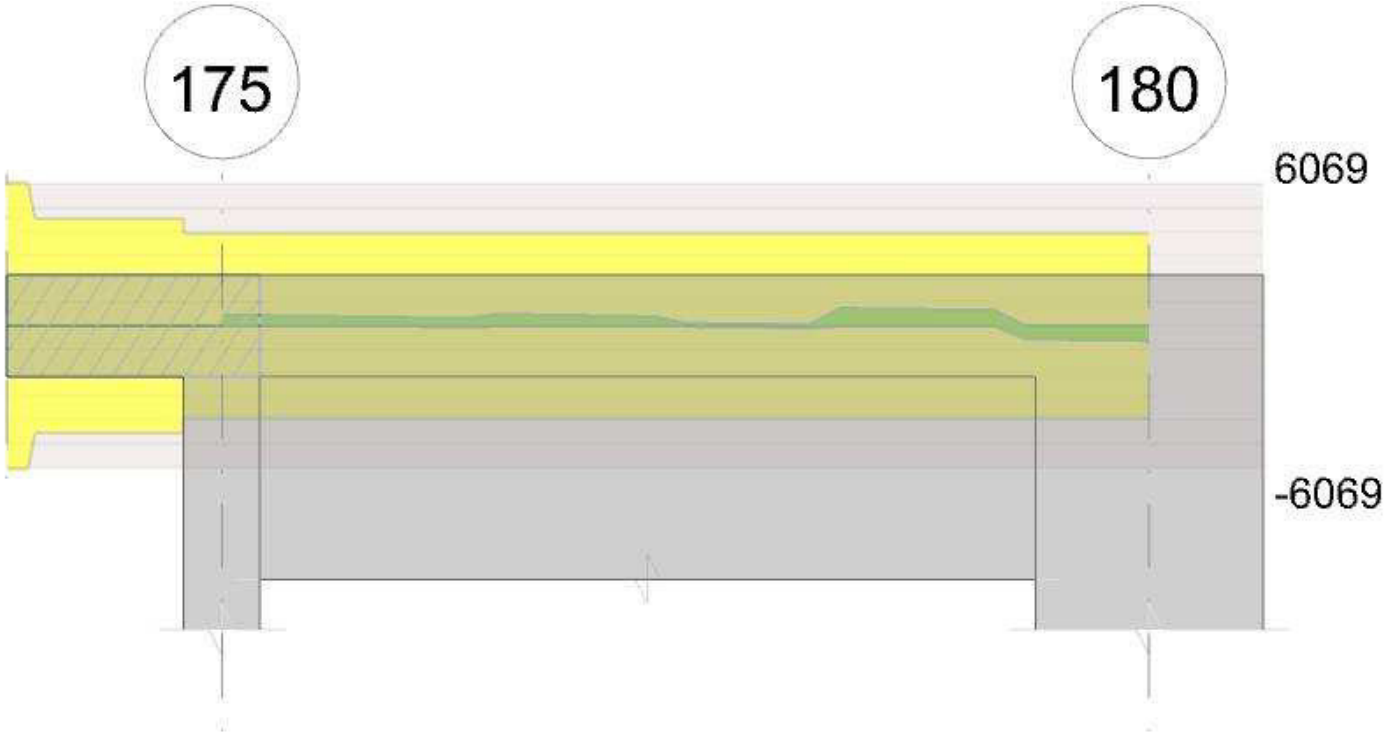
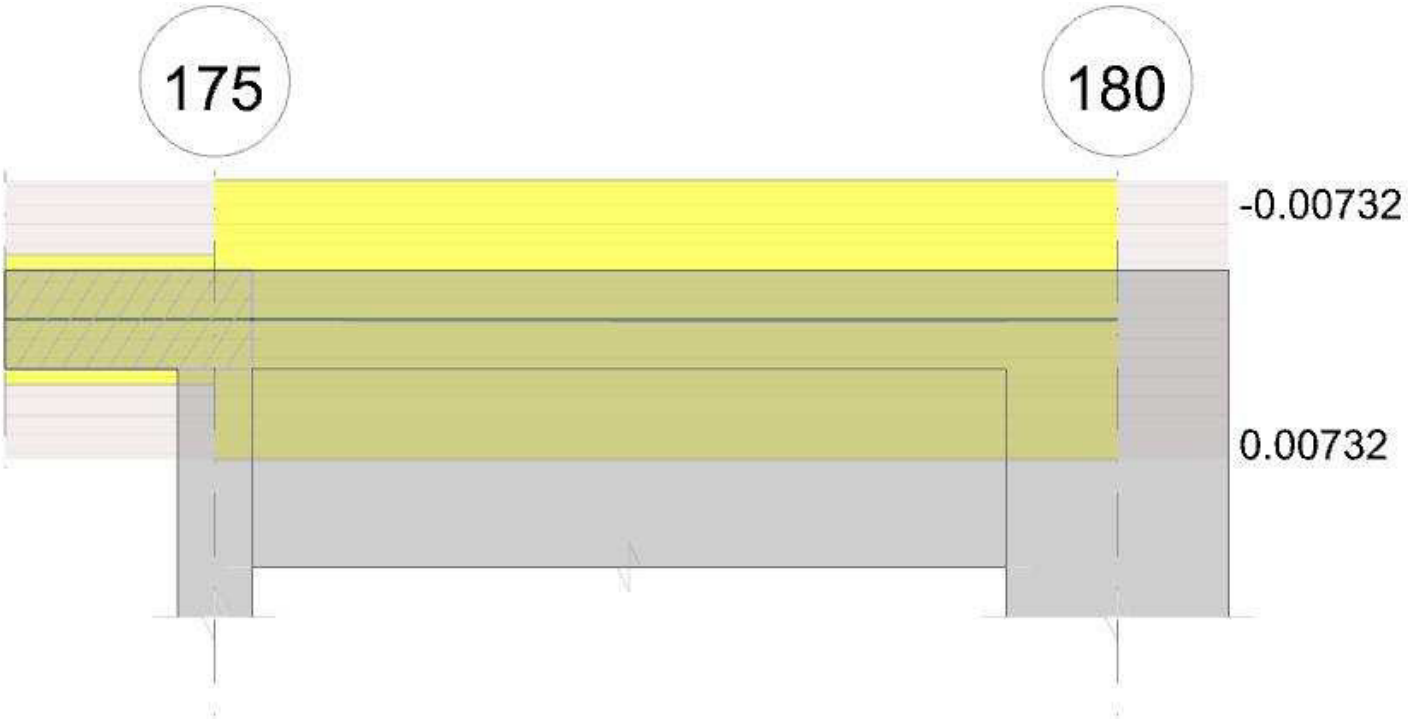


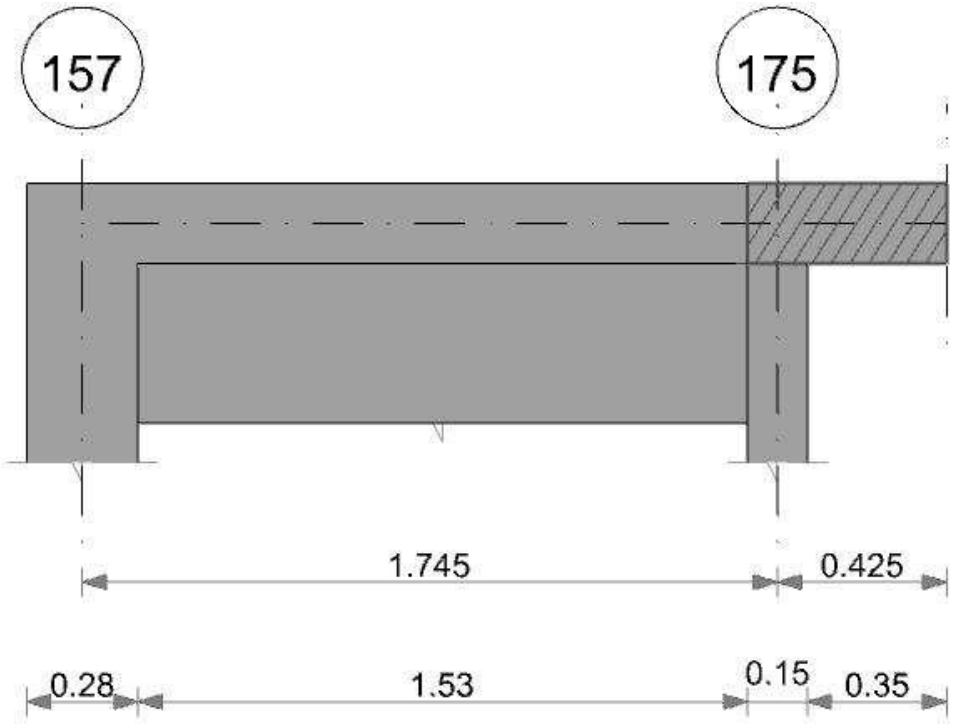
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Secondo" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

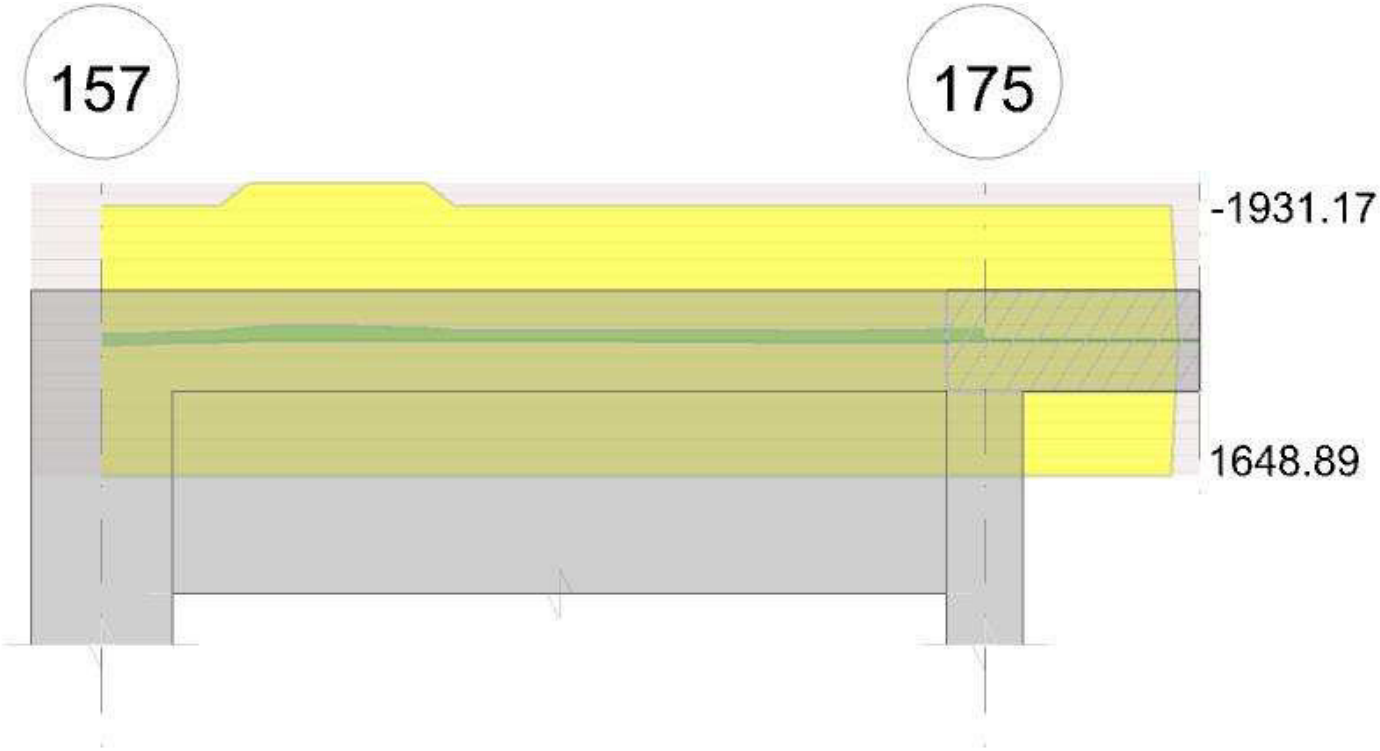
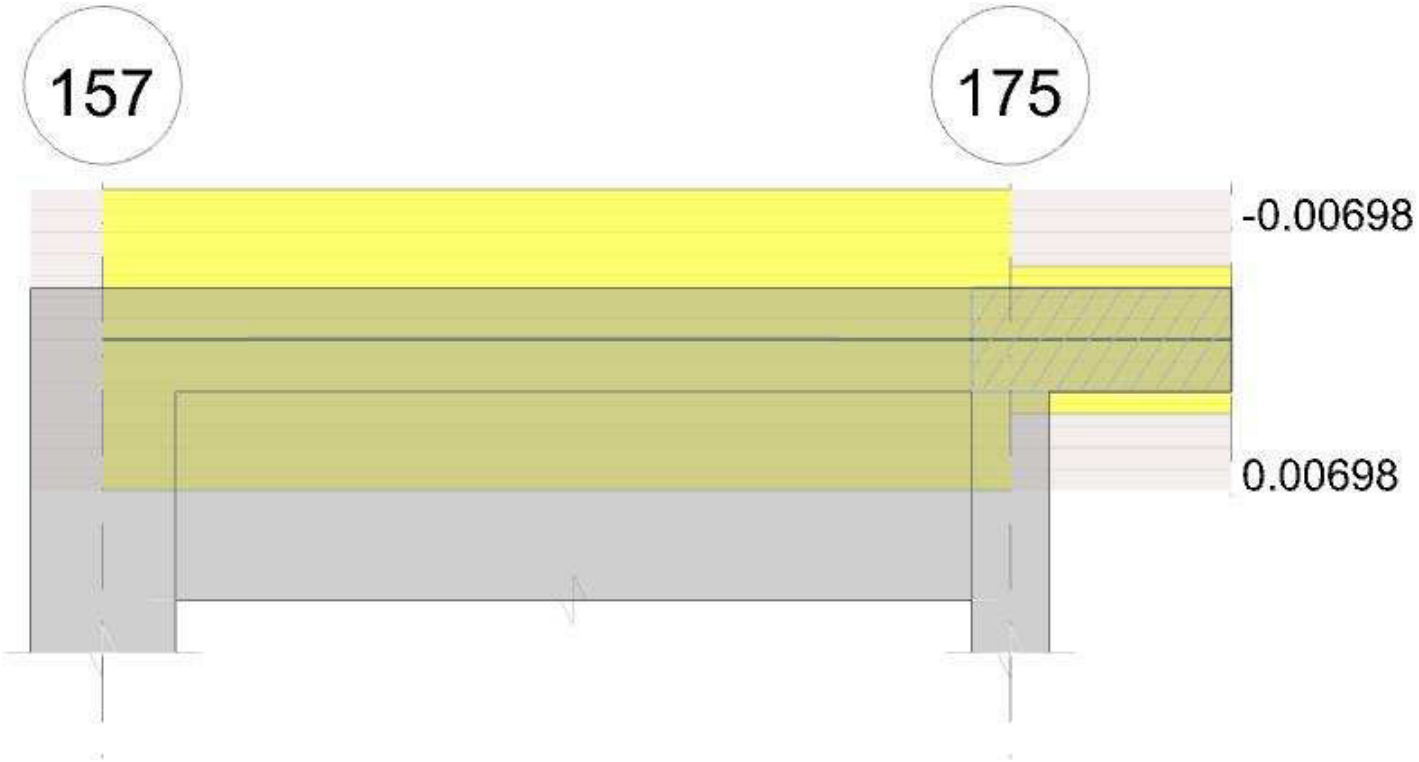


Diagramma verifica stato limite ultimo taglio

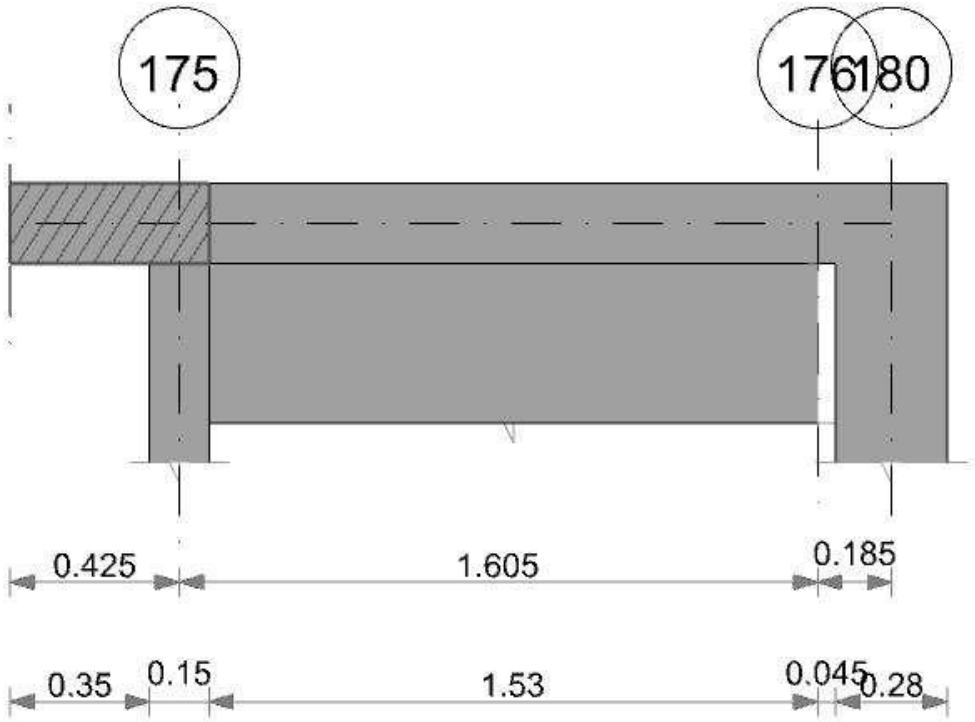
Diagramma verifica stato limite esercizio quasi permanente freccia

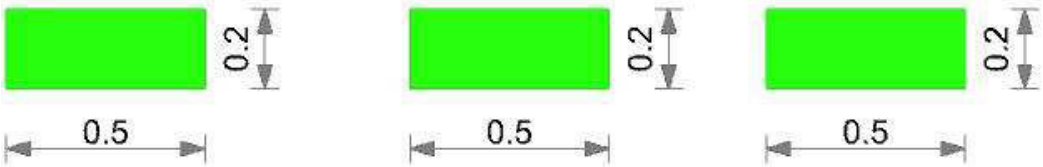


Output campate

Trave a "Secondo" 179-176

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

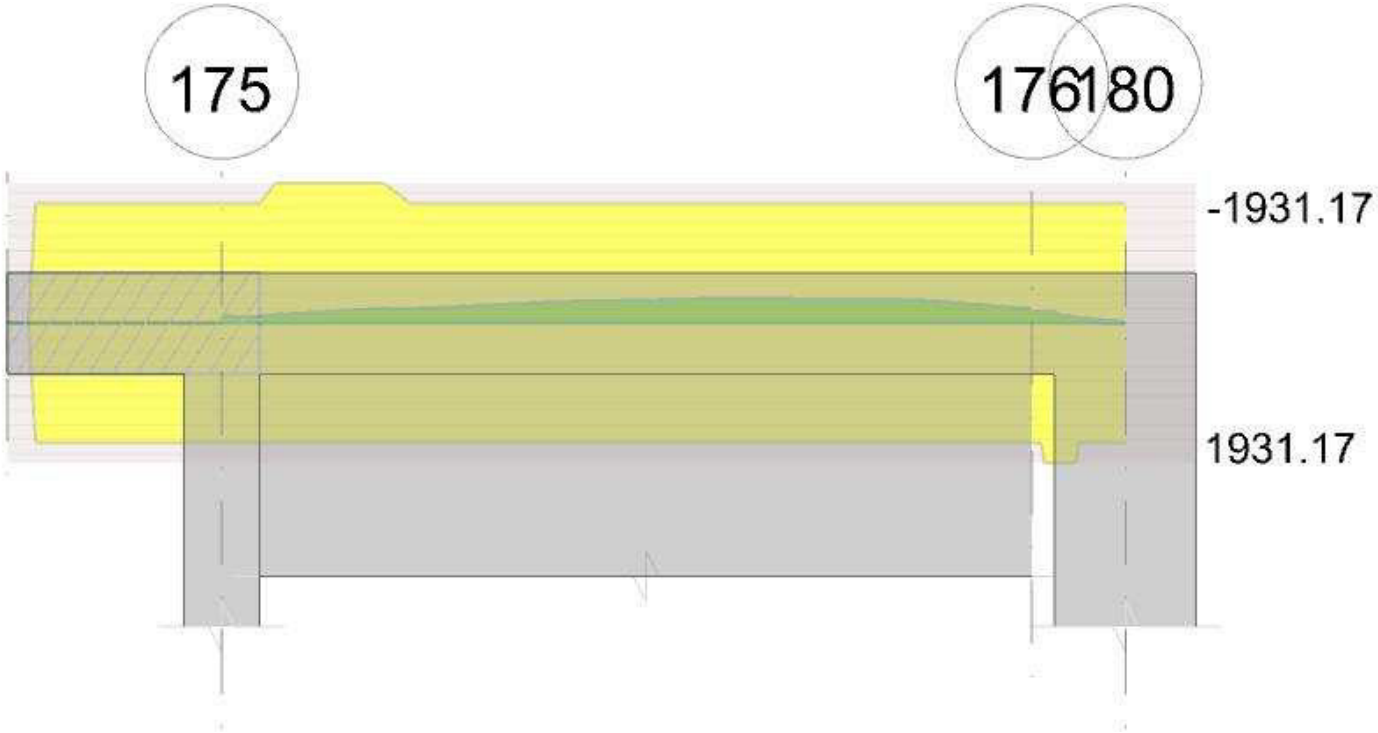


Diagramma verifica stato limite ultimo taglio

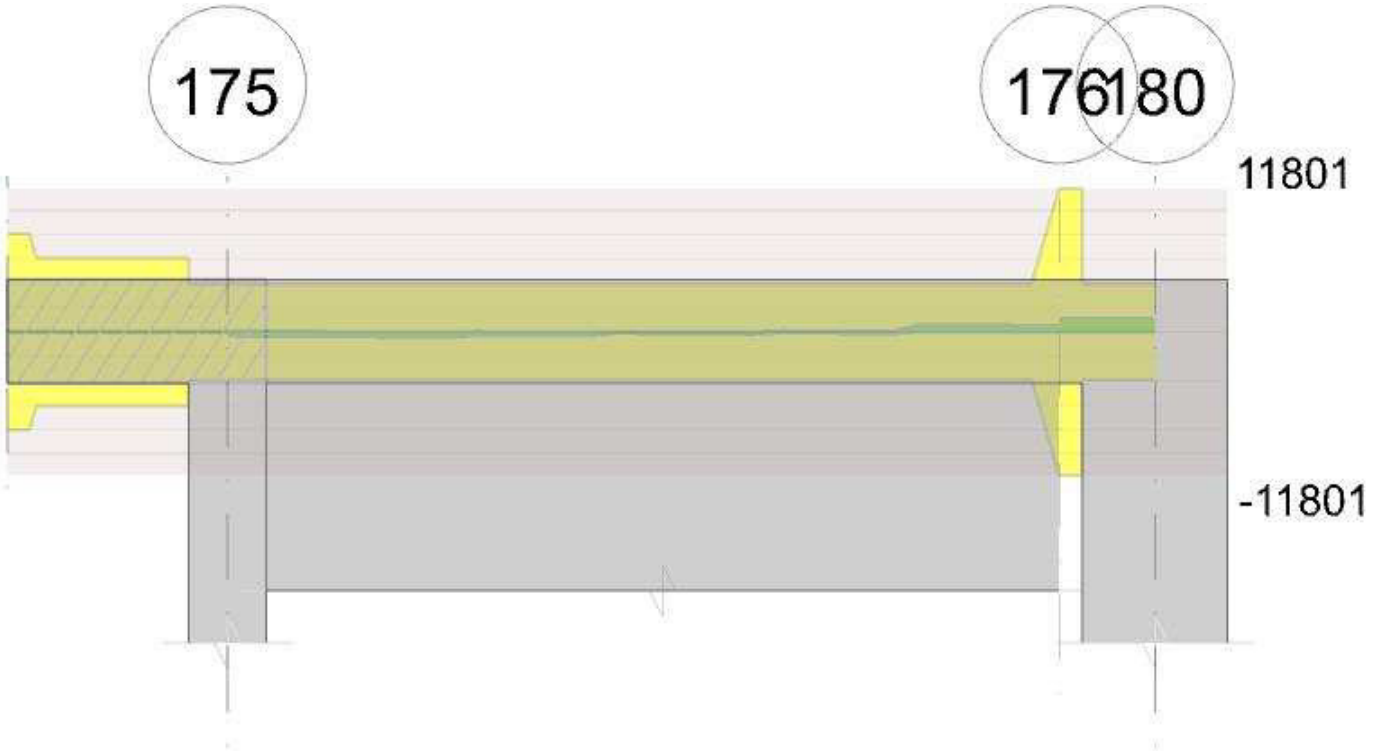
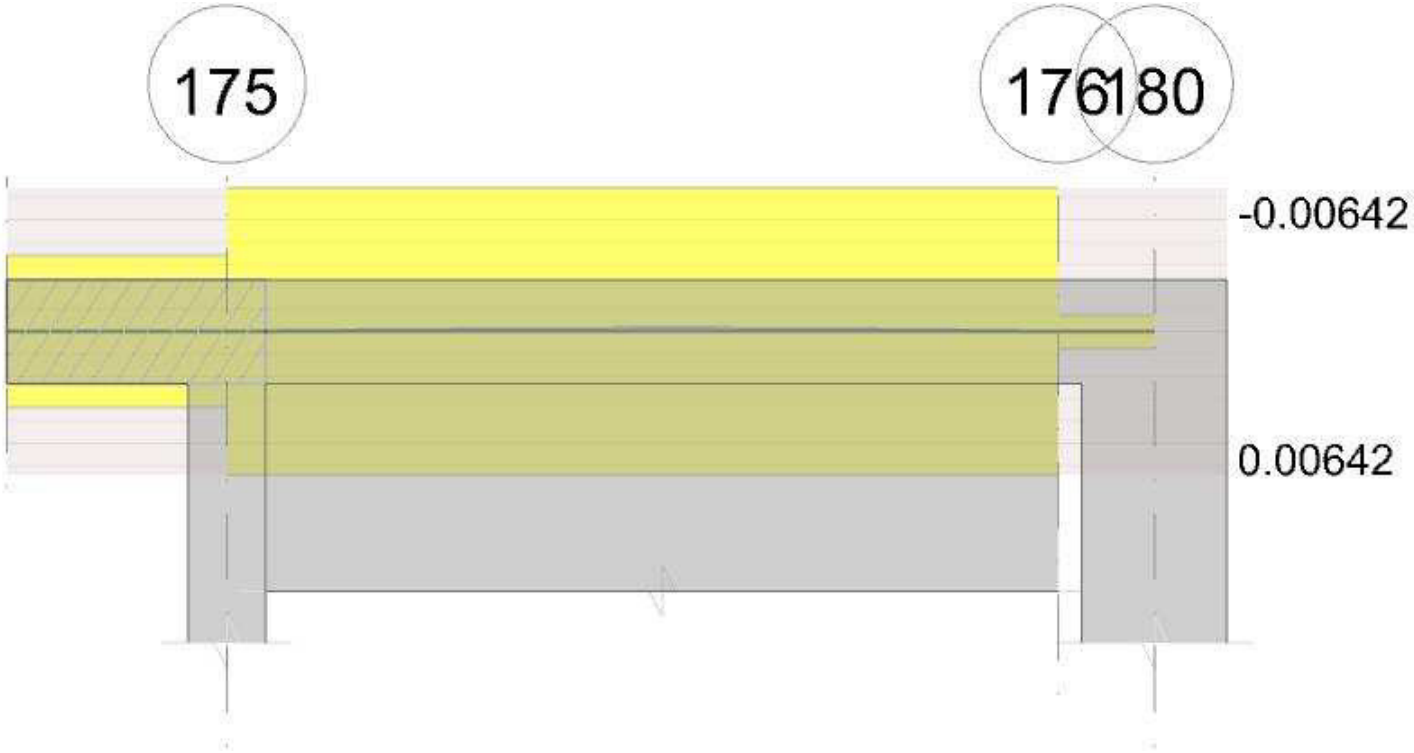


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 472

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-187.46	SLU 83	-187.46	-1931.17	0.242	10.3	Si
0.02	0.000308	0.05	0.000308	0.05							-166.69	SLU 83	-187.46	-1931.17	0.242	10.3	Si
0.05	0.000308	0.05	0.000308	0.05	-72.48	SLU 2	0.23	1931.17	0.242	8376.15	-137.12	SLU 83	-187.46	-1931.17	0.242	10.3	Si
0.09	0.000308	0.05	0.000308	0.05							-84.69	SLU 83	-84.69	-1931.17	0.242	22.8	Si
0.19	0.000308	0.05	0.000308	0.05	15.3	SLU 83	15.3	1931.17	0.242	126.19							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-160.56	SLV 3	-160.56	-1648.89	0.269	10.27	Si
0.02	0.000308	0.05	0.000308	0.05							-143.57	SLV 3	-160.56	-1648.89	0.269	10.27	Si
0.05	0.000308	0.05	0.000308	0.05							-119.57	SLV 3	-160.56	-1648.89	0.269	10.27	Si
0.09	0.000308	0.05	0.000308	0.05							-78.67	SLV 7	-78.67	-1648.89	0.269	20.96	Si
0.19	0.000308	0.05	0.000308	0.05	37.77	SLV 10	15.49	1648.89	0.269	106.47	-18.96	SLV 7	-18.96	-1648.89	0.269	86.96	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-134.35	SLD 3	-134.35	-1648.89	0.269	12.27	Si
0.02	0.000308	0.05	0.000308	0.05							-119.75	SLD 3	-134.35	-1648.89	0.269	12.27	Si
0.05	0.000308	0.05	0.000308	0.05							-99.08	SLD 3	-134.35	-1648.89	0.269	12.27	Si
0.09	0.000308	0.05	0.000308	0.05							-63.2	SLD 7	-63.2	-1648.89	0.269	26.09	Si
0.19	0.000308	0.05	0.000308	0.05	21.55	SLD 10	21.55	1648.89	0.269	76.53	-2.74	SLD 7	-2.74	-1648.89	0.269	602.8	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	1126	SLU 83	1126	3906	23811	11801	11801	1	10.48	Si
0.05	0.0000223	0.000308	0	1111	SLU 83	1111	3906	23811	11801	11801	1	10.62	Si
0.05	0	0.000308	0	1110	SLU 83	1110	3906	23811	0	3906	1	3.52	Si
0.09	0	0.000308	0	1096	SLU 83	1096	3906	23811	0	3906	1	3.56	Si
0.19	0	0.000308	0	1066	SLU 83	1066	3906	23811	0	3906	1	3.66	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	957	SLV 1	957	3906	23811	11801	11801	1	12.33	Si
0.05	0.0000223	0.000308	0	946	SLV 1	946	3906	23811	11801	11801	1	12.48	Si
0.05	0	0.000308	0	944	SLV 1	944	3906	23811	0	3906	1	4.14	Si
0.09	0	0.000308	0	934	SLV 1	934	3906	23811	0	3906	1	4.18	Si
0.19	0	0.000308	0	911	SLV 1	911	3906	23811	0	3906	1	4.29	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	807	SLD 1	807	3906	23811	11801	11801	1	14.63	Si
0.05	0.0000223	0.000308	0	795	SLD 1	795	3906	23811	11801	11801	1	14.84	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.05	0	0.000308	0	794	SLD 1	794	3906	23811	0	3906	1	4.92	Si
0.09	0	0.000308	0	783	SLD 1	783	3906	23811	0	3906	1	4.99	Si
0.19	0	0.000308	0	760	SLD 1	760	3906	23811	0	3906	1	5.14	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-134.31	20	-134.31	37683	1494000	565243	36000000	-114.76	2	-114.76	32199	1120500			Si
0.05	-98.17	20	-134.31	37683	1494000	565243	36000000	-83.77	2	-114.76	32199	1120500			Si
0.09	-60.58	20	-60.58	16996	1494000	254945	36000000	-51.61	2	-51.61	14480	1120500			Si
0.19	11.01	20	11.01	3090	1494000	46350	36000000	9.4	2	9.4	2639	1120500			Si

Verifica di apertura delle fessure

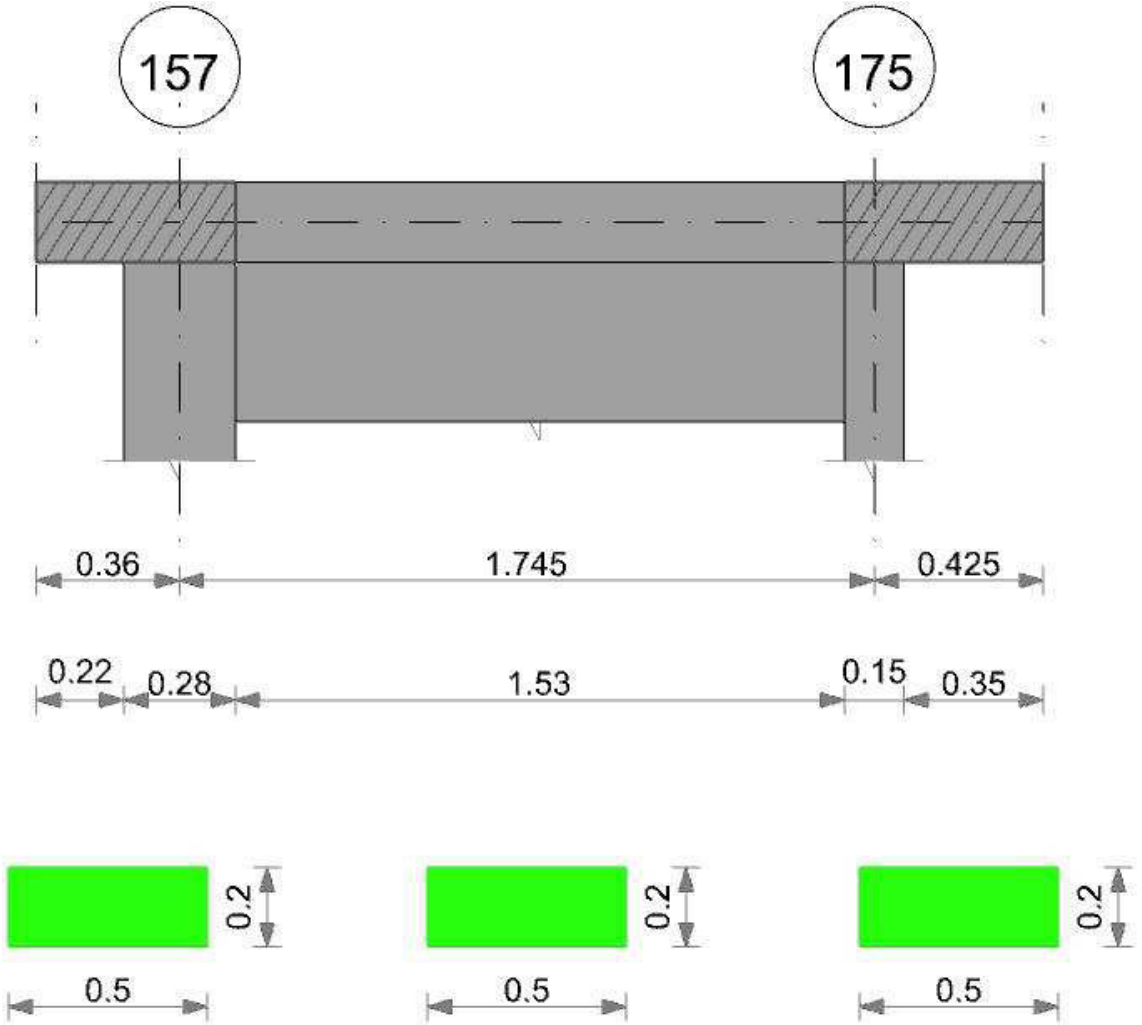
La campata non presenta apertura delle fessure

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

Trave a "Sottotetto" 146-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

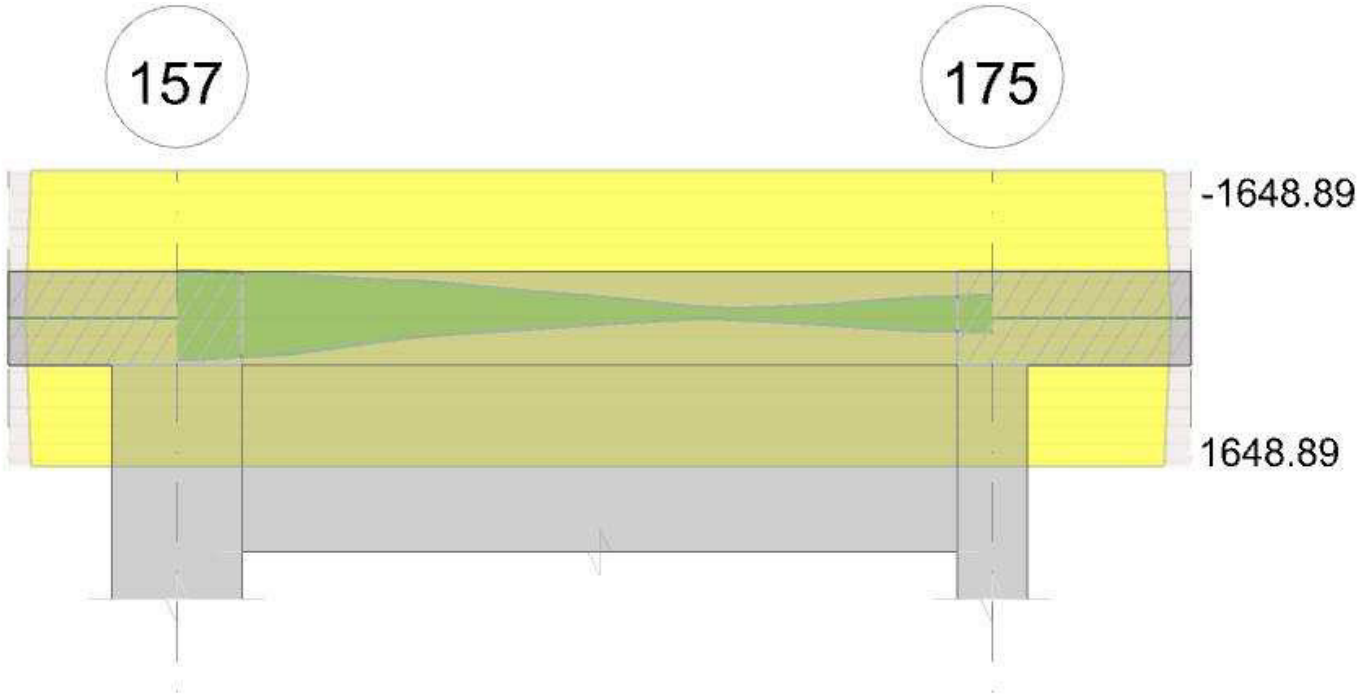


Diagramma verifica stato limite ultimo taglio

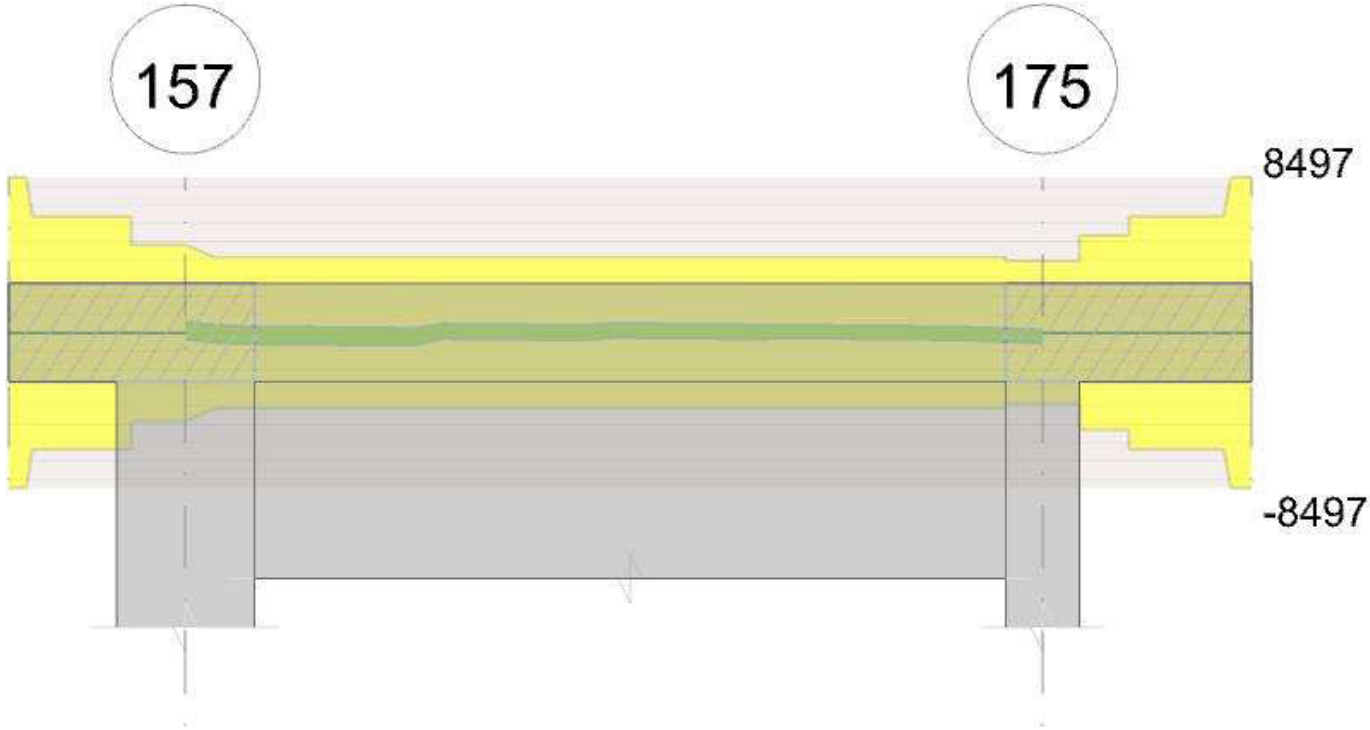
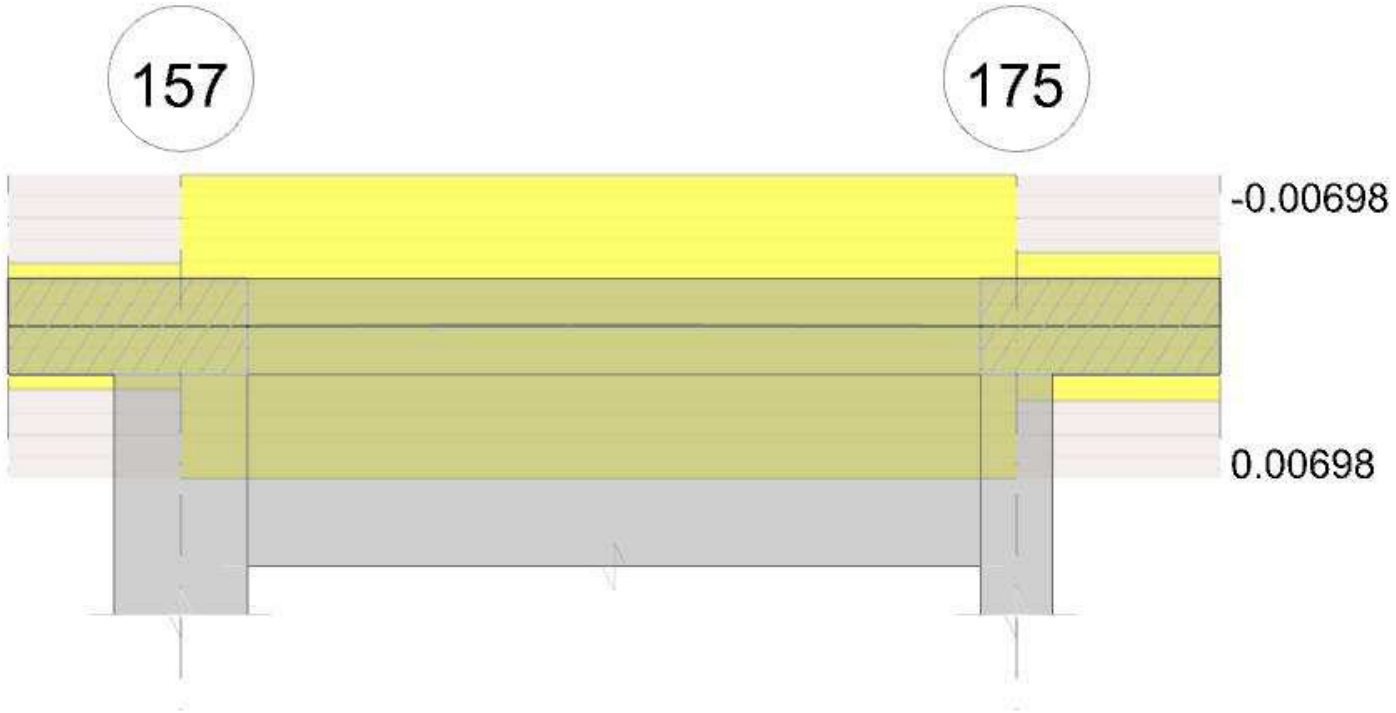


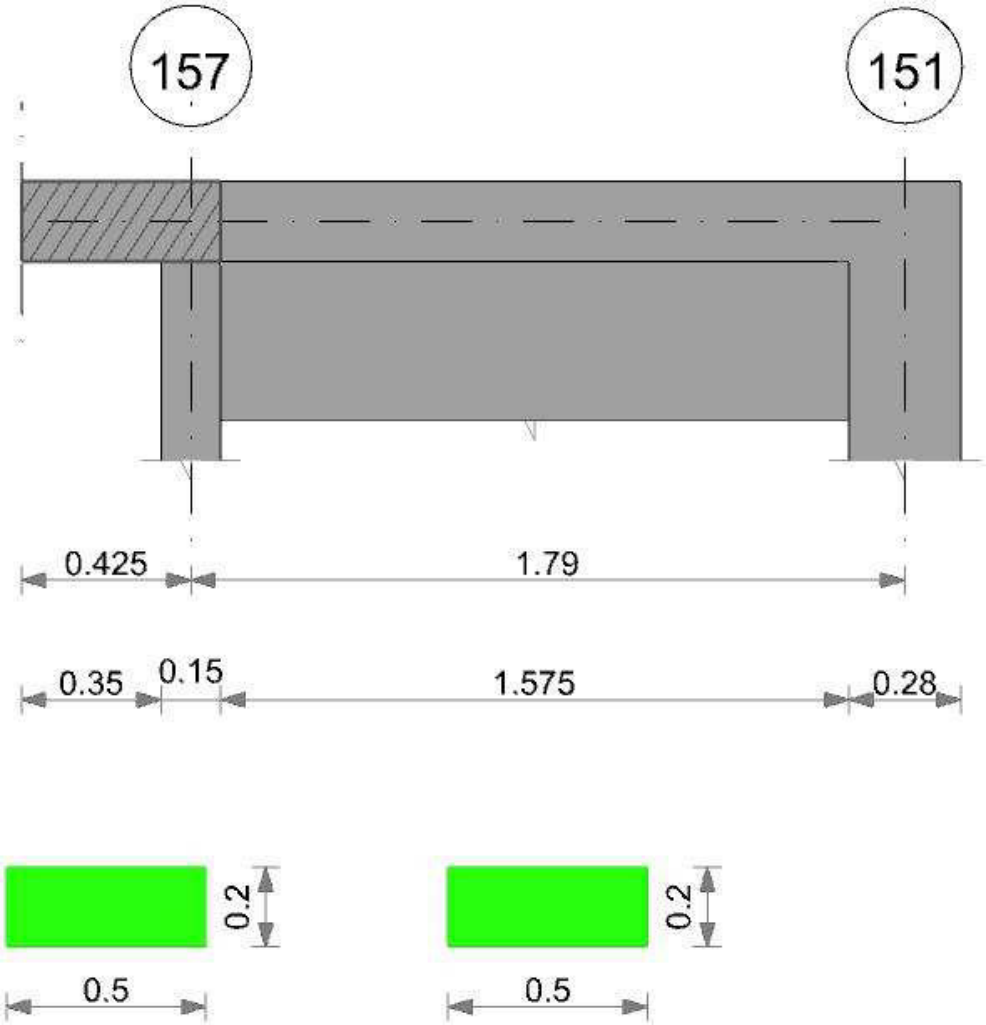
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 154-151

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

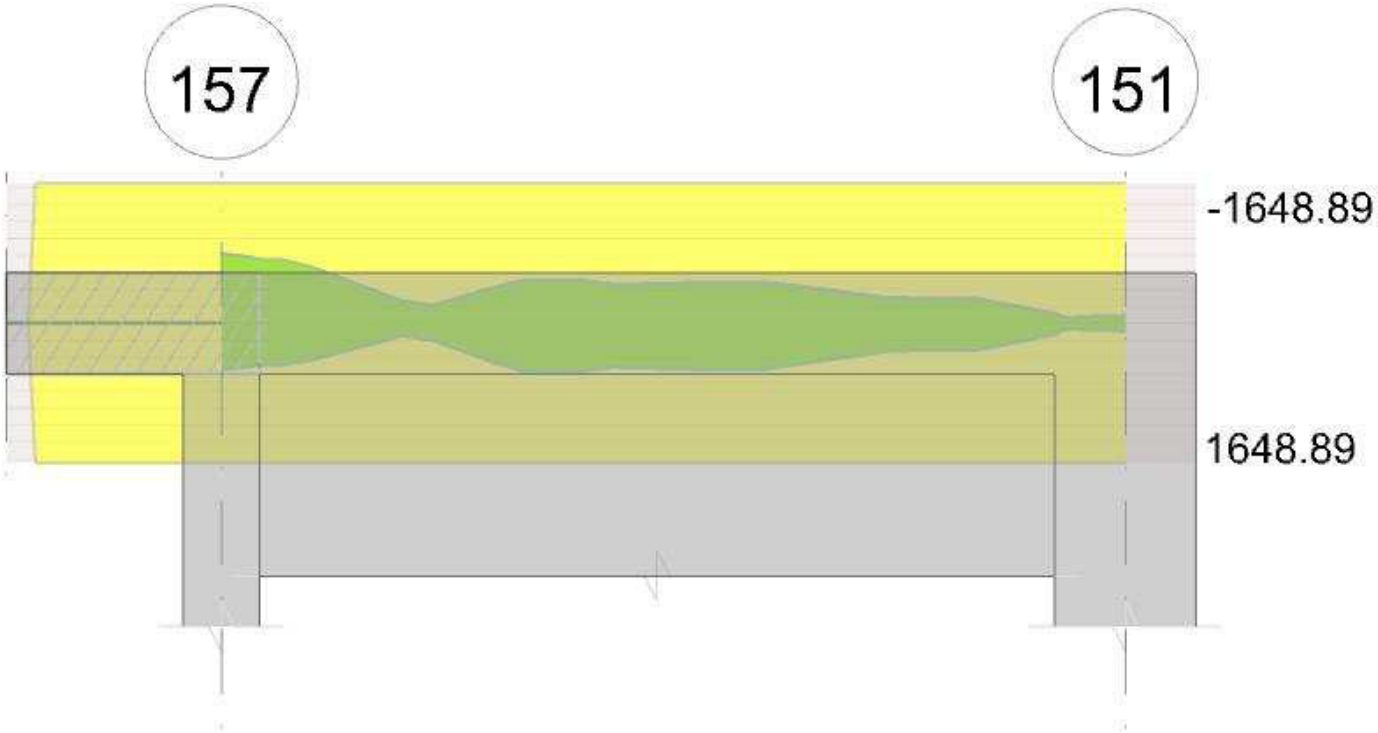


Diagramma verifica stato limite ultimo taglio

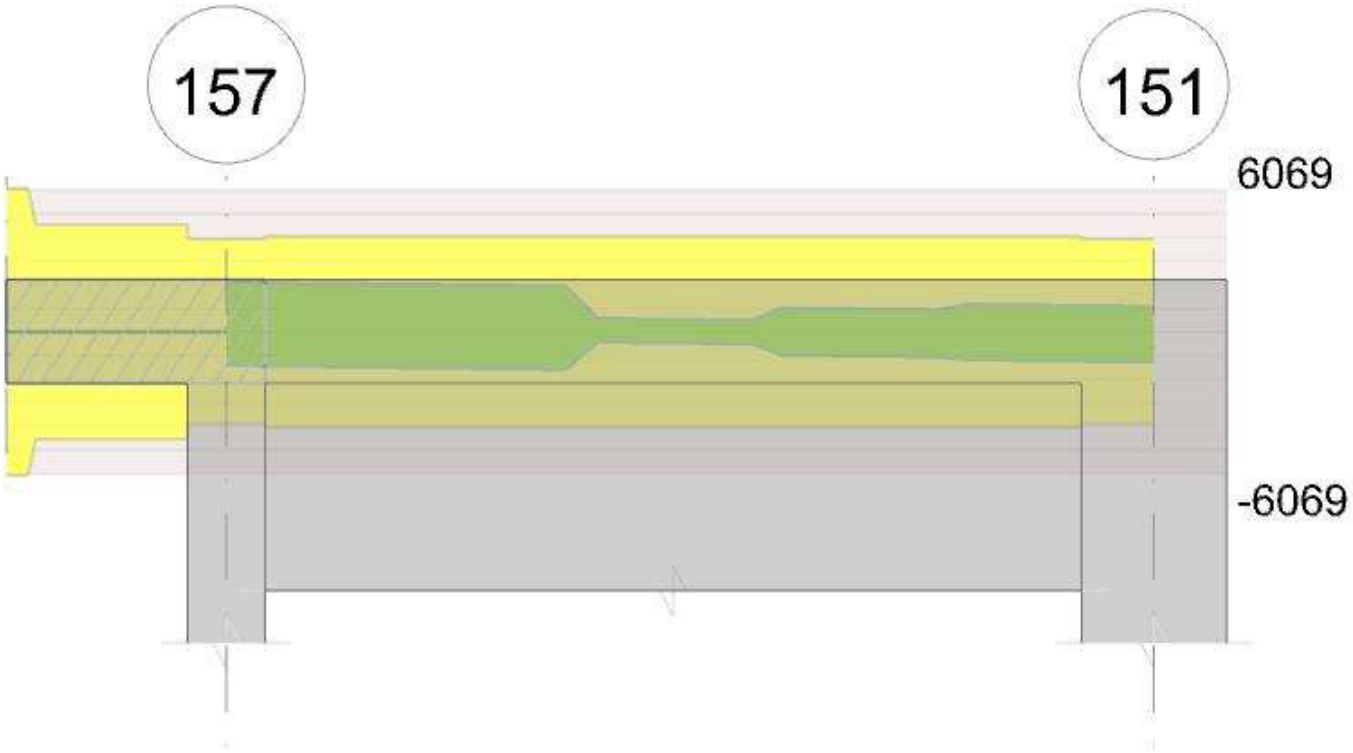
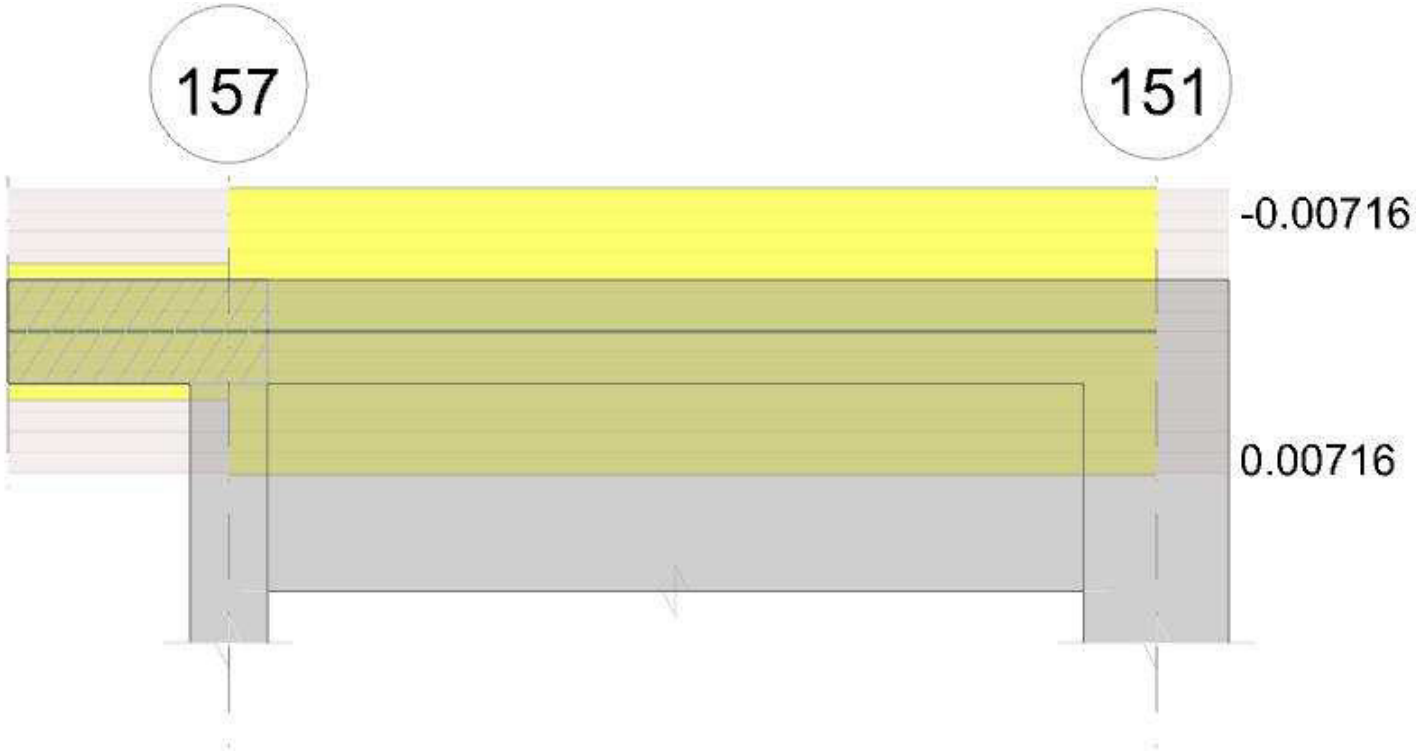


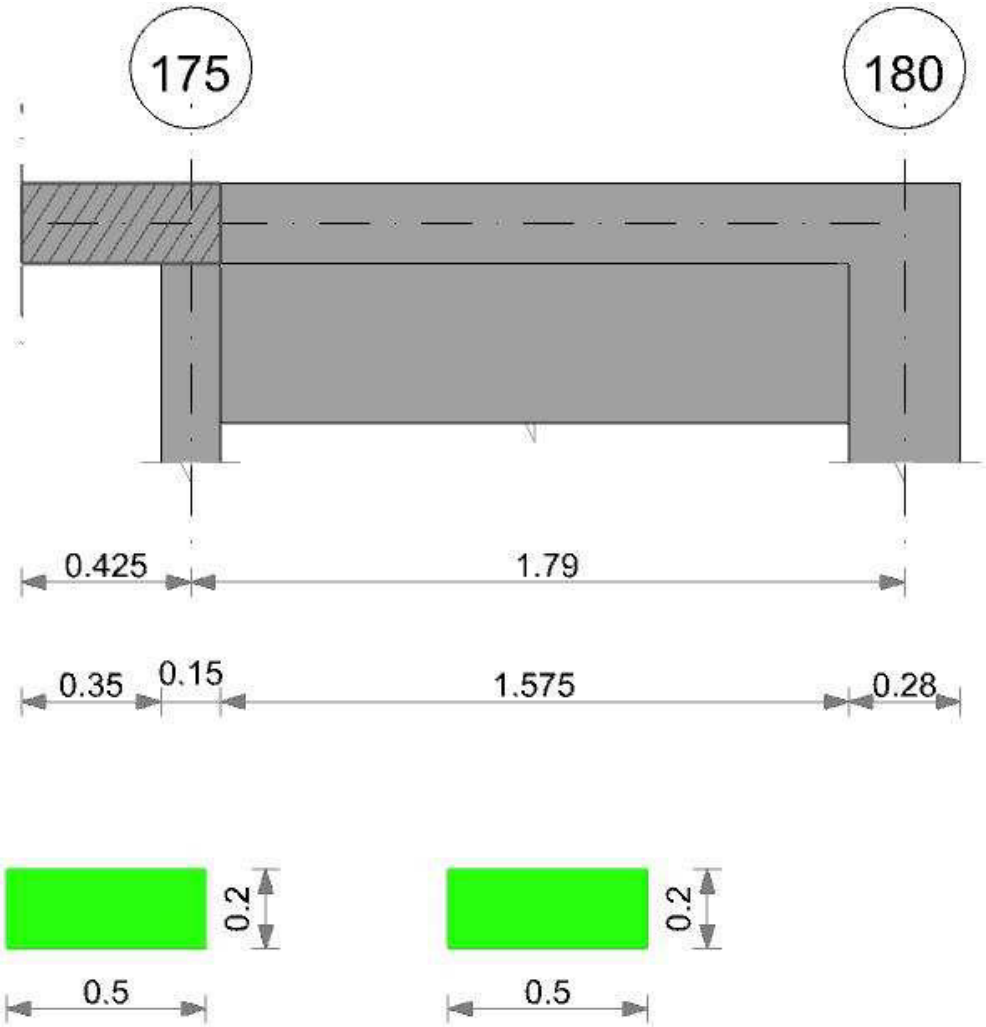
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Sottotetto" 179-176

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

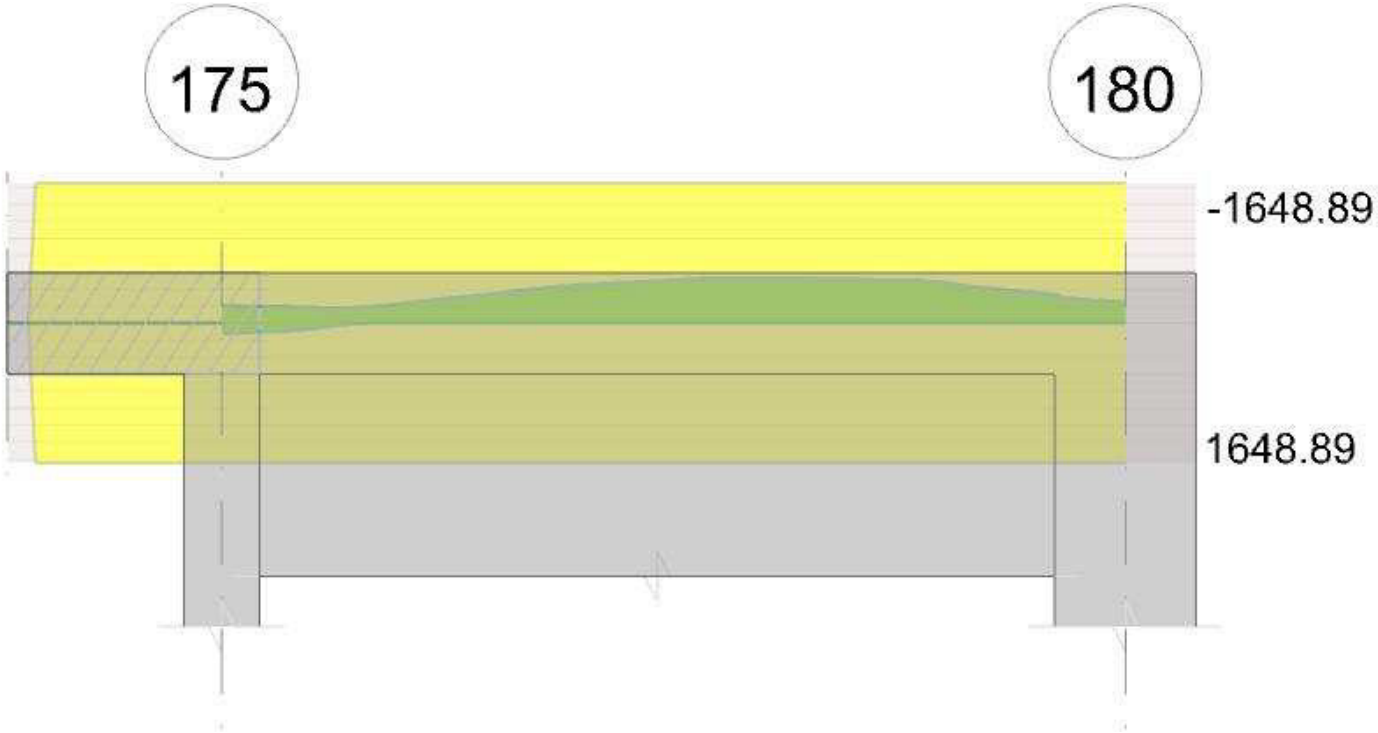


Diagramma verifica stato limite ultimo taglio

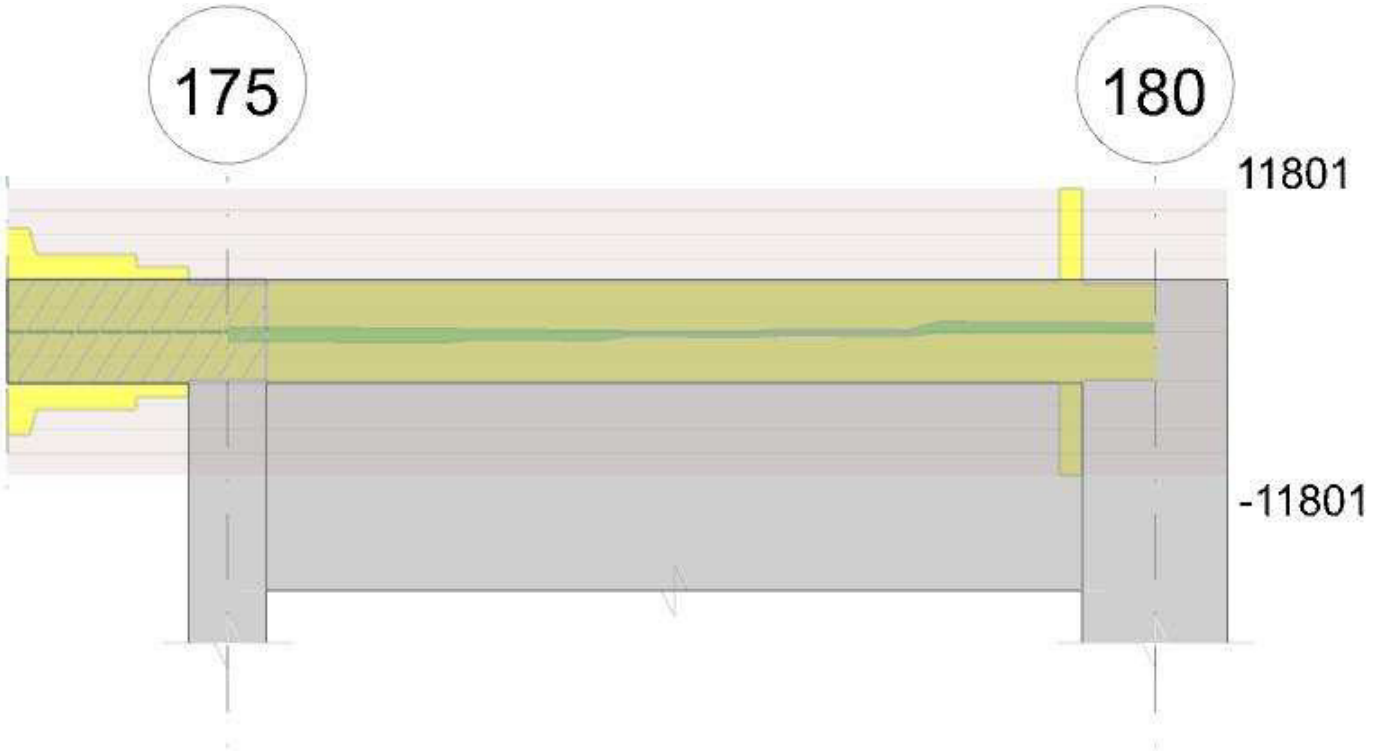
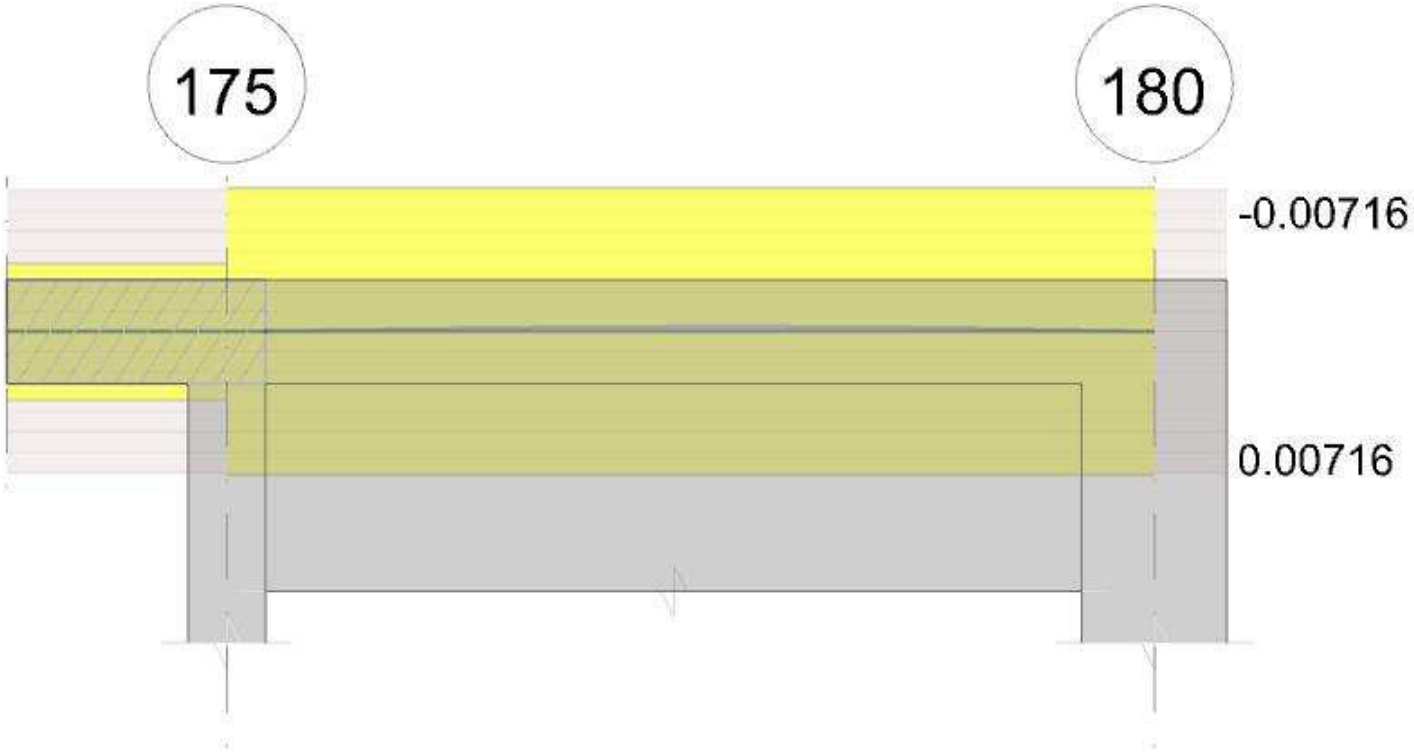


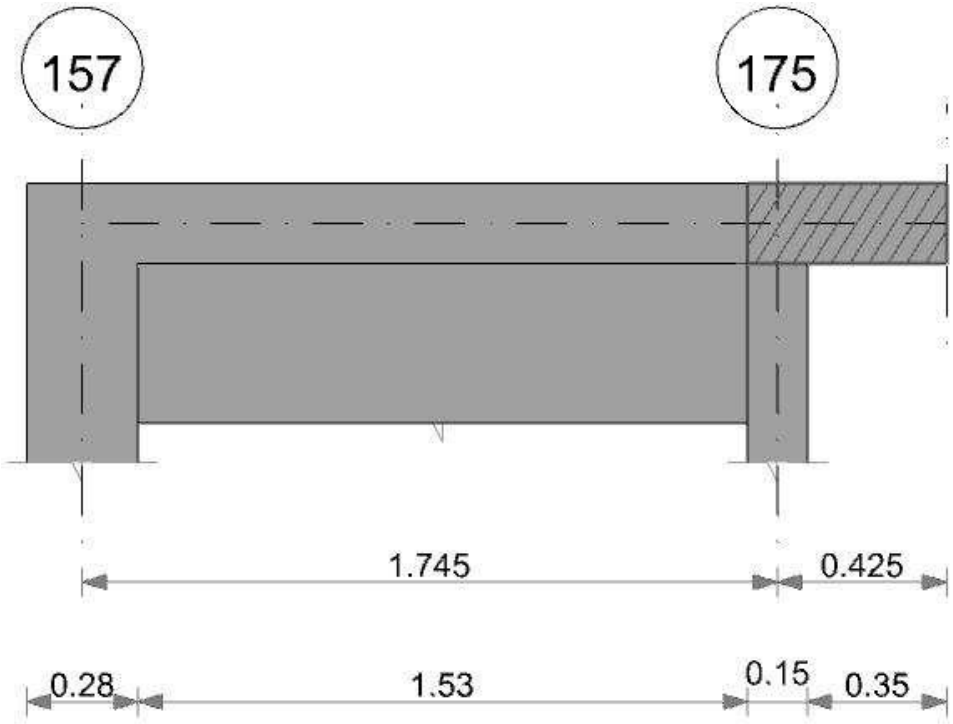
Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Trave a "Terzo" 157-179

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

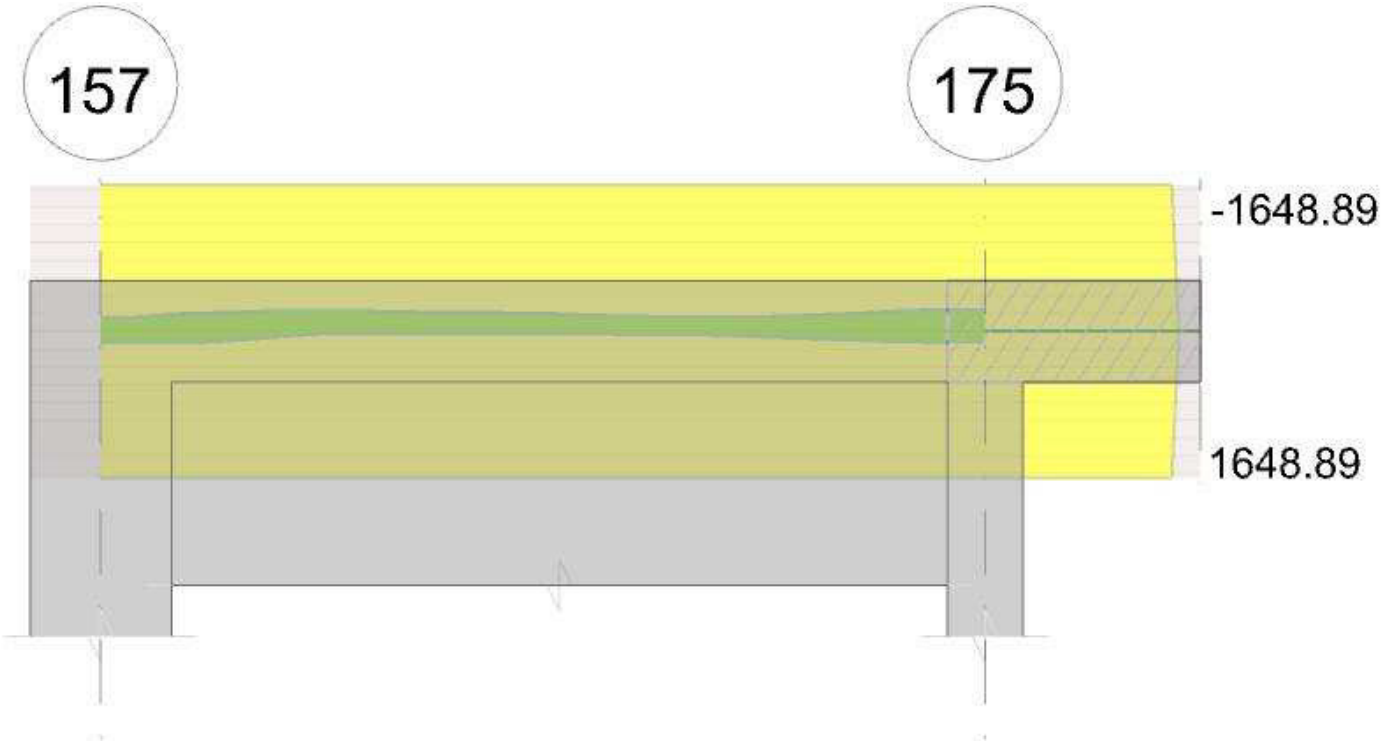
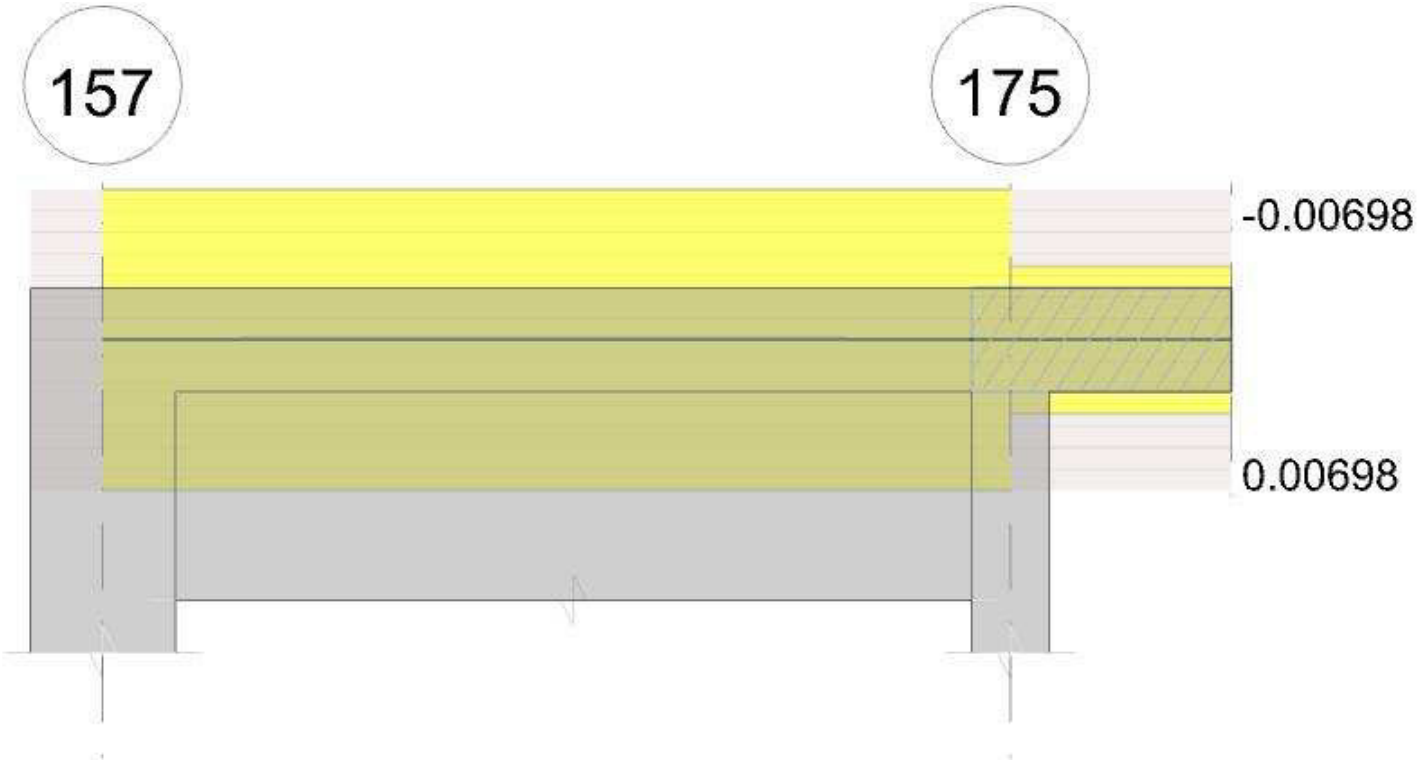


Diagramma verifica stato limite ultimo taglio

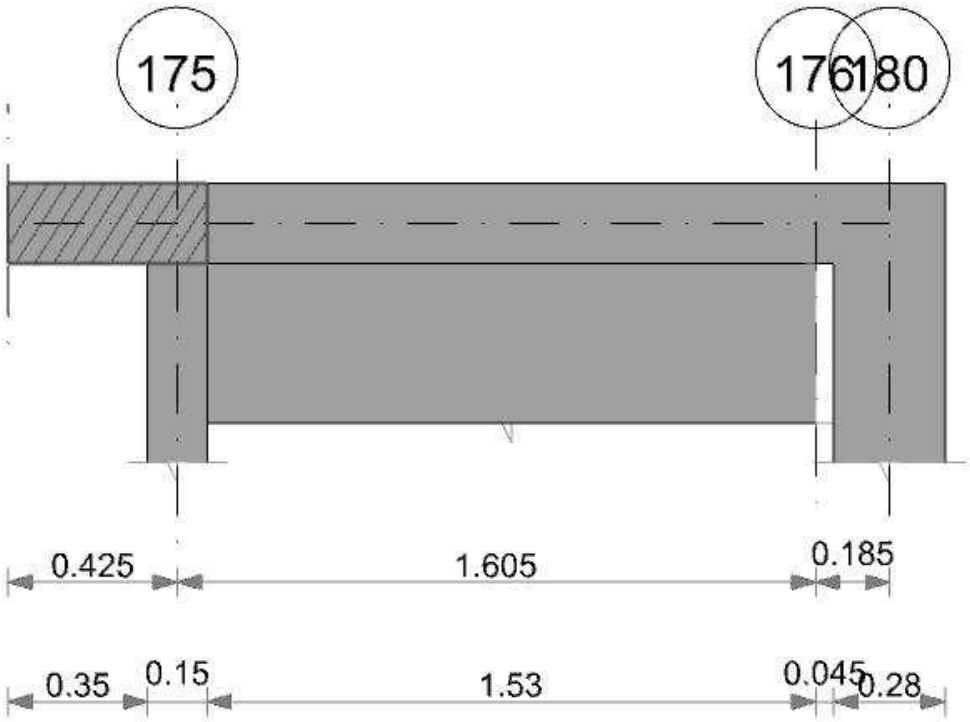
Diagramma verifica stato limite esercizio quasi permanente freccia

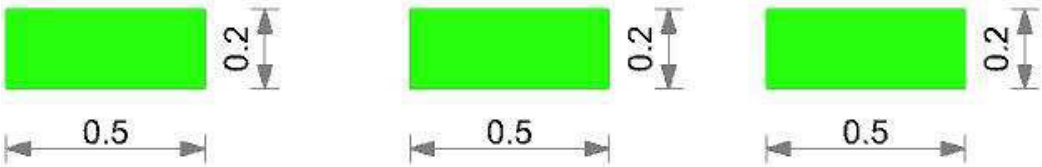


Output campate

Trave a "Terzo" 179-176

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x20	Rettangolare	0.5	0.2	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

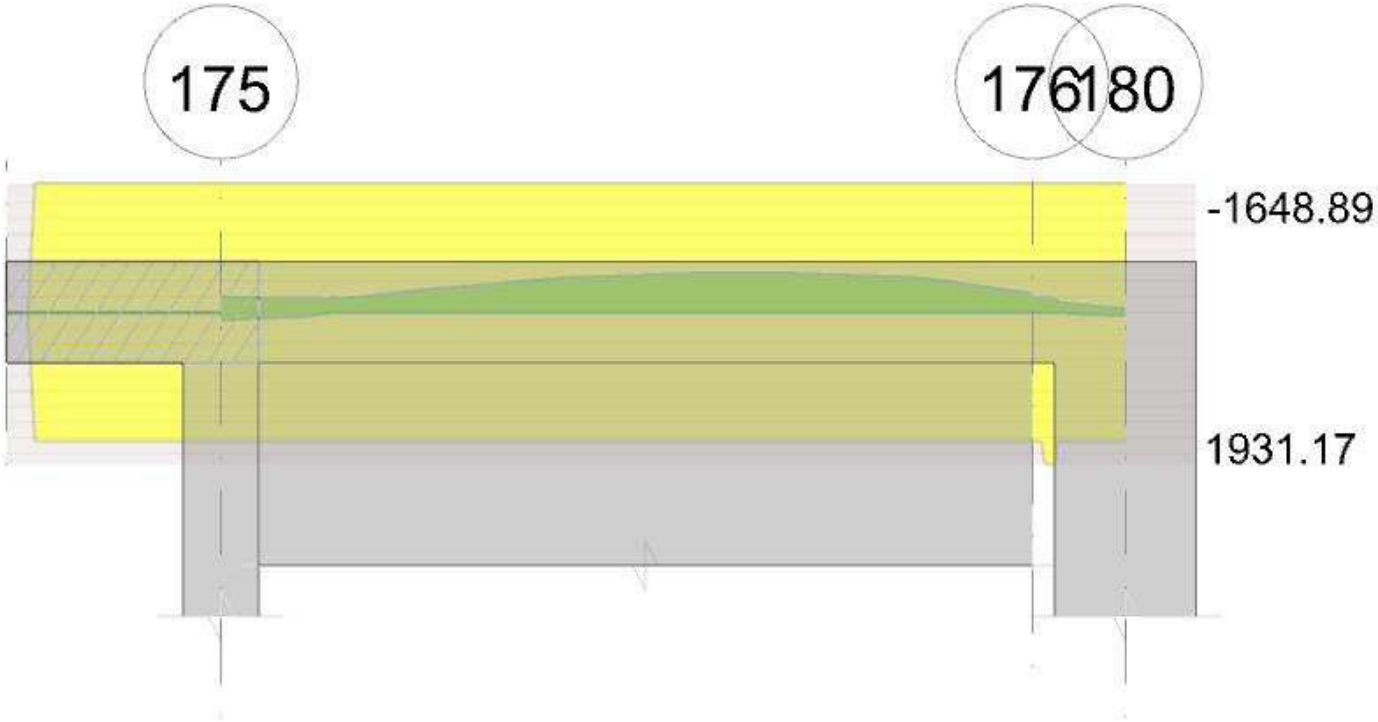


Diagramma verifica stato limite ultimo taglio

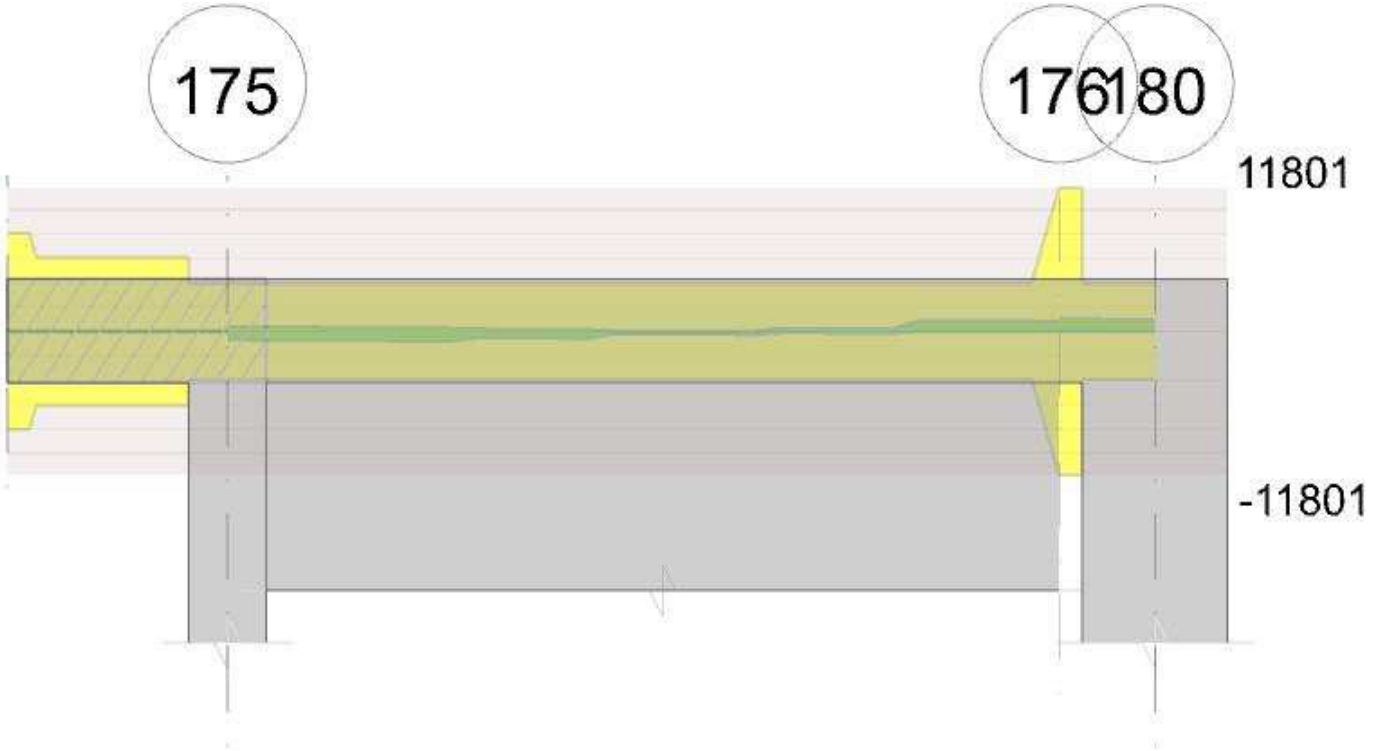
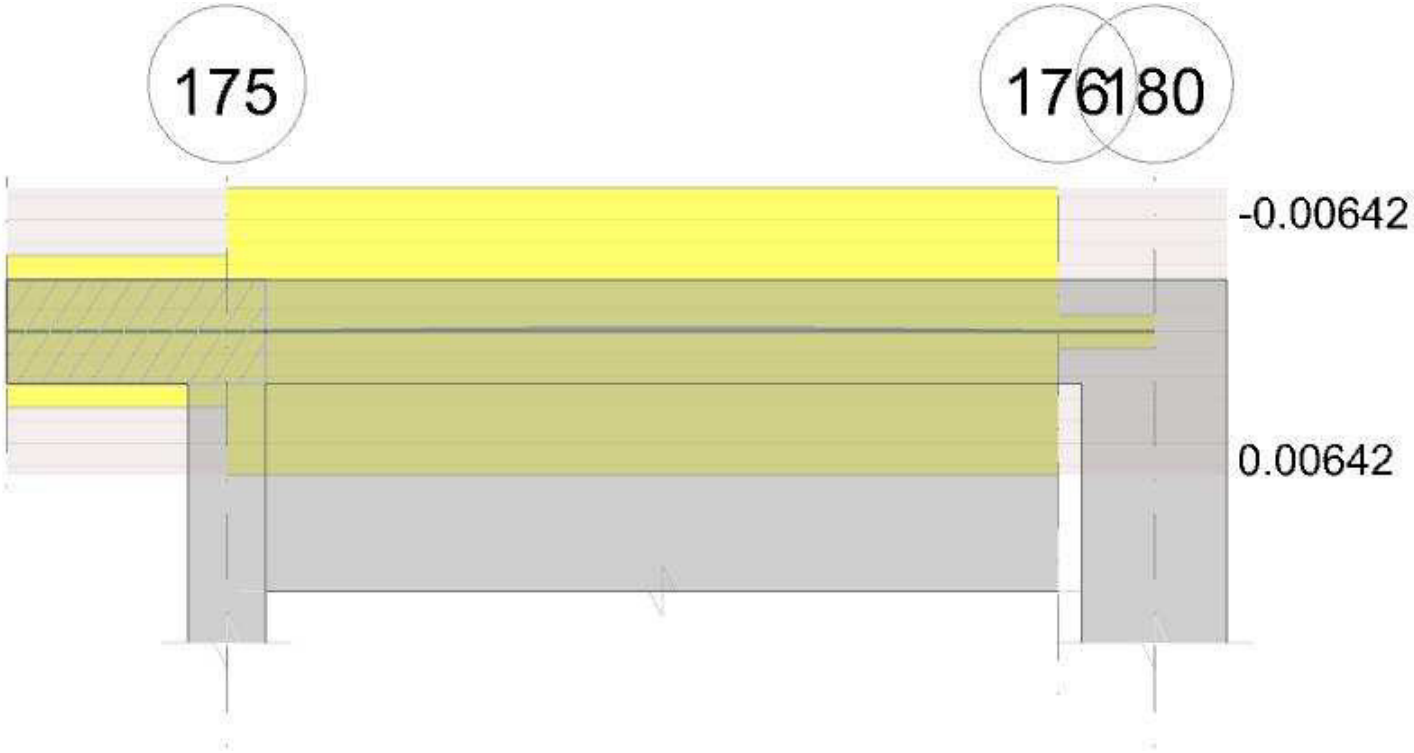


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 3 tra i fili 176 - 180, sezione R 50x20, asta 478

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-152.55	SLU 83	-152.55	-1931.17	0.242	12.66	Si
0.01	0.000308	0.05	0.000308	0.05							-146.8	SLU 83	-152.55	-1931.17	0.242	12.66	Si
0.05	0.000308	0.05	0.000308	0.05	-57.36	SLU 2	0.23	1931.17	0.242	8376.15	-110.88	SLU 83	-152.55	-1931.17	0.242	12.66	Si
0.09	0.000308	0.05	0.000308	0.05							-67.61	SLU 83	-67.61	-1931.17	0.242	28.56	Si
0.19	0.000308	0.05	0.000308	0.05	14.56	SLU 84	14.56	1931.17	0.242	132.63							Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-174.98	SLV 2	-174.98	-1648.89	0.269	9.42	Si
0.01	0.000308	0.05	0.000308	0.05							-168.87	SLV 1	-174.98	-1648.89	0.269	9.42	Si
0.05	0.000308	0.05	0.000308	0.05							-132.77	SLV 7	-174.98	-1648.89	0.269	9.42	Si
0.09	0.000308	0.05	0.000308	0.05	18.38	SLV 10	18.38	1648.89	0.269	89.7	-99.79	SLV 7	-99.79	-1648.89	0.269	16.52	Si
0.19	0.000308	0.05	0.000308	0.05	62.95	SLV 10	34.61	1648.89	0.269	47.64	-45.21	SLV 7	-45.21	-1648.89	0.269	36.47	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000308	0.05	0.000308	0.05							-127.72	SLD 2	-127.72	-1648.89	0.269	12.91	Si
0.01	0.000308	0.05	0.000308	0.05							-123.1	SLD 1	-127.72	-1648.89	0.269	12.91	Si
0.05	0.000308	0.05	0.000308	0.05							-95.15	SLD 7	-127.72	-1648.89	0.269	12.91	Si
0.09	0.000308	0.05	0.000308	0.05							-65.99	SLD 7	-65.99	-1648.89	0.269	24.99	Si
0.19	0.000308	0.05	0.000308	0.05	32.01	SLD 10	12.43	1648.89	0.269	132.62	-14.26	SLD 7	-14.26	-1648.89	0.269	115.59	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	933	SLU 83	933	3906	23811	11801	11801	1	12.64	Si
0.05	0.0000223	0.000308	0	919	SLU 83	919	3906	23811	11801	11801	1	12.85	Si
0.05	0	0.000308	0	917	SLU 83	917	3906	23811	0	3906	1	4.26	Si
0.09	0	0.000308	0	903	SLU 83	903	3906	23811	0	3906	1	4.32	Si
0.19	0	0.000308	0	873	SLU 83	873	3906	23811	0	3906	1	4.47	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	1014	SLV 2	1014	3906	23811	11801	11801	1	11.64	Si
0.05	0.0000223	0.000308	0	1003	SLV 2	1003	3906	23811	11801	11801	1	11.77	Si
0.05	0	0.000308	0	1002	SLV 2	1002	3906	23811	0	3906	1	3.9	Si
0.09	0	0.000308	0	991	SLV 2	991	3906	23811	0	3906	1	3.94	Si
0.19	0	0.000308	0	968	SLV 2	968	3906	23811	0	3906	1	4.04	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000223	0.000308	0	760	SLD 2	760	3906	23811	11801	11801	1	15.52	Si
0.05	0.0000223	0.000308	0	749	SLD 2	749	3906	23811	11801	11801	1	15.75	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.05	0	0.000308	0	748	SLD 2	748	3906	23811	0	3906	1	5.22	Si
0.09	0	0.000308	0	737	SLD 2	737	3906	23811	0	3906	1	5.3	Si
0.19	0	0.000308	0	714	SLD 2	714	3906	23811	0	3906	1	5.47	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-108.91	20	-108.91	30558	1494000	458364	36000000	-92.41	2	-92.41	25928	1120500			Si
0.05	-79.09	20	-108.91	30558	1494000	458364	36000000	-66.99	2	-92.41	25928	1120500			Si
0.09	-48.16	20	-48.16	13513	1494000	202693	36000000	-40.7	2	-40.7	11420	1120500			Si
0.19	10.45	21	10.45	2933	1494000	43989	36000000	8.87	2	8.87	2489	1120500			Si

Verifica di apertura delle fessure

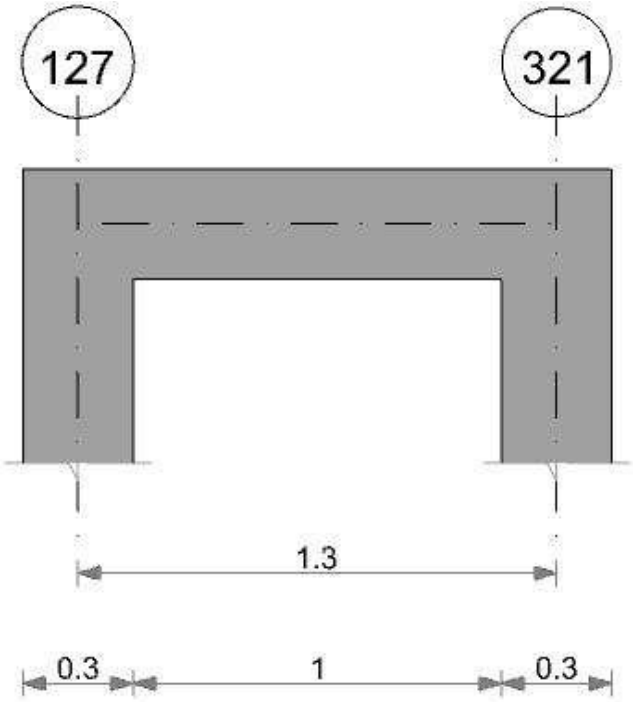
La campata non presenta apertura delle fessure

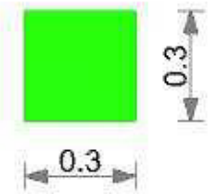
Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.05	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.07	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si
0.09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	9999	Si

TRAVE PIANO TERRA

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 30x30	Rettangolare	0.3	0.3	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

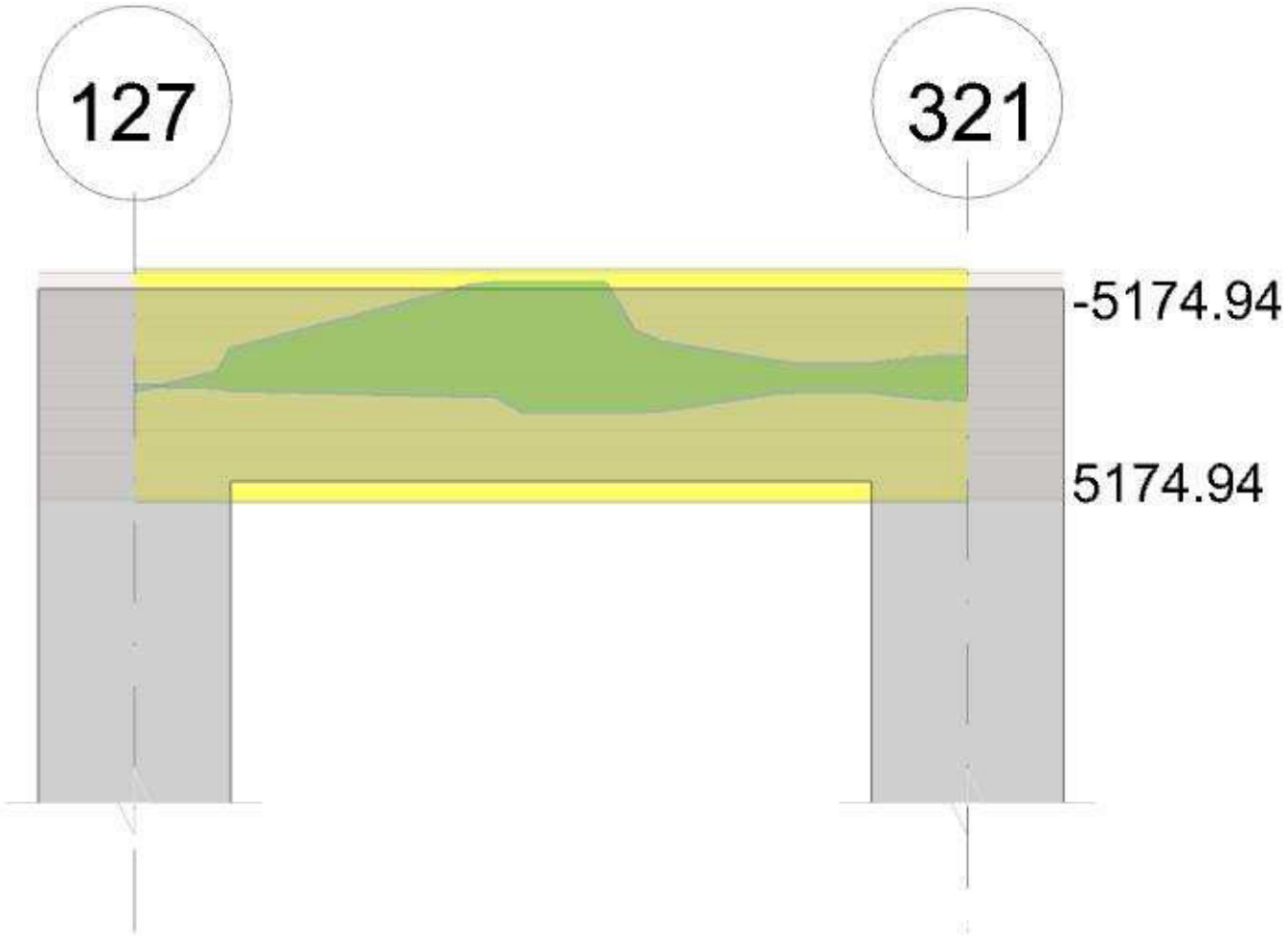


Diagramma verifica stato limite ultimo taglio

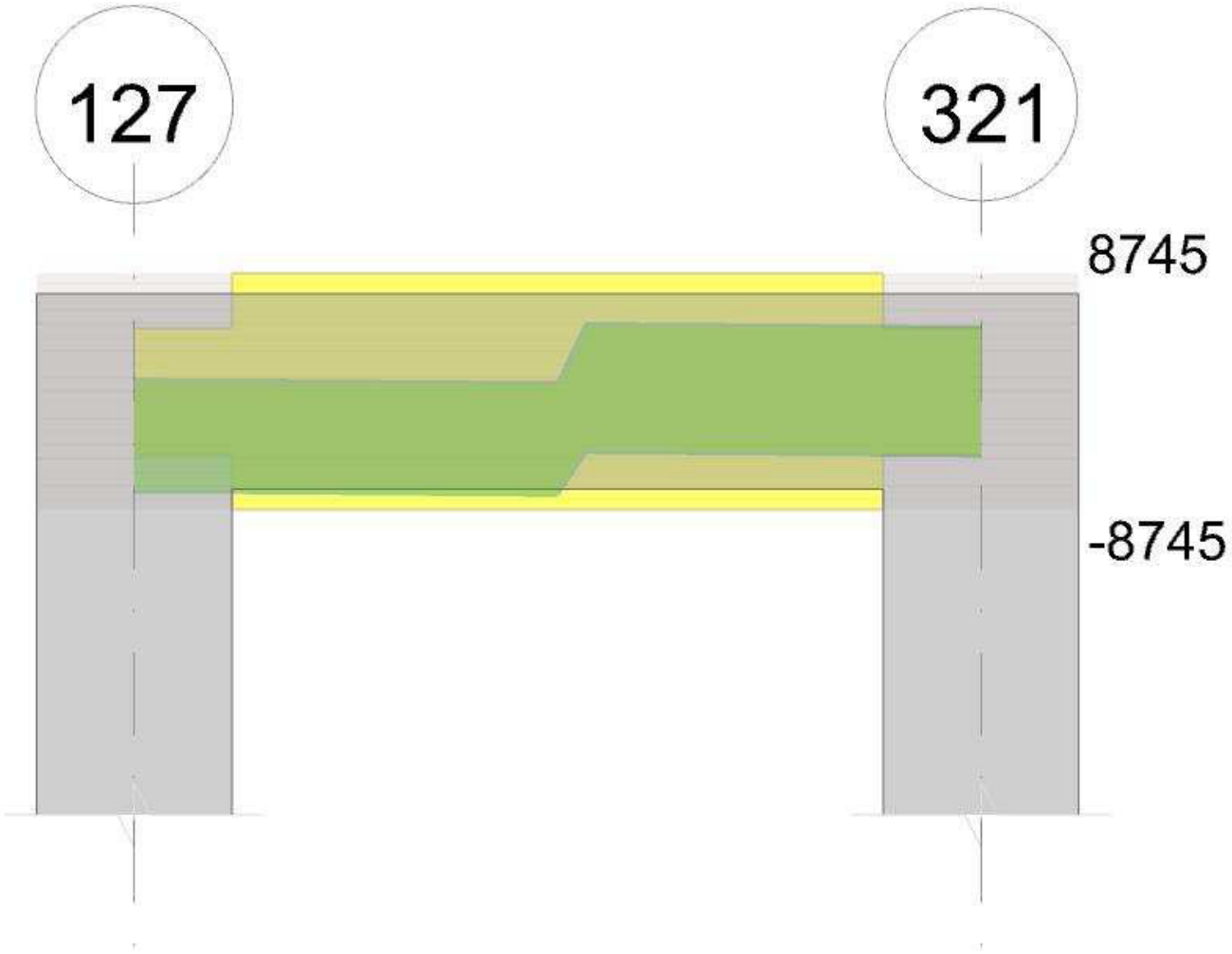
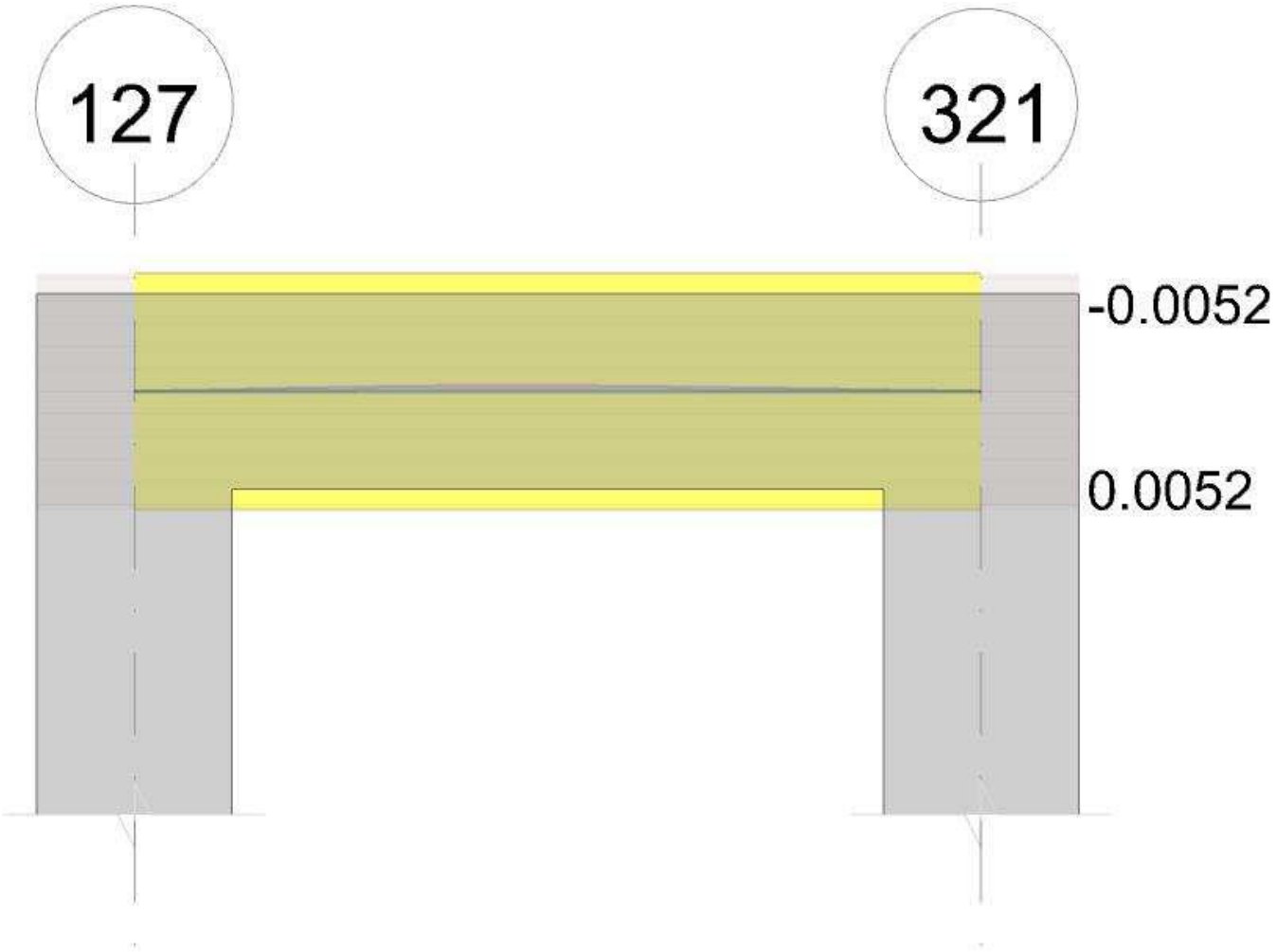


Diagramma verifica stato limite esercizio quasi permanente freccia



Output campate

Campata 1 tra i fili 127 - 321, sezione R 30x30, aste 784, 785

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053	231.14	SLU 78	125.7	5357.17	0.239	42.62							Si
0.15	0.000628	0.053	0.000628	0.053							-475.39	SLU 70	-1006.21	-5357.17	0.239	5.32	Si
0.61	0.000628	0.053	0.000628	0.053	-1810.92	SLU 1	68.24	5357.17	0.239	78.5	-2707.51	SLU 78	-2927.25	-5357.17	0.239	1.83	Si
0.65	0.000628	0.053	0.000628	0.053	-1955.58	SLU 1	69.44	5357.17	0.239	77.15	-2927.25	SLU 78	-2927.25	-5357.17	0.239	1.83	Si
1.15	0.000628	0.053	0.000628	0.053							-522.8	SLU 84	-522.8	-5357.17	0.239	10.25	Si
1.3	0.000628	0.053	0.000628	0.053							-559.35	SLU 84	-536.35	-5357.17	0.239	9.99	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053	335.7	SLV 15	225.99	5174.94	0.333	22.9	-15.47	SLV 2	-15.47	-5174.94	0.333	334.55	Si
0.15	0.000628	0.053	0.000628	0.053	115.69	SLV 2	206.72	5174.94	0.333	25.03	-787.9	SLV 15	-1626.24	-5174.94	0.333	3.18	Si
0.61	0.000628	0.053	0.000628	0.053	456.36	SLV 2	1196.87	5174.94	0.333	4.32	-4251.79	SLV 15	-4585.02	-5174.94	0.333	1.13	Si
0.65	0.000628	0.053	0.000628	0.053	484.23	SLV 2	1196.87	5174.94	0.333	4.32	-4585.02	SLV 15	-4585.02	-5174.94	0.333	1.13	Si
1.15	0.000628	0.053	0.000628	0.053	271.94	SLV 2	271.94	5174.94	0.333	19.03	-960.57	SLV 15	-960.57	-5174.94	0.333	5.39	Si
1.3	0.000628	0.053	0.000628	0.053	990.82	SLV 2	634.33	5174.94	0.333	8.16	-1672.31	SLV 15	-1314.73	-5174.94	0.333	3.94	Si

Verifiche SLD Resistenza a flessione (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000628	0.053	0.000628	0.053	235.63	SLD 15	146.59	5174.94	0.333	35.3							Si
0.15	0.000628	0.053	0.000628	0.053							-530.36	SLD 15	-1103.82	-5174.94	0.333	4.69	Si
0.61	0.000628	0.053	0.000628	0.053	-885.52	SLD 2	275.69	5174.94	0.333	18.77	-2909.91	SLD 15	-3140.22	-5174.94	0.333	1.65	Si
0.65	0.000628	0.053	0.000628	0.053	-960.57	SLD 2	275.69	5174.94	0.333	18.77	-3140.22	SLD 15	-3140.22	-5174.94	0.333	1.65	Si
1.15	0.000628	0.053	0.000628	0.053							-608.58	SLD 15	-608.58	-5174.94	0.333	8.5	Si
1.3	0.000628	0.053	0.000628	0.053	229.49	SLD 2	77.31	5174.94	0.333	66.94	-910.98	SLD 15	-757.71	-5174.94	0.333	6.83	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000628	0	-4681	SLU 78	-4681	-4669	-23525	0	-4669	1	1	Si
0.13	0	0.000628	0	-4719	SLU 78	-4719	-4669	-23525	0	-4669	1	0.99	Si

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0.15	0.0000101	0.000628	0	-4726	SLU 78	-4726	-4669	-23525	-8745	-8745	1	1.85	Si
0.65	0.0000101	0.000628	0	-5087	SLU 78	-5087	-4669	-23525	-8745	-8745	1	1.72	Si
1.15	0.0000101	0.000628	0	208	SLU 44	208	4669	23525	8745	8745	1	42.05	Si
1.15	0.0000101	0.000628	0	-250	SLU 41	-250	-4669	-23525	-8745	-8745	1	35.04	Si
1.3	0	0.000628	0	146	SLU 44	146	4669	23525	0	4669	1	31.92	Si
1.3	0	0.000628	0	-363	SLU 41	-363	-4669	-23525	0	-4669	1	12.87	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000628	0	876	SLV 2	876	4669	23525	0	4669	1	5.33	Si
0	0	0.000628	0	-7458	SLV 15	-7458	-4669	-23525	0	-4669	1	0.63	Si
0.13	0	0.000628	0	846	SLV 2	846	4669	23525	0	4669	1	5.52	Si
0.13	0	0.000628	0	-7487	SLV 15	-7487	-4669	-23525	0	-4669	1	0.62	Si
0.15	0.0000101	0.000628	0	842	SLV 2	842	4669	23525	8745	8745	1	10.39	Si
0.15	0.0000101	0.000628	0	-7492	SLV 15	-7492	-4669	-23525	-8745	-8745	1	1.17	Si
0.65	0.0000101	0.000628	0	634	SLV 2	634	4669	23525	8745	8745	1	13.78	Si
0.65	0.0000101	0.000628	0	-7699	SLV 15	-7699	-4669	-23525	-8745	-8745	1	1.14	Si
1.15	0.0000101	0.000628	0	4832	SLV 2	4832	4669	23525	8745	8745	1	1.81	Si
1.15	0.0000101	0.000628	0	-4722	SLV 15	-4722	-4669	-23525	-8745	-8745	1	1.85	Si
1.3	0	0.000628	0	4770	SLV 2	4770	4669	23525	0	4669	1	0.98	Si
1.3	0	0.000628	0	-4784	SLV 15	-4784	-4669	-23525	0	-4669	1	0.98	Si

Verifiche SLD Resistenza a taglio

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0	0.000628	0	-5083	SLD 15	-5083	-4669	-23525	0	-4669	1	0.92	Si
0.13	0	0.000628	0	-5112	SLD 15	-5112	-4669	-23525	0	-4669	1	0.91	Si
0.15	0.0000101	0.000628	0	-5117	SLD 15	-5117	-4669	-23525	-8745	-8745	1	1.71	Si
0.65	0.0000101	0.000628	0	-5324	SLD 15	-5324	-4669	-23525	-8745	-8745	1	1.64	Si
1.15	0.0000101	0.000628	0	2098	SLD 2	2098	4669	23525	8745	8745	1	4.17	Si
1.15	0.0000101	0.000628	0	-1988	SLD 15	-1988	-4669	-23525	-8745	-8745	1	4.4	Si
1.3	0	0.000628	0	2036	SLD 2	2036	4669	23525	0	4669	1	2.29	Si
1.3	0	0.000628	0	-2051	SLD 15	-2051	-4669	-23525	0	-4669	1	2.28	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	171.11	15	93.29	16417	1494000	246257	36000000	160.11	2	88.36	15550	1120500			Si
0.15	-353.26	7	-747.33	131518	1494000	1972767	36000000	-336.4	1	-709.76	124906	1120500			Si
0.65	-2171.55	15	-2171.55	602075	1494000	16272685	36000000	-2050.4	2	-2050.4	568485	1120500			Si
1.15	-383.2	21	-383.2	67437	1494000	1011550	36000000	-344.32	2	-353.03	62128	1120500			Si
1.3	-403.55	21	-390.02	68636	1494000	1029542	36000000	-340.75	2	-340.2	59870	1120500			Si

Verifica di apertura delle fessure

x	Bordo	Rara				Frequente				Quasi permanente				Verifica
		Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	Dmax	Esm	Wd	Comb	
0.61	superiore	0.261	0.00047	0.000124	15	0.261	0.00051	0.000133	5	0.261	0.0005	0.000131	2	Si
0.65	superiore	0.261	0.00047	0.000124	15	0.261	0.00051	0.000133	5	0.261	0.0005	0.000131	2	Si

Verifica di deformabilità

x	Rara				Frequente				Quasi permanente							Verifica
	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess.+	Fess.-	Elastica+	Elastica-	Fess. viscosa+	Comb.	Fess. viscosa-	Comb.	l/f	
0.15	-0.00003	-0.00003	-0.00003	-0.00004	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00009	1	-0.00009	1	9999	Si
0.61	-0.00009	-0.0001	-0.0001	-0.00011	-0.00009	-0.00009	-0.0001	-0.0001	-0.00009	-0.00009	-0.00026	1	-0.00027	1	4892	Si
0.65	-0.00009	-0.0001	-0.0001	-0.00011	-0.00009	-0.00009	-0.0001	-0.0001	-0.00009	-0.00009	-0.00026	1	-0.00026	1	4991	Si
1.15	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00003	-0.00007	1	-0.00007	1	9999	Si

1.3 Verifiche pareti C.A.

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

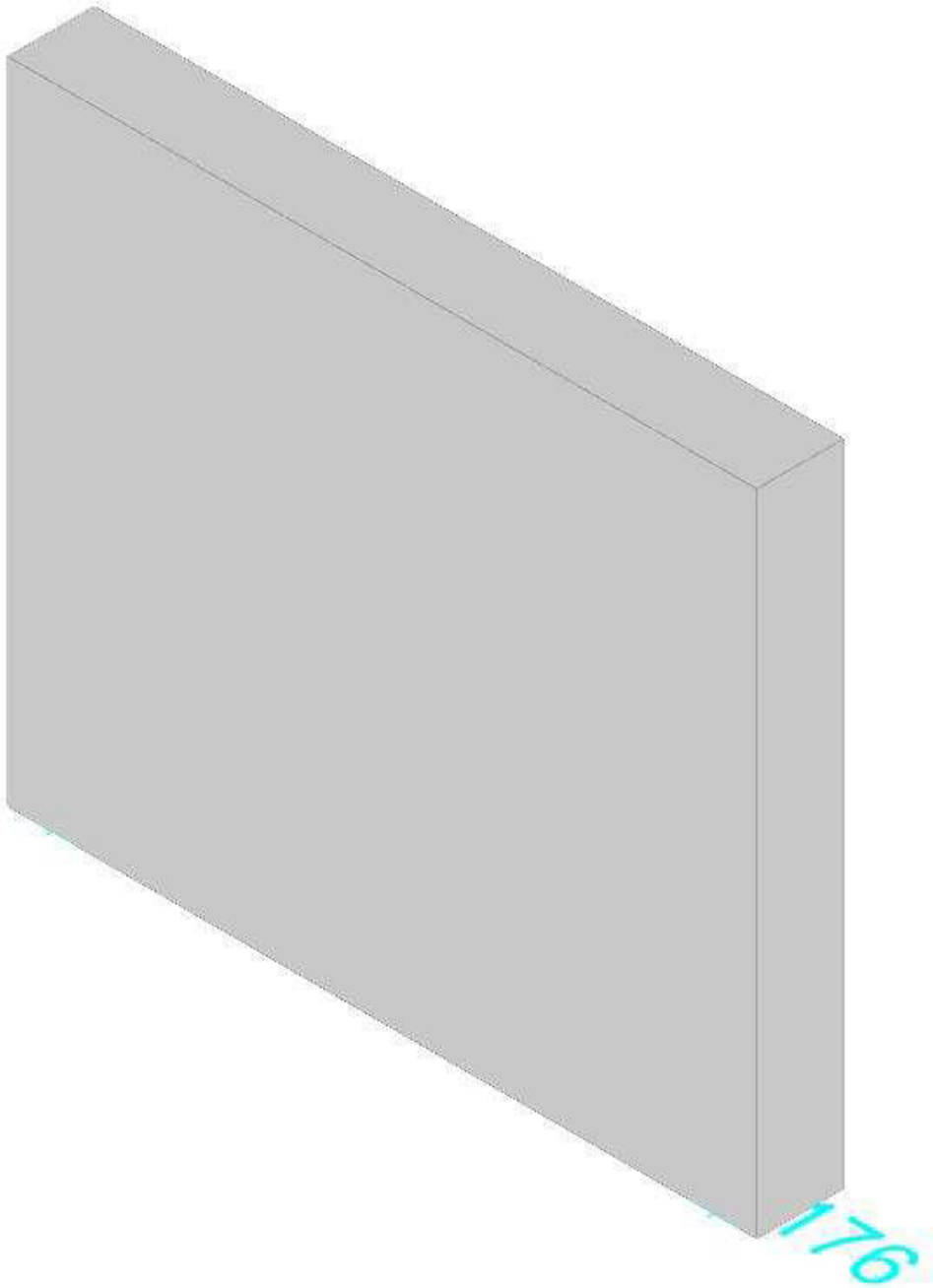
Descrizione breve: *nome sintetico assegnato al livello.*
Descrizione: *nome assegnato al livello.*
Quota: *quota superiore espressa nel sistema di riferimento assoluto. [m]*
Spessore: *spessore del livello. [m]*
Descrizione: *descrizione della sezione di verifica.*
Dir.: *direzione della sezione di verifica.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
As,sup: *area di acciaio efficace superiore. [m²]*
As,inf: *area di acciaio efficace inferiore. [m²]*
c,sup: *copriferro medio superiore. [m]*
c,inf: *copriferro medio inferiore. [m]*
Comb.: *combinazione di verifica.*
MEd: *momento agente. [daN*m]*
NEd: *sforzo normale agente, positivo se di trazione. [daN]*
MRd: *momento resistente. [daN*m]*
NRd: *sforzo normale resistente, positivo se di trazione. [daN]*
c.s.: *coefficiente di sicurezza.*
Verifica: *stato di verifica.*
d: *altezza utile. [m]*

bw: *minima larghezza anima. [m]*
Armatura a taglio: *necessità di armatura a taglio.*
Asw/s: *rapporto tra l'area dell'armatura trasversale e l'interasse tra due armature consecutive.*
VEd: *taglio agente. [daN]*
Vrd,c: *resistenza di calcolo a taglio per elementi privi di armature trasversali. [daN]*
Vrcd: *valore resistente di calcolo a taglio compressione del calcestruzzo d'anima. [daN]*
Vrsd: *valore resistente di calcolo a taglio trazione dell'armatura trasversale. [daN]*
VRd: *resistenza a taglio. [daN]*
cotg(ϑ): *cotangente dell'angolo dei puntoni rispetto all'asse.*
Asl: *area armatura longitudinale. [m²]*
Sezione fessurata: *sezione fessurata.*
σc: *tensione del calcestruzzo. [daN/m²]*
σc limite: *tensione limite del calcestruzzo. [daN/m²]*
Es/Ec: *coefficiente di omogenizzazione.*
σf: *tensione dell'armatura. [daN/m²]*
σf limite: *tensione limite dell'armatura. [daN/m²]*

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.06	0
L2	Fondazione	-1.56	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
583 Prosp.A	Verticale	0.5	0.2	0.00019	0.0003	0.036	0.036
129 Prosp.A	Verticale	0.875	0.2	0.000317	0.000501	0.036	0.036
582 Prosp.A	Verticale	0.5	0.2	0.000462	0.000462	0.036	0.036
110 Prosp.A	Verticale	1	0.2	0.000317	0.000501	0.036	0.036
578 Prosp.A	Verticale	0.5	0.2	0.000159	0.000218	0.036	0.036
124 Prosp.A	Orizzontale	0.6	0.2	0.000672	0.000672	0.0489	0.0489
125 Prosp.A	Orizzontale	0.9087	0.2	0.001008	0.001008	0.0486	0.0486
579 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
581 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
583 Prosp.A	Verticale	SLV 16	153.56	9109	198.66	11784	1.2937	Si
129 Prosp.A	Verticale	SLV 16	153.56	9109	331.11	19640	2.1562	Si
582 Prosp.A	Verticale	SLV 14	-533.42	5777	-1425.12	15435	2.6717	Si
110 Prosp.A	Verticale	SLV 7	-594.77	247	-2813.08	1169	4.7297	Si
129 Prosp.A	Verticale	SLV 7	-521.69	688	-2618.73	3451	5.0197	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
583 Prosp.A	Verticale	SLD 16	131.69	6687	224.2	11385	1.7025	Si
129 Prosp.A	Verticale	SLD 16	131.69	6687	373.66	18975	2.8375	Si
582 Prosp.A	Verticale	SLD 16	-264.75	5502	-999.47	20771	3.7751	Si
578 Prosp.A	Verticale	SLD 16	341.08	-2609	2117.64	-16195	6.2086	Si
110 Prosp.A	Verticale	SLD 7	-459.39	-44	-2924.04	-282	6.3651	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
582 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 16	4642	8025	-414.1	4748	17954	0	4748	2.5	0.0004623	1.0227	Si
128 Prosp.A	Orizzontale	0.151	0.852	Non necessaria	0	SLV 7	6351	-1164	-151.37	8464	28398	0	8464	2.5	0.0010085	1.3327	Si
124 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLV 7	4018	-1677	457.99	5942	20049	0	5942	2.5	0.0006723	1.4786	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
583 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 16	3230	7655	95.18	4051	17954	0	4051	2.5	0.0001902	1.254	Si
582 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 16	3666	6082	-258.2	4748	17954	0	4748	2.5	0.0004623	1.295	Si
129 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	4359	-381	-96.83	5795	19897	0	5795	2.5	0.0006723	1.3294	Si
128 Prosp.A	Orizzontale	0.151	0.852	Non necessaria	0	SLD 7	4359	-381	-96.83	8375	28306	0	8375	2.5	0.0010085	1.9214	Si
124 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 7	3147	-2627	380.7	6049	20161	0	6049	2.5	0.0006723	1.9222	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
578 Prosp.A	Verticale	SLE QP 2	287.97	-2247	No	-101284	1120500	15	11.0629	Si
124 Prosp.A	Orizzontale	SLE QP 2	318.85	-3345	No	-94285	1120500	15	11.8841	Si
125 Prosp.A	Orizzontale	SLE QP 2	494.07	-3211	No	-87183	1120500	15	12.8523	Si
578 Prosp.A	Verticale	SLE RA 21	306.2	-2293	No	-106797	1494000	15	13.9891	Si
124 Prosp.A	Orizzontale	SLE RA 21	348.18	-3620	No	-102725	1494000	15	14.5436	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

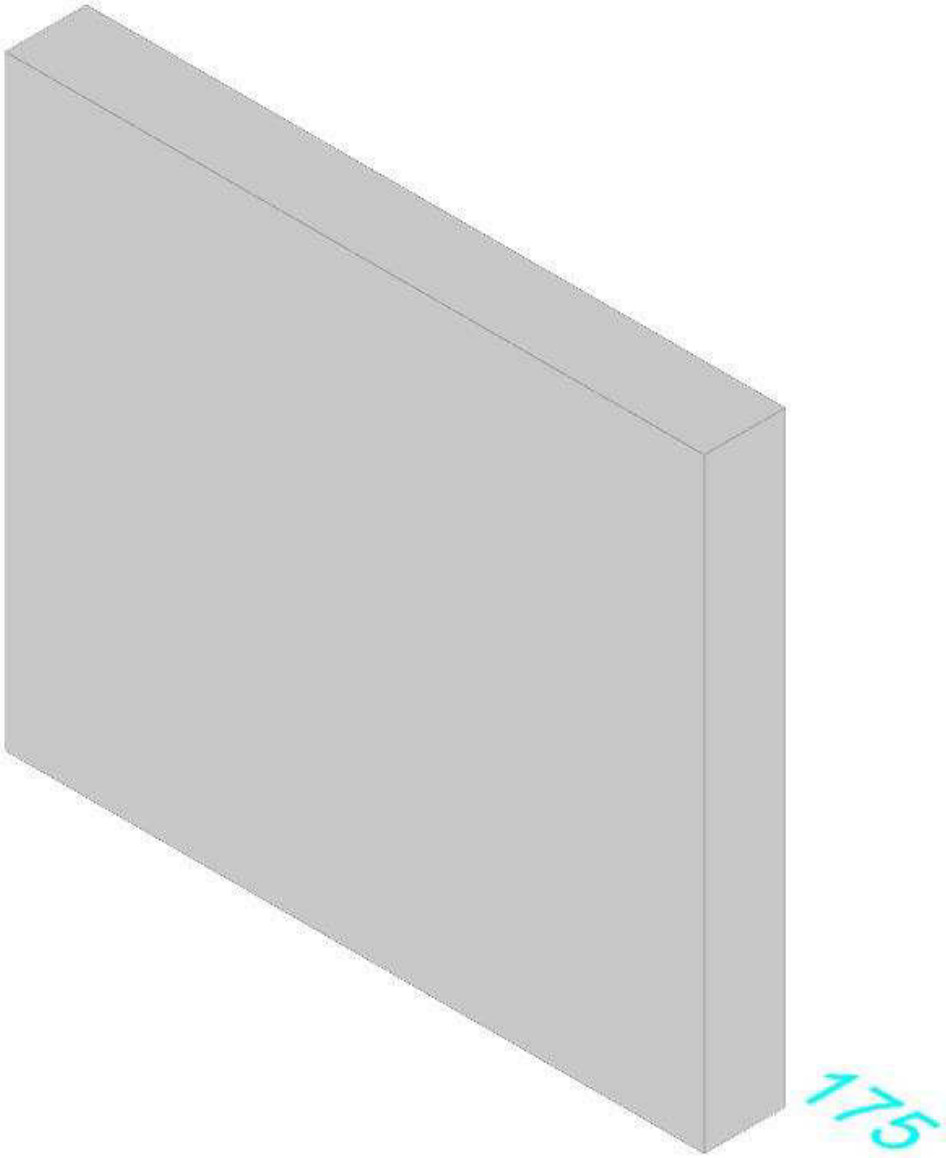
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
583 Prosp.A	Verticale	SLE RA 21	126.16	5226	No	1082463	36000000	15	33.2575	Si
582 Prosp.A	Verticale	SLE RA 21	-167.84	4762	No	1040348	36000000	15	34.6038	Si
579 Prosp.A	Verticale	SLE RA 21	248.21	1303	No	758661	36000000	15	47.4521	Si
129 Prosp.A	Verticale	SLE RA 21	126.16	5226	No	620221	36000000	15	58.0438	Si
581 Prosp.A	Verticale	SLE RA 21	107.37	2539	No	581438	36000000	15	61.9155	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.06	0
L2	Fondazione	-1.56	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
458 Prosp.A	Verticale	0.5	0.2	0.000159	0.000218	0.036	0.036
116 Prosp.A	Verticale	0.875	0.2	0.000254	0.000349	0.036	0.036
97 Prosp.A	Verticale	1	0.2	0.000317	0.000436	0.036	0.036
113 Prosp.A	Verticale	0.875	0.2	0.000901	0.000901	0.036	0.036
94 Prosp.A	Verticale	1	0.2	0.001001	0.001001	0.036	0.036
455 Prosp.A	Verticale	0.5	0.2	0.000501	0.000501	0.036	0.036
114 Prosp.A	Orizzontale	1	0.2	0.001121	0.001121	0.048	0.048
113 Prosp.A	Orizzontale	0.795	0.2	0.000896	0.000896	0.0487	0.0487
27 Prosp.A	Orizzontale	0.6	0.2	0.000679	0.000679	0.0489	0.0489
96 Prosp.A	Orizzontale	1	0.2	0.001244	0.001244	0.0485	0.0485
23 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
25 Prosp.A	Orizzontale	1	0.2	0.001244	0.001244	0.0485	0.0485
97 Prosp.A	Orizzontale	0.6	0.2	0.000679	0.000679	0.0489	0.0489

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
458 Prosp.A	Verticale	SLV 11	-191.42	-330	-1465.89	-2527	7.6582	Si

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
116 Prosp.A	Verticale	SLV 15	-300.41	-705	-2495.66	-5853	8.3075	Si
97 Prosp.A	Verticale	SLV 15	-257.24	-898	-3446.85	-12036	13.3992	Si
113 Prosp.A	Verticale	SLV 2	-92.31	3675	-1272.44	50658	13.7843	Si
94 Prosp.A	Verticale	SLV 2	-95.87	3996	-1367.56	57009	14.2647	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
458 Prosp.A	Verticale	SLD 11	-140.48	-208	-1435.69	-2126	10.2201	Si
116 Prosp.A	Verticale	SLD 15	-212.44	-413	-2407.01	-4680	11.3303	Si
94 Prosp.A	Verticale	SLD 4	107.93	2838	1869.73	49163	17.3231	Si
97 Prosp.A	Verticale	SLD 15	-181.8	-587	-3360.21	-10842	18.4827	Si
455 Prosp.A	Verticale	SLD 13	179.7	-2952	4410.73	-72455	24.5452	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
455 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 6	874	-3116	165	5259	18350	0	5259	2.5	0.0005007	6.0141	Si
113 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 6	888	-2784	157.89	8955	31773	0	8955	2.5	0.0009013	10.0823	Si
113 Prosp.A	Orizzontale	0.151	0.795	Non necessaria	0	SLV 6	-497	2270	-99.87	7644	26343	0	7644	2.5	0.0008964	15.3876	Si
94 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLU 83	-605	2303	110.62	9751	35908	0	9751	2.5	0.0010015	16.1071	Si
27 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLU 83	-370	-5720	147.33	6418	20523	0	6418	2.5	0.0006786	17.3611	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
455 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 6	648	-3142	149.91	5262	18354	0	5262	2.5	0.0005007	8.1243	Si
113 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLD 6	649	-3054	153.95	8988	31808	0	8988	2.5	0.0009013	13.8489	Si
113 Prosp.A	Orizzontale	0.151	0.795	Non necessaria	0	SLD 6	-403	1429	-89.06	7644	26343	0	7644	2.5	0.0008964	18.9502	Si
94 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLD 2	-458	2035	26.43	9751	35908	0	9751	2.5	0.0010015	21.2832	Si
27 Prosp.A	Orizzontale	0.151	0.6	Non necessaria	0	SLD 13	-272	-4061	106.7	6230	20329	0	6230	2.5	0.0006786	22.937	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
455 Prosp.A	Verticale	SLE QP 2	164.79	-2558	No	-63971	1120500	15	17.5159	Si
114 Prosp.A	Orizzontale	SLE QP 2	-136.4	-8147	No	-52878	1120500	15	21.1905	Si
455 Prosp.A	Verticale	SLE RA 20	176.51	-2890	No	-69826	1494000	15	21.3962	Si
113 Prosp.A	Orizzontale	SLE QP 2	-179.29	-4132	No	-52063	1120500	15	21.5219	Si
27 Prosp.A	Orizzontale	SLE QP 2	101.64	-3906	No	-50254	1120500	15	22.2968	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

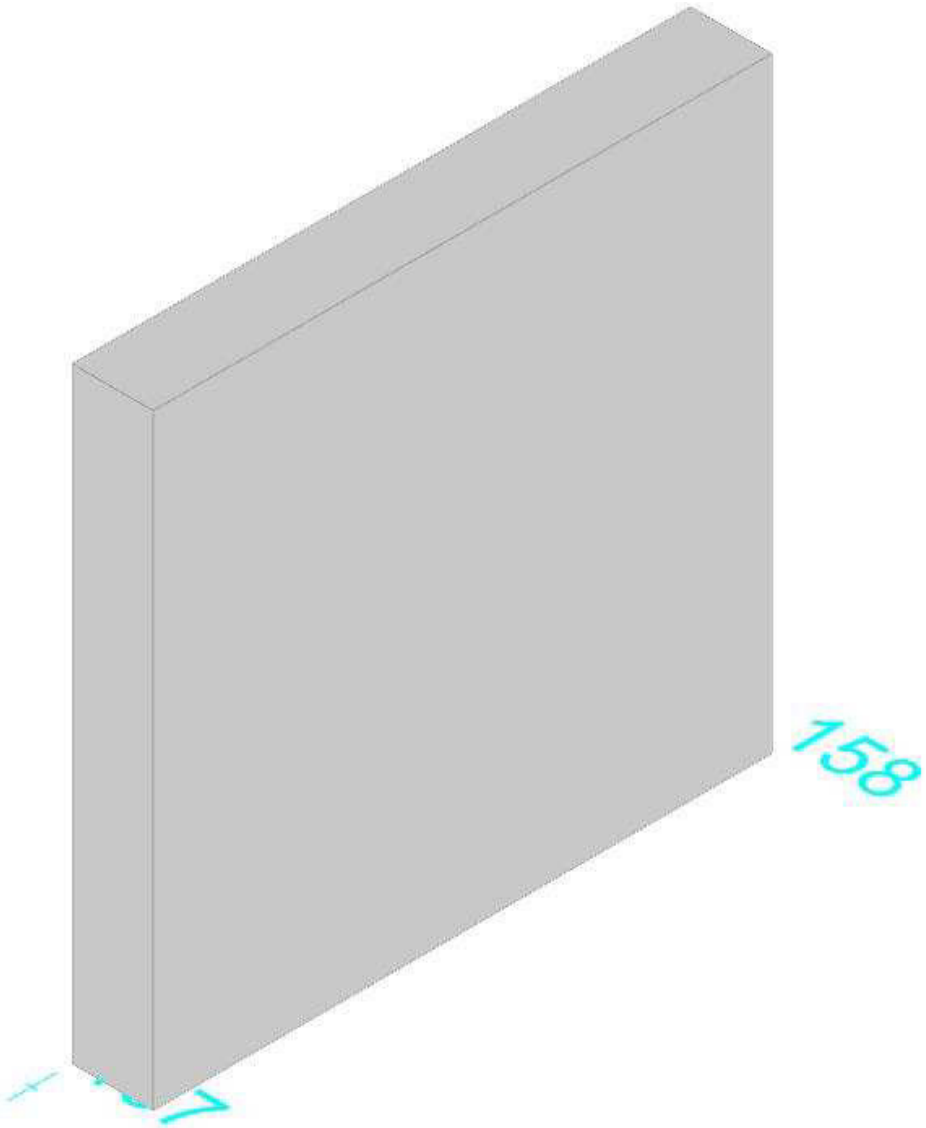
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
96 Prosp.A	Orizzontale	SLE RA 2	-41.73	-5933	No	-332468	36000000	15	108.2812	Si
23 Prosp.A	Orizzontale	SLE RA 2	73.41	-5854	No	-299888	36000000	15	120.0446	Si
94 Prosp.A	Verticale	SLE RA 21	130.37	2135	No	297704	36000000	15	120.9255	Si
25 Prosp.A	Orizzontale	SLE RA 2	134.6	-6723	No	-287832	36000000	15	125.0728	Si
97 Prosp.A	Orizzontale	SLE RA 2	-11.47	-2795	No	-278956	36000000	15	129.0527	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.06	0
L2	Fondazione	-1.56	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
497 Prosp.A	Verticale	0.5	0.2	0.000565	0.000565	0.036	0.036
513 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
118 Prosp.A	Orizzontale	0.8325	0.2	0.001008	0.001008	0.0486	0.0486
476 Prosp.A	Verticale	0.5	0.2	0.000549	0.000549	0.036	0.036
103 Prosp.A	Verticale	1	0.2	0.001099	0.001099	0.036	0.036
84 Prosp.A	Orizzontale	0.8325	0.2	0.001527	0.001527	0.0486	0.0486
82 Prosp.A	Orizzontale	1	0.2	0.001697	0.001697	0.048	0.048
50 Prosp.A	Orizzontale	0.8325	0.2	0.001018	0.001018	0.0486	0.0486

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
497 Prosp.A	Verticale	SLV 2	-17.42	4777	-152.69	41870	8.7657	Si
497 Prosp.A	Verticale	SLV 1	29.05	3394	334.17	39034	11.5022	Si
513 Prosp.A	Verticale	SLV 15	188.02	-8279	2851.34	-125560	15.1651	Si
118 Prosp.A	Orizzontale	SLV 2	353.78	-433	5386.67	-6586	15.2262	Si
476 Prosp.A	Verticale	SLV 11	-185.39	-8202	-2842.28	-125749	15.3314	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
497 Prosp.A	Verticale	SLD 2	56.43	1952	881.4	30484	15.6193	Si
513 Prosp.A	Verticale	SLD 15	152.77	-6392	2951.35	-123485	19.3194	Si
476 Prosp.A	Verticale	SLD 11	79.35	-6770	1742.84	-148695	21.9646	Si
103 Prosp.A	Verticale	SLD 11	167.45	1441	3726.07	32053	22.2512	Si
118 Prosp.A	Orizzontale	SLD 2	272.97	-1100	6544.27	-26375	23.9745	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
118 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 2	1624	-4508	-127.02	8713	28129	0	8713	2.5	0.0010085	5.364	Si
120 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLV 2	-1444	3	309.57	9623	33280	0	9623	2.5	0.0011205	6.6662	Si
476 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 2	-786	-2441	50.76	5328	18264	0	5328	2.5	0.0005493	6.7775	Si
118 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 2	-931	-1888	31.69	9115	31659	0	9115	2.5	0.0009887	9.786	Si
99 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLV 2	879	-4388	-79.89	8725	28114	0	8725	2.5	0.0010179	9.9214	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
118 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 2	-1095	-492	261.39	8257	27657	0	8257	2.5	0.0010085	7.5418	Si
120 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLD 2	-1039	-336	236	9661	33320	0	9661	2.5	0.0011205	9.2968	Si
476 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 2	-535	-2841	15.21	5378	18315	0	5378	2.5	0.0005493	10.0542	Si
99 Prosp.A	Orizzontale	0.151	0.832	Non necessaria	0	SLD 2	656	-4033	-60.39	8684	28073	0	8684	2.5	0.0010179	13.2436	Si
513 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 11	426	-7454	86.85	5945	18902	0	5945	2.5	0.0005493	13.9445	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
476 Prosp.A	Verticale	SLE QP 2	96.6	-6093	No	-76408	1120500	15	14.6646	Si
513 Prosp.A	Verticale	SLE QP 2	126.32	-4974	No	-74220	1120500	15	15.097	Si
118 Prosp.A	Orizzontale	SLE QP 2	238.21	-5453	No	-65224	1120500	15	17.1792	Si
476 Prosp.A	Verticale	SLE RA 21	105.62	-6639	No	-83352	1494000	15	17.9239	Si
513 Prosp.A	Verticale	SLE RA 21	132.52	-5397	No	-79393	1494000	15	18.8178	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

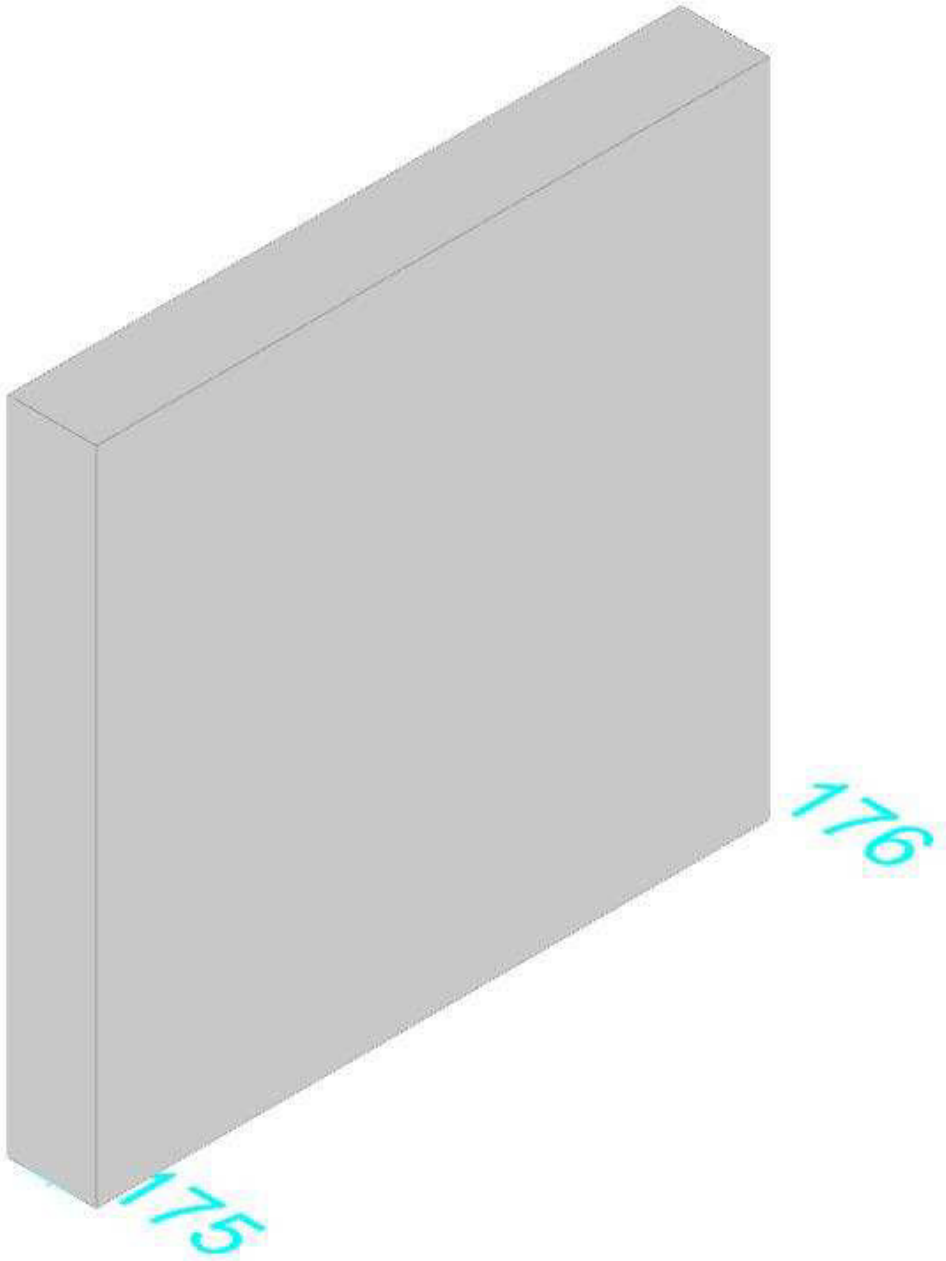
Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
497 Prosp.A	Verticale	SLE RA 21	96.78	743	No	325874	36000000	15	110.4722	Si
103 Prosp.A	Verticale	SLE RA 21	136.85	1349	No	250719	36000000	15	143.5871	Si
84 Prosp.A	Orizzontale	SLE RA 1	-32.96	-3973	No	-242708	36000000	15	148.3261	Si
82 Prosp.A	Orizzontale	SLE RA 1	-34.4	-4183	No	-216707	36000000	15	166.1227	Si
50 Prosp.A	Orizzontale	SLE RA 1	-26.54	-3229	No	-213232	36000000	15	168.8303	Si

Verifiche generali

Parete Fondazione ascensore - Fondazione

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Livelli significativi

Descrizione breve	Descrizione	Quota	Spessore
L1	Fondazione ascensore	-3.06	0
L2	Fondazione	-1.56	0

Verifiche nei nodi

Sezioni rettangolari

Descrizione	Dir.	Base	Altezza	As,sup	As,inf	c,sup	c,inf
104 Prosp.A	Verticale	1	0.2	0.000875	0.000875	0.036	0.036
514 Prosp.A	Verticale	0.5	0.2	0.000437	0.000437	0.036	0.036
473 Prosp.A	Verticale	0.5	0.2	0.000437	0.000437	0.036	0.036
85 Prosp.A	Verticale	0.875	0.2	0.000787	0.000787	0.036	0.036
123 Prosp.A	Orizzontale	0.746	0.2	0.000896	0.000896	0.0487	0.0487
104 Prosp.A	Orizzontale	0.746	0.2	0.000905	0.000905	0.0487	0.0487
55 Prosp.A	Orizzontale	0.746	0.2	0.000905	0.000905	0.0487	0.0487
81 Prosp.A	Orizzontale	1	0.2	0.001697	0.001697	0.048	0.048
102 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048
46 Prosp.A	Orizzontale	1	0.2	0.001131	0.001131	0.048	0.048

Verifiche a flessione SLU D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
104 Prosp.A	Verticale	SLV 7	124.89	5042	1222.43	49351	9.7878	Si
514 Prosp.A	Verticale	SLU 84	-10.89	2312	-153.83	32669	14.1311	Si
473 Prosp.A	Verticale	SLV 11	-115.24	337	-2017.44	5900	17.5063	Si
85 Prosp.A	Verticale	SLV 11	128.21	1440	2386.82	26807	18.617	Si
514 Prosp.A	Verticale	SLU 84	58.18	-6236	1372.57	-147106	23.5906	Si

Verifiche a flessione SLD Resistenza D.M. 17-01-18 §4.1.2.3.4.2

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Descrizione	Dir.	Comb.	MEd	NEd	MRd	NRd	c.s.	Verifica
104 Prosp.A	Verticale	SLD 3	70.22	3419	1064.2	51824	15.1558	Si
514 Prosp.A	Verticale	SLD 12	-4.56	1710	-87.64	32857	19.2175	Si
473 Prosp.A	Verticale	SLD 11	-88.79	259	-2017.83	5894	22.7271	Si
85 Prosp.A	Verticale	SLD 11	98.47	1153	2339.46	27405	23.7581	Si
123 Prosp.A	Orizzontale	SLD 12	150.72	-6135	4400.37	-179120	29.1962	Si

Verifiche a taglio SLU D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
514 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLV 15	533	416	14.08	4660	17954	0	4660	2.5	0.0004373	8.7378	Si
123 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLV 11	782	2302	93.79	8233	31419	0	8233	2.5	0.0007872	10.5247	Si
104 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLU 84	842	3698	82.82	9321	35908	0	9321	2.5	0.0008747	11.0691	Si
123 Prosp.A	Orizzontale	0.151	0.746	Non necessaria	0	SLV 16	-632	-5045	218.04	7899	25312	0	7899	2.5	0.0008964	12.4964	Si
121 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLV 16	-550	-5569	164.23	10258	33937	0	10258	2.5	0.0011205	18.6674	Si

Verifiche a taglio SLD Resistenza D.M. 17-01-18 §4.1.2.3.5

Descrizione	Dir.	d	bw	Armatura a taglio	Asw/s	Comb.	VEd	NEd	MEd	Vrd,c	Vrcd	Vrsd	VRd	cotg(θ)	Asl	c.s.	Verifica
514 Prosp.A	Verticale	0.164	0.5	Non necessaria	0	SLD 15	400	471	8.67	4660	17954	0	4660	2.5	0.0004373	11.6375	Si
123 Prosp.A	Verticale	0.164	0.875	Non necessaria	0	SLD 11	637	1884	62.11	8233	31419	0	8233	2.5	0.0007872	12.9218	Si
104 Prosp.A	Verticale	0.164	1	Non necessaria	0	SLD 11	681	3276	87.55	9321	35908	0	9321	2.5	0.0008747	13.6922	Si
123 Prosp.A	Orizzontale	0.151	0.746	Non necessaria	0	SLD 16	-518	-5310	158.48	7929	25343	0	7929	2.5	0.0008964	15.2967	Si
121 Prosp.A	Orizzontale	0.152	1	Non necessaria	0	SLD 16	-439	-6170	117.5	10326	34008	0	10326	2.5	0.0011205	23.5394	Si

Verifiche SLE tensione calcestruzzo D.M. 17-01-18 §4.1.2.2.5.1

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σc	σc limite	Es/Ec	c.s.	Verifica
123 Prosp.A	Orizzontale	SLE QP 2	121.21	-5987	No	-55329	1120500	15	20.2516	Si
123 Prosp.A	Orizzontale	SLE RA 21	131.94	-6674	No	-61115	1494000	15	24.4455	Si
514 Prosp.A	Verticale	SLE QP 2	37.7	-3982	No	-44937	1120500	15	24.9346	Si
104 Prosp.A	Orizzontale	SLE QP 2	76.93	-5491	No	-44658	1120500	15	25.0905	Si
55 Prosp.A	Orizzontale	SLE QP 2	-98.67	-4443	No	-42537	1120500	15	26.3415	Si

Verifiche SLE tensione acciaio D.M. 17-01-18 §4.1.2.2.5.2

Descrizione	Dir.	Comb.	MEd	NEd	Sezione fessurata	σf	σf limite	Es/Ec	c.s.	Verifica
81 Prosp.A	Orizzontale	SLE RA 1	54.62	-5944	No	-302359	36000000	15	119.0637	Si
123 Prosp.A	Orizzontale	SLE RA 2	108.11	-5291	No	-302289	36000000	15	119.0912	Si
102 Prosp.A	Orizzontale	SLE RA 2	99.87	-6081	No	-287199	36000000	15	125.3487	Si
46 Prosp.A	Orizzontale	SLE RA 2	-107.66	-5762	No	-258761	36000000	15	139.1247	Si
104 Prosp.A	Orizzontale	SLE RA 2	84.68	-4370	No	-255605	36000000	15	140.8423	Si

Verifiche generali

1.4 Verifiche piastre C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

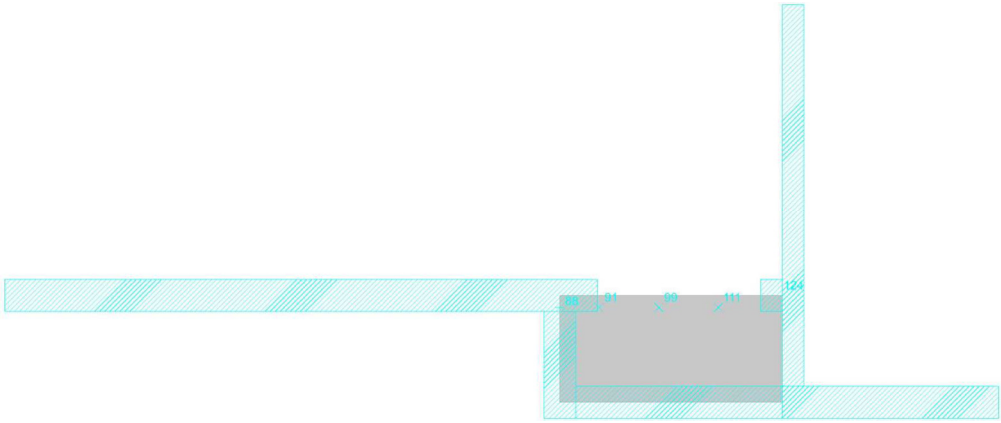
Nodo: *indice del nodo di verifica.*
Dir.: *direzione della sezione di verifica.*
B: *base della sezione rettangolare di verifica. [m]*
H: *altezza della sezione rettangolare di verifica. [m]*
A. sup.: *area barre armatura superiori. [m²]*
C. sup.: *distanza media delle barre superiori dal bordo superiore della sezione. [m]*
A. inf.: *area barre armatura inferiori. [m²]*
C. inf.: *distanza media delle barre inferiori dal bordo inferiore della sezione. [m]*
Comb.: *combinazione di verifica.*
M: *momento flettente. [daN*m]*
N: *sforzo normale. [daN]*
Mu: *momento flettente ultimo. [daN*m]*
Nu: *sforzo normale ultimo. [daN]*
c.s.: *coefficiente di sicurezza.*
Verifica: *stato di verifica.*

σc: tensione nel calcestruzzo. [daN/m²]
σlim: tensione limite. [daN/m²]
Es/Ec: coefficiente di omogenizzazione.
σf: tensione nell'acciaio d'armatura. [daN/m²]
εsm: deformazione unitaria media delle barre di armatura.
Δmax: distanza massima tra le fessure. [m]
Wd: valore di calcolo di apertura delle fessure. [m]
Comb.: combinazione.
Fh: componente orizzontale del carico. [daN]
Fv: componente verticale del carico. [daN]
Cnd: resistenza valutata a breve o lungo termine (BT - LT).
Ad: adesione di progetto. [daN/m²]
Phi: angolo di attrito di progetto. [deg]
RPl: resistenza passiva laterale unitaria di progetto. [daN/m²]
γR: coefficiente parziale sulla resistenza di progetto.
Rd: resistenza alla traslazione di progetto. [daN]
Ed: azione di progetto. [daN]
Rd/Ed: coefficiente di sicurezza allo scorrimento.
ID: indice della verifica di capacità portante.
Fx: componente lungo x del carico. [daN]
Fy: componente lungo y del carico. [daN]
Fz: componente verticale del carico. [daN]
*Mx: componente lungo x del momento. [daN*m]*
*My: componente lungo y del momento. [daN*m]*
ix: inclinazione del carico in x. [deg]
iy: inclinazione del carico in y. [deg]
ex: eccentricità del carico in x. [m]
ey: eccentricità del carico in y. [m]
B': larghezza efficace. [m]
L': lunghezza efficace. [m]
C: coesione di progetto. [daN/m²]
Qs: sovraccarico laterale da piano di posa. [daN/m²]
Rd: resistenza alla rottura del complesso di progetto. [daN]
Ed: azione di progetto (sforzo normale al piano di posa). [daN]
Rd/Ed: coefficiente di sicurezza alla capacità portante.
N:
Nq: fattore di capacità portante per il termine di sovraccarico.
Nc: fattore di capacità portante per il termine coesivo.
Ng: fattore di capacità portante per il termine attritivo.
S:
Sq: fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.
Sc: fattore correttivo di capacità portante per forma (shape), per il termine coesivo.
Sg: fattore correttivo di capacità portante per forma (shape), per il termine attritivo.
D:
Dq: fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.
Dc: fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.
Dg: fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.
I:
Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.
Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.

platea 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-17.053; -4.784; -1.56), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
268	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLD 8	6024.07	0	6254.21	0	1.0382	Si
275	Y	0.5	0.45	0.000283	0.036	0.000866	0.045	SLD 5	-3861.32	0	-4126.95	0	1.0688	Si
134	X	0.892	0.45	0.000505	0.048	0.000505	0.048	SLD 9	-5934.89	0	-7159.54	0	1.2063	Si
135	Y	0.5	0.45	0.000283	0.036	0.00052	0.047	SLD 13	-3221.42	0	-4120.17	0	1.279	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
135	X	0.5	0.45	0.000283	0.048	0.000283	0.048	SLE QP 2	-5092.01	0	-696724	1120500	15	Si
268	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE QP 2	5785.33	0	-623608	1120500	15	Si
135	X	0.5	0.45	0.000283	0.048	0.000283	0.048	SLE RA 20	-5577.41	0	-763139	1494000	15	Si
277	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE QP 2	4752.5	0	-512278	1120500	15	Si
268	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE RA 21	6301.87	0	-679286	1494000	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
277	X	0.5	0.45	0.000622	0.048	0.000441	0.048	SLE RA 20	5206.66	0	31836530	36000000	15	Si
184	X	0.5	0.45	0.000487	0.048	0.000799	0.048	SLE RA 20	-4971.37	0	27653213	36000000	15	Si
135	X	0.5	0.45	0.000283	0.048	0.000283	0.048	SLE RA 20	1355.66	0	12743687	36000000	15	Si

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -15.5; -4; -2
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.23

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 44	881	-49205	LT	0	19	0	1.1	14967	881	16.98	Si
SLV 15	9127	-36993	LT	0	19	0	1.1	11252	9127	1.23	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 1.5 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 0.75 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 2.95

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 83	577	699	-60741	1405.7	318.32	1	1	0.01	0.02	1.45	3.13	BT	14430	0	878	2.3	179119	60741	2.95	Si
2	SLV 13	9252	-1184	-39307	1558.75	6130.15	13	-2	0.16	0.04	1.42	2.83	LT	0	37	878	2.3	134435	39307	3.42	Si
3	SLD 1	-2919	222	-43662	1266.45	-2198.2	-4	0	-0.05	0.03	1.44	3.04	BT	14430	0	878	2.3	171731	43662	3.93	Si

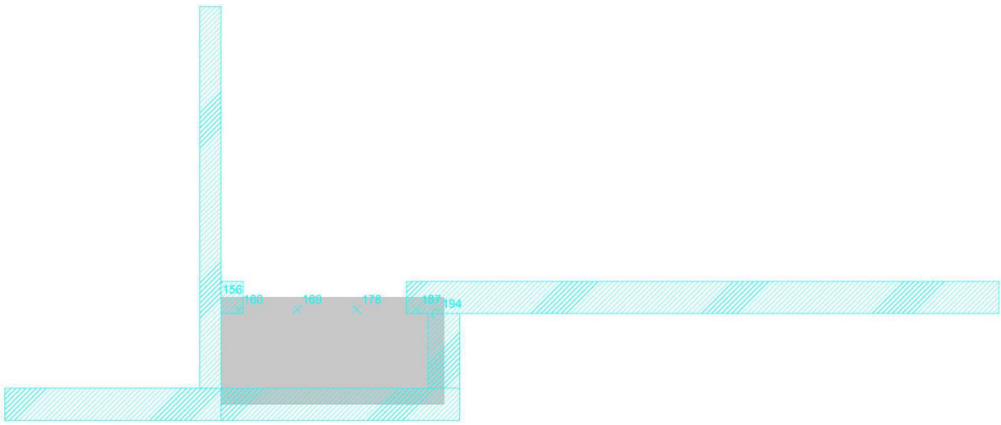
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.09	0	0	0.12	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
2	43	56	66	1.38	1.39	0.8	1.07	1.12	1	0.7	0.69	0.53	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.09	0	0	0.12	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Platea 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-10.863; -4.784; -1.56), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
212	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLU 83	8222.45	0	9018.93	0	1.0969	Si
153	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLV 2	3610.17	0	4108.61	0	1.1381	Si
189	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLV 2	6169.37	0	7209.27	0	1.1686	Si
234	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLU 83	5970.21	0	7834.44	0	1.3123	Si
290	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLU 84	5776.4	0	7838.32	0	1.357	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
212	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLD 2	6150.9	0	8566.94	0	1.3928	Si
189	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLD 2	5048.69	0	7209.27	0	1.4279	Si
153	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLD 2	2814.57	0	4108.61	0	1.4598	Si
234	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLD 1	4736.99	0	7209.27	0	1.5219	Si
281	Y	0.5	0.45	0.000283	0.036	0.000283	0.036	SLD 4	2416.2	0	4108.61	0	1.7004	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
282	Y	0.5	0.45	0.000283	0.036	0.001011	0.048	SLE QP 2	4068.32	0	-214515	1120500	15	Si
290	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE QP 2	3933.76	0	-203238	1120500	15	Si
282	Y	0.5	0.45	0.000283	0.036	0.001011	0.048	SLE RA 20	4461.7	0	-235257	1494000	15	Si
289	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLE QP 2	4976.44	0	-169509	1120500	15	Si
290	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE RA 21	4276.92	0	-220967	1494000	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
282	Y	0.5	0.45	0.000283	0.036	0.001011	0.048	SLE RA 20	4461.7	0	2748337	36000000	15	Si
290	X	0.5	0.45	0.000622	0.048	0.00052	0.048	SLE RA 21	4276.92	0	2636933	36000000	15	Si
289	X	0.765	0.45	0.000885	0.048	0.000749	0.048	SLE RA 21	5408.31	0	2195324	36000000	15	Si
212	Y	1	0.45	0.000565	0.036	0.000565	0.036	SLE RA 20	6078.09	0	2101455	36000000	15	Si
189	Y	0.875	0.45	0.000495	0.036	0.000495	0.036	SLE RA 20	4643.03	0	1834591	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -9.3; -4; -2
Lato minore B dell'impronta: 1.5
Lato maggiore L dell'impronta: 3.1
Area dell'impronta rettangolare di calcolo: 4.7

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.24

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 47	654	-49501	LT	0	19	0	1.1	15057	654	23.03	Si
SLV 4	8892	-36339	LT	0	19	0	1.1	11054	8892	1.24	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 1.5 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 0.75 m
Peso specifico efficace del terreno di progetto γs: 2060 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 2.98

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 83	44	575	-60306	1091.18	810.82	0	1	0.01	0.02	1.46	3.11	BT	14430	0	878	2.3	179788	60306	2.98	Si
2	SLV 13	8913	457	-46150	1176.98	6425.46	11	1	0.14	0.03	1.45	2.86	LT	0	37	878	2.3	155702	46150	3.37	Si
3	SLD 14	3443	319	-43542	987.82	2949.1	5	0	0.07	0.02	1.45	3	BT	14430	0	878	2.3	171228	43542	3.93	Si

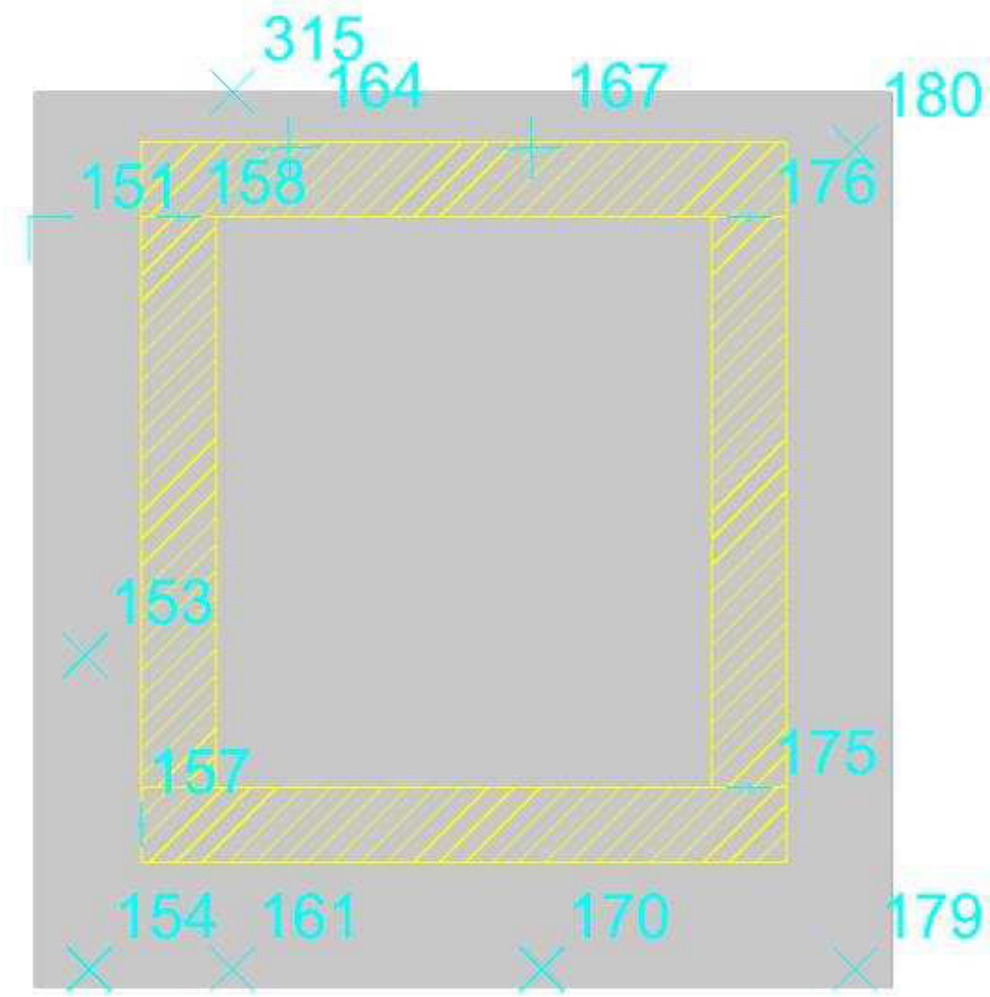
Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.09	0	0	0.12	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
2	43	56	66	1.38	1.39	0.8	1.07	1.12	1	0.75	0.74	0.61	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.1	0	0	0.12	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Platea a "Fondazione ascensore"

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Sistema di riferimento e direzioni di armatura

Le coordinate citate nel seguito sono espresse in un sistema di riferimento cartesiano con origine in (-11.148; -1.244; -3.06), direzione dell'asse X = (0.01; 0; 0), direzione dell'asse Y = (0; 0.01; 0).
Le direzioni X/Y di armatura e le sezioni X/Y di verifica sono individuate dagli assi del sistema di riferimento.

Verifiche nei nodi

Verifiche SLU flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per le combinazioni SLV, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
26	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1331.76	0	10399.81	0	7.8091	Si
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 84	1318.85	0	10466.55	0	7.9361	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLU 83	1259.21	0	10399.8	0	8.259	Si
46	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLU 84	1150.31	0	10123.8	0	8.8009	Si
42	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLU 84	1140.57	0	10159.62	0	8.9075	Si

Verifiche SLD Resistenza flessione nei nodi

La struttura è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	Mu	Nu	c.s.	Verifica
26	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	963.17	0	9465.6	0	9.8276	Si
42	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLD 15	849.93	0	8838.16	0	10.3986	Si
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 15	938.87	0	9822.9	0	10.4625	Si
46	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLD 11	809.71	0	8752.03	0	10.8089	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLD 13	870.59	0	9465.51	0	10.8725	Si

Verifiche SLE tensione calcestruzzo nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
26	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	909.21	0	-53226	1120500	15	Si
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	897.21	0	-52524	1120500	15	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE QP 2	850.64	0	-49797	1120500	15	Si
27	X	0.885	0.3	0.000894	0.048	0.001063	0.048	SLE QP 2	727.11	0	-47769	1120500	15	Si

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σc	σlim	Es/Ec	Verifica
46	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE QP 2	779.02	0	-45596	1120500	15	Si

Verifiche SLE tensione acciaio nei nodi

Nodo	Dir.	B	H	A. sup.	C. sup.	A. inf.	C. inf.	Comb.	M	N	σf	σlim	Es/Ec	Verifica
26	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	986.67	0	581629	36000000	15	Si
24	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 21	976.32	0	575531	36000000	15	Si
46	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE RA 21	849.87	0	561736	36000000	15	Si
42	Y	1	0.3	0.000914	0.045	0.001064	0.047	SLE RA 21	844.45	0	558154	36000000	15	Si
22	X	1	0.3	0.000959	0.048	0.001128	0.048	SLE RA 20	930.65	0	548607	36000000	15	Si

Verifiche SLE fessurazione nei nodi

La piastra non presenta nodi con apertura delle fessure.

Verifiche geotecniche

Dati geometrici dell'impronta di calcolo

Forma dell'impronta di calcolo: rettangolare di area equivalente
Centro impronta, nel sistema globale: -10; 0; -3.4
Lato minore B dell'impronta: 2.3
Lato maggiore L dell'impronta: 2.4
Area dell'impronta rettangolare di calcolo: 5.5

Verifica di scorrimento sul piano di posa

Coefficiente di sicurezza minimo per scorrimento 1.96

Comb.	Fh	Fv	Cnd	Ad	Phi	RPl	γR	Rd	Ed	Rd/Ed	Verifica
SLU 44	1653	-50271	LT	0	19	0	1.1	15291	1653	9.25	Si
SLV 15	6754	-43464	LT	0	19	0	1.1	13221	6754	1.96	Si

Verifica di capacità portante sul piano di posa

Profondità massima del bulbo di rottura considerato: 2.31 m
Profondità massima del bulbo di rottura considerato (per condizione non drenata): 1.15 m
Peso specifico efficace del terreno di progetto γs: 2057 daN/m3
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLD: 0.03
Accelerazione normalizzata massima attesa al suolo Amax per verifiche in SLV: 0.073

Coefficiente di sicurezza minimo per portanza 3.49

ID	Comb.	Fx	Fy	Fz	Mx	My	ix	iy	ex	ey	B'	L'	Cnd	C	Phi	Qs	γR	Rd	Ed	Rd/Ed	Verifica
1	SLU 84	199	1659	-62423	1025.94	-354.43	0	2	-0.01	0.02	2.29	2.37	BT	14430	0	585	2.3	217962	62423	3.49	Si
2	SLV 15	6401	2154	-43464	148.3	2485.27	8	3	0.06	0	2.19	2.39	LT	0	36	585	2.3	184899	43464	4.25	Si
3	SLD 13	2639	907	-42833	918.8	946.76	4	1	0.02	0.02	2.26	2.36	BT	14430	0	585	2.3	212820	42833	4.97	Si

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

ID	N			S			D			I			B			G			P			E		
	Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	1	5	0	0	0.19	0	0	0.05	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
2	39	52	58	1.67	1.69	0.63	1.03	1.05	1	0.77	0.77	0.65	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
3	1	5	0	0	0.19	0	0	0.05	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

1.5 Verifiche aste in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Area: *area inerziale nel sistema geometrico centrato nel baricentro. [m²]*
Jx: *momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]*
Jy: *momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]*
Wx: *modulo di resistenza elastico minimo relativo all'asse x. [m³]*
Wy: *modulo di resistenza elastico minimo relativo all'asse y. [m³]*

Asta 21: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.301

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(13170^2+17882^2) = 22209 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -321.1; Ty = 436

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14862/1324138)^2+93193/1410046+0.7*49660/1410046=0.09 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 254.48; My = 67.802; N = -760.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -259.8; Ty = 244.2; Mt = -47.727

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.301
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
23712 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -47.727

Asta 22: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.624

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
49446/1551051+33253/1938814+0.7*17065/1938814=0.06 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 90.804; My = -23.299; N = 2531.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2168^2+9949^2) = 10183 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -52.9; Ty = 242.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media

Tx = -54.4; Ty = 233.7; Mt = -4.938

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3550 <= 345172 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Mt = 7.146

Asta 23: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.216

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2139^2+35772^2) = 35836 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -52.1; Ty = 872.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.216
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24538/1324138)^2+53316/1410046+0.7*25093/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -145.587; My = -34.26; N = -1256.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -54.6; Ty = 859.2; Mt = -8.583

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.216
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7555 <= 345172 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 15.207

Asta 24: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1263^2+6129^2) = 6258 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -30.8; Ty = 149.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23208/1324138)^2+88806/1410046+0.7*30170/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -242.499; My = -41.192; N = -1188.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -31.1; Ty = 144.7; Mt = 18.484

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9183 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 18.484

Asta 25: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.604

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4533^2+26234^2) = 26622 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 110.5; Ty = -639.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24711/1324138)^2+86899/1410046+0.7*40982/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -237.292; My = -55.954; N = -1265.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.604

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 119.6; Ty = -619.8; Mt = 38.72

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.604
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19237 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 38.72

Asta 26: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.236

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3834^2+7049^2) = 8024 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 93.5; Ty = -171.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(26196/1324138)^2+63929/1410046+0.7*30320/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 174.57; My = 41.397; N = -1341.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 92.9; Ty = -171.2; Mt = 39.696

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.236
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19722 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 39.696

Asta 27: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.564

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(367^2+4184^2) = 4200 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 8.9; Ty = 102

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19716/1324138)^2+64666/1410046+0.7*6438/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 176.581; My = 8.79; N = -1009.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 8.9; Ty = 102; Mt = 28.937

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.564
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14377 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 28.937

Asta 28: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.276

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(418^2+29904^2) = 29906 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 10.2; Ty = 729.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22642/1324138)^2+43905/1410046+0.7*12326/1410046=0.04 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 119.889; My = 16.829; N = -1159.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 11.4; Ty = 708.6; Mt = 36.446

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.276
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18478 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 37.192

Asta 29: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(66^2+6717^2) = 6718 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 1.6; Ty = -163.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22558/1324138)^2+38128/1410046+0.7*8522/1410046=0.03 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = -104.116; My = -11.636; N = -1155

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -35.1; Ty = 37.9; Mt = 8.82

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4382 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 8.82

Asta 30: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1043^2+21633^2) = 21659 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -25.4; Ty = -527.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11616/1820690)^2+65798/1938814+0.7*32566/1938814=0.05 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 179.673; My = 44.464; N = -594.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -25.4; Ty = -527.4; Mt = -19.493

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9685 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -19.493

Asta 31: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.191

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
30241/1551051+0.7*10074/1938814+56838/1938814=0.05 <= 1 [4.4.6b] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -27.509; My = -77.603; N = 1548.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(677^2+14770^2) = 14786 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -16.5; Ty = -360.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -13.7; Ty = -356.4; Mt = -16.577

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.191
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8236 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -16.577

Asta 32: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.325

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
30945/1551051+0.7*15048/1938814+82527/1938814=0.07 <= 1 [4.4.6b] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -41.09; My = -112.677; N = 1584.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.325
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(11825^2+21974^2) = 24954 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -288.3; Ty = -535.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.325
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -31.3; Ty = -83.7; Mt = -29.249

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.325
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14532 <= 188276 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -29.249

Asta 33: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.284

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(11352^2+19618^2) = 22666 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 276.8; Ty = -478.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(41823/1820690)^2+91078/1938814+0.7*38913/1938814=0.06 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 248.704; My = 53.129; N = -2141.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -8.6; Ty = 6.6; Mt = -60.471

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
30044 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -60.471

Asta 34: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.268

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d

Sqrt(19489^2+24611^2) = 31393 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -475.2; Ty = 600

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.268
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13116/1820690)^2+0.7*13643/1938814+151731/1938814=0.08 <= 1 [4.4.7b] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 37.256; My = -207.163; N = -671.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -21.3; Ty = 274.3; Mt = -59.513

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.268
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
29567 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -59.513

Asta 35: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.287

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
0.7*32626/1938814+75502/1938814=0.05 <= 1 (formula 4.4.5b) Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = -89.09; My = -103.085

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(15578^2+14347^2) = 21178 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 379.8; Ty = 349.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.35+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 36.5; Ty = -35.4; Mt = -130.98

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.287
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6
τ,tor,d <= Ksh * fv,d
65074 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -130.98

Asta 36: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
61985/1938814+0.7*12239/1938814=0.04 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = -169.261; My = -16.71

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3792^2+1306^2) = 4011 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 92.5; Ty = -31.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 91.9; Ty = -33.2; Mt = -44.993

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22354 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -44.993

Asta 37: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(815^2+3390^2) = 3487 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 19.9; Ty = -82.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24644/1324138)^2+0.7*23586/1410046+31143/1410046=0.03 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -64.404; My = 42.521; N = -1261.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 29.6; Ty = -13.1; Mt = -8.88

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4412 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -8.88

Asta 38: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2456^2+1418^2) = 2836 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -59.9; Ty = -34.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24603/1324138)^2+0.7*23838/1410046+34532/1410046=0.04 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -65.094; My = 47.147; N = -1259.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = -59.7; Ty = -33.6; Mt = 14.923

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7414 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 14.923

Asta 39: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(597^2+5373^2) = 5406 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -14.5; Ty = 131

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25856/1324138)^2+54773/1410046+0.7*12127/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -149.566; My = -16.558; N = -1323.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -48.3; Ty = 137.7; Mt = 70.339

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
34946 <= 251034 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 70.339

Asta 40: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.434

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1551^2+12245^2) = 12343 <= 193103 Comb: SLU, 61; Durata minima del carico nella combinazione: media
Tx = 37.8; Ty = 298.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9165/993103)^2+50665/1057535+0.7*22233/1057535=0.06 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 138.35; My = -30.355; N = -469.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -24.7; Ty = -40.8; Mt = 83.338

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
41405 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 83.338

Asta 41: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.366

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.366
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.065 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6010/1551051+0.7*53528/1938814+58561/1938814=0.05 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = -146.167; My = -79.956; N = 307.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6536^2+19430^2) = 20500 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -159.4; Ty = 473.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -37.3; Ty = 225.3; Mt = 87.686

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.366
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
43565 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 87.686

Asta 42: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.434

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(998^2+5687^2) = 5774 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 24.3; Ty = 138.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20882/1324138)^2+54336/1410046+0.7*27432/1410046=0.05 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 148.373; My = -37.454; N = -1069.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 23.2; Ty = 136.2; Mt = 7.722

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.434
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3856 <= 251034 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 7.761

Asta 43: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.435

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(873^2+16081^2) = 16104 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 21.3; Ty = 392.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23753/1324138)^2+33881/1410046+0.7*19355/1410046=0.03 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 92.518; My = -26.426; N = -1216.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 26.9; Ty = 370.7; Mt = 17.503

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.435
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8916 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.947

Asta 44: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5783^2+8201^2) = 10035 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 141; Ty = -199.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10123/993103)^2+0.7*22895/1057535+37753/1057535=0.05 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 62.519; My = 51.545; N = -518.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 110.1; Ty = -122.4; Mt = -10.661

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5297 <= 251034 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -10.661

Asta 45: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.18

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3826^2+18579^2) = 18969 <= 193103 Comb: SLU, 61; Durata minima del carico nella combinazione: media
Tx = -93.3; Ty = 453

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10316/993103)^2+0.7*24893/1057535+44005/1057535=0.06 <= 1 [4.4.7b] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 67.974; My = 60.081; N = -528.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.18
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -113.6; Ty = -49.4; Mt = -54.617

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.18
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
27135 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -54.617

Asta 46: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.66

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(3755^2+2417^2) = 4465 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -91.5; Ty = 58.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19667/1324138)^2+0.7*19866/1410046+37746/1410046=0.04 <= 1 [4.4.7b] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 54.248; My = 51.536; N = -1007

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -113.1; Ty = 17.8; Mt = -45.624

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.66
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22667 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -45.624

Asta 47: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.14

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(478^2+2652^2) = 2695 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -11.7; Ty = 64.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18307/1324138)^2+24167/1410046+0.7*6974/1410046=0.02 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 65.993; My = 9.521; N = -937.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11.9; Ty = 55.5; Mt = -41.898

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.14
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20816 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -41.898

Asta 48: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.7

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3034^2+12535^2) = 12897 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -74; Ty = 305.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.7
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23804/1324138)^2+57905/1410046+0.7*35351/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -158.118; My = -48.265; N = -1218.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -81.6; Ty = 268; Mt = -42.074

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.7
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
20903 <= 251034 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = -42.074

Asta 49: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.902

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.902
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1183^2+9059^2) = 9135 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 28.8; Ty = -220.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23555/1324138)^2+61927/1410046+0.7*26928/1410046=0.06 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -169.103; My = -36.766; N = -1206

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.902
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 28.6; Ty = -207.7; Mt = -10.959

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.902
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4382 <= 188276 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.819

Asta 50: Trave in legno a falda Falda 1 fili 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.778

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(5523^2+8729^2) = 10330 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 134.7; Ty = -212.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20220/1324138)^2+75100/1410046+0.7*55987/1410046=0.08 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 205.072; My = 76.441; N = -1035.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.065 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 136.7; Ty = -204.6; Mt = 16.967

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8429 <= 251034 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 16.967

Asta 51: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.338

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
125700/1088400+0.7*21114/1088400=0.13 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -193.076; My = 21.62

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.338
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1024^2+9205^2) = 9261 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -18.7; Ty = -168.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.338
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -18.7; Ty = -168.3; Mt = 6.008

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.338

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4234 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 6.008

Asta 52: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
259928/1088400+0.7*57829/1088400=0.28 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 399.249; My = -59.216

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2225^2+18084^2) = 18220 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -40.7; Ty = -330.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -40.7; Ty = -330.7; Mt = 6.059

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6445 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.145

Asta 53: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.523

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(18987^2+35693^2) = 40429 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 347.2; Ty = -652.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14227/993103)^2+529763/1088400+0.7*96774/1088400=0.55 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 813.716; My = 99.097; N = -546.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.24+0.02+0.06 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 347.2; Ty = -652.7; Mt = -59.962

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.523
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
42258 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -59.962

Asta 54: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20503/870720+328965/1088400+0.7*9263/1088400=0.33 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 505.29; My = -9.485; N = 787.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3831^2+40836^2) = 41015 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -70; Ty = 746.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.25+0+0.03 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente

Tx = -84.6; Ty = 491; Mt = 64.107

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
45179 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 64.107

Asta 55: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
14986/870720+155212/1088400+0.7*74106/1088400=0.21 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 238.406; My = -75.885; N = 575.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2610^2+19191^2) = 19367 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 47.7; Ty = 350.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 51.1; Ty = 245.5; Mt = -8.406

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5958 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -8.454

Asta 56: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.295

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
16113/870720+156877/1088400+0.7*23769/1088400=0.18 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -240.963; My = 24.34; N = 618.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(949^2+10722^2) = 10764 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 17.4; Ty = 196.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 20; Ty = 193.6; Mt = -11.793

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.295
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
8311 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -11.793

Asta 57: Trave in legno a falda Falda 6 fili 167-225

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.764

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9621/870720+164827/1088400+0.7*99167/1088400=0.23 <= 1 [4.4.6a] Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -253.174; My = 101.547; N = 369.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7880^2+32515^2) = 33456 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 144.1; Ty = -594.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.764

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.22+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 181.7; Ty = -538.7; Mt = -72.173

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.764
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
50864 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -72.173

Asta 58: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.838

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
153344/1088400+0.7*33849/1088400=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -235.536; My = -34.662

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1680^2+13627^2) = 13730 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -30.7; Ty = 249.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.838
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.26+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 12.2; Ty = -122.2; Mt = 64.839

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.838
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
45695 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 64.839

Asta 59: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
247758/1451200+0.7*64938/1451200=0.2 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -380.556; My = -66.497

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4458^2+31052^2) = 31370 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 81.5; Ty = -567.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 63; Ty = -390.4; Mt = 14.069

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
9915 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 14.069

Asta 60: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
794409/1451200+0.7*175385/1451200=0.63 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1220.212; My = 179.594

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(6889^2+56267^2) = 56688 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 126; Ty = -1028.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 126.8; Ty = -1028.5; Mt = -21.101

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14871 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -21.101

Asta 61: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.353

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(26782^2+90180^2) = 94072 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -489.7; Ty = -1649

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24415/1324138)^2+1041679/1451200+0.7*1279/1451200=0.72 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1600.019; My = 1.309; N = -937.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.54+0.02+0.22 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -484.7; Ty = -1647.5; Mt = -180.144

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.353
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
126957 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -180.144

Asta 62: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.154

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
41612/870720+170013/1088400+0.7*94321/1088400=0.26 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 261.139; My = -96.585; N = 1597.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(20714^2+37933^2) = 43220 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 378.8; Ty = 693.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.19+0.02+0.07 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 378.8; Ty = 693.6; Mt = 47.485

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.154
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
33465 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 47.485

Asta 63: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.767

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
44537/1160960+163674/1451200+0.7*25012/1451200=0.16 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 251.404; My = -25.612; N = 1710.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4466^2+36692^2) = 36963 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 81.7; Ty = 670.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 81.7; Ty = 670.9; Mt = 40.277

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.767
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
28386 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 40.277

Asta 64: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.233

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31633/1160960+150532/1451200+0.7*19450/1451200=0.14 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -231.218; My = -19.916; N = 1214.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(23422^2+7996^2) = 24749 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -428.3; Ty = -146.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0.01+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -208.4; Ty = 66.4; Mt = 40.782

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.233
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
28742 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 40.782

Asta 65: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.041

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
26253/1160960+246640/1451200+0.7*38555/1451200=0.21 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -378.839; My = -39.48; N = 1008.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(923^2+17269^2) = 17293 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -16.9; Ty = 315.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -0.9; Ty = 186.3; Mt = -25.041

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.041
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
17647 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -25.041

Asta 66: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.274

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
25403/1160960+221593/1451200+0.7*33162/1451200=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -340.367; My = -33.958; N = 975.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(55^2+16944^2) = 16944 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 1; Ty = -309.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.5; Ty = -294.2; Mt = -3.493

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.274
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5279 <= 325259 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -7.49

Asta 67: Trave in legno a falda Falda 4 fili 118-60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.016

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18678/1160960+203386/1451200+0.7*63947/1451200=0.19 <= 1 [4.4.6a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 312.401; My = 65.482; N = 717.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5164^2+49066^2) = 49337 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 94.4; Ty = -897.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 94.4; Ty = -897.2; Mt = 9.769

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.016
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6885 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 9.769

Asta 68: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.82

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11141^2+12019^2) = 16389 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 203.7; Ty = 219.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24978/1324138)^2+131508/1451200+0.7*112296/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 201.996; My = -114.991; N = -959.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 201; Ty = 220.6; Mt = -27.516

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.82
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
19392 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -27.516

Asta 69: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.468

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12086^2+3096^2) = 12477 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -221; Ty = 56.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16065/1324138)^2+0.7*3350/1451200+69547/1451200=0.05 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -5.146; My = 71.216; N = -616.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -220.6; Ty = 56.8; Mt = 23.385

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.468
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16481 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 23.385

Asta 70: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.785

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10301^2+3493^2) = 10877 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 188.4; Ty = -63.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5735/1324138)^2+0.7*26732/1451200+78994/1451200=0.07 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -41.06; My = 80.89; N = -220.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 188.4; Ty = -63.9; Mt = -13.93

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.785
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9817 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -13.93

Asta 71: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.503

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7127/1160960+0.7*49595/1451200+100439/1451200=0.1 <= 1 [4.4.6b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -76.178; My = 102.849; N = 273.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17166^2+5890^2) = 18149 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -313.9; Ty = -107.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -312.5; Ty = -108; Mt = 24.42

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.503
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17210 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 24.42

Asta 72: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.816

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19272/1160960+0.7*43723/1451200+57168/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -67.158; My = -58.54; N = 740

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6842^2+7703^2) = 10303 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 125.1; Ty = 140.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 112.3; Ty = 69.8; Mt = -6.479

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.816
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4566 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.479

Asta 73: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.472

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
48028/1596320+0.7*31358/1995400+134466/1995400=0.11 <= 1 [4.4.6b] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -48.165; My = -137.694; N = 1844.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.472
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(24733^2+3238^2) = 24944 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -452.3; Ty = -59.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -60; Ty = 229.4; Mt = 34.439

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.472
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24271 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 34.439

Asta 74: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.715

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
54763/1596320+0.7*62721/1995400+71241/1995400=0.09 <= 1 [4.4.6b] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = -96.339; My = 72.951; N = 2102.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(15163^2+9142^2) = 17705 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 277.3; Ty = 167.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 277.3; Ty = 167.2; Mt = -16.727

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.715
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
11789 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -16.727

Asta 75: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.573

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
69472/1596320+0.7*5730/1995400+84041/1995400=0.09 <= 1 [4.4.6b] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = -8.802; My = 86.058; N = 2667.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11585^2+2661^2) = 11887 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -211.8; Ty = -48.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -245.4; Ty = 66.6; Mt = 4.994

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.573
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3901 <= 325259 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = 5.535

Asta 76: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.68

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
76928/1596320+31065/1995400+0.7*23147/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 47.716; My = 23.702; N = 2954

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(5962^2+4268^2) = 7333 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 109; Ty = -78

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -24; Ty = 116.7; Mt = 10.142

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7147 <= 325259 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = 10.142

Asta 77: Trave in legno a falda Falda 2 fili 51-14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.86

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.602
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
78408/1596320+23944/1995400+0.7*14437/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 36.777; My = -14.784; N = 3010.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2427^2+8719^2) = 9051 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -44.4; Ty = -159.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -44.3; Ty = -159.4; Mt = -0.572

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
864 <= 325259 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -1.227

Asta 78: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.05

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
62452/1596320+353417/1995400+0.7*151544/1995400=0.27 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -542.849; My = 155.182; N = 2398.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8000^2+30055^2) = 31101 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -146.3; Ty = 549.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -165.1; Ty = 492.9; Mt = 57.707

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.05
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
40669 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 57.707

Asta 79: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
65363/1596320+246381/1995400+0.7*36847/1995400=0.18 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -378.442; My = 37.732; N = 2509.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(2292^2+11640^2) = 11863 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -41.9; Ty = -212.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -41.9; Ty = -212.8; Mt = 9.425

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6642 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 9.425

Asta 80: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.279

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
23867/870720+238085/1088400+0.7*96894/1088400=0.31 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 365.699; My = -99.219; N = 916.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4516^2+22504^2) = 22953 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -82.6; Ty = -411.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -82.6; Ty = -411.5; Mt = -2.805

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.279
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1998 <= 236552 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mt = -2.835

Asta 81: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1859^2+14804^2) = 14920 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -34; Ty = 270.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5588/993103)^2+293063/1088400+0.7*21542/1088400=0.28 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 450.144; My = 22.059; N = -214.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -59.6; Ty = 309.7; Mt = -23.444

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16522 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -23.444

Asta 82: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.324

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
113190/1451200+0.7*30263/1451200=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 173.86; My = -30.989

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1166^2+7149^2) = 7244 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 21.3; Ty = 130.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 21.3; Ty = 130.7; Mt = -6.668

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.324
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4699 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.668

Asta 83: Trave in legno a falda Falda 3 fili 52-109

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.811

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
53439/1451200+0.7*21152/1451200=0.05 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 82.082; My = -21.66

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2352^2+4970^2) = 5499 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 43; Ty = 90.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 42.6; Ty = 90.4; Mt = -6.154

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.811
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4337 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -6.154

Asta 84: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.165

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
31838/1165241+89680/1456552+0.7*17280/1456552=0.1 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 67.798; My = 10.161; N = 802.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(482^2+19224^2) = 19230 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = -230.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = -230.7; Mt = 0.245

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.165
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2655 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -2.086

Asta 85: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
20118/1165241+53348/1456552+0.7*3656/1456552=0.06 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 40.331; My = -2.15; N = 507

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(579^2+4619^2) = 4655 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7; Ty = 55.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -39.7; Ty = 19.6; Mt = -2.253

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2869 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -2.253

Asta 86: Trave in legno a falda Falda 5 fili 230-248

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.226

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
23543/1602207+0.7*6174/2002759+13030/2002759=0.02 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 4.668; My = 7.661; N = 593.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4019^2+991^2) = 4140 <= 265517 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -48.2; Ty = 11.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo

Tx = -48.2; Ty = 11.9; Mt = -14.497

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.226
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
18455 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -14.497

Asta 87: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.121

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
19138/1165241+92086/1456552+0.7*24931/1456552=0.09 <= 1 [4.4.6a] Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mx = 69.617; My = -14.659; N = 482.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.121
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(678^2+18725^2) = 18737 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 8.1; Ty = -224.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.121
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 8.1; Ty = -224.7; Mt = -0.178

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.121
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2839 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = -2.23

Asta 88: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12526/1165241+51267/1456552+0.7*5296/1456552=0.05 <= 1 [4.4.6a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 38.758; My = 3.114; N = 315.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(642^2+4537^2) = 4582 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 7.7; Ty = 54.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 44.6; Ty = 14.5; Mt = 2.211

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2814 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 2.211

Asta 89: Trave in legno a falda Falda 2 fili 51-29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
21083/1602207+0.7*5170/2002759+11304/2002759=0.02 <= 1 [4.4.6b] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 3.909; My = -6.647; N = 531.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4536^2+1159^2) = 4682 <= 265517 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 54.4; Ty = 13.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 54.4; Ty = 13.9; Mt = 15.304

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
19484 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 15.304

Asta 90: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.386

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(317^2+76229^2) = 76230 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = 1393.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31472/1324138)^2+559446/1451200+0.7*109357/1451200=0.44 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 859.308; My = 111.981; N = -1208.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.16 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = 1393.9; Mt = -4.803

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.386
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4471 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -6.344

Asta 91: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.829

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15754^2+40280^2) = 43251 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -288.1; Ty = 736.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32030/1324138)^2+213489/1451200+0.7*123133/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 327.92; My = 126.088; N = -1229.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -288.3; Ty = 736.3; Mt = -9.664

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.829
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6811 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.664

Asta 92: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1742^2+18116^2) = 18199 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -31.8; Ty = 331.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32378/1324138)^2+350150/1451200+0.7*126507/1451200=0.3 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -537.831; My = -129.543; N = -1243.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -31.8; Ty = 331.3; Mt = -1.081

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
824 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -1.17

Asta 93: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3791^2+3351^2) = 5060 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 69.3; Ty = -61.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32486/1324138)^2+341028/1451200+0.7*144424/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -523.819; My = -147.89; N = -1247.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 69.3; Ty = -61.3; Mt = 2.145

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1511 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.145

Asta 94: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4817^2+26900^2) = 27328 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 88.1; Ty = -491.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32685/1324138)^2+311850/1451200+0.7*102392/1451200=0.26 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -479.002; My = -104.849; N = -1255.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 88.4; Ty = -491.7; Mt = 3.65

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2572 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.65

Asta 95: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15489^2+48658^2) = 51064 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 283.2; Ty = -889.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33058/1324138)^2+520470/1451200+0.7*233425/1451200=0.47 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 799.442; My = 239.027; N = -1269.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0.06 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 283.2; Ty = -889.7; Mt = 3.678

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2375 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.37

Asta 96: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.68

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15148^2+56207^2) = 58212 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -277; Ty = 1027.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33225/1324138)^2+565204/1451200+0.7*214318/1451200=0.49 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 868.154; My = 219.462; N = -1275.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -276.9; Ty = 1027.6; Mt = 6.738

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.68
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5064 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Mt = 7.186

Asta 97: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5410^2+29599^2) = 30089 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -98.9; Ty = 541.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33317/1324138)^2+173027/1451200+0.7*54114/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -265.769; My = -55.412; N = -1279.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -98.9; Ty = 541.2; Mt = 0.678

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1916 <= 325259 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 2.718

Asta 98: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(1780^2+2804^2) = 3321 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -32.6; Ty = 51.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33564/1324138)^2+190983/1451200+0.7*85851/1451200=0.17 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -293.35; My = -87.912; N = -1288.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -33.2; Ty = 50.7; Mt = 4.551

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3208 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 4.551

Asta 99: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4705^2+16208^2) = 16877 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 86; Ty = -296.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34081/1324138)^2+188200/1451200+0.7*94054/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -289.075; My = -96.311; N = -1308.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 86.4; Ty = -295.8; Mt = 3.579

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2523 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 3.579

Asta 100: Trave in legno a falda Falda 1 fili 154-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(21049^2+17405^2) = 27313 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 384.9; Ty = -318.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32983/1324138)^2+0.7*106281/1451200+172534/1451200=0.17 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 163.248; My = 176.675; N = -1266.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.01+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 383.9; Ty = -319.4; Mt = -12.048

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8491 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -12.048

Asta 101: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.641

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4379^2+60934^2) = 61091 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -80.1; Ty = 1114.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30861/1324138)^2+495374/1451200+0.7*104597/1451200=0.39 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 760.894; My = 107.107; N = -1185.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.14+0+0.1 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -80.1; Ty = 1112.7; Mt = 45.548

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.641
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
32100 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 45.548

Asta 102: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3423^2+16084^2) = 16444 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -62.6; Ty = 294.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29662/1324138)^2+119155/1451200+0.7*22256/1451200=0.09 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -183.022; My = -22.791; N = -1139

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Tx = -62.7; Ty = 293.5; Mt = 6.474

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4562 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 6.474

Asta 103: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6829^2+26902^2) = 27755 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 124.9; Ty = -491.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30750/1324138)^2+151318/1451200+0.7*87178/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 232.425; My = 89.27; N = -1180.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 125.1; Ty = -491.3; Mt = -10.28

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7245 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -10.28

Asta 104: Trave in legno a falda Falda 1 fili 126-154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.454

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2534^2+75811^2) = 75853 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -46.3; Ty = -1386.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31082/1324138)^2+547060/1451200+0.7*101457/1451200=0.43 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 840.284; My = 103.892; N = -1193.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0+0.15 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -47.4; Ty = -1385.5; Mt = -56.648

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.454
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
39985 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -56.736

Asta 105: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14196^2+22547^2) = 26644 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -259.6; Ty = 412.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32572/1324138)^2+0.7*137085/1451200+141015/1451200=0.16 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 210.563; My = 144.399; N = -1250.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -258.6; Ty = 412.8; Mt = 7.44

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5243 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 7.44

Asta 106: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3274^2+12978^2) = 13385 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -59.9; Ty = 237.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32774/1324138)^2+227479/1451200+0.7*102388/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -349.408; My = -104.846; N = -1258.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -60.6; Ty = 235.8; Mt = -6.015

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4239 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.015

Asta 107: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3015^2+10894^2) = 11304 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 55.1; Ty = -199.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32516/1324138)^2+230766/1451200+0.7*98463/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -354.457; My = -100.826; N = -1248.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 41.6; Ty = -94.4; Mt = -3.376

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2380 <= 325259 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = -3.376

Asta 108: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9354^2+34485^2) = 35731 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 171; Ty = -630.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32683/1324138)^2+209994/1451200+0.7*84807/1451200=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 322.551; My = 86.842; N = -1255

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 171; Ty = -630.6; Mt = -2.696

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3234 <= 325259 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -4.589

Asta 109: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.499

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17084^2+61181^2) = 63521 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 312.4; Ty = -1118.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32587/1324138)^2+570273/1451200+0.7*231582/1451200=0.51 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 875.939; My = 237.14; N = -1251.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0.01+0.1 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 312.4; Ty = -1118.7; Mt = -8.699

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.499
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6666 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -9.458

Asta 110: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.341

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(19122^2+70338^2) = 72891 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -349.7; Ty = 1286.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32694/1324138)^2+575128/1451200+0.7*234788/1451200=0.51 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 883.397; My = 240.423; N = -1255.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.13 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -349.3; Ty = 1285.9; Mt = 5.415

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.341
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5042 <= 236552 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 7.154

Asta 111: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(13923^2+41717^2) = 43979 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -254.6; Ty = 762.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32630/1324138)^2+292262/1451200+0.7*131035/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 448.914; My = 134.18; N = -1253

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -254.6; Ty = 762.8; Mt = -2.544

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1793 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.544

Asta 112: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1898^2+20657^2) = 20744 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -34.7; Ty = 377.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32515/1324138)^2+316342/1451200+0.7*98392/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -485.901; My = -100.754; N = -1248.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -34.7; Ty = 377.7; Mt = -5.595

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3998 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Mt = -5.672

Asta 113: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(2663^2+1979^2) = 3318 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -48.7; Ty = -36.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32451/1324138)^2+309471/1451200+0.7*118138/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -475.348; My = -120.974; N = -1246.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -25.2; Ty = -16.3; Mt = -1.818

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1281 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -1.818

Asta 114: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(2867^2+21043^2) = 21237 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 52.4; Ty = -384.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32482/1324138)^2+315376/1451200+0.7*112411/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -484.417; My = -115.109; N = -1247.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 52.4; Ty = -384.8; Mt = 1.095

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
743 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.055

Asta 115: Trave in legno a falda Falda 1 fili 26-126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.039

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15781^2+45523^2) = 48181 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 288.6; Ty = -832.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32398/1324138)^2+441666/1451200+0.7*210223/1451200=0.41 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 678.399; My = 215.269; N = -1244.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.039
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 288.6; Ty = -832.2; Mt = 6.794

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.039

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4788 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.794

Asta 116: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.145

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
228149/1088400+0.7*37161/1088400=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -350.436; My = 38.053

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(413^2+10589^2) = 10597 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -7.6; Ty = -193.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -7.6; Ty = -193.6; Mt = -40.158

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.145
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
28301 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -40.158

Asta 117: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.29

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4505^2+33781^2) = 34080 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -82.4; Ty = -617.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7222/1324138)^2+247497/1451200+0.7*65432/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -380.155; My = 67.002; N = -277.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -62.5; Ty = -415.1; Mt = -9.755

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
6875 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -9.755

Asta 118: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8276^2+54518^2) = 55142 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -151.3; Ty = -996.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10492/1324138)^2+861601/1451200+0.7*204297/1451200=0.69 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 1323.419; My = -209.2; N = -402.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -151.3; Ty = -996.9; Mt = 29.977

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21127 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 29.977

Asta 119: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.156

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2515^2+85784^2) = 85821 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 46; Ty = -1568.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19433/1324138)^2+874427/1451200+0.7*165589/1451200=0.68 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1343.119; My = -169.563; N = -746.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.67+0+0.2 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 33.7; Ty = -1565.1; Mt = 226.317

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
159498 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 226.317

Asta 120: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.194

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
32040/1160960+189329/1451200+0.7*31312/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 290.81; My = 32.063; N = 1230.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(23505^2+77603^2) = 81084 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = -429.8; Ty = 1419

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0.01+0.06 <= 1 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Tx = 460; Ty = -1170.6; Mt = -74.27

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.194
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
52342 <= 325259 Comb: SLV, 7; Durata minima del carico nella combinazione: istantaneo
Mt = -74.27

Asta 121: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.929

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38465/1160960+150600/1451200+0.7*30567/1451200=0.15 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 231.322; My = 31.3; N = 1477.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1677^2+30280^2) = 30326 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -30.7; Ty = 553.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -30.7; Ty = 553.7; Mt = -31.132

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.929
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
21940 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -31.132

Asta 122: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.282

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.282
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
23113/1160960+215532/1451200+0.7*36554/1451200=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -331.058; My = 37.431; N = 887.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(984^2+16584^2) = 16613 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 18; Ty = 303.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 14; Ty = 213.2; Mt = 19.472

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.282
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
13723 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 19.472

Asta 123: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.28

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22722/1160960+195006/1451200+0.7*33993/1451200=0.17 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -299.53; My = 34.808; N = 872.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(876^2+18109^2) = 18130 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -16; Ty = -331.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 12.2; Ty = 81.7; Mt = 3.389

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.28
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2389 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 3.389

Asta 124: Trave in legno a falda Falda 4 fili 164-221

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.562

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5368^2+19474^2) = 20200 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -98.2; Ty = -356.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30239/1820690)^2+191398/1995400+0.7*113942/1995400=0.14 <= 1 [4.4.7a] Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mx = -293.987; My = 116.677; N = -1161.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -98.2; Ty = -356.1; Mt = -6.666

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.562
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6791 <= 325259 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -9.636

Asta 125: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.614

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.368
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
71450/1596320+43752/1995400+0.7*7140/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 67.203; My = 7.311; N = 2743.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1980^2+9509^2) = 9712 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 36.2; Ty = 173.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 36.2; Ty = 173.9; Mt = 1.435

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.614
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1011 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 1.435

Asta 126: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.001

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
72580/1596320+42775/1995400+0.7*4197/1995400=0.07 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 65.702; My = -4.298; N = 2787.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2999^2+6060^2) = 6762 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -54.8; Ty = 110.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.001
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 8.3; Ty = -92.9; Mt = -7.861

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.001
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5540 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -7.861

Asta 127: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
63232/1596320+0.7*7392/1995400+33323/1995400=0.06 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 11.354; My = -34.122; N = 2428.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(21645^2+3191^2) = 21879 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 395.8; Ty = 58.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 395.8; Ty = 58.2; Mt = -7.556

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5325 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -7.556

Asta 128: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
53106/1596320+65342/1995400+0.7*28046/1995400=0.08 <= 1 [4.4.6a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -100.365; My = 28.719; N = 2039.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3522^2+4417^2) = 5649 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -64.4; Ty = 80.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 25.7; Ty = 107.7; Mt = -6.616

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4663 <= 325259 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -6.616

Asta 129: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.406

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(55034^2+15492^2) = 57173 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -1006.3; Ty = 283.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.406
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(45063/1324138)^2+0.7*96071/1451200+157603/1451200=0.16 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 147.565; My = -161.386; N = -1730.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.04+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -1006.3; Ty = 283.3; Mt = 17.42

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.406
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
16141 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -22.903

Asta 130: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.933

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18596/1160960+68823/1451200+0.7*41593/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -105.712; My = -42.591; N = 714.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6013^2+3401^2) = 6908 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 110; Ty = 62.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.933
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 42.9; Ty = -63; Mt = -2.468

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.933
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1739 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.468

Asta 131: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.214

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12075/1596320+0.7*27003/1995400+60965/1995400=0.05 <= 1 [4.4.6b] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -41.476; My = 62.428; N = 463.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2830^2+8611^2) = 9064 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -51.7; Ty = 157.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 25.2; Ty = 78.9; Mt = -2.562

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.214
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1805 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -2.562

Asta 132: Trave in legno a falda Falda 5 fili 269-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.266

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5195^2+9950^2) = 11224 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -95; Ty = -181.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29234/1324138)^2+121733/1451200+0.7*71173/1451200=0.12 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 186.981; My = -72.881; N = -1122.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -93.7; Ty = -182.3; Mt = 13.126

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.266
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9251 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 13.126

Asta 133: Trave in legno a falda Falda 5 fili 267-272

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.24

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9846/1602207+0.7*5598/2002759+8004/2002759=0.01 <= 1 [4.4.6b] Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mx = -4.232; My = -4.706; N = 248.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(636^2+3401^2) = 3460 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = -40.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 11.8; Ty = -43.1; Mt = 1.382

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.24
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1759 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = 1.382

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.112
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.24/0=524722.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.12
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.24/0=959848 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.112
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.24/0=412440.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 134: Trave in legno a falda Falda 5 fili 261-273

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.234

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
393001/2002759+0.7*14207/2002759=0.2 <= 1 (formula 4.4.5a) Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 297.109; My = 8.354

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(480^2+24460^2) = 24465 <= 265517 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 5.8; Ty = -293.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 5.8; Ty = -293.5; Mt = -2.174

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2946 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 2.314

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.617
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.234/0=28564 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.617
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.234/0=49962.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.617
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.234/0.0001=22724.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 135: Trave in legno a falda Falda 5 fili 255-274

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.335

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
581971/2002759+0.7*19835/2002759=0.3 <= 1 (formula 4.4.5a) Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 439.97; My = 11.663

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(390^2+20384^2) = 20388 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 4.7; Ty = 244.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = 13.6; Ty = -290.2; Mt = -1.832

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.335
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2332 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -1.832

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.323
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.335/0.0003=7512.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.323
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.335/0.0002=13077.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.323
Kdef = 0.6
Ufin in x = 0

Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.335/0.0004=5984.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 136: Trave in legno a falda Falda 5 fili 244-246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.686

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7300^2+5077^2) = 8892 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 87.6; Ty = -60.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(36668/1324138)^2+133616/1456552+0.7*65723/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 101.014; My = 38.645; N = -924

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 86.9; Ty = -59.8; Mt = -6.091

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.686
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7754 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.091

Asta 137: Trave in legno a falda Falda 5 fili 238-247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200

Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3262^2+15851^2) = 16183 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 39.1; Ty = -190.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25697/1324138)^2+130869/1456552+0.7*46754/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 98.937; My = 27.492; N = -647.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 39.1; Ty = -190.2; Mt = -2.334

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2974 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.336

Asta 138: Trave in legno a falda Falda 5 fili 233-249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4324^2+14270^2) = 14911 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -51.9; Ty = -171.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35432/1324138)^2+144145/1456552+0.7*87038/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 108.974; My = 51.178; N = -892.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -51.8; Ty = 167.8; Mt = 2.994

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3812 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 2.994

Asta 139: Trave in legno a falda Falda 5 fili 239-250

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.827

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(13379^2+6485^2) = 14868 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -160.5; Ty = 77.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(57256/1324138)^2+0.7*122151/1456552+128537/1456552=0.15 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 92.346; My = 75.58; N = -1442.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -160.5; Ty = 77.8; Mt = 4.773

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.827
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6076 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 4.773

Asta 140: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.166

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
214403/1456552+0.7*102653/1456552=0.2 <= 1 (formula 4.4.5a) Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 162.088; My = -60.36

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4824^2+2596^2) = 5478 <= 193103 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = 57.9; Ty = -31.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 56.9; Ty = -28.9; Mt = 11.184

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.166
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14239 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 11.184

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.083
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.166/0=35126.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.083
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.166/0=56450.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.083
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.166/0=28636 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 141: Trave in legno a falda Falda 5 fili 251-280

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.441

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6157/1602207+637324/2002759+0.7*16498/2002759=0.33 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 481.817; My = -9.701; N = 155.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(958^2+25669^2) = 25687 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -11.5; Ty = 308

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -11.5; Ty = 308; Mt = 0.248

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.441
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2083 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = 1.637

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.464
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.441/0.0003=7823.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.464
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.441/0.0002=13971 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.383
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite

2.441/0.0004=6176.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 142: Trave in legno a falda Falda 5 fili 256-281

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
529789/2002759+0.7*19579/2002759=0.27 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 400.52; My = -11.512

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1283^2+25795^2) = 25827 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -15.4; Ty = -309.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = 4.8; Ty = 295; Mt = -3.688

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4695 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -3.688

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.821
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.642/0.0002=10181 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.821
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001

Luce/Uinst,var > limite
1.642/0.0001=17801.2 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.821
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.642/0.0002=8099.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 143: Trave in legno a falda Falda 5 fili 262-282

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.746

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
229500/2002759+0.7*12674/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 173.502; My = -7.452

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(899^2+20414^2) = 20434 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -10.8; Ty = -245

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -2.9; Ty = 224.3; Mt = -2.079

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.746
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2646 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -2.079

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.348
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0

Uinst tot = 0
Luce/Uinst,tot > limite
0.746/0=58369.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.373
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.746/0=101606.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.348
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.746/0=46485.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 144: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.882

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15404^2+29596^2) = 33365 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 281.7; Ty = 541.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(42671/1324138)^2+277272/1451200+0.7*189163/1451200=0.28 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 425.89; My = -193.703; N = -1638.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0.01+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 281.7; Ty = 541.2; Mt = -11.771

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.882
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8

τ,tor,d <= Ksh * fv,d
8296 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -11.771

Asta 145: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10424^2+24305^2) = 26446 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 190.6; Ty = 444.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44474/1324138)^2+277830/1451200+0.7*156355/1451200=0.27 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -426.747; My = 160.108; N = -1707.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 190.6; Ty = 444.4; Mt = 9.706

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6840 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.706

Asta 146: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(866^2+10396^2) = 10432 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -15.8; Ty = 190.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44613/1324138)^2+375564/1451200+0.7*130273/1451200=0.32 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -576.867; My = 133.399; N = -1713.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -23.2; Ty = 187.4; Mt = 16.727

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11788 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 16.727

Asta 147: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6073^2+1234^2) = 6197 <= 193103 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Tx = -111; Ty = 22.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(43762/1324138)^2+369597/1451200+0.7*158457/1451200=0.33 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -567.7; My = 162.26; N = -1680.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -109.7; Ty = 16.1; Mt = 5.724

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4034 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.724

Asta 148: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9330^2+19678^2) = 21778 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -170.6; Ty = -359.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(44714/1324138)^2+360335/1451200+0.7*121831/1451200=0.31 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -553.474; My = 124.755; N = -1717

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -170.6; Ty = -359.8; Mt = 17.328

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12212 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.328

Asta 149: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.833

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10652^2+36545^2) = 38066 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -194.8; Ty = -668.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(46356/1324138)^2+193836/1451200+0.7*149480/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 297.732; My = -153.067; N = -1780.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -194.8; Ty = -668.2; Mt = 12.066

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.833
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
7809 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 11.081

Asta 150: Trave in legno a falda Falda 3 fili 32-307

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.513

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(50594^2+122845^2) = 132856 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 925.1; Ty = -2246.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23964/1324138)^2+839306/1451200+0.7*172173/1451200=0.66 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1289.174; My = 176.305; N = -920.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.3+0.07+0.4 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 925.1; Ty = -2246.3; Mt = -100.965

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.513
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
57000 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -80.879

Asta 151: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.774

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(15565^2+19650^2) = 25067 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -284.6; Ty = 359.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68372/1324138)^2+0.7*159121/1451200+184038/1451200=0.21 <= 1 [4.4.7b] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 244.41; My = 188.455; N = -2625.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -283.4; Ty = 359; Mt = 22.861

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.774
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16111 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 22.861

Asta 152: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
73515/1995400+0.7*68897/1995400=0.06 <= 1 (formula 4.4.5a) Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = -112.918; My = -70.55

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3695^2+6070^2) = 7106 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = 67.6; Ty = 111

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -101; Ty = -71.5; Mt = 8.048

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5672 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 8.048

Asta 153: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3946^2+24122^2) = 24443 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 72.2; Ty = -441.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(69757/1324138)^2+174159/1451200+0.7*46456/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 267.509; My = 47.571; N = -2678.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 72.2; Ty = -441.1; Mt = -4.786

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6085 <= 325259 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -8.634

Asta 154: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.841

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4725^2+22224^2) = 22721 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -86.4; Ty = 406.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(69777/1324138)^2+168211/1451200+0.7*55275/1451200=0.15 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 258.372; My = 56.601; N = -2679.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -86.4; Ty = 406.4; Mt = 6.299

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.841
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4509 <= 236552 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Mt = 6.398

Asta 155: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3069^2+5877^2) = 6630 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 56.1; Ty = -107.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35110/1820690)^2+66739/1995400+0.7*66461/1995400=0.06 <= 1 [4.4.7a] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = -102.511; My = 68.056; N = -1348.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 103.2; Ty = 42.6; Mt = -6.456

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4550 <= 325259 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mt = -6.456

Asta 156: Trave in legno a falda Falda 2 fili 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.522

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16762^2+24909^2) = 30024 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 306.5; Ty = -455.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68566/1324138)^2+165873/1451200+0.7*149265/1451200=0.19 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 254.781; My = 152.847; N = -2632.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0.01+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 304.2; Ty = -456.5; Mt = -24.245

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.522
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17087 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -24.245

Asta 157: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.44

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1782^2+53318^2) = 53347 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -32.6; Ty = 975

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37945/1324138)^2+707282/1451200+0.7*36552/1451200=0.51 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 1086.385; My = -37.429; N = -1457.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.08 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -32.6; Ty = 975; Mt = 27.419

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.44
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
15341 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 21.769

Asta 158: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(12483^2+21420^2) = 24792 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 228.3; Ty = 391.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38817/1324138)^2+387087/1451200+0.7*134138/1451200=0.33 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -594.566; My = 137.357; N = -1490.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 228.3; Ty = 391.7; Mt = -15.832

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11157 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -15.832

Asta 159: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6694^2+1728^2) = 6913 <= 193103 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = 122.4; Ty = -31.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39000/1324138)^2+388720/1451200+0.7*191564/1451200=0.36 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -597.074; My = 196.161; N = -1497.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 120.8; Ty = -24.3; Mt = -11.566

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8151 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -11.566

Asta 160: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6788^2+16529^2) = 17869 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -124.1; Ty = -302.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39598/1324138)^2+389328/1451200+0.7*185810/1451200=0.36 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -598.007; My = 190.269; N = -1520.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -121.5; Ty = -302; Mt = -11.247

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7926 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Mt = -11.247

Asta 161: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(11200^2+29319^2) = 31386 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -204.8; Ty = -536.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39890/1324138)^2+222353/1451200+0.7*120535/1451200=0.21 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -341.534; My = 123.428; N = -1531.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -204.8; Ty = -536.1; Mt = -1.397

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1909 <= 325259 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -2.709

Asta 162: Trave in legno a falda Falda 6 fili 191-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.626

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(25655^2+23035^2) = 34478 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -469.1; Ty = -421.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38684/1324138)^2+0.7*246532/1451200+269354/1451200=0.31 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 378.673; My = -275.819; N = -1485.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.02+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -469.1; Ty = -421.2; Mt = 17.967

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.626
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12663 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.967

Asta 163: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.772

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10962^2+18908^2) = 21856 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 200.5; Ty = 345.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(63692/1324138)^2+108835/1451200+0.7*100870/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 167.171; My = -103.291; N = -2445.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 199.8; Ty = 345.9; Mt = -23.591

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.772

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
16626 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -23.591

Asta 164: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3989^2+7242^2) = 8267 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 72.9; Ty = 132.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8892/1820690)^2+106610/1995400+0.7*43843/1995400=0.07 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -163.753; My = 44.895; N = -341.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = 72.9; Ty = 132.4; Mt = -7.913

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5577 <= 325259 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -7.913

Asta 165: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3812^2+29687^2) = 29931 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -69.7; Ty = -542.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68594/1324138)^2+218222/1451200+0.7*53404/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 335.189; My = -54.686; N = -2634

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -70.9; Ty = -539.7; Mt = 8.993

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6381 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.054

Asta 166: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4747^2+26595^2) = 27016 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 86.8; Ty = 486.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68415/1324138)^2+210274/1451200+0.7*61705/1451200=0.18 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 322.981; My = -63.186; N = -2627.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Tx = 86.8; Ty = 486.3; Mt = -9.081

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6461 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -9.168

Asta 167: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(857^2+7550^2) = 7598 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 15.7; Ty = -138

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27415/1820690)^2+81591/1995400+0.7*42403/1995400=0.06 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -125.323; My = -43.42; N = -1052.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -64.5; Ty = 92.6; Mt = 6.555

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4620 <= 325259 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 6.556

Asta 168: Trave in legno a falda Falda 5 fili 251-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.525

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6847^2+25623^2) = 26522 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -125.2; Ty = -468.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(65198/1324138)^2+140879/1451200+0.7*66128/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 216.39; My = -67.715; N = -2503.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -125.2; Ty = -468.5; Mt = 25.219

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.525
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17775 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 25.221

Asta 169: Trave in legno a falda Falda 1 fili 230-229

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(70^2+27666^2) = 27666 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 0.8; Ty = 332

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30300/1324138)^2+328591/1456552+0.7*1459/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 248.415; My = 0.858; N = -763.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 0.8; Ty = 331.9; Mt = -1.821

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.517
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2333 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -1.832

Asta 170: Trave in legno a falda Falda 1 fili 216-215

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
328415/1456552+0.7*4325/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 248.282; My = 2.543

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(14^2+29273^2) = 29273 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.2; Ty = 351.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.2; Ty = 351.3; Mt = -2.804

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3575 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -2.808

Asta 171: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.894

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1071^2+22957^2) = 22982 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 12.9; Ty = 275.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6621/1324138)^2+197208/1456552+0.7*16520/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 149.089; My = -9.714; N = -166.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 14.4; Ty = 256.7; Mt = 3.709

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4723 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 3.71

Asta 172: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1198^2+8961^2) = 9040 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 14.4; Ty = -107.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6000/993103)^2+34646/1092414+0.7*920/1092414=0.03 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 26.193; My = -0.541; N = -151.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 14.4; Ty = -107.5; Mt = -4.666

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5941 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.666

Asta 173: Trave in legno a falda Falda 1 fili 206-211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5130^2+12471^2) = 13485 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -61.6; Ty = -149.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8191/1820690)^2+33033/2002759+0.7*14411/2002759=0.02 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = -24.973; My = 8.474; N = -206.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -61.6; Ty = -149.7; Mt = -5.237

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6667 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -5.237

Asta 174: Trave in legno a falda Falda 1 fili 200-199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
224233/1456552+0.7*9536/1456552=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 169.52; My = -5.607

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(255^2+29591^2) = 29592 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 3.1; Ty = 355.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 3.6; Ty = 351.6; Mt = 6.199

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8030 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.308

Asta 175: Trave in legno a falda Falda 1 fili 189-188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3^2+29496^2) = 29496 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 0; Ty = 353.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.51
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(24345/1324138)^2+257318/1456552+0.7*249/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -194.532; My = -0.147; N = -613.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -0.8; Ty = 348.5; Mt = 3.203

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4149 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.259

Asta 176: Trave in legno a falda Falda 1 fili 180-179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(466^2+28943^2) = 28947 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -5.6; Ty = 347.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.51
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5048/1324138)^2+280055/1456552+0.7*650/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -211.721; My = -0.382; N = -127.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.9; Ty = 342.5; Mt = -1.636

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2169 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Mt = -1.703

Asta 177: Trave in legno a falda Falda 1 fili 167-170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.174
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5003/1165241+244371/1456552+0.7*1390/1456552=0.17 <= 1 [4.4.6a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -184.744; My = -0.817; N = 126.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(638^2+24908^2) = 24916 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 7.7; Ty = 298.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.7; Ty = 291.7; Mt = -5.717

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7445 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.848

Asta 178: Trave in legno a falda Falda 1 fili 315-161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.517

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(1300^2+28329^2) = 28359 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 15.6; Ty = 339.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32300/1324138)^2+276664/1456552+0.7*39904/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 209.158; My = -23.464; N = -814

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 17; Ty = 335.4; Mt = -5.74

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7469 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -5.866

Asta 179: Trave in legno a falda Falda 1 fili 147-146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1663^2+27466^2) = 27516 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 20; Ty = 329.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(46349/1324138)^2+454351/1456552+0.7*41537/1456552=0.33 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 343.49; My = -24.424; N = -1168

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 19.8; Ty = 328.5; Mt = -0.329

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
621 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -0.488

Asta 180: Trave in legno a falda Falda 1 fili 141-140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(232^2+28641^2) = 28642 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 2.8; Ty = 343.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39057/1324138)^2+531131/1456552+0.7*6674/1456552=0.37 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 401.535; My = -3.924; N = -984.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.8; Ty = 343.4; Mt = 0.239

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
825 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 0.648

Asta 181: Trave in legno a falda Falda 1 fili 132-131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1118^2+28093^2) = 28115 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.4; Ty = 337.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39977/1324138)^2+487040/1456552+0.7*30244/1456552=0.35 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 368.202; My = 17.784; N = -1007.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.4; Ty = 337.1; Mt = -0.17

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1032 <= 316724 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = 0.81

Asta 182: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.894

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(489^2+30504^2) = 30508 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -5.9; Ty = 366

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40581/1324138)^2+373131/1456552+0.7*23236/1456552=0.27 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 282.087; My = 13.662; N = -1022.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -7.6; Ty = 360.6; Mt = 4.189

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.894
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5333 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 4.189

Asta 183: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7896/1602207+26157/2002759+0.7*18350/2002759=0.02 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 19.774; My = -10.79; N = 199

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5513^2+6288^2) = 8363 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -66.2; Ty = -75.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -66.2; Ty = -75.5; Mt = -2.547

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3243 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -2.547

Asta 184: Trave in legno a falda Falda 1 fili 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.311

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
59584/2002759+0.7*25181/2002759=0.04 <= 1 (formula 4.4.5a) Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 45.045; My = -14.807

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7400^2+23528^2) = 24665 <= 265517 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -88.8; Ty = -282.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -88.8; Ty = -282.3; Mt = -7.316

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.311
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
9313 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -7.316

Asta 185: Trave in legno a falda Falda 1 fili 113-112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.342
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
200667/1456552+0.7*984/1456552=0.14 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -151.704; My = -0.579

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(442^2+25700^2) = 25704 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -5.3; Ty = 308.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.6; Ty = 304.4; Mt = 5.973

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.516
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7604 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 5.973

Asta 186: Trave in legno a falda Falda 1 fili 101-100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.593
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
243901/1456552+0.7*1624/1456552=0.17 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = -184.389; My = 0.955

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(252^2+30499^2) = 30500 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 3; Ty = 366

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 3.7; Ty = 364; Mt = 2.362

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3032 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 2.382

Asta 187: Trave in legno a falda Falda 1 fili 93-92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6563/1165241+223748/1456552+0.7*6815/1456552=0.16 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 169.153; My = 4.007; N = 165.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(242^2+32244^2) = 32245 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = 386.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.5; Ty = 385.6; Mt = -1.98

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2593 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.037

Asta 188: Trave in legno a falda Falda 1 fili 85-84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9112/1165241+258444/1456552+0.7*2540/1456552=0.19 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 195.383; My = 1.493; N = 229.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(39^2+30541^2) = 30541 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -0.5; Ty = 366.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -0.9; Ty = 364.7; Mt = -5.685

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7355 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -5.777

Asta 189: Trave in legno a falda Falda 1 fili 77-76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
252654/1456552+0.7*4880/1456552=0.18 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 191.007; My = -2.869

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(246^2+26685^2) = 26686 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 3; Ty = 320.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.3; Ty = 318; Mt = -4.436

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5746 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -4.513

Asta 190: Trave in legno a falda Falda 1 fili 66-65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
333568/1456552+0.7*1617/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 252.178; My = 0.951

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(174^2+28956^2) = 28957 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -2.1; Ty = 347.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.5; Ty = 347.3; Mt = 2.566

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3266 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.566

Asta 191: Trave in legno a falda Falda 1 fili 57-56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.516

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(189^2+32441^2) = 32441 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.3; Ty = 389.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15395/1324138)^2+424800/1456552+0.7*11563/1456552=0.3 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 321.149; My = -6.799; N = -387.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.3; Ty = 389.3; Mt = 2.965

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.515
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3820 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3

Asta 192: Trave in legno a falda Falda 1 fili 264-263

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.37

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
68035/2002759+0.7*32249/2002759=0.05 <= 1 (formula 4.4.5a) Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 51.434; My = 18.962

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5071^2+10169^2) = 11363 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 60.9; Ty = -122

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -86.5; Ty = 54.6; Mt = -1.618

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.37
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2060 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo

Mt = -1.618

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.197
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.37/0=178138.7 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.197
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.37/0=332180.4 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.197
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.37/0=139344.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 193: Trave in legno a falda Falda 1 fili 258-257

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.284

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9010/1602207+121795/2002759+0.7*35295/2002759=0.08 <= 1 [4.4.6a] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = -92.077; My = -20.753; N = 227.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1337^2+10413^2) = 10498 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -16; Ty = -125

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -16; Ty = -124.9; Mt = -1.151

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.284
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2036 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -1.599

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.685
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.284/0.0001=13781.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.685
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.284/0.0001=24066.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.685
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.284/0.0001=10968.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 194: Trave in legno a falda Falda 1 fili 255-252

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.197

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.318
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(68073/1324138)^2+128333/1456552+0.7*4433/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -97.019; My = -2.607; N = -1715.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(583^2+19911^2) = 19919 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -7; Ty = 238.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.3; Ty = 238.7; Mt = -0.9

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.197
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2994 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -2.352

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.172
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.197/0.0004=5029.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.172
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.197/0.0003=8726.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.172
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
2.197/0.0005=4010.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 195: Trave in legno a falda Falda 1 fili 244-241

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(5441^2+16971^2) = 17822 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -65.3; Ty = 203.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37084/1324138)^2+113480/1456552+0.7*52018/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 85.791; My = 30.586; N = -934.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -65.3; Ty = 203.1; Mt = 3.463

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4409 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.463

Asta 196: Trave in legno a falda Falda 1 fili 238-235

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.569

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(480^2+17472^2) = 17479 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 5.8; Ty = 209.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21127/1324138)^2+106146/1456552+0.7*4604/1456552=0.08 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 80.247; My = -2.707; N = -532.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 5.4; Ty = 209.7; Mt = -0.606

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.569

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
772 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -0.606

Asta 197: Trave in legno a falda Falda 1 fili 229-228

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(792^2+24682^2) = 24695 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -9.5; Ty = -296.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.048
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(40276/1324138)^2+161187/1456552+0.7*1674/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -121.857; My = 0.984; N = -1014.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -9.5; Ty = -296.2; Mt = 2.093

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2665 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.093

Asta 198: Trave in legno a falda Falda 1 fili 215-214

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(641^2+23878^2) = 23887 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -7.7; Ty = 286.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18506/1324138)^2+138091/1456552+0.7*2709/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -104.396; My = -1.593; N = -466.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.7; Ty = 285.4; Mt = 2.572

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3275 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.572

Asta 199: Trave in legno a falda Falda 1 fili 211-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.292

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
80660/1456552+0.7*4181/1456552=0.06 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 60.979; My = 2.458

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(217^2+14595^2) = 14597 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 2.6; Ty = 175.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media

Tx = 2.6; Ty = 175.1; Mt = 7.531

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.292
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9587 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 7.531

Asta 200: Trave in legno a falda Falda 1 fili 211-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.127

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
122962/1456552+0.7*10098/1456552=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 92.959; My = 5.937

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(583^2+23016^2) = 23023 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7; Ty = 276.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -6.8; Ty = 275.7; Mt = -2.95

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.127
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3756 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.95

Asta 201: Trave in legno a falda Falda 1 fili 199-198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(759^2+30059^2) = 30069 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -9.1; Ty = -360.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(25150/1324138)^2+285893/1456552+0.7*17771/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 216.135; My = -10.449; N = -633.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -9.1; Ty = -360.7; Mt = -6.186

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7876 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.186

Asta 202: Trave in legno a falda Falda 1 fili 84-83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(218^2+26773^2) = 26773 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2.6; Ty = -321.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20383/1324138)^2+168324/1456552+0.7*4604/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 127.253; My = 2.707; N = -513.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.6; Ty = -321.3; Mt = 5.556

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7074 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 5.556

Asta 203: Trave in legno a falda Falda 1 fili 76-75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
128828/1456552+0.7*11935/1456552=0.09 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 97.394; My = -7.018

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(378^2+23270^2) = 23273 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 4.5; Ty = 279.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.5; Ty = 279.2; Mt = 4.205

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5353 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 4.205

Asta 204: Trave in legno a falda Falda 1 fili 65-64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(150^2+23795^2) = 23795 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = 285.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.29
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(14382/1324138)^2+136573/1456552+0.7*2563/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -103.249; My = 1.507; N = -362.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = 284.6; Mt = -2.215

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2820 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -2.215

Asta 205: Trave in legno a falda Falda 1 fili 56-55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(224^2+24506^2) = 24507 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 2.7; Ty = -294.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.129
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29127/1324138)^2+173709/1456552+0.7*1997/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -131.324; My = 1.174; N = -734

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 2.7; Ty = -294; Mt = -2.799

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3567 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -2.802

Asta 206: Trave in legno a falda Falda 1 fili 46-45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
266184/2002759+0.7*21808/2002759=0.14 <= 1 (formula 4.4.5a) Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mx = 201.235; My = 12.823

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(625^2+25790^2) = 25797 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 7.5; Ty = -309.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.5; Ty = -309.5; Mt = 0.152

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
517 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = -0.406

Asta 207: Trave in legno a falda Falda 1 fili 38-37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1206^2+26709^2) = 26736 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 14.5; Ty = -320.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.968
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(39421/1324138)^2+194947/1456552+0.7*10453/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -147.38; My = -6.146; N = -993.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 14.5; Ty = -320.3; Mt = 2.922

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3719 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 2.922

Asta 208: Trave in legno a falda Falda 1 fili 241-240

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1691^2+25130^2) = 25187 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -20.3; Ty = -301.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.048
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(54621/1324138)^2+184887/1456552+0.7*10791/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -139.775; My = 6.345; N = -1376.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -20.3; Ty = -301.6; Mt = -2.737

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3488 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -2.74

Asta 209: Trave in legno a falda Falda 1 fili 235-234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1073^2+26709^2) = 26730 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = -320.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.967
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30816/1324138)^2+187588/1456552+0.7*5742/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -141.817; My = 3.376; N = -776.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -12.9; Ty = -320.4; Mt = -0.828

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1065 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media

Mt = -0.836

Asta 210: Trave in legno a falda Falda 1 fili 26-33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(77858/1820690)^2+218204/2002759+0.7*51564/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 164.962; My = 30.32; N = -1962

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(478^2+24304^2) = 24308 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 5.7; Ty = -291.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 5.7; Ty = -291.6; Mt = 2.243

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2855 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.243

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.129
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.419/0.0004=5523.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.21
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.419/0.0003=9550.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.129
Kdef = 0.6

Ufin in x = 0
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
2.419/0.0005=4408.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 211: Trave in legno a falda Falda 1 fili 47-46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.911

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(228^2+18118^2) = 18120 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.7; Ty = 217.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(21835/1324138)^2+94177/1456552+0.7*5282/1456552=0.07 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 71.198; My = 3.106; N = -550.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.6; Ty = 216.9; Mt = 2.644

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.911
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3367 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.644

Asta 212: Trave in legno a falda Falda 1 fili 39-38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.981

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1800^2+13953^2) = 14068 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 21.6; Ty = 167.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30715/1324138)^2+60170/1456552+0.7*21274/1456552=0.05 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -45.489; My = 12.509; N = -774

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 21.2; Ty = 167.1; Mt = -0.716

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.981
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
919 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -0.722

Asta 213: Trave in legno a falda Falda 1 fili 23-22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.54

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(32372/1820690)^2+195642/2002759+0.7*29332/2002759=0.11 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 147.906; My = -17.248; N = -815.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(142^2+15930^2) = 15931 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -1.7; Ty = -191.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.8; Ty = -191.1; Mt = 0.691

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.54
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2469 <= 316724 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = 1.94

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.719
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.54/0.0001=14950.1 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.719
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.54/0.0001=26107.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.719
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.54/0.0001=11899 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 214: Trave in legno a falda Falda 1 fili 17-16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.609

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7405/1820690)^2+115187/2002759+0.7*46821/2002759=0.07 <= 1 [4.4.7a] Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mx = 87.082; My = -27.531; N = -186.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4648^2+12571^2) = 13402 <= 265517 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -55.8; Ty = -150.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6.6; Ty = -96.2; Mt = 0.611

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.609
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1075 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 0.844

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.264
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.609/0=125716.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.264
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.609/0=227317.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.264
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.609/0=99132 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 215: Trave in legno a falda Falda 2 fili 19-11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.652

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
233206/2002759+0.7*22132/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 176.304; My = 13.013

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(3620^2+22588^2) = 22877 <= 265517 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 43.4; Ty = -271.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -23.8; Ty = 245.2; Mt = 1.691

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.652
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2153 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 1.691

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.435
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.652/0=158075.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.304
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.652/0=225162.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.435
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.652/0=131070 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 216: Trave in legno a falda Falda 2 fili 21-10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.591

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5081/1602207+512121/2002759+0.7*16662/2002759=0.26 <= 1 [4.4.6a] Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mx = 387.164; My = 9.797; N = 128

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(766^2+26256^2) = 26267 <= 265517 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 9.2; Ty = -315.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 8.8; Ty = -314.9; Mt = -2.526

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.591
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3216 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -2.526

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.796
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.591/0.0001=29087.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.796
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.591/0=43433.8 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.796
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.591/0.0001=24276.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Vento = 0,600 + 0,000 = 0,600

Asta 217: Trave in legno a falda Falda 2 fili 32-9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15942/1602207+591160/2002759+0.7*1956/2002759=0.31 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 446.917; My = 1.15; N = 401.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(599^2+24363^2) = 24371 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -7.2; Ty = 292.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -7; Ty = 292.1; Mt = -1.836

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2338 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -1.836

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.417
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
2.504/0.0001=22943.4 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.669
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.504/0.0001=36763.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.417
Kdef = 0.6

Ufin in x = 0.0001
Ufin in y = 0.0001
Ufin = 0.0001
Luce/Ufin > limite
2.504/0.0001=17552.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 218: Trave in legno a falda Falda 2 fili 36-31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.814

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4293^2+6002^2) = 7379 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 51.5; Ty = 72

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(52918/1324138)^2+95536/1456552+0.7*60262/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 72.225; My = 35.434; N = -1333.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 52.6; Ty = 71; Mt = -6.172

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.814
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7858 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -6.172

Asta 219: Trave in legno a falda Falda 2 fili 44-30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.696

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2123^2+15150^2) = 15298 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 25.5; Ty = -181.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34353/1324138)^2+114439/1456552+0.7*38697/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 86.516; My = -22.754; N = -865.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 25.7; Ty = -181; Mt = -2.893

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.696
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3682 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -2.893

Asta 220: Trave in legno a falda Falda 2 fili 31-8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(629^2+25170^2) = 25177 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = -302

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13255/1820690)^2+511176/2002759+0.7*4998/2002759=0.26 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 386.449; My = 2.939; N = -334

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.504

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 7.6; Ty = -301.5; Mt = -0.441

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
573 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -0.45

Asta 221: Trave in legno a falda Falda 2 fili 30-7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(510^2+24472^2) = 24477 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.1; Ty = -293.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7398/1820690)^2+252446/2002759+0.7*19954/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 190.849; My = 11.733; N = -186.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 6; Ty = -292.8; Mt = -1.072

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1365 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -1.072

Asta 222: Trave in legno a falda Falda 2 fili 43-28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.592

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2138^2+15949^2) = 16092 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -25.7; Ty = -191.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28818/1324138)^2+114200/1456552+0.7*30680/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 86.335; My = -18.04; N = -726.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -25.7; Ty = -191.4; Mt = 1.71

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.592
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2178 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 1.71

Asta 223: Trave in legno a falda Falda 2 fili 35-27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.615

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2615^2+10388^2) = 10712 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -31.4; Ty = -124.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28269/1324138)^2+117448/1456552+0.7*42238/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 88.791; My = -24.836; N = -712.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -31.4; Ty = -124.7; Mt = 3.443

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.616
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4400 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.456

Asta 224: Trave in legno a falda Falda 2 fili 28-5

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(133^2+24540^2) = 24541 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 1.6; Ty = 294.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6174/1820690)^2+271246/2002759+0.7*2749/2002759=0.14 <= 1 [4.4.7a] Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 205.062; My = 1.617; N = -155.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.3; Ty = 294.5; Mt = 0.602

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1364 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = 1.071

Asta 225: Trave in legno a falda Falda 2 fili 27-4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.504

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
504450/2002759+0.7*12319/2002759=0.26 <= 1 (formula 4.4.5a) Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mx = 381.364; My = 7.244

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5^2+24361^2) = 24361 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -0.1; Ty = 292.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -0.4; Ty = 292; Mt = 0.299

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.504
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
775 <= 316724 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mt = 0.608

Asta 226: Trave in legno a falda Falda 2 fili 25-3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.144

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18708/1602207+542822/2002759+0.7*19849/2002759=0.29 <= 1 [4.4.6a] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 410.373; My = -11.671; N = 471.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(231^2+19047^2) = 19048 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -2.8; Ty = -228.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = 11.9; Ty = 260.1; Mt = -2.914

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.144
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3710 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.914

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.143
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.144/0.0003=7435.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.143
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.144/0.0002=12448.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.143
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
2.144/0.0004=5988.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 227: Trave in legno a falda Falda 2 fili 20-2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.167

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
381697/2002759+0.7*22998/2002759=0.2 <= 1 (formula 4.4.5a) Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 288.563; My = -13.523

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1314^2+24550^2) = 24585 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -15.8; Ty = -294.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -15.8; Ty = -294.6; Mt = 2.384

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.167
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3150 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.474

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.545
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.167/0=48774.7 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.545
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.167/0=80145.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.545
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
1.167/0=39498.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 228: Trave in legno a falda Falda 5 fili 248-277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.452

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12781/1165241+43279/1456552+0.7*7097/1456552=0.04 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 32.719; My = 4.173; N = 322.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(7521^2+1265^2) = 7626 <= 265517 Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Tx = -90.2; Ty = -15.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Tx = -90.2; Ty = -15.2; Mt = 19.595

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.452
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
24946 <= 316724 Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mt = 19.595

Asta 229: Trave in legno a falda Falda 5 fili 248-277

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.156

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17116/1165241+139240/1456552+0.7*7012/1456552=0.11 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 105.265; My = 4.123; N = 431.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(401^2+23243^2) = 23246 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -4.8; Ty = 278.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Tx = -17.4; Ty = 88.3; Mt = 4.469

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.156
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
5689 <= 316724 Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mt = 4.469

Asta 230: Trave in legno a falda Falda 5 fili 246-275

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(453^2+27047^2) = 27051 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -5.4; Ty = 324.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5383/1820690)^2+528882/2002759+0.7*6812/2002759=0.27 <= 1 [4.4.7a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 399.835; My = -4.006; N = -135.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.2; Ty = 324.5; Mt = -0.325

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
711 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -0.558

Asta 231: Trave in legno a falda Falda 5 fili 247-276

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
261123/2002759+0.7*1725/2002759=0.13 <= 1 (formula 4.4.5a) Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 197.409; My = -1.014

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(242^2+27168^2) = 27169 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = 326

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -2.9; Ty = 326; Mt = -0.723

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1340 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -1.053

Asta 232: Trave in legno a falda Falda 5 fili 249-278

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
226361/2002759+0.7*9315/2002759=0.12 <= 1 (formula 4.4.5a) Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 171.129; My = -5.477

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(520^2+26405^2) = 26410 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 316.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -6.2; Ty = 316.9; Mt = 1.444

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1838 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 1.444

Asta 233: Trave in legno a falda Falda 5 fili 250-279

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.607

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(466^2+26338^2) = 26342 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -5.6; Ty = 316.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(19366/1820690)^2+507481/2002759+0.7*8905/2002759=0.26 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 383.655; My = -5.236; N = -488

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -5.8; Ty = 316; Mt = 0.493

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.607
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
637 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 0.5

Asta 234: Trave in legno a falda Falda 2 fili 29-6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.457

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7826/1165241+39643/1456552+0.7*5031/1456552=0.04 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 29.97; My = -2.958; N = 197.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(8219^2+1031^2) = 8283 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = 98.6; Ty = -12.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0 <= 1 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 98.6; Ty = -12.4; Mt = -20.924

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.457
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
26637 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -20.924

Asta 235: Trave in legno a falda Falda 2 fili 29-6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.047

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
7782/1165241+123351/1456552+0.7*4950/1456552=0.09 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 93.254; My = -2.911; N = 196.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(298^2+21834^2) = 21836 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 3.6; Ty = 262

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Tx = 23.5; Ty = 86; Mt = -5.035

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.047
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6421 <= 316724 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = 5.044

Asta 236: Trave in legno a falda Falda 6 fili 230-231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(902^2+36474^2) = 36485 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -10.8; Ty = 437.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20457/1324138)^2+500815/1456552+0.7*21475/1456552=0.35 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 378.616; My = 12.627; N = -515.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11; Ty = 433.7; Mt = 0.926

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2170 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 1.704

Asta 237: Trave in legno a falda Falda 6 fili 265-266

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.416

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7986/1820690)^2+100306/2002759+0.7*51653/2002759=0.07 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 75.832; My = 30.372; N = -201.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(1626^2+14455^2) = 14546 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = -19.5; Ty = -173.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -18.3; Ty = -173.4; Mt = 1.769

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.416
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1793 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 1.408

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.25
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.416/0=114986.4 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.25
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.416/0=203884.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.25
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.416/0=91142.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 238: Trave in legno a falda Falda 6 fili 259-260

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.409

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(28447/1820690)^2+199345/2002759+0.7*28729/2002759=0.11 <= 1 [4.4.7a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = 150.705; My = 16.892; N = -716.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(579^2+16031^2) = 16042 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 6.9; Ty = -192.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 14.2; Ty = -142.7; Mt = -2.176

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.409
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
2938 <= 316724 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = 2.308

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.657
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
1.409/0=33803.9 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.657
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.409/0=55441.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.611
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.409/0.0001=27382.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 239: Trave in legno a falda Falda 6 fili 253-254

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.528

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(79414/1324138)^2+189836/1456552+0.7*13283/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 143.516; My = 7.811; N = -2001.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(104^2+26467^2) = 26467 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.2; Ty = -317.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.2; Ty = -317.6; Mt = 1.558

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.528
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3098 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = 2.434

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.18
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
2.528/0.0004=6382.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.18
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.528/0.0002=10811.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.18
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
2.528/0.0005=5123 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 240: Trave in legno a falda Falda 6 fili 216-217

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
372935/1456552+0.7*50005/1456552=0.28 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 281.939; My = 29.403

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1831^2+36188^2) = 36234 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -22; Ty = 434.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -21.3; Ty = 424.2; Mt = 6.579

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8376 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.579

Asta 241: Trave in legno a falda Falda 6 fili 206-207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.72

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
236977/1456552+0.7*4732/1456552=0.16 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 179.155; My = 2.783

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(27^2+31263^2) = 31263 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -0.3; Ty = 375.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2.1; Ty = 355.3; Mt = 9.983

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.72
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12709 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 9.983

Asta 242: Trave in legno a falda Falda 6 fili 200-201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.991

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.991
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11190/993103)^2+159922/1092414+0.7*50898/1092414=0.18 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 120.901; My = 29.928; N = -282

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1460^2+29034^2) = 29071 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 17.5; Ty = 348.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 21.6; Ty = 332.4; Mt = 11.106

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.991
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
14139 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 11.106

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.495
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
2.991/0.0008=3893 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.695
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
2.991/0.0005=6179.3 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.396
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
2.991/0.001=3137.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Asta 243: Trave in legno a falda Falda 6 fili 189-190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.987

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27839/993103)^2+140358/1092414+0.7*4188/1092414=0.13 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 106.111; My = 2.463; N = -701.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(575^2+13680^2) = 13692 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 6.9; Ty = -164.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.8; Ty = -217.5; Mt = 6.195

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.987
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7887 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 6.195

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.596
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.987/0.0001=13764.2 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.397
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.987/0=44832.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.596
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.987/0.0002=8905.8 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi

Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 244: Trave in legno a falda Falda 6 fili 180-181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.002

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
123075/1092414+0.7*3427/1092414=0.11 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = -93.044; My = 2.015

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(311^2+9488^2) = 9494 <= 144828 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -3.7; Ty = -113.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -17.2; Ty = 141.8; Mt = 1.786

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.002
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2275 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 1.787

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.434
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.002/0.0001=12902.1 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.401
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.002/0=26105.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.434
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.002/0.0001=8407.6 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 245: Trave in legno a falda Falda 6 fili 231-232

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1024^2+34196^2) = 34211 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 12.3; Ty = -410.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(49143/1324138)^2+266948/1456552+0.7*33769/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 201.812; My = 19.856; N = -1238.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 12.2; Ty = -408.8; Mt = -0.831

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2031 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -1.596

Asta 246: Trave in legno a falda Falda 6 fili 236-237

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1728^2+34110^2) = 34153 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 20.7; Ty = -409.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.793
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(51912/1324138)^2+271286/1456552+0.7*22551/1456552=0.2 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -205.092; My = -13.26; N = -1308.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 20.4; Ty = -405.2; Mt = 3.794

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4850 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 3.81

Asta 247: Trave in legno a falda Falda 6 fili 242-243

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2044^2+33119^2) = 33182 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 24.5; Ty = -397.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(86755/1324138)^2+232158/1456552+0.7*48734/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 175.512; My = 28.655; N = -2186.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 24.5; Ty = -397.4; Mt = 4.716

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6063 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 4.763

Asta 248: Trave in legno a falda Falda 6 fili 217-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.224

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1092^2+23629^2) = 23654 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -13.1; Ty = -283.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.667
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8199/1324138)^2+177332/1456552+0.7*9211/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -134.063; My = 5.416; N = -206.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -13; Ty = -282.9; Mt = 1.625

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.224
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2073 <= 230345 Comb: SLU, 38; Durata minima del carico nella combinazione: media
Mt = 1.629

Asta 249: Trave in legno a falda Falda 6 fili 207-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.238

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
86860/1092414+0.7*39713/1092414=0.1 <= 1 (formula 4.4.5a) Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mx = 65.666; My = -23.351

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2563^2+12014^2) = 12285 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 30.8; Ty = -144.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 29.9; Ty = 89.8; Mt = 3.468

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.239
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4415 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 3.468

Asta 250: Trave in legno a falda Falda 4 fili 219-220

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.424

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12378/1602207+132553/2002759+0.7*67793/2002759=0.1 <= 1 [4.4.6a] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = 100.21; My = 39.862; N = 311.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5362^2+19864^2) = 20575 <= 265517 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Tx = 64.3; Ty = -238.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 29.7; Ty = -14.1; Mt = -4.164

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.424
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5302 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -4.164

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.212
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.424/0=88080.1 > 300 Comb: SLE rara, 10

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.24
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.424/0=172555.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.212
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.424/0=64697.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Vento = 0,600 + 0,400 = 1,000

Asta 251: Trave in legno a falda Falda 4 fili 209-210

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.39

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
220835/2002759+0.7*981/2002759=0.11 <= 1 (formula 4.4.5a) Comb: SLV, 12; Durata minima del carico nella combinazione: istantaneo
Mx = -166.951; My = 0.577

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(725^2+14934^2) = 14952 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 8.7; Ty = -179.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10.3; Ty = -179.1; Mt = -3.958

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.39
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3861 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.033

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.695
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
1.39/0.0002=8230.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.695
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.39/0.0001=18622.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.695
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.39/0.0002=6136.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 252: Trave in legno a falda Falda 4 fili 202-203

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
12812/1165241+252435/1456552+0.7*1861/1456552=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -190.841; My = -1.094; N = 322.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(358^2+24230^2) = 24233 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 4.3; Ty = -290.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 2.4; Ty = -283.6; Mt = -0.841

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1598 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 1.255

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.179
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0011
Uinst tot = 0.0011
Luce/Uinst,tot > limite
2.358/0.0011=2152.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.179
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.358/0.0004=5437.7 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.179
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0015
Ufin = 0.0015
Luce/Ufin > limite
2.358/0.0015=1572.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880

Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 253: Trave in legno a falda Falda 4 fili 191-319

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.963

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18207/1165241+395330/1456552+0.7*48935/1456552=0.31 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 298.869; My = 28.774; N = 458.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3426^2+40796^2) = 40940 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -41.1; Ty = 489.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -42.4; Ty = 489.1; Mt = -0.546

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.964
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
997 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -0.783

Asta 254: Trave in legno a falda Falda 3 fili 101-102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.617

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
131835/1456552+0.7*13049/1456552=0.1 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 99.667; My = -7.673

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1285^2+16315^2) = 16365 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 15.4; Ty = 195.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 15.4; Ty = 195.8; Mt = -3.388

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.617
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4313 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -3.388

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.288
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.617/0=41989.7 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.268
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.617/0=29514.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.288
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.617/0=27993.7 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 255: Trave in legno a falda Falda 3 fili 93-94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
188063/1456552+0.7*10423/1456552=0.13 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 142.176; My = -6.129

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(740^2+22543^2) = 22556 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 8.9; Ty = 270.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 7.9; Ty = 262.6; Mt = -4.763

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6160 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.839

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.766
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.642/0.0001=11524.9 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.493
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.642/0.0001=22685.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.766
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0002
Ufin = 0.0002
Luce/Ufin > limite
1.642/0.0002=7505.8 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Asta 256: Trave in legno a falda Falda 3 fili 85-82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.732

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
239684/1456552+0.7*39188/1456552=0.18 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 181.201; My = 23.043

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1830^2+29836^2) = 29892 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -22; Ty = 358

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -26.4; Ty = 344.2; Mt = -9.267

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.732
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11798 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -9.267

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.457
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
2.732/0.0007=3833.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.639
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
2.732/0.0004=7148 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.366
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite

2.732/0.0009=2970.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 257: Trave in legno a falda Falda 3 fili 77-78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
8034/1165241+271586/1456552+0.7*9452/1456552=0.2 <= 1 [4.4.6a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 205.319; My = 5.558; N = 202.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(332^2+33342^2) = 33344 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -4; Ty = 400.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -5.9; Ty = 388.6; Mt = -9.937

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12650 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -9.937

Asta 258: Trave in legno a falda Falda 3 fili 66-67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.726

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
364643/1456552+0.7*40109/1456552=0.27 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 275.67; My = -23.584

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1428^2+37058^2) = 37085 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 17.1; Ty = 444.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 16.4; Ty = 438.2; Mt = -7.005

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.726
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8918 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -7.005

Asta 259: Trave in legno a falda Falda 3 fili 57-58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.738

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
499832/1456552+0.7*45855/1456552=0.37 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 377.873; My = -26.962

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1641^2+40827^2) = 40859 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 19.7; Ty = 489.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71

τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 20; Ty = 486.9; Mt = -1.741

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.738
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2362 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -1.855

Asta 260: Trave in legno a falda Falda 4 fili 95-308

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.132

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
39606/873931+239620/1092414+0.7*75382/1092414=0.31 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 181.153; My = -44.325; N = 998.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5527^2+33996^2) = 34442 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 66.3; Ty = 408

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 66; Ty = 407.7; Mt = -7.194

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.133
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9159 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -7.194

Asta 261: Trave in legno a falda Falda 4 fili 86-87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.535

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.267
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
18294/1165241+263946/1456552+0.7*4227/1456552=0.2 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -199.543; My = 2.486; N = 461

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(542^2+24040^2) = 24046 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -6.5; Ty = -288.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = -4.7; Ty = -286.1; Mt = 2.049

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.535
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2659 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 2.089

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.267
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
2.535/0.0013=1971.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.267
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
2.535/0.0006=4520.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.267
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0017
Ufin = 0.0017
Luce/Ufin > limite
2.535/0.0017=1467.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 262: Trave in legno a falda Falda 4 fili 80-81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.577

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
214481/2002759+0.7*8569/2002759=0.11 <= 1 (formula 4.4.5a) Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mx = -162.148; My = 5.039

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(494^2+17221^2) = 17228 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -5.9; Ty = -206.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -5.9; Ty = -206.6; Mt = 4.088

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.577
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5286 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 4.152

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.789
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
1.577/0.0003=5921.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.789
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.577/0.0001=12903.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.789
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite

1.577/0.0004=4453.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 263: Trave in legno a falda Falda 4 fili 69-70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.619

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5124/1602207+191481/2002759+0.7*66138/2002759=0.12 <= 1 [4.4.6a] Comb: SLV, 10; Durata minima del carico nella combinazione: istantaneo
Mx = 144.76; My = -38.889; N = 129.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4485^2+21192^2) = 21662 <= 265517 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Tx = -53.8; Ty = -254.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -43.3; Ty = 91.9; Mt = 7.547

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.619
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
9608 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = 7.547

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.31
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.619/0=56450.8 > 300 Comb: SLE rara, 13

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.351
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0

Luce/Uinst,var > limite
0.619/0=114773.7 > 300 Comb: SLE rara, 10

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.31
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.619/0=42805.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,000 = 0,500
Vento = 0,600 + 0,400 = 1,000

Asta 264: Trave in legno a falda Falda 3 fili 48-49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.076

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(294^2+27017^2) = 27019 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.5; Ty = 324.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29718/1324138)^2+199261/1456552+0.7*13314/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 150.641; My = 7.828; N = -748.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -2.4; Ty = 322.5; Mt = -0.99

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.076
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
1252 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -0.983

Asta 265: Trave in legno a falda Falda 3 fili 40-41

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.063

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4768^2+24690^2) = 25146 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -57.2; Ty = 296.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(56746/1324138)^2+159751/1456552+0.7*50369/1456552=0.14 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -120.772; My = -29.617; N = -1430

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -57.2; Ty = 296.3; Mt = 4.379

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.063
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
5634 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 4.425

Asta 266: Trave in legno a falda Falda 3 fili 32-34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(87209/1324138)^2+216209/1456552+0.7*24142/1456552=0.16 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 163.454; My = -14.196; N = -2197.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(862^2+29101^2) = 29114 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -10.3; Ty = -349.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -10.3; Ty = -349.2; Mt = -3.333

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4316 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -3.39

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.233
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0006
Uinst tot = 0.0006
Luce/Uinst,tot > limite
2.642/0.0006=4306.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.233
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
2.642/0.0003=7783.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.233
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
2.642/0.0008=3396.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 267: Trave in legno a falda Falda 3 fili 21-24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.639

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(31668/1820690)^2+223827/2002759+0.7*45124/2002759=0.13 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 169.213; My = -26.533; N = -798

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1133^2+18682^2) = 18716 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.6; Ty = -224.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.01 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -13.6; Ty = -224.2; Mt = -0.855

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.639
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3906 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -3.068

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.765
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0001
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.639/0.0001=17448.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.765
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
1.639/0.0001=32306.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.765
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0001
Ufin = 0.0001
Luce/Ufin > limite
1.639/0.0001=13675 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Asta 268: Trave in legno a falda Falda 3 fili 19-18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.692

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(13130/1820690)^2+142172/2002759+0.7*52438/2002759=0.09 <= 1 [4.4.7a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 107.482; My = -30.833; N = -330.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(4798^2+14938^2) = 15689 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -57.6; Ty = -179.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -37.3; Ty = -107.9; Mt = -1.205

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.692
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1601 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -1.258

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.438
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = 0
Uinst tot = 0
Luce/Uinst,tot > limite
0.692/0=124524.8 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.392
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
0.692/0=203664.1 > 300 Comb: SLE rara, 10

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.438
Kdef = 0.6
Ufin in x = 0
Ufin in y = 0
Ufin = 0
Luce/Ufin > limite
0.692/0=100818 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Asta 269: Trave in legno a falda Falda 3 fili 49-50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(873^2+34642^2) = 34653 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -10.5; Ty = -415.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.881
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(45419/1324138)^2+266954/1456552+0.7*7007/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -201.817; My = 4.12; N = -1144.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -10.5; Ty = -415.7; Mt = -3.172

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4190 <= 230345 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = -3.291

Asta 270: Trave in legno a falda Falda 3 fili 78-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.965

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
77144/1456552+0.7*54250/1456552=0.08 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -58.321; My = -31.899

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5256^2+12492^2) = 13553 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 63.1; Ty = -149.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = 41.2; Ty = 48.7; Mt = -3.566

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.965
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4539 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -3.566

Asta 271: Trave in legno a falda Falda 3 fili 67-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.989

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3112^2+22206^2) = 22422 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 37.3; Ty = -266.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.464
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8784/1324138)^2+171385/1456552+0.7*27536/1456552=0.13 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = -129.567; My = -16.191; N = -221.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 40.1; Ty = -261.8; Mt = -2.127

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.989
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3942 <= 316724 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = -3.096

Asta 272: Trave in legno a falda Falda 3 fili 58-52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4^2+44515^2) = 44515 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0; Ty = -534.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(23959/1324138)^2+633690/1456552+0.7*7904/1456552=0.44 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 479.07; My = -4.647; N = -603.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0; Ty = -534.2; Mt = 1.803

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2320 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 1.822

Asta 273: Trave in legno a falda Falda 3 fili 41-42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.642

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(1589^2+34072^2) = 34109 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -19.1; Ty = -408.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.881
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(63331/1324138)^2+257385/1456552+0.7*19957/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -194.583; My = 11.735; N = -1595.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -19.1; Ty = -408.9; Mt = -5.517

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.642
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7084 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -5.565

Asta 274: Trave in legno a falda Falda 1 fili 92-91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(114^2+34618^2) = 34618 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 1.4; Ty = -415.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11659/1324138)^2+334229/1456552+0.7*2703/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 252.677; My = 1.589; N = -293.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 1.4; Ty = -415.3; Mt = 2.145

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2731 <= 230345 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 2.145

Asta 275: Trave in legno a falda Falda 1 fili 100-99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(238^2+34718^2) = 34719 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2.9; Ty = -416.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(16191/1324138)^2+336961/1456552+0.7*2966/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 254.743; My = 1.744; N = -408

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 2.9; Ty = -416.6; Mt = -2.733

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3480 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -2.733

Asta 276: Trave in legno a falda Falda 1 fili 112-111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(150^2+29386^2) = 29387 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.8; Ty = -352.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18136/1324138)^2+253677/1456552+0.7*2867/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 191.779; My = -1.686; N = -457

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -1.8; Ty = -352.6; Mt = -6.479

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8248 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -6.479

Asta 277: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.292

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
21186/1602207+71296/2002759+0.7*53406/2002759=0.07 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 53.9; My = 31.403; N = 533.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(14480^2+27176^2) = 30793 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = -173.8; Ty = 326.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo

Tx = -173.8; Ty = 326.1; Mt = 8.513

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.292
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
10838 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 8.513

Asta 278: Trave in legno a falda Falda 1 fili 119-124

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.128

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1308^2+21832^2) = 21871 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 15.7; Ty = -262

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(30039/1324138)^2+127608/1456552+0.7*40568/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 96.472; My = 23.854; N = -757

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 15.7; Ty = -262; Mt = -2.644

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.128
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4802 <= 316724 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = -3.772

Asta 279: Trave in legno a falda Falda 1 fili 131-130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(394^2+41319^2) = 41321 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.7; Ty = 495.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.21
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(48132/1324138)^2+374879/1456552+0.7*1597/1456552=0.26 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -283.408; My = -0.939; N = -1212.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = 495.7; Mt = 0.249

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
370 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = 0.291

Asta 280: Trave in legno a falda Falda 1 fili 140-139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(81^2+43032^2) = 43033 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1; Ty = 516.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.21
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(54342/1324138)^2+415390/1456552+0.7*888/1456552=0.29 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -314.035; My = 0.522; N = -1369.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.05 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1; Ty = 516.4; Mt = -0.118

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
267 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -0.21

Asta 281: Trave in legno a falda Falda 1 fili 146-145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 4.143

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(579^2+39937^2) = 39941 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.9; Ty = 479.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(35851/1324138)^2+358201/1456552+0.7*25402/1456552=0.26 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 270.8; My = -14.936; N = -903.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.04 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.9; Ty = 479.2; Mt = 0.115

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 4.143
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
356 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 0.28

Asta 282: Trave in legno a falda Falda 1 fili 161-160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(311^2+25013^2) = 25015 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -3.7; Ty = -300.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(34484/1324138)^2+165649/1456552+0.7*11363/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 125.231; My = -6.681; N = -869

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.3; Ty = -299.1; Mt = 6.548

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
8336 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.548

Asta 283: Trave in legno a falda Falda 1 fili 170-169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(343^2+30504^2) = 30506 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -4.1; Ty = -366.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(15157/1324138)^2+275995/1456552+0.7*10947/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 208.652; My = -6.437; N = -381.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -4.5; Ty = -365.9; Mt = 6.251

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7958 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 6.251

Asta 284: Trave in legno a falda Falda 1 fili 188-187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(781^2+33215^2) = 33224 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -9.4; Ty = -398.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(33938/1324138)^2+318699/1456552+0.7*17733/1456552=0.23 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 240.936; My = -10.427; N = -855.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.03 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -9.1; Ty = -398.4; Mt = -3.383

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4307 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -3.383

Asta 285: Trave in legno a falda Falda 1 fili 179-178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.419

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(918^2+35210^2) = 35222 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11; Ty = -422.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(18738/1324138)^2+349010/1456552+0.7*19474/1456552=0.25 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 263.852; My = -11.451; N = -472.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -11; Ty = -422.5; Mt = 1.698

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.419
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2162 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 1.698

Asta 329: Trave in legno a falda Falda 6 fili 236-233

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.778

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(807^2+27759^2) = 27771 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 9.7; Ty = -333.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(42251/1324138)^2+256802/1456552+0.7*17320/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 194.142; My = 10.184; N = -1064.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.02 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 9.3; Ty = -331.1; Mt = -3.347

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.778
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
4261 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -3.347

Asta 330: Trave in legno a falda Falda 6 fili 242-239

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.832

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4578^2+28467^2) = 28833 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 54.9; Ty = -341.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(61151/1324138)^2+211349/1456552+0.7*23691/1456552=0.16 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 159.78; My = 13.93; N = -1541

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.02 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 54.9; Ty = -341.6; Mt = -10.854

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.832
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
13818 <= 230345 Comb: SLU, 71; Durata minima del carico nella combinazione: media

Mt = -10.854

Asta 331: Trave in legno a falda Falda 4 fili 147-314

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(448^2+48225^2) = 48227 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.4; Ty = 578.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(41387/1324138)^2+567379/1456552+0.7*16612/1456552=0.4 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 428.938; My = -9.768; N = -1043

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 5.4; Ty = 578.7; Mt = -6.044

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7695 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -6.044

Asta 332: Trave in legno a falda Falda 4 fili 315-316

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(513^2+44073^2) = 44076 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.2; Ty = 528.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(20628/1324138)^2+628074/1456552+0.7*17253/1456552=0.44 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 474.824; My = -10.145; N = -519.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.4; Ty = 528.8; Mt = -8.925

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11362 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -8.925

Asta 333: Trave in legno a falda Falda 4 fili 141-313

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.677

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(59^2+50240^2) = 50240 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.7; Ty = 602.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37931/1324138)^2+600325/1456552+0.7*2444/1456552=0.41 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 453.846; My = -1.437; N = -955.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.07 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.7; Ty = 602.9; Mt = -0.571

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.677

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
727 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -0.571

Asta 334: Trave in legno a falda Falda 4 fili 132-312

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(434^2+48715^2) = 48717 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.2; Ty = 584.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(38175/1324138)^2+572043/1456552+0.7*16218/1456552=0.4 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 432.465; My = 9.536; N = -962

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -5.2; Ty = 584.6; Mt = 5.063

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
6445 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 5.063

Asta 335: Trave in legno a falda Falda 4 fili 120-311

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 3.678

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(500^2+43875^2) = 43878 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6; Ty = 526.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(29453/1324138)^2+551500/1456552+0.7*16382/1456552=0.39 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 416.934; My = 9.632; N = -742.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.05 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -6; Ty = 526.5; Mt = 8.674

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 3.678
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11043 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 8.674

Asta 493: Trave in legno a falda Falda 1 fili 91-90

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
5114/1165241+321829/1456552+0.7*1706/1456552=0.23 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 243.303; My = 1.003; N = 128.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(20^2+25867^2) = 25867 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -0.2; Ty = 310.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = -0.3; Ty = 310.4; Mt = -0.262

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1711 <= 316724 Comb: SLV, 11; Durata minima del carico nella combinazione: istantaneo
Mt = -1.344

Asta 494: Trave in legno a falda Falda 1 fili 99-98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
328618/1456552+0.7*4271/1456552=0.23 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 248.435; My = 2.511

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(118^2+28417^2) = 28417 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 1.4; Ty = 341

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.4; Ty = 341; Mt = 0.167

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1702 <= 316724 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = 1.337

Asta 495: Trave in legno a falda Falda 1 fili 111-110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.724

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
249676/1456552+0.7*3669/1456552=0.17 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 188.755; My = 2.158

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(46^2+26586^2) = 26586 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = 319

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = 319; Mt = 0.642

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.724
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1233 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = 0.969

Asta 496: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.551

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(24184^2+8759^2) = 25721 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 290.2; Ty = 105.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(37514/1820690)^2+0.7*49736/2002759+147494/2002759=0.09 <= 1 [4.4.7b] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 37.601; My = -86.726; N = -945.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.551

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Tx = -142.8; Ty = -172; Mt = -5.748

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7318 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -5.748

Asta 497: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.365
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
28193/1602207+0.7*41188/2002759+60790/2002759=0.06 <= 1 [4.4.6b] Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mx = 31.138; My = -35.744; N = 710.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(21413^2+2272^2) = 21533 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 257; Ty = 27.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 227.3; Ty = 57.6; Mt = 2.709

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4767 <= 316724 Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mt = -3.744

Asta 498: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
38821/1602207+0.7*22920/2002759+78797/2002759=0.07 <= 1 [4.4.6b] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = -17.328; My = -46.333; N = 978.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(25688^2+3796^2) = 25967 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 308.3; Ty = 45.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0.01+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 267.2; Ty = 81.8; Mt = 2.978

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4503 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -3.537

Asta 499: Trave in legno a falda Falda 1 fili 124-123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.391

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
30159/1602207+0.7*37708/2002759+145923/2002759=0.1 <= 1 [4.4.6b] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = -28.507; My = 85.803; N = 760

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71

τ,d <= fv,d
Sqrt(32616^2+17775^2) = 37145 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 391.4; Ty = -213.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0.01+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 337.6; Ty = -160.8; Mt = 6.136

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.391
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
9040 <= 316724 Comb: SLV, 2; Durata minima del carico nella combinazione: istantaneo
Mt = -7.101

Asta 500: Trave in legno a falda Falda 1 fili 160-159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1108^2+18591^2) = 18624 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 13.3; Ty = 223.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(22138/1324138)^2+160553/1456552+0.7*17824/1456552=0.12 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 121.378; My = -10.48; N = -557.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 14.5; Ty = 222.9; Mt = -1.086

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1477 <= 230345 Comb: SLU, 83; Durata minima del carico nella combinazione: media
Mt = -1.16

Asta 501: Trave in legno a falda Falda 1 fili 169-168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
270882/1456552+0.7*17887/1456552=0.19 <= 1 (formula 4.4.5a) Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 204.787; My = -10.517

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(816^2+25951^2) = 25964 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.8; Ty = 311.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 9.8; Ty = 311.4; Mt = -0.284

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
630 <= 230345 Comb: SLU, 60; Durata minima del carico nella combinazione: media
Mt = -0.495

Asta 502: Trave in legno a falda Falda 1 fili 187-186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(912^2+23849^2) = 23867 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10.9; Ty = 286.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17742/1324138)^2+306050/1456552+0.7*16597/1456552=0.22 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 231.374; My = -9.759; N = -447.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 11; Ty = 286.2; Mt = 0.332

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1081 <= 316724 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo
Mt = 0.849

Asta 503: Trave in legno a falda Falda 1 fili 178-177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.725

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
340063/1456552+0.7*19541/1456552=0.24 <= 1 (formula 4.4.5a) Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 257.088; My = -11.49

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(861^2+28834^2) = 28847 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10.3; Ty = 346

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.02 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 9.1; Ty = 344.9; Mt = 0.214

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.725
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1437 <= 316724 Comb: SLV, 8; Durata minima del carico nella combinazione: istantaneo

Mt = 1.129

Asta 504: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.922

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
47364/1160960+38571/1451200+0.7*1789/1451200=0.07 <= 1 [4.4.6a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 59.245; My = 1.832; N = 1818.8

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(38^2+5216^2) = 5216 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -0.7; Ty = 95.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.922
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Tx = 16; Ty = -27.9; Mt = -1.821

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.922
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1283 <= 325259 Comb: SLV, 15; Durata minima del carico nella combinazione: istantaneo
Mt = -1.821

Asta 505: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.265

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2)

St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
53221/1596320+26694/1995400+0.7*13372/1995400=0.05 <= 1 [4.4.6a] Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Mx = 41.002; My = 13.693; N = 2043.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(66^2+5182^2) = 5183 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -1.2; Ty = 94.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 19.6; Ty = -26.9; Mt = -9.325

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.265
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6572 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -9.325

Asta 506: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.308

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
15320/1160960+62166/1451200+0.7*53797/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 95.487; My = -55.088; N = 588.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3466^2+5840^2) = 6791 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -63.4; Ty = -106.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.308
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -63.4; Ty = -106.8; Mt = -13.461

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.308

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9487 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = -13.461

Asta 507: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.095

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34997/1160960+98694/1451200+0.7*51399/1451200=0.12 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -151.593; My = 52.632; N = 1343.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6388^2+4746^2) = 7957 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -116.8; Ty = -86.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -116.8; Ty = -86.8; Mt = 3.592

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.095
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2532 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 3.592

Asta 508: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.26

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
13608/1160960+0.7*65779/1451200+143944/1451200=0.14 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -101.037; My = 147.399; N = 522.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(41423^2+9024^2) = 42395 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 757.5; Ty = 165

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.17+0.05+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 757.5; Ty = 165; Mt = -55.594

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.26
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
39180 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -55.594

Asta 509: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.958

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(10636^2+7102^2) = 12789 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -194.5; Ty = 129.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(11302/1324138)^2+0.7*66222/1451200+89320/1451200=0.09 <= 1 [4.4.7b] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -101.716; My = -91.463; N = -434

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = -193.9; Ty = 129.4; Mt = 14.971

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.958
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10551 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 14.971

Asta 510: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.358

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(24191^2+4601^2) = 24624 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 442.3; Ty = 84.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(27020/1324138)^2+0.7*43805/1451200+107618/1451200=0.1 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -67.284; My = 110.201; N = -1037.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.16+0.02+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 439.4; Ty = 84.2; Mt = -54.477

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.358
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
38393 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -54.477

Asta 511: Trave in legno a falda Falda 3 fili 12-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.86

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(6177^2+11586^2) = 13130 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -112.9; Ty = -211.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(41124/1324138)^2+122837/1451200+0.7*31308/1451200=0.1 <= 1 [4.4.7a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 188.678; My = -32.059; N = -1579.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.12+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -115.9; Ty = -207.8; Mt = 41.016

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.86
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
28906 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 41.016

Asta 512: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.643

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
60197/1160960+55097/1451200+0.7*3372/1451200=0.09 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 84.629; My = 3.453; N = 2311.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1244^2+7254^2) = 7360 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -22.7; Ty = 132.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -22.7; Ty = 132.7; Mt = -0.975

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.643
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
687 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -0.975

Asta 513: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.36

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
59903/1160960+0.7*14386/1451200+26762/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 22.097; My = 27.404; N = 2300.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(6294^2+11567^2) = 13169 <= 265517 Comb: SLV, 13; Durata minima del carico nella combinazione: istantaneo
Tx = 115.1; Ty = 211.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Tx = -44.6; Ty = -169.9; Mt = 4.799

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.36
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
3382 <= 325259 Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mt = 4.799

Asta 514: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.94

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
56795/1160960+0.7*4346/1451200+48239/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -6.675; My = -49.397; N = 2180.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4349^2+4598^2) = 6329 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -79.5; Ty = 84.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -78; Ty = -19.3; Mt = -10.233

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.94
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
7212 <= 325259 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mt = -10.233

Asta 515: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.288

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
44123/1160960+0.7*3638/1451200+52219/1451200=0.08 <= 1 [4.4.6b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -5.588; My = 53.472; N = 1694.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(19605^2+2030^2) = 19710 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 358.5; Ty = 37.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = 372.7; Ty = 173.8; Mt = -21.966

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.288
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
15481 <= 325259 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -21.966

Asta 516: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.109

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
34737/1160960+45232/1451200+0.7*44995/1451200=0.08 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 69.477; My = -46.075; N = 1333.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3759^2+5668^2) = 6802 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -68.7; Ty = -103.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -69.8; Ty = -102.7; Mt = 10.146

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.109
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7150 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = 10.146

Asta 517: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.17

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(16307^2+1722^2) = 16397 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 298.2; Ty = -31.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(17452/1324138)^2+0.7*72323/1451200+120222/1451200=0.12 <= 1 [4.4.7b] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = 111.088; My = 123.107; N = -670.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0.01+0 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 298.2; Ty = -31.5; Mt = 35.357

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.17
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24927 <= 236552 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mt = 35.371

Asta 518: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.178

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
44948/1160960+106902/1451200+0.7*54160/1451200=0.14 <= 1 [4.4.6a] Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mx = -164.202; My = 55.46; N = 1726

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5061^2+4102^2) = 6514 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -92.5; Ty = -75

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Tx = -36.7; Ty = 45.4; Mt = -2.734

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.178
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
1927 <= 325259 Comb: SLV, 4; Durata minima del carico nella combinazione: istantaneo
Mt = -2.734

Asta 519: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.195

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3607^2+11742^2) = 12284 <= 193103 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = -66; Ty = 214.7

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.195
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7099/1324138)^2+98239/1451200+0.7*38273/1451200=0.09 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -150.895; My = -39.191; N = -272.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -63.7; Ty = 211.2; Mt = 5.143

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.195
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
3624 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 5.143

Asta 520: Trave in legno a falda Falda 6 fili 271-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.262

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1496^2+4985^2) = 5205 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 27.4; Ty = -91.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(43312/1324138)^2+74496/1451200+0.7*14168/1451200=0.06 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 114.426; My = 14.508; N = -1663.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0 <= 1 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Tx = 28.8; Ty = -88; Mt = -13.907

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.262
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
9801 <= 236552 Comb: SLU, 71; Durata minima del carico nella combinazione: media
Mt = -13.907

Asta 786: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.994

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d

Sqrt(679^2+9550^2) = 9574 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -12.4; Ty = -174.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7306/1324138)^2+170115/1451200+0.7*30272/1451200=0.13 <= 1 [4.4.7a] Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mx = 261.297; My = -30.999; N = -280.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -0.2; Ty = -78.9; Mt = 4.037

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.994
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
2845 <= 177414 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 4.037

Asta 787: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
284718/1451200+0.7*116672/1451200=0.25 <= 1 (formula 4.4.5a) Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = 437.326; My = -119.473

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(7299^2+14328^2) = 16080 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -133.5; Ty = -262

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.1+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -140.7; Ty = -202.9; Mt = 34.939

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
24623 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 34.939

Asta 788: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.624

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
647457/1451200+0.7*169724/1451200=0.53 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 994.494; My = -173.798

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(5675^2+49026^2) = 49353 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -103.8; Ty = -896.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0.06 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -48.1; Ty = -849.1; Mt = 31.217

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.624
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
17775 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 25.221

Asta 789: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.056

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(17064^2+65381^2) = 67571 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 312; Ty = 1195.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6670/1324138)^2+617021/1451200+0.7*243821/1451200=0.54 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 947.744; My = -249.672; N = -256.1

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.11 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 312; Ty = 1195.5; Mt = 16.466

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.056
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12001 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 17.029

Asta 790: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9296^2+34429^2) = 35661 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 170; Ty = 629.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8914/1324138)^2+546672/1451200+0.7*187556/1451200=0.47 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -839.688; My = 192.058; N = -342.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.03 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media

Tx = 169.5; Ty = 625.2; Mt = 10.821

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7626 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 10.821

Asta 791: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2792^2+9561^2) = 9961 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = 51; Ty = 174.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8920/1324138)^2+633037/1451200+0.7*207954/1451200=0.54 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -972.344; My = 212.944; N = -342.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 51; Ty = 172.5; Mt = 2.733

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1926 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 2.733

Asta 792: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4216^2+13630^2) = 14267 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -77.1; Ty = -249.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8914/1324138)^2+633317/1451200+0.7*210525/1451200=0.54 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -972.774; My = 215.577; N = -342.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -77.1; Ty = -249.2; Mt = -4.143

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2920 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -4.143

Asta 793: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(9504^2+39747^2) = 40868 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -173.8; Ty = -726.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8933/1324138)^2+505993/1451200+0.7*171481/1451200=0.43 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -777.206; My = 175.597; N = -343

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.84

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -174.1; Ty = -724.7; Mt = -14.251

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10043 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -14.251

Asta 794: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.906

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.906
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(19945^2+69306^2) = 72119 <= 193103 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -364.7; Ty = -1267.3

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.906
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6728/1324138)^2+638206/1451200+0.7*259538/1451200=0.56 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 980.285; My = -265.766; N = -258.4

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.906
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0.01+0.13 <= 1 Comb: SLU, 72; Durata minima del carico nella combinazione: media
Tx = -364.7; Ty = -1267.3; Mt = -16.108

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.906
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11888 <= 236552 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = -16.868

Asta 795: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.774

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
601816/1451200+0.7*187641/1451200=0.51 <= 1 (formula 4.4.5a) Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 924.389; My = -192.145

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(8445^2+40743^2) = 41609 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 154.4; Ty = 745

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.04 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 120.7; Ty = 696.2; Mt = -26.517

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.774
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
14637 <= 177414 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -20.769

Asta 796: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.84

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2885^2+9433^2) = 9864 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 52.8; Ty = 172.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5250/1324138)^2+235257/1451200+0.7*77744/1451200=0.2 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 361.354; My = -79.61; N = -201.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.09+0+0 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 52; Ty = 120.1; Mt = -31.617

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.84
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
22282 <= 236552 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -31.617

Asta 797: Trave in legno a falda Falda 4 fili 287-202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.839

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2358^2+9875^2) = 10153 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 43.1; Ty = 180.6

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.096 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7134/993103)^2+131453/1088400+0.7*31999/1088400=0.14 <= 1 [4.4.7a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 201.912; My = -32.767; N = -273.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.096 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 35.4; Ty = 159.8; Mt = 4.098

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.839
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
2888 <= 236552 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mt = 4.098

Asta 798: Trave in legno a falda Falda 4 fili 182-318

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.93

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(473^2+20038^2) = 20043 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 5.7; Ty = -240.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(8279/1324138)^2+140867/1456552+0.7*4940/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 106.495; My = 2.904; N = -208.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 6.2; Ty = -229.4; Mt = 11.208

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.93
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10960 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.609

Asta 799: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.467

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(70^2+25536^2) = 25536 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.8; Ty = -306.4

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.234
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5898/1324138)^2+133213/1456552+0.7*2964/1456552=0.09 <= 1 [4.4.7a] Comb: SLU, 72; Durata minima del carico nella combinazione: media
Mx = -100.709; My = -1.743; N = -148.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = -0.4; Ty = 85.5; Mt = 3.515

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.467
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4474 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 3.515

Asta 800: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica flessione D.M. 17-01-18 §4.4.8.1.6

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
84538/1456552+0.7*8353/1456552=0.06 <= 1 (formula 4.4.5a) Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 63.91; My = 4.911

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; kcr = 0.71
τ,d <= fv,d
Sqrt(1702^2+3317^2) = 3728 <= 144828 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -20.4; Ty = -39.8

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 37; Durata minima del carico nella combinazione: media
Tx = -29.9; Ty = -38.3; Mt = 10.092

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12848 <= 230345 Comb: SLU, 37; Durata minima del carico nella combinazione: media

Mt = 10.092

Asta 801: Trave in legno a falda Falda 4 fili 171-317

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9154/1602207+25680/2002759+0.7*19140/2002759=0.03 <= 1 [4.4.6a] Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Mx = -19.414; My = -11.254; N = 230.7

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(5497^2+11466^2) = 12716 <= 265517 Comb: SLV, 14; Durata minima del carico nella combinazione: istantaneo
Tx = -66; Ty = 137.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0 <= 1 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Tx = -67.9; Ty = 129; Mt = -8.175

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
10408 <= 316724 Comb: SLV, 16; Durata minima del carico nella combinazione: istantaneo
Mt = -8.175

Asta 802: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.612

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71

τ,d <= fv,d
Sqrt(59^2+25159^2) = 25160 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 0.7; Ty = -301.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 1.393
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6440/1324138)^2+153914/1456552+0.7*5096/1456552=0.11 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -116.359; My = 2.996; N = -162.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0 <= 1 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Tx = 1; Ty = 105.9; Mt = -3.382

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.612
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
4306 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -3.382

Asta 803: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(2339^2+21261^2) = 21389 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 28.1; Ty = -255.1

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(9651/1324138)^2+105948/1456552+0.7*2901/1456552=0.07 <= 1 [4.4.7a] Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mx = 80.097; My = -1.706; N = -243.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 28.1; Ty = -255.1; Mt = -8.148

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10373 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -8.148

Asta 804: Trave in legno a falda Falda 4 fili 114-310

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(680^2+17456^2) = 17469 <= 193103 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 8.2; Ty = -209.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(10048/1324138)^2+37201/1456552+0.7*3524/1456552=0.03 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 28.124; My = -2.072; N = -253.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.01 <= 1 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Tx = 8.2; Ty = -209.5; Mt = -5.838

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
7433 <= 230345 Comb: SLU, 29; Durata minima del carico nella combinazione: media
Mt = -5.838

Asta 805: Trave in legno a falda Falda 4 fili 103-309

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.091

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(110^2+21209^2) = 21209 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -1.3; Ty = -254.5

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(6992/1324138)^2+141718/1456552+0.7*177/1456552=0.1 <= 1 [4.4.7a] Comb: SLU, 30; Durata minima del carico nella combinazione: media
Mx = 107.139; My = 0.104; N = -176.2

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0.01 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -1.9; Ty = -241.9; Mt = -11.137

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.091
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
11347 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -8.913

Asta 806: Trave in legno a falda Falda 4 fili 319-192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
9211/1165241+270584/1456552+0.7*1561/1456552=0.19 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -204.561; My = 0.918; N = 232.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(96^2+25871^2) = 25871 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 1.1; Ty = -310.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media

Tx = 1.1; Ty = -310.5; Mt = 1.586

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3330 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = 2.616

Asta 807: Trave in legno a falda Falda 4 fili 308-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.101
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
29657/1165241+293977/1456552+0.7*1102/1456552=0.23 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -222.247; My = -0.648; N = 747.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(28^2+25241^2) = 25241 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -0.3; Ty = -302.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -2.2; Ty = -140.9; Mt = -2.861

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
3714 <= 172759 Comb: SLU, 43; Durata minima del carico nella combinazione: permanente
Mt = -2.917

Asta 808: Trave in legno a falda Falda 4 fili 314-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300

Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(507^2+33149^2) = 33153 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.1; Ty = -397.8

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.708
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(55553/1324138)^2+245373/1456552+0.7*9975/1456552=0.18 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -185.502; My = -5.865; N = -1399.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 6.1; Ty = -397.8; Mt = 9.619

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
12337 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 9.691

Asta 809: Trave in legno a falda Falda 4 fili 316-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(844^2+27492^2) = 27505 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10.1; Ty = -329.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(5774/1820690)^2+282112/2002759+0.7*15387/2002759=0.15 <= 1 [4.4.7a] Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mx = 213.277; My = 9.047; N = -145.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359

Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10.1; Ty = -329.9; Mt = 14.449

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
18527 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 14.553

Asta 810: Trave in legno a falda Falda 4 fili 313-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(42^2+35434^2) = 35434 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = -425.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.551
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53711/1324138)^2+301020/1456552+0.7*1347/1456552=0.21 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -227.571; My = -0.792; N = -1353.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 0.5; Ty = -425.2; Mt = 0.868

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
1111 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 0.873

Asta 811: Trave in legno a falda Falda 4 fili 312-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(409^2+33662^2) = 33665 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = -403.9

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 0.629
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(53160/1324138)^2+260696/1456552+0.7*9314/1456552=0.19 <= 1 [4.4.7a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = -197.086; My = 5.477; N = -1339.6

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.04+0+0.03 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -4.9; Ty = -403.9; Mt = -8.116

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
10414 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -8.18

Asta 812: Trave in legno a falda Falda 4 fili 311-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(683^2+28013^2) = 28021 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.2; Ty = -336.2

Verifica pressoflessione D.M. 17-01-18 §4.4.8.1.8

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
(Sc,0,d/fc,0,d)^2 + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

(Sc,0,d/fc,0,d)^2 + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
(7917/1820690)^2+289575/2002759+0.7*5931/2002759=0.15 <= 1 [4.4.7a] Comb: SLV, 9; Durata minima del carico nella combinazione: istantaneo
Mx = 218.919; My = -3.488; N = -199.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.08+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -8.2; Ty = -336.2; Mt = -13.956

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
17899 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -14.059

Asta 813: Trave in legno a falda Falda 4 fili 318-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
6914/1602207+215215/2002759+0.7*14480/2002759=0.12 <= 1 [4.4.6a] Comb: SLV, 6; Durata minima del carico nella combinazione: istantaneo
Mx = 162.702; My = 8.514; N = 174.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(93^2+26142^2) = 26142 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = -1.1; Ty = 313.7

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -0.2; Ty = 311.5; Mt = 4.666

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5457 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 4.286

Asta 814: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
17339/873931+45466/1092414+0.7*26357/1092414=0.08 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = -34.372; My = -15.498; N = 436.9

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(4667^2+28753^2) = 29129 <= 193103 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = -56; Ty = -345

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.11+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -55.8; Ty = -344.2; Mt = 20.711

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
26367 <= 230345 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Mt = 20.711

Asta 815: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
33556/1165241+33554/1456552+0.7*30000/1456552=0.07 <= 1 [4.4.6a] Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mx = 25.367; My = -17.64; N = 845.6

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(3904^2+10362^2) = 11073 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -46.8; Ty = -124.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.06+0+0 <= 1 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Tx = -29.7; Ty = -90.8; Mt = 8.334

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
10610 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = 8.334

Asta 816: Trave in legno a falda Falda 4 fili 317-166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
39266/873931+232605/1092414+0.7*13646/1092414=0.27 <= 1 [4.4.6a] Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mx = 175.85; My = -8.024; N = 989.5

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(1016^2+28272^2) = 28290 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -12.2; Ty = -339.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.05+0+0.02 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = -12.2; Ty = -339.3; Mt = 9.087

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8
τ,tor,d <= Ksh * fv,d
11655 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = 9.155

Asta 817: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
58816/1602207+56211/2002759+0.7*39327/2002759=0.08 <= 1 [4.4.6a] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = -42.496; My = 23.124; N = 1482.2

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(11670^2+20291^2) = 23408 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 140; Ty = -243.5

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.02+0+0.01 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 140; Ty = -243.5; Mt = -4.941

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
6290 <= 316724 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mt = -4.941

Asta 818: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 0.218

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1

St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
61564/1602207+0.7*32532/2002759+39097/2002759=0.07 <= 1 [4.4.6b] Comb: SLV, 3; Durata minima del carico nella combinazione: istantaneo
Mx = 24.594; My = 22.989; N = 1551.4

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; kcr = 0.71
τ,d <= fv,d
Sqrt(9417^2+11411^2) = 14795 <= 265517 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 113; Ty = -136.9

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.01+0+0 <= 1 Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Tx = 113; Ty = -136.9; Mt = -3.056

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 0.218
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1
τ,tor,d <= Ksh * fv,d
4040 <= 316724 Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mt = -3.173

Asta 819: Trave in legno a falda Falda 4 fili 310-117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 1.923

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
49885/1602207+175124/2002759+0.7*57858/2002759=0.14 <= 1 [4.4.6a] Comb: SLV, 1; Durata minima del carico nella combinazione: istantaneo
Mx = 132.394; My = 34.021; N = 1257.1

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(829^2+20746^2) = 20763 <= 193103 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10; Ty = -249

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.07+0+0.01 <= 1 Comb: SLU, 79; Durata minima del carico nella combinazione: media
Tx = 10; Ty = -249; Mt = -12.443

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 1.923
Coefficiente parziale di sicurezza del materiale γ = 1.45

Kmod = 0.8
τ,tor,d <= Ksh * fv,d
15944 <= 230345 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Mt = -12.524

Asta 820: Trave in legno a falda Falda 4 fili 309-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Lunghezza = 2.359

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica tensoflessione D.M. 17-01-18 §4.4.8.1.7

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 1.1; Kh = 1.1 (formula 11.7.2)
St,0,d/ft,0,d + Sm,y,d/fm,y,d + Km*(Sm,z,d/fm,z,d) <= 1
St,0,d/ft,0,d + Km*(Sm,y,d/fm,y,d) + Sm,z,d/fm,z,d <= 1
22193/1602207+208526/2002759+0.7*11537/2002759=0.12 <= 1 [4.4.6a] Comb: SLV, 5; Durata minima del carico nella combinazione: istantaneo
Mx = 157.646; My = 6.784; N = 559.3

Verifica taglio D.M. 17-01-18 §4.4.8.1.9

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; kcr = 0.71
τ,d <= fv,d
Sqrt(231^2+25527^2) = 25528 <= 193103 Comb: SLU, 30; Durata minima del carico nella combinazione: media
Tx = 2.8; Ty = 306.3

Verifica taglio+torsione D.M. 17-01-18 §4.4.8.1.11

Sezione ad ascissa 0
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.8; Kh = 1.1 (formula 11.7.2); kcr = 0.71
τ,tor,d/(ksh*fv,d) + (τ,y,d/fv,d)^2 + (τ,z,d/fv,d)^2 <= 1
0.03+0+0.02 <= 1 Comb: SLU, 80; Durata minima del carico nella combinazione: media
Tx = 2.1; Ty = 301.8; Mt = -5.2

Verifica torsione D.M. 17-01-18 §4.4.8.1.10

Sezione ad ascissa 2.359
Coefficiente parziale di sicurezza del materiale γ = 1.45
Kmod = 0.6
τ,tor,d <= Ksh * fv,d
5713 <= 172759 Comb: SLU, 64; Durata minima del carico nella combinazione: permanente
Mt = -4.488

1.6 Verifiche superelementi in legno

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Area: *area inerziale nel sistema geometrico centrato nel baricentro. [m²]*
Jx: *momento d'inerzia attorno all'asse orizzontale baricentrico di definizione della sezione. [m4]*
Jy: *momento d'inerzia attorno all'asse verticale baricentrico di definizione della sezione. [m4]*
Wx: *modulo di resistenza elastico minimo relativo all'asse x. [m³]*
Wy: *modulo di resistenza elastico minimo relativo all'asse y. [m³]*

Superelemento in legno a "Falda 1" 26-245

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 19.977 composto da:
asta 105: Trave in legno a falda Falda 1 fili 26-126 (L = 0.882)
asta 106: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 107: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 108: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 109: Trave in legno a falda Falda 1 fili 26-126 (L = 0.499)
asta 110: Trave in legno a falda Falda 1 fili 26-126 (L = 0.341)
asta 111: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 112: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 113: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 114: Trave in legno a falda Falda 1 fili 26-126 (L = 0.84)
asta 115: Trave in legno a falda Falda 1 fili 26-126 (L = 1.039)
asta 101: Trave in legno a falda Falda 1 fili 126-154 (L = 0.641)
asta 102: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 103: Trave in legno a falda Falda 1 fili 126-154 (L = 0.84)
asta 104: Trave in legno a falda Falda 1 fili 126-154 (L = 0.454)
asta 90: Trave in legno a falda Falda 1 fili 154-245 (L = 0.386)
asta 91: Trave in legno a falda Falda 1 fili 154-245 (L = 0.829)
asta 92: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 93: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 94: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 95: Trave in legno a falda Falda 1 fili 154-245 (L = 1)
asta 96: Trave in legno a falda Falda 1 fili 154-245 (L = 0.68)
asta 97: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 98: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 99: Trave in legno a falda Falda 1 fili 154-245 (L = 0.84)
asta 100: Trave in legno a falda Falda 1 fili 154-245 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 13.751
Kdef = 0
Uinst tot in x = -0.0017
Uinst tot in y = -0.0028
Uinst tot = 0.0028
Luce/Uinst,tot > limite
19.977/0.0028=7123.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 6.314
Kdef = 0
Uinst var in x = -0.0008
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
19.977/0.0013=14987.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 14.2
Kdef = 0.6
Ufin in x = -0.0023
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
19.977/0.0037=5381.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880

Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 39-(-2154; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.4 composto da:
asta 212: Trave in legno a falda Falda 1 fili 39-38 (L = 0.981)
asta 207: Trave in legno a falda Falda 1 fili 38-37 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.868
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
3.4/0.0013=2537.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.868
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
3.4/0.0008=4406.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.9
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0017
Ufin = 0.0017
Luce/Ufin > limite
3.4/0.0017=2017.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 47-(-2070; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.33 composto da:
asta 211: Trave in legno a falda Falda 1 fili 47-46 (L = 1.911)
asta 206: Trave in legno a falda Falda 1 fili 46-45 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.556
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0018
Uinst tot = 0.0018
Luce/Uinst,tot > limite
4.33/0.0018=2448.2 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.556
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
4.33/0.001=4247 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.62
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0022
Ufin = 0.0022
Luce/Ufin > limite
4.33/0.0022=1949.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 51-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 15.41 composto da:
asta 21: Trave in legno a falda Falda 1 fili 51-230 (L = 0.301)
asta 22: Trave in legno a falda Falda 1 fili 51-230 (L = 0.624)
asta 23: Trave in legno a falda Falda 1 fili 51-230 (L = 0.216)
asta 24: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 25: Trave in legno a falda Falda 1 fili 51-230 (L = 0.604)
asta 26: Trave in legno a falda Falda 1 fili 51-230 (L = 0.236)
asta 27: Trave in legno a falda Falda 1 fili 51-230 (L = 0.564)
asta 28: Trave in legno a falda Falda 1 fili 51-230 (L = 0.276)
asta 29: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 30: Trave in legno a falda Falda 1 fili 51-230 (L = 0.324)
asta 31: Trave in legno a falda Falda 1 fili 51-230 (L = 0.191)
asta 32: Trave in legno a falda Falda 1 fili 51-230 (L = 0.325)
asta 33: Trave in legno a falda Falda 1 fili 51-230 (L = 0.284)
asta 34: Trave in legno a falda Falda 1 fili 51-230 (L = 0.268)
asta 35: Trave in legno a falda Falda 1 fili 51-230 (L = 0.287)
asta 36: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 37: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 38: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 39: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 40: Trave in legno a falda Falda 1 fili 51-230 (L = 0.434)
asta 41: Trave in legno a falda Falda 1 fili 51-230 (L = 0.366)
asta 42: Trave in legno a falda Falda 1 fili 51-230 (L = 0.434)
asta 43: Trave in legno a falda Falda 1 fili 51-230 (L = 0.435)
asta 44: Trave in legno a falda Falda 1 fili 51-230 (L = 0.84)
asta 45: Trave in legno a falda Falda 1 fili 51-230 (L = 0.18)
asta 46: Trave in legno a falda Falda 1 fili 51-230 (L = 0.66)
asta 47: Trave in legno a falda Falda 1 fili 51-230 (L = 0.14)
asta 48: Trave in legno a falda Falda 1 fili 51-230 (L = 0.7)
asta 49: Trave in legno a falda Falda 1 fili 51-230 (L = 0.902)
asta 50: Trave in legno a falda Falda 1 fili 51-230 (L = 0.778)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x32	Rettangolare	0.16	0.32	0.0512	0.0004369067	0.0001092267	0.00273067	0.00136533

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.729
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
15.41/0.0002=72009 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.813
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
15.41/0.0001=105020.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.739
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
15.41/0.0003=59996 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 57-(-1986; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 191: Trave in legno a falda Falda 1 fili 57-56 (L = 2.516)
asta 205: Trave in legno a falda Falda 1 fili 56-55 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
4.935/0.0015=3395 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.242
Kdef = 0
Uinst var in x = 0

Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
4.935/0.0009=5757.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.325
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
4.935/0.0018=2724 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 66-(-1902; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 190: Trave in legno a falda Falda 1 fili 66-65 (L = 2.516)
asta 204: Trave in legno a falda Falda 1 fili 65-64 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.645
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
4.935/0.0007=7553.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.645
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.935/0.0004=11941.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.809
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0008
Ufin = 0.0008
Luce/Ufin > limite
4.935/0.0008=6146.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 77-(-1818; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 189: Trave in legno a falda Falda 1 fili 77-76 (L = 2.516)
asta 203: Trave in legno a falda Falda 1 fili 76-75 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.645
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
4.935/0.0007=7168.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.645
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
4.935/0.0004=12288.5 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.728
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
4.935/0.0009=5701.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 85-(-1734; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 188: Trave in legno a falda Falda 1 fili 85-84 (L = 2.516)
asta 202: Trave in legno a falda Falda 1 fili 84-83 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.264
Kdef = 0

Uinst tot in x = 0
Uinst tot in y = -0.0021
Uinst tot = 0.0021
Luce/Uinst,tot > limite
4.935/0.0021=2345.4 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.919
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
4.935/0.001=4701.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.18
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0028
Ufin = 0.0028
Luce/Ufin > limite
4.935/0.0028=1773.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 93-(-1650; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 187: Trave in legno a falda Falda 1 fili 93-92 (L = 2.516)
asta 274: Trave in legno a falda Falda 1 fili 92-91 (L = 2.419)
asta 493: Trave in legno a falda Falda 1 fili 91-90 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.18
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0033
Uinst tot = 0.0033
Luce/Uinst,tot > limite
6.659/0.0033=1993.8 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.348
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4206.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.18
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0044

Ufin = 0.0044
Luce/Ufin > limite
6.659/0.0044=1508.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 101-(-1566; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 186: Trave in legno a falda Falda 1 fili 101-100 (L = 2.516)
asta 275: Trave in legno a falda Falda 1 fili 100-99 (L = 2.419)
asta 494: Trave in legno a falda Falda 1 fili 99-98 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.096
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0033
Uinst tot = 0.0033
Luce/Uinst,tot > limite
6.659/0.0033=2008.1 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.264
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4258.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.096
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0044
Ufin = 0.0044
Luce/Ufin > limite
6.659/0.0044=1517.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 113-(-1482; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 185: Trave in legno a falda Falda 1 fili 113-112 (L = 2.516)
asta 276: Trave in legno a falda Falda 1 fili 112-111 (L = 2.419)
asta 495: Trave in legno a falda Falda 1 fili 111-110 (L = 1.724)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.845
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
6.659/0.0022=3053.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.929
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
6.659/0.001=6484.6 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.845
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0029
Ufin = 0.0029
Luce/Ufin > limite
6.659/0.0029=2308.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 119-(-1398; -357)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.419 composto da:
asta 277: Trave in legno a falda Falda 1 fili 119-124 (L = 0.292)
asta 278: Trave in legno a falda Falda 1 fili 119-124 (L = 2.128)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.285
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
2.419/0.0003=9499.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.285
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
2.419/0.0001=16812.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.223
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
2.419/0.0003=7517.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 120-119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 2.516 composto da:
asta 182: Trave in legno a falda Falda 1 fili 120-119 (L = 1.894)
asta 183: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)
asta 184: Trave in legno a falda Falda 1 fili 120-119 (L = 0.311)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.568
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = 0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
2.516/0.0002=12853.8 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.631
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
2.516/0.0002=16146.8 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 0.568
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = 0.0002
Ufin = 0.0002
Luce/Ufin > limite
2.516/0.0002=11448.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600

Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 132-(-1314; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 181: Trave in legno a falda Falda 1 fili 132-131 (L = 2.516)
asta 279: Trave in legno a falda Falda 1 fili 131-130 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0039
Uinst tot = 0.0039
Luce/Uinst,tot > limite
6.659/0.0039=1698.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
6.659/0.0023=2849.7 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.809
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0049
Ufin = 0.0049
Luce/Ufin > limite
6.659/0.0049=1365.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 141-(-1230; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 180: Trave in legno a falda Falda 1 fili 141-140 (L = 2.516)
asta 280: Trave in legno a falda Falda 1 fili 140-139 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0045
Uinst tot = 0.0045
Luce/Uinst,tot > limite
6.659/0.0045=1480.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.587
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
6.659/0.0027=2460.3 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.809
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0056
Ufin = 0.0056
Luce/Ufin > limite
6.659/0.0056=1193.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 147-(-1146; -482)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 179: Trave in legno a falda Falda 1 fili 147-146 (L = 2.516)
asta 281: Trave in legno a falda Falda 1 fili 146-145 (L = 4.143)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.726
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0036
Uinst tot = 0.0036
Luce/Uinst,tot > limite
6.659/0.0036=1870.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.588
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
6.659/0.0021=3114 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.81
Kdef = 0.6

Ufin in x = -0.0001
Ufin in y = -0.0044
Ufin = 0.0044
Luce/Ufin > limite
6.659/0.0044=1506 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 167-(-979; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 177: Trave in legno a falda Falda 1 fili 167-170 (L = 2.516)
asta 283: Trave in legno a falda Falda 1 fili 170-169 (L = 2.419)
asta 501: Trave in legno a falda Falda 1 fili 169-168 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.845
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0027
Uinst tot = 0.0027
Luce/Uinst,tot > limite
6.659/0.0027=2453 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.096
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0012
Uinst var = 0.0012
Luce/Uinst,var > limite
6.659/0.0012=5670.5 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.761
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
6.659/0.0037=1817.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 180-(-895; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 176: Trave in legno a falda Falda 1 fili 180-179 (L = 2.516)
asta 285: Trave in legno a falda Falda 1 fili 179-178 (L = 2.419)

asta 503: Trave in legno a falda Falda 1 fili 178-177 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.097
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0037
Uinst tot = 0.0037
Luce/Uinst,tot > limite
6.659/0.0037=1785.8 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.265
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0016
Uinst var = 0.0016
Luce/Uinst,var > limite
6.659/0.0016=4059.8 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.013
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.005
Ufin = 0.005
Luce/Ufin > limite
6.659/0.005=1328.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 189-(-811; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.659 composto da:
asta 175: Trave in legno a falda Falda 1 fili 189-188 (L = 2.516)
asta 284: Trave in legno a falda Falda 1 fili 188-187 (L = 2.419)
asta 502: Trave in legno a falda Falda 1 fili 187-186 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.097
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
6.659/0.0035=1905.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.265
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0015
Uinst var = 0.0015
Luce/Uinst,var > limite
6.659/0.0015=4367.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.013
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0047
Ufin = 0.0047
Luce/Ufin > limite
6.659/0.0047=1414.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 200-(-727; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 174: Trave in legno a falda Falda 1 fili 200-199 (L = 2.516)
asta 201: Trave in legno a falda Falda 1 fili 199-198 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.013
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
4.935/0.0019=2582.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.265
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0008
Uinst var = 0.0008
Luce/Uinst,var > limite
4.935/0.0008=5933.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.929
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0026
Ufin = 0.0026
Luce/Ufin > limite
4.935/0.0026=1910.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 206-205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 171: Trave in legno a falda Falda 1 fili 206-211 (L = 1.894)
asta 172: Trave in legno a falda Falda 1 fili 206-211 (L = 0.311)
asta 173: Trave in legno a falda Falda 1 fili 206-211 (L = 0.311)
asta 199: Trave in legno a falda Falda 1 fili 211-205 (L = 0.292)
asta 200: Trave in legno a falda Falda 1 fili 211-205 (L = 2.127)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.872
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
4.935/0.0003=14245.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.943
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.935/0.0002=26044.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.965
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
4.935/0.0004=11036.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 1" 216-(-559; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.934 composto da:
asta 170: Trave in legno a falda Falda 1 fili 216-215 (L = 2.516)
asta 198: Trave in legno a falda Falda 1 fili 215-214 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080

β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.564
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.934/0.0008=6505.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.564
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.934/0.0005=10284.5 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.728
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
4.934/0.0009=5306.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 230-(-475; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.935 composto da:
asta 169: Trave in legno a falda Falda 1 fili 230-229 (L = 2.517)
asta 197: Trave in legno a falda Falda 1 fili 229-228 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0014
Uinst tot = 0.0014
Luce/Uinst,tot > limite
4.935/0.0014=3449.1 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.242
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009

Luce/Uinst,var > limite
4.935/0.0009=5783 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.326
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
4.935/0.0018=2774 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 238-(-391; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.988 composto da:
asta 196: Trave in legno a falda Falda 1 fili 238-235 (L = 1.569)
asta 209: Trave in legno a falda Falda 1 fili 235-234 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.295
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
3.988/0.0015=2575.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.295
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
3.988/0.0009=4402.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.347
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0019
Ufin = 0.0019
Luce/Ufin > limite
3.988/0.0019=2055.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 244-(-307; -331)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.111 composto da:
asta 195: Trave in legno a falda Falda 1 fili 244-241 (L = 0.692)
asta 208: Trave in legno a falda Falda 1 fili 241-240 (L = 2.419)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.66
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0011
Uinst tot = 0.0011
Luce/Uinst,tot > limite
3.111/0.0011=2861.9 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.66
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
3.111/0.0006=4931.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.683
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
3.111/0.0014=2279.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" 315-(-1062; -468)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.66 composto da:
asta 178: Trave in legno a falda Falda 1 fili 315-161 (L = 2.517)
asta 282: Trave in legno a falda Falda 1 fili 161-160 (L = 2.419)
asta 500: Trave in legno a falda Falda 1 fili 160-159 (L = 1.725)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.242
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0007

Uinst tot = 0.0007
Luce/Uinst,tot > limite
6.66/0.0007=9272.8 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.403
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
6.66/0.0004=16439 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.677
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
6.66/0.001=6915.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 1" (-1398; -318)-(-1398; -585)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 1.724 composto da:
asta 496: Trave in legno a falda Falda 1 fili 124-123 (L = 0.551)
asta 497: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 498: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)
asta 499: Trave in legno a falda Falda 1 fili 124-123 (L = 0.391)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 0.981
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = 0
Uinst tot = 0.0001
Luce/Uinst,tot > limite
1.724/0.0001=31098 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 0.968
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0
Uinst var = 0
Luce/Uinst,var > limite
1.724/0=58930.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.012
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = 0

Ufin = 0.0001
Luce/Ufin > limite
1.724/0.0001=24109.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 32-26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.656 composto da:
asta 151: Trave in legno a falda Falda 2 fili 32-26 (L = 0.774)
asta 152: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 153: Trave in legno a falda Falda 2 fili 32-26 (L = 0.839)
asta 154: Trave in legno a falda Falda 2 fili 32-26 (L = 0.841)
asta 155: Trave in legno a falda Falda 2 fili 32-26 (L = 0.84)
asta 156: Trave in legno a falda Falda 2 fili 32-26 (L = 0.522)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.453
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = 0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
4.656/0.0004=11217.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.453
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.656/0.0003=18299 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.507
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = 0.0005
Ufin = 0.0005
Luce/Ufin > limite
4.656/0.0005=9181.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 35-(-2463; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.119 composto da:
asta 223: Trave in legno a falda Falda 2 fili 35-27 (L = 0.615)
asta 225: Trave in legno a falda Falda 2 fili 27-4 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.867
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
3.119/0.0004=6945.3 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.951
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
3.119/0.0003=11730.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.888
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
3.119/0.0006=5540.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 36-(-2463; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.317 composto da:
asta 218: Trave in legno a falda Falda 2 fili 36-31 (L = 0.814)
asta 220: Trave in legno a falda Falda 2 fili 31-8 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.982
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
3.317/0.0004=9061.9 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.066
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
3.317/0.0002=14794.5 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.009
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
3.317/0.0005=7214.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 43-(-2463; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.096 composto da:
asta 222: Trave in legno a falda Falda 2 fili 43-28 (L = 1.592)
asta 224: Trave in legno a falda Falda 2 fili 28-5 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.844
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0006
Uinst tot = 0.0006
Luce/Uinst,tot > limite
4.096/0.0006=7344.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.844
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.096/0.0003=12658.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.897
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0007
Ufin = 0.0007
Luce/Ufin > limite
4.096/0.0007=5820.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600

Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 2" 44-(-2463; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.199 composto da:
asta 219: Trave in legno a falda Falda 2 fili 44-30 (L = 1.696)
asta 221: Trave in legno a falda Falda 2 fili 30-7 (L = 2.504)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.864
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
4.199/0.0005=8161.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.864
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.199/0.0003=14055.1 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.921
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0007
Ufin = 0.0007
Luce/Ufin > limite
4.199/0.0007=6423.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 51-(-2504; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.073 composto da:
asta 87: Trave in legno a falda Falda 2 fili 51-29 (L = 2.121)
asta 88: Trave in legno a falda Falda 2 fili 51-29 (L = 0.224)
asta 89: Trave in legno a falda Falda 2 fili 51-29 (L = 0.224)
asta 234: Trave in legno a falda Falda 2 fili 29-6 (L = 0.457)
asta 235: Trave in legno a falda Falda 2 fili 29-6 (L = 2.047)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.131
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0002
Uinst tot = 0.0002
Luce/Uinst,tot > limite
5.073/0.0002=22445.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.118
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
5.073/0.0001=41039.9 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.202
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0003
Ufin = 0.0003
Luce/Ufin > limite
5.073/0.0003=17454.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 2" 51-(-2854; -716)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.692 composto da:
asta 68: Trave in legno a falda Falda 2 fili 51-14 (L = 0.82)
asta 69: Trave in legno a falda Falda 2 fili 51-14 (L = 0.468)
asta 70: Trave in legno a falda Falda 2 fili 51-14 (L = 0.785)
asta 71: Trave in legno a falda Falda 2 fili 51-14 (L = 0.503)
asta 72: Trave in legno a falda Falda 2 fili 51-14 (L = 0.816)
asta 73: Trave in legno a falda Falda 2 fili 51-14 (L = 0.472)
asta 74: Trave in legno a falda Falda 2 fili 51-14 (L = 0.715)
asta 75: Trave in legno a falda Falda 2 fili 51-14 (L = 0.573)
asta 76: Trave in legno a falda Falda 2 fili 51-14 (L = 0.68)
asta 77: Trave in legno a falda Falda 2 fili 51-14 (L = 0.86)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.392
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004

Uinst tot = 0.0004
Luce/Uinst,tot > limite
6.692/0.0004=16259.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.409
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
6.692/0.0002=32296.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.461
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0005
Ufin = 0.0005
Luce/Ufin > limite
6.692/0.0005=12505.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 3" 32-(-1176; 346)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.588 composto da:
asta 144: Trave in legno a falda Falda 3 fili 32-307 (L = 0.882)
asta 145: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 146: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 147: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 148: Trave in legno a falda Falda 3 fili 32-307 (L = 0.84)
asta 149: Trave in legno a falda Falda 3 fili 32-307 (L = 0.833)
asta 150: Trave in legno a falda Falda 3 fili 32-307 (L = 0.513)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.786
Kdef = 0
Uinst tot in x = 0.0023
Uinst tot in y = -0.0053
Uinst tot = 0.0053
Luce/Uinst,tot > limite
5.588/0.0053=1050.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.842
Kdef = 0
Uinst var in x = 0.0011
Uinst var in y = -0.0023
Uinst var = 0.0023
Luce/Uinst,var > limite
5.588/0.0023=2451.5 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.871
Kdef = 0.6

Ufin in x = 0.0031
Ufin in y = -0.0073
Ufin = 0.0073
Luce/Ufin > limite
5.588/0.0073=765.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 40-(-2154; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.705 composto da:
asta 265: Trave in legno a falda Falda 3 fili 40-41 (L = 1.063)
asta 273: Trave in legno a falda Falda 3 fili 41-42 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.855
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
3.705/0.0022=1702.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.855
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
3.705/0.0013=2922.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.891
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0027
Ufin = 0.0027
Luce/Ufin > limite
3.705/0.0027=1357.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 48-(-2070; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.718 composto da:
asta 264: Trave in legno a falda Falda 3 fili 48-49 (L = 2.076)
asta 269: Trave in legno a falda Falda 3 fili 49-50 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.517
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
4.718/0.0035=1361.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.517
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
4.718/0.0021=2236 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.586
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0043
Ufin = 0.0043
Luce/Ufin > limite
4.718/0.0043=1101.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 57-(-1986; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.38 composto da:
asta 259: Trave in legno a falda Falda 3 fili 57-58 (L = 2.738)
asta 272: Trave in legno a falda Falda 3 fili 58-52 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.556
Kdef = 0
Uinst tot in x = 0.0002
Uinst tot in y = -0.0038
Uinst tot = 0.0038
Luce/Uinst,tot > limite
5.38/0.0038=1419.6 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.647

Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0026
Uinst var = 0.0026
Luce/Uinst,var > limite
5.38/0.0026=2104.4 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.556
Kdef = 0.6
Ufin in x = 0.0002
Ufin in y = -0.0045
Ufin = 0.0045
Luce/Ufin > limite
5.38/0.0045=1187.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 66-68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.715 composto da:
asta 258: Trave in legno a falda Falda 3 fili 66-67 (L = 2.726)
asta 271: Trave in legno a falda Falda 3 fili 67-68 (L = 1.989)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.271
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0027
Uinst tot = 0.0027
Luce/Uinst,tot > limite
4.715/0.0027=1748.1 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.453
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0021
Uinst var = 0.0021
Luce/Uinst,var > limite
4.715/0.0021=2285.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.18
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0031
Ufin = 0.0031
Luce/Ufin > limite
4.715/0.0031=1528.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" 77-79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.69 composto da:
asta 257: Trave in legno a falda Falda 3 fili 77-78 (L = 2.725)
asta 270: Trave in legno a falda Falda 3 fili 78-79 (L = 0.965)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.817
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0015
Uinst tot = 0.0015
Luce/Uinst,tot > limite
3.69/0.0015=2428.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.998
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0011
Uinst var = 0.0011
Luce/Uinst,var > limite
3.69/0.0011=3284.1 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.726
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
3.69/0.0018=2082.1 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 3" (-1961; 589)-(-1104; -347)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.159 composto da:
asta 78: Trave in legno a falda Falda 3 fili 52-109 (L = 1.05)
asta 79: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 80: Trave in legno a falda Falda 3 fili 52-109 (L = 1.279)
asta 81: Trave in legno a falda Falda 3 fili 52-109 (L = 1.37)
asta 82: Trave in legno a falda Falda 3 fili 52-109 (L = 1.324)
asta 83: Trave in legno a falda Falda 3 fili 52-109 (L = 0.811)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.745
Kdef = 0
Uinst tot in x = -0.0012
Uinst tot in y = 0.0039
Uinst tot = 0.0039
Luce/Uinst,tot > limite
7.159/0.0039=1824.7 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.374
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
7.159/0.0009=7769.9 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.867
Kdef = 0.6
Ufin in x = -0.0019
Ufin in y = 0.0061
Ufin = 0.0061
Luce/Ufin > limite
7.159/0.0061=1178.8 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 3" (-2458; 579)-51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.026 composto da:
asta 504: Trave in legno a falda Falda 3 fili 12-51 (L = 0.922)
asta 505: Trave in legno a falda Falda 3 fili 12-51 (L = 1.265)
asta 506: Trave in legno a falda Falda 3 fili 12-51 (L = 1.308)
asta 507: Trave in legno a falda Falda 3 fili 12-51 (L = 1.095)
asta 508: Trave in legno a falda Falda 3 fili 12-51 (L = 0.26)
asta 509: Trave in legno a falda Falda 3 fili 12-51 (L = 0.958)
asta 510: Trave in legno a falda Falda 3 fili 12-51 (L = 0.358)
asta 511: Trave in legno a falda Falda 3 fili 12-51 (L = 0.86)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.262
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
7.026/0.0008=8818.8 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.262
Kdef = 0
Uinst var in x = -0.0001

Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
7.026/0.0005=14360.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.378
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
7.026/0.001=7160.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 95-96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.492 composto da:
asta 260: Trave in legno a falda Falda 4 fili 95-308 (L = 1.132)
asta 807: Trave in legno a falda Falda 4 fili 308-96 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.997
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0022
Uinst tot = 0.0022
Luce/Uinst,tot > limite
3.492/0.0022=1569.6 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.155
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
3.492/0.0007=5253 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.957
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0031
Ufin = 0.0031
Luce/Ufin > limite
3.492/0.0031=1128.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 103-105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.45 composto da:
asta 805: Trave in legno a falda Falda 4 fili 103-309 (L = 2.091)
asta 820: Trave in legno a falda Falda 4 fili 309-105 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.72
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.001
Uinst tot = 0.001
Luce/Uinst,tot > limite
4.45/0.001=4619.9 > 300 Comb: SLE rara, 19

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.091
Kdef = 0
Uinst var in x = 0
Uinst var in y = 0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.45/0.0002=19474.2 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.789
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
4.45/0.0014=3213 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 114-(-1482; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.408 composto da:
asta 802: Trave in legno a falda Falda 4 fili 114-310 (L = 2.612)
asta 803: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)
asta 804: Trave in legno a falda Falda 4 fili 114-310 (L = 0.218)
asta 817: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 818: Trave in legno a falda Falda 4 fili 310-117 (L = 0.218)
asta 819: Trave in legno a falda Falda 4 fili 310-117 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno

Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.741
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
5.408/0.0013=4059.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.393
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
5.408/0.0005=9910.7 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.828
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0018
Ufin = 0.0018
Luce/Ufin > limite
5.408/0.0018=2943.5 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 118-(-2445; 1167)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.223 composto da:
asta 58: Trave in legno a falda Falda 4 fili 118-60 (L = 0.838)
asta 59: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 60: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 61: Trave in legno a falda Falda 4 fili 118-60 (L = 0.353)
asta 62: Trave in legno a falda Falda 4 fili 118-60 (L = 0.154)
asta 63: Trave in legno a falda Falda 4 fili 118-60 (L = 0.767)
asta 64: Trave in legno a falda Falda 4 fili 118-60 (L = 0.233)
asta 65: Trave in legno a falda Falda 4 fili 118-60 (L = 1.041)
asta 66: Trave in legno a falda Falda 4 fili 118-60 (L = 1.274)
asta 67: Trave in legno a falda Falda 4 fili 118-60 (L = 1.016)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.343
Kdef = 0
Uinst tot in x = 0.0016
Uinst tot in y = 0.0057
Uinst tot = 0.0057
Luce/Uinst,tot > limite
8.223/0.0057=1453.6 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.864
Kdef = 0
Uinst var in x = -0.0003
Uinst var in y = -0.0009
Uinst var = 0.0009
Luce/Uinst,var > limite
8.223/0.0009=9151.2 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.414
Kdef = 0.6
Ufin in x = 0.0024
Ufin in y = 0.0087
Ufin = 0.0087
Luce/Ufin > limite
8.223/0.0087=942 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 4" 171-(-978; 695)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.263 composto da:
asta 799: Trave in legno a falda Falda 4 fili 171-317 (L = 2.467)
asta 800: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)
asta 801: Trave in legno a falda Falda 4 fili 171-317 (L = 0.218)
asta 814: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 815: Trave in legno a falda Falda 4 fili 317-166 (L = 0.218)
asta 816: Trave in legno a falda Falda 4 fili 317-166 (L = 1.923)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.398
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
5.263/0.0008=6524.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.151
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
5.263/0.0003=15834.4 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.48
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite

5.263/0.0011=4751.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 182-184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.29 composto da:
asta 798: Trave in legno a falda Falda 4 fili 182-318 (L = 1.93)
asta 813: Trave in legno a falda Falda 4 fili 318-184 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.031
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.29/0.0008=5176.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.346
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
4.29/0.0002=18917.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.017
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
4.29/0.0011=3823.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 191-192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.323 composto da:
asta 253: Trave in legno a falda Falda 4 fili 191-319 (L = 0.963)
asta 806: Trave in legno a falda Falda 4 fili 319-192 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.828
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0019
Uinst tot = 0.0019
Luce/Uinst,tot > limite
3.323/0.0019=1750.2 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.986
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0006
Uinst var = 0.0006
Luce/Uinst,var > limite
3.323/0.0006=5217 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.861
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0026
Ufin = 0.0026
Luce/Ufin > limite
3.323/0.0026=1282.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" 287-(214; 439)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 10.233 composto da:
asta 786: Trave in legno a falda Falda 4 fili 287-202 (L = 0.994)
asta 787: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 788: Trave in legno a falda Falda 4 fili 287-202 (L = 0.624)
asta 789: Trave in legno a falda Falda 4 fili 287-202 (L = 1.056)
asta 790: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 791: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 792: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 793: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 794: Trave in legno a falda Falda 4 fili 287-202 (L = 0.906)
asta 795: Trave in legno a falda Falda 4 fili 287-202 (L = 0.774)
asta 796: Trave in legno a falda Falda 4 fili 287-202 (L = 0.84)
asta 797: Trave in legno a falda Falda 4 fili 287-202 (L = 0.839)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 5.138
Kdef = 0

Uinst tot in x = 0.0046
Uinst tot in y = -0.0101
Uinst tot = 0.0101
Luce/Uinst,tot > limite
10.233/0.0101=1009 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.166
Kdef = 0
Uinst var in x = 0.0018
Uinst var in y = -0.0039
Uinst var = 0.0039
Luce/Uinst,var > limite
10.233/0.0039=2646.7 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 5.283
Kdef = 0.6
Ufin in x = 0.0064
Ufin in y = -0.014
Ufin = 0.014
Luce/Ufin > limite
10.233/0.014=731.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1060; 86)-(-32; 1171)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 8.118 composto da:
asta 116: Trave in legno a falda Falda 4 fili 164-221 (L = 1.145)
asta 117: Trave in legno a falda Falda 4 fili 164-221 (L = 1.29)
asta 118: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 119: Trave in legno a falda Falda 4 fili 164-221 (L = 0.156)
asta 120: Trave in legno a falda Falda 4 fili 164-221 (L = 0.194)
asta 121: Trave in legno a falda Falda 4 fili 164-221 (L = 0.929)
asta 122: Trave in legno a falda Falda 4 fili 164-221 (L = 1.282)
asta 123: Trave in legno a falda Falda 4 fili 164-221 (L = 1.28)
asta 124: Trave in legno a falda Falda 4 fili 164-221 (L = 0.562)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.501
Kdef = 0
Uinst tot in x = -0.0016
Uinst tot in y = 0.0054
Uinst tot = 0.0054
Luce/Uinst,tot > limite
8.118/0.0054=1497.4 > 300 Comb: SLE rara, 20

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.501
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = 0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite

8.118/0.0007=11745.8 > 300 Comb: SLE rara, 20

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.583
Kdef = 0.6
Ufin in x = -0.0024
Ufin in y = 0.0084
Ufin = 0.0084
Luce/Ufin > limite
8.118/0.0084=970.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,480 = 1,180
Neve = 0,500 + 0,000 = 0,500

Superelemento in legno a "Falda 4" (-1062; 88)-163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 332: Trave in legno a falda Falda 4 fili 315-316 (L = 3.677)
asta 809: Trave in legno a falda Falda 4 fili 316-163 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.819
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0042
Uinst tot = 0.0042
Luce/Uinst,tot > limite
6.036/0.0042=1435.7 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.574
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0024
Uinst var = 0.0024
Luce/Uinst,var > limite
6.036/0.0024=2499.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.819
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0053
Ufin = 0.0053
Luce/Ufin > limite
6.036/0.0053=1140.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1146; 88)-149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.036 composto da:
asta 331: Trave in legno a falda Falda 4 fili 147-314 (L = 3.677)
asta 808: Trave in legno a falda Falda 4 fili 314-149 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.819
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0077
Uinst tot = 0.0077
Luce/Uinst,tot > limite
6.036/0.0077=787.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.819
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0041
Uinst var = 0.0041
Luce/Uinst,var > limite
6.036/0.0041=1471.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0098
Ufin = 0.0098
Luce/Ufin > limite
6.036/0.0098=615 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1230; 88)-143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.037 composto da:
asta 333: Trave in legno a falda Falda 4 fili 141-313 (L = 3.677)
asta 810: Trave in legno a falda Falda 4 fili 313-143 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.942
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0091

Uinst tot = 0.0091
Luce/Uinst,tot > limite
6.037/0.0091=666.8 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.942
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0048
Uinst var = 0.0048
Luce/Uinst,var > limite
6.037/0.0048=1253.4 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0116
Ufin = 0.0116
Luce/Ufin > limite
6.037/0.0116=520.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1314; 88)-134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.037 composto da:
asta 334: Trave in legno a falda Falda 4 fili 132-312 (L = 3.678)
asta 811: Trave in legno a falda Falda 4 fili 312-134 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.942
Kdef = 0
Uinst tot in x = 0
Uinst tot in y = -0.0081
Uinst tot = 0.0081
Luce/Uinst,tot > limite
6.037/0.0081=744 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.82
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0043
Uinst var = 0.0043
Luce/Uinst,var > limite
6.037/0.0043=1402.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.942
Kdef = 0.6
Ufin in x = 0
Ufin in y = -0.0104
Ufin = 0.0104
Luce/Ufin > limite

6.037/0.0104=579.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 4" (-1398; 88)-122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.038 composto da:
asta 335: Trave in legno a falda Falda 4 fili 120-311 (L = 3.678)
asta 812: Trave in legno a falda Falda 4 fili 311-122 (L = 2.359)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.697
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0051
Uinst tot = 0.0051
Luce/Uinst,tot > limite
6.038/0.0051=1185.3 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.575
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0027
Uinst var = 0.0027
Luce/Uinst,var > limite
6.038/0.0027=2199.8 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.82
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0065
Ufin = 0.0065
Luce/Ufin > limite
6.038/0.0065=927 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 230-(27; 101)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.224 composto da:
asta 84: Trave in legno a falda Falda 5 fili 230-248 (L = 2.165)
asta 85: Trave in legno a falda Falda 5 fili 230-248 (L = 0.226)
asta 86: Trave in legno a falda Falda 5 fili 230-248 (L = 0.226)
asta 228: Trave in legno a falda Falda 5 fili 248-277 (L = 0.452)
asta 229: Trave in legno a falda Falda 5 fili 248-277 (L = 2.156)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.218
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0003
Uinst tot = 0.0003
Luce/Uinst,tot > limite
5.224/0.0003=18912.8 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.218
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0001
Uinst var = 0.0001
Luce/Uinst,var > limite
5.224/0.0001=35127.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.32
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0004
Ufin = 0.0004
Luce/Ufin > limite
5.224/0.0004=14593.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 233-(-13; 185)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.285 composto da:
asta 138: Trave in legno a falda Falda 5 fili 233-249 (L = 1.678)
asta 232: Trave in legno a falda Falda 5 fili 249-278 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.894
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0009
Uinst tot = 0.0009
Luce/Uinst,tot > limite
4.285/0.0009=4898.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.981
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.285/0.0005=8892.3 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.95
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
4.285/0.0011=3818.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 238-(-13; 17)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.25 composto da:
asta 137: Trave in legno a falda Falda 5 fili 238-247 (L = 1.643)
asta 231: Trave in legno a falda Falda 5 fili 247-276 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.947
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
4.25/0.0008=5355.2 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.947
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
4.25/0.0005=9432.4 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.002
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
4.25/0.001=4221.8 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600

Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5" 239-(-13; 269)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.434 composto da:
asta 139: Trave in legno a falda Falda 5 fili 239-250 (L = 0.827)
asta 233: Trave in legno a falda Falda 5 fili 250-279 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.131
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0008
Uinst tot = 0.0008
Luce/Uinst,tot > limite
3.434/0.0008=4250.1 > 300 Comb: SLE rara, 17

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.131
Kdef = 0
Uinst var in x = 0
Uinst var in y = -0.0004
Uinst var = 0.0004
Luce/Uinst,var > limite
3.434/0.0004=7709.9 > 300 Comb: SLE rara, 17

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.158
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.001
Ufin = 0.001
Luce/Ufin > limite
3.434/0.001=3313.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" 251-(-244; -533)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.657 composto da:
asta 163: Trave in legno a falda Falda 5 fili 251-245 (L = 0.772)
asta 164: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 165: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 166: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 167: Trave in legno a falda Falda 5 fili 251-245 (L = 0.84)
asta 168: Trave in legno a falda Falda 5 fili 251-245 (L = 0.525)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.452
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = 0.0005
Uinst tot = 0.0005
Luce/Uinst,tot > limite
4.657/0.0005=9519.6 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.452
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = 0.0003
Uinst var = 0.0003
Luce/Uinst,var > limite
4.657/0.0003=15179.6 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.506
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = 0.0006
Ufin = 0.0006
Luce/Ufin > limite
4.657/0.0006=7857.2 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 5" (-311; -67)-(-13; -67)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.293 composto da:
asta 136: Trave in legno a falda Falda 5 fili 244-246 (L = 0.686)
asta 230: Trave in legno a falda Falda 5 fili 246-275 (L = 2.607)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.076
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0007
Uinst tot = 0.0007
Luce/Uinst,tot > limite
3.293/0.0007=4625.7 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.076
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0004

Uinst var = 0.0004
Luce/Uinst,var > limite
3.293/0.0004=8097.1 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.099
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0009
Ufin = 0.0009
Luce/Ufin > limite
3.293/0.0009=3658.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 5"-"Falda 1" 267-(-865; 473)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 6.818 composto da:
asta 125: Trave in legno a falda Falda 5 fili 269-230 (L = 0.614)
asta 126: Trave in legno a falda Falda 5 fili 269-230 (L = 1.001)
asta 127: Trave in legno a falda Falda 5 fili 269-230 (L = 0.24)
asta 128: Trave in legno a falda Falda 5 fili 269-230 (L = 1.143)
asta 129: Trave in legno a falda Falda 5 fili 269-230 (L = 0.406)
asta 130: Trave in legno a falda Falda 5 fili 269-230 (L = 0.933)
asta 131: Trave in legno a falda Falda 5 fili 269-230 (L = 1.214)
asta 132: Trave in legno a falda Falda 5 fili 269-230 (L = 1.266)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.995
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0004
Uinst tot = 0.0004
Luce/Uinst,tot > limite
6.818/0.0004=15338.3 > 300 Comb: SLE rara, 9

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.964
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0002
Uinst var = 0.0002
Luce/Uinst,var > limite
6.818/0.0002=28168 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.109
Kdef = 0.6
Ufin in x = 0.0001
Ufin in y = -0.0006
Ufin = 0.0006
Luce/Ufin > limite
6.818/0.0006=12136.3 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600

Neve = 0,500 + 0,500 = 1,000
Vento = 0,600 + 0,000 = 0,600

Superelemento in legno a "Falda 6" 167-(-86; 1042)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.282 composto da:
asta 51: Trave in legno a falda Falda 6 fili 167-225 (L = 1.338)
asta 52: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 53: Trave in legno a falda Falda 6 fili 167-225 (L = 0.523)
asta 54: Trave in legno a falda Falda 6 fili 167-225 (L = 0.772)
asta 55: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 56: Trave in legno a falda Falda 6 fili 167-225 (L = 1.295)
asta 57: Trave in legno a falda Falda 6 fili 167-225 (L = 0.764)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.156
Kdef = 0
Uinst tot in x = -0.0014
Uinst tot in y = 0.0055
Uinst tot = 0.0055
Luce/Uinst,tot > limite
7.282/0.0055=1335.5 > 300 Comb: SLE rara, 18

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 5.137
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0007
Uinst var = 0.0007
Luce/Uinst,var > limite
7.282/0.0007=9818.1 > 300 Comb: SLE rara, 9

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.244
Kdef = 0.6
Ufin in x = -0.0022
Ufin in y = 0.0085
Ufin = 0.0085
Luce/Ufin > limite
7.282/0.0085=859.9 > 200
Condizione base per ricombinare la freccia: Variabile A
Comb: SLE quasi permanente, 2 + incrementi viscosi
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 1,000 + 0,180 = 1,180

Superelemento in legno a "Falda 6" 206-208

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.957 composto da:
asta 241: Trave in legno a falda Falda 6 fili 206-207 (L = 2.72)
asta 249: Trave in legno a falda Falda 6 fili 207-208 (L = 1.238)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.722
Kdef = 0
Uinst tot in x = -0.0001
Uinst tot in y = -0.0013
Uinst tot = 0.0013
Luce/Uinst,tot > limite
3.957/0.0013=2963.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.085
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0013
Uinst var = 0.0013
Luce/Uinst,var > limite
3.957/0.0013=3025.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.632
Kdef = 0.6
Ufin in x = -0.0001
Ufin in y = -0.0014
Ufin = 0.0014
Luce/Ufin > limite
3.957/0.0014=2835.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 216-218

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.963 composto da:
asta 240: Trave in legno a falda Falda 6 fili 216-217 (L = 2.738)
asta 248: Trave in legno a falda Falda 6 fili 217-218 (L = 2.224)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.373
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0025
Uinst tot = 0.0025
Luce/Uinst,tot > limite
4.963/0.0025=1973.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.556
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0022

Uinst var = 0.0022
Luce/Uinst,var > limite
4.963/0.0022=2237.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.282
Kdef = 0.6
Ufin in x = -0.0002
Ufin in y = -0.0027
Ufin = 0.0027
Luce/Ufin > limite
4.963/0.0027=1832 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 230-(-475; 583)

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.38 composto da:
asta 236: Trave in legno a falda Falda 6 fili 230-231 (L = 2.738)
asta 245: Trave in legno a falda Falda 6 fili 231-232 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 3.09
Kdef = 0
Uinst tot in x = -0.0003
Uinst tot in y = -0.0035
Uinst tot = 0.0035
Luce/Uinst,tot > limite
5.38/0.0035=1553.5 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 3.002
Kdef = 0
Uinst var in x = -0.0002
Uinst var in y = -0.0025
Uinst var = 0.0025
Luce/Uinst,var > limite
5.38/0.0025=2178.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 3.182
Kdef = 0.6
Ufin in x = -0.0003
Ufin in y = -0.0041
Ufin = 0.0041
Luce/Ufin > limite
5.38/0.0041=1324.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 233-236

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 4.42 composto da:
asta 329: Trave in legno a falda Falda 6 fili 236-233 (L = 1.778)
asta 246: Trave in legno a falda Falda 6 fili 236-237 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.395
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.003
Uinst tot = 0.003
Luce/Uinst,tot > limite
4.42/0.003=1481.7 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.395
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.0019
Uinst var = 0.0019
Luce/Uinst,var > limite
4.42/0.0019=2352.6 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.454
Kdef = 0.6
Ufin in x = -0.0007
Ufin in y = -0.0037
Ufin = 0.0037
Luce/Ufin > limite
4.42/0.0037=1209.9 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" 239-242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 3.474 composto da:
asta 330: Trave in legno a falda Falda 6 fili 242-239 (L = 0.832)
asta 247: Trave in legno a falda Falda 6 fili 242-243 (L = 2.642)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 14x18	Rettangolare	0.14	0.18	0.0252	0.00006804	0.00004116	0.000756	0.000588

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 1.712
Kdef = 0
Uinst tot in x = -0.0002
Uinst tot in y = -0.0016
Uinst tot = 0.0016
Luce/Uinst,tot > limite

3.474/0.0016=2173.2 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 1.712
Kdef = 0
Uinst var in x = -0.0001
Uinst var in y = -0.001
Uinst var = 0.001
Luce/Uinst,var > limite
3.474/0.001=3633.7 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 1.828
Kdef = 0.6
Ufin in x = -0.0009
Ufin in y = -0.002
Ufin = 0.002
Luce/Ufin > limite
3.474/0.002=1744.6 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-17; 585)-230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 7.145 composto da:
asta 512: Trave in legno a falda Falda 6 fili 271-230 (L = 0.643)
asta 513: Trave in legno a falda Falda 6 fili 271-230 (L = 0.36)
asta 514: Trave in legno a falda Falda 6 fili 271-230 (L = 0.94)
asta 515: Trave in legno a falda Falda 6 fili 271-230 (L = 0.288)
asta 516: Trave in legno a falda Falda 6 fili 271-230 (L = 1.109)
asta 517: Trave in legno a falda Falda 6 fili 271-230 (L = 0.17)
asta 518: Trave in legno a falda Falda 6 fili 271-230 (L = 1.178)
asta 519: Trave in legno a falda Falda 6 fili 271-230 (L = 1.195)
asta 520: Trave in legno a falda Falda 6 fili 271-230 (L = 1.262)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 4.177
Kdef = 0
Uinst tot in x = 0.0001
Uinst tot in y = -0.0009
Uinst tot = 0.0009
Luce/Uinst,tot > limite
7.145/0.0009=7883.3 > 300 Comb: SLE rara, 8

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 4.216
Kdef = 0
Uinst var in x = 0.0001
Uinst var in y = -0.0005
Uinst var = 0.0005
Luce/Uinst,var > limite
7.145/0.0005=13449.9 > 300 Comb: SLE rara, 8

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 4.294
Kdef = 0.6
Ufin in x = 0.0001

Ufin in y = -0.0011
Ufin = 0.0011
Luce/Ufin > limite
7.145/0.0011=6331.4 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Neve = 0,500 + 0,500 = 1,000

Superelemento in legno a "Falda 6" (-772; 346)-251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati generali

Superelemento di lunghezza complessiva L= 5.425 composto da:
asta 157: Trave in legno a falda Falda 6 fili 191-251 (L = 1.44)
asta 158: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 159: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 160: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 161: Trave in legno a falda Falda 6 fili 191-251 (L = 0.84)
asta 162: Trave in legno a falda Falda 6 fili 191-251 (L = 0.626)

Caratteristiche della sezione

Descrizione	Tipo	Base	Altezza	Area	Jx	Jy	Wx	Wy
R 16x24	Rettangolare	0.16	0.24	0.0384	0.00018432	0.00008192	0.001536	0.001024

Materiale: GL 24h EN 14080
β,x = 0; β,y = 0
Rapporto luce/freccia elastica limite = 300
Rapporto luce/freccia elastica differita = 200
Mensola Y: Nessuno; Mensola X: Nessuno
Classe di servizio 1

Verifica della freccia istantanea totale D.M. 17-01-18 §C4.4.7 Circolare 7 21-01-19

Sezione ad ascissa 2.784
Kdef = 0
Uinst tot in x = 0.0023
Uinst tot in y = -0.0048
Uinst tot = 0.0048
Luce/Uinst,tot > limite
5.425/0.0048=1136.5 > 300 Comb: SLE rara, 16

Verifica della freccia istantanea variabile D.M. 17-01-18 §4.4.7

Sezione ad ascissa 2.672
Kdef = 0
Uinst var in x = 0.0011
Uinst var in y = -0.0022
Uinst var = 0.0022
Luce/Uinst,var > limite
5.425/0.0022=2512.2 > 300 Comb: SLE rara, 16

Verifica della freccia finale EC5 §4.4.7 - EC5 2.2.3 (3)

Sezione ad ascissa 2.888
Kdef = 0.6
Ufin in x = 0.0029
Ufin in y = -0.0062
Ufin = 0.0062
Luce/Ufin > limite
5.425/0.0062=868.7 > 200
Coefficienti combinatori impiegati:
Pesi strutturali = 1,000 + 0,600 = 1,600
Permanenti portati = 1,000 + 0,600 = 1,600
Variabile A = 0,700 + 0,180 = 0,880
Neve = 0,500 + 0,500 = 1,000

1.7 Verifica sismica globale

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Desc.: *descrizione.*
Stato limite: *(muratura) V=Taglio; PF=Pressoflessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*

***Molt.**: moltiplicatore minimo della azione sismica che produce lo stato limite.*
***Comb.**: combinazione.*
***PGA**: accelerazione al suolo.*
***iPGA (ζE)**: indicatore di rischio sismico in termini di PGA ovvero rapporto tra l'azione sismica massima sopportabile dall'elemento e l'azione sismica massima che si utilizzerebbe nel progetto nuovo (§C8.3).*
***TR**: tempo di ritorno.*
***(TR/TRrif)^.41**: indicatore di rischio sismico in termini di periodo di ritorno.*
***fa**: fattore di accelerazione.*
***Stato limite**: (muratura) V=Taglio; PF=Presso flessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
***Coeff.s.**: coefficiente minimo prodotto dallo stato limite.*
***Verifica**: stato di verifica.*
***Trave**: titolo della trave.*
***Pressoflessione**: dati della verifica a pressoflessione.*
***Coeff.s.**: coefficiente di sicurezza a flessione.*
***iTR**: indicatore di rischio sismico in termini di tempo di ritorno.*
***campata**: campata di riferimento.*
***dist.**: ascissa relativa all'inizio della campata. [m]*
***Taglio**: dati della verifica a taglio.*
***Coeff.s.**: coefficiente di sicurezza a taglio.*
***Maschio**: maschio.*
***Stato limite**: (maschio muratura) V=Taglio; PF=Presso flessione; PFFP=Presso flessione fuori piano; R=Ribaltamento.*
***Trave**: trave di collegamento in muratura.*
***Stato limite**: (trave muratura) V=Taglio; F=Flessione.*
***S. L.**: stato limite di riferimento.*
***TR,C**: periodo di ritorno di capacità.*
***PGA,C**: accelerazione di aggancio di capacità.*
***TR,Rif**: periodo di ritorno di riferimento.*
***PGA,Rif**: accelerazione di aggancio di riferimento.*
***Tipo rottura**: tipo di rottura che fornisce il valore minimo degli elementi considerati.*
***PAM**: perdita media annua attesa.*
***Classe PAM**: classe di rischio PAM.*
***IS-V**: indice di sicurezza.*
***Classe IS-V**: classe di rischio IS-V.*
***λ,SLR**: frequenza media annua di superamento in Stato Limite di Ricostruzione.*
***λ,SLC**: frequenza media annua di superamento in Stato Limite di Collasso.*
***λ,SLV**: frequenza media annua di superamento in Stato Limite di salvaguardia della Vita.*
***λ,SLD**: frequenza media annua di superamento in Stato Limite di Danno.*
***λ,SLO**: frequenza media annua di superamento in Stato Limite di Operatività.*
***λ,SLID**: frequenza media annua di superamento in Stato Limite di Inizio Danno.*

Verifica di elementi dotati di indicatori di rischio sismico mediante analisi con fattore q

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.) § C8.7.1

Accelerazioni e tempi di ritorno

Accelerazione di aggancio SLO (ag/g_SLO*S*ST) PGA,SLOrif = 0.081
Accelerazione di aggancio SLD (ag/g_SLD*S*ST) PGA,SLDrif = 0.101
Accelerazione di aggancio SLV (ag/g_SLV*S*ST) PGA,SLVrif = 0.244
Tr,SLOrif = 30 anni
Tr,SLDrif = 50 anni
Tr,SLVrif = 475 anni

Indicatori minimi riferiti al solo materiale muratura

Desc.	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	fa
Maschio 197	PF	0.165	SLV 3	0.0383	0.1569	5	0.1546	0.1526
Maschio 15	V	0.711	SLV 4	0.1709	0.6994	186	0.6809	0.6987
Maschio 247	PFFP	0.247	SLV 2	0.0572	0.2342	13	0.2287	0.2279
Maschio 264	R	0.592	SLV 4	0.1402	0.5737	118	0.565	0.5732
Trave di accoppiamento 19	PF	0.203	SLV 3	0.0467	0.1911	8	0.1874	0.1859
Trave di accoppiamento 15	V	0.11	SLV 3	0.0261	0.1068	2	0.1062	0.1039

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	5.021	SLU 83	Si
Maschio 1	V SLU	7.943	SLU 84	Si
Maschio 1	PF	3.153	SLV 13	Si
Maschio 1	V	5.939	SLV 8	Si
Maschio 1	PFFP	8.818	SLV 16	Si
Maschio 1	R	1.965	SLV 7	Si
Maschio 2	PF SLU	3.756	SLU 78	Si
Maschio 2	V SLU	9.739	SLU 83	Si
Maschio 2	PF	1.072	SLV 13	Si
Maschio 2	V	6.886	SLV 5	Si
Maschio 2	PFFP	3.369	SLV 13	Si
Maschio 2	R	2.376	SLV 4	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 3	PF SLU	7.345	SLU 47	Si
Maschio 3	V SLU	5.008	SLU 78	Si
Maschio 3	PF	3.702	SLV 16	Si
Maschio 3	V	4.285	SLV 12	Si
Maschio 3	PFFP	9.06	SLV 15	Si
Maschio 3	R	2.357	SLV 6	Si
Maschio 4	PF SLU	3.59	SLU 47	Si
Maschio 4	V SLU	2.923	SLU 83	Si
Maschio 4	PF	2.175	SLV 14	Si
Maschio 4	V	2.886	SLV 14	Si
Maschio 4	PFFP	18.054	SLV 1	Si
Maschio 4	R	1.947	SLV 12	Si
Maschio 7	PF SLU	9.138	SLU 83	Si
Maschio 7	V SLU	6.635	SLU 83	Si
Maschio 7	PF	2.882	SLV 9	Si
Maschio 7	V	3.927	SLV 5	Si
Maschio 7	PFFP	43.777	SLV 13	Si
Maschio 7	R	1.249	SLV 8	Si
Maschio 9	PF SLU	8.96	SLU 81	Si
Maschio 9	V SLU	5.365	SLU 77	Si
Maschio 9	PF	3.051	SLV 15	Si
Maschio 9	V	4.799	SLV 13	Si
Maschio 9	PFFP	9.093	SLV 14	Si
Maschio 9	R	2.253	SLV 7	Si
Maschio 10	PF SLU	3.328	SLU 77	Si
Maschio 10	V SLU	2.362	SLU 83	Si
Maschio 10	PF	1.748	SLV 13	Si
Maschio 10	V	1.685	SLV 15	Si
Maschio 10	PFFP	16.796	SLV 14	Si
Maschio 10	R	1.95	SLV 7	Si
Maschio 11	PF SLU	4.015	SLU 83	Si
Maschio 11	V SLU	3.618	SLU 84	Si
Maschio 11	PF	1.917	SLV 13	Si
Maschio 11	V	1.927	SLV 4	Si
Maschio 11	PFFP	45.222	SLV 15	Si
Maschio 11	R	1.794	SLV 7	Si
Maschio 12	PF SLU	1.145	SLU 83	Si
Maschio 12	V SLU	1.823	SLU 84	Si
Maschio 12	PF	2.222	SLV 1	Si
Maschio 12	V	1.394	SLV 15	Si
Maschio 12	PFFP	65.561	SLV 8	Si
Maschio 12	R	1.754	SLV 9	Si
Maschio 13	PF SLU	6.276	SLU 83	Si
Maschio 13	V SLU	7.202	SLU 78	Si
Maschio 13	PF	3.675	SLV 9	Si
Maschio 13	V	3.39	SLV 8	Si
Maschio 13	PFFP	26.516	SLV 16	Si
Maschio 13	R	1.842	SLV 7	Si
Maschio 14	PF SLU	5.2	SLU 47	Si
Maschio 14	V SLU	3.08	SLU 83	Si
Maschio 14	PF	0	SLV 13	No
Maschio 14	V	2.654	SLV 14	Si
Maschio 14	PFFP	0	SLV 16	No
Maschio 14	R	1.783	SLV 7	Si
Maschio 15	PF SLU	1.596	SLU 84	Si
Maschio 15	V SLU	1.288	SLU 84	Si
Maschio 15	PF	1.973	SLV 8	Si
Maschio 15	V	0.842	SLV 4	No
Maschio 15	PFFP	15.427	SLV 13	Si
Maschio 15	R	4.132	SLV 7	Si
Maschio 16	PF SLU	3.315	SLU 84	Si
Maschio 16	V SLU	8.503	SLU 84	Si
Maschio 16	PF	1.958	SLV 15	Si
Maschio 16	V	1.843	SLV 2	Si
Maschio 16	PFFP	10.967	SLV 16	Si
Maschio 16	R	3.021	SLV 8	Si
Maschio 17	PF SLU	18.268	SLU 84	Si
Maschio 17	V SLU	2.137	SLU 83	Si
Maschio 17	PF	5.688	SLV 12	Si
Maschio 17	V	2.337	SLV 5	Si
Maschio 17	PFFP	39.838	SLV 14	Si
Maschio 17	R	1.498	SLV 7	Si
Maschio 18	PF SLU	1.89	SLU 84	Si
Maschio 18	V SLU	2.759	SLU 78	Si
Maschio 18	PF	1.491	SLV 4	Si
Maschio 18	V	2.29	SLV 4	Si
Maschio 18	PFFP	45.944	SLV 4	Si
Maschio 18	R	2.449	SLV 9	Si
Maschio 19	PF SLU	3.932	SLU 84	Si
Maschio 19	V SLU	2.501	SLU 84	Si
Maschio 19	PF	2.33	SLV 4	Si
Maschio 19	V	1.79	SLV 8	Si
Maschio 19	PFFP	200.015	SLV 2	Si
Maschio 19	R	3.467	SLV 8	Si
Maschio 20	PF SLU	2.613	SLU 84	Si
Maschio 20	V SLU	3.873	SLU 84	Si
Maschio 20	PF	2.566	SLV 12	Si
Maschio 20	V	2.185	SLV 8	Si
Maschio 20	PFFP	23.992	SLV 4	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 20	R	1.444	SLV 11	Si
Maschio 21	PF SLU	19.164	SLU 49	Si
Maschio 21	V SLU	3.634	SLU 84	Si
Maschio 21	PF	2.555	SLV 16	Si
Maschio 21	V	3.3	SLV 16	Si
Maschio 21	PFFP	31.303	SLV 14	Si
Maschio 21	R	1.471	SLV 7	Si
Maschio 22	PF SLU	11.647	SLU 83	Si
Maschio 22	V SLU	17.511	SLU 83	Si
Maschio 22	PF	1.881	SLV 14	Si
Maschio 22	V	2.574	SLV 1	Si
Maschio 22	PFFP	49.924	SLV 16	Si
Maschio 22	R	1.454	SLV 5	Si
Maschio 25	PF SLU	7.618	SLU 84	Si
Maschio 25	V SLU	8.814	SLU 84	Si
Maschio 25	PF	0.852	SLV 14	No
Maschio 25	V	2.309	SLV 16	Si
Maschio 25	PFFP	56.8	SLV 14	Si
Maschio 25	R	1.766	SLV 5	Si
Maschio 26	PF SLU	7.579	SLU 83	Si
Maschio 26	V SLU	8.673	SLU 83	Si
Maschio 26	PF	1.426	SLV 1	Si
Maschio 26	V	2.076	SLV 16	Si
Maschio 26	PFFP	49.71	SLV 6	Si
Maschio 26	R	1.532	SLV 12	Si
Maschio 27	PF SLU	1.501	SLU 84	Si
Maschio 27	V SLU	13.357	SLU 84	Si
Maschio 27	PF	0.61	SLV 3	No
Maschio 27	V	3.87	SLV 15	Si
Maschio 27	PFFP	44.412	SLV 3	Si
Maschio 27	R	1.315	SLV 7	Si
Maschio 28	PF SLU	16.666	SLU 78	Si
Maschio 28	V SLU	3.28	SLU 83	Si
Maschio 28	PF	2.914	SLV 1	Si
Maschio 28	V	3.072	SLV 1	Si
Maschio 28	PFFP	27.239	SLV 2	Si
Maschio 28	R	1.565	SLV 11	Si
Maschio 30	PF SLU	7.346	SLU 84	Si
Maschio 30	V SLU	7.899	SLU 83	Si
Maschio 30	PF	1.349	SLV 16	Si
Maschio 30	V	2.814	SLV 1	Si
Maschio 30	PFFP	17.778	SLV 12	Si
Maschio 30	R	8.705	SLV 6	Si
Maschio 31	PF SLU	17.029	SLU 83	Si
Maschio 31	V SLU	4.65	SLU 83	Si
Maschio 31	PF	3.494	SLV 16	Si
Maschio 31	V	1.719	SLV 14	Si
Maschio 31	PFFP	19.786	SLV 14	Si
Maschio 31	R	1.724	SLV 7	Si
Maschio 32	PF SLU	2.868	SLU 83	Si
Maschio 32	V SLU	4.296	SLU 70	Si
Maschio 32	PF	3.281	SLV 6	Si
Maschio 32	V	2.461	SLV 11	Si
Maschio 32	PFFP	56.89	SLV 15	Si
Maschio 32	R	2.322	SLV 6	Si
Maschio 33	PF SLU	21.763	SLU 84	Si
Maschio 33	V SLU	1.745	SLU 84	Si
Maschio 33	PF	5.578	SLV 15	Si
Maschio 33	V	1.264	SLV 11	Si
Maschio 33	PFFP	211.127	SLV 15	Si
Maschio 33	R	3.349	SLV 6	Si
Maschio 34	PF SLU	1.261	SLU 84	Si
Maschio 34	V SLU	1.626	SLU 84	Si
Maschio 34	PF	1.527	SLV 12	Si
Maschio 34	V	2.044	SLV 8	Si
Maschio 34	PFFP	37.796	SLV 13	Si
Maschio 34	R	1.744	SLV 8	Si
Maschio 36	PF SLU	4.948	SLU 84	Si
Maschio 36	V SLU	2.082	SLU 84	Si
Maschio 36	PF	2.814	SLV 7	Si
Maschio 36	V	2.347	SLV 7	Si
Maschio 36	PFFP	27.572	SLV 14	Si
Maschio 36	R	1.156	SLV 6	Si
Maschio 38	PF SLU	15.536	SLU 83	Si
Maschio 38	V SLU	8.669	SLU 83	Si
Maschio 38	PF	4.27	SLV 14	Si
Maschio 38	V	1.694	SLV 1	Si
Maschio 38	PFFP	20.169	SLV 6	Si
Maschio 38	R	1.788	SLV 12	Si
Maschio 39	PF SLU	7.595	SLU 83	Si
Maschio 39	V SLU	3.148	SLU 83	Si
Maschio 39	PF	2.112	SLV 3	Si
Maschio 39	V	2.463	SLV 3	Si
Maschio 39	PFFP	4.838	SLV 1	Si
Maschio 39	R	2.072	SLV 12	Si
Maschio 40	PF SLU	5.082	SLU 84	Si
Maschio 40	V SLU	1.642	SLU 83	Si
Maschio 40	PF	2.581	SLV 7	Si
Maschio 40	V	2.258	SLV 10	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 40	PFFP	30.724	SLV 1	Si
Maschio 40	R	1.447	SLV 10	Si
Maschio 42	PF SLU	2.434	SLU 84	Si
Maschio 42	V SLU	11.275	SLU 83	Si
Maschio 42	PF	1.347	SLV 4	Si
Maschio 42	V	1.684	SLV 15	Si
Maschio 42	PFFP	12.092	SLV 3	Si
Maschio 42	R	3.228	SLV 11	Si
Maschio 43	PF SLU	1.002	SLU 84	Si
Maschio 43	V SLU	2.519	SLU 83	Si
Maschio 43	PF	0.93	SLV 7	No
Maschio 43	V	2.051	SLV 15	Si
Maschio 43	PFFP	13.786	SLV 2	Si
Maschio 43	R	4.345	SLV 12	Si
Maschio 44	PF SLU	78.217	SLU 83	Si
Maschio 44	V SLU	7.522	SLU 84	Si
Maschio 44	PF	26.268	SLV 10	Si
Maschio 44	V	4.492	SLV 11	Si
Maschio 44	PFFP	174.206	SLV 14	Si
Maschio 44	R	1.437	SLV 10	Si
Maschio 45	PF SLU	3.48	SLU 84	Si
Maschio 45	V SLU	3.668	SLU 84	Si
Maschio 45	PF	1.832	SLV 4	Si
Maschio 45	V	2.225	SLV 4	Si
Maschio 45	PFFP	66.336	SLV 15	Si
Maschio 45	R	1.517	SLV 6	Si
Maschio 46	PF SLU	3.455	SLU 84	Si
Maschio 46	V SLU	4.322	SLU 83	Si
Maschio 46	PF	1.831	SLV 2	Si
Maschio 46	V	2.303	SLV 15	Si
Maschio 46	PFFP	38.938	SLV 4	Si
Maschio 46	R	1.949	SLV 12	Si
Maschio 47	PF SLU	4.094	SLU 78	Si
Maschio 47	V SLU	3.023	SLU 84	Si
Maschio 47	PF	1.918	SLV 2	Si
Maschio 47	V	1.943	SLV 4	Si
Maschio 47	PFFP	15.358	SLV 1	Si
Maschio 47	R	1.983	SLV 12	Si
Maschio 48	PF SLU	15.02	SLU 82	Si
Maschio 48	V SLU	7.996	SLU 78	Si
Maschio 48	PF	3.49	SLV 4	Si
Maschio 48	V	6.207	SLV 6	Si
Maschio 48	PFFP	9.014	SLV 1	Si
Maschio 48	R	2.288	SLV 12	Si
Maschio 49	PF SLU	31.406	SLU 82	Si
Maschio 49	V SLU	664.991	SLU 40	Si
Maschio 49	PF	1.917	SLV 7	Si
Maschio 49	V	14.331	SLV 10	Si
Maschio 49	PFFP	40.504	SLV 3	Si
Maschio 49	R	1.949	SLV 12	Si
Maschio 50	PF SLU	3.455	SLU 83	Si
Maschio 50	V SLU	3.96	SLU 83	Si
Maschio 50	PF	2.127	SLV 10	Si
Maschio 50	V	3.342	SLV 10	Si
Maschio 50	PFFP	36.17	SLV 2	Si
Maschio 50	R	1.176	SLV 9	Si
Maschio 52	PF SLU	8.309	SLU 81	Si
Maschio 52	V SLU	3.394	SLU 83	Si
Maschio 52	PF	3.435	SLV 5	Si
Maschio 52	V	2.969	SLV 1	Si
Maschio 52	PFFP	18.148	SLV 6	Si
Maschio 52	R	2.149	SLV 11	Si
Maschio 53	PF SLU	5.212	SLU 81	Si
Maschio 53	V SLU	3.373	SLU 78	Si
Maschio 53	PF	2.839	SLV 3	Si
Maschio 53	V	3.613	SLV 7	Si
Maschio 53	PFFP	8.821	SLV 2	Si
Maschio 53	R	2.592	SLV 9	Si
Maschio 54	PF SLU	30.409	SLU 48	Si
Maschio 54	V SLU	30.953	SLU 83	Si
Maschio 54	PF	9.961	SLV 6	Si
Maschio 54	V	5.919	SLV 10	Si
Maschio 54	PFFP	7.823	SLV 2	Si
Maschio 54	R	2.06	SLV 9	Si
Maschio 55	PF SLU	69.366	SLU 31	Si
Maschio 55	V SLU	22.214	SLU 83	Si
Maschio 55	PF	3.737	SLV 9	Si
Maschio 55	V	3.266	SLV 9	Si
Maschio 55	PFFP	5.706	SLV 15	Si
Maschio 55	R	1.076	SLV 5	Si
Maschio 56	PF SLU	17.071	SLU 31	Si
Maschio 56	V SLU	11.202	SLU 84	Si
Maschio 56	PF	2.039	SLV 16	Si
Maschio 56	V	3.889	SLV 1	Si
Maschio 56	PFFP	4.448	SLV 11	Si
Maschio 56	R	0.78	SLV 5	No
Maschio 57	PF SLU	3.658	SLU 68	Si
Maschio 57	V SLU	4.51	SLU 84	Si
Maschio 57	PF	1.877	SLV 16	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 57	V	4.183	SLV 16	Si
Maschio 57	PFFP	6.5	SLV 7	Si
Maschio 57	R	0.988	SLV 6	No
Maschio 59	PF SLU	8.941	SLU 71	Si
Maschio 59	V SLU	22.118	SLU 71	Si
Maschio 59	PF	4.079	SLV 10	Si
Maschio 59	V	4.929	SLV 9	Si
Maschio 59	PFFP	11.722	SLV 15	Si
Maschio 59	R	0.664	SLV 6	No
Maschio 61	PF SLU	14.905	SLU 82	Si
Maschio 61	V SLU	8.143	SLU 83	Si
Maschio 61	PF	5.581	SLV 7	Si
Maschio 61	V	2.753	SLV 1	Si
Maschio 61	PFFP	10.595	SLV 3	Si
Maschio 61	R	0.963	SLV 10	No
Maschio 62	PF SLU	3.69	SLU 84	Si
Maschio 62	V SLU	3.074	SLU 84	Si
Maschio 62	PF	3.349	SLV 8	Si
Maschio 62	V	2.601	SLV 12	Si
Maschio 62	PFFP	13.795	SLV 4	Si
Maschio 62	R	0.758	SLV 5	No
Maschio 63	PF SLU	5.75	SLU 76	Si
Maschio 63	V SLU	11.675	SLU 76	Si
Maschio 63	PF	0.761	SLV 14	No
Maschio 63	V	4.205	SLV 14	Si
Maschio 63	PFFP	3.971	SLV 14	Si
Maschio 63	R	0.883	SLV 5	No
Maschio 64	PF SLU	12.908	SLU 81	Si
Maschio 64	V SLU	10.944	SLU 82	Si
Maschio 64	PF	2.402	SLV 14	Si
Maschio 64	V	2.421	SLV 14	Si
Maschio 64	PFFP	13.126	SLV 16	Si
Maschio 64	R	0.699	SLV 5	No
Maschio 65	PF SLU	30.507	SLU 50	Si
Maschio 65	V SLU	67.11	SLU 40	Si
Maschio 65	PF	2.279	SLV 3	Si
Maschio 65	V	2.229	SLV 3	Si
Maschio 65	PFFP	14.153	SLV 3	Si
Maschio 65	R	0.721	SLV 10	No
Maschio 66	PF SLU	18.506	SLU 44	Si
Maschio 66	V SLU	17.782	SLU 83	Si
Maschio 66	PF	0.181	SLV 3	No
Maschio 66	V	1.982	SLV 3	Si
Maschio 66	PFFP	2.622	SLV 3	Si
Maschio 66	R	0.801	SLV 10	No
Maschio 67	PF SLU	6.871	SLU 83	Si
Maschio 67	V SLU	5.481	SLU 78	Si
Maschio 67	PF	2.208	SLV 14	Si
Maschio 67	V	2.848	SLV 16	Si
Maschio 67	PFFP	9.498	SLV 13	Si
Maschio 67	R	0.718	SLV 8	No
Maschio 68	PF SLU	18.32	SLU 82	Si
Maschio 68	V SLU	23.801	SLU 81	Si
Maschio 68	PF	2.787	SLV 14	Si
Maschio 68	V	2.197	SLV 1	Si
Maschio 68	PFFP	19.852	SLV 16	Si
Maschio 68	R	0.704	SLV 5	No
Maschio 69	PF SLU	3.782	SLU 84	Si
Maschio 69	V SLU	12.083	SLU 83	Si
Maschio 69	PF	0.987	SLV 3	No
Maschio 69	V	2.61	SLV 3	Si
Maschio 69	PFFP	17.177	SLV 8	Si
Maschio 69	R	0.723	SLV 9	No
Maschio 70	PF SLU	9.593	SLU 77	Si
Maschio 70	V SLU	20.72	SLU 77	Si
Maschio 70	PF	1.635	SLV 16	Si
Maschio 70	V	1.899	SLV 1	Si
Maschio 70	PFFP	18.128	SLV 14	Si
Maschio 70	R	0.813	SLV 6	No
Maschio 71	PF SLU	2.74	SLU 83	Si
Maschio 71	V SLU	5.613	SLU 83	Si
Maschio 71	PF	0.827	SLV 2	No
Maschio 71	V	1.802	SLV 2	Si
Maschio 71	PFFP	20.697	SLV 3	Si
Maschio 71	R	0.635	SLV 9	No
Maschio 72	PF SLU	15.291	SLU 43	Si
Maschio 72	V SLU	11.918	SLU 50	Si
Maschio 72	PF	1.952	SLV 2	Si
Maschio 72	V	3.42	SLV 2	Si
Maschio 72	PFFP	5.751	SLV 2	Si
Maschio 72	R	0.794	SLV 11	No
Maschio 73	PF SLU	14.129	SLU 77	Si
Maschio 73	V SLU	6.208	SLU 80	Si
Maschio 73	PF	7.582	SLV 9	Si
Maschio 73	V	2.852	SLV 7	Si
Maschio 73	PFFP	26.323	SLV 15	Si
Maschio 73	R	1.609	SLV 6	Si
Maschio 74	PF SLU	2.585	SLU 84	Si
Maschio 74	V SLU	2.916	SLU 84	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 74	PF	3.054	SLV 7	Si
Maschio 74	V	2.622	SLV 11	Si
Maschio 74	PFFP	13.775	SLV 3	Si
Maschio 74	R	0.683	SLV 10	No
Maschio 75	PF SLU	19.185	SLU 73	Si
Maschio 75	V SLU	3.563	SLU 81	Si
Maschio 75	PF	6.912	SLV 11	Si
Maschio 75	V	3.738	SLV 10	Si
Maschio 75	PFFP	8.691	SLV 1	Si
Maschio 75	R	1.044	SLV 11	Si
Maschio 78	PF SLU	9.225	SLU 84	Si
Maschio 78	V SLU	6.262	SLU 84	Si
Maschio 78	PF	4.163	SLV 16	Si
Maschio 78	V	3.937	SLV 10	Si
Maschio 78	PFFP	11.995	SLV 2	Si
Maschio 78	R	0.981	SLV 11	No
Maschio 81	PF SLU	2.545	SLU 44	Si
Maschio 81	V SLU	2.384	SLU 84	Si
Maschio 81	PF	0.97	SLV 3	No
Maschio 81	V	2.036	SLV 1	Si
Maschio 81	PFFP	7.321	SLV 16	Si
Maschio 81	R	0.8	SLV 5	No
Maschio 82	PF SLU	20.49	SLU 44	Si
Maschio 82	V SLU	18.5	SLU 42	Si
Maschio 82	PF	0.654	SLV 3	No
Maschio 82	V	3.066	SLV 3	Si
Maschio 82	PFFP	5.469	SLV 8	Si
Maschio 82	R	0.825	SLV 10	No
Maschio 83	PF SLU	146.466	SLU 50	Si
Maschio 83	V SLU	37.33	SLU 79	Si
Maschio 83	PF	4.014	SLV 6	Si
Maschio 83	V	3.5	SLV 10	Si
Maschio 83	PFFP	6.125	SLV 3	Si
Maschio 83	R	1.036	SLV 10	Si
Maschio 86	PF SLU	9.316	SLU 44	Si
Maschio 86	V SLU	22.619	SLU 41	Si
Maschio 86	PF	0	SLV 7	No
Maschio 86	V	5.355	SLV 1	Si
Maschio 86	PFFP	0	SLV 12	No
Maschio 86	R	0.653	SLV 5	No
Maschio 87	PF SLU	10.822	SLU 43	Si
Maschio 87	V SLU	5.354	SLU 84	Si
Maschio 87	PF	2.363	SLV 12	Si
Maschio 87	V	3.598	SLV 14	Si
Maschio 87	PFFP	2.428	SLV 12	Si
Maschio 87	R	0.677	SLV 5	No
Maschio 89	PF SLU	24.652	SLU 50	Si
Maschio 89	V SLU	14.302	SLU 71	Si
Maschio 89	PF	5.252	SLV 12	Si
Maschio 89	V	5.584	SLV 10	Si
Maschio 89	PFFP	5.257	SLV 15	Si
Maschio 89	R	0.993	SLV 5	No
Maschio 91	PF SLU	6.242	SLU 81	Si
Maschio 91	V SLU	24.826	SLU 69	Si
Maschio 91	PF	1.265	SLV 3	Si
Maschio 91	V	4.081	SLV 1	Si
Maschio 91	PFFP	3.367	SLV 7	Si
Maschio 91	R	0.944	SLV 10	No
Maschio 92	PF SLU	11.194	SLU 60	Si
Maschio 92	V SLU	9.526	SLU 59	Si
Maschio 92	PF	5.814	SLV 6	Si
Maschio 92	V	5.456	SLV 7	Si
Maschio 92	PFFP	12.073	SLV 5	Si
Maschio 92	R	1.821	SLV 11	Si
Maschio 93	PF SLU	5.206	SLU 81	Si
Maschio 93	V SLU	13.748	SLU 81	Si
Maschio 93	PF	1.923	SLV 16	Si
Maschio 93	V	6.506	SLV 14	Si
Maschio 93	PFFP	4.497	SLV 16	Si
Maschio 93	R	1.005	SLV 5	Si
Maschio 94	PF SLU	23.046	SLU 84	Si
Maschio 94	V SLU	12.783	SLU 82	Si
Maschio 94	PF	2.148	SLV 16	Si
Maschio 94	V	2.449	SLV 14	Si
Maschio 94	PFFP	6.857	SLV 16	Si
Maschio 94	R	0.8	SLV 5	No
Maschio 95	PF SLU	83.417	SLU 43	Si
Maschio 95	V SLU	64.123	SLU 50	Si
Maschio 95	PF	2.557	SLV 3	Si
Maschio 95	V	2.34	SLV 3	Si
Maschio 95	PFFP	9.072	SLV 3	Si
Maschio 95	R	0.795	SLV 10	No
Maschio 96	PF SLU	6.453	SLU 66	Si
Maschio 96	V SLU	22.302	SLU 43	Si
Maschio 96	PF	0.844	SLV 3	No
Maschio 96	V	2.897	SLV 3	Si
Maschio 96	PFFP	3.647	SLV 3	Si
Maschio 96	R	0.903	SLV 10	No
Maschio 97	PF SLU	10.228	SLU 69	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 97	V SLU	14.71	SLU 51	Si
Maschio 97	PF	2.953	SLV 13	Si
Maschio 97	V	3.559	SLV 16	Si
Maschio 97	PFFP	7.01	SLV 13	Si
Maschio 97	R	0.765	SLV 8	No
Maschio 98	PF SLU	41.66	SLU 29	Si
Maschio 98	V SLU	91.445	SLU 72	Si
Maschio 98	PF	2.223	SLV 14	Si
Maschio 98	V	2.335	SLV 16	Si
Maschio 98	PFFP	12.594	SLV 13	Si
Maschio 98	R	0.709	SLV 8	No
Maschio 99	PF SLU	11.512	SLU 61	Si
Maschio 99	V SLU	18.077	SLU 83	Si
Maschio 99	PF	0.871	SLV 16	No
Maschio 99	V	2.266	SLV 16	Si
Maschio 99	PFFP	7.442	SLV 8	Si
Maschio 99	R	0.621	SLV 5	No
Maschio 100	PF SLU	18.61	SLU 63	Si
Maschio 100	V SLU	90.498	SLU 51	Si
Maschio 100	PF	0.443	SLV 3	No
Maschio 100	V	4.181	SLV 16	Si
Maschio 100	PFFP	9.237	SLV 7	Si
Maschio 100	R	0.657	SLV 10	No
Maschio 101	PF SLU	9.392	SLU 65	Si
Maschio 101	V SLU	13.702	SLU 78	Si
Maschio 101	PF	1.38	SLV 16	Si
Maschio 101	V	3.026	SLV 1	Si
Maschio 101	PFFP	10.189	SLV 15	Si
Maschio 101	R	0.653	SLV 6	No
Maschio 102	PF SLU	7.592	SLU 44	Si
Maschio 102	V SLU	11.644	SLU 72	Si
Maschio 102	PF	0.966	SLV 3	No
Maschio 102	V	2.375	SLV 2	Si
Maschio 102	PFFP	12.835	SLV 7	Si
Maschio 102	R	0.577	SLV 10	No
Maschio 103	PF SLU	11.691	SLU 43	Si
Maschio 103	V SLU	22.239	SLU 51	Si
Maschio 103	PF	2.265	SLV 2	Si
Maschio 103	V	4.299	SLV 3	Si
Maschio 103	PFFP	5.293	SLV 3	Si
Maschio 103	R	0.824	SLV 10	No
Maschio 104	PF SLU	24.05	SLU 40	Si
Maschio 104	V SLU	4.438	SLU 51	Si
Maschio 104	PF	1.912	SLV 11	Si
Maschio 104	V	2.203	SLV 11	Si
Maschio 104	PFFP	44.648	SLV 11	Si
Maschio 104	R	2.912	SLV 6	Si
Maschio 105	PF SLU	3.448	SLU 81	Si
Maschio 105	V SLU	13.746	SLU 81	Si
Maschio 105	PF	1.901	SLV 6	Si
Maschio 105	V	11.099	SLV 10	Si
Maschio 105	PFFP	3.835	SLV 6	Si
Maschio 105	R	1.339	SLV 11	Si
Maschio 107	PF SLU	13.34	SLU 82	Si
Maschio 107	V SLU	6.305	SLU 83	Si
Maschio 107	PF	3.957	SLV 7	Si
Maschio 107	V	5.657	SLV 5	Si
Maschio 107	PFFP	5.425	SLV 2	Si
Maschio 107	R	1.437	SLV 12	Si
Maschio 110	PF SLU	6.706	SLU 81	Si
Maschio 110	V SLU	4.452	SLU 83	Si
Maschio 110	PF	2.537	SLV 3	Si
Maschio 110	V	3.261	SLV 1	Si
Maschio 110	PFFP	5.02	SLV 12	Si
Maschio 110	R	0.72	SLV 9	No
Maschio 111	PF SLU	6.128	SLU 43	Si
Maschio 111	V SLU	32.774	SLU 45	Si
Maschio 111	PF	0	SLV 7	No
Maschio 111	V	3.706	SLV 3	Si
Maschio 111	PFFP	0	SLV 8	No
Maschio 111	R	0.648	SLV 10	No
Maschio 112	PF SLU	7.971	SLU 81	Si
Maschio 112	V SLU	61.922	SLU 50	Si
Maschio 112	PF	1.528	SLV 6	Si
Maschio 112	V	3.906	SLV 11	Si
Maschio 112	PFFP	4.353	SLV 2	Si
Maschio 112	R	0.85	SLV 11	No
Maschio 113	PF SLU	7.867	SLU 68	Si
Maschio 113	V SLU	15.539	SLU 80	Si
Maschio 113	PF	1.749	SLV 7	Si
Maschio 113	V	5.155	SLV 10	Si
Maschio 113	PFFP	3.614	SLV 3	Si
Maschio 113	R	0.827	SLV 10	No
Maschio 114	PF SLU	24.839	SLU 40	Si
Maschio 114	V SLU	25.478	SLU 40	Si
Maschio 114	PF	2.014	SLV 9	Si
Maschio 114	V	2.301	SLV 11	Si
Maschio 114	PFFP	3.433	SLV 15	Si
Maschio 114	R	1.837	SLV 6	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 115	PF SLU	8.77	SLU 42	Si
Maschio 115	V SLU	22.651	SLU 42	Si
Maschio 115	PF	0	SLV 7	No
Maschio 115	V	7.012	SLV 7	Si
Maschio 115	PFFP	0	SLV 12	No
Maschio 115	R	0.864	SLV 5	No
Maschio 116	PF SLU	9.285	SLU 44	Si
Maschio 116	V SLU	12.483	SLU 84	Si
Maschio 116	PF	0	SLV 11	No
Maschio 116	V	6.979	SLV 14	Si
Maschio 116	PFFP	0	SLV 8	No
Maschio 116	R	0.901	SLV 5	No
Maschio 117	PF SLU	9.455	SLU 35	Si
Maschio 117	V SLU	17.858	SLU 83	Si
Maschio 117	PF	0	SLV 5	No
Maschio 117	V	4.651	SLV 6	Si
Maschio 117	PFFP	0	SLV 10	No
Maschio 117	R	0.842	SLV 8	No
Maschio 118	PF SLU	11.931	SLU 78	Si
Maschio 118	V SLU	21.069	SLU 65	Si
Maschio 118	PF	2.707	SLV 2	Si
Maschio 118	V	3.756	SLV 15	Si
Maschio 118	PFFP	2.564	SLV 9	Si
Maschio 118	R	1.092	SLV 8	Si
Maschio 119	PF SLU	5.361	SLU 78	Si
Maschio 119	V SLU	11.582	SLU 84	Si
Maschio 119	PF	0.363	SLV 13	No
Maschio 119	V	3.151	SLV 4	Si
Maschio 119	PFFP	1.931	SLV 9	Si
Maschio 119	R	1.217	SLV 8	Si
Maschio 121	PF SLU	38.779	SLU 73	Si
Maschio 121	V SLU	51.783	SLU 51	Si
Maschio 121	PF	4.039	SLV 12	Si
Maschio 121	V	6.278	SLV 12	Si
Maschio 121	PFFP	2.06	SLV 16	Si
Maschio 121	R	1.647	SLV 5	Si
Maschio 122	PF SLU	5.337	SLU 71	Si
Maschio 122	V SLU	30.093	SLU 61	Si
Maschio 122	PF	0.315	SLV 13	No
Maschio 122	V	2.223	SLV 13	Si
Maschio 122	PFFP	1.218	SLV 13	Si
Maschio 122	R	1.277	SLV 7	Si
Maschio 123	PF SLU	11.247	SLU 50	Si
Maschio 123	V SLU	27.973	SLU 81	Si
Maschio 123	PF	3.184	SLV 8	Si
Maschio 123	V	20.35	SLV 10	Si
Maschio 123	PFFP	2.287	SLV 12	Si
Maschio 123	R	1.533	SLV 5	Si
Maschio 126	PF SLU	3.285	SLU 39	Si
Maschio 126	V SLU	5.541	SLU 69	Si
Maschio 126	PF	0.61	SLV 13	No
Maschio 126	V	2.16	SLV 13	Si
Maschio 126	PFFP	2.102	SLV 2	Si
Maschio 126	R	1.18	SLV 8	Si
Maschio 128	PF SLU	46.735	SLU 40	Si
Maschio 128	V SLU	23.991	SLU 81	Si
Maschio 128	PF	1.834	SLV 7	Si
Maschio 128	V	6.653	SLV 10	Si
Maschio 128	PFFP	1.651	SLV 7	Si
Maschio 128	R	1.458	SLV 9	Si
Maschio 129	PF SLU	14.041	SLU 40	Si
Maschio 129	V SLU	5.28	SLU 84	Si
Maschio 129	PF	0	SLV 9	No
Maschio 129	V	3.191	SLV 15	Si
Maschio 129	PFFP	0	SLV 10	No
Maschio 129	R	0.97	SLV 8	No
Maschio 131	PF SLU	11.831	SLU 18	Si
Maschio 131	V SLU	26.63	SLU 50	Si
Maschio 131	PF	2.624	SLV 9	Si
Maschio 131	V	3.33	SLV 5	Si
Maschio 131	PFFP	5.487	SLV 9	Si
Maschio 131	R	2.672	SLV 12	Si
Maschio 132	PF SLU	9.017	SLU 43	Si
Maschio 132	V SLU	37.217	SLU 43	Si
Maschio 132	PF	2.792	SLV 3	Si
Maschio 132	V	11.626	SLV 14	Si
Maschio 132	PFFP	3.952	SLV 7	Si
Maschio 132	R	1.305	SLV 10	Si
Maschio 133	PF SLU	16.435	SLU 81	Si
Maschio 133	V SLU	17.272	SLU 81	Si
Maschio 133	PF	2.483	SLV 16	Si
Maschio 133	V	3.892	SLV 14	Si
Maschio 133	PFFP	4.428	SLV 16	Si
Maschio 133	R	1.157	SLV 5	Si
Maschio 134	PF SLU	62.668	SLU 36	Si
Maschio 134	V SLU	141.651	SLU 43	Si
Maschio 134	PF	2.33	SLV 3	Si
Maschio 134	V	3.458	SLV 3	Si
Maschio 134	PFFP	4.958	SLV 7	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 134	R	1.16	SLV 10	Si
Maschio 135	PF SLU	8.365	SLU 44	Si
Maschio 135	V SLU	44.513	SLU 44	Si
Maschio 135	PF	1.431	SLV 16	Si
Maschio 135	V	5.579	SLV 1	Si
Maschio 135	PFFP	3.985	SLV 12	Si
Maschio 135	R	1.167	SLV 5	Si
Maschio 136	PF SLU	11.744	SLU 65	Si
Maschio 136	V SLU	31.128	SLU 50	Si
Maschio 136	PF	2.668	SLV 13	Si
Maschio 136	V	5.753	SLV 14	Si
Maschio 136	PFFP	3.801	SLV 13	Si
Maschio 136	R	1.052	SLV 8	Si
Maschio 137	PF SLU	28.355	SLU 26	Si
Maschio 137	V SLU	35.222	SLU 72	Si
Maschio 137	PF	1.799	SLV 16	Si
Maschio 137	V	2.95	SLV 16	Si
Maschio 137	PFFP	6.827	SLV 9	Si
Maschio 137	R	0.955	SLV 8	No
Maschio 138	PF SLU	10.62	SLU 60	Si
Maschio 138	V SLU	21.54	SLU 82	Si
Maschio 138	PF	0.36	SLV 16	No
Maschio 138	V	2.79	SLV 16	Si
Maschio 138	PFFP	3.491	SLV 11	Si
Maschio 138	R	0.772	SLV 5	No
Maschio 139	PF SLU	9.553	SLU 40	Si
Maschio 139	V SLU	37.375	SLU 42	Si
Maschio 139	PF	0.243	SLV 3	No
Maschio 139	V	4.04	SLV 3	Si
Maschio 139	PFFP	3.94	SLV 7	Si
Maschio 139	R	0.93	SLV 10	No
Maschio 140	PF SLU	11.297	SLU 23	Si
Maschio 140	V SLU	19.166	SLU 71	Si
Maschio 140	PF	1.281	SLV 3	Si
Maschio 140	V	3.964	SLV 1	Si
Maschio 140	PFFP	6.036	SLV 11	Si
Maschio 140	R	0.949	SLV 6	No
Maschio 141	PF SLU	7.309	SLU 44	Si
Maschio 141	V SLU	17.197	SLU 65	Si
Maschio 141	PF	0.778	SLV 3	No
Maschio 141	V	3.451	SLV 3	Si
Maschio 141	PFFP	6.18	SLV 7	Si
Maschio 141	R	0.758	SLV 10	No
Maschio 142	PF SLU	9.733	SLU 43	Si
Maschio 142	V SLU	21.525	SLU 41	Si
Maschio 142	PF	2.649	SLV 3	Si
Maschio 142	V	6.79	SLV 14	Si
Maschio 142	PFFP	3.193	SLV 3	Si
Maschio 142	R	1.178	SLV 10	Si
Maschio 143	PF SLU	18.366	SLU 82	Si
Maschio 143	V SLU	7.51	SLU 84	Si
Maschio 143	PF	2.295	SLV 9	Si
Maschio 143	V	3.537	SLV 9	Si
Maschio 143	PFFP	0	SLV 5	No
Maschio 143	R	1.146	SLV 11	Si
Maschio 144	PF SLU	14.438	SLU 40	Si
Maschio 144	V SLU	15.889	SLU 71	Si
Maschio 144	PF	1.964	SLV 7	Si
Maschio 144	V	8.934	SLV 6	Si
Maschio 144	PFFP	5.583	SLV 7	Si
Maschio 144	R	1.774	SLV 10	Si
Maschio 145	PF SLU	28.31	SLU 37	Si
Maschio 145	V SLU	13.821	SLU 50	Si
Maschio 145	PF	1.84	SLV 7	Si
Maschio 145	V	1.697	SLV 11	Si
Maschio 145	PFFP	15.687	SLV 7	Si
Maschio 145	R	4.255	SLV 10	Si
Maschio 147	PF SLU	24.733	SLU 45	Si
Maschio 147	V SLU	231.143	SLU 51	Si
Maschio 147	PF	1.707	SLV 6	Si
Maschio 147	V	29.907	SLV 5	Si
Maschio 147	PFFP	2.294	SLV 6	Si
Maschio 147	R	1.511	SLV 11	Si
Maschio 150	PF SLU	3.051	SLU 40	Si
Maschio 150	V SLU	4.803	SLU 70	Si
Maschio 150	PF	0.535	SLV 2	No
Maschio 150	V	1.901	SLV 4	Si
Maschio 150	PFFP	1.969	SLV 13	Si
Maschio 150	R	1.427	SLV 11	Si
Maschio 152	PF SLU	16.71	SLU 45	Si
Maschio 152	V SLU	31.061	SLU 40	Si
Maschio 152	PF	3.601	SLV 6	Si
Maschio 152	V	6.426	SLV 7	Si
Maschio 152	PFFP	3.012	SLV 2	Si
Maschio 152	R	1.734	SLV 11	Si
Maschio 153	PF SLU	3.751	SLU 65	Si
Maschio 153	V SLU	21.79	SLU 67	Si
Maschio 153	PF	0.25	SLV 2	No
Maschio 153	V	1.912	SLV 4	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 153	PFFP	1.404	SLV 2	Si
Maschio 153	R	0.945	SLV 8	No
Maschio 155	PF SLU	7.136	SLU 82	Si
Maschio 155	V SLU	26.297	SLU 84	Si
Maschio 155	PF	1.804	SLV 3	Si
Maschio 155	V	15.983	SLV 7	Si
Maschio 155	PFFP	0.768	SLV 1	No
Maschio 155	R	2.189	SLV 12	Si
Maschio 158	PF SLU	4.357	SLU 65	Si
Maschio 158	V SLU	27.645	SLU 50	Si
Maschio 158	PF	0	SLV 2	No
Maschio 158	V	2.699	SLV 2	Si
Maschio 158	PFFP	1.305	SLV 6	Si
Maschio 158	R	1.116	SLV 11	Si
Maschio 159	PF SLU	12.927	SLU 69	Si
Maschio 159	V SLU	11.152	SLU 68	Si
Maschio 159	PF	2.528	SLV 13	Si
Maschio 159	V	3.457	SLV 4	Si
Maschio 159	PFFP	2.237	SLV 6	Si
Maschio 159	R	1.036	SLV 7	Si
Maschio 160	PF SLU	10.64	SLU 41	Si
Maschio 160	V SLU	35.144	SLU 41	Si
Maschio 160	PF	0	SLV 5	No
Maschio 160	V	5.331	SLV 13	Si
Maschio 160	PFFP	0	SLV 10	No
Maschio 160	R	0.84	SLV 11	No
Maschio 161	PF SLU	8.338	SLU 43	Si
Maschio 161	V SLU	14.178	SLU 81	Si
Maschio 161	PF	2.627	SLV 1	Si
Maschio 161	V	7.764	SLV 1	Si
Maschio 161	PFFP	2.931	SLV 7	Si
Maschio 161	R	0.942	SLV 10	No
Maschio 162	PF SLU	8.148	SLU 43	Si
Maschio 162	V SLU	42.897	SLU 42	Si
Maschio 162	PF	0	SLV 7	No
Maschio 162	V	5.765	SLV 12	Si
Maschio 162	PFFP	0	SLV 12	No
Maschio 162	R	0.838	SLV 10	No
Maschio 163	PF SLU	43.605	SLU 40	Si
Maschio 163	V SLU	36.489	SLU 76	Si
Maschio 163	PF	2.085	SLV 6	Si
Maschio 163	V	2.291	SLV 8	Si
Maschio 163	PFFP	3.47	SLV 4	Si
Maschio 163	R	1.79	SLV 9	Si
Maschio 164	PF SLU	44.227	SLU 31	Si
Maschio 164	V SLU	36.763	SLU 31	Si
Maschio 164	PF	1.829	SLV 9	Si
Maschio 164	V	0.758	SLV 12	No
Maschio 164	PFFP	1.758	SLV 3	Si
Maschio 164	R	5.957	SLV 8	Si
Maschio 165	PF SLU	2.557	SLU 37	Si
Maschio 165	V SLU	12.097	SLU 36	Si
Maschio 165	PF	0	SLV 7	No
Maschio 165	V	4.922	SLV 12	Si
Maschio 165	PFFP	0	SLV 12	No
Maschio 165	R	3.432	SLV 5	Si
Maschio 166	PF SLU	2.764	SLU 60	Si
Maschio 166	V SLU	13.407	SLU 75	Si
Maschio 166	PF	0.786	SLV 12	No
Maschio 166	V	9.918	SLV 12	Si
Maschio 166	PFFP	0	SLV 11	No
Maschio 166	R	3.205	SLV 7	Si
Maschio 167	PF SLU	3.082	SLU 37	Si
Maschio 167	V SLU	11.21	SLU 77	Si
Maschio 167	PF	0	SLV 5	No
Maschio 167	V	3.891	SLV 5	Si
Maschio 167	PFFP	0	SLV 10	No
Maschio 167	R	3.534	SLV 8	Si
Maschio 168	PF SLU	33.082	SLU 30	Si
Maschio 168	V SLU	25.843	SLU 70	Si
Maschio 168	PF	5.706	SLV 2	Si
Maschio 168	V	10.853	SLV 15	Si
Maschio 168	PFFP	1.65	SLV 5	Si
Maschio 168	R	3.033	SLV 12	Si
Maschio 169	PF SLU	5.781	SLU 36	Si
Maschio 169	V SLU	14.541	SLU 77	Si
Maschio 169	PF	0.642	SLV 15	No
Maschio 169	V	6.08	SLV 2	Si
Maschio 169	PFFP	0	SLV 5	No
Maschio 169	R	2.606	SLV 6	Si
Maschio 172	PF SLU	11.2	SLU 60	Si
Maschio 172	V SLU	29.962	SLU 81	Si
Maschio 172	PF	1.565	SLV 12	Si
Maschio 172	V	3.475	SLV 5	Si
Maschio 172	PFFP	0.662	SLV 16	No
Maschio 172	R	8.334	SLV 7	Si
Maschio 173	PF SLU	8.207	SLU 37	Si
Maschio 173	V SLU	28.273	SLU 81	Si
Maschio 173	PF	2.723	SLV 9	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 173	V	9.899	SLV 5	Si
Maschio 173	PFFP	1.049	SLV 12	Si
Maschio 173	R	4.973	SLV 6	Si
Maschio 175	PF SLU	2.403	SLU 82	Si
Maschio 175	V SLU	23.958	SLU 81	Si
Maschio 175	PF	0.996	SLV 10	No
Maschio 175	V	3.406	SLV 10	Si
Maschio 175	PFFP	0.948	SLV 16	No
Maschio 175	R	2.47	SLV 7	Si
Maschio 176	PF SLU	3.326	SLU 40	Si
Maschio 176	V SLU	15.38	SLU 50	Si
Maschio 176	PF	0.433	SLV 11	No
Maschio 176	V	1.873	SLV 5	Si
Maschio 176	PFFP	1.055	SLV 9	Si
Maschio 176	R	5.423	SLV 6	Si
Maschio 177	PF SLU	2.189	SLU 38	Si
Maschio 177	V SLU	47.179	SLU 36	Si
Maschio 177	PF	0	SLV 3	No
Maschio 177	V	32.637	SLV 13	Si
Maschio 177	PFFP	0	SLV 3	No
Maschio 177	R	2.82	SLV 10	Si
Maschio 178	PF SLU	7.519	SLU 39	Si
Maschio 178	V SLU	32.769	SLU 81	Si
Maschio 178	PF	1.451	SLV 4	Si
Maschio 178	V	8.636	SLV 15	Si
Maschio 178	PFFP	1.318	SLV 7	Si
Maschio 178	R	2.434	SLV 10	Si
Maschio 179	PF SLU	7.406	SLU 37	Si
Maschio 179	V SLU	46.236	SLU 37	Si
Maschio 179	PF	2.097	SLV 16	Si
Maschio 179	V	6.497	SLV 16	Si
Maschio 179	PFFP	1.71	SLV 11	Si
Maschio 179	R	3.298	SLV 6	Si
Maschio 180	PF SLU	3.369	SLU 41	Si
Maschio 180	V SLU	41.302	SLU 35	Si
Maschio 180	PF	0	SLV 13	No
Maschio 180	V	6.064	SLV 16	Si
Maschio 180	PFFP	0	SLV 16	No
Maschio 180	R	2.277	SLV 5	Si
Maschio 181	PF SLU	10.941	SLU 77	Si
Maschio 181	V SLU	29.468	SLU 42	Si
Maschio 181	PF	3.145	SLV 14	Si
Maschio 181	V	13.473	SLV 4	Si
Maschio 181	PFFP	2.313	SLV 13	Si
Maschio 181	R	3.056	SLV 5	Si
Maschio 182	PF SLU	18.721	SLU 30	Si
Maschio 182	V SLU	25.77	SLU 70	Si
Maschio 182	PF	1.215	SLV 16	Si
Maschio 182	V	3.427	SLV 16	Si
Maschio 182	PFFP	3.835	SLV 13	Si
Maschio 182	R	2.685	SLV 9	Si
Maschio 183	PF SLU	5.352	SLU 53	Si
Maschio 183	V SLU	13.73	SLU 75	Si
Maschio 183	PF	0.514	SLV 12	No
Maschio 183	V	3.613	SLV 1	Si
Maschio 183	PFFP	3.19	SLV 12	Si
Maschio 183	R	2.288	SLV 6	Si
Maschio 184	PF SLU	4.076	SLU 42	Si
Maschio 184	V SLU	36.69	SLU 80	Si
Maschio 184	PF	0.009	SLV 7	No
Maschio 184	V	4.351	SLV 3	Si
Maschio 184	PFFP	2.773	SLV 11	Si
Maschio 184	R	3.186	SLV 5	Si
Maschio 185	PF SLU	5.151	SLU 40	Si
Maschio 185	V SLU	17.679	SLU 70	Si
Maschio 185	PF	0.615	SLV 3	No
Maschio 185	V	5.645	SLV 1	Si
Maschio 185	PFFP	2.797	SLV 11	Si
Maschio 185	R	3.208	SLV 10	Si
Maschio 186	PF SLU	6.22	SLU 44	Si
Maschio 186	V SLU	20.631	SLU 65	Si
Maschio 186	PF	0.559	SLV 3	No
Maschio 186	V	4.706	SLV 3	Si
Maschio 186	PFFP	3.842	SLV 3	Si
Maschio 186	R	2.686	SLV 11	Si
Maschio 187	PF SLU	7.282	SLU 35	Si
Maschio 187	V SLU	15.138	SLU 77	Si
Maschio 187	PF	3.37	SLV 14	Si
Maschio 187	V	13.227	SLV 14	Si
Maschio 187	PFFP	1.949	SLV 3	Si
Maschio 187	R	3.094	SLV 10	Si
Maschio 188	PF SLU	2.377	SLU 42	Si
Maschio 188	V SLU	13.492	SLU 71	Si
Maschio 188	PF	0	SLV 1	No
Maschio 188	V	2.812	SLV 10	Si
Maschio 188	PFFP	1.162	SLV 2	Si
Maschio 188	R	4.272	SLV 11	Si
Maschio 190	PF SLU	1.317	SLU 60	Si
Maschio 190	V SLU	18.865	SLU 82	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 190	PF	1.173	SLV 11	Si
Maschio 190	V	10.199	SLV 11	Si
Maschio 190	PFFP	1.002	SLV 6	Si
Maschio 190	R	2.049	SLV 11	Si
Maschio 192	PF SLU	14.691	SLU 42	Si
Maschio 192	V SLU	27.08	SLU 40	Si
Maschio 192	PF	1.891	SLV 7	Si
Maschio 192	V	4.28	SLV 7	Si
Maschio 192	PFFP	1.737	SLV 4	Si
Maschio 192	R	4.828	SLV 9	Si
Maschio 194	PF SLU	4.416	SLU 35	Si
Maschio 194	V SLU	29.57	SLU 78	Si
Maschio 194	PF	1.035	SLV 6	Si
Maschio 194	V	9.467	SLV 11	Si
Maschio 194	PFFP	0	SLV 1	No
Maschio 194	R	3.481	SLV 12	Si
Maschio 197	PF SLU	1.74	SLU 61	Si
Maschio 197	V SLU	12.22	SLU 75	Si
Maschio 197	PF	0	SLV 1	No
Maschio 197	V	5.313	SLV 1	Si
Maschio 197	PFFP	0	SLV 4	No
Maschio 197	R	2.329	SLV 10	Si
Maschio 198	PF SLU	2.015	SLU 37	Si
Maschio 198	V SLU	14.239	SLU 36	Si
Maschio 198	PF	0	SLV 7	No
Maschio 198	V	4.238	SLV 11	Si
Maschio 198	PFFP	0	SLV 12	No
Maschio 198	R	3.615	SLV 10	Si
Maschio 199	PF SLU	62.314	SLU 70	Si
Maschio 199	V SLU	38.371	SLU 48	Si
Maschio 199	PF	1.775	SLV 10	Si
Maschio 199	V	0.736	SLV 7	No
Maschio 199	PFFP	1.774	SLV 16	Si
Maschio 199	R	5.965	SLV 8	Si
Maschio 201	PF SLU	4.472	SLU 65	Si
Maschio 201	V SLU	12.169	SLU 78	Si
Maschio 201	PF	0.236	SLV 15	No
Maschio 201	V	6.055	SLV 13	Si
Maschio 201	PFFP	1.248	SLV 15	Si
Maschio 201	R	2.658	SLV 9	Si
Maschio 202	PF SLU	2.749	SLU 66	Si
Maschio 202	V SLU	6.668	SLU 77	Si
Maschio 202	PF	0.439	SLV 13	No
Maschio 202	V	3.188	SLV 13	Si
Maschio 202	PFFP	1.549	SLV 2	Si
Maschio 202	R	3.316	SLV 8	Si
Maschio 204	PF SLU	1.953	SLU 30	Si
Maschio 204	V SLU	8.505	SLU 78	Si
Maschio 204	PF	0	SLD 5	No
Maschio 204	V	3.1	SLV 11	Si
Maschio 204	PFFP	0	SLV 10	No
Maschio 204	R	4.369	SLV 11	Si
Maschio 205	PF SLU	23.98	SLU 80	Si
Maschio 205	V SLU	7.189	SLU 80	Si
Maschio 205	PF	0	SLV 5	No
Maschio 205	V	2.781	SLV 9	Si
Maschio 205	PFFP	0	SLV 10	No
Maschio 205	R	4.265	SLV 8	Si
Maschio 207	PF SLU	2.619	SLU 82	Si
Maschio 207	V SLU	5.698	SLU 78	Si
Maschio 207	PF	0.332	SLV 2	No
Maschio 207	V	2.753	SLV 4	Si
Maschio 207	PFFP	1.023	SLV 13	Si
Maschio 207	R	3.581	SLV 7	Si
Maschio 209	PF SLU	7.292	SLU 65	Si
Maschio 209	V SLU	26.885	SLU 65	Si
Maschio 209	PF	0.405	SLV 4	No
Maschio 209	V	3.076	SLV 4	Si
Maschio 209	PFFP	1.534	SLV 4	Si
Maschio 209	R	3.094	SLV 6	Si
Maschio 210	PF SLU	4.787	SLU 64	Si
Maschio 210	V SLU	27.617	SLU 50	Si
Maschio 210	PF	0	SLV 2	No
Maschio 210	V	5.254	SLV 2	Si
Maschio 210	PFFP	0	SLV 10	No
Maschio 210	R	1.97	SLV 9	Si
Maschio 211	PF SLU	22.5	SLU 50	Si
Maschio 211	V SLU	15.28	SLU 71	Si
Maschio 211	PF	5.836	SLV 6	Si
Maschio 211	V	9.24	SLV 4	Si
Maschio 211	PFFP	1.388	SLV 6	Si
Maschio 211	R	2.813	SLV 8	Si
Maschio 212	PF SLU	3.085	SLU 37	Si
Maschio 212	V SLU	15.963	SLU 77	Si
Maschio 212	PF	0	SLV 5	No
Maschio 212	V	4.715	SLV 10	Si
Maschio 212	PFFP	0	SLV 10	No
Maschio 212	R	3.608	SLV 11	Si
Maschio 219	PF SLU	5.225	SLU 83	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 219	V SLU	3.279	SLU 83	Si
Maschio 219	PF	0.753	SLV 15	No
Maschio 219	V	0.709	SLV 13	No
Maschio 219	PFFP	23.092	SLV 11	Si
Maschio 219	R	5.781	SLV 6	Si
Maschio 230	PF SLU	17.659	SLU 84	Si
Maschio 230	V SLU	14.283	SLU 84	Si
Maschio 230	PF	0	SLV 13	No
Maschio 230	V	2.718	SLV 13	Si
Maschio 230	PFFP	0	SLV 9	No
Maschio 230	R	0.528	SLV 4	No
Maschio 231	PF SLU	10.564	SLU 77	Si
Maschio 231	V SLU	5.055	SLU 83	Si
Maschio 231	PF	3.347	SLV 2	Si
Maschio 231	V	2.214	SLV 13	Si
Maschio 231	PFFP	1.664	SLV 10	Si
Maschio 231	R	0.65	SLV 3	No
Maschio 232	PF SLU	3.571	SLU 71	Si
Maschio 232	V SLU	7.465	SLU 84	Si
Maschio 232	PF	0.215	SLV 13	No
Maschio 232	V	1.885	SLV 13	Si
Maschio 232	PFFP	1.95	SLV 10	Si
Maschio 232	R	0.599	SLV 4	No
Maschio 233	PF SLU	2.332	SLU 84	Si
Maschio 233	V SLU	4.427	SLU 84	Si
Maschio 233	PF	1.139	SLV 13	Si
Maschio 233	V	1.769	SLV 2	Si
Maschio 233	PFFP	1.779	SLV 2	Si
Maschio 233	R	0.563	SLV 15	No
Maschio 234	PF SLU	9.958	SLU 51	Si
Maschio 234	V SLU	11.576	SLU 84	Si
Maschio 234	PF	5.193	SLV 9	Si
Maschio 234	V	7.52	SLV 12	Si
Maschio 234	PFFP	1.718	SLV 16	Si
Maschio 234	R	1.668	SLV 1	Si
Maschio 237	PF SLU	4.993	SLU 83	Si
Maschio 237	V SLU	6.898	SLU 69	Si
Maschio 237	PF	1.104	SLV 2	Si
Maschio 237	V	2.283	SLV 13	Si
Maschio 237	PFFP	1.866	SLV 9	Si
Maschio 237	R	0.656	SLV 4	No
Maschio 242	PF SLU	15.653	SLU 44	Si
Maschio 242	V SLU	3.855	SLU 83	Si
Maschio 242	PF	0.434	SLV 9	No
Maschio 242	V	2.228	SLV 13	Si
Maschio 242	PFFP	1.244	SLV 5	Si
Maschio 242	R	0.619	SLV 4	No
Maschio 243	PF SLU	15.424	SLU 39	Si
Maschio 243	V SLU	6.805	SLU 51	Si
Maschio 243	PF	6.05	SLV 6	Si
Maschio 243	V	3.203	SLV 7	Si
Maschio 243	PFFP	6.995	SLV 4	Si
Maschio 243	R	0.6	SLV 11	No
Maschio 244	PF SLU	12.643	SLU 75	Si
Maschio 244	V SLU	4.426	SLU 75	Si
Maschio 244	PF	4.677	SLV 12	Si
Maschio 244	V	1.276	SLV 12	Si
Maschio 244	PFFP	0	SLV 1	No
Maschio 244	R	2.631	SLV 14	Si
Maschio 246	PF SLU	7.97	SLU 69	Si
Maschio 246	V SLU	9.384	SLU 77	Si
Maschio 246	PF	0	SLV 1	No
Maschio 246	V	1.217	SLV 13	Si
Maschio 246	PFFP	0	SLV 14	No
Maschio 246	R	7.23	SLV 4	Si
Maschio 247	PF SLU	3.664	SLU 83	Si
Maschio 247	V SLU	4.999	SLU 83	Si
Maschio 247	PF	0	SLV 1	No
Maschio 247	V	1.011	SLV 15	Si
Maschio 247	PFFP	0	SLV 6	No
Maschio 247	R	7.322	SLV 15	Si
Maschio 249	PF SLU	11.165	SLU 84	Si
Maschio 249	V SLU	5.523	SLU 78	Si
Maschio 249	PF	1.752	SLV 6	Si
Maschio 249	V	2.65	SLV 2	Si
Maschio 249	PFFP	1.64	SLV 10	Si
Maschio 249	R	0.681	SLV 3	No
Maschio 251	PF SLU	9.713	SLU 39	Si
Maschio 251	V SLU	9.145	SLU 51	Si
Maschio 251	PF	6.709	SLV 10	Si
Maschio 251	V	4.343	SLV 8	Si
Maschio 251	PFFP	8.868	SLV 7	Si
Maschio 251	R	0.814	SLV 10	No
Maschio 254	PF SLU	9.833	SLU 75	Si
Maschio 254	V SLU	5.482	SLU 78	Si
Maschio 254	PF	2.003	SLV 15	Si
Maschio 254	V	3.123	SLV 15	Si
Maschio 254	PFFP	0	SLV 1	No
Maschio 254	R	1.973	SLV 2	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 261	PF SLU	4.53	SLU 82	Si
Maschio 261	V SLU	5.711	SLU 70	Si
Maschio 261	PF	1.038	SLV 13	Si
Maschio 261	V	2.285	SLV 4	Si
Maschio 261	PFFP	1.898	SLV 2	Si
Maschio 261	R	0.697	SLV 15	No
Maschio 263	PF SLU	8.526	SLU 83	Si
Maschio 263	V SLU	13.891	SLU 51	Si
Maschio 263	PF	4.275	SLV 6	Si
Maschio 263	V	5.931	SLV 11	Si
Maschio 263	PFFP	2.212	SLV 1	Si
Maschio 263	R	1.492	SLV 15	Si
Maschio 264	PF SLU	3.187	SLU 78	Si
Maschio 264	V SLU	11.306	SLU 78	Si
Maschio 264	PF	0.319	SLV 2	No
Maschio 264	V	1.592	SLV 2	Si
Maschio 264	PFFP	1.531	SLV 13	Si
Maschio 264	R	0.513	SLV 4	No
Maschio 265	PF SLU	3.03	SLU 70	Si
Maschio 265	V SLU	6.189	SLU 84	Si
Maschio 265	PF	0.195	SLV 2	No
Maschio 265	V	1.74	SLV 2	Si
Maschio 265	PFFP	1.862	SLV 5	Si
Maschio 265	R	0.547	SLV 15	No
Maschio 266	PF SLU	8.737	SLU 78	Si
Maschio 266	V SLU	4.333	SLU 78	Si
Maschio 266	PF	2.888	SLV 2	Si
Maschio 266	V	2.092	SLV 2	Si
Maschio 266	PFFP	1.49	SLV 5	Si
Maschio 266	R	0.66	SLV 15	No
Maschio 267	PF SLU	18.734	SLU 41	Si
Maschio 267	V SLU	14.222	SLU 83	Si
Maschio 267	PF	0	SLV 1	No
Maschio 267	V	2.797	SLV 2	Si
Maschio 267	PFFP	0	SLV 1	No
Maschio 267	R	0.524	SLV 15	No

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
1	PF	1.422	SLV 13	0.34	1.39	1307	1.514	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.328	SLV 16	0.318	1.304	1057	1.388	Si
	R	1.659	SLV 3	0.362	1.483	1618	1.653	Si
2	PF	1.018	SLV 13	0.248	1.017	499	1.02	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.119	SLV 13	0.271	1.11	649	1.137	Si
	R	1.816	SLV 4	0.362	1.483	1618	1.653	Si
3	PF	1.887	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.693	SLV 15	0.362	1.483	1618	1.653	Si
	R	2.01	SLV 6	0.362	1.483	1618	1.653	Si
4	PF	2.058	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.09	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.431	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.698	SLV 12	0.362	1.483	1618	1.653	Si
7	PF	2.995	SLV 9	0.362	1.483	1618	1.653	Si
	V	4.091	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.229	SLV 8	0.298	1.218	857	1.274	Si
9	PF	1.645	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.531	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.931	SLV 3	0.362	1.483	1618	1.653	Si
10	PF	1.802	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.289	SLV 15	0.31	1.268	965	1.337	Si
	PFFP	3.061	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.746	SLV 7	0.362	1.483	1618	1.653	Si
11	PF	2.076	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.239	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	3.889	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.622	SLV 7	0.362	1.483	1618	1.653	Si
12	PF	2.796	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.642	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.659	SLV 9	0.362	1.483	1618	1.653	Si
13	PF	3.035	SLV 13	0.362	1.483	1618	1.653	Si
	V	4.05	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	3.369	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.756	SLV 7	0.362	1.483	1618	1.653	Si
14	PF	0.594	SLV 14	0.141	0.576	119	0.567	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.628	SLV 14	0.149	0.61	136	0.599	No
	R	1.479	SLV 7	0.357	1.462	1544	1.621	Si
15	PF	3.368	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.711	SLV 4	0.171	0.699	186	0.681	No
	PFFP	3.542	SLV 13	0.362	1.483	1618	1.653	Si
	R	3.039	SLV 7	0.362	1.483	1618	1.653	Si
16	PF	1.951	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.321	SLV 2	0.317	1.297	1040	1.379	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.381	SLV 8	0.362	1.483	1618	1.653	Si
17	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.743	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.45	SLV 7	0.35	1.434	1447	1.579	Si
18	PF	1.955	SLV 4	0.362	1.483	1618	1.653	Si
	V	2.469	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.138	SLV 9	0.362	1.483	1618	1.653	Si
19	PF	2.498	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.936	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.2	SLV 8	0.362	1.483	1618	1.653	Si
20	PF	4.042	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.781	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.427	SLV 11	0.345	1.411	1374	1.546	Si
21	PF	1.588	SLV 16	0.362	1.483	1618	1.653	Si
	V	3.878	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.093	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.382	SLV 7	0.334	1.368	1238	1.481	Si
22	PF	1.877	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.271	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.407	SLV 5	0.34	1.392	1313	1.517	Si
25	PF	0.85	SLV 16	0.206	0.844	303	0.832	No
	V	2.551	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.623	SLV 5	0.362	1.483	1618	1.653	Si
26	PF	1.32	SLV 1	0.317	1.296	1038	1.378	Si
	V	2.245	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.44	SLV 12	0.348	1.424	1415	1.564	Si
27	PF	0.671	SLV 3	0.16	0.656	160	0.64	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.532	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.273	SLV 7	0.308	1.261	950	1.329	Si
28	PF	1.559	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.724	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.969	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.444	SLV 11	0.349	1.428	1428	1.57	Si
30	PF	1.302	SLV 16	0.313	1.28	994	1.354	Si
	V	2.515	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
31	PF	2.332	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.654	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	3.44	SLV 14	0.362	1.483	1618	1.653	Si
	R	1.615	SLV 7	0.362	1.483	1618	1.653	Si
32	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.194	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.183	SLV 6	0.362	1.483	1618	1.653	Si
33	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.439	SLV 11	0.348	1.423	1412	1.563	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.022	SLV 4	0.362	1.483	1618	1.653	Si
34	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.724	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.684	SLV 8	0.362	1.483	1618	1.653	Si
36	PF	3.493	SLV 10	0.362	1.483	1618	1.653	Si
	V	3.979	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.143	SLV 5	0.278	1.136	696	1.17	Si
38	PF	2.681	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.658	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.992	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.656	SLV 12	0.362	1.483	1618	1.653	Si
39	PF	1.488	SLV 1	0.354	1.451	1504	1.604	Si
	V	2.605	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.218	SLV 1	0.294	1.202	822	1.252	Si
	R	1.707	SLV 12	0.362	1.483	1618	1.653	Si
40	PF	2.22	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.421	SLV 10	0.343	1.406	1355	1.537	Si
42	PF	1.485	SLV 4	0.354	1.448	1494	1.6	Si
	V	1.633	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.666	SLV 11	0.362	1.483	1618	1.653	Si
43	PF	0.582	SLV 7	0.135	0.551	107	0.543	No
	V	2.762	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.28	SLV 2	0.362	1.483	1618	1.653	Si
	R	3.084	SLV 12	0.362	1.483	1618	1.653	Si
44	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	1.407	SLV 10	0.34	1.392	1313	1.517	Si
45	PF	2.157	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.102	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.466	SLV 6	0.354	1.45	1500	1.602	Si
46	PF	1.618	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.746	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	3.272	SLV 4	0.362	1.483	1618	1.653	Si
	R	1.742	SLV 12	0.362	1.483	1618	1.653	Si
47	PF	1.892	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.471	SLV 4	0.351	1.435	1451	1.581	Si
	PFFP	2.948	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.745	SLV 12	0.362	1.483	1618	1.653	Si
48	PF	1.548	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.49	SLV 1	0.355	1.452	1510	1.607	Si
	R	1.903	SLV 16	0.362	1.483	1618	1.653	Si
49	PF	1.844	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.724	SLV 12	0.362	1.483	1618	1.653	Si
50	PF	3.166	SLV 10	0.362	1.483	1618	1.653	Si
	V	3.962	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.161	SLV 9	0.282	1.154	728	1.191	Si
52	PF	1.822	SLV 6	0.362	1.483	1618	1.653	Si
	V	3.19	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.577	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.7	SLV 11	0.362	1.483	1618	1.653	Si
53	PF	1.911	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.782	SLV 2	0.362	1.483	1618	1.653	Si
	R	2.06	SLV 9	0.362	1.483	1618	1.653	Si
54	PF	1.352	SLV 4	0.324	1.326	1117	1.42	Si
	V	3.899	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1.333	SLV 2	0.32	1.308	1070	1.395	Si
	R	1.704	SLV 15	0.362	1.483	1618	1.653	Si
55	PF	1.326	SLV 14	0.318	1.302	1052	1.385	Si
	V	2.839	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	1.408	SLV 15	0.337	1.377	1268	1.496	Si
	R	1.063	SLV 5	0.259	1.06	565	1.074	Si
56	PF	1.119	SLV 12	0.272	1.114	655	1.141	Si
	V	3.677	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.431	SLV 11	0.346	1.415	1386	1.551	Si
	R	0.842	SLV 5	0.202	0.826	286	0.812	No
57	PF	1.811	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.9	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.991	SLV 6	0.242	0.99	462	0.989	No
59	PF	3.776	SLV 11	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.551	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.699	SLV 6	0.164	0.673	170	0.656	No
61	PF	2.711	SLV 3	0.362	1.483	1618	1.653	Si
	V	3.146	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.969	SLV 10	0.236	0.965	432	0.962	No
62	PF	3.207	SLV 12	0.362	1.483	1618	1.653	Si
	V	2.996	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.786	SLV 5	0.187	0.766	234	0.748	No
63	PF	0.89	SLV 14	0.216	0.886	344	0.876	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.248	SLV 14	0.3	1.23	881	1.288	Si
	R	0.904	SLV 5	0.218	0.893	351	0.883	No
64	PF	2.102	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.811	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	3.569	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.737	SLV 5	0.174	0.713	194	0.693	No
65	PF	2.027	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.554	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.75	SLV 10	0.177	0.727	203	0.706	No
66	PF	0.793	SLV 3	0.192	0.785	250	0.769	No
	V	1.936	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.104	SLV 3	0.268	1.097	625	1.119	Si
	R	0.837	SLV 10	0.2	0.82	280	0.805	No
67	PF	1.728	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.792	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.711	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.757	SLV 8	0.18	0.735	210	0.716	No
68	PF	2.319	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.851	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.721	SLV 5	0.17	0.696	184	0.678	No
69	PF	0.984	SLV 3	0.24	0.984	454	0.982	No
	V	2.128	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.759	SLV 9	0.18	0.736	211	0.717	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
70	PF	1.64	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.925	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.836	SLV 6	0.2	0.819	279	0.804	No
71	PF	0.817	SLV 2	0.198	0.81	272	0.796	No
	V	1.974	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	3.182	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.662	SLV 9	0.155	0.633	148	0.62	No
72	PF	1.199	SLV 2	0.289	1.184	787	1.23	Si
	V	3.577	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.357	SLV 2	0.325	1.33	1130	1.427	Si
	R	0.826	SLV 11	0.197	0.808	269	0.792	No
73	PF	3.783	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.438	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.585	SLV 6	0.362	1.483	1618	1.653	Si
74	PF	2.635	SLV 7	0.362	1.483	1618	1.653	Si
	V	3.713	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	3.998	SLV 3	0.362	1.483	1618	1.653	Si
	R	0.726	SLV 9	0.171	0.701	187	0.682	No
75	PF	2.456	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.535	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.037	SLV 11	0.253	1.035	526	1.043	Si
78	PF	3.771	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.982	SLV 11	0.239	0.979	448	0.976	No
81	PF	0.947	SLV 3	0.231	0.945	408	0.94	No
	V	2.271	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.93	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.838	SLV 5	0.201	0.821	281	0.806	No
82	PF	0.912	SLV 3	0.222	0.909	369	0.902	No
	V	2.598	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.747	SLV 8	0.362	1.483	1618	1.653	Si
	R	0.875	SLV 10	0.21	0.861	319	0.849	No
83	PF	1.372	SLV 1	0.328	1.344	1170	1.447	Si
	V	2.957	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	1.421	SLV 3	0.339	1.389	1304	1.513	Si
	R	1.03	SLV 10	0.251	1.029	517	1.035	Si
86	PF	0.767	SLV 12	0.182	0.744	217	0.725	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.785	SLV 12	0.187	0.765	233	0.747	No
	R	0.754	SLV 5	0.179	0.731	207	0.711	No
87	PF	1.218	SLV 12	0.295	1.208	834	1.26	Si
	V	3.831	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.202	SLV 12	0.291	1.192	804	1.241	Si
	R	0.757	SLV 5	0.18	0.735	210	0.716	No
89	PF	2.872	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.159	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.994	SLV 5	0.243	0.993	466	0.992	No
91	PF	1.134	SLV 3	0.275	1.124	674	1.154	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.485	SLV 7	0.359	1.468	1564	1.63	Si
	R	0.958	SLV 10	0.233	0.953	418	0.949	No
92	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.69	SLV 11	0.362	1.483	1618	1.653	Si
93	PF	1.429	SLV 16	0.341	1.397	1327	1.524	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.725	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.004	SLV 5	0.245	1.004	480	1.004	Si
94	PF	1.592	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.897	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.154	SLV 16	0.362	1.483	1618	1.653	Si
	R	0.827	SLV 5	0.198	0.809	271	0.794	No
95	PF	2.104	SLV 3	0.362	1.483	1618	1.653	Si
	V	1.648	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.818	SLV 10	0.196	0.801	263	0.785	No
96	PF	0.927	SLV 3	0.226	0.924	385	0.917	No
	V	3.063	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.382	SLV 3	0.331	1.353	1196	1.46	Si
	R	0.92	SLV 10	0.223	0.912	371	0.904	No
97	PF	1.613	SLV 13	0.362	1.483	1618	1.653	Si
	V	3.09	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.859	SLV 13	0.362	1.483	1618	1.653	Si
	R	0.796	SLV 8	0.19	0.776	243	0.76	No
98	PF	2.064	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.875	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.737	SLV 7	0.174	0.713	194	0.693	No
99	PF	0.904	SLV 3	0.22	0.9	359	0.892	No
	V	2.3	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.905	SLV 8	0.362	1.483	1618	1.653	Si
	R	0.692	SLV 5	0.163	0.665	166	0.65	No
100	PF	0.639	SLV 3	0.152	0.623	142	0.61	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.061	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.727	SLV 10	0.172	0.703	188	0.684	No
101	PF	1.217	SLV 16	0.293	1.201	820	1.251	Si
	V	2.869	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.273	SLV 15	0.362	1.483	1618	1.653	Si
	R	0.7	SLV 6	0.165	0.674	171	0.658	No
102	PF	0.97	SLV 3	0.237	0.968	435	0.965	No
	V	2.481	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	3.404	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.64	SLV 10	0.149	0.61	136	0.599	No
103	PF	1.456	SLV 3	0.347	1.421	1406	1.56	Si
	V	3.85	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	1.515	SLV 3	0.361	1.476	1593	1.642	Si
	R	0.849	SLV 10	0.204	0.834	293	0.82	No
104	PF	1.387	SLV 11	0.335	1.372	1252	1.488	Si
	V	4.04	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	2.071	SLV 11	0.362	1.483	1618	1.653	Si
	R	2.195	SLV 6	0.362	1.483	1618	1.653	Si
105	PF	1.528	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.016	SLV 6	0.362	1.483	1618	1.653	Si
	R	1.266	SLV 11	0.306	1.254	935	1.32	Si
107	PF	2.68	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.881	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.368	SLV 12	0.331	1.354	1198	1.461	Si
110	PF	1.807	SLV 7	0.362	1.483	1618	1.653	Si
	V	3.856	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.781	SLV 12	0.362	1.483	1618	1.653	Si
	R	0.772	SLV 9	0.184	0.751	222	0.732	No
111	PF	0.817	SLV 7	0.195	0.799	262	0.784	No
	V	3.452	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	0.862	SLV 7	0.207	0.848	306	0.835	No
	R	0.747	SLV 10	0.177	0.723	201	0.703	No
112	PF	1.263	SLV 6	0.306	1.251	929	1.317	Si
	V	2.709	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	1.684	SLV 2	0.362	1.483	1618	1.653	Si
	R	0.883	SLV 11	0.213	0.871	329	0.86	No
113	PF	1.308	SLV 7	0.316	1.295	1035	1.376	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.47	SLV 3	0.35	1.434	1448	1.579	Si
	R	0.872	SLV 10	0.209	0.857	316	0.846	No
114	PF	1.943	SLV 12	0.362	1.483	1618	1.653	Si
	V	1.361	SLV 11	0.329	1.347	1178	1.451	Si
	PFFP	2.549	SLV 15	0.362	1.483	1618	1.653	Si
	R	1.774	SLV 6	0.362	1.483	1618	1.653	Si
115	PF	0.631	SLV 12	0.147	0.602	132	0.592	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.61	SLV 12	0.142	0.58	121	0.571	No
	R	0.909	SLV 5	0.219	0.898	357	0.89	No
116	PF	0.947	SLV 12	0.23	0.94	403	0.935	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.864	SLV 12	0.208	0.85	308	0.837	No
	R	0.93	SLV 5	0.225	0.922	383	0.916	No
117	PF	0.73	SLV 9	0.172	0.705	189	0.685	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.676	SLV 9	0.158	0.648	156	0.633	No
	R	0.893	SLV 8	0.215	0.881	340	0.872	No
118	PF	1.824	SLV 6	0.362	1.483	1618	1.653	Si
	V	3.505	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.435	SLV 9	0.347	1.419	1399	1.557	Si
	R	1.067	SLV 8	0.26	1.064	571	1.078	Si
119	PF	0.717	SLV 13	0.173	0.706	190	0.687	No
	V	2.936	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.213	SLV 9	0.294	1.203	824	1.253	Si
	R	1.158	SLV 8	0.281	1.151	722	1.187	Si
121	PF	2.676	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.196	SLV 16	0.289	1.182	782	1.227	Si
	R	1.49	SLV 5	0.36	1.473	1581	1.637	Si
122	PF	0.614	SLV 13	0.146	0.596	128	0.584	No
	V	2.195	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.035	SLV 13	0.252	1.033	522	1.039	Si
	R	1.25	SLV 7	0.303	1.239	901	1.3	Si
123	PF	1.988	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.289	SLV 12	0.312	1.277	987	1.35	Si
	R	1.378	SLV 5	0.333	1.364	1227	1.476	Si
126	PF	0.777	SLV 13	0.188	0.77	237	0.752	No
	V	2.293	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.263	SLV 2	0.304	1.243	911	1.306	Si
	R	1.131	SLV 8	0.275	1.125	675	1.155	Si
128	PF	1.332	SLV 7	0.322	1.319	1098	1.41	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.069	SLV 7	0.26	1.066	574	1.081	Si
	R	1.331	SLV 9	0.322	1.318	1096	1.409	Si
129	PF	0.889	SLV 9	0.214	0.877	335	0.867	No
	V	3.666	SLV 2	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	0.793	SLV 5	0.189	0.773	239	0.755	No
	R	0.979	SLV 8	0.238	0.976	445	0.974	No
131	PF	2.439	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.077	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	3.086	SLV 9	0.362	1.483	1618	1.653	Si
	R	2.24	SLV 12	0.362	1.483	1618	1.653	Si
132	PF	2.641	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.827	SLV 7	0.362	1.483	1618	1.653	Si
	R	1.243	SLV 10	0.301	1.232	885	1.291	Si
133	PF	1.914	SLV 16	0.362	1.483	1618	1.653	Si
	V	3.081	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.497	SLV 16	0.362	1.483	1618	1.653	Si
	R	1.127	SLV 5	0.274	1.121	668	1.15	Si
134	PF	2.055	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.521	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	3.156	SLV 7	0.362	1.483	1618	1.653	Si
	R	1.132	SLV 10	0.275	1.126	677	1.156	Si
135	PF	1.409	SLV 16	0.337	1.378	1270	1.497	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.588	SLV 12	0.362	1.483	1618	1.653	Si
	R	1.126	SLV 5	0.274	1.12	667	1.149	Si
136	PF	1.472	SLV 13	0.351	1.436	1454	1.582	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.602	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.042	SLV 8	0.254	1.04	534	1.049	Si
137	PF	1.808	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.416	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	4.079	SLV 9	0.362	1.483	1618	1.653	Si
	R	0.961	SLV 8	0.234	0.956	422	0.953	No
138	PF	0.674	SLV 16	0.161	0.66	162	0.643	No
	V	2.816	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	1.399	SLV 11	0.338	1.384	1288	1.505	Si
	R	0.827	SLV 5	0.198	0.809	271	0.794	No
139	PF	0.399	SLV 3	0.094	0.384	44	0.377	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.471	SLV 7	0.355	1.454	1516	1.609	Si
	R	0.947	SLV 10	0.23	0.941	404	0.936	No
140	PF	1.183	SLV 3	0.286	1.17	759	1.212	Si
	V	3.675	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	2.239	SLV 11	0.362	1.483	1618	1.653	Si
	R	0.957	SLV 6	0.233	0.952	416	0.947	No
141	PF	0.828	SLV 3	0.201	0.821	281	0.806	No
	V	3.552	SLV 3	0.362	1.483	1618	1.653	Si
	PFFP	2.31	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.808	SLV 10	0.193	0.789	253	0.772	No
142	PF	1.505	SLV 3	0.358	1.466	1557	1.627	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.412	SLV 3	0.337	1.381	1279	1.501	Si
	R	1.15	SLV 10	0.279	1.143	708	1.178	Si
143	PF	1.216	SLV 6	0.295	1.206	830	1.257	Si
	V	3.291	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	0.911	SLV 6	0.22	0.902	360	0.893	No
	R	1.102	SLV 11	0.268	1.097	627	1.121	Si
144	PF	1.347	SLV 7	0.326	1.333	1139	1.431	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.723	SLV 7	0.362	1.483	1618	1.653	Si
	R	1.522	SLV 10	0.362	1.483	1618	1.653	Si
145	PF	1.302	SLV 7	0.315	1.289	1020	1.368	Si
	V	1.581	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1.629	SLV 7	0.362	1.483	1618	1.653	Si
	R	2.709	SLV 10	0.362	1.483	1618	1.653	Si
147	PF	1.383	SLV 6	0.334	1.369	1241	1.483	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.365	SLV 6	0.33	1.351	1189	1.457	Si
	R	1.372	SLV 11	0.332	1.358	1209	1.467	Si
150	PF	0.702	SLV 2	0.168	0.689	180	0.672	No
	V	2.096	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.212	SLV 13	0.292	1.196	811	1.245	Si
	R	1.327	SLV 11	0.321	1.314	1085	1.403	Si
152	PF	3.039	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.686	SLV 2	0.362	1.483	1618	1.653	Si
	R	1.652	SLV 11	0.362	1.483	1618	1.653	Si
153	PF	0.519	SLV 2	0.122	0.501	85	0.494	No
	V	1.961	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.07	SLV 2	0.26	1.065	574	1.081	Si
	R	0.956	SLV 8	0.232	0.951	415	0.946	No
155	PF	1.414	SLV 3	0.338	1.383	1285	1.504	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.891	SLV 1	0.217	0.887	345	0.877	No
	R	1.892	SLV 12	0.362	1.483	1618	1.653	Si
158	PF	0.633	SLV 2	0.151	0.617	139	0.604	No
	V	2.596	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	1.052	SLV 6	0.256	1.05	549	1.061	Si
	R	1.083	SLV 11	0.264	1.08	597	1.098	Si
159	PF	1.577	SLV 6	0.362	1.483	1618	1.653	Si
	V	3.504	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.3	SLV 6	0.315	1.287	1015	1.365	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	1.026	SLV 7	0.25	1.025	511	1.03	Si
160	PF	0.676	SLV 6	0.158	0.648	156	0.633	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.665	SLV 6	0.156	0.637	150	0.623	No
	R	0.891	SLV 11	0.215	0.879	337	0.869	No
161	PF	1.751	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.501	SLV 7	0.362	1.483	1618	1.653	Si
	R	0.956	SLV 10	0.232	0.951	415	0.946	No
162	PF	0.667	SLV 7	0.156	0.639	151	0.625	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.658	SLV 7	0.154	0.629	145	0.615	No
	R	0.889	SLV 10	0.214	0.877	335	0.867	No
163	PF	1.883	SLV 7	0.362	1.483	1618	1.653	Si
	V	1.335	SLV 8	0.323	1.322	1106	1.414	Si
	PFFP	2.533	SLV 4	0.362	1.483	1618	1.653	Si
	R	1.725	SLV 9	0.362	1.483	1618	1.653	Si
164	PF	1.72	SLV 16	0.362	1.483	1618	1.653	Si
	V	0.948	SLV 8	0.23	0.943	406	0.938	No
	PFFP	1.683	SLV 3	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
165	PF	0.587	SLV 12	0.136	0.555	109	0.547	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.596	SLV 12	0.139	0.567	115	0.559	No
	R	2.615	SLV 5	0.362	1.483	1618	1.653	Si
166	PF	0.966	SLV 12	0.235	0.962	428	0.958	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.891	SLV 12	0.215	0.879	337	0.869	No
	R	2.512	SLV 7	0.362	1.483	1618	1.653	Si
167	PF	0.559	SLV 9	0.129	0.528	97	0.521	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.601	SLV 9	0.14	0.571	117	0.563	No
	R	2.702	SLV 8	0.362	1.483	1618	1.653	Si
168	PF	2.078	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.334	SLV 5	0.323	1.321	1103	1.413	Si
	R	2.299	SLV 12	0.362	1.483	1618	1.653	Si
169	PF	0.732	SLV 15	0.176	0.722	200	0.701	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.755	SLV 5	0.179	0.731	207	0.711	No
	R	2.087	SLV 6	0.362	1.483	1618	1.653	Si
172	PF	1.373	SLV 12	0.332	1.359	1212	1.468	Si
	V	3.591	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	0.779	SLV 16	0.188	0.771	238	0.753	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
173	PF	1.839	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.036	SLV 12	0.253	1.034	525	1.042	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
175	PF	0.998	SLV 10	0.244	0.997	471	0.997	No
	V	3.65	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	0.963	SLV 16	0.235	0.962	428	0.958	No
	R	1.755	SLV 7	0.362	1.483	1618	1.653	Si
176	PF	0.473	SLV 11	0.107	0.439	62	0.434	No
	V	1.897	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	1.028	SLV 9	0.251	1.027	514	1.033	Si
	R	3.712	SLV 6	0.362	1.483	1618	1.653	Si
177	PF	0.576	SLV 3	0.136	0.558	110	0.549	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.899	SLV 3	0.219	0.895	353	0.885	No
	R	2.017	SLV 10	0.362	1.483	1618	1.653	Si
178	PF	1.197	SLV 3	0.289	1.182	783	1.227	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.14	SLV 7	0.277	1.134	691	1.166	Si
	R	1.786	SLV 10	0.362	1.483	1618	1.653	Si
179	PF	1.988	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.396	SLV 11	0.337	1.381	1279	1.501	Si
	R	2.301	SLV 6	0.362	1.483	1618	1.653	Si
180	PF	0.332	SLV 16	0.078	0.318	28	0.313	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.634	SLV 16	0.151	0.617	139	0.604	No
	R	1.683	SLV 5	0.362	1.483	1618	1.653	Si
181	PF	1.679	SLV 14	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.36	SLV 13	0.326	1.333	1138	1.431	Si
	R	2.768	SLV 5	0.362	1.483	1618	1.653	Si
182	PF	1.232	SLV 16	0.297	1.214	849	1.269	Si
	V	3.637	SLV 16	0.362	1.483	1618	1.653	Si
	PFFP	3.082	SLV 13	0.362	1.483	1618	1.653	Si
	R	2.355	SLV 9	0.362	1.483	1618	1.653	Si
183	PF	0.766	SLV 3	0.185	0.758	228	0.74	No
	V	3.849	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.65	SLV 12	0.362	1.483	1618	1.653	Si
	R	2.247	SLV 6	0.362	1.483	1618	1.653	Si
184	PF	0.231	SLV 3	0.053	0.218	11	0.214	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.472	SLV 11	0.356	1.455	1520	1.611	Si
	R	2.836	SLV 5	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
185	PF	0.708	SLV 3	0.17	0.696	184	0.678	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.512	SLV 11	0.362	1.483	1618	1.653	Si
	R	2.567	SLV 10	0.362	1.483	1618	1.653	Si
186	PF	0.666	SLV 3	0.159	0.65	157	0.635	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.473	SLV 3	0.362	1.483	1618	1.653	Si
	R	2.289	SLV 11	0.362	1.483	1618	1.653	Si
187	PF	2.016	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.173	SLV 3	0.283	1.16	740	1.199	Si
	R	2.758	SLV 10	0.362	1.483	1618	1.653	Si
188	PF	0.649	SLV 7	0.152	0.621	141	0.608	No
	V	3.005	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	1.082	SLV 2	0.263	1.076	591	1.094	Si
	R	2.807	SLV 11	0.362	1.483	1618	1.653	Si
190	PF	1.437	SLV 6	0.347	1.421	1405	1.56	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.001	SLV 6	0.245	1.001	476	1.001	Si
	R	1.658	SLV 11	0.362	1.483	1618	1.653	Si
192	PF	1.72	SLV 7	0.362	1.483	1618	1.653	Si
	V	3.587	SLV 10	0.362	1.483	1618	1.653	Si
	PFFP	1.167	SLV 4	0.282	1.155	730	1.193	Si
	R	3.743	SLV 9	0.362	1.483	1618	1.653	Si
194	PF	1.016	SLV 1	0.248	1.015	496	1.018	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.519	SLV 1	0.122	0.501	85	0.494	No
	R	2.22	SLV 12	0.362	1.483	1618	1.653	Si
197	PF	0.165	SLV 3	0.038	0.157	5	0.155	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.476	SLV 3	0.112	0.457	68	0.451	No
	R	1.694	SLV 10	0.362	1.483	1618	1.653	Si
198	PF	0.639	SLV 7	0.149	0.61	136	0.599	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.635	SLV 7	0.148	0.606	134	0.595	No
	R	2.833	SLV 10	0.362	1.483	1618	1.653	Si
199	PF	1.777	SLV 10	0.362	1.483	1618	1.653	Si
	V	0.988	SLV 7	0.241	0.986	458	0.985	No
	PFFP	1.714	SLV 16	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
201	PF	0.514	SLV 13	0.121	0.495	83	0.489	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.075	SLV 15	0.261	1.07	581	1.086	Si
	R	2.131	SLV 9	0.362	1.483	1618	1.653	Si
202	PF	0.626	SLV 13	0.149	0.608	135	0.597	No
	V	3.999	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.231	SLV 2	0.297	1.214	847	1.268	Si
	R	2.899	SLV 8	0.362	1.483	1618	1.653	Si
204	PF	0.368	SLV 6	0.082	0.337	33	0.335	No
	V	3.051	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	0.499	SLV 6	0.114	0.466	71	0.459	No
	R	2.409	SLV 11	0.362	1.483	1618	1.653	Si
205	PF	0.605	SLV 9	0.141	0.576	119	0.567	No
	V	2.489	SLV 9	0.362	1.483	1618	1.653	Si
	PFFP	0.533	SLV 9	0.122	0.501	85	0.494	No
	R	2.289	SLV 8	0.362	1.483	1618	1.653	Si
207	PF	0.486	SLV 2	0.114	0.468	72	0.461	No
	V	3.401	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.007	SLV 13	0.246	1.006	484	1.008	Si
	R	2.9	SLV 7	0.362	1.483	1618	1.653	Si
209	PF	0.56	SLV 4	0.132	0.542	103	0.534	No
	V	3.233	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.171	SLV 4	0.283	1.158	737	1.197	Si
	R	2.533	SLV 6	0.362	1.483	1618	1.653	Si
210	PF	0.619	SLV 4	0.147	0.602	132	0.592	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.705	SLV 10	0.166	0.68	174	0.662	No
	R	1.572	SLV 9	0.362	1.483	1618	1.653	Si
211	PF	2.065	SLV 10	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.182	SLV 6	0.287	1.173	765	1.216	Si
	R	2.156	SLV 8	0.362	1.483	1618	1.653	Si
212	PF	0.643	SLV 6	0.15	0.614	138	0.602	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.63	SLV 6	0.147	0.602	132	0.592	No
	R	2.899	SLV 11	0.362	1.483	1618	1.653	Si
219	PF	0.766	SLV 15	0.185	0.758	228	0.74	No
	V	0.734	SLV 15	0.177	0.723	201	0.703	No
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
230	PF	0.742	SLV 13	0.179	0.733	208	0.713	No
	V	2.566	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	0.739	SLV 9	0.175	0.715	196	0.696	No
	R	0.626	SLV 4	0.149	0.608	135	0.597	No
231	PF	2.011	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.559	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.363	SLV 10	0.33	1.349	1183	1.454	Si
	R	0.681	SLV 3	0.163	0.667	167	0.651	No
232	PF	0.669	SLV 13	0.16	0.654	159	0.638	No

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1.871	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.625	SLV 10	0.362	1.483	1618	1.653	Si
	R	0.663	SLV 4	0.158	0.648	156	0.633	No
233	PF	1.045	SLV 13	0.255	1.042	537	1.052	Si
	V	1.94	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.392	SLV 2	0.333	1.363	1224	1.474	Si
	R	0.63	SLV 15	0.15	0.612	137	0.601	No
234	PF	3.047	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.344	SLV 16	0.322	1.318	1097	1.409	Si
	R	1.522	SLV 1	0.362	1.482	1615	1.652	Si
237	PF	1.042	SLV 2	0.254	1.039	532	1.048	Si
	V	2.288	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.496	SLV 9	0.361	1.479	1602	1.646	Si
	R	0.7	SLV 4	0.168	0.687	178	0.669	No
242	PF	0.899	SLV 9	0.217	0.888	346	0.878	No
	V	2.65	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1.117	SLV 5	0.272	1.112	651	1.138	Si
	R	0.674	SLV 4	0.161	0.66	162	0.643	No
243	PF	3.453	SLV 2	0.362	1.483	1618	1.653	Si
	V	3.658	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	3.814	SLV 4	0.362	1.483	1618	1.653	Si
	R	0.62	SLV 11	0.144	0.591	126	0.58	No
244	PF	3.746	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.331	SLV 12	0.322	1.318	1096	1.409	Si
	PFFP	0.471	SLV 7	0.107	0.439	62	0.434	No
	R	2.412	SLV 14	0.362	1.483	1618	1.653	Si
246	PF	0.256	SLV 13	0.059	0.242	14	0.236	No
	V	1.205	SLV 13	0.291	1.19	798	1.237	Si
	PFFP	0.286	SLV 9	0.062	0.256	17	0.255	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
247	PF	0.305	SLV 15	0.071	0.292	23	0.289	No
	V	1.011	SLV 15	0.247	1.01	489	1.012	Si
	PFFP	0.247	SLV 2	0.057	0.234	13	0.229	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
249	PF	1.187	SLV 6	0.288	1.178	775	1.222	Si
	V	3.033	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.367	SLV 9	0.331	1.353	1195	1.46	Si
	R	0.712	SLV 3	0.171	0.699	186	0.681	No
251	PF	3.621	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	0.836	SLV 10	0.2	0.819	279	0.804	No
254	PF	1.134	SLV 15	0.275	1.124	674	1.154	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.586	SLV 3	0.139	0.567	115	0.559	No
	R	1.645	SLV 2	0.362	1.483	1618	1.653	Si
261	PF	1.015	SLV 13	0.248	1.014	495	1.017	Si
	V	2.034	SLV 4	0.362	1.483	1618	1.653	Si
	PFFP	1.518	SLV 2	0.361	1.479	1602	1.646	Si
	R	0.733	SLV 15	0.177	0.723	201	0.703	No
263	PF	3.604	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.851	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.409	SLV 15	0.337	1.378	1270	1.497	Si
264	PF	0.565	SLV 2	0.134	0.548	106	0.541	No
	V	1.589	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.227	SLV 13	0.296	1.21	840	1.263	Si
	R	0.592	SLV 4	0.14	0.574	118	0.565	No
265	PF	0.635	SLV 2	0.151	0.619	140	0.606	No
	V	1.772	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.49	SLV 5	0.36	1.473	1581	1.637	Si
	R	0.621	SLV 15	0.148	0.604	133	0.593	No
266	PF	1.838	SLV 6	0.362	1.483	1618	1.653	Si
	V	2.448	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1.257	SLV 5	0.304	1.245	915	1.308	Si
	R	0.696	SLV 15	0.167	0.682	175	0.664	No
267	PF	0.785	SLV 2	0.19	0.778	244	0.761	No
	V	2.634	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	0.755	SLV 6	0.179	0.731	207	0.711	No
	R	0.621	SLV 15	0.148	0.604	133	0.593	No

Verifica travi di collegamento in muratura

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
2	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.38	SLV 16	0.33	1.352	1191	1.458	Si
6	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.134	SLV 13	0.275	1.124	674	1.154	Si
8	F	2.684	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.292	SLV 4	0.069	0.281	21	0.278	No
10	F	2.577	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.072	SLV 4	0.261	1.067	577	1.083	Si
11	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.482	SLV 14	0.113	0.463	70	0.456	No
15	F	0.27	SLV 3	0.062	0.256	17	0.255	No
	V	0.11	SLV 3	0.026	0.107	2	0.106	No
16	F	1.66	SLV 16	0.362	1.483	1618	1.653	Si
	V	0.394	SLV 14	0.093	0.38	43	0.373	No
17	F	0.474	SLV 1	0.112	0.457	68	0.451	No

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	0.479	SLV 3	0.112	0.46	69	0.453	No
19	F	0.203	SLV 3	0.047	0.191	8	0.187	No
	V	0.286	SLV 3	0.067	0.275	20	0.273	No
22	F	3.147	SLV 16	0.362	1.483	1618	1.653	Si
	V	0.562	SLV 16	0.133	0.544	104	0.536	No
24	F	3.422	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.313	SLV 3	0.074	0.303	25	0.299	No
27	F	0.817	SLV 13	0.198	0.81	272	0.796	No
	V	0.239	SLV 13	0.055	0.226	12	0.221	No
28	F	2.626	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.274	SLV 15	0.064	0.262	18	0.261	No
30	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.513	SLV 2	0.36	1.473	1583	1.638	Si
32	F	1.358	SLV 11	0.328	1.344	1169	1.447	Si
	V	1.193	SLV 11	0.289	1.184	786	1.229	Si
33	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.812	SLV 1	0.197	0.805	267	0.79	No
35	F	2.355	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.272	SLV 12	0.308	1.26	948	1.328	Si
36	F	1.129	SLV 16	0.274	1.12	666	1.149	Si
	V	1.423	SLV 14	0.34	1.391	1310	1.516	Si
37	F	1.753	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.743	SLV 4	0.18	0.735	210	0.716	No
39	F	1.016	SLV 4	0.248	1.015	496	1.018	Si
	V	0.546	SLV 2	0.129	0.528	97	0.521	No
40	F	3.726	SLV 8	0.362	1.483	1618	1.653	Si
	V	2.132	SLV 12	0.362	1.483	1618	1.653	Si
42	F	0.872	SLV 13	0.212	0.867	325	0.856	No
	V	0.49	SLV 2	0.115	0.471	73	0.464	No
44	F	1.798	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.217	SLV 14	0.293	1.201	820	1.251	Si
45	F	0.874	SLV 14	0.212	0.869	327	0.858	No
	V	0.712	SLV 14	0.171	0.699	186	0.681	No
46	F	0.841	SLV 14	0.204	0.835	294	0.821	No
	V	0.587	SLV 14	0.139	0.569	116	0.561	No
47	F	0.489	SLV 14	0.115	0.471	73	0.464	No
	V	0.435	SLV 14	0.103	0.42	55	0.413	No
48	F	1.033	SLV 3	0.252	1.031	520	1.038	Si
	V	0.688	SLV 3	0.165	0.674	171	0.658	No
49	F	0.518	SLV 3	0.122	0.501	85	0.494	No
	V	0.436	SLV 3	0.103	0.42	55	0.413	No
50	F	0.942	SLV 14	0.229	0.939	401	0.933	No
	V	0.247	SLV 14	0.057	0.234	13	0.229	No
51	F	0.905	SLV 4	0.22	0.901	360	0.893	No
	V	0.264	SLV 4	0.062	0.256	17	0.255	No
52	F	0.396	SLV 14	0.093	0.38	43	0.373	No
	V	0.32	SLV 14	0.075	0.308	26	0.304	No
53	F	0.984	SLV 3	0.24	0.984	454	0.982	No
	V	0.405	SLV 14	0.096	0.392	46	0.384	No
56	F	0.782	SLV 4	0.189	0.775	242	0.758	No
	V	0.496	SLV 2	0.116	0.477	75	0.469	No
58	F	3.268	SLV 11	0.362	1.483	1618	1.653	Si
	V	1.746	SLV 11	0.362	1.483	1618	1.653	Si
59	F	3.301	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.184	SLV 14	0.041	0.169	6	0.167	No
60	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.749	SLV 14	0.181	0.741	214	0.721	No
61	F	0.928	SLV 13	0.226	0.925	386	0.918	No
	V	0.582	SLV 2	0.138	0.565	113	0.555	No
63	F	1.357	SLV 4	0.325	1.33	1130	1.427	Si
	V	0.993	SLV 15	0.243	0.993	465	0.991	No
64	F	1.21	SLV 3	0.292	1.194	808	1.243	Si
	V	1.141	SLV 3	0.276	1.131	686	1.163	Si
65	F	0.526	SLV 3	0.124	0.508	88	0.501	No
	V	0.733	SLV 3	0.177	0.723	201	0.703	No
66	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.928	SLV 13	0.226	0.925	386	0.918	No
67	F	1.946	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.515	SLV 14	0.361	1.476	1593	1.642	Si
68	F	2.308	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.564	SLV 14	0.362	1.483	1618	1.653	Si
69	F	1.677	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.633	SLV 15	0.151	0.617	139	0.604	No
70	F	1.674	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.802	SLV 15	0.194	0.794	258	0.779	No
71	F	1.829	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.679	SLV 4	0.162	0.663	165	0.648	No
72	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
74	F	1.512	SLV 13	0.36	1.473	1580	1.637	Si
	V	0.507	SLV 13	0.119	0.487	80	0.482	No
76	F	1.926	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.291	SLV 14	0.31	1.269	969	1.34	Si
77	F	1.936	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.308	SLV 14	0.314	1.285	1009	1.362	Si
78	F	0.893	SLV 14	0.217	0.889	347	0.879	No
	V	0.584	SLV 14	0.139	0.567	115	0.559	No
79	F	0.87	SLV 14	0.211	0.865	323	0.854	No
	V	0.581	SLV 14	0.137	0.562	112	0.553	No

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
80	F	1.141	SLV 1	0.276	1.131	686	1.163	Si
	V	0.755	SLV 1	0.183	0.747	219	0.728	No
81	F	1.353	SLV 1	0.324	1.327	1120	1.421	Si
	V	0.593	SLV 1	0.141	0.576	119	0.567	No
82	F	1.197	SLV 1	0.289	1.182	783	1.227	Si
	V	0.293	SLV 14	0.069	0.281	21	0.278	No
83	F	1.16	SLV 3	0.281	1.148	718	1.185	Si
	V	0.352	SLV 3	0.082	0.337	33	0.335	No
84	F	0.67	SLV 1	0.16	0.654	159	0.638	No
	V	0.55	SLV 14	0.13	0.532	99	0.526	No
85	F	1.003	SLV 16	0.245	1.003	479	1.003	Si
	V	1.06	SLV 1	0.258	1.056	559	1.069	Si
86	F	1.526	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.532	SLV 1	0.125	0.513	90	0.506	No
87	F	1.357	SLV 3	0.325	1.33	1130	1.427	Si
	V	0.284	SLV 3	0.067	0.275	20	0.273	No
89	F	1.327	SLV 4	0.318	1.303	1055	1.387	Si
	V	0.409	SLV 4	0.096	0.392	46	0.384	No
91	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
92	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.869	SLV 14	0.211	0.864	322	0.853	No
93	F	3.458	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.555	SLV 12	0.362	1.483	1618	1.653	Si
94	F	1.76	SLV 15	0.362	1.483	1618	1.653	Si
	V	0.672	SLV 15	0.161	0.658	161	0.642	No
95	F	1.599	SLV 2	0.362	1.483	1618	1.653	Si
	V	0.707	SLV 4	0.17	0.694	183	0.676	No
96	F	1.507	SLV 2	0.359	1.468	1564	1.63	Si
	V	0.644	SLV 4	0.153	0.627	144	0.613	No
97	F	1.272	SLV 1	0.306	1.252	929	1.317	Si
	V	0.963	SLV 1	0.235	0.962	428	0.958	No
98	F	1.825	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.139	SLV 1	0.276	1.129	682	1.16	Si
99	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.195	SLV 6	0.29	1.186	790	1.232	Si
100	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.18	SLV 10	0.362	1.483	1618	1.653	Si
101	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.805	SLV 10	0.362	1.483	1618	1.653	Si
102	F	2.279	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.506	SLV 15	0.358	1.467	1560	1.628	Si
103	F	2.801	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.545	SLV 15	0.362	1.483	1618	1.653	Si
104	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.552	SLV 15	0.131	0.535	100	0.528	No
105	F	2.684	SLV 4	0.362	1.483	1618	1.653	Si
	V	2.438	SLV 4	0.362	1.483	1618	1.653	Si
106	F	1.704	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.86	SLV 4	0.209	0.855	313	0.843	No
107	F	2.283	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.979	SLV 15	0.239	0.977	447	0.975	No
108	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
110	F	1.91	SLV 13	0.362	1.483	1618	1.653	Si
	V	0.618	SLV 13	0.147	0.6	131	0.59	No
112	F	3.447	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.394	SLV 14	0.362	1.483	1618	1.653	Si
113	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.712	SLV 14	0.362	1.483	1618	1.653	Si
114	F	1.513	SLV 3	0.36	1.474	1586	1.639	Si
	V	0.86	SLV 14	0.209	0.855	313	0.843	No
115	F	1.379	SLV 14	0.33	1.351	1188	1.456	Si
	V	1.058	SLV 1	0.258	1.054	556	1.067	Si
116	F	1.903	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.208	SLV 1	0.291	1.192	804	1.241	Si
117	F	1.786	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.32	SLV 1	0.317	1.296	1038	1.378	Si
118	F	1.548	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.424	SLV 16	0.1	0.41	52	0.404	No
119	F	1.415	SLV 1	0.338	1.384	1287	1.505	Si
	V	0.461	SLV 1	0.109	0.445	64	0.44	No
120	F	0.771	SLV 3	0.186	0.763	232	0.745	No
	V	0.688	SLV 14	0.165	0.674	171	0.658	No
121	F	1.002	SLV 3	0.245	1.002	477	1.002	Si
	V	0.985	SLV 3	0.24	0.984	455	0.983	No
122	F	2.308	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.847	SLV 1	0.206	0.842	301	0.829	No
123	F	2.133	SLV 3	0.362	1.483	1618	1.653	Si
	V	0.622	SLV 3	0.148	0.604	133	0.593	No
125	F	1.574	SLV 4	0.362	1.483	1618	1.653	Si
	V	0.446	SLV 4	0.105	0.43	58	0.422	No
127	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
128	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.19	SLV 1	0.362	1.483	1618	1.653	Si
129	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
130	F	1.662	SLV 4	0.362	1.483	1618	1.653	Si

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	0.787	SLV 4	0.19	0.779	245	0.762	No
131	F	2.353	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.136	SLV 13	0.275	1.126	678	1.157	Si
132	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.464	SLV 2	0.11	0.448	65	0.442	No
133	F	2.39	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.34	SLV 15	0.362	1.483	1618	1.653	Si
134	F	2.237	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.475	SLV 4	0.351	1.439	1463	1.586	Si
135	F	2.952	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.451	SLV 4	0.346	1.417	1391	1.554	Si
136	F	3.181	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.705	SLV 5	0.362	1.483	1618	1.653	Si
137	F	3.381	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.39	SLV 16	0.362	1.483	1618	1.653	Si
138	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.937	SLV 6	0.362	1.483	1618	1.653	Si
139	F	2.887	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
140	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.661	SLV 6	0.362	1.483	1618	1.653	Si
141	F	2.375	SLV 11	0.362	1.483	1618	1.653	Si
	V	2.334	SLV 6	0.362	1.483	1618	1.653	Si
142	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.236	SLV 4	0.298	1.218	857	1.274	Si
143	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
144	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.966	SLV 15	0.362	1.483	1618	1.653	Si
145	F	2.225	SLV 2	0.362	1.483	1618	1.653	Si
	V	1.897	SLV 2	0.362	1.483	1618	1.653	Si
146	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
147	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
148	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
149	F	2.671	SLV 14	0.362	1.483	1618	1.653	Si
	V	1.829	SLV 14	0.362	1.483	1618	1.653	Si
150	F	2.124	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.422	SLV 14	0.362	1.483	1618	1.653	Si
151	F	3.776	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.015	SLV 1	0.362	1.483	1618	1.653	Si
152	F	3.291	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.629	SLV 1	0.362	1.483	1618	1.653	Si
153	F	2.749	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.872	SLV 1	0.212	0.867	325	0.856	No
154	F	1.693	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.864	SLV 12	0.208	0.85	308	0.837	No
155	F	0.784	SLV 4	0.19	0.776	243	0.76	No
	V	0.742	SLV 13	0.179	0.733	208	0.713	No
156	F	1.084	SLV 14	0.263	1.078	594	1.096	Si
	V	1.456	SLV 1	0.347	1.421	1406	1.56	Si
157	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.945	SLV 2	0.362	1.483	1618	1.653	Si
158	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.724	SLV 3	0.362	1.483	1618	1.653	Si
159	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
160	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.09	SLV 1	0.265	1.084	603	1.103	Si
161	F	1.726	SLV 16	0.362	1.483	1618	1.653	Si
	V	3.262	SLV 1	0.362	1.483	1618	1.653	Si
162	F	3.538	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.115	SLV 5	0.362	1.483	1618	1.653	Si
163	F	2.38	SLV 10	0.362	1.483	1618	1.653	Si
	V	2.442	SLV 10	0.362	1.483	1618	1.653	Si
165	F	3.411	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.032	SLV 13	0.362	1.483	1618	1.653	Si
168	F	2.113	SLV 4	0.362	1.483	1618	1.653	Si
	V	1.363	SLV 4	0.326	1.336	1146	1.435	Si
170	F	2.683	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.387	SLV 13	0.332	1.358	1210	1.467	Si
171	F	1.786	SLV 13	0.362	1.483	1618	1.653	Si
	V	1.464	SLV 4	0.349	1.429	1430	1.571	Si
172	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.04	SLV 2	0.253	1.037	530	1.046	Si
173	F	3.223	SLV 10	0.362	1.483	1618	1.653	Si
	V	3.979	SLV 11	0.362	1.483	1618	1.653	Si
174	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.27	SLV 8	0.362	1.483	1618	1.653	Si
175	F	4.004	SLV 9	0.362	1.483	1618	1.653	Si
	V	3.314	SLV 8	0.362	1.483	1618	1.653	Si
176	F	2.654	SLV 15	0.362	1.483	1618	1.653	Si
	V	1.388	SLV 15	0.332	1.359	1212	1.468	Si
178	F	1.42	SLV 15	0.339	1.388	1301	1.512	Si
	V	0.486	SLV 13	0.114	0.468	72	0.461	No
182	F	1.355	SLV 4	0.325	1.329	1125	1.424	Si
	V	0.551	SLV 4	0.13	0.532	99	0.526	No

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
186	F	0.683	SLV 15	0.163	0.669	168	0.653	No
	V	0.602	SLV 15	0.143	0.585	123	0.575	No
187	F	1.221	SLV 15	0.294	1.204	828	1.256	Si
	V	0.63	SLV 15	0.15	0.612	137	0.601	No
188	F	1.284	SLV 15	0.309	1.263	954	1.331	Si
	V	0.668	SLV 15	0.159	0.652	158	0.637	No
191	F	1.25	SLV 15	0.301	1.231	885	1.291	Si
	V	0.537	SLV 15	0.127	0.518	93	0.512	No
195	F	1.337	SLV 2	0.321	1.312	1080	1.4	Si
	V	0.471	SLV 2	0.111	0.454	67	0.448	No

Periodi di ritorno e accelerazioni di aggancio per gli Stati Limite

S. L.	TR,C	PGA,C	TR,Rif	PGA,Rif	Tipo rottura
Stato limite di salvaguardia della vita	2	0.026	475	0.244	taglio trave connessione in muratura

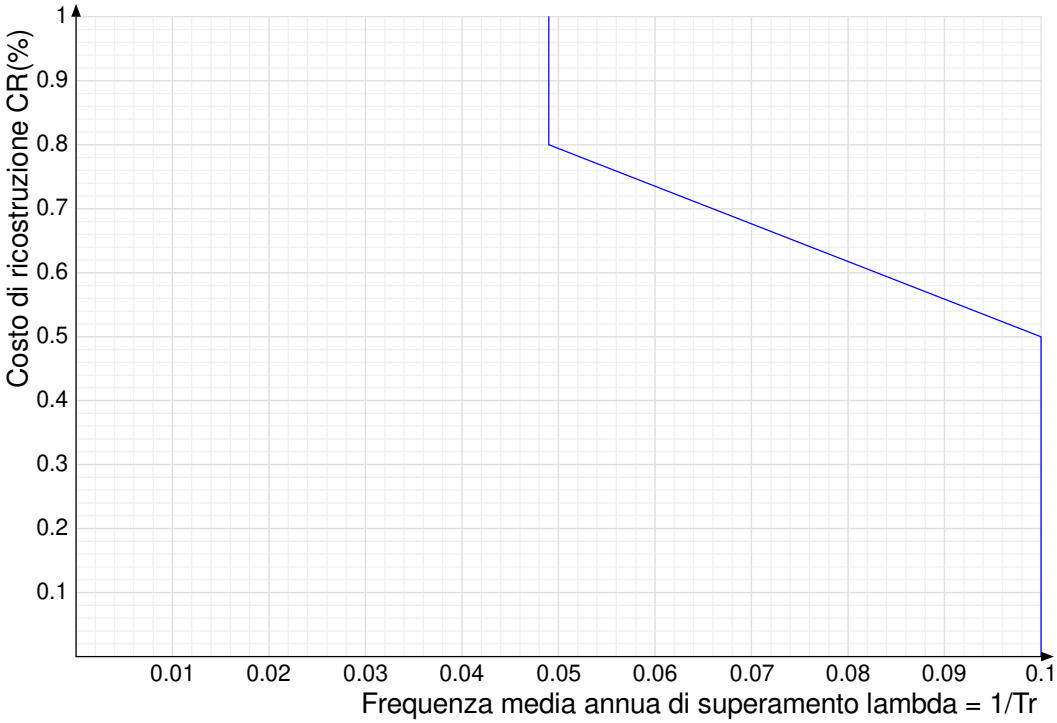
Coefficienti relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

TR,C	TR,Rif	PAM	Classe PAM	IS-V	Classe IS-V	Tipo rottura
2	475	8.215	G	10.678	F	taglio trave connessione in muratura

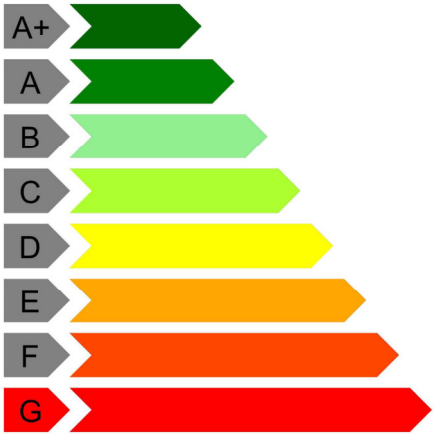
Coefficienti λ relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

λ,SLR	λ,SLC	λ,SLV	λ,SLD	λ,SLO	λ,SLID
0.049	0.049	0.1	0.1	0.1	0.1

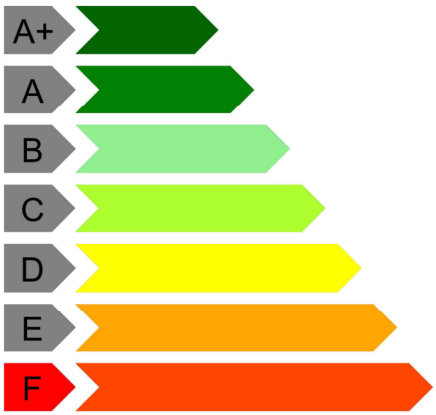
Andamento della curva che individua il PAM (Perdita Annuale Media Attesa)



Classe PAM



Classe IS-V



1.8 Verifiche maschi in muratura

Le unità di misura elencate nel capitolo sono in [m, daN, s] ove non espressamente specificato.

X ini.: *coordinate del punto iniziale del maschio. [m]*
Y ini.: *coordinate del punto iniziale del maschio. [m]*
X fin.: *coordinate del punto finale del maschio. [m]*
Y fin.: *coordinate del punto finale del maschio. [m]*
Quota i.: *livello o falda inferiore.*
Quota.s: *livello o falda superiore.*
l: *lunghezza del maschio. [m]*
Sp.: *spessore. [m]*
h netta: *altezza netta (a filo solai). [m]*
h ini.: *altezza nel modello al punto iniziale. [m]*
h fin.: *altezza nel modello al punto finale. [m]*
a: *distanza tra irrigidimenti laterali. [m]*
a.s.,sx: *lunghezza di appoggio del solaio di sinistra. [m]*
a.s.,dx: *lunghezza di appoggio del solaio di destra. [m]*
fb: *resistenza normalizzata a compressione verticale dei blocchi. [daN/m²]*
fk: *resistenza caratteristica a compressione della muratura utilizzata. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fmedio: *resistenza media a compressione della muratura utilizzata. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fv,lim: *valore massimo della resistenza a taglio che può essere impiegata nel calcolo. [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*

tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*
γF,d: *fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
connettori: *presenza di connettori per la prevenzione del distacco del rinforzo.*
tipo di muratura: *tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
CRM / Fibrenet?: *dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
CRM: *stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
intonaco: *materiale intonaco FRCM ovvero CRM.*
spessore intonaco: *spessore intonaco. [m]*
tipo blocco fibrenet: *tipo blocco muratura per verifica a tglio tipo Fibrenet.*
Comb.: *combinazione.*
Quota: *quota della sezione di verifica. [m]*
M: *momento flettente nel piano. [daN*m]*
N: *sforzo normale. [daN]*
εm: *deformazione della muratura.*
εm_: *deformazione elastica della muratura.*
εmu: *deformazione ultima della muratura.*
df: *distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
M0d: *momento resistente della sezione non rinforzata. [daN*m]*
M1d: *momento resistente della sezione rinforzata. [daN*m]*
MRd: *momento resistente della sezione. [daN*m]*
c.s.: *coefficiente di sicurezza.*
incremento > 50%: *incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
Verifica: *stato di verifica.*
Nmur: *aliquota di sforzo normale recepito dalla sola muratura. [daN]*
V: *taglio nel piano. [daN]*
df: *distanza tra lembo compresso e baricentro dell'armatura tesa. [m]*
l': *lunghezza della parte compressa della parete. [m]*
σN: *tensione media nella zona compressa. [daN/m²]*
fvd: *resistenza a taglio di calcolo. [daN/m²]*
Vt: *resistenza a taglio della muratura non rinforzata. [daN]*
Vt,f: *resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]*
Vt,c: *resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]*
Vt,c int.: *contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]*
Vt,R: *resistenza a taglio della sezione rinforzata. [daN]*
res. > 50%: *incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
fd: *resistenza a compressione di calcolo. [daN/m²]*
Sa: *accelerazione massima, adimensionalizzata rispetto a g, che l'elemento strutturale subisce durante il sisma.*
σ0: *tensione media di compressione. [daN/m²]*
M: *momento flettente fuori piano. [daN*m]*
Mc: *momento di collasso per azioni perpendicolari al piano. [daN*m]*
Coeff.s.: *coefficiente di sicurezza.*
N top: *sforzo normale in sommità. [daN]*
N base: *sforzo normale al piede. [daN]*
V orto: *taglio fuori piano. [daN]*
α0: *moltiplicatore secondo [C8.7.1.1].*
M*: *massa partecipante al cinematismo. [daN/(m/s²)]*
e*: *frazione di massa partecipante della muratura [C8.7.1.5].*
a0*: *accelerazione spettrale di attivazione del meccanismo [C8.7.1.8]. [m/s²]*
aLim: *accelerazione limite [C7.2.11]. [m/s²]*
Stato limite: *pF_SLU=Presso flessione per azioni non sismiche; V_SLU=Taglio per azioni non sismiche; PF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche; PFFP_SLV=Presso flessione fuori piano per azioni sismiche; R_SLV=Ribaltamento per azioni sismiche.*
Sa: *accelerazione massima adimensionalizzata rispetto a quella di gravità.*

Maschio 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	1.271	-24.653	-3.284	L2	L4	4.555	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.56	-8499.58	-56154	-0.0000494	0.0004492	0.0035	4.555	99216.32	120755.5	120755.5	14.21	No	Si
SLU 82	0.64	-27039.77	-65902	-0.0000762	0.0004492	0.0035	4.555	110598.33	136086.56	136086.56	5.03	No	Si
SLU 77	-1.56	-8385.59	-55880	-0.0000491	0.0004492	0.0035	4.555	98871.25	120302.15	120302.15	14.35	No	Si
SLU 77	0.64	-26939.92	-65826	-0.000076	0.0004492	0.0035	4.555	110516.01	135968.55	135968.55	5.05	No	Si
SLU 78	-1.56	-8443.23	-55873	-0.0000491	0.0004492	0.0035	4.555	98862.35	120290.48	120290.48	14.25	No	Si
SLU 78	0.64	-26910.09	-65818	-0.000076	0.0004492	0.0035	4.555	110507.45	135956.29	135956.29	5.05	No	Si
SLU 83	-1.56	-8523	-56765	-0.0000499	0.0004492	0.0035	4.555	99980.31	121765.68	121765.68	14.29	No	Si
SLU 83	0.64	-27369.48	-66771	-0.0000773	0.0004492	0.0035	4.555	111528.86	137431.28	137431.28	5.02	No	Si
SLU 79	-1.56	-8332.71	-55529	-0.0000487	0.0004492	0.0035	4.555	98427.91	119722.3	119722.3	14.37	No	Si
SLU 79	0.64	-26764.73	-65322	-0.0000754	0.0004492	0.0035	4.555	109969.65	135189.1	135189.1	5.05	No	Si
SLU 75	-1.56	-8362.17	-55269	-0.0000486	0.0004492	0.0035	4.555	98097.43	119291.97	119291.97	14.27	No	Si
SLU 75	0.64	-26610.21	-64957	-0.000075	0.0004492	0.0035	4.555	109570.54	134623.83	134623.83	5.06	No	Si
SLU 80	-1.56	-8390.35	-55522	-0.0000488	0.0004492	0.0035	4.555	98418.96	119710.63	119710.63	14.27	No	Si
SLU 80	0.64	-26734.9	-65314	-0.0000754	0.0004492	0.0035	4.555	109961.02	135176.84	135176.84	5.06	No	Si
SLU 74	-1.56	-8304.53	-55276	-0.0000485	0.0004492	0.0035	4.555	98106.41	119303.63	119303.63	14.37	No	Si
SLU 74	0.64	-26640.04	-64965	-0.000075	0.0004492	0.0035	4.555	109579.22	134636.09	134636.09	5.05	No	Si
SLU 81	-1.56	-8441.95	-56161	-0.0000493	0.0004492	0.0035	4.555	99225.18	120767.17	120767.17	14.31	No	Si
SLU 81	0.64	-27069.6	-65910	-0.0000763	0.0004492	0.0035	4.555	110606.87	136098.82	136098.82	5.03	No	Si
SLU 84	-1.56	-8580.64	-56758	-0.0000499	0.0004492	0.0035	4.555	99971.52	121754.01	121754.01	14.19	No	Si
SLU 84	0.64	-27339.65	-66763	-0.0000772	0.0004492	0.0035	4.555	111520.44	137419.02	137419.02	5.03	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	-1.56	2683.5	-31082	-0.0000245	0.0006738	0.0035	4.555		68423.25	68423.25	25.5		Si
SLV 9	0.64	-22513.22	-36531	-0.0000475	0.0006738	0.0035	4.555		88844.13	88844.13	3.95		Si
SLV 15	-1.56	-3723.83	-11540	-0.0000115	0.0006738	0.0035	4.555		37627.53	37627.53	10.1		Si
SLV 15	0.64	-9674.69	-12855	-0.000018	0.0006738	0.0035	4.555		40433.54	40433.54	4.18		Si
SLV 16	-1.56	-5733.39	-11268	-0.0000132	0.0006738	0.0035	4.555		37047.81	37047.81	6.46		Si
SLV 16	0.64	-8747.53	-12288	-0.0000167	0.0006738	0.0035	4.555		39223.7	39223.7	4.48		Si
SLV 10	-1.56	1374.11	-30905	-0.0000232	0.0006738	0.0035	4.555		68069.61	68069.61	49.54		Si
SLV 10	0.64	-21909.1	-36161	-0.0000466	0.0006738	0.0035	4.555		88134.28	88134.28	4.02		Si
SLV 6	-1.56	-530.49	-47239	-0.0000342	0.0006738	0.0035	4.555		109355.6	109355.6	206.14		Si
SLV 6	0.64	-26499.96	-55495	-0.0000657	0.0006738	0.0035	4.555		124421.52	124421.52	4.7		Si
SLV 5	-1.56	778.9	-47416	-0.0000346	0.0006738	0.0035	4.555		99992.83	99992.83	128.38		Si
SLV 5	0.64	-27104.08	-55864	-0.0000666	0.0006738	0.0035	4.555		125095.68	125095.68	4.62		Si
SLV 14	-1.56	-1589.03	-11514	-0.0000095	0.0006738	0.0035	4.555		37571.21	37571.21	23.64		Si
SLV 14	0.64	-12275.56	-12851	-0.0000208	0.0006738	0.0035	4.555		40424.01	40424.01	3.29		Si
SLV 13	-1.56	420.53	-11785	-0.0000086	0.0006738	0.0035	4.555		28178.1	28178.1	67.01		Si
SLV 13	0.64	-13202.71	-13418	-0.0000222	0.0006738	0.0035	4.555		41633.86	41633.86	3.15		Si
SLD 13	-1.56	-3126.77	-27231	-0.0000222	0.0006738	0.0035	4.555		70265.76	70265.76	22.47		Si
SLD 13	0.64	-16319.82	-31582	-0.0000379	0.0006738	0.0035	4.555		79048.14	79048.14	4.84		Si
SLD 9	-1.56	-2085.24	-35479	-0.0000271	0.0006738	0.0035	4.555		86823.62	86823.62	41.64		Si
SLD 9	0.64	-20385.74	-41415	-0.0000491	0.0006738	0.0035	4.555		98229.26	98229.26	4.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	-1.56	-8347.72	-54914	-43931	-6511	4.555	4.555	-21432	10833	22206	95155	73663	23230	96893	No	14.88	Si
SLU 76	0.64	-26415.13	-64448	-51559	-11970	4.555	4.555	-25154	10833	22206	95155	73663	23230	96893	No	8.09	Si
SLU 79	-1.56	-8332.71	-55529	-44423	-6415	4.555	4.555	-21673	10833	22206	95155	73663	23230	96893	No	15.1	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	0.64	-26764.73	-65322	-52258	-11968	4.555	4.555	-25495	10833	22206	95155	73663	23230	96893	No	8.1	Si
SLU 83	-1.56	-8523	-56765	-45412	-6488	4.555	4.555	-22155	10833	22206	95155	73663	23230	96893	No	14.93	Si
SLU 83	0.64	-27369.48	-66771	-53417	-12123	4.555	4.555	-26060	10833	22206	95155	73663	23230	96893	No	7.99	Si
SLU 78	-1.56	-8443.23	-55873	-44698	-6530	4.555	4.555	-21807	10833	22206	95155	73663	23230	96893	No	14.84	Si
SLU 78	0.64	-26910.09	-65818	-52654	-12106	4.555	4.555	-25688	10833	22206	95155	73663	23230	96893	No	8	Si
SLU 80	-1.56	-8390.35	-55522	-44418	-6505	4.555	4.555	-21670	10833	22206	95155	73663	23230	96893	No	14.9	Si
SLU 80	0.64	-26734.9	-65314	-52252	-12044	4.555	4.555	-25492	10833	22206	95155	73663	23230	96893	No	8.04	Si
SLU 77	-1.56	-8385.59	-55880	-44704	-6441	4.555	4.555	-21809	10833	22206	95155	73663	23230	96893	No	15.04	Si
SLU 77	0.64	-26939.92	-65826	-52661	-12030	4.555	4.555	-25691	10833	22206	95155	73663	23230	96893	No	8.05	Si
SLU 82	-1.56	-8499.58	-56154	-44923	-6524	4.555	4.555	-21916	10833	22206	95155	73663	23230	96893	No	14.85	Si
SLU 82	0.64	-27039.77	-65902	-52722	-12074	4.555	4.555	-25721	10833	22206	95155	73663	23230	96893	No	8.03	Si
SLU 84	-1.56	-8580.64	-56758	-45406	-6577	4.555	4.555	-22152	10833	22206	95155	73663	23230	96893	No	14.73	Si
SLU 84	0.64	-27339.65	-66763	-53410	-12199	4.555	4.555	-26057	10833	22206	95155	73663	23230	96893	No	7.94	Si
SLU 81	-1.56	-8441.95	-56161	-44929	-6435	4.555	4.555	-21919	10833	22206	95155	73663	23230	96893	No	15.06	Si
SLU 81	0.64	-27069.6	-65910	-52728	-11998	4.555	4.555	-25724	10833	22206	95155	73663	23230	96893	No	8.08	Si
SLU 75	-1.56	-8362.17	-55269	-44215	-6477	4.555	4.555	-21571	10833	22206	95155	73663	23230	96893	No	14.96	Si
SLU 75	0.64	-26610.21	-64957	-51966	-11981	4.555	4.555	-25352	10833	22206	95155	73663	23230	96893	No	8.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 7	-1.56	-9003.46	-42101	-33681	-10415	4.555	4.555	-16432	15786	32358	95155	110494	23230	127513		12.24	Si
SLD 7	0.64	-17131.64	-48898	-39118	-13518	4.555	4.555	-19084	16250	33308	95155	110494	23230	128464		9.5	Si
SLV 3	-1.56	-10072.48	-65990	-52792	-10250	4.555	4.555	-25755	16250	33308	95155	110494	23230	128464		12.53	Si
SLV 3	0.64	-24977.54	-77300	-61840	-14719	4.555	4.555	-30170	16250	33308	95155	110494	23230	128464		8.73	Si
SLD 11	-1.56	-8189.39	-35122	-28097	-9592	4.555	4.555	-13708	15242	31241	95155	110494	23230	126397		13.18	Si
SLD 11	0.64	-15157.6	-40661	-32529	-12427	4.555	4.555	-15870	15674	32128	95155	110494	23230	127283		10.24	Si
SLV 7	-1.56	-13035.62	-46599	-37279	-17752	4.555	4.555	-18187	16137	33078	95155	110494	23230	128233		7.22	Si
SLV 7	0.64	-15343.99	-53990	-43192	-19859	4.555	4.555	-21072	16250	33308	95155	110494	23230	128464		6.47	Si
SLD 8	-1.56	-9576.28	-42024	-33619	-11302	4.555	4.555	-16402	15780	32346	95155	110494	23230	127501		11.28	Si
SLD 8	0.64	-16867.36	-48736	-38989	-14292	4.555	4.555	-19021	16250	33308	95155	110494	23230	128464		8.99	Si
SLV 4	-1.56	-12082.04	-65718	-52574	-13361	4.555	4.555	-25649	16250	33308	95155	110494	23230	128464		9.62	Si
SLV 4	0.64	-24050.38	-76733	-61387	-17434	4.555	4.555	-29948	16250	33308	95155	110494	23230	128464		7.37	Si
SLV 8	-1.56	-14345.02	-46422	-37137	-19778	4.555	4.555	-18118	16124	33049	95155	110494	23230	128205		6.48	Si
SLV 8	0.64	-14739.87	-53620	-42896	-21629	4.555	4.555	-20927	16250	33308	95155	110494	23230	128464		5.94	Si
SLV 12	-1.56	-12440.42	-30087	-24070	-17851	4.555	4.555	-11743	14849	30436	95155	110494	23230	125591		7.04	Si
SLV 12	0.64	-10149.02	-34287	-27429	-19077	4.555	4.555	-13382	15176	31108	95155	110494	23230	126263		6.62	Si
SLV 11	-1.56	-11131.03	-30264	-24211	-15824	4.555	4.555	-11812	14862	30464	95155	110494	23230	125619		7.94	Si
SLV 11	0.64	-10753.13	-34656	-27725	-17307	4.555	4.555	-13526	15205	31167	95155	110494	23230	126322		7.3	Si
SLD 12	-1.56	-8762.2	-35044	-28035	-10478	4.555	4.555	-13677	15235	31229	95155	110494	23230	126384		12.06	Si
SLD 12	0.64	-14893.32	-40499	-32399	-13201	4.555	4.555	-15806	15661	32102	95155	110494	23230	127257		9.64	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-10765	0.24	331.3	2352.71	3489.9	2921.3	8.82	Si
SLV 15	-11339	0.24	331.3	2474.25	3626.71	3050.48	9.21	Si
SLV 14	-11648	0.24	331.3	2539.45	3700.07	3119.76	9.42	Si
SLV 13	-12222	0.24	331.3	2660.39	3835.93	3248.16	9.8	Si
SLV 12	-32171	0.24	331.3	6618.63	8512.81	7565.72	22.84	Si
SLV 11	-32545	0.24	331.3	6688.28	8599.74	7644.01	23.07	Si
SLV 10	-35113	0.24	331.3	7162.03	9196.56	8179.29	24.69	Si
SLV 9	-35487	0.24	331.3	7230.36	9283	8256.68	24.92	Si
SLV 8	-51316	0.24	331.3	9968.97	12923.33	11446.15	34.55	Si
SLV 7	-51690	0.24	331.3	10030.05	13008.1	11519.08	34.77	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-52560	-46599	-69	0.523	6209.4	0.959	7.919	4.02955	Si
SLV 8	-52333	-46422	-69	0.524	6186.3	0.959	7.9467	4.02955	Si
SLV 5	-51064	-47416	-438	0.528	6057.3	0.958	8.00707	4.02955	Si
SLV 6	-50837	-47239	-438	0.53	6034.2	0.958	8.03589	4.02955	Si
SLV 3	-74424	-65990	-37	0.401	8434.2	0.969	6.00938	2.9746	Si
SLV 1	-73975	-66235	-148	0.401	8388.5	0.969	6.017	2.9746	Si
SLV 4	-74075	-65718	-38	0.402	8398.7	0.969	6.03143	2.9746	Si
SLV 2	-73626	-65963	-148	0.403	8353	0.969	6.03921	2.9746	Si
SLV 11	-33424	-30264	-207	0.739	4266	0.943	11.38667	4.02955	Si
SLV 12	-33197	-30087	-207	0.743	4243	0.943	11.44982	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.021	SLU 83	Si
V_SLU	7.943	SLU 84	Si
PF_SLV	3.153	SLV 13	Si
V_SLV	5.939	SLV 8	Si
PFFP_SLV	8.818	SLV 16	Si
R_SLV	1.965	SLV 7	Si

Maschio 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.653	5.876	-24.653	2.271	L2	L4	3.605	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-1.56	-6915.61	-45145	-0.0000526	0.0004492	0.0035	3.605	62840.87	76374.26	76374.26	11.04	No	Si
SLU 84	0.64	-17310.59	-36699	-0.000061	0.0004492	0.0035	3.605	53902.33	65152.28	65152.28	3.76	No	Si
SLU 76	-1.56	-6670.85	-43678	-0.0000508	0.0004492	0.0035	3.605	61381.27	74445.34	74445.34	11.16	No	Si
SLU 76	0.64	-16865.2	-35496	-0.0000591	0.0004492	0.0035	3.605	52523.97	63471.41	63471.41	3.76	No	Si
SLU 83	-1.56	-6866.99	-45119	-0.0000525	0.0004492	0.0035	3.605	62814.92	76339.5	76339.5	11.12	No	Si
SLU 83	0.64	-17199.54	-36506	-0.0000606	0.0004492	0.0035	3.605	53683.66	64883.47	64883.47	3.77	No	Si
SLU 75	-1.56	-6681.65	-43937	-0.0000511	0.0004492	0.0035	3.605	61642.07	74786.24	74786.24	11.19	No	Si
SLU 75	0.64	-16906.52	-35657	-0.0000593	0.0004492	0.0035	3.605	52709.89	63696.27	63696.27	3.77	No	Si
SLU 70	-1.56	-6097.98	-40954	-0.0000472	0.0004492	0.0035	3.605	58567.88	70864.53	70864.53	11.62	No	Si
SLU 70	0.64	-15936.92	-33066	-0.0000552	0.0004492	0.0035	3.605	49658.83	60075.34	60075.34	3.77	No	Si
SLU 79	-1.56	-6652.89	-44116	-0.0000512	0.0004492	0.0035	3.605	61820.64	75020.58	75020.58	11.28	No	Si
SLU 79	0.64	-16922.51	-35690	-0.0000594	0.0004492	0.0035	3.605	52748.17	63742.65	63742.65	3.77	No	Si
SLU 78	-1.56	-6744.73	-44419	-0.0000517	0.0004492	0.0035	3.605	62123.23	75419.4	75419.4	11.18	No	Si
SLU 78	0.64	-17148.91	-36172	-0.0000602	0.0004492	0.0035	3.605	53301.41	64415.53	64415.53	3.76	No	Si
SLU 77	-1.56	-6696.11	-44392	-0.0000516	0.0004492	0.0035	3.605	62096.93	75384.65	75384.65	11.26	No	Si
SLU 77	0.64	-17037.86	-35979	-0.0000598	0.0004492	0.0035	3.605	53080.9	64146.72	64146.72	3.76	No	Si
SLU 80	-1.56	-6701.51	-44142	-0.0000513	0.0004492	0.0035	3.605	61847.08	75055.33	75055.33	11.2	No	Si
SLU 80	0.64	-17033.56	-35882	-0.0000597	0.0004492	0.0035	3.605	52969.7	64011.46	64011.46	3.76	No	Si
SLU 72	-1.56	-6054.77	-40677	-0.0000469	0.0004492	0.0035	3.605	58274.28	70500.46	70500.46	11.64	No	Si
SLU 72	0.64	-15821.58	-32777	-0.0000547	0.0004492	0.0035	3.605	49310.78	59671.27	59671.27	3.77	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	-1.56	-265.81	-24150	-0.000022	0.0006738	0.0035	3.605		47950.97	47950.97	180.4		Si
SLV 10	0.64	-14183.3	-15492	-0.0000378	0.0006738	0.0035	3.605		33993.19	33993.19	2.4		Si
SLD 14	-1.56	-2733.65	-22038	-0.0000238	0.0006738	0.0035	3.605		44573.01	44573.01	16.31		Si
SLD 14	0.64	-10594.95	-15206	-0.0000296	0.0006738	0.0035	3.605		33521.69	33521.69	3.16		Si
SLV 15	-1.56	-1364.44	-10230	-0.0000111	0.0006738	0.0035	3.605		25194.41	25194.41	18.47		Si
SLV 15	0.64	-7599.9	-3464	-0.0001268	0.0006738	0.0035	2.884		13627.14	13627.14	1.79		Si
SLV 14	-1.56	-313.93	-10397	-0.0000097	0.0006738	0.0035	3.605		25477.92	25477.92	81.16		Si
SLV 14	0.64	-8978.45	-2872	-0.0002042	0.0006738	0.0035	2.884		12598.93	12598.93	1.4		Si
SLD 9	-1.56	-2375.59	-27754	-0.0000285	0.0006738	0.0035	3.605		53662.88	53662.88	22.59		Si
SLD 9	0.64	-13103.76	-20234	-0.0000379	0.0006738	0.0035	3.605		41686.93	41686.93	3.18		Si
SLV 16	-1.56	-2431.52	-10780	-0.0000132	0.0006738	0.0035	3.605		26124.62	26124.62	10.74		Si
SLV 16	0.64	-6737.67	-4643	-0.0000278	0.0006738	0.0035	2.884		15661.61	15661.61	2.32		Si
SLV 9	-1.56	429.48	-23791	-0.0000219	0.0006738	0.0035	3.605		41571.02	41571.02	96.79		Si
SLV 9	0.64	-14745.12	-14723	-0.0000398	0.0006738	0.0035	2.884		32725.37	32725.37	2.22		Si
SLV 13	-1.56	753.15	-9847	-0.0000098	0.0006738	0.0035	3.605		18540.98	18540.98	24.62		Si
SLV 13	0.64	-9840.69	-1692	-0.000265	0.0006738	0.0035	2.884		10548.83	10548.83	1.07		Si
SLD 13	-1.56	-2275.32	-21802	-0.0000229	0.0006738	0.0035	3.605		44194.87	44194.87	19.42		Si
SLD 13	0.64	-10965.3	-14700	-0.0000299	0.0006738	0.0035	3.605		32685.94	32685.94	2.98		Si
SLV 5	-1.56	-1806.18	-36044	-0.0000352	0.0006738	0.0035	3.605		66298.5	66298.5	36.71		Si
SLV 5	0.64	-16836.88	-27488	-0.0000503	0.0006738	0.0035	3.605		53258.15	53258.15	3.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-1.56	-6915.61	-45145	-36116	7742	3.605	3.605	-22263	10833	17574	95155	58300	18385	76685	No	9.91	Si
SLU 84	0.64	-17310.59	-36699	-29359	5787	3.605	3.605	-18098	10746	17433	95155	58300	18385	76685	No	13.25	Si
SLU 83	-1.56	-6866.99	-45119	-36095	7874	3.605	3.605	-22250	10833	17574	95155	58300	18385	76685	No	9.74	Si
SLU 83	0.64	-17199.54	-36506	-29205	5900	3.605	3.605	-18003	10734	17413	95155	58300	18385	76685	No	13	Si
SLU 77	-1.56	-6696.11	-44392	-35514	7730	3.605	3.605	-21892	10833	17574	95155	58300	18385	76685	No	9.92	Si
SLU 77	0.64	-17037.86	-35979	-28783	5752	3.605	3.605	-17743	10699	17357	95155	58300	18385	76685	No	13.33	Si
SLU 82	-1.56	-6852.54	-44664	-35731	7653	3.605	3.605	-22025	10833	17574	95155	58300	18385	76685	No	10.02	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	0.64	-17068.2	-36184	-28947	5724	3.605	3.605	-17844	10713	17378	95155	58300	18385	76685	No	13.4	Si
SLU 81	-1.56	-6803.92	-44637	-35710	7785	3.605	3.605	-22012	10833	17574	95155	58300	18385	76685	No	9.85	Si
SLU 81	0.64	-16957.16	-35992	-28793	5837	3.605	3.605	-17749	10700	17358	95155	58300	18385	76685	No	13.14	Si
SLU 79	-1.56	-6652.89	-44116	-35292	7697	3.605	3.605	-21755	10833	17574	95155	58300	18385	76685	No	9.96	Si
SLU 79	0.64	-16922.51	-35690	-28552	5729	3.605	3.605	-17600	10680	17326	95155	58300	18385	76685	No	13.38	Si
SLU 80	-1.56	-6701.51	-44142	-35314	7565	3.605	3.605	-21768	10833	17574	95155	58300	18385	76685	No	10.14	Si
SLU 80	0.64	-17033.56	-35882	-28706	5616	3.605	3.605	-17695	10693	17346	95155	58300	18385	76685	No	13.66	Si
SLU 78	-1.56	-6744.73	-44419	-35535	7598	3.605	3.605	-21905	10833	17574	95155	58300	18385	76685	No	10.09	Si
SLU 78	0.64	-17148.91	-36172	-28937	5639	3.605	3.605	-17838	10712	17377	95155	58300	18385	76685	No	13.6	Si
SLU 75	-1.56	-6681.65	-43937	-35150	7509	3.605	3.605	-21667	10833	17574	95155	58300	18385	76685	No	10.21	Si
SLU 75	0.64	-16906.52	-35657	-28525	5576	3.605	3.605	-17584	10678	17322	95155	58300	18385	76685	No	13.75	Si
SLU 74	-1.56	-6633.03	-43911	-35129	7642	3.605	3.605	-21654	10833	17574	95155	58300	18385	76685	No	10.04	Si
SLU 74	0.64	-16795.47	-35464	-28372	5689	3.605	3.605	-17489	10665	17302	95155	58300	18385	76685	No	13.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	-1.56	-265.81	-24150	-19320	13516	3.605	3.605	-11909	14882	24142	95155	87449	18385	105835		7.83	Si
SLV 10	0.64	-14183.3	-15492	-12394	10139	3.605	2.661	-10394	14579	17457	95155	87449	18385	105835		10.44	Si
SLD 5	-1.56	-3331.32	-32991	-26393	9766	3.605	3.605	-16269	15754	25557	95155	87449	18385	105835		10.84	Si
SLD 5	0.64	-13998.45	-25692	-20554	7488	3.605	3.605	-12670	15034	24389	95155	87449	18385	105835		14.13	Si
SLD 6	-1.56	-3635.49	-33148	-26519	9160	3.605	3.605	-16347	15769	25582	95155	87449	18385	105835		11.55	Si
SLD 6	0.64	-13752.68	-26028	-20823	6999	3.605	3.605	-12836	15067	24443	95155	87449	18385	105835		15.12	Si
SLV 5	-1.56	-1806.18	-36044	-28835	15370	3.605	3.605	-17775	16055	26045	95155	87449	18385	105835		6.89	Si
SLV 5	0.64	-16836.88	-27488	-21991	12004	3.605	3.57	-13556	15211	24436	95155	87449	18385	105835		8.82	Si
SLV 9	-1.56	429.48	-23791	-19033	14900	3.605	3.605	-11733	14847	24085	95155	87449	18385	105835		7.1	Si
SLV 9	0.64	-14745.12	-14723	-11779	11256	2.884	2.4031	0	0	0	95155	69960	14708	84668		7.52	Si
SLV 13	-1.56	753.15	-9847	-7878	8352	3.605	3.605	-4856	13471	21854	95155	87449	18385	105835		12.67	Si
SLV 13	0.64	-9840.69	-1692	-1354	5680	2.884	0	0	0	0	95155	69960	14708	84668		14.91	Si
SLD 9	-1.56	-2375.59	-27754	-22203	9565	3.605	3.605	-13687	15237	24719	95155	87449	18385	105835		11.06	Si
SLD 9	0.64	-13103.76	-20234	-16187	7168	3.605	3.4647	-10428	14586	22741	95155	87449	18385	105835		14.76	Si
SLV 6	-1.56	-2501.47	-36403	-29122	13986	3.605	3.605	-17952	16090	26103	95155	87449	18385	105835		7.57	Si
SLV 6	0.64	-16275.07	-28257	-22605	10887	3.605	3.605	-13935	15287	24799	95155	87449	18385	105835		9.72	Si
SLD 10	-1.56	-2679.76	-27911	-22328	8960	3.605	3.605	-13764	15253	24744	95155	87449	18385	105835		11.81	Si
SLD 10	0.64	-12857.98	-20571	-16456	6680	3.605	3.5323	-10144	14529	23094	95155	87449	18385	105835		15.84	Si
SLV 1	-1.56	-6699.08	-50689	-40551	9920	3.605	3.605	-24997	16250	26362	95155	87449	18385	105835		10.67	Si
SLV 1	0.64	-16813.23	-44241	-35393	8174	3.605	3.605	-21817	16250	26362	95155	87449	18385	105835		12.95	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-2298	0.24	262.21	513.12	1253.45	883.29	3.37	Si
SLV 14	-3422	0.24	262.21	761.04	1526.54	1143.79	4.36	Si
SLV 15	-4016	0.24	262.21	891.41	1670.55	1280.98	4.89	Si
SLV 16	-5140	0.24	262.21	1136.4	1940.78	1538.59	5.87	Si
SLV 9	-14917	0.24	262.21	3188	4263.62	3725.81	14.21	Si
SLV 10	-15649	0.24	262.21	3335.78	4435.21	3885.49	14.82	Si
SLV 11	-20643	0.24	262.21	4322.23	5605.51	4963.87	18.93	Si
SLV 12	-21375	0.24	262.21	4463.66	5776.54	5120.1	19.53	Si
SLV 5	-27284	0.24	262.21	5575.5	7150.96	6363.23	24.27	Si
SLV 6	-28016	0.24	262.21	5709.57	7320.86	6515.22	24.85	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-47251	-51622	-333	0.468	5489.4	0.963	7.06645	2.9746	Si
SLV 8	-32395	-37678	-215	0.63	3979.1	0.951	9.63459	4.02955	Si
SLV 2	-46412	-51240	-367	0.474	5404	0.962	7.15815	2.9746	Si
SLV 3	-46257	-51072	-325	0.476	5388.2	0.962	7.18997	2.9746	Si
SLV 7	-31747	-37319	-210	0.64	3913.3	0.95	9.79651	4.02955	Si
SLV 1	-45417	-50689	-359	0.482	5302.8	0.962	7.28571	2.9746	Si
SLV 6	-29597	-36403	-330	0.672	3695.1	0.947	10.3177	4.02955	Si
SLV 5	-28948	-36044	-325	0.684	3629.3	0.946	10.5075	4.02955	Si
SLV 12	-18970	-25425	-150	0.952	2619.4	0.93	14.88733	4.02955	Si
SLV 11	-18322	-25067	-145	0.978	2554.1	0.928	15.30634	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.756	SLU 78	Si
V_SLU	9.739	SLU 83	Si
PF_SLV	1.072	SLV 13	Si
V_SLV	6.886	SLV 5	Si
PFFP_SLV	3.369	SLV 13	Si
R_SLV	2.376	SLV 4	Si

Maschio 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.876	-24.653	5.876	L2	L4	1.89	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	0.44	-133.02	-17950	-0.0000341	0.0003743	0.0035	1.89	13446.68	15190.09	15190.09	114.19	No	Si
SLU 46	0.84	1739.43	-16750	-0.0000415	0.0003743	0.0035	1.89	12766.93	13489	13489	7.75	No	Si
SLU 51	0.44	-136.79	-18090	-0.0000344	0.0003743	0.0035	1.89	13523.89	15281.36	15281.36	111.71	No	Si
SLU 51	0.84	1758.01	-16883	-0.0000419	0.0003743	0.0035	1.89	12843.92	13585.8	13585.8	7.73	No	Si
SLU 7	0.44	-101.37	-14768	-0.0000278	0.0003743	0.0035	1.89	11575.46	13021.44	13021.44	128.46	No	Si
SLU 7	0.84	1427.31	-13822	-0.0000339	0.0003743	0.0035	1.89	10976.73	11394.19	11394.19	7.98	No	Si
SLU 47	0.44	-73.62	-17719	-0.0000333	0.0003743	0.0035	1.89	13317.9	15038.23	15038.23	204.26	No	Si
SLU 47	0.84	1811.24	-16495	-0.0000415	0.0003743	0.0035	1.89	12618.53	13304.15	13304.15	7.35	No	Si
SLU 9	0.44	-107.54	-14616	-0.0000275	0.0003743	0.0035	1.89	11480.44	12912.94	12912.94	120.08	No	Si
SLU 9	0.84	1408.59	-13675	-0.0000335	0.0003743	0.0035	1.89	10882.22	11290.93	11290.93	8.02	No	Si
SLU 49	0.44	-130.62	-18243	-0.0000347	0.0003743	0.0035	1.89	13607.36	15380.25	15380.25	117.74	No	Si
SLU 49	0.84	1776.72	-17030	-0.0000423	0.0003743	0.0035	1.89	12928.17	13692.44	13692.44	7.71	No	Si
SLU 2	0.44	-46.76	-13952	-0.0000259	0.0003743	0.0035	1.89	11060.08	12442.4	12442.4	266.09	No	Si
SLU 2	0.84	1424.54	-13007	-0.0000323	0.0003743	0.0035	1.89	10445.55	10822.37	10822.37	7.6	No	Si
SLU 4	0.44	-103.76	-14476	-0.0000272	0.0003743	0.0035	1.89	11392.62	12813.38	12813.38	123.49	No	Si
SLU 4	0.84	1390.02	-13542	-0.0000331	0.0003743	0.0035	1.89	10795.9	11197.2	11197.2	8.06	No	Si
SLU 44	0.44	-76.02	-17427	-0.0000327	0.0003743	0.0035	1.89	13153.88	14844.74	14844.74	195.28	No	Si
SLU 44	0.84	1773.95	-16215	-0.0000407	0.0003743	0.0035	1.89	12454.02	13101.82	13101.82	7.39	No	Si
SLU 5	0.44	-44.37	-14244	-0.0000264	0.0003743	0.0035	1.89	11246.26	12648.94	12648.94	285.11	No	Si
SLU 5	0.84	1461.83	-13287	-0.000033	0.0003743	0.0035	1.89	10629.66	11018.24	11018.24	7.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	0.44	-2009.74	-9119	-0.0000279	0.0005615	0.0035	1.89		8983.92	8983.92	4.47		Si
SLV 13	0.84	-154.19	-9355	-0.0000177	0.0005615	0.0035	1.89		9181.94	9181.94	59.55		Si
SLV 15	0.44	-2312.65	-9122	-0.0000297	0.0005615	0.0035	1.89		8986.65	8986.65	3.89		Si
SLV 15	0.84	716.78	-8180	-0.0000188	0.0005615	0.0035	1.89		7530.2	7530.2	10.51		Si
SLD 8	0.44	-269.95	-16298	-0.0000312	0.0005615	0.0035	1.89		14733.17	14733.17	54.58		Si
SLD 8	0.84	1966.68	-14498	-0.0000378	0.0005615	0.0035	1.89		12647.51	12647.51	6.43		Si
SLV 14	0.44	-2280.27	-9809	-0.0000308	0.0005615	0.0035	1.89		9559.31	9559.31	4.19		Si
SLV 14	0.84	-60.74	-9799	-0.000018	0.0005615	0.0035	1.89		9551.35	9551.35	157.26		Si
SLV 11	0.44	-1300.06	-13433	-0.0000319	0.0005615	0.0035	1.89		12505.77	12505.77	9.62		Si
SLV 11	0.84	2359.12	-10808	-0.0000331	0.0005615	0.0035	1.89		9732.03	9732.03	4.13		Si
SLV 4	0.44	1454.27	-21774	-0.0000487	0.0005615	0.0035	1.89		17733.61	17733.61	12.19		Si
SLV 4	0.84	2552.86	-19828	-0.0000515	0.0005615	0.0035	1.89		16357.76	16357.76	6.41		Si
SLV 12	0.44	-1476.33	-13882	-0.0000337	0.0005615	0.0035	1.89		12864.73	12864.73	8.71		Si
SLV 12	0.84	2420.01	-11098	-0.000034	0.0005615	0.0035	1.89		9969.04	9969.04	4.12		Si
SLV 16	0.44	-2583.17	-9812	-0.0000325	0.0005615	0.0035	1.89		9562	9562	3.7		Si
SLV 16	0.84	810.24	-8624	-0.0000201	0.0005615	0.0035	1.89		7908.61	7908.61	9.76		Si
SLV 7	0.44	-88.83	-17021	-0.0000315	0.0005615	0.0035	1.89		15286.08	15286.08	172.09		Si
SLV 7	0.84	2881.9	-14169	-0.0000425	0.0005615	0.0035	1.89		12410.1	12410.1	4.31		Si
SLV 8	0.44	-265.1	-17471	-0.0000334	0.0005615	0.0035	1.89		15630.76	15630.76	58.96		Si
SLV 8	0.84	2942.8	-14459	-0.0000435	0.0005615	0.0035	1.89		12618.95	12618.95	4.29		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.44	-463.69	-22897	-20353	-5760	1.89	1.89	-23931	10135	8620	33304	25468	4820	30287	No	5.26	Si
SLU 77	0.84	1644.83	-21788	-19367	-5852	1.89	1.89	-22772	9981	8489	33304	25468	4820	30287	No	5.18	Si
SLU 75	0.44	-367.74	-22486	-19987	-5839	1.89	1.89	-23501	10078	8571	33304	25468	4820	30287	No	5.19	Si
SLU 75	0.84	1743.33	-21346	-18974	-5931	1.89	1.89	-22309	9919	8436	33304	25468	4820	30287	No	5.11	Si
SLU 84	0.44	-432.07	-23314	-20724	-5865	1.89	1.89	-24367	10193	8669	33304	25468	4820	30287	No	5.16	Si
SLU 84	0.84	1713.72	-22199	-19733	-5959	1.89	1.89	-23202	10038	8537	33304	25468	4820	30287	No	5.08	Si
SLU 68	0.44	-172.63	-19966	-17747	-5761	1.89	1.89	-20867	9727	8273	33304	25468	4820	30287	No	5.26	Si
SLU 68	0.84	1840.56	-18757	-16673	-5845	1.89	1.89	-19604	9558	8129	33304	25468	4820	30287	No	5.18	Si
SLU 73	0.44	-310.74	-21962	-19522	-5810	1.89	1.89	-22953	10005	8509	33304	25468	4820	30287	No	5.21	Si
SLU 73	0.84	1777.85	-20811	-18499	-5899	1.89	1.89	-21750	9845	8373	33304	25468	4820	30287	No	5.13	Si
SLU 76	0.44	-308.34	-22254	-19781	-5925	1.89	1.89	-23258	10046	8544	33304	25468	4820	30287	No	5.11	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	0.84	1815.14	-21091	-18747	-6016	1.89	1.89	-22043	9883	8406	33304	25468	4820	30287	No	5.03	Si
SLU 82	0.44	-434.46	-23022	-20464	-5750	1.89	1.89	-24061	10153	8635	33304	25468	4820	30287	No	5.27	Si
SLU 82	0.84	1676.43	-21920	-19484	-5842	1.89	1.89	-22909	9999	8504	33304	25468	4820	30287	No	5.18	Si
SLU 70	0.44	-229.63	-20489	-18213	-5791	1.89	1.89	-21414	9800	8335	33304	25468	4820	30287	No	5.23	Si
SLU 70	0.84	1806.04	-19292	-17148	-5876	1.89	1.89	-20162	9633	8193	33304	25468	4820	30287	No	5.15	Si
SLU 78	0.44	-365.34	-22778	-20247	-5955	1.89	1.89	-23806	10119	8606	33304	25468	4820	30287	No	5.09	Si
SLU 78	0.84	1780.62	-21626	-19223	-6047	1.89	1.89	-22602	9958	8469	33304	25468	4820	30287	No	5.01	Si
SLU 80	0.44	-371.51	-22626	-20112	-5911	1.89	1.89	-23647	10097	8588	33304	25468	4820	30287	No	5.12	Si
SLU 80	0.84	1761.91	-21479	-19092	-6003	1.89	1.89	-22449	9938	8452	33304	25468	4820	30287	No	5.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	0.44	-1476.33	-13882	-12340	-10039	1.89	1.89	-14509	13318	11327	33304	38202	4820	43021		4.29	Si
SLV 12	0.84	2420.01	-11098	-9865	-9629	1.89	1.89	-11599	12736	10832	33304	38202	4820	43021		4.47	Si
SLV 15	0.44	-2312.65	-9122	-8109	-8547	1.89	1.89	-9534	12324	10481	33304	38202	4820	43021		5.03	Si
SLV 15	0.84	716.78	-8180	-7271	-7214	1.89	1.89	-8550	12127	10314	33304	38202	4820	43021		5.96	Si
SLV 16	0.44	-2583.17	-9812	-8722	-10035	1.89	1.89	-10255	12468	10604	33304	38202	4820	43021		4.29	Si
SLV 16	0.84	810.24	-8624	-7666	-8704	1.89	1.89	-9014	12219	10393	33304	38202	4820	43021		4.94	Si
SLV 7	0.44	-88.83	-17021	-15130	-6719	1.89	1.89	-17790	13975	11885	33304	38202	4820	43021		6.4	Si
SLV 7	0.84	2881.9	-14169	-12595	-7134	1.89	1.89	-14809	13378	11378	33304	38202	4820	43021		6.03	Si
SLD 16	0.44	-1263.91	-13030	-11582	-6653	1.89	1.89	-13618	13140	11176	33304	38202	4820	43021		6.47	Si
SLD 16	0.84	1037.93	-12029	-10693	-6115	1.89	1.89	-12572	12931	10998	33304	38202	4820	43021		7.04	Si
SLV 8	0.44	-265.1	-17471	-15530	-7688	1.89	1.89	-18259	14069	11965	33304	38202	4820	43021		5.6	Si
SLV 8	0.84	2942.8	-14459	-12852	-8105	1.89	1.89	-15111	13439	11430	33304	38202	4820	43021		5.31	Si
SLV 11	0.44	-1300.06	-13433	-11940	-9069	1.89	1.89	-14039	13225	11247	33304	38202	4820	43021		4.74	Si
SLV 11	0.84	2359.12	-10808	-9607	-8658	1.89	1.89	-11296	12676	10781	33304	38202	4820	43021		4.97	Si
SLV 14	0.44	-2280.27	-9809	-8719	-7458	1.89	1.89	-10251	12467	10603	33304	38202	4820	43021		5.77	Si
SLV 14	0.84	-60.74	-9799	-8710	-6163	1.89	1.89	-10241	12465	10601	33304	38202	4820	43021		6.98	Si
SLD 11	0.44	-711.36	-14565	-12947	-6277	1.89	1.89	-15223	13461	11449	33304	38202	4820	43021		6.85	Si
SLD 11	0.84	1715.63	-12935	-11498	-6135	1.89	1.89	-13519	13120	11159	33304	38202	4820	43021		7.01	Si
SLD 12	0.44	-788.47	-14762	-13122	-6701	1.89	1.89	-15428	13502	11484	33304	38202	4820	43021		6.42	Si
SLD 12	0.84	1742.27	-13061	-11610	-6560	1.89	1.89	-13651	13147	11181	33304	38202	4820	43021		6.56	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.24	7078	-6020	142.56	1291.62	9.06	Si
SLV 13	179667	0.24	7414	-6306	142.56	1349.95	9.47	Si
SLV 16	179667	0.24	7591	-6456	142.56	1380.39	9.68	Si
SLV 14	179667	0.24	7928	-6742	142.56	1438.29	10.09	Si
SLV 11	179667	0.24	12332	-10488	142.56	2169.27	15.22	Si
SLV 12	179667	0.24	12666	-10772	142.56	2222.78	15.59	Si
SLV 9	179667	0.24	13454	-11443	142.56	2347.82	16.47	Si
SLV 10	179667	0.24	13789	-11727	142.56	2400.39	16.84	Si
SLV 7	179667	0.24	17095	-14540	142.56	2905.2	20.38	Si
SLV 8	179667	0.24	17430	-14824	142.56	2954.71	20.73	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-17000	-13587	-274	0.621	2087.8	0.951	9.4992	4.02955	Si
SLV 5	-16720	-13327	-263	0.63	2059.4	0.95	9.63681	4.02955	Si
SLV 10	-14265	-9537	-152	0.719	1810.3	0.944	11.06774	4.02955	Si
SLV 9	-13985	-9277	-141	0.731	1781.9	0.943	11.25746	4.02955	Si
SLV 2	-18627	-18749	-532	0.566	2253	0.954	8.63173	2.9746	Si
SLV 1	-18197	-18349	-516	0.578	2209.4	0.953	8.80836	2.9746	Si
SLV 8	-12315	-14637	-597	0.774	1612.7	0.938	11.99412	4.02955	Si
SLV 7	-12035	-14377	-587	0.789	1584.4	0.937	12.22941	4.02955	Si
SLV 4	-17221	-19064	-629	0.597	2110.3	0.951	9.12141	2.9746	Si
SLV 3	-16791	-18664	-613	0.609	2066.6	0.95	9.32293	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.345	SLU 47	Si
V_SLU	5.008	SLU 78	Si
PF_SLV	3.702	SLV 16	Si
V_SLV	4.285	SLV 12	Si
PFFP_SLV	9.06	SLV 15	Si
R_SLV	2.357	SLV 6	Si

Maschio 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	5.876	-21.763	5.876	L2	L4	2.145	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	0.44	-6645.7	-26771	-0.0000775	0.0003743	0.0035	2.145	20890.15	24133.84	24133.84	3.63	No	Si
SLU 49	0.84	-2675.23	-25751	-0.0000558	0.0003743	0.0035	2.145	20381.13	23457.85	23457.85	8.77	No	Si
SLU 44	0.44	-6470.21	-25590	-0.0000743	0.0003743	0.0035	2.145	20298.62	23351.82	23351.82	3.61	No	Si
SLU 44	0.84	-2652.86	-24571	-0.0000535	0.0003743	0.0035	2.145	19763.34	22685.87	22685.87	8.55	No	Si
SLU 68	0.44	-7121.67	-29382	-0.0000851	0.0003743	0.0035	2.145	22090.68	25748.12	25748.12	3.62	No	Si
SLU 68	0.84	-2923.81	-28346	-0.0000618	0.0003743	0.0035	2.145	21632.33	25114.12	25114.12	8.59	No	Si
SLU 78	0.44	-7626.67	-33427	-0.000096	0.0003743	0.0035	2.145	23656.03	27740.83	27740.83	3.64	No	Si
SLU 78	0.84	-3017.59	-32391	-0.00007	0.0003743	0.0035	2.145	23289.12	27260.64	27260.64	9.03	No	Si
SLU 47	0.44	-6588.91	-26051	-0.0000758	0.0003743	0.0035	2.145	20533.41	23656.04	23656.04	3.59	No	Si
SLU 47	0.84	-2718.91	-25032	-0.0000547	0.0003743	0.0035	2.145	20008.39	22986.17	22986.17	8.45	No	Si
SLU 80	0.44	-7590.89	-33241	-0.0000955	0.0003743	0.0035	2.145	23591.94	27654.15	27654.15	3.64	No	Si
SLU 80	0.84	-2995.87	-32205	-0.0000695	0.0003743	0.0035	2.145	23220.83	27175.22	27175.22	9.07	No	Si
SLU 76	0.44	-7569.89	-32707	-0.0000942	0.0003743	0.0035	2.145	23403.77	27406.72	27406.72	3.62	No	Si
SLU 76	0.84	-3061.27	-31672	-0.0000688	0.0003743	0.0035	2.145	23020.6	26931.42	26931.42	8.8	No	Si
SLU 51	0.44	-6609.91	-26585	-0.000077	0.0003743	0.0035	2.145	20799.07	24010	24010	3.63	No	Si
SLU 51	0.84	-2653.51	-25565	-0.0000553	0.0003743	0.0035	2.145	20285.92	23335.59	23335.59	8.79	No	Si
SLU 70	0.44	-7178.45	-30101	-0.0000869	0.0003743	0.0035	2.145	22395.14	26167.07	26167.07	3.65	No	Si
SLU 70	0.84	-2880.13	-29066	-0.000063	0.0003743	0.0035	2.145	21953.04	25553.41	25553.41	8.87	No	Si
SLU 65	0.44	-7002.97	-28921	-0.0000836	0.0003743	0.0035	2.145	21889.44	25464.73	25464.73	3.64	No	Si
SLU 65	0.84	-2857.75	-27885	-0.0000606	0.0003743	0.0035	2.145	21420.65	24833.65	24833.65	8.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.44	-11289.63	-30262	-0.000104	0.0005615	0.0035	2.145		28529.92	28529.92	2.53		Si
SLV 16	0.84	-5235.79	-29323	-0.0000727	0.0005615	0.0035	2.145		27846.62	27846.62	5.32		Si
SLD 14	0.44	-8102.12	-24437	-0.0000776	0.0005615	0.0035	2.145		24068.35	24068.35	2.97		Si
SLD 14	0.84	-3275.3	-23818	-0.0000537	0.0005615	0.0035	2.145		23561.22	23561.22	7.19		Si
SLV 14	0.44	-11963.46	-26937	-0.0001027	0.0005615	0.0035	2.145		26018.6	26018.6	2.17		Si
SLV 14	0.84	-5066.71	-26540	-0.0000669	0.0005615	0.0035	2.145		25711.88	25711.88	5.07		Si
SLV 13	0.44	-11020.14	-25185	-0.0000945	0.0005615	0.0035	2.145		24663.83	24663.83	2.24		Si
SLV 13	0.84	-4647.7	-24788	-0.0000619	0.0005615	0.0035	2.145		24354.04	24354.04	5.24		Si
SLV 10	0.44	-8423.84	-19168	-0.0000708	0.0005615	0.0035	2.145		19688.42	19688.42	2.34		Si
SLV 10	0.84	-2695.03	-19316	-0.0000433	0.0005615	0.0035	2.145		19814.54	19814.54	7.35		Si
SLV 9	0.44	-7809.19	-18027	-0.0000657	0.0005615	0.0035	2.145		18711.52	18711.52	2.4		Si
SLV 9	0.84	-2422.01	-18175	-0.0000402	0.0005615	0.0035	2.145		18838.62	18838.62	7.78		Si
SLD 10	0.44	-6602.88	-21081	-0.0000645	0.0005615	0.0035	2.145		21320.44	21320.44	3.23		Si
SLD 10	0.84	-2258.67	-20704	-0.0000437	0.0005615	0.0035	2.145		21001.57	21001.57	9.3		Si
SLD 16	0.44	-7804.37	-25893	-0.0000788	0.0005615	0.0035	2.145		25213.4	25213.4	3.23		Si
SLD 16	0.84	-3350.77	-25035	-0.0000562	0.0005615	0.0035	2.145		24546.75	24546.75	7.33		Si
SLV 15	0.44	-10346.31	-28510	-0.000096	0.0005615	0.0035	2.145		27231.62	27231.62	2.63		Si
SLV 15	0.84	-4816.79	-27571	-0.0000676	0.0005615	0.0035	2.145		26510.33	26510.33	5.5		Si
SLD 13	0.44	-7696.94	-23684	-0.0000743	0.0005615	0.0035	2.145		23451.8	23451.8	3.05		Si
SLD 13	0.84	-3095.33	-23065	-0.0000516	0.0005615	0.0035	2.145		22946.85	22946.85	7.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	0.44	-7545.59	-33743	-29994	-11503	2.145	2.145	-31074	10833	10457	33304	28904	5470	34374	No	2.99	Si
SLU 82	0.84	-2922.68	-32707	-29073	-11503	2.145	2.145	-30120	10833	10457	33304	28904	5470	34374	No	2.99	Si
SLU 84	0.44	-7664.28	-34205	-30404	-11635	2.145	2.145	-31499	10833	10457	33304	28904	5470	34374	No	2.95	Si
SLU 84	0.84	-2988.73	-33169	-29483	-11635	2.145	2.145	-30545	10833	10457	33304	28904	5470	34374	No	2.95	Si
SLU 77	0.44	-7480.13	-33535	-29809	-11595	2.145	2.145	-30882	10833	10457	33304	28904	5470	34374	No	2.96	Si
SLU 77	0.84	-2820.41	-32499	-28888	-11595	2.145	2.145	-29928	10833	10457	33304	28904	5470	34374	No	2.96	Si
SLU 74	0.44	-7361.43	-33073	-29399	-11464	2.145	2.145	-30457	10833	10457	33304	28904	5470	34374	No	3	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	0.84	-2754.35	-32038	-28478	-11464	2.145	2.145	-29503	10833	10457	33304	28904	5470	34374	No	3	Si
SLU 83	0.44	-7517.74	-34313	-30500	-11761	2.145	2.145	-31598	10833	10457	33304	28904	5470	34374	No	2.92	Si
SLU 83	0.84	-2791.55	-33277	-29579	-11761	2.145	2.145	-30644	10833	10457	33304	28904	5470	34374	No	2.92	Si
SLU 75	0.44	-7507.97	-32965	-29302	-11337	2.145	2.145	-30357	10833	10457	33304	28904	5470	34374	No	3.03	Si
SLU 75	0.84	-2951.53	-31929	-28382	-11337	2.145	2.145	-29403	10833	10457	33304	28904	5470	34374	No	3.03	Si
SLU 81	0.44	-7399.04	-33851	-30090	-11630	2.145	2.145	-31173	10833	10457	33304	28904	5470	34374	No	2.96	Si
SLU 81	0.84	-2725.5	-32815	-29169	-11630	2.145	2.145	-30219	10833	10457	33304	28904	5470	34374	No	2.96	Si
SLU 78	0.44	-7626.67	-33427	-29713	-11469	2.145	2.145	-30782	10833	10457	33304	28904	5470	34374	No	3	Si
SLU 78	0.84	-3017.59	-32391	-28792	-11469	2.145	2.145	-29828	10833	10457	33304	28904	5470	34374	No	3	Si
SLU 80	0.44	-7590.89	-33241	-29547	-11433	2.145	2.145	-30611	10833	10457	33304	28904	5470	34374	No	3.01	Si
SLU 80	0.84	-2995.87	-32205	-28627	-11433	2.145	2.145	-29657	10833	10457	33304	28904	5470	34374	No	3.01	Si
SLU 79	0.44	-7444.34	-33349	-29643	-11560	2.145	2.145	-30711	10833	10457	33304	28904	5470	34374	No	2.97	Si
SLU 79	0.84	-2798.69	-32313	-28723	-11560	2.145	2.145	-29757	10833	10457	33304	28904	5470	34374	No	2.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	0.44	-11289.63	-30262	-26899	-16522	2.145	2.0983	-28929	16202	15299	33304	43356	5470	48603		2.94	Si
SLV 16	0.84	-5235.79	-29323	-26065	-16434	2.145	2.145	-27003	15817	15268	33304	43356	5470	48572		2.96	Si
SLV 13	0.44	-11020.14	-25185	-22386	-14969	2.145	1.9048	-26412	15699	13456	33304	43356	5470	46761		3.12	Si
SLV 13	0.84	-4647.7	-24788	-22034	-14917	2.145	2.145	-22827	14982	14461	33304	43356	5470	47766		3.2	Si
SLV 10	0.44	-8423.84	-19168	-17039	-10442	2.145	1.8991	-20097	14436	12337	33304	43356	5470	45641		4.37	Si
SLV 10	0.84	-2695.03	-19316	-17170	-10480	2.145	2.145	-17788	13974	13489	33304	43356	5470	46793		4.46	Si
SLD 13	0.44	-7696.94	-23684	-21053	-11059	2.145	2.145	-21810	14779	14265	33304	43356	5470	47570		4.3	Si
SLD 13	0.84	-3095.33	-23065	-20503	-11035	2.145	2.145	-21241	14665	14155	33304	43356	5470	47460		4.3	Si
SLD 16	0.44	-7804.37	-25893	-23016	-11719	2.145	2.145	-23845	15186	14658	33304	43356	5470	47962		4.09	Si
SLD 16	0.84	-3350.77	-25035	-22253	-11679	2.145	2.145	-23054	15027	14505	33304	43356	5470	47810		4.09	Si
SLV 12	0.44	-6177.73	-30252	-26891	-11247	2.145	2.145	-27859	15988	15433	33304	43356	5470	48737		4.33	Si
SLV 12	0.84	-3258.65	-28593	-25416	-11167	2.145	2.145	-26331	15683	15138	33304	43356	5470	48442		4.34	Si
SLV 15	0.44	-10346.31	-28510	-25342	-15211	2.145	2.1288	-26254	15668	15009	33304	43356	5470	48313		3.18	Si
SLV 15	0.84	-4816.79	-27571	-24508	-15123	2.145	2.145	-25390	15495	14956	33304	43356	5470	48261		3.19	Si
SLD 14	0.44	-8102.12	-24437	-21721	-11622	2.145	2.145	-22503	14917	14399	33304	43356	5470	47703		4.1	Si
SLD 14	0.84	-3275.3	-23818	-21171	-11598	2.145	2.145	-21934	14803	14289	33304	43356	5470	47593		4.1	Si
SLV 14	0.44	-11963.46	-26937	-23944	-16280	2.145	1.8851	-28559	16129	13682	33304	43356	5470	46986		2.89	Si
SLV 14	0.84	-5066.71	-26540	-23591	-16228	2.145	2.145	-24440	15305	14773	33304	43356	5470	48077		2.96	Si
SLD 15	0.44	-7399.19	-25141	-22347	-11156	2.145	2.145	-23152	15047	14524	33304	43356	5470	47829		4.29	Si
SLD 15	0.84	-3170.79	-24282	-21584	-11116	2.145	2.145	-22361	14889	14371	33304	43356	5470	47676		4.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	14904	-14386	161.79	2920.95	18.05	Si
SLV 2	179667	0.24	16974	-16385	161.79	3276.77	20.25	Si
SLV 3	179667	0.24	17200	-16603	161.79	3314.88	20.49	Si
SLV 5	179667	0.24	17446	-16840	161.79	3356.11	20.74	Si
SLV 6	179667	0.24	18795	-18142	161.79	3579.58	22.12	Si
SLV 4	179667	0.24	19271	-18601	161.79	3657.18	22.6	Si
SLV 9	179667	0.24	21613	-20861	161.79	4029.56	24.91	Si
SLV 10	179667	0.24	22962	-22164	161.79	4237.05	26.19	Si
SLV 7	179667	0.24	25102	-24229	161.79	4555.53	28.16	Si
SLV 8	179667	0.24	26451	-25532	161.79	4749.63	29.36	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-24412	-25108	-324	0.517	2889.6	0.959	7.84406	4.02955	Si
SLV 11	-23613	-23836	-282	0.532	2808.4	0.957	8.0814	4.02955	Si
SLV 8	-22137	-21100	-114	0.567	2658.3	0.955	8.61832	4.02955	Si
SLV 7	-21338	-19828	-72	0.585	2577.1	0.954	8.90577	4.02955	Si
SLV 16	-23348	-29753	-854	0.515	2781.5	0.957	7.82043	2.9746	Si
SLV 15	-22123	-27801	-790	0.539	2656.9	0.955	8.20609	2.9746	Si
SLV 14	-19978	-29435	-1089	0.57	2439	0.952	8.70724	2.9746	Si
SLV 10	-13178	-24049	-1107	0.782	1749.6	0.936	12.15085	4.02955	Si
SLV 13	-18752	-27483	-1025	0.602	2314.5	0.95	9.20881	2.9746	Si
SLV 9	-12380	-22777	-1065	0.823	1668.9	0.933	12.81469	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.59	SLU 47	Si
V_SLU	2.923	SLU 83	Si
PF_SLV	2.175	SLV 14	Si
V_SLV	2.886	SLV 14	Si
PFFP_SLV	18.054	SLV 1	Si
R_SLV	1.947	SLV 12	Si

Maschio 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.618	2.271	-19.618	4.851	L2	L4	2.58	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-1.56	-6243.23	-75218	-0.0001966	0.0004492	0.0035	2.58	19857.91	57312.86	57312.86	9.18	No	Si
SLU 79	0.44	4665.55	-70485	-0.0001737	0.0004492	0.0035	2.58	23158.82	55140.14	55140.14	11.82	No	Si
SLU 74	-1.56	-6192.88	-74889	-0.0001953	0.0004492	0.0035	2.58	20107.42	57262.81	57262.81	9.25	No	Si
SLU 74	0.44	4606.54	-70162	-0.0001724	0.0004492	0.0035	2.58	23361.84	55053.06	55053.06	11.95	No	Si
SLU 83	-1.56	-6305.05	-77220	-0.0002029	0.0004492	0.0035	2.58	18278.35	57617	57617	9.14	No	Si
SLU 83	0.44	4711.24	-72456	-0.0001793	0.0004492	0.0035	2.58	21858.61	55671.38	55671.38	11.82	No	Si
SLU 78	-1.56	-6144.4	-75764	-0.0001976	0.0004492	0.0035	2.58	19438.46	57395.71	57395.71	9.34	No	Si
SLU 78	0.44	4663.57	-71023	-0.0001751	0.0004492	0.0035	2.58	22814.77	55285	55285	11.85	No	Si
SLU 77	-1.56	-6274.4	-75698	-0.0001982	0.0004492	0.0035	2.58	19489.07	57385.8	57385.8	9.15	No	Si
SLU 77	0.44	4684.05	-70958	-0.0001751	0.0004492	0.0035	2.58	22856.87	55267.45	55267.45	11.8	No	Si
SLU 80	-1.56	-6113.23	-75284	-0.000196	0.0004492	0.0035	2.58	19808.16	57322.78	57322.78	9.38	No	Si
SLU 80	0.44	4645.07	-70551	-0.0001737	0.0004492	0.0035	2.58	23117.56	55157.69	55157.69	11.87	No	Si
SLU 84	-1.56	-6175.06	-77285	-0.0002022	0.0004492	0.0035	2.58	18225.04	57626.92	57626.92	9.33	No	Si
SLU 84	0.44	4690.76	-72521	-0.0001794	0.0004492	0.0035	2.58	21813.85	55688.93	55688.93	11.87	No	Si
SLU 81	-1.56	-6223.53	-76410	-0.0002	0.0004492	0.0035	2.58	18930.29	57494.01	57494.01	9.24	No	Si
SLU 81	0.44	4633.73	-71661	-0.0001767	0.0004492	0.0035	2.58	22396.1	55456.98	55456.98	11.97	No	Si
SLU 69	-1.56	-5939.92	-69140	-0.0001776	0.0004492	0.0035	2.58	23985.41	55996.61	55996.61	9.43	No	Si
SLU 69	0.44	4396.58	-64504	-0.0001563	0.0004492	0.0035	2.58	26456.53	53527.63	53527.63	12.17	No	Si
SLU 82	-1.56	-6093.54	-76476	-0.0001993	0.0004492	0.0035	2.58	18878.42	57503.92	57503.92	9.44	No	Si
SLU 82	0.44	4613.25	-71726	-0.0001767	0.0004492	0.0035	2.58	22352.75	55474.53	55474.53	12.03	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	-1.56	-18177.93	-52613	-0.0001886	0.0006738	0.0035	2.58		55381.42	55381.42	3.05		Si
SLV 5	0.44	8366.35	-48884	-0.000132	0.0006738	0.0035	2.58		49542.32	49542.32	5.92		Si
SLD 5	-1.56	-10501.34	-52221	-0.0001496	0.0006738	0.0035	2.58		55101.09	55101.09	5.25		Si
SLD 5	0.44	5514.37	-48586	-0.0001177	0.0006738	0.0035	2.58		49326.03	49326.03	8.95		Si
SLV 6	-1.56	-17077.83	-53247	-0.0001845	0.0006738	0.0035	2.58		55834.8	55834.8	3.27		Si
SLV 6	0.44	8197.59	-49516	-0.0001326	0.0006738	0.0035	2.58		50001.73	50001.73	6.1		Si
SLD 9	-1.56	-10416.2	-50125	-0.0001446	0.0006738	0.0035	2.58		53602.04	53602.04	5.15		Si
SLD 9	0.44	5625.2	-46418	-0.0001137	0.0006738	0.0035	2.58		47750.46	47750.46	8.49		Si
SLV 12	-1.56	9317.34	-51370	-0.000142	0.0006738	0.0035	2.58		51349.37	51349.37	5.51		Si
SLV 12	0.44	-1852.17	-48008	-0.0000992	0.0006738	0.0035	2.58		52069	52069	28.11		Si
SLV 10	-1.56	-16884.79	-48341	-0.0001722	0.0006738	0.0035	2.58		52324.84	52324.84	3.1		Si
SLV 10	0.44	8448.52	-44409	-0.0001228	0.0006738	0.0035	2.58		46290.2	46290.2	5.48		Si
SLV 9	-1.56	-17984.89	-47706	-0.0001762	0.0006738	0.0035	2.58		51837.37	51837.37	2.88		Si
SLV 9	0.44	8617.28	-43777	-0.0001223	0.0006738	0.0035	2.58		45830.79	45830.79	5.32		Si
SLD 10	-1.56	-9934.94	-50402	-0.0001429	0.0006738	0.0035	2.58		53800.38	53800.38	5.42		Si
SLD 10	0.44	5551.37	-46695	-0.0001139	0.0006738	0.0035	2.58		47951.44	47951.44	8.64		Si
SLD 6	-1.56	-10020.08	-52498	-0.0001479	0.0006738	0.0035	2.58		55299.43	55299.43	5.52		Si
SLD 6	0.44	5440.54	-48863	-0.0001179	0.0006738	0.0035	2.58		49527	49527	9.1		Si
SLV 13	-1.56	-8883.06	-42873	-0.0001217	0.0006738	0.0035	2.58		48091.72	48091.72	5.41		Si
SLV 13	0.44	5349.92	-38910	-0.0000969	0.0006738	0.0035	2.58		41794.85	41794.85	7.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.56	-6144.4	-75764	-55101	-6059	2.58	2.58	-71190	10833	8385	95155	27816	13158	40974	No	6.76	Si
SLU 78	0.44	4663.57	-71023	-51653	-5267	2.58	2.58	-66735	10833	8385	95155	27816	13158	40974	No	7.78	Si
SLU 83	-1.56	-6305.05	-77220	-56160	-6175	2.58	2.58	-72558	10833	8385	95155	27816	13158	40974	No	6.64	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.44	4711.24	-72456	-52695	-5369	2.58	2.58	-68082	10833	8385	95155	27816	13158	40974	No	7.63	Si
SLU 74	-1.56	-6192.88	-74889	-54465	-6047	2.58	2.58	-70368	10833	8385	95155	27816	13158	40974	No	6.78	Si
SLU 74	0.44	4606.54	-70162	-51027	-5263	2.58	2.58	-65927	10833	8385	95155	27816	13158	40974	No	7.79	Si
SLU 82	-1.56	-6093.54	-76476	-55619	-6013	2.58	2.58	-71859	10833	8385	95155	27816	13158	40974	No	6.81	Si
SLU 82	0.44	4613.25	-71726	-52164	-5216	2.58	2.58	-67396	10833	8385	95155	27816	13158	40974	No	7.85	Si
SLU 84	-1.56	-6175.06	-77285	-56207	-6100	2.58	2.58	-72619	10833	8385	95155	27816	13158	40974	No	6.72	Si
SLU 84	0.44	4690.76	-72521	-52743	-5295	2.58	2.58	-68143	10833	8385	95155	27816	13158	40974	No	7.74	Si
SLU 81	-1.56	-6223.53	-76410	-55571	-6088	2.58	2.58	-71797	10833	8385	95155	27816	13158	40974	No	6.73	Si
SLU 81	0.44	4633.73	-71661	-52117	-5290	2.58	2.58	-67335	10833	8385	95155	27816	13158	40974	No	7.74	Si
SLU 80	-1.56	-6113.23	-75284	-54752	-6030	2.58	2.58	-70739	10833	8385	95155	27816	13158	40974	No	6.8	Si
SLU 80	0.44	4645.07	-70551	-51309	-5243	2.58	2.58	-66291	10833	8385	95155	27816	13158	40974	No	7.82	Si
SLU 75	-1.56	-6062.88	-74954	-54512	-5972	2.58	2.58	-70429	10833	8385	95155	27816	13158	40974	No	6.86	Si
SLU 75	0.44	4586.06	-70227	-51075	-5189	2.58	2.58	-65988	10833	8385	95155	27816	13158	40974	No	7.9	Si
SLU 77	-1.56	-6274.4	-75698	-55053	-6134	2.58	2.58	-71128	10833	8385	95155	27816	13158	40974	No	6.68	Si
SLU 77	0.44	4684.05	-70958	-51606	-5341	2.58	2.58	-66674	10833	8385	95155	27816	13158	40974	No	7.67	Si
SLU 79	-1.56	-6243.23	-75218	-54704	-6105	2.58	2.58	-70677	10833	8385	95155	27816	13158	40974	No	6.71	Si
SLU 79	0.44	4665.55	-70485	-51262	-5317	2.58	2.58	-66230	10833	8385	95155	27816	13158	40974	No	7.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 6	-1.56	-10020.08	-52498	-38181	-8290	2.58	2.58	-49329	16250	12577	95155	41723	13158	54881		6.62	Si
SLD 6	0.44	5440.54	-48863	-35537	-7761	2.58	2.58	-45913	16250	12577	95155	41723	13158	54881		7.07	Si
SLD 5	-1.56	-10501.34	-52221	-37979	-8567	2.58	2.58	-49068	16250	12577	95155	41723	13158	54881		6.41	Si
SLD 5	0.44	5514.37	-48586	-35335	-8036	2.58	2.58	-45653	16250	12577	95155	41723	13158	54881		6.83	Si
SLD 9	-1.56	-10416.2	-50125	-36454	-8536	2.58	2.58	-47098	16250	12577	95155	41723	13158	54881		6.43	Si
SLD 9	0.44	5625.2	-46418	-33759	-8025	2.58	2.58	-43616	16250	12577	95155	41723	13158	54881		6.84	Si
SLV 5	-1.56	-18177.93	-52613	-38264	-13975	2.58	2.58	-49437	16250	12577	95155	41723	13158	54881		3.93	Si
SLV 5	0.44	8366.35	-48884	-35552	-13465	2.58	2.58	-45933	16250	12577	95155	41723	13158	54881		4.08	Si
SLV 10	-1.56	-16884.79	-48341	-35157	-13268	2.58	2.58	-45422	16250	12577	95155	41723	13158	54881		4.14	Si
SLV 10	0.44	8448.52	-44409	-32298	-12805	2.58	2.58	-41728	16250	12577	95155	41723	13158	54881		4.29	Si
SLV 6	-1.56	-17077.83	-53247	-38725	-13341	2.58	2.58	-50033	16250	12577	95155	41723	13158	54881		4.11	Si
SLV 6	0.44	8197.59	-49516	-36012	-12838	2.58	2.58	-46527	16250	12577	95155	41723	13158	54881		4.28	Si
SLV 9	-1.56	-17984.89	-47706	-34696	-13901	2.58	2.58	-44826	16250	12577	95155	41723	13158	54881		3.95	Si
SLV 9	0.44	8617.28	-43777	-31838	-13433	2.58	2.58	-41134	16250	12577	95155	41723	13158	54881		4.09	Si
SLD 10	-1.56	-9934.94	-50402	-36656	-8259	2.58	2.58	-47359	16250	12577	95155	41723	13158	54881		6.65	Si
SLD 10	0.44	5551.37	-46695	-33960	-7751	2.58	2.58	-43876	16250	12577	95155	41723	13158	54881		7.08	Si
SLV 13	-1.56	-8883.06	-42873	-31180	-7455	2.58	2.58	-40285	16250	12577	95155	41723	13158	54881		7.36	Si
SLV 13	0.44	5349.92	-38910	-28298	-6990	2.58	2.58	-36561	16250	12577	95155	41723	13158	54881		7.85	Si
SLV 1	-1.56	-9526.52	-59228	-43075	-7701	2.58	2.58	-55653	16250	12577	95155	41723	13158	54881		7.13	Si
SLV 1	0.44	4513.47	-55932	-40678	-7099	2.58	2.58	-52556	16250	12577	95155	41723	13158	54881		7.73	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-40220	0.24	125.1	4322.54	6630.78	5476.66	43.78	Si
SLV 14	-41193	0.24	125.1	4384.74	6765.23	5574.99	44.56	Si
SLV 15	-41307	0.24	125.1	4391.89	6780.96	5586.43	44.65	Si
SLV 16	-42280	0.24	125.1	4451.85	6915.42	5683.64	45.43	Si
SLV 9	-45088	0.24	125.1	4613.61	7284.21	5948.91	47.55	Si
SLV 10	-45722	0.24	125.1	4647.84	7366.74	6007.29	48.02	Si
SLV 11	-48711	0.24	125.1	4797.75	7741.04	6269.39	50.11	Si
SLV 12	-49345	0.24	125.1	4827.12	7819.34	6323.23	50.54	Si
SLV 5	-50202	0.24	125.1	4865.44	7925.11	6395.28	51.12	Si
SLV 6	-50836	0.24	125.1	4892.81	8000.05	6446.43	51.53	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-34198	-56277	-54	0.452	3805.5	0.974	6.73829	5.39576	Si
SLV 7	-33818	-55643	-54	0.456	3766.8	0.974	6.80297	5.39576	Si
SLV 6	-32970	-53247	-78	0.465	3680.4	0.973	6.94354	5.39576	Si
SLV 5	-32591	-52613	-79	0.469	3641.8	0.973	7.01287	5.39576	Si
SLV 12	-30970	-51370	221	0.486	3476.8	0.971	7.26461	5.39576	Si
SLV 11	-30591	-50736	220	0.491	3438.1	0.971	7.34294	5.39576	Si
SLV 10	-29742	-48341	197	0.503	3351.7	0.97	7.53501	5.39576	Si
SLV 9	-29363	-47706	196	0.509	3313.1	0.97	7.61983	5.39576	Si
SLV 4	-37635	-61110	-382	0.409	4155.6	0.976	6.08359	3.34272	Si
SLV 2	-37267	-60202	-389	0.412	4118.1	0.976	6.13205	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.138	SLU 83	Si
V_SLU	6.635	SLU 83	Si
PF_SLV	2.882	SLV 9	Si
V_SLV	3.927	SLV 5	Si
PFFP_SLV	43.777	SLV 13	Si
R_SLV	1.249	SLV 8	Si

Maschio 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.284	-24.653	-3.284	L2	L4	2.11	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	0.44	-2688.51	-28500	-0.0000623	0.0003743	0.0035	2.11	21202.85	24693.44	24693.44	9.18	No	Si
SLU 77	0.84	-401.92	-27342	-0.0000484	0.0003743	0.0035	2.11	20686.87	24001.82	24001.82	59.72	No	Si
SLU 74	0.44	-2669.44	-28147	-0.0000615	0.0003743	0.0035	2.11	21048.68	24483.1	24483.1	9.17	No	Si
SLU 74	0.84	-415.46	-26996	-0.0000478	0.0003743	0.0035	2.11	20527.09	23791.06	23791.06	57.26	No	Si
SLU 75	0.44	-2664.35	-28136	-0.0000614	0.0003743	0.0035	2.11	21044.03	24476.83	24476.83	9.19	No	Si
SLU 75	0.84	-414.61	-26991	-0.0000478	0.0003743	0.0035	2.11	20524.76	23788	23788	57.37	No	Si
SLU 83	0.44	-2790.88	-29089	-0.0000639	0.0003743	0.0035	2.11	21454.19	25046.85	25046.85	8.97	No	Si
SLU 83	0.84	-489.21	-27949	-0.0000499	0.0003743	0.0035	2.11	20960.98	24365.55	24365.55	49.81	No	Si
SLU 73	0.44	-2630.09	-27572	-0.0000602	0.0003743	0.0035	2.11	20792.06	24141.21	24141.21	9.18	No	Si
SLU 73	0.84	-436.31	-26443	-0.0000469	0.0003743	0.0035	2.11	20266.46	23443	23443	53.73	No	Si
SLU 76	0.44	-2649.17	-27925	-0.000061	0.0003743	0.0035	2.11	20950.65	24351.8	24351.8	9.19	No	Si
SLU 76	0.84	-422.78	-26789	-0.0000475	0.0003743	0.0035	2.11	20430.41	23664.09	23664.09	55.97	No	Si
SLU 79	0.44	-2676.72	-28296	-0.0000618	0.0003743	0.0035	2.11	21114.22	24571.92	24571.92	9.18	No	Si
SLU 79	0.84	-410.66	-27143	-0.0000481	0.0003743	0.0035	2.11	20595.61	23881.3	23881.3	58.15	No	Si
SLU 81	0.44	-2771.8	-28736	-0.0000631	0.0003743	0.0035	2.11	21304.56	24834.84	24834.84	8.96	No	Si
SLU 81	0.84	-502.75	-27603	-0.0000494	0.0003743	0.0035	2.11	20805.78	24159.45	24159.45	48.05	No	Si
SLU 84	0.44	-2785.79	-29078	-0.0000639	0.0003743	0.0035	2.11	21449.76	25040.5	25040.5	8.99	No	Si
SLU 84	0.84	-488.37	-27944	-0.0000499	0.0003743	0.0035	2.11	20958.75	24362.58	24362.58	49.89	No	Si
SLU 82	0.44	-2766.71	-28725	-0.0000631	0.0003743	0.0035	2.11	21300.04	24828.52	24828.52	8.97	No	Si
SLU 82	0.84	-501.9	-27598	-0.0000494	0.0003743	0.0035	2.11	20803.52	24156.44	24156.44	48.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	0.44	-2241.23	-14908	-0.0000346	0.0005615	0.0035	2.11		15667.83	15667.83	6.99		Si
SLD 14	0.84	-251.46	-13788	-0.0000235	0.0005615	0.0035	2.11		14681.55	14681.55	58.39		Si
SLV 14	0.44	-2790.69	-8985	-0.0000273	0.0005615	0.0035	2.11		10230.89	10230.89	3.67		Si
SLV 14	0.84	-227.02	-7523	-0.0000131	0.0005615	0.0035	2.11		8833.17	8833.17	38.91		Si
SLD 13	0.44	-2372.38	-15208	-0.0000358	0.0005615	0.0035	2.11		15931.01	15931.01	6.72		Si
SLD 13	0.84	-274.17	-13991	-0.0000239	0.0005615	0.0035	2.11		14866.01	14866.01	54.22		Si
SLD 15	0.44	-2616.23	-15409	-0.0000372	0.0005615	0.0035	2.11		16107.37	16107.37	6.16		Si
SLD 15	0.84	-743.8	-14444	-0.0000269	0.0005615	0.0035	2.11		15261.09	15261.09	20.52		Si
SLV 12	0.44	-3173.59	-16944	-0.0000425	0.0005615	0.0035	2.11		17459.63	17459.63	5.5		Si
SLV 12	0.84	-2352.08	-17034	-0.0000388	0.0005615	0.0035	2.11		17537.07	17537.07	7.46		Si
SLD 16	0.44	-2485.07	-15109	-0.0000361	0.0005615	0.0035	2.11		15843.87	15843.87	6.38		Si
SLD 16	0.84	-721.09	-14240	-0.0000264	0.0005615	0.0035	2.11		15083.58	15083.58	20.92		Si
SLV 13	0.44	-3096.04	-9684	-0.0000298	0.0005615	0.0035	2.11		10898.4	10898.4	3.52		Si
SLV 13	0.84	-279.9	-7996	-0.0000141	0.0005615	0.0035	2.11		9284.24	9284.24	33.17		Si
SLV 15	0.44	-3712.62	-10143	-0.0000335	0.0005615	0.0035	2.11		11328.01	11328.01	3.05		Si
SLV 15	0.84	-1449.41	-9065	-0.0000212	0.0005615	0.0035	2.11		10307.04	10307.04	7.11		Si
SLV 11	0.44	-3372.56	-17399	-0.0000442	0.0005615	0.0035	2.11		17847.92	17847.92	5.29		Si
SLV 11	0.84	-2386.54	-17343	-0.0000395	0.0005615	0.0035	2.11		17800.02	17800.02	7.46		Si
SLV 16	0.44	-3407.27	-9445	-0.0000309	0.0005615	0.0035	2.11		10672.63	10672.63	3.13		Si
SLV 16	0.84	-1396.53	-8591	-0.0000202	0.0005615	0.0035	2.11		9853.25	9853.25	7.06		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.44	-2688.51	-28500	-25333	-6244	2.11	2.11	-26680	10502	9971	33304	28432	5380	33813	No	5.42	Si
SLU 77	0.84	-401.92	-27342	-24304	-6303	2.11	2.11	-25596	10357	9834	33304	28432	5380	33813	No	5.36	Si
SLU 83	0.44	-2790.88	-29089	-25857	-6234	2.11	2.11	-27232	10575	10041	33304	28432	5380	33813	No	5.42	Si
SLU 83	0.84	-489.21	-27949	-24843	-6294	2.11	2.11	-26164	10433	9906	33304	28432	5380	33813	No	5.37	Si
SLU 78	0.44	-2683.43	-28489	-25324	-6218	2.11	2.11	-26670	10500	9970	33304	28432	5380	33813	No	5.44	Si
SLU 78	0.84	-401.08	-27337	-24299	-6277	2.11	2.11	-25592	10357	9834	33304	28432	5380	33813	No	5.39	Si
SLU 82	0.44	-2766.71	-28725	-25534	-6109	2.11	2.11	-26892	10530	9998	33304	28432	5380	33813	No	5.53	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	0.84	-501.9	-27598	-24531	-6168	2.11	2.11	-25836	10389	9865	33304	28432	5380	33813	No	5.48	Si
SLU 81	0.44	-2771.8	-28736	-25543	-6134	2.11	2.11	-26902	10531	9999	33304	28432	5380	33813	No	5.51	Si
SLU 81	0.84	-502.75	-27603	-24536	-6193	2.11	2.11	-25841	10390	9865	33304	28432	5380	33813	No	5.46	Si
SLU 75	0.44	-2664.35	-28136	-25010	-6119	2.11	2.11	-26340	10456	9928	33304	28432	5380	33813	No	5.53	Si
SLU 75	0.84	-414.61	-26991	-23992	-6177	2.11	2.11	-25268	10313	9793	33304	28432	5380	33813	No	5.47	Si
SLU 84	0.44	-2785.79	-29078	-25847	-6209	2.11	2.11	-27222	10574	10040	33304	28432	5380	33813	No	5.45	Si
SLU 84	0.84	-488.37	-27944	-24839	-6269	2.11	2.11	-26160	10432	9906	33304	28432	5380	33813	No	5.39	Si
SLU 74	0.44	-2669.44	-28147	-25019	-6144	2.11	2.11	-26350	10458	9930	33304	28432	5380	33813	No	5.5	Si
SLU 74	0.84	-415.46	-26996	-23996	-6202	2.11	2.11	-25272	10314	9793	33304	28432	5380	33813	No	5.45	Si
SLU 80	0.44	-2671.64	-28285	-25143	-6153	2.11	2.11	-26480	10475	9946	33304	28432	5380	33813	No	5.5	Si
SLU 80	0.84	-409.81	-27138	-24123	-6212	2.11	2.11	-25406	10332	9810	33304	28432	5380	33813	No	5.44	Si
SLU 79	0.44	-2676.72	-28296	-25152	-6178	2.11	2.11	-26490	10476	9947	33304	28432	5380	33813	No	5.47	Si
SLU 79	0.84	-410.66	-27143	-24127	-6237	2.11	2.11	-25411	10333	9811	33304	28432	5380	33813	No	5.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 10	0.44	-1548.64	-17650	-15688	-6147	2.11	2.11	-16523	13721	13028	33304	42648	5380	46333		7.54	Si
SLD 10	0.84	472.31	-16333	-14518	-6172	2.11	2.11	-15290	13475	12794	33304	42648	5380	46099		7.47	Si
SLV 6	0.44	-255.86	-21276	-18912	-6699	2.11	2.11	-19917	14400	13673	33304	42648	5380	46977		7.01	Si
SLV 6	0.84	1904.65	-19572	-17397	-6945	2.11	2.11	-18322	14081	13370	33304	42648	5380	46674		6.72	Si
SLV 14	0.44	-2790.69	-8985	-7987	-8135	2.11	2.11	-8412	12099	11488	33304	42648	5380	44792		5.51	Si
SLV 14	0.84	-227.02	-7523	-6687	-7828	2.11	2.11	-7043	11825	11228	33304	42648	5380	44532		5.69	Si
SLD 9	0.44	-1635.68	-17849	-15865	-6496	2.11	2.11	-16709	13759	13064	33304	42648	5380	46368		7.14	Si
SLD 9	0.84	457.24	-16468	-14638	-6521	2.11	2.11	-15417	13500	12818	33304	42648	5380	46123		7.07	Si
SLV 13	0.44	-3096.04	-9684	-8608	-9360	2.11	2.11	-9066	12230	11612	33304	42648	5380	44917		4.8	Si
SLV 13	0.84	-279.9	-7996	-7108	-9052	2.11	2.11	-7486	11914	11312	33304	42648	5380	44617		4.93	Si
SLV 5	0.44	-454.82	-21731	-19316	-7497	2.11	2.11	-20344	14485	13754	33304	42648	5380	47058		6.28	Si
SLV 5	0.84	1870.19	-19880	-17671	-7743	2.11	2.11	-18611	14139	13425	33304	42648	5380	46729		6.03	Si
SLV 10	0.44	-1118.33	-15412	-13699	-8679	2.11	2.11	-14428	13302	12631	33304	42648	5380	45935		5.29	Si
SLV 10	0.84	1546.29	-13474	-11977	-8700	2.11	2.11	-12614	12939	12286	33304	42648	5380	45590		5.24	Si
SLV 9	0.44	-1317.29	-15867	-14104	-9477	2.11	2.11	-14854	13387	12711	33304	42648	5380	46016		4.86	Si
SLV 9	0.84	1511.83	-13782	-12251	-9498	2.11	2.11	-12902	12997	12341	33304	42648	5380	45645		4.81	Si
SLV 15	0.44	-3712.62	-10143	-9016	-7095	2.11	2.067	-9738	12364	11500	33304	42648	5380	44805		6.31	Si
SLV 15	0.84	-1449.41	-9065	-8057	-6732	2.11	2.11	-8486	12114	11502	33304	42648	5380	44806		6.66	Si
SLD 13	0.44	-2372.38	-15208	-13519	-6461	2.11	2.11	-14238	13264	12594	33304	42648	5380	45899		7.1	Si
SLD 13	0.84	-274.17	-13991	-12436	-6348	2.11	2.11	-13098	13036	12378	33304	42648	5380	45682		7.2	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	6838	-6493	153.47	1395.43	9.09	Si
SLV 16	179667	0.24	7047	-6692	153.47	1436.11	9.36	Si
SLV 13	179667	0.24	7376	-7003	153.47	1499.61	9.77	Si
SLV 15	179667	0.24	7585	-7202	153.47	1539.97	10.03	Si
SLV 10	179667	0.24	13972	-13266	153.47	2711.81	17.67	Si
SLV 9	179667	0.24	14322	-13599	153.47	2772.79	18.07	Si
SLV 12	179667	0.24	14670	-13929	153.47	2833	18.46	Si
SLV 11	179667	0.24	15020	-14262	153.47	2893.3	18.85	Si
SLV 6	179667	0.24	20216	-19195	153.47	3747.12	24.42	Si
SLV 5	179667	0.24	20566	-19527	153.47	3801.98	24.77	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-19580	-17678	-573	0.594	2391.9	0.952	9.07726	4.02955	Si
SLV 8	-19329	-17321	-566	0.601	2366.4	0.951	9.17747	4.02955	Si
SLV 5	-19892	-24653	80	0.609	2423.6	0.952	9.29678	4.02955	Si
SLV 6	-19641	-24295	87	0.615	2398.1	0.952	9.38866	4.02955	Si
SLV 3	-25985	-28056	-452	0.482	3042.9	0.961	7.29147	2.9746	Si
SLV 1	-26078	-30148	-256	0.488	3052.4	0.961	7.37408	2.9746	Si
SLV 4	-25599	-27507	-442	0.488	3003.7	0.961	7.3849	2.9746	Si
SLV 2	-25693	-29600	-246	0.494	3013.2	0.961	7.46836	2.9746	Si
SLV 11	-14242	-10957	-482	0.765	1850.4	0.94	11.82891	4.02955	Si
SLV 9	-14554	-17932	172	0.77	1882	0.941	11.90413	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.96	SLU 81	Si
V_SLU	5.365	SLU 77	Si
PF_SLV	3.051	SLV 15	Si
V_SLV	4.799	SLV 13	Si
PFFP_SLV	9.093	SLV 14	Si
R_SLV	2.253	SLV 7	Si

Maschio 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.284	-21.543	-3.284	L2	L4	3.23	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	0.44	-19428.3	-52843	-0.0001046	0.0003743	0.0035	3.23	54866.74	64666.95	64666.95	3.33	No	Si
SLU 77	0.84	-11271.03	-51372	-0.0000835	0.0003743	0.0035	3.23	54164.15	63609.42	63609.42	5.64	No	Si
SLU 79	0.44	-19284.24	-52471	-0.0001037	0.0003743	0.0035	3.23	54693.89	64398.73	64398.73	3.34	No	Si
SLU 79	0.84	-11177.7	-51001	-0.0000828	0.0003743	0.0035	3.23	53979.38	63344.71	63344.71	5.67	No	Si
SLU 81	0.44	-19402.59	-53232	-0.0001051	0.0003743	0.0035	3.23	55044.66	64949.16	64949.16	3.35	No	Si
SLU 81	0.84	-11199.86	-51761	-0.0000838	0.0003743	0.0035	3.23	54354.56	63887.95	63887.95	5.7	No	Si
SLU 82	0.44	-19390.36	-53225	-0.000105	0.0003743	0.0035	3.23	55041.6	64944.24	64944.24	3.35	No	Si
SLU 82	0.84	-11193.42	-51754	-0.0000838	0.0003743	0.0035	3.23	54351.28	63883.1	63883.1	5.71	No	Si
SLU 74	0.44	-19176.93	-52162	-0.000103	0.0003743	0.0035	3.23	54547.68	64176.2	64176.2	3.35	No	Si
SLU 74	0.84	-11105.25	-50692	-0.0000822	0.0003743	0.0035	3.23	53823.25	63125.11	63125.11	5.68	No	Si
SLU 78	0.44	-19416.06	-52836	-0.0001046	0.0003743	0.0035	3.23	54863.61	64662.06	64662.06	3.33	No	Si
SLU 78	0.84	-11264.6	-51365	-0.0000834	0.0003743	0.0035	3.23	54160.81	63604.59	63604.59	5.65	No	Si
SLU 83	0.44	-19653.96	-53912	-0.0001067	0.0003743	0.0035	3.23	55347.84	65445.32	65445.32	3.33	No	Si
SLU 83	0.84	-11365.65	-52441	-0.0000851	0.0003743	0.0035	3.23	54679.57	64376.77	64376.77	5.66	No	Si
SLU 84	0.44	-19641.73	-53905	-0.0001066	0.0003743	0.0035	3.23	55344.87	65440.37	65440.37	3.33	No	Si
SLU 84	0.84	-11359.21	-52434	-0.0000851	0.0003743	0.0035	3.23	54676.39	64371.9	64371.9	5.67	No	Si
SLU 75	0.44	-19164.7	-52156	-0.000103	0.0003743	0.0035	3.23	54544.46	64171.34	64171.34	3.35	No	Si
SLU 75	0.84	-11098.81	-50685	-0.0000822	0.0003743	0.0035	3.23	53819.82	63120.32	63120.32	5.69	No	Si
SLU 80	0.44	-19272.01	-52465	-0.0001037	0.0003743	0.0035	3.23	54690.71	64393.85	64393.85	3.34	No	Si
SLU 80	0.84	-11171.26	-50994	-0.0000827	0.0003743	0.0035	3.23	53975.98	63339.9	63339.9	5.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.44	-22073.44	-29310	-0.0000802	0.0005615	0.0035	3.23		45194.23	45194.23	2.05		Si
SLV 15	0.84	-10167.78	-28147	-0.0000505	0.0005615	0.0035	3.23		43697.6	43697.6	4.3		Si
SLV 9	0.44	-20296.19	-30293	-0.0000752	0.0005615	0.0035	3.23		46465.92	46465.92	2.29		Si
SLV 9	0.84	-14122.75	-29125	-0.0000597	0.0005615	0.0035	3.23		44954.42	44954.42	3.18		Si
SLV 13	0.44	-24356.52	-27272	-0.0000898	0.0005615	0.0035	3.23		42576.21	42576.21	1.75		Si
SLV 13	0.84	-13253.95	-26094	-0.0000545	0.0005615	0.0035	3.23		41036.71	41036.71	3.1		Si
SLV 16	0.44	-21206.01	-28623	-0.000077	0.0005615	0.0035	3.23		44308.29	44308.29	2.09		Si
SLV 16	0.84	-9914.38	-27459	-0.0000492	0.0005615	0.0035	3.23		42815.89	42815.89	4.32		Si
SLD 16	0.44	-16760.13	-32722	-0.0000694	0.0005615	0.0035	3.23		49548.68	49548.68	2.96		Si
SLD 16	0.84	-8712.1	-31577	-0.0000515	0.0005615	0.0035	3.23		48115.04	48115.04	5.52		Si
SLV 14	0.44	-23489.09	-26584	-0.0000861	0.0005615	0.0035	3.23		41681.12	41681.12	1.77		Si
SLV 14	0.84	-13000.55	-25406	-0.0000532	0.0005615	0.0035	3.23		40121.85	40121.85	3.09		Si
SLD 15	0.44	-17132.71	-33018	-0.0000705	0.0005615	0.0035	3.23		49908.74	49908.74	2.91		Si
SLD 15	0.84	-8820.94	-31872	-0.000052	0.0005615	0.0035	3.23		48489.44	48489.44	5.5		Si
SLV 10	0.44	-19730.99	-29845	-0.0000733	0.0005615	0.0035	3.23		45885.53	45885.53	2.33		Si
SLV 10	0.84	-13957.64	-28676	-0.0000589	0.0005615	0.0035	3.23		44377.5	44377.5	3.18		Si
SLD 13	0.44	-18047.73	-32189	-0.0000715	0.0005615	0.0035	3.23		48888.78	48888.78	2.71		Si
SLD 13	0.84	-10059.38	-31040	-0.0000536	0.0005615	0.0035	3.23		47431.05	47431.05	4.72		Si
SLD 14	0.44	-17675.15	-31893	-0.0000704	0.0005615	0.0035	3.23		48515.86	48515.86	2.74		Si
SLD 14	0.84	-9950.54	-30745	-0.0000531	0.0005615	0.0035	3.23		47051.35	47051.35	4.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	0.44	-19641.73	-53905	-47916	-20751	3.23	3.23	-32966	10833	15746	33304	43524	8236	49051	No	2.36	Si
SLU 84	0.84	-11359.21	-52434	-46608	-20751	3.23	3.23	-32066	10833	15746	33304	43524	8236	49051	No	2.36	Si
SLU 75	0.44	-19164.7	-52156	-46361	-20210	3.23	3.23	-31896	10833	15746	33304	43524	8236	49051	No	2.43	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	0.84	-11098.81	-50685	-45053	-20210	3.23	3.23	-30996	10833	15746	33304	43524	8236	49051	No	2.43	Si
SLU 77	0.44	-19428.3	-52843	-46971	-20438	3.23	3.23	-32316	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 77	0.84	-11271.03	-51372	-45664	-20438	3.23	3.23	-31416	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 74	0.44	-19176.93	-52162	-46367	-20224	3.23	3.23	-31900	10833	15746	33304	43524	8236	49051	No	2.43	Si
SLU 74	0.84	-11105.25	-50692	-45059	-20224	3.23	3.23	-31000	10833	15746	33304	43524	8236	49051	No	2.43	Si
SLU 81	0.44	-19402.59	-53232	-47317	-20552	3.23	3.23	-32554	10833	15746	33304	43524	8236	49051	No	2.39	Si
SLU 81	0.84	-11199.86	-51761	-46010	-20552	3.23	3.23	-31654	10833	15746	33304	43524	8236	49051	No	2.39	Si
SLU 82	0.44	-19390.36	-53225	-47311	-20537	3.23	3.23	-32550	10833	15746	33304	43524	8236	49051	No	2.39	Si
SLU 82	0.84	-11193.42	-51754	-46004	-20537	3.23	3.23	-31650	10833	15746	33304	43524	8236	49051	No	2.39	Si
SLU 78	0.44	-19416.06	-52836	-46965	-20424	3.23	3.23	-32312	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 78	0.84	-11264.6	-51365	-45658	-20424	3.23	3.23	-31412	10833	15746	33304	43524	8236	49051	No	2.4	Si
SLU 80	0.44	-19272.01	-52465	-46635	-20297	3.23	3.23	-32085	10833	15746	33304	43524	8236	49051	No	2.42	Si
SLU 80	0.84	-11171.26	-50994	-45328	-20297	3.23	3.23	-31185	10833	15746	33304	43524	8236	49051	No	2.42	Si
SLU 79	0.44	-19284.24	-52471	-46641	-20311	3.23	3.23	-32089	10833	15746	33304	43524	8236	49051	No	2.41	Si
SLU 79	0.84	-11177.7	-51001	-45334	-20311	3.23	3.23	-31189	10833	15746	33304	43524	8236	49051	No	2.41	Si
SLU 83	0.44	-19653.96	-53912	-47922	-20766	3.23	3.23	-32970	10833	15746	33304	43524	8236	49051	No	2.36	Si
SLU 83	0.84	-11365.65	-52441	-46614	-20766	3.23	3.23	-32070	10833	15746	33304	43524	8236	49051	No	2.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	0.44	-17132.71	-33018	-29349	-20942	3.23	3.23	-20192	14455	21010	33304	65286	8236	54315		2.59	Si
SLD 15	0.84	-8820.94	-31872	-28331	-20864	3.23	3.23	-19492	14315	20807	33304	65286	8236	54111		2.59	Si
SLV 16	0.44	-21206.01	-28623	-25442	-28552	3.23	2.6223	-21798	14776	17437	33304	65286	8236	50741		1.78	Si
SLV 16	0.84	-9914.38	-27459	-24408	-28372	3.23	3.23	-16793	13775	20022	33304	65286	8236	53327		1.88	Si
SLV 13	0.44	-24356.52	-27272	-24242	-28095	3.23	2.1657	-25194	15456	15063	33304	65286	8236	48367		1.72	Si
SLV 13	0.84	-13253.95	-26094	-23194	-28014	3.23	3.23	-15958	13608	19779	33304	65286	8236	53084		1.89	Si
SLD 13	0.44	-18047.73	-32189	-28612	-20137	3.23	3.1629	-20306	14478	20607	33304	65286	8236	53911		2.68	Si
SLD 13	0.84	-10059.38	-31040	-27591	-20101	3.23	3.23	-18983	14213	20659	33304	65286	8236	53963		2.68	Si
SLV 14	0.44	-23489.09	-26584	-23631	-26560	3.23	2.1943	-24226	15262	15071	33304	65286	8236	48375		1.82	Si
SLV 14	0.84	-13000.55	-25406	-22583	-26479	3.23	3.23	-15537	13524	19657	33304	65286	8236	52962		2	Si
SLV 11	0.44	-12685.93	-37088	-32967	-22224	3.23	3.23	-22681	14953	21734	33304	65286	8236	55038		2.48	Si
SLV 11	0.84	-3835.53	-35970	-31973	-22020	3.23	3.23	-21997	14816	21535	33304	65286	8236	54840		2.49	Si
SLD 16	0.44	-16760.13	-32722	-29087	-20283	3.23	3.23	-20011	14419	20958	33304	65286	8236	54262		2.68	Si
SLD 16	0.84	-8712.1	-31577	-28068	-20204	3.23	3.23	-19311	14279	20754	33304	65286	8236	54059		2.68	Si
SLV 12	0.44	-12120.73	-36639	-32568	-21224	3.23	3.23	-22407	14898	21654	33304	65286	8236	54959		2.59	Si
SLV 12	0.84	-3670.42	-35522	-31575	-21019	3.23	3.23	-21723	14761	21456	33304	65286	8236	54760		2.61	Si
SLD 14	0.44	-17675.15	-31893	-28350	-19477	3.23	3.1824	-19504	14318	20504	33304	65286	8236	53808		2.76	Si
SLD 14	0.84	-9950.54	-30745	-27329	-19442	3.23	3.23	-18802	14177	20606	33304	65286	8236	53911		2.77	Si
SLV 15	0.44	-22073.44	-29310	-26054	-30087	3.23	2.5857	-22647	14946	17391	33304	65286	8236	50695		1.68	Si
SLV 15	0.84	-10167.78	-28147	-25020	-29907	3.23	3.23	-17213	13859	20145	33304	65286	8236	53449		1.79	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	13208	-19198	234.93	3945.94	16.8	Si
SLV 13	179667	0.24	13634	-19818	234.93	4060.86	17.29	Si
SLV 16	179667	0.24	13659	-19854	234.93	4067.55	17.31	Si
SLV 15	179667	0.24	14086	-20473	234.93	4181.65	17.8	Si
SLV 10	179667	0.24	16177	-23513	234.93	4730.04	20.13	Si
SLV 9	179667	0.24	16455	-23917	234.93	4801.48	20.44	Si
SLV 12	179667	0.24	17681	-25699	234.93	5112.89	21.76	Si
SLV 11	179667	0.24	17959	-26103	234.93	5182.54	22.06	Si
SLV 6	179667	0.24	19109	-27775	234.93	5467.43	23.27	Si
SLV 5	179667	0.24	19387	-28179	234.93	5535.38	23.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-36123	-23227	-743	0.518	4286.4	0.958	7.85849	4.02955	Si
SLV 8	-35822	-22857	-742	0.521	4255.8	0.958	7.91223	4.02955	Si
SLV 11	-32539	-17870	-647	0.564	3922.1	0.955	8.59029	4.02955	Si
SLV 12	-32238	-17500	-645	0.568	3891.5	0.954	8.65584	4.02955	Si
SLV 5	-27345	-30918	-189	0.66	3394.6	0.948	10.11582	4.02955	Si
SLV 6	-27044	-30549	-187	0.666	3364.1	0.948	10.20819	4.02955	Si
SLV 3	-37313	-32268	-663	0.507	4407.4	0.959	7.68608	2.9746	Si
SLV 4	-36850	-31700	-660	0.512	4360.4	0.959	7.76439	2.9746	Si
SLV 1	-34679	-34576	-496	0.541	4139.7	0.957	8.21834	2.9746	Si
SLV 2	-34217	-34008	-494	0.547	4092.7	0.956	8.30891	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.328	SLU 77	Si
V_SLU	2.362	SLU 83	Si
PF_SLV	1.748	SLV 13	Si
V_SLV	1.685	SLV 15	Si
PFFP_SLV	16.796	SLV 14	Si
R_SLV	1.95	SLV 7	Si

Maschio 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.523	-3.284	-17.313	-3.284	L2	L4	0.79	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	0.44	986.41	-24449	-0.0001577	0.0003743	0.0035	0.79	3133.73	5934.04	5934.04	6.02	No	Si
SLU 77	0.84	1370.98	-20825	-0.0001514	0.0003743	0.0035	0.79	3492.9	5505.31	5505.31	4.02	No	Si
SLU 78	0.44	988.29	-24447	-0.0001577	0.0003743	0.0035	0.79	3134.13	5933.82	5933.82	6	No	Si
SLU 78	0.84	1368.03	-20821	-0.0001513	0.0003743	0.0035	0.79	3493.14	5504.73	5504.73	4.02	No	Si
SLU 80	0.44	982.7	-24278	-0.0001564	0.0003743	0.0035	0.79	3157.23	5920.92	5920.92	6.03	No	Si
SLU 80	0.84	1357.08	-20674	-0.0001499	0.0003743	0.0035	0.79	3501.65	5483.49	5483.49	4.04	No	Si
SLU 75	0.44	977.06	-24168	-0.0001554	0.0003743	0.0035	0.79	3171.91	5912.53	5912.53	6.05	No	Si
SLU 75	0.84	1348.53	-20574	-0.0001489	0.0003743	0.0035	0.79	3507.16	5469.04	5469.04	4.06	No	Si
SLU 79	0.44	980.82	-24281	-0.0001563	0.0003743	0.0035	0.79	3156.84	5921.14	5921.14	6.04	No	Si
SLU 79	0.84	1360.03	-20678	-0.00015	0.0003743	0.0035	0.79	3501.42	5484.07	5484.07	4.03	No	Si
SLU 82	0.44	996.09	-24800	-0.0001604	0.0003743	0.0035	0.79	3083.77	5960.81	5960.81	5.98	No	Si
SLU 82	0.84	1367.42	-21092	-0.000153	0.0003743	0.0035	0.79	3476.26	5543.78	5543.78	4.05	No	Si
SLU 74	0.44	975.19	-24171	-0.0001554	0.0003743	0.0035	0.79	3171.53	5912.75	5912.75	6.06	No	Si
SLU 74	0.84	1351.49	-20578	-0.000149	0.0003743	0.0035	0.79	3506.95	5469.62	5469.62	4.05	No	Si
SLU 84	0.44	1007.31	-25079	-0.0001628	0.0003743	0.0035	0.79	3042.14	5982.1	5982.1	5.94	No	Si
SLU 84	0.84	1386.92	-21339	-0.0001554	0.0003743	0.0035	0.79	3459.45	5579.46	5579.46	4.02	No	Si
SLU 83	0.44	1005.44	-25082	-0.0001627	0.0003743	0.0035	0.79	3041.7	5982.32	5982.32	5.95	No	Si
SLU 83	0.84	1389.87	-21343	-0.0001555	0.0003743	0.0035	0.79	3459.17	5580.04	5580.04	4.01	No	Si
SLU 81	0.44	994.21	-24803	-0.0001603	0.0003743	0.0035	0.79	3083.35	5961.03	5961.03	6	No	Si
SLU 81	0.84	1370.38	-21096	-0.0001531	0.0003743	0.0035	0.79	3476	5544.36	5544.36	4.05	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.44	439.26	-12124	-0.0000656	0.0005615	0.0035	0.79		4073.55	4073.55	9.27		Si
SLV 15	0.84	1859.22	-12261	-0.0001159	0.0005615	0.0035	0.79		4111.81	4111.81	2.21		Si
SLV 9	0.44	13.73	-15571	-0.0000667	0.0005615	0.0035	0.79		5036.7	5036.7	366.74		Si
SLV 9	0.84	1637.46	-12797	-0.0001097	0.0005615	0.0035	0.79		4261.63	4261.63	2.6		Si
SLV 14	0.44	155.24	-12243	-0.0000566	0.0005615	0.0035	0.79		4106.65	4106.65	26.45		Si
SLV 14	0.84	1968.76	-11674	-0.0001189	0.0005615	0.0035	0.79		3947.65	3947.65	2.01		Si
SLV 10	0.44	39.13	-15524	-0.0000673	0.0005615	0.0035	0.79		5023.58	5023.58	128.39		Si
SLV 10	0.84	1562.25	-12687	-0.0001066	0.0005615	0.0035	0.79		4230.73	4230.73	2.71		Si
SLV 16	0.44	478.23	-12052	-0.0000665	0.0005615	0.0035	0.79		4053.41	4053.41	8.48		Si
SLV 16	0.84	1743.8	-12092	-0.0001104	0.0005615	0.0035	0.79		4064.39	4064.39	2.33		Si
SLD 13	0.44	442.21	-14729	-0.0000775	0.0005615	0.0035	0.79		4801.56	4801.56	10.86		Si
SLD 13	0.84	1421.77	-13128	-0.0001038	0.0005615	0.0035	0.79		4354.02	4354.02	3.06		Si
SLV 13	0.44	116.26	-12315	-0.0000556	0.0005615	0.0035	0.79		4126.79	4126.79	35.49		Si
SLV 13	0.84	2084.18	-11844	-0.0001252	0.0005615	0.0035	0.79		3995.07	3995.07	1.92		Si
SLD 14	0.44	458.95	-14699	-0.000078	0.0005615	0.0035	0.79		4792.91	4792.91	10.44		Si
SLD 14	0.84	1372.19	-13055	-0.0001017	0.0005615	0.0035	0.79		4333.65	4333.65	3.16		Si
SLD 15	0.44	574.28	-14652	-0.0000817	0.0005615	0.0035	0.79		4779.96	4779.96	8.32		Si
SLD 15	0.84	1328.13	-13288	-0.0001013	0.0005615	0.0035	0.79		4398.72	4398.72	3.31		Si
SLD 16	0.44	591.02	-14621	-0.0000821	0.0005615	0.0035	0.79		4771.31	4771.31	8.07		Si
SLD 16	0.84	1278.55	-13215	-0.0000992	0.0005615	0.0035	0.79		4378.35	4378.35	3.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.44	1005.44	-25082	-20065	4043	0.79	0.79	-56443	10833	3851	95155	10645	4029	14674	No	3.63	Si
SLU 83	0.84	1389.87	-21343	-17074	280	0.79	0.79	-48029	10833	3851	95155	10645	4029	14674	No	52.33	Si
SLU 82	0.44	996.09	-24800	-19840	4026	0.79	0.79	-55809	10833	3851	95155	10645	4029	14674	No	3.64	Si
SLU 82	0.84	1367.42	-21092	-16873	308	0.79	0.79	-47464	10833	3851	95155	10645	4029	14674	No	47.67	Si
SLU 78	0.44	988.29	-24447	-19557	3896	0.79	0.79	-55013	10833	3851	95155	10645	4029	14674	No	3.77	Si
SLU 78	0.84	1368.03	-20821	-16657	230	0.79	0.79	-46855	10833	3851	95155	10645	4029	14674	No	63.81	Si
SLU 75	0.44	977.06	-24168	-19334	3866	0.79	0.79	-54386	10833	3851	95155	10645	4029	14674	No	3.8	Si
SLU 75	0.84	1348.53	-20574	-16459	244	0.79	0.79	-46299	10833	3851	95155	10645	4029	14674	No	60.05	Si
SLU 84	0.44	1007.31	-25079	-20063	4056	0.79	0.79	-56436	10833	3851	95155	10645	4029	14674	No	3.62	Si
SLU 84	0.84	1386.92	-21339	-17071	293	0.79	0.79	-48020	10833	3851	95155	10645	4029	14674	No	50.01	Si
SLU 79	0.44	980.82	-24281	-19424	3860	0.79	0.79	-54640	10833	3851	95155	10645	4029	14674	No	3.8	Si
SLU 79	0.84	1360.03	-20678	-16543	227	0.79	0.79	-46534	10833	3851	95155	10645	4029	14674	No	64.78	Si
SLU 74	0.44	975.19	-24171	-19337	3853	0.79	0.79	-54393	10833	3851	95155	10645	4029	14674	No	3.81	Si
SLU 74	0.84	1351.49	-20578	-16463	231	0.79	0.79	-46308	10833	3851	95155	10645	4029	14674	No	63.42	Si
SLU 81	0.44	994.21	-24803	-19842	4013	0.79	0.79	-55815	10833	3851	95155	10645	4029	14674	No	3.66	Si
SLU 81	0.84	1370.38	-21096	-16877	295	0.79	0.79	-47473	10833	3851	95155	10645	4029	14674	No	49.77	Si
SLU 80	0.44	982.7	-24278	-19422	3873	0.79	0.79	-54633	10833	3851	95155	10645	4029	14674	No	3.79	Si
SLU 80	0.84	1357.08	-20674	-16539	239	0.79	0.79	-46524	10833	3851	95155	10645	4029	14674	No	61.27	Si
SLU 77	0.44	986.41	-24449	-19560	3883	0.79	0.79	-55020	10833	3851	95155	10645	4029	14674	No	3.78	Si
SLU 77	0.84	1370.98	-20825	-16660	217	0.79	0.79	-46864	10833	3851	95155	10645	4029	14674	No	67.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	0.44	1319.68	-17547	-14038	5622	0.79	0.79	-39487	16250	5777	95155	15968	4029	19997		3.56	Si
SLV 7	0.84	296.97	-15451	-12360	2312	0.79	0.79	-34769	16250	5777	95155	15968	4029	19997		8.65	Si
SLV 4	0.44	1242.54	-20756	-16605	10379	0.79	0.79	-46708	16250	5777	95155	15968	4029	19997		1.93	Si
SLV 4	0.84	-224.97	-16294	-13035	4636	0.79	0.79	-36667	16250	5777	95155	15968	4029	19997		4.31	Si
SLV 3	0.44	1203.57	-20828	-16662	9850	0.79	0.79	-46870	16250	5777	95155	15968	4029	19997		2.03	Si
SLV 3	0.84	-109.54	-16463	-13171	4203	0.79	0.79	-37049	16250	5777	95155	15968	4029	19997		4.76	Si
SLD 3	0.44	899.86	-18372	-14698	5710	0.79	0.79	-41344	16250	5777	95155	15968	4029	19997		3.5	Si
SLD 3	0.84	487.03	-15082	-12066	1887	0.79	0.79	-33940	16250	5777	95155	15968	4029	19997		10.59	Si
SLV 1	0.44	880.57	-21018	-16815	9240	0.79	0.79	-47299	16250	5777	95155	15968	4029	19997		2.16	Si
SLV 1	0.84	115.42	-16046	-12837	3534	0.79	0.79	-36109	16250	5777	95155	15968	4029	19997		5.66	Si
SLV 2	0.44	919.55	-20946	-16757	9770	0.79	0.79	-47137	16250	5777	95155	15968	4029	19997		2.05	Si
SLV 2	0.84	-0.01	-15876	-12701	3966	0.79	0.79	-35727	16250	5777	95155	15968	4029	19997		5.04	Si
SLD 2	0.44	784.52	-18419	-14735	5680	0.79	0.79	-41449	16250	5777	95155	15968	4029	19997		3.52	Si
SLD 2	0.84	531.09	-14849	-11880	1787	0.79	0.79	-33416	16250	5777	95155	15968	4029	19997		11.19	Si
SLV 8	0.44	1345.07	-17500	-14000	5967	0.79	0.79	-39381	16250	5777	95155	15968	4029	19997		3.35	Si
SLV 8	0.84	221.76	-15340	-12272	2594	0.79	0.79	-34520	16250	5777	95155	15968	4029	19997		7.71	Si
SLD 4	0.44	916.59	-18341	-14673	5938	0.79	0.79	-41275	16250	5777	95155	15968	4029	19997		3.37	Si
SLD 4	0.84	437.45	-15009	-12007	2073	0.79	0.79	-33776	16250	5777	95155	15968	4029	19997		9.65	Si
SLD 1	0.44	767.78	-18450	-14760	5452	0.79	0.79	-41518	16250	5777	95155	15968	4029	19997		3.67	Si
SLD 1	0.84	580.67	-14922	-11938	1601	0.79	0.79	-33580	16250	5777	95155	15968	4029	19997		12.49	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-12538	0.24	57.46	2169.55	3027.34	2598.44	45.22	Si
SLV 16	-12595	0.24	57.46	2176.43	3039.42	2607.93	45.39	Si
SLV 13	-12927	0.24	57.46	2215.99	3109.74	2662.86	46.34	Si
SLV 14	-12984	0.24	57.46	2222.69	3121.82	2672.26	46.51	Si
SLV 11	-14734	0.24	57.46	2415.48	3475.52	2945.5	51.26	Si
SLV 12	-14771	0.24	57.46	2419.29	3482.89	2951.09	51.36	Si
SLV 9	-16030	0.24	57.46	2541.82	3721.71	3131.76	54.5	Si
SLV 10	-16067	0.24	57.46	2545.24	3728.73	3136.98	54.59	Si
SLV 7	-16997	0.24	57.46	2627.03	3897.57	3262.3	56.78	Si
SLV 8	-17034	0.24	57.46	2630.15	3904.23	3267.19	56.86	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-10036	-22289	86	0.478	1170.5	0.962	7.22774	4.02955	Si
SLV 8	-9879	-22224	90	0.484	1154.6	0.962	7.31315	4.02955	Si
SLV 11	-9777	-23176	113	0.486	1144.2	0.961	7.34249	4.02955	Si
SLV 12	-9621	-23111	117	0.491	1128.3	0.961	7.4318	4.02955	Si
SLV 5	-7910	-23573	-605	0.516	954.3	0.954	7.86549	4.02955	Si
SLV 6	-7753	-23508	-600	0.525	938.4	0.954	7.99989	4.02955	Si
SLV 9	-7651	-24460	-578	0.533	928	0.953	8.12483	4.02955	Si
SLV 10	-7494	-24395	-573	0.542	912.1	0.952	8.26847	4.02955	Si
SLV 3	-9635	-21721	-189	0.484	1129.8	0.961	7.32051	2.9746	Si
SLV 1	-8997	-22106	-396	0.489	1064.9	0.959	7.41819	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.015	SLU 83	Si
V_SLU	3.618	SLU 84	Si
PF_SLV	1.917	SLV 13	Si
V_SLV	1.927	SLV 4	Si
PFFP_SLV	45.222	SLV 15	Si
R_SLV	1.794	SLV 7	Si

Maschio 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.284	-14.223	-3.284	L2	L4	0.46	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.025	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-1.56	1184.5	-31838	-0.001905	0.0003743	0.0035	0.46	0	1552.23	1552.23	1.31	No	Si
SLU 74	0.54	-747.12	-12953	-0.0001919	0.0003743	0.0035	0.46	1148.15	2026.99	2026.99	2.71	No	Si
SLU 80	-1.56	1187.66	-31964	-0.0019536	0.0003743	0.0035	0.46	0	1532.99	1532.99	1.29	No	Si
SLU 80	0.54	-751.81	-13022	-0.0001933	0.0003743	0.0035	0.46	1144.45	2032.89	2032.89	2.7	No	Si
SLU 77	-1.56	1198.05	-32194	-0.002063	0.0003743	0.0035	0.46	0	1497.98	1497.98	1.25	No	Si
SLU 77	0.54	-757.22	-13111	-0.0001951	0.0003743	0.0035	0.46	1139.53	2040.48	2040.48	2.69	No	Si
SLU 81	-1.56	1208.3	-32487	-0.0022565	0.0003743	0.0035	0.46	0	1453.31	1453.31	1.2	No	Si
SLU 81	0.54	-753.78	-13235	-0.0001962	0.0003743	0.0035	0.46	1132.4	2051.05	2051.05	2.72	No	Si
SLU 78	-1.56	1196.77	-32181	-0.0020546	0.0003743	0.0035	0.46	0	1499.96	1499.96	1.25	No	Si
SLU 78	0.54	-757.8	-13114	-0.0001952	0.0003743	0.0035	0.46	1139.35	2040.76	2040.76	2.69	No	Si
SLU 84	-1.56	1220.57	-32829	-0.002548	0.0003743	0.0035	0.46	0	1401.05	1401.05	1.15	No	Si
SLU 84	0.54	-764.45	-13396	-0.0001996	0.0003743	0.0035	0.46	1122.6	2064.82	2064.82	2.7	No	Si
SLU 83	-1.56	1221.86	-32842	-0.002566	0.0003743	0.0035	0.46	0	1399.06	1399.06	1.15	No	Si
SLU 83	0.54	-763.87	-13393	-0.0001995	0.0003743	0.0035	0.46	1122.81	2064.54	2064.54	2.7	No	Si
SLU 75	-1.56	1183.21	-31825	-0.0018982	0.0003743	0.0035	0.46	0	1554.21	1554.21	1.31	No	Si
SLU 75	0.54	-747.7	-12956	-0.000192	0.0003743	0.0035	0.46	1147.97	2027.27	2027.27	2.71	No	Si
SLU 79	-1.56	1188.95	-31977	-0.0019609	0.0003743	0.0035	0.46	0	1531.01	1531.01	1.29	No	Si
SLU 79	0.54	-751.23	-13019	-0.0001932	0.0003743	0.0035	0.46	1144.63	2032.61	2032.61	2.71	No	Si
SLU 82	-1.56	1207.01	-32474	-0.0022445	0.0003743	0.0035	0.46	0	1455.29	1455.29	1.21	No	Si
SLU 82	0.54	-754.36	-13238	-0.0001963	0.0003743	0.0035	0.46	1132.21	2051.33	2051.33	2.72	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	-1.56	1048.53	-23345	-0.0003288	0.0005615	0.0035	0.46		2977.59	2977.59	2.84		Si
SLD 1	0.54	-417.55	-7739	-0.0000956	0.0005615	0.0035	0.46		1565.05	1565.05	3.75		Si
SLV 4	-1.56	1233.78	-23938	-0.0003657	0.0005615	0.0035	0.46		2986.35	2986.35	2.42		Si
SLV 4	0.54	-322.86	-6777	-0.0000788	0.0005615	0.0035	0.46		1406.18	1406.18	4.36		Si
SLV 13	-1.56	409.15	-20308	-0.0002071	0.0005615	0.0035	0.46		2849.66	2849.66	6.96		Si
SLV 13	0.54	-722.25	-11039	-0.0001549	0.0005615	0.0035	0.46		2030.77	2030.77	2.81		Si
SLV 3	-1.56	1245.09	-24109	-0.0003701	0.0005615	0.0035	0.46		2988.89	2988.89	2.4		Si
SLV 3	0.54	-342.96	-6915	-0.0000818	0.0005615	0.0035	0.46		1429.42	1429.42	4.17		Si
SLV 16	-1.56	292.01	-19276	-0.0001827	0.0005615	0.0035	0.46		2792.98	2792.98	9.56		Si
SLV 16	0.54	-767.81	-11643	-0.0001653	0.0005615	0.0035	0.46		2103.77	2103.77	2.74		Si
SLV 1	-1.56	1350.92	-24969	-0.0004014	0.0005615	0.0035	0.46		3001.6	3001.6	2.22		Si
SLV 1	0.54	-277.29	-6174	-0.0000697	0.0005615	0.0035	0.46		1302.44	1302.44	4.7		Si
SLV 5	-1.56	1142.79	-24311	-0.0003569	0.0005615	0.0035	0.46		2991.88	2991.88	2.62		Si
SLV 5	0.54	-352.92	-6988	-0.0000833	0.0005615	0.0035	0.46		1441.78	1441.78	4.09		Si
SLV 15	-1.56	303.33	-19448	-0.0001857	0.0005615	0.0035	0.46		2802.42	2802.42	9.24		Si
SLV 15	0.54	-787.91	-11781	-0.0001687	0.0005615	0.0035	0.46		2120.45	2120.45	2.69		Si
SLV 6	-1.56	1135.42	-24199	-0.0003541	0.0005615	0.0035	0.46		2990.22	2990.22	2.63		Si
SLV 6	0.54	-339.82	-6899	-0.0000814	0.0005615	0.0035	0.46		1426.64	1426.64	4.2		Si
SLV 2	-1.56	1339.6	-24798	-0.0003966	0.0005615	0.0035	0.46		2999.06	2999.06	2.24		Si
SLV 2	0.54	-257.2	-6036	-0.0000667	0.0005615	0.0035	0.46		1278.18	1278.18	4.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-1.56	1183.21	-31825	-24248	2710	0.46	0.46	-117140	10833	2243	95155	6199	2933	9131	No	3.37	Si
SLU 75	0.54	-747.7	-12956	-9871	-4872	0.46	0.46	-47687	10833	2243	95155	6199	2933	9131	No	1.87	Si
SLU 82	-1.56	1207.01	-32474	-24742	2757	0.46	0.46	-119526	10833	2243	95155	6199	2933	9131	No	3.31	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	0.54	-754.36	-13238	-10086	-4957	0.46	0.46	-48726	10833	2243	95155	6199	2933	9131	No	1.84	Si
SLU 77	-1.56	1198.05	-32194	-24529	2744	0.46	0.46	-118496	10833	2243	95155	6199	2933	9131	No	3.33	Si
SLU 77	0.54	-757.22	-13111	-9989	-4920	0.46	0.46	-48257	10833	2243	95155	6199	2933	9131	No	1.86	Si
SLU 83	-1.56	1221.86	-32842	-25023	2791	0.46	0.46	-120882	10833	2243	95155	6199	2933	9131	No	3.27	Si
SLU 83	0.54	-763.87	-13393	-10204	-5005	0.46	0.46	-49296	10833	2243	95155	6199	2933	9131	No	1.82	Si
SLU 79	-1.56	1188.95	-31977	-24364	2724	0.46	0.46	-117699	10833	2243	95155	6199	2933	9131	No	3.35	Si
SLU 79	0.54	-751.23	-13019	-9919	-4894	0.46	0.46	-47917	10833	2243	95155	6199	2933	9131	No	1.87	Si
SLU 81	-1.56	1208.3	-32487	-24752	2760	0.46	0.46	-119573	10833	2243	95155	6199	2933	9131	No	3.31	Si
SLU 81	0.54	-753.78	-13235	-10084	-4954	0.46	0.46	-48713	10833	2243	95155	6199	2933	9131	No	1.84	Si
SLU 74	-1.56	1184.5	-31838	-24258	2713	0.46	0.46	-117187	10833	2243	95155	6199	2933	9131	No	3.37	Si
SLU 74	0.54	-747.12	-12953	-9869	-4869	0.46	0.46	-47675	10833	2243	95155	6199	2933	9131	No	1.88	Si
SLU 78	-1.56	1196.77	-32181	-24519	2741	0.46	0.46	-118448	10833	2243	95155	6199	2933	9131	No	3.33	Si
SLU 78	0.54	-757.8	-13114	-9992	-4923	0.46	0.46	-48269	10833	2243	95155	6199	2933	9131	No	1.85	Si
SLU 84	-1.56	1220.57	-32829	-25013	2788	0.46	0.46	-120834	10833	2243	95155	6199	2933	9131	No	3.28	Si
SLU 84	0.54	-764.45	-13396	-10207	-5008	0.46	0.46	-49308	10833	2243	95155	6199	2933	9131	No	1.82	Si
SLU 80	-1.56	1187.66	-31964	-24354	2721	0.46	0.46	-117651	10833	2243	95155	6199	2933	9131	No	3.36	Si
SLU 80	0.54	-751.81	-13022	-9921	-4897	0.46	0.46	-47930	10833	2243	95155	6199	2933	9131	No	1.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.56	292.01	-19276	-14687	983	0.46	0.46	-70951	16250	3364	95155	9298	2933	12230		12.44	Si
SLV 16	0.54	-767.81	-11643	-8871	-8513	0.46	0.46	-42853	16250	3364	95155	9298	2933	12230		1.44	Si
SLV 12	-1.56	500.14	-19934	-15188	1356	0.46	0.46	-73373	16250	3364	95155	9298	2933	12230		9.02	Si
SLV 12	0.54	-692.19	-10828	-8250	-6170	0.46	0.46	-39856	16250	3364	95155	9298	2933	12230		1.98	Si
SLD 13	-1.56	645.75	-21352	-16268	1591	0.46	0.46	-78591	16250	3364	95155	9298	2933	12230		7.69	Si
SLD 13	0.54	-607.73	-9816	-7479	-5328	0.46	0.46	-36130	16250	3364	95155	9298	2933	12230		2.3	Si
SLV 11	-1.56	507.51	-20046	-15273	1375	0.46	0.46	-73785	16250	3364	95155	9298	2933	12230		8.9	Si
SLV 11	0.54	-705.28	-10918	-8319	-6338	0.46	0.46	-40187	16250	3364	95155	9298	2933	12230		1.93	Si
SLV 15	-1.56	303.33	-19448	-14818	1012	0.46	0.46	-71583	16250	3364	95155	9298	2933	12230		12.09	Si
SLV 15	0.54	-787.91	-11781	-8976	-8771	0.46	0.46	-43361	16250	3364	95155	9298	2933	12230		1.39	Si
SLD 15	-1.56	599.26	-20975	-15981	1516	0.46	0.46	-77202	16250	3364	95155	9298	2933	12230		8.07	Si
SLD 15	0.54	-636.19	-10137	-7724	-5685	0.46	0.46	-37312	16250	3364	95155	9298	2933	12230		2.15	Si
SLV 13	-1.56	409.15	-20308	-15473	1183	0.46	0.46	-74748	16250	3364	95155	9298	2933	12230		10.33	Si
SLV 13	0.54	-722.25	-11039	-8411	-7921	0.46	0.46	-40633	16250	3364	95155	9298	2933	12230		1.54	Si
SLD 14	-1.56	640.89	-21278	-16212	1579	0.46	0.46	-78319	16250	3364	95155	9298	2933	12230		7.75	Si
SLD 14	0.54	-599.09	-9757	-7434	-5217	0.46	0.46	-35912	16250	3364	95155	9298	2933	12230		2.34	Si
SLD 16	-1.56	594.4	-20901	-15925	1504	0.46	0.46	-76931	16250	3364	95155	9298	2933	12230		8.13	Si
SLD 16	0.54	-627.56	-10078	-7679	-5574	0.46	0.46	-37094	16250	3364	95155	9298	2933	12230		2.19	Si
SLV 14	-1.56	397.84	-20136	-15342	1155	0.46	0.46	-74116	16250	3364	95155	9298	2933	12230		10.59	Si
SLV 14	0.54	-702.15	-10902	-8306	-7663	0.46	0.46	-40126	16250	3364	95155	9298	2933	12230		1.6	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-11941	0.24	33.46	1671.86	2715.18	2193.52	65.56	Si
SLV 4	-11952	0.24	33.46	1672.47	2717.1	2194.79	65.6	Si
SLV 7	-11991	0.24	33.46	1674.61	2723.87	2199.24	65.73	Si
SLV 3	-12029	0.24	33.46	1676.66	2730.45	2203.55	65.86	Si
SLV 12	-12195	0.24	33.46	1685.38	2759.02	2222.2	66.42	Si
SLV 2	-12227	0.24	33.46	1687.03	2764.56	2225.79	66.53	Si
SLV 11	-12245	0.24	33.46	1687.95	2767.67	2227.81	66.59	Si
SLV 1	-12304	0.24	33.46	1690.92	2777.83	2234.38	66.78	Si
SLV 16	-12799	0.24	33.46	1713.84	2860.2	2287.02	68.36	Si
SLV 6	-12858	0.24	33.46	1716.34	2869.78	2293.06	68.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-5979	-22913	-63	0.468	695.3	0.963	7.06612	4.02955	Si
SLV 10	-5884	-22801	-64	0.474	685.7	0.962	7.15602	4.02955	Si
SLV 11	-5933	-20046	-37	0.475	690.7	0.962	7.16914	4.02955	Si
SLV 12	-5839	-19934	-38	0.481	681.1	0.962	7.26127	4.02955	Si
SLV 13	-7282	-20308	-43	0.405	827.9	0.968	6.08432	2.9746	Si
SLV 15	-7268	-19448	-36	0.407	826.6	0.968	6.10807	2.9746	Si
SLV 5	-4869	-24311	-73	0.547	582.5	0.956	8.30749	4.02955	Si
SLV 14	-7137	-20136	-44	0.412	813.1	0.968	6.18024	2.9746	Si
SLV 16	-7123	-19276	-36	0.413	811.8	0.968	6.20463	2.9746	Si
SLV 6	-4775	-24199	-73	0.555	572.9	0.956	8.43953	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.145	SLU 83	Si
V_SLU	1.823	SLU 84	Si
PF_SLV	2.222	SLV 1	Si
V_SLV	1.394	SLV 15	Si
PFFP_SLV	65.561	SLV 8	Si
R_SLV	1.754	SLV 9	Si

Maschio 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.498	1.046	-18.498	-3.284	L2	L4	4.33	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-1.56	22445.31	-97896	-0.0001606	0.0004492	0.0035	4.33	81221.94	142632.98	142632.98	6.35	No	Si
SLU 77	1.41	3548.65	-49079	-0.0000605	0.0004492	0.0035	4.33	73400.24	88653.92	88653.92	24.98	No	Si
SLU 84	-1.56	22831.52	-99592	-0.000164	0.0004492	0.0035	4.33	80324.98	144045.86	144045.86	6.31	No	Si
SLU 84	1.41	3440.21	-49847	-0.0000613	0.0004492	0.0035	4.33	74026.24	89853.71	89853.71	26.12	No	Si
SLU 82	-1.56	22576.57	-98544	-0.0001619	0.0004492	0.0035	4.33	80888.27	143173.18	143173.18	6.34	No	Si
SLU 82	1.41	3357.12	-49195	-0.0000604	0.0004492	0.0035	4.33	73495.86	88835.21	88835.21	26.46	No	Si
SLU 74	-1.56	22190.37	-96848	-0.0001585	0.0004492	0.0035	4.33	81736.75	141760.3	141760.3	6.39	No	Si
SLU 74	1.41	3465.56	-48428	-0.0000596	0.0004492	0.0035	4.33	72856.22	87635.42	87635.42	25.29	No	Si
SLU 78	-1.56	22323.52	-97885	-0.0001604	0.0004492	0.0035	4.33	81227.35	142624.07	142624.07	6.39	No	Si
SLU 78	1.41	3599.46	-49073	-0.0000606	0.0004492	0.0035	4.33	73395.35	88644.67	88644.67	24.63	No	Si
SLU 75	-1.56	22068.57	-96837	-0.0001583	0.0004492	0.0035	4.33	81741.86	141751.39	141751.39	6.42	No	Si
SLU 75	1.41	3516.38	-48422	-0.0000597	0.0004492	0.0035	4.33	72851.22	87626.16	87626.16	24.92	No	Si
SLU 80	-1.56	22172.52	-97281	-0.0001591	0.0004492	0.0035	4.33	81527.71	142120.81	142120.81	6.41	No	Si
SLU 80	1.41	3593.34	-48705	-0.0000602	0.0004492	0.0035	4.33	73089.6	88069.69	88069.69	24.51	No	Si
SLU 83	-1.56	22953.31	-99603	-0.0001643	0.0004492	0.0035	4.33	80319.07	144054.77	144054.77	6.28	No	Si
SLU 83	1.41	3389.39	-49853	-0.0000612	0.0004492	0.0035	4.33	74031	89862.96	89862.96	26.51	No	Si
SLU 79	-1.56	22294.31	-97292	-0.0001594	0.0004492	0.0035	4.33	81522.48	142129.72	142129.72	6.38	No	Si
SLU 79	1.41	3542.52	-48711	-0.0000601	0.0004492	0.0035	4.33	73094.54	88078.94	88078.94	24.86	No	Si
SLU 81	-1.56	22698.37	-98555	-0.0001622	0.0004492	0.0035	4.33	80882.67	143182.09	143182.09	6.31	No	Si
SLU 81	1.41	3306.3	-49201	-0.0000603	0.0004492	0.0035	4.33	73500.73	88844.46	88844.46	26.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-1.56	9809.04	-49323	-0.0000695	0.0006738	0.0035	4.33		92535.76	92535.76	9.43		Si
SLV 15	1.41	11350.75	-27971	-0.0000474	0.0006738	0.0035	4.33		57475.31	57475.31	5.06		Si
SLV 5	-1.56	31961.87	-73683	-0.0001355	0.0006738	0.0035	4.33		129247.7	129247.7	4.04		Si
SLV 5	1.41	-6418.3	-34910	-0.0000477	0.0006738	0.0035	4.33		78639.72	78639.72	12.25		Si
SLV 13	-1.56	19069.59	-49397	-0.0000843	0.0006738	0.0035	4.33		92652.74	92652.74	4.86		Si
SLV 13	1.41	7198.46	-27650	-0.0000407	0.0006738	0.0035	4.33		56880.1	56880.1	7.9		Si
SLV 9	-1.56	30831.25	-62467	-0.0001194	0.0006738	0.0035	4.33		113296.87	113296.87	3.67		Si
SLV 9	1.41	-2337.21	-31346	-0.0000374	0.0006738	0.0035	4.33		72406.13	72406.13	30.98		Si
SLV 16	-1.56	7734.66	-48746	-0.0000655	0.0006738	0.0035	4.33		91624.41	91624.41	11.85		Si
SLV 16	1.41	11752.22	-27473	-0.0000475	0.0006738	0.0035	4.33		56551.59	56551.59	4.81		Si
SLV 6	-1.56	30610.25	-73307	-0.0001328	0.0006738	0.0035	4.33		128786.59	128786.59	4.21		Si
SLV 6	1.41	-6156.71	-34585	-0.0000469	0.0006738	0.0035	4.33		78077.06	78077.06	12.68		Si
SLV 14	-1.56	16995.22	-48820	-0.0000803	0.0006738	0.0035	4.33		91741.38	91741.38	5.4		Si
SLV 14	1.41	7599.93	-27151	-0.0000408	0.0006738	0.0035	4.33		55955.6	55955.6	7.36		Si
SLD 9	-1.56	22164.38	-65495	-0.0001088	0.0006738	0.0035	4.33		118078.29	118078.29	5.33		Si
SLD 9	1.41	424.88	-32550	-0.0000358	0.0006738	0.0035	4.33		65771.69	65771.69	154.8		Si
SLD 10	-1.56	21573.09	-65330	-0.0001076	0.0006738	0.0035	4.33		117818.51	117818.51	5.46		Si
SLD 10	1.41	539.32	-32408	-0.0000358	0.0006738	0.0035	4.33		65517.1	65517.1	121.48		Si
SLV 10	-1.56	29479.63	-62091	-0.0001167	0.0006738	0.0035	4.33		112703.05	112703.05	3.82		Si
SLV 10	1.41	-2075.63	-31021	-0.0000366	0.0006738	0.0035	4.33		71813.56	71813.56	34.6		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.56	22323.52	-97885	-71189	-9548	4.33	4.33	-54803	10833	14073	95155	46683	22083	68766	No	7.2	Si
SLU 78	1.41	3599.46	-49073	-35690	-8649	4.33	4.33	-27475	10833	14073	95155	46683	22083	68766	No	7.95	Si
SLU 79	-1.56	22294.31	-97292	-70758	-9369	4.33	4.33	-54471	10833	14073	95155	46683	22083	68766	No	7.34	Si
SLU 79	1.41	3542.52	-48711	-35426	-8478	4.33	4.33	-27272	10833	14073	95155	46683	22083	68766	No	8.11	Si
SLU 75	-1.56	22068.57	-96837	-70427	-9443	4.33	4.33	-54216	10833	14073	95155	46683	22083	68766	No	7.28	Si
SLU 75	1.41	3516.38	-48422	-35216	-8558	4.33	4.33	-27110	10833	14073	95155	46683	22083	68766	No	8.04	Si
SLU 77	-1.56	22445.31	-97896	-71197	-9396	4.33	4.33	-54809	10833	14073	95155	46683	22083	68766	No	7.32	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.41	3548.65	-49079	-35694	-8496	4.33	4.33	-27478	10833	14073	95155	46683	22083	68766	No	8.09	Si
SLU 80	-1.56	22172.52	-97281	-70750	-9521	4.33	4.33	-54465	10833	14073	95155	46683	22083	68766	No	7.22	Si
SLU 80	1.41	3593.34	-48705	-35422	-8630	4.33	4.33	-27269	10833	14073	95155	46683	22083	68766	No	7.97	Si
SLU 83	-1.56	22953.31	-99603	-72438	-9364	4.33	4.33	-55765	10833	14073	95155	46683	22083	68766	No	7.34	Si
SLU 83	1.41	3389.39	-49853	-36256	-8454	4.33	4.33	-27911	10833	14073	95155	46683	22083	68766	No	8.13	Si
SLU 73	-1.56	21581.44	-95178	-69221	-9412	4.33	4.33	-53288	10833	14073	95155	46683	22083	68766	No	7.31	Si
SLU 73	1.41	3461.04	-47398	-34472	-8551	4.33	4.33	-26537	10833	14073	95155	46683	22083	68766	No	8.04	Si
SLU 76	-1.56	21836.38	-96226	-69983	-9517	4.33	4.33	-53874	10833	14073	95155	46683	22083	68766	No	7.23	Si
SLU 76	1.41	3544.13	-48050	-34945	-8641	4.33	4.33	-26902	10833	14073	95155	46683	22083	68766	No	7.96	Si
SLU 84	-1.56	22831.52	-99592	-72431	-9516	4.33	4.33	-55759	10833	14073	95155	46683	22083	68766	No	7.23	Si
SLU 84	1.41	3440.21	-49847	-36252	-8606	4.33	4.33	-27908	10833	14073	95155	46683	22083	68766	No	7.99	Si
SLU 82	-1.56	22576.57	-98544	-71669	-9411	4.33	4.33	-55172	10833	14073	95155	46683	22083	68766	No	7.31	Si
SLU 82	1.41	3357.12	-49195	-35778	-8516	4.33	4.33	-27543	10833	14073	95155	46683	22083	68766	No	8.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	-1.56	1093.34	-73436	-53408	-25763	4.33	4.33	-41115	16250	21109	95155	70024	22083	92107		3.58	Si
SLV 7	1.41	7422.68	-35981	-26168	-24894	4.33	4.33	-20145	16250	21109	95155	70024	22083	92107		3.7	Si
SLD 8	-1.56	8408.59	-70033	-50933	-15843	4.33	4.33	-39209	16250	21109	95155	70024	22083	92107		5.81	Si
SLD 8	1.41	4922.17	-34452	-25056	-15130	4.33	4.33	-19289	16250	21109	95155	70024	22083	92107		6.09	Si
SLD 12	-1.56	7924.4	-65241	-47448	-15712	4.33	4.33	-36527	16250	21109	95155	70024	22083	92107		5.86	Si
SLD 12	1.41	6660.35	-32929	-23948	-15107	4.33	4.33	-18436	16187	21027	95155	70024	22083	92107		6.1	Si
SLD 11	-1.56	8515.69	-65406	-47568	-15096	4.33	4.33	-36619	16250	21109	95155	70024	22083	92107		6.1	Si
SLD 11	1.41	6545.91	-33071	-24052	-14488	4.33	4.33	-18516	16203	21048	95155	70024	22083	92107		6.36	Si
SLV 11	-1.56	-37.28	-62220	-45251	-25455	4.33	4.33	-34835	16250	21109	95155	70024	22083	92107		3.62	Si
SLV 11	1.41	11503.77	-32417	-23576	-24835	4.33	4.33	-18149	16130	20953	95155	70024	22083	92107		3.71	Si
SLV 9	-1.56	30831.25	-62467	-45431	13404	4.33	4.33	-34974	16250	21109	95155	70024	22083	92107		6.87	Si
SLV 9	1.41	-2337.21	-31346	-22797	13756	4.33	4.33	-17550	16010	20797	95155	70024	22083	92107		6.7	Si
SLV 4	-1.56	11503.37	-86130	-62640	-14305	4.33	4.33	-48222	16250	21109	95155	70024	22083	92107		6.44	Si
SLV 4	1.41	-1851.4	-39352	-28620	-13250	4.33	4.33	-22032	16250	21109	95155	70024	22083	92107		6.95	Si
SLV 8	-1.56	-258.29	-73060	-53134	-27170	4.33	4.33	-40904	16250	21109	95155	70024	22083	92107		3.39	Si
SLV 8	1.41	7684.27	-35656	-25932	-26309	4.33	4.33	-19963	16250	21109	95155	70024	22083	92107		3.5	Si
SLV 12	-1.56	-1388.9	-61844	-44978	-26862	4.33	4.33	-34625	16250	21109	95155	70024	22083	92107		3.43	Si
SLV 12	1.41	11765.36	-32092	-23340	-26250	4.33	4.33	-17968	16094	20905	95155	70024	22083	92107		3.51	Si
SLD 7	-1.56	8999.88	-70197	-51052	-15228	4.33	4.33	-39301	16250	21109	95155	70024	22083	92107		6.05	Si
SLD 7	1.41	4807.74	-34594	-25159	-14511	4.33	4.33	-19368	16250	21109	95155	70024	22083	92107		6.35	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-36610	0.24	209.96	4647.09	6487.38	5567.24	26.52	Si
SLV 14	-36623	0.24	209.96	4648.47	6489.44	5568.95	26.52	Si
SLV 15	-37190	0.24	209.96	4707.11	6577.54	5642.33	26.87	Si
SLV 13	-37203	0.24	209.96	4708.48	6579.6	5644.04	26.88	Si
SLV 12	-45908	0.24	209.96	5558.4	7922.25	6740.33	32.1	Si
SLV 10	-45952	0.24	209.96	5562.47	7929	6745.74	32.13	Si
SLV 11	-46286	0.24	209.96	5593.13	7980.08	6786.6	32.32	Si
SLV 9	-46330	0.24	209.96	5597.17	7986.83	6792	32.35	Si
SLV 8	-53805	0.24	209.96	6246.79	9131.53	7689.16	36.62	Si
SLV 6	-53849	0.24	209.96	6250.42	9138.29	7694.36	36.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-35981	-73436	554	0.657	4206.9	0.961	9.93716	5.39576	Si
SLV 8	-35656	-73060	551	0.662	4173.8	0.961	10.01729	5.39576	Si
SLV 5	-34910	-73683	487	0.676	4097.9	0.96	10.2295	5.39576	Si
SLV 6	-34585	-73307	484	0.681	4064.9	0.96	10.31452	5.39576	Si
SLV 11	-32417	-62220	427	0.721	3844.4	0.958	10.93914	5.39576	Si
SLV 12	-32092	-61844	424	0.727	3811.4	0.958	11.037	5.39576	Si
SLV 9	-31346	-62467	360	0.744	3735.5	0.957	11.29424	5.39576	Si
SLV 10	-31021	-62091	357	0.75	3702.5	0.957	11.3987	5.39576	Si
SLV 3	-39851	-86707	680	0.6	4600.6	0.964	9.04526	3.34272	Si
SLV 1	-39530	-86781	660	0.605	4567.9	0.964	9.11642	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.276	SLU 83	Si
V_SLU	7.202	SLU 78	Si
PF_SLV	3.675	SLV 9	Si
V_SLV	3.39	SLV 8	Si
PFFP_SLV	26.516	SLV 16	Si
R_SLV	1.842	SLV 7	Si

Maschio 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.576	-17.768	6.576	L2	L4	1.925	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	0.44	2790.17	-17773	-0.0000488	0.0003743	0.0035	1.925	13658.9	14509.91	14509.91	5.2	No	Si
SLU 47	0.84	-349.8	-16871	-0.0000326	0.0003743	0.0035	1.925	13131.77	14916.34	14916.34	42.64	No	Si
SLU 50	0.44	2681.72	-17873	-0.0000483	0.0003743	0.0035	1.925	13716.65	14584.81	14584.81	5.44	No	Si
SLU 50	0.84	-562.17	-16971	-0.0000341	0.0003743	0.0035	1.925	13191.5	14983.12	14983.12	26.65	No	Si
SLU 5	0.44	2248.99	-14395	-0.000039	0.0003743	0.0035	1.925	11593.68	12038.4	12038.4	5.35	No	Si
SLU 5	0.84	-247.56	-13701	-0.0000261	0.0003743	0.0035	1.925	11138.62	12644.99	12644.99	51.08	No	Si
SLU 51	0.44	2771.44	-17920	-0.000049	0.0003743	0.0035	1.925	13743.18	14619.34	14619.34	5.28	No	Si
SLU 51	0.84	-433.1	-17018	-0.0000334	0.0003743	0.0035	1.925	13218.95	15013.91	15013.91	34.67	No	Si
SLU 2	0.44	2207.91	-14217	-0.0000384	0.0003743	0.0035	1.925	11477.93	11910.37	11910.37	5.39	No	Si
SLU 2	0.84	-250.3	-13523	-0.0000257	0.0003743	0.0035	1.925	11020.17	12512.29	12512.29	49.99	No	Si
SLU 65	0.44	2971.73	-20115	-0.0000546	0.0003743	0.0035	1.925	14945.09	16149.16	16149.16	5.43	No	Si
SLU 65	0.84	-461.57	-19213	-0.0000378	0.0003743	0.0035	1.925	14464.07	16484.59	16484.59	35.71	No	Si
SLU 68	0.44	3012.8	-20293	-0.0000552	0.0003743	0.0035	1.925	15037.92	16246.16	16246.16	5.39	No	Si
SLU 68	0.84	-458.82	-19391	-0.0000381	0.0003743	0.0035	1.925	14560.42	16598.39	16598.39	36.18	No	Si
SLU 49	0.44	2787.52	-18174	-0.0000496	0.0003743	0.0035	1.925	13887.8	14808.95	14808.95	5.31	No	Si
SLU 49	0.84	-445.12	-17272	-0.000034	0.0003743	0.0035	1.925	13368.57	15183.1	15183.1	34.11	No	Si
SLU 44	0.44	2749.09	-17595	-0.0000482	0.0003743	0.0035	1.925	13556.27	14377.67	14377.67	5.23	No	Si
SLU 44	0.84	-352.54	-16693	-0.0000323	0.0003743	0.0035	1.925	13025.63	14795.1	14795.1	41.97	No	Si
SLU 46	0.44	2746.45	-17996	-0.000049	0.0003743	0.0035	1.925	13786.73	14676.19	14676.19	5.34	No	Si
SLU 46	0.84	-447.86	-17094	-0.0000336	0.0003743	0.0035	1.925	13263.99	15064.62	15064.62	33.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	0.44	3847.85	-8638	-0.0000381	0.0005615	0.0035	1.925		8059.09	8059.09	2.09		Si
SLD 16	0.84	367.67	-8024	-0.0000161	0.0005615	0.0035	1.925		7527.09	7527.09	20.47		Si
SLV 14	0.44	5863.63	3093	0.3368695	0.0005615	0.0035	1.54		0	0	0		No
SLV 14	0.84	1325.6	3918	0.4874242	0.0005615	0.0035	1.54		0	0	0		No
SLV 13	0.44	5470.37	1760	0.1384259	0.0005615	0.0035	1.54		0	0	0		No
SLV 13	0.84	1136.23	2585	0.320126	0.0005615	0.0035	1.54		0	0	0		No
SLV 16	0.44	6084.13	700	-0.047763	0.0005615	0.0035	1.925		0	0	0		No
SLV 16	0.84	1568.52	1209	0.1414246	0.0005615	0.0035	1.54		0	0	0		No
SLD 13	0.44	3580.42	-8166	-0.0000355	0.0005615	0.0035	1.925		7649.58	7649.58	2.14		Si
SLD 13	0.84	179.16	-7415	-0.000014	0.0005615	0.0035	1.925		6994.42	6994.42	39.04		Si
SLV 9	0.44	2761	-6996	-0.0000279	0.0005615	0.0035	1.925		6624.26	6624.26	2.4		Si
SLV 9	0.84	-433.35	-5784	-0.0000125	0.0005615	0.0035	1.925		6384.72	6384.72	14.73		Si
SLV 10	0.44	3017.25	-6127	-0.0000296	0.0005615	0.0035	1.925		5856	5856	1.94		Si
SLV 10	0.84	-309.96	-4916	-0.0000103	0.0005615	0.0035	1.925		5606.24	5606.24	18.09		Si
SLV 15	0.44	5690.86	-633	-0.0381155	0.0005615	0.0035	1.925		796.74	796.74	0.14		No
SLV 15	0.84	1379.15	-124	-0.0090728	0.0005615	0.0035	1.925		312.74	312.74	0.23		No
SLD 15	0.44	3678.94	-9211	-0.0000373	0.0005615	0.0035	1.925		8555.2	8555.2	2.33		Si
SLD 15	0.84	286.34	-8597	-0.0000167	0.0005615	0.0035	1.925		8023.44	8023.44	28.02		Si
SLD 14	0.44	3749.33	-7593	-0.000037	0.0005615	0.0035	1.925		7151.43	7151.43	1.91		Si
SLD 14	0.84	260.5	-6843	-0.0000134	0.0005615	0.0035	1.925		6489.21	6489.21	24.91		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	0.44	3093.96	-23732	-21096	9918	1.925	1.925	-24353	10191	8828	33304	25939	4909	30848	No	3.11	Si
SLU 81	0.84	-854.53	-22831	-20294	9918	1.925	1.925	-23427	10068	8721	33304	25939	4909	30848	No	3.11	Si
SLU 84	0.44	3224.76	-23957	-21295	9916	1.925	1.925	-24583	10222	8855	33304	25939	4909	30848	No	3.11	Si
SLU 84	0.84	-722.72	-23055	-20493	9916	1.925	1.925	-23657	10099	8748	33304	25939	4909	30848	No	3.11	Si
SLU 80	0.44	3184.31	-23027	-20468	9674	1.925	1.925	-23628	10095	8745	33304	25939	4909	30848	No	3.19	Si
SLU 80	0.84	-666.62	-22125	-19666	9674	1.925	1.925	-22703	9971	8638	33304	25939	4909	30848	No	3.19	Si
SLU 77	0.44	3110.68	-23234	-20653	9843	1.925	1.925	-23842	10123	8769	33304	25939	4909	30848	No	3.13	Si
SLU 77	0.84	-807.71	-22333	-19851	9843	1.925	1.925	-22916	10000	8662	33304	25939	4909	30848	No	3.13	Si
SLU 79	0.44	3094.59	-22980	-20427	9773	1.925	1.925	-23581	10089	8739	33304	25939	4909	30848	No	3.16	Si
SLU 79	0.84	-795.69	-22078	-19625	9773	1.925	1.925	-22655	9965	8632	33304	25939	4909	30848	No	3.16	Si
SLU 83	0.44	3135.04	-23911	-21254	10014	1.925	1.925	-24535	10216	8849	33304	25939	4909	30848	No	3.08	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.84	-851.79	-23009	-20452	10014	1.925	1.925	-23610	10092	8743	33304	25939	4909	30848	No	3.08	Si
SLU 74	0.44	3069.6	-23056	-20495	9747	1.925	1.925	-23659	10099	8748	33304	25939	4909	30848	No	3.16	Si
SLU 74	0.84	-810.45	-22155	-19693	9747	1.925	1.925	-22734	9976	8641	33304	25939	4909	30848	No	3.16	Si
SLU 82	0.44	3183.68	-23779	-21137	9820	1.925	1.925	-24400	10198	8834	33304	25939	4909	30848	No	3.14	Si
SLU 82	0.84	-725.46	-22877	-20335	9820	1.925	1.925	-23475	10074	8727	33304	25939	4909	30848	No	3.14	Si
SLU 75	0.44	3159.32	-23103	-20536	9649	1.925	1.925	-23707	10105	8754	33304	25939	4909	30848	No	3.2	Si
SLU 75	0.84	-681.39	-22201	-19734	9649	1.925	1.925	-22781	9982	8647	33304	25939	4909	30848	No	3.2	Si
SLU 78	0.44	3200.4	-23281	-20694	9745	1.925	1.925	-23889	10130	8775	33304	25939	4909	30848	No	3.17	Si
SLU 78	0.84	-678.64	-22379	-19892	9745	1.925	1.925	-22964	10006	8668	33304	25939	4909	30848	No	3.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	0.44	5863.63	3093	2749	12549	1.54	0	0	0	0	33304	31127	3927	33304		2.65	Si
SLV 14	0.84	1325.6	3918	3482	11726	1.54	1.8724	0	0	0	33304	31127	3927	33304		2.84	Si
SLV 15	0.44	5690.86	-633	-562	11046	1.925	0	0	0	0	33304	38909	4909	33304		3.02	Si
SLV 15	0.84	1379.15	-124	-110	10700	1.925	0	0	4374	0	33304	38909	4909	33304		3.11	Si
SLV 10	0.44	3017.25	-6127	-5447	10127	1.925	1.4103	-6288	11674	7409	33304	38909	4909	40713		4.02	Si
SLV 10	0.84	-309.96	-4916	-4370	9156	1.925	1.925	-5044	11426	9897	33304	38909	4909	43202		4.72	Si
SLV 13	0.44	5470.37	1760	1565	12040	1.54	0	0	0	0	33304	31127	3927	33304		2.77	Si
SLV 13	0.84	1136.23	2585	2298	11216	1.54	1.5688	0	0	0	33304	31127	3927	33304		2.97	Si
SLD 14	0.44	3749.33	-7593	-6750	9265	1.925	1.4062	-7792	11975	7578	33304	38909	4909	40882		4.41	Si
SLD 14	0.84	260.5	-6843	-6083	8909	1.925	1.925	-7022	11821	10240	33304	38909	4909	43544		4.89	Si
SLV 16	0.44	6084.13	700	622	11556	1.925	0	0	10398	0	33304	38909	4909	33304		2.88	Si
SLV 16	0.84	1568.52	1209	1075	11210	1.54	0	0	0	0	33304	31127	3927	33304		2.97	Si
SLD 13	0.44	3580.42	-8166	-7258	9046	1.925	1.5721	-8379	12092	8555	33304	38909	4909	41859		4.63	Si
SLD 13	0.84	179.16	-7415	-6591	8690	1.925	1.925	-7609	11938	10342	33304	38909	4909	43646		5.02	Si
SLD 15	0.44	3678.94	-9211	-8187	8616	1.925	1.6892	-9451	12307	9355	33304	38909	4909	42659		4.95	Si
SLD 15	0.84	286.34	-8597	-7642	8468	1.925	1.925	-8822	12181	10552	33304	38909	4909	43818		5.17	Si
SLD 16	0.44	3847.85	-8638	-7678	8835	1.925	1.5511	-8864	12189	8508	33304	38909	4909	41813		4.73	Si
SLD 16	0.84	367.67	-8024	-7133	8687	1.925	1.925	-8234	12063	10450	33304	38909	4909	43754		5.04	Si
SLV 9	0.44	2761	-6996	-6219	9795	1.925	1.7035	-7179	11852	9086	33304	38909	4909	42390		4.33	Si
SLV 9	0.84	-433.35	-5784	-5142	8824	1.925	1.925	-5935	11604	10052	33304	38909	4909	43356		4.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	0	6618	140.01	0	0	No, Trazione
SLV 16	179667	0.24	0	5017	140.01	0	0	No, Trazione
SLV 13	179667	0.24	0	5189	140.01	0	0	No, Trazione
SLV 15	179667	0.24	0	3588	140.01	0	0	No, Trazione
SLV 10	179667	0.24	4517	-3913	140.01	854.3	6.1	Si
SLV 9	179667	0.24	5592	-4844	140.01	1049.94	7.5	Si
SLV 12	179667	0.24	10679	-9251	140.01	1935.88	13.83	Si
SLV 11	179667	0.24	11754	-10182	140.01	2114.62	15.1	Si
SLV 6	179667	0.24	16539	-14327	140.01	2874.45	20.53	Si
SLV 5	179667	0.24	17614	-15258	140.01	3037.11	21.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-24777	-17232	-152	0.476	2885.1	0.962	7.18404	4.02955	Si
SLV 8	-24022	-16270	-200	0.485	2808.2	0.961	7.33707	4.02955	Si
SLV 3	-31379	-29203	1290	0.364	3557	0.969	5.45323	2.9746	Si
SLV 1	-27969	-28623	2086	0.37	3209.8	0.966	5.56307	2.9746	Si
SLV 4	-30219	-27728	1216	0.376	3438.9	0.968	5.6468	2.9746	Si
SLV 2	-26809	-27148	2012	0.384	3091.7	0.965	5.78439	2.9746	Si
SLV 5	-13408	-15297	2501	0.616	1730.2	0.941	9.50751	4.02955	Si
SLV 11	-15881	-6611	-581	0.648	1980.9	0.947	9.93611	4.02955	Si
SLV 6	-12652	-14336	2453	0.646	1653.6	0.939	10.00233	4.02955	Si
SLV 12	-15125	-5649	-629	0.67	1904.2	0.946	10.29408	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.2	SLU 47	Si
V_SLU	3.08	SLU 83	Si
PF_SLV	0	SLV 13	No
V_SLV	2.654	SLV 14	Si
PFFP_SLV	0	SLV 16	No
R_SLV	1.783	SLV 7	Si

Maschio 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.053	-4.784	-17.053	-3.284	L2	L4	1.5	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.56	10685.55	-13619	-0.0005999	0.0003743	0.0035	1.5	0	17186.55	17186.55	1.61	No	Si
SLU 82	1.41	-2262.95	-7795	-0.0000393	0.0003743	0.0035	1.5	5183.36	14947.47	14947.47	6.61	No	Si
SLU 78	-1.56	10598.43	-13485	-0.0005917	0.0003743	0.0035	1.5	0	17139.97	17139.97	1.62	No	Si
SLU 78	1.41	-2319.19	-7796	-0.00004	0.0003743	0.0035	1.5	5183.97	14947.94	14947.94	6.45	No	Si
SLU 83	-1.56	10788.88	-13766	-0.0006108	0.0003743	0.0035	1.5	0	17236.58	17236.58	1.6	No	Si
SLU 83	1.41	-2287.78	-7905	-0.0000398	0.0003743	0.0035	1.5	5246.69	14995.46	14995.46	6.55	No	Si
SLU 84	-1.56	10796.7	-13763	-0.0006129	0.0003743	0.0035	1.5	0	17235.66	17235.66	1.6	No	Si
SLU 84	1.41	-2295.62	-7906	-0.0000399	0.0003743	0.0035	1.5	5247.52	14996.08	14996.08	6.53	No	Si
SLU 75	-1.56	10487.28	-13341	-0.0005791	0.0003743	0.0035	1.5	0	17089.4	17089.4	1.63	No	Si
SLU 75	1.41	-2286.52	-7686	-0.0000394	0.0003743	0.0035	1.5	5119.53	14898.27	14898.27	6.52	No	Si
SLU 77	-1.56	10590.61	-13488	-0.0005896	0.0003743	0.0035	1.5	0	17140.91	17140.91	1.62	No	Si
SLU 77	1.41	-2311.35	-7795	-0.0000399	0.0003743	0.0035	1.5	5183.13	14947.29	14947.29	6.47	No	Si
SLU 79	-1.56	10532.11	-13408	-0.0005834	0.0003743	0.0035	1.5	0	17112.92	17112.92	1.62	No	Si
SLU 79	1.41	-2310.51	-7753	-0.0000398	0.0003743	0.0035	1.5	5158.82	14928.56	14928.56	6.46	No	Si
SLU 81	-1.56	10677.72	-13622	-0.0005978	0.0003743	0.0035	1.5	0	17187.47	17187.47	1.61	No	Si
SLU 81	1.41	-2255.11	-7794	-0.0000392	0.0003743	0.0035	1.5	5182.52	14946.82	14946.82	6.63	No	Si
SLU 80	-1.56	10539.93	-13405	-0.0005854	0.0003743	0.0035	1.5	0	17111.98	17111.98	1.62	No	Si
SLU 80	1.41	-2318.35	-7755	-0.0000399	0.0003743	0.0035	1.5	5159.66	14929.21	14929.21	6.44	No	Si
SLU 74	-1.56	10479.46	-13343	-0.0005771	0.0003743	0.0035	1.5	0	17090.34	17090.34	1.63	No	Si
SLU 74	1.41	-2278.68	-7684	-0.0000393	0.0003743	0.0035	1.5	5118.69	14897.62	14897.62	6.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	-1.56	8551.83	-12135	-0.0002845	0.0005615	0.0035	1.5		18641.54	18641.54	2.18		Si
SLV 1	1.41	-2410.06	-5858	-0.0000392	0.0005615	0.0035	1.5		15482.56	15482.56	6.42		Si
SLV 12	-1.56	7949.24	-8190	-0.0004295	0.0005615	0.0035	1.5		16780.39	16780.39	2.11		Si
SLV 12	1.41	-2406.63	-6301	-0.0000389	0.0005615	0.0035	1.5		15755.96	15755.96	6.55		Si
SLV 4	-1.56	9396.69	-11988	-0.0003864	0.0005615	0.0035	1.5		18577.32	18577.32	1.98		Si
SLV 4	1.41	-3215.96	-6559	-0.0000572	0.0005615	0.0035	1.5		15912.63	15912.63	4.95		Si
SLV 8	-1.56	8921	-9846	-0.0004535	0.0005615	0.0035	1.5		17602.98	17602.98	1.97		Si
SLV 8	1.41	-3064.46	-6806	-0.0000516	0.0005615	0.0035	1.5		16054.13	16054.13	5.24		Si
SLV 3	-1.56	9152.34	-11960	-0.0003586	0.0005615	0.0035	1.5		18564.81	18564.81	2.03		Si
SLV 3	1.41	-2974.14	-6572	-0.0000501	0.0005615	0.0035	1.5		15920.74	15920.74	5.35		Si
SLD 8	-1.56	8029.49	-9530	-0.0003571	0.0005615	0.0035	1.5		17452.54	17452.54	2.17		Si
SLD 8	1.41	-2276.65	-5941	-0.0000368	0.0005615	0.0035	1.5		15534.48	15534.48	6.82		Si
SLD 4	-1.56	8228.93	-10449	-0.0003303	0.0005615	0.0035	1.5		17884.44	17884.44	2.17		Si
SLD 4	1.41	-2353.84	-5862	-0.0000382	0.0005615	0.0035	1.5		15485.18	15485.18	6.58		Si
SLV 11	-1.56	7790.03	-8171	-0.0004094	0.0005615	0.0035	1.5		16770.79	16770.79	2.15		Si
SLV 11	1.41	-2249.07	-6309	-0.0000365	0.0005615	0.0035	1.5		15761.31	15761.31	7.01		Si
SLV 7	-1.56	8761.78	-9828	-0.000433	0.0005615	0.0035	1.5		17594.2	17594.2	2.01		Si
SLV 7	1.41	-2906.89	-6814	-0.000048	0.0005615	0.0035	1.5		16058.99	16058.99	5.52		Si
SLV 2	-1.56	8796.18	-12163	-0.0003086	0.0005615	0.0035	1.5		18653.98	18653.98	2.12		Si
SLV 2	1.41	-2651.89	-5845	-0.0000446	0.0005615	0.0035	1.5		15474.14	15474.14	5.84		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-1.56	10788.88	-13766	-12237	9206	1.5	0	-75514	10833	0	11894	20213	3825	11894	No	1.29	Si
SLU 83	1.41	-2287.78	-7905	-7027	8673	1.5	1.3818	-11386	8463	5262	11894	20213	3825	17156	No	1.98	Si
SLU 78	-1.56	10598.43	-13485	-11987	9086	1.5	0	-74551	10833	0	11894	20213	3825	11894	No	1.31	Si
SLU 78	1.41	-2319.19	-7796	-6930	8556	1.5	1.3576	-11424	8468	5173	11894	20213	3825	17068	No	1.99	Si
SLU 82	-1.56	10685.55	-13619	-12106	9145	1.5	0	-74991	10833	0	11894	20213	3825	11894	No	1.3	Si
SLU 82	1.41	-2262.95	-7795	-6929	8622	1.5	1.3791	-11248	8444	5241	11894	20213	3825	17135	No	1.99	Si
SLU 80	-1.56	10539.93	-13405	-11916	9048	1.5	0	-74248	10833	0	11894	20213	3825	11894	No	1.31	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.41	-2318.35	-7755	-6893	8524	1.5	1.3531	-11399	8465	5154	11894	20213	3825	17048	No	2	Si
SLU 84	-1.56	10796.7	-13763	-12234	9235	1.5	0	-75560	10833	0	11894	20213	3825	11894	No	1.29	Si
SLU 84	1.41	-2295.62	-7906	-7028	8702	1.5	1.3789	-11411	8466	5253	11894	20213	3825	17148	No	1.97	Si
SLU 77	-1.56	10590.61	-13488	-11989	9057	1.5	0	-74503	10833	0	11894	20213	3825	11894	No	1.31	Si
SLU 77	1.41	-2311.35	-7795	-6929	8527	1.5	1.3604	-11398	8464	5182	11894	20213	3825	17076	No	2	Si
SLU 76	-1.56	10433.99	-13259	-11786	8978	1.5	0	-73693	10833	0	11894	20213	3825	11894	No	1.32	Si
SLU 76	1.41	-2290.91	-7645	-6795	8463	1.5	1.351	-11253	8445	5134	11894	20213	3825	17028	No	2.01	Si
SLU 75	-1.56	10487.28	-13341	-11858	8996	1.5	0	-73968	10833	0	11894	20213	3825	11894	No	1.32	Si
SLU 75	1.41	-2286.52	-7686	-6832	8476	1.5	1.3575	-11261	8446	5159	11894	20213	3825	17054	No	2.01	Si
SLU 81	-1.56	10677.72	-13622	-12108	9117	1.5	0	-74944	10833	0	11894	20213	3825	11894	No	1.3	Si
SLU 81	1.41	-2255.11	-7794	-6928	8593	1.5	1.382	-11223	8441	5249	11894	20213	3825	17144	No	2	Si
SLU 79	-1.56	10532.11	-13408	-11918	9020	1.5	0	-74199	10833	0	11894	20213	3825	11894	No	1.32	Si
SLU 79	1.41	-2310.51	-7753	-6892	8495	1.5	1.356	-11373	8461	5163	11894	20213	3825	17057	No	2.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	-1.56	8029.49	-9530	-8471	8629	1.5	0	-62167	16250	0	11894	30319	3825	11894		1.38	Si
SLD 8	1.41	-2276.65	-5941	-5281	7743	1.5	1.1004	-10679	12556	6218	11894	30319	3825	18112		2.34	Si
SLD 2	-1.56	7969.5	-10526	-9356	8948	1.5	0	-59095	16250	0	11894	30319	3825	11894		1.33	Si
SLD 2	1.41	-2123.09	-5581	-4961	9018	1.5	1.1088	-9955	12410	6192	11894	30319	3825	18086		2.01	Si
SLV 8	-1.56	8921	-9846	-8752	11570	1.5	0	-69471	16250	0	11894	30319	3825	11894		1.03	Si
SLV 8	1.41	-3064.46	-6806	-6049	10023	1.5	0.8991	-14833	13397	5421	11894	30319	3825	17315		1.73	Si
SLV 2	-1.56	8796.18	-12163	-10812	12361	1.5	0.0805	-63206	16250	589	11894	30319	3825	12483		1.01	Si
SLV 2	1.41	-2651.89	-5845	-5195	13069	1.5	0.8888	-12862	13001	5200	11894	30319	3825	17095		1.31	Si
SLV 3	-1.56	9152.34	-11960	-10631	13112	1.5	0	-67843	16250	0	11894	30319	3825	11894		0.91	No
SLV 3	1.41	-2974.14	-6572	-5842	12975	1.5	0.8925	-14420	13315	5347	11894	30319	3825	17242		1.33	Si
SLD 4	-1.56	8228.93	-10449	-9288	9708	1.5	0	-62136	16250	0	11894	30319	3825	11894		1.23	Si
SLD 4	1.41	-2353.84	-5862	-5211	9417	1.5	1.0455	-11073	12636	5945	11894	30319	3825	17839		1.89	Si
SLV 1	-1.56	8551.83	-12135	-10787	11351	1.5	0.1358	-60389	16250	993	11894	30319	3825	12888		1.14	Si
SLV 1	1.41	-2410.06	-5858	-5207	12045	1.5	1.0158	-11375	12697	5804	11894	30319	3825	17698		1.47	Si
SLD 3	-1.56	8123.98	-10436	-9277	9274	1.5	0	-61055	16250	0	11894	30319	3825	11894		1.28	Si
SLD 3	1.41	-2249.97	-5868	-5216	8978	1.5	1.0997	-10553	12530	6201	11894	30319	3825	18095		2.02	Si
SLV 4	-1.56	9396.69	-11988	-10656	14122	1.5	0	-70319	16250	0	11894	30319	3825	11894		0.84	No
SLV 4	1.41	-3215.96	-6559	-5830	13999	1.5	0.7791	-16253	13694	4801	11894	30319	3825	16695		1.19	Si
SLV 7	-1.56	8761.78	-9828	-8736	10912	1.5	0	-68204	16250	0	11894	30319	3825	11894		1.09	Si
SLV 7	1.41	-2906.89	-6814	-6057	9356	1.5	0.9703	-13834	13192	5760	11894	30319	3825	17654		1.89	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.24	12030	-8120	109.1	1683.13	15.43	Si
SLV 14	179667	0.24	12059	-8140	109.1	1686.84	15.46	Si
SLV 15	179667	0.24	12168	-8213	109.1	1700.74	15.59	Si
SLV 16	179667	0.24	12197	-8233	109.1	1704.44	15.62	Si
SLV 9	179667	0.24	14415	-9730	109.1	1982.61	18.17	Si
SLV 10	179667	0.24	14434	-9743	109.1	1984.94	18.19	Si
SLV 11	179667	0.24	14874	-10040	109.1	2038.98	18.69	Si
SLV 12	179667	0.24	14893	-10053	109.1	2041.29	18.71	Si
SLV 5	179667	0.24	16592	-11200	109.1	2246.19	20.59	Si
SLV 6	179667	0.24	16611	-11213	109.1	2248.43	20.61	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-6814	-9828	-97	1.058	981.3	0.924	16.6481	4.02955	Si
SLV 8	-6806	-9846	-96	1.059	980.4	0.924	16.66643	4.02955	Si
SLV 11	-6309	-8171	13	1.129	930.6	0.92	17.83357	4.02955	Si
SLV 12	-6301	-8190	14	1.13	929.7	0.92	17.85095	4.02955	Si
SLV 3	-6572	-11960	-197	1.074	957	0.922	16.93314	2.9746	Si
SLV 4	-6559	-11988	-196	1.076	955.6	0.922	16.9626	2.9746	Si
SLV 5	-4433	-10412	-16	1.446	743.4	0.907	23.1723	4.02955	Si
SLV 6	-4425	-10431	-15	1.448	742.5	0.907	23.20732	4.02955	Si
SLV 9	-3928	-8756	94	1.553	693.5	0.903	25.00371	4.02955	Si
SLV 10	-3920	-8774	95	1.555	692.6	0.903	25.03968	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.596	SLU 84	Si
V_SLU	1.288	SLU 84	Si
PF_SLV	1.973	SLV 8	Si
V_SLV	0.842	SLV 4	No
PFFP_SLV	15.427	SLV 13	Si
R_SLV	4.132	SLV 7	Si

Maschio 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-17.053	-4.784	L2	L4	3.29	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-1.56	-5370.92	-18630	-0.0000299	0.0003743	0.0035	3.29	26859.06	30611.45	30611.45	5.7	No	Si
SLU 74	1.41	-11144.01	-23868	-0.0000473	0.0003743	0.0035	3.29	33046.12	37427.79	37427.79	3.36	No	Si
SLU 78	-1.56	-5422.9	-18830	-0.0000302	0.0003743	0.0035	3.29	27105.68	30882.81	30882.81	5.69	No	Si
SLU 78	1.41	-11360.33	-24242	-0.0000481	0.0003743	0.0035	3.29	33464.33	37895.13	37895.13	3.34	No	Si
SLU 80	-1.56	-5401.12	-18715	-0.0000301	0.0003743	0.0035	3.29	26964.16	30726.92	30726.92	5.69	No	Si
SLU 80	1.41	-11209.74	-24093	-0.0000477	0.0003743	0.0035	3.29	33298.2	37709.62	37709.62	3.36	No	Si
SLU 42	-1.56	-4528.76	-16015	-0.0000254	0.0003743	0.0035	3.29	23545.45	27085.59	27085.59	5.98	No	Si
SLU 42	1.41	-9995.32	-20919	-0.0000416	0.0003743	0.0035	3.29	29635.42	33640.07	33640.07	3.37	No	Si
SLU 82	-1.56	-5420.32	-18961	-0.0000304	0.0003743	0.0035	3.29	27266.82	31060.88	31060.88	5.73	No	Si
SLU 82	1.41	-11427.61	-24382	-0.0000484	0.0003743	0.0035	3.29	33620.78	38069.67	38069.67	3.33	No	Si
SLU 84	-1.56	-5475.87	-19176	-0.0000307	0.0003743	0.0035	3.29	27531.21	31353.79	31353.79	5.73	No	Si
SLU 84	1.41	-11612.6	-24728	-0.0000492	0.0003743	0.0035	3.29	34003.77	38493.63	38493.63	3.31	No	Si
SLU 75	-1.56	-5367.35	-18615	-0.0000299	0.0003743	0.0035	3.29	26839.67	30590.17	30590.17	5.7	No	Si
SLU 75	1.41	-11175.35	-23896	-0.0000474	0.0003743	0.0035	3.29	33077.68	37463.09	37463.09	3.35	No	Si
SLU 77	-1.56	-5426.47	-18846	-0.0000302	0.0003743	0.0035	3.29	27124.99	30904.12	30904.12	5.7	No	Si
SLU 77	1.41	-11328.99	-24214	-0.000048	0.0003743	0.0035	3.29	33432.98	37860.14	37860.14	3.34	No	Si
SLU 83	-1.56	-5479.44	-19191	-0.0000307	0.0003743	0.0035	3.29	27550.41	31374.9	31374.9	5.73	No	Si
SLU 83	1.41	-11581.26	-24699	-0.0000491	0.0003743	0.0035	3.29	33972.72	38459.73	38459.73	3.32	No	Si
SLU 81	-1.56	-5423.88	-18976	-0.0000304	0.0003743	0.0035	3.29	27286.1	31082.21	31082.21	5.73	No	Si
SLU 81	1.41	-11396.27	-24354	-0.0000483	0.0003743	0.0035	3.29	33589.51	38034.8	38034.8	3.34	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	-1.56	-1857.02	-15640	-0.0000196	0.0005615	0.0035	3.29		27161.57	27161.57	14.63		Si
SLV 5	1.41	-9207.1	-12153	-0.0000311	0.0005615	0.0035	3.29		21940.83	21940.83	2.38		Si
SLV 14	-1.56	-9316.76	-11447	-0.0000313	0.0005615	0.0035	3.29		20889.27	20889.27	2.24		Si
SLV 14	1.41	-896.29	-13114	-0.0000152	0.0005615	0.0035	3.29		23374.87	23374.87	26.08		Si
SLV 1	-1.56	1867.89	-15739	-0.0000198	0.0005615	0.0035	3.29		24981.96	24981.96	13.37		Si
SLV 1	1.41	-13899.42	-16830	-0.0000472	0.0005615	0.0035	3.29		28858.72	28858.72	2.08		Si
SLV 15	-1.56	-9913.53	-10452	-0.0000341	0.0005615	0.0035	2.632		19410.52	19410.52	1.96		Si
SLV 15	1.41	-154.5	-15796	-0.0000166	0.0005615	0.0035	3.29		27383.98	27383.98	177.25		Si
SLV 6	-1.56	-1611.17	-15522	-0.0000191	0.0005615	0.0035	3.29		26992.44	26992.44	16.75		Si
SLV 6	1.41	-9695.69	-12273	-0.0000326	0.0005615	0.0035	3.29		22119.2	22119.2	2.28		Si
SLV 4	-1.56	2025.74	-14382	-0.0000186	0.0005615	0.0035	3.29		22984.58	22984.58	11.35		Si
SLV 4	1.41	-14657.34	-19880	-0.0000505	0.0005615	0.0035	3.29		33241.7	33241.7	2.27		Si
SLV 3	-1.56	1648.43	-14563	-0.0000181	0.0005615	0.0035	3.29		23250.34	23250.34	14.1		Si
SLV 3	1.41	-13907.48	-19696	-0.0000483	0.0005615	0.0035	3.29		32976.42	32976.42	2.37		Si
SLV 13	-1.56	-9694.07	-11627	-0.0000326	0.0005615	0.0035	3.29		21157.72	21157.72	2.18		Si
SLV 13	1.41	-146.43	-12930	-0.0000136	0.0005615	0.0035	3.29		23100.3	23100.3	157.76		Si
SLV 16	-1.56	-9536.22	-10271	-0.0000326	0.0005615	0.0035	2.632		19136.64	19136.64	2.01		Si
SLV 16	1.41	-904.35	-15980	-0.0000182	0.0005615	0.0035	3.29		27645.39	27645.39	30.57		Si
SLV 2	-1.56	2245.2	-15558	-0.0000203	0.0005615	0.0035	3.29		24718.04	24718.04	11.01		Si
SLV 2	1.41	-14649.27	-17014	-0.00005	0.0005615	0.0035	3.29		29121.15	29121.15	1.99		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-1.56	-5423.88	-18976	-16868	5276	3.29	3.29	-11393	8464	12530	33304	44333	8390	45835	No	8.69	Si
SLU 81	1.41	-11396.27	-24354	-21648	3902	3.29	3.29	-14622	8894	13168	33304	44333	8390	46472	No	11.91	Si
SLU 77	-1.56	-5426.47	-18846	-16752	5120	3.29	3.29	-11315	8453	12515	33304	44333	8390	45819	No	8.95	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.41	-11328.99	-24214	-21523	3664	3.29	3.29	-14538	8883	13151	33304	44333	8390	46455	No	12.68	Si
SLU 78	-1.56	-5422.9	-18830	-16738	5152	3.29	3.29	-11305	8452	12513	33304	44333	8390	45817	No	8.89	Si
SLU 78	1.41	-11360.33	-24242	-21548	3709	3.29	3.29	-14555	8885	13154	33304	44333	8390	46459	No	12.53	Si
SLU 79	-1.56	-5404.68	-18731	-16650	5042	3.29	3.29	-11246	8444	12501	33304	44333	8390	45806	No	9.08	Si
SLU 79	1.41	-11178.4	-24065	-21391	3581	3.29	3.29	-14449	8871	13133	33304	44333	8390	46438	No	12.97	Si
SLU 80	-1.56	-5401.12	-18715	-16636	5075	3.29	3.29	-11237	8443	12499	33304	44333	8390	45804	No	9.03	Si
SLU 80	1.41	-11209.74	-24093	-21416	3625	3.29	3.29	-14465	8873	13137	33304	44333	8390	46441	No	12.81	Si
SLU 82	-1.56	-5420.32	-18961	-16854	5309	3.29	3.29	-11384	8462	12528	33304	44333	8390	45833	No	8.63	Si
SLU 82	1.41	-11427.61	-24382	-21673	3947	3.29	3.29	-14639	8896	13171	33304	44333	8390	46475	No	11.78	Si
SLU 75	-1.56	-5367.35	-18615	-16546	5068	3.29	3.29	-11176	8435	12487	33304	44333	8390	45792	No	9.04	Si
SLU 75	1.41	-11175.35	-23896	-21241	3636	3.29	3.29	-14347	8857	13113	33304	44333	8390	46418	No	12.77	Si
SLU 83	-1.56	-5479.44	-19191	-17059	5361	3.29	3.29	-11523	8481	12556	33304	44333	8390	45860	No	8.55	Si
SLU 83	1.41	-11581.26	-24699	-21955	3975	3.29	3.29	-14830	8922	13209	33304	44333	8390	46513	No	11.7	Si
SLU 74	-1.56	-5370.92	-18630	-16560	5035	3.29	3.29	-11186	8436	12489	33304	44333	8390	45794	No	9.09	Si
SLU 74	1.41	-11144.01	-23868	-21216	3591	3.29	3.29	-14331	8855	13110	33304	44333	8390	46414	No	12.93	Si
SLU 84	-1.56	-5475.87	-19176	-17045	5393	3.29	3.29	-11513	8480	12554	33304	44333	8390	45858	No	8.5	Si
SLU 84	1.41	-11612.6	-24728	-21980	4020	3.29	3.29	-14846	8924	13212	33304	44333	8390	46516	No	11.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	-1.56	-9316.76	-11447	-10175	-10739	3.29	2.4933	-9102	12237	13730	33304	66499	8390	47034		4.38	Si
SLV 14	1.41	-896.29	-13114	-11657	-19874	3.29	3.29	-7873	11991	17753	33304	66499	8390	51057		2.57	Si
SLV 2	-1.56	2245.2	-15558	-13829	18526	3.29	3.29	-9341	12285	18188	33304	66499	8390	51492		2.78	Si
SLV 2	1.41	-14649.27	-17014	-15123	25702	3.29	2.3519	-14389	13295	14071	33304	66499	8390	47375		1.84	Si
SLD 2	-1.56	-1233.47	-14101	-12534	9747	3.29	3.29	-8466	12110	17929	33304	66499	8390	51233		5.26	Si
SLD 2	1.41	-10466.01	-16663	-14811	12161	3.29	3.0507	-10841	12585	17276	33304	66499	8390	50581		4.16	Si
SLV 13	-1.56	-9694.07	-11627	-10335	-12554	3.29	2.4338	-9479	12312	13485	33304	66499	8390	46789		3.73	Si
SLV 13	1.41	-146.43	-12930	-11493	-22443	3.29	3.29	-7763	11969	17721	33304	66499	8390	51025		2.27	Si
SLV 3	-1.56	1648.43	-14563	-12945	17129	3.29	3.29	-8743	12165	18011	33304	66499	8390	51315		3	Si
SLV 3	1.41	-13907.48	-19696	-17508	23965	3.29	2.8167	-13907	13198	16729	33304	66499	8390	50033		2.09	Si
SLV 4	-1.56	2025.74	-14382	-12784	18944	3.29	3.29	-8635	12144	17979	33304	66499	8390	51283		2.71	Si
SLV 4	1.41	-14657.34	-19880	-17671	26534	3.29	2.7231	-14523	13321	16324	33304	66499	8390	49628		1.87	Si
SLV 1	-1.56	1867.89	-15739	-13990	16711	3.29	3.29	-9449	12307	18220	33304	66499	8390	51524		3.08	Si
SLV 1	1.41	-13899.42	-16830	-14960	23133	3.29	2.4574	-13618	13140	14531	33304	66499	8390	47835		2.07	Si
SLV 15	-1.56	-9913.53	-10452	-9290	-12135	2.632	2.0894	0	0	0	33304	53199	6712	33304		2.74	Si
SLV 15	1.41	-154.5	-15796	-14041	-21611	3.29	3.29	-9484	12313	18230	33304	66499	8390	51534		2.38	Si
SLV 16	-1.56	-9536.22	-10271	-9130	-10320	2.632	2.1496	0	0	0	33304	53199	6712	33304		3.23	Si
SLV 16	1.41	-904.35	-15980	-14204	-19042	3.29	3.29	-9594	12336	18263	33304	66499	8390	51567		2.71	Si
SLD 4	-1.56	-1331.17	-13588	-12078	9934	3.29	3.29	-8158	12048	17837	33304	66499	8390	51142		5.15	Si
SLD 4	1.41	-10536.68	-17895	-15907	12512	3.29	3.1686	-11215	12660	18051	33304	66499	8390	51355		4.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.24	8333	-12337	239.3	2624.38	10.97	Si
SLV 15	179667	0.24	8367	-12387	239.3	2634.43	11.01	Si
SLV 12	179667	0.24	8389	-12420	239.3	2640.92	11.04	Si
SLV 11	179667	0.24	8411	-12452	239.3	2647.46	11.06	Si
SLV 14	179667	0.24	8608	-12745	239.3	2705.91	11.31	Si
SLV 13	179667	0.24	8642	-12795	239.3	2715.92	11.35	Si
SLV 8	179667	0.24	8707	-12890	239.3	2735	11.43	Si
SLV 7	179667	0.24	8729	-12923	239.3	2741.51	11.46	Si
SLV 10	179667	0.24	9306	-13778	239.3	2911.17	12.17	Si
SLV 9	179667	0.24	9328	-13811	239.3	2917.63	12.19	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-21827	-11603	-452	0.787	2846.8	0.939	12.17441	4.02955	Si
SLV 7	-21707	-11720	-449	0.79	2834.7	0.939	12.2301	4.02955	Si
SLV 12	-20657	-10369	-341	0.825	2728.4	0.937	12.79679	4.02955	Si
SLV 11	-20537	-10487	-339	0.829	2716.3	0.937	12.85839	4.02955	Si
SLV 4	-19880	-14382	-636	0.837	2649.9	0.935	13.0053	2.9746	Si
SLV 3	-19696	-14563	-632	0.843	2631.3	0.935	13.10499	2.9746	Si
SLV 6	-12273	-15522	-608	1.195	1884.2	0.916	18.97483	4.02955	Si
SLV 5	-12153	-15640	-605	1.204	1872.2	0.915	19.11744	4.02955	Si
SLV 2	-17014	-15558	-682	0.939	2360.5	0.929	14.68706	2.9746	Si
SLV 1	-16830	-15739	-678	0.947	2341.9	0.928	14.81642	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.315	SLU 84	Si
V_SLU	8.503	SLU 84	Si
PF_SLV	1.958	SLV 15	Si
V_SLV	1.843	SLV 2	Si
PFFP_SLV	10.967	SLV 16	Si
R_SLV	3.021	SLV 8	Si

Maschio 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.058	2.201	-15.058	6.576	L2	L4	4.375	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	-1.56	5383.05	-112204	-0.0001461	0.0004492	0.0035	4.375	73719.61	155171.28	155171.28	28.83	No	Si
SLU 52	0.64	-6686.83	-68125	-0.0000884	0.0004492	0.0035	4.375	85718.91	123828.58	123828.58	18.52	No	Si
SLU 78	-1.56	5899.09	-126992	-0.0001697	0.0004492	0.0035	4.375	57819.73	161987.05	161987.05	27.46	No	Si
SLU 78	0.64	-7260.07	-78439	-0.0001027	0.0004492	0.0035	4.375	87661.35	135074.42	135074.42	18.61	No	Si
SLU 55	-1.56	5488.26	-113358	-0.000148	0.0004492	0.0035	4.375	72693.04	155703.37	155703.37	28.37	No	Si
SLU 55	0.64	-6745.93	-68855	-0.0000894	0.0004492	0.0035	4.375	85951.8	124691.72	124691.72	18.48	No	Si
SLU 73	-1.56	5686.83	-123807	-0.0001643	0.0004492	0.0035	4.375	61747.55	160519.38	160519.38	28.23	No	Si
SLU 73	0.64	-7244.77	-76392	-0.0001	0.0004492	0.0035	4.375	87506.62	133027.6	133027.6	18.36	No	Si
SLU 76	-1.56	5792.04	-124962	-0.0001663	0.0004492	0.0035	4.375	60355.52	161051.47	161051.47	27.81	No	Si
SLU 76	0.64	-7303.86	-77122	-0.000101	0.0004492	0.0035	4.375	87574.9	133816.65	133816.65	18.32	No	Si
SLU 63	-1.56	5471.85	-118558	-0.0001558	0.0004492	0.0035	4.375	67618.46	158100.01	158100.01	28.89	No	Si
SLU 63	0.64	-6945.96	-72720	-0.0000947	0.0004492	0.0035	4.375	86942.65	129058.26	129058.26	18.58	No	Si
SLU 84	-1.56	5775.62	-130162	-0.0001745	0.0004492	0.0035	4.375	53634.87	163448.11	163448.11	28.3	No	Si
SLU 84	0.64	-7503.89	-80986	-0.0001065	0.0004492	0.0035	4.375	87694.19	137082.44	137082.44	18.27	No	Si
SLU 61	-1.56	5366.64	-117404	-0.0001538	0.0004492	0.0035	4.375	68808.8	157567.92	157567.92	29.36	No	Si
SLU 61	0.64	-6886.86	-71990	-0.0000936	0.0004492	0.0035	4.375	86786.71	128269.21	128269.21	18.63	No	Si
SLU 82	-1.56	5670.41	-129007	-0.0001725	0.0004492	0.0035	4.375	55190.66	162916.02	162916.02	28.73	No	Si
SLU 82	0.64	-7444.8	-80256	-0.0001054	0.0004492	0.0035	4.375	87702.87	136506.95	136506.95	18.34	No	Si
SLU 80	-1.56	5811.04	-126146	-0.0001682	0.0004492	0.0035	4.375	58890.08	161597.19	161597.19	27.81	No	Si
SLU 80	0.64	-7259.87	-77922	-0.000102	0.0004492	0.0035	4.375	87633.04	134666.27	134666.27	18.55	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	-1.56	-16839.28	-91267	-0.0001305	0.0006738	0.0035	4.375		162008.27	162008.27	9.62		Si
SLV 5	0.64	-3284.46	-51507	-0.0000609	0.0006738	0.0035	4.375		107380.58	107380.58	32.69		Si
SLV 11	-1.56	24119.04	-83084	-0.0001323	0.0006738	0.0035	4.375		142659.44	142659.44	5.91		Si
SLV 11	0.64	-6390.38	-54173	-0.0000688	0.0006738	0.0035	4.375		111558.88	111558.88	17.46		Si
SLV 9	-1.56	-15854.64	-83569	-0.0001192	0.0006738	0.0035	4.375		152791.9	152791.9	9.64		Si
SLV 9	0.64	-4563.49	-47911	-0.0000588	0.0006738	0.0035	4.375		101623.9	101623.9	22.27		Si
SLV 8	-1.56	23980.99	-90250	-0.0001413	0.0006738	0.0035	4.375		151527.4	151527.4	6.32		Si
SLV 8	0.64	-5256.6	-57688	-0.0000711	0.0006738	0.0035	4.375		117069.07	117069.07	22.27		Si
SLV 10	-1.56	-15008.05	-83037	-0.0001171	0.0006738	0.0035	4.375		152134.81	152134.81	10.14		Si
SLV 10	0.64	-4708.74	-47830	-0.0000589	0.0006738	0.0035	4.375		101488.99	101488.99	21.55		Si
SLV 16	-1.56	12349.94	-73599	-0.0001012	0.0006738	0.0035	4.375		130920.73	130920.73	10.6		Si
SLV 16	0.64	-7427.25	-47682	-0.000063	0.0006738	0.0035	4.375		101244.44	101244.44	13.63		Si
SLV 7	-1.56	23134.4	-90782	-0.0001405	0.0006738	0.0035	4.375		152185.87	152185.87	6.58		Si
SLV 7	0.64	-5111.35	-57769	-0.0000709	0.0006738	0.0035	4.375		117190.96	117190.96	22.93		Si
SLV 12	-1.56	24965.63	-82552	-0.0001331	0.0006738	0.0035	4.375		142000.98	142000.98	5.69		Si
SLV 12	0.64	-6535.63	-54092	-0.0000689	0.0006738	0.0035	4.375		111431.49	111431.49	17.05		Si
SLD 12	-1.56	13276.09	-85073	-0.0001168	0.0006738	0.0035	4.375		145120.44	145120.44	10.93		Si
SLD 12	0.64	-5634.49	-53445	-0.0000668	0.0006738	0.0035	4.375		110417.76	110417.76	19.6		Si
SLV 6	-1.56	-15992.69	-90735	-0.0001284	0.0006738	0.0035	4.375		161371.23	161371.23	10.09		Si
SLV 6	0.64	-3429.72	-51426	-0.0000611	0.0006738	0.0035	4.375		107253.19	107253.19	31.27		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.56	5670.41	-129007	-93823	-27582	4.375	4.375	-71485	10833	14219	95155	47168	22312	69480	No	2.52	Si
SLU 82	0.64	-7444.8	-80256	-58368	-32120	4.375	4.375	-44471	10833	14219	95155	47168	22312	69480	No	2.16	Si
SLU 78	-1.56	5899.09	-126992	-92358	-27445	4.375	4.375	-70368	10833	14219	95155	47168	22312	69480	No	2.53	Si
SLU 78	0.64	-7260.07	-78439	-57047	-31968	4.375	4.375	-43464	10833	14219	95155	47168	22312	69480	No	2.17	Si
SLU 81	-1.56	5541.09	-129052	-93856	-27668	4.375	4.375	-71509	10833	14219	95155	47168	22312	69480	No	2.51	Si
SLU 81	0.64	-7290.16	-80361	-58445	-32209	4.375	4.375	-44529	10833	14219	95155	47168	22312	69480	No	2.16	Si
SLU 77	-1.56	5769.78	-127036	-92390	-27532	4.375	4.375	-70392	10833	14219	95155	47168	22312	69480	No	2.52	Si
SLU 77	0.64	-7105.43	-78544	-57123	-32057	4.375	4.375	-43522	10833	14219	95155	47168	22312	69480	No	2.17	Si
SLU 79	-1.56	5681.72	-126190	-91775	-27308	4.375	4.375	-69924	10833	14219	95155	47168	22312	69480	No	2.54	Si
SLU 79	0.64	-7105.24	-78027	-56747	-31795	4.375	4.375	-43236	10833	14219	95155	47168	22312	69480	No	2.19	Si
SLU 83	-1.56	5646.31	-130206	-94695	-27919	4.375	4.375	-72149	10833	14219	95155	47168	22312	69480	No	2.49	Si
SLU 83	0.64	-7349.26	-81091	-58976	-32516	4.375	4.375	-44934	10833	14219	95155	47168	22312	69480	No	2.14	Si
SLU 84	-1.56	5775.62	-130162	-94663	-27832	4.375	4.375	-72124	10833	14219	95155	47168	22312	69480	No	2.5	Si
SLU 84	0.64	-7503.89	-80986	-58899	-32427	4.375	4.375	-44876	10833	14219	95155	47168	22312	69480	No	2.14	Si
SLU 80	-1.56	5811.04	-126146	-91742	-27222	4.375	4.375	-69899	10833	14219	95155	47168	22312	69480	No	2.55	Si
SLU 80	0.64	-7259.87	-77922	-56670	-31706	4.375	4.375	-43177	10833	14219	95155	47168	22312	69480	No	2.19	Si
SLU 74	-1.56	5664.56	-125882	-91550	-27281	4.375	4.375	-69753	10833	14219	95155	47168	22312	69480	No	2.55	Si
SLU 74	0.64	-7046.34	-77814	-56592	-31750	4.375	4.375	-43118	10833	14219	95155	47168	22312	69480	No	2.19	Si
SLU 75	-1.56	5793.88	-125837	-91518	-27195	4.375	4.375	-69728	10833	14219	95155	47168	22312	69480	No	2.55	Si
SLU 75	0.64	-7200.97	-77709	-56516	-31661	4.375	4.375	-43060	10833	14219	95155	47168	22312	69480	No	2.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-1.56	-15992.69	-90735	-65989	-37896	4.375	4.375	-50277	16250	21328	95155	70752	22312	93064		2.46	Si
SLV 6	0.64	-3429.72	-51426	-37401	-38872	4.375	4.375	-28496	16250	21328	95155	70752	22312	93064		2.39	Si
SLV 9	-1.56	-15854.64	-83569	-60778	-31182	4.375	4.375	-46307	16250	21328	95155	70752	22312	93064		2.98	Si
SLV 9	0.64	-4563.49	-47911	-34844	-32706	4.375	4.375	-26548	16250	21328	95155	70752	22312	93064		2.85	Si
SLD 1	-1.56	470.39	-92516	-67285	-27015	4.375	4.375	-51264	16250	21328	95155	70752	22312	93064		3.44	Si
SLD 1	0.64	-3721.24	-54869	-39905	-29392	4.375	4.375	-30404	16250	21328	95155	70752	22312	93064		3.17	Si
SLV 10	-1.56	-15008.05	-83037	-60391	-30165	4.375	4.375	-46012	16250	21328	95155	70752	22312	93064		3.09	Si
SLV 10	0.64	-4708.74	-47830	-34785	-31759	4.375	4.375	-26503	16250	21328	95155	70752	22312	93064		2.93	Si
SLV 1	-1.56	-4223.58	-100221	-72888	-37447	4.375	4.375	-55534	16250	21328	95155	70752	22312	93064		2.49	Si
SLV 1	0.64	-2392.84	-57917	-42121	-38903	4.375	4.375	-32092	16250	21328	95155	70752	22312	93064		2.39	Si
SLV 2	-1.56	-2924.3	-99404	-72294	-35886	4.375	4.375	-55081	16250	21328	95155	70752	22312	93064		2.59	Si
SLV 2	0.64	-2615.76	-57792	-42031	-37449	4.375	4.375	-32023	16250	21328	95155	70752	22312	93064		2.49	Si
SLD 5	-1.56	-5149.74	-88746	-64543	-27827	4.375	4.375	-49175	16250	21328	95155	70752	22312	93064		3.34	Si
SLD 5	0.64	-4185.6	-52154	-37930	-29959	4.375	4.375	-28899	16250	21328	95155	70752	22312	93064		3.11	Si
SLV 3	-1.56	7768.52	-100075	-72782	-28227	4.375	4.375	-55453	16250	21328	95155	70752	22312	93064		3.3	Si
SLV 3	0.64	-2940.9	-59795	-43488	-30788	4.375	4.375	-33133	16250	21328	95155	70752	22312	93064		3.02	Si
SLV 5	-1.56	-16839.28	-91267	-66376	-38912	4.375	4.375	-50572	16250	21328	95155	70752	22312	93064		2.39	Si
SLV 5	0.64	-3284.46	-51507	-37460	-39819	4.375	4.375	-28541	16250	21328	95155	70752	22312	93064		2.34	Si
SLD 6	-1.56	-4779.38	-88514	-64374	-27383	4.375	4.375	-49046	16250	21328	95155	70752	22312	93064		3.4	Si
SLD 6	0.64	-4249.14	-52119	-37904	-29545	4.375	4.375	-28880	16250	21328	95155	70752	22312	93064		3.15	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-60403	0.24	212.14	6785.42	10117.21	8451.32	39.84	Si
SLV 13	-60741	0.24	212.14	6810.54	10166.5	8488.52	40.01	Si
SLV 16	-61608	0.24	212.14	6874.51	10293.29	8583.9	40.46	Si
SLV 15	-61946	0.24	212.14	6899.12	10342.59	8620.86	40.64	Si
SLV 10	-62482	0.24	212.14	6937.94	10420.9	8679.42	40.91	Si
SLV 9	-62702	0.24	212.14	6953.75	10453.03	8703.39	41.03	Si
SLV 6	-65418	0.24	212.14	7144.22	10850.1	8997.16	42.41	Si
SLV 5	-65638	0.24	212.14	7159.23	10881.14	9020.19	42.52	Si
SLV 12	-66499	0.24	212.14	7217.44	10999.61	9108.53	42.94	Si
SLV 11	-66719	0.24	212.14	7232.16	11029.86	9131.01	43.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-46518	-90782	335	0.539	5284.8	0.968	8.0826	5.39576	Si
SLV 8	-46444	-90250	335	0.539	5277.3	0.968	8.09368	5.39576	Si
SLV 11	-43195	-83084	266	0.575	4946.6	0.966	8.64365	5.39576	Si
SLV 12	-43121	-82552	267	0.576	4939.1	0.966	8.65645	5.39576	Si
SLV 5	-42321	-91267	299	0.584	4857.6	0.966	8.78829	5.39576	Si
SLV 6	-42247	-90735	300	0.585	4850.1	0.966	8.80157	5.39576	Si
SLV 9	-38998	-83569	231	0.627	4519.5	0.964	9.46318	5.39576	Si
SLV 10	-38924	-83037	231	0.628	4512	0.963	9.47874	5.39576	Si
SLV 3	-48946	-100075	402	0.515	5532	0.97	7.71379	3.34272	Si
SLV 4	-48833	-99259	403	0.516	5520.5	0.97	7.72917	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.268	SLU 84	Si
V_SLU	2.137	SLU 83	Si
PF_SLV	5.688	SLV 12	Si
V_SLV	2.337	SLV 5	Si
PFFP_SLV	39.838	SLV 14	Si
R_SLV	1.498	SLV 7	Si

Maschio 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	-3.397	L2	Z medio 42 cm	1.386	0.3	1.978	1.98	1.975			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	-1.56	4862.72	-19825	-0.0001796	0.0003743	0.0035	1.3865	7309.52	9235.54	9235.54	1.9	No	Si
SLU 75	0.42	1079.69	-20073	-0.0001013	0.0003743	0.0035	1.3865	7319.46	9307.8	9307.8	8.62	No	Si
SLU 84	-1.56	4983.84	-20451	-0.0001862	0.0003743	0.0035	1.3865	7330.74	9418.81	9418.81	1.89	No	Si
SLU 84	0.42	1146.81	-20724	-0.0001059	0.0003743	0.0035	1.3865	7335.97	9499.41	9499.41	8.28	No	Si
SLU 83	-1.56	4979.76	-20462	-0.0001862	0.0003743	0.0035	1.3865	7331	9422.01	9422.01	1.89	No	Si
SLU 83	0.42	1149.22	-20731	-0.0001059	0.0003743	0.0035	1.3865	7336.08	9501.7	9501.7	8.27	No	Si
SLU 76	-1.56	4837.44	-19688	-0.0001782	0.0003743	0.0035	1.3865	7303.13	9195.62	9195.62	1.9	No	Si
SLU 76	0.42	1070.05	-19900	-0.0001003	0.0003743	0.0035	1.3865	7312.7	9257.08	9257.08	8.65	No	Si
SLU 82	-1.56	4930.8	-20228	-0.0001836	0.0003743	0.0035	1.3865	7324.65	9353.19	9353.19	1.9	No	Si
SLU 82	0.42	1136.99	-20452	-0.0001043	0.0003743	0.0035	1.3865	7330.75	9418.91	9418.91	8.28	No	Si
SLU 79	-1.56	4883.68	-19929	-0.0001807	0.0003743	0.0035	1.3865	7313.91	9265.61	9265.61	1.9	No	Si
SLU 79	0.42	1083.89	-20184	-0.0001019	0.0003743	0.0035	1.3865	7323.25	9340.24	9340.24	8.62	No	Si
SLU 77	-1.56	4911.69	-20059	-0.0001821	0.0003743	0.0035	1.3865	7318.95	9303.66	9303.66	1.89	No	Si
SLU 77	0.42	1091.92	-20353	-0.0001029	0.0003743	0.0035	1.3865	7328.26	9389.81	9389.81	8.6	No	Si
SLU 81	-1.56	4926.72	-20239	-0.0001835	0.0003743	0.0035	1.3865	7324.99	9356.37	9356.37	1.9	No	Si
SLU 81	0.42	1139.41	-20460	-0.0001044	0.0003743	0.0035	1.3865	7330.93	9421.2	9421.2	8.27	No	Si
SLU 78	-1.56	4915.76	-20048	-0.0001822	0.0003743	0.0035	1.3865	7318.55	9300.5	9300.5	1.89	No	Si
SLU 78	0.42	1089.51	-20345	-0.0001028	0.0003743	0.0035	1.3865	7328.05	9387.54	9387.54	8.62	No	Si
SLU 80	-1.56	4887.76	-19918	-0.0001807	0.0003743	0.0035	1.3865	7313.47	9262.45	9262.45	1.9	No	Si
SLU 80	0.42	1081.48	-20177	-0.0001019	0.0003743	0.0035	1.3865	7323	9337.98	9337.98	8.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-1.56	4569.49	-11600	-0.000141	0.0005615	0.0035	1.3865		6907.6	6907.6	1.51		Si
SLV 3	0.42	336.24	-10599	-0.0000445	0.0005615	0.0035	1.3865		6387.46	6387.46	19		Si
SLD 3	-1.56	3917.91	-12850	-0.0001182	0.0005615	0.0035	1.3865		7566.27	7566.27	1.93		Si
SLD 3	0.42	550.1	-12422	-0.0000552	0.0005615	0.0035	1.3865		7339.63	7339.63	13.34		Si
SLV 4	-1.56	4582.53	-11458	-0.0001423	0.0005615	0.0035	1.3865		6833.45	6833.45	1.49		Si
SLV 4	0.42	318.44	-10344	-0.0000432	0.0005615	0.0035	1.3865		6255.95	6255.95	19.65		Si
SLV 7	-1.56	4346.61	-12302	-0.0001306	0.0005615	0.0035	1.3865		7275.94	7275.94	1.67		Si
SLV 7	0.42	292.61	-11590	-0.0000477	0.0005615	0.0035	1.3865		6902.29	6902.29	23.59		Si
SLD 4	-1.56	3923.51	-12789	-0.0001182	0.0005615	0.0035	1.3865		7533.89	7533.89	1.92		Si
SLD 4	0.42	542.45	-12313	-0.0000546	0.0005615	0.0035	1.3865		7281.8	7281.8	13.42		Si
SLV 8	-1.56	4355.11	-12209	-0.0001309	0.0005615	0.0035	1.3865		7227.17	7227.17	1.66		Si
SLV 8	0.42	281.01	-11424	-0.0000468	0.0005615	0.0035	1.3865		6815.52	6815.52	24.25		Si
SLD 7	-1.56	3827.82	-13139	-0.0001166	0.0005615	0.0035	1.3865		7720.19	7720.19	2.02		Si
SLD 7	0.42	529.13	-12838	-0.0000565	0.0005615	0.0035	1.3865		7559.61	7559.61	14.29		Si
SLD 8	-1.56	3831.54	-13099	-0.0001166	0.0005615	0.0035	1.3865		7698.62	7698.62	2.01		Si
SLD 8	0.42	524.06	-12765	-0.0000561	0.0005615	0.0035	1.3865		7521.02	7521.02	14.35		Si
SLV 2	-1.56	4200.95	-12023	-0.0001257	0.0005615	0.0035	1.3865		7129.28	7129.28	1.7		Si
SLV 2	0.42	522.53	-11193	-0.0000499	0.0005615	0.0035	1.3865		6695.07	6695.07	12.81		Si
SLV 1	-1.56	4187.91	-12165	-0.0001252	0.0005615	0.0035	1.3865		7203.97	7203.97	1.72		Si
SLV 1	0.42	540.33	-11448	-0.0000512	0.0005615	0.0035	1.3865		6827.93	6827.93	12.64		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.56	4883.68	-19929	-16782	5751	1.3865	1.3446	-40347	10833	4370	21410	12455	3536	15991	No	2.78	Si
SLU 79	0.42	1083.89	-20184	-16997	4091	1.3865	1.3865	-40864	10833	4506	21410	12455	3536	15991	No	3.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-1.56	4887.76	-19918	-16773	5775	1.3865	1.3435	-40325	10833	4367	21410	12455	3536	15991	No	2.77	Si
SLU 80	0.42	1081.48	-20177	-16991	4101	1.3865	1.3865	-40849	10833	4506	21410	12455	3536	15991	No	3.9	Si
SLU 74	-1.56	4858.65	-19836	-16704	5710	1.3865	1.3449	-40160	10833	4371	21410	12455	3536	15991	No	2.8	Si
SLU 74	0.42	1082.1	-20081	-16910	4063	1.3865	1.3865	-40656	10833	4506	21410	12455	3536	15991	No	3.94	Si
SLU 76	-1.56	4837.44	-19688	-16579	5728	1.3865	1.3426	-39859	10833	4363	21410	12455	3536	15991	No	2.79	Si
SLU 76	0.42	1070.05	-19900	-16758	4060	1.3865	1.3865	-40288	10833	4506	21410	12455	3536	15991	No	3.94	Si
SLU 70	-1.56	4567.82	-18284	-15397	5698	1.3865	1.3302	-37016	10833	4323	21410	12455	3536	15991	No	2.81	Si
SLU 70	0.42	914.15	-18434	-15524	4074	1.3865	1.3865	-37322	10833	4506	21410	12455	3536	15991	No	3.92	Si
SLU 84	-1.56	4983.84	-20451	-17222	5754	1.3865	1.3486	-41405	10833	4383	21410	12455	3536	15991	No	2.78	Si
SLU 84	0.42	1146.81	-20724	-17452	4073	1.3865	1.3865	-41956	10833	4506	21410	12455	3536	15991	No	3.93	Si
SLU 75	-1.56	4862.72	-19825	-16695	5734	1.3865	1.3439	-40138	10833	4368	21410	12455	3536	15991	No	2.79	Si
SLU 75	0.42	1079.69	-20073	-16904	4072	1.3865	1.3865	-40640	10833	4506	21410	12455	3536	15991	No	3.93	Si
SLU 83	-1.56	4979.76	-20462	-17231	5730	1.3865	1.3496	-41427	10833	4386	21410	12455	3536	15991	No	2.79	Si
SLU 83	0.42	1149.22	-20731	-17458	4064	1.3865	1.3865	-41972	10833	4506	21410	12455	3536	15991	No	3.94	Si
SLU 77	-1.56	4911.69	-20059	-16892	5772	1.3865	1.3451	-40611	10833	4372	21410	12455	3536	15991	No	2.77	Si
SLU 77	0.42	1091.92	-20353	-17139	4109	1.3865	1.3865	-41206	10833	4506	21410	12455	3536	15991	No	3.89	Si
SLU 78	-1.56	4915.76	-20048	-16883	5797	1.3865	1.3441	-40589	10833	4368	21410	12455	3536	15991	No	2.76	Si
SLU 78	0.42	1089.51	-20345	-17133	4119	1.3865	1.3865	-41190	10833	4506	21410	12455	3536	15991	No	3.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	-1.56	4200.95	-12023	-10125	7623	1.3865	1.0315	-24341	15285	4730	21410	18683	3536	22218		2.91	Si
SLV 2	0.42	522.53	-11193	-9425	6310	1.3865	1.3865	-22660	14949	6218	21410	18683	3536	22218		3.52	Si
SLV 12	-1.56	3780.54	-13396	-11281	6417	1.3865	1.2331	-27122	15841	5860	21410	18683	3536	22218		3.46	Si
SLV 12	0.42	450.36	-13160	-11082	3216	1.3865	1.3865	-26643	15745	6549	21410	18683	3536	22218		6.91	Si
SLV 1	-1.56	4187.91	-12165	-10244	7459	1.3865	1.0469	-24629	15342	4819	21410	18683	3536	22218		2.98	Si
SLV 1	0.42	540.33	-11448	-9640	6193	1.3865	1.3865	-23176	15052	6261	21410	18683	3536	22218		3.59	Si
SLV 4	-1.56	4582.53	-11458	-9649	9702	1.3865	0.8799	-23198	15056	3974	21410	18683	3536	22218		2.29	Si
SLV 4	0.42	318.44	-10344	-8711	7069	1.3865	1.3865	-20942	14605	6075	21410	18683	3536	22218		3.14	Si
SLV 7	-1.56	4346.61	-12302	-10359	8932	1.3865	1.0197	-24905	15398	4710	21410	18683	3536	22218		2.49	Si
SLV 7	0.42	292.61	-11590	-9760	5318	1.3865	1.3865	-23465	15110	6285	21410	18683	3536	22218		4.18	Si
SLD 3	-1.56	3917.91	-12850	-10821	6499	1.3865	1.165	-26016	15620	5459	21410	18683	3536	22218		3.42	Si
SLD 3	0.42	550.1	-12422	-10461	4694	1.3865	1.3865	-25150	15447	6425	21410	18683	3536	22218		4.73	Si
SLV 3	-1.56	4569.49	-11600	-9769	9538	1.3865	0.898	-23485	15114	4072	21410	18683	3536	22218		2.33	Si
SLV 3	0.42	336.24	-10599	-8925	6952	1.3865	1.3865	-21458	14708	6118	21410	18683	3536	22218		3.2	Si
SLD 8	-1.56	3831.54	-13099	-11031	6316	1.3865	1.2022	-26519	15721	5670	21410	18683	3536	22218		3.52	Si
SLD 8	0.42	524.06	-12765	-10749	4037	1.3865	1.3865	-25843	15585	6483	21410	18683	3536	22218		5.5	Si
SLV 8	-1.56	4355.11	-12209	-10281	9039	1.3865	1.0096	-24718	15360	4652	21410	18683	3536	22218		2.46	Si
SLV 8	0.42	281.01	-11424	-9620	5394	1.3865	1.3865	-23128	15042	6257	21410	18683	3536	22218		4.12	Si
SLD 4	-1.56	3923.51	-12789	-10770	6570	1.3865	1.1594	-25892	15595	5424	21410	18683	3536	22218		3.38	Si
SLD 4	0.42	542.45	-12313	-10369	4744	1.3865	1.3865	-24928	15402	6406	21410	18683	3536	22218		4.68	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.572 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.24	26574	-11053	29.81	1369.5	45.94	Si
SLV 3	179667	0.24	27087	-11267	29.81	1390.24	46.64	Si
SLV 2	179667	0.24	28104	-11690	29.81	1430.76	48	Si
SLV 1	179667	0.24	28616	-11903	29.81	1450.86	48.67	Si
SLV 8	179667	0.24	28864	-12006	29.81	1460.49	49	Si
SLV 7	179667	0.24	29198	-12145	29.81	1473.4	49.43	Si
SLV 12	179667	0.24	32279	-13426	29.81	1588.26	53.28	Si
SLV 11	179667	0.24	32613	-13565	29.81	1600.24	53.69	Si
SLV 6	179667	0.24	33962	-14126	29.81	1647.71	55.28	Si
SLV 5	179667	0.24	34296	-14265	29.81	1659.23	55.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.572 Wa = 0.05 Ta = 0.0218

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-16155	-15372	-57	0.537	1760.8	0.979	7.96414	3.2525	Si
SLV 10	-15989	-15279	-58	0.541	1743.9	0.979	8.03308	3.2525	Si
SLV 5	-14419	-14184	-64	0.589	1583.9	0.977	8.76015	3.2525	Si
SLV 6	-14252	-14092	-65	0.595	1567	0.977	8.84624	3.2525	Si
SLV 13	-17235	-16122	-7	0.512	1870.8	0.981	7.58577	2.67902	Si
SLV 14	-16980	-15980	-8	0.518	1844.8	0.98	7.68002	2.67902	Si
SLV 11	-13326	-13489	63	0.629	1472.6	0.976	9.36948	3.2525	Si
SLV 12	-13160	-13396	62	0.636	1455.7	0.975	9.47126	3.2525	Si
SLV 15	-16386	-15558	29	0.532	1784.4	0.98	7.89394	2.67902	Si
SLV 16	-16131	-15416	28	0.539	1758.4	0.979	7.99946	2.67902	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.89	SLU 84	Si
V_SLU	2.759	SLU 78	Si
PF_SLV	1.491	SLV 4	Si
V_SLV	2.29	SLV 4	Si
PFFP_SLV	45.944	SLV 4	Si

Stato limite	Coeff.s.	Comb.	Verifica
R_SLV	2.449	SLV 9	Si

Maschio 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-4.784	-13.763	-3.397	Z medio 42 cm	L4	1.386	0.3	0.992	0.99	0.995			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	0.42	2446.91	-21357	-0.0001354	0.0003743	0.0035	1.3865	7338.74	9685.87	9685.87	3.96	No	Si
SLU 81	1.41	-63.97	-21710	-0.0000895	0.0003743	0.0035	1.3865	7334.58	9912.86	9912.86	154.96	No	Si
SLU 83	0.42	2469.41	-21648	-0.0001375	0.0003743	0.0035	1.3865	7335.61	9732.32	9732.32	3.94	No	Si
SLU 83	1.41	-65.04	-22030	-0.0000911	0.0003743	0.0035	1.3865	7327.3	9991.2	9991.2	153.62	No	Si
SLU 60	0.42	2299.86	-19475	-0.0001223	0.0003743	0.0035	1.3865	7292.06	9134.3	9134.3	3.97	No	Si
SLU 60	1.41	-87.55	-19720	-0.0000806	0.0003743	0.0035	1.3865	7304.66	9427.73	9427.73	107.68	No	Si
SLU 73	0.42	2373.62	-20496	-0.0001292	0.0003743	0.0035	1.3865	7331.77	9432.04	9432.04	3.97	No	Si
SLU 73	1.41	-78.86	-20800	-0.0000855	0.0003743	0.0035	1.3865	7336.99	9685.61	9685.61	122.82	No	Si
SLU 63	0.42	2327.69	-19761	-0.0001244	0.0003743	0.0035	1.3865	7306.6	9216.8	9216.8	3.96	No	Si
SLU 63	1.41	-95.47	-20044	-0.0000823	0.0003743	0.0035	1.3865	7318.37	9503.78	9503.78	99.54	No	Si
SLU 61	0.42	2305.19	-19470	-0.0001224	0.0003743	0.0035	1.3865	7291.74	9132.65	9132.65	3.96	No	Si
SLU 61	1.41	-94.4	-19724	-0.0000808	0.0003743	0.0035	1.3865	7304.87	9428.74	9428.74	99.88	No	Si
SLU 84	0.42	2474.73	-21642	-0.0001375	0.0003743	0.0035	1.3865	7335.7	9731.62	9731.62	3.93	No	Si
SLU 84	1.41	-71.89	-22034	-0.0000912	0.0003743	0.0035	1.3865	7327.17	9992.18	9992.18	138.99	No	Si
SLU 76	0.42	2396.12	-20788	-0.0001313	0.0003743	0.0035	1.3865	7336.84	9518.39	9518.39	3.97	No	Si
SLU 76	1.41	-79.93	-21119	-0.000087	0.0003743	0.0035	1.3865	7339.24	9764.39	9764.39	122.16	No	Si
SLU 82	0.42	2452.24	-21351	-0.0001355	0.0003743	0.0035	1.3865	7338.77	9684.31	9684.31	3.95	No	Si
SLU 82	1.41	-70.82	-21714	-0.0000897	0.0003743	0.0035	1.3865	7334.5	9913.96	9913.96	139.98	No	Si
SLU 62	0.42	2322.36	-19767	-0.0001243	0.0003743	0.0035	1.3865	7306.87	9218.46	9218.46	3.97	No	Si
SLU 62	1.41	-88.62	-20039	-0.0000821	0.0003743	0.0035	1.3865	7318.21	9502.76	9502.76	107.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	0.42	2972.27	-11961	-0.0000943	0.0005615	0.0035	1.3865		7096.85	7096.85	2.39		Si
SLV 3	1.41	-2241.48	-15277	-0.0000955	0.0005615	0.0035	1.3865		9180.79	9180.79	4.1		Si
SLV 4	0.42	2997.59	-11746	-0.0000939	0.0005615	0.0035	1.3865		6983.77	6983.77	2.33		Si
SLV 4	1.41	-2401.33	-15372	-0.0000987	0.0005615	0.0035	1.3865		9224.2	9224.2	3.84		Si
SLV 1	0.42	2458	-12032	-0.0000855	0.0005615	0.0035	1.3865		7134.22	7134.22	2.9		Si
SLV 1	1.41	-1927.51	-14964	-0.0000888	0.0005615	0.0035	1.3865		9035.89	9035.89	4.69		Si
SLD 8	0.42	2207.75	-13998	-0.0000895	0.0005615	0.0035	1.3865		8178.08	8178.08	3.7		Si
SLD 8	1.41	-583.48	-14856	-0.0000655	0.0005615	0.0035	1.3865		8985.78	8985.78	15.4		Si
SLV 13	0.42	390.46	-17055	-0.0000711	0.0005615	0.0035	1.3865		9436.69	9436.69	24.17		Si
SLV 13	1.41	2279.38	-13671	-0.0000893	0.0005615	0.0035	1.3865		8004.44	8004.44	3.51		Si
SLD 4	0.42	2254.41	-13266	-0.0000872	0.0005615	0.0035	1.3865		7787.67	7787.67	3.45		Si
SLD 4	1.41	-1063.5	-14889	-0.0000737	0.0005615	0.0035	1.3865		9001.22	9001.22	8.46		Si
SLD 3	0.42	2243.54	-13358	-0.0000874	0.0005615	0.0035	1.3865		7837.13	7837.13	3.49		Si
SLD 3	1.41	-994.84	-14849	-0.0000724	0.0005615	0.0035	1.3865		8982.38	8982.38	9.03		Si
SLV 2	0.42	2483.32	-11817	-0.000085	0.0005615	0.0035	1.3865		7021.03	7021.03	2.83		Si
SLV 2	1.41	-2087.37	-15059	-0.0000919	0.0005615	0.0035	1.3865		9079.86	9079.86	4.35		Si
SLV 7	0.42	2853.03	-13599	-0.0000989	0.0005615	0.0035	1.3865		7965.75	7965.75	2.79		Si
SLV 7	1.41	-1163.21	-15207	-0.0000767	0.0005615	0.0035	1.3865		9148.43	9148.43	7.86		Si
SLV 8	0.42	2869.53	-13458	-0.0000986	0.0005615	0.0035	1.3865		7890.55	7890.55	2.75		Si
SLV 8	1.41	-1267.37	-15269	-0.0000787	0.0005615	0.0035	1.3865		9176.79	9176.79	7.24		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	0.42	2403.06	-20974	-17662	4590	1.3865	1.3865	-42462	10833	4506	9516	12455	3536	14022	No	3.06	Si
SLU 75	1.41	-75.59	-21321	-17955	5519	1.3865	1.3865	-43166	10833	4506	9516	12455	3536	14022	No	2.54	Si
SLU 79	0.42	2409.75	-21088	-17759	4593	1.3865	1.3865	-42695	10833	4506	9516	12455	3536	14022	No	3.05	Si
SLU 79	1.41	-69.58	-21432	-18048	5529	1.3865	1.3865	-43390	10833	4506	9516	12455	3536	14022	No	2.54	Si
SLU 81	0.42	2446.91	-21357	-17985	4587	1.3865	1.3865	-43238	10833	4506	9516	12455	3536	14022	No	3.06	Si
SLU 81	1.41	-63.97	-21710	-18282	5526	1.3865	1.3865	-43953	10833	4506	9516	12455	3536	14022	No	2.54	Si
SLU 84	0.42	2474.73	-21642	-18225	4654	1.3865	1.3865	-43816	10833	4506	9516	12455	3536	14022	No	3.01	Si
SLU 84	1.41	-71.89	-22034	-18555	5607	1.3865	1.3865	-44609	10833	4506	9516	12455	3536	14022	No	2.5	Si
SLU 78	0.42	2425.56	-21265	-17907	4626	1.3865	1.3865	-43052	10833	4506	9516	12455	3536	14022	No	3.03	Si
SLU 78	1.41	-76.66	-21641	-18224	5572	1.3865	1.3865	-43813	10833	4506	9516	12455	3536	14022	No	2.52	Si
SLU 83	0.42	2469.41	-21648	-18230	4623	1.3865	1.3865	-43827	10833	4506	9516	12455	3536	14022	No	3.03	Si
SLU 83	1.41	-65.04	-22030	-18551	5579	1.3865	1.3865	-44600	10833	4506	9516	12455	3536	14022	No	2.51	Si
SLU 82	0.42	2452.24	-21351	-17980	4617	1.3865	1.3865	-43226	10833	4506	9516	12455	3536	14022	No	3.04	Si
SLU 82	1.41	-70.82	-21714	-18286	5554	1.3865	1.3865	-43962	10833	4506	9516	12455	3536	14022	No	2.52	Si
SLU 80	0.42	2415.07	-21083	-17754	4623	1.3865	1.3865	-42683	10833	4506	9516	12455	3536	14022	No	3.03	Si
SLU 80	1.41	-76.43	-21436	-18051	5557	1.3865	1.3865	-43399	10833	4506	9516	12455	3536	14022	No	2.52	Si
SLU 77	0.42	2420.24	-21271	-17912	4595	1.3865	1.3865	-43064	10833	4506	9516	12455	3536	14022	No	3.05	Si
SLU 77	1.41	-69.8	-21637	-18220	5544	1.3865	1.3865	-43805	10833	4506	9516	12455	3536	14022	No	2.53	Si
SLU 76	0.42	2396.12	-20788	-17505	4607	1.3865	1.3865	-42086	10833	4506	9516	12455	3536	14022	No	3.04	Si
SLU 76	1.41	-79.93	-21119	-17785	5523	1.3865	1.3865	-42757	10833	4506	9516	12455	3536	14022	No	2.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	0.42	2869.53	-13458	-11333	8871	1.3865	1.3865	-27247	15866	6599	9516	18683	3536	16115		1.82	Si
SLV 8	1.41	-1267.37	-15269	-12858	9091	1.3865	1.3865	-30912	16250	6759	9516	18683	3536	16275		1.79	Si
SLD 4	0.42	2254.41	-13266	-11171	5418	1.3865	1.3865	-26857	15788	6567	9516	18683	3536	16083		2.97	Si
SLD 4	1.41	-1063.5	-14889	-12538	5886	1.3865	1.3865	-30144	16250	6759	9516	18683	3536	16275		2.76	Si
SLD 8	0.42	2207.75	-13998	-11787	5789	1.3865	1.3865	-28339	16084	6690	9516	18683	3536	16206		2.8	Si
SLD 8	1.41	-583.48	-14856	-12510	6239	1.3865	1.3865	-30077	16250	6759	9516	18683	3536	16275		2.61	Si
SLD 7	0.42	2200.53	-14059	-11839	5768	1.3865	1.3865	-28463	16109	6701	9516	18683	3536	16216		2.81	Si
SLD 7	1.41	-537.91	-14829	-12488	6218	1.3865	1.3865	-30022	16250	6759	9516	18683	3536	16275		2.62	Si
SLV 4	0.42	2997.59	-11746	-9891	8112	1.3865	1.3141	-23780	15173	5982	9516	18683	3536	15497		1.91	Si
SLV 4	1.41	-2401.33	-15372	-12945	8367	1.3865	1.3865	-31122	16250	6759	9516	18683	3536	16275		1.95	Si
SLV 11	0.42	2232.77	-15106	-12721	6805	1.3865	1.3865	-30582	16250	6759	9516	18683	3536	16275		2.39	Si
SLV 11	1.41	98.86	-14819	-12479	7191	1.3865	1.3865	-30002	16250	6759	9516	18683	3536	16275		2.26	Si
SLV 12	0.42	2249.27	-14965	-12602	6855	1.3865	1.3865	-30298	16250	6759	9516	18683	3536	16275		2.37	Si
SLV 12	1.41	-5.3	-14881	-12531	7239	1.3865	1.3865	-30127	16250	6759	9516	18683	3536	16275		2.25	Si
SLV 3	0.42	2972.27	-11961	-10073	8035	1.3865	1.3343	-24216	15260	6108	9516	18683	3536	15624		1.94	Si
SLV 3	1.41	-2241.48	-15277	-12865	8295	1.3865	1.3865	-30930	16250	6759	9516	18683	3536	16275		1.96	Si
SLV 2	0.42	2483.32	-11817	-9951	5432	1.3865	1.3865	-23924	15201	6323	9516	18683	3536	15838		2.92	Si
SLV 2	1.41	-2087.37	-15059	-12681	5883	1.3865	1.3865	-30487	16250	6759	9516	18683	3536	16275		2.77	Si
SLV 7	0.42	2853.03	-13599	-11452	8821	1.3865	1.3865	-27532	15923	6623	9516	18683	3536	16139		1.83	Si
SLV 7	1.41	-1163.21	-15207	-12806	9044	1.3865	1.3865	-30788	16250	6759	9516	18683	3536	16275		1.8	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.915 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.26	33141	-13785	8.09	1618.99	200.01	Si
SLV 1	179667	0.26	33265	-13836	8.09	1623.37	200.56	Si
SLV 6	179667	0.26	33551	-13955	8.09	1633.41	201.8	Si
SLV 5	179667	0.26	33632	-13989	8.09	1636.24	202.15	Si
SLV 4	179667	0.26	33763	-14043	8.09	1640.8	202.71	Si
SLV 3	179667	0.26	33887	-14095	8.09	1645.12	203.24	Si
SLV 10	179667	0.26	34506	-14353	8.09	1666.46	205.88	Si
SLV 9	179667	0.26	34587	-14386	8.09	1669.22	206.22	Si
SLV 8	179667	0.26	35625	-14818	8.09	1704.19	210.54	Si
SLV 7	179667	0.26	35706	-14852	8.09	1706.88	210.87	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.915 Wa = 0.05 Ta = 0.0055

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-15269	-13458	-116	0.645	1613.5	0.989	9.48678	2.73626	Si
SLV 7	-15207	-13599	-114	0.647	1607.2	0.988	9.51774	2.73626	Si
SLV 12	-14881	-14965	-69	0.661	1573.9	0.988	9.71978	2.73626	Si
SLV 11	-14819	-15106	-67	0.663	1567.7	0.988	9.75249	2.73626	Si
SLV 4	-15372	-11746	-177	0.638	1624	0.989	9.38137	2.61363	Si
SLV 3	-15277	-11961	-174	0.641	1614.4	0.989	9.42803	2.61363	Si
SLV 2	-15059	-11817	-182	0.648	1592.1	0.988	9.52445	2.61363	Si
SLV 6	-14224	-13695	-132	0.68	1507	0.988	9.99892	2.73626	Si
SLV 1	-14964	-12032	-179	0.651	1582.4	0.988	9.57296	2.61363	Si
SLV 5	-14162	-13836	-130	0.682	1500.7	0.988	10.03432	2.73626	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.932	SLU 84	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	2.501	SLU 84	Si
PF_SLV	2.33	SLV 4	Si
V_SLV	1.79	SLV 8	Si
PFFP_SLV	200.015	SLV 2	Si
R_SLV	3.467	SLV 8	Si

Maschio 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.763	-3.397	-13.763	1.046	L2	L4	4.444	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-1.56	35303.06	-61272	-0.0001435	0.0003743	0.0035	4.4435	74673.86	92775.34	92775.34	2.63	No	Si
SLU 77	1.41	10128.72	-70805	-0.0001096	0.0003743	0.0035	4.4435	75242.32	100270.11	100270.11	9.9	No	Si
SLU 75	-1.56	34940.77	-60578	-0.0001416	0.0003743	0.0035	4.4435	74516.3	92124.53	92124.53	2.64	No	Si
SLU 75	1.41	10047.62	-69866	-0.0001079	0.0003743	0.0035	4.4435	75318.37	99896.62	99896.62	9.94	No	Si
SLU 78	-1.56	35349.73	-61269	-0.0001436	0.0003743	0.0035	4.4435	74673.1	92772.02	92772.02	2.62	No	Si
SLU 78	1.41	10112.76	-70796	-0.0001095	0.0003743	0.0035	4.4435	75243.1	100266.84	100266.84	9.91	No	Si
SLU 82	-1.56	35506.66	-61728	-0.0001447	0.0003743	0.0035	4.4435	74768.78	93204.76	93204.76	2.62	No	Si
SLU 82	1.41	10553.52	-71386	-0.0001113	0.0003743	0.0035	4.4435	75180.72	100503.49	100503.49	9.52	No	Si
SLU 79	-1.56	35029.83	-60838	-0.0001422	0.0003743	0.0035	4.4435	74577.03	92367.33	92367.33	2.64	No	Si
SLU 79	1.41	10054.47	-70196	-0.0001085	0.0003743	0.0035	4.4435	75294.96	100027.24	100027.24	9.95	No	Si
SLU 80	-1.56	35076.5	-60834	-0.0001423	0.0003743	0.0035	4.4435	74576.22	92364.02	92364.02	2.63	No	Si
SLU 80	1.41	10038.51	-70187	-0.0001084	0.0003743	0.0035	4.4435	75295.59	100023.99	100023.99	9.96	No	Si
SLU 74	-1.56	34894.1	-60582	-0.0001415	0.0003743	0.0035	4.4435	74517.14	92127.84	92127.84	2.64	No	Si
SLU 74	1.41	10063.58	-69875	-0.000108	0.0003743	0.0035	4.4435	75317.83	99899.85	99899.85	9.93	No	Si
SLU 81	-1.56	35459.99	-61732	-0.0001446	0.0003743	0.0035	4.4435	74769.49	93208.1	93208.1	2.63	No	Si
SLU 81	1.41	10569.48	-71394	-0.0001114	0.0003743	0.0035	4.4435	75179.77	100506.77	100506.77	9.51	No	Si
SLU 83	-1.56	35868.95	-62422	-0.0001466	0.0003743	0.0035	4.4435	74900.22	93861.42	93861.42	2.62	No	Si
SLU 83	1.41	10634.63	-72324	-0.000113	0.0003743	0.0035	4.4435	75057.98	100883.11	100883.11	9.49	No	Si
SLU 84	-1.56	35915.62	-62419	-0.0001467	0.0003743	0.0035	4.4435	74899.59	93858.06	93858.06	2.61	No	Si
SLU 84	1.41	10618.67	-72316	-0.0001129	0.0003743	0.0035	4.4435	75059.18	100879.78	100879.78	9.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	-1.56	27624.97	-42857	-0.0000951	0.0005615	0.0035	4.4435		80661.89	80661.89	2.92		Si
SLD 11	1.41	3854.17	-48608	-0.0000632	0.0005615	0.0035	4.4435		88974.35	88974.35	23.09		Si
SLV 15	-1.56	29989.57	-46819	-0.0001044	0.0005615	0.0035	4.4435		86678.14	86678.14	2.89		Si
SLV 15	1.41	-3886.17	-53543	-0.0000695	0.0005615	0.0035	4.4435		101201.52	101201.52	26.04		Si
SLD 8	-1.56	26695.49	-41635	-0.0000919	0.0005615	0.0035	4.4435		78548.09	78548.09	2.94		Si
SLD 8	1.41	6314.81	-47074	-0.0000653	0.0005615	0.0035	4.4435		87005.11	87005.11	13.78		Si
SLV 16	-1.56	30195.29	-46590	-0.0001044	0.0005615	0.0035	4.4435		86385.55	86385.55	2.86		Si
SLV 16	1.41	-3719.15	-53151	-0.0000687	0.0005615	0.0035	4.4435		100673.35	100673.35	27.07		Si
SLD 7	-1.56	26636.85	-41700	-0.0000919	0.0005615	0.0035	4.4435		78660.68	78660.68	2.95		Si
SLD 7	1.41	6267.2	-47186	-0.0000654	0.0005615	0.0035	4.4435		87148.06	87148.06	13.91		Si
SLV 11	-1.56	31885.66	-43869	-0.0001036	0.0005615	0.0035	4.4435		82419.56	82419.56	2.58		Si
SLV 11	1.41	145.4	-49730	-0.0000585	0.0005615	0.0035	4.4435		90421.35	90421.35	621.86		Si
SLV 7	-1.56	29567.12	-41159	-0.0000961	0.0005615	0.0035	4.4435		77727.93	77727.93	2.63		Si
SLV 7	1.41	5791.82	-46401	-0.0000636	0.0005615	0.0035	4.4435		86144.51	86144.51	14.87		Si
SLV 12	-1.56	32019.69	-43720	-0.0001036	0.0005615	0.0035	4.4435		82160.79	82160.79	2.57		Si
SLV 12	1.41	254.23	-49474	-0.0000584	0.0005615	0.0035	4.4435		90091.68	90091.68	354.37		Si
SLV 8	-1.56	29701.16	-41010	-0.0000961	0.0005615	0.0035	4.4435		77471.14	77471.14	2.61		Si
SLV 8	1.41	5900.65	-46146	-0.0000635	0.0005615	0.0035	4.4435		85818.76	85818.76	14.54		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 12	-1.56	27683.61	-42792	-0.0000951	0.0005615	0.0035	4.4435		80548.78	80548.78	2.91		Si
SLD 12	1.41	3901.78	-48496	-0.0000631	0.0005615	0.0035	4.4435		88830.67	88830.67	22.77		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.56	35506.66	-61728	-51982	7183	4.4435	4.4435	-38994	10833	14441	33304	39918	11331	47746	No	6.65	Si
SLU 82	1.41	10553.52	-71386	-60115	12197	4.4435	4.4435	-45095	10833	14441	33304	39918	11331	47746	No	3.91	Si
SLU 76	-1.56	34698.66	-60141	-50645	7236	4.4435	4.4435	-37992	10833	14441	33304	39918	11331	47746	No	6.6	Si
SLU 76	1.41	9962.72	-69252	-58317	12132	4.4435	4.4435	-43747	10833	14441	33304	39918	11331	47746	No	3.94	Si
SLU 78	-1.56	35349.73	-61269	-51595	7342	4.4435	4.4435	-38704	10833	14441	33304	39918	11331	47746	No	6.5	Si
SLU 78	1.41	10112.76	-70796	-59618	12252	4.4435	4.4435	-44723	10833	14441	33304	39918	11331	47746	No	3.9	Si
SLU 77	-1.56	35303.06	-61272	-51598	7272	4.4435	4.4435	-38706	10833	14441	33304	39918	11331	47746	No	6.57	Si
SLU 77	1.41	10128.72	-70805	-59625	12153	4.4435	4.4435	-44728	10833	14441	33304	39918	11331	47746	No	3.93	Si
SLU 84	-1.56	35915.62	-62419	-52563	7283	4.4435	4.4435	-39431	10833	14441	33304	39918	11331	47746	No	6.56	Si
SLU 84	1.41	10618.67	-72316	-60898	12327	4.4435	4.4435	-45683	10833	14441	33304	39918	11331	47746	No	3.87	Si
SLU 83	-1.56	35868.95	-62422	-52566	7213	4.4435	4.4435	-39433	10833	14441	33304	39918	11331	47746	No	6.62	Si
SLU 83	1.41	10634.63	-72324	-60905	12228	4.4435	4.4435	-45688	10833	14441	33304	39918	11331	47746	No	3.9	Si
SLU 75	-1.56	34940.77	-60578	-51013	7242	4.4435	4.4435	-38268	10833	14441	33304	39918	11331	47746	No	6.59	Si
SLU 75	1.41	10047.62	-69866	-58835	12122	4.4435	4.4435	-44135	10833	14441	33304	39918	11331	47746	No	3.94	Si
SLU 81	-1.56	35459.99	-61732	-51985	7113	4.4435	4.4435	-38997	10833	14441	33304	39918	11331	47746	No	6.71	Si
SLU 81	1.41	10569.48	-71394	-60122	12099	4.4435	4.4435	-45101	10833	14441	33304	39918	11331	47746	No	3.95	Si
SLU 79	-1.56	35029.83	-60838	-51232	7220	4.4435	4.4435	-38432	10833	14441	33304	39918	11331	47746	No	6.61	Si
SLU 79	1.41	10054.47	-70196	-59112	12098	4.4435	4.4435	-44343	10833	14441	33304	39918	11331	47746	No	3.95	Si
SLU 80	-1.56	35076.5	-60834	-51229	7289	4.4435	4.4435	-38430	10833	14441	33304	39918	11331	47746	No	6.55	Si
SLU 80	1.41	10038.51	-70187	-59105	12196	4.4435	4.4435	-44338	10833	14441	33304	39918	11331	47746	No	3.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.56	32019.69	-43720	-36817	14276	4.4435	4.4435	-27618	15940	21249	33304	59876	11331	54554		3.82	Si
SLV 12	1.41	254.23	-49474	-41663	21444	4.4435	4.4435	-31254	16250	21662	33304	59876	11331	54966		2.56	Si
SLV 8	-1.56	29701.16	-41010	-34535	16283	4.4435	4.4435	-25907	15598	20793	33304	59876	11331	54097		3.32	Si
SLV 8	1.41	5900.65	-46146	-38860	25149	4.4435	4.4435	-29151	16247	21658	33304	59876	11331	54962		2.19	Si
SLD 7	-1.56	26636.85	-41700	-35116	10001	4.4435	4.4435	-26342	15685	20909	33304	59876	11331	54214		5.42	Si
SLD 7	1.41	6267.2	-47186	-39735	15856	4.4435	4.4435	-29808	16250	21662	33304	59876	11331	54966		3.47	Si
SLV 3	-1.56	22261.13	-37787	-31821	11405	4.4435	4.4435	-23871	15191	20250	33304	59876	11331	53554		4.7	Si
SLV 3	1.41	14935.22	-42447	-35745	19066	4.4435	4.4435	-26814	15780	21035	33304	59876	11331	54339		2.85	Si
SLD 8	-1.56	26695.49	-41635	-35061	10083	4.4435	4.4435	-26301	15677	20898	33304	59876	11331	54203		5.38	Si
SLD 8	1.41	6314.81	-47074	-39641	15940	4.4435	4.4435	-29737	16250	21662	33304	59876	11331	54966		3.45	Si
SLV 4	-1.56	22466.84	-37558	-31628	11691	4.4435	4.4435	-23726	15162	20212	33304	59876	11331	53516		4.58	Si
SLV 4	1.41	15102.24	-42056	-35415	19361	4.4435	4.4435	-26567	15730	20969	33304	59876	11331	54273		2.8	Si
SLD 12	-1.56	27683.61	-42792	-36035	9227	4.4435	4.4435	-27032	15823	21093	33304	59876	11331	54397		5.9	Si
SLD 12	1.41	3901.78	-48496	-40839	14356	4.4435	4.4435	-30636	16250	21662	33304	59876	11331	54966		3.83	Si
SLV 11	-1.56	31885.66	-43869	-36942	14089	4.4435	4.4435	-27712	15959	21274	33304	59876	11331	54579		3.87	Si
SLV 11	1.41	145.4	-49730	-41878	21252	4.4435	4.4435	-31415	16250	21662	33304	59876	11331	54966		2.59	Si
SLD 11	-1.56	27624.97	-42857	-36090	9145	4.4435	4.4435	-27073	15831	21104	33304	59876	11331	54408		5.95	Si
SLD 11	1.41	3854.17	-48608	-40933	14272	4.4435	4.4435	-30706	16250	21662	33304	59876	11331	54966		3.85	Si
SLV 7	-1.56	29567.12	-41159	-34661	16097	4.4435	4.4435	-26001	15617	20818	33304	59876	11331	54122		3.36	Si
SLV 7	1.41	5791.82	-46401	-39075	24957	4.4435	4.4435	-29312	16250	21662	33304	59876	11331	54966		2.2	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.24	32971	-43952	215.46	5169.41	23.99	Si
SLV 2	179667	0.24	33138	-44175	215.46	5188.44	24.08	Si
SLV 3	179667	0.24	33241	-44312	215.46	5200.05	24.13	Si
SLV 1	179667	0.24	33409	-44536	215.46	5218.96	24.22	Si
SLV 8	179667	0.24	34315	-45744	215.46	5319.82	24.69	Si
SLV 7	179667	0.24	34491	-45979	215.46	5339.18	24.78	Si
SLV 6	179667	0.24	34875	-46490	215.46	5381	24.97	Si
SLV 5	179667	0.24	35051	-46725	215.46	5400.11	25.06	Si
SLV 12	179667	0.24	35595	-47450	215.46	5458.6	25.33	Si
SLV 11	179667	0.24	35771	-47685	215.46	5477.37	25.42	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-49730	-43869	-124	0.52	5620.4	0.97	7.79155	5.39576	Si
SLV 9	-49334	-43151	-246	0.521	5580.1	0.97	7.81142	5.39576	Si
SLV 12	-49474	-43720	-123	0.522	5594.4	0.97	7.82676	5.39576	Si
SLV 10	-49078	-43002	-244	0.523	5554.1	0.969	7.84699	5.39576	Si
SLV 7	-46401	-41159	-372	0.546	5281.5	0.968	8.20107	5.39576	Si
SLV 5	-46005	-40442	-493	0.548	5241.2	0.968	8.22565	5.39576	Si
SLV 8	-46146	-41010	-371	0.549	5255.6	0.968	8.24085	5.39576	Si
SLV 6	-45750	-40293	-492	0.55	5215.2	0.968	8.26589	5.39576	Si
SLV 15	-53543	-46819	122	0.489	6008.6	0.972	7.30845	3.34272	Si
SLV 13	-53424	-46603	86	0.49	5996.5	0.972	7.33209	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.613	SLU 84	Si
V_SLU	3.873	SLU 84	Si
PF_SLV	2.566	SLV 12	Si
V_SLV	2.185	SLV 8	Si
PFFP_SLV	23.992	SLV 4	Si
R_SLV	1.444	SLV 11	Si

Maschio 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.638	1.046	-24.653	1.046	L2	L4	5.015	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	-1.56	-4232.01	-132105	-0.0000964	0.0004492	0.0035	5.015	172556.09	242745.97	242745.97	57.36	No	Si
SLU 50	0.54	9511.28	-91706	-0.0000703	0.0004492	0.0035	5.015	153476.71	182637.32	182637.32	19.2	No	Si
SLU 43	-1.56	-4153.05	-128825	-0.0000938	0.0004492	0.0035	5.015	172114.14	239692.24	239692.24	57.71	No	Si
SLU 43	0.54	9237.66	-89257	-0.0000683	0.0004492	0.0035	5.015	151365.46	179220.54	179220.54	19.4	No	Si
SLU 49	-1.56	-4244.52	-133092	-0.0000972	0.0004492	0.0035	5.015	172650.81	243665.19	243665.19	57.41	No	Si
SLU 49	0.54	9584.01	-92442	-0.0000709	0.0004492	0.0035	5.015	154089.56	183663.63	183663.63	19.16	No	Si
SLU 48	-1.56	-4258.55	-133090	-0.0000972	0.0004492	0.0035	5.015	172650.57	243662.63	243662.63	57.22	No	Si
SLU 48	0.54	9582.52	-92449	-0.0000709	0.0004492	0.0035	5.015	154095.25	183673.23	183673.23	19.17	No	Si
SLU 70	-1.56	-4968.81	-146625	-0.0001088	0.0004492	0.0035	5.015	172162.26	256263.57	256263.57	51.57	No	Si
SLU 70	0.54	10169.11	-103410	-0.0000796	0.0004492	0.0035	5.015	162058.02	198962.75	198962.75	19.57	No	Si
SLU 46	-1.56	-4205.04	-131452	-0.0000959	0.0004492	0.0035	5.015	172483.75	242138.33	242138.33	57.58	No	Si
SLU 46	0.54	9447.2	-91217	-0.0000699	0.0004492	0.0035	5.015	153063.97	181955.24	181955.24	19.26	No	Si
SLU 45	-1.56	-4219.07	-131449	-0.0000959	0.0004492	0.0035	5.015	172483.42	242135.76	242135.76	57.39	No	Si
SLU 45	0.54	9445.71	-91224	-0.0000699	0.0004492	0.0035	5.015	153069.8	181964.84	181964.84	19.26	No	Si
SLU 47	-1.56	-4169.14	-130469	-0.0000951	0.0004492	0.0035	5.015	172360.19	241223.38	241223.38	57.86	No	Si
SLU 47	0.54	9376.96	-90470	-0.0000693	0.0004492	0.0035	5.015	152424.84	180912.94	180912.94	19.29	No	Si
SLU 51	-1.56	-4217.97	-132108	-0.0000964	0.0004492	0.0035	5.015	172556.38	242748.54	242748.54	57.55	No	Si
SLU 51	0.54	9512.77	-91699	-0.0000703	0.0004492	0.0035	5.015	153470.93	182627.72	182627.72	19.2	No	Si
SLU 44	-1.56	-4129.66	-128829	-0.0000937	0.0004492	0.0035	5.015	172114.89	239696.51	239696.51	58.04	No	Si
SLU 44	0.54	9240.15	-89245	-0.0000682	0.0004492	0.0035	5.015	151355.32	179204.55	179204.55	19.39	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-1.56	-59408.26	-61878	-0.0000892	0.0006738	0.0035	5.015		152225.54	152225.54	2.56		Si
SLV 15	0.54	-10179.91	-44024	-0.0000365	0.0006738	0.0035	5.015		115570.03	115570.03	11.35		Si
SLD 14	-1.56	-28041.97	-90287	-0.0000829	0.0006738	0.0035	5.015		205241.54	205241.54	7.32		Si
SLD 14	0.54	335.53	-63176	-0.0000414	0.0006738	0.0035	5.015		141863.87	141863.87	422.8		Si
SLV 2	-1.56	51763.77	-158976	-0.0001557	0.0006738	0.0035	5.015		296271.04	296271.04	5.72		Si
SLV 2	0.54	25331	-111744	-0.0000961	0.0006738	0.0035	5.015		229263.4	229263.4	9.05		Si
SLV 3	-1.56	52803.53	-157543	-0.0001555	0.0006738	0.0035	5.015		294238.22	294238.22	5.57		Si
SLV 3	0.54	24496.98	-112275	-0.0000958	0.0006738	0.0035	5.015		230016.83	230016.83	9.39		Si
SLV 16	-1.56	-59577.23	-61877	-0.0000893	0.0006738	0.0035	5.015		152223.81	152223.81	2.56		Si
SLV 16	0.54	-10497.85	-43756	-0.0000365	0.0006738	0.0035	5.015		115000.97	115000.97	10.95		Si
SLV 4	-1.56	52634.57	-157542	-0.0001554	0.0006738	0.0035	5.015		294237	294237	5.59		Si
SLV 4	0.54	24179.05	-112006	-0.0000953	0.0006738	0.0035	5.015		229635.56	229635.56	9.5		Si
SLV 1	-1.56	51932.73	-158977	-0.0001559	0.0006738	0.0035	5.015		296272.26	296272.26	5.7		Si
SLV 1	0.54	25648.94	-112013	-0.0000966	0.0006738	0.0035	5.015		229644.68	229644.68	8.95		Si
SLD 13	-1.56	-27969.39	-90288	-0.0000828	0.0006738	0.0035	5.015		205242.2	205242.2	7.34		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 13	0.54	472.09	-63291	-0.0000416	0.0006738	0.0035	5.015		142075.28	142075.28	300.95		Si
SLV 13	-1.56	-60279.07	-63311	-0.0000909	0.0006738	0.0035	5.015		155109.49	155109.49	2.57		Si
SLV 13	0.54	-9027.96	-43762	-0.0000354	0.0006738	0.0035	5.015		115014.58	115014.58	12.74		Si
SLV 14	-1.56	-60448.03	-63311	-0.000091	0.0006738	0.0035	5.015		155107.76	155107.76	2.57		Si
SLV 14	0.54	-9345.9	-43493	-0.0000354	0.0006738	0.0035	5.015		114445.53	114445.53	12.25		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-1.56	-6025.5	-161835	-129468	-27649	5.015	5.015	-57369	10833	24448	95155	81102	25576	106678	No	3.86	Si
SLU 81	0.54	10563.58	-116220	-92976	-28997	5.015	5.015	-41199	10833	24448	95155	81102	25576	106678	No	3.68	Si
SLU 77	-1.56	-5786.56	-160256	-128205	-27811	5.015	5.015	-56810	10833	24448	95155	81102	25576	106678	No	3.84	Si
SLU 77	0.54	10686.19	-114613	-91691	-29159	5.015	5.015	-40629	10833	24448	95155	81102	25576	106678	No	3.66	Si
SLU 78	-1.56	-5772.52	-160259	-128207	-27820	5.015	5.015	-56811	10833	24448	95155	81102	25576	106678	No	3.83	Si
SLU 78	0.54	10687.68	-114606	-91685	-29171	5.015	5.015	-40627	10833	24448	95155	81102	25576	106678	No	3.66	Si
SLU 80	-1.56	-5745.98	-159274	-127419	-27649	5.015	5.015	-56461	10833	24448	95155	81102	25576	106678	No	3.86	Si
SLU 80	0.54	10616.44	-113864	-91091	-28985	5.015	5.015	-40364	10833	24448	95155	81102	25576	106678	No	3.68	Si
SLU 82	-1.56	-6011.47	-161838	-129470	-27658	5.015	5.015	-57370	10833	24448	95155	81102	25576	106678	No	3.86	Si
SLU 82	0.54	10565.07	-116213	-92970	-29009	5.015	5.015	-41197	10833	24448	95155	81102	25576	106678	No	3.68	Si
SLU 74	-1.56	-5747.08	-158616	-126893	-27485	5.015	5.015	-56228	10833	24448	95155	81102	25576	106678	No	3.88	Si
SLU 74	0.54	10549.39	-113389	-90711	-28815	5.015	5.015	-40195	10833	24448	95155	81102	25576	106678	No	3.7	Si
SLU 79	-1.56	-5760.01	-159272	-127417	-27640	5.015	5.015	-56461	10833	24448	95155	81102	25576	106678	No	3.86	Si
SLU 79	0.54	10614.95	-113871	-91096	-28973	5.015	5.015	-40366	10833	24448	95155	81102	25576	106678	No	3.68	Si
SLU 84	-1.56	-6050.95	-163478	-130782	-27984	5.015	5.015	-57952	10833	24448	95155	81102	25576	106678	No	3.81	Si
SLU 84	0.54	10701.88	-117438	-93950	-29353	5.015	5.015	-41631	10833	24448	95155	81102	25576	106678	No	3.63	Si
SLU 83	-1.56	-6064.98	-163475	-130780	-27975	5.015	5.015	-57951	10833	24448	95155	81102	25576	106678	No	3.81	Si
SLU 83	0.54	10700.39	-117444	-93956	-29341	5.015	5.015	-41633	10833	24448	95155	81102	25576	106678	No	3.64	Si
SLU 75	-1.56	-5733.04	-158619	-126895	-27494	5.015	5.015	-56229	10833	24448	95155	81102	25576	106678	No	3.88	Si
SLU 75	0.54	10550.88	-113382	-90705	-28827	5.015	5.015	-40193	10833	24448	95155	81102	25576	106678	No	3.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	-1.56	-59408.26	-61878	-49502	-38706	5.015	4.6422	-23932	16250	33946	95155	121653	25576	129101		3.34	Si
SLV 15	0.54	-10179.91	-44024	-35220	-34259	5.015	5.015	-15606	15621	35253	95155	121653	25576	130408		3.81	Si
SLV 11	-1.56	-19147.64	-93688	-74950	-27848	5.015	5.015	-33212	16250	36672	95155	121653	25576	131827		4.73	Si
SLV 11	0.54	557.67	-68171	-54537	-26652	5.015	5.015	-24166	16250	36672	95155	121653	25576	131827		4.95	Si
SLD 14	-1.56	-28041.97	-90287	-72230	-27232	5.015	5.015	-32006	16250	36672	95155	121653	25576	131827		4.84	Si
SLD 14	0.54	335.53	-63176	-50541	-26002	5.015	5.015	-22395	16250	36672	95155	121653	25576	131827		5.07	Si
SLD 13	-1.56	-27969.39	-90288	-72230	-27061	5.015	5.015	-32006	16250	36672	95155	121653	25576	131827		4.87	Si
SLD 13	0.54	472.09	-63291	-50633	-25828	5.015	5.015	-22436	16250	36672	95155	121653	25576	131827		5.1	Si
SLD 15	-1.56	-27574.25	-89656	-71724	-27790	5.015	5.015	-31782	16250	36672	95155	121653	25576	131827		4.74	Si
SLD 15	0.54	-23.49	-63397	-50718	-26411	5.015	5.015	-22474	16250	36672	95155	121653	25576	131827		4.99	Si
SLV 16	-1.56	-59577.23	-61877	-49502	-39103	5.015	4.634	-23974	16250	33886	95155	121653	25576	129041		3.3	Si
SLV 16	0.54	-10497.85	-43756	-35005	-34664	5.015	5.015	-15511	15602	35210	95155	121653	25576	130365		3.76	Si
SLV 12	-1.56	-19257.73	-93687	-74950	-28107	5.015	5.015	-33211	16250	36672	95155	121653	25576	131827		4.69	Si
SLV 12	0.54	350.51	-67996	-54397	-26916	5.015	5.015	-24104	16250	36672	95155	121653	25576	131827		4.9	Si
SLV 13	-1.56	-60279.07	-63311	-50649	-37015	5.015	4.6662	-24368	16250	34122	95155	121653	25576	129277		3.49	Si
SLV 13	0.54	-9027.96	-43762	-35010	-32899	5.015	5.015	-15513	15603	35211	95155	121653	25576	130367		3.96	Si
SLD 16	-1.56	-27646.83	-89655	-71724	-27961	5.015	5.015	-31782	16250	36672	95155	121653	25576	131827		4.71	Si
SLD 16	0.54	-160.05	-63282	-50626	-26585	5.015	5.015	-22433	16250	36672	95155	121653	25576	131827		4.96	Si
SLV 14	-1.56	-60448.03	-63311	-50649	-37412	5.015	4.6581	-24409	16250	34063	95155	121653	25576	129218		3.45	Si
SLV 14	0.54	-9345.9	-43493	-34795	-33304	5.015	5.015	-15418	15584	35168	95155	121653	25576	130324		3.91	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-50540	0.24	364.76	9981.99	12854.19	11418.09	31.3	Si
SLV 16	-50701	0.24	364.76	10009.46	12891.14	11450.3	31.39	Si
SLV 13	-50801	0.24	364.76	10026.38	12913.91	11470.14	31.45	Si
SLV 15	-50963	0.24	364.76	10053.8	12950.86	11502.33	31.53	Si
SLV 10	-81128	0.24	364.76	14673.51	19656.02	17164.76	47.06	Si
SLV 9	-81298	0.24	364.76	14696.77	19691.53	17194.15	47.14	Si
SLV 12	-81667	0.24	364.76	14747.03	19768.42	17257.72	47.31	Si
SLV 11	-81837	0.24	364.76	14770.19	19803.93	17287.06	47.39	Si
SLV 6	-107470	0.24	364.76	17897.86	24882.81	21390.34	58.64	Si
SLV 5	-107640	0.24	364.76	17916.25	24914.64	21415.44	58.71	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-83484	-122387	19	0.395	9443.2	0.97	5.92613	4.02955	Si
SLV 8	-83356	-122387	20	0.396	9430.1	0.969	5.93296	4.02955	Si
SLV 5	-70585	-127167	-2292	0.419	8130.2	0.965	6.3174	4.02955	Si
SLV 6	-70457	-127166	-2290	0.42	8117.2	0.965	6.32674	4.02955	Si
SLV 3	-98112	-157543	-1048	0.341	10932.8	0.973	5.08462	2.9746	Si
SLV 4	-97915	-157542	-1045	0.341	10912.7	0.973	5.0927	2.9746	Si
SLV 1	-94242	-158977	-1741	0.344	10538.7	0.973	5.13892	2.9746	Si
SLV 2	-94046	-158976	-1738	0.344	10518.6	0.972	5.14743	2.9746	Si
SLV 11	-67106	-93688	239	0.464	7776.1	0.964	6.99695	4.02955	Si
SLV 12	-66978	-93687	241	0.465	7763.1	0.963	7.00729	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.164	SLU 49	Si
V_SLU	3.634	SLU 84	Si
PF_SLV	2.555	SLV 16	Si
V_SLV	3.3	SLV 16	Si
PFFP_SLV	31.303	SLV 14	Si
R_SLV	1.471	SLV 7	Si

Maschio 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.046	-18.838	1.046	L2	L4	3.875	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.56	-10141.29	-114902	-0.0001223	0.0004492	0.0035	3.875	102566.01	154045.86	154045.86	15.19	No	Si
SLU 83	0.54	-12942.94	-110407	-0.0001219	0.0004492	0.0035	3.875	103066.54	150741.84	150741.84	11.65	No	Si
SLU 63	-1.56	-8892.3	-105289	-0.0001099	0.0004492	0.0035	3.875	103189.05	146979.93	146979.93	16.53	No	Si
SLU 63	0.54	-12064.35	-100253	-0.0001096	0.0004492	0.0035	3.875	102844.6	143278.37	143278.37	11.88	No	Si
SLU 74	-1.56	-9917.37	-111366	-0.000118	0.0004492	0.0035	3.875	102990.66	151446.22	151446.22	15.27	No	Si
SLU 74	0.54	-12459.86	-106667	-0.0001171	0.0004492	0.0035	3.875	103202.93	147992.5	147992.5	11.88	No	Si
SLU 75	-1.56	-9904.28	-111381	-0.000118	0.0004492	0.0035	3.875	102989.32	151457.35	151457.35	15.29	No	Si
SLU 75	0.54	-12455.63	-106645	-0.0001171	0.0004492	0.0035	3.875	103202.98	147976.23	147976.23	11.88	No	Si
SLU 62	-1.56	-8905.4	-105274	-0.0001099	0.0004492	0.0035	3.875	103188.7	146968.8	146968.8	16.5	No	Si
SLU 62	0.54	-12068.59	-100276	-0.0001096	0.0004492	0.0035	3.875	102847.12	143294.65	143294.65	11.87	No	Si
SLU 78	-1.56	-10041	-112551	-0.0001195	0.0004492	0.0035	3.875	102873.65	152317.73	152317.73	15.17	No	Si
SLU 78	0.54	-12595.53	-107854	-0.0001186	0.0004492	0.0035	3.875	103187.21	148864.85	148864.85	11.82	No	Si
SLU 84	-1.56	-10128.19	-114918	-0.0001223	0.0004492	0.0035	3.875	102563.7	154056.99	154056.99	15.21	No	Si
SLU 84	0.54	-12938.7	-110385	-0.0001219	0.0004492	0.0035	3.875	103068.1	150725.57	150725.57	11.65	No	Si
SLU 77	-1.56	-10054.09	-112536	-0.0001195	0.0004492	0.0035	3.875	102875.3	152306.59	152306.59	15.15	No	Si
SLU 77	0.54	-12599.76	-107876	-0.0001186	0.0004492	0.0035	3.875	103186.68	148881.13	148881.13	11.82	No	Si
SLU 81	-1.56	-10004.57	-113732	-0.0001208	0.0004492	0.0035	3.875	102731.74	153185.48	153185.48	15.31	No	Si
SLU 81	0.54	-12803.04	-109198	-0.0001204	0.0004492	0.0035	3.875	103138.46	149853.22	149853.22	11.7	No	Si
SLU 82	-1.56	-9991.47	-113747	-0.0001208	0.0004492	0.0035	3.875	102729.75	153196.61	153196.61	15.33	No	Si
SLU 82	0.54	-12798.8	-109176	-0.0001204	0.0004492	0.0035	3.875	103139.52	149836.94	149836.94	11.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	-1.56	-66126.64	-71665	-0.0001651	0.0006738	0.0035	3.875		124740.69	124740.69	1.89		Si
SLV 13	0.54	16651.66	-67323	-0.0000805	0.0006738	0.0035	3.875		110899.22	110899.22	6.66		Si
SLD 14	-1.56	-32401.2	-74943	-0.0001099	0.0006738	0.0035	3.875		129061.34	129061.34	3.98		Si
SLD 14	0.54	2435.35	-70561	-0.0000637	0.0006738	0.0035	3.875		115465.9	115465.9	47.41		Si
SLV 4	-1.56	52281.19	-82784	-0.0001465	0.0006738	0.0035	3.875		132703.13	132703.13	2.54		Si
SLV 4	0.54	-33645.41	-79037	-0.0001157	0.0006738	0.0035	3.875		134454.36	134454.36	4		Si
SLV 3	-1.56	52649.94	-82535	-0.0001469	0.0006738	0.0035	3.875		132351.86	132351.86	2.51		Si
SLV 3	0.54	-34036.04	-79317	-0.0001165	0.0006738	0.0035	3.875		134800.81	134800.81	3.96		Si
SLV 16	-1.56	-63777.32	-72927	-0.0001599	0.0006738	0.0035	3.875		126403.49	126403.49	1.98		Si
SLV 16	0.54	14850.84	-65369	-0.0000762	0.0006738	0.0035	3.875		108144.22	108144.22	7.28		Si
SLV 14	-1.56	-66495.39	-71914	-0.0001661	0.0006738	0.0035	3.875		125068.95	125068.95	1.88		Si
SLV 14	0.54	17042.3	-67043	-0.0000808	0.0006738	0.0035	3.875		110504.31	110504.31	6.48		Si
SLD 13	-1.56	-32242.81	-74836	-0.0001096	0.0006738	0.0035	3.875		128920.35	128920.35	4		Si
SLD 13	0.54	2267.57	-70681	-0.0000636	0.0006738	0.0035	3.875		115635.52	115635.52	51		Si
SLV 15	-1.56	-63408.57	-72678	-0.000159	0.0006738	0.0035	3.875		126075.24	126075.24	1.99		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.54	14460.21	-65649	-0.0000759	0.0006738	0.0035	3.875		108539.13	108539.13	7.51		Si
SLV 2	-1.56	49563.12	-81771	-0.0001415	0.0006738	0.0035	3.875		131275.03	131275.03	2.65		Si
SLV 2	0.54	-31453.96	-80711	-0.0001142	0.0006738	0.0035	3.875		136524.82	136524.82	4.34		Si
SLV 1	-1.56	49931.86	-81522	-0.0001418	0.0006738	0.0035	3.875		130923.76	130923.76	2.62		Si
SLV 1	0.54	-31844.59	-80991	-0.000115	0.0006738	0.0035	3.875		136871.27	136871.27	4.3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-1.56	-10141.29	-114902	-91922	4651	3.875	3.875	-52715	10833	18891	95155	62666	19762	82429	No	17.72	Si
SLU 83	0.54	-12942.94	-110407	-88326	4707	3.875	3.875	-50653	10833	18891	95155	62666	19762	82429	No	17.51	Si
SLU 78	-1.56	-10041	-112551	-90041	4379	3.875	3.875	-51636	10833	18891	95155	62666	19762	82429	No	18.82	Si
SLU 78	0.54	-12595.53	-107854	-86283	4435	3.875	3.875	-49481	10833	18891	95155	62666	19762	82429	No	18.59	Si
SLU 63	-1.56	-8892.3	-105289	-84231	4416	3.875	3.875	-48305	10833	18891	95155	62666	19762	82429	No	18.67	Si
SLU 63	0.54	-12064.35	-100253	-80203	4467	3.875	3.875	-45994	10833	18891	95155	62666	19762	82429	No	18.45	Si
SLU 60	-1.56	-8768.67	-104104	-83283	4409	3.875	3.875	-47761	10833	18891	95155	62666	19762	82429	No	18.69	Si
SLU 60	0.54	-11928.68	-99067	-79253	4460	3.875	3.875	-45450	10833	18891	95155	62666	19762	82429	No	18.48	Si
SLU 81	-1.56	-10004.57	-113732	-90985	4620	3.875	3.875	-52178	10833	18891	95155	62666	19762	82429	No	17.84	Si
SLU 81	0.54	-12803.04	-109198	-87359	4676	3.875	3.875	-50098	10833	18891	95155	62666	19762	82429	No	17.63	Si
SLU 61	-1.56	-8755.58	-104119	-83295	4385	3.875	3.875	-47768	10833	18891	95155	62666	19762	82429	No	18.8	Si
SLU 61	0.54	-11924.45	-99044	-79236	4436	3.875	3.875	-45440	10833	18891	95155	62666	19762	82429	No	18.58	Si
SLU 62	-1.56	-8905.4	-105274	-84219	4440	3.875	3.875	-48298	10833	18891	95155	62666	19762	82429	No	18.56	Si
SLU 62	0.54	-12068.59	-100276	-80220	4492	3.875	3.875	-46005	10833	18891	95155	62666	19762	82429	No	18.35	Si
SLU 84	-1.56	-10128.19	-114918	-91934	4627	3.875	3.875	-52722	10833	18891	95155	62666	19762	82429	No	17.81	Si
SLU 84	0.54	-12938.7	-110385	-88308	4683	3.875	3.875	-50643	10833	18891	95155	62666	19762	82429	No	17.6	Si
SLU 82	-1.56	-9991.47	-113747	-90998	4596	3.875	3.875	-52185	10833	18891	95155	62666	19762	82429	No	17.93	Si
SLU 82	0.54	-12798.8	-109176	-87341	4652	3.875	3.875	-50088	10833	18891	95155	62666	19762	82429	No	17.72	Si
SLU 77	-1.56	-10054.09	-112536	-90029	4403	3.875	3.875	-51629	10833	18891	95155	62666	19762	82429	No	18.72	Si
SLU 77	0.54	-12599.76	-107876	-86301	4459	3.875	3.875	-49491	10833	18891	95155	62666	19762	82429	No	18.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	-1.56	17353.9	-79067	-63253	20517	3.875	3.875	-36274	16250	28336	95155	93999	19762	113762		5.54	Si
SLD 1	0.54	-18475.3	-76536	-61229	20553	3.875	3.875	-35113	16250	28336	95155	93999	19762	113762		5.53	Si
SLV 3	-1.56	52649.94	-82535	-66028	43735	3.875	3.875	-37865	16250	28336	95155	93999	19762	113762		2.6	Si
SLV 3	0.54	-34036.04	-79317	-63454	43410	3.875	3.875	-36389	16250	28336	95155	93999	19762	113762		2.62	Si
SLV 13	-1.56	-66126.64	-71665	-57332	-37261	3.875	3.0443	-42692	16250	22262	95155	93999	19762	113762		3.05	Si
SLV 13	0.54	16651.66	-67323	-53858	-36860	3.875	3.875	-30886	16250	28336	95155	93999	19762	113762		3.09	Si
SLV 4	-1.56	52281.19	-82784	-66227	42971	3.875	3.875	-37980	16250	28336	95155	93999	19762	113762		2.65	Si
SLV 4	0.54	-33645.41	-79037	-63230	42645	3.875	3.875	-36261	16250	28336	95155	93999	19762	113762		2.67	Si
SLV 15	-1.56	-63408.57	-72678	-58142	-37691	3.875	3.1951	-41237	16250	23364	95155	93999	19762	113762		3.02	Si
SLV 15	0.54	14460.21	-65649	-52519	-37652	3.875	3.875	-30119	16250	28336	95155	93999	19762	113762		3.02	Si
SLV 2	-1.56	49563.12	-81771	-65417	43401	3.875	3.875	-37515	16250	28336	95155	93999	19762	113762		2.62	Si
SLV 2	0.54	-31453.96	-80711	-64569	43437	3.875	3.875	-37029	16250	28336	95155	93999	19762	113762		2.62	Si
SLV 1	-1.56	49931.86	-81522	-65218	44165	3.875	3.875	-37401	16250	28336	95155	93999	19762	113762		2.58	Si
SLV 1	0.54	-31844.59	-80991	-64793	44203	3.875	3.875	-37157	16250	28336	95155	93999	19762	113762		2.57	Si
SLV 16	-1.56	-63777.32	-72927	-58341	-38456	3.875	3.1889	-41463	16250	23319	95155	93999	19762	113762		2.96	Si
SLV 16	0.54	14850.84	-65369	-52295	-38417	3.875	3.875	-29990	16250	28336	95155	93999	19762	113762		2.96	Si
SLV 14	-1.56	-66495.39	-71914	-57531	-38026	3.875	3.0385	-42927	16250	22219	95155	93999	19762	113762		2.99	Si
SLV 14	0.54	17042.3	-67043	-53634	-37625	3.875	3.875	-30758	16250	28336	95155	93999	19762	113762		3.02	Si
SLD 3	-1.56	18555.74	-79505	-63604	20329	3.875	3.875	-36476	16250	28336	95155	93999	19762	113762		5.6	Si
SLD 3	0.54	-19429.1	-75799	-60639	20211	3.875	3.875	-34775	16250	28336	95155	93999	19762	113762		5.63	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-67433	0.24	281.84	11971.19	16170.58	14070.89	49.92	Si
SLV 15	-67580	0.24	281.84	11990.26	16201.16	14095.71	50.01	Si
SLV 14	-68546	0.24	281.84	12114.98	16402.45	14258.71	50.59	Si
SLV 13	-68692	0.24	281.84	12133.82	16433.03	14283.42	50.68	Si
SLV 12	-70550	0.24	281.84	12369.67	16809.15	14589.41	51.76	Si
SLV 11	-70646	0.24	281.84	12381.68	16828.04	14604.86	51.82	Si
SLV 10	-74258	0.24	281.84	12825.93	17541.86	15183.89	53.87	Si
SLV 8	-74312	0.24	281.84	12832.43	17552.53	15192.48	53.9	Si
SLV 9	-74353	0.24	281.84	12837.43	17560.75	15199.09	53.93	Si
SLV 7	-74407	0.24	281.84	12843.93	17571.42	15207.68	53.96	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-60011	-76934	-1793	0.39	6838.9	0.968	5.8583	4.02955	Si
SLV 6	-59800	-77096	-1791	0.391	6817.4	0.968	5.87472	4.02955	Si
SLV 7	-58022	-80310	-488	0.421	6636.5	0.967	6.32675	4.02955	Si
SLV 8	-57811	-80472	-486	0.422	6615	0.967	6.34534	4.02955	Si
SLV 9	-53853	-73977	-1696	0.425	6212.1	0.965	6.39989	4.02955	Si
SLV 10	-53642	-74139	-1694	0.426	6190.6	0.965	6.42012	4.02955	Si
SLV 11	-51864	-77352	-391	0.46	6009.7	0.964	6.94063	4.02955	Si
SLV 12	-51653	-77515	-389	0.462	5988.3	0.963	6.96368	4.02955	Si
SLV 1	-66557	-81522	-1450	0.366	7505.3	0.97	5.48164	2.9746	Si
SLV 2	-66233	-81771	-1447	0.367	7472.3	0.97	5.50274	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.647	SLU 83	Si
V_SLU	17.511	SLU 83	Si
PF_SLV	1.881	SLV 14	Si
V_SLV	2.574	SLV 1	Si
PFFP_SLV	49.924	SLV 16	Si
R_SLV	1.454	SLV 5	Si

Maschio 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.046	-11.238	1.046	L2	L4	0.76	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	-1.56	-844.42	-37211	-0.000243	0.0004492	0.0035	0.7597	1543.38	6597.05	6597.05	7.81	No	Si
SLU 81	0.6	204.95	-15517	-0.0000778	0.0004492	0.0035	0.7597	3704.72	4539.46	4539.46	22.15	No	Si
SLU 82	-1.56	-848.72	-37233	-0.0002435	0.0004492	0.0035	0.7597	1536.95	6595.99	6595.99	7.77	No	Si
SLU 82	0.6	206.04	-15516	-0.0000778	0.0004492	0.0035	0.7597	3704.64	4539.29	4539.29	22.03	No	Si
SLU 60	-1.56	-831.5	-34239	-0.0002189	0.0004492	0.0035	0.7597	2345.57	6611.43	6611.43	7.95	No	Si
SLU 60	0.6	209.64	-14135	-0.0000712	0.0004492	0.0035	0.7597	3552.37	4254.6	4254.6	20.29	No	Si
SLU 84	-1.56	-863.46	-37607	-0.0002475	0.0004492	0.0035	0.7597	1424.41	6577.58	6577.58	7.62	No	Si
SLU 84	0.6	210.33	-15679	-0.0000788	0.0004492	0.0035	0.7597	3720.32	4572.89	4572.89	21.74	No	Si
SLU 77	-1.56	-823.72	-36771	-0.0002382	0.0004492	0.0035	0.7597	1672.35	6618.7	6618.7	8.04	No	Si
SLU 77	0.6	204.56	-15319	-0.0000768	0.0004492	0.0035	0.7597	3684.98	4498.56	4498.56	21.99	No	Si
SLU 78	-1.56	-828.02	-36792	-0.0002387	0.0004492	0.0035	0.7597	1666.09	6617.64	6617.64	7.99	No	Si
SLU 78	0.6	205.65	-15318	-0.0000768	0.0004492	0.0035	0.7597	3684.9	4498.39	4498.39	21.87	No	Si
SLU 83	-1.56	-859.16	-37585	-0.000247	0.0004492	0.0035	0.7597	1430.99	6578.65	6578.65	7.66	No	Si
SLU 83	0.6	209.24	-15680	-0.0000788	0.0004492	0.0035	0.7597	3720.4	4573.05	4573.05	21.86	No	Si
SLU 61	-1.56	-835.8	-34260	-0.0002193	0.0004492	0.0035	0.7597	2340.31	6611.53	6611.53	7.91	No	Si
SLU 61	0.6	210.73	-14134	-0.0000712	0.0004492	0.0035	0.7597	3552.27	4254.44	4254.44	20.19	No	Si
SLU 63	-1.56	-850.54	-34634	-0.0002229	0.0004492	0.0035	0.7597	2248	6613.23	6613.23	7.78	No	Si
SLU 63	0.6	215.02	-14297	-0.0000722	0.0004492	0.0035	0.7597	3572.05	4288.04	4288.04	19.94	No	Si
SLU 62	-1.56	-846.24	-34613	-0.0002225	0.0004492	0.0035	0.7597	2253.4	6613.13	6613.13	7.81	No	Si
SLU 62	0.6	213.94	-14298	-0.0000721	0.0004492	0.0035	0.7597	3572.15	4288.2	4288.2	20.04	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-1.56	-8049.74	-24249	-0.0069893	0.0006738	0.0035	0.6078		6948.3	6948.3	0.86		No
SLV 15	0.6	2150.74	-6930	-0.0002457	0.0006738	0.0035	0.7597		2490.46	2490.46	1.16		Si
SLD 15	-1.56	-3750.8	-24810	-0.0002724	0.0006738	0.0035	0.7597		7041.57	7041.57	1.88		Si
SLD 15	0.6	999.5	-8925	-0.0000734	0.0006738	0.0035	0.7597		3113.09	3113.09	3.11		Si
SLV 2	-1.56	6975.71	-26161	-0.0014326	0.0006738	0.0035	0.7597		7144.43	7144.43	1.02		Si
SLV 2	0.6	-1872.97	-13897	-0.0001297	0.0006738	0.0035	0.7597		4707.06	4707.06	2.51		Si
SLV 14	-1.56	-7762.21	-22249	-0.0074471	0.0006738	0.0035	0.6078		6616.08	6616.08	0.85		No
SLV 14	0.6	2035.54	-6947	-0.0001902	0.0006738	0.0035	0.7597		2495.64	2495.64	1.23		Si
SLV 13	-1.56	-7716.7	-22292	-0.0072781	0.0006738	0.0035	0.6078		6623.25	6623.25	0.86		No
SLV 13	0.6	2024.45	-6963	-0.0001851	0.0006738	0.0035	0.7597		2501.06	2501.06	1.24		Si
SLV 3	-1.56	6688.18	-28160	-0.0006903	0.0006738	0.0035	0.7597		7437.29	7437.29	1.11		Si
SLV 3	0.6	-1757.76	-13881	-0.000125	0.0006738	0.0035	0.7597		4702.74	4702.74	2.68		Si
SLV 16	-1.56	-8095.25	-24205	-0.0071472	0.0006738	0.0035	0.6078		6941.12	6941.12	0.86		No
SLV 16	0.6	2161.84	-6914	-0.0002553	0.0006738	0.0035	0.7597		2485.04	2485.04	1.15		Si
SLV 1	-1.56	7021.21	-26204	-0.0015879	0.0006738	0.0035	0.7597		7150.76	7150.76	1.02		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	0.6	-1884.06	-13914	-0.0001302	0.0006738	0.0035	0.7597		4711.57	4711.57	2.5		Si
SLV 4	-1.56	6642.67	-28117	-0.0006719	0.0006738	0.0035	0.7597		7430.97	7430.97	1.12		Si
SLV 4	0.6	-1746.67	-13864	-0.0001245	0.0006738	0.0035	0.7597		4698.23	4698.23	2.69		Si
SLD 16	-1.56	-3770.35	-24792	-0.0002735	0.0006738	0.0035	0.7597		7038.49	7038.49	1.87		Si
SLD 16	0.6	1004.26	-8918	-0.0000736	0.0006738	0.0035	0.7597		3111.12	3111.12	3.1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-1.56	-820.39	-36524	-29219	-1773	0.7597	0.7597	-85468	10833	3704	95155	12286	3875	16160	No	9.12	Si
SLU 80	0.6	204.19	-15200	-12160	-37	0.7597	0.7597	-35570	10833	3704	95155	12286	3875	16160	No	432.71	Si
SLU 75	-1.56	-813.28	-36418	-29134	-1762	0.7597	0.7597	-85221	10833	3704	95155	12286	3875	16160	No	9.17	Si
SLU 75	0.6	201.35	-15155	-12124	-35	0.7597	0.7597	-35464	10833	3704	95155	12286	3875	16160	No	455.69	Si
SLU 77	-1.56	-823.72	-36771	-29417	-1781	0.7597	0.7597	-86046	10833	3704	95155	12286	3875	16160	No	9.07	Si
SLU 77	0.6	204.56	-15319	-12255	-31	0.7597	0.7597	-35847	10833	3704	95155	12286	3875	16160	No	517.54	Si
SLU 78	-1.56	-828.02	-36792	-29434	-1787	0.7597	0.7597	-86097	10833	3704	95155	12286	3875	16160	No	9.04	Si
SLU 78	0.6	205.65	-15318	-12254	-37	0.7597	0.7597	-35845	10833	3704	95155	12286	3875	16160	No	441.29	Si
SLU 63	-1.56	-850.54	-34634	-27708	-1757	0.7597	0.7597	-81047	10833	3704	95155	12286	3875	16160	No	9.2	Si
SLU 63	0.6	215.02	-14297	-11438	-98	0.7597	0.7597	-33457	10833	3704	95155	12286	3875	16160	No	165.3	Si
SLU 82	-1.56	-848.72	-37233	-29786	-1809	0.7597	0.7597	-87127	10833	3704	95155	12286	3875	16160	No	8.93	Si
SLU 82	0.6	206.04	-15516	-12413	-31	0.7597	0.7597	-36310	10833	3704	95155	12286	3875	16160	No	516.95	Si
SLU 84	-1.56	-863.46	-37607	-30086	-1834	0.7597	0.7597	-88003	10833	3704	95155	12286	3875	16160	No	8.81	Si
SLU 84	0.6	210.33	-15679	-12544	-32	0.7597	0.7597	-36691	10833	3704	95155	12286	3875	16160	No	498.5	Si
SLU 81	-1.56	-844.42	-37211	-29769	-1803	0.7597	0.7597	-87077	10833	3704	95155	12286	3875	16160	No	8.96	Si
SLU 81	0.6	204.95	-15517	-12414	-26	0.7597	0.7597	-36312	10833	3704	95155	12286	3875	16160	No	624.78	Si
SLU 83	-1.56	-859.16	-37585	-30068	-1828	0.7597	0.7597	-87952	10833	3704	95155	12286	3875	16160	No	8.84	Si
SLU 83	0.6	209.24	-15680	-12544	-27	0.7597	0.7597	-36693	10833	3704	95155	12286	3875	16160	No	598.03	Si
SLU 79	-1.56	-816.09	-36502	-29201	-1767	0.7597	0.7597	-85417	10833	3704	95155	12286	3875	16160	No	9.15	Si
SLU 79	0.6	203.1	-15201	-12161	-32	0.7597	0.7597	-35571	10833	3704	95155	12286	3875	16160	No	505.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	-1.56	-3770.35	-24792	-19833	-3998	0.7597	0.6833	-66850	16250	4997	95155	18429	3875	22303		5.58	Si
SLD 16	0.6	1004.26	-8918	-7135	413	0.7597	0.7597	-20869	16250	5555	95155	18429	3875	22303		53.95	Si
SLV 4	-1.56	6642.67	-28117	-22494	4796	0.7597	0.4308	-65797	16250	3150	95155	18429	3875	22303		4.65	Si
SLV 4	0.6	-1746.67	-13864	-11091	-1512	0.7597	0.7597	-32443	16250	5555	95155	18429	3875	22303		14.75	Si
SLV 15	-1.56	-8049.74	-24249	-19399	-7696	0.6078	0.1437	0	0	0	95155	14743	3100	17843		2.32	Si
SLV 15	0.6	2150.74	-6930	-5544	1010	0.7597	0.2086	-60934	16250	1525	95155	18429	3875	22303		22.09	Si
SLV 3	-1.56	6688.18	-28160	-22528	4828	0.7597	0.4271	-65898	16250	3123	95155	18429	3875	22303		4.62	Si
SLV 3	0.6	-1757.76	-13881	-11105	-1534	0.7597	0.7597	-32482	16250	5555	95155	18429	3875	22303		14.54	Si
SLD 15	-1.56	-3750.8	-24810	-19848	-3985	0.7597	0.686	-66627	16250	5017	95155	18429	3875	22303		5.6	Si
SLD 15	0.6	999.5	-8925	-7140	404	0.7597	0.7597	-20886	16250	5555	95155	18429	3875	22303		55.18	Si
SLV 1	-1.56	7021.21	-26204	-20963	5313	0.7597	0.3357	-176318	16250	2455	95155	18429	3875	22303		4.2	Si
SLV 1	0.6	-1884.06	-13914	-11131	-1114	0.7597	0.7333	-32560	16250	5363	95155	18429	3875	22303		20.02	Si
SLV 13	-1.56	-7716.7	-22292	-17834	-7211	0.6078	0.1011	0	0	0	95155	14743	3100	17843		2.47	Si
SLV 13	0.6	2024.45	-6963	-5571	1430	0.7597	0.2674	-47387	16250	1955	95155	18429	3875	22303		15.6	Si
SLV 16	-1.56	-8095.25	-24205	-19364	-7728	0.6078	0.1362	0	0	0	95155	14743	3100	17843		2.31	Si
SLV 16	0.6	2161.84	-6914	-5531	1031	0.7597	0.2015	-62998	16250	1473	95155	18429	3875	22303		21.63	Si
SLV 14	-1.56	-7762.21	-22249	-17799	-7243	0.6078	0.0929	0	0	0	95155	14743	3100	17843		2.46	Si
SLV 14	0.6	2035.54	-6947	-5557	1451	0.7597	0.2605	-48558	16250	1905	95155	18429	3875	22303		15.37	Si
SLV 2	-1.56	6975.71	-26161	-20929	5281	0.7597	0.3396	-171815	16250	2483	95155	18429	3875	22303		4.22	Si
SLV 2	0.6	-1872.97	-13897	-11118	-1093	0.7597	0.7352	-32520	16250	5376	95155	18429	3875	22303		20.41	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-15623	0.24	55.26	2638.66	3638.45	3138.56	56.8	Si
SLV 13	-15642	0.24	55.26	2640.88	3642.16	3141.52	56.85	Si
SLV 10	-15729	0.24	55.26	2650.67	3658.59	3154.63	57.09	Si
SLV 9	-15742	0.24	55.26	2652.11	3661	3156.56	57.13	Si
SLV 16	-16596	0.24	55.26	2745.02	3821.28	3283.15	59.42	Si
SLV 15	-16615	0.24	55.26	2747.1	3824.98	3286.04	59.47	Si
SLV 6	-16791	0.24	55.26	2765.56	3857.92	3311.74	59.93	Si
SLV 5	-16804	0.24	55.26	2766.9	3860.33	3313.62	59.97	Si
SLV 12	-18973	0.24	55.26	2976.26	4244.6	3610.43	65.34	Si
SLV 11	-18986	0.24	55.26	2977.4	4246.75	3612.08	65.37	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-9695	-22545	-144	0.471	1130.1	0.962	7.11425	4.02955	Si
SLV 6	-9685	-22516	-143	0.471	1129.1	0.962	7.12063	4.02955	Si
SLV 7	-8688	-29066	-183	0.508	1027.7	0.959	7.70649	4.02955	Si
SLV 8	-8678	-29038	-182	0.509	1026.7	0.959	7.71418	4.02955	Si
SLV 1	-12094	-26204	-239	0.391	1374.2	0.968	5.86441	2.9746	Si
SLV 2	-12079	-26161	-239	0.391	1372.7	0.968	5.87085	2.9746	Si
SLV 3	-11792	-28160	-251	0.397	1343.5	0.968	5.96717	2.9746	Si
SLV 4	-11777	-28117	-250	0.398	1341.9	0.968	5.9739	2.9746	Si
SLV 9	-7338	-21371	-74	0.592	890.5	0.953	9.03183	4.02955	Si
SLV 10	-7329	-21343	-73	0.593	889.5	0.953	9.04248	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.618	SLU 84	Si
V_SLU	8.814	SLU 84	Si
PF_SLV	0.852	SLV 14	No
V_SLV	2.309	SLV 16	Si
PFFP_SLV	56.8	SLV 14	Si
R_SLV	1.766	SLV 5	Si

Maschio 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.428	1.046	-9.398	1.046	L2	L4	1.97	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.56	-4186.83	-63078	-0.0001428	0.0004492	0.0035	1.9703	25959.54	40975.48	40975.48	9.79	No	Si
SLU 83	0.54	5076.83	-57922	-0.0001369	0.0004492	0.0035	1.9703	26553.28	38475.53	38475.53	7.58	No	Si
SLU 78	-1.56	-4066.17	-61610	-0.0001386	0.0004492	0.0035	1.9703	26177.85	40602.81	40602.81	9.99	No	Si
SLU 78	0.54	4923.96	-56482	-0.0001327	0.0004492	0.0035	1.9703	26632.77	37935.16	37935.16	7.7	No	Si
SLU 61	-1.56	-4160.55	-57071	-0.0001292	0.0004492	0.0035	1.9703	26604.83	39304	39304	9.45	No	Si
SLU 61	0.54	4734.76	-51995	-0.0001218	0.0004492	0.0035	1.9703	26638.55	36251.23	36251.23	7.66	No	Si
SLU 81	-1.56	-4175.9	-62423	-0.0001412	0.0004492	0.0035	1.9703	26061.76	40809.25	40809.25	9.77	No	Si
SLU 81	0.54	5008.2	-57277	-0.000135	0.0004492	0.0035	1.9703	26593.56	38233.42	38233.42	7.63	No	Si
SLU 82	-1.56	-4174.09	-62434	-0.0001412	0.0004492	0.0035	1.9703	26060.1	40812.05	40812.05	9.78	No	Si
SLU 82	0.54	5007.33	-57288	-0.0001351	0.0004492	0.0035	1.9703	26592.94	38237.54	38237.54	7.64	No	Si
SLU 60	-1.56	-4162.36	-57060	-0.0001291	0.0004492	0.0035	1.9703	26605.41	39299.82	39299.82	9.44	No	Si
SLU 60	0.54	4735.62	-51984	-0.0001217	0.0004492	0.0035	1.9703	26638.12	36247.1	36247.1	7.65	No	Si
SLU 84	-1.56	-4185.02	-63089	-0.0001428	0.0004492	0.0035	1.9703	25957.74	40978.29	40978.29	9.79	No	Si
SLU 84	0.54	5075.97	-57933	-0.000137	0.0004492	0.0035	1.9703	26552.53	38479.66	38479.66	7.58	No	Si
SLU 62	-1.56	-4173.29	-57715	-0.0001307	0.0004492	0.0035	1.9703	26567.06	39547.42	39547.42	9.48	No	Si
SLU 62	0.54	4804.26	-52629	-0.0001236	0.0004492	0.0035	1.9703	26659.96	36489.22	36489.22	7.6	No	Si
SLU 77	-1.56	-4067.98	-61599	-0.0001386	0.0004492	0.0035	1.9703	26179.35	40600	40600	9.98	No	Si
SLU 77	0.54	4924.82	-56471	-0.0001327	0.0004492	0.0035	1.9703	26633.23	37931.04	37931.04	7.7	No	Si
SLU 63	-1.56	-4171.48	-57726	-0.0001307	0.0004492	0.0035	1.9703	26566.35	39551.6	39551.6	9.48	No	Si
SLU 63	0.54	4803.4	-52640	-0.0001236	0.0004492	0.0035	1.9703	26660.27	36493.34	36493.34	7.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	-1.56	20853.57	-36227	-0.0002136	0.0006738	0.0035	1.9703		30105.01	30105.01	1.44		Si
SLV 2	0.54	-11544.2	-33111	-0.0001181	0.0006738	0.0035	1.9703		29903.16	29903.16	2.59		Si
SLD 14	-1.56	-12998.47	-43504	-0.0001464	0.0006738	0.0035	1.9703		36815.2	36815.2	2.83		Si
SLD 14	0.54	9783.45	-39087	-0.0001196	0.0006738	0.0035	1.9703		32151.1	32151.1	3.29		Si
SLD 16	-1.56	-13159.87	-44485	-0.0001493	0.0006738	0.0035	1.9703		37434.65	37434.65	2.84		Si
SLD 16	0.54	9749.61	-40302	-0.0001218	0.0006738	0.0035	1.9703		33020.84	33020.84	3.39		Si
SLV 1	-1.56	21133.29	-36274	-0.0002182	0.0006738	0.0035	1.9703		30138.94	30138.94	1.43		Si
SLV 1	0.54	-11810.09	-33176	-0.0001199	0.0006738	0.0035	1.9703		29949.8	29949.8	2.54		Si
SLV 15	-1.56	-26633.33	-47822	-0.0002821	0.0006738	0.0035	1.5762		39425.43	39425.43	1.48		Si
SLV 15	0.54	18129.64	-43218	-0.0001805	0.0006738	0.0035	1.9703		35044.9	35044.9	1.93		Si
SLV 14	-1.56	-26539.97	-45498	-0.0002869	0.0006738	0.0035	1.5762		38051.42	38051.42	1.43		Si
SLV 14	0.54	18479.56	-40337	-0.0001809	0.0006738	0.0035	1.9703		33046.12	33046.12	1.79		Si
SLV 3	-1.56	20760.22	-38551	-0.0002075	0.0006738	0.0035	1.9703		31767.82	31767.82	1.53		Si
SLV 3	0.54	-11894.12	-35991	-0.0001254	0.0006738	0.0035	1.9703		31909.74	31909.74	2.68		Si
SLV 4	-1.56	20480.5	-38503	-0.0002038	0.0006738	0.0035	1.9703		31733.89	31733.89	1.55		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	0.54	-11628.24	-35926	-0.0001238	0.0006738	0.0035	1.9703		31865.76	31865.76	2.74		Si
SLV 13	-1.56	-26260.26	-45545	-0.0002814	0.0006738	0.0035	1.5762		38079.46	38079.46	1.45		Si
SLV 13	0.54	18213.67	-40403	-0.0001784	0.0006738	0.0035	1.9703		33092.9	33092.9	1.82		Si
SLV 16	-1.56	-26913.04	-47774	-0.000287	0.0006738	0.0035	1.5762		39397.39	39397.39	1.46		Si
SLV 16	0.54	18395.52	-43153	-0.0001827	0.0006738	0.0035	1.9703		35008.67	35008.67	1.9		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-1.56	-4057.05	-60944	-48755	-4380	1.9703	1.9703	-54989	10833	9605	95155	31863	10048	41912	No	9.57	Si
SLU 74	0.54	4856.19	-55826	-44661	-4648	1.9703	1.9703	-50371	10833	9605	95155	31863	10048	41912	No	9.02	Si
SLU 63	-1.56	-4171.48	-57726	-46181	-4408	1.9703	1.9703	-52086	10833	9605	95155	31863	10048	41912	No	9.51	Si
SLU 63	0.54	4803.4	-52640	-42112	-4662	1.9703	1.9703	-47497	10833	9605	95155	31863	10048	41912	No	8.99	Si
SLU 79	-1.56	-4029.44	-61195	-48956	-4380	1.9703	1.9703	-55216	10833	9605	95155	31863	10048	41912	No	9.57	Si
SLU 79	0.54	4882.05	-56074	-44859	-4649	1.9703	1.9703	-50595	10833	9605	95155	31863	10048	41912	No	9.01	Si
SLU 62	-1.56	-4173.29	-57715	-46172	-4410	1.9703	1.9703	-52076	10833	9605	95155	31863	10048	41912	No	9.5	Si
SLU 62	0.54	4804.26	-52629	-42103	-4663	1.9703	1.9703	-47487	10833	9605	95155	31863	10048	41912	No	8.99	Si
SLU 77	-1.56	-4067.98	-61599	-49279	-4419	1.9703	1.9703	-55580	10833	9605	95155	31863	10048	41912	No	9.48	Si
SLU 77	0.54	4924.82	-56471	-45177	-4691	1.9703	1.9703	-50954	10833	9605	95155	31863	10048	41912	No	8.93	Si
SLU 82	-1.56	-4174.09	-62434	-49947	-4515	1.9703	1.9703	-56334	10833	9605	95155	31863	10048	41912	No	9.28	Si
SLU 82	0.54	5007.33	-57288	-45831	-4788	1.9703	1.9703	-51691	10833	9605	95155	31863	10048	41912	No	8.75	Si
SLU 83	-1.56	-4186.83	-63078	-50462	-4556	1.9703	1.9703	-56915	10833	9605	95155	31863	10048	41912	No	9.2	Si
SLU 83	0.54	5076.83	-57922	-46338	-4832	1.9703	1.9703	-52263	10833	9605	95155	31863	10048	41912	No	8.67	Si
SLU 78	-1.56	-4066.17	-61610	-49288	-4418	1.9703	1.9703	-55590	10833	9605	95155	31863	10048	41912	No	9.49	Si
SLU 78	0.54	4923.96	-56482	-45186	-4690	1.9703	1.9703	-50964	10833	9605	95155	31863	10048	41912	No	8.94	Si
SLU 81	-1.56	-4175.9	-62423	-49938	-4516	1.9703	1.9703	-56324	10833	9605	95155	31863	10048	41912	No	9.28	Si
SLU 81	0.54	5008.2	-57277	-45822	-4790	1.9703	1.9703	-51681	10833	9605	95155	31863	10048	41912	No	8.75	Si
SLU 84	-1.56	-4185.02	-63089	-50471	-4554	1.9703	1.9703	-56925	10833	9605	95155	31863	10048	41912	No	9.2	Si
SLU 84	0.54	5075.97	-57933	-46347	-4831	1.9703	1.9703	-52273	10833	9605	95155	31863	10048	41912	No	8.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	-1.56	-26539.97	-45498	-36398	-22284	1.5762	1.2055	0	0	0	95155	38236	8039	46275		2.08	Si
SLV 14	0.54	18479.56	-40337	-32270	-22281	1.9703	1.5811	-36396	16250	11562	95155	47795	10048	57843		2.6	Si
SLD 14	-1.56	-12998.47	-43504	-34804	-11263	1.9703	1.9703	-39254	16250	14408	95155	47795	10048	57843		5.14	Si
SLD 14	0.54	9783.45	-39087	-31269	-11367	1.9703	1.9703	-35267	16250	14408	95155	47795	10048	57843		5.09	Si
SLV 16	-1.56	-26913.04	-47774	-38219	-22287	1.5762	1.2654	0	0	0	95155	38236	8039	46275		2.08	Si
SLV 16	0.54	18395.52	-43153	-34522	-22423	1.9703	1.6766	-38936	16250	12260	95155	47795	10048	57843		2.58	Si
SLV 1	-1.56	21133.29	-36274	-29020	16219	1.9703	1.2077	-32730	16250	8831	95155	47795	10048	57843		3.57	Si
SLV 1	0.54	-11810.09	-33176	-26541	15985	1.9703	1.8875	-31710	16250	13802	95155	47795	10048	57843		3.62	Si
SLV 2	-1.56	20853.57	-36227	-28982	15952	1.9703	1.2285	-32687	16250	8984	95155	47795	10048	57843		3.63	Si
SLV 2	0.54	-11544.2	-33111	-26488	15718	1.9703	1.9095	-31276	16250	13963	95155	47795	10048	57843		3.68	Si
SLV 3	-1.56	20760.22	-38551	-30841	16216	1.9703	1.3399	-34784	16250	9798	95155	47795	10048	57843		3.57	Si
SLV 3	0.54	-11894.12	-35991	-28793	15842	1.9703	1.964	-32475	16250	14362	95155	47795	10048	57843		3.65	Si
SLV 4	-1.56	20480.5	-38503	-30803	15949	1.9703	1.3597	-34741	16250	9943	95155	47795	10048	57843		3.63	Si
SLV 4	0.54	-11628.24	-35926	-28741	15575	1.9703	1.9703	-32416	16250	14408	95155	47795	10048	57843		3.71	Si
SLV 13	-1.56	-26260.26	-45545	-36436	-22017	1.5762	1.2257	0	0	0	95155	38236	8039	46275		2.1	Si
SLV 13	0.54	18213.67	-40403	-32322	-22014	1.9703	1.603	-36455	16250	11722	95155	47795	10048	57843		2.63	Si
SLD 16	-1.56	-13159.87	-44485	-35588	-11266	1.9703	1.9703	-40138	16250	14408	95155	47795	10048	57843		5.13	Si
SLD 16	0.54	9749.61	-40302	-32242	-11430	1.9703	1.9703	-36364	16250	14408	95155	47795	10048	57843		5.06	Si
SLV 15	-1.56	-26633.33	-47822	-38257	-22020	1.5762	1.2846	0	0	0	95155	38236	8039	46275		2.1	Si
SLV 15	0.54	18129.64	-43218	-34574	-22157	1.9703	1.697	-38995	16250	12409	95155	47795	10048	57843		2.61	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-34077	0.24	143.31	6059.5	8188.11	7123.81	49.71	Si
SLV 5	-34118	0.24	143.31	6064.8	8196.59	7130.69	49.76	Si
SLV 2	-34471	0.24	143.31	6110.78	8270.41	7190.6	50.18	Si
SLV 1	-34534	0.24	143.31	6118.84	8283.42	7201.13	50.25	Si
SLV 10	-36146	0.24	143.31	6323.78	8611.17	7467.48	52.11	Si
SLV 9	-36186	0.24	143.31	6328.85	8619.2	7474.02	52.15	Si
SLV 4	-36887	0.24	143.31	6415.62	8757.75	7586.69	52.94	Si
SLV 3	-36949	0.24	143.31	6423.27	8770.07	7596.67	53.01	Si
SLV 14	-41366	0.24	143.31	6938.13	9625.48	8281.8	57.79	Si
SLV 13	-41428	0.24	143.31	6945	9637.12	8291.06	57.86	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-30124	-47194	-358	0.411	3437.7	0.967	6.1732	4.02955	Si
SLV 11	-30107	-47224	-357	0.411	3436	0.967	6.17637	4.02955	Si
SLV 8	-25691	-44412	-217	0.469	2986.6	0.963	7.07705	4.02955	Si
SLV 7	-25674	-44443	-216	0.469	2984.8	0.963	7.0813	4.02955	Si
SLV 10	-21886	-39606	-937	0.501	2599.6	0.958	7.59902	4.02955	Si
SLV 9	-21869	-39636	-936	0.501	2597.8	0.958	7.60433	4.02955	Si
SLV 16	-32417	-47774	-725	0.378	3671.1	0.969	5.67131	2.9746	Si
SLV 15	-32391	-47822	-723	0.378	3668.5	0.969	5.67547	2.9746	Si
SLV 14	-29945	-45498	-899	0.396	3419.5	0.967	5.95037	2.9746	Si
SLV 13	-29919	-45545	-897	0.396	3416.9	0.967	5.95508	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.579	SLU 83	Si
V_SLU	8.673	SLU 83	Si
PF_SLV	1.426	SLV 1	Si
V_SLV	2.076	SLV 16	Si
PFFP_SLV	49.71	SLV 6	Si
R_SLV	1.532	SLV 12	Si

Maschio 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.988	1.046	-6.528	1.046	L2	L4	0.54	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-1.56	-1874.41	-14631	-0.00029	0.0004492	0.0035	0.54	2003.76	2835.72	2835.72	1.51	No	Si
SLU 77	0.54	-105.49	-17019	-0.0001224	0.0004492	0.0035	0.54	1961.23	3040.66	3040.66	28.82	No	Si
SLU 80	-1.56	-1861.68	-14538	-0.0002871	0.0004492	0.0035	0.54	2003.32	2824.89	2824.89	1.52	No	Si
SLU 80	0.54	-106.42	-16894	-0.0001215	0.0004492	0.0035	0.54	1966.05	3030.51	3030.51	28.48	No	Si
SLU 75	-1.56	-1855.44	-14485	-0.0002857	0.0004492	0.0035	0.54	2003	2818.72	2818.72	1.52	No	Si
SLU 75	0.54	-101.63	-16833	-0.0001206	0.0004492	0.0035	0.54	1968.26	3025.62	3025.62	29.77	No	Si
SLU 82	-1.56	-1891.1	-14762	-0.0002939	0.0004492	0.0035	0.54	2004.12	2850.89	2850.89	1.51	No	Si
SLU 82	0.54	-100.98	-17269	-0.000124	0.0004492	0.0035	0.54	1950.79	3060.86	3060.86	30.31	No	Si
SLU 81	-1.56	-1890.26	-14755	-0.0002937	0.0004492	0.0035	0.54	2004.11	2850.14	2850.14	1.51	No	Si
SLU 81	0.54	-102.09	-17277	-0.0001241	0.0004492	0.0035	0.54	1950.44	3061.5	3061.5	29.99	No	Si
SLU 83	-1.56	-1910.07	-14908	-0.0002983	0.0004492	0.0035	0.54	2004.15	2867.89	2867.89	1.5	No	Si
SLU 83	0.54	-104.84	-17455	-0.0001258	0.0004492	0.0035	0.54	1942.28	3075.9	3075.9	29.34	No	Si
SLU 84	-1.56	-1910.91	-14914	-0.0002985	0.0004492	0.0035	0.54	2004.14	2868.64	2868.64	1.5	No	Si
SLU 84	0.54	-103.73	-17447	-0.0001256	0.0004492	0.0035	0.54	1942.65	3075.26	3075.26	29.65	No	Si
SLU 74	-1.56	-1854.6	-14478	-0.0002855	0.0004492	0.0035	0.54	2002.95	2817.98	2817.98	1.52	No	Si
SLU 74	0.54	-102.75	-16841	-0.0001207	0.0004492	0.0035	0.54	1967.98	3026.26	3026.26	29.45	No	Si
SLU 79	-1.56	-1860.83	-14531	-0.0002869	0.0004492	0.0035	0.54	2003.28	2824.14	2824.14	1.52	No	Si
SLU 79	0.54	-107.54	-16901	-0.0001216	0.0004492	0.0035	0.54	1965.75	3031.14	3031.14	28.19	No	Si
SLU 78	-1.56	-1875.26	-14638	-0.0002902	0.0004492	0.0035	0.54	2003.79	2836.47	2836.47	1.51	No	Si
SLU 78	0.54	-104.38	-17011	-0.0001222	0.0004492	0.0035	0.54	1961.54	3040.02	3040.02	29.12	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	-1.56	-3538.17	-14680	-0.0062297	0.0006738	0.0035	0.432		3188.45	3188.45	0.9		No
SLV 16	0.54	3287.04	-13934	-0.0077278	0.0006738	0.0035	0.54		2947.91	2947.91	0.9		No
SLV 13	-1.56	-3380.3	-13842	-0.0060649	0.0006738	0.0035	0.432		3061.27	3061.27	0.91		No
SLV 13	0.54	3179.28	-14900	-0.0044933	0.0006738	0.0035	0.54		3098.2	3098.2	0.97		No
SLV 2	-1.56	974.09	-5304	-0.0001416	0.0006738	0.0035	0.54		1342.26	1342.26	1.38		Si
SLV 2	0.54	-3426.97	-9314	-0.0109119	0.0006738	0.0035	0.432		2271.86	2271.86	0.66		No
SLV 1	-1.56	953.72	-5495	-0.0001304	0.0006738	0.0035	0.54		1380.88	1380.88	1.45		Si
SLV 1	0.54	-3425.23	-9162	-0.0110282	0.0006738	0.0035	0.432		2242.63	2242.63	0.65		No
SLD 16	-1.56	-2253.56	-12058	-0.0003965	0.0006738	0.0035	0.432		2769.61	2769.61	1.23		Si
SLD 16	0.54	1366.55	-12563	-0.0001846	0.0006738	0.0035	0.54		2734.45	2734.45	2		Si
SLV 14	-1.56	-3359.93	-13651	-0.0061298	0.0006738	0.0035	0.432		3031.5	3031.5	0.9		No
SLV 14	0.54	3177.54	-15052	-0.0041982	0.0006738	0.0035	0.54		3121.86	3121.86	0.98		No
SLV 4	-1.56	795.85	-6333	-0.0000984	0.0006738	0.0035	0.54		1548.54	1548.54	1.95		Si
SLV 4	0.54	-3317.48	-8196	-0.0111913	0.0006738	0.0035	0.432		2051.98	2051.98	0.62		No
SLD 15	-1.56	-2262.31	-12140	-0.0003968	0.0006738	0.0035	0.432		2783.71	2783.71	1.23		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	0.54	1367.3	-12498	-0.0001843	0.0006738	0.0035	0.54		2724.29	2724.29	1.99		Si
SLV 3	-1.56	775.48	-6524	-0.0000967	0.0006738	0.0035	0.54		1586.74	1586.74	2.05		Si
SLV 3	0.54	-3315.74	-8044	-0.0112961	0.0006738	0.0035	0.432		2021.21	2021.21	0.61		No
SLV 15	-1.56	-3558.54	-14871	-0.0061705	0.0006738	0.0035	0.432		3217.42	3217.42	0.9		No
SLV 15	0.54	3288.77	-13782	-0.0082378	0.0006738	0.0035	0.54		2924.24	2924.24	0.89		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-1.56	-1854.6	-14478	-11583	-834	0.54	0.4257	-64174	10833	2075	95155	8733	2754	11487	No	13.77	Si
SLU 74	0.54	-102.75	-16841	-13473	-816	0.54	0.54	-55444	10833	2633	95155	8733	2754	11487	No	14.08	Si
SLU 79	-1.56	-1860.83	-14531	-11625	-835	0.54	0.4258	-64415	10833	2076	95155	8733	2754	11487	No	13.76	Si
SLU 79	0.54	-107.54	-16901	-13521	-817	0.54	0.54	-55643	10833	2633	95155	8733	2754	11487	No	14.07	Si
SLU 82	-1.56	-1891.1	-14762	-11809	-852	0.54	0.4257	-65576	10833	2075	95155	8733	2754	11487	No	13.49	Si
SLU 82	0.54	-100.98	-17269	-13815	-834	0.54	0.54	-56852	10833	2633	95155	8733	2754	11487	No	13.78	Si
SLU 78	-1.56	-1875.26	-14638	-11710	-843	0.54	0.4257	-64965	10833	2075	95155	8733	2754	11487	No	13.62	Si
SLU 78	0.54	-104.38	-17011	-13609	-825	0.54	0.54	-56004	10833	2633	95155	8733	2754	11487	No	13.92	Si
SLU 80	-1.56	-1861.68	-14538	-11630	-836	0.54	0.4258	-64447	10833	2076	95155	8733	2754	11487	No	13.75	Si
SLU 80	0.54	-106.42	-16894	-13515	-818	0.54	0.54	-55617	10833	2633	95155	8733	2754	11487	No	14.05	Si
SLU 75	-1.56	-1855.44	-14485	-11588	-835	0.54	0.4257	-64207	10833	2075	95155	8733	2754	11487	No	13.76	Si
SLU 75	0.54	-101.63	-16833	-13467	-817	0.54	0.54	-55418	10833	2633	95155	8733	2754	11487	No	14.06	Si
SLU 84	-1.56	-1910.91	-14914	-11931	-860	0.54	0.4256	-66340	10833	2075	95155	8733	2754	11487	No	13.36	Si
SLU 84	0.54	-103.73	-17447	-13958	-842	0.54	0.54	-57439	10833	2633	95155	8733	2754	11487	No	13.65	Si
SLU 77	-1.56	-1874.41	-14631	-11705	-842	0.54	0.4257	-64933	10833	2075	95155	8733	2754	11487	No	13.64	Si
SLU 77	0.54	-105.49	-17019	-13615	-824	0.54	0.54	-56030	10833	2633	95155	8733	2754	11487	No	13.94	Si
SLU 81	-1.56	-1890.26	-14755	-11804	-851	0.54	0.4257	-65543	10833	2075	95155	8733	2754	11487	No	13.5	Si
SLU 81	0.54	-102.09	-17277	-13821	-833	0.54	0.54	-56878	10833	2633	95155	8733	2754	11487	No	13.79	Si
SLU 83	-1.56	-1910.07	-14908	-11926	-859	0.54	0.4256	-66308	10833	2075	95155	8733	2754	11487	No	13.37	Si
SLU 83	0.54	-104.84	-17455	-13964	-841	0.54	0.54	-57465	10833	2633	95155	8733	2754	11487	No	13.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.56	-3538.17	-14680	-11744	-3266	0.432	0.0869	0	0	0	95155	10479	2203	12683		3.88	Si
SLV 16	0.54	3287.04	-13934	-11147	-2940	0.54	0.1023	-281711	16250	748	95155	13099	2754	15853		5.39	Si
SLV 13	-1.56	-3380.3	-13842	-11073	-3118	0.432	0.0774	0	0	0	95155	10479	2203	12683		4.07	Si
SLV 13	0.54	3179.28	-14900	-11920	-2872	0.54	0.1699	-211519	16250	1242	95155	13099	2754	15853		5.52	Si
SLV 14	-1.56	-3359.93	-13651	-10921	-3106	0.432	0.0716	0	0	0	95155	10479	2203	12683		4.08	Si
SLV 14	0.54	3177.54	-15052	-12041	-2861	0.54	0.1767	-207239	16250	1292	95155	13099	2754	15853		5.54	Si
SLV 1	-1.56	953.72	-5495	-4396	2100	0.54	0.2893	-18089	16118	2098	95155	13099	2754	15853		7.55	Si
SLV 1	0.54	-3425.23	-9162	-7329	1800	0.432	0	0	0	0	95155	10479	2203	12683		7.05	Si
SLV 3	-1.56	775.48	-6524	-5219	1941	0.54	0.4534	-21478	16250	3315	95155	13099	2754	15853		8.17	Si
SLV 3	0.54	-3315.74	-8044	-6435	1720	0.432	0	0	0	0	95155	10479	2203	12683		7.37	Si
SLV 15	-1.56	-3558.54	-14871	-11897	-3277	0.432	0.0921	0	0	0	95155	10479	2203	12683		3.87	Si
SLV 15	0.54	3288.77	-13782	-11026	-2952	0.54	0.0941	-294511	16250	688	95155	13099	2754	15853		5.37	Si
SLV 4	-1.56	795.85	-6333	-5066	1952	0.54	0.433	-20849	16250	3166	95155	13099	2754	15853		8.12	Si
SLV 4	0.54	-3317.48	-8196	-6557	1732	0.432	0	0	0	0	95155	10479	2203	12683		7.32	Si
SLD 16	-1.56	-2253.56	-12058	-9647	-1731	0.432	0.2493	0	0	0	95155	10479	2203	12683		7.33	Si
SLD 16	0.54	1366.55	-12563	-10050	-1583	0.54	0.4837	-41359	16250	3537	95155	13099	2754	15853		10.01	Si
SLV 2	-1.56	974.09	-5304	-4243	2112	0.54	0.259	-17461	15992	1864	95155	13099	2754	15853		7.51	Si
SLV 2	0.54	-3426.97	-9314	-7451	1811	0.432	0	0	0	0	95155	10479	2203	12683		7	Si
SLD 15	-1.56	-2262.31	-12140	-9712	-1736	0.432	0.251	0	0	0	95155	10479	2203	12683		7.31	Si
SLD 15	0.54	1367.3	-12498	-9998	-1588	0.54	0.4818	-41144	16250	3523	95155	13099	2754	15853		9.98	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-8188	0.24	39.28	1503.55	1985.12	1744.33	44.41	Si
SLV 4	-8233	0.24	39.28	1509.93	1995.09	1752.51	44.62	Si
SLV 1	-8601	0.24	39.28	1561.47	2075.15	1818.31	46.3	Si
SLV 2	-8646	0.24	39.28	1567.66	2084.55	1826.11	46.49	Si
SLV 7	-9646	0.24	39.28	1700.24	2293.8	1997.02	50.85	Si
SLV 8	-9675	0.24	39.28	1703.97	2299.93	2001.95	50.97	Si
SLV 5	-11023	0.24	39.28	1866.31	2566.55	2216.43	56.43	Si
SLV 6	-11052	0.24	39.28	1869.63	2572.07	2220.85	56.54	Si
SLV 11	-11302	0.24	39.28	1897.62	2618.94	2258.28	57.5	Si
SLV 12	-11331	0.24	39.28	1900.86	2624.43	2262.64	57.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-10084	-10613	-90	0.355	1128.2	0.972	5.29928	4.02955	Si
SLV 8	-10066	-10488	-89	0.355	1126.5	0.972	5.30803	4.02955	Si
SLV 5	-9624	-7182	56	0.37	1081.4	0.971	5.54198	4.02955	Si
SLV 6	-9606	-7058	57	0.371	1079.6	0.971	5.54792	4.02955	Si
SLV 3	-12620	-6524	-10	0.307	1386.6	0.977	4.56954	2.9746	Si
SLV 4	-12594	-6333	-8	0.308	1383.9	0.977	4.57886	2.9746	Si
SLV 1	-12482	-5495	33	0.308	1372.6	0.977	4.58052	2.9746	Si
SLV 2	-12456	-5304	35	0.308	1369.8	0.977	4.58561	2.9746	Si
SLV 11	-7775	-13117	-115	0.428	893.2	0.966	6.44134	4.02955	Si
SLV 12	-7758	-12992	-114	0.429	891.5	0.966	6.45501	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.501	SLU 84	Si
V_SLU	13.357	SLU 84	Si
PF_SLV	0.61	SLV 3	No
V_SLV	3.87	SLV 15	Si
PFFP_SLV	44.412	SLV 3	Si
R_SLV	1.315	SLV 7	Si

Maschio 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	1.046	-5.088	1.046	L2	L4	4.965	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-1.56	-15730.4	-160899	-0.0001332	0.0004492	0.0035	4.965	164015.03	262169.46	262169.46	16.67	No	Si
SLU 78	0.54	6338.59	-113846	-0.0000851	0.0004492	0.0035	4.965	164762.57	210870.68	210870.68	33.27	No	Si
SLU 84	-1.56	-15767.07	-164140	-0.0001361	0.0004492	0.0035	4.965	162481.19	264134.38	264134.38	16.75	No	Si
SLU 84	0.54	6926.41	-116775	-0.000088	0.0004492	0.0035	4.965	165891.54	214922.06	214922.06	31.03	No	Si
SLU 74	-1.56	-15502.84	-159274	-0.0001315	0.0004492	0.0035	4.965	164712.24	261184.18	261184.18	16.85	No	Si
SLU 74	0.54	6330.51	-112651	-0.0000842	0.0004492	0.0035	4.965	164257.3	209218.32	209218.32	33.05	No	Si
SLU 80	-1.56	-15604.85	-159904	-0.0001322	0.0004492	0.0035	4.965	164447.57	261566.26	261566.26	16.76	No	Si
SLU 80	0.54	6297.56	-113092	-0.0000845	0.0004492	0.0035	4.965	164447.12	209829.17	209829.17	33.32	No	Si
SLU 82	-1.56	-15542.87	-162532	-0.0001345	0.0004492	0.0035	4.965	163266.16	263159.39	263159.39	16.93	No	Si
SLU 82	0.54	6930.08	-115595	-0.0000871	0.0004492	0.0035	4.965	165455.4	213289.57	213289.57	30.78	No	Si
SLU 75	-1.56	-15506.2	-159291	-0.0001316	0.0004492	0.0035	4.965	164705.2	261194.48	261194.48	16.84	No	Si
SLU 75	0.54	6342.25	-112665	-0.0000842	0.0004492	0.0035	4.965	164263.53	209238.19	209238.19	32.99	No	Si
SLU 81	-1.56	-15539.51	-162515	-0.0001344	0.0004492	0.0035	4.965	163274.2	263149.1	263149.1	16.93	No	Si
SLU 81	0.54	6918.34	-115580	-0.000087	0.0004492	0.0035	4.965	165449.94	213269.7	213269.7	30.83	No	Si
SLU 77	-1.56	-15727.04	-160882	-0.0001332	0.0004492	0.0035	4.965	164022.57	262159.17	262159.17	16.67	No	Si
SLU 77	0.54	6326.85	-113831	-0.0000851	0.0004492	0.0035	4.965	164756.65	210850.81	210850.81	33.33	No	Si
SLU 79	-1.56	-15601.49	-159887	-0.0001322	0.0004492	0.0035	4.965	164454.8	261555.97	261555.97	16.76	No	Si
SLU 79	0.54	6285.82	-113078	-0.0000845	0.0004492	0.0035	4.965	164441	209809.3	209809.3	33.38	No	Si
SLU 83	-1.56	-15763.71	-164123	-0.0001361	0.0004492	0.0035	4.965	162489.72	264124.09	264124.09	16.76	No	Si
SLU 83	0.54	6914.67	-116761	-0.000088	0.0004492	0.0035	4.965	165886.38	214902.19	214902.19	31.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	-1.56	-35588.57	-132399	-0.000122	0.0006738	0.0035	4.965		268233.4	268233.4	7.54		Si
SLD 15	0.54	8609.8	-94122	-0.0000702	0.0006738	0.0035	4.965		196316.17	196316.17	22.8		Si
SLV 16	-1.56	-68633.11	-161084	-0.0001757	0.0006738	0.0035	4.965		303613.67	303613.67	4.42		Si
SLV 16	0.54	14930.61	-116633	-0.0000919	0.0006738	0.0035	4.965		233110.3	233110.3	15.61		Si
SLV 4	-1.56	45593.28	-61697	-0.0000783	0.0006738	0.0035	4.965		137454.95	137454.95	3.01		Si
SLV 4	0.54	-2441.76	-42928	-0.0000299	0.0006738	0.0035	4.965		112073.52	112073.52	45.9		Si
SLV 3	-1.56	45708.69	-61683	-0.0000783	0.0006738	0.0035	4.965		137429.37	137429.37	3.01		Si
SLV 3	0.54	-2501.3	-42960	-0.00003	0.0006738	0.0035	4.965		112140.49	112140.49	44.83		Si
SLV 15	-1.56	-68517.7	-161069	-0.0001755	0.0006738	0.0035	4.965		303600.07	303600.07	4.43		Si
SLV 15	0.54	14871.06	-116665	-0.0000918	0.0006738	0.0035	4.965		233155.26	233155.26	15.68		Si
SLV 1	-1.56	46648.41	-60865	-0.0000785	0.0006738	0.0035	4.965		135944.67	135944.67	2.91		Si
SLV 1	0.54	-7088	-37930	-0.0000303	0.0006738	0.0035	4.965		101605.9	101605.9	14.33		Si
SLV 13	-1.56	-67577.99	-160252	-0.000174	0.0006738	0.0035	4.965		302810.41	302810.41	4.48		Si
SLV 13	0.54	10284.37	-111635	-0.0000842	0.0006738	0.0035	4.965		226081.21	226081.21	21.98		Si
SLV 2	-1.56	46532.99	-60879	-0.0000785	0.0006738	0.0035	4.965		135970.24	135970.24	2.92		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	0.54	-7028.45	-37898	-0.0000303	0.0006738	0.0035	4.965		101538.94	101538.94	14.45		Si
SLV 14	-1.56	-67693.4	-160266	-0.0001741	0.0006738	0.0035	4.965		302824.02	302824.02	4.47		Si
SLV 14	0.54	10343.91	-111603	-0.0000842	0.0006738	0.0035	4.965		226036.24	226036.24	21.85		Si
SLD 16	-1.56	-35638.14	-132406	-0.0001221	0.0006738	0.0035	4.965		268241.61	268241.61	7.53		Si
SLD 16	0.54	8635.37	-94108	-0.0000702	0.0006738	0.0035	4.965		196291.24	196291.24	22.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-1.56	-15763.71	-164123	-131298	31674	4.965	4.965	-58766	10833	24204	95155	80293	25322	105615	No	3.33	Si
SLU 83	0.54	6914.67	-116761	-93409	32196	4.965	4.965	-41808	10833	24204	95155	80293	25322	105615	No	3.28	Si
SLU 78	-1.56	-15730.4	-160899	-128719	31603	4.965	4.965	-57612	10833	24204	95155	80293	25322	105615	No	3.34	Si
SLU 78	0.54	6338.59	-113846	-91076	32118	4.965	4.965	-40764	10833	24204	95155	80293	25322	105615	No	3.29	Si
SLU 74	-1.56	-15502.84	-159274	-127419	31211	4.965	4.965	-57030	10833	24204	95155	80293	25322	105615	No	3.38	Si
SLU 74	0.54	6330.51	-112651	-90121	31720	4.965	4.965	-40336	10833	24204	95155	80293	25322	105615	No	3.33	Si
SLU 77	-1.56	-15727.04	-160882	-128706	31608	4.965	4.965	-57606	10833	24204	95155	80293	25322	105615	No	3.34	Si
SLU 77	0.54	6326.85	-113831	-91065	32122	4.965	4.965	-40759	10833	24204	95155	80293	25322	105615	No	3.29	Si
SLU 84	-1.56	-15767.07	-164140	-131312	31670	4.965	4.965	-58772	10833	24204	95155	80293	25322	105615	No	3.33	Si
SLU 84	0.54	6926.41	-116775	-93420	32192	4.965	4.965	-41813	10833	24204	95155	80293	25322	105615	No	3.28	Si
SLU 75	-1.56	-15506.2	-159291	-127433	31207	4.965	4.965	-57036	10833	24204	95155	80293	25322	105615	No	3.38	Si
SLU 75	0.54	6342.25	-112665	-90132	31715	4.965	4.965	-40341	10833	24204	95155	80293	25322	105615	No	3.33	Si
SLU 79	-1.56	-15601.49	-159887	-127910	31403	4.965	4.965	-57249	10833	24204	95155	80293	25322	105615	No	3.36	Si
SLU 79	0.54	6285.82	-113078	-90462	31914	4.965	4.965	-40489	10833	24204	95155	80293	25322	105615	No	3.31	Si
SLU 81	-1.56	-15539.51	-162515	-130012	31277	4.965	4.965	-58190	10833	24204	95155	80293	25322	105615	No	3.38	Si
SLU 81	0.54	6918.34	-115580	-92464	31793	4.965	4.965	-41385	10833	24204	95155	80293	25322	105615	No	3.32	Si
SLU 80	-1.56	-15604.85	-159904	-127923	31399	4.965	4.965	-57256	10833	24204	95155	80293	25322	105615	No	3.36	Si
SLU 80	0.54	6297.56	-113092	-90474	31910	4.965	4.965	-40494	10833	24204	95155	80293	25322	105615	No	3.31	Si
SLU 82	-1.56	-15542.87	-162532	-130025	31273	4.965	4.965	-58196	10833	24204	95155	80293	25322	105615	No	3.38	Si
SLU 82	0.54	6930.08	-115595	-92476	31789	4.965	4.965	-41390	10833	24204	95155	80293	25322	105615	No	3.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-1.56	46648.41	-60865	-48692	41905	4.965	4.965	-21793	16250	36307	95155	120440	25322	131462		3.14	Si
SLV 1	0.54	-7088	-37930	-30344	42036	4.965	4.965	-13581	15216	33997	95155	120440	25322	129152		3.07	Si
SLV 3	-1.56	45708.69	-61683	-49346	38859	4.965	4.965	-22086	16250	36307	95155	120440	25322	131462		3.38	Si
SLV 3	0.54	-2501.3	-42960	-34368	38491	4.965	4.965	-15382	15576	34802	95155	120440	25322	129957		3.38	Si
SLV 6	-1.56	7670.19	-94708	-75766	32828	4.965	4.965	-33911	16250	36307	95155	120440	25322	131462		4	Si
SLV 6	0.54	-6309.64	-57832	-46265	33875	4.965	4.965	-20707	16250	36307	95155	120440	25322	131462		3.88	Si
SLV 4	-1.56	45593.28	-61697	-49358	38830	4.965	4.965	-22091	16250	36307	95155	120440	25322	131462		3.39	Si
SLV 4	0.54	-2441.76	-42928	-34342	38463	4.965	4.965	-15371	15574	34797	95155	120440	25322	129952		3.38	Si
SLD 4	-1.56	13196	-89901	-71920	29397	4.965	4.965	-32190	16250	36307	95155	120440	25322	131462		4.47	Si
SLD 4	0.54	1215.52	-62605	-50084	29437	4.965	4.965	-22417	16250	36307	95155	120440	25322	131462		4.47	Si
SLD 2	-1.56	13603.86	-89549	-71639	30710	4.965	4.965	-32064	16250	36307	95155	120440	25322	131462		4.28	Si
SLD 2	0.54	-767.19	-60441	-48352	30970	4.965	4.965	-21641	16250	36307	95155	120440	25322	131462		4.24	Si
SLV 2	-1.56	46532.99	-60879	-48703	41875	4.965	4.965	-21798	16250	36307	95155	120440	25322	131462		3.14	Si
SLV 2	0.54	-7028.45	-37898	-30318	42007	4.965	4.965	-13570	15214	33992	95155	120440	25322	129147		3.07	Si
SLD 1	-1.56	13653.44	-89543	-71634	30722	4.965	4.965	-32062	16250	36307	95155	120440	25322	131462		4.28	Si
SLD 1	0.54	-792.76	-60454	-48363	30983	4.965	4.965	-21646	16250	36307	95155	120440	25322	131462		4.24	Si
SLD 3	-1.56	13245.57	-89895	-71916	29410	4.965	4.965	-32188	16250	36307	95155	120440	25322	131462		4.47	Si
SLD 3	0.54	1189.94	-62619	-50095	29449	4.965	4.965	-22421	16250	36307	95155	120440	25322	131462		4.46	Si
SLV 5	-1.56	7745.4	-94699	-75759	32847	4.965	4.965	-33908	16250	36307	95155	120440	25322	131462		4	Si
SLV 5	0.54	-6348.44	-57852	-46282	33894	4.965	4.965	-20715	16250	36307	95155	120440	25322	131462		3.88	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-42755	0.24	361.12	8615.46	11057.54	9836.5	27.24	Si
SLV 1	-42777	0.24	361.12	8619.31	11062.54	9840.92	27.25	Si
SLV 4	-46652	0.24	361.12	9300.93	11958.16	10629.55	29.43	Si
SLV 3	-46674	0.24	361.12	9304.69	11963.16	10633.92	29.45	Si
SLV 6	-66371	0.24	361.12	12513.12	16419.72	14466.42	40.06	Si
SLV 5	-66385	0.24	361.12	12515.26	16422.83	14469.05	40.07	Si
SLV 8	-79363	0.24	361.12	14395.94	19268.29	16832.11	46.61	Si
SLV 7	-79377	0.24	361.12	14397.88	19271.23	16834.55	46.62	Si
SLV 10	-90508	0.24	361.12	15863.37	21576.88	18720.12	51.84	Si
SLV 9	-90522	0.24	361.12	15865.13	21579.66	18722.4	51.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-75940	-127241	-171	0.42	8665.7	0.967	6.3052	4.02955	Si
SLV 12	-75855	-127250	-169	0.42	8657.2	0.967	6.31108	4.02955	Si
SLV 7	-62717	-97425	56	0.488	7320.2	0.962	7.36669	4.02955	Si
SLV 8	-62633	-97434	58	0.488	7311.6	0.962	7.3742	4.02955	Si
SLV 15	-83002	-161069	-1031	0.383	9384.7	0.97	5.73602	2.9746	Si
SLV 16	-82873	-161084	-1028	0.383	9371.6	0.97	5.74347	2.9746	Si
SLV 9	-51979	-124514	-1867	0.533	6228.3	0.956	8.09787	4.02955	Si
SLV 10	-51895	-124524	-1865	0.533	6219.7	0.956	8.10896	4.02955	Si
SLV 13	-75814	-160252	-1540	0.403	8653	0.967	6.06197	2.9746	Si
SLV 14	-75685	-160266	-1537	0.404	8639.8	0.967	6.07062	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.666	SLU 78	Si
V_SLU	3.28	SLU 83	Si
PF_SLV	2.914	SLV 1	Si
V_SLV	3.072	SLV 1	Si
PFFP_SLV	27.239	SLV 2	Si
R_SLV	1.565	SLV 11	Si

Maschio 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.958	3.431	-9.728	3.431	L2	L4	4.23	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	-1.56	10223.86	-41946	-0.0000649	0.0004492	0.0035	4.23	64716.43	75471.2	75471.2	7.38	No	Si
SLU 39	0.54	-1883.32	-24257	-0.0000299	0.0004492	0.0035	4.23	43277.98	56277.61	56277.61	29.88	No	Si
SLU 41	-1.56	10342.01	-42367	-0.0000656	0.0004492	0.0035	4.23	65122.3	76114.72	76114.72	7.36	No	Si
SLU 41	0.54	-1884.82	-24521	-0.0000302	0.0004492	0.0035	4.23	43660.51	56735.4	56735.4	30.1	No	Si
SLU 78	-1.56	11702.44	-49383	-0.0000768	0.0004492	0.0035	4.23	71180.61	86848.78	86848.78	7.42	No	Si
SLU 78	0.54	-2458.77	-28209	-0.0000354	0.0004492	0.0035	4.23	48808.08	62989.39	62989.39	25.62	No	Si
SLU 42	-1.56	10351.98	-42347	-0.0000656	0.0004492	0.0035	4.23	65103.52	76084.77	76084.77	7.35	No	Si
SLU 42	0.54	-1899.65	-24506	-0.0000302	0.0004492	0.0035	4.23	43638.17	56708.61	56708.61	29.85	No	Si
SLU 82	-1.56	11937.59	-50084	-0.0000781	0.0004492	0.0035	4.23	71712.24	87921.46	87921.46	7.37	No	Si
SLU 82	0.54	-2444.29	-28679	-0.000036	0.0004492	0.0035	4.23	49437.24	63758.78	63758.78	26.08	No	Si
SLU 81	-1.56	11927.63	-50103	-0.0000781	0.0004492	0.0035	4.23	71726.89	87951.42	87951.42	7.37	No	Si
SLU 81	0.54	-2429.46	-28694	-0.000036	0.0004492	0.0035	4.23	49457.81	63784.07	63784.07	26.25	No	Si
SLU 40	-1.56	10233.82	-41927	-0.0000649	0.0004492	0.0035	4.23	64697.42	75441.25	75441.25	7.37	No	Si
SLU 40	0.54	-1898.15	-24242	-0.0000299	0.0004492	0.0035	4.23	43255.53	56250.81	56250.81	29.63	No	Si
SLU 84	-1.56	12055.74	-50504	-0.0000789	0.0004492	0.0035	4.23	72024.73	88564.99	88564.99	7.35	No	Si
SLU 84	0.54	-2445.79	-28943	-0.0000363	0.0004492	0.0035	4.23	49787.94	64190.88	64190.88	26.25	No	Si
SLU 77	-1.56	11692.48	-49402	-0.0000768	0.0004492	0.0035	4.23	71195.64	86878.73	86878.73	7.43	No	Si
SLU 77	0.54	-2443.94	-28225	-0.0000354	0.0004492	0.0035	4.23	48828.86	63014.68	63014.68	25.78	No	Si
SLU 83	-1.56	12045.78	-50524	-0.0000789	0.0004492	0.0035	4.23	72039.16	88594.94	88594.94	7.35	No	Si
SLU 83	0.54	-2430.96	-28958	-0.0000363	0.0004492	0.0035	4.23	49808.4	64216.17	64216.17	26.42	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	-1.56	39631.76	-26532	-0.0001412	0.0006738	0.0035	4.23		53478.9	53478.9	1.35		Si
SLV 16	0.54	-7478.49	-20211	-0.000034	0.0006738	0.0035	4.23		49980.78	49980.78	6.68		Si
SLV 11	-1.56	18176.85	-31199	-0.0000638	0.0006738	0.0035	4.23		61776.28	61776.28	3.4		Si
SLV 11	0.54	-4985.9	-18799	-0.0000284	0.0006738	0.0035	4.23		47332.87	47332.87	9.49		Si
SLV 13	-1.56	38613.98	-27201	-0.0001283	0.0006738	0.0035	4.23		54683.72	54683.72	1.42		Si
SLV 13	0.54	-6554.01	-20673	-0.000033	0.0006738	0.0035	4.23		50847.45	50847.45	7.76		Si
SLV 15	-1.56	39266.18	-26684	-0.0001367	0.0006738	0.0035	4.23		53754.69	53754.69	1.37		Si
SLV 15	0.54	-7508.91	-20176	-0.000034	0.0006738	0.0035	4.23		49914.73	49914.73	6.65		Si
SLD 14	-1.56	21140.75	-31160	-0.0000686	0.0006738	0.0035	4.23		61706.6	61706.6	2.92		Si
SLD 14	0.54	-3809.33	-19914	-0.0000278	0.0006738	0.0035	4.23		49422.77	49422.77	12.97		Si
SLD 15	-1.56	21268.46	-30998	-0.0000686	0.0006738	0.0035	4.23		61422.61	61422.61	2.89		Si
SLD 15	0.54	-4240.97	-19678	-0.0000282	0.0006738	0.0035	4.23		48981.05	48981.05	11.55		Si
SLV 14	-1.56	38979.55	-27049	-0.0001319	0.0006738	0.0035	4.23		54412.55	54412.55	1.4		Si
SLV 14	0.54	-6523.59	-20708	-0.000033	0.0006738	0.0035	4.23		50913.49	50913.49	7.8		Si
SLD 16	-1.56	21425.48	-30933	-0.0000688	0.0006738	0.0035	4.23		61308.12	61308.12	2.86		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 16	0.54	-4227.9	-19693	-0.0000282	0.0006738	0.0035	4.23		49009.42	49009.42	11.59		Si
SLV 12	-1.56	18415.05	-31100	-0.0000641	0.0006738	0.0035	4.23		61602.59	61602.59	3.35		Si
SLV 12	0.54	-4966.08	-18822	-0.0000284	0.0006738	0.0035	4.23		47375.9	47375.9	9.54		Si
SLD 13	-1.56	20983.73	-31225	-0.0000685	0.0006738	0.0035	4.23		61821.09	61821.09	2.95		Si
SLD 13	0.54	-3822.4	-19898	-0.0000278	0.0006738	0.0035	4.23		49394.41	49394.41	12.92		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.56	11702.44	-49383	-35915	-8260	4.23	4.23	-28302	10833	13747	95155	45605	21573	67178	No	8.13	Si
SLU 78	0.54	-2458.77	-28209	-20516	-8212	4.23	4.23	-16167	10489	13310	95155	45605	21573	67178	No	8.18	Si
SLU 81	-1.56	11927.63	-50103	-36439	-8404	4.23	4.23	-28715	10833	13747	95155	45605	21573	67178	No	7.99	Si
SLU 81	0.54	-2429.46	-28694	-20869	-8356	4.23	4.23	-16445	10526	13357	95155	45605	21573	67178	No	8.04	Si
SLU 82	-1.56	11937.59	-50084	-36425	-8388	4.23	4.23	-28703	10833	13747	95155	45605	21573	67178	No	8.01	Si
SLU 82	0.54	-2444.29	-28679	-20857	-8340	4.23	4.23	-16436	10525	13356	95155	45605	21573	67178	No	8.06	Si
SLU 74	-1.56	11574.33	-48982	-35623	-8175	4.23	4.23	-28072	10833	13747	95155	45605	21573	67178	No	8.22	Si
SLU 74	0.54	-2442.44	-27961	-20335	-8128	4.23	4.23	-16024	10470	13286	95155	45605	21573	67178	No	8.27	Si
SLU 84	-1.56	12055.74	-50504	-36730	-8489	4.23	4.23	-28944	10833	13747	95155	45605	21573	67178	No	7.91	Si
SLU 84	0.54	-2445.79	-28943	-21049	-8440	4.23	4.23	-16587	10545	13382	95155	45605	21573	67178	No	7.96	Si
SLU 77	-1.56	11692.48	-49402	-35929	-8276	4.23	4.23	-28313	10833	13747	95155	45605	21573	67178	No	8.12	Si
SLU 77	0.54	-2443.94	-28225	-20527	-8228	4.23	4.23	-16176	10490	13312	95155	45605	21573	67178	No	8.16	Si
SLU 83	-1.56	12045.78	-50524	-36745	-8505	4.23	4.23	-28956	10833	13747	95155	45605	21573	67178	No	7.9	Si
SLU 83	0.54	-2430.96	-28958	-21061	-8456	4.23	4.23	-16596	10546	13383	95155	45605	21573	67178	No	7.94	Si
SLU 75	-1.56	11584.29	-48962	-35609	-8159	4.23	4.23	-28061	10833	13747	95155	45605	21573	67178	No	8.23	Si
SLU 75	0.54	-2457.27	-27945	-20324	-8112	4.23	4.23	-16016	10469	13285	95155	45605	21573	67178	No	8.28	Si
SLU 79	-1.56	11590.69	-49137	-35736	-8238	4.23	4.23	-28161	10833	13747	95155	45605	21573	67178	No	8.15	Si
SLU 79	0.54	-2410.38	-28061	-20408	-8190	4.23	4.23	-16082	10478	13296	95155	45605	21573	67178	No	8.2	Si
SLU 80	-1.56	11600.65	-49117	-35722	-8222	4.23	4.23	-28150	10833	13747	95155	45605	21573	67178	No	8.17	Si
SLU 80	0.54	-2425.2	-28046	-20397	-8174	4.23	4.23	-16073	10476	13295	95155	45605	21573	67178	No	8.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.56	39631.76	-26532	-19296	20827	4.23	1.8639	-15206	15541	8690	95155	68407	21573	89980		4.32	Si
SLV 16	0.54	-7478.49	-20211	-14699	20864	4.23	4.23	-11583	14817	18802	95155	68407	21573	89980		4.31	Si
SLV 4	-1.56	-22979.44	-41230	-29986	-30974	4.23	4.23	-23629	16250	20621	95155	68407	21573	89980		2.9	Si
SLV 4	0.54	2897.96	-17918	-13031	-30868	4.23	4.23	-10269	14554	18469	95155	68407	21573	89980		2.91	Si
SLV 1	-1.56	-23997.22	-41899	-30472	-31970	4.23	4.23	-24013	16250	20621	95155	68407	21573	89980		2.81	Si
SLV 1	0.54	3822.44	-18380	-13367	-31941	4.23	4.23	-10534	14607	18536	95155	68407	21573	89980		2.82	Si
SLV 2	-1.56	-23631.64	-41747	-30362	-31623	4.23	4.23	-23926	16250	20621	95155	68407	21573	89980		2.85	Si
SLV 2	0.54	3852.86	-18415	-13393	-31592	4.23	4.23	-10554	14611	18541	95155	68407	21573	89980		2.85	Si
SLD 2	-1.56	-5633.92	-37434	-27225	-16712	4.23	4.23	-21454	16250	20621	95155	68407	21573	89980		5.38	Si
SLD 2	0.54	584.92	-18913	-13755	-16673	4.23	4.23	-10839	14668	18613	95155	68407	21573	89980		5.4	Si
SLV 13	-1.56	38613.98	-27201	-19783	19831	4.23	2.0863	-15589	15618	9775	95155	68407	21573	89980		4.54	Si
SLV 13	0.54	-6554.01	-20673	-15035	19792	4.23	4.23	-11848	14870	18870	95155	68407	21573	89980		4.55	Si
SLD 1	-1.56	-5790.95	-37499	-27272	-16861	4.23	4.23	-21491	16250	20621	95155	68407	21573	89980		5.34	Si
SLD 1	0.54	571.85	-18898	-13744	-16823	4.23	4.23	-10831	14666	18611	95155	68407	21573	89980		5.35	Si
SLV 14	-1.56	38979.55	-27049	-19672	20179	4.23	2.0218	-15502	15600	9462	95155	68407	21573	89980		4.46	Si
SLV 14	0.54	-6523.59	-20708	-15061	20140	4.23	4.23	-11868	14874	18875	95155	68407	21573	89980		4.47	Si
SLV 3	-1.56	-23345.02	-41382	-30096	-31322	4.23	4.23	-23717	16250	20621	95155	68407	21573	89980		2.87	Si
SLV 3	0.54	2867.54	-17883	-13006	-31217	4.23	4.23	-10249	14550	18464	95155	68407	21573	89980		2.88	Si
SLV 15	-1.56	39266.18	-26684	-19407	20480	4.23	1.9305	-15293	15559	9011	95155	68407	21573	89980		4.39	Si
SLV 15	0.54	-7508.91	-20176	-14673	20516	4.23	4.23	-11563	14813	18797	95155	68407	21573	89980		4.39	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-22531	0.24	205.11	3052.25	4240.52	3646.39	17.78	Si
SLV 11	-22534	0.24	205.11	3052.66	4241.06	3646.86	17.78	Si
SLV 16	-22539	0.24	205.11	3053.2	4241.77	3647.49	17.78	Si
SLV 15	-22544	0.24	205.11	3053.82	4242.59	3648.21	17.79	Si
SLV 8	-23025	0.24	205.11	3111.87	4319.31	3715.59	18.12	Si
SLV 7	-23029	0.24	205.11	3112.28	4319.85	3716.06	18.12	Si
SLV 14	-23041	0.24	205.11	3113.72	4321.76	3717.74	18.13	Si
SLV 13	-23046	0.24	205.11	3114.34	4322.58	3718.46	18.13	Si
SLV 4	-24187	0.24	205.11	3250.7	4504.45	3877.58	18.9	Si
SLV 3	-24192	0.24	205.11	3251.31	4505.27	3878.29	18.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-4693	-37232	1046	2.881	1042.9	0.891	46.97089	5.39576	Si
SLV 5	-4681	-37331	1046	2.885	1041.8	0.891	47.04119	5.39576	Si
SLV 10	-4600	-32823	1057	2.913	1034.2	0.891	47.50073	5.39576	Si
SLV 9	-4588	-32922	1057	2.917	1033	0.891	47.57256	5.39576	Si
SLV 8	-3945	-35510	-1034	3.171	972.8	0.889	51.81893	5.39576	Si
SLV 7	-3933	-35609	-1034	3.176	971.7	0.889	51.90307	5.39576	Si
SLV 12	-3852	-31100	-1023	3.213	964.2	0.889	52.5043	5.39576	Si
SLV 11	-3840	-31199	-1023	3.218	963.1	0.889	52.59046	5.39576	Si
SLV 2	-4542	-41747	306	3.028	1028.7	0.891	49.39333	3.34272	Si
SLV 1	-4524	-41899	306	3.035	1027	0.891	49.50884	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.346	SLU 84	Si
V_SLU	7.899	SLU 83	Si
PF_SLV	1.349	SLV 16	Si
V_SLV	2.814	SLV 1	Si
PFFP_SLV	17.778	SLV 12	Si
R_SLV	8.705	SLV 6	Si

Maschio 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.576	-12.888	6.576	L2	L4	3.88	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	0.44	267.48	-56682	-0.0000532	0.0003743	0.0035	3.88	74899.78	83888.01	83888.01	313.62	No	Si
SLU 62	0.84	-5140.17	-60550	-0.0000647	0.0003743	0.0035	3.88	77454.71	90788.08	90788.08	17.66	No	Si
SLU 84	0.44	322.8	-63019	-0.0000598	0.0003743	0.0035	3.88	78915.4	90649.73	90649.73	280.83	No	Si
SLU 84	0.84	-5536.79	-67335	-0.0000725	0.0003743	0.0035	3.88	81148.34	96719.86	96719.86	17.47	No	Si
SLU 60	0.44	276.73	-56009	-0.0000525	0.0003743	0.0035	3.88	74421.9	83103.13	83103.13	300.31	No	Si
SLU 60	0.84	-5096.13	-59815	-0.0000638	0.0003743	0.0035	3.88	76994.74	90165.51	90165.51	17.69	No	Si
SLU 82	0.44	332.04	-62346	-0.0000591	0.0003743	0.0035	3.88	78530.6	90142.25	90142.25	271.48	No	Si
SLU 82	0.84	-5492.75	-66601	-0.0000717	0.0003743	0.0035	3.88	80797.13	96061.55	96061.55	17.49	No	Si
SLU 81	0.44	213	-62231	-0.0000588	0.0003743	0.0035	3.88	78463.37	90055.06	90055.06	422.8	No	Si
SLU 81	0.84	-5628.74	-66471	-0.0000717	0.0003743	0.0035	3.88	80733.89	95945.72	95945.72	17.05	No	Si
SLU 78	0.44	343.87	-61588	-0.0000583	0.0003743	0.0035	3.88	78084.99	89477.46	89477.46	260.21	No	Si
SLU 78	0.84	-5395.77	-65843	-0.0000707	0.0003743	0.0035	3.88	80422.16	95386.06	95386.06	17.68	No	Si
SLU 77	0.44	224.82	-61472	-0.000058	0.0003743	0.0035	3.88	78015.85	89367.39	89367.39	397.51	No	Si
SLU 77	0.84	-5531.76	-65713	-0.0000708	0.0003743	0.0035	3.88	80356.77	95270.96	95270.96	17.22	No	Si
SLU 83	0.44	203.75	-62903	-0.0000594	0.0003743	0.0035	3.88	78849.87	90562.28	90562.28	444.48	No	Si
SLU 83	0.84	-5672.79	-67205	-0.0000726	0.0003743	0.0035	3.88	81087.18	96603.33	96603.33	17.03	No	Si
SLU 74	0.44	234.07	-60799	-0.0000573	0.0003743	0.0035	3.88	77608.32	88708.74	88708.74	378.99	No	Si
SLU 74	0.84	-5487.72	-64979	-0.0000699	0.0003743	0.0035	3.88	79979.56	94621.5	94621.5	17.24	No	Si
SLU 79	0.44	222.81	-60914	-0.0000574	0.0003743	0.0035	3.88	77678.63	88823.55	88823.55	398.65	No	Si
SLU 79	0.84	-5481.04	-65106	-0.00007	0.0003743	0.0035	3.88	80046.01	94734.17	94734.17	17.28	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.44	17321.02	-34855	-0.0000553	0.0005615	0.0035	3.88		60524.35	60524.35	3.49		Si
SLV 16	0.84	3986.79	-36144	-0.0000377	0.0005615	0.0035	3.88		62362.21	62362.21	15.64		Si
SLV 15	0.44	16345.49	-35174	-0.0000542	0.0005615	0.0035	3.88		60978.71	60978.71	3.73		Si
SLV 15	0.84	3631.02	-36615	-0.0000376	0.0005615	0.0035	3.88		63033.85	63033.85	17.36		Si
SLV 14	0.44	15190.22	-31731	-0.0000493	0.0005615	0.0035	3.88		56092.63	56092.63	3.69		Si
SLV 14	0.84	2520.01	-32581	-0.0000323	0.0005615	0.0035	3.88		57296.24	57296.24	22.74		Si
SLV 5	0.44	-8298.49	-38747	-0.0000462	0.0005615	0.0035	3.88		70669.24	70669.24	8.52		Si
SLV 5	0.84	-8378.14	-41416	-0.0000488	0.0005615	0.0035	3.88		74586.77	74586.77	8.9		Si
SLV 2	0.44	-15882.38	-47727	-0.0000656	0.0005615	0.0035	3.88		83696.62	83696.62	5.27		Si
SLV 2	0.84	-11161.73	-51971	-0.0000629	0.0005615	0.0035	3.88		89644.49	89644.49	8.03		Si
SLV 13	0.44	14214.69	-32050	-0.0000482	0.0005615	0.0035	3.88		56543.93	56543.93	3.98		Si
SLV 13	0.84	2164.25	-33051	-0.0000323	0.0005615	0.0035	3.88		57962.41	57962.41	26.78		Si
SLV 1	0.44	-16857.91	-48046	-0.0000674	0.0005615	0.0035	3.88		84142.5	84142.5	4.99		Si
SLV 1	0.84	-11517.49	-52441	-0.0000639	0.0005615	0.0035	3.88		90272.72	90272.72	7.84		Si
SLV 12	0.44	8761.6	-44155	-0.000052	0.0005615	0.0035	3.88		73899.61	73899.61	8.43		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	0.84	847.43	-47170	-0.0000435	0.0005615	0.0035	3.88		78296.07	78296.07	92.39		Si
SLV 3	0.44	-14727.11	-51170	-0.0000673	0.0005615	0.0035	3.88		88532.17	88532.17	6.01		Si
SLV 3	0.84	-10050.72	-56004	-0.0000652	0.0005615	0.0035	3.88		94979.75	94979.75	9.45		Si
SLV 4	0.44	-13751.57	-50851	-0.0000656	0.0005615	0.0035	3.88		88081.87	88081.87	6.41		Si
SLV 4	0.84	-9694.96	-55534	-0.0000643	0.0005615	0.0035	3.88		94356.83	94356.83	9.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.44	224.82	-61472	-54642	10898	3.88	3.88	-31295	10833	18915	33304	52283	9894	52219	No	4.79	Si
SLU 77	0.84	-5531.76	-65713	-58412	10966	3.88	3.88	-33455	10833	18915	33304	52283	9894	52219	No	4.76	Si
SLU 78	0.44	343.87	-61588	-54745	10848	3.88	3.88	-31354	10833	18915	33304	52283	9894	52219	No	4.81	Si
SLU 78	0.84	-5395.77	-65843	-58527	10915	3.88	3.88	-33521	10833	18915	33304	52283	9894	52219	No	4.78	Si
SLU 79	0.44	222.81	-60914	-54146	10795	3.88	3.88	-31011	10833	18915	33304	52283	9894	52219	No	4.84	Si
SLU 79	0.84	-5481.04	-65106	-57872	10861	3.88	3.88	-33146	10833	18915	33304	52283	9894	52219	No	4.81	Si
SLU 82	0.44	332.04	-62346	-55419	11061	3.88	3.88	-31741	10833	18915	33304	52283	9894	52219	No	4.72	Si
SLU 82	0.84	-5492.75	-66601	-59201	11128	3.88	3.88	-33907	10833	18915	33304	52283	9894	52219	No	4.69	Si
SLU 75	0.44	353.11	-60915	-54147	10797	3.88	3.88	-31012	10833	18915	33304	52283	9894	52219	No	4.84	Si
SLU 75	0.84	-5351.73	-65108	-57874	10863	3.88	3.88	-33147	10833	18915	33304	52283	9894	52219	No	4.81	Si
SLU 84	0.44	322.8	-63019	-56017	11112	3.88	3.88	-32083	10833	18915	33304	52283	9894	52219	No	4.7	Si
SLU 84	0.84	-5536.79	-67335	-59853	11180	3.88	3.88	-34280	10833	18915	33304	52283	9894	52219	No	4.67	Si
SLU 81	0.44	213	-62231	-55316	11111	3.88	3.88	-31682	10833	18915	33304	52283	9894	52219	No	4.7	Si
SLU 81	0.84	-5628.74	-66471	-59086	11179	3.88	3.88	-33840	10833	18915	33304	52283	9894	52219	No	4.67	Si
SLU 74	0.44	234.07	-60799	-54044	10847	3.88	3.88	-30953	10833	18915	33304	52283	9894	52219	No	4.81	Si
SLU 74	0.84	-5487.72	-64979	-57759	10914	3.88	3.88	-33081	10833	18915	33304	52283	9894	52219	No	4.78	Si
SLU 80	0.44	341.86	-61030	-54249	10745	3.88	3.88	-31070	10833	18915	33304	52283	9894	52219	No	4.86	Si
SLU 80	0.84	-5345.05	-65236	-57988	10811	3.88	3.88	-33212	10833	18915	33304	52283	9894	52219	No	4.83	Si
SLU 83	0.44	203.75	-62903	-55914	11162	3.88	3.88	-32024	10833	18915	33304	52283	9894	52219	No	4.68	Si
SLU 83	0.84	-5672.79	-67205	-59738	11231	3.88	3.88	-34214	10833	18915	33304	52283	9894	52219	No	4.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	0.44	7542.88	-38646	-34352	18331	3.88	3.88	-19675	14352	25058	33304	78424	9894	58362		3.18	Si
SLD 16	0.84	-451.46	-40827	-36291	18385	3.88	3.88	-20785	14574	25446	33304	78424	9894	58750		3.2	Si
SLD 15	0.44	7123.87	-38783	-34474	17628	3.88	3.88	-19744	14366	25082	33304	78424	9894	58387		3.31	Si
SLD 15	0.84	-604.27	-41029	-36471	17683	3.88	3.88	-20888	14594	25482	33304	78424	9894	58786		3.32	Si
SLV 14	0.44	15190.22	-31731	-28205	33234	3.88	3.88	-16154	13647	23829	33304	78424	9894	57133		1.72	Si
SLV 14	0.84	2520.01	-32581	-28961	32733	3.88	3.88	-16587	13734	23980	33304	78424	9894	57284		1.75	Si
SLD 14	0.44	6612.19	-37283	-33140	18541	3.88	3.88	-18981	14213	24816	33304	78424	9894	58120		3.13	Si
SLD 14	0.84	-1083.93	-39267	-34904	18350	3.88	3.88	-19991	14415	25168	33304	78424	9894	58473		3.19	Si
SLV 13	0.44	14214.69	-32050	-28489	31598	3.88	3.88	-16317	13680	23885	33304	78424	9894	57190		1.81	Si
SLV 13	0.84	2164.25	-33051	-29379	31097	3.88	3.88	-16826	13782	24063	33304	78424	9894	57368		1.84	Si
SLV 3	0.44	-14727.11	-51170	-45485	-18133	3.88	3.88	-26051	15627	27284	33304	78424	9894	60589		3.34	Si
SLV 3	0.84	-10050.72	-56004	-49782	-17539	3.88	3.88	-28512	16119	28144	33304	78424	9894	61448		3.5	Si
SLV 16	0.44	17321.02	-34855	-30982	32773	3.88	3.88	-17745	13966	24384	33304	78424	9894	57688		1.76	Si
SLV 16	0.84	3986.79	-36144	-32128	32838	3.88	3.88	-18401	14097	24613	33304	78424	9894	57917		1.76	Si
SLD 13	0.44	6193.17	-37420	-33262	17838	3.88	3.88	-19050	14227	24840	33304	78424	9894	58144		3.26	Si
SLD 13	0.84	-1236.74	-39469	-35083	17647	3.88	3.88	-20093	14435	25204	33304	78424	9894	58508		3.32	Si
SLV 15	0.44	16345.49	-35174	-31266	31137	3.88	3.88	-17907	13998	24441	33304	78424	9894	57745		1.85	Si
SLV 15	0.84	3631.02	-36615	-32546	31202	3.88	3.88	-18641	14145	24697	33304	78424	9894	58001		1.86	Si
SLV 1	0.44	-16857.91	-48046	-42708	-17671	3.88	3.88	-24460	15309	26729	33304	78424	9894	60033		3.4	Si
SLV 1	0.84	-11517.49	-52441	-46614	-17644	3.88	3.88	-26698	15756	27510	33304	78424	9894	60815		3.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	15860	-27692	282.21	5583.67	19.79	Si
SLV 13	179667	0.24	16020	-27970	282.21	5633.12	19.96	Si
SLV 10	179667	0.24	16701	-29159	282.21	5843.34	20.71	Si
SLV 9	179667	0.24	16804	-29340	282.21	5875.13	20.82	Si
SLV 16	179667	0.24	17813	-31101	282.21	6181.49	21.9	Si
SLV 15	179667	0.24	17972	-31379	282.21	6229.35	22.07	Si
SLV 6	179667	0.24	19349	-33784	282.21	6638.22	23.52	Si
SLV 5	179667	0.24	19453	-33965	282.21	6668.6	23.63	Si
SLV 12	179667	0.24	23208	-40521	282.21	7731.72	27.4	Si
SLV 11	179667	0.24	23312	-40702	282.21	7760.04	27.5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-50539	-32290	930	0.46	5875.9	0.963	6.94543	4.02955	Si
SLV 8	-50228	-32205	918	0.462	5844.2	0.963	6.98295	4.02955	Si
SLV 11	-46289	-28983	833	0.494	5443.6	0.96	7.47882	4.02955	Si
SLV 12	-45978	-28898	821	0.497	5411.9	0.96	7.52298	4.02955	Si
SLV 5	-37092	-26543	2561	0.545	4508.7	0.953	8.3107	4.02955	Si
SLV 6	-36780	-26458	2549	0.549	4477.1	0.952	8.37145	4.02955	Si
SLV 3	-50875	-34159	1617	0.445	5910.1	0.963	6.72237	2.9746	Si
SLV 4	-50396	-34029	1598	0.449	5861.4	0.963	6.77778	2.9746	Si
SLV 9	-32842	-23236	2464	0.601	4077.2	0.948	9.20295	4.02955	Si
SLV 10	-32530	-23151	2452	0.605	4045.6	0.948	9.27863	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.029	SLU 83	Si
V_SLU	4.65	SLU 83	Si
PF_SLV	3.494	SLV 16	Si
V_SLV	1.719	SLV 14	Si
PFFP_SLV	19.786	SLV 14	Si
R_SLV	1.724	SLV 7	Si

Maschio 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-1.476	L2	L3	3.308	0.3	1.98	1.98	1.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.56	-20701.01	-60563	-0.0001857	0.0003743	0.0035	3.3082	40134.48	59370.91	59370.91	2.87	No	Si
SLU 83	0.42	632.32	-58254	-0.0001037	0.0003743	0.0035	3.3082	40806.15	57363.91	57363.91	90.72	No	Si
SLU 82	-1.56	-20467.03	-59886	-0.0001829	0.0003743	0.0035	3.3082	40349.56	59200.73	59200.73	2.89	No	Si
SLU 82	0.42	635.45	-57503	-0.0001021	0.0003743	0.0035	3.3082	40987.09	57105.45	57105.45	89.87	No	Si
SLU 74	-1.56	-20017.56	-58698	-0.0001778	0.0003743	0.0035	3.3082	40690.4	58910.84	58910.84	2.94	No	Si
SLU 74	0.42	441.28	-56306	-0.000099	0.0003743	0.0035	3.3082	41237.19	56698.7	56698.7	128.49	No	Si
SLU 84	-1.56	-20680.16	-60547	-0.0001856	0.0003743	0.0035	3.3082	40139.79	59366.81	59366.81	2.87	No	Si
SLU 84	0.42	623.66	-58253	-0.0001037	0.0003743	0.0035	3.3082	40806.37	57363.61	57363.61	91.98	No	Si
SLU 75	-1.56	-19996.71	-58682	-0.0001777	0.0003743	0.0035	3.3082	40694.72	58906.96	58906.96	2.95	No	Si
SLU 75	0.42	432.62	-56305	-0.0000989	0.0003743	0.0035	3.3082	41237.35	56698.41	56698.41	131.06	No	Si
SLU 81	-1.56	-20487.88	-59902	-0.000183	0.0003743	0.0035	3.3082	40344.6	59204.76	59204.76	2.89	No	Si
SLU 81	0.42	644.11	-57504	-0.0001022	0.0003743	0.0035	3.3082	40986.89	57105.74	57105.74	88.66	No	Si
SLU 80	-1.56	-20077.73	-58971	-0.0001788	0.0003743	0.0035	3.3082	40616.34	58976.35	58976.35	2.94	No	Si
SLU 80	0.42	422.82	-56647	-0.0000996	0.0003743	0.0035	3.3082	41170.59	56814.16	56814.16	134.37	No	Si
SLU 77	-1.56	-20230.68	-59359	-0.0001805	0.0003743	0.0035	3.3082	40506.32	59070.92	59070.92	2.92	No	Si
SLU 77	0.42	429.49	-57056	-0.0001005	0.0003743	0.0035	3.3082	41085.87	56953	56953	132.61	No	Si
SLU 79	-1.56	-20098.58	-58987	-0.0001789	0.0003743	0.0035	3.3082	40611.86	58980.26	58980.26	2.93	No	Si
SLU 79	0.42	431.48	-56648	-0.0000996	0.0003743	0.0035	3.3082	41170.42	56814.45	56814.45	131.67	No	Si
SLU 78	-1.56	-20209.83	-59343	-0.0001804	0.0003743	0.0035	3.3082	40510.99	59066.97	59066.97	2.92	No	Si
SLU 78	0.42	420.82	-57055	-0.0001004	0.0003743	0.0035	3.3082	41086.06	56952.7	56952.7	135.34	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	-1.56	-16950.79	-43657	-0.0001217	0.0005615	0.0035	3.3082		59967.81	59967.81	3.54		Si
SLV 10	0.42	1828.82	-38236	-0.0000657	0.0005615	0.0035	3.3082		51196.68	51196.68	27.99		Si
SLV 5	-1.56	-18761.08	-45559	-0.0001311	0.0005615	0.0035	3.3082		61732.13	61732.13	3.29		Si
SLV 5	0.42	1163.28	-40707	-0.000068	0.0005615	0.0035	3.3082		53648.51	53648.51	46.12		Si
SLV 2	-1.56	-18391.32	-45758	-0.0001303	0.0005615	0.0035	3.3082		61918.62	61918.62	3.37		Si
SLV 2	0.42	-762	-43996	-0.0000724	0.0005615	0.0035	3.3082		60280.38	60280.38	79.11		Si
SLD 2	-1.56	-15820.07	-42956	-0.0001168	0.0005615	0.0035	3.3082		59290.06	59290.06	3.75		Si
SLD 2	0.42	-250.46	-40981	-0.0000657	0.0005615	0.0035	3.3082		57306.63	57306.63	228.81		Si
SLV 1	-1.56	-18198.64	-45368	-0.0001289	0.0005615	0.0035	3.3082		61554.16	61554.16	3.38		Si
SLV 1	0.42	-642.4	-43410	-0.000071	0.0005615	0.0035	3.3082		59738.27	59738.27	92.99		Si
SLD 6	-1.56	-16068.12	-43014	-0.0001177	0.0005615	0.0035	3.3082		59346.95	59346.95	3.69		Si
SLD 6	0.42	548.38	-39747	-0.0000645	0.0005615	0.0035	3.3082		52692.72	52692.72	96.09		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 5	-1.56	-16013.2	-42902	-0.0001173	0.0005615	0.0035	3.3082		59236.56	59236.56	3.7		Si
SLD 5	0.42	582.48	-39580	-0.0000643	0.0005615	0.0035	3.3082		52526.73	52526.73	90.18		Si
SLV 6	-1.56	-18886.63	-45813	-0.0001319	0.0005615	0.0035	3.3082		61969.82	61969.82	3.28		Si
SLV 6	0.42	1085.35	-41089	-0.0000684	0.0005615	0.0035	3.3082		54030.13	54030.13	49.78		Si
SLV 4	-1.56	-16002.16	-43497	-0.0001184	0.0005615	0.0035	3.3082		59820.68	59820.68	3.74		Si
SLV 4	0.42	-1584.12	-43547	-0.0000741	0.0005615	0.0035	3.3082		59866.2	59866.2	37.79		Si
SLV 9	-1.56	-16825.25	-43403	-0.0001208	0.0005615	0.0035	3.3082		59731.81	59731.81	3.55		Si
SLV 9	0.42	1906.75	-37854	-0.0000653	0.0005615	0.0035	3.3082		50820.11	50820.11	26.65		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	-1.56	-18195.62	-53768	-45278	1221	3.3082	3.3082	-45621	10833	10752	21410	29719	8436	32162	No	26.34	Si
SLU 71	0.42	-9.62	-51151	-43074	7404	3.3082	3.3082	-43401	10833	10752	21410	29719	8436	32162	No	4.34	Si
SLU 78	-1.56	-20209.83	-59343	-49973	662	3.3082	3.3082	-50352	10833	10752	21410	29719	8436	32162	No	48.59	Si
SLU 78	0.42	420.82	-57055	-48047	7388	3.3082	3.3082	-48411	10833	10752	21410	29719	8436	32162	No	4.35	Si
SLU 67	-1.56	-18093.75	-53463	-45022	1203	3.3082	3.3082	-45363	10833	10752	21410	29719	8436	32162	No	26.73	Si
SLU 67	0.42	-8.49	-50807	-42785	7348	3.3082	3.3082	-43110	10833	10752	21410	29719	8436	32162	No	4.38	Si
SLU 69	-1.56	-18327.73	-54140	-45592	1200	3.3082	3.3082	-45938	10833	10752	21410	29719	8436	32162	No	26.81	Si
SLU 69	0.42	-11.62	-51559	-43418	7432	3.3082	3.3082	-43747	10833	10752	21410	29719	8436	32162	No	4.33	Si
SLU 77	-1.56	-20230.68	-59359	-49987	608	3.3082	3.3082	-50366	10833	10752	21410	29719	8436	32162	No	52.91	Si
SLU 77	0.42	429.49	-57056	-48047	7333	3.3082	3.3082	-48412	10833	10752	21410	29719	8436	32162	No	4.39	Si
SLU 79	-1.56	-20098.58	-58987	-49673	629	3.3082	3.3082	-50050	10833	10752	21410	29719	8436	32162	No	51.11	Si
SLU 79	0.42	431.48	-56648	-47704	7306	3.3082	3.3082	-48066	10833	10752	21410	29719	8436	32162	No	4.4	Si
SLU 72	-1.56	-18174.77	-53751	-45264	1275	3.3082	3.3082	-45608	10833	10752	21410	29719	8436	32162	No	25.22	Si
SLU 72	0.42	-18.29	-51150	-43073	7458	3.3082	3.3082	-43400	10833	10752	21410	29719	8436	32162	No	4.31	Si
SLU 68	-1.56	-17947.75	-53080	-44699	1261	3.3082	3.3082	-45038	10833	10752	21410	29719	8436	32162	No	25.51	Si
SLU 68	0.42	-12.27	-50399	-42441	7356	3.3082	3.3082	-42763	10833	10752	21410	29719	8436	32162	No	4.37	Si
SLU 70	-1.56	-18306.88	-54124	-45578	1254	3.3082	3.3082	-45924	10833	10752	21410	29719	8436	32162	No	25.65	Si
SLU 70	0.42	-20.28	-51558	-43417	7486	3.3082	3.3082	-43746	10833	10752	21410	29719	8436	32162	No	4.3	Si
SLU 80	-1.56	-20077.73	-58971	-49659	683	3.3082	3.3082	-50036	10833	10752	21410	29719	8436	32162	No	47.07	Si
SLU 80	0.42	422.82	-56647	-47703	7360	3.3082	3.3082	-48065	10833	10752	21410	29719	8436	32162	No	4.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	-1.56	-18761.08	-45559	-38365	-9259	3.3082	3.3082	-38656	16250	16128	21410	44578	8436	37538		4.05	Si
SLV 5	0.42	1163.28	-40707	-34279	-4453	3.3082	3.3082	-34540	16250	16128	21410	44578	8436	37538		8.43	Si
SLV 12	-1.56	-8986.94	-36121	-30418	10679	3.3082	3.3082	-30649	16250	16128	21410	44578	8436	37538		3.51	Si
SLV 12	0.42	-911.57	-36738	-30937	15143	3.3082	3.3082	-31172	16250	16128	21410	44578	8436	37538		2.48	Si
SLV 11	-1.56	-8861.4	-35867	-30204	10800	3.3082	3.3082	-30433	16250	16128	21410	44578	8436	37538		3.48	Si
SLV 11	0.42	-833.63	-36356	-30616	15255	3.3082	3.3082	-30848	16250	16128	21410	44578	8436	37538		2.46	Si
SLD 11	-1.56	-11679.9	-38666	-32561	5145	3.3082	3.3082	-32808	16250	16128	21410	44578	8436	37538		7.3	Si
SLD 11	0.42	-296.67	-37698	-31746	9703	3.3082	3.3082	-31987	16250	16128	21410	44578	8436	37538		3.87	Si
SLD 12	-1.56	-11734.83	-38778	-32655	5093	3.3082	3.3082	-32903	16250	16128	21410	44578	8436	37538		7.37	Si
SLD 12	0.42	-330.76	-37865	-31887	9655	3.3082	3.3082	-32129	16250	16128	21410	44578	8436	37538		3.89	Si
SLV 7	-1.56	-10797.23	-38023	-32019	9304	3.3082	3.3082	-32262	16250	16128	21410	44578	8436	37538		4.03	Si
SLV 7	0.42	-1577.1	-39210	-33019	13739	3.3082	3.3082	-33269	16250	16128	21410	44578	8436	37538		2.73	Si
SLV 6	-1.56	-18886.63	-45813	-38579	-9380	3.3082	3.3082	-38872	16250	16128	21410	44578	8436	37538		4	Si
SLV 6	0.42	1085.35	-41089	-34601	-4565	3.3082	3.3082	-34864	16250	16128	21410	44578	8436	37538		8.22	Si
SLV 15	-1.56	-9356.71	-35922	-30250	6080	3.3082	3.3082	-30480	16250	16128	21410	44578	8436	37538		6.17	Si
SLV 15	0.42	1013.72	-33449	-28168	10685	3.3082	3.3082	-28381	16093	15972	21410	44578	8436	37382		3.5	Si
SLV 16	-1.56	-9549.38	-36312	-30579	5895	3.3082	3.3082	-30811	16250	16128	21410	44578	8436	37538		6.37	Si
SLV 16	0.42	894.11	-34036	-28662	10513	3.3082	3.3082	-28879	16192	16071	21410	44578	8436	37480		3.57	Si
SLV 8	-1.56	-10922.78	-38277	-32233	9184	3.3082	3.3082	-32478	16250	16128	21410	44578	8436	37538		4.09	Si
SLV 8	0.42	-1655.04	-39592	-33340	13628	3.3082	3.3082	-33593	16250	16128	21410	44578	8436	37538		2.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.57 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.24	35495	-35227	71.3	4055.96	56.89	Si
SLV 16	179667	0.24	36044	-35773	71.3	4099.44	57.5	Si
SLV 11	179667	0.24	36801	-36524	71.3	4158.35	58.33	Si
SLV 12	179667	0.24	37159	-36879	71.3	4185.83	58.71	Si
SLV 13	179667	0.24	37399	-37117	71.3	4204.13	58.97	Si
SLV 14	179667	0.24	37948	-37662	71.3	4245.57	59.55	Si
SLV 7	179667	0.24	39742	-39443	71.3	4376.78	61.39	Si
SLV 8	179667	0.24	40100	-39798	71.3	4402.21	61.75	Si
SLV 9	179667	0.24	43148	-42823	71.3	4608.59	64.64	Si
SLV 10	179667	0.24	43506	-43178	71.3	4631.64	64.96	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.57 Wa = 0.05 Ta = 0.0218

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-41089	-45813	99	0.51	4460.8	0.981	7.56079	3.25578	Si
SLV 5	-40707	-45559	100	0.514	4421.9	0.98	7.61966	3.25578	Si
SLV 8	-39592	-38277	-71	0.527	4308.2	0.98	7.80917	3.25578	Si
SLV 7	-39210	-38023	-70	0.531	4269.3	0.98	7.87324	3.25578	Si
SLV 10	-38236	-43657	24	0.543	4170.1	0.979	8.05852	3.25578	Si
SLV 9	-37854	-43403	25	0.547	4131.1	0.979	8.12659	3.25578	Si
SLV 12	-36738	-36121	-147	0.558	4017.5	0.979	8.28727	3.25578	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-36356	-35867	-146	0.563	3978.6	0.978	8.36111	3.25578	Si
SLV 2	-43996	-45758	127	0.482	4757	0.982	7.13438	2.68036	Si
SLV 4	-43547	-43497	76	0.487	4711.2	0.982	7.21198	2.68036	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.868	SLU 83	Si
V_SLU	4.296	SLU 70	Si
PF_SLV	3.281	SLV 6	Si
V_SLV	2.461	SLV 11	Si
PFFP_SLV	56.89	SLV 15	Si
R_SLV	2.322	SLV 6	Si

Maschio 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-11.013	-1.476	L3	L4	3.308	0.3	0.99	0.99	0.99			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.42	444.99	-56186	-0.0000987	0.0003743	0.0035	3.3082	41259.71	56658.2	56658.2	127.33	No	Si
SLU 83	1.41	-2677.55	-56778	-0.0001079	0.0003743	0.0035	3.3082	41144.1	58464.67	58464.67	21.84	No	Si
SLU 75	0.42	459.16	-54412	-0.0000951	0.0003743	0.0035	3.3082	41537.08	56067.75	56067.75	122.11	No	Si
SLU 75	1.41	-2562.66	-54947	-0.0001036	0.0003743	0.0035	3.3082	41464.26	57948.48	57948.48	22.61	No	Si
SLU 82	0.42	469.42	-55436	-0.0000973	0.0003743	0.0035	3.3082	41389.47	56407.07	56407.07	120.16	No	Si
SLU 82	1.41	-2637.38	-55981	-0.000106	0.0003743	0.0035	3.3082	41296.99	58287.73	58287.73	22.1	No	Si
SLU 80	0.42	459.83	-54745	-0.0000958	0.0003743	0.0035	3.3082	41492.81	56177.68	56177.68	122.17	No	Si
SLU 80	1.41	-2582.91	-55300	-0.0001044	0.0003743	0.0035	3.3082	41411.03	58092	58092	22.49	No	Si
SLU 77	0.42	434.72	-55161	-0.0000966	0.0003743	0.0035	3.3082	41432.45	56315.58	56315.58	129.54	No	Si
SLU 77	1.41	-2602.83	-55744	-0.0001054	0.0003743	0.0035	3.3082	41338.36	58236.15	58236.15	22.37	No	Si
SLU 79	0.42	452.88	-54750	-0.0000958	0.0003743	0.0035	3.3082	41492.16	56179.24	56179.24	124.05	No	Si
SLU 79	1.41	-2574.05	-55300	-0.0001043	0.0003743	0.0035	3.3082	41411.13	58091.73	58091.73	22.57	No	Si
SLU 74	0.42	452.21	-54417	-0.0000951	0.0003743	0.0035	3.3082	41536.48	56069.3	56069.3	123.99	No	Si
SLU 74	1.41	-2553.81	-54946	-0.0001035	0.0003743	0.0035	3.3082	41464.36	57948.21	57948.21	22.69	No	Si
SLU 78	0.42	441.67	-55157	-0.0000966	0.0003743	0.0035	3.3082	41433.16	56314.01	56314.01	127.5	No	Si
SLU 78	1.41	-2611.69	-55745	-0.0001054	0.0003743	0.0035	3.3082	41338.24	58236.29	58236.29	22.3	No	Si
SLU 84	0.42	451.93	-56181	-0.0000987	0.0003743	0.0035	3.3082	41260.58	56656.62	56656.62	125.37	No	Si
SLU 84	1.41	-2686.41	-56779	-0.0001079	0.0003743	0.0035	3.3082	41143.96	58464.82	58464.82	21.76	No	Si
SLU 81	0.42	462.48	-55441	-0.0000972	0.0003743	0.0035	3.3082	41388.71	56408.64	56408.64	121.97	No	Si
SLU 81	1.41	-2628.53	-55980	-0.000106	0.0003743	0.0035	3.3082	41297.11	58287.58	58287.58	22.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.42	2010.39	-32601	-0.0000568	0.0005615	0.0035	3.3082		45701.34	45701.34	22.73		Si
SLV 16	1.41	-8860.16	-35457	-0.000082	0.0005615	0.0035	3.3082		51549.64	51549.64	5.82		Si
SLV 1	0.42	-1180.06	-42400	-0.0000709	0.0005615	0.0035	3.3082		58734.54	58734.54	49.77		Si
SLV 1	1.41	5487.12	-39916	-0.0000796	0.0005615	0.0035	3.3082		52860.43	52860.43	9.63		Si
SLV 14	0.42	1174.16	-33451	-0.0000558	0.0005615	0.0035	3.3082		46522.26	46522.26	39.62		Si
SLV 14	1.41	-7563.24	-35456	-0.0000781	0.0005615	0.0035	3.3082		51548.11	51548.11	6.82		Si
SLD 16	0.42	1102.32	-35402	-0.0000588	0.0005615	0.0035	3.3082		48416.53	48416.53	43.92		Si
SLD 16	1.41	-4762.27	-36736	-0.0000719	0.0005615	0.0035	3.3082		52911.76	52911.76	11.11		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	0.42	1292.03	-32931	-0.0000553	0.0005615	0.0035	3.3082		46019.95	46019.95	35.62		Si
SLV 13	1.41	-7897.35	-35210	-0.0000787	0.0005615	0.0035	3.3082		51288.03	51288.03	6.49		Si
SLV 11	0.42	2218.09	-34492	-0.0000606	0.0005615	0.0035	3.3082		47530.99	47530.99	21.43		Si
SLV 11	1.41	-5964.59	-36903	-0.0000758	0.0005615	0.0035	3.3082		53090.38	53090.38	8.9		Si
SLV 12	0.42	2141.29	-34831	-0.0000609	0.0005615	0.0035	3.3082		47860.57	47860.57	22.35		Si
SLV 12	1.41	-5746.88	-37063	-0.0000754	0.0005615	0.0035	3.3082		53262.16	53262.16	9.27		Si
SLV 15	0.42	2128.26	-32080	-0.0000563	0.0005615	0.0035	3.3082		45087.92	45087.92	21.19		Si
SLV 15	1.41	-9194.28	-35212	-0.0000825	0.0005615	0.0035	3.3082		51289.55	51289.55	5.58		Si
SLD 15	0.42	1152.95	-35178	-0.0000586	0.0005615	0.0035	3.3082		48198.62	48198.62	41.8		Si
SLD 15	1.41	-4905.78	-36631	-0.0000722	0.0005615	0.0035	3.3082		52798.92	52798.92	10.76		Si
SLV 2	0.42	-1297.93	-42920	-0.0000722	0.0005615	0.0035	3.3082		59254.12	59254.12	45.65		Si
SLV 2	1.41	5821.24	-40161	-0.000081	0.0005615	0.0035	3.3082		53104.72	53104.72	9.12		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	0.42	459.16	-54412	-45821	8912	3.3082	3.3082	-46168	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 75	1.41	-2562.66	-54947	-46271	11340	3.3082	3.3082	-46622	10833	10752	9516	29719	8436	20267	No	1.79	Si
SLU 80	0.42	459.83	-54745	-46101	8997	3.3082	3.3082	-46451	10833	10752	9516	29719	8436	20267	No	2.25	Si
SLU 80	1.41	-2582.91	-55300	-46569	11438	3.3082	3.3082	-46922	10833	10752	9516	29719	8436	20267	No	1.77	Si
SLU 84	0.42	451.93	-56181	-47310	9098	3.3082	3.3082	-47669	10833	10752	9516	29719	8436	20267	No	2.23	Si
SLU 84	1.41	-2686.41	-56779	-47814	11616	3.3082	3.3082	-48177	10833	10752	9516	29719	8436	20267	No	1.74	Si
SLU 76	0.42	481.95	-53998	-45472	8943	3.3082	3.3082	-45817	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 76	1.41	-2539.79	-54503	-45897	11352	3.3082	3.3082	-46245	10833	10752	9516	29719	8436	20267	No	1.79	Si
SLU 83	0.42	444.99	-56186	-47314	9039	3.3082	3.3082	-47673	10833	10752	9516	29719	8436	20267	No	2.24	Si
SLU 83	1.41	-2677.55	-56778	-47813	11556	3.3082	3.3082	-48176	10833	10752	9516	29719	8436	20267	No	1.75	Si
SLU 78	0.42	441.67	-55157	-46448	9005	3.3082	3.3082	-46800	10833	10752	9516	29719	8436	20267	No	2.25	Si
SLU 78	1.41	-2611.69	-55745	-46943	11467	3.3082	3.3082	-47299	10833	10752	9516	29719	8436	20267	No	1.77	Si
SLU 79	0.42	452.88	-54750	-46105	8938	3.3082	3.3082	-46455	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 79	1.41	-2574.05	-55300	-46568	11377	3.3082	3.3082	-46922	10833	10752	9516	29719	8436	20267	No	1.78	Si
SLU 81	0.42	462.48	-55441	-46687	8945	3.3082	3.3082	-47041	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 81	1.41	-2628.53	-55980	-47141	11429	3.3082	3.3082	-47499	10833	10752	9516	29719	8436	20267	No	1.77	Si
SLU 77	0.42	434.72	-55161	-46452	8946	3.3082	3.3082	-46804	10833	10752	9516	29719	8436	20267	No	2.27	Si
SLU 77	1.41	-2602.83	-55744	-46943	11406	3.3082	3.3082	-47299	10833	10752	9516	29719	8436	20267	No	1.78	Si
SLU 82	0.42	469.42	-55436	-46683	9005	3.3082	3.3082	-47037	10833	10752	9516	29719	8436	20267	No	2.25	Si
SLU 82	1.41	-2637.38	-55981	-47142	11490	3.3082	3.3082	-47500	10833	10752	9516	29719	8436	20267	No	1.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	0.42	2141.29	-34831	-29332	18484	3.3082	3.3082	-29554	16250	16128	9516	44578	8436	25643		1.39	Si
SLV 12	1.41	-5746.88	-37063	-31211	20116	3.3082	3.3082	-31448	16250	16128	9516	44578	8436	25643		1.27	Si
SLV 15	0.42	2128.26	-32080	-27015	16114	3.3082	3.3082	-27220	15861	15741	9516	44578	8436	25257		1.57	Si
SLV 15	1.41	-9194.28	-35212	-29652	17207	3.3082	3.3082	-29877	16250	16128	9516	44578	8436	25643		1.49	Si
SLV 16	0.42	2010.39	-32601	-27453	15843	3.3082	3.3082	-27661	15949	15829	9516	44578	8436	25344		1.6	Si
SLV 16	1.41	-8860.16	-35457	-29859	16951	3.3082	3.3082	-30085	16250	16128	9516	44578	8436	25643		1.51	Si
SLD 11	0.42	1205.54	-36198	-30482	11804	3.3082	3.3082	-30713	16250	16128	9516	44578	8436	25643		2.17	Si
SLD 11	1.41	-3552.64	-37362	-31462	13446	3.3082	3.3082	-31701	16250	16128	9516	44578	8436	25643		1.91	Si
SLD 7	0.42	888.8	-37412	-31505	10139	3.3082	3.3082	-31744	16250	16128	9516	44578	8436	25643		2.53	Si
SLD 7	1.41	-1837.06	-37965	-31971	11935	3.3082	3.3082	-32214	16250	16128	9516	44578	8436	25643		2.15	Si
SLV 11	0.42	2218.09	-34492	-29046	18661	3.3082	3.3082	-29267	16250	16128	9516	44578	8436	25643		1.37	Si
SLV 11	1.41	-5964.59	-36903	-31076	20283	3.3082	3.3082	-31312	16250	16128	9516	44578	8436	25643		1.26	Si
SLV 7	0.42	1476.46	-37333	-31438	14764	3.3082	3.3082	-31677	16250	16128	9516	44578	8436	25643		1.74	Si
SLV 7	1.41	-1949.24	-38315	-32265	16744	3.3082	3.3082	-32510	16250	16128	9516	44578	8436	25643		1.53	Si
SLV 8	0.42	1399.66	-37672	-31724	14587	3.3082	3.3082	-31964	16250	16128	9516	44578	8436	25643		1.76	Si
SLV 8	1.41	-1731.54	-38475	-32400	16577	3.3082	3.3082	-32646	16250	16128	9516	44578	8436	25643		1.55	Si
SLD 15	0.42	1152.95	-35178	-29624	10608	3.3082	3.3082	-29849	16250	16128	9516	44578	8436	25643		2.42	Si
SLD 15	1.41	-4905.78	-36631	-30847	12022	3.3082	3.3082	-31081	16250	16128	9516	44578	8436	25643		2.13	Si
SLD 12	0.42	1171.95	-36346	-30607	11726	3.3082	3.3082	-30839	16250	16128	9516	44578	8436	25643		2.19	Si
SLD 12	1.41	-3457.4	-37432	-31521	13373	3.3082	3.3082	-31760	16250	16128	9516	44578	8436	25643		1.92	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 0.915 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.26	35521	-35253	19.22	4058.06	211.13	Si
SLV 16	179667	0.26	35787	-35517	19.22	4079.16	212.23	Si
SLV 13	179667	0.26	36167	-35895	19.22	4109.13	213.78	Si
SLV 11	179667	0.26	36301	-36028	19.22	4119.56	214.33	Si
SLV 14	179667	0.26	36433	-36159	19.22	4129.9	214.86	Si
SLV 12	179667	0.26	36474	-36200	19.22	4133.07	215.03	Si
SLV 7	179667	0.26	37576	-37293	19.22	4217.58	219.43	Si
SLV 8	179667	0.26	37750	-37465	19.22	4230.65	220.11	Si
SLV 9	179667	0.26	38456	-38166	19.22	4283.35	222.85	Si
SLV 10	179667	0.26	38629	-38338	19.22	4296.12	223.51	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 0.915 Wa = 0.05 Ta = 0.0055

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-38470	-40508	145	0.623	4057.2	0.989	9.15977	2.73518	Si
SLV 5	-38310	-40169	146	0.625	4040.9	0.989	9.18823	2.73518	Si
SLV 8	-38475	-37672	-7	0.627	4057.7	0.989	9.2105	2.73518	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-38315	-37333	-6	0.629	4041.4	0.989	9.23966	2.73518	Si
SLV 4	-40163	-42069	-185	0.603	4229.8	0.99	8.85585	2.61318	Si
SLV 2	-40161	-42920	-139	0.604	4229.6	0.99	8.87241	2.61318	Si
SLV 3	-39917	-41549	-184	0.606	4204.7	0.99	8.89667	2.61318	Si
SLV 1	-39916	-42400	-138	0.607	4204.6	0.99	8.91334	2.61318	Si
SLV 10	-37058	-37668	343	0.636	3913.4	0.989	9.34485	2.73518	Si
SLV 9	-36898	-37329	344	0.638	3897	0.989	9.37518	2.73518	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	21.763	SLU 84	Si
V_SLU	1.745	SLU 84	Si
PF_SLV	5.578	SLV 15	Si
V_SLV	1.264	SLV 11	Si
PFFP_SLV	211.127	SLV 15	Si
R_SLV	3.349	SLV 6	Si

Maschio 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-1.476	-11.013	-0.354	L2	Z medio 92 cm	1.122	0.3	2.475	1.98	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-1.56	5406.34	-22832	-0.0003931	0.0003743	0.0035	1.1218	4272.3	6948.56	6948.56	1.29	No	Si
SLU 78	0.42	610.32	-20574	-0.000126	0.0003743	0.0035	1.1218	4610.31	6696.58	6696.58	10.97	No	Si
SLU 74	-1.56	5330.99	-22510	-0.0003781	0.0003743	0.0035	1.1218	4330.63	6925.17	6925.17	1.3	No	Si
SLU 74	0.42	605.51	-20303	-0.000124	0.0003743	0.0035	1.1218	4639.58	6664.66	6664.66	11.01	No	Si
SLU 81	-1.56	5429.38	-22987	-0.0003988	0.0003743	0.0035	1.1218	4242.89	6945.74	6945.74	1.28	No	Si
SLU 81	0.42	614.7	-20833	-0.0001279	0.0003743	0.0035	1.1218	4580.02	6727.45	6727.45	10.94	No	Si
SLU 79	-1.56	5367.55	-22693	-0.0003855	0.0003743	0.0035	1.1218	4297.9	6940.21	6940.21	1.29	No	Si
SLU 79	0.42	606.21	-20427	-0.0001249	0.0003743	0.0035	1.1218	4626.49	6679.22	6679.22	11.02	No	Si
SLU 83	-1.56	5499.56	-23305	-0.0004156	0.0003743	0.0035	1.1218	4180.35	6939.39	6939.39	1.26	No	Si
SLU 83	0.42	620.49	-21101	-0.0001299	0.0003743	0.0035	1.1218	4546.36	6759.71	6759.71	10.89	No	Si
SLU 75	-1.56	5336.16	-22514	-0.0003788	0.0003743	0.0035	1.1218	4329.92	6925.66	6925.66	1.3	No	Si
SLU 75	0.42	604.53	-20306	-0.000124	0.0003743	0.0035	1.1218	4639.34	6664.93	6664.93	11.02	No	Si
SLU 80	-1.56	5372.71	-22697	-0.0003863	0.0003743	0.0035	1.1218	4297.17	6940.47	6940.47	1.29	No	Si
SLU 80	0.42	605.23	-20429	-0.0001249	0.0003743	0.0035	1.1218	4626.25	6679.48	6679.48	11.04	No	Si
SLU 84	-1.56	5504.73	-23309	-0.0004167	0.0003743	0.0035	1.1218	4179.53	6939.31	6939.31	1.26	No	Si
SLU 84	0.42	619.51	-21103	-0.0001299	0.0003743	0.0035	1.1218	4546.07	6759.98	6759.98	10.91	No	Si
SLU 82	-1.56	5434.55	-22991	-0.0003997	0.0003743	0.0035	1.1218	4242.11	6945.66	6945.66	1.28	No	Si
SLU 82	0.42	613.72	-20835	-0.0001279	0.0003743	0.0035	1.1218	4579.75	6727.72	6727.72	10.96	No	Si
SLU 77	-1.56	5401.17	-22828	-0.0003922	0.0003743	0.0035	1.1218	4273.05	6948.34	6948.34	1.29	No	Si
SLU 77	0.42	611.29	-20571	-0.000126	0.0003743	0.0035	1.1218	4610.56	6696.31	6696.31	10.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	-1.56	4456.35	-15663	-0.0002203	0.0005615	0.0035	1.1218		6804.38	6804.38	1.53		Si
SLV 11	0.42	264.86	-13710	-0.0000709	0.0005615	0.0035	1.1218		6138.2	6138.2	23.18		Si
SLD 12	-1.56	4036.26	-15597	-0.0001967	0.0005615	0.0035	1.1218		6781.42	6781.42	1.68		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 12	0.42	352.58	-13807	-0.0000737	0.0005615	0.0035	1.1218		6170.98	6170.98	17.5		Si
SLD 8	-1.56	4066.57	-16005	-0.0001992	0.0005615	0.0035	1.1218		6922.4	6922.4	1.7		Si
SLD 8	0.42	346.41	-14181	-0.0000755	0.0005615	0.0035	1.1218		6297.15	6297.15	18.18		Si
SLD 7	-1.56	4063.74	-15992	-0.000199	0.0005615	0.0035	1.1218		6918.06	6918.06	1.7		Si
SLD 7	0.42	347.45	-14175	-0.0000754	0.0005615	0.0035	1.1218		6295.15	6295.15	18.12		Si
SLV 16	-1.56	3824.59	-14132	-0.0001835	0.0005615	0.0035	1.1218		6280.75	6280.75	1.64		Si
SLV 16	0.42	394.96	-12497	-0.0000682	0.0005615	0.0035	1.1218		5733	5733	14.52		Si
SLV 15	-1.56	3814.63	-14088	-0.0001829	0.0005615	0.0035	1.1218		6265.88	6265.88	1.64		Si
SLV 15	0.42	398.6	-12476	-0.0000682	0.0005615	0.0035	1.1218		5726.13	5726.13	14.37		Si
SLD 11	-1.56	4033.42	-15584	-0.0001966	0.0005615	0.0035	1.1218		6777.09	6777.09	1.68		Si
SLD 11	0.42	353.62	-13801	-0.0000737	0.0005615	0.0035	1.1218		6168.99	6168.99	17.45		Si
SLV 8	-1.56	4533.47	-16646	-0.0002253	0.0005615	0.0035	1.1218		7145.36	7145.36	1.58		Si
SLV 8	0.42	248.26	-14598	-0.000075	0.0005615	0.0035	1.1218		6438.92	6438.92	25.94		Si
SLV 7	-1.56	4526.98	-16618	-0.0002248	0.0005615	0.0035	1.1218		7135.36	7135.36	1.58		Si
SLV 7	0.42	250.64	-14584	-0.000075	0.0005615	0.0035	1.1218		6434.32	6434.32	25.67		Si
SLV 12	-1.56	4462.84	-15692	-0.0002207	0.0005615	0.0035	1.1218		6814.28	6814.28	1.53		Si
SLV 12	0.42	262.49	-13723	-0.0000709	0.0005615	0.0035	1.1218		6142.75	6142.75	23.4		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.56	5406.34	-22832	-19227	7872	1.1218	0.9723	-57133	10833	3160	26168	10077	2860	12938	No	1.64	Si
SLU 78	0.42	610.32	-20574	-17325	3195	1.1218	1.1218	-51482	10833	3646	26168	10077	2860	12938	No	4.05	Si
SLU 74	-1.56	5330.99	-22510	-18956	7741	1.1218	0.9722	-56328	10833	3160	26168	10077	2860	12938	No	1.67	Si
SLU 74	0.42	605.51	-20303	-17098	3124	1.1218	1.1218	-50805	10833	3646	26168	10077	2860	12938	No	4.14	Si
SLU 79	-1.56	5367.55	-22693	-19110	7801	1.1218	0.9731	-56785	10833	3162	26168	10077	2860	12938	No	1.66	Si
SLU 79	0.42	606.21	-20427	-17202	3154	1.1218	1.1218	-51115	10833	3646	26168	10077	2860	12938	No	4.1	Si
SLU 84	-1.56	5504.73	-23309	-19629	7958	1.1218	0.9742	-58327	10833	3166	26168	10077	2860	12938	No	1.63	Si
SLU 84	0.42	619.51	-21103	-17771	3217	1.1218	1.1218	-52806	10833	3646	26168	10077	2860	12938	No	4.02	Si
SLU 80	-1.56	5372.71	-22697	-19113	7822	1.1218	0.9725	-56795	10833	3161	26168	10077	2860	12938	No	1.65	Si
SLU 80	0.42	605.23	-20429	-17203	3177	1.1218	1.1218	-51120	10833	3646	26168	10077	2860	12938	No	4.07	Si
SLU 82	-1.56	5434.55	-22991	-19361	7848	1.1218	0.9735	-57532	10833	3164	26168	10077	2860	12938	No	1.65	Si
SLU 82	0.42	613.72	-20835	-17545	3168	1.1218	1.1218	-52136	10833	3646	26168	10077	2860	12938	No	4.08	Si
SLU 77	-1.56	5401.17	-22828	-19223	7851	1.1218	0.9728	-57123	10833	3162	26168	10077	2860	12938	No	1.65	Si
SLU 77	0.42	611.29	-20571	-17323	3172	1.1218	1.1218	-51476	10833	3646	26168	10077	2860	12938	No	4.08	Si
SLU 75	-1.56	5336.16	-22514	-18959	7762	1.1218	0.9716	-56338	10833	3158	26168	10077	2860	12938	No	1.67	Si
SLU 75	0.42	604.53	-20306	-17099	3147	1.1218	1.1218	-50811	10833	3646	26168	10077	2860	12938	No	4.11	Si
SLU 81	-1.56	5429.38	-22987	-19358	7826	1.1218	0.9741	-57522	10833	3166	26168	10077	2860	12938	No	1.65	Si
SLU 81	0.42	614.7	-20833	-17543	3145	1.1218	1.1218	-52130	10833	3646	26168	10077	2860	12938	No	4.11	Si
SLU 83	-1.56	5499.56	-23305	-19625	7936	1.1218	0.9747	-58316	10833	3168	26168	10077	2860	12938	No	1.63	Si
SLU 83	0.42	620.49	-21101	-17769	3194	1.1218	1.1218	-52801	10833	3646	26168	10077	2860	12938	No	4.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.56	4462.84	-15692	-13214	8671	1.1218	0.8294	-39266	16250	4043	26168	15116	2860	17976		2.07	Si
SLV 12	0.42	262.49	-13723	-11556	5873	1.1218	1.1218	-34340	16250	5469	26168	15116	2860	17976		3.06	Si
SLD 7	-1.56	4063.74	-15992	-13467	6903	1.1218	0.9203	-40017	16250	4487	26168	15116	2860	17976		2.6	Si
SLD 7	0.42	347.45	-14175	-11937	3876	1.1218	1.1218	-35470	16250	5469	26168	15116	2860	17976		4.64	Si
SLD 8	-1.56	4066.57	-16005	-13477	6913	1.1218	0.9204	-40048	16250	4487	26168	15116	2860	17976		2.6	Si
SLD 8	0.42	346.41	-14181	-11942	3864	1.1218	1.1218	-35484	16250	5469	26168	15116	2860	17976		4.65	Si
SLV 7	-1.56	4526.98	-16618	-13994	8775	1.1218	0.8654	-41583	16250	4219	26168	15116	2860	17976		2.05	Si
SLV 7	0.42	250.64	-14584	-12282	5986	1.1218	1.1218	-36495	16250	5469	26168	15116	2860	17976		3	Si
SLV 8	-1.56	4533.47	-16646	-14018	8797	1.1218	0.8656	-41654	16250	4220	26168	15116	2860	17976		2.04	Si
SLV 8	0.42	248.26	-14598	-12293	5959	1.1218	1.1218	-36529	16250	5469	26168	15116	2860	17976		3.02	Si
SLV 4	-1.56	4060.02	-17314	-14580	6642	1.1218	0.9792	-43325	16250	4773	26168	15116	2860	17976		2.71	Si
SLV 4	0.42	347.54	-15413	-12979	3449	1.1218	1.1218	-38568	16250	5469	26168	15116	2860	17976		5.21	Si
SLD 11	-1.56	4033.42	-15584	-13123	6849	1.1218	0.9062	-38997	16250	4418	26168	15116	2860	17976		2.62	Si
SLD 11	0.42	353.62	-13801	-11622	3838	1.1218	1.1218	-34535	16250	5469	26168	15116	2860	17976		4.68	Si
SLV 11	-1.56	4456.35	-15663	-13190	8649	1.1218	0.8291	-39194	16250	4042	26168	15116	2860	17976		2.08	Si
SLV 11	0.42	264.86	-13710	-11545	5899	1.1218	1.1218	-34306	16250	5469	26168	15116	2860	17976		3.05	Si
SLV 3	-1.56	4050.06	-17270	-14543	6609	1.1218	0.9791	-43215	16250	4773	26168	15116	2860	17976		2.72	Si
SLV 3	0.42	351.18	-15392	-12962	3490	1.1218	1.1218	-38517	16250	5469	26168	15116	2860	17976		5.15	Si
SLD 12	-1.56	4036.26	-15597	-13134	6858	1.1218	0.9063	-39028	16250	4418	26168	15116	2860	17976		2.62	Si
SLD 12	0.42	352.58	-13807	-11627	3826	1.1218	1.1218	-34550	16250	5469	26168	15116	2860	17976		4.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.57 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.24	37481	-12614	37.77	1427.67	37.8	Si
SLV 14	179667	0.24	37519	-12626	37.77	1428.64	37.82	Si
SLV 15	179667	0.24	37912	-12759	37.77	1438.69	38.09	Si
SLV 16	179667	0.24	37950	-12771	37.77	1439.66	38.11	Si
SLV 9	179667	0.24	39646	-13342	37.77	1481.75	39.23	Si
SLV 10	179667	0.24	39670	-13350	37.77	1482.35	39.24	Si
SLV 11	179667	0.24	41083	-13826	37.77	1515.95	40.13	Si
SLV 12	179667	0.24	41108	-13834	37.77	1516.53	40.15	Si
SLV 5	179667	0.24	41926	-14109	37.77	1535.38	40.65	Si
SLV 6	179667	0.24	41951	-14118	37.77	1535.95	40.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.57 Wa = 0.05 Ta = 0.0341

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-14598	-16646	-62	0.47	1603.6	0.977	6.99013	4.00903	Si
SLV 7	-14584	-16618	-62	0.47	1602.3	0.977	6.99566	4.00903	Si
SLV 6	-14000	-15350	-17	0.49	1542.8	0.976	7.28873	4.00903	Si
SLV 5	-13987	-15321	-17	0.49	1541.4	0.976	7.29477	4.00903	Si
SLV 12	-13723	-15692	11	0.498	1514.5	0.976	7.42059	4.00903	Si
SLV 11	-13710	-15663	11	0.499	1513.2	0.976	7.4268	4.00903	Si
SLV 10	-13126	-14395	56	0.514	1453.7	0.975	7.66015	4.00903	Si
SLV 9	-13112	-14367	56	0.514	1452.3	0.975	7.66686	4.00903	Si
SLV 4	-15413	-17314	-132	0.445	1686.7	0.978	6.61177	2.9179	Si
SLV 3	-15392	-17270	-132	0.446	1684.6	0.978	6.61932	2.9179	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.261	SLU 84	Si
V_SLU	1.626	SLU 84	Si
PF_SLV	1.527	SLV 12	Si
V_SLV	2.044	SLV 8	Si
PFFP_SLV	37.796	SLV 13	Si
R_SLV	1.744	SLV 8	Si

Maschio 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-0.354	-11.013	1.046	L2	L4	1.4	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-1.56	1981.23	-21939	-0.000127	0.0003743	0.0035	1.4	7478.06	9933.83	9933.83	5.01	No	Si
SLU 77	1.41	-679.61	-27528	-0.0001304	0.0003743	0.0035	1.4	6864.47	10844.43	10844.43	15.96	No	Si
SLU 82	-1.56	1992.72	-22176	-0.0001285	0.0003743	0.0035	1.4	7472.8	9963.63	9963.63	5	No	Si
SLU 82	1.41	-757.87	-27899	-0.0001341	0.0003743	0.0035	1.4	6787.6	10885.1	10885.1	14.36	No	Si
SLU 75	-1.56	1965.74	-21712	-0.0001255	0.0003743	0.0035	1.4	7481.36	9905.68	9905.68	5.04	No	Si
SLU 75	1.41	-675.68	-27183	-0.0001284	0.0003743	0.0035	1.4	6932.05	10798.04	10798.04	15.98	No	Si
SLU 76	-1.56	1955.29	-21568	-0.0001246	0.0003743	0.0035	1.4	7482.59	9871.28	9871.28	5.05	No	Si
SLU 76	1.41	-676.29	-26963	-0.0001272	0.0003743	0.0035	1.4	6973	10769	10769	15.92	No	Si
SLU 83	-1.56	2008.22	-22403	-0.00013	0.0003743	0.0035	1.4	7466.06	9992.23	9992.23	4.98	No	Si
SLU 83	1.41	-761.8	-28244	-0.0001362	0.0003743	0.0035	1.4	6711.92	10906.4	10906.4	14.32	No	Si
SLU 80	-1.56	1974.63	-21798	-0.0001262	0.0003743	0.0035	1.4	7480.31	9916.31	9916.31	5.02	No	Si
SLU 80	1.41	-681.44	-27307	-0.0001292	0.0003743	0.0035	1.4	6908.2	10814.62	10814.62	15.87	No	Si
SLU 84	-1.56	2019.74	-22414	-0.0001303	0.0003743	0.0035	1.4	7465.68	9993.68	9993.68	4.95	No	Si
SLU 84	1.41	-765.46	-28240	-0.0001362	0.0003743	0.0035	1.4	6712.94	10906.15	10906.15	14.25	No	Si
SLU 78	-1.56	1992.76	-21950	-0.0001273	0.0003743	0.0035	1.4	7477.85	9935.25	9935.25	4.99	No	Si
SLU 78	1.41	-683.26	-27524	-0.0001305	0.0003743	0.0035	1.4	6865.38	10843.82	10843.82	15.87	No	Si
SLU 79	-1.56	1963.1	-21787	-0.0001259	0.0003743	0.0035	1.4	7480.46	9914.9	9914.9	5.05	No	Si
SLU 79	1.41	-677.79	-27311	-0.0001292	0.0003743	0.0035	1.4	6907.31	10815.23	10815.23	15.96	No	Si
SLU 81	-1.56	1981.19	-22165	-0.0001282	0.0003743	0.0035	1.4	7473.09	9962.19	9962.19	5.03	No	Si
SLU 81	1.41	-754.21	-27903	-0.0001341	0.0003743	0.0035	1.4	6786.63	10885.42	10885.42	14.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	-1.56	3383.96	-16975	-0.0001211	0.0005615	0.0035	1.4		9522.07	9522.07	2.81		Si
SLV 7	1.41	-912.31	-18729	-0.000086	0.0005615	0.0035	1.4		10767.74	10767.74	11.8		Si
SLV 11	-1.56	2849.52	-16324	-0.000109	0.0005615	0.0035	1.4		9258.34	9258.34	3.25		Si
SLV 11	1.41	-1132.73	-16641	-0.0000811	0.0005615	0.0035	1.4		9892.24	9892.24	8.73		Si
SLV 3	-1.56	2791.89	-16621	-0.0001093	0.0005615	0.0035	1.4		9378.65	9378.65	3.36		Si
SLV 3	1.41	-221.22	-21737	-0.0000868	0.0005615	0.0035	1.4		11760.9	11760.9	53.16		Si
SLD 12	-1.56	2010.12	-15612	-0.0000916	0.0005615	0.0035	1.4		8971.87	8971.87	4.46		Si
SLD 12	1.41	-721.81	-17702	-0.0000868	0.0005615	0.0035	1.4		10346.44	10346.44	14.33		Si
SLV 12	-1.56	2823.95	-16309	-0.0001085	0.0005615	0.0035	1.4		9252.54	9252.54	3.28		Si
SLV 12	1.41	-1131.65	-16644	-0.0000811	0.0005615	0.0035	1.4		9893.36	9893.36	8.74		Si
SLV 4	-1.56	2752.66	-16599	-0.0001085	0.0005615	0.0035	1.4		9369.72	9369.72	3.4		Si
SLV 4	1.41	-219.56	-21741	-0.0000868	0.0005615	0.0035	1.4		11762.17	11762.17	53.57		Si
SLD 8	-1.56	2238.65	-15890	-0.0000966	0.0005615	0.0035	1.4		9083.71	9083.71	4.06		Si
SLD 8	1.41	-627.69	-18594	-0.0000806	0.0005615	0.0035	1.4		10714.43	10714.43	17.07		Si
SLD 11	-1.56	2021.3	-15618	-0.0000918	0.0005615	0.0035	1.4		8974.39	8974.39	4.44		Si
SLD 11	1.41	-722.28	-17701	-0.0000785	0.0005615	0.0035	1.4		10345.99	10345.99	14.32		Si
SLV 8	-1.56	3358.4	-16960	-0.0001206	0.0005615	0.0035	1.4		9516.23	9516.23	2.83		Si
SLV 8	1.41	-911.23	-18732	-0.000086	0.0005615	0.0035	1.4		10768.74	10768.74	11.82		Si
SLD 7	-1.56	2249.83	-15896	-0.0000969	0.0005615	0.0035	1.4		9086.24	9086.24	4.04		Si
SLD 7	1.41	-628.17	-18593	-0.0000806	0.0005615	0.0035	1.4		10713.99	10713.99	17.06		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-1.56	1974.63	-21798	-18356	7574	1.4	1.4	-43705	10833	4550	33304	12577	3570	16147	No	2.13	Si
SLU 80	1.41	-681.44	-27307	-22995	3437	1.4	1.4	-54750	10833	4550	33304	12577	3570	16147	No	4.7	Si
SLU 77	-1.56	1981.23	-21939	-18475	7608	1.4	1.4	-43987	10833	4550	33304	12577	3570	16147	No	2.12	Si
SLU 77	1.41	-679.61	-27528	-23182	3431	1.4	1.4	-55194	10833	4550	33304	12577	3570	16147	No	4.71	Si
SLU 74	-1.56	1954.21	-21701	-18275	7516	1.4	1.4	-43511	10833	4550	33304	12577	3570	16147	No	2.15	Si
SLU 74	1.41	-672.02	-27187	-22894	3395	1.4	1.4	-54510	10833	4550	33304	12577	3570	16147	No	4.76	Si
SLU 82	-1.56	1992.72	-22176	-18675	7665	1.4	1.4	-44464	10833	4550	33304	12577	3570	16147	No	2.11	Si
SLU 82	1.41	-757.87	-27899	-23494	3538	1.4	1.4	-55937	10833	4550	33304	12577	3570	16147	No	4.56	Si
SLU 83	-1.56	2008.22	-22403	-18865	7731	1.4	1.4	-44917	10833	4550	33304	12577	3570	16147	No	2.09	Si
SLU 83	1.41	-761.8	-28244	-23785	3551	1.4	1.4	-56630	10833	4550	33304	12577	3570	16147	No	4.55	Si
SLU 75	-1.56	1965.74	-21712	-18284	7542	1.4	1.4	-43534	10833	4550	33304	12577	3570	16147	No	2.14	Si
SLU 75	1.41	-675.68	-27183	-22891	3418	1.4	1.4	-54501	10833	4550	33304	12577	3570	16147	No	4.72	Si
SLU 84	-1.56	2019.74	-22414	-18875	7757	1.4	1.4	-44940	10833	4550	33304	12577	3570	16147	No	2.08	Si
SLU 84	1.41	-765.46	-28240	-23781	3574	1.4	1.4	-56621	10833	4550	33304	12577	3570	16147	No	4.52	Si
SLU 79	-1.56	1963.1	-21787	-18347	7548	1.4	1.4	-43683	10833	4550	33304	12577	3570	16147	No	2.14	Si
SLU 79	1.41	-677.79	-27311	-22999	3414	1.4	1.4	-54760	10833	4550	33304	12577	3570	16147	No	4.73	Si
SLU 78	-1.56	1992.76	-21950	-18484	7635	1.4	1.4	-44010	10833	4550	33304	12577	3570	16147	No	2.11	Si
SLU 78	1.41	-683.26	-27524	-23178	3455	1.4	1.4	-55185	10833	4550	33304	12577	3570	16147	No	4.67	Si
SLU 81	-1.56	1981.19	-22165	-18665	7638	1.4	1.4	-44441	10833	4550	33304	12577	3570	16147	No	2.11	Si
SLU 81	1.41	-754.21	-27903	-23498	3514	1.4	1.4	-55946	10833	4550	33304	12577	3570	16147	No	4.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.56	2823.95	-16309	-13734	9040	1.4	1.4	-32700	16250	6825	33304	18865	3570	22435		2.48	Si
SLV 12	1.41	-1131.65	-16644	-14016	6519	1.4	1.4	-33371	16250	6825	33304	18865	3570	22435		3.44	Si
SLD 8	-1.56	2238.65	-15890	-13381	7121	1.4	1.4	-31860	16250	6825	33304	18865	3570	22435		3.15	Si
SLD 8	1.41	-627.69	-18594	-15658	4029	1.4	1.4	-37281	16250	6825	33304	18865	3570	22435		5.57	Si
SLD 7	-1.56	2249.83	-15896	-13386	7145	1.4	1.4	-31872	16250	6825	33304	18865	3570	22435		3.14	Si
SLD 7	1.41	-628.17	-18593	-15657	4042	1.4	1.4	-37279	16250	6825	33304	18865	3570	22435		5.55	Si
SLV 7	-1.56	3383.96	-16975	-14295	9559	1.4	1.4	-34035	16250	6825	33304	18865	3570	22435		2.35	Si
SLV 7	1.41	-912.31	-18729	-15772	6172	1.4	1.4	-37552	16250	6825	33304	18865	3570	22435		3.64	Si
SLV 8	-1.56	3358.4	-16960	-14282	9505	1.4	1.4	-34006	16250	6825	33304	18865	3570	22435		2.36	Si
SLV 8	1.41	-911.23	-18732	-15774	6142	1.4	1.4	-37557	16250	6825	33304	18865	3570	22435		3.65	Si
SLD 12	-1.56	2010.12	-15612	-13147	6923	1.4	1.4	-31302	16250	6825	33304	18865	3570	22435		3.24	Si
SLD 12	1.41	-721.81	-17702	-14907	4190	1.4	1.4	-35492	16250	6825	33304	18865	3570	22435		5.35	Si
SLD 11	-1.56	2021.3	-15618	-13152	6946	1.4	1.4	-31315	16250	6825	33304	18865	3570	22435		3.23	Si
SLD 11	1.41	-722.28	-17701	-14906	4203	1.4	1.4	-35490	16250	6825	33304	18865	3570	22435		5.34	Si
SLV 11	-1.56	2849.52	-16324	-13746	9095	1.4	1.4	-32729	16250	6825	33304	18865	3570	22435		2.47	Si
SLV 11	1.41	-1132.73	-16641	-14014	6549	1.4	1.4	-33366	16250	6825	33304	18865	3570	22435		3.43	Si
SLV 3	-1.56	2791.89	-16621	-13997	7274	1.4	1.4	-33326	16250	6825	33304	18865	3570	22435		3.08	Si
SLV 3	1.41	-221.22	-21737	-18305	2943	1.4	1.4	-43584	16250	6825	33304	18865	3570	22435		7.62	Si
SLV 4	-1.56	2752.66	-16599	-13978	7190	1.4	1.4	-33281	16250	6825	33304	18865	3570	22435		3.12	Si
SLV 4	1.41	-219.56	-21741	-18308	2897	1.4	1.4	-43591	16250	6825	33304	18865	3570	22435		7.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.24	40394	-16966	67.89	1871.72	27.57	Si
SLV 13	179667	0.24	40424	-16978	67.89	1872.62	27.59	Si
SLV 16	179667	0.24	40938	-17194	67.89	1887.74	27.81	Si
SLV 15	179667	0.24	40968	-17207	67.89	1888.63	27.82	Si
SLV 10	179667	0.24	42383	-17801	67.89	1929.11	28.42	Si
SLV 9	179667	0.24	42403	-17809	67.89	1929.66	28.43	Si
SLV 12	179667	0.24	44197	-18563	67.89	1978.59	29.15	Si
SLV 11	179667	0.24	44217	-18571	67.89	1979.11	29.15	Si
SLV 6	179667	0.24	44628	-18744	67.89	1989.95	29.31	Si
SLV 5	179667	0.24	44648	-18752	67.89	1990.47	29.32	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-20368	-13768	8	0.419	2249.5	0.976	6.23571	5.39576	Si
SLV 5	-20366	-13783	8	0.419	2249.2	0.976	6.23641	5.39576	Si
SLV 8	-18732	-16960	7	0.449	2082.8	0.974	6.7009	5.39576	Si
SLV 7	-18729	-16975	7	0.449	2082.5	0.974	6.70173	5.39576	Si
SLV 10	-18280	-13117	111	0.453	2036.8	0.973	6.76314	5.39576	Si
SLV 9	-18278	-13131	111	0.453	2036.6	0.973	6.76399	5.39576	Si
SLV 12	-16644	-16309	110	0.49	1870.1	0.971	7.33412	5.39576	Si
SLV 11	-16641	-16324	110	0.49	1869.9	0.971	7.33514	5.39576	Si
SLV 2	-22232	-15642	-113	0.385	2439.4	0.978	5.72051	3.34272	Si
SLV 1	-22228	-15664	-113	0.385	2439	0.978	5.7213	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.948	SLU 84	Si
V_SLU	2.082	SLU 84	Si
PF_SLV	2.814	SLV 7	Si
V_SLV	2.347	SLV 7	Si
PFFP_SLV	27.572	SLV 14	Si
R_SLV	1.156	SLV 6	Si

Maschio 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.576	-8.008	6.576	L2	L4	3.88	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	0.44	2205.65	-59324	-0.0000588	0.0003743	0.0035	3.88	76680.5	86988.09	86988.09	39.44	No	Si
SLU 81	0.84	5799.16	-63182	-0.0000685	0.0003743	0.0035	3.88	79007.11	90772.87	90772.87	15.65	No	Si
SLU 71	0.44	1806.89	-52546	-0.0000513	0.0003743	0.0035	3.88	71806	79088.66	79088.66	43.77	No	Si
SLU 71	0.84	5229.11	-55971	-0.00006	0.0003743	0.0035	3.88	74394.47	83058.51	83058.51	15.88	No	Si
SLU 77	0.44	2165.75	-58813	-0.0000583	0.0003743	0.0035	3.88	76348	86385.74	86385.74	39.89	No	Si
SLU 77	0.84	5784.79	-62664	-0.0000679	0.0003743	0.0035	3.88	78713.37	90381.48	90381.48	15.62	No	Si
SLU 83	0.44	2242.98	-60065	-0.0000597	0.0003743	0.0035	3.88	77152.52	87863.93	87863.93	39.17	No	Si
SLU 83	0.84	5881.59	-63977	-0.0000695	0.0003743	0.0035	3.88	79446.07	91374.69	91374.69	15.54	No	Si
SLU 74	0.44	2128.42	-58072	-0.0000574	0.0003743	0.0035	3.88	75855.74	85514.69	85514.69	40.18	No	Si
SLU 74	0.84	5702.35	-61869	-0.0000669	0.0003743	0.0035	3.88	78251.63	89740.67	89740.67	15.74	No	Si
SLU 84	0.44	2161.24	-60200	-0.0000597	0.0003743	0.0035	3.88	77237.38	88024.1	88024.1	40.73	No	Si
SLU 84	0.84	5769.76	-64135	-0.0000695	0.0003743	0.0035	3.88	79531.86	91494.82	91494.82	15.86	No	Si
SLU 66	0.44	1797.03	-52290	-0.0000511	0.0003743	0.0035	3.88	71602.5	78794.72	78794.72	43.85	No	Si
SLU 66	0.84	5187.92	-55708	-0.0000597	0.0003743	0.0035	3.88	74205.05	82751.97	82751.97	15.95	No	Si
SLU 78	0.44	2084.01	-58948	-0.0000583	0.0003743	0.0035	3.88	76436.56	86545.04	86545.04	41.53	No	Si
SLU 78	0.84	5672.95	-62822	-0.0000679	0.0003743	0.0035	3.88	78803.7	90500.91	90500.91	15.95	No	Si
SLU 69	0.44	1834.36	-53031	-0.0000519	0.0003743	0.0035	3.88	72188.28	79647.4	79647.4	43.42	No	Si
SLU 69	0.84	5270.35	-56503	-0.0000607	0.0003743	0.0035	3.88	74773.68	83679.37	83679.37	15.88	No	Si
SLU 79	0.44	2138.29	-58328	-0.0000577	0.0003743	0.0035	3.88	76026.97	85814.97	85814.97	40.13	No	Si
SLU 79	0.84	5743.55	-62132	-0.0000673	0.0003743	0.0035	3.88	78405.73	89980.64	89980.64	15.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.44	15149.04	-47338	-0.0000642	0.0005615	0.0035	3.88		78542.52	78542.52	5.18		Si
SLV 15	0.84	6190.73	-49804	-0.0000537	0.0005615	0.0035	3.88		82159.36	82159.36	13.27		Si
SLV 16	0.44	16250.81	-47351	-0.0000658	0.0005615	0.0035	3.88		78561.39	78561.39	4.83		Si
SLV 16	0.84	6494.79	-49859	-0.0000541	0.0005615	0.0035	3.88		82240.65	82240.65	12.66		Si
SLV 1	0.44	-13537.47	-31884	-0.0000471	0.0005615	0.0035	3.88		60083.99	60083.99	4.44		Si
SLV 1	0.84	1345.11	-34520	-0.0000325	0.0005615	0.0035	3.88		60047.01	60047.01	44.64		Si
SLV 2	0.44	-12435.7	-31897	-0.0000456	0.0005615	0.0035	3.88		60103.78	60103.78	4.83		Si
SLV 2	0.84	1649.17	-34575	-0.000033	0.0005615	0.0035	3.88		60125.59	60125.59	36.46		Si
SLV 9	0.44	6131.85	-32925	-0.0000377	0.0005615	0.0035	3.88		57783.97	57783.97	9.42		Si
SLV 9	0.84	7473.59	-36344	-0.0000428	0.0005615	0.0035	3.88		62647.79	62647.79	8.38		Si
SLV 13	0.44	15606.55	-42381	-0.0000601	0.0005615	0.0035	3.88		71327.02	71327.02	4.57		Si
SLV 13	0.84	7801.29	-45334	-0.0000517	0.0005615	0.0035	3.88		75616.28	75616.28	9.69		Si
SLV 10	0.44	6849.74	-32934	-0.0000387	0.0005615	0.0035	3.88		57795.88	57795.88	8.44		Si
SLV 10	0.84	7671.71	-36380	-0.0000431	0.0005615	0.0035	3.88		62699.21	62699.21	8.17		Si
SLV 4	0.44	-12893.21	-36855	-0.0000509	0.0005615	0.0035	3.88		67768.04	67768.04	5.26		Si
SLV 4	0.84	38.6	-39044	-0.0000348	0.0005615	0.0035	3.88		66515.92	66515.92	1723.18		Si
SLV 14	0.44	16708.33	-42394	-0.0000616	0.0005615	0.0035	3.88		71345.69	71345.69	4.27		Si
SLV 14	0.84	8105.35	-45389	-0.0000522	0.0005615	0.0035	3.88		75696.79	75696.79	9.34		Si
SLV 3	0.44	-13994.99	-36842	-0.0000525	0.0005615	0.0035	3.88		67747.95	67747.95	4.84		Si
SLV 3	0.84	-265.46	-38989	-0.0000351	0.0005615	0.0035	3.88		71023.65	71023.65	267.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	0.44	2161.24	-60200	-53511	-5935	3.88	3.88	-30648	10833	18915	33304	52283	9894	52219	No	8.8	Si
SLU 84	0.84	5769.76	-64135	-57009	-5874	3.88	3.88	-32651	10833	18915	33304	52283	9894	52219	No	8.89	Si
SLU 78	0.44	2084.01	-58948	-52399	-5920	3.88	3.88	-30011	10833	18915	33304	52283	9894	52219	No	8.82	Si
SLU 78	0.84	5672.95	-62822	-55842	-5859	3.88	3.88	-31983	10833	18915	33304	52283	9894	52219	No	8.91	Si
SLU 82	0.44	2123.91	-59459	-52853	-5851	3.88	3.88	-30271	10833	18915	33304	52283	9894	52219	No	8.92	Si
SLU 82	0.84	5687.32	-63341	-56303	-5791	3.88	3.88	-32247	10833	18915	33304	52283	9894	52219	No	9.02	Si
SLU 74	0.44	2128.42	-58072	-51620	-5924	3.88	3.88	-29565	10833	18915	33304	52283	9894	52219	No	8.81	Si
SLU 74	0.84	5702.35	-61869	-54995	-5864	3.88	3.88	-31498	10833	18915	33304	52283	9894	52219	No	8.91	Si
SLU 80	0.44	2056.54	-58463	-51967	-5911	3.88	3.88	-29764	10833	18915	33304	52283	9894	52219	No	8.83	Si
SLU 80	0.84	5631.71	-62290	-55369	-5850	3.88	3.88	-31712	10833	18915	33304	52283	9894	52219	No	8.93	Si
SLU 79	0.44	2138.29	-58328	-51847	-5999	3.88	3.88	-29695	10833	18915	33304	52283	9894	52219	No	8.7	Si
SLU 79	0.84	5743.55	-62132	-55228	-5938	3.88	3.88	-31631	10833	18915	33304	52283	9894	52219	No	8.79	Si
SLU 83	0.44	2242.98	-60065	-53391	-6023	3.88	3.88	-30579	10833	18915	33304	52283	9894	52219	No	8.67	Si
SLU 83	0.84	5881.59	-63977	-56869	-5962	3.88	3.88	-32571	10833	18915	33304	52283	9894	52219	No	8.76	Si
SLU 75	0.44	2046.68	-58207	-51740	-5836	3.88	3.88	-29633	10833	18915	33304	52283	9894	52219	No	8.95	Si
SLU 75	0.84	5590.52	-62027	-55135	-5776	3.88	3.88	-31578	10833	18915	33304	52283	9894	52219	No	9.04	Si
SLU 81	0.44	2205.65	-59324	-52733	-5940	3.88	3.88	-30202	10833	18915	33304	52283	9894	52219	No	8.79	Si
SLU 81	0.84	5799.16	-63182	-56162	-5879	3.88	3.88	-32166	10833	18915	33304	52283	9894	52219	No	8.88	Si
SLU 77	0.44	2165.75	-58813	-52278	-6008	3.88	3.88	-29942	10833	18915	33304	52283	9894	52219	No	8.69	Si
SLU 77	0.84	5784.79	-62664	-55701	-5947	3.88	3.88	-31902	10833	18915	33304	52283	9894	52219	No	8.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	0.44	-13994.99	-36842	-32748	-32263	3.88	3.88	-18756	14168	24737	33304	78425	9894	58041		1.8	Si
SLV 3	0.84	-265.46	-38989	-34657	-31741	3.88	3.88	-19849	14387	25119	33304	78425	9894	58423		1.84	Si
SLV 13	0.44	15606.55	-42381	-37672	21684	3.88	3.88	-21576	14732	25722	33304	78425	9894	59026		2.72	Si
SLV 13	0.84	7801.29	-45334	-40297	21245	3.88	3.88	-23080	15033	26247	33304	78425	9894	59551		2.8	Si
SLV 2	0.44	-12435.7	-31897	-28353	-31723	3.88	3.88	-16239	13664	23858	33304	78425	9894	57162		1.8	Si
SLV 2	0.84	1649.17	-34575	-30733	-31839	3.88	3.88	-17602	13937	24334	33304	78425	9894	57638		1.81	Si
SLV 1	0.44	-13537.47	-31884	-28342	-33740	3.88	3.88	-16232	13663	23856	33304	78425	9894	57160		1.69	Si
SLV 1	0.84	1345.11	-34520	-30684	-33856	3.88	3.88	-17574	13931	24324	33304	78425	9894	57629		1.7	Si
SLV 4	0.44	-12893.21	-36855	-32760	-30246	3.88	3.88	-18763	14169	24739	33304	78425	9894	58044		1.92	Si
SLV 4	0.84	38.6	-39044	-34706	-29724	3.88	3.88	-19877	14392	25129	33304	78425	9894	58433		1.97	Si
SLV 15	0.44	15149.04	-47338	-42078	23161	3.88	3.88	-24100	15237	26603	33304	78425	9894	59908		2.59	Si
SLV 15	0.84	6190.73	-49804	-44270	23360	3.88	3.88	-25355	15488	27041	33304	78425	9894	60346		2.58	Si
SLV 5	0.44	-2611.36	-29777	-26468	-15713	3.88	3.88	-15159	13449	23481	33304	78425	9894	56785		3.61	Si
SLV 5	0.84	5536.73	-33100	-29422	-16686	3.88	3.88	-16851	13787	24072	33304	78425	9894	57376		3.44	Si
SLV 16	0.44	16250.81	-47351	-42090	25178	3.88	3.88	-24107	15238	26605	33304	78425	9894	59910		2.38	Si
SLV 16	0.84	6494.79	-49859	-44319	25377	3.88	3.88	-25383	15493	27051	33304	78425	9894	60356		2.38	Si
SLD 1	0.44	-5008.31	-36298	-32265	-16886	3.88	3.88	-18479	14113	24640	33304	78425	9894	57945		3.43	Si
SLD 1	0.84	2824.36	-38898	-34576	-16913	3.88	3.88	-19803	14377	25103	33304	78425	9894	58407		3.45	Si
SLV 14	0.44	16708.33	-42394	-37683	23701	3.88	3.88	-21583	14733	25724	33304	78425	9894	59028		2.49	Si
SLV 14	0.84	8105.35	-45389	-40346	23263	3.88	3.88	-23108	15038	26257	33304	78425	9894	59561		2.56	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	16209	-28302	282.21	5691.96	20.17	Si
SLV 5	179667	0.24	16222	-28324	282.21	5696	20.18	Si
SLV 2	179667	0.24	16484	-28781	282.21	5776.83	20.47	Si
SLV 1	179667	0.24	16504	-28816	282.21	5783	20.49	Si
SLV 10	179667	0.24	18071	-31553	282.21	6259.28	22.18	Si
SLV 9	179667	0.24	18084	-31576	282.21	6263.19	22.19	Si
SLV 4	179667	0.24	18585	-32449	282.21	6412.58	22.72	Si
SLV 3	179667	0.24	18605	-32484	282.21	6418.54	22.74	Si
SLV 14	179667	0.24	22691	-39619	282.21	7589.73	26.89	Si
SLV 13	179667	0.24	22711	-39654	282.21	7595.26	26.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-48255	-31439	935	0.477	5643.5	0.961	7.20474	4.02955	Si
SLV 11	-48203	-31522	932	0.477	5638.3	0.961	7.21182	4.02955	Si
SLV 8	-45488	-28693	802	0.501	5362.1	0.96	7.59373	4.02955	Si
SLV 7	-45436	-28775	799	0.502	5356.8	0.959	7.60162	4.02955	Si
SLV 10	-32251	-25622	2641	0.604	4017.2	0.948	9.26508	4.02955	Si
SLV 9	-32199	-25704	2637	0.605	4012	0.948	9.27835	4.02955	Si
SLV 16	-45896	-32585	1688	0.48	5403.6	0.96	7.27407	2.9746	Si
SLV 15	-45816	-32712	1684	0.481	5395.5	0.96	7.28558	2.9746	Si
SLV 6	-29483	-22875	2507	0.651	3736.5	0.944	10.01721	4.02955	Si
SLV 5	-29432	-22958	2504	0.652	3731.3	0.944	10.03277	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.536	SLU 83	Si
V_SLU	8.669	SLU 83	Si
PF_SLV	4.27	SLV 14	Si
V_SLV	1.694	SLV 1	Si
PFFP_SLV	20.169	SLV 6	Si
R_SLV	1.788	SLV 12	Si

Maschio 39

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.576	-4.858	6.576	L2	L4	2.15	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	0.44	-1150.47	-26701	-0.0000499	0.0003743	0.0035	2.15	20922.87	24155.52	24155.52	21	No	Si
SLU 77	0.84	2860	-25435	-0.0000559	0.0003743	0.0035	2.15	20282.45	21928.97	21928.97	7.67	No	Si
SLU 79	0.44	-1144.69	-26464	-0.0000494	0.0003743	0.0035	2.15	20805.57	23997.27	23997.27	20.96	No	Si
SLU 79	0.84	2838.38	-25200	-0.0000554	0.0003743	0.0035	2.15	20159.75	21779.19	21779.19	7.67	No	Si
SLU 62	0.44	-1110.21	-24586	-0.0000459	0.0003743	0.0035	2.15	19832.89	22760.06	22760.06	20.5	No	Si
SLU 62	0.84	2643.66	-23341	-0.000051	0.0003743	0.0035	2.15	19145.99	20601.13	20601.13	7.79	No	Si
SLU 53	0.44	-1104.99	-23680	-0.0000442	0.0003743	0.0035	2.15	19336.45	22131.72	22131.72	20.03	No	Si
SLU 53	0.84	2538.96	-22445	-0.0000489	0.0003743	0.0035	2.15	18630.43	20039.66	20039.66	7.89	No	Si
SLU 83	0.44	-1146.53	-27306	-0.0000509	0.0003743	0.0035	2.15	21216.67	24547.26	24547.26	21.41	No	Si
SLU 83	0.84	2937.58	-26034	-0.0000574	0.0003743	0.0035	2.15	20589.75	22311.39	22311.39	7.6	No	Si
SLU 74	0.44	-1141.31	-26400	-0.0000493	0.0003743	0.0035	2.15	20774	23955.03	23955.03	20.99	No	Si
SLU 74	0.84	2832.87	-25138	-0.0000552	0.0003743	0.0035	2.15	20126.87	21739.26	21739.26	7.67	No	Si
SLU 56	0.44	-1114.15	-23981	-0.0000448	0.0003743	0.0035	2.15	19503.17	22346.73	22346.73	20.06	No	Si
SLU 56	0.84	2566.08	-22742	-0.0000496	0.0003743	0.0035	2.15	18803.5	20225.57	20225.57	7.88	No	Si
SLU 81	0.44	-1137.36	-27006	-0.0000504	0.0003743	0.0035	2.15	21071.76	24358.6	24358.6	21.42	No	Si
SLU 81	0.84	2910.45	-25737	-0.0000567	0.0003743	0.0035	2.15	20438.05	22121.16	22121.16	7.6	No	Si
SLU 60	0.44	-1101.04	-24285	-0.0000453	0.0003743	0.0035	2.15	19670.14	22562.85	22562.85	20.49	No	Si
SLU 60	0.84	2616.54	-23044	-0.0000504	0.0003743	0.0035	2.15	18976.81	20414.31	20414.31	7.8	No	Si
SLU 58	0.44	-1108.37	-23744	-0.0000444	0.0003743	0.0035	2.15	19371.79	22177.02	22177.02	20.01	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	0.84	2544.47	-22508	-0.0000491	0.0003743	0.0035	2.15	18666.99	20078.72	20078.72	7.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	0.44	3298.57	-17272	-0.0000425	0.0005615	0.0035	2.15		16861.6	16861.6	5.11		Si
SLV 10	0.84	4266.77	-15274	-0.0000436	0.0005615	0.0035	2.15		15264.4	15264.4	3.58		Si
SLV 9	0.44	3110.71	-17061	-0.0000413	0.0005615	0.0035	2.15		16692.71	16692.71	5.37		Si
SLV 9	0.84	4319.55	-15050	-0.0000434	0.0005615	0.0035	2.15		15079.29	15079.29	3.49		Si
SLV 1	0.44	-3894.92	-8536	-0.0000313	0.0005615	0.0035	2.15		9986.51	9986.51	2.56		Si
SLV 1	0.84	2392.97	-7126	-0.0000217	0.0005615	0.0035	2.15		7601.22	7601.22	3.18		Si
SLV 7	0.44	-4990.64	-18743	-0.0000528	0.0005615	0.0035	2.15		19374.59	19374.59	3.88		Si
SLV 7	0.84	-397.72	-18845	-0.0000319	0.0005615	0.0035	2.15		19461.96	19461.96	48.93		Si
SLV 2	0.44	-3606.6	-8860	-0.0000301	0.0005615	0.0035	2.15		10303.17	10303.17	2.86		Si
SLV 2	0.84	2311.97	-7470	-0.0000219	0.0005615	0.0035	2.15		7942.58	7942.58	3.44		Si
SLV 8	0.44	-4802.78	-18954	-0.0000523	0.0005615	0.0035	2.15		19554.99	19554.99	4.07		Si
SLV 8	0.84	-450.5	-19069	-0.0000326	0.0005615	0.0035	2.15		19653.39	19653.39	43.63		Si
SLV 5	0.44	842.86	-12075	-0.0000229	0.0005615	0.0035	2.15		12381.75	12381.75	14.69		Si
SLV 5	0.84	4160.11	-9990	-0.0000345	0.0005615	0.0035	2.15		10400.15	10400.15	2.5		Si
SLV 3	0.44	-5644.96	-10536	-0.0000448	0.0005615	0.0035	2.15		11921.14	11921.14	2.11		Si
SLV 3	0.84	1025.62	-9782	-0.00002	0.0005615	0.0035	2.15		10200.83	10200.83	9.95		Si
SLV 6	0.44	1030.72	-12286	-0.000024	0.0005615	0.0035	2.15		12580.69	12580.69	12.21		Si
SLV 6	0.84	4107.34	-10214	-0.0000346	0.0005615	0.0035	2.15		10615.43	10615.43	2.58		Si
SLV 4	0.44	-5356.65	-10860	-0.0000428	0.0005615	0.0035	2.15		12228.1	12228.1	2.28		Si
SLV 4	0.84	944.62	-10126	-0.0000202	0.0005615	0.0035	2.15		10531.25	10531.25	11.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	0.44	-1141.31	-26400	-23467	-10646	2.15	2.15	-24255	10178	9848	33304	28971	5483	34454	No	3.24	Si
SLU 74	0.84	2832.87	-25138	-22345	-10522	2.15	2.15	-23095	10024	9698	33304	28971	5483	34454	No	3.27	Si
SLU 80	0.44	-1297.67	-26525	-23578	-10528	2.15	2.15	-24370	10194	9863	33304	28971	5483	34454	No	3.27	Si
SLU 80	0.84	2633.28	-25268	-22460	-10404	2.15	2.15	-23215	10040	9713	33304	28971	5483	34454	No	3.31	Si
SLU 77	0.44	-1150.47	-26701	-23734	-10744	2.15	2.15	-24531	10215	9883	33304	28971	5483	34454	No	3.21	Si
SLU 77	0.84	2860	-25435	-22609	-10619	2.15	2.15	-23369	10060	9733	33304	28971	5483	34454	No	3.24	Si
SLU 78	0.44	-1303.45	-26763	-23789	-10602	2.15	2.15	-24588	10223	9891	33304	28971	5483	34454	No	3.25	Si
SLU 78	0.84	2654.89	-25503	-22669	-10476	2.15	2.15	-23431	10069	9741	33304	28971	5483	34454	No	3.29	Si
SLU 84	0.44	-1299.5	-27368	-24327	-10801	2.15	2.15	-25144	10297	9962	33304	28971	5483	34454	No	3.19	Si
SLU 84	0.84	2732.47	-26101	-23201	-10673	2.15	2.15	-23981	10142	9812	33304	28971	5483	34454	No	3.23	Si
SLU 81	0.44	-1137.36	-27006	-24005	-10845	2.15	2.15	-24811	10253	9919	33304	28971	5483	34454	No	3.18	Si
SLU 81	0.84	2910.45	-25737	-22877	-10719	2.15	2.15	-23645	10097	9769	33304	28971	5483	34454	No	3.21	Si
SLU 82	0.44	-1290.34	-27067	-24060	-10703	2.15	2.15	-24868	10260	9927	33304	28971	5483	34454	No	3.22	Si
SLU 82	0.84	2705.35	-25804	-22937	-10576	2.15	2.15	-23707	10105	9777	33304	28971	5483	34454	No	3.26	Si
SLU 75	0.44	-1294.28	-26462	-23522	-10504	2.15	2.15	-24312	10186	9855	33304	28971	5483	34454	No	3.28	Si
SLU 75	0.84	2627.77	-25205	-22405	-10380	2.15	2.15	-23157	10032	9706	33304	28971	5483	34454	No	3.32	Si
SLU 79	0.44	-1144.69	-26464	-23523	-10670	2.15	2.15	-24314	10186	9855	33304	28971	5483	34454	No	3.23	Si
SLU 79	0.84	2838.38	-25200	-22400	-10546	2.15	2.15	-23153	10031	9705	33304	28971	5483	34454	No	3.27	Si
SLU 83	0.44	-1146.53	-27306	-24272	-10943	2.15	2.15	-25087	10289	9955	33304	28971	5483	34454	No	3.15	Si
SLU 83	0.84	2937.58	-26034	-23141	-10815	2.15	2.15	-23919	10134	9804	33304	28971	5483	34454	No	3.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	0.44	-2779.4	-14958	-13296	-11279	2.15	2.15	-13743	13165	12737	33304	43457	5483	46042		4.08	Si
SLD 4	0.84	1507.27	-14104	-12537	-11157	2.15	2.15	-12958	13008	12586	33304	43457	5483	45890		4.11	Si
SLV 4	0.44	-5356.65	-10860	-9653	-16411	2.15	1.7452	-12364	12889	10123	33304	43457	5483	43427		2.65	Si
SLV 4	0.84	944.62	-10126	-9001	-16244	2.15	2.15	-9303	12277	11878	33304	43457	5483	45183		2.78	Si
SLD 1	0.44	-2148.65	-13956	-12406	-11238	2.15	2.15	-12822	12981	12559	33304	43457	5483	45864		4.08	Si
SLD 1	0.84	2130.06	-12810	-11386	-11253	2.15	2.15	-11769	12770	12355	33304	43457	5483	45660		4.06	Si
SLV 3	0.44	-5644.96	-10536	-9365	-17369	2.15	1.6176	-12946	13006	9468	33304	43457	5483	42772		2.46	Si
SLV 3	0.84	1025.62	-9782	-8696	-17210	2.15	2.15	-8988	12214	11817	33304	43457	5483	45122		2.62	Si
SLD 2	0.44	-2024.81	-14095	-12529	-10827	2.15	2.15	-12950	13007	12584	33304	43457	5483	45888		4.24	Si
SLD 2	0.84	2095.27	-12957	-11518	-10838	2.15	2.15	-11904	12798	12382	33304	43457	5483	45686		4.22	Si
SLV 2	0.44	-3606.6	-8860	-7875	-15365	2.15	2.0038	-8768	12170	10974	33304	43457	5483	44278		2.88	Si
SLV 2	0.84	2311.97	-7470	-6640	-15505	2.15	2.15	-6863	11789	11406	33304	43457	5483	44710		2.88	Si
SLD 3	0.44	-2903.24	-14819	-13173	-11690	2.15	2.15	-13615	13140	12713	33304	43457	5483	46017		3.94	Si
SLD 3	0.84	1542.06	-13956	-12406	-11572	2.15	2.15	-12822	12981	12559	33304	43457	5483	45864		3.96	Si
SLV 7	0.44	-4990.64	-18743	-16660	-12176	2.15	2.15	-17220	13861	13410	33304	43457	5483	46715		3.84	Si
SLV 7	0.84	-397.72	-18845	-16751	-11604	2.15	2.15	-17314	13879	13428	33304	43457	5483	46733		4.03	Si
SLV 1	0.44	-3894.92	-8536	-7587	-16322	2.15	1.8561	-9123	12241	10224	33304	43457	5483	43529		2.67	Si
SLV 1	0.84	2392.97	-7126	-6334	-16472	2.15	2.15	-6547	11726	11345	33304	43457	5483	44649		2.71	Si
SLV 8	0.44	-4802.78	-18954	-16848	-11552	2.15	2.15	-17414	13899	13448	33304	43457	5483	46752		4.05	Si
SLV 8	0.84	-450.5	-19069	-16950	-10974	2.15	2.15	-17520	13921	13468	33304	43457	5483	46773		4.26	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	3558	-3443	156.38	756.54	4.84	Si
SLV 2	179667	0.24	4202	-4065	156.38	889.47	5.69	Si
SLV 3	179667	0.24	4798	-4642	156.38	1011.69	6.47	Si
SLV 4	179667	0.24	5442	-5265	156.38	1142.35	7.31	Si
SLV 5	179667	0.24	10128	-9799	156.38	2058.55	13.16	Si
SLV 6	179667	0.24	10547	-10205	156.38	2137.45	13.67	Si
SLV 7	179667	0.24	14261	-13798	156.38	2814.59	18	Si
SLV 8	179667	0.24	14680	-14203	156.38	2888.55	18.47	Si
SLV 9	179667	0.24	16903	-16354	156.38	3272.37	20.93	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.24	17323	-16760	156.38	3343.17	21.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-22292	-21833	-502	0.549	2675.1	0.956	8.34818	4.02955	Si
SLV 11	-22192	-20987	-500	0.551	2664.9	0.955	8.38002	4.02955	Si
SLV 8	-18523	-10862	-416	0.637	2292.3	0.949	9.76149	4.02955	Si
SLV 7	-18423	-10016	-414	0.64	2282.1	0.949	9.80623	4.02955	Si
SLV 16	-23078	-34856	-238	0.545	2755	0.957	8.27478	2.9746	Si
SLV 15	-22925	-33557	-234	0.548	2739.4	0.956	8.32175	2.9746	Si
SLV 14	-19960	-34854	76	0.617	2438.1	0.952	9.41772	2.9746	Si
SLV 13	-19807	-33555	80	0.62	2422.6	0.951	9.47462	2.9746	Si
SLV 10	-11899	-21826	543	0.886	1621.3	0.932	13.81322	4.02955	Si
SLV 9	-11799	-20980	546	0.891	1611.2	0.931	13.90366	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.595	SLU 83	Si
V_SLU	3.148	SLU 83	Si
PF_SLV	2.112	SLV 3	Si
V_SLV	2.463	SLV 3	Si
PFFP_SLV	4.838	SLV 1	Si
R_SLV	2.072	SLV 12	Si

Maschio 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.728	2.201	-9.728	6.576	L2	L4	4.375	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-1.56	29484.2	-103936	-0.0001816	0.0004492	0.0035	4.375	80008.51	149828	149828	5.08	No	Si
SLU 84	0.64	13575.53	-73149	-0.0001068	0.0004492	0.0035	4.375	87027.58	120895.19	120895.19	8.91	No	Si
SLU 75	-1.56	28751.07	-100498	-0.0001746	0.0004492	0.0035	4.375	82075.01	146939.51	146939.51	5.11	No	Si
SLU 75	0.64	13314.96	-70151	-0.0001024	0.0004492	0.0035	4.375	86329.6	117247.96	117247.96	8.81	No	Si
SLU 74	-1.56	28650.95	-100538	-0.0001745	0.0004492	0.0035	4.375	82052.85	146973.06	146973.06	5.13	No	Si
SLU 74	0.64	13467.18	-70300	-0.0001029	0.0004492	0.0035	4.375	86369.89	117428.36	117428.36	8.72	No	Si
SLU 76	-1.56	28557.11	-99857	-0.0001732	0.0004492	0.0035	4.375	82424.82	146400.66	146400.66	5.13	No	Si
SLU 76	0.64	13067.17	-69643	-0.0001013	0.0004492	0.0035	4.375	86186.88	116629.24	116629.24	8.93	No	Si
SLU 82	-1.56	29170.46	-102953	-0.0001794	0.0004492	0.0035	4.375	80632.32	149002.07	149002.07	5.11	No	Si
SLU 82	0.64	13321.86	-72383	-0.0001053	0.0004492	0.0035	4.375	86872.42	119962.56	119962.56	9	No	Si
SLU 77	-1.56	28964.68	-101521	-0.0001767	0.0004492	0.0035	4.375	81493.81	147798.99	147798.99	5.1	No	Si
SLU 77	0.64	13720.85	-71066	-0.0001043	0.0004492	0.0035	4.375	86568.59	118360.99	118360.99	8.63	No	Si
SLU 81	-1.56	29070.33	-102993	-0.0001792	0.0004492	0.0035	4.375	80607.49	149035.62	149035.62	5.13	No	Si
SLU 81	0.64	13474.08	-72531	-0.0001058	0.0004492	0.0035	4.375	86903.69	120142.96	120142.96	8.92	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	-1.56	29064.81	-101481	-0.0001768	0.0004492	0.0035	4.375	81517.04	147765.43	147765.43	5.08	No	Si
SLU 78	0.64	13568.63	-70918	-0.0001038	0.0004492	0.0035	4.375	86531.41	118180.59	118180.59	8.71	No	Si
SLU 83	-1.56	29384.07	-103976	-0.0001814	0.0004492	0.0035	4.375	79982.61	149861.55	149861.55	5.1	No	Si
SLU 83	0.64	13727.75	-73297	-0.0001073	0.0004492	0.0035	4.375	87055.74	121075.59	121075.59	8.82	No	Si
SLU 80	-1.56	28804.1	-100866	-0.0001753	0.0004492	0.0035	4.375	81869.04	147248.96	147248.96	5.11	No	Si
SLU 80	0.64	13422.33	-70508	-0.000103	0.0004492	0.0035	4.375	86425.55	117682.14	117682.14	8.77	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	-1.56	38487.2	-74203	-0.000145	0.0006738	0.0035	4.375		131668.54	131668.54	3.42		Si
SLV 12	0.64	13683.72	-51174	-0.0000767	0.0006738	0.0035	4.375		96619.92	96619.92	7.06		Si
SLV 11	-1.56	39427.06	-73896	-0.0001462	0.0006738	0.0035	4.375		131288.14	131288.14	3.33		Si
SLV 11	0.64	13709.03	-51045	-0.0000766	0.0006738	0.0035	4.375		96413.64	96413.64	7.03		Si
SLD 3	-1.56	26703.69	-61126	-0.0001092	0.0006738	0.0035	4.375		112481.1	112481.1	4.21		Si
SLD 3	0.64	8307.98	-44041	-0.0000602	0.0006738	0.0035	4.375		85249.63	85249.63	10.26		Si
SLV 1	-1.56	22586.85	-50584	-0.00009	0.0006738	0.0035	4.375		95679.59	95679.59	4.24		Si
SLV 1	0.64	4829.24	-38494	-0.0000486	0.0006738	0.0035	4.375		76408.5	76408.5	15.82		Si
SLV 7	-1.56	44418.83	-62484	-0.0001397	0.0006738	0.0035	4.375		114646.03	114646.03	2.58		Si
SLV 7	0.64	11603.4	-45771	-0.0000673	0.0006738	0.0035	4.375		88007.55	88007.55	7.58		Si
SLD 8	-1.56	30336.53	-66619	-0.0001219	0.0006738	0.0035	4.375		121237.56	121237.56	4		Si
SLD 8	0.64	10353.53	-46937	-0.0000667	0.0006738	0.0035	4.375		89866.69	89866.69	8.68		Si
SLV 8	-1.56	43478.97	-62791	-0.0001386	0.0006738	0.0035	4.375		115135.98	115135.98	2.65		Si
SLV 8	0.64	11578.1	-45900	-0.0000674	0.0006738	0.0035	4.375		88213.83	88213.83	7.62		Si
SLD 7	-1.56	30747.69	-66485	-0.0001224	0.0006738	0.0035	4.375		121023.23	121023.23	3.94		Si
SLD 7	0.64	10364.6	-46881	-0.0000666	0.0006738	0.0035	4.375		89776.44	89776.44	8.66		Si
SLV 4	-1.56	34024.57	-50366	-0.0001078	0.0006738	0.0035	4.375		95330.78	95330.78	2.8		Si
SLV 4	0.64	6786.26	-39195	-0.0000524	0.0006738	0.0035	4.375		77526.69	77526.69	11.42		Si
SLV 3	-1.56	35467	-49894	-0.0001095	0.0006738	0.0035	4.375		94578.84	94578.84	2.67		Si
SLV 3	0.64	6825.1	-38997	-0.0000522	0.0006738	0.0035	4.375		77210.1	77210.1	11.31		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-1.56	28804.1	-100866	-73357	-31937	4.375	4.375	-55891	10833	14219	95155	47168	22312	69480	No	2.18	Si
SLU 80	0.64	13422.33	-70508	-51279	-41404	4.375	4.375	-39070	10833	14219	95155	47168	22312	69480	No	1.68	Si
SLU 74	-1.56	28650.95	-100538	-73119	-31859	4.375	4.375	-55709	10833	14219	95155	47168	22312	69480	No	2.18	Si
SLU 74	0.64	13467.18	-70300	-51127	-41294	4.375	4.375	-38954	10833	14219	95155	47168	22312	69480	No	1.68	Si
SLU 81	-1.56	29070.33	-102993	-74904	-32225	4.375	4.375	-57070	10833	14219	95155	47168	22312	69480	No	2.16	Si
SLU 81	0.64	13474.08	-72531	-52750	-41831	4.375	4.375	-40190	10833	14219	95155	47168	22312	69480	No	1.66	Si
SLU 75	-1.56	28751.07	-100498	-73089	-31815	4.375	4.375	-55687	10833	14219	95155	47168	22312	69480	No	2.18	Si
SLU 75	0.64	13314.96	-70151	-51019	-41259	4.375	4.375	-38872	10833	14219	95155	47168	22312	69480	No	1.68	Si
SLU 83	-1.56	29384.07	-103976	-75619	-32601	4.375	4.375	-57615	10833	14219	95155	47168	22312	69480	No	2.13	Si
SLU 83	0.64	13727.75	-73297	-53307	-42311	4.375	4.375	-40615	10833	14219	95155	47168	22312	69480	No	1.64	Si
SLU 84	-1.56	29484.2	-103936	-75590	-32557	4.375	4.375	-57592	10833	14219	95155	47168	22312	69480	No	2.13	Si
SLU 84	0.64	13575.53	-73149	-53199	-42276	4.375	4.375	-40533	10833	14219	95155	47168	22312	69480	No	1.64	Si
SLU 78	-1.56	29064.81	-101481	-73804	-32192	4.375	4.375	-56232	10833	14219	95155	47168	22312	69480	No	2.16	Si
SLU 78	0.64	13568.63	-70918	-51577	-41740	4.375	4.375	-39297	10833	14219	95155	47168	22312	69480	No	1.66	Si
SLU 82	-1.56	29170.46	-102953	-74875	-32181	4.375	4.375	-57048	10833	14219	95155	47168	22312	69480	No	2.16	Si
SLU 82	0.64	13321.86	-72383	-52642	-41796	4.375	4.375	-40108	10833	14219	95155	47168	22312	69480	No	1.66	Si
SLU 77	-1.56	28964.68	-101521	-73834	-32235	4.375	4.375	-56254	10833	14219	95155	47168	22312	69480	No	2.16	Si
SLU 77	0.64	13720.85	-71066	-51685	-41775	4.375	4.375	-39379	10833	14219	95155	47168	22312	69480	No	1.66	Si
SLU 79	-1.56	28703.97	-100906	-73386	-31981	4.375	4.375	-55913	10833	14219	95155	47168	22312	69480	No	2.17	Si
SLU 79	0.64	13574.55	-70657	-51387	-41439	4.375	4.375	-39152	10833	14219	95155	47168	22312	69480	No	1.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-1.56	545.14	-65093	-47341	-35941	4.375	4.375	-36069	16250	21328	95155	70752	22312	93064		2.59	Si
SLV 6	0.64	4925.23	-44224	-32163	-38828	4.375	4.375	-24505	16250	21328	95155	70752	22312	93064		2.4	Si
SLV 5	-1.56	1485	-64786	-47117	-35350	4.375	4.375	-35899	16250	21328	95155	70752	22312	93064		2.63	Si
SLV 5	0.64	4950.53	-44095	-32069	-38406	4.375	4.375	-24433	16250	21328	95155	70752	22312	93064		2.42	Si
SLV 10	-1.56	-4446.62	-76505	-55640	-39269	4.375	4.375	-42392	16250	21328	95155	70752	22312	93064		2.37	Si
SLV 10	0.64	7030.85	-49498	-35999	-41206	4.375	4.375	-27427	16250	21328	95155	70752	22312	93064		2.26	Si
SLV 9	-1.56	-3506.76	-76198	-55416	-38678	4.375	4.375	-42222	16250	21328	95155	70752	22312	93064		2.41	Si
SLV 9	0.64	7056.16	-49369	-35904	-40785	4.375	4.375	-27356	16250	21328	95155	70752	22312	93064		2.28	Si
SLD 10	-1.56	9224.52	-72504	-52730	-29759	4.375	4.375	-40175	16250	21328	95155	70752	22312	93064		3.13	Si
SLD 10	0.64	8269.66	-48388	-35191	-34274	4.375	4.375	-26813	16250	21328	95155	70752	22312	93064		2.72	Si
SLD 9	-1.56	9635.67	-72370	-52632	-29500	4.375	4.375	-40101	16250	21328	95155	70752	22312	93064		3.15	Si
SLD 9	0.64	8280.73	-48332	-35150	-34090	4.375	4.375	-26781	16250	21328	95155	70752	22312	93064		2.73	Si
SLD 5	-1.56	11772.6	-67500	-49091	-28093	4.375	4.375	-37403	16250	21328	95155	70752	22312	93064		3.31	Si
SLD 5	0.64	7403.76	-46134	-33552	-33110	4.375	4.375	-25563	16250	21328	95155	70752	22312	93064		2.81	Si
SLV 14	-1.56	4505.21	-89095	-64796	-32803	4.375	4.375	-49369	16250	21328	95155	70752	22312	93064		2.84	Si
SLV 14	0.64	11809.16	-56272	-40925	-36425	4.375	4.375	-31181	16250	21328	95155	70752	22312	93064		2.55	Si
SLV 13	-1.56	5947.63	-88623	-64453	-31895	4.375	4.375	-49107	16250	21328	95155	70752	22312	93064		2.92	Si
SLV 13	0.64	11847.99	-56074	-40781	-35778	4.375	4.375	-31071	16250	21328	95155	70752	22312	93064		2.6	Si
SLD 6	-1.56	11361.45	-67635	-49189	-28352	4.375	4.375	-37477	16250	21328	95155	70752	22312	93064		3.28	Si
SLD 6	0.64	7392.69	-46190	-33593	-33294	4.375	4.375	-25595	16250	21328	95155	70752	22312	93064		2.8	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-44034	0.24	212.14	5396.03	7639.77	6517.9	30.72	Si
SLV 2	-44237	0.24	212.14	5415.29	7670.8	6543.05	30.84	Si
SLV 3	-44688	0.24	212.14	5457.91	7739.76	6598.84	31.11	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-44890	0.24	212.14	5477	7770.8	6623.9	31.22	Si
SLV 5	-50971	0.24	212.14	6025.66	8701.83	7363.75	34.71	Si
SLV 6	-51104	0.24	212.14	6037.08	8722.07	7379.57	34.79	Si
SLV 7	-53150	0.24	212.14	6210.99	9035.56	7623.28	35.93	Si
SLV 8	-53282	0.24	212.14	6222.04	9055.81	7638.93	36.01	Si
SLV 9	-57541	0.24	212.14	6566.58	9699.19	8132.89	38.34	Si
SLV 10	-57673	0.24	212.14	6576.91	9718.49	8147.7	38.41	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-47537	-76505	752	0.521	5388.6	0.969	7.80915	5.39576	Si
SLV 12	-47657	-74203	639	0.522	5400.8	0.969	7.82525	5.39576	Si
SLV 9	-47404	-76198	749	0.522	5375	0.969	7.82906	5.39576	Si
SLV 11	-47523	-73896	636	0.523	5387.2	0.969	7.84516	5.39576	Si
SLV 6	-43712	-65093	429	0.566	4999.2	0.967	8.50273	5.39576	Si
SLV 8	-43831	-62791	316	0.567	5011.4	0.967	8.51838	5.39576	Si
SLV 5	-43578	-64786	426	0.567	4985.6	0.967	8.52633	5.39576	Si
SLV 7	-43698	-62484	313	0.568	4997.7	0.967	8.54196	5.39576	Si
SLV 14	-52078	-89095	1090	0.476	5850.9	0.971	7.12496	3.34272	Si
SLV 16	-52114	-88404	1056	0.477	5854.6	0.971	7.12984	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.082	SLU 84	Si
V_SLU	1.642	SLU 83	Si
PF_SLV	2.581	SLV 7	Si
V_SLV	2.258	SLV 10	Si
PFFP_SLV	30.724	SLV 1	Si
R_SLV	1.447	SLV 10	Si

Maschio 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-4.784	-11.013	-4.784	L2	L4	3.29	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	-1.56	13763.18	-23267	-0.000052	0.0003743	0.0035	3.29	32366.74	33541.13	33541.13	2.44	No	Si
SLU 76	1.41	11711.85	-25064	-0.0000498	0.0003743	0.0035	3.29	34374.02	35737.22	35737.22	3.05	No	Si
SLU 80	-1.56	13904.85	-23537	-0.0000526	0.0003743	0.0035	3.29	32672.72	33869.46	33869.46	2.44	No	Si
SLU 80	1.41	11992.19	-25410	-0.0000508	0.0003743	0.0035	3.29	34752.78	36163.19	36163.19	3.02	No	Si
SLU 75	-1.56	13839.26	-23419	-0.0000523	0.0003743	0.0035	3.29	32538.43	33725.08	33725.08	2.44	No	Si
SLU 75	1.41	11845.18	-25189	-0.0000502	0.0003743	0.0035	3.29	34511.07	35890.91	35890.91	3.03	No	Si
SLU 83	-1.56	14215.59	-24151	-0.000054	0.0003743	0.0035	3.29	33362.6	34618.07	34618.07	2.44	No	Si
SLU 83	1.41	12328.69	-26061	-0.0000522	0.0003743	0.0035	3.29	35458	36966.67	36966.67	3	No	Si
SLU 79	-1.56	13901.8	-23551	-0.0000526	0.0003743	0.0035	3.29	32688.44	33886.39	33886.39	2.44	No	Si
SLU 79	1.41	11992.44	-25394	-0.0000508	0.0003743	0.0035	3.29	34735.96	36144.2	36144.2	3.01	No	Si
SLU 77	-1.56	13979.92	-23693	-0.0000529	0.0003743	0.0035	3.29	32848.74	34059.35	34059.35	2.44	No	Si
SLU 77	1.41	12125.6	-25530	-0.0000512	0.0003743	0.0035	3.29	34883.3	36310.87	36310.87	2.99	No	Si
SLU 81	-1.56	14071.89	-23890	-0.0000534	0.0003743	0.0035	3.29	33070.65	34299.84	34299.84	2.44	No	Si
SLU 81	1.41	12048.51	-25704	-0.0000512	0.0003743	0.0035	3.29	35073	36526.34	36526.34	3.03	No	Si
SLU 78	-1.56	13982.97	-23679	-0.0000529	0.0003743	0.0035	3.29	32833.06	34042.41	34042.41	2.43	No	Si
SLU 78	1.41	12125.35	-25545	-0.0000512	0.0003743	0.0035	3.29	34900.07	36329.88	36329.88	3	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	-1.56	14074.94	-23876	-0.0000534	0.0003743	0.0035	3.29	33055.03	34282.87	34282.87	2.44	No	Si
SLU 82	1.41	12048.27	-25720	-0.0000513	0.0003743	0.0035	3.29	35089.72	36545.37	36545.37	3.03	No	Si
SLU 84	-1.56	14218.64	-24137	-0.000054	0.0003743	0.0035	3.29	33347.07	34601.08	34601.08	2.43	No	Si
SLU 84	1.41	12328.44	-26076	-0.0000522	0.0003743	0.0035	3.29	35474.59	36985.74	36985.74	3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	-1.56	15341.01	-12822	-0.0000667	0.0005615	0.0035	3.29		20656.93	20656.93	1.35		Si
SLV 4	1.41	-3.82	-15141	-0.0000156	0.0005615	0.0035	3.29		26419.87	26419.87	6912.07		Si
SLD 4	-1.56	12120.37	-14840	-0.000041	0.0005615	0.0035	3.29		23658.97	23658.97	1.95		Si
SLD 4	1.41	4469.21	-16435	-0.0000254	0.0005615	0.0035	3.29		25999.77	25999.77	5.82		Si
SLV 15	-1.56	4028.7	-18149	-0.0000264	0.0005615	0.0035	3.29		28492.12	28492.12	7.07		Si
SLV 15	1.41	17128.14	-20871	-0.0000587	0.0005615	0.0035	3.29		32368.04	32368.04	1.89		Si
SLV 2	-1.56	15414.66	-14567	-0.0000575	0.0005615	0.0035	3.29		23257.18	23257.18	1.51		Si
SLV 2	1.41	-1466.31	-13839	-0.000017	0.0005615	0.0035	3.29		24460.8	24460.8	16.68		Si
SLV 16	-1.56	4424.41	-18396	-0.0000274	0.0005615	0.0035	3.29		28844.85	28844.85	6.52		Si
SLV 16	1.41	16372.76	-20647	-0.0000561	0.0005615	0.0035	3.29		32051.96	32051.96	1.96		Si
SLV 3	-1.56	14945.3	-12575	-0.0000642	0.0005615	0.0035	3.29		20287.6	20287.6	1.36		Si
SLV 3	1.41	751.56	-15366	-0.0000173	0.0005615	0.0035	3.29		24434.5	24434.5	32.51		Si
SLV 13	-1.56	4102.35	-19895	-0.0000284	0.0005615	0.0035	3.29		30982.82	30982.82	7.55		Si
SLV 13	1.41	15665.65	-19568	-0.0000535	0.0005615	0.0035	3.29		30517.52	30517.52	1.95		Si
SLV 1	-1.56	15018.95	-14321	-0.0000556	0.0005615	0.0035	3.29		22893.17	22893.17	1.52		Si
SLV 1	1.41	-710.93	-14063	-0.0000158	0.0005615	0.0035	3.29		24797.24	24797.24	34.88		Si
SLV 7	-1.56	11107.51	-12533	-0.0000377	0.0005615	0.0035	3.29		20224.25	20224.25	1.82		Si
SLV 7	1.41	8058	-18774	-0.0000348	0.0005615	0.0035	3.29		29383.56	29383.56	3.65		Si
SLV 8	-1.56	11365.34	-12694	-0.0000387	0.0005615	0.0035	3.29		20464.83	20464.83	1.8		Si
SLV 8	1.41	7565.81	-18627	-0.0000337	0.0005615	0.0035	3.29		29175.25	29175.25	3.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	-1.56	13836.21	-23433	-20829	-475	3.29	3.1636	-14069	8820	12557	33304	44333	8389	45861	No	96.57	Si
SLU 74	1.41	11845.43	-25173	-22376	-3803	3.29	3.29	-15114	8960	13265	33304	44333	8389	46569	No	12.25	Si
SLU 80	-1.56	13904.85	-23537	-20922	-483	3.29	3.1627	-14132	8829	12565	33304	44333	8389	45870	No	94.9	Si
SLU 80	1.41	11992.19	-25410	-22587	-3807	3.29	3.29	-15256	8979	13293	33304	44333	8389	46597	No	12.24	Si
SLU 78	-1.56	13982.97	-23679	-21048	-513	3.29	3.1634	-14217	8840	12584	33304	44333	8389	45889	No	89.45	Si
SLU 78	1.41	12125.35	-25545	-22707	-3886	3.29	3.29	-15337	8989	13309	33304	44333	8389	46613	No	11.99	Si
SLU 83	-1.56	14215.59	-24151	-21467	-692	3.29	3.1691	-14500	8878	12661	33304	44333	8389	45965	No	66.42	Si
SLU 83	1.41	12328.69	-26061	-23165	-4140	3.29	3.29	-15647	9031	13370	33304	44333	8389	46674	No	11.27	Si
SLU 82	-1.56	14074.94	-23876	-21223	-610	3.29	3.1665	-14335	8856	12619	33304	44333	8389	45923	No	75.23	Si
SLU 82	1.41	12048.27	-25720	-22862	-3977	3.29	3.29	-15442	9003	13330	33304	44333	8389	46634	No	11.73	Si
SLU 77	-1.56	13979.92	-23693	-21061	-535	3.29	3.1649	-14225	8841	12592	33304	44333	8389	45896	No	85.82	Si
SLU 77	1.41	12125.6	-25530	-22693	-3926	3.29	3.29	-15328	8988	13307	33304	44333	8389	46611	No	11.87	Si
SLU 62	-1.56	13147.35	-22390	-19903	-653	3.29	3.1734	-13443	8737	12477	33304	44333	8389	45781	No	70.09	Si
SLU 62	1.41	11111.34	-23890	-21236	-3772	3.29	3.29	-14344	8857	13113	33304	44333	8389	46417	No	12.31	Si
SLU 81	-1.56	14071.89	-23890	-21236	-632	3.29	3.1679	-14344	8857	12626	33304	44333	8389	45930	No	72.65	Si
SLU 81	1.41	12048.51	-25704	-22848	-4016	3.29	3.29	-15433	9002	13328	33304	44333	8389	46632	No	11.61	Si
SLU 79	-1.56	13901.8	-23551	-20934	-505	3.29	3.1642	-14140	8830	12572	33304	44333	8389	45877	No	90.82	Si
SLU 79	1.41	11992.44	-25394	-22573	-3846	3.29	3.29	-15247	8977	13291	33304	44333	8389	46595	No	12.11	Si
SLU 84	-1.56	14218.64	-24137	-21455	-670	3.29	3.1677	-14492	8877	12654	33304	44333	8389	45958	No	68.57	Si
SLU 84	1.41	12328.44	-26076	-23179	-4100	3.29	3.29	-15656	9032	13372	33304	44333	8389	46676	No	11.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.56	4424.41	-18396	-16352	-14088	3.29	3.29	-11045	12626	18692	33304	66499	8389	51997		3.69	Si
SLV 16	1.41	16372.76	-20647	-18353	-25804	3.29	2.556	-12396	12896	14833	33304	66499	8389	48137		1.87	Si
SLV 1	-1.56	15018.95	-14321	-12729	14069	3.29	1.7887	-8598	12136	9769	33304	66499	8389	43073		3.06	Si
SLV 1	1.41	-710.93	-14063	-12500	21368	3.29	3.29	-8443	12105	17922	33304	66499	8389	51226		2.4	Si
SLD 15	-1.56	7283.97	-17115	-15213	-6719	3.29	3.29	-10276	12472	18465	33304	66499	8389	51769		7.71	Si
SLD 15	1.41	11786.22	-18888	-16789	-13370	3.29	3.0629	-11340	12685	17484	33304	66499	8389	50788		3.8	Si
SLV 13	-1.56	4102.35	-19895	-17684	-15514	3.29	3.29	-11945	12806	18959	33304	66499	8389	52263		3.37	Si
SLV 13	1.41	15665.65	-19568	-17394	-27327	3.29	2.5333	-11749	12766	14553	33304	66499	8389	47858		1.75	Si
SLV 2	-1.56	15414.66	-14567	-12949	15674	3.29	1.7605	-8746	12166	9638	33304	66499	8389	42942		2.74	Si
SLV 2	1.41	-1466.31	-13839	-12301	23883	3.29	3.29	-8309	12078	17882	33304	66499	8389	51186		2.14	Si
SLV 14	-1.56	4498.05	-20141	-17904	-13909	3.29	3.29	-12093	12835	19003	33304	66499	8389	52307		3.76	Si
SLV 14	1.41	14910.27	-19344	-17194	-24813	3.29	2.6226	-11614	12739	15035	33304	66499	8389	48339		1.95	Si
SLV 4	-1.56	15341.01	-12822	-11397	15495	3.29	1.3456	-7698	11956	7240	33304	66499	8389	40544		2.62	Si
SLV 4	1.41	-3.82	-15141	-13459	22891	3.29	3.29	-9091	12235	18114	33304	66499	8389	51418		2.25	Si
SLV 3	-1.56	14945.3	-12575	-11178	13890	3.29	1.3696	-7550	11927	7350	33304	66499	8389	40655		2.93	Si
SLV 3	1.41	751.56	-15366	-13658	20376	3.29	3.29	-9226	12262	18154	33304	66499	8389	51458		2.53	Si
SLD 13	-1.56	7322.99	-17877	-15890	-6637	3.29	3.29	-10733	12563	18600	33304	66499	8389	51904		7.82	Si
SLD 13	1.41	11192.62	-18274	-16244	-12956	3.29	3.0975	-10972	12611	17578	33304	66499	8389	50883		3.93	Si
SLV 15	-1.56	4028.7	-18149	-16133	-15693	3.29	3.29	-10897	12596	18648	33304	66499	8389	51953		3.31	Si
SLV 15	1.41	17128.14	-20871	-18552	-28319	3.29	2.473	-12531	12923	14381	33304	66499	8389	47685		1.68	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.24	9246	-13689	239.3	2893.45	12.09	Si
SLV 4	179667	0.24	9286	-13747	239.3	2905.05	12.14	Si
SLV 7	179667	0.24	9483	-14039	239.3	2962.63	12.38	Si
SLV 8	179667	0.24	9508	-14077	239.3	2970.16	12.41	Si
SLV 1	179667	0.24	9644	-14278	239.3	3009.72	12.58	Si
SLV 2	179667	0.24	9684	-14337	239.3	3021.25	12.63	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.24	10078	-14920	239.3	3135.53	13.1	Si
SLV 12	179667	0.24	10104	-14959	239.3	3142.99	13.13	Si
SLV 5	179667	0.24	10810	-16005	239.3	3346.13	13.98	Si
SLV 6	179667	0.24	10836	-16043	239.3	3353.52	14.01	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-20425	-14205	-192	0.838	2705	0.936	13.00831	4.02955	Si
SLV 12	-20279	-14366	-186	0.843	2690.2	0.936	13.08751	4.02955	Si
SLV 7	-18774	-12533	-160	0.895	2538.1	0.933	13.94108	4.02955	Si
SLV 8	-18627	-12694	-154	0.9	2523.3	0.933	14.03255	4.02955	Si
SLV 9	-16082	-20023	-953	0.965	2266.5	0.927	15.14118	4.02955	Si
SLV 10	-15936	-20184	-947	0.972	2251.8	0.926	15.25455	4.02955	Si
SLV 5	-14430	-18351	-921	1.047	2100.4	0.922	16.50136	4.02955	Si
SLV 6	-14284	-18512	-915	1.055	2085.7	0.922	16.63664	4.02955	Si
SLV 15	-20871	-18149	-498	0.812	2750.1	0.937	12.59296	2.9746	Si
SLV 16	-20647	-18396	-489	0.819	2727.4	0.937	12.70869	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.434	SLU 84	Si
V_SLU	11.275	SLU 83	Si
PF_SLV	1.347	SLV 4	Si
V_SLV	1.684	SLV 15	Si
PFFP_SLV	12.092	SLV 3	Si
R_SLV	3.228	SLV 11	Si

Maschio 43

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.723	-3.284	-7.723	-4.784	L2	L4	1.5	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-1.56	-8953.29	-13043	-0.0019314	0.0003743	0.0035	1.2	7926.19	9002.56	9002.56	1.01	No	Si
SLU 79	1.41	1877.72	-6952	-0.0000334	0.0003743	0.0035	1.5001	4686.72	4898.97	4898.97	2.61	No	Si
SLU 74	-1.56	-8907.83	-12982	-0.0018855	0.0003743	0.0035	1.2	7897.56	8968.98	8968.98	1.01	No	Si
SLU 74	1.41	1865.47	-6912	-0.0000332	0.0003743	0.0035	1.5001	4662.92	4875.94	4875.94	2.61	No	Si
SLU 83	-1.56	-9166.47	-13390	-0.0020765	0.0003743	0.0035	1.2	8086.27	9187.09	9187.09	1	No	Si
SLU 83	1.41	1856.61	-7117	-0.0000335	0.0003743	0.0035	1.5001	4784.94	4992.46	4992.46	2.69	No	Si
SLU 84	-1.56	-9166.61	-13386	-0.0020824	0.0003743	0.0035	1.2	8084.51	9185.09	9185.09	1	No	Si
SLU 84	1.41	1856.18	-7118	-0.0000335	0.0003743	0.0035	1.5001	4786.05	4993.49	4993.49	2.69	No	Si
SLU 77	-1.56	-8998.77	-13118	-0.0019592	0.0003743	0.0035	1.2	7961.04	9043.48	9043.48	1	No	Si
SLU 77	1.41	1876.22	-6990	-0.0000334	0.0003743	0.0035	1.5001	4709.63	4921.1	4921.1	2.62	No	Si
SLU 81	-1.56	-9075.54	-13254	-0.0019949	0.0003743	0.0035	1.2	8023.6	9116.38	9116.38	1	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	1.41	1845.86	-7039	-0.0000332	0.0003743	0.0035	1.5001	4738.44	4948.87	4948.87	2.68	No	Si
SLU 78	-1.56	-8998.91	-13115	-0.0019649	0.0003743	0.0035	1.2	7959.25	9041.38	9041.38	1	No	Si
SLU 78	1.41	1875.79	-6992	-0.0000334	0.0003743	0.0035	1.5001	4710.75	4922.18	4922.18	2.62	No	Si
SLU 82	-1.56	-9075.68	-13250	-0.0020007	0.0003743	0.0035	1.2	8021.83	9114.39	9114.39	1	No	Si
SLU 82	1.41	1845.43	-7040	-0.0000332	0.0003743	0.0035	1.5001	4739.55	4949.94	4949.94	2.68	No	Si
SLU 75	-1.56	-8907.97	-12978	-0.0018912	0.0003743	0.0035	1.2	7895.76	8966.88	8966.88	1.01	No	Si
SLU 75	1.41	1865.04	-6914	-0.0000332	0.0003743	0.0035	1.5001	4664.04	4877.02	4877.02	2.61	No	Si
SLU 80	-1.56	-8953.43	-13039	-0.0019371	0.0003743	0.0035	1.2	7924.4	9000.45	9000.45	1.01	No	Si
SLU 80	1.41	1877.3	-6954	-0.0000334	0.0003743	0.0035	1.5001	4687.84	4900.05	4900.05	2.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 8	-1.56	-6423.19	-8640	-0.0006915	0.0005615	0.0035	1.2		6655.09	6655.09	1.04		Si
SLD 8	1.41	1788.12	-5333	-0.0000292	0.0005615	0.0035	1.5001		3953.81	3953.81	2.21		Si
SLV 15	-1.56	-8382.89	-11820	-0.0008028	0.0005615	0.0035	1.2		8671.42	8671.42	1.03		Si
SLV 15	1.41	3376.55	-5682	-0.0000864	0.0005615	0.0035	1.5001		4193.84	4193.84	1.24		Si
SLD 12	-1.56	-6859.71	-9351	-0.0007031	0.0005615	0.0035	1.2		7122.11	7122.11	1.04		Si
SLD 12	1.41	2143.77	-5446	-0.0000348	0.0005615	0.0035	1.5001		4031.58	4031.58	1.88		Si
SLV 12	-1.56	-7636.66	-9740	-0.0014156	0.0005615	0.0035	1.2		7368.02	7368.02	0.96		No
SLV 12	1.41	3167.97	-6360	-0.0000586	0.0005615	0.0035	1.5001		4654.58	4654.58	1.47		Si
SLV 8	-1.56	-6614.79	-8075	-0.0013261	0.0005615	0.0035	1.2		6286.31	6286.31	0.95		No
SLV 8	1.41	2335.83	-6090	-0.0000379	0.0005615	0.0035	1.5001		4472.15	4472.15	1.91		Si
SLD 11	-1.56	-6931.94	-9365	-0.0007751	0.0005615	0.0035	1.2		7130.95	7130.95	1.03		Si
SLD 11	1.41	2214.8	-5436	-0.0000362	0.0005615	0.0035	1.5001		4024.59	4024.59	1.82		Si
SLV 11	-1.56	-7801.77	-9770	-0.0016323	0.0005615	0.0035	1.2		7387.36	7387.36	0.95		No
SLV 11	1.41	3330.35	-6336	-0.0000659	0.0005615	0.0035	1.5001		4638.84	4638.84	1.39		Si
SLD 7	-1.56	-6495.42	-8653	-0.0007608	0.0005615	0.0035	1.2		6663.87	6663.87	1.03		Si
SLD 7	1.41	1859.16	-5323	-0.0000301	0.0005615	0.0035	1.5001		3946.82	3946.82	2.12		Si
SLV 3	-1.56	-4976.64	-6272	-0.0006782	0.0005615	0.0035	1.2		5082.87	5082.87	1.02		Si
SLV 3	1.41	602.74	-4784	-0.0000162	0.0005615	0.0035	1.5001		3574.64	3574.64	5.93		Si
SLV 7	-1.56	-6779.89	-8106	-0.0015234	0.0005615	0.0035	1.2		6306.29	6306.29	0.93		No
SLV 7	1.41	2498.2	-6067	-0.000041	0.0005615	0.0035	1.5001		4456.29	4456.29	1.78		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.56	-9075.68	-13250	-11778	-7567	1.2	0.1952	0	0	0	33304	16171	3060	19231	No	2.54	Si
SLU 82	1.41	1845.43	-7040	-6258	-6691	1.5001	1.4637	-9271	8181	5388	33304	20213	3825	24038	No	3.59	Si
SLU 80	-1.56	-8953.43	-13039	-11591	-7488	1.2	0.1902	0	0	0	33304	16171	3060	19231	No	2.57	Si
SLU 80	1.41	1877.3	-6954	-6181	-6623	1.5001	1.4402	-9157	8165	5292	33304	20213	3825	24038	No	3.63	Si
SLU 81	-1.56	-9075.54	-13254	-11781	-7571	1.2	0.1958	0	0	0	33304	16171	3060	19231	No	2.54	Si
SLU 81	1.41	1845.86	-7039	-6256	-6695	1.5001	1.4633	-9268	8180	5387	33304	20213	3825	24038	No	3.59	Si
SLU 75	-1.56	-8907.97	-12978	-11536	-7444	1.2	0.1909	0	0	0	33304	16171	3060	19231	No	2.58	Si
SLU 75	1.41	1865.04	-6914	-6146	-6585	1.5001	1.4408	-9105	8158	5290	33304	20213	3825	24038	No	3.65	Si
SLU 79	-1.56	-8953.29	-13043	-11594	-7492	1.2	0.1908	0	0	0	33304	16171	3060	19231	No	2.57	Si
SLU 79	1.41	1877.72	-6952	-6180	-6627	1.5001	1.4398	-9154	8165	5290	33304	20213	3825	24038	No	3.63	Si
SLU 84	-1.56	-9166.61	-13386	-11899	-7630	1.2	0.1958	0	0	0	33304	16171	3060	19231	No	2.52	Si
SLU 84	1.41	1856.18	-7118	-6328	-6743	1.5001	1.4678	-9374	8194	5412	33304	20213	3825	24038	No	3.57	Si
SLU 78	-1.56	-8998.91	-13115	-11657	-7507	1.2	0.1915	0	0	0	33304	16171	3060	19231	No	2.56	Si
SLU 78	1.41	1875.79	-6992	-6215	-6636	1.5001	1.4453	-9207	8172	5315	33304	20213	3825	24038	No	3.62	Si
SLU 83	-1.56	-9166.47	-13390	-11902	-7634	1.2	0.1964	0	0	0	33304	16171	3060	19231	No	2.52	Si
SLU 83	1.41	1856.61	-7117	-6326	-6747	1.5001	1.4674	-9371	8194	5411	33304	20213	3825	24038	No	3.56	Si
SLU 77	-1.56	-8998.77	-13118	-11661	-7511	1.2	0.1922	0	0	0	33304	16171	3060	19231	No	2.56	Si
SLU 77	1.41	1876.22	-6990	-6214	-6640	1.5001	1.4449	-9205	8172	5313	33304	20213	3825	24038	No	3.62	Si
SLU 74	-1.56	-8907.83	-12982	-11539	-7448	1.2	0.1916	0	0	0	33304	16171	3060	19231	No	2.58	Si
SLU 74	1.41	1865.47	-6912	-6144	-6589	1.5001	1.4404	-9102	8158	5288	33304	20213	3825	24038	No	3.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	-1.56	-7175.81	-10242	-9104	-8777	1.2	0.1483	0	0	0	33304	24256	3060	27316		3.11	Si
SLD 15	1.41	2261.82	-5184	-4608	-8126	1.5001	0.9411	-6826	11782	4990	33304	30320	3825	34145		4.2	Si
SLD 13	-1.56	-6932.63	-10280	-9138	-8098	1.2	0.2269	0	0	0	33304	24256	3060	27316		3.37	Si
SLD 13	1.41	1931.04	-4856	-4317	-7760	1.5001	1.0572	-6395	11696	5564	33304	30320	3825	34145		4.4	Si
SLV 13	-1.56	-7821.29	-11905	-10583	-11736	1.2	0.2792	0	0	0	33304	24256	3060	27316		2.33	Si
SLV 13	1.41	2546.8	-4858	-4318	-11789	1.5001	0.6773	-6397	11696	3565	33304	30320	3825	34145		2.9	Si
SLV 14	-1.56	-7567.9	-11858	-10541	-10757	1.2	0.3355	0	0	0	33304	24256	3060	27316		2.54	Si
SLV 14	1.41	2297.6	-4894	-4350	-10812	1.5001	0.8416	-6444	11705	4433	33304	30320	3825	34145		3.16	Si
SLV 16	-1.56	-8129.5	-11773	-10465	-12341	1.2	0.1785	0	0	0	33304	24256	3060	27316		2.21	Si
SLV 16	1.41	3127.35	-5718	-5083	-11690	1.5001	0.6093	-7530	11923	3269	33304	30320	3825	34145		2.92	Si
SLV 15	-1.56	-8382.89	-11820	-10507	-13320	1.2	0.1224	0	0	0	33304	24256	3060	27316		2.05	Si
SLV 15	1.41	3376.55	-5682	-5051	-12667	1.5001	0.4675	-7483	11913	2506	33304	30320	3825	34145		2.7	Si
SLD 16	-1.56	-7066.98	-10222	-9086	-8357	1.2	0.176	0	0	0	33304	24256	3060	27316		3.27	Si
SLD 16	1.41	2154.78	-5199	-4621	-7706	1.5001	1.0067	-6846	11786	5339	33304	30320	3825	34145		4.43	Si
SLV 12	-1.56	-7636.66	-9740	-8657	-9701	1.2	0	0	0	0	33304	24256	3060	27316		2.82	Si
SLV 12	1.41	3167.97	-6360	-5653	-8019	1.5001	0.7557	-8374	12092	4112	33304	30320	3825	34145		4.26	Si
SLD 14	-1.56	-6823.8	-10260	-9120	-7677	1.2	0.2548	0	0	0	33304	24256	3060	27316		3.56	Si
SLD 14	1.41	1824.01	-4872	-4330	-7340	1.5001	1.1269	-6415	11700	5933	33304	30320	3825	34145		4.65	Si
SLV 11	-1.56	-7801.77	-9770	-8685	-10339	1.2	0	0	0	0	33304	24256	3060	27316		2.64	Si
SLV 11	1.41	3330.35	-6336	-5632	-8656	1.5001	0.6733	-8344	12085	3662	33304	30320	3825	34145		3.94	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.24	10645	-7186	109.11	1504.09	13.79	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	10690	-7216	109.11	1509.96	13.84	Si
SLV 4	179667	0.24	10977	-7410	109.11	1547.38	14.18	Si
SLV 3	179667	0.24	11022	-7440	109.11	1553.22	14.24	Si
SLV 6	179667	0.24	12665	-8549	109.11	1764.09	16.17	Si
SLV 5	179667	0.24	12695	-8569	109.11	1767.8	16.2	Si
SLV 8	179667	0.24	13772	-9297	109.11	1903.09	17.44	Si
SLV 7	179667	0.24	13801	-9316	109.11	1906.74	17.48	Si
SLV 10	179667	0.24	14722	-9938	109.11	2020.47	18.52	Si
SLV 9	179667	0.24	14752	-9958	109.11	2024.06	18.55	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-6360	-9740	-126	1.109	935.6	0.921	17.50803	4.02955	Si
SLV 11	-6336	-9770	-125	1.112	933.3	0.921	17.55848	4.02955	Si
SLV 8	-6090	-8075	4	1.16	908.6	0.919	18.34259	4.02955	Si
SLV 7	-6067	-8106	5	1.163	906.2	0.919	18.3953	4.02955	Si
SLV 16	-5718	-11773	-252	1.181	871.3	0.916	18.72181	2.9746	Si
SLV 15	-5682	-11820	-251	1.186	867.7	0.916	18.81213	2.9746	Si
SLV 10	-3611	-10025	-53	1.647	662.4	0.9	26.59803	4.02955	Si
SLV 9	-3588	-10055	-52	1.654	660.1	0.9	26.71476	4.02955	Si
SLV 6	-3342	-8360	77	1.725	636.1	0.898	27.9185	4.02955	Si
SLV 5	-3318	-8391	78	1.732	633.8	0.898	28.04399	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.002	SLU 84	Si
V_SLU	2.519	SLU 83	Si
PF_SLV	0.93	SLV 7	No
V_SLV	2.051	SLV 15	Si
PFFP_SLV	13.786	SLV 2	Si
R_SLV	4.345	SLV 12	Si

Maschio 44

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	1.046	-6.268	-3.284	L2	L4	4.33	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	2	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.05	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	-1.56	688.97	-110038	-0.0001012	0.0004492	0.0035	4.3299	73067.87	398895.8	398895.8	578.97	No	Si
SLU 74	1.41	-4935.4	-66785	-0.0000649	0.0004492	0.0035	4.3299	83749.05	409793.04	409793.04	83.03	No	Si
SLU 82	-1.56	767.87	-112057	-0.0001034	0.0004492	0.0035	4.3299	71322.48	398396.8	398396.8	518.83	No	Si
SLU 82	1.41	-5176.44	-67961	-0.0000663	0.0004492	0.0035	4.3299	84133.53	409487.54	409487.54	79.11	No	Si
SLU 80	-1.56	621.9	-110520	-0.0001016	0.0004492	0.0035	4.3299	72661.27	398776.67	398776.67	641.22	No	Si
SLU 80	1.41	-4871.58	-67112	-0.0000652	0.0004492	0.0035	4.3299	83859.53	409708.25	409708.25	84.1	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	-1.56	680.32	-111227	-0.0001024	0.0004492	0.0035	4.3299	72053.89	398602.06	398602.06	585.9	No	Si
SLU 77	1.41	-4953.56	-67650	-0.0000658	0.0004492	0.0035	4.3299	84035.33	409568.48	409568.48	82.68	No	Si
SLU 78	-1.56	633.03	-111236	-0.0001024	0.0004492	0.0035	4.3299	72045.64	398599.72	398599.72	629.67	No	Si
SLU 78	1.41	-4915.72	-67653	-0.0000657	0.0004492	0.0035	4.3299	84036.53	409567.5	409567.5	83.32	No	Si
SLU 79	-1.56	669.19	-110511	-0.0001017	0.0004492	0.0035	4.3299	72669.33	398779.01	398779.01	595.91	No	Si
SLU 79	1.41	-4909.41	-67108	-0.0000652	0.0004492	0.0035	4.3299	83858.28	409709.23	409709.23	83.45	No	Si
SLU 84	-1.56	759.22	-113246	-0.0001046	0.0004492	0.0035	4.3299	70243.04	398103.06	398103.06	524.36	No	Si
SLU 84	1.41	-5194.59	-68825	-0.0000672	0.0004492	0.0035	4.3299	84392.09	409262.97	409262.97	78.79	No	Si
SLU 83	-1.56	806.51	-113236	-0.0001046	0.0004492	0.0035	4.3299	70251.8	398105.41	398105.41	493.61	No	Si
SLU 83	1.41	-5232.43	-68822	-0.0000672	0.0004492	0.0035	4.3299	84391.01	409263.95	409263.95	78.22	No	Si
SLU 81	-1.56	815.16	-112048	-0.0001034	0.0004492	0.0035	4.3299	71330.94	398399.15	398399.15	488.74	No	Si
SLU 81	1.41	-5214.27	-67957	-0.0000664	0.0004492	0.0035	4.3299	84132.36	409488.51	409488.51	78.53	No	Si
SLU 75	-1.56	641.68	-110048	-0.0001012	0.0004492	0.0035	4.3299	73059.93	398893.46	398893.46	621.64	No	Si
SLU 75	1.41	-4897.57	-66789	-0.0000649	0.0004492	0.0035	4.3299	83750.33	409792.06	409792.06	83.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	-1.56	14344.67	-89592	-0.0000967	0.0006738	0.0035	4.3299		451356.96	451356.96	31.47		Si
SLV 14	1.41	-4632.65	-50360	-0.0000487	0.0006738	0.0035	4.3299		459013.82	459013.82	99.08		Si
SLV 9	-1.56	15968.58	-80185	-0.0000899	0.0006738	0.0035	4.3299		453155.66	453155.66	28.38		Si
SLV 9	1.41	-9647.64	-48275	-0.000053	0.0006738	0.0035	4.3299		459413.39	459413.39	47.62		Si
SLV 13	-1.56	12379.5	-89062	-0.0000936	0.0006738	0.0035	4.3299		451458.33	451458.33	36.47		Si
SLV 13	1.41	-4467.01	-49683	-0.0000479	0.0006738	0.0035	4.3299		459143.57	459143.57	102.79		Si
SLV 4	-1.56	-11626.81	-64542	-0.0000701	0.0006738	0.0035	4.3299		456295.62	456295.62	39.25		Si
SLV 4	1.41	-1952.84	-42362	-0.0000384	0.0006738	0.0035	4.3299		460546.75	460546.75	235.83		Si
SLV 3	-1.56	-13591.99	-64011	-0.000072	0.0006738	0.0035	4.3299		456397.23	456397.23	33.58		Si
SLV 3	1.41	-1787.2	-41685	-0.0000377	0.0006738	0.0035	4.3299		460676.5	460676.5	257.76		Si
SLV 6	-1.56	11897.84	-72976	-0.0000781	0.0006738	0.0035	4.3299		454534.23	454534.23	38.2		Si
SLV 6	1.41	-10156.18	-46569	-0.0000521	0.0006738	0.0035	4.3299		459740.45	459740.45	45.27		Si
SLV 11	-1.56	-11145.15	-80628	-0.0000842	0.0006738	0.0035	4.3299		453212.45	453212.45	40.66		Si
SLV 11	1.41	3736.33	-45476	-0.0000433	0.0006738	0.0035	4.3299		459792.64	459792.64	123.06		Si
SLV 10	-1.56	17249.05	-80531	-0.0000919	0.0006738	0.0035	4.3299		453089.6	453089.6	26.27		Si
SLV 10	1.41	-9755.57	-48716	-0.0000535	0.0006738	0.0035	4.3299		459328.85	459328.85	47.08		Si
SLV 8	-1.56	-15215.89	-73418	-0.0000827	0.0006738	0.0035	4.3299		454594.28	454594.28	29.88		Si
SLV 8	1.41	3227.79	-43770	-0.0000412	0.0006738	0.0035	4.3299		460118.93	460118.93	142.55		Si
SLV 7	-1.56	-16496.36	-73073	-0.000084	0.0006738	0.0035	4.3299		454660.49	454660.49	27.56		Si
SLV 7	1.41	3335.72	-43329	-0.000041	0.0006738	0.0035	4.3299		460203.27	460203.27	137.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.56	767.87	-112057	-57836	-13374	4.3299	4.3299	-44524	10833	14072	134577	46682	55207	101889	No	7.62	Si
SLU 82	1.41	-5176.44	-67961	-35077	-13008	4.3299	4.3299	-27003	10833	14072	134577	46682	55207	101889	No	7.83	Si
SLU 80	-1.56	621.9	-110520	-57043	-13486	4.3299	4.3299	-43913	10833	14072	134577	46682	55207	101889	No	7.56	Si
SLU 80	1.41	-4871.58	-67112	-34638	-13120	4.3299	4.3299	-26666	10833	14072	134577	46682	55207	101889	No	7.77	Si
SLU 83	-1.56	806.51	-113236	-58445	-13472	4.3299	4.3299	-44993	10833	14072	134577	46682	55207	101889	No	7.56	Si
SLU 83	1.41	-5232.43	-68822	-35521	-13098	4.3299	4.3299	-27345	10833	14072	134577	46682	55207	101889	No	7.78	Si
SLU 75	-1.56	641.68	-110048	-56799	-13374	4.3299	4.3299	-43726	10833	14072	134577	46682	55207	101889	No	7.62	Si
SLU 75	1.41	-4897.57	-66789	-34472	-13010	4.3299	4.3299	-26538	10833	14072	134577	46682	55207	101889	No	7.83	Si
SLU 77	-1.56	680.32	-111227	-57407	-13472	4.3299	4.3299	-44194	10833	14072	134577	46682	55207	101889	No	7.56	Si
SLU 77	1.41	-4953.56	-67650	-34916	-13101	4.3299	4.3299	-26879	10833	14072	134577	46682	55207	101889	No	7.78	Si
SLU 78	-1.56	633.03	-111236	-57412	-13544	4.3299	4.3299	-44198	10833	14072	134577	46682	55207	101889	No	7.52	Si
SLU 78	1.41	-4915.72	-67653	-34918	-13173	4.3299	4.3299	-26881	10833	14072	134577	46682	55207	101889	No	7.73	Si
SLU 84	-1.56	759.22	-113246	-58449	-13545	4.3299	4.3299	-44996	10833	14072	134577	46682	55207	101889	No	7.52	Si
SLU 84	1.41	-5194.59	-68825	-35523	-13171	4.3299	4.3299	-27347	10833	14072	134577	46682	55207	101889	No	7.74	Si
SLU 76	-1.56	599.02	-109338	-56433	-13364	4.3299	4.3299	-43444	10833	14072	134577	46682	55207	101889	No	7.62	Si
SLU 76	1.41	-4828.2	-66250	-34194	-13005	4.3299	4.3299	-26323	10833	14072	134577	46682	55207	101889	No	7.83	Si
SLU 79	-1.56	669.19	-110511	-57038	-13414	4.3299	4.3299	-43910	10833	14072	134577	46682	55207	101889	No	7.6	Si
SLU 79	1.41	-4909.41	-67108	-34636	-13047	4.3299	4.3299	-26664	10833	14072	134577	46682	55207	101889	No	7.81	Si
SLU 81	-1.56	815.16	-112048	-57831	-13302	4.3299	4.3299	-44520	10833	14072	134577	46682	55207	101889	No	7.66	Si
SLU 81	1.41	-5214.27	-67957	-35075	-12935	4.3299	4.3299	-27002	10833	14072	134577	46682	55207	101889	No	7.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.56	6210.56	-89725	-46310	-17371	4.3299	4.3299	-35651	16250	21108	134577	70023	55207	125230		7.21	Si
SLV 16	1.41	-617.46	-49520	-25559	-16992	4.3299	4.3299	-19676	16250	21108	134577	70023	55207	125230		7.37	Si
SLD 7	-1.56	-7035.48	-75215	-38821	-16758	4.3299	4.3299	-29886	16250	21108	134577	70023	55207	125230		7.47	Si
SLD 7	1.41	-308.87	-44870	-23159	-16409	4.3299	4.3299	-17828	16066	20869	134577	70023	55207	125230		7.63	Si
SLV 12	-1.56	-9864.68	-80973	-41793	-26719	4.3299	4.3299	-32173	16250	21108	134577	70023	55207	125230		4.69	Si
SLV 12	1.41	3628.41	-45917	-23699	-26178	4.3299	4.3299	-18244	16149	20977	134577	70023	55207	125230		4.78	Si
SLD 11	-1.56	-4748.72	-78444	-40487	-17689	4.3299	4.3299	-31168	16250	21108	134577	70023	55207	125230		7.08	Si
SLD 11	1.41	-136.51	-45787	-23632	-17328	4.3299	4.3299	-18193	16139	20964	134577	70023	55207	125230		7.23	Si
SLV 15	-1.56	4245.38	-89195	-46036	-19154	4.3299	4.3299	-35440	16250	21108	134577	70023	55207	125230		6.54	Si
SLV 15	1.41	-451.82	-48843	-25209	-18781	4.3299	4.3299	-19407	16250	21108	134577	70023	55207	125230		6.67	Si
SLD 8	-1.56	-6475.32	-75366	-38899	-16250	4.3299	4.3299	-29946	16250	21108	134577	70023	55207	125230		7.71	Si
SLD 8	1.41	-356.09	-45063	-23258	-15899	4.3299	4.3299	-17905	16081	20889	134577	70023	55207	125230		7.88	Si
SLV 11	-1.56	-11145.15	-80628	-41614	-27881	4.3299	4.3299	-32036	16250	21108	134577	70023	55207	125230		4.49	Si
SLV 11	1.41	3736.33	-45476	-23472	-27343	4.3299	4.3299	-18069	16114	20932	134577	70023	55207	125230		4.58	Si
SLD 12	-1.56	-4188.55	-78595	-40565	-17181	4.3299	4.3299	-31229	16250	21108	134577	70023	55207	125230		7.29	Si
SLD 12	1.41	-183.72	-45980	-23732	-16818	4.3299	4.3299	-18269	16154	20984	134577	70023	55207	125230		7.45	Si
SLV 7	-1.56	-16496.36	-73073	-37715	-25703	4.3299	4.3299	-29034	16250	21108	134577	70023	55207	125230		4.87	Si
SLV 7	1.41	3335.72	-43329	-22363	-25194	4.3299	4.3299	-17216	15943	20710	134577	70023	55207	125230		4.97	Si
SLV 8	-1.56	-15215.89	-73418	-37893	-24542	4.3299	4.3299	-29171	16250	21108	134577	70023	55207	125230		5.1	Si
SLV 8	1.41	3227.79	-43770	-22591	-24028	4.3299	4.3299	-17391	15978	20755	134577	70023	55207	125230		5.21	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-69648	0.24	209.96	7390.98	65760.5	36575.74	174.21	Si
SLV 16	-69155	0.24	209.96	7360.15	65804.65	36582.4	174.24	Si
SLV 13	-68996	0.24	209.96	7350.1	65818.95	36584.52	174.25	Si
SLV 15	-68503	0.24	209.96	7318.87	65863.09	36590.98	174.28	Si
SLV 10	-63942	0.24	209.96	7015.34	66271.59	36643.46	174.53	Si
SLV 9	-63517	0.24	209.96	6985.7	66309.67	36647.69	174.55	Si
SLV 12	-62299	0.24	209.96	6899.58	66418.73	36659.15	174.6	Si
SLV 11	-61874	0.24	209.96	6869.06	66456.81	36662.94	174.62	Si
SLV 6	-58656	0.24	209.96	6630.71	66745.07	36687.89	174.74	Si
SLV 5	-58231	0.24	209.96	6598.25	66783.15	36690.7	174.75	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-48716	-80531	-118	0.518	5503	0.97	7.75641	5.39576	Si
SLV 9	-48275	-80185	-119	0.522	5458.1	0.97	7.8179	5.39576	Si
SLV 6	-46569	-72976	34	0.539	5284.3	0.969	8.09173	5.39576	Si
SLV 5	-46128	-72630	34	0.544	5239.4	0.968	8.15909	5.39576	Si
SLV 12	-45917	-80973	-27	0.546	5218	0.968	8.19375	5.39576	Si
SLV 11	-45476	-80628	-27	0.55	5173.1	0.968	8.2629	5.39576	Si
SLV 8	-43770	-73418	125	0.566	4999.4	0.967	8.51173	5.39576	Si
SLV 7	-43329	-73073	125	0.571	4954.5	0.967	8.58728	5.39576	Si
SLV 14	-50360	-89592	-264	0.501	5670.3	0.971	7.49566	3.34272	Si
SLV 13	-49683	-89062	-265	0.506	5601.4	0.97	7.58407	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	78.217	SLU 83	Si
V_SLU	7.522	SLU 84	Si
PF_SLV	26.268	SLV 10	Si
V_SLV	4.492	SLV 11	Si
PFFP_SLV	174.206	SLV 14	Si
R_SLV	1.437	SLV 10	Si

Maschio 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-3.284	-10.553	-3.284	L2	L4	0.46	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-1.56	-342.46	-27630	-0.0005358	0.0003743	0.0035	0.46	0	1640.56	1640.56	4.79	No	Si
SLU 80	0.49	-555.7	-13351	-0.0001772	0.0003743	0.0035	0.46	1125.39	1975.29	1975.29	3.55	No	Si
SLU 79	-1.56	-341.95	-27639	-0.0005365	0.0003743	0.0035	0.46	0	1639.42	1639.42	4.79	No	Si
SLU 79	0.49	-555.02	-13349	-0.0001771	0.0003743	0.0035	0.46	1125.51	1975.19	1975.19	3.56	No	Si
SLU 77	-1.56	-343.18	-27819	-0.0005597	0.0003743	0.0035	0.46	0	1616.87	1616.87	4.71	No	Si
SLU 77	0.49	-557.04	-13436	-0.0001784	0.0003743	0.0035	0.46	1120.09	1979.61	1979.61	3.55	No	Si
SLU 75	-1.56	-340.58	-27497	-0.0005184	0.0003743	0.0035	0.46	0	1657.26	1657.26	4.87	No	Si
SLU 75	0.49	-552.29	-13275	-0.0001758	0.0003743	0.0035	0.46	1130	1971.42	1971.42	3.57	No	Si
SLU 82	-1.56	-345.97	-28078	-0.0005957	0.0003743	0.0035	0.46	0	1584.5	1584.5	4.58	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.49	-567.86	-13572	-0.0001815	0.0003743	0.0035	0.46	1111.28	1986.52	1986.52	3.5	No	Si
SLU 84	-1.56	-349.09	-28391	-0.0006413	0.0003743	0.0035	0.46	0	1545.25	1545.25	4.43	No	Si
SLU 84	0.49	-573.29	-13736	-0.0001842	0.0003743	0.0035	0.46	1100.19	1994.81	1994.81	3.48	No	Si
SLU 81	-1.56	-345.46	-28087	-0.0005964	0.0003743	0.0035	0.46	0	1583.35	1583.35	4.58	No	Si
SLU 81	0.49	-567.19	-13570	-0.0001814	0.0003743	0.0035	0.46	1111.41	1986.42	1986.42	3.5	No	Si
SLU 78	-1.56	-343.69	-27810	-0.000559	0.0003743	0.0035	0.46	0	1618.02	1618.02	4.71	No	Si
SLU 78	0.49	-557.72	-13438	-0.0001785	0.0003743	0.0035	0.46	1119.96	1979.71	1979.71	3.55	No	Si
SLU 76	-1.56	-339.69	-27311	-0.0004967	0.0003743	0.0035	0.46	0	1679.13	1679.13	4.94	No	Si
SLU 76	0.49	-550.72	-13190	-0.0001746	0.0003743	0.0035	0.46	1135.04	1967.07	1967.07	3.57	No	Si
SLU 83	-1.56	-348.58	-28400	-0.0006421	0.0003743	0.0035	0.46	0	1544.1	1544.1	4.43	No	Si
SLU 83	0.49	-572.61	-13734	-0.0001841	0.0003743	0.0035	0.46	1100.33	1994.71	1994.71	3.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	-1.56	-438.79	-18030	-0.0001937	0.0005615	0.0035	0.46		2636.57	2636.57	6.01		Si
SLD 3	0.49	-657.86	-9818	-0.000141	0.0005615	0.0035	0.46		1844.05	1844.05	2.8		Si
SLV 7	-1.56	-453.75	-16955	-0.0001847	0.0005615	0.0035	0.46		2578.25	2578.25	5.68		Si
SLV 7	0.49	-694.67	-9943	-0.000146	0.0005615	0.0035	0.46		1859.15	1859.15	2.68		Si
SLD 1	-1.56	-417.57	-18430	-0.0001951	0.0005615	0.0035	0.46		2658.26	2658.26	6.37		Si
SLD 1	0.49	-623.41	-9726	-0.0001364	0.0005615	0.0035	0.46		1832.96	1832.96	2.94		Si
SLV 1	-1.56	-654.7	-17520	-0.0002151	0.0005615	0.0035	0.46		2608.93	2608.93	3.98		Si
SLV 1	0.49	-947.63	-10491	-0.0001817	0.0005615	0.0035	0.46		1925.29	1925.29	2.03		Si
SLD 2	-1.56	-416.5	-18479	-0.0001955	0.0005615	0.0035	0.46		2660.89	2660.89	6.39		Si
SLD 2	0.49	-641.76	-9779	-0.0001389	0.0005615	0.0035	0.46		1839.3	1839.3	2.87		Si
SLV 2	-1.56	-652.22	-17633	-0.000216	0.0005615	0.0035	0.46		2615.06	2615.06	4.01		Si
SLV 2	0.49	-990.37	-10613	-0.0001889	0.0005615	0.0035	0.46		1940.07	1940.07	1.96		Si
SLD 4	-1.56	-437.72	-18079	-0.000194	0.0005615	0.0035	0.46		2639.2	2639.2	6.03		Si
SLD 4	0.49	-676.21	-9871	-0.0001434	0.0005615	0.0035	0.46		1850.4	1850.4	2.74		Si
SLV 4	-1.56	-700.82	-16724	-0.0002125	0.0005615	0.0035	0.46		2559.83	2559.83	3.65		Si
SLV 4	0.49	-1073.74	-10839	-0.0002038	0.0005615	0.0035	0.46		1967.37	1967.37	1.83		Si
SLV 3	-1.56	-703.31	-16611	-0.0002116	0.0005615	0.0035	0.46		2549.88	2549.88	3.63		Si
SLV 3	0.49	-1031	-10717	-0.000196	0.0005615	0.0035	0.46		1952.59	1952.59	1.89		Si
SLV 8	-1.56	-452.14	-17028	-0.0001853	0.0005615	0.0035	0.46		2582.24	2582.24	5.71		Si
SLV 8	0.49	-722.52	-10023	-0.0001498	0.0005615	0.0035	0.46		1868.78	1868.78	2.59		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	-1.56	-339.69	-27311	-21848	685	0.46	0.46	-105548	10833	2242	95155	6198	2346	8544	No	12.48	Si
SLU 76	0.49	-550.72	-13190	-10552	-2231	0.46	0.46	-50974	10833	2242	95155	6198	2346	8544	No	3.83	Si
SLU 79	-1.56	-341.95	-27639	-22111	696	0.46	0.46	-106819	10833	2242	95155	6198	2346	8544	No	12.28	Si
SLU 79	0.49	-555.02	-13349	-10680	-2242	0.46	0.46	-51592	10833	2242	95155	6198	2346	8544	No	3.81	Si
SLU 78	-1.56	-343.69	-27810	-22248	700	0.46	0.46	-107479	10833	2242	95155	6198	2346	8544	No	12.21	Si
SLU 78	0.49	-557.72	-13438	-10751	-2249	0.46	0.46	-51936	10833	2242	95155	6198	2346	8544	No	3.8	Si
SLU 77	-1.56	-343.18	-27819	-22255	702	0.46	0.46	-107514	10833	2242	95155	6198	2346	8544	No	12.18	Si
SLU 77	0.49	-557.04	-13436	-10749	-2245	0.46	0.46	-51928	10833	2242	95155	6198	2346	8544	No	3.81	Si
SLU 80	-1.56	-342.46	-27630	-22104	694	0.46	0.46	-106783	10833	2242	95155	6198	2346	8544	No	12.31	Si
SLU 80	0.49	-555.7	-13351	-10681	-2245	0.46	0.46	-51600	10833	2242	95155	6198	2346	8544	No	3.81	Si
SLU 84	-1.56	-349.09	-28391	-22713	716	0.46	0.46	-109725	10833	2242	95155	6198	2346	8544	No	11.93	Si
SLU 84	0.49	-573.29	-13736	-10988	-2329	0.46	0.46	-53084	10833	2242	95155	6198	2346	8544	No	3.67	Si
SLU 83	-1.56	-348.58	-28400	-22720	718	0.46	0.46	-109760	10833	2242	95155	6198	2346	8544	No	11.9	Si
SLU 83	0.49	-572.61	-13734	-10987	-2325	0.46	0.46	-53077	10833	2242	95155	6198	2346	8544	No	3.67	Si
SLU 81	-1.56	-345.46	-28087	-22470	710	0.46	0.46	-108549	10833	2242	95155	6198	2346	8544	No	12.04	Si
SLU 81	0.49	-567.19	-13570	-10856	-2308	0.46	0.46	-52446	10833	2242	95155	6198	2346	8544	No	3.7	Si
SLU 75	-1.56	-340.58	-27497	-21997	692	0.46	0.46	-106268	10833	2242	95155	6198	2346	8544	No	12.35	Si
SLU 75	0.49	-552.29	-13275	-10620	-2232	0.46	0.46	-51306	10833	2242	95155	6198	2346	8544	No	3.83	Si
SLU 82	-1.56	-345.97	-28078	-22462	708	0.46	0.46	-108514	10833	2242	95155	6198	2346	8544	No	12.06	Si
SLU 82	0.49	-567.86	-13572	-10858	-2312	0.46	0.46	-52454	10833	2242	95155	6198	2346	8544	No	3.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-1.56	-654.7	-17520	-14016	-192	0.46	0.46	-67712	16250	3364	95155	9298	2346	11644		60.78	Si
SLV 1	0.49	-947.63	-10491	-8393	-4567	0.46	0.419	-40544	16250	3064	95155	9298	2346	11644		2.55	Si
SLV 3	-1.56	-703.31	-16611	-13289	-381	0.46	0.46	-64199	16250	3364	95155	9298	2346	11644		30.59	Si
SLV 3	0.49	-1031	-10717	-8573	-5035	0.46	0.4014	-41417	16250	2935	95155	9298	2346	11644		2.31	Si
SLV 8	-1.56	-452.14	-17028	-13623	-60	0.46	0.46	-65810	16250	3364	95155	9298	2346	11644		192.8	Si
SLV 8	0.49	-722.52	-10023	-8018	-3385	0.46	0.46	-38735	16250	3364	95155	9298	2346	11644		3.44	Si
SLV 4	-1.56	-700.82	-16724	-13380	-370	0.46	0.46	-64635	16250	3364	95155	9298	2346	11644		31.48	Si
SLV 4	0.49	-1073.74	-10839	-8671	-5233	0.46	0.3928	-41890	16250	2872	95155	9298	2346	11644		2.23	Si
SLD 2	-1.56	-416.5	-18479	-14783	197	0.46	0.46	-71415	16250	3364	95155	9298	2346	11644		59.03	Si
SLD 2	0.49	-641.76	-9779	-7823	-2919	0.46	0.46	-37792	16250	3364	95155	9298	2346	11644		3.99	Si
SLD 4	-1.56	-437.72	-18079	-14463	116	0.46	0.46	-69869	16250	3364	95155	9298	2346	11644		100.5	Si
SLD 4	0.49	-676.21	-9871	-7896	-3106	0.46	0.46	-38147	16250	3364	95155	9298	2346	11644		3.75	Si
SLD 3	-1.56	-438.79	-18030	-14424	111	0.46	0.46	-69682	16250	3364	95155	9298	2346	11644		104.67	Si
SLD 3	0.49	-657.86	-9818	-7854	-3021	0.46	0.46	-37944	16250	3364	95155	9298	2346	11644		3.85	Si
SLD 1	-1.56	-417.57	-18430	-14744	193	0.46	0.46	-71227	16250	3364	95155	9298	2346	11644		60.44	Si
SLD 1	0.49	-623.41	-9726	-7781	-2834	0.46	0.46	-37589	16250	3364	95155	9298	2346	11644		4.11	Si
SLV 2	-1.56	-652.22	-17633	-14107	-181	0.46	0.46	-68148	16250	3364	95155	9298	2346	11644		64.38	Si
SLV 2	0.49	-990.37	-10613	-8490	-4765	0.46	0.4101	-41017	16250	2999	95155	9298	2346	11644		2.44	Si
SLV 7	-1.56	-453.75	-16955	-13564	-67	0.46	0.46	-65525	16250	3364	95155	9298	2346	11644		172.8	Si
SLV 7	0.49	-694.67	-9943	-7954	-3256	0.46	0.46	-38427	16250	3364	95155	9298	2346	11644		3.58	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-12855	0.24	33.46	1716.21	2722.67	2219.44	66.34	Si
SLV 11	-12908	0.24	33.46	1718.4	2730.35	2224.37	66.48	Si
SLV 16	-12943	0.24	33.46	1719.83	2735.47	2227.65	66.58	Si
SLV 12	-12964	0.24	33.46	1720.72	2738.69	2229.71	66.64	Si
SLV 13	-13287	0.24	33.46	1733.02	2783.65	2258.33	67.5	Si
SLV 7	-13371	0.24	33.46	1735.99	2795.18	2265.58	67.71	Si
SLV 14	-13374	0.24	33.46	1736.1	2795.6	2265.85	67.72	Si
SLV 8	-13428	0.24	33.46	1737.94	2802.96	2270.45	67.86	Si
SLV 9	-14346	0.24	33.46	1763.02	2922.79	2342.91	70.03	Si
SLV 3	-14400	0.24	33.46	1764.12	2929.51	2346.82	70.14	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-6913	-20058	156	0.407	790.3	0.967	6.11241	4.02955	Si
SLV 5	-6819	-19984	154	0.411	780.8	0.966	6.18176	4.02955	Si
SLV 8	-6743	-17028	147	0.415	773.1	0.966	6.2498	4.02955	Si
SLV 7	-6650	-16955	145	0.42	763.6	0.966	6.32266	4.02955	Si
SLV 10	-5980	-21244	121	0.459	695.5	0.963	6.9312	4.02955	Si
SLV 9	-5887	-21171	119	0.465	685.9	0.962	7.02316	4.02955	Si
SLV 12	-5811	-18214	112	0.471	678.3	0.962	7.11175	4.02955	Si
SLV 11	-5717	-18141	111	0.477	668.7	0.961	7.20906	4.02955	Si
SLV 2	-7966	-17633	193	0.361	897.6	0.971	5.41	2.9746	Si
SLV 4	-7915	-16724	191	0.363	892.4	0.97	5.44106	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.48	SLU 84	Si
V_SLU	3.668	SLU 84	Si
PF_SLV	1.832	SLV 4	Si
V_SLV	2.225	SLV 4	Si
PFFP_SLV	66.336	SLV 15	Si
R_SLV	1.517	SLV 6	Si

Maschio 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.253	-3.284	-7.463	-3.284	L2	L4	0.79	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	0.44	1546.83	-20136	-0.0001546	0.0003743	0.0035	0.79	3528.77	5405.71	5405.71	3.49	No	Si
SLU 78	0.84	245.72	-19762	-0.0000989	0.0003743	0.0035	0.79	3543.87	5351.76	5351.76	21.78	No	Si
SLU 74	0.44	1529.9	-19893	-0.0001524	0.0003743	0.0035	0.79	3538.96	5370.56	5370.56	3.51	No	Si
SLU 74	0.84	239.92	-19519	-0.0000974	0.0003743	0.0035	0.79	3552.07	5316.62	5316.62	22.16	No	Si
SLU 82	0.44	1568.9	-20394	-0.0001572	0.0003743	0.0035	0.79	3516.55	5443.03	5443.03	3.47	No	Si
SLU 82	0.84	234.94	-20021	-0.0000999	0.0003743	0.0035	0.79	3533.75	5389.09	5389.09	22.94	No	Si
SLU 81	0.44	1568.74	-20394	-0.0001572	0.0003743	0.0035	0.79	3516.56	5443	5443	3.47	No	Si
SLU 81	0.84	233.51	-20021	-0.0000998	0.0003743	0.0035	0.79	3533.76	5389.05	5389.05	23.08	No	Si
SLU 77	0.44	1546.67	-20136	-0.0001546	0.0003743	0.0035	0.79	3528.78	5405.67	5405.67	3.5	No	Si
SLU 77	0.84	244.29	-19762	-0.0000989	0.0003743	0.0035	0.79	3543.88	5351.73	5351.73	21.91	No	Si
SLU 83	0.44	1585.51	-20637	-0.0001595	0.0003743	0.0035	0.79	3503.73	5478.11	5478.11	3.46	No	Si
SLU 83	0.84	237.88	-20264	-0.0001013	0.0003743	0.0035	0.79	3522.91	5424.16	5424.16	22.8	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	0.44	1537.94	-19997	-0.0001534	0.0003743	0.0035	0.79	3534.74	5385.67	5385.67	3.5	No	Si
SLU 79	0.84	240.43	-19624	-0.000098	0.0003743	0.0035	0.79	3548.71	5331.72	5331.72	22.18	No	Si
SLU 75	0.44	1530.06	-19893	-0.0001524	0.0003743	0.0035	0.79	3538.95	5370.6	5370.6	3.51	No	Si
SLU 75	0.84	241.35	-19519	-0.0000975	0.0003743	0.0035	0.79	3552.06	5316.65	5316.65	22.03	No	Si
SLU 80	0.44	1538.11	-19997	-0.0001534	0.0003743	0.0035	0.79	3534.73	5385.7	5385.7	3.5	No	Si
SLU 80	0.84	241.86	-19624	-0.0000981	0.0003743	0.0035	0.79	3548.7	5331.76	5331.76	22.05	No	Si
SLU 84	0.44	1585.67	-20637	-0.0001595	0.0003743	0.0035	0.79	3503.71	5478.14	5478.14	3.45	No	Si
SLU 84	0.84	239.3	-20264	-0.0001014	0.0003743	0.0035	0.79	3522.9	5424.2	5424.2	22.67	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.44	1910.06	-16744	-0.0001392	0.0005615	0.0035	0.79		5291.11	5291.11	2.77		Si
SLV 15	0.84	-1622.15	-16300	-0.0001266	0.0005615	0.0035	0.79		5406.03	5406.03	3.33		Si
SLV 1	0.44	251.78	-10363	-0.0000515	0.0005615	0.0035	0.79		3581.25	3581.25	14.22		Si
SLV 1	0.84	1818.42	-10232	-0.0001076	0.0005615	0.0035	0.79		3544.72	3544.72	1.95		Si
SLV 11	0.44	1742.74	-14737	-0.000123	0.0005615	0.0035	0.79		4803.72	4803.72	2.76		Si
SLV 11	0.84	-464.42	-14100	-0.0000754	0.0005615	0.0035	0.79		4856.39	4856.39	10.46		Si
SLV 3	0.44	529.63	-10501	-0.0000613	0.0005615	0.0035	0.79		3619.74	3619.74	6.83		Si
SLV 3	0.84	1772.56	-10170	-0.0001051	0.0005615	0.0035	0.79		3527.33	3527.33	1.99		Si
SLV 2	0.44	203.99	-10465	-0.0000503	0.0005615	0.0035	0.79		3609.65	3609.65	17.7		Si
SLV 2	0.84	1950.98	-10334	-0.0001152	0.0005615	0.0035	0.79		3573.11	3573.11	1.83		Si
SLV 12	0.44	1711.61	-14803	-0.0001222	0.0005615	0.0035	0.79		4822.22	4822.22	2.82		Si
SLV 12	0.84	-378.04	-14166	-0.0000727	0.0005615	0.0035	0.79		4873.95	4873.95	12.89		Si
SLV 13	0.44	1632.21	-16606	-0.0001285	0.0005615	0.0035	0.79		5261.44	5261.44	3.22		Si
SLV 13	0.84	-1576.28	-16362	-0.0001252	0.0005615	0.0035	0.79		5420.57	5420.57	3.44		Si
SLV 7	0.44	1328.61	-12864	-0.0000993	0.0005615	0.0035	0.79		4280.27	4280.27	3.22		Si
SLV 7	0.84	554	-12261	-0.00007	0.0005615	0.0035	0.79		4111.61	4111.61	7.42		Si
SLV 16	0.44	1862.28	-16846	-0.000138	0.0005615	0.0035	0.79		5312.99	5312.99	2.85		Si
SLV 16	0.84	-1489.59	-16402	-0.0001223	0.0005615	0.0035	0.79		5429.78	5429.78	3.65		Si
SLV 4	0.44	481.84	-10602	-0.0000602	0.0005615	0.0035	0.79		3648.14	3648.14	7.57		Si
SLV 4	0.84	1905.12	-10272	-0.0001125	0.0005615	0.0035	0.79		3555.73	3555.73	1.87		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	0.44	1537.94	-19997	-15998	3270	0.79	0.79	-45000	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 79	0.84	240.43	-19624	-15699	3270	0.79	0.79	-44160	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 77	0.44	1546.67	-20136	-16108	3282	0.79	0.79	-45312	10833	3851	95155	10645	4029	14674	No	4.47	Si
SLU 77	0.84	244.29	-19762	-15810	3282	0.79	0.79	-44472	10833	3851	95155	10645	4029	14674	No	4.47	Si
SLU 80	0.44	1538.11	-19997	-15998	3267	0.79	0.79	-45001	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 80	0.84	241.86	-19624	-15699	3267	0.79	0.79	-44161	10833	3851	95155	10645	4029	14674	No	4.49	Si
SLU 78	0.44	1546.83	-20136	-16109	3279	0.79	0.79	-45313	10833	3851	95155	10645	4029	14674	No	4.48	Si
SLU 78	0.84	245.72	-19762	-15810	3279	0.79	0.79	-44472	10833	3851	95155	10645	4029	14674	No	4.48	Si
SLU 75	0.44	1530.06	-19893	-15914	3248	0.79	0.79	-44766	10833	3851	95155	10645	4029	14674	No	4.52	Si
SLU 75	0.84	241.35	-19519	-15615	3248	0.79	0.79	-43925	10833	3851	95155	10645	4029	14674	No	4.52	Si
SLU 83	0.44	1585.51	-20637	-16510	3395	0.79	0.79	-46441	10833	3851	95155	10645	4029	14674	No	4.32	Si
SLU 83	0.84	237.88	-20264	-16211	3395	0.79	0.79	-45600	10833	3851	95155	10645	4029	14674	No	4.32	Si
SLU 74	0.44	1529.9	-19893	-15914	3251	0.79	0.79	-44765	10833	3851	95155	10645	4029	14674	No	4.51	Si
SLU 74	0.84	239.92	-19519	-15615	3251	0.79	0.79	-43925	10833	3851	95155	10645	4029	14674	No	4.51	Si
SLU 84	0.44	1585.67	-20637	-16510	3392	0.79	0.79	-46441	10833	3851	95155	10645	4029	14674	No	4.33	Si
SLU 84	0.84	239.3	-20264	-16211	3392	0.79	0.79	-45601	10833	3851	95155	10645	4029	14674	No	4.33	Si
SLU 81	0.44	1568.74	-20394	-16315	3364	0.79	0.79	-45894	10833	3851	95155	10645	4029	14674	No	4.36	Si
SLU 81	0.84	233.51	-20021	-16016	3364	0.79	0.79	-45053	10833	3851	95155	10645	4029	14674	No	4.36	Si
SLU 82	0.44	1568.9	-20394	-16315	3361	0.79	0.79	-45894	10833	3851	95155	10645	4029	14674	No	4.37	Si
SLU 82	0.84	234.94	-20021	-16017	3361	0.79	0.79	-45054	10833	3851	95155	10645	4029	14674	No	4.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	0.44	1398.17	-14986	-11989	4808	0.79	0.79	-33724	16250	5777	95155	15968	4029	19997		4.16	Si
SLD 16	0.84	-542.34	-14636	-11709	4772	0.79	0.79	-32937	16250	5777	95155	15968	4029	19997		4.19	Si
SLV 15	0.44	1910.06	-16744	-13395	8684	0.79	0.79	-37680	16250	5777	95155	15968	4029	19997		2.3	Si
SLV 15	0.84	-1622.15	-16300	-13040	8599	0.79	0.79	-36681	16250	5777	95155	15968	4029	19997		2.33	Si
SLD 15	0.44	1418.7	-14942	-11954	5002	0.79	0.79	-33626	16250	5777	95155	15968	4029	19997		4	Si
SLD 15	0.84	-599.28	-14593	-11674	4966	0.79	0.79	-32838	16250	5777	95155	15968	4029	19997		4.03	Si
SLV 13	0.44	1632.21	-16606	-13285	8192	0.79	0.79	-37370	16250	5777	95155	15968	4029	19997		2.44	Si
SLV 13	0.84	-1576.28	-16362	-13090	8308	0.79	0.79	-36821	16250	5777	95155	15968	4029	19997		2.41	Si
SLD 13	0.44	1305.7	-14890	-11912	4791	0.79	0.79	-33508	16250	5777	95155	15968	4029	19997		4.17	Si
SLD 13	0.84	-579.86	-14620	-11696	4839	0.79	0.79	-32900	16250	5777	95155	15968	4029	19997		4.13	Si
SLV 11	0.44	1742.74	-14737	-11790	5007	0.79	0.79	-33164	16250	5777	95155	15968	4029	19997		3.99	Si
SLV 11	0.84	-464.42	-14100	-11280	4678	0.79	0.79	-31729	16250	5777	95155	15968	4029	19997		4.27	Si
SLV 14	0.44	1584.43	-16708	-13366	7741	0.79	0.79	-37599	16250	5777	95155	15968	4029	19997		2.58	Si
SLV 14	0.84	-1443.72	-16464	-13171	7857	0.79	0.79	-37050	16250	5777	95155	15968	4029	19997		2.55	Si
SLV 12	0.44	1711.61	-14803	-11843	4713	0.79	0.79	-33313	16250	5777	95155	15968	4029	19997		4.24	Si
SLV 12	0.84	-378.04	-14166	-11333	4384	0.79	0.79	-31878	16250	5777	95155	15968	4029	19997		4.56	Si
SLD 14	0.44	1285.17	-14934	-11947	4597	0.79	0.79	-33606	16250	5777	95155	15968	4029	19997		4.35	Si
SLD 14	0.84	-522.93	-14664	-11731	4645	0.79	0.79	-32999	16250	5777	95155	15968	4029	19997		4.3	Si
SLV 16	0.44	1862.28	-16846	-13476	8233	0.79	0.79	-37909	16250	5777	95155	15968	4029	19997		2.43	Si
SLV 16	0.84	-1489.59	-16402	-13121	8149	0.79	0.79	-36910	16250	5777	95155	15968	4029	19997		2.45	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-10468	0.24	57.46	1901.17	2573.62	2237.4	38.94	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-10546	0.24	57.46	1911.92	2591.16	2251.54	39.18	Si
SLV 2	-10718	0.24	57.46	1935.41	2629.81	2282.61	39.73	Si
SLV 1	-10795	0.24	57.46	1945.99	2647.35	2296.67	39.97	Si
SLV 8	-13042	0.24	57.46	2229.49	3134.13	2681.81	46.67	Si
SLV 7	-13093	0.24	57.46	2235.42	3144.89	2690.15	46.82	Si
SLV 6	-13874	0.24	57.46	2323.86	3303.4	2813.63	48.97	Si
SLV 5	-13924	0.24	57.46	2329.43	3313.55	2821.49	49.1	Si
SLV 12	-15486	0.24	57.46	2490.44	3618.77	3054.6	53.16	Si
SLV 11	-15536	0.24	57.46	2495.33	3628.37	3061.85	53.29	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-9120	-19080	-55	0.518	1077.3	0.959	7.85173	4.02955	Si
SLV 11	-8978	-19027	-55	0.524	1062.9	0.959	7.9509	4.02955	Si
SLV 8	-8810	-20006	-132	0.524	1045.8	0.958	7.95431	4.02955	Si
SLV 7	-8668	-19953	-132	0.531	1031.4	0.957	8.05833	4.02955	Si
SLV 10	-7253	-19483	569	0.556	887.6	0.951	8.49629	4.02955	Si
SLV 9	-7111	-19430	568	0.565	873.2	0.951	8.63288	4.02955	Si
SLV 6	-6943	-20409	492	0.585	856.1	0.95	8.94787	4.02955	Si
SLV 5	-6801	-20356	492	0.594	841.7	0.949	9.09868	4.02955	Si
SLV 16	-8866	-18154	253	0.509	1051.5	0.958	7.7262	2.9746	Si
SLV 14	-8305	-18275	440	0.515	994.6	0.956	7.83507	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.455	SLU 84	Si
V_SLU	4.322	SLU 83	Si
PF_SLV	1.831	SLV 2	Si
V_SLV	2.303	SLV 15	Si
PFFP_SLV	38.938	SLV 4	Si
R_SLV	1.949	SLV 12	Si

Maschio 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.463	-3.284	-3.233	-3.284	L2	L4	3.23	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	0.44	-14846.94	-47971	-0.0000871	0.0003743	0.0035	3.23	52358.85	61222.6	61222.6	4.12	No	Si
SLU 74	0.84	-8525.08	-46507	-0.0000709	0.0003743	0.0035	3.23	51503.87	60221.62	60221.62	7.06	No	Si
SLU 79	0.44	-14925.83	-48227	-0.0000877	0.0003743	0.0035	3.23	52503.42	61399.14	61399.14	4.11	No	Si
SLU 79	0.84	-8573.55	-46762	-0.0000713	0.0003743	0.0035	3.23	51656.62	60395.36	60395.36	7.04	No	Si
SLU 75	0.44	-14863.09	-47986	-0.0000872	0.0003743	0.0035	3.23	52367.19	61232.74	61232.74	4.12	No	Si
SLU 75	0.84	-8526.44	-46521	-0.0000709	0.0003743	0.0035	3.23	51512.69	60231.59	60231.59	7.06	No	Si
SLU 77	0.44	-15044.54	-48582	-0.0000884	0.0003743	0.0035	3.23	52701.93	61645.22	61645.22	4.1	No	Si
SLU 77	0.84	-8651.04	-47118	-0.0000719	0.0003743	0.0035	3.23	51866.49	60637.55	60637.55	7.01	No	Si
SLU 82	0.44	-15015.7	-49025	-0.000089	0.0003743	0.0035	3.23	52945.61	61953.44	61953.44	4.13	No	Si
SLU 82	0.84	-8601.3	-47561	-0.0000724	0.0003743	0.0035	3.23	52124.34	60940.91	60940.91	7.09	No	Si
SLU 81	0.44	-14999.56	-49011	-0.0000889	0.0003743	0.0035	3.23	52937.6	61943.19	61943.19	4.13	No	Si
SLU 81	0.84	-8599.94	-47546	-0.0000724	0.0003743	0.0035	3.23	52115.86	60930.83	60930.83	7.09	No	Si
SLU 80	0.44	-14941.97	-48241	-0.0000877	0.0003743	0.0035	3.23	52511.69	61409.3	61409.3	4.11	No	Si
SLU 80	0.84	-8574.91	-46777	-0.0000713	0.0003743	0.0035	3.23	51665.36	60405.35	60405.35	7.04	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.44	-15197.16	-49622	-0.0000902	0.0003743	0.0035	3.23	53266.81	62370.56	62370.56	4.1	No	Si
SLU 83	0.84	-8725.9	-48158	-0.0000734	0.0003743	0.0035	3.23	52464.6	61351.51	61351.51	7.03	No	Si
SLU 84	0.44	-15213.3	-49637	-0.0000902	0.0003743	0.0035	3.23	53274.62	62380.87	62380.87	4.1	No	Si
SLU 84	0.84	-8727.26	-48172	-0.0000735	0.0003743	0.0035	3.23	52472.88	61361.66	61361.66	7.03	No	Si
SLU 78	0.44	-15060.68	-48597	-0.0000885	0.0003743	0.0035	3.23	52710.08	61655.42	61655.42	4.09	No	Si
SLU 78	0.84	-8652.4	-47133	-0.0000719	0.0003743	0.0035	3.23	51875.11	60647.59	60647.59	7.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	0.44	-17109.3	-27279	-0.0000643	0.0005615	0.0035	3.23		42585.42	42585.42	2.49		Si
SLV 6	0.84	-12336.64	-26332	-0.0000529	0.0005615	0.0035	3.23		41349.58	41349.58	3.35		Si
SLD 1	0.44	-14392.56	-29279	-0.0000605	0.0005615	0.0035	3.23		45153.17	45153.17	3.14		Si
SLD 1	0.84	-8157.77	-28056	-0.0000463	0.0005615	0.0035	3.23		43580.51	43580.51	5.34		Si
SLV 4	0.44	-18389.85	-27314	-0.0000678	0.0005615	0.0035	3.23		42629.3	42629.3	2.32		Si
SLV 4	0.84	-8392.85	-25776	-0.0000443	0.0005615	0.0035	3.23		40617.77	40617.77	4.84		Si
SLV 1	0.44	-19877.53	-24409	-0.0000714	0.0005615	0.0035	3.23		38769.72	38769.72	1.95		Si
SLV 1	0.84	-11269.85	-23038	-0.000047	0.0005615	0.0035	3.23		36917.23	36917.23	3.28		Si
SLV 2	0.44	-20696.31	-25089	-0.0000746	0.0005615	0.0035	3.23		39691.17	39691.17	1.92		Si
SLV 2	0.84	-11490.45	-23718	-0.0000482	0.0005615	0.0035	3.23		37833.86	37833.86	3.29		Si
SLV 5	0.44	-16575.8	-26837	-0.0000626	0.0005615	0.0035	3.23		42010.99	42010.99	2.53		Si
SLV 5	0.84	-12192.9	-25889	-0.0000521	0.0005615	0.0035	3.23		40766.54	40766.54	3.34		Si
SLD 3	0.44	-13467.82	-30183	-0.0000596	0.0005615	0.0035	3.23		46323.07	46323.07	3.44		Si
SLD 3	0.84	-6912.49	-28890	-0.0000448	0.0005615	0.0035	3.23		44651.96	44651.96	6.46		Si
SLD 2	0.44	-14744.24	-29570	-0.0000615	0.0005615	0.0035	3.23		45530.16	45530.16	3.09		Si
SLD 2	0.84	-8252.52	-28348	-0.0000469	0.0005615	0.0035	3.23		43955.17	43955.17	5.33		Si
SLD 4	0.44	-13819.5	-30475	-0.0000607	0.0005615	0.0035	3.23		46701.36	46701.36	3.38		Si
SLD 4	0.84	-7007.25	-29182	-0.0000453	0.0005615	0.0035	3.23		45027.86	45027.86	6.43		Si
SLV 3	0.44	-17571.07	-26634	-0.0000649	0.0005615	0.0035	3.23		41746.44	41746.44	2.38		Si
SLV 3	0.84	-8172.25	-25097	-0.000043	0.0005615	0.0035	3.23		39701.95	39701.95	4.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	0.44	-14863.09	-47986	-42654	-15855	3.23	3.23	-29346	10833	15746	33304	43524	8236	49051	No	3.09	Si
SLU 75	0.84	-8526.44	-46521	-41352	-15855	3.23	3.23	-28450	10738	15607	33304	43524	8236	48912	No	3.09	Si
SLU 77	0.44	-15044.54	-48582	-43184	-15997	3.23	3.23	-29710	10833	15746	33304	43524	8236	49051	No	3.07	Si
SLU 77	0.84	-8651.04	-47118	-41883	-15997	3.23	3.23	-28815	10786	15678	33304	43524	8236	48982	No	3.06	Si
SLU 78	0.44	-15060.68	-48597	-43197	-16034	3.23	3.23	-29719	10833	15746	33304	43524	8236	49051	No	3.06	Si
SLU 78	0.84	-8652.4	-47133	-41896	-16034	3.23	3.23	-28824	10788	15680	33304	43524	8236	48984	No	3.06	Si
SLU 79	0.44	-14925.83	-48227	-42868	-15894	3.23	3.23	-29493	10833	15746	33304	43524	8236	49051	No	3.09	Si
SLU 79	0.84	-8573.55	-46762	-41567	-15894	3.23	3.23	-28598	10757	15636	33304	43524	8236	48940	No	3.08	Si
SLU 84	0.44	-15213.3	-49637	-44121	-16228	3.23	3.23	-30355	10833	15746	33304	43524	8236	49051	No	3.02	Si
SLU 84	0.84	-8727.26	-48172	-42820	-16228	3.23	3.23	-29460	10833	15746	33304	43524	8236	49051	No	3.02	Si
SLU 80	0.44	-14941.97	-48241	-42881	-15931	3.23	3.23	-29502	10833	15746	33304	43524	8236	49051	No	3.08	Si
SLU 80	0.84	-8574.91	-46777	-41580	-15931	3.23	3.23	-28607	10759	15638	33304	43524	8236	48942	No	3.07	Si
SLU 82	0.44	-15015.7	-49025	-43578	-16049	3.23	3.23	-29981	10833	15746	33304	43524	8236	49051	No	3.06	Si
SLU 82	0.84	-8601.3	-47561	-42277	-16049	3.23	3.23	-29086	10823	15731	33304	43524	8236	49035	No	3.06	Si
SLU 74	0.44	-14846.94	-47971	-42641	-15818	3.23	3.23	-29337	10833	15746	33304	43524	8236	49051	No	3.1	Si
SLU 74	0.84	-8525.08	-46507	-41339	-15818	3.23	3.23	-28441	10737	15606	33304	43524	8236	48910	No	3.09	Si
SLU 81	0.44	-14999.56	-49011	-43565	-16012	3.23	3.23	-29972	10833	15746	33304	43524	8236	49051	No	3.06	Si
SLU 81	0.84	-8599.94	-47546	-42264	-16012	3.23	3.23	-29077	10821	15729	33304	43524	8236	49033	No	3.06	Si
SLU 83	0.44	-15197.16	-49622	-44108	-16191	3.23	3.23	-30346	10833	15746	33304	43524	8236	49051	No	3.03	Si
SLU 83	0.84	-8725.9	-48158	-42807	-16191	3.23	3.23	-29451	10833	15746	33304	43524	8236	49051	No	3.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	0.44	-18389.85	-27314	-24279	-26485	3.23	2.8251	-19284	14274	18146	33304	65286	8236	51451		1.94	Si
SLV 4	0.84	-8392.85	-25776	-22912	-26341	3.23	3.23	-15763	13569	19723	33304	65286	8236	53027		2.01	Si
SLD 4	0.44	-13819.5	-30475	-27089	-17654	3.23	3.23	-18637	14144	20558	33304	65286	8236	53863		3.05	Si
SLD 4	0.84	-7007.25	-29182	-25939	-17592	3.23	3.23	-17846	13986	20328	33304	65286	8236	53633		3.05	Si
SLV 1	0.44	-19877.53	-24409	-21697	-22763	3.23	2.402	-20279	14473	15643	33304	65286	8236	48948		2.15	Si
SLV 1	0.84	-11269.85	-23038	-20478	-22705	3.23	3.23	-14089	13234	19236	33304	65286	8236	52541		2.31	Si
SLV 7	0.44	-8887.61	-34253	-30447	-18383	3.23	3.23	-20947	14606	21230	33304	65286	8236	54534		2.97	Si
SLV 7	0.84	-1867.58	-32751	-29112	-18208	3.23	3.23	-20029	14422	20963	33304	65286	8236	54267		2.98	Si
SLV 8	0.44	-9421.11	-34695	-30840	-19358	3.23	3.23	-21218	14660	21309	33304	65286	8236	54613		2.82	Si
SLV 8	0.84	-2011.32	-33194	-29505	-19183	3.23	3.23	-20300	14477	21042	33304	65286	8236	54346		2.83	Si
SLD 2	0.44	-14744.24	-29570	-26285	-16746	3.23	3.23	-18084	14033	20398	33304	65286	8236	53702		3.21	Si
SLD 2	0.84	-8252.52	-28348	-25198	-16717	3.23	3.23	-17336	13884	20180	33304	65286	8236	53485		3.2	Si
SLD 3	0.44	-13467.82	-30183	-26829	-17012	3.23	3.23	-18459	14108	20507	33304	65286	8236	53811		3.16	Si
SLD 3	0.84	-6912.49	-28890	-25680	-16949	3.23	3.23	-17668	13950	20277	33304	65286	8236	53581		3.16	Si
SLD 1	0.44	-14392.56	-29279	-26025	-16104	3.23	3.23	-17905	13998	20346	33304	65286	8236	53650		3.33	Si
SLD 1	0.84	-8157.77	-28056	-24939	-16075	3.23	3.23	-17158	13848	20128	33304	65286	8236	53433		3.32	Si
SLV 3	0.44	-17571.07	-26634	-23675	-24990	3.23	2.8658	-18492	14115	18203	33304	65286	8236	51508		2.06	Si
SLV 3	0.84	-8172.25	-25097	-22308	-24846	3.23	3.23	-15348	13486	19602	33304	65286	8236	52907		2.13	Si
SLV 2	0.44	-20696.31	-25089	-22301	-24258	3.23	2.3702	-21133	14643	15619	33304	65286	8236	48923		2.02	Si
SLV 2	0.84	-11490.45	-23718	-21082	-24201	3.23	3.23	-14505	13318	19357	33304	65286	8236	52661		2.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	11971	-17400	234.93	3608.19	15.36	Si
SLV 2	179667	0.24	12399	-18022	234.93	3725.73	15.86	Si
SLV 3	179667	0.24	12620	-18343	234.93	3786.19	16.12	Si
SLV 4	179667	0.24	13048	-18965	234.93	3902.54	16.61	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.24	14441	-20991	234.93	4276.27	18.2	Si
SLV 6	179667	0.24	14720	-21396	234.93	4350	18.52	Si
SLV 7	179667	0.24	16604	-24134	234.93	4839.71	20.6	Si
SLV 8	179667	0.24	16883	-24539	234.93	4910.86	20.9	Si
SLV 9	179667	0.24	17143	-24918	234.93	4977.18	21.19	Si
SLV 10	179667	0.24	17422	-25323	234.93	5047.69	21.49	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-35249	-23214	802	0.526	4197.6	0.957	7.99228	4.02955	Si
SLV 11	-34915	-22842	801	0.53	4163.7	0.957	8.05402	4.02955	Si
SLV 8	-31541	-17908	691	0.577	3820.7	0.953	8.79036	4.02955	Si
SLV 7	-31207	-17536	691	0.581	3786.8	0.953	8.86669	4.02955	Si
SLV 16	-36203	-31389	633	0.52	4294.6	0.958	7.88618	2.9746	Si
SLV 15	-35691	-30818	632	0.526	4242.5	0.958	7.9776	2.9746	Si
SLV 10	-25358	-28602	-49	0.705	3193.1	0.946	10.82951	4.02955	Si
SLV 9	-25024	-28230	-49	0.712	3159.2	0.945	10.94674	4.02955	Si
SLV 14	-33236	-33006	378	0.562	3993	0.955	8.5543	2.9746	Si
SLV 13	-32723	-32435	377	0.569	3940.9	0.955	8.66305	2.9746	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.094	SLU 78	Si
V_SLU	3.023	SLU 84	Si
PF_SLV	1.918	SLV 2	Si
V_SLV	1.943	SLV 4	Si
PFFP_SLV	15.358	SLV 1	Si
R_SLV	1.983	SLV 12	Si

Maschio 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.233	-3.284	-0.123	-3.284	L2	L4	2.11	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	0.44	-1456.58	-24844	-0.0000491	0.0003743	0.0035	2.11	19474.55	22410.54	22410.54	15.39	No	Si
SLU 42	0.84	-97.76	-24102	-0.000041	0.0003743	0.0035	2.11	19088.06	21938.62	21938.62	224.4	No	Si
SLU 40	0.44	-1451.17	-24474	-0.0000484	0.0003743	0.0035	2.11	19283.17	22174.45	22174.45	15.28	No	Si
SLU 40	0.84	-121.36	-23737	-0.0000404	0.0003743	0.0035	2.11	18893.54	21686.8	21686.8	178.7	No	Si
SLU 84	0.44	-1667.84	-29332	-0.0000586	0.0003743	0.0035	2.11	21555.7	25193.27	25193.27	15.11	No	Si
SLU 84	0.84	-31.99	-28356	-0.0000484	0.0003743	0.0035	2.11	21140.41	24607.67	24607.67	769.26	No	Si
SLU 81	0.44	-1657.58	-28949	-0.0000578	0.0003743	0.0035	2.11	21395.02	24962.44	24962.44	15.06	No	Si
SLU 81	0.84	-54.93	-27979	-0.0000478	0.0003743	0.0035	2.11	20974.74	24383.9	24383.9	443.9	No	Si
SLU 82	0.44	-1662.43	-28962	-0.0000578	0.0003743	0.0035	2.11	21400.6	24970.36	24970.36	15.02	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.84	-55.58	-27991	-0.0000478	0.0003743	0.0035	2.11	20979.78	24390.62	24390.62	438.84	No	Si
SLU 39	0.44	-1446.33	-24461	-0.0000484	0.0003743	0.0035	2.11	19276.3	22166.06	22166.06	15.33	No	Si
SLU 39	0.84	-120.71	-23726	-0.0000404	0.0003743	0.0035	2.11	18887.45	21678.87	21678.87	179.6	No	Si
SLU 76	0.44	-1578.94	-28214	-0.000056	0.0003743	0.0035	2.11	21078.26	24523.07	24523.07	15.53	No	Si
SLU 76	0.84	24.05	-27226	-0.0000463	0.0003743	0.0035	2.11	20633.57	22549.13	22549.13	937.64	No	Si
SLU 41	0.44	-1451.74	-24831	-0.0000491	0.0003743	0.0035	2.11	19467.79	22402.11	22402.11	15.43	No	Si
SLU 41	0.84	-97.12	-24091	-0.000041	0.0003743	0.0035	2.11	19082.07	21931.38	21931.38	225.83	No	Si
SLU 83	0.44	-1662.99	-29319	-0.0000585	0.0003743	0.0035	2.11	21550.23	25185.52	25185.52	15.14	No	Si
SLU 83	0.84	-31.34	-28345	-0.0000483	0.0003743	0.0035	2.11	21135.47	24600.91	24600.91	784.97	No	Si
SLU 73	0.44	-1573.53	-27843	-0.0000553	0.0003743	0.0035	2.11	20914.11	24303.32	24303.32	15.45	No	Si
SLU 73	0.84	0.46	-26861	-0.0000455	0.0003743	0.0035	2.11	20463.92	22316.29	22316.29	48800.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	0.44	733.84	-21827	-0.0000393	0.0005615	0.0035	2.11		20103.99	20103.99	27.4		Si
SLV 9	0.84	2429.59	-20496	-0.0000451	0.0005615	0.0035	2.11		19037.28	19037.28	7.84		Si
SLV 2	0.44	-2225.59	-8762	-0.0000243	0.0005615	0.0035	2.11		10016.68	10016.68	4.5		Si
SLV 2	0.84	3.09	-7344	-0.0000118	0.0005615	0.0035	2.11		7660.55	7660.55	2476.76		Si
SLV 8	0.44	-2845.1	-17254	-0.0000415	0.0005615	0.0035	2.11		17724.81	17724.81	6.23		Si
SLV 8	0.84	-2268.68	-17051	-0.0000384	0.0005615	0.0035	2.11		17551.2	17551.2	7.74		Si
SLV 3	0.44	-2734.39	-8400	-0.000026	0.0005615	0.0035	2.11		9669.77	9669.77	3.54		Si
SLV 3	0.84	-1265.12	-7628	-0.000018	0.0005615	0.0035	2.11		8933.03	8933.03	7.06		Si
SLV 1	0.44	-1967.54	-7956	-0.0000218	0.0005615	0.0035	2.11		9245.89	9245.89	4.7		Si
SLV 1	0.84	14.14	-6747	-0.0000109	0.0005615	0.0035	2.11		7077.37	7077.37	500.66		Si
SLV 7	0.44	-2676.96	-16729	-0.0000398	0.0005615	0.0035	2.11		17272.4	17272.4	6.45		Si
SLV 7	0.84	-2261.49	-16662	-0.0000377	0.0005615	0.0035	2.11		17212.34	17212.34	7.61		Si
SLV 4	0.44	-2992.44	-9206	-0.0000286	0.0005615	0.0035	2.11		10442.48	10442.48	3.49		Si
SLV 4	0.84	-1276.17	-8226	-0.000019	0.0005615	0.0035	2.11		9503.27	9503.27	7.45		Si
SLV 10	0.44	565.69	-22352	-0.0000394	0.0005615	0.0035	2.11		20526.57	20526.57	36.29		Si
SLV 10	0.84	2422.4	-20885	-0.0000457	0.0005615	0.0035	2.11		19348.83	19348.83	7.99		Si
SLV 5	0.44	-120.78	-15251	-0.0000253	0.0005615	0.0035	2.11		15968.3	15968.3	132.21		Si
SLV 5	0.84	2002.71	-13724	-0.0000315	0.0005615	0.0035	2.11		13629.47	13629.47	6.81		Si
SLV 6	0.44	-288.92	-15776	-0.0000269	0.0005615	0.0035	2.11		16430.08	16430.08	56.87		Si
SLV 6	0.84	1995.51	-14113	-0.0000321	0.0005615	0.0035	2.11		13965.16	13965.16	7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	0.44	-1581.12	-28575	-25400	-4147	2.11	2.11	-26751	10511	9980	33304	28432	5381	33813	No	8.15	Si
SLU 80	0.84	48.07	-27583	-24518	-4176	2.11	2.11	-25822	10387	9863	33304	28432	5381	33813	No	8.1	Si
SLU 70	0.44	-1371.03	-26149	-23243	-4060	2.11	2.11	-24480	10208	9693	33304	28432	5381	33813	No	8.33	Si
SLU 70	0.84	190.56	-25126	-22334	-4087	2.11	2.11	-23522	10081	9572	33304	28432	5381	33813	No	8.27	Si
SLU 83	0.44	-1662.99	-29319	-26061	-4105	2.11	2.11	-27447	10604	10069	33304	28432	5381	33813	No	8.24	Si
SLU 83	0.84	-31.34	-28345	-25195	-4134	2.11	2.11	-26535	10482	9953	33304	28432	5381	33813	No	8.18	Si
SLU 84	0.44	-1667.84	-29332	-26073	-4120	2.11	2.11	-27460	10606	10070	33304	28432	5381	33813	No	8.21	Si
SLU 84	0.84	-31.99	-28356	-25205	-4150	2.11	2.11	-26546	10484	9954	33304	28432	5381	33813	No	8.15	Si
SLU 74	0.44	-1575.75	-28395	-25240	-4098	2.11	2.11	-26582	10489	9959	33304	28432	5381	33813	No	8.25	Si
SLU 74	0.84	35.86	-27404	-24360	-4127	2.11	2.11	-25655	10365	9842	33304	28432	5381	33813	No	8.19	Si
SLU 75	0.44	-1580.59	-28408	-25252	-4113	2.11	2.11	-26595	10490	9961	33304	28432	5381	33813	No	8.22	Si
SLU 75	0.84	35.21	-27416	-24370	-4142	2.11	2.11	-25666	10367	9843	33304	28432	5381	33813	No	8.16	Si
SLU 77	0.44	-1581.16	-28765	-25569	-4184	2.11	2.11	-26929	10535	10003	33304	28432	5381	33813	No	8.08	Si
SLU 77	0.84	59.45	-27770	-24684	-4213	2.11	2.11	-25997	10411	9885	33304	28432	5381	33813	No	8.03	Si
SLU 78	0.44	-1586	-28778	-25581	-4200	2.11	2.11	-26941	10537	10005	33304	28432	5381	33813	No	8.05	Si
SLU 78	0.84	58.8	-27781	-24694	-4228	2.11	2.11	-26007	10412	9886	33304	28432	5381	33813	No	8	Si
SLU 79	0.44	-1576.27	-28562	-25389	-4131	2.11	2.11	-26739	10510	9979	33304	28432	5381	33813	No	8.18	Si
SLU 79	0.84	48.72	-27572	-24508	-4160	2.11	2.11	-25812	10386	9862	33304	28432	5381	33813	No	8.13	Si
SLU 76	0.44	-1578.94	-28214	-25079	-4071	2.11	2.11	-26413	10466	9938	33304	28432	5381	33813	No	8.31	Si
SLU 76	0.84	24.05	-27226	-24200	-4099	2.11	2.11	-25488	10343	9820	33304	28432	5381	33813	No	8.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	0.44	-2225.59	-8762	-7788	-6580	2.11	2.11	-8203	12057	11448	33304	42648	5381	44753		6.8	Si
SLV 2	0.84	3.09	-7344	-6528	-6388	2.11	2.11	-6876	11792	11196	33304	42648	5381	44501		6.97	Si
SLD 6	0.44	-765.43	-17942	-15948	-4755	2.11	2.11	-16797	13776	13080	33304	42648	5381	46385		9.76	Si
SLD 6	0.84	841.14	-16805	-14938	-4776	2.11	2.11	-15732	13563	12878	33304	42648	5381	46182		9.67	Si
SLV 1	0.44	-1967.54	-7956	-7072	-5414	2.11	2.11	-7448	11906	11305	33304	42648	5381	44609		8.24	Si
SLV 1	0.84	14.14	-6747	-5997	-5222	2.11	2.11	-6316	11680	11090	33304	42648	5381	44394		8.5	Si
SLV 4	0.44	-2992.44	-9206	-8183	-4528	2.11	2.11	-8618	12140	11527	33304	42648	5381	44831		9.9	Si
SLV 4	0.84	-1276.17	-8226	-7312	-4283	2.11	2.11	-7701	11957	11353	33304	42648	5381	44657		10.43	Si
SLD 2	0.44	-1568.66	-14939	-13279	-4463	2.11	2.11	-13985	13214	12546	33304	42648	5381	45851		10.27	Si
SLD 2	0.84	25.27	-13903	-12358	-4392	2.11	2.11	-13015	13020	12362	33304	42648	5381	45667		10.4	Si
SLV 10	0.44	565.69	-22352	-19868	-6090	2.11	2.11	-20925	14602	13864	33304	42648	5381	47169		7.75	Si
SLV 10	0.84	2422.4	-20885	-18565	-6268	2.11	2.11	-19552	14327	13604	33304	42648	5381	46908		7.48	Si
SLV 6	0.44	-288.92	-15776	-14023	-7328	2.11	2.11	-14769	13370	12695	33304	42648	5381	46000		6.28	Si
SLV 6	0.84	1995.51	-14113	-12545	-7363	2.11	2.11	-13212	13059	12400	33304	42648	5381	45704		6.21	Si
SLV 9	0.44	733.84	-21827	-19401	-5330	2.11	2.11	-20433	14503	13771	33304	42648	5381	47075		8.83	Si
SLV 9	0.84	2429.59	-20496	-18219	-5509	2.11	2.11	-19188	14254	13534	33304	42648	5381	46839		8.5	Si
SLD 5	0.44	-691.88	-17712	-15744	-4422	2.11	2.11	-16582	13733	13039	33304	42648	5381	46344		10.48	Si
SLD 5	0.84	844.29	-16635	-14786	-4444	2.11	2.11	-15573	13531	12848	33304	42648	5381	46152		10.38	Si
SLV 5	0.44	-120.78	-15251	-13556	-6568	2.11	2.11	-14277	13272	12602	33304	42648	5381	45906		6.99	Si
SLV 5	0.84	2002.71	-13724	-12199	-6604	2.11	2.11	-12848	12986	12330	33304	42648	5381	45635		6.91	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	6776	-6434	153.47	1383.41	9.01	Si
SLV 3	179667	0.24	6950	-6599	153.47	1417.24	9.23	Si
SLV 2	179667	0.24	7431	-7056	153.47	1510.33	9.84	Si
SLV 4	179667	0.24	7605	-7221	153.47	1543.84	10.06	Si
SLV 5	179667	0.24	14537	-13803	153.47	2809.98	18.31	Si
SLV 6	179667	0.24	14964	-14208	153.47	2883.54	18.79	Si
SLV 7	179667	0.24	15117	-14353	153.47	2909.81	18.96	Si
SLV 8	179667	0.24	15543	-14758	153.47	2982.69	19.44	Si
SLV 9	179667	0.24	21265	-20191	153.47	3910.38	25.48	Si
SLV 10	179667	0.24	21692	-20596	153.47	3975.91	25.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-19136	-18806	612	0.603	2346.8	0.951	9.21987	4.02955	Si
SLV 10	-19808	-25516	-64	0.612	2415	0.952	9.34059	4.02955	Si
SLV 11	-18787	-18415	603	0.612	2311.3	0.95	9.36491	4.02955	Si
SLV 9	-19458	-25125	-72	0.62	2379.5	0.951	9.47083	4.02955	Si
SLV 16	-26010	-29656	535	0.479	3045.5	0.961	7.24211	2.9746	Si
SLV 14	-26212	-31669	332	0.483	3066	0.961	7.30416	2.9746	Si
SLV 15	-25474	-29055	521	0.487	2990.9	0.96	7.37115	2.9746	Si
SLV 13	-25675	-31068	318	0.491	3011.4	0.961	7.43349	2.9746	Si
SLV 6	-14197	-18319	-198	0.784	1845.9	0.94	12.121	4.02955	Si
SLV 8	-13526	-11609	477	0.796	1778	0.938	12.3349	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.02	SLU 82	Si
V_SLU	7.996	SLU 78	Si
PF_SLV	3.49	SLV 4	Si
V_SLV	6.207	SLV 6	Si
PFFP_SLV	9.014	SLV 1	Si
R_SLV	2.288	SLV 12	Si

Maschio 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	1.046	-5.158	1.471	L2	L4	0.425	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	-1.56	42.41	-9467	-0.0001233	0.0004492	0.0035	0.425	789.22	1365.17	1365.17	32.19	No	Si
SLU 42	0.54	21.85	-8985	-0.0001125	0.0004492	0.0035	0.425	808.12	1322.73	1322.73	60.53	No	Si
SLU 75	-1.56	43.85	-10858	-0.000144	0.0004492	0.0035	0.425	699.19	1457.81	1457.81	33.24	No	Si
SLU 75	0.54	30.94	-10231	-0.000132	0.0004492	0.0035	0.425	746.29	1426.26	1426.26	46.1	No	Si
SLU 50	-1.56	24.45	-8924	-0.0001121	0.0004492	0.0035	0.425	810.07	1317.31	1317.31	53.88	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	0.54	38.95	-8297	-0.0001063	0.0004492	0.0035	0.425	824.11	1262.13	1262.13	32.41	No	Si
SLU 81	-1.56	44.5	-11119	-0.0001481	0.0004492	0.0035	0.425	676.43	1470.94	1470.94	33.06	No	Si
SLU 81	0.54	31.47	-10492	-0.000136	0.0004492	0.0035	0.425	727.98	1439.39	1439.39	45.74	No	Si
SLU 84	-1.56	46.86	-11222	-0.0001502	0.0004492	0.0035	0.425	666.89	1476.15	1476.15	31.5	No	Si
SLU 84	0.54	29.93	-10596	-0.0001372	0.0004492	0.0035	0.425	720.21	1444.6	1444.6	48.26	No	Si
SLU 73	-1.56	43.7	-10687	-0.0001414	0.0004492	0.0035	0.425	713.13	1449.18	1449.18	33.17	No	Si
SLU 73	0.54	29.99	-10060	-0.0001293	0.0004492	0.0035	0.425	757.3	1417.37	1417.37	47.26	No	Si
SLU 40	-1.56	42.38	-9363	-0.0001218	0.0004492	0.0035	0.425	793.87	1355.95	1355.95	31.99	No	Si
SLU 40	0.54	21.07	-8881	-0.0001109	0.0004492	0.0035	0.425	811.39	1313.5	1313.5	62.35	No	Si
SLU 71	-1.56	28.91	-9895	-0.0001267	0.0004492	0.0035	0.425	767.14	1402.85	1402.85	48.53	No	Si
SLU 71	0.54	41	-9269	-0.0001202	0.0004492	0.0035	0.425	797.78	1347.68	1347.68	32.87	No	Si
SLU 83	-1.56	44.53	-11224	-0.0001497	0.0004492	0.0035	0.425	666.77	1476.21	1476.21	33.15	No	Si
SLU 83	0.54	32.26	-10597	-0.0001377	0.0004492	0.0035	0.425	720.11	1444.67	1444.67	44.79	No	Si
SLU 82	-1.56	46.83	-11118	-0.0001486	0.0004492	0.0035	0.425	676.55	1470.87	1470.87	31.41	No	Si
SLU 82	0.54	29.15	-10491	-0.0001355	0.0004492	0.0035	0.425	728.08	1439.33	1439.33	49.38	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	-1.56	-535.78	-8135	-0.0001889	0.0006738	0.0035	0.425		1395.02	1395.02	2.6		Si
SLV 9	0.54	612.62	-7601	-0.0001972	0.0006738	0.0035	0.425		1285.31	1285.31	2.1		Si
SLV 10	-1.56	-575.91	-8138	-0.0001964	0.0006738	0.0035	0.425		1395.37	1395.37	2.42		Si
SLV 10	0.54	651.67	-7604	-0.0002065	0.0006738	0.0035	0.425		1285.71	1285.71	1.97		Si
SLV 11	-1.56	615.58	-7490	-0.0001966	0.0006738	0.0035	0.425		1271.21	1271.21	2.07		Si
SLV 11	0.54	-522.76	-6962	-0.0001705	0.0006738	0.0035	0.425		1257.23	1257.23	2.4		Si
SLV 12	-1.56	575.44	-7493	-0.0001879	0.0006738	0.0035	0.425		1271.61	1271.61	2.21		Si
SLV 12	0.54	-483.71	-6966	-0.0001631	0.0006738	0.0035	0.425		1257.65	1257.65	2.6		Si
SLV 14	-1.56	-194.19	-8592	-0.0001332	0.0006738	0.0035	0.425		1444.99	1444.99	7.44		Si
SLV 14	0.54	349.12	-7945	-0.0001523	0.0006738	0.0035	0.425		1329.1	1329.1	3.81		Si
SLV 7	-1.56	624.6	-6909	-0.0001932	0.0006738	0.0035	0.425		1197.25	1197.25	1.92		Si
SLV 7	0.54	-595.1	-6479	-0.000182	0.0006738	0.0035	0.425		1190.83	1190.83	2		Si
SLV 8	-1.56	584.46	-6912	-0.0001833	0.0006738	0.0035	0.425		1197.65	1197.65	2.05		Si
SLV 8	0.54	-556.04	-6483	-0.0001724	0.0006738	0.0035	0.425		1191.27	1191.27	2.14		Si
SLV 6	-1.56	-566.89	-7557	-0.0001869	0.0006738	0.0035	0.425		1331.71	1331.71	2.35		Si
SLV 6	0.54	579.34	-7121	-0.0001843	0.0006738	0.0035	0.425		1224.24	1224.24	2.11		Si
SLV 5	-1.56	-526.76	-7554	-0.000179	0.0006738	0.0035	0.425		1331.37	1331.37	2.53		Si
SLV 5	0.54	540.28	-7118	-0.000176	0.0006738	0.0035	0.425		1223.84	1223.84	2.27		Si
SLV 3	-1.56	242.88	-6456	-0.0001142	0.0006738	0.0035	0.425		1139.59	1139.59	4.69		Si
SLV 3	0.54	-292.55	-6139	-0.0001187	0.0006738	0.0035	0.425		1142.83	1142.83	3.91		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.56	46.83	-11118	-8085	8	0.425	0.425	-63415	10833	1381	95155	4582	2167	6750	No	801.51	Si
SLU 82	0.54	29.15	-10491	-7630	8	0.425	0.425	-59842	10833	1381	95155	4582	2167	6750	No	801.51	Si
SLU 19	-1.56	37.92	-8391	-6103	9	0.425	0.425	-47865	10833	1381	95155	4582	2167	6750	No	749.51	Si
SLU 19	0.54	19.01	-7909	-5752	9	0.425	0.425	-45115	10833	1381	95155	4582	2167	6750	No	749.51	Si
SLU 33	-1.56	39.4	-9103	-6620	8	0.425	0.425	-51925	10833	1381	95155	4582	2167	6750	No	856.55	Si
SLU 33	0.54	22.85	-8621	-6270	8	0.425	0.425	-49176	10833	1381	95155	4582	2167	6750	No	856.55	Si
SLU 39	-1.56	40.05	-9364	-6810	8	0.425	0.425	-53413	10833	1381	95155	4582	2167	6750	No	850.83	Si
SLU 39	0.54	23.39	-8882	-6460	8	0.425	0.425	-50664	10833	1381	95155	4582	2167	6750	No	850.83	Si
SLU 40	-1.56	42.38	-9363	-6809	10	0.425	0.425	-53406	10833	1381	95155	4582	2167	6750	No	664.99	Si
SLU 40	0.54	21.07	-8881	-6459	10	0.425	0.425	-50657	10833	1381	95155	4582	2167	6750	No	664.99	Si
SLU 34	-1.56	39.27	-9037	-6572	8	0.425	0.425	-51546	10833	1381	95155	4582	2167	6750	No	854.84	Si
SLU 34	0.54	22.69	-8555	-6222	8	0.425	0.425	-48797	10833	1381	95155	4582	2167	6750	No	854.85	Si
SLU 21	-1.56	37.95	-8496	-6179	9	0.425	0.425	-48462	10833	1381	95155	4582	2167	6750	No	780.66	Si
SLU 21	0.54	19.8	-8014	-5828	9	0.425	0.425	-45713	10833	1381	95155	4582	2167	6750	No	780.66	Si
SLU 42	-1.56	42.41	-9467	-6885	10	0.425	0.425	-54003	10833	1381	95155	4582	2167	6750	No	689.4	Si
SLU 42	0.54	21.85	-8985	-6535	10	0.425	0.425	-51254	10833	1381	95155	4582	2167	6750	No	689.4	Si
SLU 84	-1.56	46.86	-11222	-8162	8	0.425	0.425	-64013	10833	1381	95155	4582	2167	6750	No	837.23	Si
SLU 84	0.54	29.93	-10596	-7706	8	0.425	0.425	-60439	10833	1381	95155	4582	2167	6750	No	837.23	Si
SLU 31	-1.56	39.24	-8932	-6496	8	0.425	0.425	-50949	10833	1381	95155	4582	2167	6750	No	817.64	Si
SLU 31	0.54	21.91	-8450	-6145	8	0.425	0.425	-48199	10833	1381	95155	4582	2167	6750	No	817.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	-1.56	-526.76	-7554	-5494	-522	0.425	0.425	-43090	16250	2072	95155	6873	2167	9041		17.31	Si
SLV 5	0.54	540.28	-7118	-5177	-570	0.425	0.4098	-40602	16250	1998	95155	6873	2167	9041		15.86	Si
SLV 6	-1.56	-566.89	-7557	-5496	-560	0.425	0.4125	-43108	16250	2011	95155	6873	2167	9041		16.15	Si
SLV 6	0.54	579.34	-7121	-5179	-608	0.425	0.3934	-40620	16250	1918	95155	6873	2167	9041		14.88	Si
SLV 11	-1.56	615.58	-7490	-5447	556	0.425	0.3909	-42725	16250	1906	95155	6873	2167	9041		16.25	Si
SLV 11	0.54	-522.76	-6962	-5064	604	0.425	0.4123	-39715	16250	2010	95155	6873	2167	9041		14.97	Si
SLV 12	-1.56	575.44	-7493	-5450	518	0.425	0.4071	-42743	16250	1985	95155	6873	2167	9041		17.44	Si
SLV 12	0.54	-483.71	-6966	-5066	566	0.425	0.425	-39733	16250	2072	95155	6873	2167	9041		15.97	Si
SLV 8	-1.56	584.46	-6912	-5027	545	0.425	0.3838	-39428	16250	1871	95155	6873	2167	9041		16.59	Si
SLV 8	0.54	-556.04	-6483	-4715	589	0.425	0.3802	-36977	16250	1853	95155	6873	2167	9041		15.34	Si
SLD 7	-1.56	289.08	-7258	-5279	256	0.425	0.425	-41402	16250	2072	95155	6873	2167	9041		35.33	Si
SLD 7	0.54	-246	-6798	-4944	275	0.425	0.425	-38778	16250	2072	95155	6873	2167	9041		32.84	Si
SLV 9	-1.56	-535.78	-8135	-5917	-549	0.425	0.425	-46405	16250	2072	95155	6873	2167	9041		16.48	Si
SLV 9	0.54	612.62	-7601	-5528	-593	0.425	0.3957	-43357	16250	1929	95155	6873	2167	9041		15.24	Si
SLV 7	-1.56	624.6	-6909	-5025	583	0.425	0.3663	-39410	16250	1786	95155	6873	2167	9041		15.52	Si
SLV 7	0.54	-595.1	-6479	-4712	627	0.425	0.362	-36959	16250	1765	95155	6873	2167	9041		14.42	Si
SLD 10	-1.56	-240.39	-7789	-5665	-260	0.425	0.425	-44430	16250	2072	95155	6873	2167	9041		34.82	Si
SLD 10	0.54	302.58	-7285	-5298	-279	0.425	0.425	-41556	16250	2072	95155	6873	2167	9041		32.39	Si
SLV 10	-1.56	-575.91	-8138	-5919	-586	0.425	0.425	-46423	16250	2072	95155	6873	2167	9041		15.42	Si
SLV 10	0.54	651.67	-7604	-5530	-631	0.425	0.3804	-43375	16250	1854	95155	6873	2167	9041		14.33	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-6088	0.24	20.61	675.27	994.14	834.71	40.5	Si
SLV 4	-6093	0.24	20.61	675.62	994.85	835.24	40.53	Si
SLV 1	-6286	0.24	20.61	689.25	1023.27	856.26	41.55	Si
SLV 2	-6291	0.24	20.61	689.58	1023.98	856.78	41.58	Si
SLV 7	-6522	0.24	20.61	705.25	1057.45	881.35	42.77	Si
SLV 8	-6525	0.24	20.61	705.46	1057.89	881.67	42.78	Si
SLV 11	-7091	0.24	20.61	740.91	1136.33	938.62	45.55	Si
SLV 12	-7094	0.24	20.61	741.09	1136.76	938.93	45.56	Si
SLV 5	-7182	0.24	20.61	746.2	1148.4	947.3	45.97	Si
SLV 6	-7185	0.24	20.61	746.38	1148.81	947.6	45.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-3276	-7493	77	0.694	386.9	0.959	10.51731	5.39576	Si
SLV 11	-3265	-7490	82	0.695	385.8	0.959	10.52865	5.39576	Si
SLV 10	-3220	-8138	-83	0.702	381.2	0.959	10.65017	5.39576	Si
SLV 9	-3209	-8135	-78	0.706	380.1	0.958	10.70287	5.39576	Si
SLV 16	-4449	-8398	24	0.548	506.3	0.968	8.22114	3.34272	Si
SLV 15	-4432	-8393	31	0.548	504.5	0.968	8.22577	3.34272	Si
SLV 14	-4432	-8592	-24	0.549	504.5	0.968	8.24604	3.34272	Si
SLV 13	-4415	-8587	-17	0.553	502.8	0.968	8.29701	3.34272	Si
SLV 8	-2257	-6912	73	0.948	283.4	0.946	14.56295	5.39576	Si
SLV 7	-2246	-6909	78	0.95	282.2	0.946	14.59699	5.39576	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	31.406	SLU 82	Si
V_SLU	664.991	SLU 40	Si
PF_SLV	1.917	SLV 7	Si
V_SLV	14.331	SLV 10	Si
PFFP_SLV	40.504	SLV 3	Si
R_SLV	1.949	SLV 12	Si

Maschio 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.158	2.271	-5.158	6.101	L2	L4	3.83	0.3	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	-1.56	-33512.04	-87325	-0.0002037	0.0004492	0.0035	3.83	63211.53	116241.87	116241.87	3.47	No	Si
SLU 84	0.54	-1397.45	-81633	-0.0001126	0.0004492	0.0035	3.83	65429.52	112305.89	112305.89	80.36	No	Si
SLU 77	-1.56	-33045.45	-85548	-0.000199	0.0004492	0.0035	3.83	63998.95	115052.85	115052.85	3.48	No	Si
SLU 77	0.54	-1286.68	-79855	-0.0001096	0.0004492	0.0035	3.83	65940.92	111058.9	111058.9	86.31	No	Si
SLU 74	-1.56	-32712.21	-84694	-0.0001965	0.0004492	0.0035	3.83	64346.48	114453.97	114453.97	3.5	No	Si
SLU 74	0.54	-1286.69	-79002	-0.0001083	0.0004492	0.0035	3.83	66155.89	110460.02	110460.02	85.85	No	Si
SLU 79	-1.56	-32837.15	-85043	-0.0001975	0.0004492	0.0035	3.83	64206.8	114698.82	114698.82	3.49	No	Si
SLU 79	0.54	-1295.1	-79351	-0.0001088	0.0004492	0.0035	3.83	66070.4	110704.87	110704.87	85.48	No	Si
SLU 81	-1.56	-33298.93	-86412	-0.0002014	0.0004492	0.0035	3.83	63627.01	115658.91	115658.91	3.47	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	0.54	-1390.87	-80719	-0.0001112	0.0004492	0.0035	3.83	65703.13	111664.96	111664.96	80.28	No	Si
SLU 75	-1.56	-32592.08	-84754	-0.0001963	0.0004492	0.0035	3.83	64322.73	114496.02	114496.02	3.51	No	Si
SLU 75	0.54	-1293.28	-79062	-0.0001084	0.0004492	0.0035	3.83	66141.44	110502.07	110502.07	85.44	No	Si
SLU 78	-1.56	-32925.32	-85608	-0.0001988	0.0004492	0.0035	3.83	63973.8	115094.9	115094.9	3.5	No	Si
SLU 78	0.54	-1293.27	-79915	-0.0001097	0.0004492	0.0035	3.83	65925.07	111100.95	111100.95	85.91	No	Si
SLU 80	-1.56	-32717.02	-85103	-0.0001973	0.0004492	0.0035	3.83	64182.48	114740.87	114740.87	3.51	No	Si
SLU 80	0.54	-1301.69	-79411	-0.000109	0.0004492	0.0035	3.83	66055.38	110746.92	110746.92	85.08	No	Si
SLU 82	-1.56	-33178.8	-86472	-0.0002012	0.0004492	0.0035	3.83	63600.45	115700.96	115700.96	3.49	No	Si
SLU 82	0.54	-1397.46	-80779	-0.0001113	0.0004492	0.0035	3.83	65685.88	111707.01	111707.01	79.94	No	Si
SLU 83	-1.56	-33632.17	-87265	-0.0002039	0.0004492	0.0035	3.83	63239.49	116213.72	116213.72	3.46	No	Si
SLU 83	0.54	-1390.86	-81573	-0.0001125	0.0004492	0.0035	3.83	65448.16	112263.84	112263.84	80.72	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-1.56	-36121.17	-54216	-0.0001437	0.0006738	0.0035	3.83		94323.77	94323.77	2.61		Si
SLV 6	0.54	5036.18	-50203	-0.0000727	0.0006738	0.0035	3.83		81591.97	81591.97	16.2		Si
SLD 9	-1.56	-32594.69	-59238	-0.0001433	0.0006738	0.0035	3.83		100693.95	100693.95	3.09		Si
SLD 9	0.54	1315.38	-55003	-0.0000714	0.0006738	0.0035	3.83		88271.31	88271.31	67.11		Si
SLV 13	-1.56	-44913.45	-66607	-0.000182	0.0006738	0.0035	3.83		109518.83	109518.83	2.44		Si
SLV 13	0.54	-707.15	-62302	-0.0000799	0.0006738	0.0035	3.83		104424.13	104424.13	147.67		Si
SLV 10	-1.56	-47059.3	-58763	-0.0001784	0.0006738	0.0035	3.83		100115.33	100115.33	2.13		Si
SLV 10	0.54	4252.59	-54731	-0.0000771	0.0006738	0.0035	3.83		87893.03	87893.03	20.67		Si
SLV 9	-1.56	-45082.2	-59594	-0.0001734	0.0006738	0.0035	3.83		101126.52	101126.52	2.24		Si
SLV 9	0.54	4031.07	-55561	-0.0000778	0.0006738	0.0035	3.83		89048.99	89048.99	22.09		Si
SLV 5	-1.56	-34144.07	-55047	-0.0001405	0.0006738	0.0035	3.83		95401.57	95401.57	2.79		Si
SLV 5	0.54	4814.66	-51034	-0.0000734	0.0006738	0.0035	3.83		82747.93	82747.93	17.19		Si
SLV 16	-1.56	-37318.08	-66607	-0.0001646	0.0006738	0.0035	3.83		109518.29	109518.29	2.93		Si
SLV 16	0.54	-3594.17	-62088	-0.0000856	0.0006738	0.0035	3.83		104163.17	104163.17	28.98		Si
SLD 10	-1.56	-33459.61	-58875	-0.0001446	0.0006738	0.0035	3.83		100251.59	100251.59	3		Si
SLD 10	0.54	1412.29	-54639	-0.0000712	0.0006738	0.0035	3.83		87765.62	87765.62	62.14		Si
SLV 14	-1.56	-47947.76	-65333	-0.0001882	0.0006738	0.0035	3.83		108069.17	108069.17	2.25		Si
SLV 14	0.54	-367.18	-61028	-0.0000775	0.0006738	0.0035	3.83		102872.22	102872.22	280.17		Si
SLD 14	-1.56	-33653.75	-61697	-0.0001492	0.0006738	0.0035	3.83		103687.1	103687.1	3.08		Si
SLD 14	0.54	-585.42	-57345	-0.000073	0.0006738	0.0035	3.83		98384.59	98384.59	168.06		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	-1.56	-33512.04	-87325	-63509	-15298	3.83	3.83	-55273	10833	12447	95155	41292	19533	60825	No	3.98	Si
SLU 84	0.54	-1397.45	-81633	-59369	-15298	3.83	3.83	-51670	10833	12447	95155	41292	19533	60825	No	3.98	Si
SLU 80	-1.56	-32717.02	-85103	-61893	-14965	3.83	3.83	-53867	10833	12447	95155	41292	19533	60825	No	4.06	Si
SLU 80	0.54	-1301.69	-79411	-57753	-14965	3.83	3.83	-50264	10833	12447	95155	41292	19533	60825	No	4.06	Si
SLU 82	-1.56	-33178.8	-86472	-62888	-15140	3.83	3.83	-54733	10833	12447	95155	41292	19533	60825	No	4.02	Si
SLU 82	0.54	-1397.46	-80779	-58748	-15140	3.83	3.83	-51130	10833	12447	95155	41292	19533	60825	No	4.02	Si
SLU 81	-1.56	-33298.93	-86412	-62845	-15200	3.83	3.83	-54695	10833	12447	95155	41292	19533	60825	No	4	Si
SLU 81	0.54	-1390.87	-80719	-58705	-15200	3.83	3.83	-51092	10833	12447	95155	41292	19533	60825	No	4	Si
SLU 75	-1.56	-32592.08	-84754	-61639	-14910	3.83	3.83	-53646	10833	12447	95155	41292	19533	60825	No	4.08	Si
SLU 75	0.54	-1293.28	-79062	-57499	-14910	3.83	3.83	-50043	10833	12447	95155	41292	19533	60825	No	4.08	Si
SLU 79	-1.56	-32837.15	-85043	-61850	-15026	3.83	3.83	-53829	10833	12447	95155	41292	19533	60825	No	4.05	Si
SLU 79	0.54	-1295.1	-79351	-57710	-15026	3.83	3.83	-50226	10833	12447	95155	41292	19533	60825	No	4.05	Si
SLU 77	-1.56	-33045.45	-85548	-62217	-15129	3.83	3.83	-54148	10833	12447	95155	41292	19533	60825	No	4.02	Si
SLU 77	0.54	-1286.68	-79855	-58076	-15129	3.83	3.83	-50545	10833	12447	95155	41292	19533	60825	No	4.02	Si
SLU 83	-1.56	-33632.17	-87265	-63466	-15359	3.83	3.83	-55236	10833	12447	95155	41292	19533	60825	No	3.96	Si
SLU 83	0.54	-1390.86	-81573	-59326	-15359	3.83	3.83	-51632	10833	12447	95155	41292	19533	60825	No	3.96	Si
SLU 78	-1.56	-32925.32	-85608	-62260	-15069	3.83	3.83	-54186	10833	12447	95155	41292	19533	60825	No	4.04	Si
SLU 78	0.54	-1293.27	-79915	-58120	-15069	3.83	3.83	-50583	10833	12447	95155	41292	19533	60825	No	4.04	Si
SLU 74	-1.56	-32712.21	-84694	-61596	-14970	3.83	3.83	-53608	10833	12447	95155	41292	19533	60825	No	4.06	Si
SLU 74	0.54	-1286.69	-79002	-57456	-14970	3.83	3.83	-50005	10833	12447	95155	41292	19533	60825	No	4.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	-1.56	-44913.45	-66607	-48442	-21135	3.83	3.7221	-44359	16250	18145	95155	61938	19533	81471		3.85	Si
SLV 13	0.54	-707.15	-62302	-45311	-21198	3.83	3.83	-39435	16250	18671	95155	61938	19533	81471		3.84	Si
SLV 14	-1.56	-47947.76	-65333	-47515	-22742	3.83	3.5433	-45742	16250	17274	95155	61938	19533	81471		3.58	Si
SLV 14	0.54	-367.18	-61028	-44384	-22805	3.83	3.83	-38628	16250	18671	95155	61938	19533	81471		3.57	Si
SLD 14	-1.56	-33653.75	-61697	-44870	-15781	3.83	3.83	-39052	16250	18671	95155	61938	19533	81471		5.16	Si
SLD 14	0.54	-585.42	-57345	-41706	-15808	3.83	3.83	-36297	16250	18671	95155	61938	19533	81471		5.15	Si
SLD 10	-1.56	-33459.61	-58875	-42818	-16550	3.83	3.83	-37266	16250	18671	95155	61938	19533	81471		4.92	Si
SLD 10	0.54	1412.29	-54639	-39738	-16591	3.83	3.83	-34585	16250	18671	95155	61938	19533	81471		4.91	Si
SLV 5	-1.56	-34144.07	-55047	-40034	-18333	3.83	3.83	-34842	16250	18671	95155	61938	19533	81471		4.44	Si
SLV 5	0.54	4814.66	-51034	-37116	-18393	3.83	3.83	-32303	16250	18671	95155	61938	19533	81471		4.43	Si
SLV 6	-1.56	-36121.17	-54216	-39430	-19380	3.83	3.7463	-35696	16250	18263	95155	61938	19533	81471		4.2	Si
SLV 6	0.54	5036.18	-50203	-36512	-19440	3.83	3.83	-31777	16250	18671	95155	61938	19533	81471		4.19	Si
SLV 9	-1.56	-45082.2	-59594	-43341	-23250	3.83	3.4755	-42454	16250	16943	95155	61938	19533	81471		3.5	Si
SLV 9	0.54	4031.07	-55561	-40408	-23334	3.83	3.83	-35168	16250	18671	95155	61938	19533	81471		3.49	Si
SLV 10	-1.56	-47059.3	-58763	-42737	-24297	3.83	3.3425	-43554	16250	16295	95155	61938	19533	81471		3.35	Si
SLV 10	0.54	4252.59	-54731	-39804	-24381	3.83	3.83	-34642	16250	18671	95155	61938	19533	81471		3.34	Si
SLD 9	-1.56	-32594.69	-59238	-43083	-16092	3.83	3.83	-37496	16250	18671	95155	61938	19533	81471		5.06	Si
SLD 9	0.54	1315.38	-55003	-40002	-16133	3.83	3.83	-34814	16250	18671	95155	61938	19533	81471		5.05	Si
SLV 16	-1.56	-37318.08	-66607	-48441	-16253	3.83	3.83	-42160	16250	18671	95155	61938	19533	81471		5.01	Si
SLV 16	0.54	-3594.17	-62088	-45155	-16273	3.83	3.83	-39299	16250	18671	95155	61938	19533	81471		5.01	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.05 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-46916	0.24	185.71	5469.58	7964.91	6717.24	36.17	Si
SLV 4	-47811	0.24	185.71	5543.45	8102.03	6822.74	36.74	Si
SLV 1	-48191	0.24	185.71	5574.43	8160.18	6867.3	36.98	Si
SLV 3	-49086	0.24	185.71	5646.68	8297.33	6972	37.54	Si
SLV 6	-51362	0.24	185.71	5825.29	8633.23	7229.26	38.93	Si
SLV 5	-52193	0.24	185.71	5888.61	8755.13	7321.87	39.43	Si
SLV 8	-54346	0.24	185.71	6048.19	9069.65	7558.92	40.7	Si
SLV 7	-55177	0.24	185.71	6107.98	9190.99	7649.49	41.19	Si
SLV 10	-55878	0.24	185.71	6157.73	9293.53	7725.63	41.6	Si
SLV 9	-56709	0.24	185.71	6215.71	9414.9	7815.3	42.08	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.05 Ta = 0.0491

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-54393	-59594	99	0.426	6018.6	0.975	6.34564	5.39576	Si
SLV 10	-53807	-58763	101	0.43	5958.9	0.975	6.40432	5.39576	Si
SLV 11	-51328	-63841	125	0.447	5706.4	0.974	6.66224	5.39576	Si
SLV 12	-50743	-63011	127	0.451	5646.8	0.974	6.72785	5.39576	Si
SLV 5	-49386	-55047	-239	0.459	5508.6	0.973	6.8548	5.39576	Si
SLV 6	-48800	-54216	-237	0.464	5449	0.973	6.92615	5.39576	Si
SLV 7	-46321	-59294	-213	0.485	5196.5	0.972	7.25253	5.39576	Si
SLV 8	-45736	-58463	-211	0.49	5136.9	0.971	7.33335	5.39576	Si
SLV 13	-59318	-66607	502	0.39	6520.3	0.977	5.79709	3.34272	Si
SLV 14	-58420	-65333	505	0.395	6428.7	0.977	5.87208	3.34272	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.455	SLU 83	Si
V_SLU	3.96	SLU 83	Si
PF_SLV	2.127	SLV 10	Si
V_SLV	3.342	SLV 10	Si
PFFP_SLV	36.17	SLV 2	Si
R_SLV	1.176	SLV 9	Si

Maschio 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.093	5.876	-3.013	5.876	L2	L4	2.08	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	0.44	-1394.6	-22692	-0.0000457	0.0003743	0.0035	2.08	17980.01	20473.17	20473.17	14.68	No	Si
SLU 60	0.84	2252.96	-21757	-0.0000484	0.0003743	0.0035	2.08	17460.95	18909.47	18909.47	8.39	No	Si
SLU 79	0.44	-1492.55	-24744	-0.00005	0.0003743	0.0035	2.08	19051.34	21817.66	21817.66	14.62	No	Si
SLU 79	0.84	2358.72	-23808	-0.0000527	0.0003743	0.0035	2.08	18574.16	20110.47	20110.47	8.53	No	Si
SLU 62	0.44	-1421.22	-22965	-0.0000463	0.0003743	0.0035	2.08	18127.45	20653.78	20653.78	14.53	No	Si
SLU 62	0.84	2259.95	-22029	-0.0000489	0.0003743	0.0035	2.08	17613.95	19067.6	19067.6	8.44	No	Si
SLU 83	0.44	-1460.27	-25630	-0.0000515	0.0003743	0.0035	2.08	19485.84	22385.12	22385.12	15.33	No	Si
SLU 83	0.84	2471.09	-24694	-0.000055	0.0003743	0.0035	2.08	19026.75	20636.06	20636.06	8.35	No	Si
SLU 77	0.44	-1508.99	-24903	-0.0000504	0.0003743	0.0035	2.08	19130.95	21921.72	21921.72	14.53	No	Si
SLU 77	0.84	2360.14	-23968	-0.000053	0.0003743	0.0035	2.08	18657.04	20204.94	20204.94	8.56	No	Si
SLU 81	0.44	-1433.65	-25358	-0.0000508	0.0003743	0.0035	2.08	19354.22	22212.59	22212.59	15.49	No	Si
SLU 81	0.84	2464.1	-24422	-0.0000544	0.0003743	0.0035	2.08	18889.58	20474.22	20474.22	8.31	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 53	0.44	-1443.32	-21966	-0.0000446	0.0003743	0.0035	2.08	17578.55	19972.89	19972.89	13.84	No	Si
SLU 53	0.84	2142.01	-21030	-0.0000465	0.0003743	0.0035	2.08	17044.65	18391.1	18391.1	8.59	No	Si
SLU 43	0.44	-1413.48	-18831	-0.0000388	0.0003743	0.0035	2.08	15713.93	17740.12	17740.12	12.55	No	Si
SLU 43	0.84	1855.1	-17895	-0.0000393	0.0003743	0.0035	2.08	15116.02	15891.94	15891.94	8.57	No	Si
SLU 58	0.44	-1453.5	-22078	-0.0000449	0.0003743	0.0035	2.08	17641.4	20051.84	20051.84	13.8	No	Si
SLU 58	0.84	2147.58	-21143	-0.0000467	0.0003743	0.0035	2.08	17109.8	18482.02	18482.02	8.61	No	Si
SLU 74	0.44	-1482.37	-24631	-0.0000497	0.0003743	0.0035	2.08	18995.03	21743.68	21743.68	14.67	No	Si
SLU 74	0.84	2353.15	-23696	-0.0000525	0.0003743	0.0035	2.08	18515.55	20044.12	20044.12	8.52	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	0.44	-2624.4	-15029	-0.0000374	0.0005615	0.0035	2.08		15384.01	15384.01	5.86		Si
SLV 3	0.84	3264.92	-14792	-0.0000401	0.0005615	0.0035	2.08		14357.17	14357.17	4.4		Si
SLV 1	0.44	-3431.95	-11387	-0.000035	0.0005615	0.0035	2.08		12139.95	12139.95	3.54		Si
SLV 1	0.84	2629.77	-10264	-0.0000293	0.0005615	0.0035	2.08		10288.26	10288.26	3.91		Si
SLV 4	0.44	-2351.02	-14625	-0.0000354	0.0005615	0.0035	2.08		15029.7	15029.7	6.39		Si
SLV 4	0.84	3059.99	-14387	-0.0000384	0.0005615	0.0035	2.08		14003.95	14003.95	4.58		Si
SLV 2	0.44	-3158.57	-10983	-0.000033	0.0005615	0.0035	2.08		11771.82	11771.82	3.73		Si
SLV 2	0.84	2424.84	-9860	-0.0000276	0.0005615	0.0035	2.08		9911.93	9911.93	4.09		Si
SLV 9	0.44	-2004	-11898	-0.000029	0.0005615	0.0035	2.08		12606.53	12606.53	6.29		Si
SLV 9	0.84	264.07	-9691	-0.0000171	0.0005615	0.0035	2.08		9754.9	9754.9	36.94		Si
SLD 1	0.44	-2101.65	-14428	-0.0000338	0.0005615	0.0035	2.08		14857.69	14857.69	7.07		Si
SLD 1	0.84	2052.73	-13533	-0.000032	0.0005615	0.0035	2.08		13247.15	13247.15	6.45		Si
SLV 7	0.44	-384.07	-21809	-0.0000382	0.0005615	0.0035	2.08		21033.13	21033.13	54.76		Si
SLV 7	0.84	3114.63	-22577	-0.000053	0.0005615	0.0035	2.08		20408.62	20408.62	6.55		Si
SLV 6	0.44	-2897.78	-9405	-0.0000291	0.0005615	0.0035	2.08		10322.55	10322.55	3.56		Si
SLV 6	0.84	863.92	-7222	-0.0000158	0.0005615	0.0035	2.08		7426.46	7426.46	8.6		Si
SLV 5	0.44	-3075.91	-9668	-0.0000304	0.0005615	0.0035	2.08		10566.43	10566.43	3.44		Si
SLV 5	0.84	997.45	-7485	-0.0000169	0.0005615	0.0035	2.08		7676.76	7676.76	7.7		Si
SLD 3	0.44	-1751.07	-16007	-0.0000348	0.0005615	0.0035	2.08		16237.65	16237.65	9.27		Si
SLD 3	0.84	2326.33	-15498	-0.0000367	0.0005615	0.0035	2.08		14973.48	14973.48	6.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	0.44	-1657.31	-24744	-21995	-9499	2.08	2.08	-23499	10078	9433	33304	28028	5304	33332	No	3.51	Si
SLU 78	0.84	2145.66	-23809	-21163	-9499	2.08	2.08	-22611	9959	9322	33304	28028	5304	33332	No	3.51	Si
SLU 82	0.44	-1581.97	-25199	-22399	-9571	2.08	2.08	-23931	10135	9486	33304	28028	5304	33332	No	3.48	Si
SLU 82	0.84	2249.62	-24263	-21567	-9571	2.08	2.08	-23042	10017	9376	33304	28028	5304	33332	No	3.48	Si
SLU 81	0.44	-1433.65	-25358	-22540	-9736	2.08	2.08	-24082	10155	9505	33304	28028	5304	33332	No	3.42	Si
SLU 81	0.84	2464.1	-24422	-21709	-9736	2.08	2.08	-23193	10037	9394	33304	28028	5304	33332	No	3.42	Si
SLU 84	0.44	-1608.59	-25471	-22641	-9655	2.08	2.08	-24189	10170	9519	33304	28028	5304	33332	No	3.45	Si
SLU 84	0.84	2256.61	-24535	-21809	-9655	2.08	2.08	-23301	10051	9408	33304	28028	5304	33332	No	3.45	Si
SLU 77	0.44	-1508.99	-24903	-22136	-9665	2.08	2.08	-23650	10098	9451	33304	28028	5304	33332	No	3.45	Si
SLU 77	0.84	2360.14	-23968	-21305	-9665	2.08	2.08	-22762	9979	9341	33304	28028	5304	33332	No	3.45	Si
SLU 74	0.44	-1482.37	-24631	-21894	-9581	2.08	2.08	-23392	10063	9419	33304	28028	5304	33332	No	3.48	Si
SLU 74	0.84	2353.15	-23696	-21063	-9581	2.08	2.08	-22503	9945	9308	33304	28028	5304	33332	No	3.48	Si
SLU 75	0.44	-1630.69	-24472	-21753	-9415	2.08	2.08	-23241	10043	9400	33304	28028	5304	33332	No	3.54	Si
SLU 75	0.84	2138.66	-23537	-20922	-9415	2.08	2.08	-22352	9925	9289	33304	28028	5304	33332	No	3.54	Si
SLU 79	0.44	-1492.55	-24744	-21994	-9620	2.08	2.08	-23498	10078	9433	33304	28028	5304	33332	No	3.46	Si
SLU 79	0.84	2358.72	-23808	-21163	-9620	2.08	2.08	-22610	9959	9322	33304	28028	5304	33332	No	3.46	Si
SLU 80	0.44	-1640.87	-24585	-21853	-9455	2.08	2.08	-23347	10057	9414	33304	28028	5304	33332	No	3.53	Si
SLU 80	0.84	2144.24	-23649	-21021	-9455	2.08	2.08	-22459	9939	9303	33304	28028	5304	33332	No	3.53	Si
SLU 83	0.44	-1460.27	-25630	-22782	-9820	2.08	2.08	-24340	10190	9538	33304	28028	5304	33332	No	3.39	Si
SLU 83	0.84	2471.09	-24694	-21951	-9820	2.08	2.08	-23452	10071	9427	33304	28028	5304	33332	No	3.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	0.44	-1751.07	-16007	-14229	-10146	2.08	2.08	-15202	13457	12596	33304	42042	5304	45900		4.52	Si
SLD 3	0.84	2326.33	-15498	-13776	-9941	2.08	2.08	-14719	13360	12505	33304	42042	5304	45810		4.61	Si
SLV 5	0.44	-3075.91	-9668	-8594	-9697	2.08	2.08	-9182	12253	11469	33304	42042	5304	44773		4.62	Si
SLV 5	0.84	997.45	-7485	-6654	-10989	2.08	2.08	-7109	11838	11081	33304	42042	5304	44385		4.04	Si
SLV 6	0.44	-2897.78	-9405	-8360	-8918	2.08	2.08	-8932	12203	11422	33304	42042	5304	44726		5.02	Si
SLV 6	0.84	863.92	-7222	-6419	-10210	2.08	2.08	-6858	11788	11034	33304	42042	5304	44338		4.34	Si
SLD 2	0.44	-1984.23	-14254	-12671	-9714	2.08	2.08	-13537	13124	12284	33304	42042	5304	45588		4.69	Si
SLD 2	0.84	1964.71	-13359	-11875	-9854	2.08	2.08	-12687	12954	12125	33304	42042	5304	45429		4.61	Si
SLV 4	0.44	-2351.02	-14625	-13000	-13417	2.08	2.08	-13889	13194	12350	33304	42042	5304	45654		3.4	Si
SLV 4	0.84	3059.99	-14387	-12789	-12947	2.08	2.08	-13663	13149	12308	33304	42042	5304	45612		3.52	Si
SLD 4	0.44	-1633.65	-15833	-14074	-9632	2.08	2.08	-15037	13424	12565	33304	42042	5304	45869		4.76	Si
SLD 4	0.84	2238.3	-15325	-13622	-9428	2.08	2.08	-14554	13327	12474	33304	42042	5304	45779		4.86	Si
SLV 1	0.44	-3431.95	-11387	-10122	-14796	2.08	2.08	-10814	12579	11774	33304	42042	5304	45079		3.05	Si
SLV 1	0.84	2629.77	-10264	-9124	-15116	2.08	2.08	-9748	12366	11575	33304	42042	5304	44879		2.97	Si
SLV 3	0.44	-2624.4	-15029	-13359	-14612	2.08	2.08	-14273	13271	12422	33304	42042	5304	45726		3.13	Si
SLV 3	0.84	3264.92	-14792	-13148	-14143	2.08	2.08	-14047	13226	12380	33304	42042	5304	45684		3.23	Si
SLV 2	0.44	-3158.57	-10983	-9762	-13600	2.08	2.08	-10430	12503	11702	33304	42042	5304	45007		3.31	Si
SLV 2	0.84	2424.84	-9860	-8764	-13920	2.08	2.08	-9364	12289	11503	33304	42042	5304	44807		3.22	Si
SLD 1	0.44	-2101.65	-14428	-12825	-10228	2.08	2.08	-13702	13157	12315	33304	42042	5304	45619		4.46	Si
SLD 1	0.84	2052.73	-13533	-12029	-10368	2.08	2.08	-12852	12987	12156	33304	42042	5304	45460		4.38	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	14394	-13472	151.29	2745.59	18.15	Si
SLV 5	179667	0.24	14927	-13971	151.29	2836.29	18.75	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.24	15076	-14111	151.29	2861.59	18.92	Si
SLV 9	179667	0.24	15609	-14610	151.29	2951.29	19.51	Si
SLV 2	179667	0.24	16228	-15189	151.29	3054.45	20.19	Si
SLV 1	179667	0.24	17046	-15955	151.29	3189.19	21.08	Si
SLV 14	179667	0.24	18503	-17319	151.29	3424.61	22.64	Si
SLV 4	179667	0.24	18605	-17414	151.29	3440.87	22.74	Si
SLV 13	179667	0.24	19321	-18084	151.29	3554.21	23.49	Si
SLV 3	179667	0.24	19423	-18180	151.29	3570.24	23.6	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-20178	-22933	-707	0.568	2446.9	0.953	8.66084	4.02955	Si
SLV 12	-20124	-21981	-707	0.569	2441.4	0.953	8.68036	4.02955	Si
SLV 7	-17447	-24152	-653	0.638	2169.5	0.948	9.78364	4.02955	Si
SLV 8	-17392	-23200	-652	0.64	2164	0.948	9.80914	4.02955	Si
SLV 15	-18879	-21440	-258	0.619	2315	0.951	9.46093	2.9746	Si
SLV 16	-18795	-19978	-256	0.621	2306.5	0.951	9.49609	2.9746	Si
SLV 13	-15022	-21160	183	0.743	1923.6	0.942	11.45706	2.9746	Si
SLV 14	-14938	-19698	184	0.746	1915.1	0.942	11.50811	2.9746	Si
SLV 9	-7320	-22001	759	1.207	1147.3	0.913	19.21121	4.02955	Si
SLV 10	-7265	-21049	760	1.214	1141.9	0.913	19.3168	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.309	SLU 81	Si
V_SLU	3.394	SLU 83	Si
PF_SLV	3.435	SLV 5	Si
V_SLV	2.969	SLV 1	Si
PFFP_SLV	18.148	SLV 6	Si
R_SLV	2.149	SLV 11	Si

Maschio 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.013	5.876	-0.123	5.876	L2	L4	1.89	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	0.44	-3247.37	-20681	-0.000059	0.0003743	0.0035	1.89	14875.57	16925.44	16925.44	5.21	No	Si
SLU 81	0.84	-232.62	-19368	-0.0000375	0.0003743	0.0035	1.89	14208.85	16097.11	16097.11	69.2	No	Si
SLU 74	0.44	-3133.26	-20144	-0.0000571	0.0003743	0.0035	1.89	14607.51	16590.52	16590.52	5.29	No	Si
SLU 74	0.84	-140.13	-18796	-0.0000358	0.0003743	0.0035	1.89	13906.56	15734.25	15734.25	112.28	No	Si
SLU 82	0.44	-3140.13	-20516	-0.0000579	0.0003743	0.0035	1.89	14793.94	16823.95	16823.95	5.36	No	Si
SLU 82	0.84	-93.67	-19168	-0.0000363	0.0003743	0.0035	1.89	14103.82	15969.72	15969.72	170.5	No	Si
SLU 83	0.44	-3272.19	-20914	-0.0000596	0.0003743	0.0035	1.89	14990.06	17062.91	17062.91	5.21	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.84	-219.55	-19586	-0.0000379	0.0003743	0.0035	1.89	14322.07	16236.03	16236.03	73.95	No	Si
SLU 79	0.44	-3144.32	-20234	-0.0000574	0.0003743	0.0035	1.89	14653.06	16647.41	16647.41	5.29	No	Si
SLU 79	0.84	-136.38	-18880	-0.000036	0.0003743	0.0035	1.89	13951.63	15787.63	15787.63	115.76	No	Si
SLU 84	0.44	-3164.95	-20749	-0.0000586	0.0003743	0.0035	1.89	14909.26	16965.7	16965.7	5.36	No	Si
SLU 84	0.84	-80.6	-19385	-0.0000366	0.0003743	0.0035	1.89	14217.99	16108.25	16108.25	199.87	No	Si
SLU 62	0.44	-2950.43	-18833	-0.0000533	0.0003743	0.0035	1.89	13926.42	15757.73	15757.73	5.34	No	Si
SLU 62	0.84	-105.12	-17507	-0.0000331	0.0003743	0.0035	1.89	13199.12	14898.59	14898.59	141.74	No	Si
SLU 39	0.44	-2774.55	-17639	-0.0000497	0.0003743	0.0035	1.89	13273.29	14985.74	14985.74	5.4	No	Si
SLU 39	0.84	-289.44	-16636	-0.0000325	0.0003743	0.0035	1.89	12700.9	14310.08	14310.08	49.44	No	Si
SLU 77	0.44	-3158.09	-20377	-0.0000578	0.0003743	0.0035	1.89	14724.72	16737.1	16737.1	5.3	No	Si
SLU 77	0.84	-127.06	-19014	-0.0000362	0.0003743	0.0035	1.89	14022.5	15872.07	15872.07	124.91	No	Si
SLU 60	0.44	-2925.61	-18600	-0.0000526	0.0003743	0.0035	1.89	13801.35	15610.59	15610.59	5.34	No	Si
SLU 60	0.84	-118.19	-17289	-0.0000327	0.0003743	0.0035	1.89	13076.02	14751.27	14751.27	124.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	0.44	-2391.19	-11363	-0.0000343	0.0005615	0.0035	1.89		10851.71	10851.71	4.54		Si
SLV 8	0.84	-1251.82	-11965	-0.0000288	0.0005615	0.0035	1.89		11339.45	11339.45	9.06		Si
SLV 7	0.44	-2567.31	-11856	-0.0000363	0.0005615	0.0035	1.89		11253.26	11253.26	4.38		Si
SLV 7	0.84	-1193.59	-12288	-0.0000291	0.0005615	0.0035	1.89		11595.07	11595.07	9.71		Si
SLD 3	0.44	-2520.68	-11560	-0.0000355	0.0005615	0.0035	1.89		11015.97	11015.97	4.37		Si
SLD 3	0.84	-333.75	-10783	-0.0000213	0.0005615	0.0035	1.89		10368.07	10368.07	31.07		Si
SLV 2	0.44	-2689.68	-8244	-0.0000302	0.0005615	0.0035	1.89		8245.74	8245.74	3.07		Si
SLV 2	0.84	-197.6	-7173	-0.000014	0.0005615	0.0035	1.89		7327.32	7327.32	37.08		Si
SLV 1	0.44	-2959.99	-9000	-0.0000332	0.0005615	0.0035	1.89		8884.09	8884.09	3		Si
SLV 1	0.84	-108.23	-7669	-0.0000144	0.0005615	0.0035	1.89		7755.41	7755.41	71.66		Si
SLD 4	0.44	-2404.58	-11235	-0.0000342	0.0005615	0.0035	1.89		10744.83	10744.83	4.47		Si
SLD 4	0.84	-372.14	-10570	-0.0000212	0.0005615	0.0035	1.89		10191.02	10191.02	27.39		Si
SLV 4	0.44	-2764.28	-7924	-0.0000302	0.0005615	0.0035	1.89		7975.19	7975.19	2.89		Si
SLV 4	0.84	-837.39	-7733	-0.0000186	0.0005615	0.0035	1.89		7811.26	7811.26	9.33		Si
SLD 1	0.44	-2490.14	-11701	-0.0000356	0.0005615	0.0035	1.89		11130.34	11130.34	4.47		Si
SLD 1	0.84	-57.79	-10541	-0.0000193	0.0005615	0.0035	1.89		10166.89	10166.89	175.94		Si
SLV 3	0.44	-3034.59	-8681	-0.0000332	0.0005615	0.0035	1.89		8615.12	8615.12	2.84		Si
SLV 3	0.84	-748.02	-8229	-0.000019	0.0005615	0.0035	1.89		8233.26	8233.26	11.01		Si
SLD 2	0.44	-2374.04	-11376	-0.0000343	0.0005615	0.0035	1.89		10862.1	10862.1	4.58		Si
SLD 2	0.84	-96.17	-10329	-0.0000191	0.0005615	0.0035	1.89		9990.13	9990.13	103.88		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	0.44	-3144.32	-20234	-17986	-8655	1.89	1.89	-21147	9764	8304	33304	25468	4820	30287	No	3.5	Si
SLU 79	0.84	-136.38	-18880	-16783	-8735	1.89	1.89	-19733	9575	8144	33304	25468	4820	30287	No	3.47	Si
SLU 82	0.44	-3140.13	-20516	-18236	-8737	1.89	1.89	-21442	9803	8338	33304	25468	4820	30287	No	3.47	Si
SLU 82	0.84	-93.67	-19168	-17038	-8818	1.89	1.89	-20033	9615	8178	33304	25468	4820	30287	No	3.43	Si
SLU 73	0.44	-2915.94	-19493	-17327	-8666	1.89	1.89	-20373	9661	8217	33304	25468	4820	30287	No	3.5	Si
SLU 73	0.84	69.06	-18111	-16099	-8744	1.89	1.89	-18928	9468	8053	33304	25468	4820	30287	No	3.46	Si
SLU 77	0.44	-3158.09	-20377	-18113	-8734	1.89	1.89	-21297	9784	8321	33304	25468	4820	30287	No	3.47	Si
SLU 77	0.84	-127.06	-19014	-16901	-8815	1.89	1.89	-19872	9594	8160	33304	25468	4820	30287	No	3.44	Si
SLU 75	0.44	-3026.02	-19979	-17759	-8767	1.89	1.89	-20881	9729	8274	33304	25468	4820	30287	No	3.45	Si
SLU 75	0.84	-1.18	-18596	-16529	-8847	1.89	1.89	-19435	9536	8110	33304	25468	4820	30287	No	3.42	Si
SLU 84	0.44	-3164.95	-20749	-18443	-8867	1.89	1.89	-21685	9836	8365	33304	25468	4820	30287	No	3.42	Si
SLU 84	0.84	-80.6	-19385	-17231	-8949	1.89	1.89	-20260	9646	8204	33304	25468	4820	30287	No	3.38	Si
SLU 78	0.44	-3050.84	-20212	-17966	-8897	1.89	1.89	-21124	9761	8302	33304	25468	4820	30287	No	3.4	Si
SLU 78	0.84	11.89	-18813	-16723	-8978	1.89	1.89	-19663	9566	8136	33304	25468	4820	30287	No	3.37	Si
SLU 80	0.44	-3037.08	-20069	-17839	-8817	1.89	1.89	-20975	9741	8285	33304	25468	4820	30287	No	3.43	Si
SLU 80	0.84	2.57	-18680	-16604	-8898	1.89	1.89	-19523	9548	8120	33304	25468	4820	30287	No	3.4	Si
SLU 76	0.44	-2940.76	-19726	-17535	-8796	1.89	1.89	-20617	9693	8244	33304	25468	4820	30287	No	3.44	Si
SLU 76	0.84	82.13	-18329	-16292	-8875	1.89	1.89	-19156	9499	8079	33304	25468	4820	30287	No	3.41	Si
SLU 83	0.44	-3272.19	-20914	-18590	-8704	1.89	1.89	-21858	9859	8385	33304	25468	4820	30287	No	3.48	Si
SLU 83	0.84	-219.55	-19586	-17409	-8786	1.89	1.89	-20470	9674	8228	33304	25468	4820	30287	No	3.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	0.44	-2764.28	-7924	-7044	-9224	1.89	1.7885	-8282	12073	9717	33304	38202	4820	43021		4.66	Si
SLV 4	0.84	-837.39	-7733	-6874	-8066	1.89	1.89	-8082	12033	10234	33304	38202	4820	43021		5.33	Si
SLV 3	0.44	-3034.59	-8681	-7716	-10738	1.89	1.7863	-9073	12231	9832	33304	38202	4820	43021		4.01	Si
SLV 3	0.84	-748.02	-8229	-7315	-9582	1.89	1.89	-8600	12137	10322	33304	38202	4820	43021		4.49	Si
SLD 11	0.44	-2134.01	-14268	-12683	-8018	1.89	1.89	-14912	13399	11396	33304	38202	4820	43021		5.37	Si
SLD 11	0.84	-409.74	-13804	-12270	-8238	1.89	1.89	-14427	13302	11313	33304	38202	4820	43021		5.22	Si
SLV 12	0.44	-1956.43	-14517	-12904	-9431	1.89	1.89	-15173	13451	11440	33304	38202	4820	43021		4.56	Si
SLV 12	0.84	-980.61	-14959	-13297	-9870	1.89	1.89	-15634	13543	11519	33304	38202	4820	43021		4.36	Si
SLD 7	0.44	-2319.91	-12918	-11482	-8655	1.89	1.89	-13501	13117	11156	33304	38202	4820	43021		4.97	Si
SLD 7	0.84	-526.24	-12523	-11132	-8561	1.89	1.89	-13089	13034	11086	33304	38202	4820	43021		5.03	Si
SLD 3	0.44	-2520.68	-11560	-10276	-8123	1.89	1.89	-12082	12833	10915	33304	38202	4820	43021		5.3	Si
SLD 3	0.84	-333.75	-10783	-9585	-7656	1.89	1.89	-11270	12671	10776	33304	38202	4820	43021		5.62	Si
SLV 7	0.44	-2567.31	-11856	-10539	-11907	1.89	1.89	-12391	12895	10967	33304	38202	4820	43021		3.61	Si
SLV 7	0.84	-1193.59	-12288	-10923	-11616	1.89	1.89	-12843	12985	11044	33304	38202	4820	43021		3.7	Si
SLV 8	0.44	-2391.19	-11363	-10101	-10920	1.89	1.89	-11876	12792	10880	33304	38202	4820	43021		3.94	Si
SLV 8	0.84	-1251.82	-11965	-10636	-10628	1.89	1.89	-12505	12918	10987	33304	38202	4820	43021		4.05	Si
SLV 11	0.44	-2132.55	-15010	-13343	-10418	1.89	1.89	-15688	13554	11528	33304	38202	4820	43021		4.13	Si
SLV 11	0.84	-922.38	-15281	-13584	-10857	1.89	1.89	-15971	13611	11576	33304	38202	4820	43021		3.96	Si
SLD 8	0.44	-2242.86	-12702	-11291	-8224	1.89	1.89	-13275	13072	11117	33304	38202	4820	43021		5.23	Si
SLD 8	0.84	-551.72	-12382	-11006	-8129	1.89	1.89	-12941	13005	11061	33304	38202	4820	43021		5.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.075 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.24	6624	-5634	137.47	1212.61	8.82	Si
SLV 4	179667	0.24	6949	-5910	137.47	1269.26	9.23	Si
SLV 1	179667	0.24	7227	-6147	137.47	1317.54	9.58	Si
SLV 3	179667	0.24	7552	-6423	137.47	1373.69	9.99	Si
SLV 6	179667	0.24	10793	-9179	137.47	1919.35	13.96	Si
SLV 5	179667	0.24	11186	-9513	137.47	1983.72	14.43	Si
SLV 8	179667	0.24	11876	-10100	137.47	2095.83	15.25	Si
SLV 7	179667	0.24	12269	-10434	137.47	2159.13	15.71	Si
SLV 10	179667	0.24	14601	-12418	137.47	2526.89	18.38	Si
SLV 9	179667	0.24	14994	-12752	137.47	2587.5	18.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-14509	-11223	664	0.679	1835.1	0.945	10.44614	4.02955	Si
SLV 10	-14214	-10964	649	0.691	1805.2	0.944	10.63522	4.02955	Si
SLV 5	-12180	-7603	610	0.78	1599.1	0.938	12.08724	4.02955	Si
SLV 6	-11885	-7344	594	0.796	1569.3	0.937	12.34419	4.02955	Si
SLV 13	-15540	-16747	527	0.652	1939.6	0.947	10.00018	2.9746	Si
SLV 14	-15087	-16349	504	0.668	1893.7	0.946	10.26327	2.9746	Si
SLV 15	-14026	-17802	352	0.716	1786.1	0.943	11.0311	2.9746	Si
SLV 16	-13573	-17405	329	0.736	1740.2	0.942	11.35088	2.9746	Si
SLV 11	-9464	-14740	80	0.988	1324.7	0.928	15.48202	4.02955	Si
SLV 12	-9169	-14481	65	1.013	1295	0.926	15.89374	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.212	SLU 81	Si
V_SLU	3.373	SLU 78	Si
PF_SLV	2.839	SLV 3	Si
V_SLV	3.613	SLV 7	Si
PFFP_SLV	8.821	SLV 2	Si
R_SLV	2.592	SLV 9	Si

Maschio 54

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.123	6.101	-0.123	-3.284	L2	L4	9.385	0.45	2.97	2.97	2.97			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	-1.56	11368.42	-81727	-0.0000311	0.0004492	0.0035	9.3849	322762.65	348411.95	348411.95	30.65	No	Si
SLU 45	1.41	7553.18	-98086	-0.0000361	0.0004492	0.0035	9.3849	372778.01	404337.71	404337.71	53.53	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	-1.56	12297.85	-89850	-0.0000342	0.0004492	0.0035	9.3849	348206.98	376182.81	376182.81	30.59	No	Si
SLU 58	1.41	7735.66	-109292	-0.0000403	0.0004492	0.0035	9.3849	404230.04	442647.41	442647.41	57.22	No	Si
SLU 51	-1.56	11442.65	-82167	-0.0000313	0.0004492	0.0035	9.3849	324171.27	349915.82	349915.82	30.58	No	Si
SLU 51	1.41	6956.98	-99048	-0.0000364	0.0004492	0.0035	9.3849	375568.99	407628.03	407628.03	58.59	No	Si
SLU 50	-1.56	11487.79	-82151	-0.0000313	0.0004492	0.0035	9.3849	324122.09	349863.25	349863.25	30.46	No	Si
SLU 50	1.41	7741.18	-98808	-0.0000365	0.0004492	0.0035	9.3849	374872.63	406805.22	406805.22	52.55	No	Si
SLU 57	-1.56	12340.82	-90492	-0.0000345	0.0004492	0.0035	9.3849	350167.79	378378.8	378378.8	30.66	No	Si
SLU 57	1.41	6937.01	-110580	-0.0000406	0.0004492	0.0035	9.3849	407699.19	447051.23	447051.23	64.44	No	Si
SLU 48	-1.56	11575.91	-82778	-0.0000315	0.0004492	0.0035	9.3849	326123.84	352006.67	352006.67	30.41	No	Si
SLU 48	1.41	7726.74	-99855	-0.0000368	0.0004492	0.0035	9.3849	377895.63	410386.23	410386.23	53.11	No	Si
SLU 53	-1.56	12178.48	-89426	-0.0000341	0.0004492	0.0035	9.3849	346906.98	374731.51	374731.51	30.77	No	Si
SLU 53	1.41	7547.66	-108570	-0.00004	0.0004492	0.0035	9.3849	402273.05	440179.9	440179.9	58.32	No	Si
SLU 56	-1.56	12385.96	-90477	-0.0000345	0.0004492	0.0035	9.3849	350120.94	378326.23	378326.23	30.54	No	Si
SLU 56	1.41	7721.21	-110339	-0.0000407	0.0004492	0.0035	9.3849	407053.31	446228.42	446228.42	57.79	No	Si
SLU 49	-1.56	11530.76	-82794	-0.0000315	0.0004492	0.0035	9.3849	326172.85	352059.24	352059.24	30.53	No	Si
SLU 49	1.41	6942.54	-100096	-0.0000367	0.0004492	0.0035	9.3849	378587.41	411209.04	411209.04	59.23	No	Si
SLU 59	-1.56	12252.71	-89866	-0.0000342	0.0004492	0.0035	9.3849	348254	376235.38	376235.38	30.71	No	Si
SLU 59	1.41	6951.46	-109533	-0.0000402	0.0004492	0.0035	9.3849	404880.51	443470.22	443470.22	63.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	-1.56	-9373.45	-20621	-0.0000091	0.0006738	0.0035	9.3849		146722.61	146722.61	15.65		Si
SLV 3	1.41	1203.44	-20153	-0.0000071	0.0006738	0.0035	9.3849		100844.09	100844.09	83.8		Si
SLV 5	-1.56	21318.5	-53804	-0.0000232	0.0006738	0.0035	9.3849		247379.68	247379.68	11.6		Si
SLV 5	1.41	-9995.41	-63682	-0.0000241	0.0006738	0.0035	9.3849		330682.54	330682.54	33.08		Si
SLV 9	-1.56	27717.64	-82273	-0.0000346	0.0006738	0.0035	9.3849		364332.83	364332.83	13.14		Si
SLV 9	1.41	-4845.13	-101122	-0.0000361	0.0006738	0.0035	9.3849		479400.55	479400.55	98.94		Si
SLV 14	-1.56	27642.69	-115513	-0.0000465	0.0006738	0.0035	9.3849		486458.13	486458.13	17.6		Si
SLV 14	1.41	10225.21	-144694	-0.0000531	0.0006738	0.0035	9.3849		587205.91	587205.91	57.43		Si
SLV 2	-1.56	6312.23	-20617	-0.0000084	0.0006738	0.0035	9.3849		102931.76	102931.76	16.31		Si
SLV 2	1.41	-6942.36	-19894	-0.0000083	0.0006738	0.0035	9.3849		143493.03	143493.03	20.67		Si
SLV 6	-1.56	24837.06	-53811	-0.0000239	0.0006738	0.0035	9.3849		247408.31	247408.31	9.96		Si
SLV 6	1.41	-10139.87	-63548	-0.0000241	0.0006738	0.0035	9.3849		330124.88	330124.88	32.56		Si
SLV 10	-1.56	31236.2	-82280	-0.0000354	0.0006738	0.0035	9.3849		364359.66	364359.66	11.66		Si
SLV 10	1.41	-4989.59	-100988	-0.0000361	0.0006738	0.0035	9.3849		478896.73	478896.73	95.98		Si
SLV 7	-1.56	-12966.96	-53854	-0.0000213	0.0006738	0.0035	9.3849		289857.64	289857.64	22.35		Si
SLV 7	1.41	16418.24	-63860	-0.0000256	0.0006738	0.0035	9.3849		289463.56	289463.56	17.63		Si
SLD 6	-1.56	16106.94	-61971	-0.0000249	0.0006738	0.0035	9.3849		281583.36	281583.36	17.48		Si
SLD 6	1.41	-1264.99	-74298	-0.0000259	0.0006738	0.0035	9.3849		374258.37	374258.37	295.86		Si
SLD 10	-1.56	18836.5	-74139	-0.0000297	0.0006738	0.0035	9.3849		331567.41	331567.41	17.6		Si
SLD 10	1.41	885.05	-90289	-0.0000314	0.0006738	0.0035	9.3849		396108.69	396108.69	447.55		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-1.56	12835.17	-97253	-77802	2577	9.3849	9.3849	-18422	10790	45567	95155	151772	47863	140722	No	54.62	Si
SLU 75	1.41	6814.69	-119993	-95995	4286	9.3849	9.3849	-22730	10833	45752	95155	151772	47863	140907	No	32.88	Si
SLU 77	-1.56	13087.8	-98289	-78631	2623	9.3849	9.3849	-18619	10816	45678	95155	151772	47863	140833	No	53.7	Si
SLU 77	1.41	7772.45	-121522	-97218	4344	9.3849	9.3849	-23020	10833	45752	95155	151772	47863	140907	No	32.44	Si
SLU 79	-1.56	12999.69	-97662	-78129	2587	9.3849	9.3849	-18500	10800	45611	95155	151772	47863	140766	No	54.4	Si
SLU 79	1.41	7786.9	-120474	-96380	4294	9.3849	9.3849	-22821	10833	45752	95155	151772	47863	140907	No	32.81	Si
SLU 81	-1.56	12931.88	-98858	-79087	2823	9.3849	9.3849	-18727	10830	45738	95155	151772	47863	140894	No	49.92	Si
SLU 81	1.41	7437.42	-121429	-97143	4538	9.3849	9.3849	-23002	10833	45752	95155	151772	47863	140907	No	31.05	Si
SLU 82	-1.56	12886.74	-98874	-79099	2767	9.3849	9.3849	-18729	10831	45740	95155	151772	47863	140895	No	50.92	Si
SLU 82	1.41	6653.22	-121670	-97336	4494	9.3849	9.3849	-23048	10833	45752	95155	151772	47863	140907	No	31.36	Si
SLU 83	-1.56	13139.37	-99910	-79928	2813	9.3849	9.3849	-18926	10833	45752	95155	151772	47863	140907	No	50.09	Si
SLU 83	1.41	7610.98	-123198	-98559	4552	9.3849	9.3849	-23337	10833	45752	95155	151772	47863	140907	No	30.95	Si
SLU 74	-1.56	12880.32	-97237	-77790	2632	9.3849	9.3849	-18420	10789	45565	95155	151772	47863	140721	No	53.46	Si
SLU 74	1.41	7598.9	-119753	-95802	4330	9.3849	9.3849	-22685	10833	45752	95155	151772	47863	140907	No	32.54	Si
SLU 80	-1.56	12954.55	-97677	-78142	2532	9.3849	9.3849	-18503	10800	45612	95155	151772	47863	140768	No	55.6	Si
SLU 80	1.41	7002.7	-120715	-96572	4250	9.3849	9.3849	-22867	10833	45752	95155	151772	47863	140907	No	33.15	Si
SLU 84	-1.56	13094.23	-99925	-79940	2758	9.3849	9.3849	-18929	10833	45752	95155	151772	47863	140907	No	51.1	Si
SLU 84	1.41	6826.77	-123439	-98751	4508	9.3849	9.3849	-23383	10833	45752	95155	151772	47863	140907	No	31.26	Si
SLU 78	-1.56	13042.66	-98304	-78643	2567	9.3849	9.3849	-18622	10816	45679	95155	151772	47863	140834	No	54.86	Si
SLU 78	1.41	6988.25	-121763	-97410	4300	9.3849	9.3849	-23065	10833	45752	95155	151772	47863	140907	No	32.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-1.56	24837.06	-53811	-43049	25558	9.3849	9.3849	-10193	14539	61400	95155	227658	47863	156555		6.13	Si
SLV 6	1.41	-10139.87	-63548	-50838	25840	9.3849	9.3849	-12038	14908	62958	95155	227658	47863	158113		6.12	Si
SLV 7	-1.56	-12966.96	-53854	-43084	-23165	9.3849	9.3849	-10202	14540	61407	95155	227658	47863	156562		6.76	Si
SLV 7	1.41	16418.24	-63860	-51088	-21983	9.3849	9.3849	-12097	14919	63008	95155	227658	47863	158163		7.19	Si
SLV 11	-1.56	-6567.82	-82323	-65859	-22235	9.3849	9.3849	-15594	15619	65962	95155	227658	47863	161117		7.25	Si
SLV 11	1.41	21568.51	-101300	-81040	-20152	9.3849	9.3849	-19189	16250	68627	95155	227658	47863	163783		8.13	Si
SLV 5	-1.56	21318.5	-53804	-43044	21748	9.3849	9.3849	-10192	14538	61399	95155	227658	47863	156554		7.2	Si
SLV 5	1.41	-9995.41	-63682	-50946	22046	9.3849	9.3849	-12063	14913	62979	95155	227658	47863	158135		7.17	Si
SLV 12	-1.56	-3049.26	-82330	-65864	-18426	9.3849	9.3849	-15596	15619	65963	95155	227658	47863	161118		8.74	Si
SLV 12	1.41	21424.06	-101165	-80932	-16358	9.3849	9.3849	-19164	16250	68627	95155	227658	47863	163783		10.01	Si
SLV 8	-1.56	-9448.39	-53861	-43089	-19355	9.3849	9.3849	-10203	14541	61408	95155	227658	47863	156563		8.09	Si
SLV 8	1.41	16273.78	-63725	-50980	-18189	9.3849	9.3849	-12071	14914	62986	95155	227658	47863	158142		8.69	Si
SLV 14	-1.56	27642.69	-115513	-92411	12871	9.3849	9.3849	-21882	16250	68627	95155	227658	47863	163783		12.73	Si
SLV 14	1.41	10225.21	-144694	-115755	15410	9.3849	9.3849	-27409	16250	68627	95155	227658	47863	163783		10.63	Si
SLV 10	-1.56	31236.2	-82280	-65824	26487	9.3849	9.3849	-15586	15617	65955	95155	227658	47863	161110		6.08	Si
SLV 10	1.41	-4989.59	-100988	-80790	27670	9.3849	9.3849	-19130	16250	68627	95155	227658	47863	163783		5.92	Si
SLV 9	-1.56	27717.64	-82273	-65819	22678	9.3849	9.3849	-15585	15617	65954	95155	227658	47863	161109		7.1	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	1.41	-4845.13	-101122	-80898	23876	9.3849	9.3849	-19155	16250	68627	95155	227658	47863	163783		6.86	Si
SLD 10	-1.56	18836.5	-74139	-59311	12578	9.3849	9.3849	-14044	15309	64652	95155	227658	47863	159808		12.71	Si
SLD 10	1.41	885.05	-90289	-72232	13770	9.3849	9.3849	-17103	15921	67237	95155	227658	47863	162392		11.79	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.075 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-19211	0.24	682.61	4215.26	6464.78	5340.02	7.82	Si
SLV 4	-19255	0.24	682.61	4224.62	6475.22	5349.92	7.84	Si
SLV 1	-19276	0.24	682.61	4229.14	6480.26	5354.7	7.84	Si
SLV 3	-19320	0.24	682.61	4238.5	6490.7	5364.6	7.86	Si
SLV 6	-58680	0.24	682.61	12202.07	15738.95	13970.51	20.47	Si
SLV 5	-58722	0.24	682.61	12210.14	15748.76	13979.45	20.48	Si
SLV 8	-58826	0.24	682.61	12229.93	15772.8	14001.37	20.51	Si
SLV 7	-58868	0.24	682.61	12238	15782.62	14010.31	20.52	Si
SLV 10	-92544	0.24	682.61	18332.93	23537.98	20935.46	30.67	Si
SLV 9	-92587	0.24	682.61	18340.17	23547.66	20943.92	30.68	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.075 Wa = 0.08 Ta = 0.0327

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-101122	-82273	643	0.547	12064.6	0.957	8.30268	4.02955	Si
SLV 10	-100988	-82280	641	0.547	12050.9	0.957	8.31185	4.02955	Si
SLV 11	-101300	-82323	-159	0.55	12082.6	0.957	8.35622	4.02955	Si
SLV 12	-101165	-82330	-161	0.551	12069	0.957	8.36496	4.02955	Si
SLV 15	-144953	-115518	-219	0.417	16523.8	0.968	6.26688	2.9746	Si
SLV 16	-144747	-115528	-222	0.418	16502.8	0.968	6.27364	2.9746	Si
SLV 13	-144900	-115503	22	0.419	16518.3	0.968	6.28768	2.9746	Si
SLV 14	-144694	-115513	19	0.419	16497.4	0.968	6.29499	2.9746	Si
SLV 5	-63682	-53804	936	0.778	8264.5	0.94	12.02738	4.02955	Si
SLV 6	-63548	-53811	934	0.779	8250.9	0.94	12.04829	4.02955	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	30.409	SLU 48	Si
V_SLU	30.953	SLU 83	Si
PF_SLV	9.961	SLV 6	Si
V_SLV	5.919	SLV 10	Si
PFFP_SLV	7.823	SLV 2	Si
R_SLV	2.06	SLV 9	Si

Maschio 55

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.284	-24.633	5.876	L4	L5	9.16	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	1.41	-4414.12	-100237	-0.0000579	0.0004492	0.0035	9.16	312246.1	424413.83	424413.83	96.15	No	Si
SLU 52	4.83	-4883.82	-78574	-0.0000453	0.0004492	0.0035	9.16	269641.7	356036.56	356036.56	72.9	No	Si
SLU 31	1.41	-3645.51	-92256	-0.0000528	0.0004492	0.0035	9.16	298145.84	399815.64	399815.64	109.67	No	Si
SLU 31	4.83	-4870.95	-73088	-0.0000421	0.0004492	0.0035	9.16	256675.37	337876.96	337876.96	69.37	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	1.41	-5873.81	-100497	-0.0000586	0.0004492	0.0035	9.16	312674.84	425163.92	425163.92	72.38	No	Si
SLU 64	4.83	-4107.51	-79315	-0.0000454	0.0004492	0.0035	9.16	271324.97	358488.42	358488.42	87.28	No	Si
SLU 43	1.41	-5481.12	-90319	-0.0000524	0.0004492	0.0035	9.16	294443.02	393820.56	393820.56	71.85	No	Si
SLU 43	4.83	-3481.88	-70739	-0.0000402	0.0004492	0.0035	9.16	250852.86	330099.26	330099.26	94.8	No	Si
SLU 61	1.41	-5113.08	-104155	-0.0000605	0.0004492	0.0035	9.16	318487.57	435699.61	435699.61	85.21	No	Si
SLU 61	4.83	-5023.49	-81872	-0.0000473	0.0004492	0.0035	9.16	277012.08	366951.75	366951.75	73.05	No	Si
SLU 19	1.41	-3951.77	-85996	-0.0000493	0.0004492	0.0035	9.16	285783.5	380440.6	380440.6	96.27	No	Si
SLU 19	4.83	-4384.98	-67810	-0.0000389	0.0004492	0.0035	9.16	243368.09	319778.08	319778.08	72.93	No	Si
SLU 40	1.41	-4344.46	-96174	-0.0000554	0.0004492	0.0035	9.16	305301.32	411943.61	411943.61	94.82	No	Si
SLU 40	4.83	-5010.61	-76386	-0.0000441	0.0004492	0.0035	9.16	264574.51	348792.15	348792.15	69.61	No	Si
SLU 73	1.41	-4806.81	-110415	-0.0000642	0.0004492	0.0035	9.16	327527.53	453729.21	453729.21	94.39	No	Si
SLU 73	4.83	-5509.46	-87151	-0.0000506	0.0004492	0.0035	9.16	288149.56	384013.84	384013.84	69.7	No	Si
SLU 82	1.41	-5505.77	-114333	-0.0000668	0.0004492	0.0035	9.16	332603.34	465002.94	465002.94	84.46	No	Si
SLU 82	4.83	-5649.12	-90448	-0.0000525	0.0004492	0.0035	9.16	294693.33	394220.31	394220.31	69.78	No	Si
SLU 10	1.41	-3252.81	-82078	-0.0000467	0.0004492	0.0035	9.16	277462.36	367634.23	367634.23	113.02	No	Si
SLU 10	4.83	-4245.32	-64512	-0.000037	0.0004492	0.0035	9.16	234642.33	308154.18	308154.18	72.59	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.41	-3074.95	-96986	-0.0000544	0.0006738	0.0035	9.16		432578.45	432578.45	140.68		Si
SLV 8	4.83	-70140.84	-68217	-0.0000628	0.0006738	0.0035	9.16		330322.09	330322.09	4.71		Si
SLV 12	1.41	-1530.88	-60991	-0.0000336	0.0006738	0.0035	9.16		303187.63	303187.63	198.05		Si
SLV 12	4.83	-62956.98	-47951	-0.0000485	0.0006738	0.0035	9.16		252926.16	252926.16	4.02		Si
SLV 10	1.41	-3877.12	-59033	-0.0000333	0.0006738	0.0035	9.16		295639.6	295639.6	76.25		Si
SLV 10	4.83	61291.23	-54452	-0.0000516	0.0006738	0.0035	9.16		237664.24	237664.24	3.88		Si
SLV 11	1.41	-3630.52	-60548	-0.0000341	0.0006738	0.0035	9.16		301476.77	301476.77	83.04		Si
SLV 11	4.83	-60634.67	-47971	-0.0000477	0.0006738	0.0035	9.16		253005.97	253005.97	4.17		Si
SLV 9	1.41	-5976.76	-58589	-0.0000338	0.0006738	0.0035	9.16		293928.74	293928.74	49.18		Si
SLV 9	4.83	63613.54	-54472	-0.0000525	0.0006738	0.0035	9.16		237745.55	237745.55	3.74		Si
SLV 7	1.41	-5174.6	-96542	-0.0000549	0.0006738	0.0035	9.16		431041.63	431041.63	83.3		Si
SLV 7	4.83	-67818.54	-68238	-0.0000619	0.0006738	0.0035	9.16		330397.84	330397.84	4.87		Si
SLV 6	1.41	-5421.2	-95028	-0.0000541	0.0006738	0.0035	9.16		425798.24	425798.24	78.54		Si
SLV 6	4.83	54107.37	-74718	-0.0000606	0.0006738	0.0035	9.16		311972.7	311972.7	5.77		Si
SLV 13	1.41	-3915.52	-17162	-0.0000105	0.0006738	0.0035	9.16		126145.73	126145.73	32.22		Si
SLV 13	4.83	29128.74	-28559	-0.0000256	0.0006738	0.0035	9.16		132669.31	132669.31	4.55		Si
SLV 5	1.41	-7520.84	-94584	-0.0000547	0.0006738	0.0035	9.16		424261.41	424261.41	56.41		Si
SLV 5	4.83	56429.68	-74738	-0.0000614	0.0006738	0.0035	9.16		312041.96	312041.96	5.53		Si
SLV 14	1.41	-693.14	-17843	-0.0000097	0.0006738	0.0035	9.16		129064.76	129064.76	186.2		Si
SLV 14	4.83	25564.63	-28527	-0.0000243	0.0006738	0.0035	9.16		132536.11	132536.11	5.18		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.41	-6117.48	-114338	-81566	-6096	9.16	9.16	-31802	10833	27785	108749	92173	46716	136534	No	22.4	Si
SLU 77	4.83	-4529.64	-91314	-65141	-4986	9.16	9.16	-25398	10833	27785	108749	92173	46716	136534	No	27.38	Si
SLU 74	1.41	-6183.59	-112658	-80367	-5938	9.16	9.16	-31335	10833	27785	108749	92173	46716	136534	No	22.99	Si
SLU 74	4.83	-4788.38	-89660	-63961	-4844	9.16	9.16	-24938	10833	27785	108749	92173	46716	136534	No	28.19	Si
SLU 80	1.41	-5232.78	-113615	-81050	-5820	9.16	9.16	-31601	10833	27785	108749	92173	46716	136534	No	23.46	Si
SLU 80	4.83	-4769.35	-90430	-64510	-4662	9.16	9.16	-25152	10833	27785	108749	92173	46716	136534	No	29.29	Si
SLU 75	1.41	-5346.31	-112898	-80539	-5682	9.16	9.16	-31402	10833	27785	108749	92173	46716	136534	No	24.03	Si
SLU 75	4.83	-5122.33	-89704	-63992	-4531	9.16	9.16	-24950	10833	27785	108749	92173	46716	136534	No	30.13	Si
SLU 81	1.41	-6343.05	-114093	-81391	-5988	9.16	9.16	-31734	10833	27785	108749	92173	46716	136534	No	22.8	Si
SLU 81	4.83	-5315.17	-90404	-64492	-4886	9.16	9.16	-25145	10833	27785	108749	92173	46716	136534	No	27.95	Si
SLU 78	1.41	-5280.2	-114578	-81737	-5841	9.16	9.16	-31869	10833	27785	108749	92173	46716	136534	No	23.37	Si
SLU 78	4.83	-4863.59	-91358	-65172	-4673	9.16	9.16	-25410	10833	27785	108749	92173	46716	136534	No	29.22	Si
SLU 82	1.41	-5505.77	-114333	-81562	-5732	9.16	9.16	-31801	10833	27785	108749	92173	46716	136534	No	23.82	Si
SLU 82	4.83	-5649.12	-90448	-64524	-4573	9.16	9.16	-25157	10833	27785	108749	92173	46716	136534	No	29.86	Si
SLU 79	1.41	-6070.06	-113375	-80879	-6075	9.16	9.16	-31534	10833	27785	108749	92173	46716	136534	No	22.47	Si
SLU 79	4.83	-4435.4	-90386	-64479	-4975	9.16	9.16	-25140	10833	27785	108749	92173	46716	136534	No	27.45	Si
SLU 84	1.41	-5439.66	-116013	-82761	-5891	9.16	9.16	-32268	10833	27785	108749	92173	46716	136534	No	23.18	Si
SLU 84	4.83	-5390.38	-92102	-65704	-4715	9.16	9.16	-25617	10833	27785	108749	92173	46716	136534	No	28.96	Si
SLU 83	1.41	-6276.94	-115773	-82590	-6146	9.16	9.16	-32201	10833	27785	108749	92173	46716	136534	No	22.21	Si
SLU 83	4.83	-5056.43	-92059	-65672	-5028	9.16	9.16	-25605	10833	27785	108749	92173	46716	136534	No	27.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.41	-3915.52	-17162	-12243	-25117	9.16	9.16	-4773	13455	34509	108749	138259	46716	143257		5.7	Si
SLV 13	4.83	29128.74	-28559	-20373	-24066	9.16	9.16	-7943	14089	36135	108749	138259	46716	144883		6.02	Si
SLV 12	1.41	-1530.88	-60991	-43510	33863	9.16	9.16	-16964	15893	40762	108749	138259	46716	149511		4.42	Si
SLV 12	4.83	-62956.98	-47951	-34207	30087	9.16	9.16	-13337	15167	38901	108749	138259	46716	147650		4.91	Si
SLD 9	1.41	-5190.28	-69500	-49580	-22351	9.16	9.16	-19331	16250	41678	108749	138259	46716	150427		6.73	Si
SLD 9	4.83	26244.02	-58421	-41676	-19829	9.16	9.16	-16249	15750	40395	108749	138259	46716	149144		7.52	Si
SLV 9	1.41	-5976.76	-58589	-41796	-45667	9.16	9.16	-16296	15759	40419	108749	138259	46716	149168		3.27	Si
SLV 9	4.83	63613.54	-54472	-38859	-40963	9.16	9.16	-15151	15530	39832	108749	138259	46716	148581		3.63	Si
SLV 6	1.41	-5421.2	-95028	-67791	-37275	9.16	9.16	-26431	16250	41678	108749	138259	46716	150427		4.04	Si
SLV 6	4.83	54107.37	-74718	-53302	-31990	9.16	9.16	-20782	16250	41678	108749	138259	46716	150427		4.7	Si
SLV 10	1.41	-3877.12	-59033	-42113	-41106	9.16	9.16	-16420	15784	40483	108749	138259	46716	149231		3.63	Si
SLV 10	4.83	61291.23	-54452	-38844	-36415	9.16	9.16	-15145	15529	39829	108749	138259	46716	148578		4.08	Si
SLV 11	1.41	-3630.52	-60548	-43193	29301	9.16	9.16	-16841	15868	40699	108749	138259	46716	149447		5.1	Si
SLV 11	4.83	-60634.67	-47971	-34222	25539	9.16	9.16	-13343	15169	38904	108749	138259	46716	147653		5.78	Si
SLV 7	1.41	-5174.6	-96542	-68871	33132	9.16	9.16	-26852	16250	41678	108749	138259	46716	150427		4.54	Si
SLV 7	4.83	-67818.54	-68238	-48679	29964	9.16	9.16	-18980	16250	41678	108749	138259	46716	150427		5.02	Si
SLV 5	1.41	-7520.84	-94584	-67474	-41837	9.16	9.16	-26308	16250	41678	108749	138259	46716	150427		3.6	Si
SLV 5	4.83	56429.68	-74738	-53317	-36538	9.16	9.16	-20788	16250	41678	108749	138259	46716	150427		4.12	Si
SLV 8	1.41	-3074.95	-96986	-69188	37693	9.16	9.16	-26976	16250	41678	108749	138259	46716	150427		3.99	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	4.83	-70140.84	-68217	-48664	34512	9.16	9.16	-18974	16250	41678	108749	138259	46716	150427		4.36	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-24337	0.31	713.2	3230.75	4908.64	4069.69	5.71	Si
SLV 16	-24577	0.31	713.2	3260.85	4945.26	4103.05	5.75	Si
SLV 13	-25933	0.31	713.2	3430.3	5152.27	4291.29	6.02	Si
SLV 14	-26173	0.31	713.2	3460.17	5188.91	4324.54	6.06	Si
SLV 11	-53765	0.31	713.2	6666.18	9332.21	7999.2	11.22	Si
SLV 12	-53921	0.31	713.2	6683.06	9355.46	8019.26	11.24	Si
SLV 9	-59085	0.31	713.2	7232.2	10119.75	8675.98	12.16	Si
SLV 10	-59241	0.31	713.2	7248.58	10142.8	8695.69	12.19	Si
SLV 7	-80549	0.31	713.2	9344.57	13272.85	11308.71	15.86	Si
SLV 8	-80706	0.31	713.2	9358.95	13295.73	11327.34	15.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-74738	-94584	-747	0.658	8845.9	0.959	9.98312	9.2784	Si
SLV 6	-74718	-95028	-746	0.659	8843.8	0.959	9.98564	9.2784	Si
SLV 7	-68238	-96542	-179	0.719	8185	0.956	10.92972	9.2784	Si
SLV 8	-68217	-96986	-179	0.719	8182.9	0.956	10.93273	9.2784	Si
SLV 9	-54472	-58589	182	0.868	6787	0.948	13.31514	9.2784	Si
SLV 10	-54452	-59033	182	0.868	6784.9	0.948	13.31944	9.2784	Si
SLV 11	-47971	-60548	750	0.954	6127.8	0.943	14.71042	9.2784	Si
SLV 12	-47951	-60991	750	0.955	6125.7	0.943	14.71577	9.2784	Si
SLV 1	-96113	-137144	-1632	0.523	11020.4	0.966	7.86822	4.61088	Si
SLV 2	-96081	-137826	-1631	0.523	11017.2	0.966	7.87061	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	69.366	SLU 31	Si
V_SLU	22.214	SLU 83	Si
PF_SLV	3.737	SLV 9	Si
V_SLV	3.266	SLV 9	Si
PFFP_SLV	5.706	SLV 15	Si
R_SLV	1.076	SLV 5	Si

Maschio 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.763	5.826	-24.633	5.826	L4	L5	1.87	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 13	2.31	548.02	-13460	-0.0000455	0.0003743	0.0035	1.87	9407.34	10334	10334	18.86	No	Si
SLU 13	4.21	-176.54	-13392	-0.0000416	0.0003743	0.0035	1.87	9375.75	11148.24	11148.24	63.15	No	Si
SLU 42	2.31	633.98	-15847	-0.0000542	0.0003743	0.0035	1.87	10412.26	11650.82	11650.82	18.38	No	Si
SLU 42	4.21	-399.35	-16327	-0.0000534	0.0003743	0.0035	1.87	10590.21	12788.26	12788.26	32.02	No	Si
SLU 10	2.31	541.88	-13124	-0.0000444	0.0003743	0.0035	1.87	9249.69	10153.04	10153.04	18.74	No	Si
SLU 10	4.21	-161.59	-13015	-0.0000403	0.0003743	0.0035	1.87	9197.73	10922.24	10922.24	67.59	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	2.31	685.27	-17778	-0.0000612	0.0003743	0.0035	1.87	11078.79	12760.3	12760.3	18.62	No	Si
SLU 73	4.21	-267.9	-17729	-0.0000568	0.0003743	0.0035	1.87	11063.4	13368.29	13368.29	49.9	No	Si
SLU 34	2.31	652.92	-15093	-0.0000519	0.0003743	0.0035	1.87	10116.4	11227.94	11227.94	17.2	No	Si
SLU 34	4.21	-317.85	-15430	-0.0000496	0.0003743	0.0035	1.87	10250.99	12337.59	12337.59	38.82	No	Si
SLU 23	2.31	527.86	-13274	-0.0000447	0.0003743	0.0035	1.87	9320.54	10233.65	10233.65	19.39	No	Si
SLU 23	4.21	-148.18	-13117	-0.0000405	0.0003743	0.0035	1.87	9246.65	10983.47	10983.47	74.12	No	Si
SLU 33	2.31	590.11	-15373	-0.0000522	0.0003743	0.0035	1.87	10228.65	11384.44	11384.44	19.29	No	Si
SLU 33	4.21	-337.96	-15667	-0.0000506	0.0003743	0.0035	1.87	10343.18	12467.42	12467.42	36.89	No	Si
SLU 40	2.31	627.85	-15511	-0.000053	0.0003743	0.0035	1.87	10282.77	11461.64	11461.64	18.26	No	Si
SLU 40	4.21	-384.39	-15950	-0.000052	0.0003743	0.0035	1.87	10451.04	12610.82	12610.82	32.81	No	Si
SLU 76	2.31	691.4	-18114	-0.0000624	0.0003743	0.0035	1.87	11181.53	12958.09	12958.09	18.74	No	Si
SLU 76	4.21	-282.85	-18106	-0.0000582	0.0003743	0.0035	1.87	11179.03	13528.96	13528.96	47.83	No	Si
SLU 31	2.31	646.79	-14757	-0.0000507	0.0003743	0.0035	1.87	9978.01	11041.28	11041.28	17.07	No	Si
SLU 31	4.21	-302.9	-15053	-0.0000483	0.0003743	0.0035	1.87	10099.94	12123.35	12123.35	40.02	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	2.31	4077.51	-14686	-0.0000826	0.0005615	0.0035	1.87		11810.43	11810.43	2.9		Si
SLV 3	4.21	-1759.34	-16157	-0.0000646	0.0005615	0.0035	1.87		13699.18	13699.18	7.79		Si
SLV 16	2.31	-3872.8	-10304	-0.0000674	0.0005615	0.0035	1.87		9551.11	9551.11	2.47		Si
SLV 16	4.21	1637.69	-3492	-0.0000266	0.0005615	0.0035	1.87		3339.58	3339.58	2.04		Si
SLV 12	2.31	-1658.05	-11196	-0.0000481	0.0005615	0.0035	1.87		10227.25	10227.25	6.17		Si
SLV 12	4.21	671.17	-1875	-0.0000114	0.0005615	0.0035	1.87		1910.02	1910.02	2.85		Si
SLV 15	2.31	-3426.77	-9533	-0.0000603	0.0005615	0.0035	1.87		8965.83	8965.83	2.62		Si
SLV 15	4.21	1282.86	-3924	-0.0000228	0.0005615	0.0035	1.87		3714.54	3714.54	2.9		Si
SLV 4	2.31	3631.48	-15456	-0.0000808	0.0005615	0.0035	1.87		12364.12	12364.12	3.4		Si
SLV 4	4.21	-1404.5	-15726	-0.0000598	0.0005615	0.0035	1.87		13415.07	13415.07	9.55		Si
SLV 1	2.31	4497.04	-15351	-0.000089	0.0005615	0.0035	1.87		12288.42	12288.42	2.73		Si
SLV 1	4.21	-1896.53	-21277	-0.0000826	0.0005615	0.0035	1.87		16874.89	16874.89	8.9		Si
SLV 11	2.31	-1367.42	-10694	-0.0000438	0.0005615	0.0035	1.87		9849.9	9849.9	7.2		Si
SLV 11	4.21	439.96	-2156	-0.00001	0.0005615	0.0035	1.87		2162.56	2162.56	4.92		Si
SLV 2	2.31	4051.01	-16122	-0.0000871	0.0005615	0.0035	1.87		12846	12846	3.17		Si
SLV 2	4.21	-1541.69	-20846	-0.0000776	0.0005615	0.0035	1.87		16617.96	16617.96	10.78		Si
SLV 13	2.31	-3007.24	-10199	-0.0000579	0.0005615	0.0035	1.87		9471	9471	3.15		Si
SLV 13	4.21	1145.66	-9044	-0.0000367	0.0005615	0.0035	1.87		7890.99	7890.99	6.89		Si
SLV 14	2.31	-3453.27	-10969	-0.0000646	0.0005615	0.0035	1.87		10060.8	10060.8	2.91		Si
SLV 14	4.21	1500.5	-8612	-0.0000388	0.0005615	0.0035	1.87		7580.81	7580.81	5.05		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	2.31	685.27	-17778	-14804	1595	1.87	1.87	-28274	10714	5610	38062	15679	4768	20447	No	12.82	Si
SLU 73	4.21	-267.9	-17729	-14763	1692	1.87	1.87	-28195	10704	5604	38062	15679	4768	20447	No	12.08	Si
SLU 83	2.31	567.59	-19046	-15860	1653	1.87	1.87	-30291	10833	5672	38062	15679	4768	20447	No	12.37	Si
SLU 83	4.21	-387.13	-19106	-15909	1741	1.87	1.87	-30385	10833	5672	38062	15679	4768	20447	No	11.75	Si
SLU 42	2.31	633.98	-15847	-13196	1640	1.87	1.87	-25203	10305	5396	38062	15679	4768	20447	No	12.47	Si
SLU 42	4.21	-399.35	-16327	-13596	1723	1.87	1.87	-25967	10407	5449	38062	15679	4768	20447	No	11.87	Si
SLU 80	2.31	627.62	-18569	-15463	1604	1.87	1.87	-29532	10833	5672	38062	15679	4768	20447	No	12.75	Si
SLU 80	4.21	-313	-18551	-15448	1699	1.87	1.87	-29504	10833	5672	38062	15679	4768	20447	No	12.03	Si
SLU 40	2.31	627.85	-15511	-12916	1610	1.87	1.87	-24668	10234	5358	38062	15679	4768	20447	No	12.7	Si
SLU 40	4.21	-384.39	-15950	-13282	1691	1.87	1.87	-25367	10327	5407	38062	15679	4768	20447	No	12.09	Si
SLU 78	2.31	634.72	-18731	-15597	1614	1.87	1.87	-29789	10833	5672	38062	15679	4768	20447	No	12.67	Si
SLU 78	4.21	-317.92	-18720	-15588	1709	1.87	1.87	-29772	10833	5672	38062	15679	4768	20447	No	11.96	Si
SLU 84	2.31	672.46	-18869	-15712	1729	1.87	1.87	-30008	10833	5672	38062	15679	4768	20447	No	11.83	Si
SLU 84	4.21	-364.35	-19004	-15824	1825	1.87	1.87	-30223	10833	5672	38062	15679	4768	20447	No	11.2	Si
SLU 81	2.31	561.45	-18710	-15580	1622	1.87	1.87	-29756	10833	5672	38062	15679	4768	20447	No	12.6	Si
SLU 81	4.21	-372.18	-18728	-15595	1709	1.87	1.87	-29785	10833	5672	38062	15679	4768	20447	No	11.96	Si
SLU 76	2.31	691.4	-18114	-15084	1625	1.87	1.87	-28809	10786	5647	38062	15679	4768	20447	No	12.58	Si
SLU 76	4.21	-282.85	-18106	-15077	1724	1.87	1.87	-28795	10784	5646	38062	15679	4768	20447	No	11.86	Si
SLU 82	2.31	666.33	-18532	-15432	1699	1.87	1.87	-29473	10833	5672	38062	15679	4768	20447	No	12.04	Si
SLU 82	4.21	-349.4	-18626	-15510	1794	1.87	1.87	-29623	10833	5672	38062	15679	4768	20447	No	11.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.31	-3453.27	-10969	-9134	-3958	1.87	1.8605	-17445	13906	7244	38062	23518	4768	28287		7.15	Si
SLV 14	4.21	1500.5	-8612	-7172	-3236	1.87	1.87	-13697	13156	6888	38062	23518	4768	28287		8.74	Si
SLV 2	2.31	4051.01	-16122	-13425	6260	1.87	1.87	-25640	15545	8139	38062	23518	4768	28287		4.52	Si
SLV 2	4.21	-1541.69	-20846	-17359	5490	1.87	1.87	-33153	16250	8508	38062	23518	4768	28287		5.15	Si
SLV 4	2.31	3631.48	-15456	-12871	4705	1.87	1.87	-24581	15333	8028	38062	23518	4768	28287		6.01	Si
SLV 4	4.21	-1404.5	-15726	-13095	4102	1.87	1.87	-25010	15419	8073	38062	23518	4768	28287		6.9	Si
SLD 1	2.31	2104.73	-13914	-11587	3617	1.87	1.87	-22129	14842	7771	38062	23518	4768	28287		7.82	Si
SLD 1	4.21	-886.23	-16226	-13512	3321	1.87	1.87	-25806	15578	8156	38062	23518	4768	28287		8.52	Si
SLV 6	2.31	1991.66	-14961	-12458	4675	1.87	1.87	-23794	15175	7946	38062	23518	4768	28287		6.05	Si
SLV 6	4.21	-698.8	-22613	-18830	4232	1.87	1.87	-35963	16250	8508	38062	23518	4768	28287		6.68	Si
SLV 16	2.31	-3872.8	-10304	-8580	-5513	1.87	1.6774	-18406	14098	6621	38062	23518	4768	28287		5.13	Si
SLV 16	4.21	1637.69	-3492	-2908	-4624	1.87	1.3981	-5554	11527	4512	38062	23518	4768	28287		6.12	Si
SLV 5	2.31	2282.29	-14459	-12040	5335	1.87	1.87	-22995	15016	7862	38062	23518	4768	28287		5.3	Si
SLV 5	4.21	-930.01	-22894	-19064	4892	1.87	1.87	-36410	16250	8508	38062	23518	4768	28287		5.78	Si
SLV 1	2.31	4497.04	-15351	-12783	7274	1.87	1.87	-24414	15300	8011	38062	23518	4768	28287		3.89	Si
SLV 1	4.21	-1896.53	-21277	-17718	6503	1.87	1.87	-33839	16250	8508	38062	23518	4768	28287		4.35	Si
SLV 15	2.31	-3426.77	-9533	-7938	-4500	1.87	1.7266	-16542	13725	6635	38062	23518	4768	28287		6.29	Si
SLV 15	4.21	1282.86	-3924	-3267	-3611	1.87	1.8241	-6240	11665	5958	38062	23518	4768	28287		7.83	Si
SLV 3	2.31	4077.51	-14686	-12229	5719	1.87	1.87	-23356	15088	7900	38062	23518	4768	28287		4.95	Si
SLV 3	4.21	-1759.34	-16157	-13454	5115	1.87	1.87	-25696	15556	8145	38062	23518	4768	28287		5.53	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.31	9416	-4930	145.6	647.69	4.45	Si
SLV 12	179667	0.31	9631	-5043	145.6	661.49	4.54	Si
SLV 15	179667	0.31	12616	-6606	145.6	848.39	5.83	Si
SLV 16	179667	0.31	12946	-6779	145.6	868.54	5.97	Si
SLV 7	179667	0.31	14201	-7435	145.6	944.16	6.48	Si
SLV 8	179667	0.31	14416	-7548	145.6	956.98	6.57	Si
SLV 13	179667	0.31	20192	-10573	145.6	1284.45	8.82	Si
SLV 14	179667	0.31	20522	-10745	145.6	1302.2	8.94	Si
SLV 3	179667	0.31	28564	-14956	145.6	1702.2	11.69	Si
SLV 4	179667	0.31	28894	-15129	145.6	1717.3	11.79	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-20667	-10674	-744	0.482	2356.2	0.968	7.23983	9.2784	No
SLV 6	-20532	-10969	-744	0.485	2342.5	0.967	7.28148	9.2784	No
SLV 9	-18185	-8227	-603	0.544	2103.6	0.964	8.20772	9.2784	No
SLV 10	-18050	-8522	-603	0.548	2089.9	0.964	8.26162	9.2784	No
SLV 1	-17849	-13978	-436	0.562	2069.5	0.963	8.47232	4.61088	Si
SLV 2	-17642	-14431	-437	0.567	2048.4	0.963	8.55977	4.61088	Si
SLV 3	-12922	-14432	-32	0.766	1568.4	0.953	11.68139	4.61088	Si
SLV 4	-12715	-14885	-32	0.776	1547.4	0.952	11.84812	4.61088	Si
SLV 7	-4241	-12186	604	1.744	691.9	0.909	27.86717	9.2784	Si
SLV 8	-4106	-12481	604	1.784	678.5	0.908	28.54684	9.2784	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.071	SLU 31	Si
V_SLU	11.202	SLU 84	Si
PF_SLV	2.039	SLV 16	Si
V_SLV	3.889	SLV 1	Si
PFFP_SLV	4.448	SLV 11	Si
R_SLV	0.78	SLV 5	No

Maschio 57

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.763	5.826	L4	L5	2.08	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	2.31	-4301.55	-17952	-0.0000847	0.0003743	0.0035	2.08	13017.58	15743.34	15743.34	3.66	No	Si
SLU 44	4.21	3142.45	-15922	-0.0000685	0.0003743	0.0035	2.08	12112.45	13376.68	13376.68	4.26	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	2.31	-4361.4	-18408	-0.0000867	0.0003743	0.0035	2.08	13201.11	15959.51	15959.51	3.66	No	Si
SLU 47	4.21	3188.39	-16389	-0.0000703	0.0003743	0.0035	2.08	12333.75	13657.89	13657.89	4.28	No	Si
SLU 70	2.31	-4622.76	-21327	-0.0000987	0.0003743	0.0035	2.08	14202.57	17327.49	17327.49	3.75	No	Si
SLU 70	4.21	3564.94	-19348	-0.0000829	0.0003743	0.0035	2.08	13556.16	15493.57	15493.57	4.35	No	Si
SLU 67	2.31	-4562.91	-20871	-0.0000966	0.0003743	0.0035	2.08	14065.75	17104.44	17104.44	3.75	No	Si
SLU 67	4.21	3519	-18880	-0.000081	0.0003743	0.0035	2.08	13383.38	15197.58	15197.58	4.32	No	Si
SLU 73	2.31	-4808.65	-22077	-0.0001029	0.0003743	0.0035	2.08	14411.72	17701.77	17701.77	3.68	No	Si
SLU 73	4.21	3730.24	-20135	-0.0000869	0.0003743	0.0035	2.08	13829.77	15997.83	15997.83	4.29	No	Si
SLU 65	2.31	-4578.04	-20125	-0.0000942	0.0003743	0.0035	2.08	13826.38	16747.15	16747.15	3.66	No	Si
SLU 65	4.21	3444.98	-18125	-0.000078	0.0003743	0.0035	2.08	13088.16	14724.23	14724.23	4.27	No	Si
SLU 76	2.31	-4868.5	-22533	-0.000105	0.0003743	0.0035	2.08	14529.23	17933.81	17933.81	3.68	No	Si
SLU 76	4.21	3776.18	-20603	-0.0000888	0.0003743	0.0035	2.08	13981.96	16300.75	16300.75	4.32	No	Si
SLU 52	2.31	-4532.16	-19904	-0.0000931	0.0003743	0.0035	2.08	13751.76	16643.11	16643.11	3.67	No	Si
SLU 52	4.21	3427.71	-17932	-0.0000772	0.0003743	0.0035	2.08	13009.42	14603.79	14603.79	4.26	No	Si
SLU 68	2.31	-4637.89	-20581	-0.0000963	0.0003743	0.0035	2.08	13975.13	16964.64	16964.64	3.66	No	Si
SLU 68	4.21	3490.92	-18593	-0.0000798	0.0003743	0.0035	2.08	13273.32	15016.84	15016.84	4.3	No	Si
SLU 55	2.31	-4592.01	-20360	-0.0000952	0.0003743	0.0035	2.08	13904.04	16858.94	16858.94	3.67	No	Si
SLU 55	4.21	3473.64	-18399	-0.0000791	0.0003743	0.0035	2.08	13197.74	14895.95	14895.95	4.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	2.31	-7842.21	-15012	-0.0001097	0.0005615	0.0035	2.08		14718.64	14718.64	1.88		Si
SLV 16	4.21	5038.84	-13607	-0.0000748	0.0005615	0.0035	2.08		12484.2	12484.2	2.48		Si
SLV 15	2.31	-7129.15	-14424	-0.0000992	0.0005615	0.0035	2.08		14257.21	14257.21	2		Si
SLV 15	4.21	4539.6	-12950	-0.0000688	0.0005615	0.0035	2.08		11982.8	11982.8	2.64		Si
SLD 16	2.31	-5269.11	-15419	-0.0000817	0.0005615	0.0035	2.08		15030.49	15030.49	2.85		Si
SLD 16	4.21	3681.66	-13929	-0.0000649	0.0005615	0.0035	2.08		12731.33	12731.33	3.46		Si
SLV 13	2.31	-6397.81	-17485	-0.0000972	0.0005615	0.0035	2.08		16602.75	16602.75	2.6		Si
SLV 13	4.21	5812.46	-15950	-0.0000878	0.0005615	0.0035	2.08		14298.98	14298.98	2.46		Si
SLV 10	2.31	-3482.4	-21194	-0.0000845	0.0005615	0.0035	2.08		19248.24	19248.24	5.53		Si
SLV 10	4.21	5790.47	-19594	-0.0000984	0.0005615	0.0035	2.08		17202.47	17202.47	2.97		Si
SLV 11	2.31	-5455.59	-10608	-0.0000742	0.0005615	0.0035	2.08		11107.13	11107.13	2.04		Si
SLV 11	4.21	1222.32	-9168	-0.0000329	0.0005615	0.0035	2.08		9016.69	9016.69	7.38		Si
SLV 14	2.31	-7110.87	-18073	-0.0001054	0.0005615	0.0035	2.08		17032.76	17032.76	2.4		Si
SLV 14	4.21	6311.7	-16606	-0.0000941	0.0005615	0.0035	2.08		14814.93	14814.93	2.35		Si
SLV 12	2.31	-5920.2	-10991	-0.0000811	0.0005615	0.0035	2.08		11428.93	11428.93	1.93		Si
SLV 12	4.21	1547.61	-9596	-0.0000365	0.0005615	0.0035	2.08		9392.77	9392.77	6.07		Si
SLD 12	2.31	-4467.41	-13660	-0.0000703	0.0005615	0.0035	2.08		13637.93	13637.93	3.05		Si
SLD 12	4.21	2168.01	-12163	-0.0000482	0.0005615	0.0035	2.08		11385.75	11385.75	5.25		Si
SLD 15	2.31	-4962.83	-15166	-0.0000785	0.0005615	0.0035	2.08		14836.68	14836.68	2.99		Si
SLD 15	4.21	3467.23	-13647	-0.0000624	0.0005615	0.0035	2.08		12514.89	12514.89	3.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	2.31	-4868.5	-22533	-18764	-4982	2.08	2.08	-32218	10833	6309	38062	17440	5304	22744	No	4.57	Si
SLU 76	4.21	3776.18	-20603	-17156	-4937	2.08	2.08	-29457	10833	6309	38062	17440	5304	22744	No	4.61	Si
SLU 73	2.31	-4808.65	-22077	-18384	-4920	2.08	2.08	-31566	10833	6309	38062	17440	5304	22744	No	4.62	Si
SLU 73	4.21	3730.24	-20135	-16767	-4876	2.08	2.08	-28789	10783	6280	38062	17440	5304	22744	No	4.66	Si
SLU 83	2.31	-4715.33	-23619	-19668	-4940	2.08	2.08	-33769	10833	6309	38062	17440	5304	22744	No	4.6	Si
SLU 83	4.21	3922.94	-21696	-18067	-4973	2.08	2.08	-31021	10833	6309	38062	17440	5304	22744	No	4.57	Si
SLU 81	2.31	-4655.48	-23162	-19288	-4878	2.08	2.08	-33117	10833	6309	38062	17440	5304	22744	No	4.66	Si
SLU 81	4.21	3877	-21229	-17678	-4911	2.08	2.08	-30353	10833	6309	38062	17440	5304	22744	No	4.63	Si
SLU 75	2.31	-4793.51	-22823	-19005	-4939	2.08	2.08	-32632	10833	6309	38062	17440	5304	22744	No	4.6	Si
SLU 75	4.21	3804.26	-20890	-17395	-4925	2.08	2.08	-29868	10833	6309	38062	17440	5304	22744	No	4.62	Si
SLU 80	2.31	-4827.55	-23089	-19227	-4976	2.08	2.08	-33012	10833	6309	38062	17440	5304	22744	No	4.57	Si
SLU 80	4.21	3831.92	-21163	-17623	-4961	2.08	2.08	-30259	10833	6309	38062	17440	5304	22744	No	4.58	Si
SLU 78	2.31	-4853.36	-23279	-19385	-5001	2.08	2.08	-33284	10833	6309	38062	17440	5304	22744	No	4.55	Si
SLU 78	4.21	3850.19	-21358	-17785	-4987	2.08	2.08	-30537	10833	6309	38062	17440	5304	22744	No	4.56	Si
SLU 82	2.31	-4806.68	-23013	-19164	-4981	2.08	2.08	-32904	10833	6309	38062	17440	5304	22744	No	4.57	Si
SLU 82	4.21	3862.3	-21089	-17561	-4968	2.08	2.08	-30153	10833	6309	38062	17440	5304	22744	No	4.58	Si
SLU 84	2.31	-4866.53	-23470	-19543	-5043	2.08	2.08	-33556	10833	6309	38062	17440	5304	22744	No	4.51	Si
SLU 84	4.21	3908.23	-21557	-17951	-5030	2.08	2.08	-30822	10833	6309	38062	17440	5304	22744	No	4.52	Si
SLU 77	2.31	-4702.17	-23428	-19509	-4899	2.08	2.08	-33497	10833	6309	38062	17440	5304	22744	No	4.64	Si
SLU 77	4.21	3864.9	-21497	-17901	-4929	2.08	2.08	-30736	10833	6309	38062	17440	5304	22744	No	4.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	2.31	-5269.11	-15419	-12839	-5182	2.08	2.08	-22046	14826	8635	38062	26160	5304	31464		6.07	Si
SLD 16	4.21	3681.66	-13929	-11599	-4883	2.08	2.08	-19915	14400	8386	38062	26160	5304	31464		6.44	Si
SLD 15	2.31	-4962.83	-15166	-12629	-4890	2.08	2.08	-21684	14754	8593	38062	26160	5304	31464		6.43	Si
SLD 15	4.21	3467.23	-13647	-11364	-4594	2.08	2.08	-19512	14319	8340	38062	26160	5304	31464		6.85	Si
SLV 13	2.31	-6397.81	-17485	-14560	-6799	2.08	2.0223	-24999	15416	8729	38062	26160	5304	31464		4.63	Si
SLV 13	4.21	5812.46	-15950	-13282	-6752	2.08	2.0268	-22805	14978	8500	38062	26160	5304	31464		4.66	Si
SLD 13	2.31	-4634.48	-16510	-13748	-4871	2.08	2.08	-23605	15138	8816	38062	26160	5304	31464		6.46	Si
SLD 13	4.21	4030.42	-14975	-12470	-4864	2.08	2.08	-21412	14699	8561	38062	26160	5304	31464		6.47	Si
SLV 16	2.31	-7842.21	-15012	-12501	-7521	2.08	1.5528	-29194	16250	7065	38062	26160	5304	31464		4.18	Si
SLV 16	4.21	5038.84	-13607	-11331	-6799	2.08	2.0091	-19455	14308	8049	38062	26160	5304	31464		4.63	Si
SLD 14	2.31	-4940.76	-16762	-13958	-5162	2.08	2.08	-23966	15210	8858	38062	26160	5304	31464		6.09	Si
SLD 14	4.21	4244.86	-15257	-12705	-5153	2.08	2.08	-21815	14780	8608	38062	26160	5304	31464		6.11	Si
SLV 14	2.31	-7110.87	-18073	-15049	-7477	2.08	1.9397	-28124	16041	8712	38062	26160	5304	31464		4.21	Si
SLV 14	4.21	6311.7	-16606	-13828	-7426	2.08	1.9798	-23744	15165	8407	38062	26160	5304	31464		4.24	Si
SLV 10	2.31	-3482.4	-21194	-17648	-4700	2.08	2.08	-30303	16250	9464	38062	26160	5304	31464		6.69	Si
SLV 10	4.21	5790.47	-19594	-16316	-5716	2.08	2.08	-28016	16020	9330	38062	26160	5304	31464		5.5	Si
SLV 15	2.31	-7129.15	-14424	-12011	-6842	2.08	1.6372	-26553	15727	7210	38062	26160	5304	31464		4.6	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	4.21	4539.6	-12950	-10784	-6125	2.08	2.0684	-18516	14120	8178	38062	26160	5304	31464		5.14	Si
SLV 9	2.31	-3017.78	-20811	-17329	-4258	2.08	2.08	-29755	16250	9464	38062	26160	5304	31464		7.39	Si
SLV 9	4.21	5465.17	-19166	-15960	-5277	2.08	2.08	-27404	15897	9259	38062	26160	5304	31464		5.96	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.31	14237	-8292	161.95	1052.64	6.5	Si
SLV 11	179667	0.31	14765	-8599	161.95	1087.49	6.71	Si
SLV 8	179667	0.31	14922	-8690	161.95	1097.78	6.78	Si
SLV 12	179667	0.31	15449	-8998	161.95	1132.25	6.99	Si
SLV 3	179667	0.31	21076	-12275	161.95	1481.3	9.15	Si
SLV 4	179667	0.31	22126	-12886	161.95	1542.7	9.53	Si
SLV 15	179667	0.31	22835	-13299	161.95	1583.47	9.78	Si
SLV 16	179667	0.31	23885	-13911	161.95	1642.9	10.14	Si
SLV 1	179667	0.31	27622	-16087	161.95	1844.85	11.39	Si
SLV 2	179667	0.31	28672	-16699	161.95	1898.91	11.73	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-16742	-15154	-1313	0.604	1985.4	0.958	9.16759	9.2784	No
SLV 5	-16574	-14459	-1313	0.61	1968.3	0.958	9.24911	9.2784	No
SLV 10	-15939	-17154	-1233	0.634	1903.7	0.957	9.63953	9.2784	Si
SLV 9	-15770	-16459	-1233	0.64	1886.6	0.956	9.72958	9.2784	Si
SLV 8	-7168	-14701	1153	1.224	1014.9	0.926	19.2171	9.2784	Si
SLV 7	-6999	-14007	1153	1.247	998	0.925	19.59441	9.2784	Si
SLV 12	-6364	-16701	1233	1.331	934.2	0.921	21.00314	9.2784	Si
SLV 11	-6196	-16007	1233	1.358	917.2	0.92	21.45866	9.2784	Si
SLV 2	-14374	-12848	-543	0.735	1744.7	0.953	11.20212	4.61088	Si
SLV 1	-14115	-11782	-543	0.746	1718.4	0.952	11.38159	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.658	SLU 68	Si
V_SLU	4.51	SLU 84	Si
PF_SLV	1.877	SLV 16	Si
V_SLV	4.183	SLV 16	Si
PFFP_SLV	6.5	SLV 7	Si
R_SLV	0.988	SLV 6	No

Maschio 59

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L4	L5	4.82	0.14	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 69	1.41	-10344.69	-61347	-0.0001525	0.0004492	0.0035	4.82	37844.22	115411.48	115411.48	11.16	No	Si
SLU 69	4.83	9994.72	-47510	-0.000119	0.0004492	0.0035	4.82	48523.24	89739.59	89739.59	8.98	No	Si
SLU 59	1.41	-10057.55	-60310	-0.0001492	0.0004492	0.0035	4.82	39031.91	114557.33	114557.33	11.39	No	Si
SLU 59	4.83	9866.27	-46630	-0.0001166	0.0004492	0.0035	4.82	48823.97	88555.18	88555.18	8.98	No	Si
SLU 70	1.41	-10305.29	-61415	-0.0001526	0.0004492	0.0035	4.82	37764.3	115467.38	115467.38	11.2	No	Si
SLU 70	4.83	9996.78	-47539	-0.000119	0.0004492	0.0035	4.82	48512.53	89778.75	89778.75	8.98	No	Si
SLU 72	1.41	-10215.24	-60876	-0.000151	0.0004492	0.0035	4.82	38391.2	115023.71	115023.71	11.26	No	Si
SLU 72	4.83	9970.83	-47083	-0.0001179	0.0004492	0.0035	4.82	48674.75	89165.17	89165.17	8.94	No	Si
SLU 51	1.41	-9227.55	-55300	-0.0001348	0.0004492	0.0035	4.82	43887.88	109984.03	109984.03	11.92	No	Si
SLU 51	4.83	9268.52	-42580	-0.000106	0.0004492	0.0035	4.82	49623.86	83106.07	83106.07	8.97	No	Si
SLU 79	1.41	-11084.65	-65819	-0.0001659	0.0004492	0.0035	4.82	31999.6	119096.95	119096.95	10.74	No	Si
SLU 79	4.83	10566.52	-51104	-0.0001288	0.0004492	0.0035	4.82	46825.48	94575.11	94575.11	8.95	No	Si
SLU 80	1.41	-11045.25	-65887	-0.0001659	0.0004492	0.0035	4.82	31901.95	119152.85	119152.85	10.79	No	Si
SLU 80	4.83	10568.58	-51133	-0.0001288	0.0004492	0.0035	4.82	46808.65	94614.27	94614.27	8.95	No	Si
SLU 50	1.41	-9266.94	-55232	-0.0001348	0.0004492	0.0035	4.82	43943.55	109903.32	109903.32	11.86	No	Si
SLU 50	4.83	9266.46	-42550	-0.000106	0.0004492	0.0035	4.82	49626.13	83066.91	83066.91	8.96	No	Si
SLU 71	1.41	-10254.64	-60808	-0.000151	0.0004492	0.0035	4.82	38468.98	114967.81	114967.81	11.21	No	Si
SLU 71	4.83	9968.77	-47054	-0.0001179	0.0004492	0.0035	4.82	48684.69	89126.01	89126.01	8.94	No	Si
SLU 58	1.41	-10096.95	-60242	-0.0001491	0.0004492	0.0035	4.82	39107.45	114501.43	114501.43	11.34	No	Si
SLU 58	4.83	9864.21	-46601	-0.0001166	0.0004492	0.0035	4.82	48833.13	88516.02	88516.02	8.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.41	-8682.01	-48190	-0.0001125	0.0006738	0.0035	4.82		106123.04	106123.04	12.22		Si
SLV 5	4.83	18047.04	-41567	-0.0001223	0.0006738	0.0035	4.82		84598.25	84598.25	4.69		Si
SLV 9	1.41	-9830.65	-43418	-0.0001056	0.0006738	0.0035	4.82		98783.57	98783.57	10.05		Si
SLV 9	4.83	19845.56	-39639	-0.0001227	0.0006738	0.0035	4.82		81221.86	81221.86	4.09		Si
SLV 10	1.41	-9818.99	-43969	-0.0001067	0.0006738	0.0035	4.82		99678.25	99678.25	10.15		Si
SLV 10	4.83	20075.56	-40022	-0.0001241	0.0006738	0.0035	4.82		81892.72	81892.72	4.08		Si
SLD 6	1.41	-8141.11	-46882	-0.0001085	0.0006738	0.0035	4.82		104132.41	104132.41	12.79		Si
SLD 6	4.83	12187.65	-38077	-0.0001005	0.0006738	0.0035	4.82		78487.01	78487.01	6.44		Si
SLV 6	1.41	-8670.36	-48741	-0.0001137	0.0006738	0.0035	4.82		106961.63	106961.63	12.34		Si
SLV 6	4.83	18277.04	-41950	-0.0001237	0.0006738	0.0035	4.82		85269.1	85269.1	4.67		Si
SLV 14	1.41	-10082.13	-38191	-0.0000956	0.0006738	0.0035	4.82		90283.28	90283.28	8.95		Si
SLV 14	4.83	14033.19	-33856	-0.0000965	0.0006738	0.0035	4.82		71095.25	71095.25	5.07		Si
SLD 5	1.41	-8146.21	-46640	-0.000108	0.0006738	0.0035	4.82		103765.55	103765.55	12.74		Si
SLD 5	4.83	12087.04	-37909	-0.0001	0.0006738	0.0035	4.82		78193.54	78193.54	6.47		Si
SLV 13	1.41	-10100.02	-37345	-0.0000939	0.0006738	0.0035	4.82		88824.13	88824.13	8.79		Si
SLV 13	4.83	13680.21	-33268	-0.0000945	0.0006738	0.0035	4.82		70065.67	70065.67	5.12		Si
SLD 9	1.41	-8618.37	-44637	-0.0001051	0.0006738	0.0035	4.82		100716.53	100716.53	11.69		Si
SLD 9	4.83	12854.54	-37090	-0.0001002	0.0006738	0.0035	4.82		76758.29	76758.29	5.97		Si
SLD 10	1.41	-8613.27	-44878	-0.0001056	0.0006738	0.0035	4.82		101083.39	101083.39	11.74		Si
SLD 10	4.83	12955.16	-37257	-0.0001008	0.0006738	0.0035	4.82		77051.76	77051.76	5.95		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	1.41	-9266.94	-55232	-30624	-2121	4.82	4.82	-45382	10833	7310	108749	24251	24582	48833	No	23.03	Si
SLU 50	4.83	9266.46	-42550	-23592	-267	4.82	4.82	-34962	10833	7310	108749	24251	24582	48833	No	182.6	Si
SLU 77	1.41	-11174.7	-66357	-36792	-2094	4.82	4.82	-54523	10833	7310	108749	24251	24582	48833	No	23.32	Si
SLU 77	4.83	10592.47	-51560	-28588	149	4.82	4.82	-42365	10833	7310	108749	24251	24582	48833	No	328.35	Si
SLU 66	1.41	-10220.03	-60428	-33505	-2119	4.82	4.82	-49651	10833	7310	108749	24251	24582	48833	No	23.04	Si
SLU 66	4.83	9773.23	-46659	-25870	-81	4.82	4.82	-38338	10833	7310	108749	24251	24582	48833	No	599.87	Si
SLU 70	1.41	-10305.29	-61415	-34052	-2161	4.82	4.82	-50462	10833	7310	108749	24251	24582	48833	No	22.6	Si
SLU 70	4.83	9996.78	-47539	-26358	-93	4.82	4.82	-39061	10833	7310	108749	24251	24582	48833	No	524.57	Si
SLU 79	1.41	-11084.65	-65819	-36494	-2102	4.82	4.82	-54081	10833	7310	108749	24251	24582	48833	No	23.23	Si
SLU 79	4.83	10566.52	-51104	-28335	122	4.82	4.82	-41990	10833	7310	108749	24251	24582	48833	No	398.92	Si
SLU 48	1.41	-9357	-55770	-30922	-2113	4.82	4.82	-45824	10833	7310	108749	24251	24582	48833	No	23.11	Si
SLU 48	4.83	9292.4	-43007	-23845	-241	4.82	4.82	-35337	10833	7310	108749	24251	24582	48833	No	202.52	Si
SLU 51	1.41	-9227.55	-55300	-30661	-2082	4.82	4.82	-45438	10833	7310	108749	24251	24582	48833	No	23.46	Si
SLU 51	4.83	9268.52	-42580	-23608	-229	4.82	4.82	-34986	10833	7310	108749	24251	24582	48833	No	212.95	Si
SLU 71	1.41	-10254.64	-60808	-33716	-2208	4.82	4.82	-49964	10833	7310	108749	24251	24582	48833	No	22.12	Si
SLU 71	4.83	9968.77	-47054	-26089	-158	4.82	4.82	-38662	10833	7310	108749	24251	24582	48833	No	310	Si
SLU 69	1.41	-10344.69	-61347	-34014	-2200	4.82	4.82	-50406	10833	7310	108749	24251	24582	48833	No	22.2	Si
SLU 69	4.83	9994.72	-47510	-26342	-131	4.82	4.82	-39037	10833	7310	108749	24251	24582	48833	No	372.16	Si
SLU 72	1.41	-10215.24	-60876	-33753	-2169	4.82	4.82	-50019	10833	7310	108749	24251	24582	48833	No	22.51	Si
SLU 72	4.83	9970.83	-47083	-26105	-119	4.82	4.82	-38686	10833	7310	108749	24251	24582	48833	No	408.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.41	-6762.58	-42395	-23506	6594	4.82	4.82	-34834	16250	10965	108749	36376	24582	60958		9.24	Si
SLV 11	4.83	-3589.12	-28156	-15611	6408	4.82	4.82	-23135	16250	10965	108749	36376	24582	60958		9.51	Si
SLV 14	1.41	-10082.13	-38191	-21175	-8770	4.82	4.82	-31380	16250	10965	108749	36376	24582	60958		6.95	Si
SLV 14	4.83	14033.19	-33856	-18772	-6457	4.82	4.82	-27818	16250	10965	108749	36376	24582	60958		9.44	Si
SLV 13	1.41	-10100.02	-37345	-20706	-8858	4.82	4.82	-30685	16250	10965	108749	36376	24582	60958		6.88	Si
SLV 13	4.83	13680.21	-33268	-18446	-6540	4.82	4.82	-27335	16250	10965	108749	36376	24582	60958		9.32	Si
SLV 7	1.41	-5613.94	-47167	-26152	9261	4.82	4.82	-38755	16250	10965	108749	36376	24582	60958		6.58	Si
SLV 7	4.83	-5387.64	-30084	-16680	8931	4.82	4.82	-24719	16250	10965	108749	36376	24582	60958		6.83	Si
SLV 8	1.41	-5602.28	-47718	-26457	9318	4.82	4.82	-39208	16250	10965	108749	36376	24582	60958		6.54	Si
SLV 8	4.83	-5157.64	-30468	-16893	8985	4.82	4.82	-25034	16250	10965	108749	36376	24582	60958		6.78	Si
SLV 10	1.41	-9818.99	-43969	-24379	-12311	4.82	4.82	-36127	16250	10965	108749	36376	24582	60958		4.95	Si
SLV 10	4.83	20075.56	-40022	-22190	-8908	4.82	4.82	-32884	16250	10965	108749	36376	24582	60958		6.84	Si
SLV 5	1.41	-8682.01	-48190	-26719	-9701	4.82	4.82	-39596	16250	10965	108749	36376	24582	60958		6.28	Si
SLV 5	4.83	18047.04	-41567	-23047	-6439	4.82	4.82	-34154	16250	10965	108749	36376	24582	60958		9.47	Si
SLV 12	1.41	-6750.92	-42946	-23812	6651	4.82	4.82	-35287	16250	10965	108749	36376	24582	60958		9.16	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	4.83	-3359.12	-28539	-15824	6462	4.82	4.82	-23450	16250	10965	108749	36376	24582	60958		9.43	Si
SLV 9	1.41	-9830.65	-43418	-24073	-12368	4.82	4.82	-35675	16250	10965	108749	36376	24582	60958		4.93	Si
SLV 9	4.83	19845.56	-39639	-21978	-8962	4.82	4.82	-32570	16250	10965	108749	36376	24582	60958		6.8	Si
SLV 6	1.41	-8670.36	-48741	-27025	-9644	4.82	4.82	-40049	16250	10965	108749	36376	24582	60958		6.32	Si
SLV 6	4.83	18277.04	-41950	-23259	-6386	4.82	4.82	-34468	16250	10965	108749	36376	24582	60958		9.55	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.14 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-32647	0.31	200.73	1682.05	3023.98	2353.01	11.72	Si
SLV 16	-33352	0.31	200.73	1705.07	3079.93	2392.5	11.92	Si
SLV 13	-34059	0.31	200.73	1727.59	3134.24	2430.92	12.11	Si
SLV 14	-34764	0.31	200.73	1749.48	3187.97	2468.72	12.3	Si
SLV 11	-36545	0.31	200.73	1802.26	3323.78	2563.02	12.77	Si
SLV 12	-37005	0.31	200.73	1815.3	3358.85	2587.07	12.89	Si
SLV 7	-41193	0.31	200.73	1923.12	3679	2801.06	13.95	Si
SLV 9	-41253	0.31	200.73	1924.5	3683.53	2804.01	13.97	Si
SLV 8	-41653	0.31	200.73	1933.74	3714.16	2823.95	14.07	Si
SLV 10	-41712	0.31	200.73	1935.09	3718.69	2826.89	14.08	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.03 Ta = 0.1395

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-41950	-48741	-231	0.631	4596.4	0.978	9.37863	14.11901	No
SLV 5	-41567	-48190	-231	0.636	4557.4	0.978	9.45998	14.11901	No
SLV 10	-40022	-43969	194	0.66	4400	0.977	9.81671	14.11901	No
SLV 9	-39639	-43418	193	0.666	4360.9	0.977	9.90608	14.11901	No
SLV 8	-30468	-47718	-175	0.848	3426.8	0.971	12.69679	14.11901	No
SLV 7	-30084	-47167	-175	0.858	3387.8	0.971	12.84845	14.11901	No
SLV 12	-28539	-42946	249	0.898	3230.5	0.969	13.46386	14.11901	No
SLV 11	-28156	-42395	249	0.909	3191.5	0.969	13.63553	14.11901	No
SLV 2	-40283	-54098	-706	0.644	4426.6	0.977	9.57677	8.02035	Si
SLV 1	-39695	-53252	-706	0.653	4366.7	0.977	9.71016	8.02035	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.941	SLU 71	Si
V_SLU	22.118	SLU 71	Si
PF_SLV	4.079	SLV 10	Si
V_SLV	4.929	SLV 9	Si
PFFP_SLV	11.722	SLV 15	Si
R_SLV	0.664	SLV 6	No

Maschio 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.526	L4	L5	5.52	0.14	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.41	163.12	-60647	-0.0001043	0.0004492	0.0035	5.52	59879.09	127295.21	127295.21	780.39	No	Si
SLU 84	4.83	-6872.92	-37988	-0.0000756	0.0004492	0.0035	5.52	62666.55	104279.1	104279.1	15.17	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	1.41	215.64	-59830	-0.0001028	0.0004492	0.0035	5.52	60501.68	126038.02	126038.02	584.49	No	Si
SLU 82	4.83	-6898.44	-37206	-0.0000743	0.0004492	0.0035	5.52	62227.18	102823.26	102823.26	14.91	No	Si
SLU 83	1.41	323.44	-60763	-0.0001048	0.0004492	0.0035	5.52	59788.17	127472.47	127472.47	394.12	No	Si
SLU 83	4.83	-6862.01	-37981	-0.0000756	0.0004492	0.0035	5.52	62662.96	104266.72	104266.72	15.19	No	Si
SLU 40	1.41	376.09	-50134	-0.000085	0.0004492	0.0035	5.52	64905.02	111129.21	111129.21	295.49	No	Si
SLU 40	4.83	-6045.01	-31292	-0.0000622	0.0004492	0.0035	5.52	57744.67	91353.35	91353.35	15.11	No	Si
SLU 73	1.41	-108.12	-57705	-0.0000985	0.0004492	0.0035	5.52	61937.02	136877.52	136877.52	1266.03	No	Si
SLU 73	4.83	-6537.81	-35896	-0.0000712	0.0004492	0.0035	5.52	61410.58	100382.86	100382.86	15.35	No	Si
SLU 39	1.41	536.41	-50249	-0.0000855	0.0004492	0.0035	5.52	64884.95	111306.46	111306.46	207.5	No	Si
SLU 39	4.83	-6034.1	-31285	-0.0000621	0.0004492	0.0035	5.52	57738.48	91340.12	91340.12	15.14	No	Si
SLU 42	1.41	323.57	-50951	-0.0000864	0.0004492	0.0035	5.52	64745.9	112386.41	112386.41	347.34	No	Si
SLU 42	4.83	-6019.49	-32073	-0.0000635	0.0004492	0.0035	5.52	58454.26	92910.26	92910.26	15.43	No	Si
SLU 75	1.41	-53.39	-59159	-0.0001012	0.0004492	0.0035	5.52	60983.13	139022.47	139022.47	2604.12	No	Si
SLU 75	4.83	-6595.97	-37066	-0.0000734	0.0004492	0.0035	5.52	62144.95	102563.26	102563.26	15.55	No	Si
SLU 41	1.41	483.89	-51066	-0.0000869	0.0004492	0.0035	5.52	64720.32	112563.66	112563.66	232.62	No	Si
SLU 41	4.83	-6008.58	-32066	-0.0000635	0.0004492	0.0035	5.52	58448.38	92897.02	92897.02	15.46	No	Si
SLU 81	1.41	375.96	-59945	-0.0001034	0.0004492	0.0035	5.52	60416.27	126215.27	126215.27	335.72	No	Si
SLU 81	4.83	-6887.52	-37199	-0.0000742	0.0004492	0.0035	5.52	62223.29	102810.88	102810.88	14.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.41	5327.13	-41457	-0.000077	0.0006738	0.0035	5.52		98589.95	98589.95	18.51		Si
SLV 8	4.83	-11351.31	-18615	-0.0000494	0.0006738	0.0035	5.52		65161.38	65161.38	5.74		Si
SLV 7	1.41	5312.76	-41440	-0.0000769	0.0006738	0.0035	5.52		98556.62	98556.62	18.55		Si
SLV 7	4.83	-11543.19	-18297	-0.0000492	0.0006738	0.0035	5.52		64424.16	64424.16	5.58		Si
SLD 7	1.41	2199.27	-41282	-0.0000709	0.0006738	0.0035	5.52		98238.97	98238.97	44.67		Si
SLD 7	4.83	-7568.21	-22285	-0.0000487	0.0006738	0.0035	5.52		73675.69	73675.69	9.73		Si
SLV 12	1.41	643.83	-43574	-0.0000719	0.0006738	0.0035	5.52		102831.91	102831.91	159.72		Si
SLV 12	4.83	-10383.66	-23620	-0.000056	0.0006738	0.0035	5.52		76770.89	76770.89	7.39		Si
SLV 3	1.41	8577.34	-37971	-0.000077	0.0006738	0.0035	5.52		91606.39	91606.39	10.68		Si
SLV 3	4.83	-8128.1	-15470	-0.0000385	0.0006738	0.0035	5.52		57651.67	57651.67	7.09		Si
SLD 8	1.41	2205.55	-41289	-0.0000709	0.0006738	0.0035	5.52		98253.55	98253.55	44.55		Si
SLD 8	4.83	-7484.27	-22425	-0.0000488	0.0006738	0.0035	5.52		73998.2	73998.2	9.89		Si
SLV 4	1.41	8599.39	-37997	-0.0000771	0.0006738	0.0035	5.52		91657.54	91657.54	10.66		Si
SLV 4	4.83	-7833.61	-15958	-0.0000388	0.0006738	0.0035	5.52		58840.62	58840.62	7.51		Si
SLV 11	1.41	629.47	-43558	-0.0000719	0.0006738	0.0035	5.52		102798.59	102798.59	163.31		Si
SLV 11	4.83	-10575.54	-23302	-0.0000558	0.0006738	0.0035	5.52		76033.67	76033.67	7.19		Si
SLD 12	1.41	241.05	-42182	-0.0000688	0.0006738	0.0035	5.52		100041.74	100041.74	415.02		Si
SLD 12	4.83	-7042.15	-24567	-0.0000516	0.0006738	0.0035	5.52		78910.63	78910.63	11.21		Si
SLD 11	1.41	234.77	-42174	-0.0000688	0.0006738	0.0035	5.52		100027.16	100027.16	426.06		Si
SLD 11	4.83	-7126.09	-24428	-0.0000515	0.0006738	0.0035	5.52		78604.52	78604.52	11.03		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.41	-106.27	-59417	-32944	-6404	5.52	5.52	-42629	10833	8372	108749	27773	28152	55925	No	8.73	Si
SLU 80	4.83	-6479.5	-37455	-20767	-4172	5.52	5.52	-26872	10833	8372	108749	27773	28152	55925	No	13.4	Si
SLU 79	1.41	54.05	-59532	-33008	-6653	5.52	5.52	-42712	10833	8372	108749	27773	28152	55925	No	8.41	Si
SLU 79	4.83	-6468.59	-37448	-20763	-4318	5.52	5.52	-26868	10833	8372	108749	27773	28152	55925	No	12.95	Si
SLU 74	1.41	106.94	-59274	-32865	-6729	5.52	5.52	-42527	10833	8372	108749	27773	28152	55925	No	8.31	Si
SLU 74	4.83	-6585.06	-37060	-20548	-4403	5.52	5.52	-26589	10833	8372	108749	27773	28152	55925	No	12.7	Si
SLU 75	1.41	-53.39	-59159	-32801	-6480	5.52	5.52	-42445	10833	8372	108749	27773	28152	55925	No	8.63	Si
SLU 75	4.83	-6595.97	-37066	-20552	-4258	5.52	5.52	-26594	10833	8372	108749	27773	28152	55925	No	13.14	Si
SLU 81	1.41	375.96	-59945	-33237	-6856	5.52	5.52	-43008	10833	8372	108749	27773	28152	55925	No	8.16	Si
SLU 81	4.83	-6887.52	-37199	-20625	-4491	5.52	5.52	-26689	10833	8372	108749	27773	28152	55925	No	12.45	Si
SLU 84	1.41	163.12	-60647	-33626	-6618	5.52	5.52	-43512	10833	8372	108749	27773	28152	55925	No	8.45	Si
SLU 84	4.83	-6872.92	-37988	-21062	-4326	5.52	5.52	-27255	10833	8372	108749	27773	28152	55925	No	12.93	Si
SLU 78	1.41	-105.9	-59977	-33254	-6491	5.52	5.52	-43031	10833	8372	108749	27773	28152	55925	No	8.62	Si
SLU 78	4.83	-6570.45	-37848	-20985	-4238	5.52	5.52	-27155	10833	8372	108749	27773	28152	55925	No	13.2	Si
SLU 83	1.41	323.44	-60763	-33690	-6867	5.52	5.52	-43595	10833	8372	108749	27773	28152	55925	No	8.14	Si
SLU 83	4.83	-6862.01	-37981	-21059	-4472	5.52	5.52	-27250	10833	8372	108749	27773	28152	55925	No	12.51	Si
SLU 82	1.41	215.64	-59830	-33173	-6607	5.52	5.52	-42926	10833	8372	108749	27773	28152	55925	No	8.46	Si
SLU 82	4.83	-6898.44	-37206	-20629	-4346	5.52	5.52	-26694	10833	8372	108749	27773	28152	55925	No	12.87	Si
SLU 77	1.41	54.42	-60092	-33318	-6740	5.52	5.52	-43114	10833	8372	108749	27773	28152	55925	No	8.3	Si
SLU 77	4.83	-6559.54	-37841	-20981	-4384	5.52	5.52	-27150	10833	8372	108749	27773	28152	55925	No	12.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	1.41	2697.94	-39400	-21846	-13475	5.52	5.52	-28268	16250	12558	108749	41659	28152	69811		5.18	Si
SLD 1	4.83	-4326.85	-22294	-12361	-11499	5.52	5.52	-15995	15699	12132	108749	41659	28152	69811		6.07	Si
SLV 3	1.41	8577.34	-37971	-21053	-18306	5.52	5.52	-27243	16250	12558	108749	41659	28152	69811		3.81	Si
SLV 3	4.83	-8128.1	-15470	-8577	-16762	5.52	5.52	-11099	14720	11375	108749	41659	28152	69811		4.16	Si
SLV 5	1.41	-959.89	-38599	-21401	-21782	5.52	5.52	-27693	16250	12558	108749	41659	28152	69811		3.2	Si
SLV 5	4.83	1586.28	-27147	-15052	-18496	5.52	5.52	-19477	16250	12558	108749	41659	28152	69811		3.77	Si
SLV 2	1.41	6717.59	-37144	-20595	-24143	5.52	5.52	-26650	16250	12558	108749	41659	28152	69811		2.89	Si
SLV 2	4.83	-3894.77	-18613	-10320	-21680	5.52	5.52	-13354	15171	11724	108749	41659	28152	69811		3.22	Si
SLD 2	1.41	2707.41	-39411	-21852	-12952	5.52	5.52	-28276	16250	12558	108749	41659	28152	69811		5.39	Si
SLD 2	4.83	-4200.36	-22504	-12477	-10984	5.52	5.52	-16146	15729	12155	108749	41659	28152	69811		6.36	Si
SLV 6	1.41	-945.52	-38616	-21411	-20988	5.52	5.52	-27705	16250	12558	108749	41659	28152	69811		3.33	Si
SLV 6	4.83	1778.16	-27465	-15228	-17714	5.52	5.52	-19705	16250	12558	108749	41659	28152	69811		3.94	Si
SLV 15	1.41	-7033.65	-45029	-24967	14837	5.52	5.52	-32307	16250	12558	108749	41659	28152	69811		4.71	Si
SLV 15	4.83	-4902.61	-32154	-17828	15564	5.52	5.52	-23069	16250	12558	108749	41659	28152	69811		4.49	Si
SLV 4	1.41	8599.39	-37997	-21068	-17086	5.52	5.52	-27261	16250	12558	108749	41659	28152	69811		4.09	Si
SLV 4	4.83	-7833.61	-15958	-8848	-15561	5.52	5.52	-11449	14790	11430	108749	41659	28152	69811		4.49	Si
SLV 16	1.41	-7011.6	-45054	-24981	16057	5.52	5.52	-32325	16250	12558	108749	41659	28152	69811		4.35	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	4.83	-4608.13	-32642	-18098	16764	5.52	5.52	-23419	16250	12558	108749	41659	28152	69811		4.16	Si
SLV 1	1.41	6695.55	-37119	-20581	-25362	5.52	5.52	-26631	16250	12558	108749	41659	28152	69811		2.75	Si
SLV 1	4.83	-4189.26	-18125	-10050	-22881	5.52	5.52	-13004	15101	11670	108749	41659	28152	69811		3.05	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.14 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-32892	0.31	229.89	1767.78	3103.34	2435.56	10.59	Si
SLV 1	-33008	0.31	229.89	1772.11	3112.64	2442.38	10.62	Si
SLV 7	-33098	0.31	229.89	1775.48	3119.89	2447.68	10.65	Si
SLV 4	-33109	0.31	229.89	1775.86	3120.72	2448.29	10.65	Si
SLV 2	-33224	0.31	229.89	1780.17	3130.01	2455.09	10.68	Si
SLV 8	-33239	0.31	229.89	1780.72	3131.21	2455.96	10.68	Si
SLV 11	-33358	0.31	229.89	1785.14	3140.77	2462.95	10.71	Si
SLV 5	-33484	0.31	229.89	1789.79	3150.88	2470.33	10.75	Si
SLV 12	-33499	0.31	229.89	1790.34	3152.09	2471.22	10.75	Si
SLV 6	-33625	0.31	229.89	1794.98	3162.2	2478.59	10.78	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.03 Ta = 0.1395

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-32470	-40733	174	0.907	3677.9	0.969	13.59505	14.11901	No
SLV 9	-32152	-40716	173	0.915	3645.5	0.969	13.72126	14.11901	No
SLV 6	-27465	-38616	-263	1.052	3168.4	0.965	15.85341	14.11901	Si
SLV 5	-27147	-38599	-264	1.063	3136.1	0.964	16.02596	14.11901	Si
SLV 12	-23620	-43574	300	1.203	2777.3	0.96	18.21651	14.11901	Si
SLV 11	-23302	-43558	299	1.218	2744.9	0.96	18.44672	14.11901	Si
SLV 14	-35297	-44202	727	0.825	3965.7	0.971	12.35101	8.02035	Si
SLV 13	-34809	-44177	726	0.836	3916	0.971	12.51382	8.02035	Si
SLV 8	-18615	-41457	-137	1.493	2268.5	0.952	22.79121	14.11901	Si
SLV 7	-18297	-41440	-138	1.516	2236.2	0.952	23.15106	14.11901	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.905	SLU 82	Si
V_SLU	8.143	SLU 83	Si
PF_SLV	5.581	SLV 7	Si
V_SLV	2.753	SLV 1	Si
PFFP_SLV	10.595	SLV 3	Si
R_SLV	0.963	SLV 10	No

Maschio 62

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-0.354	-13.778	1.006	L4	L5	1.36	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	1.41	2559.1	-26912	-0.0001929	0.0003743	0.0035	1.36	5597.16	9630.94	9630.94	3.76	No	Si
SLU 78	4.83	-672.28	-20657	-0.0001067	0.0003743	0.0035	1.36	6562.53	9118.57	9118.57	13.56	No	Si
SLU 75	1.41	2527.4	-26571	-0.0001894	0.0003743	0.0035	1.36	5685.14	9643.91	9643.91	3.82	No	Si
SLU 75	4.83	-668.9	-20349	-0.000105	0.0003743	0.0035	1.36	6574.59	9065.38	9065.38	13.55	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.41	2523.23	-26577	-0.0001894	0.0003743	0.0035	1.36	5683.76	9643.7	9643.7	3.82	No	Si
SLU 74	4.83	-662.4	-20364	-0.0001049	0.0003743	0.0035	1.36	6574.08	9068.1	9068.1	13.69	No	Si
SLU 77	1.41	2554.94	-26917	-0.0001928	0.0003743	0.0035	1.36	5595.72	9630.74	9630.74	3.77	No	Si
SLU 77	4.83	-665.79	-20672	-0.0001066	0.0003743	0.0035	1.36	6561.86	9120.99	9120.99	13.7	No	Si
SLU 83	1.41	2600.32	-27446	-0.0001981	0.0003743	0.0035	1.36	5451.3	9611.05	9611.05	3.7	No	Si
SLU 83	4.83	-746.08	-21128	-0.000111	0.0003743	0.0035	1.36	6537.61	9182.73	9182.73	12.31	No	Si
SLU 84	1.41	2604.48	-27440	-0.0001982	0.0003743	0.0035	1.36	5452.85	9611.26	9611.26	3.69	No	Si
SLU 84	4.83	-752.58	-21113	-0.0001054	0.0003743	0.0035	1.36	6538.51	9181.18	9181.18	12.2	No	Si
SLU 82	1.41	2572.77	-27099	-0.0001947	0.0003743	0.0035	1.36	5547.14	9623.91	9623.91	3.74	No	Si
SLU 82	4.83	-749.19	-20806	-0.0001092	0.0003743	0.0035	1.36	6555.5	9142.07	9142.07	12.2	No	Si
SLU 80	1.41	2540.85	-26679	-0.0001906	0.0003743	0.0035	1.36	5657.75	9639.79	9639.79	3.79	No	Si
SLU 80	4.83	-672.32	-20421	-0.0001054	0.0003743	0.0035	1.36	6572.07	9078.39	9078.39	13.5	No	Si
SLU 81	1.41	2568.61	-27105	-0.0001946	0.0003743	0.0035	1.36	5545.66	9623.71	9623.71	3.75	No	Si
SLU 81	4.83	-742.7	-20821	-0.0001092	0.0003743	0.0035	1.36	6554.75	9144.34	9144.34	12.31	No	Si
SLU 79	1.41	2536.69	-26684	-0.0001905	0.0003743	0.0035	1.36	5656.35	9639.58	9639.58	3.8	No	Si
SLU 79	4.83	-665.83	-20436	-0.0001054	0.0003743	0.0035	1.36	6571.52	9081.04	9081.04	13.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	1.41	2868.14	-18421	-0.0001333	0.0005615	0.0035	1.36		9628.23	9628.23	3.36		Si
SLV 7	4.83	-1368.72	-11203	-0.0000703	0.0005615	0.0035	1.36		7000.2	7000.2	5.11		Si
SLV 3	1.41	2816.55	-20047	-0.0001405	0.0005615	0.0035	1.36		10296.68	10296.68	3.66		Si
SLV 3	4.83	-413.95	-12899	-0.0000601	0.0005615	0.0035	1.36		7805.58	7805.58	18.86		Si
SLD 8	1.41	2245.48	-18289	-0.0001201	0.0005615	0.0035	1.36		9574.06	9574.06	4.26		Si
SLD 8	4.83	-836.25	-12580	-0.0000665	0.0005615	0.0035	1.36		7659.82	7659.82	9.16		Si
SLD 7	1.41	2245.2	-18312	-0.0001202	0.0005615	0.0035	1.36		9583.64	9583.64	4.27		Si
SLD 7	4.83	-835.25	-12591	-0.0000665	0.0005615	0.0035	1.36		7665.14	7665.14	9.18		Si
SLD 3	1.41	2214.22	-19012	-0.0001231	0.0005615	0.0035	1.36		9872.47	9872.47	4.46		Si
SLD 3	4.83	-417.47	-13345	-0.0000621	0.0005615	0.0035	1.36		8006.17	8006.17	19.18		Si
SLD 4	1.41	2214.63	-18976	-0.0001229	0.0005615	0.0035	1.36		9857.91	9857.91	4.45		Si
SLD 4	4.83	-418.98	-13328	-0.000062	0.0005615	0.0035	1.36		7998.69	7998.69	19.09		Si
SLV 4	1.41	2817.5	-19965	-0.0001401	0.0005615	0.0035	1.36		10266.05	10266.05	3.64		Si
SLV 4	4.83	-417.47	-12860	-0.00006	0.0005615	0.0035	1.36		7788.1	7788.1	18.66		Si
SLV 8	1.41	2868.76	-18367	-0.000133	0.0005615	0.0035	1.36		9606.31	9606.31	3.35		Si
SLV 8	4.83	-1371.01	-11177	-0.0000702	0.0005615	0.0035	1.36		6987.71	6987.71	5.1		Si
SLV 12	1.41	2390.17	-17234	-0.0001179	0.0005615	0.0035	1.36		9143.39	9143.39	3.83		Si
SLV 12	4.83	-1558.27	-11221	-0.0000739	0.0005615	0.0035	1.36		7009.43	7009.43	4.5		Si
SLV 11	1.41	2389.55	-17287	-0.0001181	0.0005615	0.0035	1.36		9164.98	9164.98	3.84		Si
SLV 11	4.83	-1555.98	-11246	-0.000074	0.0005615	0.0035	1.36		7021.89	7021.89	4.51		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	1.41	2436.46	-25086	-20889	4685	1.36	1.36	-54856	10833	4125	38062	11403	3468	14871	No	3.17	Si
SLU 63	4.83	-752.12	-19196	-15985	2682	1.36	1.36	-41978	10833	4125	38062	11403	3468	14871	No	5.54	Si
SLU 82	1.41	2572.77	-27099	-22566	4775	1.36	1.36	-59259	10833	4125	38062	11403	3468	14871	No	3.11	Si
SLU 82	4.83	-749.19	-20806	-17325	2548	1.36	1.36	-45497	10833	4125	38062	11403	3468	14871	No	5.84	Si
SLU 79	1.41	2536.69	-26684	-22220	4703	1.36	1.36	-58352	10833	4125	38062	11403	3468	14871	No	3.16	Si
SLU 79	4.83	-665.83	-20436	-17017	2465	1.36	1.36	-44688	10833	4125	38062	11403	3468	14871	No	6.03	Si
SLU 81	1.41	2568.61	-27105	-22570	4751	1.36	1.36	-59271	10833	4125	38062	11403	3468	14871	No	3.13	Si
SLU 81	4.83	-742.7	-20821	-17338	2517	1.36	1.36	-45529	10833	4125	38062	11403	3468	14871	No	5.91	Si
SLU 84	1.41	2604.48	-27440	-22850	4837	1.36	1.36	-60004	10833	4125	38062	11403	3468	14871	No	3.07	Si
SLU 84	4.83	-752.58	-21113	-17581	2565	1.36	1.36	-46169	10833	4125	38062	11403	3468	14871	No	5.8	Si
SLU 78	1.41	2559.1	-26912	-22410	4747	1.36	1.36	-58850	10833	4125	38062	11403	3468	14871	No	3.13	Si
SLU 78	4.83	-672.28	-20657	-17201	2496	1.36	1.36	-45171	10833	4125	38062	11403	3468	14871	No	5.96	Si
SLU 75	1.41	2527.4	-26571	-22126	4685	1.36	1.36	-58104	10833	4125	38062	11403	3468	14871	No	3.17	Si
SLU 75	4.83	-668.9	-20349	-16945	2479	1.36	1.36	-44499	10833	4125	38062	11403	3468	14871	No	6	Si
SLU 83	1.41	2600.32	-27446	-22854	4814	1.36	1.36	-60016	10833	4125	38062	11403	3468	14871	No	3.09	Si
SLU 83	4.83	-746.08	-21128	-17594	2534	1.36	1.36	-46202	10833	4125	38062	11403	3468	14871	No	5.87	Si
SLU 77	1.41	2554.94	-26917	-22415	4724	1.36	1.36	-58862	10833	4125	38062	11403	3468	14871	No	3.15	Si
SLU 77	4.83	-665.79	-20672	-17214	2466	1.36	1.36	-45204	10833	4125	38062	11403	3468	14871	No	6.03	Si
SLU 80	1.41	2540.85	-26679	-22216	4727	1.36	1.36	-58340	10833	4125	38062	11403	3468	14871	No	3.15	Si
SLU 80	4.83	-672.32	-20421	-17005	2495	1.36	1.36	-44656	10833	4125	38062	11403	3468	14871	No	5.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.41	2389.55	-17287	-14395	7895	1.36	1.36	-37803	16250	6188	38062	17104	3468	20572		2.61	Si
SLV 11	4.83	-1555.98	-11246	-9365	6011	1.36	1.36	-24593	15335	5840	38062	17104	3468	20572		3.42	Si
SLV 7	1.41	2868.14	-18421	-15339	7611	1.36	1.36	-40281	16250	6188	38062	17104	3468	20572		2.7	Si
SLV 7	4.83	-1368.72	-11203	-9328	6675	1.36	1.36	-24497	15316	5832	38062	17104	3468	20572		3.08	Si
SLV 12	1.41	2390.17	-17234	-14351	7908	1.36	1.36	-37687	16250	6188	38062	17104	3468	20572		2.6	Si
SLV 12	4.83	-1558.27	-11221	-9344	6027	1.36	1.36	-24538	15324	5835	38062	17104	3468	20572		3.41	Si
SLD 12	1.41	2040.95	-17804	-14826	5331	1.36	1.36	-38934	16250	6188	38062	17104	3468	20572		3.86	Si
SLD 12	4.83	-916.2	-12598	-10490	3667	1.36	1.36	-27548	15926	6065	38062	17104	3468	20572		5.61	Si
SLV 15	1.41	1221.24	-16269	-13548	5098	1.36	1.36	-35577	16250	6188	38062	17104	3468	20572		4.03	Si
SLV 15	4.83	-1038.15	-13044	-10862	2046	1.36	1.36	-28525	16122	6139	38062	17104	3468	20572		10.06	Si
SLV 16	1.41	1222.19	-16188	-13480	5118	1.36	1.36	-35398	16250	6188	38062	17104	3468	20572		4.02	Si
SLV 16	4.83	-1041.66	-13006	-10830	2070	1.36	1.36	-28440	16105	6133	38062	17104	3468	20572		9.94	Si
SLD 8	1.41	2245.48	-18289	-15229	5209	1.36	1.36	-39993	16250	6188	38062	17104	3468	20572		3.95	Si
SLD 8	4.83	-836.25	-12580	-10475	3949	1.36	1.36	-27508	15918	6062	38062	17104	3468	20572		5.21	Si
SLV 8	1.41	2868.76	-18367	-15295	7623	1.36	1.36	-40165	16250	6188	38062	17104	3468	20572		2.7	Si
SLV 8	4.83	-1371.01	-11177	-9308	6690	1.36	1.36	-24442	15305	5828	38062	17104	3468	20572		3.07	Si
SLD 7	1.41	2245.2	-18312	-15249	5204	1.36	1.36	-40044	16250	6188	38062	17104	3468	20572		3.95	Si
SLD 7	4.83	-835.25	-12591	-10484	3942	1.36	1.36	-27532	15923	6064	38062	17104	3468	20572		5.22	Si
SLD 11	1.41	2040.68	-17828	-14845	5325	1.36	1.36	-38984	16250	6188	38062	17104	3468	20572		3.86	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	4.83	-915.2	-12609	-10500	3660	1.36	1.36	-27572	15931	6067	38062	17104	3468	20572		5.62	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.31	37004	-14091	108.35	1494.74	13.8	Si
SLV 3	179667	0.31	37174	-14156	108.35	1499.42	13.84	Si
SLV 8	179667	0.31	37875	-14423	108.35	1518.42	14.01	Si
SLV 7	179667	0.31	37986	-14465	108.35	1521.4	14.04	Si
SLV 2	179667	0.31	39887	-15189	108.35	1571.07	14.5	Si
SLV 1	179667	0.31	40058	-15254	108.35	1575.41	14.54	Si
SLV 12	179667	0.31	41480	-15796	108.35	1610.75	14.87	Si
SLV 11	179667	0.31	41591	-15838	108.35	1613.45	14.89	Si
SLV 6	179667	0.31	47487	-18083	108.35	1744.43	16.1	Si
SLV 5	179667	0.31	47598	-18125	108.35	1746.67	16.12	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-16175	-19248	-254	0.469	1830.1	0.969	7.03713	9.2784	No
SLV 6	-16150	-19195	-254	0.47	1827.6	0.969	7.04681	9.2784	No
SLV 9	-16219	-18115	46	0.48	1834.6	0.97	7.19968	9.2784	No
SLV 10	-16194	-18062	46	0.481	1832	0.969	7.20947	9.2784	No
SLV 11	-11246	-17287	255	0.639	1328.6	0.959	9.68937	9.2784	Si
SLV 12	-11221	-17234	256	0.641	1326	0.959	9.70844	9.2784	Si
SLV 7	-11203	-18421	-45	0.659	1324.1	0.959	9.98055	9.2784	Si
SLV 8	-11177	-18367	-45	0.66	1321.6	0.959	10.00045	9.2784	Si
SLV 13	-14536	-16518	470	0.5	1663.3	0.967	7.52328	4.61088	Si
SLV 1	-14390	-20295	-532	0.501	1648.5	0.966	7.5308	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.69	SLU 84	Si
V_SLU	3.074	SLU 84	Si
PF_SLV	3.349	SLV 8	Si
V_SLV	2.601	SLV 12	Si
PFFP_SLV	13.795	SLV 4	Si
R_SLV	0.758	SLV 5	No

Maschio 63

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.693	6.526	-17.768	6.526	L4	L5	1.925	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	2.31	2931.18	-26922	-0.0001151	0.0003743	0.0035	1.925	13199.9	17195.2	17195.2	5.87	No	Si
SLU 78	4.21	-316.89	-24352	-0.0000777	0.0003743	0.0035	1.925	13037.55	16793.94	16793.94	53	No	Si
SLU 75	2.31	2912.89	-26701	-0.000114	0.0003743	0.0035	1.925	13195.05	17103.91	17103.91	5.87	No	Si
SLU 75	4.21	-331.59	-24131	-0.0000771	0.0003743	0.0035	1.925	13012.75	16730.56	16730.56	50.45	No	Si
SLU 82	2.31	2976.54	-27510	-0.000118	0.0003743	0.0035	1.925	13204.49	17419.85	17419.85	5.85	No	Si
SLU 82	4.21	-316.58	-24941	-0.0000798	0.0003743	0.0035	1.925	13095.2	16965.57	16965.57	53.59	No	Si
SLU 84	2.31	2994.83	-27731	-0.000119	0.0003743	0.0035	1.925	13203.08	17494.49	17494.49	5.84	No	Si
SLU 84	4.21	-301.87	-25162	-0.0000804	0.0003743	0.0035	1.925	13113.72	17031.16	17031.16	56.42	No	Si
SLU 52	2.31	2666.09	-23077	-0.0000976	0.0003743	0.0035	1.925	12871.01	15638.78	15638.78	5.87	No	Si
SLU 52	4.21	-379.24	-20531	-0.0000652	0.0003743	0.0035	1.925	12367.85	15290.17	15290.17	40.32	No	Si
SLU 73	2.31	2934.41	-26170	-0.0001122	0.0003743	0.0035	1.925	13176.39	16886.39	16886.39	5.75	No	Si
SLU 73	4.21	-333.6	-23594	-0.0000752	0.0003743	0.0035	1.925	12945.37	16579.13	16579.13	49.7	No	Si
SLU 65	2.31	2676.89	-23023	-0.0000975	0.0003743	0.0035	1.925	12862.64	15617.5	15617.5	5.83	No	Si
SLU 65	4.21	-395.52	-20443	-0.0000651	0.0003743	0.0035	1.925	12346.46	15251.54	15251.54	38.56	No	Si
SLU 68	2.31	2695.18	-23244	-0.0000985	0.0003743	0.0035	1.925	12896	15704.06	15704.06	5.83	No	Si
SLU 68	4.21	-380.81	-20665	-0.0000657	0.0003743	0.0035	1.925	12399.87	15349.18	15349.18	40.31	No	Si
SLU 55	2.31	2684.38	-23298	-0.0000986	0.0003743	0.0035	1.925	12903.95	15725.44	15725.44	5.86	No	Si
SLU 55	4.21	-364.53	-20752	-0.0000658	0.0003743	0.0035	1.925	12420.58	15388.13	15388.13	42.21	No	Si
SLU 76	2.31	2952.7	-26391	-0.0001133	0.0003743	0.0035	1.925	13185.36	16976.71	16976.71	5.75	No	Si
SLU 76	4.21	-318.89	-23815	-0.0000758	0.0003743	0.0035	1.925	12974.34	16641.05	16641.05	52.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2.31	5716.15	-7521	-0.0001446	0.0005615	0.0035	1.925		6917.1	6917.1	1.21		Si
SLV 15	4.21	-2621.61	-4263	-0.000044	0.0005615	0.0035	1.54		4953.38	4953.38	1.89		Si
SLV 16	2.31	6091.61	-6656	-0.0013209	0.0005615	0.0035	1.925		6191.12	6191.12	1.02		Si
SLV 16	4.21	-2871.03	-3346	-0.0001062	0.0005615	0.0035	1.54		4145.52	4145.52	1.44		Si
SLD 13	2.31	3998.1	-13074	-0.0000732	0.0005615	0.0035	1.925		11018.35	11018.35	2.76		Si
SLD 13	4.21	-1440.91	-10940	-0.0000435	0.0005615	0.0035	1.925		10479.29	10479.29	7.27		Si
SLD 14	2.31	4159.37	-12703	-0.0000736	0.0005615	0.0035	1.925		10751.39	10751.39	2.58		Si
SLD 14	4.21	-1548.04	-10546	-0.0000433	0.0005615	0.0035	1.925		10174.46	10174.46	6.57		Si
SLV 13	2.31	6737.61	-6606	-0.0071217	0.0005615	0.0035	1.925		6149.23	6149.23	0.91		No
SLV 13	4.21	-2951.6	-4236	-0.0000576	0.0005615	0.0035	1.54		4929.19	4929.19	1.67		Si
SLD 16	2.31	3710.98	-13098	-0.0000706	0.0005615	0.0035	1.925		11035.12	11035.12	2.97		Si
SLD 16	4.21	-1406.97	-10552	-0.0000421	0.0005615	0.0035	1.925		10178.64	10178.64	7.23		Si
SLV 14	2.31	7113.07	-5742	-0.0149933	0.0005615	0.0035	1.925		5411.11	5411.11	0.76		No
SLV 14	4.21	-3201.01	-3319	-0.0002266	0.0005615	0.0035	1.54		4120.61	4120.61	1.29		Si
SLV 9	2.31	4864.24	-13285	-0.0000825	0.0005615	0.0035	1.925		11170.59	11170.59	2.3		Si
SLV 9	4.21	-1562.54	-12552	-0.0000494	0.0005615	0.0035	1.925		11706.29	11706.29	7.49		Si
SLD 15	2.31	3549.71	-13469	-0.0000703	0.0005615	0.0035	1.925		11303.17	11303.17	3.18		Si
SLD 15	4.21	-1299.85	-10946	-0.0000423	0.0005615	0.0035	1.925		10483.49	10483.49	8.07		Si
SLV 10	2.31	5108.88	-12722	-0.0000841	0.0005615	0.0035	1.925		10765.14	10765.14	2.11		Si
SLV 10	4.21	-1725.05	-11955	-0.0000491	0.0005615	0.0035	1.925		11268.31	11268.31	6.53		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	2.31	2931.18	-26922	-22418	1752	1.925	1.925	-41592	10833	5839	38062	16140	4909	21049	No	12.01	Si
SLU 78	4.21	-316.89	-24352	-20278	1775	1.925	1.925	-37622	10833	5839	38062	16140	4909	21049	No	11.86	Si
SLU 73	2.31	2934.41	-26170	-21792	1750	1.925	1.925	-40431	10833	5839	38062	16140	4909	21049	No	12.03	Si
SLU 73	4.21	-333.6	-23594	-19647	1801	1.925	1.925	-36451	10833	5839	38062	16140	4909	21049	No	11.69	Si
SLU 84	2.31	2994.83	-27731	-23092	1779	1.925	1.925	-42842	10833	5839	38062	16140	4909	21049	No	11.83	Si
SLU 84	4.21	-301.87	-25162	-20953	1799	1.925	1.925	-38873	10833	5839	38062	16140	4909	21049	No	11.7	Si
SLU 76	2.31	2952.7	-26391	-21976	1751	1.925	1.925	-40772	10833	5839	38062	16140	4909	21049	No	12.02	Si
SLU 76	4.21	-318.89	-23815	-19831	1803	1.925	1.925	-36792	10833	5839	38062	16140	4909	21049	No	11.67	Si
SLU 77	2.31	2828.82	-26908	-22406	1727	1.925	1.925	-41570	10833	5839	38062	16140	4909	21049	No	12.19	Si
SLU 77	4.21	-331.16	-24347	-20274	1705	1.925	1.925	-37615	10833	5839	38062	16140	4909	21049	No	12.35	Si
SLU 83	2.31	2892.46	-27717	-23080	1753	1.925	1.925	-42821	10833	5839	38062	16140	4909	21049	No	12.01	Si
SLU 83	4.21	-316.15	-25157	-20949	1729	1.925	1.925	-38866	10833	5839	38062	16140	4909	21049	No	12.17	Si
SLU 81	2.31	2874.18	-27496	-22896	1751	1.925	1.925	-42479	10833	5839	38062	16140	4909	21049	No	12.02	Si
SLU 81	4.21	-330.86	-24936	-20765	1728	1.925	1.925	-38524	10833	5839	38062	16140	4909	21049	No	12.18	Si
SLU 75	2.31	2912.89	-26701	-22234	1751	1.925	1.925	-41251	10833	5839	38062	16140	4909	21049	No	12.02	Si
SLU 75	4.21	-331.59	-24131	-20094	1773	1.925	1.925	-37281	10833	5839	38062	16140	4909	21049	No	11.87	Si
SLU 82	2.31	2976.54	-27510	-22908	1777	1.925	1.925	-42501	10833	5839	38062	16140	4909	21049	No	11.84	Si
SLU 82	4.21	-316.58	-24941	-20769	1797	1.925	1.925	-38532	10833	5839	38062	16140	4909	21049	No	11.71	Si
SLU 80	2.31	2902.75	-26603	-22153	1736	1.925	1.925	-41099	10833	5839	38062	16140	4909	21049	No	12.13	Si
SLU 80	4.21	-313.7	-24033	-20013	1758	1.925	1.925	-37129	10833	5839	38062	16140	4909	21049	No	11.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	2.31	5108.88	-12722	-10594	2919	1.925	1.6828	-19654	14348	6760	38062	24210	4909	29119		9.98	Si
SLV 10	4.21	-1725.05	-11955	-9955	3460	1.925	1.925	-18469	14111	7606	38062	24210	4909	29119		8.42	Si
SLD 16	2.31	3710.98	-13098	-10906	3124	1.925	1.925	-20235	14464	7796	38062	24210	4909	29119		9.32	Si
SLD 16	4.21	-1406.97	-10552	-8787	2817	1.925	1.925	-16302	13677	7372	38062	24210	4909	29119		10.34	Si
SLV 14	2.31	7113.07	-5742	-4781	5812	1.925	0	-235011	16250	0	38062	24210	4909	29119		5.01	Si
SLV 14	4.21	-3201.01	-3319	-2763	5539	1.54	0	0	0	0	38062	19368	3927	23295		4.21	Si
SLV 1	2.31	-2206.58	-29167	-24288	-3177	1.925	1.925	-45061	16250	8759	38062	24210	4909	29119		9.17	Si
SLV 1	4.21	2241.25	-28547	-23771	-2515	1.925	1.925	-44103	16250	8759	38062	24210	4909	29119		11.58	Si
SLV 13	2.31	6737.61	-6606	-5501	5460	1.925	0	-187130	16250	0	38062	24210	4909	29119		5.33	Si
SLV 13	4.21	-2951.6	-4236	-3527	5182	1.54	0.7969	0	0	0	38062	19368	3927	23295		4.5	Si
SLV 15	2.31	5716.15	-7521	-6262	5297	1.925	0.6073	-37603	16250	2763	38062	24210	4909	29119		5.5	Si
SLV 15	4.21	-2621.61	-4263	-3550	4602	1.54	1.0428	0	0	0	38062	19368	3927	23295		5.06	Si
SLV 16	2.31	6091.61	-6656	-5542	5649	1.925	0.1418	-139522	16250	645	38062	24210	4909	29119		5.15	Si
SLV 16	4.21	-2871.03	-3346	-2787	4959	1.54	0.3137	0	0	0	38062	19368	3927	23295		4.7	Si
SLD 14	2.31	4159.37	-12703	-10578	3191	1.925	1.9052	-19625	14342	7651	38062	24210	4909	29119		9.12	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	4.21	-1548.04	-10546	-8782	3071	1.925	1.925	-16293	13675	7371	38062	24210	4909	29119		9.48	Si
SLV 9	2.31	4864.24	-13285	-11063	2689	1.925	1.7891	-20525	14522	7275	38062	24210	4909	29119		10.83	Si
SLV 9	4.21	-1562.54	-12552	-10452	3227	1.925	1.925	-19392	14295	7705	38062	24210	4909	29119		9.02	Si
SLV 3	2.31	-3228.04	-30081	-25049	-3341	1.925	1.925	-46473	16250	8759	38062	24210	4909	29119		8.72	Si
SLV 3	4.21	2571.23	-28575	-23795	-3095	1.925	1.925	-44146	16250	8759	38062	24210	4909	29119		9.41	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.31	8343	-4497	149.88	595.17	3.97	Si
SLV 16	179667	0.31	9735	-5247	149.88	687.75	4.59	Si
SLV 13	179667	0.31	9992	-5386	149.88	704.65	4.7	Si
SLV 15	179667	0.31	11383	-6136	149.88	794.96	5.3	Si
SLV 10	179667	0.31	22332	-12037	149.88	1438.76	9.6	Si
SLV 9	179667	0.31	23407	-12616	149.88	1495.55	9.98	Si
SLV 12	179667	0.31	26971	-14537	149.88	1675.8	11.18	Si
SLV 11	179667	0.31	28045	-15117	149.88	1727.66	11.53	Si
SLV 6	179667	0.31	35468	-19118	149.88	2054.85	13.71	Si
SLV 5	179667	0.31	36543	-19697	149.88	2097.69	14	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-17967	-15476	1038	0.542	2088.9	0.963	8.18887	9.2784	No
SLV 6	-17546	-14826	1038	0.553	2046.1	0.962	8.36102	9.2784	No
SLV 7	-17480	-24012	-1020	0.556	2039.4	0.962	8.40283	9.2784	No
SLV 8	-17059	-23362	-1020	0.568	1996.5	0.961	8.58472	9.2784	No
SLV 9	-12495	-7415	1030	0.737	1532.6	0.951	11.2636	9.2784	Si
SLV 10	-12073	-6765	1030	0.758	1489.8	0.95	11.60486	9.2784	Si
SLV 11	-12008	-15951	-1027	0.762	1483.2	0.949	11.66403	9.2784	Si
SLV 12	-11586	-15302	-1027	0.785	1440.4	0.948	12.03173	9.2784	Si
SLV 1	-24294	-28041	326	0.448	2732.9	0.971	6.70009	4.61088	Si
SLV 3	-24148	-30602	-291	0.451	2718	0.971	6.75576	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.75	SLU 76	Si
V_SLU	11.675	SLU 76	Si
PF_SLV	0.761	SLV 14	No
V_SLV	4.205	SLV 14	Si
PFFP_SLV	3.971	SLV 14	Si
R_SLV	0.883	SLV 5	No

Maschio 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.768	6.526	-12.888	6.526	L4	L5	3.88	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	2.31	2174.46	-71406	-0.0001224	0.0003743	0.0035	3.88	49097.2	76975.74	76975.74	35.4	No	Si
SLU 77	4.21	-5867.29	-71688	-0.0001338	0.0003743	0.0035	3.88	48936.54	78382.18	78382.18	13.36	No	Si
SLU 82	2.31	2393.71	-72271	-0.0001248	0.0003743	0.0035	3.88	48595.02	77327.81	77327.81	32.3	No	Si
SLU 82	4.21	-6060.22	-72719	-0.0001366	0.0003743	0.0035	3.88	48324.99	78747.79	78747.79	12.99	No	Si
SLU 73	2.31	2386.27	-69108	-0.0001183	0.0003743	0.0035	3.88	50302.48	76059.56	76059.56	31.87	No	Si
SLU 73	4.21	-5757.98	-69224	-0.0001282	0.0003743	0.0035	3.88	50245.94	77546.18	77546.18	13.47	No	Si
SLU 74	2.31	2201.89	-70567	-0.0001207	0.0003743	0.0035	3.88	49558.62	76638.26	76638.26	34.81	No	Si
SLU 74	4.21	-5887.11	-70878	-0.0001321	0.0003743	0.0035	3.88	49390.6	78101.5	78101.5	13.27	No	Si
SLU 79	2.31	2140.55	-70667	-0.0001207	0.0003743	0.0035	3.88	49504.65	76678.49	76678.49	35.82	No	Si
SLU 79	4.21	-5786.47	-70882	-0.0001318	0.0003743	0.0035	3.88	49388.31	78102.94	78102.94	13.5	No	Si
SLU 75	2.31	2316.41	-70638	-0.0001212	0.0003743	0.0035	3.88	49520.63	76666.6	76666.6	33.1	No	Si
SLU 75	4.21	-5846.24	-70855	-0.0001319	0.0003743	0.0035	3.88	49402.88	78093.79	78093.79	13.36	No	Si
SLU 84	2.31	2366.28	-73110	-0.0001265	0.0003743	0.0035	3.88	48083.46	77672.44	77672.44	32.82	No	Si
SLU 84	4.21	-6040.4	-73529	-0.0001383	0.0003743	0.0035	3.88	47818.59	78860.99	78860.99	13.06	No	Si
SLU 78	2.31	2288.98	-71476	-0.0001228	0.0003743	0.0035	3.88	49057.13	77004.39	77004.39	33.64	No	Si
SLU 78	4.21	-5826.42	-71665	-0.0001336	0.0003743	0.0035	3.88	48949.45	78374.31	78374.31	13.45	No	Si
SLU 83	2.31	2251.76	-73039	-0.000126	0.0003743	0.0035	3.88	48127.58	77643.22	77643.22	34.48	No	Si
SLU 83	4.21	-6081.28	-73552	-0.0001384	0.0003743	0.0035	3.88	47804.21	78863.44	78863.44	12.97	No	Si
SLU 81	2.31	2279.19	-72201	-0.0001243	0.0003743	0.0035	3.88	48637.06	77298.88	77298.88	33.92	No	Si
SLU 81	4.21	-6101.1	-72742	-0.0001367	0.0003743	0.0035	3.88	48311.25	78755.86	78755.86	12.91	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	2.31	21499.65	-40715	-0.0001085	0.0005615	0.0035	3.88		64730.45	64730.45	3.01		Si
SLV 15	4.21	-14717.27	-32503	-0.0000793	0.0005615	0.0035	3.88		57979.08	57979.08	3.94		Si
SLV 4	2.31	-22404.6	-53386	-0.0001324	0.0005615	0.0035	3.88		82856.04	82856.04	3.7		Si
SLV 4	4.21	7276.57	-60152	-0.0001067	0.0005615	0.0035	3.88		86245.23	86245.23	11.85		Si
SLV 3	2.31	-24293.04	-53877	-0.000138	0.0005615	0.0035	3.88		83268.35	83268.35	3.43		Si
SLV 3	4.21	8331.54	-61260	-0.0001112	0.0005615	0.0035	3.88		87119.22	87119.22	10.46		Si
SLV 9	2.31	14511.75	-48438	-0.0001047	0.0005615	0.0035	3.88		73564.71	73564.71	5.07		Si
SLV 9	4.21	-8219.72	-47724	-0.0000885	0.0005615	0.0035	3.88		77121.14	77121.14	9.38		Si
SLV 2	2.31	-18384.34	-54864	-0.000125	0.0005615	0.0035	3.88		84102.2	84102.2	4.57		Si
SLV 2	4.21	6637	-62620	-0.0001093	0.0005615	0.0035	3.88		88197.98	88197.98	13.29		Si
SLV 14	2.31	27408.34	-41702	-0.0001245	0.0005615	0.0035	3.88		65843.96	65843.96	2.4		Si
SLV 14	4.21	-16411.81	-33864	-0.0000854	0.0005615	0.0035	3.88		59799.44	59799.44	3.64		Si
SLV 10	2.31	15742.22	-48118	-0.0001071	0.0005615	0.0035	3.88		73192.86	73192.86	4.65		Si
SLV 10	4.21	-8907.12	-47002	-0.0000889	0.0005615	0.0035	3.88		76310.22	76310.22	8.57		Si
SLV 16	2.31	23388.08	-40224	-0.0001122	0.0005615	0.0035	3.88		64178.05	64178.05	2.74		Si
SLV 16	4.21	-15772.24	-31395	-0.00008	0.0005615	0.0035	3.88		56385.74	56385.74	3.57		Si
SLV 13	2.31	25519.91	-42193	-0.0001206	0.0005615	0.0035	3.88		66400.14	66400.14	2.6		Si
SLV 13	4.21	-15356.85	-34972	-0.0000847	0.0005615	0.0035	3.88		61289.8	61289.8	3.99		Si
SLV 1	2.31	-20272.78	-55355	-0.0001306	0.0005615	0.0035	3.88		84520.04	84520.04	4.17		Si
SLV 1	4.21	7691.96	-63729	-0.0001138	0.0005615	0.0035	3.88		89075.15	89075.15	11.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	2.31	2386.27	-69108	-57547	3750	3.88	3.88	-52970	10833	11769	38062	32532	9894	42426	No	11.31	Si
SLU 73	4.21	-5757.98	-69224	-57644	3690	3.88	3.88	-53060	10833	11769	38062	32532	9894	42426	No	11.5	Si
SLU 76	2.31	2358.84	-69947	-58246	3729	3.88	3.88	-53613	10833	11769	38062	32532	9894	42426	No	11.38	Si
SLU 76	4.21	-5738.16	-70034	-58318	3668	3.88	3.88	-53680	10833	11769	38062	32532	9894	42426	No	11.57	Si
SLU 75	2.31	2316.41	-70638	-58821	3749	3.88	3.88	-54143	10833	11769	38062	32532	9894	42426	No	11.32	Si
SLU 75	4.21	-5846.24	-70855	-59002	3688	3.88	3.88	-54310	10833	11769	38062	32532	9894	42426	No	11.5	Si
SLU 74	2.31	2201.89	-70567	-58762	3699	3.88	3.88	-54089	10833	11769	38062	32532	9894	42426	No	11.47	Si
SLU 74	4.21	-5887.11	-70878	-59021	3639	3.88	3.88	-54327	10833	11769	38062	32532	9894	42426	No	11.66	Si
SLU 78	2.31	2288.98	-71476	-59519	3728	3.88	3.88	-54786	10833	11769	38062	32532	9894	42426	No	11.38	Si
SLU 78	4.21	-5826.42	-71665	-59677	3666	3.88	3.88	-54931	10833	11769	38062	32532	9894	42426	No	11.57	Si
SLU 83	2.31	2251.76	-73039	-60821	3806	3.88	3.88	-55984	10833	11769	38062	32532	9894	42426	No	11.15	Si
SLU 83	4.21	-6081.28	-73552	-61248	3744	3.88	3.88	-56377	10833	11769	38062	32532	9894	42426	No	11.33	Si
SLU 77	2.31	2174.46	-71406	-59461	3678	3.88	3.88	-54732	10833	11769	38062	32532	9894	42426	No	11.54	Si
SLU 77	4.21	-5867.29	-71688	-59695	3617	3.88	3.88	-54948	10833	11769	38062	32532	9894	42426	No	11.73	Si
SLU 81	2.31	2279.19	-72201	-60123	3827	3.88	3.88	-55341	10833	11769	38062	32532	9894	42426	No	11.09	Si
SLU 81	4.21	-6101.1	-72742	-60573	3766	3.88	3.88	-55756	10833	11769	38062	32532	9894	42426	No	11.27	Si
SLU 84	2.31	2366.28	-73110	-60880	3856	3.88	3.88	-56038	10833	11769	38062	32532	9894	42426	No	11	Si
SLU 84	4.21	-6040.4	-73529	-61229	3793	3.88	3.88	-56359	10833	11769	38062	32532	9894	42426	No	11.18	Si
SLU 82	2.31	2393.71	-72271	-60181	3877	3.88	3.88	-55395	10833	11769	38062	32532	9894	42426	No	10.94	Si
SLU 82	4.21	-6060.22	-72719	-60554	3815	3.88	3.88	-55739	10833	11769	38062	32532	9894	42426	No	11.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.31	27408.34	-41702	-34726	22950	3.88	3.8483	-31964	16250	17510	38062	48797	9894	55572		2.42	Si
SLV 14	4.21	-16411.81	-33864	-28199	22146	3.88	3.88	-25956	15608	16956	38062	48797	9894	55019		2.48	Si
SLV 15	2.31	21499.65	-40715	-33904	20835	3.88	3.88	-31208	16250	17654	38062	48797	9894	55716		2.67	Si
SLV 15	4.21	-14717.27	-32503	-27066	20516	3.88	3.88	-24913	15399	16730	38062	48797	9894	54792		2.67	Si
SLV 2	2.31	-18384.34	-54864	-45686	-15702	3.88	3.88	-42053	16250	17654	38062	48797	9894	55716		3.55	Si
SLV 2	4.21	6637	-62620	-52145	-15466	3.88	3.88	-47998	16250	17654	38062	48797	9894	55716		3.6	Si
SLV 1	2.31	-20272.78	-55355	-46095	-17322	3.88	3.88	-42429	16250	17654	38062	48797	9894	55716		3.22	Si
SLV 1	4.21	7691.96	-63729	-53068	-17083	3.88	3.88	-48847	16250	17654	38062	48797	9894	55716		3.26	Si
SLV 4	2.31	-22404.6	-53386	-44455	-16197	3.88	3.88	-40920	16250	17654	38062	48797	9894	55716		3.44	Si
SLV 4	4.21	7276.57	-60152	-50089	-15478	3.88	3.88	-46106	16250	17654	38062	48797	9894	55716		3.6	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	2.31	-24293.04	-53877	-44864	-17817	3.88	3.88	-41296	16250	17654	38062	48797	9894	55716		3.13	Si
SLV 3	4.21	8331.54	-61260	-51012	-17095	3.88	3.88	-46955	16250	17654	38062	48797	9894	55716		3.26	Si
SLV 13	2.31	25519.91	-42193	-35134	21330	3.88	3.88	-32340	16250	17654	38062	48797	9894	55716		2.61	Si
SLV 13	4.21	-15356.85	-34972	-29122	20528	3.88	3.88	-26806	15778	17141	38062	48797	9894	55203		2.69	Si
SLD 16	2.31	10858.16	-44548	-37096	11064	3.88	3.88	-34146	16250	17654	38062	48797	9894	55716		5.04	Si
SLD 16	4.21	-9053.23	-40632	-33835	10902	3.88	3.88	-31144	16250	17654	38062	48797	9894	55716		5.11	Si
SLD 14	2.31	12622.79	-45185	-37626	11281	3.88	3.88	-34634	16250	17654	38062	48797	9894	55716		4.94	Si
SLD 14	4.21	-9331.07	-41714	-34736	10907	3.88	3.88	-31973	16250	17654	38062	48797	9894	55716		5.11	Si
SLV 16	2.31	23388.08	-40224	-33495	22455	3.88	3.88	-30831	16250	17654	38062	48797	9894	55716		2.48	Si
SLV 16	4.21	-15772.24	-31395	-26143	22133	3.88	3.88	-24064	15229	16545	38062	48797	9894	54607		2.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.31	33358	-36240	302.1	3965.4	13.13	Si
SLV 15	179667	0.31	34010	-36948	302.1	4020.77	13.31	Si
SLV 14	179667	0.31	35478	-38544	302.1	4142.52	13.71	Si
SLV 13	179667	0.31	36130	-39251	302.1	4195.14	13.89	Si
SLV 12	179667	0.31	37085	-40289	302.1	4270.79	14.14	Si
SLV 11	179667	0.31	37510	-40750	302.1	4303.81	14.25	Si
SLV 8	179667	0.31	42303	-45958	302.1	4651.82	15.4	Si
SLV 7	179667	0.31	42727	-46419	302.1	4680.44	15.49	Si
SLV 10	179667	0.31	44153	-47967	302.1	4773.9	15.8	Si
SLV 9	179667	0.31	44577	-48428	302.1	4800.95	15.89	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-48886	-46000	1425	0.434	5500.2	0.971	6.48954	9.2784	No
SLV 6	-48260	-45634	1426	0.438	5436.5	0.971	6.5627	9.2784	No
SLV 7	-41529	-46872	-1452	0.497	4751.2	0.967	7.47691	9.2784	No
SLV 9	-41215	-41147	1405	0.502	4719.3	0.966	7.54243	9.2784	No
SLV 8	-40903	-46506	-1451	0.504	4687.5	0.966	7.57759	9.2784	No
SLV 10	-40589	-40781	1406	0.508	4655.6	0.966	7.64415	9.2784	No
SLV 11	-33858	-42020	-1472	0.591	3970.7	0.961	8.93867	9.2784	No
SLV 12	-33232	-41654	-1471	0.6	3907.1	0.96	9.08694	9.2784	No
SLV 1	-55427	-52064	441	0.407	6166.3	0.974	6.06759	4.61088	Si
SLV 2	-54466	-51503	443	0.413	6068.5	0.973	6.1604	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.908	SLU 81	Si
V_SLU	10.944	SLU 82	Si
PF_SLV	2.402	SLV 14	Si
V_SLV	2.421	SLV 14	Si
PFFP_SLV	13.126	SLV 16	Si
R_SLV	0.699	SLV 5	No

Maschio 65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.888	6.526	-8.008	6.526	L4	L5	3.88	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 58	2.31	876.11	-60168	-0.0000966	0.0003743	0.0035	3.88	53229.71	72745.88	72745.88	83.03	No	Si
SLU 58	4.21	2366.35	-63417	-0.0001069	0.0003743	0.0035	3.88	52490.13	73904.1	73904.1	31.23	No	Si
SLU 50	2.31	617.07	-53215	-0.0000833	0.0003743	0.0035	3.88	53568.19	68972.5	68972.5	111.77	No	Si
SLU 50	4.21	2317.72	-55303	-0.0000915	0.0003743	0.0035	3.88	53644.68	70707.37	70707.37	30.51	No	Si
SLU 48	2.31	645.44	-53860	-0.0000845	0.0003743	0.0035	3.88	53608.11	69517.81	69517.81	107.71	No	Si
SLU 48	4.21	2315.63	-56099	-0.0000929	0.0003743	0.0035	3.88	53633.59	71301.12	71301.12	30.79	No	Si
SLU 43	2.31	533.46	-51334	-0.0000797	0.0003743	0.0035	3.88	53368.26	67400.01	67400.01	126.34	No	Si
SLU 43	4.21	2241.94	-53552	-0.0000881	0.0003743	0.0035	3.88	53590.88	69257.24	69257.24	30.89	No	Si
SLU 45	2.31	603.64	-52919	-0.0000827	0.0003743	0.0035	3.88	53544.94	68722.84	68722.84	113.85	No	Si
SLU 45	4.21	2277.74	-55224	-0.0000912	0.0003743	0.0035	3.88	53644.57	70647.04	70647.04	31.02	No	Si
SLU 71	2.31	870.99	-60469	-0.0000972	0.0003743	0.0035	3.88	53176.74	72851	72851	83.64	No	Si
SLU 71	4.21	2408.14	-63445	-0.0001071	0.0003743	0.0035	3.88	52482.21	73914.22	73914.22	30.69	No	Si
SLU 51	2.31	573.5	-53309	-0.0000833	0.0003743	0.0035	3.88	53574.91	69051.73	69051.73	120.4	No	Si
SLU 51	4.21	2256.39	-55326	-0.0000913	0.0003743	0.0035	3.88	53644.67	70724.88	70724.88	31.34	No	Si
SLU 66	2.31	857.56	-60173	-0.0000966	0.0003743	0.0035	3.88	53228.9	72747.52	72747.52	84.83	No	Si
SLU 66	4.21	2368.16	-63365	-0.0001068	0.0003743	0.0035	3.88	52504.85	73885.19	73885.19	31.2	No	Si
SLU 69	2.31	899.36	-61113	-0.0000985	0.0003743	0.0035	3.88	53052.7	73077.49	73077.49	81.25	No	Si
SLU 69	4.21	2406.05	-64241	-0.0001086	0.0003743	0.0035	3.88	52243.86	74206.01	74206.01	30.84	No	Si
SLU 79	2.31	1130.03	-67421	-0.0001113	0.0003743	0.0035	3.88	51069.24	75403.92	75403.92	66.73	No	Si
SLU 79	4.21	2456.77	-71559	-0.0001235	0.0003743	0.0035	3.88	49010.37	77037.69	77037.69	31.36	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.31	-27663.82	-40392	-0.0001231	0.0005615	0.0035	3.88		68354.02	68354.02	2.47		Si
SLV 4	4.21	17292.23	-41060	-0.0000991	0.0005615	0.0035	3.88		65119.22	65119.22	3.77		Si
SLV 14	2.31	31183.4	-50619	-0.0001494	0.0005615	0.0035	3.88		76113.87	76113.87	2.44		Si
SLV 14	4.21	-15159.01	-55121	-0.0001175	0.0005615	0.0035	3.88		84320.87	84320.87	5.56		Si
SLV 15	2.31	23991.29	-49602	-0.0001297	0.0005615	0.0035	3.88		74921.38	74921.38	3.12		Si
SLV 15	4.21	-13289.44	-52677	-0.0001088	0.0005615	0.0035	3.88		82264.23	82264.23	6.19		Si
SLV 1	2.31	-25015.34	-41225	-0.0001178	0.0005615	0.0035	3.88		69424.67	69424.67	2.78		Si
SLV 1	4.21	18308.8	-43085	-0.0001048	0.0005615	0.0035	3.88		67413.68	67413.68	3.68		Si
SLV 13	2.31	28911.59	-50527	-0.0001435	0.0005615	0.0035	3.88		76005.13	76005.13	2.63		Si
SLV 13	4.21	-13715.94	-54912	-0.0001136	0.0005615	0.0035	3.88		84142.8	84142.8	6.13		Si
SLV 16	2.31	26263.11	-49694	-0.0001355	0.0005615	0.0035	3.88		75029.68	75029.68	2.86		Si
SLV 16	4.21	-14732.51	-52887	-0.0001127	0.0005615	0.0035	3.88		82438.72	82438.72	5.6		Si
SLV 10	2.31	17653.55	-48427	-0.0001122	0.0005615	0.0035	3.88		73551.81	73551.81	4.17		Si
SLV 10	4.21	-4196.54	-53552	-0.0000883	0.0005615	0.0035	3.88		82995.03	82995.03	19.78		Si
SLV 3	2.31	-29935.63	-40300	-0.0001294	0.0005615	0.0035	3.88		68235.29	68235.29	2.28		Si
SLV 3	4.21	18735.3	-40851	-0.0001022	0.0005615	0.0035	3.88		64883.09	64883.09	3.46		Si
SLV 2	2.31	-22743.53	-41317	-0.0001125	0.0005615	0.0035	3.88		69544.15	69544.15	3.06		Si
SLV 2	4.21	16865.73	-43294	-0.0001018	0.0005615	0.0035	3.88		67652.26	67652.26	4.01		Si
SLV 7	2.31	-16405.78	-42492	-0.0000993	0.0005615	0.0035	3.88		70970.61	70970.61	4.33		Si
SLV 7	4.21	7772.83	-42420	-0.0000789	0.0005615	0.0035	3.88		66657.64	66657.64	8.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 33	2.31	1016.89	-57286	-47703	553	3.88	3.88	-43909	10833	11769	38062	32532	9894	42426	No	76.75	Si
SLU 33	4.21	1861.94	-61291	-51038	533	3.88	3.88	-46979	10833	11769	38062	32532	9894	42426	No	79.63	Si
SLU 39	2.31	1101.3	-58586	-48786	631	3.88	3.88	-44906	10833	11769	38062	32532	9894	42426	No	67.27	Si
SLU 39	4.21	1908.31	-63074	-52523	612	3.88	3.88	-48346	10833	11769	38062	32532	9894	42426	No	69.27	Si
SLU 32	2.31	1060.46	-57192	-47624	551	3.88	3.88	-43837	10833	11769	38062	32532	9894	42426	No	76.96	Si
SLU 32	4.21	1923.27	-61268	-51019	532	3.88	3.88	-46961	10833	11769	38062	32532	9894	42426	No	79.7	Si
SLU 82	2.31	1113.87	-68613	-57135	582	3.88	3.88	-52591	10833	11769	38062	32532	9894	42426	No	72.92	Si
SLU 82	4.21	2340.5	-73308	-61045	559	3.88	3.88	-56190	10833	11769	38062	32532	9894	42426	No	75.91	Si
SLU 81	2.31	1157.44	-68519	-57057	580	3.88	3.88	-52519	10833	11769	38062	32532	9894	42426	No	73.11	Si
SLU 81	4.21	2401.83	-73285	-61026	558	3.88	3.88	-56172	10833	11769	38062	32532	9894	42426	No	75.98	Si
SLU 42	2.31	1099.53	-59621	-49647	627	3.88	3.88	-45699	10833	11769	38062	32532	9894	42426	No	67.68	Si
SLU 42	4.21	1884.87	-63973	-53271	606	3.88	3.88	-49034	10833	11769	38062	32532	9894	42426	No	69.96	Si
SLU 41	2.31	1143.1	-59527	-49569	625	3.88	3.88	-45627	10833	11769	38062	32532	9894	42426	No	67.85	Si
SLU 41	4.21	1946.2	-63950	-53252	606	3.88	3.88	-49017	10833	11769	38062	32532	9894	42426	No	70.02	Si
SLU 40	2.31	1057.73	-58680	-48864	632	3.88	3.88	-44978	10833	11769	38062	32532	9894	42426	No	67.11	Si
SLU 40	4.21	1846.98	-63097	-52542	613	3.88	3.88	-48363	10833	11769	38062	32532	9894	42426	No	69.22	Si
SLU 83	2.31	1199.24	-69460	-57840	575	3.88	3.88	-53241	10833	11769	38062	32532	9894	42426	No	73.79	Si
SLU 83	4.21	2439.72	-74161	-61755	552	3.88	3.88	-56843	10833	11769	38062	32532	9894	42426	No	76.87	Si
SLU 84	2.31	1155.67	-69554	-57919	576	3.88	3.88	-53312	10833	11769	38062	32532	9894	42426	No	73.6	Si
SLU 84	4.21	2378.39	-74184	-61774	552	3.88	3.88	-56861	10833	11769	38062	32532	9894	42426	No	76.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.31	31183.4	-50619	-42151	24795	3.88	3.88	-38799	16250	17654	38062	48797	9894	55716		2.25	Si
SLV 14	4.21	-15159.01	-55121	-45900	23946	3.88	3.88	-42250	16250	17654	38062	48797	9894	55716		2.33	Si
SLV 1	2.31	-25015.34	-41225	-34328	-23028	3.88	3.88	-31598	16250	17654	38062	48797	9894	55716		2.42	Si
SLV 1	4.21	18308.8	-43085	-35877	-22694	3.88	3.88	-33024	16250	17654	38062	48797	9894	55716		2.46	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	2.31	13695.61	-47660	-39687	10711	3.88	3.88	-36531	16250	17654	38062	48797	9894	55716		5.2	Si
SLD 14	4.21	-5462.69	-51048	-42508	10337	3.88	3.88	-39128	16250	17654	38062	48797	9894	55716		5.39	Si
SLV 4	2.31	-27663.82	-40392	-33635	-22434	3.88	3.7654	-32467	16250	17132	38062	48797	9894	55194		2.46	Si
SLV 4	4.21	17292.23	-41060	-34191	-21617	3.88	3.88	-31472	16250	17654	38062	48797	9894	55716		2.58	Si
SLV 13	2.31	28911.59	-50527	-42074	22826	3.88	3.88	-38728	16250	17654	38062	48797	9894	55716		2.44	Si
SLV 13	4.21	-13715.94	-54912	-45726	21977	3.88	3.88	-42089	16250	17654	38062	48797	9894	55716		2.54	Si
SLV 15	2.31	23991.29	-49602	-41304	21450	3.88	3.88	-38019	16250	17654	38062	48797	9894	55716		2.6	Si
SLV 15	4.21	-13289.44	-52677	-43865	21084	3.88	3.88	-40377	16250	17654	38062	48797	9894	55716		2.64	Si
SLV 16	2.31	26263.11	-49694	-41381	23419	3.88	3.88	-38090	16250	17654	38062	48797	9894	55716		2.38	Si
SLV 16	4.21	-14732.51	-52887	-44040	23054	3.88	3.88	-40537	16250	17654	38062	48797	9894	55716		2.42	Si
SLV 3	2.31	-29935.63	-40300	-33558	-24404	3.88	3.5915	-33993	16250	16341	38062	48797	9894	54404		2.23	Si
SLV 3	4.21	18735.3	-40851	-34017	-23586	3.88	3.88	-31312	16250	17654	38062	48797	9894	55716		2.36	Si
SLD 3	2.31	-12447.84	-43259	-36022	-10320	3.88	3.88	-33158	16250	17654	38062	48797	9894	55716		5.4	Si
SLD 3	4.21	9038.98	-44924	-37408	-9977	3.88	3.88	-34433	16250	17654	38062	48797	9894	55716		5.58	Si
SLV 2	2.31	-22743.53	-41317	-34406	-21058	3.88	3.88	-31669	16250	17654	38062	48797	9894	55716		2.65	Si
SLV 2	4.21	16865.73	-43294	-36052	-20724	3.88	3.88	-33185	16250	17654	38062	48797	9894	55716		2.69	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.31	37146	-40355	302.1	4275.54	14.15	Si
SLV 4	179667	0.31	37270	-40490	302.1	4285.22	14.18	Si
SLV 1	179667	0.31	38174	-41472	302.1	4354.78	14.42	Si
SLV 2	179667	0.31	38298	-41607	302.1	4364.21	14.45	Si
SLV 7	179667	0.31	39200	-42587	302.1	4431.79	14.67	Si
SLV 8	179667	0.31	39281	-42675	302.1	4437.78	14.69	Si
SLV 11	179667	0.31	41971	-45597	302.1	4629.2	15.32	Si
SLV 12	179667	0.31	42052	-45685	302.1	4634.73	15.34	Si
SLV 5	179667	0.31	42627	-46310	302.1	4673.72	15.47	Si
SLV 6	179667	0.31	42708	-46398	302.1	4679.15	15.49	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-46946	-42278	1525	0.447	5302.6	0.97	6.69359	9.2784	No
SLV 9	-46821	-42184	1525	0.448	5290	0.97	6.70903	9.2784	No
SLV 6	-43782	-38745	1551	0.473	4980.5	0.968	7.10669	9.2784	No
SLV 5	-43657	-38652	1551	0.475	4967.9	0.968	7.12432	9.2784	No
SLV 12	-40448	-43695	-1606	0.505	4641.2	0.966	7.59919	9.2784	No
SLV 11	-40323	-43601	-1605	0.506	4628.5	0.966	7.61981	9.2784	No
SLV 8	-37284	-40162	-1579	0.542	4319.2	0.964	8.17245	9.2784	No
SLV 7	-37160	-40068	-1579	0.543	4306.6	0.964	8.19654	9.2784	No
SLV 14	-48396	-46920	399	0.457	5450.3	0.971	6.84402	4.61088	Si
SLV 13	-48205	-46776	399	0.459	5430.9	0.971	6.86765	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	30.507	SLU 50	Si
V_SLU	67.11	SLU 40	Si
PF_SLV	2.279	SLV 3	Si
V_SLV	2.229	SLV 3	Si
PFFP_SLV	14.153	SLV 3	Si
R_SLV	0.721	SLV 10	No

Maschio 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.008	6.526	-5.093	6.526	L4	L5	1.915	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	2.31	-816.8	-23188	-0.0000793	0.0003743	0.0035	1.915	12772.21	16339.69	16339.69	20	No	Si
SLU 65	4.21	356.77	-23224	-0.0000746	0.0003743	0.0035	1.915	12777.39	15581.15	15581.15	43.67	No	Si
SLU 46	2.31	-735.52	-20800	-0.0000701	0.0003743	0.0035	1.915	12327.95	15303.6	15303.6	20.81	No	Si
SLU 46	4.21	455.12	-20534	-0.0000664	0.0003743	0.0035	1.915	12266.23	14550.14	14550.14	31.97	No	Si
SLU 2	2.31	-667.15	-16382	-0.0000547	0.0003743	0.0035	1.915	10978.89	13365.59	13365.59	20.03	No	Si
SLU 2	4.21	328.39	-16201	-0.0000509	0.0003743	0.0035	1.915	10909.09	12198.91	12198.91	37.15	No	Si
SLU 47	2.31	-803.95	-20569	-0.00007	0.0003743	0.0035	1.915	12274.57	15202.06	15202.06	18.91	No	Si
SLU 47	4.21	455.93	-20245	-0.0000654	0.0003743	0.0035	1.915	12196.09	14441.53	14441.53	31.67	No	Si
SLU 55	2.31	-821.33	-23458	-0.0000803	0.0003743	0.0035	1.915	12809.74	16413.35	16413.35	19.98	No	Si
SLU 55	4.21	337.3	-23565	-0.0000756	0.0003743	0.0035	1.915	12823.96	15714.92	15714.92	46.59	No	Si
SLU 68	2.31	-806.91	-23511	-0.0000803	0.0003743	0.0035	1.915	12816.89	16428.09	16428.09	20.36	No	Si
SLU 68	4.21	350.08	-23588	-0.0000758	0.0003743	0.0035	1.915	12827.06	15724.32	15724.32	44.92	No	Si
SLU 44	2.31	-813.84	-20247	-0.000069	0.0003743	0.0035	1.915	12196.59	15061.15	15061.15	18.51	No	Si
SLU 44	4.21	462.62	-19881	-0.0000643	0.0003743	0.0035	1.915	12103.71	14305.92	14305.92	30.92	No	Si
SLU 73	2.31	-834.17	-26076	-0.0000899	0.0003743	0.0035	1.915	13042.07	17176.47	17176.47	20.59	No	Si
SLU 73	4.21	238.14	-26544	-0.0000852	0.0003743	0.0035	1.915	13058.25	16921.23	16921.23	71.06	No	Si
SLU 52	2.31	-831.21	-23135	-0.0000792	0.0003743	0.0035	1.915	12764.45	16325.16	16325.16	19.64	No	Si
SLU 52	4.21	343.99	-23201	-0.0000744	0.0003743	0.0035	1.915	12773.98	15571.81	15571.81	45.27	No	Si
SLU 5	2.31	-657.26	-16705	-0.0000557	0.0003743	0.0035	1.915	11100.62	13548.54	13548.54	20.61	No	Si
SLU 5	4.21	321.69	-16565	-0.000052	0.0003743	0.0035	1.915	11048.46	12409.13	12409.13	38.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	2.31	-6878.71	-11864	-0.0001197	0.0005615	0.0035	1.532		11136.96	11136.96	1.62		Si
SLV 1	4.21	4965.67	-2633	-0.0194817	0.0005615	0.0035	1.915		2635.03	2635.03	0.53		No
SLV 16	2.31	5882.35	-23957	-0.0001282	0.0005615	0.0035	1.915		17950.53	17950.53	3.05		Si
SLV 16	4.21	-4440.98	-33349	-0.0001474	0.0005615	0.0035	1.915		23251.32	23251.32	5.24		Si
SLV 2	2.31	-6312.24	-12081	-0.0001046	0.0005615	0.0035	1.915		11295.66	11295.66	1.79		Si
SLV 2	4.21	4522.87	-3844	-0.0083249	0.0005615	0.0035	1.915		3722.89	3722.89	0.82		No
SLV 13	2.31	6609.07	-22993	-0.0001321	0.0005615	0.0035	1.915		17399.11	17399.11	2.63		Si
SLV 13	4.21	-4218.39	-33975	-0.0001473	0.0005615	0.0035	1.915		23475.61	23475.61	5.57		Si
SLV 14	2.31	7175.54	-23211	-0.0001387	0.0005615	0.0035	1.915		17522.98	17522.98	2.44		Si
SLV 14	4.21	-4661.19	-35186	-0.0001566	0.0005615	0.0035	1.915		23827.81	23827.81	5.11		Si
SLV 15	2.31	5315.88	-23740	-0.0001218	0.0005615	0.0035	1.915		17825.81	17825.81	3.35		Si
SLV 15	4.21	-3998.18	-32137	-0.0001382	0.0005615	0.0035	1.915		22709.89	22709.89	5.68		Si
SLV 3	2.31	-8171.9	-12610	-0.00016	0.0005615	0.0035	1.532		11681.92	11681.92	1.43		Si
SLV 3	4.21	5185.88	-796	-0.0345379	0.0005615	0.0035	1.915		940.46	940.46	0.18		No
SLV 7	2.31	-4861.21	-17414	-0.0000959	0.0005615	0.0035	1.915		15048.9	15048.9	3.1		Si
SLV 7	4.21	2151.24	-9833	-0.0000469	0.0005615	0.0035	1.915		8665.12	8665.12	4.03		Si
SLV 4	2.31	-7605.43	-12827	-0.0001357	0.0005615	0.0035	1.532		11841.29	11841.29	1.56		Si
SLV 4	4.21	4743.08	-2007	-0.0220253	0.0005615	0.0035	1.915		2064.38	2064.38	0.44		No
SLV 8	2.31	-4492.11	-17556	-0.0000928	0.0005615	0.0035	1.915		15143.13	15143.13	3.37		Si
SLV 8	4.21	1862.72	-10622	-0.0000467	0.0005615	0.0035	1.915		9214.88	9214.88	4.95		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	2.31	-650.99	-26547	-22106	1047	1.915	1.915	-41227	10833	5809	38062	16056	4883	20940	No	20	Si
SLU 74	4.21	229.49	-27129	-22591	1085	1.915	1.915	-42131	10833	5809	38062	16056	4883	20940	No	19.3	Si
SLU 84	2.31	-761.82	-27582	-22968	1096	1.915	1.915	-42834	10833	5809	38062	16056	4883	20940	No	19.11	Si
SLU 84	4.21	179.84	-28285	-23554	1102	1.915	1.915	-43926	10833	5809	38062	16056	4883	20940	No	18.99	Si
SLU 81	2.31	-666.84	-27177	-22631	1108	1.915	1.915	-42205	10833	5809	38062	16056	4883	20940	No	18.9	Si
SLU 81	4.21	185.39	-27853	-23193	1148	1.915	1.915	-43254	10833	5809	38062	16056	4883	20940	No	18.24	Si
SLU 35	2.31	-494.4	-23005	-19156	1040	1.915	1.915	-35726	10833	5809	38062	16056	4883	20940	No	20.13	Si
SLU 35	4.21	88.56	-23814	-19830	1076	1.915	1.915	-36982	10833	5809	38062	16056	4883	20940	No	19.46	Si
SLU 83	2.31	-656.96	-27500	-22899	1137	1.915	1.915	-42706	10833	5809	38062	16056	4883	20940	No	18.42	Si
SLU 83	4.21	178.7	-28217	-23497	1178	1.915	1.915	-43820	10833	5809	38062	16056	4883	20940	No	17.78	Si
SLU 82	2.31	-771.71	-27259	-22699	1067	1.915	1.915	-42333	10833	5809	38062	16056	4883	20940	No	19.63	Si
SLU 82	4.21	186.53	-27921	-23251	1073	1.915	1.915	-43361	10833	5809	38062	16056	4883	20940	No	19.52	Si
SLU 79	2.31	-639.62	-26585	-22137	1053	1.915	1.915	-41285	10833	5809	38062	16056	4883	20940	No	19.89	Si
SLU 79	4.21	222.85	-27158	-22615	1090	1.915	1.915	-42176	10833	5809	38062	16056	4883	20940	No	19.22	Si
SLU 77	2.31	-641.1	-26870	-22375	1077	1.915	1.915	-41728	10833	5809	38062	16056	4883	20940	No	19.45	Si
SLU 77	4.21	222.8	-27493	-22894	1115	1.915	1.915	-42696	10833	5809	38062	16056	4883	20940	No	18.79	Si
SLU 41	2.31	-510.26	-23635	-19681	1101	1.915	1.915	-36704	10833	5809	38062	16056	4883	20940	No	19.02	Si
SLU 41	4.21	44.46	-24537	-20433	1139	1.915	1.915	-38106	10833	5809	38062	16056	4883	20940	No	18.39	Si
SLU 39	2.31	-520.15	-23312	-19412	1071	1.915	1.915	-36203	10833	5809	38062	16056	4883	20940	No	19.54	Si
SLU 39	4.21	51.15	-24173	-20129	1109	1.915	1.915	-37540	10833	5809	38062	16056	4883	20940	No	18.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2.31	5882.35	-23957	-19949	11125	1.915	1.915	-37205	16250	8713	38062	24085	4883	28968		2.6	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	4.21	-4440.98	-33349	-27770	11562	1.915	1.915	-51789	16250	8713	38062	24085	4883	28968		2.51	Si
SLV 3	2.31	-8171.9	-12610	-10501	-11692	1.532	0.9284	0	0	0	38062	19268	3907	23174		1.98	Si
SLV 3	4.21	5185.88	-796	-662	-11491	1.915	0	0	16250	0	38062	24085	4883	28968		2.52	Si
SLV 4	2.31	-7605.43	-12827	-10681	-10685	1.532	1.0938	0	0	0	38062	19268	3907	23174		2.17	Si
SLV 4	4.21	4743.08	-2007	-1671	-10444	1.915	0	0	16250	0	38062	24085	4883	28968		2.77	Si
SLV 9	2.31	3495.75	-18265	-15209	6391	1.915	1.915	-28365	16090	8627	38062	24085	4883	28968		4.53	Si
SLV 9	4.21	-1338.03	-25359	-21117	5442	1.915	1.915	-39382	16250	8713	38062	24085	4883	28968		5.32	Si
SLV 13	2.31	6609.07	-22993	-19147	11840	1.915	1.915	-35708	16250	8713	38062	24085	4883	28968		2.45	Si
SLV 13	4.21	-4218.39	-33975	-28291	11644	1.915	1.915	-52761	16250	8713	38062	24085	4883	28968		2.49	Si
SLV 14	2.31	7175.54	-23211	-19328	12847	1.915	1.915	-36045	16250	8713	38062	24085	4883	28968		2.25	Si
SLV 14	4.21	-4661.19	-35186	-29300	12691	1.915	1.915	-54642	16250	8713	38062	24085	4883	28968		2.28	Si
SLV 2	2.31	-6312.24	-12081	-10060	-8963	1.915	1.305	-27924	16002	5847	38062	24085	4883	28968		3.23	Si
SLV 2	4.21	4522.87	-3844	-3201	-9315	1.915	0	-158783	16250	0	38062	24085	4883	28968		3.11	Si
SLV 1	2.31	-6878.71	-11864	-9879	-9970	1.532	1.1331	0	0	0	38062	19268	3907	23174		2.32	Si
SLV 1	4.21	4965.67	-2633	-2192	-10362	1.915	0	-168841	16250	0	38062	24085	4883	28968		2.8	Si
SLV 10	2.31	3864.86	-18406	-15327	7046	1.915	1.915	-28585	16134	8651	38062	24085	4883	28968		4.11	Si
SLV 10	4.21	-1626.55	-26149	-21774	6124	1.915	1.915	-40608	16250	8713	38062	24085	4883	28968		4.73	Si
SLV 15	2.31	5315.88	-23740	-19769	10119	1.915	1.915	-36867	16250	8713	38062	24085	4883	28968		2.86	Si
SLV 15	4.21	-3998.18	-32137	-26761	10514	1.915	1.915	-49908	16250	8713	38062	24085	4883	28968		2.76	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.31	5399	-2895	149.1	391	2.62	Si
SLV 1	179667	0.31	6799	-3645	149.1	487.65	3.27	Si
SLV 4	179667	0.31	7664	-4109	149.1	546.42	3.66	Si
SLV 2	179667	0.31	9063	-4860	149.1	639.96	4.29	Si
SLV 7	179667	0.31	24177	-12964	149.1	1527.62	10.25	Si
SLV 8	179667	0.31	25652	-13755	149.1	1602.23	10.75	Si
SLV 5	179667	0.31	28841	-15465	149.1	1756.2	11.78	Si
SLV 6	179667	0.31	30316	-16256	149.1	1824.04	12.23	Si
SLV 11	179667	0.31	41333	-22163	149.1	2263.06	15.18	Si
SLV 12	179667	0.31	42809	-22954	149.1	2312.79	15.51	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-20867	-13430	615	0.494	2382.7	0.967	7.42825	9.2784	No
SLV 9	-20379	-13279	615	0.504	2333	0.967	7.58447	9.2784	No
SLV 12	-17336	-16608	-578	0.581	2023.4	0.962	8.77292	9.2784	No
SLV 11	-16848	-16457	-578	0.595	1973.8	0.961	8.99594	9.2784	No
SLV 6	-14546	-10474	589	0.673	1739.7	0.956	10.2267	9.2784	Si
SLV 5	-14058	-10322	589	0.693	1690.1	0.955	10.53802	9.2784	Si
SLV 14	-27136	-18032	228	0.409	3021	0.974	6.10522	4.61088	Si
SLV 13	-26387	-17800	228	0.419	2944.7	0.973	6.25637	4.61088	Si
SLV 16	-26077	-18986	-130	0.427	2913.1	0.973	6.37409	4.61088	Si
SLV 8	-11016	-13652	-604	0.848	1381.1	0.946	13.0202	9.2784	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.506	SLU 44	Si
V_SLU	17.782	SLU 83	Si
PF_SLV	0.181	SLV 3	No
V_SLV	1.982	SLV 3	Si
PFFP_SLV	2.622	SLV 3	Si
R_SLV	0.801	SLV 10	No

Maschio 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L4	L5	5.19	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.41	-25979.26	-87213	-0.0001241	0.0004492	0.0035	5.19	115157.96	180417.84	180417.84	6.94	No	Si
SLU 74	3.51	-18450.34	-79717	-0.000105	0.0004492	0.0035	5.19	113993.19	170738.02	170738.02	9.25	No	Si
SLU 80	1.41	-26133.66	-87670	-0.0001248	0.0004492	0.0035	5.19	115175.85	181002.32	181002.32	6.93	No	Si
SLU 80	3.51	-18488.13	-80125	-0.0001055	0.0004492	0.0035	5.19	114098.82	171309.15	171309.15	9.27	No	Si
SLU 79	1.41	-26141.89	-87673	-0.0001248	0.0004492	0.0035	5.19	115175.96	181006.5	181006.5	6.92	No	Si
SLU 79	3.51	-18495.19	-80099	-0.0001055	0.0004492	0.0035	5.19	114092.15	171272.29	171272.29	9.26	No	Si
SLU 78	1.41	-26329.74	-88400	-0.000126	0.0004492	0.0035	5.19	115191.79	181936.56	181936.56	6.91	No	Si
SLU 78	3.51	-18689.92	-80889	-0.0001067	0.0004492	0.0035	5.19	114283.6	172326	172326	9.22	No	Si
SLU 84	1.41	-26611.62	-89362	-0.0001276	0.0004492	0.0035	5.19	115189	182900.76	182900.76	6.87	No	Si
SLU 84	3.51	-19049.02	-82196	-0.0001087	0.0004492	0.0035	5.19	114560.05	173997.79	173997.79	9.13	No	Si
SLU 82	1.41	-26252.91	-88171	-0.0001256	0.0004492	0.0035	5.19	115188.48	181644.33	181644.33	6.92	No	Si
SLU 82	3.51	-18802.38	-81050	-0.000107	0.0004492	0.0035	5.19	114320.34	172531.92	172531.92	9.18	No	Si
SLU 83	1.41	-26619.85	-89365	-0.0001276	0.0004492	0.0035	5.19	115188.94	182903.79	182903.79	6.87	No	Si
SLU 83	3.51	-19056.08	-82169	-0.0001087	0.0004492	0.0035	5.19	114554.97	173964.11	173964.11	9.13	No	Si
SLU 77	1.41	-26337.97	-88403	-0.000126	0.0004492	0.0035	5.19	115191.82	181940.75	181940.75	6.91	No	Si
SLU 77	3.51	-18696.98	-80863	-0.0001066	0.0004492	0.0035	5.19	114277.52	172292.31	172292.31	9.21	No	Si
SLU 81	1.41	-26261.14	-88175	-0.0001256	0.0004492	0.0035	5.19	115188.54	181648.52	181648.52	6.92	No	Si
SLU 81	3.51	-18809.44	-81024	-0.000107	0.0004492	0.0035	5.19	114314.39	172498.23	172498.23	9.17	No	Si
SLU 75	1.41	-25971.03	-87210	-0.000124	0.0004492	0.0035	5.19	115157.81	180413.65	180413.65	6.95	No	Si
SLU 75	3.51	-18443.28	-79744	-0.000105	0.0004492	0.0035	5.19	114000.15	170774.88	170774.88	9.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	1.41	-31759.36	-47705	-0.0000828	0.0006738	0.0035	5.19		124281.43	124281.43	3.91		Si
SLV 10	3.51	-14387.85	-36949	-0.0000517	0.0006738	0.0035	5.19		102129.17	102129.17	7.1		Si
SLV 15	1.41	-44208.58	-42635	-0.0000932	0.0006738	0.0035	5.19		113944.26	113944.26	2.58		Si
SLV 15	3.51	-1828.51	-29497	-0.0000301	0.0006738	0.0035	5.19		85900.72	85900.72	46.98		Si
SLV 16	1.41	-44415.61	-42482	-0.0000934	0.0006738	0.0035	5.19		113626.54	113626.54	2.56		Si
SLV 16	3.51	-1632.44	-29734	-0.0000301	0.0006738	0.0035	5.19		86420.67	86420.67	52.94		Si
SLV 13	1.41	-47365.46	-38496	-0.0000963	0.0006738	0.0035	5.19		105343.84	105343.84	2.22		Si
SLV 13	3.51	-4665.79	-23902	-0.0000279	0.0006738	0.0035	5.19		73360.32	73360.32	15.72		Si
SLD 13	1.41	-30605	-51216	-0.0000852	0.0006738	0.0035	5.19		131190.06	131190.06	4.29		Si
SLD 13	3.51	-9160.87	-41413	-0.0000502	0.0006738	0.0035	5.19		111404.33	111404.33	12.16		Si
SLV 9	1.41	-31624.46	-47805	-0.0000828	0.0006738	0.0035	5.19		124477.5	124477.5	3.94		Si
SLV 9	3.51	-14515.61	-36794	-0.0000517	0.0006738	0.0035	5.19		101807.41	101807.41	7.01		Si
SLD 16	1.41	-29332.84	-52922	-0.0000855	0.0006738	0.0035	5.19		134547.07	134547.07	4.59		Si
SLD 16	3.51	-7878.29	-43925	-0.0000512	0.0006738	0.0035	5.19		116624.29	116624.29	14.8		Si
SLD 14	1.41	-30693.92	-51150	-0.0000852	0.0006738	0.0035	5.19		131060.81	131060.81	4.27		Si
SLD 14	3.51	-9076.65	-41515	-0.0000502	0.0006738	0.0035	5.19		111616.44	111616.44	12.3		Si
SLV 14	1.41	-47572.5	-38343	-0.0000967	0.0006738	0.0035	5.19		105026.12	105026.12	2.21		Si
SLV 14	3.51	-4469.72	-24139	-0.0000279	0.0006738	0.0035	5.19		73906.41	73906.41	16.53		Si
SLD 15	1.41	-29243.92	-52988	-0.0000854	0.0006738	0.0035	5.19		134676.32	134676.32	4.61		Si
SLD 15	3.51	-7962.51	-43823	-0.0000512	0.0006738	0.0035	5.19		116412.18	116412.18	14.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	1.41	-25979.26	-87213	-62216	-14156	5.19	5.19	-42813	10833	15743	108749	52224	26469	78693	No	5.56	Si
SLU 74	3.51	-18450.34	-79717	-56868	-12868	5.19	5.19	-39133	10833	15743	108749	52224	26469	78693	No	6.12	Si
SLU 79	1.41	-26141.89	-87673	-62544	-14293	5.19	5.19	-43039	10833	15743	108749	52224	26469	78693	No	5.51	Si
SLU 79	3.51	-18495.19	-80099	-57141	-12998	5.19	5.19	-39320	10833	15743	108749	52224	26469	78693	No	6.05	Si
SLU 75	1.41	-25971.03	-87210	-62213	-14172	5.19	5.19	-42811	10833	15743	108749	52224	26469	78693	No	5.55	Si
SLU 75	3.51	-18443.28	-79744	-56887	-12883	5.19	5.19	-39146	10833	15743	108749	52224	26469	78693	No	6.11	Si
SLU 72	1.41	-24181.44	-80945	-57744	-14232	5.19	5.19	-39736	10833	15743	108749	52224	26469	78693	No	5.53	Si
SLU 72	3.51	-16603.87	-72621	-51806	-13048	5.19	5.19	-35650	10833	15743	108749	52224	26469	78693	No	6.03	Si
SLU 77	1.41	-26337.97	-88403	-63065	-14343	5.19	5.19	-43397	10833	15743	108749	52224	26469	78693	No	5.49	Si
SLU 77	3.51	-18696.98	-80863	-57686	-13037	5.19	5.19	-39696	10833	15743	108749	52224	26469	78693	No	6.04	Si
SLU 78	1.41	-26329.74	-88400	-63062	-14359	5.19	5.19	-43395	10833	15743	108749	52224	26469	78693	No	5.48	Si
SLU 78	3.51	-18689.92	-80889	-57704	-13052	5.19	5.19	-39708	10833	15743	108749	52224	26469	78693	No	6.03	Si
SLU 80	1.41	-26133.66	-87670	-62541	-14309	5.19	5.19	-43037	10833	15743	108749	52224	26469	78693	No	5.5	Si
SLU 80	3.51	-18488.13	-80125	-57159	-13014	5.19	5.19	-39333	10833	15743	108749	52224	26469	78693	No	6.05	Si
SLU 71	1.41	-24189.67	-80948	-57746	-14216	5.19	5.19	-39737	10833	15743	108749	52224	26469	78693	No	5.54	Si
SLU 71	3.51	-16610.93	-72595	-51787	-13033	5.19	5.19	-35637	10833	15743	108749	52224	26469	78693	No	6.04	Si
SLU 70	1.41	-24377.52	-81675	-58265	-14281	5.19	5.19	-40094	10833	15743	108749	52224	26469	78693	No	5.51	Si
SLU 70	3.51	-16805.66	-73385	-52351	-13087	5.19	5.19	-36025	10833	15743	108749	52224	26469	78693	No	6.01	Si
SLU 69	1.41	-24385.75	-81678	-58267	-14265	5.19	5.19	-40096	10833	15743	108749	52224	26469	78693	No	5.52	Si
SLU 69	3.51	-16812.72	-73359	-52332	-13071	5.19	5.19	-36012	10833	15743	108749	52224	26469	78693	No	6.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.41	-47365.46	-38496	-27462	-35910	5.19	4.0938	-24216	16250	18627	108749	78337	26469	104806		2.92	Si
SLV 13	3.51	-4665.79	-23902	-17051	-34320	5.19	5.19	-11733	14847	21575	108749	78337	26469	104806		3.05	Si
SLD 16	1.41	-29332.84	-52922	-37753	-21780	5.19	5.19	-25979	16250	23615	108749	78337	26469	104806		4.81	Si
SLD 16	3.51	-7878.29	-43925	-31335	-20875	5.19	5.19	-21563	16250	23615	108749	78337	26469	104806		5.02	Si
SLV 15	1.41	-44208.58	-42635	-30415	-36692	5.19	4.6743	-23455	16250	21268	108749	78337	26469	104806		2.86	Si
SLV 15	3.51	-1828.51	-29497	-21042	-35745	5.19	5.19	-14480	15396	22373	108749	78337	26469	104806		2.93	Si
SLV 12	1.41	-21236.42	-61502	-43874	-19641	5.19	5.19	-30191	16250	23615	108749	78337	26469	104806		5.34	Si
SLV 12	3.51	-4930.26	-55599	-39663	-19713	5.19	5.19	-27294	16250	23615	108749	78337	26469	104806		5.32	Si
SLV 14	1.41	-47572.5	-38343	-27353	-36019	5.19	4.0629	-24303	16250	18486	108749	78337	26469	104806		2.91	Si
SLV 14	3.51	-4469.72	-24139	-17220	-34433	5.19	5.19	-11850	14870	21609	108749	78337	26469	104806		3.04	Si
SLD 13	1.41	-30605	-51216	-36536	-21397	5.19	5.19	-25142	16250	23615	108749	78337	26469	104806		4.9	Si
SLD 13	3.51	-9160.87	-41413	-29543	-20201	5.19	5.19	-20329	16250	23615	108749	78337	26469	104806		5.19	Si
SLD 15	1.41	-29243.92	-52988	-37800	-21734	5.19	5.19	-26012	16250	23615	108749	78337	26469	104806		4.82	Si
SLD 15	3.51	-7962.51	-43823	-31262	-20826	5.19	5.19	-21513	16250	23615	108749	78337	26469	104806		5.03	Si
SLV 16	1.41	-44415.61	-42482	-30306	-36800	5.19	4.6485	-23496	16250	21150	108749	78337	26469	104806		2.85	Si
SLV 16	3.51	-1632.44	-29734	-21212	-35858	5.19	5.19	-14597	15419	22407	108749	78337	26469	104806		2.92	Si
SLV 11	1.41	-21101.53	-61602	-43945	-19570	5.19	5.19	-30240	16250	23615	108749	78337	26469	104806		5.36	Si
SLV 11	3.51	-5058.02	-55444	-39553	-19639	5.19	5.19	-27218	16250	23615	108749	78337	26469	104806		5.34	Si
SLD 14	1.41	-30693.92	-51150	-36490	-21443	5.19	5.19	-25110	16250	23615	108749	78337	26469	104806		4.89	Si
SLD 14	3.51	-9076.65	-41515	-29616	-20250	5.19	5.19	-20380	16250	23615	108749	78337	26469	104806		5.18	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-25721	0.31	413.49	3253.16	4601.19	3927.18	9.5	Si
SLV 14	-25888	0.31	413.49	3272.07	4626.29	3949.18	9.55	Si
SLV 15	-32707	0.31	413.49	4016.72	5641.47	4829.1	11.68	Si
SLV 16	-32875	0.31	413.49	4034.4	5666.14	4850.27	11.73	Si
SLV 9	-35519	0.31	413.49	4309.55	6055.94	5182.74	12.53	Si
SLV 10	-35628	0.31	413.49	4320.75	6072.03	5196.39	12.57	Si
SLV 5	-50880	0.31	413.49	5762.43	8297.1	7029.76	17	Si
SLV 6	-50989	0.31	413.49	5771.86	8312.8	7042.33	17.03	Si
SLV 11	-58808	0.31	413.49	6415.28	9437.04	7926.16	19.17	Si
SLV 12	-58917	0.31	413.49	6423.81	9452.64	7938.22	19.2	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-65340	-73643	1110	0.445	7352	0.971	6.66474	9.2784	No
SLV 7	-65026	-73743	1111	0.447	7320.1	0.971	6.69265	9.2784	No
SLV 12	-54784	-61502	1535	0.51	6277.4	0.966	7.67194	9.2784	No
SLV 11	-54470	-61602	1536	0.513	6245.5	0.966	7.71049	9.2784	No
SLV 6	-49752	-59847	-1719	0.55	5765.3	0.964	8.29928	9.2784	No
SLV 5	-49438	-59946	-1718	0.553	5733.4	0.963	8.34587	9.2784	No
SLV 10	-39196	-47705	-1294	0.683	4691.8	0.956	10.38348	9.2784	Si
SLV 9	-38883	-47805	-1293	0.688	4659.9	0.956	10.45741	9.2784	Si
SLV 4	-72283	-82952	-376	0.418	8059.1	0.973	6.24507	4.61088	Si
SLV 3	-71802	-83105	-374	0.421	8010.1	0.973	6.28193	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.871	SLU 83	Si
V_SLU	5.481	SLU 78	Si
PF_SLV	2.208	SLV 14	Si
V_SLV	2.848	SLV 16	Si
PFFP_SLV	9.498	SLV 13	Si
R_SLV	0.718	SLV 8	No

Maschio 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L4	L5	3.68	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	1.41	4966.36	-70501	-0.0001171	0.0004492	0.0035	3.68	57081.82	92224.49	92224.49	18.57	No	Si
SLU 62	3.51	3489.14	-69622	-0.0001115	0.0004492	0.0035	3.68	57264.5	91601.42	91601.42	26.25	No	Si
SLU 60	1.41	4930.22	-69511	-0.0001153	0.0004492	0.0035	3.68	57286	91522.58	91522.58	18.56	No	Si
SLU 60	3.51	3433.62	-68579	-0.0001096	0.0004492	0.0035	3.68	57452.05	90861.75	90861.75	26.46	No	Si
SLU 84	1.41	5301.51	-77472	-0.0001302	0.0004492	0.0035	3.68	54833.45	97165.83	97165.83	18.33	No	Si
SLU 84	3.51	4219.87	-76997	-0.0001263	0.0004492	0.0035	3.68	55031.52	96829.52	96829.52	22.95	No	Si
SLU 63	1.41	4976	-70470	-0.000117	0.0004492	0.0035	3.68	57088.71	92202.33	92202.33	18.53	No	Si
SLU 63	3.51	3467.07	-69615	-0.0001114	0.0004492	0.0035	3.68	57265.89	91596.37	91596.37	26.42	No	Si
SLU 81	1.41	5255.73	-76513	-0.0001283	0.0004492	0.0035	3.68	55226.99	96486.08	96486.08	18.36	No	Si
SLU 81	3.51	4186.41	-75961	-0.0001244	0.0004492	0.0035	3.68	55441.28	96094.9	96094.9	22.95	No	Si
SLU 82	1.41	5265.37	-76482	-0.0001283	0.0004492	0.0035	3.68	55239.37	96463.93	96463.93	18.32	No	Si
SLU 82	3.51	4164.35	-75954	-0.0001243	0.0004492	0.0035	3.68	55443.99	96089.85	96089.85	23.07	No	Si
SLU 61	1.41	4939.85	-69480	-0.0001152	0.0004492	0.0035	3.68	57291.98	91500.43	91500.43	18.52	No	Si
SLU 61	3.51	3411.56	-68572	-0.0001095	0.0004492	0.0035	3.68	57453.22	90856.7	90856.7	26.63	No	Si
SLU 83	1.41	5291.88	-77503	-0.0001302	0.0004492	0.0035	3.68	54820.17	97187.99	97187.99	18.37	No	Si
SLU 83	3.51	4241.93	-77004	-0.0001263	0.0004492	0.0035	3.68	55028.59	96834.58	96834.58	22.83	No	Si
SLU 78	1.41	5045.81	-76209	-0.0001272	0.0004492	0.0035	3.68	55346.2	96270.49	96270.49	19.08	No	Si
SLU 78	3.51	4200.12	-75595	-0.0001238	0.0004492	0.0035	3.68	55578.35	95835.74	95835.74	22.82	No	Si
SLU 75	1.41	5009.67	-75218	-0.0001254	0.0004492	0.0035	3.68	55715.56	95568.58	95568.58	19.08	No	Si
SLU 75	3.51	4144.61	-74552	-0.0001218	0.0004492	0.0035	3.68	55948.07	95096.07	95096.07	22.94	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.41	28394.88	-61673	-0.0001566	0.0006738	0.0035	3.68		91049.86	91049.86	3.21		Si
SLV 1	3.51	-16395.79	-57441	-0.0001198	0.0006738	0.0035	3.68		92491.12	92491.12	5.64		Si
SLV 2	1.41	28279.55	-61308	-0.0001557	0.0006738	0.0035	3.68		90669.28	90669.28	3.21		Si
SLV 2	3.51	-16464.07	-57228	-0.0001197	0.0006738	0.0035	3.68		92240.49	92240.49	5.6		Si
SLV 4	1.41	27856.45	-61605	-0.0001551	0.0006738	0.0035	3.68		90978.41	90978.41	3.27		Si
SLV 4	3.51	-19777.65	-55923	-0.0001258	0.0006738	0.0035	3.68		90707.88	90707.88	4.59		Si
SLV 10	1.41	-3442.17	-48206	-0.0000746	0.0006738	0.0035	3.68		81346.18	81346.18	23.63		Si
SLV 10	3.51	14716.93	-51155	-0.000106	0.0006738	0.0035	3.68		78782.38	78782.38	5.35		Si
SLV 14	1.41	-21313.42	-41585	-0.0001072	0.0006738	0.0035	3.68		72773.04	72773.04	3.41		Si
SLV 14	3.51	25540.97	-45487	-0.0001234	0.0006738	0.0035	3.68		71178.62	71178.62	2.79		Si
SLV 3	1.41	27971.78	-61970	-0.000156	0.0006738	0.0035	3.68		91358.99	91358.99	3.27		Si
SLV 3	3.51	-19709.37	-56137	-0.0001259	0.0006738	0.0035	3.68		90958.51	90958.51	4.61		Si
SLV 16	1.41	-21736.52	-41881	-0.0001086	0.0006738	0.0035	3.68		73166.61	73166.61	3.37		Si
SLV 16	3.51	22227.4	-44183	-0.0001133	0.0006738	0.0035	3.68		69429.07	69429.07	3.12		Si
SLV 9	1.41	-3367.03	-48444	-0.0000748	0.0006738	0.0035	3.68		81643.72	81643.72	24.25		Si
SLV 9	3.51	14761.42	-51294	-0.0001063	0.0006738	0.0035	3.68		78968.8	78968.8	5.35		Si
SLV 13	1.41	-21198.1	-41950	-0.0001075	0.0006738	0.0035	3.68		73257.57	73257.57	3.46		Si
SLV 13	3.51	25609.25	-45700	-0.0001239	0.0006738	0.0035	3.68		71464.73	71464.73	2.79		Si
SLV 15	1.41	-21621.2	-42246	-0.0001089	0.0006738	0.0035	3.68		73651.13	73651.13	3.41		Si
SLV 15	3.51	22295.68	-44396	-0.0001138	0.0006738	0.0035	3.68		69715.18	69715.18	3.13		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	1.41	5255.73	-76513	-54582	2135	3.68	3.68	-52972	10833	11163	108749	37030	18768	55798	No	26.14	Si
SLU 81	3.51	4186.41	-75961	-54189	2344	3.68	3.68	-52590	10833	11163	108749	37030	18768	55798	No	23.8	Si
SLU 82	1.41	5265.37	-76482	-54560	2105	3.68	3.68	-52950	10833	11163	108749	37030	18768	55798	No	26.5	Si
SLU 82	3.51	4164.35	-75954	-54184	2316	3.68	3.68	-52585	10833	11163	108749	37030	18768	55798	No	24.1	Si
SLU 84	1.41	5301.51	-77472	-55266	2099	3.68	3.68	-53636	10833	11163	108749	37030	18768	55798	No	26.59	Si
SLU 84	3.51	4219.87	-76997	-54928	2312	3.68	3.68	-53307	10833	11163	108749	37030	18768	55798	No	24.13	Si
SLU 61	1.41	4939.85	-69480	-49565	2038	3.68	3.68	-48103	10833	11163	108749	37030	18768	55798	No	27.38	Si
SLU 61	3.51	3411.56	-68572	-48917	2232	3.68	3.68	-47474	10833	11163	108749	37030	18768	55798	No	25	Si
SLU 74	1.41	5000.03	-75250	-53681	1903	3.68	3.68	-52098	10833	11163	108749	37030	18768	55798	No	29.32	Si
SLU 74	3.51	4166.67	-74559	-53189	2112	3.68	3.68	-51619	10833	11163	108749	37030	18768	55798	No	26.42	Si
SLU 63	1.41	4976	-70470	-50272	2031	3.68	3.68	-48788	10833	11163	108749	37030	18768	55798	No	27.47	Si
SLU 63	3.51	3467.07	-69615	-49662	2229	3.68	3.68	-48197	10833	11163	108749	37030	18768	55798	No	25.04	Si
SLU 77	1.41	5036.18	-76240	-54388	1897	3.68	3.68	-52783	10833	11163	108749	37030	18768	55798	No	29.42	Si
SLU 77	3.51	4222.18	-75602	-53933	2109	3.68	3.68	-52342	10833	11163	108749	37030	18768	55798	No	26.46	Si
SLU 60	1.41	4930.22	-69511	-49587	2067	3.68	3.68	-48124	10833	11163	108749	37030	18768	55798	No	27	Si
SLU 60	3.51	3433.62	-68579	-48922	2261	3.68	3.68	-47479	10833	11163	108749	37030	18768	55798	No	24.68	Si
SLU 62	1.41	4966.36	-70501	-50294	2060	3.68	3.68	-48810	10833	11163	108749	37030	18768	55798	No	27.08	Si
SLU 62	3.51	3489.14	-69622	-49667	2257	3.68	3.68	-48201	10833	11163	108749	37030	18768	55798	No	24.72	Si
SLU 83	1.41	5291.88	-77503	-55289	2128	3.68	3.68	-53658	10833	11163	108749	37030	18768	55798	No	26.22	Si
SLU 83	3.51	4241.93	-77004	-54933	2341	3.68	3.68	-53312	10833	11163	108749	37030	18768	55798	No	23.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.41	27971.78	-61970	-44208	33461	3.68	3.68	-42903	16250	16744	108749	55545	18768	74313		2.22	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	3.51	-19709.37	-56137	-40047	32830	3.68	3.68	-38865	16250	16744	108749	55545	18768	74313		2.26	Si
SLV 16	1.41	-21736.52	-41881	-29877	-31600	3.68	3.68	-28996	16250	16744	108749	55545	18768	74313		2.35	Si
SLV 16	3.51	22227.4	-44183	-31519	-30721	3.68	3.68	-30589	16250	16744	108749	55545	18768	74313		2.42	Si
SLV 13	1.41	-21198.1	-41950	-29926	-30816	3.68	3.68	-29043	16250	16744	108749	55545	18768	74313		2.41	Si
SLV 13	3.51	25609.25	-45700	-32601	-29896	3.68	3.68	-31639	16250	16744	108749	55545	18768	74313		2.49	Si
SLD 3	1.41	13862.61	-56139	-40048	14938	3.68	3.68	-38867	16250	16744	108749	55545	18768	74313		4.97	Si
SLD 3	3.51	-6773	-53081	-37866	14752	3.68	3.68	-36749	16250	16744	108749	55545	18768	74313		5.04	Si
SLD 1	1.41	14042	-56010	-39956	15096	3.68	3.68	-38777	16250	16744	108749	55545	18768	74313		4.92	Si
SLD 1	3.51	-5318.34	-53658	-38278	14935	3.68	3.68	-37149	16250	16744	108749	55545	18768	74313		4.98	Si
SLV 4	1.41	27856.45	-61605	-43947	33039	3.68	3.68	-42651	16250	16744	108749	55545	18768	74313		2.25	Si
SLV 4	3.51	-19777.65	-55923	-39894	32412	3.68	3.68	-38717	16250	16744	108749	55545	18768	74313		2.29	Si
SLV 1	1.41	28394.88	-61673	-43996	33823	3.68	3.68	-42698	16250	16744	108749	55545	18768	74313		2.2	Si
SLV 1	3.51	-16395.79	-57441	-40977	33237	3.68	3.68	-39768	16250	16744	108749	55545	18768	74313		2.24	Si
SLV 14	1.41	-21313.42	-41585	-29666	-31238	3.68	3.68	-28790	16250	16744	108749	55545	18768	74313		2.38	Si
SLV 14	3.51	25540.97	-45487	-32449	-30314	3.68	3.68	-31492	16250	16744	108749	55545	18768	74313		2.45	Si
SLV 15	1.41	-21621.2	-42246	-30137	-31178	3.68	3.68	-29248	16250	16744	108749	55545	18768	74313		2.38	Si
SLV 15	3.51	22295.68	-44396	-31671	-30303	3.68	3.68	-30737	16250	16744	108749	55545	18768	74313		2.45	Si
SLV 2	1.41	28279.55	-61308	-43736	33401	3.68	3.68	-42446	16250	16744	108749	55545	18768	74313		2.22	Si
SLV 2	3.51	-16464.07	-57228	-40825	32819	3.68	3.68	-39620	16250	16744	108749	55545	18768	74313		2.26	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-43534	0.31	293.19	4689.79	6950.87	5820.33	19.85	Si
SLV 15	-43786	0.31	293.19	4708.76	6987.13	5847.95	19.95	Si
SLV 14	-44699	0.31	293.19	4776.73	7118.61	5947.67	20.29	Si
SLV 13	-44951	0.31	293.19	4795.27	7154.89	5975.08	20.38	Si
SLV 12	-46961	0.31	293.19	4939.72	7437.21	6188.46	21.11	Si
SLV 11	-47126	0.31	293.19	4951.25	7459.95	6205.6	21.17	Si
SLV 10	-50847	0.31	293.19	5201.95	7972.4	6587.17	22.47	Si
SLV 9	-51011	0.31	293.19	5212.54	7995.02	6603.78	22.52	Si
SLV 8	-51027	0.31	293.19	5213.6	7997.28	6605.44	22.53	Si
SLV 7	-51192	0.31	293.19	5224.15	8019.9	6622.03	22.59	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-47137	-54361	-912	0.436	5295.3	0.971	6.52766	9.2784	No
SLV 6	-47061	-54123	-912	0.437	5287.4	0.971	6.53684	9.2784	No
SLV 7	-45957	-55349	733	0.449	5175	0.971	6.72842	9.2784	No
SLV 8	-45880	-55111	733	0.45	5167.2	0.971	6.73839	9.2784	No
SLV 9	-42980	-48444	-802	0.474	4872	0.969	7.11297	9.2784	No
SLV 10	-42904	-48206	-803	0.475	4864.2	0.969	7.12399	9.2784	No
SLV 11	-41800	-49431	843	0.485	4751.8	0.968	7.27542	9.2784	No
SLV 12	-41723	-49194	843	0.485	4744	0.968	7.2873	9.2784	No
SLV 1	-51595	-61673	-464	0.412	5749.1	0.973	6.15517	4.61088	Si
SLV 2	-51477	-61308	-464	0.413	5737.2	0.973	6.16728	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.32	SLU 82	Si
V_SLU	23.801	SLU 81	Si
PF_SLV	2.787	SLV 14	Si
V_SLV	2.197	SLV 1	Si
PFFP_SLV	19.852	SLV 16	Si
R_SLV	0.704	SLV 5	No

Maschio 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L4	L5	1.9	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	1.41	6989.16	-41577	-0.0001976	0.0004492	0.0035	1.9	14234.81	26475.52	26475.52	3.79	No	Si
SLU 83	3.91	-833.47	-30751	-0.0000939	0.0004492	0.0035	1.9	15393.53	23371.43	23371.43	28.04	No	Si
SLU 62	1.41	6602.75	-38004	-0.000179	0.0004492	0.0035	1.9	14995.92	25175.05	25175.05	3.81	No	Si
SLU 62	3.91	-783.57	-27677	-0.0000839	0.0004492	0.0035	1.9	15098.07	21870.76	21870.76	27.91	No	Si
SLU 81	1.41	6913.05	-41055	-0.0001946	0.0004492	0.0035	1.9	14369.22	26285.61	26285.61	3.8	No	Si
SLU 81	3.91	-834.72	-30347	-0.0000926	0.0004492	0.0035	1.9	15370.48	23202.8	23202.8	27.8	No	Si
SLU 60	1.41	6526.65	-37482	-0.0001761	0.0004492	0.0035	1.9	15075.85	24985.14	24985.14	3.83	No	Si
SLU 60	3.91	-784.82	-27273	-0.0000827	0.0004492	0.0035	1.9	15038.75	21652.75	21652.75	27.59	No	Si
SLU 77	1.41	6832.43	-40850	-0.0001929	0.0004492	0.0035	1.9	14419.91	26210.9	26210.9	3.84	No	Si
SLU 77	3.91	-748.44	-30028	-0.0000908	0.0004492	0.0035	1.9	15348.95	23044.05	23044.05	30.79	No	Si
SLU 82	1.41	6923.82	-41052	-0.0001947	0.0004492	0.0035	1.9	14369.94	26284.55	26284.55	3.8	No	Si
SLU 82	3.91	-838.87	-30320	-0.0000926	0.0004492	0.0035	1.9	15368.75	23189.2	23189.2	27.64	No	Si
SLU 61	1.41	6537.42	-37479	-0.0001762	0.0004492	0.0035	1.9	15076.27	24984.09	24984.09	3.82	No	Si
SLU 61	3.91	-788.96	-27246	-0.0000826	0.0004492	0.0035	1.9	15034.57	21638.01	21638.01	27.43	No	Si
SLU 63	1.41	6613.53	-38001	-0.0001791	0.0004492	0.0035	1.9	14996.39	25173.99	25173.99	3.81	No	Si
SLU 63	3.91	-787.71	-27649	-0.0000838	0.0004492	0.0035	1.9	15094.21	21856.03	21856.03	27.75	No	Si
SLU 84	1.41	6999.93	-41574	-0.0001977	0.0004492	0.0035	1.9	14235.58	26474.46	26474.46	3.78	No	Si
SLU 84	3.91	-837.62	-30723	-0.0000938	0.0004492	0.0035	1.9	15392.12	23361.23	23361.23	27.89	No	Si
SLU 78	1.41	6843.2	-40847	-0.000193	0.0004492	0.0035	1.9	14420.62	26209.84	26209.84	3.83	No	Si
SLU 78	3.91	-752.58	-30001	-0.0000908	0.0004492	0.0035	1.9	15346.97	23030.45	23030.45	30.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	1.41	17341.51	-24740	-0.0004187	0.0006738	0.0035	1.9		19850.54	19850.54	1.14		Si
SLV 2	3.91	-10928.6	-27632	-0.0001789	0.0006738	0.0035	1.9		23245.27	23245.27	2.13		Si
SLV 7	1.41	12698.27	-25723	-0.0002059	0.0006738	0.0035	1.9		20528.13	20528.13	1.62		Si
SLV 7	3.91	-4059.86	-16587	-0.0000786	0.0006738	0.0035	1.9		15715.32	15715.32	3.87		Si
SLV 4	1.41	19654.56	-24118	-0.0038205	0.0006738	0.0035	1.9		19422.25	19422.25	0.99		No
SLV 4	3.91	-11178.54	-24500	-0.000178	0.0006738	0.0035	1.9		21251.06	21251.06	1.9		Si
SLV 14	1.41	-10323.05	-31361	-0.0001817	0.0006738	0.0035	1.9		25476.76	25476.76	2.47		Si
SLV 14	3.91	10243.03	-15346	-0.0001973	0.0006738	0.0035	1.9		13376.86	13376.86	1.31		Si
SLV 15	1.41	-7976.4	-30755	-0.000157	0.0006738	0.0035	1.9		25122.58	25122.58	3.15		Si
SLV 15	3.91	9993.34	-12263	-0.0003684	0.0006738	0.0035	1.9		11059.57	11059.57	1.11		Si
SLV 13	1.41	-10289.45	-31376	-0.0001814	0.0006738	0.0035	1.9		25485.4	25485.4	2.48		Si
SLV 13	3.91	10243.28	-15395	-0.0001964	0.0006738	0.0035	1.9		13410.64	13410.64	1.31		Si
SLV 16	1.41	-8010	-30740	-0.0001572	0.0006738	0.0035	1.9		25113.94	25113.94	3.14		Si
SLV 16	3.91	9993.09	-12214	-0.0003785	0.0006738	0.0035	1.9		11020.44	11020.44	1.1		Si
SLV 1	1.41	17375.1	-24754	-0.0004213	0.0006738	0.0035	1.9		19860.74	19860.74	1.14		Si
SLV 1	3.91	-10928.35	-27681	-0.000179	0.0006738	0.0035	1.9		23275.74	23275.74	2.13		Si
SLV 8	1.41	12676.38	-25713	-0.0002054	0.0006738	0.0035	1.9		20521.49	20521.49	1.62		Si
SLV 8	3.91	-4060.03	-16555	-0.0000785	0.0006738	0.0035	1.9		15691.85	15691.85	3.86		Si
SLV 3	1.41	19688.15	-24133	-0.0039166	0.0006738	0.0035	1.9		19432.45	19432.45	0.99		No
SLV 3	3.91	-11178.29	-24549	-0.000178	0.0006738	0.0035	1.9		21283.38	21283.38	1.9		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.41	6786.04	-40489	-28884	814	1.9	1.9	-54293	10833	5763	108749	19119	9690	28809	No	35.41	Si
SLU 80	3.91	-750.2	-29693	-21182	2254	1.9	1.9	-39817	10833	5763	108749	19119	9690	28809	No	12.78	Si
SLU 81	1.41	6913.05	-41055	-29288	915	1.9	1.9	-55052	10833	5763	108749	19119	9690	28809	No	31.49	Si
SLU 81	3.91	-834.72	-30347	-21649	2363	1.9	1.9	-40693	10833	5763	108749	19119	9690	28809	No	12.19	Si
SLU 75	1.41	6767.09	-40325	-28767	827	1.9	1.9	-54073	10833	5763	108749	19119	9690	28809	No	34.82	Si
SLU 75	3.91	-753.84	-29598	-21114	2254	1.9	1.9	-39688	10833	5763	108749	19119	9690	28809	No	12.78	Si
SLU 83	1.41	6989.16	-41577	-29660	908	1.9	1.9	-55752	10833	5763	108749	19119	9690	28809	No	31.72	Si
SLU 83	3.91	-833.47	-30751	-21937	2384	1.9	1.9	-41234	10833	5763	108749	19119	9690	28809	No	12.08	Si
SLU 77	1.41	6832.43	-40850	-29141	817	1.9	1.9	-54777	10833	5763	108749	19119	9690	28809	No	35.27	Si
SLU 77	3.91	-748.44	-30028	-21422	2282	1.9	1.9	-40266	10833	5763	108749	19119	9690	28809	No	12.63	Si
SLU 82	1.41	6923.82	-41052	-29286	919	1.9	1.9	-55048	10833	5763	108749	19119	9690	28809	No	31.36	Si
SLU 82	3.91	-838.87	-30320	-21629	2356	1.9	1.9	-40657	10833	5763	108749	19119	9690	28809	No	12.23	Si
SLU 84	1.41	6999.93	-41574	-29658	912	1.9	1.9	-55748	10833	5763	108749	19119	9690	28809	No	31.57	Si
SLU 84	3.91	-837.62	-30723	-21917	2378	1.9	1.9	-41198	10833	5763	108749	19119	9690	28809	No	12.11	Si
SLU 78	1.41	6843.2	-40847	-29139	821	1.9	1.9	-54773	10833	5763	108749	19119	9690	28809	No	35.09	Si
SLU 78	3.91	-752.58	-30001	-21402	2275	1.9	1.9	-40230	10833	5763	108749	19119	9690	28809	No	12.66	Si
SLU 74	1.41	6756.32	-40328	-28769	823	1.9	1.9	-54077	10833	5763	108749	19119	9690	28809	No	34.99	Si
SLU 74	3.91	-749.69	-29625	-21134	2260	1.9	1.9	-39725	10833	5763	108749	19119	9690	28809	No	12.75	Si
SLU 79	1.41	6775.27	-40492	-28886	810	1.9	1.9	-54297	10833	5763	108749	19119	9690	28809	No	35.58	Si
SLU 79	3.91	-746.05	-29720	-21202	2260	1.9	1.9	-39853	10833	5763	108749	19119	9690	28809	No	12.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	1.41	11102.81	-26204	-18693	6589	1.9	1.5789	-35137	16250	7184	108749	28678	9690	38368		5.82	Si
SLD 3	3.91	-5047.74	-21895	-15619	5485	1.9	1.9	-29360	16250	8645	108749	28678	9690	38368		6.99	Si
SLV 1	1.41	17375.1	-24754	-17659	13835	1.9	0.7443	-33194	16250	3387	108749	28678	9690	38368		2.77	Si
SLV 1	3.91	-10928.35	-27681	-19747	11642	1.9	1.6656	-43270	16250	7579	108749	28678	9690	38368		3.3	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	1.41	11088.38	-26197	-18689	6583	1.9	1.5802	-35129	16250	7190	108749	28678	9690	38368		5.83	Si
SLD 4	3.91	-5047.85	-21874	-15604	5470	1.9	1.9	-29332	16250	8645	108749	28678	9690	38368		7.01	Si
SLV 3	1.41	19688.15	-24133	-17216	14698	1.9	0.4025	-201604	16250	1831	108749	28678	9690	38368		2.61	Si
SLV 3	3.91	-11178.29	-24549	-17513	10866	1.9	1.484	-43034	16250	6752	108749	28678	9690	38368		3.53	Si
SLV 2	1.41	17341.51	-24740	-17649	13820	1.9	0.7471	-33174	16250	3399	108749	28678	9690	38368		2.78	Si
SLV 2	3.91	-10928.6	-27632	-19712	11607	1.9	1.6635	-43248	16250	7569	108749	28678	9690	38368		3.31	Si
SLV 4	1.41	19654.56	-24118	-17205	14683	1.9	0.4052	-200573	16250	1844	108749	28678	9690	38368		2.61	Si
SLV 4	3.91	-11178.54	-24500	-17478	10832	1.9	1.4812	-43027	16250	6740	108749	28678	9690	38368		3.54	Si
SLV 13	1.41	-10289.45	-31376	-22383	-13614	1.9	1.8662	-42073	16250	8491	108749	28678	9690	38368		2.82	Si
SLV 13	3.91	10243.28	-15395	-10982	-7881	1.9	0.8539	-20643	16250	3885	108749	28678	9690	38368		4.87	Si
SLV 15	1.41	-7976.4	-30755	-21940	-12750	1.9	1.9	-41240	16250	8645	108749	28678	9690	38368		3.01	Si
SLV 15	3.91	9993.34	-12263	-8748	-8656	1.9	0.4052	-80673	16250	1844	108749	28678	9690	38368		4.43	Si
SLV 16	1.41	-8010	-30740	-21929	-12766	1.9	1.9	-41220	16250	8645	108749	28678	9690	38368		3.01	Si
SLV 16	3.91	9993.09	-12214	-8713	-8690	1.9	0.3955	-82418	16250	1799	108749	28678	9690	38368		4.41	Si
SLV 14	1.41	-10323.05	-31361	-22372	-13629	1.9	1.8625	-42053	16250	8474	108749	28678	9690	38368		2.82	Si
SLV 14	3.91	10243.03	-15346	-10947	-7915	1.9	0.8475	-20577	16250	3856	108749	28678	9690	38368		4.85	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-18904	0.31	151.37	2133.49	3066.86	2600.17	17.18	Si
SLV 7	-18936	0.31	151.37	2136.18	3071.38	2603.78	17.2	Si
SLV 12	-19174	0.31	151.37	2156.5	3105.72	2631.11	17.38	Si
SLV 11	-19205	0.31	151.37	2159.16	3110.25	2634.7	17.41	Si
SLV 4	-21506	0.31	151.37	2346.77	3441.3	2894.04	19.12	Si
SLV 3	-21554	0.31	151.37	2350.54	3448.22	2899.38	19.15	Si
SLV 16	-22405	0.31	151.37	2415.94	3570.31	2993.12	19.77	Si
SLV 15	-22453	0.31	151.37	2419.58	3577.23	2998.4	19.81	Si
SLV 2	-24013	0.31	151.37	2533.89	3799.16	3166.53	20.92	Si
SLV 1	-24061	0.31	151.37	2537.31	3805.82	3171.57	20.95	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-24063	-29781	-276	0.448	2706	0.971	6.70593	9.2784	No
SLV 10	-24055	-29771	-276	0.448	2705.2	0.971	6.70776	9.2784	No
SLV 5	-23417	-27794	-220	0.461	2640.3	0.97	6.90114	9.2784	No
SLV 6	-23409	-27785	-221	0.461	2639.5	0.97	6.90307	9.2784	No
SLV 11	-14924	-27709	221	0.676	1776	0.957	10.2626	9.2784	Si
SLV 12	-14916	-27700	221	0.676	1775.2	0.957	10.26726	9.2784	Si
SLV 7	-14278	-25723	277	0.698	1710.4	0.956	10.61695	9.2784	Si
SLV 8	-14270	-25713	277	0.699	1709.6	0.956	10.62197	9.2784	Si
SLV 13	-21620	-31376	-167	0.496	2457.3	0.968	7.43704	4.61088	Si
SLV 14	-21608	-31361	-167	0.496	2456.1	0.968	7.44053	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.782	SLU 84	Si
V_SLU	12.083	SLU 83	Si
PF_SLV	0.987	SLV 3	No
V_SLV	2.61	SLV 3	Si
PFFP_SLV	17.177	SLV 8	Si
R_SLV	0.723	SLV 9	No

Maschio 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-11.143	1.006	L4	L5	3.68	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.41	9216.57	-65326	-0.0001197	0.0004492	0.0035	3.68	57832.57	88526.75	88526.75	9.61	No	Si
SLU 84	3.91	3515.49	-60633	-0.0000967	0.0004492	0.0035	3.68	57836.44	83713.16	83713.16	23.81	No	Si
SLU 79	1.41	9016.54	-63454	-0.000116	0.0004492	0.0035	3.68	57911.3	86606.73	86606.73	9.61	No	Si
SLU 79	3.91	3299.97	-58629	-0.0000928	0.0004492	0.0035	3.68	57642.04	81658.6	81658.6	24.75	No	Si
SLU 74	1.41	8996.6	-63204	-0.0001155	0.0004492	0.0035	3.68	57914.05	86350.73	86350.73	9.6	No	Si
SLU 74	3.91	3269	-58421	-0.0000924	0.0004492	0.0035	3.68	57615.13	81445.26	81445.26	24.91	No	Si
SLU 75	1.41	8990.86	-63206	-0.0001155	0.0004492	0.0035	3.68	57914.04	86353.03	86353.03	9.6	No	Si
SLU 75	3.91	3266.48	-58402	-0.0000924	0.0004492	0.0035	3.68	57612.51	81424.98	81424.98	24.93	No	Si
SLU 78	1.41	9081.19	-64007	-0.0001171	0.0004492	0.0035	3.68	57898.69	87174.12	87174.12	9.6	No	Si
SLU 78	3.91	3302.44	-59198	-0.0000938	0.0004492	0.0035	3.68	57709.19	82242.24	82242.24	24.9	No	Si
SLU 82	1.41	9126.23	-64525	-0.0001181	0.0004492	0.0035	3.68	57878.77	87705.66	87705.66	9.61	No	Si
SLU 82	3.91	3479.53	-59836	-0.0000953	0.0004492	0.0035	3.68	57773.16	82895.91	82895.91	23.82	No	Si
SLU 81	1.41	9131.97	-64523	-0.0001181	0.0004492	0.0035	3.68	57878.88	87703.36	87703.36	9.6	No	Si
SLU 81	3.91	3482.04	-59856	-0.0000953	0.0004492	0.0035	3.68	57774.95	82916.19	82916.19	23.81	No	Si
SLU 83	1.41	9222.31	-65324	-0.0001197	0.0004492	0.0035	3.68	57832.73	88524.44	88524.44	9.6	No	Si
SLU 83	3.91	3518.01	-60652	-0.0000967	0.0004492	0.0035	3.68	57837.77	83733.44	83733.44	23.8	No	Si
SLU 80	1.41	9010.8	-63456	-0.0001159	0.0004492	0.0035	3.68	57911.26	86609.04	86609.04	9.61	No	Si
SLU 80	3.91	3297.45	-58610	-0.0000928	0.0004492	0.0035	3.68	57639.54	81638.32	81638.32	24.76	No	Si
SLU 77	1.41	9086.93	-64005	-0.0001171	0.0004492	0.0035	3.68	57898.76	87171.81	87171.81	9.59	No	Si
SLU 77	3.91	3304.96	-59218	-0.0000938	0.0004492	0.0035	3.68	57711.35	82262.52	82262.52	24.89	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	1.41	-19219.79	-43929	-0.0001058	0.0006738	0.0035	3.68		75886.29	75886.29	3.95		Si
SLV 13	3.91	37605.88	-39965	-0.0001575	0.0006738	0.0035	3.68		63771.22	63771.22	1.7		Si
SLV 2	1.41	34051.32	-38604	-0.0001414	0.0006738	0.0035	3.68		61945.27	61945.27	1.82		Si
SLV 2	3.91	-32788.59	-40704	-0.0001378	0.0006738	0.0035	3.68		71602.97	71602.97	2.18		Si
SLV 14	1.41	-19365.39	-43891	-0.000106	0.0006738	0.0035	3.68		75835.28	75835.28	3.92		Si
SLV 14	3.91	37703.38	-39968	-0.000158	0.0006738	0.0035	3.68		63774.66	63774.66	1.69		Si
SLV 16	1.41	-21688.23	-47918	-0.0001179	0.0006738	0.0035	3.68		80986.19	80986.19	3.73		Si
SLV 16	3.91	37313.51	-37912	-0.0001569	0.0006738	0.0035	3.68		61017.57	61017.57	1.64		Si
SLV 15	1.41	-21542.64	-47957	-0.0001176	0.0006738	0.0035	3.68		81034.27	81034.27	3.76		Si
SLV 15	3.91	37216.01	-37910	-0.0001564	0.0006738	0.0035	3.68		61014.13	61014.13	1.64		Si
SLV 6	1.41	18090.82	-35762	-0.0000907	0.0006738	0.0035	3.68		58132.91	58132.91	3.21		Si
SLV 6	3.91	-7678.53	-42843	-0.0000767	0.0006738	0.0035	3.68		74444.47	74444.47	9.7		Si
SLV 5	1.41	18185.69	-35787	-0.000091	0.0006738	0.0035	3.68		58166.48	58166.48	3.2		Si
SLV 5	3.91	-7742.06	-42842	-0.0000769	0.0006738	0.0035	3.68		74442.25	74442.25	9.62		Si
SLV 1	1.41	34196.91	-38642	-0.000142	0.0006738	0.0035	3.68		61996.8	61996.8	1.81		Si
SLV 1	3.91	-32886.09	-40701	-0.0001381	0.0006738	0.0035	3.68		71599.56	71599.56	2.18		Si
SLV 4	1.41	31728.47	-42632	-0.0001361	0.0006738	0.0035	3.68		67348.39	67348.39	2.12		Si
SLV 4	3.91	-33178.46	-38649	-0.0001378	0.0006738	0.0035	3.68		68873.6	68873.6	2.08		Si
SLV 3	1.41	31874.07	-42670	-0.0001366	0.0006738	0.0035	3.68		67399.91	67399.91	2.11		Si
SLV 3	3.91	-33275.96	-38646	-0.0001382	0.0006738	0.0035	3.68		68870.19	68870.19	2.07		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	1.41	9086.93	-64005	-45659	2693	3.68	3.68	-44312	10833	11163	108749	37030	18768	55798	No	20.72	Si
SLU 77	3.91	3304.96	-59218	-42245	1322	3.68	3.68	-40998	10833	11163	108749	37030	18768	55798	No	42.2	Si
SLU 82	1.41	9126.23	-64525	-46031	2646	3.68	3.68	-44673	10833	11163	108749	37030	18768	55798	No	21.09	Si
SLU 82	3.91	3479.53	-59836	-42685	1321	3.68	3.68	-41426	10833	11163	108749	37030	18768	55798	No	42.24	Si
SLU 74	1.41	8996.6	-63204	-45088	2680	3.68	3.68	-43758	10833	11163	108749	37030	18768	55798	No	20.82	Si
SLU 74	3.91	3269	-58421	-41676	1329	3.68	3.68	-40447	10833	11163	108749	37030	18768	55798	No	41.99	Si
SLU 81	1.41	9131.97	-64523	-46029	2663	3.68	3.68	-44671	10833	11163	108749	37030	18768	55798	No	20.95	Si
SLU 81	3.91	3482.04	-59856	-42699	1339	3.68	3.68	-41440	10833	11163	108749	37030	18768	55798	No	41.68	Si
SLU 78	1.41	9081.19	-64007	-45661	2676	3.68	3.68	-44314	10833	11163	108749	37030	18768	55798	No	20.85	Si
SLU 78	3.91	3302.44	-59198	-42231	1304	3.68	3.68	-40985	10833	11163	108749	37030	18768	55798	No	42.78	Si
SLU 84	1.41	9216.57	-65326	-46602	2659	3.68	3.68	-45227	10833	11163	108749	37030	18768	55798	No	20.98	Si
SLU 84	3.91	3515.49	-60633	-43254	1314	3.68	3.68	-41978	10833	11163	108749	37030	18768	55798	No	42.46	Si
SLU 79	1.41	9016.54	-63454	-45266	2649	3.68	3.68	-43931	10833	11163	108749	37030	18768	55798	No	21.07	Si
SLU 79	3.91	3299.97	-58629	-41825	1284	3.68	3.68	-40591	10833	11163	108749	37030	18768	55798	No	43.47	Si
SLU 75	1.41	8990.86	-63206	-45090	2663	3.68	3.68	-43760	10833	11163	108749	37030	18768	55798	No	20.96	Si
SLU 75	3.91	3266.48	-58402	-41662	1311	3.68	3.68	-40433	10833	11163	108749	37030	18768	55798	No	42.56	Si
SLU 83	1.41	9222.31	-65324	-46600	2677	3.68	3.68	-45225	10833	11163	108749	37030	18768	55798	No	20.85	Si
SLU 83	3.91	3518.01	-60652	-43268	1332	3.68	3.68	-41991	10833	11163	108749	37030	18768	55798	No	41.89	Si
SLU 80	1.41	9010.8	-63456	-45268	2631	3.68	3.68	-43932	10833	11163	108749	37030	18768	55798	No	21.21	Si
SLU 80	3.91	3297.45	-58610	-41811	1266	3.68	3.68	-40577	10833	11163	108749	37030	18768	55798	No	44.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	1.41	18134.92	-41275	-29445	17705	3.68	3.68	-28576	16250	16744	108749	55545	18768	74313		4.2	Si
SLD 2	3.91	-12743.46	-39919	-28478	13791	3.68	3.68	-27637	16250	16744	108749	55545	18768	74313		5.39	Si
SLV 3	1.41	31874.07	-42670	-30440	36404	3.68	3.279	-29542	16250	14920	108749	55545	18768	74313		2.04	Si
SLV 3	3.91	-33275.96	-38646	-27569	28898	3.68	2.9369	-34066	16250	13363	108749	55545	18768	74313		2.57	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	1.41	34196.91	-38642	-27567	39123	3.68	2.8651	-26753	16250	13036	108749	55545	18768	74313		1.9	Si
SLV 1	3.91	-32886.09	-40701	-29035	31265	3.68	3.096	-34044	16250	14087	108749	55545	18768	74313		2.38	Si
SLV 14	1.41	-19365.39	-43891	-31311	-32822	3.68	3.68	-30387	16250	16744	108749	55545	18768	74313		2.26	Si
SLV 14	3.91	37703.38	-39968	-28512	-27305	3.68	2.69	-27671	16250	12239	108749	55545	18768	74313		2.72	Si
SLD 1	1.41	18197.46	-41292	-29457	17758	3.68	3.68	-28588	16250	16744	108749	55545	18768	74313		4.18	Si
SLD 1	3.91	-12785.34	-39918	-28477	13826	3.68	3.68	-27637	16250	16744	108749	55545	18768	74313		5.37	Si
SLV 13	1.41	-19219.79	-43929	-31338	-32700	3.68	3.68	-30413	16250	16744	108749	55545	18768	74313		2.27	Si
SLV 13	3.91	37605.88	-39965	-28510	-27224	3.68	2.6971	-27669	16250	12272	108749	55545	18768	74313		2.73	Si
SLV 2	1.41	34051.32	-38604	-27539	39001	3.68	2.8738	-26727	16250	13076	108749	55545	18768	74313		1.91	Si
SLV 2	3.91	-32788.59	-40704	-29037	31184	3.68	3.1034	-33965	16250	14120	108749	55545	18768	74313		2.38	Si
SLV 16	1.41	-21688.23	-47918	-34184	-35541	3.68	3.68	-33175	16250	16744	108749	55545	18768	74313		2.09	Si
SLV 16	3.91	37313.51	-37912	-27046	-29672	3.68	2.5674	-26248	16250	11682	108749	55545	18768	74313		2.5	Si
SLV 4	1.41	31728.47	-42632	-30412	36282	3.68	3.2873	-29515	16250	14957	108749	55545	18768	74313		2.05	Si
SLV 4	3.91	-33178.46	-38649	-27571	28817	3.68	2.9446	-33978	16250	13398	108749	55545	18768	74313		2.58	Si
SLV 15	1.41	-21542.64	-47957	-34211	-35419	3.68	3.68	-33202	16250	16744	108749	55545	18768	74313		2.1	Si
SLV 15	3.91	37216.01	-37910	-27044	-29590	3.68	2.5749	-26246	16250	11716	108749	55545	18768	74313		2.51	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 14	-38993	0.31	293.19	4331.9	6297.72	5314.81	18.13	Si
SLV 13	-39026	0.31	293.19	4334.61	6302.48	5318.55	18.14	Si
SLV 10	-39224	0.31	293.19	4350.79	6330.85	5340.82	18.22	Si
SLV 9	-39245	0.31	293.19	4352.56	6333.95	5343.26	18.22	Si
SLV 16	-40576	0.31	293.19	4460.16	6525.41	5492.79	18.73	Si
SLV 15	-40610	0.31	293.19	4462.8	6530.17	5496.49	18.75	Si
SLV 6	-40999	0.31	293.19	4493.8	6586.25	5540.02	18.9	Si
SLV 5	-41021	0.31	293.19	4495.51	6589.35	5542.43	18.9	Si
SLV 12	-44501	0.31	293.19	4762.09	7090.09	5926.09	20.21	Si
SLV 11	-44523	0.31	293.19	4763.69	7093.2	5928.44	20.22	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-40406	-35762	-714	0.502	4609.9	0.967	7.53978	9.2784	No
SLV 5	-40367	-35787	-715	0.502	4605.9	0.967	7.54623	9.2784	No
SLV 10	-38688	-37348	-850	0.518	4435	0.966	7.7848	9.2784	No
SLV 9	-38648	-37373	-850	0.518	4431	0.966	7.79176	9.2784	No
SLV 8	-29097	-49187	804	0.661	3459.4	0.958	10.0265	9.2784	Si
SLV 7	-29058	-49212	804	0.661	3455.4	0.958	10.03846	9.2784	Si
SLV 12	-27379	-50773	668	0.7	3284.7	0.956	10.64544	9.2784	Si
SLV 11	-27340	-50798	668	0.701	3280.7	0.956	10.65892	9.2784	Si
SLV 2	-38463	-38604	-24	0.54	4412.2	0.966	8.12326	4.61088	Si
SLV 1	-38403	-38642	-25	0.541	4406	0.966	8.13451	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.593	SLU 77	Si
V_SLU	20.72	SLU 77	Si
PF_SLV	1.635	SLV 16	Si
V_SLV	1.899	SLV 1	Si
PFFP_SLV	18.128	SLV 14	Si
R_SLV	0.813	SLV 6	No

Maschio 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L4	L5	1.55	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	1.41	6577.53	-35409	-0.0002401	0.0004492	0.0035	1.55	9118.28	18098.96	18098.96	2.75	No	Si
SLU 81	3.51	-966.61	-40958	-0.0001676	0.0004492	0.0035	1.55	7225.62	19600.72	19600.72	20.28	No	Si
SLU 74	1.41	6492.44	-34887	-0.0002356	0.0004492	0.0035	1.55	9250.08	17938.04	17938.04	2.76	No	Si
SLU 74	3.51	-1031.55	-40205	-0.0001652	0.0004492	0.0035	1.55	7535.47	19460.5	19460.5	18.87	No	Si
SLU 82	1.41	6573.26	-35413	-0.00024	0.0004492	0.0035	1.55	9117.23	18100.22	18100.22	2.75	No	Si
SLU 82	3.51	-965.73	-40950	-0.0001676	0.0004492	0.0035	1.55	7229.03	19599.95	19599.95	20.3	No	Si
SLU 84	1.41	6653.95	-35878	-0.0002442	0.0004492	0.0035	1.55	8993.1	18243.51	18243.51	2.74	No	Si
SLU 84	3.51	-976.45	-41495	-0.0001703	0.0004492	0.0035	1.55	6994.77	19651.95	19651.95	20.13	No	Si
SLU 78	1.41	6568.86	-35356	-0.0002396	0.0004492	0.0035	1.55	9132.06	18082.58	18082.58	2.75	No	Si
SLU 78	3.51	-1041.38	-40741	-0.0001679	0.0004492	0.0035	1.55	7316.44	19566.02	19566.02	18.79	No	Si
SLU 79	1.41	6530.64	-35038	-0.0002371	0.0004492	0.0035	1.55	9212.64	17984.75	17984.75	2.75	No	Si
SLU 79	3.51	-1048.96	-40371	-0.0001663	0.0004492	0.0035	1.55	7468.34	19493.27	19493.27	18.58	No	Si
SLU 80	1.41	6526.37	-35042	-0.0002371	0.0004492	0.0035	1.55	9211.63	17986	17986	2.76	No	Si
SLU 80	3.51	-1048.08	-40363	-0.0001663	0.0004492	0.0035	1.55	7471.62	19491.68	19491.68	18.6	No	Si
SLU 75	1.41	6488.17	-34891	-0.0002355	0.0004492	0.0035	1.55	9249.08	17939.29	17939.29	2.76	No	Si
SLU 75	3.51	-1030.66	-40197	-0.0001652	0.0004492	0.0035	1.55	7538.7	19458.91	19458.91	18.88	No	Si
SLU 77	1.41	6573.13	-35352	-0.0002397	0.0004492	0.0035	1.55	9133.11	18081.33	18081.33	2.75	No	Si
SLU 77	3.51	-1042.26	-40750	-0.000168	0.0004492	0.0035	1.55	7313.08	19567.6	19567.6	18.77	No	Si
SLU 83	1.41	6658.22	-35874	-0.0002442	0.0004492	0.0035	1.55	8994.21	18242.26	18242.26	2.74	No	Si
SLU 83	3.51	-977.33	-41503	-0.0001704	0.0004492	0.0035	1.55	6991.23	19652.72	19652.72	20.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	1.41	7998.07	-21477	-0.0001933	0.0006738	0.0035	1.55		13984.1	13984.1	1.75		Si
SLD 4	3.51	-4844.94	-24344	-0.0001475	0.0006738	0.0035	1.55		16463.79	16463.79	3.4		Si
SLV 2	1.41	14062.54	-17375	-0.0145018	0.0006738	0.0035	1.55		11624.88	11624.88	0.83		No
SLV 2	3.51	-10369.03	-22640	-0.0002718	0.0006738	0.0035	1.24		15614.87	15614.87	1.51		Si
SLV 3	1.41	12589	-18008	-0.005764	0.0006738	0.0035	1.55		11988.97	11988.97	0.95		No
SLV 3	3.51	-10174.61	-19991	-0.0002885	0.0006738	0.0035	1.24		14242.07	14242.07	1.4		Si
SLV 1	1.41	13989.84	-17417	-0.0140125	0.0006738	0.0035	1.55		11648.84	11648.84	0.83		No
SLV 1	3.51	-10348.78	-22444	-0.0002721	0.0006738	0.0035	1.24		15517.4	15517.4	1.5		Si
SLV 6	1.41	9527.31	-21164	-0.0002438	0.0006738	0.0035	1.55		13804.13	13804.13	1.45		Si
SLV 6	3.51	-3974.61	-29765	-0.0001563	0.0006738	0.0035	1.55		18915.8	18915.8	4.76		Si
SLD 1	1.41	8580.63	-21220	-0.0002096	0.0006738	0.0035	1.55		13836.32	13836.32	1.61		Si
SLD 1	3.51	-4910.28	-25318	-0.0001522	0.0006738	0.0035	1.55		16922.13	16922.13	3.45		Si
SLD 2	1.41	8611.86	-21202	-0.0002106	0.0006738	0.0035	1.55		13826.03	13826.03	1.61		Si
SLD 2	3.51	-4918.98	-25402	-0.0001527	0.0006738	0.0035	1.55		16961.32	16961.32	3.45		Si
SLV 4	1.41	12661.7	-17967	-0.0061511	0.0006738	0.0035	1.55		11965.01	11965.01	0.94		No
SLV 4	3.51	-10194.87	-20187	-0.0002868	0.0006738	0.0035	1.24		14345.78	14345.78	1.41		Si
SLV 5	1.41	9479.94	-21191	-0.0002417	0.0006738	0.0035	1.55		13819.74	13819.74	1.46		Si
SLV 5	3.51	-3961.41	-29637	-0.0001556	0.0006738	0.0035	1.55		18860.41	18860.41	4.76		Si
SLD 3	1.41	7966.84	-21495	-0.0001925	0.0006738	0.0035	1.55		13994.38	13994.38	1.76		Si
SLD 3	3.51	-4836.24	-24260	-0.000147	0.0006738	0.0035	1.55		16421.92	16421.92	3.4		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.41	6526.37	-35042	-24998	4062	1.55	1.55	-57600	10833	4702	108749	15597	7905	23502	No	5.79	Si
SLU 80	3.51	-1048.08	-40363	-28794	4113	1.55	1.55	-66346	10833	4702	108749	15597	7905	23502	No	5.71	Si
SLU 79	1.41	6530.64	-35038	-24996	4069	1.55	1.55	-57593	10833	4702	108749	15597	7905	23502	No	5.78	Si
SLU 79	3.51	-1048.96	-40371	-28800	4120	1.55	1.55	-66359	10833	4702	108749	15597	7905	23502	No	5.7	Si
SLU 84	1.41	6653.95	-35878	-25595	4128	1.55	1.55	-58974	10833	4702	108749	15597	7905	23502	No	5.69	Si
SLU 84	3.51	-976.45	-41495	-29602	4181	1.55	1.55	-68206	10833	4702	108749	15597	7905	23502	No	5.62	Si
SLU 74	1.41	6492.44	-34887	-24887	4044	1.55	1.55	-57344	10833	4702	108749	15597	7905	23502	No	5.81	Si
SLU 74	3.51	-1031.55	-40205	-28681	4095	1.55	1.55	-66085	10833	4702	108749	15597	7905	23502	No	5.74	Si
SLU 77	1.41	6573.13	-35352	-25219	4087	1.55	1.55	-58109	10833	4702	108749	15597	7905	23502	No	5.75	Si
SLU 77	3.51	-1042.26	-40750	-29070	4138	1.55	1.55	-66981	10833	4702	108749	15597	7905	23502	No	5.68	Si
SLU 81	1.41	6577.53	-35409	-25260	4092	1.55	1.55	-58203	10833	4702	108749	15597	7905	23502	No	5.74	Si
SLU 81	3.51	-966.61	-40958	-29219	4144	1.55	1.55	-67324	10833	4702	108749	15597	7905	23502	No	5.67	Si
SLU 82	1.41	6573.26	-35413	-25263	4086	1.55	1.55	-58209	10833	4702	108749	15597	7905	23502	No	5.75	Si
SLU 82	3.51	-965.73	-40950	-29213	4137	1.55	1.55	-67311	10833	4702	108749	15597	7905	23502	No	5.68	Si
SLU 83	1.41	6658.22	-35874	-25592	4135	1.55	1.55	-58967	10833	4702	108749	15597	7905	23502	No	5.68	Si
SLU 83	3.51	-977.33	-41503	-29607	4187	1.55	1.55	-68220	10833	4702	108749	15597	7905	23502	No	5.61	Si
SLU 75	1.41	6488.17	-34891	-24890	4037	1.55	1.55	-57351	10833	4702	108749	15597	7905	23502	No	5.82	Si
SLU 75	3.51	-1030.66	-40197	-28675	4088	1.55	1.55	-66072	10833	4702	108749	15597	7905	23502	No	5.75	Si
SLU 78	1.41	6568.86	-35356	-25222	4080	1.55	1.55	-58115	10833	4702	108749	15597	7905	23502	No	5.76	Si
SLU 78	3.51	-1041.38	-40741	-29064	4132	1.55	1.55	-66968	10833	4702	108749	15597	7905	23502	No	5.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	1.41	14062.54	-17375	-12395	14094	1.55	0	-400125	16250	0	108749	23395	7905	31300		2.22	Si
SLV 2	3.51	-10369.03	-22640	-16151	13898	1.24	0.951	0	0	0	108749	18716	6324	25040		1.8	Si
SLV 15	1.41	-5002.09	-30784	-21961	-8388	1.55	1.55	-50601	16250	7052	108749	23395	7905	31300		3.73	Si
SLV 15	3.51	8665.61	-32273	-23022	-8123	1.55	1.5195	-53047	16250	6914	108749	23395	7905	31300		3.85	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.41	12589	-18008	-12847	12619	1.55	0.2278	-230825	16250	1037	108749	23395	7905	31300		2.48	Si
SLV 3	3.51	-10174.61	-19991	-14261	12352	1.24	0.7982	0	0	0	108749	18716	6324	25040		2.03	Si
SLV 5	1.41	9479.94	-21191	-15117	8219	1.55	0.983	-34833	16250	4472	108749	23395	7905	31300		3.81	Si
SLV 5	3.51	-3961.41	-29637	-21143	8293	1.55	1.55	-48716	16250	7052	108749	23395	7905	31300		3.77	Si
SLV 16	1.41	-4929.38	-30743	-21931	-8266	1.55	1.55	-50533	16250	7052	108749	23395	7905	31300		3.79	Si
SLV 16	3.51	8645.35	-32468	-23162	-8001	1.55	1.5262	-53369	16250	6944	108749	23395	7905	31300		3.91	Si
SLD 2	1.41	8611.86	-21202	-15125	7666	1.55	1.1065	-34851	16250	5034	108749	23395	7905	31300		4.08	Si
SLD 2	3.51	-4918.98	-25402	-18121	7600	1.55	1.55	-41754	16250	7052	108749	23395	7905	31300		4.12	Si
SLV 6	1.41	9527.31	-21164	-15098	8298	1.55	0.9745	-34788	16250	4434	108749	23395	7905	31300		3.77	Si
SLV 6	3.51	-3974.61	-29765	-21234	8373	1.55	1.55	-48925	16250	7052	108749	23395	7905	31300		3.74	Si
SLD 1	1.41	8580.63	-21220	-15138	7613	1.55	1.1119	-34880	16250	5059	108749	23395	7905	31300		4.11	Si
SLD 1	3.51	-4910.28	-25318	-18061	7548	1.55	1.55	-41616	16250	7052	108749	23395	7905	31300		4.15	Si
SLV 4	1.41	12661.7	-17967	-12817	12741	1.55	0.2108	-238602	16250	959	108749	23395	7905	31300		2.46	Si
SLV 4	3.51	-10194.87	-20187	-14401	12474	1.24	0.81	0	0	0	108749	18716	6324	25040		2.01	Si
SLV 1	1.41	13989.84	-17417	-12425	13972	1.55	0	-392377	16250	0	108749	23395	7905	31300		2.24	Si
SLV 1	3.51	-10348.78	-22444	-16011	13776	1.24	0.9417	0	0	0	108749	18716	6324	25040		1.82	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-19266	0.31	123.49	2043.93	3067.77	2555.85	20.7	Si
SLV 4	-19409	0.31	123.49	2054.26	3087.65	2570.95	20.82	Si
SLV 7	-21306	0.31	123.49	2183.87	3349.01	2766.44	22.4	Si
SLV 1	-21385	0.31	123.49	2189.02	3359.96	2774.49	22.47	Si
SLV 8	-21399	0.31	123.49	2189.94	3361.9	2775.92	22.48	Si
SLV 2	-21529	0.31	123.49	2198.28	3379.74	2789.01	22.58	Si
SLV 11	-25153	0.31	123.49	2407.87	3857.23	3132.55	25.37	Si
SLV 12	-25246	0.31	123.49	2412.67	3868.74	3140.7	25.43	Si
SLV 5	-28371	0.31	123.49	2555.26	4245.06	3400.16	27.53	Si
SLV 6	-28464	0.31	123.49	2559	4255.99	3407.5	27.59	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-23027	-25024	-126	0.395	2553.4	0.975	5.8948	9.2784	No
SLV 10	-23023	-24997	-125	0.395	2553.1	0.975	5.89632	9.2784	No
SLV 12	-20161	-26968	154	0.441	2261.6	0.972	6.60086	9.2784	No
SLV 11	-20164	-26996	153	0.441	2261.9	0.972	6.60091	9.2784	No
SLV 5	-20146	-21191	-158	0.441	2260.1	0.972	6.6023	9.2784	No
SLV 6	-20143	-21164	-157	0.442	2259.8	0.972	6.60414	9.2784	No
SLV 7	-17283	-23163	121	0.505	1968.6	0.968	7.58314	9.2784	No
SLV 8	-17280	-23136	123	0.505	1968.3	0.968	7.58325	9.2784	No
SLV 14	-25381	-30151	10	0.368	2793.3	0.977	5.48265	4.61088	Si
SLV 13	-25386	-30193	8	0.369	2793.7	0.977	5.48292	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.74	SLU 83	Si
V_SLU	5.613	SLU 83	Si
PF_SLV	0.827	SLV 2	No
V_SLV	1.802	SLV 2	Si
PFFP_SLV	20.697	SLV 3	Si
R_SLV	0.635	SLV 9	No

Maschio 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L4	L5	3.98	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	1.41	5067.24	-47663	-0.0000725	0.0004492	0.0035	3.98	61648.89	77907.55	77907.55	15.37	No	Si
SLU 51	3.51	-2508.44	-40539	-0.0000572	0.0004492	0.0035	3.98	56655.1	75807.84	75807.84	30.22	No	Si
SLU 47	1.41	5023.07	-46910	-0.0000713	0.0004492	0.0035	3.98	61191.2	77063.54	77063.54	15.34	No	Si
SLU 47	3.51	-2466.79	-39797	-0.0000561	0.0004492	0.0035	3.98	56049.51	74802.82	74802.82	30.32	No	Si
SLU 45	1.41	5048.99	-47390	-0.0000721	0.0004492	0.0035	3.98	61484.81	77601.44	77601.44	15.37	No	Si
SLU 45	3.51	-2467.31	-40297	-0.0000568	0.0004492	0.0035	3.98	56459.11	75479.64	75479.64	30.59	No	Si
SLU 49	1.41	5093.93	-48155	-0.0000733	0.0004492	0.0035	3.98	61938.96	78458.96	78458.96	15.4	No	Si
SLU 49	3.51	-2504.83	-41054	-0.0000579	0.0004492	0.0035	3.98	57065.88	76505.26	76505.26	30.54	No	Si
SLU 48	1.41	5093.46	-48148	-0.0000732	0.0004492	0.0035	3.98	61934.74	78450.85	78450.85	15.4	No	Si
SLU 48	3.51	-2507.31	-41045	-0.0000579	0.0004492	0.0035	3.98	57058.67	76492.9	76492.9	30.51	No	Si
SLU 50	1.41	5066.77	-47656	-0.0000725	0.0004492	0.0035	3.98	61644.57	77899.44	77899.44	15.37	No	Si
SLU 50	3.51	-2510.92	-40530	-0.0000572	0.0004492	0.0035	3.98	56647.75	75795.48	75795.48	30.19	No	Si
SLU 43	1.41	4977.81	-46140	-0.0000701	0.0004492	0.0035	3.98	60706.12	76118.01	76118.01	15.29	No	Si
SLU 43	3.51	-2430.93	-39033	-0.000055	0.0004492	0.0035	3.98	55409.75	73768.97	73768.97	30.35	No	Si
SLU 46	1.41	5049.45	-47397	-0.0000721	0.0004492	0.0035	3.98	61489.18	77609.55	77609.55	15.37	No	Si
SLU 46	3.51	-2464.83	-40306	-0.0000568	0.0004492	0.0035	3.98	56466.52	75492	75492	30.63	No	Si
SLU 64	1.41	5239.89	-50924	-0.0000775	0.0004492	0.0035	3.98	63440.02	81563.36	81563.36	15.57	No	Si
SLU 64	3.51	-2351.49	-44229	-0.000062	0.0004492	0.0035	3.98	59426.84	80669.55	80669.55	34.31	No	Si
SLU 44	1.41	4978.59	-46152	-0.0000702	0.0004492	0.0035	3.98	60713.85	76135.48	76135.48	15.29	No	Si
SLU 44	3.51	-2426.79	-39048	-0.000055	0.0004492	0.0035	3.98	55422.66	73789.57	73789.57	30.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	1.41	14875.12	-22226	-0.0000561	0.0006738	0.0035	3.98		42524.14	42524.14	2.86		Si
SLV 2	3.51	-12635.92	-8093	-0.0000617	0.0006738	0.0035	3.184		24665.6	24665.6	1.95		Si
SLV 3	1.41	21105.46	-28309	-0.0000768	0.0006738	0.0035	3.98		52719.86	52719.86	2.5		Si
SLV 3	3.51	-10168.87	-14804	-0.0000375	0.0006738	0.0035	3.98		36829.88	36829.88	3.62		Si
SLD 4	1.41	11353.47	-34593	-0.0000656	0.0006738	0.0035	3.98		61915.24	61915.24	5.45		Si
SLD 4	3.51	-5277.72	-25867	-0.0000423	0.0006738	0.0035	3.98		55871.23	55871.23	10.59		Si
SLD 3	1.41	11329.65	-34646	-0.0000657	0.0006738	0.0035	3.98		61994.1	61994.1	5.47		Si
SLD 3	3.51	-5355.65	-25985	-0.0000426	0.0006738	0.0035	3.98		56068.17	56068.17	10.47		Si
SLV 7	1.41	18674.15	-45112	-0.0000946	0.0006738	0.0035	3.98		77307.84	77307.84	4.14		Si
SLV 7	3.51	-293.67	-38278	-0.0000487	0.0006738	0.0035	3.98		75552.27	75552.27	257.27		Si
SLV 1	1.41	14819.66	-22352	-0.0000562	0.0006738	0.0035	3.98		42739.52	42739.52	2.88		Si
SLV 1	3.51	-12817.37	-8366	-0.0000599	0.0006738	0.0035	3.184		25170.53	25170.53	1.96		Si
SLV 6	1.41	-2242.39	-25174	-0.0000356	0.0006738	0.0035	3.98		54707.06	54707.06	24.4		Si
SLV 6	3.51	-9003.78	-16638	-0.0000376	0.0006738	0.0035	3.98		40063.74	40063.74	4.45		Si
SLV 4	1.41	21160.92	-28183	-0.0000768	0.0006738	0.0035	3.98		52536.25	52536.25	2.48		Si
SLV 4	3.51	-9987.42	-14531	-0.0000368	0.0006738	0.0035	3.98		36348.43	36348.43	3.64		Si
SLV 8	1.41	18710.29	-45030	-0.0000946	0.0006738	0.0035	3.98		77188.2	77188.2	4.13		Si
SLV 8	3.51	-175.44	-38100	-0.0000483	0.0006738	0.0035	3.98		75283.39	75283.39	429.1		Si
SLV 5	1.41	-2278.53	-25256	-0.0000358	0.0006738	0.0035	3.98		54844.34	54844.34	24.07		Si
SLV 5	3.51	-9122	-16816	-0.0000381	0.0006738	0.0035	3.98		40377.45	40377.45	4.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	1.41	5066.77	-47656	-33996	5063	3.98	3.98	-30506	10833	12073	108749	40049	20298	60347	No	11.92	Si
SLU 50	3.51	-2510.92	-40530	-28913	4634	3.98	3.98	-25945	10833	12073	108749	40049	20298	60347	No	13.02	Si
SLU 71	1.41	5328.84	-52440	-37409	4679	3.98	3.98	-33569	10833	12073	108749	40049	20298	60347	No	12.9	Si
SLU 71	3.51	-2431.48	-45725	-32619	4199	3.98	3.98	-29271	10833	12073	108749	40049	20298	60347	No	14.37	Si
SLU 46	1.41	5049.45	-47397	-33812	4999	3.98	3.98	-30341	10833	12073	108749	40049	20298	60347	No	12.07	Si
SLU 46	3.51	-2464.83	-40306	-28753	4572	3.98	3.98	-25801	10833	12073	108749	40049	20298	60347	No	13.2	Si
SLU 48	1.41	5093.46	-48148	-34347	5056	3.98	3.98	-30821	10833	12073	108749	40049	20298	60347	No	11.94	Si
SLU 48	3.51	-2507.31	-41045	-29280	4621	3.98	3.98	-26275	10833	12073	108749	40049	20298	60347	No	13.06	Si
SLU 51	1.41	5067.24	-47663	-34002	5061	3.98	3.98	-30511	10833	12073	108749	40049	20298	60347	No	11.92	Si
SLU 51	3.51	-2508.44	-40539	-28920	4631	3.98	3.98	-25951	10833	12073	108749	40049	20298	60347	No	13.03	Si
SLU 47	1.41	5023.07	-46910	-33465	5005	3.98	3.98	-30029	10833	12073	108749	40049	20298	60347	No	12.06	Si
SLU 47	3.51	-2466.79	-39797	-28390	4582	3.98	3.98	-25476	10833	12073	108749	40049	20298	60347	No	13.17	Si
SLU 49	1.41	5093.93	-48155	-34353	5053	3.98	3.98	-30826	10833	12073	108749	40049	20298	60347	No	11.94	Si
SLU 49	3.51	-2504.83	-41054	-29287	4619	3.98	3.98	-26280	10833	12073	108749	40049	20298	60347	No	13.07	Si
SLU 45	1.41	5048.99	-47390	-33807	5001	3.98	3.98	-30336	10833	12073	108749	40049	20298	60347	No	12.07	Si
SLU 45	3.51	-2467.31	-40297	-28747	4574	3.98	3.98	-25796	10833	12073	108749	40049	20298	60347	No	13.19	Si
SLU 44	1.41	4978.59	-46152	-32924	4950	3.98	3.98	-29544	10833	12073	108749	40049	20298	60347	No	12.19	Si
SLU 44	3.51	-2426.79	-39048	-27856	4535	3.98	3.98	-24997	10833	12073	108749	40049	20298	60347	No	13.31	Si
SLU 43	1.41	4977.81	-46140	-32915	4955	3.98	3.98	-29536	10833	12073	108749	40049	20298	60347	No	12.18	Si
SLU 43	3.51	-2430.93	-39033	-27845	4540	3.98	3.98	-24987	10833	12073	108749	40049	20298	60347	No	13.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	1.41	-13107.23	-50567	-36073	-14143	3.98	3.98	-32370	16250	18109	108749	60073	20298	80371		5.68	Si
SLV 13	3.51	6478.84	-54108	-38599	-14049	3.98	3.98	-34637	16250	18109	108749	60073	20298	80371		5.72	Si
SLV 4	1.41	21160.92	-28183	-20105	20994	3.98	3.7175	-18041	16108	16767	108749	60073	20298	80371		3.83	Si
SLV 4	3.51	-9987.42	-14531	-10366	20180	3.98	3.9081	-9302	14360	15714	108749	60073	20298	80371		3.98	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	1.41	11353.47	-34593	-24677	10933	3.98	3.98	-22144	16250	18109	108749	60073	20298	80371		7.35	Si
SLD 4	3.51	-5277.72	-25867	-18453	10379	3.98	3.98	-16559	15812	17621	108749	60073	20298	80371		7.74	Si
SLV 2	1.41	14875.12	-22226	-15856	19910	3.98	3.9622	-14228	15346	17025	108749	60073	20298	80371		4.04	Si
SLV 2	3.51	-12635.92	-8093	-5773	18798	3.184	1.2858	0	0	0	108749	48059	16238	64297		3.42	Si
SLV 3	1.41	21105.46	-28309	-20195	20915	3.98	3.7334	-18121	16124	16855	108749	60073	20298	80371		3.84	Si
SLV 3	3.51	-10168.87	-14804	-10561	20100	3.98	3.9094	-9477	14395	15757	108749	60073	20298	80371		4	Si
SLV 14	1.41	-13051.77	-50442	-35984	-14064	3.98	3.98	-32290	16250	18109	108749	60073	20298	80371		5.71	Si
SLV 14	3.51	6660.29	-53835	-38405	-13969	3.98	3.98	-34462	16250	18109	108749	60073	20298	80371		5.75	Si
SLV 16	1.41	-6765.96	-56399	-40233	-12980	3.98	3.98	-36103	16250	18109	108749	60073	20298	80371		6.19	Si
SLV 16	3.51	9308.79	-60274	-42998	-12587	3.98	3.98	-38584	16250	18109	108749	60073	20298	80371		6.39	Si
SLD 3	1.41	11329.65	-34646	-24716	10899	3.98	3.98	-22179	16250	18109	108749	60073	20298	80371		7.37	Si
SLD 3	3.51	-5355.65	-25985	-18537	10345	3.98	3.98	-16634	15827	17637	108749	60073	20298	80371		7.77	Si
SLV 15	1.41	-6821.42	-56524	-40323	-13059	3.98	3.98	-36183	16250	18109	108749	60073	20298	80371		6.15	Si
SLV 15	3.51	9127.34	-60547	-43192	-12667	3.98	3.98	-38758	16250	18109	108749	60073	20298	80371		6.34	Si
SLV 1	1.41	14819.66	-22352	-15945	19831	3.98	3.98	-14308	15362	17119	108749	60073	20298	80371		4.05	Si
SLV 1	3.51	-12817.37	-8366	-5968	18718	3.184	1.3737	0	0	0	108749	48059	16238	64297		3.44	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-10948	0.31	317.09	1450.52	2196.42	1823.47	5.75	Si
SLV 1	-11183	0.31	317.09	1479.94	2232.52	1856.23	5.85	Si
SLV 4	-17608	0.31	317.09	2252.64	3210.9	2731.77	8.62	Si
SLV 6	-17632	0.31	317.09	2255.37	3214.48	2734.93	8.63	Si
SLV 5	-17785	0.31	317.09	2273.14	3237.76	2755.45	8.69	Si
SLV 3	-17844	0.31	317.09	2279.9	3246.63	2763.26	8.71	Si
SLV 10	-29987	0.31	317.09	3581.79	5055.92	4318.85	13.62	Si
SLV 9	-30140	0.31	317.09	3596.96	5078.58	4337.77	13.68	Si
SLV 8	-39834	0.31	317.09	4489.14	6485.13	5487.14	17.3	Si
SLV 7	-39988	0.31	317.09	4502.24	6507.2	5504.72	17.36	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-44749	-53576	835	0.491	5092.6	0.968	7.36459	9.2784	No
SLV 12	-44531	-53495	836	0.493	5070.3	0.968	7.3961	9.2784	No
SLV 7	-36205	-45112	1158	0.579	4223	0.962	8.75191	9.2784	No
SLV 8	-35986	-45030	1159	0.582	4200.8	0.962	8.79838	9.2784	No
SLV 9	-34387	-33720	-1303	0.601	4038.1	0.96	9.0997	9.2784	No
SLV 10	-34169	-33639	-1303	0.605	4015.9	0.96	9.1511	9.2784	No
SLV 5	-25843	-25256	-981	0.776	3169.7	0.951	11.86025	9.2784	Si
SLV 6	-25624	-25174	-980	0.781	3147.5	0.951	11.94884	9.2784	Si
SLV 15	-51150	-56524	-290	0.448	5744.2	0.971	6.6995	4.61088	Si
SLV 16	-50815	-56399	-289	0.45	5710.1	0.971	6.73849	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.291	SLU 43	Si
V_SLU	11.918	SLU 50	Si
PF_SLV	1.952	SLV 2	Si
V_SLV	3.42	SLV 2	Si
PFFP_SLV	5.751	SLV 2	Si
R_SLV	0.794	SLV 11	No

Maschio 73

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.354	L4	Z medio 397 cm	2.96	0.28	2.565	1.71	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.41	615.36	-48283	-0.000103	0.0003743	0.0035	2.96	30569.76	43022.75	43022.75	69.91	No	Si
SLU 74	3.12	2958.22	-45026	-0.0001058	0.0003743	0.0035	2.96	31079.84	42081.23	42081.23	14.23	No	Si
SLU 81	1.41	545.42	-49135	-0.0001049	0.0003743	0.0035	2.96	30375	43277.68	43277.68	79.35	No	Si
SLU 81	3.12	2946.26	-45909	-0.000108	0.0003743	0.0035	2.96	30978.32	42331.28	42331.28	14.37	No	Si
SLU 84	1.41	554.99	-49821	-0.0001067	0.0003743	0.0035	2.96	30199.52	43485.76	43485.76	78.35	No	Si
SLU 84	3.12	2966.53	-46602	-0.0001099	0.0003743	0.0035	2.96	30879.61	42530	42530	14.34	No	Si
SLU 69	1.41	772.32	-44480	-0.0000944	0.0003743	0.0035	2.96	31128.98	41928.39	41928.39	54.29	No	Si
SLU 69	3.12	2826.6	-41127	-0.0000956	0.0003743	0.0035	2.96	31201.04	40518.94	40518.94	14.33	No	Si
SLU 77	1.41	621.15	-48971	-0.0001048	0.0003743	0.0035	2.96	30414.51	43228.28	43228.28	69.59	No	Si
SLU 77	3.12	2992.41	-45723	-0.0001077	0.0003743	0.0035	2.96	31001.97	42278.3	42278.3	14.13	No	Si
SLU 83	1.41	551.21	-49823	-0.0001066	0.0003743	0.0035	2.96	30199.2	43486.13	43486.13	78.89	No	Si
SLU 83	3.12	2980.45	-46606	-0.0001099	0.0003743	0.0035	2.96	30878.85	42531.42	42531.42	14.27	No	Si
SLU 75	1.41	619.14	-48282	-0.0001031	0.0003743	0.0035	2.96	30570.02	43022.39	43022.39	69.49	No	Si
SLU 75	3.12	2944.3	-45021	-0.0001057	0.0003743	0.0035	2.96	31080.33	42079.85	42079.85	14.29	No	Si
SLU 78	1.41	624.93	-48970	-0.0001048	0.0003743	0.0035	2.96	30414.79	43227.92	43227.92	69.17	No	Si
SLU 78	3.12	2978.49	-45718	-0.0001077	0.0003743	0.0035	2.96	31002.58	42276.9	42276.9	14.19	No	Si
SLU 79	1.41	621.78	-48585	-0.0001038	0.0003743	0.0035	2.96	30503.6	43112.75	43112.75	69.34	No	Si
SLU 79	3.12	2943.58	-45334	-0.0001065	0.0003743	0.0035	2.96	31047.61	42167.81	42167.81	14.33	No	Si
SLU 66	1.41	766.53	-43792	-0.0000927	0.0003743	0.0035	2.96	31175.9	41738.25	41738.25	54.45	No	Si
SLU 66	3.12	2792.41	-40430	-0.0000938	0.0003743	0.0035	2.96	31166.5	40082.94	40082.94	14.35	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	1.41	-1725.4	-31462	-0.0000659	0.0005615	0.0035	2.96		40462.95	40462.95	23.45		Si
SLV 10	3.12	4996.62	-31418	-0.0000789	0.0005615	0.0035	2.96		37927.22	37927.22	7.59		Si
SLV 14	1.41	-2212.26	-25983	-0.0000569	0.0005615	0.0035	2.96		35018.94	35018.94	15.83		Si
SLV 14	3.12	3721.94	-30611	-0.0000721	0.0005615	0.0035	2.96		37225.51	37225.51	10		Si
SLV 5	1.41	-295.43	-35772	-0.000069	0.0005615	0.0035	2.96		44416.32	44416.32	150.35		Si
SLV 5	3.12	4474.43	-31562	-0.0000771	0.0005615	0.0035	2.96		38053.01	38053.01	8.5		Si
SLD 5	1.41	164.75	-34320	-0.0000656	0.0005615	0.0035	2.96		40475.84	40475.84	245.68		Si
SLD 5	3.12	3129.17	-31081	-0.0000707	0.0005615	0.0035	2.96		37634.49	37634.49	12.03		Si
SLV 9	1.41	-1614.25	-31266	-0.0000651	0.0005615	0.0035	2.96		40273.36	40273.36	24.95		Si
SLV 9	3.12	4991.11	-31320	-0.0000786	0.0005615	0.0035	2.96		37842.02	37842.02	7.58		Si
SLD 9	1.41	-399.02	-32394	-0.0000626	0.0005615	0.0035	2.96		41352.79	41352.79	103.64		Si
SLD 9	3.12	3350.09	-30977	-0.0000714	0.0005615	0.0035	2.96		37543.8	37543.8	11.21		Si
SLV 13	1.41	-2041.69	-25682	-0.0000556	0.0005615	0.0035	2.96		34714.18	34714.18	17		Si
SLV 13	3.12	3713.48	-30461	-0.0000718	0.0005615	0.0035	2.96		37095.08	37095.08	9.99		Si
SLD 10	1.41	-447.64	-32479	-0.0000629	0.0005615	0.0035	2.96		41429.37	41429.37	92.55		Si
SLD 10	3.12	3352.51	-31020	-0.0000715	0.0005615	0.0035	2.96		37581.08	37581.08	11.21		Si
SLV 6	1.41	-406.57	-35968	-0.0000699	0.0005615	0.0035	2.96		44582.23	44582.23	109.65		Si
SLV 6	3.12	4479.94	-31660	-0.0000773	0.0005615	0.0035	2.96		38138.33	38138.33	8.51		Si
SLD 6	1.41	116.13	-34406	-0.0000655	0.0005615	0.0035	2.96		40551.69	40551.69	349.19		Si
SLD 6	3.12	3131.58	-31124	-0.0000708	0.0005615	0.0035	2.96		37671.8	37671.8	12.03		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 57	1.41	588.89	-44792	-37299	3532	2.96	2.96	-45003	10833	8979	28547	24818	7548	32366	No	9.16	Si
SLU 57	3.12	2613.53	-41748	-34764	5145	2.96	2.96	-41945	10833	8979	28547	24818	7548	32366	No	6.29	Si
SLU 63	1.41	518.95	-45643	-38008	3390	2.96	2.96	-45859	10833	8979	28547	24818	7548	32366	No	9.55	Si
SLU 63	3.12	2601.57	-42631	-35500	5158	2.96	2.96	-42833	10833	8979	28547	24818	7548	32366	No	6.28	Si
SLU 83	1.41	551.21	-49823	-41488	3182	2.96	2.96	-50058	10833	8979	28547	24818	7548	32366	No	10.17	Si
SLU 83	3.12	2980.45	-46606	-38810	5145	2.96	2.96	-46827	10833	8979	28547	24818	7548	32366	No	6.29	Si
SLU 59	1.41	589.53	-44406	-36977	3576	2.96	2.96	-44616	10833	8979	28547	24818	7548	32366	No	9.05	Si
SLU 59	3.12	2564.69	-41358	-34440	5176	2.96	2.96	-41554	10833	8979	28547	24818	7548	32366	No	6.25	Si
SLU 76	1.41	622.29	-47896	-39883	3388	2.96	2.96	-48122	10833	8979	28547	24818	7548	32366	No	9.55	Si
SLU 76	3.12	2886.19	-44628	-37163	5172	2.96	2.96	-44839	10833	8979	28547	24818	7548	32366	No	6.26	Si
SLU 84	1.41	554.99	-49821	-41487	3234	2.96	2.96	-50057	10833	8979	28547	24818	7548	32366	No	10.01	Si
SLU 84	3.12	2966.53	-46602	-38806	5195	2.96	2.96	-46822	10833	8979	28547	24818	7548	32366	No	6.23	Si
SLU 80	1.41	625.56	-48584	-40457	3420	2.96	2.96	-48814	10833	8979	28547	24818	7548	32366	No	9.46	Si
SLU 80	3.12	2929.66	-45329	-37746	5214	2.96	2.96	-45543	10833	8979	28547	24818	7548	32366	No	6.21	Si
SLU 79	1.41	621.78	-48585	-40458	3368	2.96	2.96	-48815	10833	8979	28547	24818	7548	32366	No	9.61	Si
SLU 79	3.12	2943.58	-45334	-37750	5163	2.96	2.96	-45548	10833	8979	28547	24818	7548	32366	No	6.27	Si
SLU 55	1.41	586.26	-43718	-36404	3544	2.96	2.96	-43924	10833	8979	28547	24818	7548	32366	No	9.13	Si
SLU 55	3.12	2521.23	-40658	-33857	5134	2.96	2.96	-40850	10833	8979	28547	24818	7548	32366	No	6.3	Si
SLU 78	1.41	624.93	-48970	-40778	3376	2.96	2.96	-49201	10833	8979	28547	24818	7548	32366	No	9.59	Si
SLU 78	3.12	2978.49	-45718	-38070	5182	2.96	2.96	-45934	10833	8979	28547	24818	7548	32366	No	6.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 8	1.41	1468.14	-34058	-28360	7699	2.96	2.96	-34219	16250	13468	28547	37227	7548	42015		5.46	Si
SLD 8	3.12	752.52	-30431	-25341	8598	2.96	2.96	-30575	16250	13468	28547	37227	7548	42015		4.89	Si
SLV 12	1.41	1364.55	-30679	-25547	12823	2.96	2.96	-30824	16250	13468	28547	37227	7548	42015		3.28	Si
SLV 12	3.12	-371.81	-29846	-24854	13190	2.96	2.96	-29987	16250	13468	28547	37227	7548	42015		3.19	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.41	1475.69	-30483	-25384	12845	2.96	2.96	-30627	16250	13468	28547	37227	7548	42015		3.27	Si
SLV 11	3.12	-377.33	-29749	-24772	13210	2.96	2.96	-29889	16250	13468	28547	37227	7548	42015		3.18	Si
SLV 9	1.41	-1614.25	-31266	-26035	-8767	2.96	2.96	-31414	16250	13468	28547	37227	7548	42015		4.79	Si
SLV 9	3.12	4991.11	-31320	-26080	-7147	2.96	2.96	-31468	16250	13468	28547	37227	7548	42015		5.88	Si
SLD 7	1.41	1516.76	-33972	-28289	7709	2.96	2.96	-34133	16250	13468	28547	37227	7548	42015		5.45	Si
SLD 7	3.12	750.1	-30389	-25305	8607	2.96	2.96	-30532	16250	13468	28547	37227	7548	42015		4.88	Si
SLV 3	1.41	3281.38	-40469	-33699	8016	2.96	2.96	-40660	16250	13468	28547	37227	7548	42015		5.24	Si
SLV 3	3.12	380.67	-30797	-25645	9385	2.96	2.96	-30943	16250	13468	28547	37227	7548	42015		4.48	Si
SLV 7	1.41	2794.52	-34990	-29136	14105	2.96	2.96	-35155	16250	13468	28547	37227	7548	42015		2.98	Si
SLV 7	3.12	-894.01	-29991	-24974	14731	2.96	2.96	-30133	16250	13468	28547	37227	7548	42015		2.85	Si
SLV 4	1.41	3110.81	-40769	-33949	7983	2.96	2.96	-40961	16250	13468	28547	37227	7548	42015		5.26	Si
SLV 4	3.12	389.13	-30948	-25771	9354	2.96	2.96	-31094	16250	13468	28547	37227	7548	42015		4.49	Si
SLV 8	1.41	2683.38	-35185	-29299	14083	2.96	2.96	-35352	16250	13468	28547	37227	7548	42015		2.98	Si
SLV 8	3.12	-888.5	-30089	-25055	14711	2.96	2.96	-30231	16250	13468	28547	37227	7548	42015		2.86	Si
SLV 10	1.41	-1725.4	-31462	-26198	-8788	2.96	2.96	-31610	16250	13468	28547	37227	7548	42015		4.78	Si
SLV 10	3.12	4996.62	-31418	-26162	-7167	2.96	2.96	-31566	16250	13468	28547	37227	7548	42015		5.86	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.265 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.29	37622	-31181	124.98	3289.95	26.32	Si
SLV 16	179667	0.29	37900	-31412	124.98	3306.26	26.45	Si
SLV 13	179667	0.29	38046	-31532	124.98	3314.74	26.52	Si
SLV 11	179667	0.29	38244	-31696	124.98	3326.23	26.61	Si
SLV 14	179667	0.29	38324	-31763	124.98	3330.87	26.65	Si
SLV 12	179667	0.29	38425	-31846	124.98	3336.7	26.7	Si
SLV 7	179667	0.29	39158	-32454	124.98	3378.57	27.03	Si
SLV 8	179667	0.29	39339	-32604	124.98	3388.79	27.11	Si
SLV 9	179667	0.29	39655	-32866	124.98	3406.49	27.26	Si
SLV 10	179667	0.29	39837	-33017	124.98	3416.57	27.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.265 Wa = 0.05 Ta = 0.0392

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-31660	-35968	-14	0.552	3522.7	0.974	8.24529	5.12315	Si
SLV 5	-31562	-35772	-15	0.554	3512.8	0.974	8.26736	5.12315	Si
SLV 10	-31418	-31462	-31	0.556	3498.1	0.974	8.29324	5.12315	Si
SLV 9	-31320	-31266	-32	0.557	3488.1	0.974	8.31563	5.12315	Si
SLV 8	-30089	-35185	-42	0.576	3362.7	0.973	8.60761	5.12315	Si
SLV 7	-29991	-34990	-42	0.578	3352.7	0.973	8.63193	5.12315	Si
SLV 12	-29846	-30679	-59	0.58	3338	0.972	8.66082	5.12315	Si
SLV 11	-29749	-30483	-59	0.581	3328.1	0.972	8.6855	5.12315	Si
SLV 2	-31419	-41004	-4	0.556	3498.2	0.974	8.30506	3.53212	Si
SLV 1	-31269	-40703	-5	0.559	3482.9	0.974	8.33952	3.53212	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.129	SLU 77	Si
V_SLU	6.208	SLU 80	Si
PF_SLV	7.582	SLV 9	Si
V_SLV	2.852	SLV 7	Si
PFFP_SLV	26.323	SLV 15	Si
R_SLV	1.609	SLV 6	Si

Maschio 74

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-0.354	-11.003	1.006	L4	L5	1.36	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	1.41	3553.6	-28657	-0.000236	0.0003743	0.0035	1.36	5082.94	9567.71	9567.71	2.69	No	Si
SLU 74	4.83	-188.73	-21255	-0.0000993	0.0003743	0.0035	1.36	6529.56	9196.05	9196.05	48.73	No	Si
SLU 82	1.41	3645.65	-29246	-0.0002443	0.0003743	0.0035	1.36	4885.25	9547.56	9547.56	2.62	No	Si
SLU 82	4.83	-265.66	-21704	-0.0001034	0.0003743	0.0035	1.36	6496.61	9244.23	9244.23	34.8	No	Si
SLU 78	1.41	3599.85	-29021	-0.0002408	0.0003743	0.0035	1.36	4962.35	9555.2	9555.2	2.65	No	Si
SLU 78	4.83	-190.11	-21566	-0.000101	0.0003743	0.0035	1.36	6507.43	9229.32	9229.32	48.55	No	Si
SLU 80	1.41	3574.73	-28785	-0.0002379	0.0003743	0.0035	1.36	5041.03	9563.28	9563.28	2.68	No	Si
SLU 80	4.83	-194.28	-21336	-0.0000999	0.0003743	0.0035	1.36	6524.16	9204.58	9204.58	47.38	No	Si
SLU 84	1.41	3688.83	-29613	-0.0002492	0.0003743	0.0035	1.36	4755.92	9535.31	9535.31	2.58	No	Si
SLU 84	4.83	-261.54	-22033	-0.0001051	0.0003743	0.0035	1.36	6467.91	9280.62	9280.62	35.48	No	Si
SLU 81	1.41	3642.59	-29250	-0.0002443	0.0003743	0.0035	1.36	4884.07	9547.45	9547.45	2.62	No	Si
SLU 81	4.83	-260.16	-21722	-0.0001034	0.0003743	0.0035	1.36	6495.14	9246.21	9246.21	35.54	No	Si
SLU 79	1.41	3571.67	-28789	-0.0002378	0.0003743	0.0035	1.36	5039.91	9563.17	9563.17	2.68	No	Si
SLU 79	4.83	-188.78	-21354	-0.0000998	0.0003743	0.0035	1.36	6522.92	9206.5	9206.5	48.77	No	Si
SLU 75	1.41	3556.67	-28654	-0.0002361	0.0003743	0.0035	1.36	5084.05	9567.83	9567.83	2.69	No	Si
SLU 75	4.83	-194.23	-21237	-0.0000993	0.0003743	0.0035	1.36	6530.74	9194.15	9194.15	47.34	No	Si
SLU 83	1.41	3685.77	-29617	-0.0002491	0.0003743	0.0035	1.36	4754.7	9535.19	9535.19	2.59	No	Si
SLU 83	4.83	-256.05	-22051	-0.0001051	0.0003743	0.0035	1.36	6466.23	9282.53	9282.53	36.25	No	Si
SLU 77	1.41	3596.79	-29024	-0.0002407	0.0003743	0.0035	1.36	4961.2	9555.09	9555.09	2.66	No	Si
SLU 77	4.83	-184.61	-21584	-0.000101	0.0003743	0.0035	1.36	6506.05	9231.27	9231.27	50	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.41	3406.63	-20423	-0.0001546	0.0005615	0.0035	1.36		10424.97	10424.97	3.06		Si
SLV 8	4.83	-853.55	-9869	-0.000055	0.0005615	0.0035	1.36		6330.52	6330.52	7.42		Si
SLD 7	1.41	2866.77	-19985	-0.0001412	0.0005615	0.0035	1.36		10273.61	10273.61	3.58		Si
SLD 7	4.83	-426.42	-12365	-0.000058	0.0005615	0.0035	1.36		7556.43	7556.43	17.72		Si
SLD 8	1.41	2863.52	-19984	-0.0001411	0.0005615	0.0035	1.36		10273.34	10273.34	3.59		Si
SLD 8	4.83	-425.13	-12377	-0.000058	0.0005615	0.0035	1.36		7561.77	7561.77	17.79		Si
SLV 7	1.41	3414.07	-20425	-0.0001548	0.0005615	0.0035	1.36		10425.41	10425.41	3.05		Si
SLV 7	4.83	-856.5	-9843	-0.000055	0.0005615	0.0035	1.36		6317.59	6317.59	7.38		Si
SLV 11	1.41	3050.06	-18087	-0.0001353	0.0005615	0.0035	1.36		9491.32	9491.32	3.11		Si
SLV 11	4.83	-1042.6	-11471	-0.0000655	0.0005615	0.0035	1.36		7129.23	7129.23	6.84		Si
SLV 3	1.41	3290.86	-23439	-0.0001683	0.0005615	0.0035	1.36		11254.51	11254.51	3.42		Si
SLV 3	4.83	-36.43	-10504	-0.0000429	0.0005615	0.0035	1.36		6650.01	6650.01	182.55		Si
SLV 4	1.41	3279.43	-23437	-0.0001681	0.0005615	0.0035	1.36		11253.81	11253.81	3.43		Si
SLV 4	4.83	-31.9	-10543	-0.000043	0.0005615	0.0035	1.36		6669.6	6669.6	209.05		Si
SLD 11	1.41	2711.22	-18986	-0.000133	0.0005615	0.0035	1.36		9861.77	9861.77	3.64		Si
SLD 11	4.83	-506.06	-13061	-0.0000625	0.0005615	0.0035	1.36		7878.49	7878.49	15.57		Si
SLV 12	1.41	3042.61	-18086	-0.0001351	0.0005615	0.0035	1.36		9490.64	9490.64	3.12		Si
SLV 12	4.83	-1039.66	-11497	-0.0000655	0.0005615	0.0035	1.36		7141.24	7141.24	6.87		Si
SLD 12	1.41	2707.96	-18985	-0.0001329	0.0005615	0.0035	1.36		9861.47	9861.47	3.64		Si
SLD 12	4.83	-504.77	-13072	-0.0000625	0.0005615	0.0035	1.36		7883.46	7883.46	15.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	1.41	3685.77	-29617	-24662	5082	1.36	1.36	-64764	10833	4125	38062	11403	3468	14871	No	2.93	Si
SLU 83	4.83	-256.05	-22051	-18362	1902	1.36	1.36	-48220	10833	4125	38062	11403	3468	14871	No	7.82	Si
SLU 80	1.41	3574.73	-28785	-23970	4958	1.36	1.36	-62946	10833	4125	38062	11403	3468	14871	No	3	Si
SLU 80	4.83	-194.28	-21336	-17766	1874	1.36	1.36	-46655	10833	4125	38062	11403	3468	14871	No	7.94	Si
SLU 62	1.41	3409.32	-27037	-22514	4918	1.36	1.36	-59124	10833	4125	38062	11403	3468	14871	No	3.02	Si
SLU 62	4.83	-280.07	-20123	-16757	2076	1.36	1.36	-44004	10833	4125	38062	11403	3468	14871	No	7.16	Si
SLU 77	1.41	3596.79	-29024	-24169	4958	1.36	1.36	-63468	10833	4125	38062	11403	3468	14871	No	3	Si
SLU 77	4.83	-184.61	-21584	-17974	1846	1.36	1.36	-47200	10833	4125	38062	11403	3468	14871	No	8.06	Si
SLU 81	1.41	3642.59	-29250	-24357	5012	1.36	1.36	-63961	10833	4125	38062	11403	3468	14871	No	2.97	Si
SLU 81	4.83	-260.16	-21722	-18088	1884	1.36	1.36	-47499	10833	4125	38062	11403	3468	14871	No	7.89	Si
SLU 82	1.41	3645.65	-29246	-24354	5030	1.36	1.36	-63954	10833	4125	38062	11403	3468	14871	No	2.96	Si
SLU 82	4.83	-265.66	-21704	-18073	1909	1.36	1.36	-47460	10833	4125	38062	11403	3468	14871	No	7.79	Si
SLU 63	1.41	3412.38	-27034	-22512	4935	1.36	1.36	-59116	10833	4125	38062	11403	3468	14871	No	3.01	Si
SLU 63	4.83	-285.57	-20105	-16742	2100	1.36	1.36	-43965	10833	4125	38062	11403	3468	14871	No	7.08	Si
SLU 78	1.41	3599.85	-29021	-24166	4976	1.36	1.36	-63461	10833	4125	38062	11403	3468	14871	No	2.99	Si
SLU 78	4.83	-190.11	-21566	-17959	1870	1.36	1.36	-47160	10833	4125	38062	11403	3468	14871	No	7.95	Si
SLU 79	1.41	3571.67	-28789	-23973	4940	1.36	1.36	-62953	10833	4125	38062	11403	3468	14871	No	3.01	Si
SLU 79	4.83	-188.78	-21354	-17781	1849	1.36	1.36	-46695	10833	4125	38062	11403	3468	14871	No	8.04	Si
SLU 84	1.41	3688.83	-29613	-24659	5100	1.36	1.36	-64757	10833	4125	38062	11403	3468	14871	No	2.92	Si
SLU 84	4.83	-261.54	-22033	-18347	1927	1.36	1.36	-48180	10833	4125	38062	11403	3468	14871	No	7.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	1.41	2711.22	-18986	-15810	5364	1.36	1.36	-41517	16250	6188	38062	17104	3468	20572		3.84	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	4.83	-506.06	-13061	-10876	3137	1.36	1.36	-28560	16129	6142	38062	17104	3468	20572		6.56	Si
SLV 8	1.41	3406.63	-20423	-17007	6624	1.36	1.36	-44660	16250	6188	38062	17104	3468	20572		3.11	Si
SLV 8	4.83	-853.55	-9869	-8218	4559	1.36	1.36	-21580	14733	5610	38062	17104	3468	20572		4.51	Si
SLV 12	1.41	3042.61	-18086	-15060	7835	1.36	1.36	-39549	16250	6188	38062	17104	3468	20572		2.63	Si
SLV 12	4.83	-1039.66	-11497	-9573	5398	1.36	1.36	-25140	15445	5881	38062	17104	3468	20572		3.81	Si
SLV 15	1.41	2077.48	-15648	-13030	6590	1.36	1.36	-34218	16250	6188	38062	17104	3468	20572		3.12	Si
SLV 15	4.83	-656.77	-15931	-13266	3859	1.36	1.36	-34836	16250	6188	38062	17104	3468	20572		5.33	Si
SLD 7	1.41	2866.77	-19985	-16642	4846	1.36	1.36	-43702	16250	6188	38062	17104	3468	20572		4.25	Si
SLD 7	4.83	-426.42	-12365	-10297	2778	1.36	1.36	-27040	15825	6026	38062	17104	3468	20572		7.4	Si
SLD 12	1.41	2707.96	-18985	-15809	5358	1.36	1.36	-41515	16250	6188	38062	17104	3468	20572		3.84	Si
SLD 12	4.83	-504.77	-13072	-10885	3128	1.36	1.36	-28585	16134	6144	38062	17104	3468	20572		6.58	Si
SLD 8	1.41	2863.52	-19984	-16641	4841	1.36	1.36	-43700	16250	6188	38062	17104	3468	20572		4.25	Si
SLD 8	4.83	-425.13	-12377	-10306	2769	1.36	1.36	-27064	15830	6028	38062	17104	3468	20572		7.43	Si
SLV 11	1.41	3050.06	-18087	-15062	7847	1.36	1.36	-39552	16250	6188	38062	17104	3468	20572		2.62	Si
SLV 11	4.83	-1042.6	-11471	-9552	5420	1.36	1.36	-25085	15434	5877	38062	17104	3468	20572		3.8	Si
SLV 16	1.41	2066.05	-15645	-13028	6572	1.36	1.36	-34212	16250	6188	38062	17104	3468	20572		3.13	Si
SLV 16	4.83	-652.25	-15969	-13298	3826	1.36	1.36	-34921	16250	6188	38062	17104	3468	20572		5.38	Si
SLV 7	1.41	3414.07	-20425	-17008	6637	1.36	1.36	-44664	16250	6188	38062	17104	3468	20572		3.1	Si
SLV 7	4.83	-856.5	-9843	-8197	4581	1.36	1.36	-21525	14722	5606	38062	17104	3468	20572		4.49	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.31	36922	-14060	108.35	1492.51	13.77	Si
SLV 4	179667	0.31	36988	-14085	108.35	1494.32	13.79	Si
SLV 7	179667	0.31	39402	-15004	108.35	1558.64	14.38	Si
SLV 8	179667	0.31	39445	-15021	108.35	1559.75	14.4	Si
SLV 1	179667	0.31	39637	-15094	108.35	1564.68	14.44	Si
SLV 2	179667	0.31	39703	-15119	108.35	1566.36	14.46	Si
SLV 11	179667	0.31	44232	-16844	108.35	1675.13	15.46	Si
SLV 12	179667	0.31	44275	-16860	108.35	1676.09	15.47	Si
SLV 5	179667	0.31	48450	-18450	108.35	1763.52	16.28	Si
SLV 6	179667	0.31	48493	-18466	108.35	1764.36	16.28	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18830	-18905	16	0.424	2100.5	0.973	6.33901	9.2784	No
SLV 9	-18805	-18907	16	0.425	2097.9	0.973	6.34652	9.2784	No
SLV 6	-17202	-21243	-198	0.449	1934.7	0.971	6.7135	9.2784	No
SLV 5	-17177	-21244	-198	0.449	1932.2	0.971	6.72213	9.2784	No
SLV 12	-11497	-18086	132	0.637	1354.1	0.96	9.65138	9.2784	Si
SLV 11	-11471	-18087	131	0.639	1351.5	0.96	9.67024	9.2784	Si
SLV 8	-9869	-20423	-82	0.73	1188.6	0.955	11.10926	9.2784	Si
SLV 7	-9843	-20425	-82	0.731	1186	0.955	11.13434	9.2784	Si
SLV 14	-18169	-15891	305	0.423	2033.2	0.972	6.31667	4.61088	Si
SLV 13	-18131	-15894	305	0.423	2029.3	0.972	6.32855	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.585	SLU 84	Si
V_SLU	2.916	SLU 84	Si
PF_SLV	3.054	SLV 7	Si
V_SLV	2.622	SLV 11	Si
PFFP_SLV	13.775	SLV 3	Si
R_SLV	0.683	SLV 10	No

Maschio 75

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L4	L5	3.35	0.14	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	1.41	-20.59	-44584	-0.0001293	0.0004492	0.0035	3.35	16578.63	56876.59	56876.59	2762.77	No	Si
SLU 81	4.83	-1861.83	-21198	-0.0000667	0.0004492	0.0035	3.35	22372.21	36130.57	36130.57	19.41	No	Si
SLU 55	1.41	-288.96	-39612	-0.0001145	0.0004492	0.0035	3.35	20486.71	54031.37	54031.37	186.98	No	Si
SLU 55	4.83	-1747.32	-19487	-0.0000612	0.0004492	0.0035	3.35	21541.34	34077.32	34077.32	19.5	No	Si
SLU 52	1.41	-285.01	-38873	-0.0001121	0.0004492	0.0035	3.35	20943.94	53501.64	53501.64	187.72	No	Si
SLU 52	4.83	-1718.56	-18696	-0.0000587	0.0004492	0.0035	3.35	21099.28	33116.72	33116.72	19.27	No	Si
SLU 82	1.41	-85.61	-44427	-0.0001291	0.0004492	0.0035	3.35	16723.94	56786.86	56786.86	663.34	No	Si
SLU 82	4.83	-1881.79	-21205	-0.0000668	0.0004492	0.0035	3.35	22375.27	36138.55	36138.55	19.2	No	Si
SLU 84	1.41	-89.56	-45166	-0.0001316	0.0004492	0.0035	3.35	16026.9	57209.5	57209.5	638.79	No	Si
SLU 84	4.83	-1910.55	-21995	-0.0000693	0.0004492	0.0035	3.35	22701.36	37037.81	37037.81	19.39	No	Si
SLU 73	1.41	-201.44	-42883	-0.0001247	0.0004492	0.0035	3.35	18078.2	55903.26	55903.26	277.52	No	Si
SLU 73	4.83	-1852.35	-20690	-0.0000652	0.0004492	0.0035	3.35	22143.55	35538.28	35538.28	19.19	No	Si
SLU 75	1.41	-146.84	-44070	-0.0001283	0.0004492	0.0035	3.35	17049.64	56582.45	56582.45	385.33	No	Si
SLU 75	4.83	-1880.47	-21545	-0.0000678	0.0004492	0.0035	3.35	22520.1	36525.59	36525.59	19.42	No	Si
SLU 61	1.41	-169.18	-40417	-0.0001164	0.0004492	0.0035	3.35	19951.67	54492.33	54492.33	322.1	No	Si
SLU 61	4.83	-1748	-19211	-0.0000604	0.0004492	0.0035	3.35	21390.95	33741.48	33741.48	19.3	No	Si
SLU 65	1.41	-370.57	-39524	-0.0001147	0.0004492	0.0035	3.35	20542.77	53981.1	53981.1	145.67	No	Si
SLU 65	4.83	-1752.6	-19479	-0.0000612	0.0004492	0.0035	3.35	21536.88	34067.23	34067.23	19.44	No	Si
SLU 76	1.41	-205.39	-43622	-0.0001272	0.0004492	0.0035	3.35	17447.83	56325.9	56325.9	274.24	No	Si
SLU 76	4.83	-1881.11	-21481	-0.0000676	0.0004492	0.0035	3.35	22493.43	36452.94	36452.94	19.38	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	1.41	1018.23	-32043	-0.0000918	0.0006738	0.0035	3.35		44775.99	44775.99	43.97		Si
SLV 11	4.83	-4773.17	-17977	-0.0000707	0.0006738	0.0035	3.35		32990.22	32990.22	6.91		Si
SLV 4	1.41	3417.24	-20341	-0.0000706	0.0006738	0.0035	3.35		30425.49	30425.49	8.9		Si
SLV 4	4.83	-934.19	-12852	-0.000038	0.0006738	0.0035	3.35		26007.93	26007.93	27.84		Si
SLV 16	1.41	-2598.91	-40287	-0.0001245	0.0006738	0.0035	3.35		57967.72	57967.72	22.3		Si
SLV 16	4.83	-3537.13	-18281	-0.0000655	0.0006738	0.0035	3.35		33397.47	33397.47	9.44		Si
SLV 7	1.41	2823.07	-26060	-0.0000838	0.0006738	0.0035	3.35		37438.08	37438.08	13.26		Si
SLV 7	4.83	-3992.29	-16349	-0.0000623	0.0006738	0.0035	3.35		30807.5	30807.5	7.72		Si
SLV 5	1.41	-1310.67	-29190	-0.0000851	0.0006738	0.0035	3.35		46616.66	46616.66	35.57		Si
SLV 5	4.83	2125.16	-11788	-0.0000409	0.0006738	0.0035	3.35		19344.02	19344.02	9.1		Si
SLV 6	1.41	-1361.7	-29321	-0.0000858	0.0006738	0.0035	3.35		46765.38	46765.38	34.34		Si
SLV 6	4.83	2129.87	-11788	-0.0000409	0.0006738	0.0035	3.35		19344.01	19344.01	9.08		Si
SLV 8	1.41	2772.04	-26192	-0.000084	0.0006738	0.0035	3.35		37599.76	37599.76	13.56		Si
SLV 8	4.83	-3987.58	-16349	-0.0000623	0.0006738	0.0035	3.35		30807.48	30807.48	7.73		Si
SLV 12	1.41	967.2	-32175	-0.0000919	0.0006738	0.0035	3.35		44937.67	44937.67	46.46		Si
SLV 12	4.83	-4768.47	-17977	-0.0000707	0.0006738	0.0035	3.35		32990.21	32990.21	6.92		Si
SLV 3	1.41	3495.56	-20139	-0.0000705	0.0006738	0.0035	3.35		30177.35	30177.35	8.63		Si
SLV 3	4.83	-941.41	-12852	-0.0000381	0.0006738	0.0035	3.35		26007.95	26007.95	27.63		Si
SLV 15	1.41	-2520.59	-40084	-0.0001235	0.0006738	0.0035	3.35		57782.44	57782.44	22.92		Si
SLV 15	4.83	-3544.35	-18281	-0.0000655	0.0006738	0.0035	3.35		33397.49	33397.49	9.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.41	-89.56	-45166	-25042	-9358	3.35	3.35	-53395	10833	5081	108749	16855	17085	33940	No	3.63	Si
SLU 84	4.83	-1910.55	-21995	-12196	-8634	3.35	3.35	-26003	10833	5081	108749	16855	17085	33940	No	3.93	Si
SLU 82	1.41	-85.61	-44427	-24633	-9382	3.35	3.35	-52522	10833	5081	108749	16855	17085	33940	No	3.62	Si
SLU 82	4.83	-1881.79	-21205	-11757	-8670	3.35	3.35	-25068	10833	5081	108749	16855	17085	33940	No	3.91	Si
SLU 74	1.41	-81.82	-44227	-24522	-9189	3.35	3.35	-52285	10833	5081	108749	16855	17085	33940	No	3.69	Si
SLU 74	4.83	-1860.51	-21538	-11942	-8388	3.35	3.35	-25462	10833	5081	108749	16855	17085	33940	No	4.05	Si
SLU 81	1.41	-20.59	-44584	-24720	-9525	3.35	3.35	-52707	10833	5081	108749	16855	17085	33940	No	3.56	Si
SLU 81	4.83	-1861.83	-21198	-11753	-8708	3.35	3.35	-25060	10833	5081	108749	16855	17085	33940	No	3.9	Si
SLU 80	1.41	-165.99	-44465	-24654	-8890	3.35	3.35	-52567	10833	5081	108749	16855	17085	33940	No	3.82	Si
SLU 80	4.83	-1896.56	-22267	-12346	-8190	3.35	3.35	-26325	10833	5081	108749	16855	17085	33940	No	4.14	Si
SLU 79	1.41	-100.97	-44622	-24741	-9033	3.35	3.35	-52752	10833	5081	108749	16855	17085	33940	No	3.76	Si
SLU 79	4.83	-1876.59	-22260	-12342	-8228	3.35	3.35	-26316	10833	5081	108749	16855	17085	33940	No	4.13	Si
SLU 78	1.41	-150.79	-44809	-24844	-9022	3.35	3.35	-52973	10833	5081	108749	16855	17085	33940	No	3.76	Si
SLU 78	4.83	-1909.23	-22336	-12384	-8315	3.35	3.35	-26406	10833	5081	108749	16855	17085	33940	No	4.08	Si
SLU 83	1.41	-24.54	-45323	-25129	-9500	3.35	3.35	-53581	10833	5081	108749	16855	17085	33940	No	3.57	Si
SLU 83	4.83	-1890.58	-21988	-12192	-8672	3.35	3.35	-25995	10833	5081	108749	16855	17085	33940	No	3.91	Si
SLU 75	1.41	-146.84	-44070	-24435	-9047	3.35	3.35	-52100	10833	5081	108749	16855	17085	33940	No	3.75	Si
SLU 75	4.83	-1880.47	-21545	-11946	-8350	3.35	3.35	-25471	10833	5081	108749	16855	17085	33940	No	4.06	Si
SLU 77	1.41	-85.77	-44965	-24931	-9165	3.35	3.35	-53158	10833	5081	108749	16855	17085	33940	No	3.7	Si
SLU 77	4.83	-1889.26	-22329	-12380	-8353	3.35	3.35	-26397	10833	5081	108749	16855	17085	33940	No	4.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	1.41	-3839.03	-41226	-22858	-11204	3.35	3.35	-48737	16250	7621	108749	25282	17085	42367		3.78	Si
SLV 14	4.83	-1701.89	-16913	-9378	-10124	3.35	3.35	-19995	16250	7621	108749	25282	17085	42367		4.18	Si
SLV 9	1.41	-3115.52	-35173	-19502	-11253	3.35	3.35	-41582	16250	7621	108749	25282	17085	42367		3.76	Si
SLV 9	4.83	1344.28	-13417	-7439	-9630	3.35	3.35	-15861	15672	7350	108749	25282	17085	42367		4.4	Si
SLV 5	1.41	-1310.67	-29190	-16184	-9043	3.35	3.35	-34508	16250	7621	108749	25282	17085	42367		4.68	Si
SLV 5	4.83	2125.16	-11788	-6536	-7558	3.35	3.35	-13936	15287	7170	108749	25282	17085	42367		5.61	Si
SLV 10	1.41	-3166.55	-35305	-19575	-11336	3.35	3.35	-41738	16250	7621	108749	25282	17085	42367		3.74	Si
SLV 10	4.83	1348.99	-13417	-7439	-9710	3.35	3.35	-15861	15672	7350	108749	25282	17085	42367		4.36	Si
SLV 15	1.41	-2520.59	-40084	-22225	-8737	3.35	3.35	-47388	16250	7621	108749	25282	17085	42367		4.85	Si
SLV 15	4.83	-3544.35	-18281	-10136	-8266	3.35	3.35	-21612	16250	7621	108749	25282	17085	42367		5.13	Si
SLV 16	1.41	-2598.91	-40287	-22337	-8863	3.35	3.35	-47627	16250	7621	108749	25282	17085	42367		4.78	Si
SLV 16	4.83	-3537.13	-18281	-10136	-8389	3.35	3.35	-21612	16250	7621	108749	25282	17085	42367		5.05	Si
SLV 6	1.41	-1361.7	-29321	-16257	-9125	3.35	3.35	-34664	16250	7621	108749	25282	17085	42367		4.64	Si
SLV 6	4.83	2129.87	-11788	-6536	-7638	3.35	3.35	-13936	15287	7170	108749	25282	17085	42367		5.55	Si
SLV 13	1.41	-3760.71	-41023	-22746	-11078	3.35	3.35	-48498	16250	7621	108749	25282	17085	42367		3.82	Si
SLV 13	4.83	-1709.11	-16913	-9378	-10001	3.35	3.35	-19995	16250	7621	108749	25282	17085	42367		4.24	Si
SLD 10	1.41	-1451.1	-32585	-18067	-8460	3.35	3.35	-38523	16250	7621	108749	25282	17085	42367		5.01	Si
SLD 10	4.83	-118.78	-14201	-7874	-7430	3.35	3.35	-16788	15858	7437	108749	25282	17085	42367		5.7	Si
SLD 9	1.41	-1428.78	-32528	-18035	-8424	3.35	3.35	-38454	16250	7621	108749	25282	17085	42367		5.03	Si
SLD 9	4.83	-120.84	-14201	-7874	-7395	3.35	3.35	-16788	15858	7437	108749	25282	17085	42367		5.73	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.14 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-15531	0.31	139.51	890.75	1534.26	1212.51	8.69	Si
SLV 2	-15641	0.31	139.51	895.63	1543	1219.32	8.74	Si
SLV 3	-15740	0.31	139.51	900.03	1550.92	1225.47	8.78	Si
SLV 4	-15849	0.31	139.51	904.87	1559.67	1232.27	8.83	Si
SLV 5	-19975	0.31	139.51	1073.33	1890.46	1481.89	10.62	Si
SLV 6	-20046	0.31	139.51	1075.99	1896.18	1486.09	10.65	Si
SLV 7	-20669	0.31	139.51	1098.95	1946.21	1522.58	10.91	Si
SLV 8	-20741	0.31	139.51	1101.53	1951.94	1526.73	10.94	Si
SLV 9	-23976	0.31	139.51	1210.2	2209.4	1709.8	12.26	Si
SLV 10	-24047	0.31	139.51	1212.4	2214.84	1713.62	12.28	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.03 Ta = 0.1395

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-17977	-32043	196	0.981	2056.1	0.967	14.74502	14.11901	Si
SLV 12	-17977	-32175	196	0.981	2056.1	0.967	14.74505	14.11901	Si
SLV 8	-16349	-26192	-169	1.07	1890.4	0.964	16.13373	14.11901	Si
SLV 7	-16349	-26060	-169	1.07	1890.4	0.964	16.13375	14.11901	Si
SLV 9	-13417	-35173	190	1.276	1592.1	0.958	19.35704	14.11901	Si
SLV 10	-13417	-35305	190	1.276	1592.1	0.958	19.35708	14.11901	Si
SLV 6	-11788	-29321	-175	1.432	1426.6	0.954	21.81699	14.11901	Si
SLV 5	-11788	-29190	-175	1.432	1426.6	0.954	21.81702	14.11901	Si
SLV 15	-18281	-40084	619	0.945	2087.1	0.967	14.19336	8.02035	Si
SLV 16	-18281	-40287	619	0.945	2087	0.967	14.19341	8.02035	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	19.185	SLU 73	Si
V_SLU	3.563	SLU 81	Si
PF_SLV	6.912	SLV 11	Si
V_SLV	3.738	SLV 10	Si
PFFP_SLV	8.691	SLV 1	Si
R_SLV	1.044	SLV 11	Si

Maschio 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L4	L5	3.64	0.14	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	1.41	5429.56	-53557	-0.0001742	0.0004492	0.0035	3.64	13635.01	66554.32	66554.32	12.26	No	Si
SLU 75	3.51	-6396.78	-38839	-0.0001313	0.0004492	0.0035	3.64	26595.77	59925.81	59925.81	9.37	No	Si
SLU 82	1.41	5638.42	-54091	-0.0001772	0.0004492	0.0035	3.64	12926	66929.81	66929.81	11.87	No	Si
SLU 82	3.51	-6511.19	-39170	-0.0001329	0.0004492	0.0035	3.64	26443.49	60226.45	60226.45	9.25	No	Si
SLU 77	1.41	5419.08	-54203	-0.0001764	0.0004492	0.0035	3.64	12776.05	67008.11	67008.11	12.37	No	Si
SLU 77	3.51	-6430.82	-39376	-0.0001331	0.0004492	0.0035	3.64	26345.43	60413.65	60413.65	9.39	No	Si
SLU 80	1.41	5421.64	-53873	-0.0001752	0.0004492	0.0035	3.64	13217.56	66776.47	66776.47	12.32	No	Si
SLU 80	3.51	-6399.74	-39108	-0.0001322	0.0004492	0.0035	3.64	26472.67	60169.81	60169.81	9.4	No	Si
SLU 81	1.41	5587	-54034	-0.0001767	0.0004492	0.0035	3.64	13001.93	66890.02	66890.02	11.97	No	Si
SLU 81	3.51	-6472.11	-39142	-0.0001326	0.0004492	0.0035	3.64	26456.83	60200.61	60200.61	9.3	No	Si
SLU 78	1.41	5470.5	-54259	-0.0001768	0.0004492	0.0035	3.64	12699.56	67047.9	67047.9	12.26	No	Si
SLU 78	3.51	-6469.9	-39405	-0.0001334	0.0004492	0.0035	3.64	26331.7	60439.49	60439.49	9.34	No	Si
SLU 76	1.41	5414.98	-53208	-0.0001729	0.0004492	0.0035	3.64	14088.45	66309.42	66309.42	12.25	No	Si
SLU 76	3.51	-6352.67	-38561	-0.0001303	0.0004492	0.0035	3.64	26718.7	59673.36	59673.36	9.39	No	Si
SLU 73	1.41	5374.04	-52505	-0.0001703	0.0004492	0.0035	3.64	14980.72	65815.83	65815.83	12.25	No	Si
SLU 73	3.51	-6279.55	-37996	-0.0001282	0.0004492	0.0035	3.64	26954.9	59134.72	59134.72	9.42	No	Si
SLU 83	1.41	5627.94	-54737	-0.0001794	0.0004492	0.0035	3.64	12046.85	67383.6	67383.6	11.97	No	Si
SLU 83	3.51	-6545.24	-39707	-0.0001347	0.0004492	0.0035	3.64	26182.76	60714.29	60714.29	9.28	No	Si
SLU 84	1.41	5679.36	-54794	-0.0001798	0.0004492	0.0035	3.64	11968.58	67423.4	67423.4	11.87	No	Si
SLU 84	3.51	-6584.32	-39736	-0.000135	0.0004492	0.0035	3.64	26168.47	60740.13	60740.13	9.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	1.41	1176.13	-42051	-0.0001112	0.0006738	0.0035	3.64		60527.75	60527.75	51.46		Si
SLV 15	3.51	-12335.98	-30428	-0.0001286	0.0006738	0.0035	3.64		53265.23	53265.23	4.32		Si
SLV 13	1.41	213.78	-42702	-0.0001087	0.0006738	0.0035	3.64		61199.87	61199.87	286.28		Si
SLV 13	3.51	-9990.88	-29572	-0.000116	0.0006738	0.0035	3.64		52210.33	52210.33	5.23		Si
SLV 14	1.41	-200.45	-41633	-0.0001057	0.0006738	0.0035	3.64		66098.33	66098.33	329.76		Si
SLV 14	3.51	-10179.16	-28654	-0.0001143	0.0006738	0.0035	3.64		51077.56	51077.56	5.02		Si
SLV 4	1.41	7014.22	-32339	-0.0001105	0.0006738	0.0035	3.64		49507.71	49507.71	7.06		Si
SLV 4	3.51	1270.3	-24680	-0.0000657	0.0006738	0.0035	3.64		39392.19	39392.19	31.01		Si
SLV 3	1.41	7428.44	-33408	-0.0001153	0.0006738	0.0035	3.64		50919.25	50919.25	6.85		Si
SLV 3	3.51	1458.58	-25598	-0.0000688	0.0006738	0.0035	3.64		40604.69	40604.69	27.84		Si
SLV 12	1.41	4145.12	-37383	-0.0001117	0.0006738	0.0035	3.64		55710.53	55710.53	13.44		Si
SLV 12	3.51	-10399.31	-28978	-0.0001161	0.0006738	0.0035	3.64		51478.86	51478.86	4.95		Si
SLV 11	1.41	4415.02	-38080	-0.0001148	0.0006738	0.0035	3.64		56429.32	56429.32	12.78		Si
SLV 11	3.51	-10276.64	-29576	-0.0001172	0.0006738	0.0035	3.64		52215.96	52215.96	5.08		Si
SLD 15	1.41	2645.45	-39385	-0.0001105	0.0006738	0.0035	3.64		57776.48	57776.48	21.84		Si
SLD 15	3.51	-7744.18	-28502	-0.0001033	0.0006738	0.0035	3.64		50879.21	50879.21	6.57		Si
SLD 16	1.41	2467.54	-38926	-0.0001085	0.0006738	0.0035	3.64		57302.65	57302.65	23.22		Si
SLD 16	3.51	-7825.05	-28108	-0.0001026	0.0006738	0.0035	3.64		50363.32	50363.32	6.44		Si
SLV 16	1.41	761.91	-40982	-0.0001065	0.0006738	0.0035	3.64		59424.6	59424.6	77.99		Si
SLV 16	3.51	-12524.26	-29510	-0.0001269	0.0006738	0.0035	3.64		52133.98	52133.98	4.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	1.41	5429.56	-53557	-29695	-5551	3.64	3.64	-58271	10833	5521	108749	18314	18564	36878	No	6.64	Si
SLU 75	3.51	-6396.78	-38839	-21535	-5758	3.64	3.64	-42258	10833	5521	108749	18314	18564	36878	No	6.4	Si
SLU 83	1.41	5627.94	-54737	-30349	-5714	3.64	3.64	-59555	10833	5521	108749	18314	18564	36878	No	6.45	Si
SLU 83	3.51	-6545.24	-39707	-22016	-5878	3.64	3.64	-43202	10833	5521	108749	18314	18564	36878	No	6.27	Si
SLU 81	1.41	5587	-54034	-29960	-5640	3.64	3.64	-58791	10833	5521	108749	18314	18564	36878	No	6.54	Si
SLU 81	3.51	-6472.11	-39142	-21702	-5802	3.64	3.64	-42587	10833	5521	108749	18314	18564	36878	No	6.36	Si
SLU 80	1.41	5421.64	-53873	-29870	-5600	3.64	3.64	-58615	10833	5521	108749	18314	18564	36878	No	6.59	Si
SLU 80	3.51	-6399.74	-39108	-21684	-5793	3.64	3.64	-42550	10833	5521	108749	18314	18564	36878	No	6.37	Si
SLU 78	1.41	5470.5	-54259	-30084	-5625	3.64	3.64	-59035	10833	5521	108749	18314	18564	36878	No	6.56	Si
SLU 78	3.51	-6469.9	-39405	-21848	-5834	3.64	3.64	-42873	10833	5521	108749	18314	18564	36878	No	6.32	Si
SLU 79	1.41	5370.22	-53816	-29839	-5646	3.64	3.64	-58553	10833	5521	108749	18314	18564	36878	No	6.53	Si
SLU 79	3.51	-6360.66	-39079	-21668	-5782	3.64	3.64	-42519	10833	5521	108749	18314	18564	36878	No	6.38	Si
SLU 74	1.41	5378.14	-53500	-29663	-5597	3.64	3.64	-58209	10833	5521	108749	18314	18564	36878	No	6.59	Si
SLU 74	3.51	-6357.7	-38811	-21519	-5747	3.64	3.64	-42227	10833	5521	108749	18314	18564	36878	No	6.42	Si
SLU 77	1.41	5419.08	-54203	-30053	-5671	3.64	3.64	-58973	10833	5521	108749	18314	18564	36878	No	6.5	Si
SLU 77	3.51	-6430.82	-39376	-21832	-5823	3.64	3.64	-42842	10833	5521	108749	18314	18564	36878	No	6.33	Si
SLU 84	1.41	5679.36	-54794	-30381	-5668	3.64	3.64	-59617	10833	5521	108749	18314	18564	36878	No	6.51	Si
SLU 84	3.51	-6584.32	-39736	-22032	-5889	3.64	3.64	-43233	10833	5521	108749	18314	18564	36878	No	6.26	Si
SLU 82	1.41	5638.42	-54091	-29991	-5594	3.64	3.64	-58852	10833	5521	108749	18314	18564	36878	No	6.59	Si
SLU 82	3.51	-6511.19	-39170	-21718	-5813	3.64	3.64	-42618	10833	5521	108749	18314	18564	36878	No	6.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	1.41	1207.18	-40250	-22317	-8858	3.64	3.64	-43793	16250	8281	108749	27471	18564	46035		5.2	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	3.51	-2459.64	-26723	-14817	-11335	3.64	3.64	-29075	16250	8281	108749	27471	18564	46035		4.06	Si
SLV 10	1.41	937.28	-39554	-21931	-8729	3.64	3.64	-43036	16250	8281	108749	27471	18564	46035		5.27	Si
SLV 10	3.51	-2582.31	-26124	-14485	-11693	3.64	3.64	-28424	16250	8281	108749	27471	18564	46035		3.94	Si
SLD 10	1.41	2455.95	-38364	-21271	-6089	3.64	3.64	-41740	16250	8281	108749	27471	18564	46035		7.56	Si
SLD 10	3.51	-3525.43	-26640	-14771	-7380	3.64	3.64	-28985	16250	8281	108749	27471	18564	46035		6.24	Si
SLD 9	1.41	2574.03	-38668	-21440	-6146	3.64	3.64	-42072	16250	8281	108749	27471	18564	46035		7.49	Si
SLD 9	3.51	-3471.77	-26902	-14916	-7224	3.64	3.64	-29270	16250	8281	108749	27471	18564	46035		6.37	Si
SLV 6	1.41	2812.97	-36961	-20493	-11130	3.64	3.64	-40215	16250	8281	108749	27471	18564	46035		4.14	Si
SLV 6	3.51	1556.06	-24676	-13681	-9413	3.64	3.64	-26847	16250	8281	108749	27471	18564	46035		4.89	Si
SLV 13	1.41	213.78	-42702	-23676	-1880	3.64	3.64	-46460	16250	8281	108749	27471	18564	46035		24.49	Si
SLV 13	3.51	-9990.88	-29572	-16396	-9458	3.64	3.64	-32175	16250	8281	108749	27471	18564	46035		4.87	Si
SLV 5	1.41	3082.87	-37658	-20880	-11259	3.64	3.64	-40972	16250	8281	108749	27471	18564	46035		4.09	Si
SLV 5	3.51	1678.73	-25274	-14013	-9056	3.64	3.64	-27498	16250	8281	108749	27471	18564	46035		5.08	Si
SLV 1	1.41	6466.09	-34059	-18884	-9881	3.64	3.64	-37057	16250	8281	108749	27471	18564	46035		4.66	Si
SLV 1	3.51	3803.68	-24742	-13718	-1860	3.64	3.64	-26920	16250	8281	108749	27471	18564	46035		24.75	Si
SLV 14	1.41	-200.45	-41633	-23084	-1682	3.64	3.64	-45298	16250	8281	108749	27471	18564	46035		27.37	Si
SLV 14	3.51	-10179.16	-28654	-15887	-10007	3.64	3.64	-31176	16250	8281	108749	27471	18564	46035		4.6	Si
SLV 2	1.41	6051.86	-32991	-18292	-9683	3.64	3.64	-35894	16250	8281	108749	27471	18564	46035		4.75	Si
SLV 2	3.51	3615.4	-23824	-13209	-2409	3.64	3.64	-25921	16250	8281	108749	27471	18564	46035		19.11	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.14 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-25368	0.31	151.59	1293.44	2343.27	1818.36	12	Si
SLV 4	-26146	0.31	151.59	1317.88	2402.75	1860.32	12.27	Si
SLV 1	-26308	0.31	151.59	1322.86	2415.14	1869	12.33	Si
SLV 6	-26546	0.31	151.59	1330.08	2433.28	1881.68	12.41	Si
SLV 3	-27087	0.31	151.59	1346.2	2474.63	1910.42	12.6	Si
SLV 5	-27159	0.31	151.59	1348.31	2480.13	1914.22	12.63	Si
SLV 10	-28194	0.31	151.59	1377.82	2559.26	1968.54	12.99	Si
SLV 9	-28807	0.31	151.59	1394.55	2606.16	2000.35	13.2	Si
SLV 8	-29141	0.31	151.59	1403.42	2631.73	2017.58	13.31	Si
SLV 7	-29754	0.31	151.59	1419.28	2678.66	2048.97	13.52	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.03 Ta = 0.1395

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-20986	-38080	123	0.923	2382	0.969	13.84765	14.11901	No
SLV 12	-20598	-37383	122	0.939	2342.5	0.968	14.09175	14.11901	No
SLV 7	-20400	-35487	-116	0.947	2322.4	0.968	14.22397	14.11901	Si
SLV 9	-20228	-40250	101	0.955	2304.8	0.968	14.34801	14.11901	Si
SLV 8	-20013	-34791	-116	0.964	2282.9	0.967	14.48163	14.11901	Si
SLV 10	-19841	-39554	100	0.972	2265.4	0.967	14.6103	14.11901	Si
SLV 5	-19643	-37658	-138	0.979	2245.2	0.967	14.72113	14.11901	Si
SLV 6	-19255	-36961	-138	0.997	2205.7	0.966	14.99794	14.11901	Si
SLV 15	-21508	-42051	393	0.891	2435.1	0.969	13.35662	8.02035	Si
SLV 13	-21281	-42702	387	0.9	2412	0.969	13.49462	8.02035	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.225	SLU 84	Si
V_SLU	6.262	SLU 84	Si
PF_SLV	4.163	SLV 16	Si
V_SLV	3.937	SLV 10	Si
PFFP_SLV	11.995	SLV 2	Si
R_SLV	0.981	SLV 11	No

Maschio 81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.013	5.826	-5.093	5.826	L4	L5	2.08	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	2.31	5944.71	-19584	-0.0001044	0.0003743	0.0035	2.08	13640.25	15643.94	15643.94	2.63	No	Si
SLU 68	4.21	-3011.12	-23552	-0.000092	0.0003743	0.0035	2.08	14764.73	18454.47	18454.47	6.13	No	Si
SLU 52	2.31	5844.89	-18965	-0.0001014	0.0003743	0.0035	2.08	13414.78	15250.52	15250.52	2.61	No	Si
SLU 52	4.21	-3003.55	-22889	-0.0000897	0.0003743	0.0035	2.08	14615.18	18116.36	18116.36	6.03	No	Si
SLU 55	2.31	5914.56	-19324	-0.0001033	0.0003743	0.0035	2.08	13547.03	15477.87	15477.87	2.62	No	Si
SLU 55	4.21	-3043.35	-23333	-0.0000915	0.0003743	0.0035	2.08	14717.11	18346.44	18346.44	6.03	No	Si
SLU 65	2.31	5875.04	-19225	-0.0001026	0.0003743	0.0035	2.08	13511.28	15415.49	15415.49	2.62	No	Si
SLU 65	4.21	-2971.31	-23107	-0.0000901	0.0003743	0.0035	2.08	14666.22	18230.16	18230.16	6.14	No	Si
SLU 46	2.31	5572.72	-17842	-0.0000953	0.0003743	0.0035	2.08	12972.15	14547.81	14547.81	2.61	No	Si
SLU 46	4.21	-2781.56	-21278	-0.0000824	0.0003743	0.0035	2.08	14187.87	17303.06	17303.06	6.22	No	Si
SLU 51	2.31	5614.07	-18031	-0.0000963	0.0003743	0.0035	2.08	13049.78	14665.43	14665.43	2.61	No	Si
SLU 51	4.21	-2790.52	-21501	-0.0000832	0.0003743	0.0035	2.08	14252.31	17412.87	17412.87	6.24	No	Si
SLU 47	2.31	5625.48	-17535	-0.0000947	0.0003743	0.0035	2.08	12843.42	14357.73	14357.73	2.55	No	Si
SLU 47	4.21	-2722.9	-20946	-0.0000808	0.0003743	0.0035	2.08	14088.52	17140.75	17140.75	6.3	No	Si
SLU 44	2.31	5555.81	-17176	-0.0000929	0.0003743	0.0035	2.08	12688.65	14136.78	14136.78	2.54	No	Si
SLU 44	4.21	-2683.1	-20502	-0.0000791	0.0003743	0.0035	2.08	13949.37	16926.14	16926.14	6.31	No	Si
SLU 54	2.31	5861.8	-19630	-0.0001039	0.0003743	0.0035	2.08	13656.51	15673.44	15673.44	2.67	No	Si
SLU 54	4.21	-3102.01	-23665	-0.0000931	0.0003743	0.0035	2.08	14788.67	18508.93	18508.93	5.97	No	Si
SLU 49	2.31	5642.39	-18201	-0.0000971	0.0003743	0.0035	2.08	13118.53	14771.57	14771.57	2.62	No	Si
SLU 49	4.21	-2821.36	-21723	-0.0000842	0.0003743	0.0035	2.08	14314.91	17523.31	17523.31	6.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.31	-8172.29	-11600	-0.0001329	0.0005615	0.0035	1.664		11943.5	11943.5	1.46		Si
SLV 14	4.21	395.59	-13457	-0.0000382	0.0005615	0.0035	2.08		12369.19	12369.19	31.27		Si
SLV 8	2.31	10673.19	-12006	-0.0003805	0.0005615	0.0035	2.08		11267.37	11267.37	1.06		Si
SLV 8	4.21	-2543.42	-13786	-0.0000556	0.0005615	0.0035	2.08		13739.81	13739.81	5.4		Si
SLD 4	2.31	9094.84	-16186	-0.0001303	0.0005615	0.0035	2.08		14484.32	14484.32	1.59		Si
SLD 4	4.21	-3313.32	-19521	-0.0000782	0.0005615	0.0035	2.08		18086.61	18086.61	5.46		Si
SLV 2	2.31	13249.43	-20107	-0.0002185	0.0005615	0.0035	2.08		17599.95	17599.95	1.33		Si
SLV 2	4.21	-4843.24	-24864	-0.0001069	0.0005615	0.0035	2.08		21632.78	21632.78	4.47		Si
SLV 3	2.31	16923.87	-18625	-0.0058557	0.0005615	0.0035	2.08		16420.11	16420.11	0.97		No
SLV 3	4.21	-5130.23	-22734	-0.0001026	0.0005615	0.0035	2.08		20269.85	20269.85	3.95		Si
SLV 1	2.31	14775.15	-21067	-0.0002692	0.0005615	0.0035	2.08		18176.59	18176.59	1.23		Si
SLV 1	4.21	-5389.32	-26103	-0.0001153	0.0005615	0.0035	2.08		22391.29	22391.29	4.15		Si
SLV 4	2.31	15398.15	-17665	-0.0007263	0.0005615	0.0035	2.08		15653.25	15653.25	1.02		Si
SLV 4	4.21	-4584.15	-21494	-0.0000944	0.0005615	0.0035	2.08		19457.84	19457.84	4.24		Si
SLD 3	2.31	9750.18	-16599	-0.0001425	0.0005615	0.0035	2.08		14808.45	14808.45	1.52		Si
SLD 3	4.21	-3547.87	-20053	-0.0000816	0.0005615	0.0035	2.08		18453.45	18453.45	5.2		Si
SLV 16	2.31	-6023.57	-9159	-0.0000891	0.0005615	0.0035	1.664		9842.55	9842.55	1.63		Si
SLV 16	4.21	654.68	-10087	-0.000031	0.0005615	0.0035	2.08		9822.47	9822.47	15		Si
SLV 7	2.31	11667.32	-12632	-0.000825	0.0005615	0.0035	2.08		11740.37	11740.37	1.01		Si
SLV 7	4.21	-2899.24	-14594	-0.0000607	0.0005615	0.0035	2.08		14393.58	14393.58	4.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	2.31	6181.04	-21679	-18053	9313	2.08	2.08	-30997	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 75	4.21	-3390.22	-26271	-21876	9292	2.08	2.08	-37562	10833	6309	38062	17439	5304	22743	No	2.45	Si
SLU 78	2.31	6250.71	-22038	-18351	9421	2.08	2.08	-31510	10833	6309	38062	17439	5304	22743	No	2.41	Si
SLU 78	4.21	-3430.03	-26715	-22246	9400	2.08	2.08	-38198	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 82	2.31	6206.95	-21917	-18250	9431	2.08	2.08	-31337	10833	6309	38062	17439	5304	22743	No	2.41	Si
SLU 82	4.21	-3456.91	-26627	-22173	9412	2.08	2.08	-38072	10833	6309	38062	17439	5304	22743	No	2.42	Si
SLU 76	2.31	6233.79	-21372	-17797	9310	2.08	2.08	-30558	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 76	4.21	-3331.57	-25939	-21600	9264	2.08	2.08	-37088	10833	6309	38062	17439	5304	22743	No	2.46	Si
SLU 79	2.31	6100.79	-22074	-18381	9274	2.08	2.08	-31561	10833	6309	38062	17439	5304	22743	No	2.45	Si
SLU 79	4.21	-3440.9	-26658	-22198	9288	2.08	2.08	-38116	10833	6309	38062	17439	5304	22743	No	2.45	Si
SLU 84	2.31	6276.62	-22276	-18549	9539	2.08	2.08	-31850	10833	6309	38062	17439	5304	22743	No	2.38	Si
SLU 84	4.21	-3496.71	-27072	-22543	9520	2.08	2.08	-38707	10833	6309	38062	17439	5304	22743	No	2.39	Si
SLU 80	2.31	6222.39	-21868	-18210	9360	2.08	2.08	-31267	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 80	4.21	-3399.18	-26493	-22061	9338	2.08	2.08	-37880	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 81	2.31	6085.34	-22122	-18421	9345	2.08	2.08	-31630	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 81	4.21	-3498.62	-26792	-22310	9362	2.08	2.08	-38307	10833	6309	38062	17439	5304	22743	No	2.43	Si
SLU 83	2.31	6155.01	-22481	-18720	9453	2.08	2.08	-32143	10833	6309	38062	17439	5304	22743	No	2.41	Si
SLU 83	4.21	-3538.43	-27236	-22680	9470	2.08	2.08	-38943	10833	6309	38062	17439	5304	22743	No	2.4	Si
SLU 77	2.31	6129.1	-22243	-18522	9335	2.08	2.08	-31804	10833	6309	38062	17439	5304	22743	No	2.44	Si
SLU 77	4.21	-3471.74	-26880	-22383	9350	2.08	2.08	-38433	10833	6309	38062	17439	5304	22743	No	2.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	2.31	15398.15	-17665	-14710	13447	2.08	0.505	-119503	16250	2298	38062	26159	5304	31463		2.34	Si
SLV 4	4.21	-4584.15	-21494	-17899	12836	2.08	2.08	-30733	16250	9464	38062	26159	5304	31463		2.45	Si
SLV 6	2.31	3510.78	-20146	-16775	9703	2.08	2.08	-28804	16178	9422	38062	26159	5304	31463		3.24	Si
SLV 6	4.21	-3407.05	-25019	-20834	9456	2.08	2.08	-35772	16250	9464	38062	26159	5304	31463		3.33	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	2.31	13249.43	-20107	-16744	14186	2.08	1.1431	-28749	16167	5175	38062	26159	5304	31463		2.22	Si
SLV 2	4.21	-4843.24	-24864	-20705	13534	2.08	2.08	-35551	16250	9464	38062	26159	5304	31463		2.32	Si
SLV 5	2.31	4504.91	-20771	-17296	10531	2.08	2.08	-29698	16250	9464	38062	26159	5304	31463		2.99	Si
SLV 5	4.21	-3762.87	-25826	-21506	10258	2.08	2.08	-36927	16250	9464	38062	26159	5304	31463		3.07	Si
SLD 4	2.31	9094.84	-16186	-13479	9467	2.08	1.4343	-23144	15045	6042	38062	26159	5304	31463		3.32	Si
SLD 4	4.21	-3313.32	-19521	-16255	9208	2.08	2.08	-27911	15999	9318	38062	26159	5304	31463		3.42	Si
SLV 1	2.31	14775.15	-21067	-17542	15457	2.08	1.0159	-30121	16250	4622	38062	26159	5304	31463		2.04	Si
SLV 1	4.21	-5389.32	-26103	-21737	14766	2.08	2.08	-37323	16250	9464	38062	26159	5304	31463		2.13	Si
SLV 3	2.31	16923.87	-18625	-15509	14717	2.08	0.3939	-178095	16250	1792	38062	26159	5304	31463		2.14	Si
SLV 3	4.21	-5130.23	-22734	-18931	14068	2.08	2.08	-32505	16250	9464	38062	26159	5304	31463		2.24	Si
SLD 1	2.31	8809.07	-17669	-14713	10327	2.08	1.6243	-25264	15469	7036	38062	26159	5304	31463		3.05	Si
SLD 1	4.21	-3661.43	-21543	-17939	10036	2.08	2.08	-30802	16250	9464	38062	26159	5304	31463		3.14	Si
SLD 2	2.31	8153.73	-17257	-14370	9782	2.08	1.7025	-24674	15352	7318	38062	26159	5304	31463		3.22	Si
SLD 2	4.21	-3426.87	-21010	-17496	9507	2.08	2.08	-30041	16250	9464	38062	26159	5304	31463		3.31	Si
SLD 3	2.31	9750.18	-16599	-13822	10012	2.08	1.3577	-23733	15163	5765	38062	26159	5304	31463		3.14	Si
SLD 3	4.21	-3547.87	-20053	-16699	9737	2.08	2.08	-28673	16151	9406	38062	26159	5304	31463		3.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.31	16275	-9478	161.95	1185.56	7.32	Si
SLV 12	179667	0.31	16841	-9808	161.95	1221.7	7.54	Si
SLV 11	179667	0.31	18135	-10562	161.95	1303.06	8.05	Si
SLV 15	179667	0.31	18261	-10635	161.95	1310.89	8.09	Si
SLV 14	179667	0.31	21794	-12693	161.95	1523.39	9.41	Si
SLV 8	179667	0.31	22549	-13132	161.95	1567.05	9.68	Si
SLV 13	179667	0.31	23780	-13850	161.95	1637.01	10.11	Si
SLV 7	179667	0.31	23843	-13886	161.95	1640.52	10.13	Si
SLV 10	179667	0.31	35238	-20523	161.95	2210.19	13.65	Si
SLV 4	179667	0.31	35301	-20559	161.95	2212.94	13.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-23053	-13156	-495	0.494	2627.4	0.968	7.42315	9.2784	No
SLV 6	-22525	-13234	-496	0.504	2573.7	0.967	7.57507	9.2784	No
SLV 9	-21277	-16988	-466	0.53	2446.7	0.965	7.98376	9.2784	No
SLV 10	-20749	-17066	-468	0.542	2393	0.965	8.1615	9.2784	No
SLV 7	-12555	-10072	485	0.827	1560	0.948	12.66923	9.2784	Si
SLV 8	-12027	-10150	484	0.857	1506.5	0.947	13.15246	9.2784	Si
SLV 11	-10779	-13904	513	0.935	1379.9	0.942	14.42335	9.2784	Si
SLV 12	-10252	-13982	512	0.975	1326.5	0.94	15.06045	9.2784	Si
SLV 1	-21591	-7584	-184	0.536	2478.7	0.966	8.06283	4.61088	Si
SLV 2	-20781	-7704	-186	0.553	2396.2	0.965	8.33816	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.545	SLU 44	Si
V_SLU	2.384	SLU 84	Si
PF_SLV	0.97	SLV 3	No
V_SLV	2.036	SLV 1	Si
PFFP_SLV	7.321	SLV 16	Si
R_SLV	0.8	SLV 5	No

Maschio 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.013	5.826	L4	L5	1.88	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

												εlim,conv / ε,CNR DT-200					CRM / Fibrenet?		
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	2.31	388.46	-14761	-0.0000479	0.0003743	0.0035	1.88	10054	11119.42	11119.42	28.62	No	Si
SLU 48	4.21	-524.16	-13886	-0.0000464	0.0003743	0.0035	1.88	9670.87	11520.37	11520.37	21.98	No	Si
SLU 46	2.31	246.91	-14274	-0.0000449	0.0003743	0.0035	1.88	9844.2	10850.66	10850.66	43.95	No	Si
SLU 46	4.21	-532.66	-13470	-0.0000451	0.0003743	0.0035	1.88	9479.52	11266.37	11266.37	21.15	No	Si
SLU 45	2.31	388.59	-14473	-0.0000469	0.0003743	0.0035	1.88	9930.98	10960.21	10960.21	28.21	No	Si
SLU 45	4.21	-524.46	-13564	-0.0000454	0.0003743	0.0035	1.88	9523.19	11323.36	11323.36	21.59	No	Si
SLU 47	2.31	150.11	-13966	-0.000043	0.0003743	0.0035	1.88	9706.98	10681.84	10681.84	71.16	No	Si
SLU 47	4.21	-532.9	-13226	-0.0000444	0.0003743	0.0035	1.88	9364.59	11118.99	11118.99	20.87	No	Si
SLU 50	2.31	386.12	-14586	-0.0000473	0.0003743	0.0035	1.88	9979.23	11022.09	11022.09	28.55	No	Si
SLU 50	4.21	-518.93	-13705	-0.0000457	0.0003743	0.0035	1.88	9588.26	11409.33	11409.33	21.99	No	Si
SLU 51	2.31	244.44	-14386	-0.0000452	0.0003743	0.0035	1.88	9893.23	10912.28	10912.28	44.64	No	Si
SLU 51	4.21	-527.13	-13611	-0.0000455	0.0003743	0.0035	1.88	9545.05	11352.1	11352.1	21.54	No	Si
SLU 49	2.31	246.79	-14562	-0.0000458	0.0003743	0.0035	1.88	9969.23	11009.2	11009.2	44.61	No	Si
SLU 49	4.21	-532.36	-13792	-0.0000462	0.0003743	0.0035	1.88	9628.26	11462.83	11462.83	21.53	No	Si
SLU 44	2.31	150.23	-13678	-0.000042	0.0003743	0.0035	1.88	9575.92	10525.31	10525.31	70.06	No	Si
SLU 44	4.21	-533.2	-12904	-0.0000433	0.0003743	0.0035	1.88	9209.47	10925.1	10925.1	20.49	No	Si
SLU 43	2.31	386.36	-14010	-0.0000454	0.0003743	0.0035	1.88	9726.73	10705.82	10705.82	27.71	No	Si
SLU 43	4.21	-519.53	-13061	-0.0000437	0.0003743	0.0035	1.88	9285.18	11019.3	11019.3	21.21	No	Si
SLU 2	2.31	44.31	-10874	-0.0000323	0.0003743	0.0035	1.88	8147.83	8764	8764	197.79	No	Si
SLU 2	4.21	-384.88	-10422	-0.0000341	0.0003743	0.0035	1.88	7891.8	9296.05	9296.05	24.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.31	-5457.13	-13622	-0.0000944	0.0005615	0.0035	1.88		12046.17	12046.17	2.21		Si
SLV 14	4.21	2447.85	-22191	-0.0000906	0.0005615	0.0035	1.88		16557.28	16557.28	6.76		Si
SLV 8	2.31	3501.04	-11254	-0.0000654	0.0005615	0.0035	1.88		9459.51	9459.51	2.7		Si
SLV 8	4.21	-1269.69	-1418	-0.0000706	0.0005615	0.0035	1.504		2198.63	2198.63	1.73		Si
SLV 13	2.31	-4864.29	-14390	-0.000089	0.0005615	0.0035	1.88		12583.4	12583.4	2.59		Si
SLV 13	4.21	1966.06	-21624	-0.0000838	0.0005615	0.0035	1.88		16240.35	16240.35	8.26		Si
SLV 10	2.31	-3393.82	-12444	-0.0000681	0.0005615	0.0035	1.88		11201.02	11201.02	3.3		Si
SLV 10	4.21	958.68	-22352	-0.0000762	0.0005615	0.0035	1.88		16647.51	16647.51	17.36		Si
SLV 4	2.31	5357.79	-9809	-0.000093	0.0005615	0.0035	1.88		8465.99	8465.99	1.58		Si
SLV 4	4.21	-2591	-1777	-0.000583	0.0005615	0.0035	1.504		2521.87	2521.87	0.97		No
SLV 16	2.31	-4253.71	-13606	-0.0000802	0.0005615	0.0035	1.88		12035.47	12035.47	2.83		Si
SLV 16	4.21	2211.57	-17309	-0.0000722	0.0005615	0.0035	1.88		13790.65	13790.65	6.24		Si
SLV 7	2.31	3887.32	-11755	-0.0000708	0.0005615	0.0035	1.88		9807.59	9807.59	2.52		Si
SLV 7	4.21	-1583.61	-1048	-0.0003412	0.0005615	0.0035	1.504		1863.62	1863.62	1.18		Si
SLV 1	2.31	4747.21	-10593	-0.0000796	0.0005615	0.0035	1.88		9003.28	9003.28	1.9		Si
SLV 1	4.21	-2836.5	-6092	-0.0000462	0.0005615	0.0035	1.88		6249.73	6249.73	2.2		Si
SLV 2	2.31	4154.36	-9824	-0.0000697	0.0005615	0.0035	1.88		8476.48	8476.48	2.04		Si
SLV 2	4.21	-2354.71	-6659	-0.0000407	0.0005615	0.0035	1.88		6720.38	6720.38	2.85		Si
SLV 3	2.31	5950.63	-10578	-0.0001057	0.0005615	0.0035	1.88		8992.71	8992.71	1.51		Si
SLV 3	4.21	-3072.78	-1209	-0.0011881	0.0005615	0.0035	1.504		2010	2010	0.65		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	2.31	22.94	-14886	-12396	-954	1.88	1.88	-23548	10084	5308	38062	15763	4794	20557	No	21.55	Si
SLU 36	4.21	-178.44	-15236	-12688	-1005	1.88	1.88	-24102	10158	5347	38062	15763	4794	20557	No	20.44	Si
SLU 38	2.31	20.6	-14710	-12250	-956	1.88	1.88	-23270	10047	5289	38062	15763	4794	20557	No	21.51	Si
SLU 38	4.21	-173.2	-15055	-12537	-1007	1.88	1.88	-23816	10120	5327	38062	15763	4794	20557	No	20.42	Si
SLU 42	2.31	-2.58	-15065	-12545	-1059	1.88	1.88	-23831	10122	5328	38062	15763	4794	20557	No	19.41	Si
SLU 42	4.21	-131.58	-15552	-12950	-1111	1.88	1.88	-24601	10225	5382	38062	15763	4794	20557	No	18.5	Si
SLU 40	2.31	-2.46	-14777	-12305	-1043	1.88	1.88	-23376	10061	5296	38062	15763	4794	20557	No	19.72	Si
SLU 40	4.21	-131.88	-15230	-12682	-1094	1.88	1.88	-24092	10157	5347	38062	15763	4794	20557	No	18.79	Si
SLU 31	2.31	-73.61	-14002	-11659	-1000	1.88	1.88	-22149	9898	5210	38062	15763	4794	20557	No	20.55	Si
SLU 31	4.21	-179.27	-14349	-11948	-1057	1.88	1.88	-22698	9971	5249	38062	15763	4794	20557	No	19.44	Si
SLU 73	2.31	32.31	-16805	-13994	-969	1.88	1.88	-26584	10489	5521	38062	15763	4794	20557	No	21.21	Si
SLU 73	4.21	-327.59	-16831	-14015	-1034	1.88	1.88	-26624	10494	5524	38062	15763	4794	20557	No	19.88	Si
SLU 82	2.31	103.46	-17581	-14640	-1012	1.88	1.88	-27811	10653	5608	38062	15763	4794	20557	No	20.32	Si
SLU 82	4.21	-280.2	-17712	-14749	-1071	1.88	1.88	-28018	10680	5622	38062	15763	4794	20557	No	19.2	Si
SLU 84	2.31	103.34	-17869	-14879	-1028	1.88	1.88	-28266	10713	5640	38062	15763	4794	20557	No	19.99	Si
SLU 84	4.21	-279.9	-18034	-15017	-1088	1.88	1.88	-28527	10748	5658	38062	15763	4794	20557	No	18.9	Si
SLU 76	2.31	32.19	-17093	-14234	-986	1.88	1.88	-27040	10550	5553	38062	15763	4794	20557	No	20.85	Si
SLU 76	4.21	-327.29	-17153	-14283	-1051	1.88	1.88	-27134	10562	5560	38062	15763	4794	20557	No	19.55	Si
SLU 34	2.31	-73.73	-14290	-11899	-1017	1.88	1.88	-22605	9958	5242	38062	15763	4794	20557	No	20.21	Si
SLU 34	4.21	-178.97	-14671	-12217	-1075	1.88	1.88	-23207	10039	5284	38062	15763	4794	20557	No	19.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	2.31	-3007.54	-12945	-10780	-5400	1.88	1.88	-20478	14512	7639	38062	23644	4794	28438		5.27	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	4.21	644.76	-21982	-18305	-5077	1.88	1.88	-34774	16250	8554	38062	23644	4794	28438		5.6	Si
SLV 14	2.31	-5457.13	-13622	-11343	-8999	1.88	1.6182	-25365	15490	7018	38062	23644	4794	28438		3.16	Si
SLV 14	4.21	2447.85	-22191	-18479	-8278	1.88	1.88	-35104	16250	8554	38062	23644	4794	28438		3.44	Si
SLV 3	2.31	5950.63	-10578	-8808	8208	1.88	1.1324	-16733	13763	4364	38062	23644	4794	28438		3.46	Si
SLV 3	4.21	-3072.78	-1209	-1007	7421	1.504	0	0	0	0	38062	18916	3835	22751		3.07	Si
SLV 13	2.31	-4864.29	-14390	-11983	-7773	1.88	1.806	-22764	14969	7570	38062	23644	4794	28438		3.66	Si
SLV 13	4.21	1966.06	-21624	-18006	-7052	1.88	1.88	-34206	16250	8554	38062	23644	4794	28438		4.03	Si
SLV 10	2.31	-3393.82	-12444	-10363	-6199	1.88	1.88	-19686	14354	7556	38062	23644	4794	28438		4.59	Si
SLV 10	4.21	958.68	-22352	-18613	-5876	1.88	1.88	-35359	16250	8554	38062	23644	4794	28438		4.84	Si
SLV 7	2.31	3887.32	-11755	-9789	5408	1.88	1.8279	-18595	14136	7235	38062	23644	4794	28438		5.26	Si
SLV 7	4.21	-1583.61	-1048	-873	5019	1.504	0	0	0	0	38062	18916	3835	22751		4.53	Si
SLV 4	2.31	5357.79	-9809	-8168	6981	1.88	1.1814	-15517	13520	4472	38062	23644	4794	28438		4.07	Si
SLV 4	4.21	-2591	-1777	-1480	6195	1.504	0	0	0	0	38062	18916	3835	22751		3.67	Si
SLV 1	2.31	4747.21	-10593	-8821	6225	1.88	1.4756	-16757	13768	5689	38062	23644	4794	28438		4.57	Si
SLV 1	4.21	-2836.5	-6092	-5073	5524	1.88	1.4231	-12807	12978	5171	38062	23644	4794	28438		5.15	Si
SLV 15	2.31	-3660.86	-14375	-11970	-5790	1.88	1.88	-22740	14965	7877	38062	23644	4794	28438		4.91	Si
SLV 15	4.21	1729.78	-16741	-13941	-5155	1.88	1.88	-26483	15713	8272	38062	23644	4794	28438		5.52	Si
SLV 16	2.31	-4253.71	-13606	-11330	-7017	1.88	1.88	-21523	14721	7749	38062	23644	4794	28438		4.05	Si
SLV 16	4.21	2211.57	-17309	-14413	-6381	1.88	1.88	-27381	15893	8366	38062	23644	4794	28438		4.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.31	11769	-6195	146.38	800.52	5.47	Si
SLV 4	179667	0.31	11857	-6242	146.38	805.98	5.51	Si
SLV 7	179667	0.31	12067	-6352	146.38	819	5.6	Si
SLV 3	179667	0.31	12313	-6482	146.38	834.26	5.7	Si
SLV 12	179667	0.31	16661	-8771	146.38	1093.92	7.47	Si
SLV 2	179667	0.31	16892	-8892	146.38	1107.18	7.56	Si
SLV 11	179667	0.31	16958	-8927	146.38	1110.99	7.59	Si
SLV 1	179667	0.31	17348	-9132	146.38	1133.25	7.74	Si
SLV 16	179667	0.31	28163	-14825	146.38	1692.76	11.56	Si
SLV 6	179667	0.31	28552	-15030	146.38	1710.8	11.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-20029	-9040	-493	0.509	2292.7	0.967	7.6534	9.2784	No
SLV 9	-19831	-9399	-494	0.513	2272.5	0.966	7.72021	9.2784	No
SLV 6	-16930	-6843	-374	0.594	1977.3	0.962	8.97159	9.2784	No
SLV 5	-16732	-7202	-374	0.6	1957.1	0.961	9.06471	9.2784	No
SLV 14	-18325	-12598	-327	0.557	2119.3	0.964	8.40184	4.61088	Si
SLV 13	-18021	-13150	-328	0.565	2088.3	0.964	8.52604	4.61088	Si
SLV 16	-13720	-13533	-65	0.729	1650.9	0.955	11.10174	4.61088	Si
SLV 15	-13416	-14084	-66	0.743	1620	0.954	11.32188	4.61088	Si
SLV 12	-4677	-12156	380	1.668	736.7	0.913	26.55939	9.2784	Si
SLV 11	-4479	-12516	379	1.721	716.9	0.911	27.45204	9.2784	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	20.49	SLU 44	Si
V_SLU	18.5	SLU 42	Si
PF_SLV	0.654	SLV 3	No
V_SLV	3.066	SLV 3	Si
PFFP_SLV	5.469	SLV 8	Si
R_SLV	0.825	SLV 10	No

Maschio 83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.284	-0.133	5.826	L4	L5	9.11	0.28	3.42	3.42	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	1.41	-1025.69	-123161	-0.0000709	0.0004492	0.0035	9.1099	339311.92	485270.24	485270.24	473.12	No	Si
SLU 82	4.83	-2527.65	-93517	-0.0000535	0.0004492	0.0035	9.1099	298155.97	401191.57	401191.57	158.72	No	Si
SLU 73	1.41	-668.69	-118930	-0.0000681	0.0004492	0.0035	9.1099	335009.8	474078.4	474078.4	708.97	No	Si
SLU 73	4.83	-2507.31	-90138	-0.0000515	0.0004492	0.0035	9.1099	291834.78	390805.04	390805.04	155.87	No	Si
SLU 52	1.41	-1001.87	-107889	-0.0000615	0.0004492	0.0035	9.1099	321316.94	443568.87	443568.87	442.74	No	Si
SLU 52	4.83	-2240.18	-81258	-0.0000461	0.0004492	0.0035	9.1099	273630.93	362708.6	362708.6	161.91	No	Si
SLU 50	1.41	-2891.56	-100877	-0.000058	0.0004492	0.0035	9.1099	310771.87	423516.84	423516.84	146.47	No	Si
SLU 50	4.83	-1550.73	-76607	-0.0000431	0.0004492	0.0035	9.1099	263175.23	347412.16	347412.16	224.03	No	Si
SLU 76	1.41	-753.4	-120742	-0.0000693	0.0004492	0.0035	9.1099	336916.11	478871.01	478871.01	635.61	No	Si
SLU 76	4.83	-2453.56	-91860	-0.0000525	0.0004492	0.0035	9.1099	295097.55	396097.69	396097.69	161.44	No	Si
SLU 40	1.41	-309.63	-103630	-0.0000587	0.0004492	0.0035	9.1099	315082.81	431388.54	431388.54	1393.22	No	Si
SLU 40	4.83	-2215.44	-78974	-0.0000448	0.0004492	0.0035	9.1099	268576	355197.74	355197.74	160.33	No	Si
SLU 43	1.41	-2722.13	-97254	-0.0000558	0.0004492	0.0035	9.1099	304759.6	412680.8	412680.8	151.6	No	Si
SLU 43	4.83	-1658.23	-73164	-0.0000412	0.0004492	0.0035	9.1099	255027.98	336088.83	336088.83	202.68	No	Si
SLU 45	1.41	-2739.67	-100136	-0.0000575	0.0004492	0.0035	9.1099	309572.65	421396.21	421396.21	153.81	No	Si
SLU 45	4.83	-1557.76	-75879	-0.0000427	0.0004492	0.0035	9.1099	261481.5	345018	345018	221.48	No	Si
SLU 48	1.41	-2824.39	-101947	-0.0000586	0.0004492	0.0035	9.1099	312474.16	426577.14	426577.14	151.03	No	Si
SLU 48	4.83	-1504.01	-77601	-0.0000437	0.0004492	0.0035	9.1099	265461.81	350679.66	350679.66	233.16	No	Si
SLU 31	1.41	47.37	-99399	-0.000056	0.0004492	0.0035	9.1099	308365.59	377661.32	377661.32	7973.05	No	Si
SLU 31	4.83	-2195.1	-75596	-0.0000428	0.0004492	0.0035	9.1099	260818.72	344087.05	344087.05	156.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	1.41	152.04	-102999	-0.000057	0.0006738	0.0035	9.1099		403986.62	403986.62	2657.06		Si
SLV 10	4.83	57651.68	-77823	-0.0000642	0.0006738	0.0035	9.1099		320176.72	320176.72	5.55		Si
SLV 6	1.41	3010.33	-66104	-0.0000371	0.0006738	0.0035	9.1099		280715.21	280715.21	93.25		Si
SLV 6	4.83	60857.82	-56537	-0.0000531	0.0006738	0.0035	9.1099		244279.64	244279.64	4.01		Si
SLV 9	1.41	1344.71	-103097	-0.0000575	0.0006738	0.0035	9.1099		404314.11	404314.11	300.67		Si
SLV 9	4.83	54725.57	-77643	-0.000063	0.0006738	0.0035	9.1099		319579.29	319579.29	5.84		Si
SLV 2	1.41	3244.16	-22476	-0.0000132	0.0006738	0.0035	9.1099		106236.15	106236.15	32.75		Si
SLV 2	4.83	23869.73	-29197	-0.0000243	0.0006738	0.0035	9.1099		134498.18	134498.18	5.63		Si
SLV 7	1.41	-3745.46	-64608	-0.0000366	0.0006738	0.0035	9.1099		315293.07	315293.07	84.18		Si
SLV 7	4.83	-60670.92	-49058	-0.0000487	0.0006738	0.0035	9.1099		255764.22	255764.22	4.22		Si
SLV 12	1.41	-7796.41	-101404	-0.000059	0.0006738	0.0035	9.1099		444642.93	444642.93	57.03		Si
SLV 12	4.83	-60950.95	-70523	-0.0000612	0.0006738	0.0035	9.1099		336797.78	336797.78	5.53		Si
SLV 11	1.41	-6603.74	-101502	-0.0000586	0.0006738	0.0035	9.1099		444962.13	444962.13	67.38		Si
SLV 11	4.83	-63877.06	-70343	-0.0000621	0.0006738	0.0035	9.1099		336145.32	336145.32	5.26		Si
SLV 1	1.41	5074.58	-22627	-0.0000139	0.0006738	0.0035	9.1099		106875.54	106875.54	21.06		Si
SLV 1	4.83	19378.95	-28922	-0.0000225	0.0006738	0.0035	9.1099		133349.81	133349.81	6.88		Si
SLV 8	1.41	-4938.13	-64509	-0.000037	0.0006738	0.0035	9.1099		314935.42	314935.42	63.78		Si
SLV 8	4.83	-57744.81	-49237	-0.0000478	0.0006738	0.0035	9.1099		256451.76	256451.76	4.44		Si
SLV 5	1.41	4202.99	-66203	-0.0000376	0.0006738	0.0035	9.1099		281086.69	281086.69	66.88		Si
SLV 5	4.83	57931.71	-56358	-0.0000519	0.0006738	0.0035	9.1099		243590.2	243590.2	4.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	1.41	-1818.08	-122924	-87691	-3526	9.1099	9.1099	-34378	10833	27633	108749	91669	46461	136382	No	38.68	Si
SLU 81	4.83	-2361.78	-93451	-66666	-2585	9.1099	9.1099	-26135	10833	27633	108749	91669	46461	136382	No	52.76	Si
SLU 79	1.41	-2158.77	-122158	-87145	-3653	9.1099	9.1099	-34164	10833	27633	108749	91669	46461	136382	No	37.33	Si
SLU 79	4.83	-2123.36	-93472	-66681	-2713	9.1099	9.1099	-26141	10833	27633	108749	91669	46461	136382	No	50.28	Si
SLU 84	1.41	-1110.4	-124972	-89152	-3606	9.1099	9.1099	-34951	10833	27633	108749	91669	46461	136382	No	37.82	Si
SLU 84	4.83	-2473.9	-95238	-67941	-2587	9.1099	9.1099	-26635	10833	27633	108749	91669	46461	136382	No	52.73	Si
SLU 77	1.41	-2091.6	-123228	-87908	-3651	9.1099	9.1099	-34463	10833	27633	108749	91669	46461	136382	No	37.35	Si
SLU 77	4.83	-2076.63	-94465	-67389	-2702	9.1099	9.1099	-26419	10833	27633	108749	91669	46461	136382	No	50.48	Si
SLU 75	1.41	-1214.49	-121654	-86785	-3533	9.1099	9.1099	-34023	10833	27633	108749	91669	46461	136382	No	38.6	Si
SLU 75	4.83	-2296.26	-92809	-66208	-2534	9.1099	9.1099	-25956	10833	27633	108749	91669	46461	136382	No	53.82	Si
SLU 74	1.41	-2006.89	-121417	-86616	-3552	9.1099	9.1099	-33957	10833	27633	108749	91669	46461	136382	No	38.4	Si
SLU 74	4.83	-2130.38	-92744	-66161	-2617	9.1099	9.1099	-25938	10833	27633	108749	91669	46461	136382	No	52.11	Si
SLU 83	1.41	-1902.8	-124735	-88983	-3625	9.1099	9.1099	-34885	10833	27633	108749	91669	46461	136382	No	37.62	Si
SLU 83	4.83	-2308.03	-95173	-67894	-2670	9.1099	9.1099	-26617	10833	27633	108749	91669	46461	136382	No	51.09	Si
SLU 78	1.41	-1299.21	-123465	-88077	-3632	9.1099	9.1099	-34529	10833	27633	108749	91669	46461	136382	No	37.55	Si
SLU 78	4.83	-2242.51	-94531	-67436	-2619	9.1099	9.1099	-26437	10833	27633	108749	91669	46461	136382	No	52.08	Si
SLU 80	1.41	-1366.38	-122395	-87314	-3634	9.1099	9.1099	-34230	10833	27633	108749	91669	46461	136382	No	37.53	Si
SLU 80	4.83	-2289.23	-93537	-66727	-2630	9.1099	9.1099	-26160	10833	27633	108749	91669	46461	136382	No	51.86	Si
SLU 76	1.41	-753.4	-120742	-86134	-3523	9.1099	9.1099	-33768	10833	27633	108749	91669	46461	136382	No	38.72	Si
SLU 76	4.83	-2453.56	-91860	-65530	-2490	9.1099	9.1099	-25690	10833	27633	108749	91669	46461	136382	No	54.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.41	-3745.46	-64608	-46089	37959	9.1099	9.1099	-18069	16114	41103	108749	137503	46461	149851		3.95	Si
SLV 7	4.83	-60670.92	-49058	-34997	35564	9.1099	9.1099	-13720	15244	38884	108749	137503	46461	147633		4.15	Si
SLD 10	1.41	-855.82	-91928	-65579	-20341	9.1099	9.1099	-25709	16250	41450	108749	137503	46461	150199		7.38	Si
SLD 10	4.83	24750.91	-69595	-49647	-18327	9.1099	9.1099	-19464	16250	41450	108749	137503	46461	150199		8.2	Si
SLV 6	1.41	3010.33	-66104	-47157	-42540	9.1099	9.1099	-18487	16197	41316	108749	137503	46461	150065		3.53	Si
SLV 6	4.83	60857.82	-56537	-40332	-38801	9.1099	9.1099	-15812	15662	39951	108749	137503	46461	148700		3.83	Si
SLV 8	1.41	-4938.13	-64509	-46019	33098	9.1099	9.1099	-18041	16108	41089	108749	137503	46461	149837		4.53	Si
SLV 8	4.83	-57744.81	-49237	-35125	30717	9.1099	9.1099	-13770	15254	38910	108749	137503	46461	147659		4.81	Si
SLV 10	1.41	152.04	-102999	-73477	-42913	9.1099	9.1099	-28806	16250	41450	108749	137503	46461	150199		3.5	Si
SLV 10	4.83	57651.68	-77823	-55517	-39216	9.1099	9.1099	-21765	16250	41450	108749	137503	46461	150199		3.83	Si
SLD 6	1.41	318.84	-76169	-54337	-20182	9.1099	9.1099	-21302	16250	41450	108749	137503	46461	150199		7.44	Si
SLD 6	4.83	26098.14	-60497	-43157	-18149	9.1099	9.1099	-16919	15884	40516	108749	137503	46461	149265		8.22	Si
SLV 5	1.41	4202.99	-66203	-47227	-37679	9.1099	9.1099	-18515	16203	41330	108749	137503	46461	150079		3.98	Si
SLV 5	4.83	57931.71	-56358	-40204	-33954	9.1099	9.1099	-15762	15652	39926	108749	137503	46461	148674		4.38	Si
SLV 11	1.41	-6603.74	-101502	-72409	37586	9.1099	9.1099	-28387	16250	41450	108749	137503	46461	150199		4	Si
SLV 11	4.83	-63877.06	-70343	-50181	35150	9.1099	9.1099	-19673	16250	41450	108749	137503	46461	150199		4.27	Si
SLV 12	1.41	-7796.41	-101404	-72339	32725	9.1099	9.1099	-28359	16250	41450	108749	137503	46461	150199		4.59	Si
SLV 12	4.83	-60950.95	-70523	-50309	30303	9.1099	9.1099	-19723	16250	41450	108749	137503	46461	150199		4.96	Si
SLV 9	1.41	1344.71	-103097	-73547	-38052	9.1099	9.1099	-28833	16250	41450	108749	137503	46461	150199		3.95	Si
SLV 9	4.83	54725.57	-77643	-55389	-34369	9.1099	9.1099	-21714	16250	41450	108749	137503	46461	150199		4.37	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.12 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-26322	0.31	709.3	3477.62	5210.63	4344.13	6.12	Si
SLV 4	-26420	0.31	709.3	3489.8	5225.62	4357.71	6.14	Si
SLV 1	-27795	0.31	709.3	3660	5435.7	4547.85	6.41	Si
SLV 2	-27893	0.31	709.3	3672.1	5450.69	4561.39	6.43	Si
SLV 7	-58128	0.31	709.3	7126.06	9975.92	8550.99	12.06	Si
SLV 8	-58192	0.31	709.3	7132.78	9985.34	8559.06	12.07	Si
SLV 5	-63038	0.31	709.3	7635.38	10700.13	9167.76	12.93	Si
SLV 6	-63102	0.31	709.3	7641.92	10709.56	9175.74	12.94	Si
SLV 11	-86848	0.31	709.3	9900.04	14179.26	12039.65	16.97	Si
SLV 12	-86912	0.31	709.3	9905.67	14188.46	12047.06	16.98	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.0698

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-77823	-102999	600	0.635	9152.7	0.96	9.61203	9.2784	Si
SLV 9	-77643	-103097	600	0.636	9134.5	0.96	9.63162	9.2784	Si
SLV 12	-70523	-101404	267	0.695	8410.5	0.957	10.54872	9.2784	Si
SLV 11	-70343	-101502	268	0.696	8392.2	0.957	10.57243	9.2784	Si
SLV 6	-56537	-66104	-276	0.836	6989.7	0.949	12.8057	9.2784	Si
SLV 5	-56358	-66203	-276	0.839	6971.5	0.949	12.84132	9.2784	Si
SLV 8	-49237	-64509	-609	0.932	6249.1	0.944	14.35198	9.2784	Si
SLV 7	-49058	-64608	-609	0.935	6230.9	0.944	14.39739	9.2784	Si
SLV 14	-100149	-145458	1507	0.504	11424.4	0.967	7.56814	4.61088	Si
SLV 13	-99873	-145608	1507	0.505	11396.4	0.967	7.5865	4.61088	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	146.466	SLU 50	Si
V_SLU	37.33	SLU 79	Si
PF_SLV	4.014	SLV 6	Si
V_SLV	3.5	SLV 10	Si
PFFP_SLV	6.125	SLV 3	Si
R_SLV	1.036	SLV 10	Si

Maschio 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L5	L6	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	5.73	-1249.07	-13535	-0.000051	0.0003743	0.0035	1.92	9780.33	11723.48	11723.48	9.39	No	Si
SLU 51	7.53	-240.86	-12152	-0.0000372	0.0003743	0.0035	1.92	9075.69	10833.96	10833.96	44.98	No	Si
SLU 45	5.73	-1235.48	-13390	-0.0000504	0.0003743	0.0035	1.92	9709.54	11630.71	11630.71	9.41	No	Si
SLU 45	7.53	-228.44	-11989	-0.0000366	0.0003743	0.0035	1.92	8988.3	10725.33	10725.33	46.95	No	Si
SLU 43	5.73	-1199.07	-12799	-0.0000482	0.0003743	0.0035	1.92	9413.57	11248.4	11248.4	9.38	No	Si
SLU 43	7.53	-184.91	-11358	-0.0000343	0.0003743	0.0035	1.92	8640.78	10294.74	10294.74	55.67	No	Si
SLU 48	5.73	-1261.13	-13804	-0.000052	0.0003743	0.0035	1.92	9909.37	11893.17	11893.17	9.43	No	Si
SLU 48	7.53	-262.23	-12438	-0.0000383	0.0003743	0.0035	1.92	9226.79	11017.21	11017.21	42.01	No	Si
SLU 47	5.73	-1222.58	-13061	-0.0000492	0.0003743	0.0035	1.92	9546.22	11417.68	11417.68	9.34	No	Si
SLU 47	7.53	-199.34	-11635	-0.0000353	0.0003743	0.0035	1.92	8794.84	10485.06	10485.06	52.6	No	Si
SLU 68	5.73	-1191.08	-14268	-0.0000528	0.0003743	0.0035	1.92	10126.57	12171.86	12171.86	10.22	No	Si
SLU 68	7.53	-402.09	-13221	-0.000042	0.0003743	0.0035	1.92	9626.28	11521.86	11521.86	28.66	No	Si
SLU 50	5.73	-1250.35	-13626	-0.0000513	0.0003743	0.0035	1.92	9824.37	11781.3	11781.3	9.42	No	Si
SLU 50	7.53	-252.47	-12255	-0.0000376	0.0003743	0.0035	1.92	9130.55	10901.2	10901.2	43.18	No	Si
SLU 49	5.73	-1259.84	-13713	-0.0000517	0.0003743	0.0035	1.92	9865.9	11835.92	11835.92	9.39	No	Si
SLU 49	7.53	-250.62	-12335	-0.0000379	0.0003743	0.0035	1.92	9172.58	10951.62	10951.62	43.7	No	Si
SLU 44	5.73	-1196.94	-12647	-0.0000477	0.0003743	0.0035	1.92	9335.62	11150.92	11150.92	9.32	No	Si
SLU 44	7.53	-165.56	-11186	-0.0000336	0.0003743	0.0035	1.92	8543.72	10177.07	10177.07	61.47	No	Si
SLU 46	5.73	-1234.2	-13299	-0.0000501	0.0003743	0.0035	1.92	9664.76	11572.13	11572.13	9.38	No	Si
SLU 46	7.53	-216.83	-11886	-0.0000362	0.0003743	0.0035	1.92	8932.48	10655.97	10655.97	49.14	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	5.73	-431.87	-933	-0.0000066	0.0005615	0.0035	1.92		1934.63	1934.63	4.48		Si
SLV 8	7.53	-1203.41	851	0.0710056	0.0005615	0.0035	1.536		0	0	0		No
SLV 14	5.73	-3282.5	-12718	-0.0000658	0.0005615	0.0035	1.92		11794.32	11794.32	3.59		Si
SLV 14	7.53	2668.9	-9433	-0.0000502	0.0005615	0.0035	1.92		8416.27	8416.27	3.15		Si
SLV 11	5.73	-1478.85	-241	-0.0005424	0.0005615	0.0035	1.536		1288.35	1288.35	0.87		No
SLV 11	7.53	120.07	2300	0	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	5.73	-157.25	-918	-0.0000038	0.0005615	0.0035	1.92		1920.06	1920.06	12.21		Si
SLV 7	7.53	-1491.87	186	0.0136278	0.0005615	0.0035	1.536		0	0	0		No
SLV 16	5.73	-3322.31	-6604	-0.0000523	0.0005615	0.0035	1.92		6953.5	6953.5	2.09		Si
SLV 16	7.53	2529.22	-2490	-0.0011821	0.0005615	0.0035	1.92		2513.16	2513.16	0.99		No
SLV 15	5.73	-2900.84	-6580	-0.0000456	0.0005615	0.0035	1.92		6933.25	6933.25	2.39		Si
SLV 15	7.53	2086.5	-3511	-0.0000343	0.0005615	0.0035	1.92		3436.88	3436.88	1.65		Si
SLV 3	5.73	1504.5	-8835	-0.000038	0.0005615	0.0035	1.92		7972.53	7972.53	5.3		Si
SLV 3	7.53	-3286.63	-10558	-0.0000592	0.0005615	0.0035	1.92		10155.13	10155.13	3.09		Si
SLV 13	5.73	-2861.03	-12694	-0.0000619	0.0005615	0.0035	1.92		11776.55	11776.55	4.12		Si
SLV 13	7.53	2226.19	-10454	-0.0000493	0.0005615	0.0035	1.92		9126.84	9126.84	4.1		Si
SLV 4	5.73	1083.03	-8859	-0.0000344	0.0005615	0.0035	1.92		7991.25	7991.25	7.38		Si
SLV 4	7.53	-2843.92	-9537	-0.0000521	0.0005615	0.0035	1.92		9360.55	9360.55	3.29		Si
SLV 12	5.73	-1753.47	-257	-0.0006835	0.0005615	0.0035	1.536		1303.13	1303.13	0.74		No
SLV 12	7.53	408.53	2965	0	0.0005615	0.0035	1.536		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	5.73	-888.41	-13313	-11086	799	1.92	1.92	-20621	9694	5211	40441	16098	4896	20994	No	26.28	Si
SLU 35	7.53	-669.08	-13176	-10972	793	1.92	1.92	-20409	9666	5196	40441	16098	4896	20994	No	26.48	Si
SLU 37	5.73	-877.64	-13136	-10938	796	1.92	1.92	-20346	9657	5192	40441	16098	4896	20994	No	26.36	Si
SLU 37	7.53	-659.33	-12994	-10820	791	1.92	1.92	-20126	9628	5176	40441	16098	4896	20994	No	26.55	Si
SLU 41	5.73	-827.91	-13123	-10928	928	1.92	1.92	-20328	9655	5190	40441	16098	4896	20994	No	22.62	Si
SLU 41	7.53	-708.39	-13125	-10930	922	1.92	1.92	-20331	9655	5191	40441	16098	4896	20994	No	22.76	Si
SLU 40	5.73	-800.98	-12619	-10508	886	1.92	1.92	-19546	9551	5134	40441	16098	4896	20994	No	23.69	Si
SLU 40	7.53	-663	-12574	-10470	894	1.92	1.92	-19476	9541	5129	40441	16098	4896	20994	No	23.49	Si
SLU 83	5.73	-1112.92	-15759	-13122	822	1.92	1.92	-24409	10199	5483	40441	16098	4896	20994	No	25.54	Si
SLU 83	7.53	-697.59	-15328	-12764	815	1.92	1.92	-23742	10110	5435	40441	16098	4896	20994	No	25.76	Si
SLU 81	5.73	-1087.28	-15345	-12778	799	1.92	1.92	-23769	10114	5437	40441	16098	4896	20994	No	26.28	Si
SLU 81	7.53	-663.81	-14879	-12390	792	1.92	1.92	-23047	10017	5385	40441	16098	4896	20994	No	26.51	Si
SLU 36	5.73	-887.13	-13222	-11010	780	1.92	1.92	-20480	9675	5201	40441	16098	4896	20994	No	26.92	Si
SLU 36	7.53	-657.47	-13073	-10886	787	1.92	1.92	-20250	9644	5185	40441	16098	4896	20994	No	26.66	Si
SLU 84	5.73	-1111.64	-15668	-13047	803	1.92	1.92	-24268	10180	5473	40441	16098	4896	20994	No	26.14	Si
SLU 84	7.53	-685.98	-15225	-12678	810	1.92	1.92	-23583	10089	5424	40441	16098	4896	20994	No	25.93	Si
SLU 39	5.73	-802.26	-12710	-10584	905	1.92	1.92	-19687	9569	5144	40441	16098	4896	20994	No	23.2	Si
SLU 39	7.53	-674.61	-12677	-10556	899	1.92	1.92	-19636	9563	5141	40441	16098	4896	20994	No	23.35	Si
SLU 42	5.73	-826.62	-13032	-10852	909	1.92	1.92	-20187	9636	5180	40441	16098	4896	20994	No	23.09	Si
SLU 42	7.53	-696.78	-13022	-10844	917	1.92	1.92	-20171	9634	5179	40441	16098	4896	20994	No	22.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	5.73	1122.85	-14973	-12468	4386	1.92	1.92	-23192	15055	8094	40441	24147	4896	29043		6.62	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	7.53	-2704.24	-16480	-13723	3672	1.92	1.92	-25527	15522	8345	40441	24147	4896	29043		7.91	Si
SLV 12	5.73	-1753.47	-257	-214	-2232	1.536	0	0	0	0	40441	19318	3917	23234		10.41	Si
SLV 12	7.53	408.53	2965	2469	-2149	1.536	1.92	0	0	0	40441	19318	3917	23234		10.81	Si
SLV 15	5.73	-2900.84	-6580	-5479	-3897	1.92	1.5574	-12638	12944	5645	40441	24147	4896	29043		7.45	Si
SLV 15	7.53	2086.5	-3511	-2924	-3192	1.92	1.0972	-5439	11504	3534	40441	24147	4896	29043		9.1	Si
SLV 3	5.73	1504.5	-8835	-7357	4935	1.92	1.92	-13685	13154	7071	40441	24147	4896	29043		5.89	Si
SLV 3	7.53	-3286.63	-10558	-8792	4138	1.92	1.92	-16354	13687	7358	40441	24147	4896	29043		7.02	Si
SLV 14	5.73	-3282.5	-12718	-10590	-4446	1.92	1.92	-19699	14357	7718	40441	24147	4896	29043		6.53	Si
SLV 14	7.53	2668.9	-9433	-7855	-3658	1.92	1.92	-14611	13339	7171	40441	24147	4896	29043		7.94	Si
SLV 4	5.73	1083.03	-8859	-7377	3898	1.92	1.92	-13722	13161	7075	40441	24147	4896	29043		7.45	Si
SLV 4	7.53	-2843.92	-9537	-7942	3101	1.92	1.92	-14773	13371	7188	40441	24147	4896	29043		9.37	Si
SLV 1	5.73	1544.32	-14948	-12448	5423	1.92	1.92	-23155	15048	8089	40441	24147	4896	29043		5.36	Si
SLV 1	7.53	-3146.95	-17501	-14573	4709	1.92	1.92	-27108	15838	8515	40441	24147	4896	29043		6.17	Si
SLV 5	5.73	-24.52	-21296	-17733	2721	1.92	1.92	-32987	16250	8736	40441	24147	4896	29043		10.67	Si
SLV 5	7.53	-1026.27	-22956	-19116	2629	1.92	1.92	-35559	16250	8736	40441	24147	4896	29043		11.05	Si
SLV 16	5.73	-3322.31	-6604	-5499	-4934	1.92	1.3708	-14424	13302	5106	40441	24147	4896	29043		5.89	Si
SLV 16	7.53	2529.22	-2490	-2074	-4230	1.92	0	-122575	16250	0	40441	24147	4896	29043		6.87	Si
SLV 13	5.73	-2861.03	-12694	-10570	-3409	1.92	1.92	-19662	14349	7714	40441	24147	4896	29043		8.52	Si
SLV 13	7.53	2226.19	-10454	-8705	-2621	1.92	1.92	-16193	13655	7341	40441	24147	4896	29043		11.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.38	0	-384	195.51	0	0	No, e>t/2
SLV 8	179667	0.38	0	17	195.51	0	0	No, Trazione
SLV 12	179667	0.38	0	1472	195.51	0	0	No, Trazione
SLV 11	179667	0.38	0	1071	195.51	0	0	No, Trazione
SLV 16	179667	0.38	8372	-4501	195.51	595.58	3.05	Si
SLV 15	179667	0.38	9518	-5117	195.51	671.68	3.44	Si
SLV 4	179667	0.38	17392	-9350	195.51	1159.92	5.93	Si
SLV 3	179667	0.38	18538	-9966	195.51	1225.84	6.27	Si
SLV 14	179667	0.38	20773	-11167	195.51	1350.77	6.91	Si
SLV 13	179667	0.38	21918	-11783	195.51	1412.87	7.23	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-20409	-19533	-575	0.505	2344.3	0.966	7.59332	11.63229	No
SLV 6	-19884	-19393	-576	0.516	2290.9	0.965	7.7692	11.63229	No
SLV 9	-19253	-17443	-479	0.535	2226.6	0.964	8.06228	11.63229	No
SLV 10	-18727	-17303	-479	0.547	2173.2	0.963	8.26084	11.63229	No
SLV 1	-14377	-15969	-315	0.695	1730.9	0.955	10.57976	5.55889	Si
SLV 2	-13571	-15754	-316	0.73	1648.9	0.953	11.1289	5.55889	Si
SLV 13	-10522	-9001	5	0.927	1339.5	0.943	14.28101	5.55889	Si
SLV 14	-9715	-8785	5	0.99	1257.8	0.94	15.29765	5.55889	Si
SLV 3	-7930	-10791	4	1.166	1077.2	0.932	18.1772	5.55889	Si
SLV 4	-7124	-10576	3	1.269	995.9	0.928	19.87636	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.316	SLU 44	Si
V_SLU	22.619	SLU 41	Si
PF_SLV	0	SLV 7	No
V_SLV	5.355	SLV 1	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.653	SLV 5	No

Maschio 87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.683	5.826	-21.813	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	5.73	-595.34	-15870	-0.0000462	0.0003743	0.0035	2.13	12484.35	15013.86	15013.86	25.22	No	Si
SLU 52	7.53	1348.38	-17743	-0.0000574	0.0003743	0.0035	2.13	13374.74	14915.71	14915.71	11.06	No	Si
SLU 50	5.73	-545.19	-15937	-0.000046	0.0003743	0.0035	2.13	12518.41	15058.69	15058.69	27.62	No	Si
SLU 50	7.53	1318.3	-17565	-0.0000567	0.0003743	0.0035	2.13	13295.38	14798.8	14798.8	11.23	No	Si
SLU 43	5.73	-578.71	-14824	-0.0000431	0.0003743	0.0035	2.13	11933.36	14300.7	14300.7	24.71	No	Si
SLU 43	7.53	1291.45	-16296	-0.0000528	0.0003743	0.0035	2.13	12697.52	13976.2	13976.2	10.82	No	Si
SLU 44	5.73	-589.59	-14633	-0.0000426	0.0003743	0.0035	2.13	11828.6	14162.2	14162.2	24.02	No	Si
SLU 44	7.53	1277.34	-16126	-0.0000522	0.0003743	0.0035	2.13	12613.3	13867.64	13867.64	10.86	No	Si
SLU 46	5.73	-563.54	-15486	-0.0000448	0.0003743	0.0035	2.13	12286.34	14758.76	14758.76	26.19	No	Si
SLU 46	7.53	1302.13	-17062	-0.0000551	0.0003743	0.0035	2.13	13065.34	14470.72	14470.72	11.11	No	Si
SLU 64	5.73	-563.36	-16440	-0.0000476	0.0003743	0.0035	2.13	12768.44	15397.05	15397.05	27.33	No	Si
SLU 64	7.53	1357.45	-18272	-0.0000591	0.0003743	0.0035	2.13	13604.15	15265.61	15265.61	11.25	No	Si
SLU 60	5.73	-586.92	-16591	-0.0000482	0.0003743	0.0035	2.13	12841.87	15499.67	15499.67	26.41	No	Si
SLU 60	7.53	1392.93	-18605	-0.0000603	0.0003743	0.0035	2.13	13743.47	15486.7	15486.7	11.12	No	Si
SLU 45	5.73	-557.01	-15600	-0.0000451	0.0003743	0.0035	2.13	12345.92	14834.54	14834.54	26.63	No	Si
SLU 45	7.53	1310.59	-17164	-0.0000555	0.0003743	0.0035	2.13	13112.65	14536.93	14536.93	11.09	No	Si
SLU 61	5.73	-593.45	-16477	-0.0000479	0.0003743	0.0035	2.13	12786.27	15421.84	15421.84	25.99	No	Si
SLU 61	7.53	1384.46	-18504	-0.00006	0.0003743	0.0035	2.13	13701.31	15419.08	15419.08	11.14	No	Si
SLU 47	5.73	-572.83	-15190	-0.0000441	0.0003743	0.0035	2.13	12130.29	14562.18	14562.18	25.42	No	Si
SLU 47	7.53	1290.77	-16761	-0.0000541	0.0003743	0.0035	2.13	12923.07	14275.31	14275.31	11.06	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	5.73	2052.53	-13928	-0.0000506	0.0005615	0.0035	2.13		13040.09	13040.09	6.35		Si
SLV 3	7.53	-2293.76	-11638	-0.0000462	0.0005615	0.0035	2.13		12439.77	12439.77	5.42		Si
SLD 16	5.73	-1531.86	-9944	-0.0000361	0.0005615	0.0035	2.13		10952.21	10952.21	7.15		Si
SLD 16	7.53	2393.43	-12504	-0.0000492	0.0005615	0.0035	2.13		11890.99	11890.99	4.97		Si
SLV 14	5.73	-2929.27	-11361	-0.00005	0.0005615	0.0035	2.13		12204.84	12204.84	4.17		Si
SLV 14	7.53	4393.73	-16529	-0.0000753	0.0005615	0.0035	2.13		15178.79	15178.79	3.45		Si
SLV 15	5.73	-2537.26	-6733	-0.0000349	0.0005615	0.0035	2.13		8014.04	8014.04	3.16		Si
SLV 15	7.53	3680.19	-10481	-0.0000532	0.0005615	0.0035	2.13		10283.33	10283.33	2.79		Si
SLV 11	5.73	-1084.34	-3424	-0.0000161	0.0005615	0.0035	2.13		4808.42	4808.42	4.43		Si
SLV 11	7.53	1446	-3849	-0.0000197	0.0005615	0.0035	2.13		4199.1	4199.1	2.9		Si
SLD 14	5.73	-1504.09	-12135	-0.0000417	0.0005615	0.0035	2.13		12865.15	12865.15	8.55		Si
SLD 14	7.53	2482.19	-15177	-0.0000572	0.0005615	0.0035	2.13		14060.84	14060.84	5.66		Si
SLD 15	5.73	-1336.19	-10080	-0.0000351	0.0005615	0.0035	2.13		11075.09	11075.09	8.29		Si
SLD 15	7.53	2172.68	-12498	-0.0000476	0.0005615	0.0035	2.13		11886.08	11886.08	5.47		Si
SLV 13	5.73	-2473.72	-11679	-0.0000476	0.0005615	0.0035	2.13		12475.38	12475.38	5.04		Si
SLV 13	7.53	3879.77	-16514	-0.0000713	0.0005615	0.0035	2.13		15166.93	15166.93	3.91		Si
SLV 12	5.73	-1381.17	-3217	-0.0000178	0.0005615	0.0035	2.13		4601.22	4601.22	3.33		Si
SLV 12	7.53	1780.88	-3858	-0.0000226	0.0005615	0.0035	2.13		4208.34	4208.34	2.36		Si
SLV 16	5.73	-2992.82	-6415	-0.0000384	0.0005615	0.0035	2.13		7714.91	7714.91	2.58		Si
SLV 16	7.53	4194.14	-10495	-0.0000573	0.0005615	0.0035	2.13		10294.54	10294.54	2.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	5.73	-578.11	-18093	-15066	-4301	2.13	2.13	-25262	10313	6151	40441	17859	5432	23291	No	5.42	Si
SLU 82	7.53	1450.47	-20480	-17054	-4303	2.13	2.13	-28595	10757	6416	40441	17859	5432	23291	No	5.41	Si
SLU 84	5.73	-561.35	-18650	-15530	-4348	2.13	2.13	-26039	10416	6212	40441	17859	5432	23291	No	5.36	Si
SLU 84	7.53	1463.9	-21115	-17582	-4350	2.13	2.13	-29481	10833	6461	40441	17859	5432	23291	No	5.35	Si
SLU 75	5.73	-553.95	-18339	-15271	-4237	2.13	2.13	-25606	10359	6178	40441	17859	5432	23291	No	5.5	Si
SLU 75	7.53	1439.17	-20655	-17200	-4239	2.13	2.13	-28840	10790	6435	40441	17859	5432	23291	No	5.49	Si
SLU 80	5.73	-542.13	-18676	-15552	-4275	2.13	2.13	-26076	10421	6215	40441	17859	5432	23291	No	5.45	Si
SLU 80	7.53	1446.88	-21056	-17534	-4277	2.13	2.13	-29399	10833	6461	40441	17859	5432	23291	No	5.45	Si
SLU 77	5.73	-530.66	-19011	-15830	-4275	2.13	2.13	-26543	10484	6252	40441	17859	5432	23291	No	5.45	Si
SLU 77	7.53	1461.06	-21392	-17813	-4280	2.13	2.13	-29868	10833	6461	40441	17859	5432	23291	No	5.44	Si
SLU 83	5.73	-554.82	-18764	-15625	-4339	2.13	2.13	-26199	10438	6225	40441	17859	5432	23291	No	5.37	Si
SLU 83	7.53	1472.36	-21216	-17667	-4344	2.13	2.13	-29623	10833	6461	40441	17859	5432	23291	No	5.36	Si
SLU 79	5.73	-535.6	-18791	-15647	-4265	2.13	2.13	-26236	10443	6228	40441	17859	5432	23291	No	5.46	Si
SLU 79	7.53	1455.34	-21158	-17619	-4271	2.13	2.13	-29541	10833	6461	40441	17859	5432	23291	No	5.45	Si
SLU 76	5.73	-563.24	-18043	-15025	-4233	2.13	2.13	-25192	10303	6145	40441	17859	5432	23291	No	5.5	Si
SLU 76	7.53	1427.81	-20354	-16949	-4234	2.13	2.13	-28419	10734	6402	40441	17859	5432	23291	No	5.5	Si
SLU 81	5.73	-571.58	-18208	-15162	-4292	2.13	2.13	-25422	10334	6163	40441	17859	5432	23291	No	5.43	Si
SLU 81	7.53	1458.94	-20582	-17139	-4297	2.13	2.13	-28737	10776	6427	40441	17859	5432	23291	No	5.42	Si
SLU 78	5.73	-537.19	-18896	-15735	-4284	2.13	2.13	-26383	10462	6240	40441	17859	5432	23291	No	5.44	Si
SLU 78	7.53	1452.6	-21290	-17728	-4286	2.13	2.13	-29725	10833	6461	40441	17859	5432	23291	No	5.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	5.73	-2992.82	-6415	-5342	-8164	2.13	1.7954	-10678	12552	6310	40441	26789	5432	32220		3.95	Si
SLV 16	7.53	4194.14	-10495	-8739	-7425	2.13	1.9961	-14653	13347	7460	40441	26789	5432	32220		4.34	Si
SLV 10	5.73	-1169.34	-19706	-16410	-6125	2.13	2.13	-27514	15920	9494	40441	26789	5432	32220		5.26	Si
SLV 10	7.53	2446.15	-23970	-19960	-5867	2.13	2.13	-33468	16250	9692	40441	26789	5432	32220		5.49	Si
SLD 14	5.73	-1504.09	-12135	-10105	-5560	2.13	2.13	-16943	13805	8234	40441	26789	5432	32220		5.79	Si
SLD 14	7.53	2482.19	-15177	-12638	-5237	2.13	2.13	-21190	14655	8740	40441	26789	5432	32220		6.15	Si
SLD 13	5.73	-1308.42	-12272	-10219	-5239	2.13	2.13	-17134	13843	8256	40441	26789	5432	32220		6.15	Si
SLD 13	7.53	2261.44	-15171	-12633	-4917	2.13	2.13	-21182	14653	8739	40441	26789	5432	32220		6.55	Si
SLV 14	5.73	-2929.27	-11361	-9461	-8955	2.13	2.13	-15863	13589	8105	40441	26789	5432	32220		3.6	Si
SLV 14	7.53	4393.73	-16529	-13764	-8194	2.13	2.13	-23078	15032	8965	40441	26789	5432	32220		3.93	Si
SLD 15	5.73	-1336.19	-10080	-8394	-4889	2.13	2.13	-14074	13231	7891	40441	26789	5432	32220		6.59	Si
SLD 15	7.53	2172.68	-12498	-10407	-4577	2.13	2.13	-17450	13907	8294	40441	26789	5432	32220		7.04	Si
SLV 13	5.73	-2473.72	-11679	-9726	-8208	2.13	2.13	-16307	13678	8158	40441	26789	5432	32220		3.93	Si
SLV 13	7.53	3879.77	-16514	-13752	-7447	2.13	2.13	-23058	15028	8963	40441	26789	5432	32220		4.33	Si
SLD 16	5.73	-1531.86	-9944	-8280	-5210	2.13	2.13	-13883	13193	7869	40441	26789	5432	32220		6.18	Si
SLD 16	7.53	2393.43	-12504	-10413	-4897	2.13	2.13	-17459	13908	8295	40441	26789	5432	32220		6.58	Si
SLV 9	5.73	-872.51	-19913	-16582	-5638	2.13	2.13	-27804	15977	9529	40441	26789	5432	32220		5.71	Si
SLV 9	7.53	2111.27	-23961	-19953	-5381	2.13	2.13	-33455	16250	9692	40441	26789	5432	32220		5.99	Si
SLV 15	5.73	-2537.26	-6733	-5606	-7418	2.13	2.0645	-9742	12365	7148	40441	26789	5432	32220		4.34	Si
SLV 15	7.53	3680.19	-10481	-8727	-6678	2.13	2.13	-14633	13343	7958	40441	26789	5432	32220		4.82	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.38	6592	-3932	216.89	526.66	2.43	Si
SLV 11	179667	0.38	6715	-4005	216.89	536.04	2.47	Si
SLV 8	179667	0.38	8236	-4912	216.89	650.62	3	Si
SLV 7	179667	0.38	8360	-4986	216.89	659.79	3.04	Si
SLV 16	179667	0.38	15803	-9425	216.89	1182.99	5.45	Si
SLV 15	179667	0.38	15993	-9538	216.89	1195.49	5.51	Si
SLV 4	179667	0.38	21285	-12694	216.89	1529.51	7.05	Si
SLV 3	179667	0.38	21474	-12807	216.89	1540.87	7.1	Si
SLV 14	179667	0.38	25372	-15132	216.89	1766.5	8.14	Si
SLV 13	179667	0.38	25561	-15244	216.89	1777.02	8.19	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-21771	-16984	-623	0.522	2512.1	0.965	7.86983	11.63229	No
SLV 6	-21568	-17092	-623	0.526	2491.5	0.964	7.93486	11.63229	No
SLV 9	-20555	-15992	-652	0.547	2388.5	0.963	8.25815	11.63229	No
SLV 10	-20353	-16101	-652	0.552	2367.9	0.963	8.33048	11.63229	No
SLV 1	-16914	-14252	-136	0.673	2018.2	0.957	10.2201	5.55889	Si
SLV 2	-16603	-14418	-136	0.683	1986.6	0.956	10.38849	5.55889	Si
SLV 13	-12863	-10946	-234	0.84	1606.7	0.947	12.88966	5.55889	Si
SLV 14	-12553	-11113	-234	0.857	1575.2	0.946	13.16677	5.55889	Si
SLV 3	-11490	-10943	252	0.921	1467.5	0.943	14.1937	5.55889	Si
SLV 4	-11179	-11110	252	0.942	1436	0.942	14.53303	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.822	SLU 43	Si
V_SLU	5.354	SLU 84	Si
PF_SLV	2.363	SLV 12	Si
V_SLV	3.598	SLV 14	Si
PFFP_SLV	2.428	SLV 12	Si
R_SLV	0.677	SLV 5	No

Maschio 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L5	L6	4.82	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	4.83	3176.26	-39694	-0.0000839	0.0004492	0.0035	4.82	49608.82	79153.77	79153.77	24.92	No	Si
SLU 48	8.35	696.03	-23126	-0.0000444	0.0004492	0.0035	4.82	40102.1	50439.21	50439.21	72.47	No	Si
SLU 58	4.83	3362.26	-42896	-0.0000912	0.0004492	0.0035	4.82	49595.89	83531.84	83531.84	24.84	No	Si
SLU 58	8.35	536.85	-24819	-0.0000473	0.0004492	0.0035	4.82	41808.88	53372.09	53372.09	99.42	No	Si
SLU 59	4.83	3346.35	-42913	-0.0000912	0.0004492	0.0035	4.82	49594.2	83555	83555	24.97	No	Si
SLU 59	8.35	446	-24791	-0.000047	0.0004492	0.0035	4.82	41782.54	53324.54	53324.54	119.56	No	Si
SLU 79	4.83	3540.69	-46981	-0.0001004	0.0004492	0.0035	4.82	48709.32	89028.1	89028.1	25.14	No	Si
SLU 79	8.35	445.5	-27304	-0.0000519	0.0004492	0.0035	4.82	44012.35	57680.05	57680.05	129.47	No	Si
SLU 51	4.83	3164.43	-39277	-0.000083	0.0004492	0.0035	4.82	49566.38	78430.84	78430.84	24.79	No	Si
SLU 51	8.35	650.21	-22740	-0.0000436	0.0004492	0.0035	4.82	39688.46	49768.81	49768.81	76.54	No	Si
SLU 71	4.83	3358.77	-43345	-0.0000921	0.0004492	0.0035	4.82	49546.18	84135.81	84135.81	25.05	No	Si
SLU 71	8.35	649.7	-25253	-0.0000484	0.0004492	0.0035	4.82	42219.66	54124.32	54124.32	83.31	No	Si
SLU 50	4.83	3180.33	-39260	-0.000083	0.0004492	0.0035	4.82	49564.41	78401.01	78401.01	24.65	No	Si
SLU 50	8.35	741.05	-22767	-0.0000438	0.0004492	0.0035	4.82	39718.08	49816.36	49816.36	67.22	No	Si
SLU 56	4.83	3358.18	-43330	-0.0000921	0.0004492	0.0035	4.82	49547.97	84116.22	84116.22	25.05	No	Si
SLU 56	8.35	491.82	-25178	-0.0000479	0.0004492	0.0035	4.82	42149.79	53994.94	53994.94	109.79	No	Si
SLU 49	4.83	3160.36	-39711	-0.0000839	0.0004492	0.0035	4.82	49610.35	79183.61	79183.61	25.06	No	Si
SLU 49	8.35	605.18	-23099	-0.0000441	0.0004492	0.0035	4.82	40073.05	50391.67	50391.67	83.27	No	Si
SLU 57	4.83	3342.28	-43348	-0.0000921	0.0004492	0.0035	4.82	49545.85	84139.38	84139.38	25.17	No	Si
SLU 57	8.35	400.98	-25151	-0.0000476	0.0004492	0.0035	4.82	42124.04	53947.39	53947.39	134.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 9	4.83	5646.73	-33925	-0.0000763	0.0006738	0.0035	4.82		71215.79	71215.79	12.61		Si
SLD 9	8.35	3857.38	-19229	-0.0000439	0.0006738	0.0035	4.82		44625.08	44625.08	11.57		Si
SLV 10	4.83	9801.52	-36334	-0.0000912	0.0006738	0.0035	4.82		75434.22	75434.22	7.7		Si
SLV 10	8.35	8086.46	-20144	-0.0000554	0.0006738	0.0035	4.82		46482.35	46482.35	5.75		Si
SLD 5	4.83	5663.89	-34732	-0.0000779	0.0006738	0.0035	4.82		72628.45	72628.45	12.82		Si
SLD 5	8.35	3987.24	-20519	-0.0000466	0.0006738	0.0035	4.82		47243.06	47243.06	11.85		Si
SLV 11	4.83	-4972.25	-26259	-0.0000598	0.0006738	0.0035	4.82		69027.88	69027.88	13.88		Si
SLV 11	8.35	-7977.75	-13689	-0.000043	0.0006738	0.0035	4.82		43932.81	43932.81	5.51		Si
SLV 6	4.83	9842.09	-38227	-0.0000951	0.0006738	0.0035	4.82		78749.61	78749.61	8		Si
SLV 6	8.35	8390.17	-23162	-0.0000619	0.0006738	0.0035	4.82		52367.16	52367.16	6.24		Si
SLV 7	4.83	-4931.68	-28152	-0.0000634	0.0006738	0.0035	4.82		72525.7	72525.7	14.71		Si
SLV 7	8.35	-7674.04	-16706	-0.000048	0.0006738	0.0035	4.82		50188.19	50188.19	6.54		Si
SLV 12	4.83	-4868.77	-26573	-0.0000602	0.0006738	0.0035	4.82		69632.46	69632.46	14.3		Si
SLV 12	8.35	-8346.23	-13644	-0.0000437	0.0006738	0.0035	4.82		43837.06	43837.06	5.25		Si
SLV 5	4.83	9738.6	-37913	-0.0000942	0.0006738	0.0035	4.82		78200.62	78200.62	8.03		Si
SLV 5	8.35	8758.65	-23206	-0.0000629	0.0006738	0.0035	4.82		52445.81	52445.81	5.99		Si
SLV 8	4.83	-4828.2	-28466	-0.0000637	0.0006738	0.0035	4.82		73098.39	73098.39	15.14		Si
SLV 8	8.35	-8042.52	-16661	-0.0000487	0.0006738	0.0035	4.82		50097.01	50097.01	6.23		Si
SLV 9	4.83	9698.04	-36020	-0.0000903	0.0006738	0.0035	4.82		74885.23	74885.23	7.72		Si
SLV 9	8.35	8454.94	-20189	-0.0000564	0.0006738	0.0035	4.82		46573.56	46573.56	5.51		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	4.83	3338.79	-43796	-24283	-3319	4.82	4.82	-35986	10833	7310	115546	24251	24582	48833	No	14.71	Si
SLU 70	8.35	513.83	-25585	-14186	-3342	4.82	4.82	-21022	10833	7310	115546	24251	24582	48833	No	14.61	Si
SLU 50	4.83	3180.33	-39260	-21768	-3276	4.82	4.82	-32258	10833	7310	115546	24251	24582	48833	No	14.91	Si
SLU 50	8.35	741.05	-22767	-12623	-3352	4.82	4.82	-18707	10828	7306	115546	24251	24582	48833	No	14.57	Si
SLU 49	4.83	3160.36	-39711	-22018	-3265	4.82	4.82	-32629	10833	7310	115546	24251	24582	48833	No	14.96	Si
SLU 49	8.35	605.18	-23099	-12807	-3279	4.82	4.82	-18980	10833	7310	115546	24251	24582	48833	No	14.89	Si
SLU 69	4.83	3354.7	-43779	-24274	-3305	4.82	4.82	-35972	10833	7310	115546	24251	24582	48833	No	14.77	Si
SLU 69	8.35	604.67	-25612	-14201	-3390	4.82	4.82	-21044	10833	7310	115546	24251	24582	48833	No	14.4	Si
SLU 72	4.83	3342.87	-43362	-24042	-3344	4.82	4.82	-35629	10833	7310	115546	24251	24582	48833	No	14.6	Si
SLU 72	8.35	558.85	-25225	-13986	-3366	4.82	4.82	-20727	10833	7310	115546	24251	24582	48833	No	14.51	Si
SLU 48	4.83	3176.26	-39694	-22009	-3251	4.82	4.82	-32615	10833	7310	115546	24251	24582	48833	No	15.02	Si
SLU 48	8.35	696.03	-23126	-12823	-3328	4.82	4.82	-19002	10833	7310	115546	24251	24582	48833	No	14.67	Si
SLU 71	4.83	3358.77	-43345	-24033	-3330	4.82	4.82	-35615	10833	7310	115546	24251	24582	48833	No	14.66	Si
SLU 71	8.35	649.7	-25253	-14002	-3414	4.82	4.82	-20749	10833	7310	115546	24251	24582	48833	No	14.3	Si
SLU 51	4.83	3164.43	-39277	-21777	-3290	4.82	4.82	-32272	10833	7310	115546	24251	24582	48833	No	14.84	Si
SLU 51	8.35	650.21	-22740	-12608	-3303	4.82	4.82	-18684	10825	7304	115546	24251	24582	48833	No	14.78	Si
SLU 79	4.83	3540.69	-46981	-26049	-3149	4.82	4.82	-38602	10833	7310	115546	24251	24582	48833	No	15.51	Si
SLU 79	8.35	445.5	-27304	-15139	-3241	4.82	4.82	-22435	10833	7310	115546	24251	24582	48833	No	15.07	Si
SLU 66	4.83	3249.72	-42973	-23827	-3173	4.82	4.82	-35309	10833	7310	115546	24251	24582	48833	No	15.39	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 66	8.35	438.73	-24936	-13826	-3257	4.82	4.82	-20489	10833	7310	115546	24251	24582	48833	No	14.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	4.83	4488.44	-30311	-16806	-10016	4.82	4.82	-24906	16250	10966	115546	36376	24582	60958		6.09	Si
SLV 13	8.35	2447.69	-14405	-7987	-8648	4.82	4.82	-11836	14867	10032	115546	36376	24582	60958		7.05	Si
SLV 14	4.83	4647.26	-30792	-17073	-10166	4.82	4.82	-25301	16250	10966	115546	36376	24582	60958		6	Si
SLV 14	8.35	1882.18	-14336	-7949	-8799	4.82	4.82	-11779	14856	10025	115546	36376	24582	60958		6.93	Si
SLV 6	4.83	9842.09	-38227	-21195	-7472	4.82	4.82	-31410	16250	10966	115546	36376	24582	60958		8.16	Si
SLV 6	8.35	8390.17	-23162	-12842	-2892	4.82	4.82	-19031	16250	10966	115546	36376	24582	60958		21.07	Si
SLV 5	4.83	9738.6	-37913	-21021	-7374	4.82	4.82	-31152	16250	10966	115546	36376	24582	60958		8.27	Si
SLV 5	8.35	8758.65	-23206	-12867	-2794	4.82	4.82	-19068	16250	10966	115546	36376	24582	60958		21.82	Si
SLV 10	4.83	9801.52	-36334	-20145	-10917	4.82	4.82	-29854	16250	10966	115546	36376	24582	60958		5.58	Si
SLV 10	8.35	8086.46	-20144	-11169	-6316	4.82	4.82	-16551	15810	10669	115546	36376	24582	60958		9.65	Si
SLV 16	4.83	246.17	-27864	-15449	-6056	4.82	4.82	-22895	16250	10966	115546	36376	24582	60958		10.07	Si
SLV 16	8.35	-3047.63	-12386	-6868	-7480	4.82	4.82	-10177	14535	9809	115546	36376	24582	60958		8.15	Si
SLV 15	4.83	87.36	-27383	-15183	-5905	4.82	4.82	-22500	16250	10966	115546	36376	24582	60958		10.32	Si
SLV 15	8.35	-2482.11	-12455	-6906	-7329	4.82	4.82	-10234	14547	9816	115546	36376	24582	60958		8.32	Si
SLV 9	4.83	9698.04	-36020	-19972	-10819	4.82	4.82	-29596	16250	10966	115546	36376	24582	60958		5.63	Si
SLV 9	8.35	8454.94	-20189	-11194	-6218	4.82	4.82	-16588	15818	10674	115546	36376	24582	60958		9.8	Si
SLV 8	4.83	-4828.2	-28466	-15783	6229	4.82	4.82	-23389	16250	10966	115546	36376	24582	60958		9.79	Si
SLV 8	8.35	-8042.52	-16661	-9238	1503	4.82	4.82	-13690	15238	10283	115546	36376	24582	60958		40.56	Si
SLV 7	4.83	-4931.68	-28152	-15609	6328	4.82	4.82	-23132	16250	10966	115546	36376	24582	60958		9.63	Si
SLV 7	8.35	-7674.04	-16706	-9263	1601	4.82	4.82	-13727	15245	10288	115546	36376	24582	60958		38.07	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-16811	0.38	262.52	1016.8	1743.51	1380.15	5.26	Si
SLV 16	-16940	0.38	262.52	1023.4	1754.19	1388.79	5.29	Si
SLV 11	-18826	0.38	262.52	1117.23	1909.53	1513.38	5.76	Si
SLV 12	-18910	0.38	262.52	1121.33	1916.44	1518.89	5.79	Si
SLV 13	-18933	0.38	262.52	1122.44	1918.3	1520.37	5.79	Si
SLV 14	-19063	0.38	262.52	1128.73	1928.9	1528.81	5.82	Si
SLV 7	-22657	0.38	262.52	1295.43	2222.51	1758.97	6.7	Si
SLV 8	-22741	0.38	262.52	1299.18	2229.27	1764.22	6.72	Si
SLV 9	-25901	0.38	262.52	1433.38	2482.55	1957.97	7.46	Si
SLV 10	-25986	0.38	262.52	1436.82	2489.32	1963.07	7.48	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-23206	-37913	-119	1.085	2697.3	0.963	16.37936	16.49386	No
SLV 6	-23162	-38227	-119	1.087	2692.7	0.963	16.40885	16.49386	No
SLV 9	-20189	-36020	155	1.227	2390.3	0.959	18.61153	16.49386	Si
SLV 10	-20144	-36334	155	1.23	2385.8	0.958	18.64987	16.49386	Si
SLV 7	-16706	-28152	-155	1.451	2036.4	0.952	22.14327	16.49386	Si
SLV 8	-16661	-28466	-155	1.454	2031.8	0.952	22.19761	16.49386	Si
SLV 1	-24464	-36622	-452	1.022	2825.2	0.964	15.40586	10.00749	Si
SLV 2	-24395	-37103	-452	1.025	2818.2	0.964	15.44636	10.00749	Si
SLV 11	-13689	-26259	119	1.726	1730.1	0.945	26.54562	16.49386	Si
SLV 12	-13644	-26573	119	1.731	1725.6	0.945	26.62388	16.49386	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.652	SLU 50	Si
V_SLU	14.302	SLU 71	Si
PF_SLV	5.252	SLV 12	Si
V_SLV	5.584	SLV 10	Si
PFFP_SLV	5.257	SLV 15	Si
R_SLV	0.993	SLV 5	No

Maschio 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.526	L5	L6	5.52	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	4.83	-13366.27	-28241	-0.0000705	0.0004492	0.0035	5.52	54633.03	85221.72	85221.72	6.38	No	Si
SLU 40	8.35	-3479.73	-20997	-0.0000399	0.0004492	0.0035	5.52	45065.94	69658.13	69658.13	20.02	No	Si
SLU 74	4.83	-14730.52	-33931	-0.0000833	0.0004492	0.0035	5.52	59997.37	96610.31	96610.31	6.56	No	Si
SLU 74	8.35	-3415.41	-25459	-0.0000473	0.0004492	0.0035	5.52	51321.77	79320.96	79320.96	23.22	No	Si
SLU 83	4.83	-15318.65	-34625	-0.0000857	0.0004492	0.0035	5.52	60522.76	97994.35	97994.35	6.4	No	Si
SLU 83	8.35	-3578.12	-25901	-0.0000483	0.0004492	0.0035	5.52	51877.54	80257.54	80257.54	22.43	No	Si
SLU 82	4.83	-15253.8	-33853	-0.0000842	0.0004492	0.0035	5.52	59937.19	96456.37	96456.37	6.32	No	Si
SLU 82	8.35	-3771.87	-25041	-0.0000472	0.0004492	0.0035	5.52	50785.21	78434.44	78434.44	20.79	No	Si
SLU 73	4.83	-14322.46	-32846	-0.0000806	0.0004492	0.0035	5.52	59121.17	94450.6	94450.6	6.59	No	Si
SLU 73	8.35	-3508.17	-24267	-0.0000454	0.0004492	0.0035	5.52	49764.94	76793.24	76793.24	21.89	No	Si
SLU 39	4.83	-13544.08	-28177	-0.0000707	0.0004492	0.0035	5.52	54562.37	85086.8	85086.8	6.28	No	Si
SLU 39	8.35	-3430.3	-20985	-0.0000397	0.0004492	0.0035	5.52	45047.19	69630.6	69630.6	20.3	No	Si
SLU 41	4.83	-13431.12	-29013	-0.000072	0.0004492	0.0035	5.52	55471.92	86814.01	86814.01	6.46	No	Si
SLU 41	8.35	-3285.98	-21857	-0.0000409	0.0004492	0.0035	5.52	46361.43	71592.36	71592.36	21.79	No	Si
SLU 42	4.83	-13253.32	-29076	-0.0000718	0.0004492	0.0035	5.52	55539.47	86940.71	86940.71	6.56	No	Si
SLU 42	8.35	-3335.41	-21869	-0.0000411	0.0004492	0.0035	5.52	46379.56	71619.89	71619.89	21.47	No	Si
SLU 81	4.83	-15431.6	-33790	-0.0000844	0.0004492	0.0035	5.52	59887.4	96329.67	96329.67	6.24	No	Si
SLU 81	8.35	-3722.44	-25029	-0.0000471	0.0004492	0.0035	5.52	50769.35	78408.48	78408.48	21.06	No	Si
SLU 84	4.83	-15140.85	-34689	-0.0000855	0.0004492	0.0035	5.52	60569.44	98121.05	98121.05	6.48	No	Si
SLU 84	8.35	-3627.56	-25913	-0.0000484	0.0004492	0.0035	5.52	51892.78	80283.49	80283.49	22.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	4.83	-12313.05	-21214	-0.0000554	0.0006738	0.0035	5.52		71190.66	71190.66	5.78		Si
SLV 11	8.35	-15971.06	-10242	-0.0000499	0.0006738	0.0035	4.416		44886.47	44886.47	2.81		Si
SLD 4	4.83	-18219.13	-17099	-0.0000594	0.0006738	0.0035	5.52		61622.96	61622.96	3.38		Si
SLD 4	8.35	-5509.34	-13534	-0.0000308	0.0006738	0.0035	5.52		52932	52932	9.61		Si
SLV 12	4.83	-11350.17	-21732	-0.0000545	0.0006738	0.0035	5.52		72393.03	72393.03	6.38		Si
SLV 12	8.35	-15991.78	-10452	-0.0000497	0.0006738	0.0035	5.52		45413.58	45413.58	2.84		Si
SLV 1	4.83	-26407.16	-11450	-0.0001402	0.0006738	0.0035	4.416		47853.89	47853.89	1.81		Si
SLV 1	8.35	-927.8	-13565	-0.0000229	0.0006738	0.0035	5.52		53008.59	53008.59	57.13		Si
SLV 4	4.83	-29354.31	-8700	-0.0003889	0.0006738	0.0035	4.416		41009.56	41009.56	1.4		Si
SLV 4	8.35	-9840.62	-8624	-0.0000309	0.0006738	0.0035	5.52		40816.57	40816.57	4.15		Si
SLV 8	4.83	-22161.23	-13745	-0.0000708	0.0006738	0.0035	4.416		53445.69	53445.69	2.41		Si
SLV 8	8.35	-17932.31	-6748	-0.0001428	0.0006738	0.0035	4.416		36047.48	36047.48	2.01		Si
SLV 2	4.83	-24929.4	-12246	-0.0000997	0.0006738	0.0035	4.416		49793.02	49793.02	2		Si
SLV 2	8.35	-959.61	-13887	-0.0000235	0.0006738	0.0035	5.52		53792.65	53792.65	56.06		Si
SLV 7	4.83	-23124.12	-13226	-0.0000774	0.0006738	0.0035	4.416		52182.19	52182.19	2.26		Si
SLV 7	8.35	-17911.59	-6538	-0.000155	0.0006738	0.0035	4.416		35513.3	35513.3	1.98		Si
SLD 3	4.83	-18853.86	-16758	-0.0000604	0.0006738	0.0035	5.52		60790.06	60790.06	3.22		Si
SLD 3	8.35	-5495.68	-13396	-0.0000306	0.0006738	0.0035	5.52		52595.23	52595.23	9.57		Si
SLV 3	4.83	-30832.07	-7905	-0.0004752	0.0006738	0.0035	4.416		38995.84	38995.84	1.26		Si
SLV 3	8.35	-9808.82	-8302	-0.0000305	0.0006738	0.0035	5.52		40007.6	40007.6	4.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	4.83	-12722.29	-30292	-16796	-2119	5.52	5.52	-21733	10833	8372	115546	27773	28152	55925	No	26.39	Si
SLU 64	8.35	-2733.58	-22423	-12432	-2163	5.52	5.52	-16088	10478	8098	115546	27773	28152	55925	No	25.86	Si
SLU 70	4.83	-12543.24	-32381	-17954	-2102	5.52	5.52	-23232	10833	8372	115546	27773	28152	55925	No	26.6	Si
SLU 70	8.35	-2628.32	-24519	-13595	-2148	5.52	5.52	-17591	10679	8253	115546	27773	28152	55925	No	26.04	Si
SLU 67	4.83	-12656.19	-31546	-17491	-2066	5.52	5.52	-22633	10833	8372	115546	27773	28152	55925	No	27.07	Si
SLU 67	8.35	-2772.64	-23647	-13111	-2110	5.52	5.52	-16966	10595	8188	115546	27773	28152	55925	No	26.5	Si
SLU 77	4.83	-14617.57	-34766	-19276	-2056	5.52	5.52	-24943	10833	8372	115546	27773	28152	55925	No	27.19	Si
SLU 77	8.35	-3271.1	-26331	-14599	-2110	5.52	5.52	-18891	10833	8372	115546	27773	28152	55925	No	26.51	Si
SLU 66	4.83	-12834	-31482	-17455	-2170	5.52	5.52	-22587	10833	8372	115546	27773	28152	55925	No	25.77	Si
SLU 66	8.35	-2723.21	-23635	-13104	-2215	5.52	5.52	-16957	10594	8187	115546	27773	28152	55925	No	25.25	Si
SLU 72	4.83	-12318.59	-32027	-17758	-2088	5.52	5.52	-22978	10833	8372	115546	27773	28152	55925	No	26.79	Si
SLU 72	8.35	-2494.38	-24178	-13406	-2133	5.52	5.52	-17347	10646	8227	115546	27773	28152	55925	No	26.22	Si
SLU 69	4.83	-12721.05	-32318	-17919	-2207	5.52	5.52	-23187	10833	8372	115546	27773	28152	55925	No	25.34	Si
SLU 69	8.35	-2578.89	-24506	-13588	-2253	5.52	5.52	-17582	10678	8252	115546	27773	28152	55925	No	24.83	Si
SLU 79	4.83	-14392.91	-34412	-19080	-2042	5.52	5.52	-24689	10833	8372	115546	27773	28152	55925	No	27.39	Si
SLU 79	8.35	-3137.15	-25990	-14411	-2095	5.52	5.52	-18647	10820	8361	115546	27773	28152	55925	No	26.7	Si
SLU 74	4.83	-14730.52	-33931	-18813	-2020	5.52	5.52	-24344	10833	8372	115546	27773	28152	55925	No	27.69	Si
SLU 74	8.35	-3415.41	-25459	-14116	-2072	5.52	5.52	-18266	10769	8322	115546	27773	28152	55925	No	26.99	Si
SLU 71	4.83	-12496.39	-31963	-17722	-2193	5.52	5.52	-22932	10833	8372	115546	27773	28152	55925	No	25.5	Si
SLU 71	8.35	-2444.94	-24166	-13399	-2238	5.52	5.52	-17338	10645	8227	115546	27773	28152	55925	No	24.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	4.83	-11350.17	-21732	-12050	8025	5.52	5.52	-15592	15618	12070	115546	41659	28152	69811		8.7	Si
SLV 12	8.35	-15991.78	-10452	-5795	4551	5.52	3.6897	-11257	14753	7621	115546	41659	28152	69811		15.34	Si
SLV 4	4.83	-29354.31	-8700	-4824	-9076	4.416	0	0	0	0	115546	33327	22522	55849		6.15	Si
SLV 4	8.35	-9840.62	-8624	-4781	-10031	5.52	4.8566	-7055	13911	9458	115546	41659	28152	69811		6.96	Si
SLV 14	4.83	11107.49	-38872	-21553	6808	5.52	5.52	-27890	16250	12558	115546	41659	28152	69811		10.25	Si
SLV 14	8.35	5508.82	-26232	-14545	7692	5.52	5.52	-18821	16250	12558	115546	41659	28152	69811		9.08	Si
SLV 5	4.83	-8374.42	-25045	-13886	-11094	5.52	5.52	-17969	16094	12437	115546	41659	28152	69811		6.29	Si
SLV 5	8.35	11691.79	-24083	-13353	-7689	5.52	5.52	-17278	15956	12331	115546	41659	28152	69811		9.08	Si
SLV 6	4.83	-7411.53	-25563	-14174	-10572	5.52	5.52	-18341	16168	12495	115546	41659	28152	69811		6.6	Si
SLV 6	8.35	11671.06	-24292	-13469	-7168	5.52	5.52	-17429	15986	12354	115546	41659	28152	69811		9.74	Si
SLV 3	4.83	-30832.07	-7905	-4383	-9877	4.416	0	0	0	0	115546	33327	22522	55849		5.65	Si
SLV 3	8.35	-9808.82	-8302	-4603	-10830	5.52	4.7355	-6964	13893	9211	115546	41659	28152	69811		6.45	Si
SLV 1	4.83	-26407.16	-11450	-6349	-13683	4.416	1.3613	0	0	0	115546	33327	22522	55849		4.08	Si
SLV 1	8.35	-927.8	-13565	-7521	-12592	5.52	5.52	-9733	14447	11164	115546	41659	28152	69811		5.54	Si
SLV 16	4.83	6682.58	-35327	-19587	10615	5.52	5.52	-25346	16250	12558	115546	41659	28152	69811		6.58	Si
SLV 16	8.35	-3372.19	-20969	-11626	9454	5.52	5.52	-15044	15509	11985	115546	41659	28152	69811		7.38	Si
SLV 2	4.83	-24929.4	-12246	-6790	-12883	4.416	2.1728	0	0	0	115546	33327	22522	55849		4.34	Si
SLV 2	8.35	-959.61	-13887	-7700	-11793	5.52	5.52	-9963	14493	11200	115546	41659	28152	69811		5.92	Si
SLV 15	4.83	5204.81	-34531	-19146	9814	5.52	5.52	-24775	16250	12558	115546	41659	28152	69811		7.11	Si
SLV 15	8.35	-3340.39	-20647	-11448	8655	5.52	5.52	-14814	15463	11950	115546	41659	28152	69811		8.07	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-11040	0.38	300.65	712.54	1312.11	1012.33	3.37	Si
SLV 8	-11397	0.38	300.65	733.58	1342.57	1038.07	3.45	Si
SLV 3	-11758	0.38	300.65	754.76	1373.42	1064.09	3.54	Si
SLV 4	-12306	0.38	300.65	786.6	1420.19	1103.4	3.67	Si
SLV 11	-15044	0.38	300.65	941.23	1651.79	1296.51	4.31	Si
SLV 12	-15401	0.38	300.65	960.85	1681.59	1321.22	4.39	Si
SLV 1	-16461	0.38	300.65	1018.35	1769.03	1393.69	4.64	Si
SLV 2	-17009	0.38	300.65	1047.64	1814.2	1430.92	4.76	Si
SLV 15	-25107	0.38	300.65	1445.94	2478.82	1962.38	6.53	Si
SLV 16	-25655	0.38	300.65	1470.56	2523.05	1996.8	6.64	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-27996	-33551	202	1.033	3233.4	0.964	15.5728	16.49386	No
SLV 9	-27786	-33033	202	1.04	3212	0.964	15.68221	16.49386	No
SLV 6	-24292	-25563	-186	1.174	2856.6	0.96	17.77559	16.49386	Si
SLV 5	-24083	-25045	-186	1.183	2835.3	0.96	17.91873	16.49386	Si
SLV 14	-26232	-38872	646	1.08	3053.9	0.962	16.31075	10.00749	Si
SLV 13	-25910	-38077	646	1.092	3021.2	0.962	16.49871	10.00749	Si
SLV 16	-20969	-35327	639	1.319	2518.7	0.955	20.06274	10.00749	Si
SLV 15	-20647	-34531	639	1.337	2486	0.955	20.3491	10.00749	Si
SLV 12	-10452	-21732	178	2.413	1452.8	0.929	37.77186	16.49386	Si
SLV 11	-10242	-21214	178	2.453	1431.7	0.928	38.42504	16.49386	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.242	SLU 81	Si
V_SLU	24.826	SLU 69	Si
PF_SLV	1.265	SLV 3	Si
V_SLV	4.081	SLV 1	Si
PFFP_SLV	3.367	SLV 7	Si
R_SLV	0.944	SLV 10	No

Maschio 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.385	-13.778	-0.354	Z medio 570 cm	L6	3.031	0.28	2.649	1.777	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 63	6.57	3025.69	-29735	-0.000068	0.0003743	0.0035	3.0314	29560.85	34413.32	34413.32	11.37	No	Si
SLU 63	8.35	1082.23	-24748	-0.0000501	0.0003743	0.0035	3.0314	26767.84	29746.38	29746.38	27.49	No	Si
SLU 18	6.57	2567.99	-24040	-0.0000543	0.0003743	0.0035	3.0314	26300.47	29104.68	29104.68	11.33	No	Si
SLU 18	8.35	1094.6	-20048	-0.0000407	0.0003743	0.0035	3.0314	23337.04	25589.69	25589.69	23.38	No	Si
SLU 60	6.57	3017.99	-29079	-0.0000666	0.0003743	0.0035	3.0314	29243.56	33784.22	33784.22	11.19	No	Si
SLU 60	8.35	1136.15	-24118	-0.000049	0.0003743	0.0035	3.0314	26352.89	29175.18	29175.18	25.68	No	Si
SLU 61	6.57	3004.03	-29088	-0.0000666	0.0003743	0.0035	3.0314	29247.97	33792.73	33792.73	11.25	No	Si
SLU 61	8.35	1103.99	-24126	-0.0000489	0.0003743	0.0035	3.0314	26358.6	29182.88	29182.88	26.43	No	Si
SLU 82	6.57	3141.52	-32112	-0.0000736	0.0003743	0.0035	3.0314	30585.32	36196.02	36196.02	11.52	No	Si
SLU 82	8.35	1222.54	-26707	-0.0000546	0.0003743	0.0035	3.0314	27969	31549.33	31549.33	25.81	No	Si
SLU 62	6.57	3039.65	-29726	-0.0000681	0.0003743	0.0035	3.0314	29556.64	34404.74	34404.74	11.32	No	Si
SLU 62	8.35	1114.39	-24739	-0.0000502	0.0003743	0.0035	3.0314	26762.31	29738.62	29738.62	26.69	No	Si
SLU 20	6.57	2589.65	-24686	-0.0000557	0.0003743	0.0035	3.0314	26727.83	29690.26	29690.26	11.46	No	Si
SLU 20	8.35	1072.84	-20670	-0.0000419	0.0003743	0.0035	3.0314	23835.18	26126.04	26126.04	24.35	No	Si
SLU 81	6.57	3155.48	-32103	-0.0000737	0.0003743	0.0035	3.0314	30581.85	36190.77	36190.77	11.47	No	Si
SLU 81	8.35	1254.69	-26698	-0.0000547	0.0003743	0.0035	3.0314	27964.06	31541.42	31541.42	25.14	No	Si
SLU 83	6.57	3177.14	-32750	-0.0000752	0.0003743	0.0035	3.0314	30826.35	36573.9	36573.9	11.51	No	Si
SLU 83	8.35	1232.93	-27320	-0.0000559	0.0003743	0.0035	3.0314	28317.23	32120.39	32120.39	26.05	No	Si
SLU 19	6.57	2554.03	-24049	-0.0000543	0.0003743	0.0035	3.0314	26306.45	29112.7	29112.7	11.4	No	Si
SLU 19	8.35	1062.44	-20057	-0.0000406	0.0003743	0.0035	3.0314	23343.96	25597.02	25597.02	24.09	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	6.57	3544.45	-20648	-0.0000499	0.0005615	0.0035	3.0314		27379.59	27379.59	7.72		Si
SLV 6	8.35	3841.94	-16170	-0.0000425	0.0005615	0.0035	3.0314		22337.85	22337.85	5.81		Si
SLV 13	6.57	3901.96	-21454	-0.0000528	0.0005615	0.0035	3.0314		28302.97	28302.97	7.25		Si
SLV 13	8.35	1341.83	-18916	-0.0000387	0.0005615	0.0035	3.0314		25412.49	25412.49	18.94		Si
SLV 5	6.57	3594.55	-20610	-0.00005	0.0005615	0.0035	3.0314		27336.95	27336.95	7.61		Si
SLV 5	8.35	3839.34	-16174	-0.0000425	0.0005615	0.0035	3.0314		22341.72	22341.72	5.82		Si
SLD 9	6.57	2994.96	-21309	-0.0000492	0.0005615	0.0035	3.0314		28137.07	28137.07	9.39		Si
SLD 9	8.35	1923.22	-17524	-0.0000382	0.0005615	0.0035	3.0314		23846.4	23846.4	12.4		Si
SLV 9	6.57	4407.95	-20600	-0.000053	0.0005615	0.0035	3.0314		27325.03	27325.03	6.2		Si
SLV 9	8.35	3762.96	-16994	-0.0000438	0.0005615	0.0035	3.0314		23254.67	23254.67	6.18		Si
SLV 7	6.57	-600.7	-23113	-0.0000439	0.0005615	0.0035	3.0314		32834.75	32834.75	54.66		Si
SLV 7	8.35	-2821.62	-18927	-0.000044	0.0005615	0.0035	3.0314		28019.07	28019.07	9.93		Si
SLV 14	6.57	3825.08	-21511	-0.0000526	0.0005615	0.0035	3.0314		28368.74	28368.74	7.42		Si
SLV 14	8.35	1345.82	-18911	-0.0000387	0.0005615	0.0035	3.0314		25406.45	25406.45	18.88		Si
SLV 8	6.57	-650.8	-23151	-0.0000441	0.0005615	0.0035	3.0314		32876.02	32876.02	50.52		Si
SLV 8	8.35	-2819.02	-18924	-0.000044	0.0005615	0.0035	3.0314		28015.05	28015.05	9.94		Si
SLD 10	6.57	2973.04	-21326	-0.0000491	0.0005615	0.0035	3.0314		28155.8	28155.8	9.47		Si
SLD 10	8.35	1924.36	-17522	-0.0000382	0.0005615	0.0035	3.0314		23844.7	23844.7	12.39		Si
SLV 10	6.57	4357.85	-20637	-0.0000529	0.0005615	0.0035	3.0314		27367.66	27367.66	6.28		Si
SLV 10	8.35	3765.56	-16991	-0.0000438	0.0005615	0.0035	3.0314		23250.78	23250.78	6.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 62	6.57	3039.65	-29726	-24753	3396	3.0314	3.0314	-29163	10833	9195	28547	25416	7730	33146	No	9.76	Si
SLU 62	8.35	1114.39	-24739	-20601	2532	3.0314	3.0314	-24271	10181	8641	28547	25416	7730	33146	No	13.09	Si
SLU 51	6.57	2136.47	-26596	-22147	3411	3.0314	3.0314	-26092	10423	8847	28547	25416	7730	33146	No	9.72	Si
SLU 51	8.35	239.84	-21836	-18183	3053	3.0314	3.0314	-21423	9801	8319	28547	25416	7730	33146	No	10.86	Si
SLU 55	6.57	2743.12	-28605	-23820	3441	3.0314	3.0314	-28063	10686	9070	28547	25416	7730	33146	No	9.63	Si
SLU 55	8.35	814.6	-23694	-19730	2730	3.0314	3.0314	-23245	10044	8525	28547	25416	7730	33146	No	12.14	Si
SLU 56	6.57	2818.89	-29689	-24722	3378	3.0314	3.0314	-29127	10828	9191	28547	25416	7730	33146	No	9.81	Si
SLU 56	8.35	897.5	-24736	-20598	2661	3.0314	3.0314	-24268	10180	8641	28547	25416	7730	33146	No	12.46	Si
SLU 47	6.57	2105.5	-25955	-21613	3372	3.0314	3.0314	-25464	10340	8776	28547	25416	7730	33146	No	9.83	Si
SLU 47	8.35	240.16	-21220	-17671	3023	3.0314	3.0314	-20819	9720	8250	28547	25416	7730	33146	No	10.96	Si
SLU 58	6.57	2788.04	-29237	-24346	3435	3.0314	3.0314	-28683	10769	9140	28547	25416	7730	33146	No	9.65	Si
SLU 58	8.35	846.44	-24301	-20236	2716	3.0314	3.0314	-23841	10123	8592	28547	25416	7730	33146	No	12.2	Si
SLU 52	6.57	2721.46	-27958	-23281	3372	3.0314	3.0314	-27429	10602	8999	28547	25416	7730	33146	No	9.83	Si
SLU 52	8.35	836.37	-23072	-19213	2672	3.0314	3.0314	-22635	9962	8456	28547	25416	7730	33146	No	12.4	Si
SLU 59	6.57	2774.08	-29246	-24353	3480	3.0314	3.0314	-28692	10770	9141	28547	25416	7730	33146	No	9.53	Si
SLU 59	8.35	814.28	-24310	-20243	2760	3.0314	3.0314	-23849	10124	8593	28547	25416	7730	33146	No	12.01	Si
SLU 57	6.57	2804.93	-29698	-24730	3422	3.0314	3.0314	-29136	10829	9192	28547	25416	7730	33146	No	9.69	Si
SLU 57	8.35	865.34	-24744	-20605	2704	3.0314	3.0314	-24276	10181	8642	28547	25416	7730	33146	No	12.26	Si
SLU 63	6.57	3025.69	-29735	-24760	3440	3.0314	3.0314	-29172	10833	9195	28547	25416	7730	33146	No	9.63	Si
SLU 63	8.35	1082.23	-24748	-20608	2576	3.0314	3.0314	-24279	10182	8642	28547	25416	7730	33146	No	12.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	6.57	212.69	-23103	-19238	7209	3.0314	3.0314	-22666	14950	12689	28547	38125	7730	41236		5.72	Si
SLV 11	8.35	-2898	-19748	-16444	4453	3.0314	3.0314	-19374	14291	12130	28547	38125	7730	40677		9.14	Si
SLV 12	6.57	162.6	-23140	-19269	7204	3.0314	3.0314	-22702	14957	12695	28547	38125	7730	41242		5.72	Si
SLV 12	8.35	-2895.4	-19744	-16441	4495	3.0314	3.0314	-19370	14291	12130	28547	38125	7730	40676		9.05	Si
SLD 7	6.57	784.1	-22425	-18674	4671	3.0314	3.0314	-22000	14817	12576	28547	38125	7730	41123		8.8	Si
SLD 7	8.35	-980.42	-18396	-15318	3317	3.0314	3.0314	-18047	14026	11905	28547	38125	7730	40452		12.19	Si
SLV 7	6.57	-600.7	-23113	-19247	7559	3.0314	3.0314	-22676	14952	12691	28547	38125	7730	41237		5.46	Si
SLV 7	8.35	-2821.62	-18927	-15761	5005	3.0314	3.0314	-18569	14130	11994	28547	38125	7730	40540		8.1	Si
SLV 4	6.57	-144.82	-22297	-18567	4486	3.0314	3.0314	-21875	14792	12555	28547	38125	7730	41101		9.16	Si
SLV 4	8.35	-397.89	-17001	-14157	3793	3.0314	3.0314	-16680	13753	11673	28547	38125	7730	40220		10.6	Si
SLD 11	6.57	1131.5	-22420	-18670	4523	3.0314	3.0314	-21996	14816	12575	28547	38125	7730	41122		9.09	Si
SLD 11	8.35	-1013.67	-18746	-15610	3082	3.0314	3.0314	-18391	14095	11963	28547	38125	7730	40510		13.14	Si
SLD 8	6.57	762.19	-22441	-18687	4669	3.0314	3.0314	-22017	14820	12579	28547	38125	7730	41126		8.81	Si
SLD 8	8.35	-979.28	-18394	-15317	3336	3.0314	3.0314	-18046	14026	11905	28547	38125	7730	40451		12.13	Si
SLV 3	6.57	-67.93	-22240	-18519	4493	3.0314	3.0314	-21819	14780	12545	28547	38125	7730	41092		9.15	Si
SLV 3	8.35	-401.88	-17007	-14162	3728	3.0314	3.0314	-16685	13754	11674	28547	38125	7730	40220		10.79	Si
SLV 8	6.57	-650.8	-23151	-19278	7554	3.0314	3.0314	-22712	14959	12697	28547	38125	7730	41244		5.46	Si
SLV 8	8.35	-2819.02	-18924	-15758	5047	3.0314	3.0314	-18565	14130	11993	28547	38125	7730	40540		8.03	Si
SLD 12	6.57	1109.58	-22436	-18683	4521	3.0314	3.0314	-22012	14819	12578	28547	38125	7730	41125		9.1	Si
SLD 12	8.35	-1012.54	-18744	-15609	3101	3.0314	3.0314	-18389	14095	11963	28547	38125	7730	40510		13.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.461 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.4	22288	-18918	187.36	2261.99	12.07	Si
SLV 6	179667	0.4	22330	-18953	187.36	2265.5	12.09	Si
SLV 9	179667	0.4	22490	-19089	187.36	2278.95	12.16	Si
SLV 10	179667	0.4	22532	-19125	187.36	2282.44	12.18	Si
SLV 1	179667	0.4	23052	-19566	187.36	2325.79	12.41	Si
SLV 2	179667	0.4	23116	-19621	187.36	2331.1	12.44	Si
SLV 13	179667	0.4	23725	-20138	187.36	2381.28	12.71	Si
SLV 14	179667	0.4	23789	-20192	187.36	2386.52	12.74	Si
SLV 3	179667	0.4	23918	-20301	187.36	2397.06	12.79	Si
SLV 4	179667	0.4	23982	-20356	187.36	2402.28	12.82	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.461 Wa = 0.05 Ta = 0.0418

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-19748	-23103	549	0.815	2327.4	0.96	12.3387	6.77651	Si
SLV 12	-19744	-23140	549	0.815	2327	0.96	12.34081	6.77651	Si
SLV 7	-18927	-23113	-139	0.864	2244	0.958	13.10601	6.77651	Si
SLV 8	-18924	-23151	-139	0.864	2243.6	0.958	13.10794	6.77651	Si
SLV 9	-16994	-20600	169	0.945	2047.5	0.955	14.38569	6.77651	Si
SLV 10	-16991	-20637	169	0.945	2047.1	0.955	14.3885	6.77651	Si
SLV 5	-16174	-20610	-518	0.966	1964.1	0.953	14.73255	6.77651	Si
SLV 6	-16170	-20648	-519	0.966	1963.8	0.953	14.73511	6.77651	Si
SLV 15	-19742	-22205	1219	0.784	2326.9	0.96	11.87583	4.54361	Si
SLV 16	-19737	-22262	1218	0.784	2326.3	0.96	11.87894	4.54361	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.194	SLU 60	Si
V_SLU	9.526	SLU 59	Si
PF_SLV	5.814	SLV 6	Si
V_SLV	5.456	SLV 7	Si
PFFP_SLV	12.073	SLV 5	Si
R_SLV	1.821	SLV 11	Si

Maschio 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L5	L6	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	5.73	2707.85	-17025	-0.0000671	0.0003743	0.0035	2.105	12834.65	14236.39	14236.39	5.26	No	Si
SLU 43	7.53	82.88	-14258	-0.0000382	0.0003743	0.0035	2.105	11440.58	12492	12492	150.72	No	Si
SLU 78	5.73	3322.97	-22392	-0.0000892	0.0003743	0.0035	2.105	14773	17446.74	17446.74	5.25	No	Si
SLU 78	7.53	357.83	-19597	-0.0000558	0.0003743	0.0035	2.105	13889.79	15931.41	15931.41	44.52	No	Si
SLU 81	5.73	3362.04	-22521	-0.00009	0.0003743	0.0035	2.105	14807.31	17502.01	17502.01	5.21	No	Si
SLU 81	7.53	325.92	-19727	-0.000056	0.0003743	0.0035	2.105	13936.81	16018.68	16018.68	49.15	No	Si
SLU 74	5.73	3318.42	-22173	-0.0000885	0.0003743	0.0035	2.105	14713.66	17353.66	17353.66	5.23	No	Si
SLU 74	7.53	324.23	-19378	-0.0000549	0.0003743	0.0035	2.105	13808.98	15784.37	15784.37	48.68	No	Si
SLU 77	5.73	3335.84	-22395	-0.0000894	0.0003743	0.0035	2.105	14773.72	17447.9	17447.9	5.23	No	Si
SLU 77	7.53	360.76	-19600	-0.0000559	0.0003743	0.0035	2.105	13890.78	15933.24	15933.24	44.17	No	Si
SLU 82	5.73	3349.17	-22519	-0.0000899	0.0003743	0.0035	2.105	14806.6	17500.84	17500.84	5.23	No	Si
SLU 82	7.53	322.99	-19724	-0.0000559	0.0003743	0.0035	2.105	13935.83	16016.84	16016.84	49.59	No	Si
SLU 79	5.73	3283.36	-22010	-0.0000877	0.0003743	0.0035	2.105	14668.43	17284.66	17284.66	5.26	No	Si
SLU 79	7.53	358.28	-19215	-0.0000547	0.0003743	0.0035	2.105	13747.76	15675.36	15675.36	43.75	No	Si
SLU 83	5.73	3379.46	-22743	-0.0000909	0.0003743	0.0035	2.105	14864.66	17596.89	17596.89	5.21	No	Si
SLU 83	7.53	362.45	-19949	-0.0000569	0.0003743	0.0035	2.105	14015.9	16168.46	16168.46	44.61	No	Si
SLU 75	5.73	3305.55	-22170	-0.0000884	0.0003743	0.0035	2.105	14712.91	17352.5	17352.5	5.25	No	Si
SLU 75	7.53	321.3	-19375	-0.0000549	0.0003743	0.0035	2.105	13807.96	15782.55	15782.55	49.12	No	Si
SLU 84	5.73	3366.59	-22741	-0.0000908	0.0003743	0.0035	2.105	14863.97	17595.73	17595.73	5.23	No	Si
SLU 84	7.53	359.52	-19946	-0.0000569	0.0003743	0.0035	2.105	14014.94	16166.62	16166.62	44.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 15	5.73	3189.6	-12475	-0.000056	0.0005615	0.0035	2.105		11701.18	11701.18	3.67		Si
SLD 15	7.53	-959.86	-9954	-0.0000325	0.0005615	0.0035	2.105		10827.25	10827.25	11.28		Si
SLD 13	5.73	3271.92	-12799	-0.0000575	0.0005615	0.0035	2.105		11959.52	11959.52	3.66		Si
SLD 13	7.53	-1082.74	-10178	-0.000034	0.0005615	0.0035	2.105		11026.35	11026.35	10.18		Si
SLV 16	5.73	4572.75	-8793	-0.0000601	0.0005615	0.0035	2.105		8795.65	8795.65	1.92		Si
SLV 16	7.53	-2799.75	-5768	-0.0000363	0.0005615	0.0035	2.105		7007.95	7007.95	2.5		Si
SLV 15	5.73	4366.77	-9103	-0.0000577	0.0005615	0.0035	2.105		9063.03	9063.03	2.08		Si
SLV 15	7.53	-2447.83	-6077	-0.0000333	0.0005615	0.0035	2.105		7304.86	7304.86	2.98		Si
SLD 16	5.73	3278.07	-12341	-0.0000563	0.0005615	0.0035	2.105		11595.45	11595.45	3.54		Si
SLD 16	7.53	-1111.02	-9821	-0.0000333	0.0005615	0.0035	2.105		10709.44	10709.44	9.64		Si
SLD 14	5.73	3360.39	-12666	-0.0000578	0.0005615	0.0035	2.105		11853.51	11853.51	3.53		Si
SLD 14	7.53	-1233.9	-10045	-0.0000348	0.0005615	0.0035	2.105		10907.96	10907.96	8.84		Si
SLV 10	5.73	3369.84	-14442	-0.0000628	0.0005615	0.0035	2.105		13280.1	13280.1	3.94		Si
SLV 10	7.53	-1310.27	-11605	-0.0000395	0.0005615	0.0035	2.105		12255.49	12255.49	9.35		Si
SLV 14	5.73	4762.49	-9540	-0.0000629	0.0005615	0.0035	2.105		9400.18	9400.18	1.97		Si
SLV 14	7.53	-3082.36	-6278	-0.0000401	0.0005615	0.0035	2.105		7495.48	7495.48	2.43		Si
SLV 13	5.73	4556.5	-9850	-0.0000608	0.0005615	0.0035	2.105		9640.05	9640.05	2.12		Si
SLV 13	7.53	-2730.44	-6588	-0.0000369	0.0005615	0.0035	2.105		7786.65	7786.65	2.85		Si
SLV 12	5.73	2737.39	-11954	-0.0000511	0.0005615	0.0035	2.105		11287.95	11287.95	4.12		Si
SLV 12	7.53	-368.26	-9904	-0.000028	0.0005615	0.0035	2.105		10782.34	10782.34	29.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	5.73	3362.04	-22521	-18754	1674	2.105	2.105	-31819	10833	6385	40441	17649	5368	23017	No	13.75	Si
SLU 81	7.53	325.92	-19727	-16427	1674	2.105	2.105	-27871	10661	6283	40441	17649	5368	23017	No	13.75	Si
SLU 75	5.73	3305.55	-22170	-18461	1645	2.105	2.105	-31323	10833	6385	40441	17649	5368	23017	No	13.99	Si
SLU 75	7.53	321.3	-19375	-16134	1645	2.105	2.105	-27374	10594	6244	40441	17649	5368	23017	No	13.99	Si
SLU 73	5.73	3227.07	-21562	-17955	1625	2.105	2.105	-30463	10833	6385	40441	17649	5368	23017	No	14.17	Si
SLU 73	7.53	280.33	-18767	-15627	1625	2.105	2.105	-26514	10480	6177	40441	17649	5368	23017	No	14.17	Si
SLU 84	5.73	3366.59	-22741	-18936	1658	2.105	2.105	-32129	10833	6385	40441	17649	5368	23017	No	13.88	Si
SLU 84	7.53	359.52	-19946	-16609	1658	2.105	2.105	-28180	10702	6308	40441	17649	5368	23017	No	13.88	Si
SLU 78	5.73	3322.97	-22392	-18646	1635	2.105	2.105	-31636	10833	6385	40441	17649	5368	23017	No	14.08	Si
SLU 78	7.53	357.83	-19597	-16319	1635	2.105	2.105	-27687	10636	6269	40441	17649	5368	23017	No	14.08	Si
SLU 83	5.73	3379.46	-22743	-18939	1664	2.105	2.105	-32132	10833	6385	40441	17649	5368	23017	No	13.84	Si
SLU 83	7.53	362.45	-19949	-16611	1664	2.105	2.105	-28184	10702	6308	40441	17649	5368	23017	No	13.84	Si
SLU 74	5.73	3318.42	-22173	-18464	1651	2.105	2.105	-31326	10833	6385	40441	17649	5368	23017	No	13.94	Si
SLU 74	7.53	324.23	-19378	-16136	1651	2.105	2.105	-27378	10595	6245	40441	17649	5368	23017	No	13.94	Si
SLU 82	5.73	3349.17	-22519	-18752	1669	2.105	2.105	-31815	10833	6385	40441	17649	5368	23017	No	13.79	Si
SLU 82	7.53	322.99	-19724	-16424	1669	2.105	2.105	-27867	10660	6283	40441	17649	5368	23017	No	13.79	Si
SLU 76	5.73	3244.5	-21783	-18139	1614	2.105	2.105	-30776	10833	6385	40441	17649	5368	23017	No	14.26	Si
SLU 76	7.53	316.87	-18989	-15812	1614	2.105	2.105	-26828	10521	6201	40441	17649	5368	23017	No	14.26	Si
SLU 77	5.73	3335.84	-22395	-18648	1640	2.105	2.105	-31640	10833	6385	40441	17649	5368	23017	No	14.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	7.53	360.76	-19600	-16321	1640	2.105	2.105	-27691	10637	6269	40441	17649	5368	23017	No	14.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 14	5.73	3360.39	-12666	-10547	2774	2.105	2.105	-17895	13996	8249	40441	26474	5368	31841		11.48	Si
SLD 14	7.53	-1233.9	-10045	-8365	2574	2.105	2.105	-14192	13255	7812	40441	26474	5368	31841		12.37	Si
SLV 10	5.73	3369.84	-14442	-12026	2570	2.105	2.105	-20405	14498	8545	40441	26474	5368	31841		12.39	Si
SLV 10	7.53	-1310.27	-11605	-9664	2507	2.105	2.105	-16396	13696	8072	40441	26474	5368	31841		12.7	Si
SLD 15	5.73	3189.6	-12475	-10388	2581	2.105	2.105	-17624	13942	8217	40441	26474	5368	31841		12.33	Si
SLD 15	7.53	-959.86	-9954	-8289	2359	2.105	2.105	-14064	13229	7797	40441	26474	5368	31841		13.5	Si
SLV 3	5.73	-142.14	-20467	-17043	-2513	2.105	2.105	-28916	16200	9548	40441	26474	5368	31841		12.67	Si
SLV 3	7.53	3382.12	-19441	-16189	-2044	2.105	2.105	-27467	15910	9377	40441	26474	5368	31841		15.58	Si
SLD 13	5.73	3271.92	-12799	-10658	2641	2.105	2.105	-18083	14033	8271	40441	26474	5368	31841		12.06	Si
SLD 13	7.53	-1082.74	-10178	-8475	2441	2.105	2.105	-14380	13293	7835	40441	26474	5368	31841		13.04	Si
SLV 14	5.73	4762.49	-9540	-7944	4894	2.105	1.6599	-13479	13112	6094	40441	26474	5368	31841		6.51	Si
SLV 14	7.53	-3082.36	-6278	-5228	4425	2.105	1.6846	-11139	12644	5964	40441	26474	5368	31841		7.2	Si
SLV 16	5.73	4572.75	-8793	-7322	4754	2.105	1.5974	-12424	12901	5771	40441	26474	5368	31841		6.7	Si
SLV 16	7.53	-2799.75	-5768	-4803	4232	2.105	1.7012	-10128	12442	5927	40441	26474	5368	31841		7.52	Si
SLV 15	5.73	4366.77	-9103	-7580	4444	2.105	1.7184	-12861	12989	6250	40441	26474	5368	31841		7.17	Si
SLV 15	7.53	-2447.83	-6077	-5061	3922	2.105	1.9492	-9308	12278	6701	40441	26474	5368	31841		8.12	Si
SLV 13	5.73	4556.5	-9850	-8202	4584	2.105	1.7697	-13916	13200	6541	40441	26474	5368	31841		6.95	Si
SLV 13	7.53	-2730.44	-6588	-5486	4115	2.105	1.9141	-10276	12472	6684	40441	26474	5368	31841		7.74	Si
SLD 16	5.73	3278.07	-12341	-10277	2715	2.105	2.105	-17436	13904	8195	40441	26474	5368	31841		11.73	Si
SLD 16	7.53	-1111.02	-9821	-8178	2492	2.105	2.105	-13876	13192	7775	40441	26474	5368	31841		12.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.38	12745	-7512	214.34	963.91	4.5	Si
SLV 15	179667	0.38	13271	-7822	214.34	999.89	4.66	Si
SLV 14	179667	0.38	14214	-8377	214.34	1063.68	4.96	Si
SLV 13	179667	0.38	14739	-8687	214.34	1098.82	5.13	Si
SLV 12	179667	0.38	18261	-10763	214.34	1326.66	6.19	Si
SLV 11	179667	0.38	18604	-10965	214.34	1348.1	6.29	Si
SLV 10	179667	0.38	23155	-13648	214.34	1620.97	7.56	Si
SLV 9	179667	0.38	23498	-13849	214.34	1640.59	7.65	Si
SLV 8	179667	0.38	24379	-14369	214.34	1690.52	7.89	Si
SLV 7	179667	0.38	24722	-14571	214.34	1709.69	7.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-13693	-16375	624	0.764	1687.4	0.95	11.69436	11.63229	Si
SLV 6	-13671	-16012	624	0.765	1685.2	0.95	11.71026	11.63229	Si
SLV 7	-11496	-15387	-732	0.875	1464.5	0.943	13.48711	11.63229	Si
SLV 9	-11501	-11470	721	0.876	1465.1	0.943	13.49347	11.63229	Si
SLV 8	-11474	-15024	-732	0.877	1462.3	0.943	13.50901	11.63229	Si
SLV 10	-11480	-11107	721	0.877	1462.9	0.943	13.51509	11.63229	Si
SLV 11	-9304	-10482	-635	1.048	1242.6	0.935	16.29037	11.63229	Si
SLV 12	-9283	-10118	-635	1.05	1240.5	0.935	16.32237	11.63229	Si
SLV 1	-15486	-21850	37	0.723	1869.5	0.954	11.01639	5.55889	Si
SLV 2	-15453	-21292	37	0.725	1866.1	0.954	11.03688	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.206	SLU 81	Si
V_SLU	13.748	SLU 81	Si
PF_SLV	1.923	SLV 16	Si
V_SLV	6.506	SLV 14	Si
PFFP_SLV	4.497	SLV 16	Si
R_SLV	1.005	SLV 5	Si

Maschio 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	5.73	3216.57	-58491	-0.0000966	0.0003743	0.0035	3.98	56391.05	75236.64	75236.64	23.39	No	Si
SLU 81	7.53	-2664.05	-53331	-0.000086	0.0003743	0.0035	3.98	56242.95	73708.67	73708.67	27.67	No	Si
SLU 52	5.73	2940.39	-49931	-0.0000808	0.0003743	0.0035	3.98	55634.98	68655.48	68655.48	23.35	No	Si
SLU 52	7.53	-2271.18	-44823	-0.0000706	0.0003743	0.0035	3.98	53959.27	67645.33	67645.33	29.78	No	Si
SLU 73	5.73	3164.1	-55931	-0.0000919	0.0003743	0.0035	3.98	56434.33	73800.15	73800.15	23.32	No	Si
SLU 73	7.53	-2515.87	-50771	-0.0000812	0.0003743	0.0035	3.98	55822.76	72161.42	72161.42	28.68	No	Si
SLU 84	5.73	3275.11	-59153	-0.0000979	0.0003743	0.0035	3.98	56342.47	75477.2	75477.2	23.05	No	Si
SLU 84	7.53	-2566.17	-53993	-0.0000869	0.0003743	0.0035	3.98	56314.15	74121.7	74121.7	28.88	No	Si
SLU 83	5.73	3232.82	-59233	-0.000098	0.0003743	0.0035	3.98	56335.54	75506.47	75506.47	23.36	No	Si
SLU 83	7.53	-2561.58	-54073	-0.0000871	0.0003743	0.0035	3.98	56321.73	74172.08	74172.08	28.96	No	Si
SLU 61	5.73	3035.15	-52411	-0.0000853	0.0003743	0.0035	3.98	56118.52	70787.39	70787.39	23.32	No	Si
SLU 61	7.53	-2423.95	-47303	-0.0000751	0.0003743	0.0035	3.98	54887.21	69774.97	69774.97	28.79	No	Si
SLU 63	5.73	3051.4	-53153	-0.0000867	0.0003743	0.0035	3.98	56221.23	71434.99	71434.99	23.41	No	Si
SLU 63	7.53	-2321.48	-48045	-0.0000761	0.0003743	0.0035	3.98	55122.84	70370.01	70370.01	30.31	No	Si
SLU 78	5.73	3211.94	-58324	-0.0000963	0.0003743	0.0035	3.98	56400.87	75176.31	75176.31	23.41	No	Si
SLU 78	7.53	-2374.28	-53164	-0.000085	0.0003743	0.0035	3.98	56222.57	73605.36	73605.36	31	No	Si
SLU 76	5.73	3180.35	-56673	-0.0000932	0.0003743	0.0035	3.98	56445.45	74377	74377	23.39	No	Si
SLU 76	7.53	-2413.39	-51512	-0.0000823	0.0003743	0.0035	3.98	55968.17	72601.4	72601.4	30.08	No	Si
SLU 82	5.73	3258.86	-58411	-0.0000966	0.0003743	0.0035	3.98	56395.89	75207.66	75207.66	23.08	No	Si
SLU 82	7.53	-2668.64	-53251	-0.0000859	0.0003743	0.0035	3.98	56233.28	73659.02	73659.02	27.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	5.73	-16042.25	-53225	-0.0001122	0.0005615	0.0035	3.98		86052.93	86052.93	5.36		Si
SLV 1	7.53	15378.27	-48813	-0.0001035	0.0005615	0.0035	3.98		76373.73	76373.73	4.97		Si
SLV 2	5.73	-14620.2	-52251	-0.0001074	0.0005615	0.0035	3.98		85051.78	85051.78	5.82		Si
SLV 2	7.53	13868.47	-47839	-0.0000985	0.0005615	0.0035	3.98		75196.77	75196.77	5.42		Si
SLV 4	5.73	-15331.47	-50736	-0.0001065	0.0005615	0.0035	3.98		83325.07	83325.07	5.43		Si
SLV 4	7.53	14052.38	-46177	-0.0000963	0.0005615	0.0035	3.98		73200.42	73200.42	5.21		Si
SLV 13	5.73	19715.13	-27404	-0.0000797	0.0005615	0.0035	3.98		47616.98	47616.98	2.42		Si
SLV 13	7.53	-17451.99	-24047	-0.0000697	0.0005615	0.0035	3.98		47198.49	47198.49	2.7		Si
SLV 15	5.73	19003.86	-25889	-0.000076	0.0005615	0.0035	3.98		45328.44	45328.44	2.39		Si
SLV 15	7.53	-17268.08	-22385	-0.0000672	0.0005615	0.0035	3.98		44531.6	44531.6	2.58		Si
SLV 16	5.73	20425.92	-24915	-0.0000786	0.0005615	0.0035	3.98		43866.9	43866.9	2.15		Si
SLV 16	7.53	-18777.88	-21411	-0.0000706	0.0005615	0.0035	3.98		42983.99	42983.99	2.29		Si
SLD 16	5.73	9984.88	-33012	-0.0000669	0.0005615	0.0035	3.98		56232.45	56232.45	5.63		Si
SLD 16	7.53	-9000.7	-29245	-0.0000592	0.0005615	0.0035	3.98		55196.38	55196.38	6.13		Si
SLD 14	5.73	10299.78	-33674	-0.0000686	0.0005615	0.0035	3.98		57265.63	57265.63	5.56		Si
SLD 14	7.53	-9080.34	-29972	-0.0000604	0.0005615	0.0035	3.98		56245.3	56245.3	6.19		Si
SLV 14	5.73	21137.19	-26431	-0.0000822	0.0005615	0.0035	3.98		46144.39	46144.39	2.18		Si
SLV 14	7.53	-18961.79	-23073	-0.0000725	0.0005615	0.0035	3.98		45630.76	45630.76	2.41		Si
SLV 3	5.73	-16753.52	-51710	-0.0001114	0.0005615	0.0035	3.98		84432.77	84432.77	5.04		Si
SLV 3	7.53	15562.18	-47151	-0.0001012	0.0005615	0.0035	3.98		74368.91	74368.91	4.78		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	5.73	3164.1	-55931	-46574	3267	3.98	3.98	-41793	10833	12073	40441	33370	10149	43519	No	13.32	Si
SLU 73	7.53	-2515.87	-50771	-42277	3267	3.98	3.98	-37937	10833	12073	40441	33370	10149	43519	No	13.32	Si
SLU 74	5.73	3153.4	-57663	-48016	3237	3.98	3.98	-43087	10833	12073	40441	33370	10149	43519	No	13.45	Si
SLU 74	7.53	-2472.17	-52502	-43719	3237	3.98	3.98	-39231	10833	12073	40441	33370	10149	43519	No	13.45	Si
SLU 78	5.73	3211.94	-58324	-48568	3215	3.98	3.98	-43582	10833	12073	40441	33370	10149	43519	No	13.54	Si
SLU 78	7.53	-2374.28	-53164	-44270	3215	3.98	3.98	-39726	10833	12073	40441	33370	10149	43519	No	13.54	Si
SLU 77	5.73	3169.65	-58404	-48634	3189	3.98	3.98	-43642	10833	12073	40441	33370	10149	43519	No	13.65	Si
SLU 77	7.53	-2369.69	-53244	-44337	3189	3.98	3.98	-39786	10833	12073	40441	33370	10149	43519	No	13.65	Si
SLU 83	5.73	3232.82	-59233	-49324	3331	3.98	3.98	-44261	10833	12073	40441	33370	10149	43519	No	13.07	Si
SLU 83	7.53	-2561.58	-54073	-45027	3331	3.98	3.98	-40405	10833	12073	40441	33370	10149	43519	No	13.07	Si
SLU 82	5.73	3258.86	-58411	-48640	3405	3.98	3.98	-43647	10833	12073	40441	33370	10149	43519	No	12.78	Si
SLU 82	7.53	-2668.64	-53251	-44343	3405	3.98	3.98	-39791	10833	12073	40441	33370	10149	43519	No	12.78	Si
SLU 75	5.73	3195.69	-57583	-47950	3263	3.98	3.98	-43027	10833	12073	40441	33370	10149	43519	No	13.34	Si
SLU 75	7.53	-2476.76	-52422	-43653	3263	3.98	3.98	-39171	10833	12073	40441	33370	10149	43519	No	13.34	Si
SLU 76	5.73	3180.35	-56673	-47192	3219	3.98	3.98	-42348	10833	12073	40441	33370	10149	43519	No	13.52	Si
SLU 76	7.53	-2413.39	-51512	-42895	3219	3.98	3.98	-38492	10833	12073	40441	33370	10149	43519	No	13.52	Si
SLU 81	5.73	3216.57	-58491	-48706	3378	3.98	3.98	-43706	10833	12073	40441	33370	10149	43519	No	12.88	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	7.53	-2664.05	-53331	-44409	3378	3.98	3.98	-39850	10833	12073	40441	33370	10149	43519	No	12.88	Si
SLU 84	5.73	3275.11	-59153	-49257	3357	3.98	3.98	-44201	10833	12073	40441	33370	10149	43519	No	12.97	Si
SLU 84	7.53	-2566.17	-53993	-44960	3357	3.98	3.98	-40345	10833	12073	40441	33370	10149	43519	No	12.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	5.73	21137.19	-26431	-22009	22382	3.98	3.5708	-19750	14367	14364	40441	50055	10149	54805		2.45	Si
SLV 14	7.53	-18961.79	-23073	-19213	21592	3.98	3.5045	-19725	14362	14093	40441	50055	10149	54534		2.53	Si
SLD 14	5.73	10299.78	-33674	-28041	10861	3.98	3.98	-25162	15449	17217	40441	50055	10149	57657		5.31	Si
SLD 14	7.53	-9080.34	-29972	-24958	10522	3.98	3.98	-22396	14896	16600	40441	50055	10149	57041		5.42	Si
SLV 16	5.73	20425.92	-24915	-20747	21783	3.98	3.5105	-18617	14140	13899	40441	50055	10149	54340		2.49	Si
SLV 16	7.53	-18777.88	-21411	-17830	21042	3.98	3.339	-19253	14267	13339	40441	50055	10149	53780		2.56	Si
SLV 4	5.73	-15331.47	-50736	-42248	-16258	3.98	3.98	-37911	16250	18109	40441	50055	10149	58550		3.6	Si
SLV 4	7.53	14052.38	-46177	-38453	-15467	3.98	3.98	-34505	16250	18109	40441	50055	10149	58550		3.79	Si
SLV 15	5.73	19003.86	-25889	-21558	20155	3.98	3.7678	-19345	14286	15071	40441	50055	10149	55512		2.75	Si
SLV 15	7.53	-17268.08	-22385	-18641	19413	3.98	3.6558	-18360	14089	14421	40441	50055	10149	54862		2.83	Si
SLV 13	5.73	19715.13	-27404	-22820	20753	3.98	3.8118	-20477	14512	15489	40441	50055	10149	55930		2.69	Si
SLV 13	7.53	-17451.99	-24047	-20024	19963	3.98	3.7927	-19028	14222	15103	40441	50055	10149	55544		2.78	Si
SLD 16	5.73	9984.88	-33012	-27489	10599	3.98	3.98	-24667	15350	17106	40441	50055	10149	57547		5.43	Si
SLD 16	7.53	-9000.7	-29245	-24353	10284	3.98	3.98	-21853	14787	16479	40441	50055	10149	56920		5.54	Si
SLV 3	5.73	-16753.52	-51710	-43059	-17886	3.98	3.98	-38639	16250	18109	40441	50055	10149	58550		3.27	Si
SLV 3	7.53	15562.18	-47151	-39264	-17096	3.98	3.98	-35233	16250	18109	40441	50055	10149	58550		3.42	Si
SLV 2	5.73	-14620.2	-52251	-43510	-15659	3.98	3.98	-39044	16250	18109	40441	50055	10149	58550		3.74	Si
SLV 2	7.53	13868.47	-47839	-39836	-14917	3.98	3.98	-35747	16250	18109	40441	50055	10149	58550		3.92	Si
SLV 1	5.73	-16042.25	-53225	-44321	-17288	3.98	3.98	-39771	16250	18109	40441	50055	10149	58550		3.39	Si
SLV 1	7.53	15378.27	-48813	-40647	-16546	3.98	3.98	-36474	16250	18109	40441	50055	10149	58550		3.54	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.38	20586	-22941	405.27	2778.83	6.86	Si
SLV 15	179667	0.38	21460	-23915	405.27	2877.63	7.1	Si
SLV 14	179667	0.38	22088	-24615	405.27	2947.64	7.27	Si
SLV 13	179667	0.38	22962	-25589	405.27	3043.76	7.51	Si
SLV 12	179667	0.38	27105	-30206	405.27	3478.25	8.58	Si
SLV 11	179667	0.38	27674	-30840	405.27	3535.22	8.72	Si
SLV 10	179667	0.38	32110	-35784	405.27	3956.39	9.76	Si
SLV 9	179667	0.38	32680	-36418	405.27	4007.53	9.89	Si
SLV 8	179667	0.38	34064	-37961	405.27	4129.07	10.19	Si
SLV 7	179667	0.38	34633	-38595	405.27	4177.95	10.31	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-33502	-46267	1235	0.614	3963.9	0.959	9.30676	11.63229	No
SLV 6	-33083	-45463	1235	0.62	3921.3	0.958	9.41022	11.63229	No
SLV 7	-28648	-40028	-1255	0.7	3470.6	0.953	10.6681	11.63229	No
SLV 9	-28439	-36458	1245	0.705	3449.3	0.953	10.74179	11.63229	No
SLV 8	-28229	-39224	-1255	0.709	3428	0.953	10.8066	11.63229	No
SLV 10	-28020	-35654	1245	0.713	3406.8	0.953	10.88215	11.63229	No
SLV 11	-23586	-30219	-1246	0.823	2956.6	0.946	12.64525	11.63229	Si
SLV 12	-23167	-29415	-1245	0.836	2914.1	0.946	12.8432	11.63229	Si
SLV 1	-37821	-55742	352	0.575	4403.2	0.962	8.68719	5.55889	Si
SLV 2	-37179	-54509	352	0.584	4337.8	0.962	8.81951	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	23.046	SLU 84	Si
V_SLU	12.783	SLU 82	Si
PF_SLV	2.148	SLV 16	Si
V_SLV	2.449	SLV 14	Si
PFFP_SLV	6.857	SLV 16	Si
R_SLV	0.8	SLV 5	No

Maschio 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	5.73	-492.36	-48470	-0.0000725	0.0003743	0.0035	3.98	55249.21	70702.46	70702.46	143.6	No	Si
SLU 48	7.53	696.26	-43564	-0.0000649	0.0003743	0.0035	3.98	53405.44	63415.83	63415.83	91.08	No	Si
SLU 47	5.73	-490.86	-46733	-0.0000696	0.0003743	0.0035	3.98	54692.74	69303.96	69303.96	141.19	No	Si
SLU 47	7.53	667.32	-41826	-0.000062	0.0003743	0.0035	3.98	52549.83	62044.04	62044.04	92.97	No	Si
SLU 1	5.73	-365.08	-36989	-0.0000537	0.0003743	0.0035	3.98	49610.58	60831.43	60831.43	166.62	No	Si
SLU 1	7.53	556.06	-33200	-0.0000482	0.0003743	0.0035	3.98	46735.64	52121.55	52121.55	93.73	No	Si
SLU 43	5.73	-497.59	-45997	-0.0000684	0.0003743	0.0035	3.98	54425.19	68679.93	68679.93	138.03	No	Si
SLU 43	7.53	736.91	-41090	-0.000061	0.0003743	0.0035	3.98	52155.62	61470.73	61470.73	83.42	No	Si
SLU 64	5.73	-430.56	-52088	-0.0000784	0.0003743	0.0035	3.98	56067.76	72947.71	72947.71	169.42	No	Si
SLU 64	7.53	695.99	-47129	-0.0000707	0.0003743	0.0035	3.98	54829.1	66308.36	66308.36	95.27	No	Si
SLU 46	5.73	-467.79	-47636	-0.000071	0.0003743	0.0035	3.98	54995.27	70044.21	70044.21	149.74	No	Si
SLU 46	7.53	671.87	-42729	-0.0000635	0.0003743	0.0035	3.98	53007.89	62754.12	62754.12	93.4	No	Si
SLU 44	5.73	-478.03	-45935	-0.0000682	0.0003743	0.0035	3.98	54401.94	68626.86	68626.86	143.56	No	Si
SLU 44	7.53	678.18	-41028	-0.0000608	0.0003743	0.0035	3.98	52121.78	61422.97	61422.97	90.57	No	Si
SLU 50	5.73	-523.26	-47592	-0.0000711	0.0003743	0.0035	3.98	54981.02	70008.37	70008.37	133.79	No	Si
SLU 50	7.53	715.2	-42685	-0.0000635	0.0003743	0.0035	3.98	52985.97	62718.95	62718.95	87.69	No	Si
SLU 51	5.73	-511.52	-47555	-0.000071	0.0003743	0.0035	3.98	54969.16	69978.61	69978.61	136.8	No	Si
SLU 51	7.53	679.97	-42648	-0.0000634	0.0003743	0.0035	3.98	52967.75	62689.8	62689.8	92.2	No	Si
SLU 45	5.73	-479.52	-47673	-0.0000711	0.0003743	0.0035	3.98	55007.03	70073.86	70073.86	146.13	No	Si
SLU 45	7.53	707.11	-42766	-0.0000636	0.0003743	0.0035	3.98	53026	62783.3	62783.3	88.79	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	5.73	21872.96	-43957	-0.0001104	0.0005615	0.0035	3.98		70555.03	70555.03	3.23		Si
SLV 16	7.53	-19378.6	-40325	-0.0000989	0.0005615	0.0035	3.98		70623.98	70623.98	3.64		Si
SLV 13	5.73	20299.74	-45983	-0.0001101	0.0005615	0.0035	3.98		72967.39	72967.39	3.59		Si
SLV 13	7.53	-17759.32	-42305	-0.0000984	0.0005615	0.0035	3.98		73196.48	73196.48	4.12		Si
SLV 2	5.73	-20680.52	-37021	-0.0000965	0.0005615	0.0035	3.98		66221.06	66221.06	3.2		Si
SLV 2	7.53	18610.83	-33047	-0.0000857	0.0005615	0.0035	3.98		56287.55	56287.55	3.02		Si
SLD 1	5.73	-9779.8	-38888	-0.0000754	0.0005615	0.0035	3.98		68778.27	68778.27	7.03		Si
SLD 1	7.53	9020.35	-35013	-0.0000678	0.0005615	0.0035	3.98		59363.99	59363.99	6.58		Si
SLD 3	5.73	-9872.36	-37918	-0.0000741	0.0005615	0.0035	3.98		67459.37	67459.37	6.83		Si
SLD 3	7.53	9103.46	-34061	-0.0000666	0.0005615	0.0035	3.98		57870.72	57870.72	6.36		Si
SLV 15	5.73	20085.36	-43777	-0.000106	0.0005615	0.0035	3.98		70341.05	70341.05	3.5		Si
SLV 15	7.53	-17575.34	-40144	-0.0000946	0.0005615	0.0035	3.98		70391.19	70391.19	4.01		Si
SLV 14	5.73	22087.34	-46163	-0.0001145	0.0005615	0.0035	3.98		73183.45	73183.45	3.31		Si
SLV 14	7.53	-19562.58	-42486	-0.0001028	0.0005615	0.0035	3.98		73432.71	73432.71	3.75		Si
SLV 3	5.73	-22682.5	-34634	-0.0000972	0.0005615	0.0035	3.98		62950.8	62950.8	2.78		Si
SLV 3	7.53	20598.06	-30706	-0.0000865	0.0005615	0.0035	3.98		52660.9	52660.9	2.56		Si
SLV 1	5.73	-22468.12	-36840	-0.0001002	0.0005615	0.0035	3.98		65971.82	65971.82	2.94		Si
SLV 1	7.53	20414.09	-32867	-0.0000894	0.0005615	0.0035	3.98		56006.53	56006.53	2.74		Si
SLV 4	5.73	-20894.9	-34815	-0.0000935	0.0005615	0.0035	3.98		63196.33	63196.33	3.02		Si
SLV 4	7.53	18794.81	-30886	-0.0000828	0.0005615	0.0035	3.98		52939.09	52939.09	2.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	5.73	-479.52	-47673	-39698	-650	3.98	3.98	-35623	10833	12073	40441	33370	10149	43519	No	66.96	Si
SLU 45	7.53	707.11	-42766	-35612	-650	3.98	3.98	-31956	10833	12073	40441	33370	10149	43519	No	66.96	Si
SLU 44	5.73	-478.03	-45935	-38251	-633	3.98	3.98	-34324	10833	12073	40441	33370	10149	43519	No	68.75	Si
SLU 44	7.53	678.18	-41028	-34165	-633	3.98	3.98	-30658	10833	12073	40441	33370	10149	43519	No	68.75	Si
SLU 46	5.73	-467.79	-47636	-39667	-624	3.98	3.98	-35595	10833	12073	40441	33370	10149	43519	No	69.77	Si
SLU 46	7.53	671.87	-42729	-35581	-624	3.98	3.98	-31929	10833	12073	40441	33370	10149	43519	No	69.77	Si
SLU 43	5.73	-497.59	-45997	-38302	-676	3.98	3.98	-34370	10833	12073	40441	33370	10149	43519	No	64.33	Si
SLU 43	7.53	736.91	-41090	-34216	-676	3.98	3.98	-30704	10833	12073	40441	33370	10149	43519	No	64.33	Si
SLU 48	5.73	-492.36	-48470	-40362	-651	3.98	3.98	-36219	10833	12073	40441	33370	10149	43519	No	66.85	Si
SLU 48	7.53	696.26	-43564	-36276	-651	3.98	3.98	-32552	10833	12073	40441	33370	10149	43519	No	66.85	Si
SLU 49	5.73	-480.62	-48434	-40331	-625	3.98	3.98	-36191	10833	12073	40441	33370	10149	43519	No	69.64	Si
SLU 49	7.53	661.02	-43527	-36245	-625	3.98	3.98	-32525	10833	12073	40441	33370	10149	43519	No	69.64	Si
SLU 47	5.73	-490.86	-46733	-38915	-634	3.98	3.98	-34920	10833	12073	40441	33370	10149	43519	No	68.63	Si
SLU 47	7.53	667.32	-41826	-34829	-634	3.98	3.98	-31254	10833	12073	40441	33370	10149	43519	No	68.63	Si
SLU 50	5.73	-523.26	-47592	-39630	-679	3.98	3.98	-35562	10833	12073	40441	33370	10149	43519	No	64.12	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	7.53	715.2	-42685	-35544	-679	3.98	3.98	-31895	10833	12073	40441	33370	10149	43519	No	64.12	Si
SLU 51	5.73	-511.52	-47555	-39599	-653	3.98	3.98	-35534	10833	12073	40441	33370	10149	43519	No	66.69	Si
SLU 51	7.53	679.97	-42648	-35513	-653	3.98	3.98	-31868	10833	12073	40441	33370	10149	43519	No	66.69	Si
SLU 71	5.73	-456.24	-53683	-44703	-619	3.98	3.98	-40114	10833	12073	40441	33370	10149	43519	No	70.34	Si
SLU 71	7.53	674.28	-48724	-40573	-619	3.98	3.98	-36408	10833	12073	40441	33370	10149	43519	No	70.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	5.73	22087.34	-46163	-38441	23813	3.98	3.98	-34495	16250	18109	40441	50055	10149	58550		2.46	Si
SLV 14	7.53	-19562.58	-42486	-35378	22913	3.98	3.98	-31747	16250	18109	40441	50055	10149	58550		2.56	Si
SLV 13	5.73	20299.74	-45983	-38290	21818	3.98	3.98	-34360	16250	18109	40441	50055	10149	58550		2.68	Si
SLV 13	7.53	-17759.32	-42305	-35228	20918	3.98	3.98	-31612	16250	18109	40441	50055	10149	58550		2.8	Si
SLD 1	5.73	-9779.8	-38888	-32383	-10607	3.98	3.98	-29059	16228	18085	40441	50055	10149	58526		5.52	Si
SLD 1	7.53	9020.35	-35013	-29156	-10325	3.98	3.98	-26163	15649	17440	40441	50055	10149	57880		5.61	Si
SLV 1	5.73	-22468.12	-36840	-30677	-24215	3.98	3.98	-27528	15922	17744	40441	50055	10149	58185		2.4	Si
SLV 1	7.53	20414.09	-32867	-27368	-23555	3.98	3.98	-24559	15328	17082	40441	50055	10149	57523		2.44	Si
SLV 16	5.73	21872.96	-43957	-36604	23324	3.98	3.98	-32846	16250	18109	40441	50055	10149	58550		2.51	Si
SLV 16	7.53	-19378.6	-40325	-33579	22664	3.98	3.98	-30132	16250	18109	40441	50055	10149	58550		2.58	Si
SLV 3	5.73	-22682.5	-34634	-28840	-24705	3.98	3.98	-25880	15593	17376	40441	50055	10149	57817		2.34	Si
SLV 3	7.53	20598.06	-30706	-25569	-23804	3.98	3.9575	-22944	15005	16628	40441	50055	10149	57069		2.4	Si
SLV 15	5.73	20085.36	-43777	-36453	21329	3.98	3.98	-32711	16250	18109	40441	50055	10149	58550		2.75	Si
SLV 15	7.53	-17575.34	-40144	-33429	20669	3.98	3.98	-29997	16250	18109	40441	50055	10149	58550		2.83	Si
SLV 4	5.73	-20894.9	-34815	-28991	-22710	3.98	3.98	-26015	15620	17406	40441	50055	10149	57847		2.55	Si
SLV 4	7.53	18794.81	-30886	-25719	-21809	3.98	3.98	-23079	15032	16752	40441	50055	10149	57193		2.62	Si
SLV 2	5.73	-20680.52	-37021	-30828	-22220	3.98	3.98	-27663	15949	17774	40441	50055	10149	58215		2.62	Si
SLV 2	7.53	18610.83	-33047	-27519	-21560	3.98	3.98	-24694	15355	17112	40441	50055	10149	57553		2.67	Si
SLD 3	5.73	-9872.36	-37918	-31575	-10819	3.98	3.98	-28333	16083	17923	40441	50055	10149	58364		5.39	Si
SLD 3	7.53	9103.46	-34061	-28363	-10436	3.98	3.98	-25452	15507	17281	40441	50055	10149	57722		5.53	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.38	29117	-32448	405.27	3676.59	9.07	Si
SLV 4	179667	0.38	29279	-32628	405.27	3692.2	9.11	Si
SLV 7	179667	0.38	29824	-33236	405.27	3744.37	9.24	Si
SLV 8	179667	0.38	29930	-33354	405.27	3754.4	9.26	Si
SLV 1	179667	0.38	31052	-34605	405.27	3859.58	9.52	Si
SLV 2	179667	0.38	31214	-34785	405.27	3874.55	9.56	Si
SLV 11	179667	0.38	32342	-36042	405.27	3977.28	9.81	Si
SLV 12	179667	0.38	32448	-36160	405.27	3986.76	9.84	Si
SLV 5	179667	0.38	36276	-40426	405.27	4315.25	10.65	Si
SLV 6	179667	0.38	36382	-40544	405.27	4323.89	10.67	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-33671	-44981	1273	0.61	3981.1	0.959	9.25013	11.63229	No
SLV 9	-33604	-44829	1273	0.611	3974.3	0.959	9.26628	11.63229	No
SLV 6	-31923	-41861	1275	0.638	3803.4	0.957	9.69281	11.63229	No
SLV 5	-31857	-41710	1275	0.639	3796.6	0.957	9.71064	11.63229	No
SLV 12	-27662	-37743	-1284	0.72	3370.4	0.952	10.98601	11.63229	No
SLV 11	-27596	-37592	-1284	0.721	3363.6	0.952	11.00923	11.63229	No
SLV 8	-25915	-34624	-1282	0.76	3193	0.95	11.63172	11.63229	No
SLV 7	-25848	-34473	-1282	0.762	3186.2	0.95	11.65789	11.63229	Si
SLV 14	-33625	-46127	375	0.635	3976.4	0.959	9.62766	5.55889	Si
SLV 13	-33522	-45895	375	0.637	3966	0.959	9.65358	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	83.417	SLU 43	Si
V_SLU	64.123	SLU 50	Si
PF_SLV	2.557	SLV 3	Si
V_SLV	2.34	SLV 3	Si
PFFP_SLV	9.072	SLV 3	Si
R_SLV	0.795	SLV 10	No

Maschio 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L5	L6	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 67	5.73	-2417.2	-20489	-0.0000831	0.0003743	0.0035	1.965	12767.69	15693.97	15693.97	6.49	No	Si
SLU 67	7.53	518.68	-19484	-0.0000616	0.0003743	0.0035	1.965	12484.75	14571.91	14571.91	28.09	No	Si
SLU 77	5.73	-2594.52	-22924	-0.0000934	0.0003743	0.0035	1.965	13306.01	16835.24	16835.24	6.49	No	Si
SLU 77	7.53	391.72	-22185	-0.0000693	0.0003743	0.0035	1.965	13164.53	15757.85	15757.85	40.23	No	Si
SLU 53	5.73	-2399.92	-20296	-0.0000823	0.0003743	0.0035	1.965	12716.23	15607.53	15607.53	6.5	No	Si
SLU 53	7.53	485.16	-19307	-0.0000607	0.0003743	0.0035	1.965	12431.45	14462.92	14462.92	29.81	No	Si
SLU 64	5.73	-2376.56	-19776	-0.0000803	0.0003743	0.0035	1.965	12570.83	15377.25	15377.25	6.47	No	Si
SLU 64	7.53	522.99	-18694	-0.0000591	0.0003743	0.0035	1.965	12237.62	14086.83	14086.83	26.94	No	Si
SLU 71	5.73	-2418.95	-20463	-0.000083	0.0003743	0.0035	1.965	12760.87	15682.37	15682.37	6.48	No	Si
SLU 71	7.53	507.55	-19441	-0.0000613	0.0003743	0.0035	1.965	12471.84	14545.28	14545.28	28.66	No	Si
SLU 70	5.73	-2438.4	-20832	-0.0000845	0.0003743	0.0035	1.965	12856.2	15849.58	15849.58	6.5	No	Si
SLU 70	7.53	510.96	-19857	-0.0000627	0.0003743	0.0035	1.965	12593.96	14794.81	14794.81	28.96	No	Si
SLU 74	5.73	-2573.32	-22581	-0.000092	0.0003743	0.0035	1.965	13242.7	16671.79	16671.79	6.48	No	Si
SLU 74	7.53	399.44	-21811	-0.0000681	0.0003743	0.0035	1.965	13085.81	15613.75	15613.75	39.09	No	Si
SLU 81	5.73	-2579.88	-22789	-0.0000928	0.0003743	0.0035	1.965	13281.62	16773.13	16773.13	6.5	No	Si
SLU 81	7.53	356.06	-22067	-0.0000685	0.0003743	0.0035	1.965	13140.18	15712.19	15712.19	44.13	No	Si
SLU 66	5.73	-2431	-20472	-0.0000832	0.0003743	0.0035	1.965	12763.16	15686.25	15686.25	6.45	No	Si
SLU 66	7.53	516.29	-19450	-0.0000615	0.0003743	0.0035	1.965	12474.76	14551.29	14551.29	28.18	No	Si
SLU 69	5.73	-2452.19	-20815	-0.0000846	0.0003743	0.0035	1.965	12851.87	15841.76	15841.76	6.46	No	Si
SLU 69	7.53	508.57	-19824	-0.0000626	0.0003743	0.0035	1.965	12584.41	14777.41	14777.41	29.06	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	5.73	-3967.89	-12436	-0.0000687	0.0005615	0.0035	1.965		11886.92	11886.92	3		Si
SLD 3	7.53	2957.85	-10683	-0.0000546	0.0005615	0.0035	1.965		9560.29	9560.29	3.23		Si
SLV 2	5.73	-6332.35	-10468	-0.0001043	0.0005615	0.0035	1.572		10339.67	10339.67	1.63		Si
SLV 2	7.53	6056.01	-7781	-0.0001488	0.0005615	0.0035	1.965		7299.6	7299.6	1.21		Si
SLD 2	5.73	-3753.89	-13251	-0.0000693	0.0005615	0.0035	1.965		12502.47	12502.47	3.33		Si
SLD 2	7.53	2809.52	-11639	-0.0000562	0.0005615	0.0035	1.965		10245.53	10245.53	3.65		Si
SLV 4	5.73	-6376.12	-8970	-0.0001258	0.0005615	0.0035	1.572		9118.03	9118.03	1.43		Si
SLV 4	7.53	5856.15	-6157	-0.0017527	0.0005615	0.0035	1.965		5900.95	5900.95	1.01		Si
SLV 3	5.73	-6828.19	-8607	-0.0001774	0.0005615	0.0035	1.572		8818.1	8818.1	1.29		Si
SLV 3	7.53	6400.84	-5590	-0.0095514	0.0005615	0.0035	1.965		5401.08	5401.08	0.84		No
SLD 1	5.73	-3948.06	-13095	-0.0000705	0.0005615	0.0035	1.965		12384.2	12384.2	3.14		Si
SLD 1	7.53	3043.47	-11395	-0.0000575	0.0005615	0.0035	1.965		10070.08	10070.08	3.31		Si
SLV 7	5.73	-3475.78	-10965	-0.00006	0.0005615	0.0035	1.965		10732.74	10732.74	3.09		Si
SLV 7	7.53	1984.31	-9267	-0.0000422	0.0005615	0.0035	1.965		8536.45	8536.45	4.3		Si
SLD 4	5.73	-3773.71	-12592	-0.0000675	0.0005615	0.0035	1.965		12004.13	12004.13	3.18		Si
SLD 4	7.53	2723.89	-10927	-0.0000533	0.0005615	0.0035	1.965		9734.44	9734.44	3.57		Si
SLV 1	5.73	-6784.42	-10105	-0.0001239	0.0005615	0.0035	1.572		10054.49	10054.49	1.48		Si
SLV 1	7.53	6600.7	-7214	-0.0006353	0.0005615	0.0035	1.965		6815.4	6815.4	1.03		Si
SLV 16	5.73	3123.07	-20521	-0.0000862	0.0005615	0.0035	1.965		16552.13	16552.13	5.3		Si
SLV 16	7.53	-5825.19	-21794	-0.0001153	0.0005615	0.0035	1.965		18352.67	18352.67	3.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	5.73	-2180.17	-17521	-14590	-899	1.965	1.965	-26517	10480	5766	40441	16476	5011	21487	No	23.91	Si
SLU 44	7.53	612.7	-16245	-13528	-956	1.965	1.965	-24586	10223	5625	40441	16476	5011	21487	No	22.48	Si
SLU 50	5.73	-2245.55	-18179	-15138	-946	1.965	1.965	-27513	10613	5839	40441	16476	5011	21487	No	22.72	Si
SLU 50	7.53	593.27	-16936	-14103	-939	1.965	1.965	-25633	10362	5701	40441	16476	5011	21487	No	22.88	Si
SLU 46	5.73	-2243.8	-18205	-15159	-918	1.965	1.965	-27552	10618	5842	40441	16476	5011	21487	No	23.41	Si
SLU 46	7.53	604.4	-16980	-14139	-949	1.965	1.965	-25698	10371	5706	40441	16476	5011	21487	No	22.63	Si
SLU 64	5.73	-2376.56	-19776	-16468	-879	1.965	1.965	-29931	10833	5961	40441	16476	5011	21487	No	24.44	Si
SLU 64	7.53	522.99	-18694	-15567	-870	1.965	1.965	-28292	10717	5896	40441	16476	5011	21487	No	24.69	Si
SLU 48	5.73	-2278.79	-18531	-15431	-948	1.965	1.965	-28046	10684	5878	40441	16476	5011	21487	No	22.67	Si
SLU 48	7.53	594.29	-17320	-14422	-941	1.965	1.965	-26212	10439	5744	40441	16476	5011	21487	No	22.83	Si
SLU 45	5.73	-2257.59	-18188	-15145	-957	1.965	1.965	-27526	10615	5840	40441	16476	5011	21487	No	22.46	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	7.53	602.01	-16946	-14111	-950	1.965	1.965	-25647	10364	5702	40441	16476	5011	21487	No	22.62	Si
SLU 43	5.73	-2203.16	-17492	-14566	-963	1.965	1.965	-26474	10474	5763	40441	16476	5011	21487	No	22.3	Si
SLU 43	7.53	608.71	-16190	-13481	-957	1.965	1.965	-24502	10211	5618	40441	16476	5011	21487	No	22.45	Si
SLU 49	5.73	-2265	-18548	-15445	-909	1.965	1.965	-28072	10687	5880	40441	16476	5011	21487	No	23.64	Si
SLU 49	7.53	596.68	-17353	-14450	-940	1.965	1.965	-26263	10446	5748	40441	16476	5011	21487	No	22.85	Si
SLU 47	5.73	-2201.36	-17864	-14876	-890	1.965	1.965	-27036	10549	5804	40441	16476	5011	21487	No	24.15	Si
SLU 47	7.53	604.98	-16619	-13839	-947	1.965	1.965	-25152	10298	5666	40441	16476	5011	21487	No	22.69	Si
SLU 51	5.73	-2231.76	-18196	-15152	-907	1.965	1.965	-27539	10616	5841	40441	16476	5011	21487	No	23.69	Si
SLU 51	7.53	595.66	-16970	-14131	-938	1.965	1.965	-25683	10369	5705	40441	16476	5011	21487	No	22.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	5.73	-6828.19	-8607	-7167	-8207	1.572	0.5675	0	0	0	40441	19771	4009	23779		2.9	Si
SLV 3	7.53	6400.84	-5590	-4655	-7852	1.965	0	-192966	16250	0	40441	24714	5011	29724		3.79	Si
SLD 1	5.73	-3948.06	-13095	-10905	-3886	1.965	1.965	-19819	14381	7912	40441	24714	5011	29724		7.65	Si
SLD 1	7.53	3043.47	-11395	-9489	-3728	1.965	1.965	-17246	13866	7629	40441	24714	5011	29724		7.97	Si
SLV 13	5.73	2714.77	-21657	-18034	6224	1.965	1.965	-32776	16250	8941	40441	24714	5011	29724		4.78	Si
SLV 13	7.53	-5080.64	-22851	-19028	5879	1.965	1.965	-34583	16250	8941	40441	24714	5011	29724		5.06	Si
SLV 4	5.73	-6376.12	-8970	-7469	-7544	1.572	0.815	0	0	0	40441	19771	4009	23779		3.15	Si
SLV 4	7.53	5856.15	-6157	-5127	-7184	1.965	0.0943	-145369	16250	429	40441	24714	5011	29724		4.14	Si
SLV 16	5.73	3123.07	-20521	-17088	6887	1.965	1.965	-31058	16250	8941	40441	24714	5011	29724		4.32	Si
SLV 16	7.53	-5825.19	-21794	-18148	6541	1.965	1.965	-32985	16250	8941	40441	24714	5011	29724		4.54	Si
SLV 1	5.73	-6784.42	-10105	-8415	-8207	1.572	0.9334	0	0	0	40441	19771	4009	23779		2.9	Si
SLV 1	7.53	6600.7	-7214	-6007	-7847	1.965	0.2025	-113108	16250	921	40441	24714	5011	29724		3.79	Si
SLD 3	5.73	-3967.89	-12436	-10356	-3887	1.965	1.965	-18822	14181	7803	40441	24714	5011	29724		7.65	Si
SLD 3	7.53	2957.85	-10683	-8896	-3730	1.965	1.965	-16169	13650	7511	40441	24714	5011	29724		7.97	Si
SLV 15	5.73	2671	-20158	-16786	6224	1.965	1.965	-30509	16250	8941	40441	24714	5011	29724		4.78	Si
SLV 15	7.53	-5280.5	-21227	-17676	5873	1.965	1.965	-32126	16250	8941	40441	24714	5011	29724		5.06	Si
SLV 14	5.73	3166.83	-22020	-18336	6887	1.965	1.965	-33326	16250	8941	40441	24714	5011	29724		4.32	Si
SLV 14	7.53	-5625.33	-23418	-19501	6547	1.965	1.965	-35443	16250	8941	40441	24714	5011	29724		4.54	Si
SLV 2	5.73	-6332.35	-10468	-8717	-7544	1.572	1.1327	0	0	0	40441	19771	4009	23779		3.15	Si
SLV 2	7.53	6056.01	-7781	-6480	-7179	1.965	0.6127	-38586	16250	2788	40441	24714	5011	29724		4.14	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.38	10149	-5584	200.09	729.78	3.65	Si
SLV 4	179667	0.38	11220	-6174	200.09	800.8	4	Si
SLV 1	179667	0.38	13047	-7179	200.09	919.15	4.59	Si
SLV 2	179667	0.38	14119	-7768	200.09	987.03	4.93	Si
SLV 7	179667	0.38	17403	-9575	200.09	1187.78	5.94	Si
SLV 8	179667	0.38	18101	-9960	200.09	1229.07	6.14	Si
SLV 11	179667	0.38	26360	-14503	200.09	1679.99	8.4	Si
SLV 12	179667	0.38	27058	-14888	200.09	1714.97	8.57	Si
SLV 5	179667	0.38	27065	-14891	200.09	1715.32	8.57	Si
SLV 6	179667	0.38	27763	-15276	200.09	1749.8	8.74	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-14171	-17301	771	0.689	1716.2	0.954	10.5055	11.63229	No
SLV 9	-14064	-16872	770	0.694	1705.4	0.953	10.57626	11.63229	No
SLV 6	-12204	-11780	766	0.781	1516.5	0.948	11.97444	11.63229	Si
SLV 5	-12097	-11351	765	0.787	1505.7	0.948	12.0674	11.63229	Si
SLV 12	-10651	-15569	-784	0.873	1359	0.943	13.44912	11.63229	Si
SLV 11	-10544	-15140	-785	0.88	1348.2	0.943	13.56544	11.63229	Si
SLV 8	-8685	-10048	-789	1.029	1159.9	0.935	15.99906	11.63229	Si
SLV 7	-8578	-9619	-790	1.039	1149.1	0.934	16.16592	11.63229	Si
SLV 14	-15262	-23252	234	0.679	1827.1	0.956	10.32479	5.55889	Si
SLV 13	-15098	-22593	232	0.685	1810.4	0.956	10.42472	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.453	SLU 66	Si
V_SLU	22.302	SLU 43	Si
PF_SLV	0.844	SLV 3	No
V_SLV	2.897	SLV 3	Si
PFFP_SLV	3.647	SLV 3	Si
R_SLV	0.903	SLV 10	No

Maschio 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L5	L6	5.19	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 66	4.83	-14561.21	-65199	-0.0000833	0.0004492	0.0035	5.19	107066.47	149553.62	149553.62	10.27	No	Si
SLU 66	6.93	-7897.31	-58948	-0.0000681	0.0004492	0.0035	5.19	102186.5	139419.46	139419.46	17.65	No	Si
SLU 77	4.83	-15527.23	-71746	-0.0000919	0.0004492	0.0035	5.19	110952.56	159509.67	159509.67	10.27	No	Si
SLU 77	6.93	-9717.02	-66417	-0.0000786	0.0004492	0.0035	5.19	107884.37	151406.04	151406.04	15.58	No	Si
SLU 71	4.83	-14668.26	-65583	-0.0000839	0.0004492	0.0035	5.19	107328.96	150137.51	150137.51	10.24	No	Si
SLU 71	6.93	-7788.4	-59252	-0.0000683	0.0004492	0.0035	5.19	102449.85	139917.71	139917.71	17.96	No	Si
SLU 72	4.83	-14665.71	-65631	-0.0000839	0.0004492	0.0035	5.19	107361.08	150209.63	150209.63	10.24	No	Si
SLU 72	6.93	-7827.16	-59289	-0.0000684	0.0004492	0.0035	5.19	102481.98	139978.85	139978.85	17.88	No	Si
SLU 69	4.83	-14798.2	-66382	-0.0000849	0.0004492	0.0035	5.19	107861.58	151353.06	151353.06	10.23	No	Si
SLU 69	6.93	-7992.65	-60097	-0.0000695	0.0004492	0.0035	5.19	103169.2	141305.59	141305.59	17.68	No	Si
SLU 79	4.83	-15397.3	-70946	-0.0000908	0.0004492	0.0035	5.19	110545.24	158294.12	158294.12	10.28	No	Si
SLU 79	6.93	-9512.78	-65572	-0.0000774	0.0004492	0.0035	5.19	107321.21	150120.14	150120.14	15.78	No	Si
SLU 80	4.83	-15394.74	-70994	-0.0000909	0.0004492	0.0035	5.19	110569.92	158366.24	158366.24	10.29	No	Si
SLU 80	6.93	-9551.54	-65609	-0.0000775	0.0004492	0.0035	5.19	107346.46	150176.79	150176.79	15.72	No	Si
SLU 70	4.83	-14795.64	-66430	-0.000085	0.0004492	0.0035	5.19	107892.6	151425.18	151425.18	10.23	No	Si
SLU 70	6.93	-8031.41	-60134	-0.0000696	0.0004492	0.0035	5.19	103200.42	141366.73	141366.73	17.6	No	Si
SLU 67	4.83	-14558.65	-65247	-0.0000833	0.0004492	0.0035	5.19	107099.13	149625.74	149625.74	10.28	No	Si
SLU 67	6.93	-7936.07	-58985	-0.0000682	0.0004492	0.0035	5.19	102218.97	139480.61	139480.61	17.58	No	Si
SLU 78	4.83	-15524.68	-71793	-0.000092	0.0004492	0.0035	5.19	110976.14	159581.79	159581.79	10.28	No	Si
SLU 78	6.93	-9755.78	-66455	-0.0000786	0.0004492	0.0035	5.19	107908.7	151462.69	151462.69	15.53	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	4.83	-19343.49	-41712	-0.0000622	0.0006738	0.0035	5.19		112025.77	112025.77	5.79		Si
SLD 14	6.93	3605.68	-35453	-0.000038	0.0006738	0.0035	5.19		86487.73	86487.73	23.99		Si
SLV 2	4.83	8552.32	-61982	-0.0000704	0.0006738	0.0035	5.19		137456.41	137456.41	16.07		Si
SLV 2	6.93	-25228.06	-61231	-0.0000894	0.0006738	0.0035	5.19		150272.5	150272.5	5.96		Si
SLV 4	4.83	8966.3	-65898	-0.0000749	0.0006738	0.0035	5.19		144919.08	144919.08	16.16		Si
SLV 4	6.93	-29004.63	-64459	-0.0000974	0.0006738	0.0035	5.19		156269.99	156269.99	5.39		Si
SLV 16	4.83	-30254.55	-36135	-0.0000691	0.0006738	0.0035	5.19		100425.25	100425.25	3.32		Si
SLV 16	6.93	12686.22	-27092	-0.00004	0.0006738	0.0035	5.19		68026.96	68026.96	5.36		Si
SLD 13	4.83	-19378.14	-41505	-0.000062	0.0006738	0.0035	5.19		111595.9	111595.9	5.76		Si
SLD 13	6.93	3819.48	-35431	-0.0000382	0.0006738	0.0035	5.19		86440.58	86440.58	22.63		Si
SLV 9	4.83	-17490.82	-37670	-0.000056	0.0006738	0.0035	5.19		103627.65	103627.65	5.92		Si
SLV 9	6.93	6688.03	-33134	-0.0000392	0.0006738	0.0035	5.19		81449.21	81449.21	12.18		Si
SLV 3	4.83	8885.64	-65417	-0.0000743	0.0006738	0.0035	5.19		144001.2	144001.2	16.21		Si
SLV 3	6.93	-28506.86	-64409	-0.0000967	0.0006738	0.0035	5.19		156175.7	156175.7	5.48		Si
SLV 13	4.83	-30749.19	-31738	-0.0000654	0.0006738	0.0035	5.19		90803.74	90803.74	2.95		Si
SLV 13	6.93	16960.55	-23813	-0.0000415	0.0006738	0.0035	5.19		60568.39	60568.39	3.57		Si
SLV 15	4.83	-30335.21	-35654	-0.0000687	0.0006738	0.0035	5.19		99371.45	99371.45	3.28		Si
SLV 15	6.93	13183.99	-27041	-0.0000405	0.0006738	0.0035	5.19		67911.65	67911.65	5.15		Si
SLV 14	4.83	-30668.53	-32219	-0.0000658	0.0006738	0.0035	5.19		91857.54	91857.54	3		Si
SLV 14	6.93	16462.79	-23864	-0.000041	0.0006738	0.0035	5.19		60685.56	60685.56	3.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	4.83	-13118.34	-57187	-40796	-5233	5.19	5.19	-28073	10833	15743	115546	52224	26469	78693	No	15.04	Si
SLU 44	6.93	-6228.88	-50282	-35870	-5227	5.19	5.19	-24684	10833	15743	115546	52224	26469	78693	No	15.05	Si
SLU 51	4.83	-13594.02	-59522	-42461	-5350	5.19	5.19	-29219	10833	15743	115546	52224	26469	78693	No	14.71	Si
SLU 51	6.93	-6393.72	-52556	-37492	-5344	5.19	5.19	-25800	10833	15743	115546	52224	26469	78693	No	14.73	Si
SLU 49	4.83	-13723.96	-60321	-43032	-5293	5.19	5.19	-29612	10833	15743	115546	52224	26469	78693	No	14.87	Si
SLU 49	6.93	-6597.96	-53401	-38095	-5287	5.19	5.19	-26215	10833	15743	115546	52224	26469	78693	No	14.88	Si
SLU 43	4.83	-13122.6	-57108	-40739	-5210	5.19	5.19	-28034	10833	15743	115546	52224	26469	78693	No	15.1	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	6.93	-6164.28	-50220	-35826	-5205	5.19	5.19	-24653	10833	15743	115546	52224	26469	78693	No	15.12	Si
SLU 47	4.83	-13355.33	-58370	-41640	-5296	5.19	5.19	-28654	10833	15743	115546	52224	26469	78693	No	14.86	Si
SLU 47	6.93	-6324.22	-51431	-36690	-5290	5.19	5.19	-25248	10833	15743	115546	52224	26469	78693	No	14.88	Si
SLU 45	4.83	-13489.53	-59090	-42154	-5217	5.19	5.19	-29008	10833	15743	115546	52224	26469	78693	No	15.08	Si
SLU 45	6.93	-6463.86	-52215	-37249	-5211	5.19	5.19	-25632	10833	15743	115546	52224	26469	78693	No	15.1	Si
SLU 72	4.83	-14665.71	-65631	-46819	-4735	5.19	5.19	-32218	10833	15743	115546	52224	26469	78693	No	16.62	Si
SLU 72	6.93	-7827.16	-59289	-42295	-4729	5.19	5.19	-29105	10833	15743	115546	52224	26469	78693	No	16.64	Si
SLU 46	4.83	-13486.97	-59138	-42188	-5230	5.19	5.19	-29031	10833	15743	115546	52224	26469	78693	No	15.05	Si
SLU 46	6.93	-6502.62	-52252	-37275	-5225	5.19	5.19	-25651	10833	15743	115546	52224	26469	78693	No	15.06	Si
SLU 50	4.83	-13596.58	-59474	-42428	-5336	5.19	5.19	-29196	10833	15743	115546	52224	26469	78693	No	14.75	Si
SLU 50	6.93	-6354.95	-52518	-37465	-5331	5.19	5.19	-25781	10833	15743	115546	52224	26469	78693	No	14.76	Si
SLU 48	4.83	-13726.51	-60274	-42998	-5280	5.19	5.19	-29588	10833	15743	115546	52224	26469	78693	No	14.9	Si
SLU 48	6.93	-6559.2	-53364	-38068	-5274	5.19	5.19	-26196	10833	15743	115546	52224	26469	78693	No	14.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	4.83	-19204.81	-43198	-30817	-14399	5.19	5.19	-21206	16250	23615	115546	78337	26469	104806		7.28	Si
SLD 15	6.93	2164.92	-36838	-26279	-13794	5.19	5.19	-18084	16117	23421	115546	78337	26469	104806		7.6	Si
SLD 16	4.83	-19170.17	-43405	-30964	-14550	5.19	5.19	-21308	16250	23615	115546	78337	26469	104806		7.2	Si
SLD 16	6.93	1951.12	-36860	-26295	-13945	5.19	5.19	-18094	16119	23424	115546	78337	26469	104806		7.52	Si
SLV 2	4.83	8552.32	-61982	-44217	22254	5.19	5.19	-30427	16250	23615	115546	78337	26469	104806		4.71	Si
SLV 2	6.93	-25228.06	-61231	-43681	20845	5.19	5.19	-30058	16250	23615	115546	78337	26469	104806		5.03	Si
SLV 15	4.83	-30335.21	-35654	-25435	-29095	5.19	5.19	-17502	16000	23252	115546	78337	26469	104806		3.6	Si
SLV 15	6.93	13183.99	-27041	-19291	-27677	5.19	5.19	-13275	15155	22023	115546	78337	26469	104806		3.79	Si
SLV 16	4.83	-30254.55	-36135	-25778	-29448	5.19	5.19	-17739	16048	23321	115546	78337	26469	104806		3.56	Si
SLV 16	6.93	12686.22	-27092	-19327	-28031	5.19	5.19	-13300	15160	22030	115546	78337	26469	104806		3.74	Si
SLV 14	4.83	-30668.53	-32219	-22985	-28011	5.19	4.9294	-16775	15855	21884	115546	78337	26469	104806		3.74	Si
SLV 14	6.93	16462.79	-23864	-17024	-26796	5.19	5.19	-11715	14843	21570	115546	78337	26469	104806		3.91	Si
SLV 13	4.83	-30749.19	-31738	-22641	-27657	5.19	4.8784	-16694	15839	21635	115546	78337	26469	104806		3.79	Si
SLV 13	6.93	16960.55	-23813	-16988	-26443	5.19	5.19	-11690	14838	21563	115546	78337	26469	104806		3.96	Si
SLV 3	4.83	8885.64	-65417	-46667	21170	5.19	5.19	-32113	16250	23615	115546	78337	26469	104806		4.95	Si
SLV 3	6.93	-28506.86	-64409	-45947	19964	5.19	5.19	-31618	16250	23615	115546	78337	26469	104806		5.25	Si
SLV 1	4.83	8471.66	-61501	-43873	22607	5.19	5.19	-30191	16250	23615	115546	78337	26469	104806		4.64	Si
SLV 1	6.93	-24730.3	-61180	-43645	21199	5.19	5.19	-30033	16250	23615	115546	78337	26469	104806		4.94	Si
SLV 4	4.83	8966.3	-65898	-47010	20816	5.19	5.19	-32349	16250	23615	115546	78337	26469	104806		5.03	Si
SLV 4	6.93	-29004.63	-64459	-45984	19611	5.19	5.19	-31643	16250	23615	115546	78337	26469	104806		5.34	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-24685	0.38	540.77	3135.55	4445.56	3790.55	7.01	Si
SLV 14	-24735	0.38	540.77	3141.34	4453.23	3797.28	7.02	Si
SLV 15	-28053	0.38	540.77	3513.75	4950.79	4232.27	7.83	Si
SLV 16	-28104	0.38	540.77	3519.36	4958.34	4238.85	7.84	Si
SLV 9	-33827	0.38	540.77	4134.31	5806.42	4970.36	9.19	Si
SLV 10	-33860	0.38	540.77	4137.76	5811.29	4974.53	9.2	Si
SLV 5	-45024	0.38	540.77	5237.82	7450.72	6344.27	11.73	Si
SLV 11	-45055	0.38	540.77	5240.68	7455.23	6347.95	11.74	Si
SLV 6	-45057	0.38	540.77	5240.89	7455.55	6348.22	11.74	Si
SLV 12	-45088	0.38	540.77	5243.74	7460.06	6351.9	11.75	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-46594	-59966	1242	0.589	5464.6	0.961	8.90285	11.63229	No
SLV 7	-46477	-59652	1242	0.59	5452.8	0.961	8.92236	11.63229	No
SLV 12	-41238	-51037	1419	0.649	4920	0.957	9.85422	11.63229	No
SLV 11	-41121	-50723	1420	0.65	4908.2	0.957	9.8786	11.63229	No
SLV 6	-36191	-46913	-1416	0.724	4407.1	0.952	11.05144	11.63229	No
SLV 5	-36074	-46599	-1415	0.726	4395.3	0.952	11.08299	11.63229	No
SLV 10	-30835	-37984	-1238	0.833	3863.4	0.947	12.78454	11.63229	Si
SLV 9	-30718	-37670	-1238	0.835	3851.6	0.946	12.82699	11.63229	Si
SLV 4	-49233	-65898	104	0.583	5733	0.962	8.80025	5.55889	Si
SLV 3	-49053	-65417	105	0.585	5714.8	0.962	8.82836	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.228	SLU 69	Si
V_SLU	14.71	SLU 51	Si
PF_SLV	2.953	SLV 13	Si
V_SLV	3.559	SLV 16	Si
PFFP_SLV	7.01	SLV 13	Si
R_SLV	0.765	SLV 8	No

Maschio 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L5	L6	3.68	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 71	4.83	815.75	-56595	-0.0000832	0.0004492	0.0035	3.68	57324.49	79571.9	79571.9	97.54	No	Si
SLU 71	6.93	1713.43	-50683	-0.0000762	0.0004492	0.0035	3.68	55715.53	73508.85	73508.85	42.9	No	Si
SLU 23	4.83	614.38	-44689	-0.0000643	0.0004492	0.0035	3.68	53041	67360.8	67360.8	109.64	No	Si
SLU 23	6.93	1465.7	-40326	-0.0000598	0.0004492	0.0035	3.68	50433.96	61879.41	61879.41	42.22	No	Si
SLU 22	4.83	611.82	-44694	-0.0000643	0.0004492	0.0035	3.68	53043.76	67366.11	67366.11	110.11	No	Si
SLU 22	6.93	1468.29	-40301	-0.0000598	0.0004492	0.0035	3.68	50417.28	61845.95	61845.95	42.12	No	Si
SLU 29	4.83	582.75	-46772	-0.0000674	0.0004492	0.0035	3.68	54089.65	69497.63	69497.63	119.26	No	Si
SLU 29	6.93	1547.28	-42270	-0.0000629	0.0004492	0.0035	3.68	51664.12	64459.49	64459.49	41.66	No	Si
SLU 26	4.83	599.84	-45728	-0.0000658	0.0004492	0.0035	3.68	53579.88	68426.56	68426.56	114.07	No	Si
SLU 26	6.93	1505.2	-41311	-0.0000614	0.0004492	0.0035	3.68	51070.82	63186.18	63186.18	41.98	No	Si
SLU 72	4.83	817.28	-56592	-0.0000832	0.0004492	0.0035	3.68	57323.92	79568.71	79568.71	97.36	No	Si
SLU 72	6.93	1711.88	-50699	-0.0000762	0.0004492	0.0035	3.68	55720.95	73524.37	73524.37	42.95	No	Si
SLU 28	4.83	608.23	-47515	-0.0000686	0.0004492	0.0035	3.68	54432.66	70259.06	70259.06	115.51	No	Si
SLU 28	6.93	1520.32	-43049	-0.000064	0.0004492	0.0035	3.68	52126.38	65494.06	65494.06	43.08	No	Si
SLU 27	4.83	606.7	-47518	-0.0000686	0.0004492	0.0035	3.68	54434.06	70262.24	70262.24	115.81	No	Si
SLU 27	6.93	1521.87	-43034	-0.000064	0.0004492	0.0035	3.68	52117.58	65473.99	65473.99	43.02	No	Si
SLU 24	4.83	621.23	-46479	-0.000067	0.0004492	0.0035	3.68	53949.54	69196.48	69196.48	111.39	No	Si
SLU 24	6.93	1482.38	-42050	-0.0000624	0.0004492	0.0035	3.68	51530.31	64167.22	64167.22	43.29	No	Si
SLU 30	4.83	584.28	-46769	-0.0000674	0.0004492	0.0035	3.68	54088.18	69494.44	69494.44	118.94	No	Si
SLU 30	6.93	1545.73	-42285	-0.0000629	0.0004492	0.0035	3.68	51673.26	64479.56	64479.56	41.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	4.83	24182.53	-49130	-0.0001258	0.0006738	0.0035	3.68		76066.67	76066.67	3.15		Si
SLV 1	6.93	-21628.97	-41036	-0.0001071	0.0006738	0.0035	3.68		72044.43	72044.43	3.33		Si
SLV 13	4.83	-22937.32	-35957	-0.0001025	0.0006738	0.0035	3.68		65095.11	65095.11	2.84		Si
SLV 13	6.93	25061.82	-34137	-0.000106	0.0006738	0.0035	3.68		55952.25	55952.25	2.23		Si
SLV 4	4.83	24503.47	-48398	-0.0001255	0.0006738	0.0035	3.68		75084.06	75084.06	3.06		Si
SLV 4	6.93	-22861.1	-41484	-0.0001107	0.0006738	0.0035	3.68		72638.55	72638.55	3.18		Si
SLD 14	4.83	-9453.29	-39488	-0.000076	0.0006738	0.0035	3.68		69988.3	69988.3	7.4		Si
SLD 14	6.93	11408.89	-36261	-0.0000758	0.0006738	0.0035	3.68		58801.64	58801.64	5.15		Si
SLV 2	4.83	23950.24	-49038	-0.0001251	0.0006738	0.0035	3.68		75942.12	75942.12	3.17		Si
SLV 2	6.93	-21487.04	-41090	-0.0001068	0.0006738	0.0035	3.68		72116.12	72116.12	3.36		Si
SLV 15	4.83	-22384.09	-35318	-0.0001002	0.0006738	0.0035	3.68		64196.78	64196.78	2.87		Si
SLV 15	6.93	23687.76	-34530	-0.0001026	0.0006738	0.0035	3.68		56479.98	56479.98	2.38		Si
SLV 3	4.83	24735.76	-48491	-0.0001262	0.0006738	0.0035	3.68		75208.6	75208.6	3.04		Si
SLV 3	6.93	-23003.02	-41430	-0.000111	0.0006738	0.0035	3.68		72566.85	72566.85	3.15		Si
SLV 14	4.83	-23169.61	-35864	-0.000103	0.0006738	0.0035	3.68		64964.72	64964.72	2.8		Si
SLV 14	6.93	25203.75	-34191	-0.0001065	0.0006738	0.0035	3.68		56024.67	56024.67	2.22		Si
SLV 16	4.83	-22616.38	-35225	-0.0001007	0.0006738	0.0035	3.68		64066.39	64066.39	2.83		Si
SLV 16	6.93	23829.69	-34584	-0.000103	0.0006738	0.0035	3.68		56552.41	56552.41	2.37		Si
SLD 13	4.83	-9353.52	-39528	-0.0000758	0.0006738	0.0035	3.68		70041.25	70041.25	7.49		Si
SLD 13	6.93	11347.93	-36238	-0.0000756	0.0006738	0.0035	3.68		58770.53	58770.53	5.18		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	4.83	817.28	-56592	-40371	-599	3.68	3.68	-39180	10833	11163	115546	37030	18768	55798	No	93.12	Si
SLU 72	6.93	1711.88	-50699	-36167	-610	3.68	3.68	-35100	10833	11163	115546	37030	18768	55798	No	91.45	Si
SLU 26	4.83	599.84	-45728	-32621	-553	3.68	3.68	-31659	10833	11163	115546	37030	18768	55798	No	100.95	Si
SLU 26	6.93	1505.2	-41311	-29470	-562	3.68	3.68	-28601	10833	11163	115546	37030	18768	55798	No	99.36	Si
SLU 65	4.83	847.38	-54511	-38887	-556	3.68	3.68	-37740	10833	11163	115546	37030	18768	55798	No	100.36	Si
SLU 65	6.93	1631.85	-48740	-34770	-567	3.68	3.68	-33744	10833	11163	115546	37030	18768	55798	No	98.47	Si
SLU 71	4.83	815.75	-56595	-40373	-574	3.68	3.68	-39182	10833	11163	115546	37030	18768	55798	No	97.26	Si
SLU 71	6.93	1713.43	-50683	-36156	-585	3.68	3.68	-35090	10833	11163	115546	37030	18768	55798	No	95.44	Si
SLU 69	4.83	839.7	-57340	-40905	-531	3.68	3.68	-39698	10833	11163	115546	37030	18768	55798	No	105.07	Si
SLU 69	6.93	1688.02	-51448	-36702	-542	3.68	3.68	-35619	10833	11163	115546	37030	18768	55798	No	102.92	Si
SLU 70	4.83	841.23	-57337	-40903	-557	3.68	3.68	-39696	10833	11163	115546	37030	18768	55798	No	100.25	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	6.93	1686.47	-51463	-36712	-568	3.68	3.68	-35629	10833	11163	115546	37030	18768	55798	No	98.29	Si
SLU 68	4.83	832.84	-55551	-39628	-586	3.68	3.68	-38459	10833	11163	115546	37030	18768	55798	No	95.2	Si
SLU 68	6.93	1671.35	-49724	-35472	-597	3.68	3.68	-34426	10833	11163	115546	37030	18768	55798	No	93.48	Si
SLU 29	4.83	582.75	-46772	-33366	-540	3.68	3.68	-32382	10833	11163	115546	37030	18768	55798	No	103.27	Si
SLU 29	6.93	1547.28	-42270	-30154	-549	3.68	3.68	-29265	10833	11163	115546	37030	18768	55798	No	101.58	Si
SLU 30	4.83	584.28	-46769	-33364	-566	3.68	3.68	-32380	10833	11163	115546	37030	18768	55798	No	98.61	Si
SLU 30	6.93	1545.73	-42285	-30165	-575	3.68	3.68	-29275	10833	11163	115546	37030	18768	55798	No	97.07	Si
SLU 67	4.83	855.77	-56298	-40162	-526	3.68	3.68	-38977	10833	11163	115546	37030	18768	55798	No	105.98	Si
SLU 67	6.93	1646.97	-50478	-36010	-537	3.68	3.68	-34948	10833	11163	115546	37030	18768	55798	No	103.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	4.83	-22937.32	-35957	-25651	-30551	3.68	3.6063	-24894	16250	16409	115546	55545	18768	74313		2.43	Si
SLV 13	6.93	25061.82	-34137	-24352	-29913	3.68	3.3175	-23634	16250	15095	115546	55545	18768	74313		2.48	Si
SLV 2	4.83	23950.24	-49038	-34982	30852	3.68	3.68	-33950	16250	16744	115546	55545	18768	74313		2.41	Si
SLV 2	6.93	-21487.04	-41090	-29313	29692	3.68	3.68	-28448	16250	16744	115546	55545	18768	74313		2.5	Si
SLV 1	4.83	24182.53	-49130	-35048	31321	3.68	3.68	-34014	16250	16744	115546	55545	18768	74313		2.37	Si
SLV 1	6.93	-21628.97	-41036	-29274	30161	3.68	3.68	-28411	16250	16744	115546	55545	18768	74313		2.46	Si
SLD 16	4.83	-9213.72	-39206	-27969	-13755	3.68	3.68	-27143	16250	16744	115546	55545	18768	74313		5.4	Si
SLD 16	6.93	10810.44	-36436	-25993	-13265	3.68	3.68	-25226	16250	16744	115546	55545	18768	74313		5.6	Si
SLV 16	4.83	-22616.38	-35225	-25129	-31821	3.68	3.5938	-24387	16250	16352	115546	55545	18768	74313		2.34	Si
SLV 16	6.93	23829.69	-34584	-24671	-30678	3.68	3.4529	-23944	16250	15711	115546	55545	18768	74313		2.42	Si
SLV 4	4.83	24503.47	-48398	-34526	30050	3.68	3.68	-33507	16250	16744	115546	55545	18768	74313		2.47	Si
SLV 4	6.93	-22861.1	-41484	-29593	29396	3.68	3.68	-28720	16250	16744	115546	55545	18768	74313		2.53	Si
SLV 3	4.83	24735.76	-48491	-34592	30519	3.68	3.68	-33572	16250	16744	115546	55545	18768	74313		2.43	Si
SLV 3	6.93	-23003.02	-41430	-29555	29865	3.68	3.68	-28683	16250	16744	115546	55545	18768	74313		2.49	Si
SLV 15	4.83	-22384.09	-35318	-25195	-31352	3.68	3.6186	-24451	16250	16465	115546	55545	18768	74313		2.37	Si
SLV 15	6.93	23687.76	-34530	-24633	-30209	3.68	3.462	-23906	16250	15752	115546	55545	18768	74313		2.46	Si
SLD 15	4.83	-9113.95	-39246	-27997	-13554	3.68	3.68	-27171	16250	16744	115546	55545	18768	74313		5.48	Si
SLD 15	6.93	10749.48	-36413	-25976	-13063	3.68	3.68	-25210	16250	16744	115546	55545	18768	74313		5.69	Si
SLV 14	4.83	-23169.61	-35864	-25585	-31020	3.68	3.5819	-24830	16250	16298	115546	55545	18768	74313		2.4	Si
SLV 14	6.93	25203.75	-34191	-24391	-30382	3.68	3.3085	-23671	16250	15054	115546	55545	18768	74313		2.45	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-34750	0.38	383.44	3969.8	5687.88	4828.84	12.59	Si
SLV 14	-34804	0.38	383.44	3974.58	5695.63	4835.11	12.61	Si
SLV 15	-35110	0.38	383.44	4001.53	5739.54	4870.53	12.7	Si
SLV 16	-35163	0.38	383.44	4006.27	5747.29	4876.78	12.72	Si
SLV 9	-36801	0.38	383.44	4148.19	5982.63	5065.41	13.21	Si
SLV 10	-36836	0.38	383.44	4151.19	5987.69	5069.44	13.22	Si
SLV 11	-38000	0.38	383.44	4249.53	6154.92	5202.23	13.57	Si
SLV 12	-38035	0.38	383.44	4252.47	6159.98	5206.23	13.58	Si
SLV 5	-38911	0.38	383.44	4325.15	6285.93	5305.54	13.84	Si
SLV 6	-38946	0.38	383.44	4328.04	6290.99	5309.51	13.85	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-36093	-43057	836	0.547	4185.5	0.963	8.25239	11.63229	No
SLV 7	-36068	-43118	837	0.547	4183	0.963	8.25721	11.63229	No
SLV 12	-33071	-39105	939	0.586	3878.1	0.961	8.87063	11.63229	No
SLV 11	-33046	-39166	939	0.587	3875.6	0.961	8.87629	11.63229	No
SLV 6	-30083	-45189	-939	0.635	3574.3	0.958	9.64159	11.63229	No
SLV 5	-30059	-45250	-939	0.636	3571.8	0.958	9.64867	11.63229	No
SLV 10	-27061	-41237	-836	0.698	3267.1	0.954	10.63295	11.63229	No
SLV 9	-27037	-41298	-836	0.699	3264.6	0.954	10.64159	11.63229	No
SLV 4	-37522	-48398	95	0.547	4330.9	0.964	8.24869	5.55889	Si
SLV 3	-37484	-48491	96	0.548	4327.1	0.964	8.25582	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	41.66	SLU 29	Si
V_SLU	91.445	SLU 72	Si
PF_SLV	2.223	SLV 14	Si
V_SLV	2.335	SLV 16	Si
PFFP_SLV	12.594	SLV 13	Si
R_SLV	0.709	SLV 8	No

Maschio 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L5	L6	1.9	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	4.83	456.93	-21611	-0.0000627	0.0004492	0.0035	1.9	13705.02	17037.45	17037.45	37.29	No	Si
SLU 19	7.33	-1305.04	-17283	-0.0000578	0.0004492	0.0035	1.9	12053.33	15659.8	15659.8	12	No	Si
SLU 63	4.83	524.04	-26840	-0.0000789	0.0004492	0.0035	1.9	14969.92	19959.15	19959.15	38.09	No	Si
SLU 63	7.33	-1564.09	-21068	-0.0000713	0.0004492	0.0035	1.9	13527.64	18100.78	18100.78	11.57	No	Si
SLU 61	4.83	545.85	-26360	-0.0000776	0.0004492	0.0035	1.9	14887.08	19706.09	19706.09	36.1	No	Si
SLU 61	7.33	-1551.09	-20675	-0.00007	0.0004492	0.0035	1.9	13394.07	17856.03	17856.03	11.51	No	Si
SLU 84	4.83	384.1	-29091	-0.0000844	0.0004492	0.0035	1.9	15268.38	21145.39	21145.39	55.05	No	Si
SLU 84	7.33	-1658.17	-23392	-0.0000791	0.0004492	0.0035	1.9	14225.63	19495.08	19495.08	11.76	No	Si
SLU 52	4.83	457.73	-25369	-0.0000738	0.0004492	0.0035	1.9	14694.86	19183.94	19183.94	41.91	No	Si
SLU 52	7.33	-1440.17	-19636	-0.0000659	0.0004492	0.0035	1.9	13019.25	17209.07	17209.07	11.95	No	Si
SLU 81	4.83	397.61	-28640	-0.0000831	0.0004492	0.0035	1.9	15220.43	20907.65	20907.65	52.58	No	Si
SLU 81	7.33	-1642.8	-23044	-0.0000779	0.0004492	0.0035	1.9	14131.04	19292.39	19292.39	11.74	No	Si
SLU 83	4.83	375.8	-29121	-0.0000844	0.0004492	0.0035	1.9	15271.26	21160.71	21160.71	56.31	No	Si
SLU 83	7.33	-1655.79	-23437	-0.0000792	0.0004492	0.0035	1.9	14237.41	19520.87	19520.87	11.79	No	Si
SLU 60	4.83	537.55	-26389	-0.0000776	0.0004492	0.0035	1.9	14892.29	19721.4	19721.4	36.69	No	Si
SLU 60	7.33	-1548.71	-20719	-0.0000701	0.0004492	0.0035	1.9	13409.37	17883.65	17883.65	11.55	No	Si
SLU 62	4.83	515.74	-26869	-0.0000789	0.0004492	0.0035	1.9	14974.72	19974.46	19974.46	38.73	No	Si
SLU 62	7.33	-1561.71	-21112	-0.0000714	0.0004492	0.0035	1.9	13542.44	18128.4	18128.4	11.61	No	Si
SLU 82	4.83	405.91	-28611	-0.0000831	0.0004492	0.0035	1.9	15217.14	20892.34	20892.34	51.47	No	Si
SLU 82	7.33	-1645.17	-23000	-0.0000778	0.0004492	0.0035	1.9	14118.76	19266.6	19266.6	11.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	4.83	14549.7	-18530	-0.0005047	0.0006738	0.0035	1.9		15571.13	15571.13	1.07		Si
SLV 2	7.33	-10341.32	-22970	-0.0001634	0.0006738	0.0035	1.9		20242.2	20242.2	1.96		Si
SLV 4	4.83	15185.34	-15506	-0.0093864	0.0006738	0.0035	1.52		13487.7	13487.7	0.89		No
SLV 4	7.33	-10325.7	-18477	-0.0001683	0.0006738	0.0035	1.52		17103.92	17103.92	1.66		Si
SLV 14	4.83	-14895.66	-23880	-0.0002795	0.0006738	0.0035	1.52		20842.09	20842.09	1.4		Si
SLV 14	7.33	8272.64	-12099	-0.0001614	0.0006738	0.0035	1.9		10928.31	10928.31	1.32		Si
SLV 16	4.83	-14260.02	-20857	-0.0003021	0.0006738	0.0035	1.52		18788.46	18788.46	1.32		Si
SLV 16	7.33	8288.27	-7605	-0.0066755	0.0006738	0.0035	1.52		7216.07	7216.07	0.87		No
SLV 13	4.83	-14867.53	-23879	-0.0002783	0.0006738	0.0035	1.52		20841.54	20841.54	1.4		Si
SLV 13	7.33	8266.6	-12124	-0.0001605	0.0006738	0.0035	1.9		10948.91	10948.91	1.32		Si
SLV 7	4.83	5644.27	-13851	-0.0000867	0.0006738	0.0035	1.9		12314.91	12314.91	2.18		Si
SLV 7	7.33	-3797.58	-9450	-0.0000576	0.0006738	0.0035	1.9		10113.1	10113.1	2.66		Si
SLV 3	4.83	15213.47	-15506	-0.0094772	0.0006738	0.0035	1.52		13487.12	13487.12	0.89		No
SLV 3	7.33	-10331.75	-18502	-0.0001684	0.0006738	0.0035	1.52		17122.89	17122.89	1.66		Si
SLV 8	4.83	5625.94	-13852	-0.0000865	0.0006738	0.0035	1.9		12315.34	12315.34	2.19		Si
SLV 8	7.33	-3793.64	-9433	-0.0000575	0.0006738	0.0035	1.9		10099.47	10099.47	2.66		Si
SLV 15	4.83	-14231.89	-20856	-0.0003003	0.0006738	0.0035	1.52		18787.88	18787.88	1.32		Si
SLV 15	7.33	8282.22	-7631	-0.006593	0.0006738	0.0035	1.52		7238.12	7238.12	0.87		No
SLV 1	4.83	14577.84	-18529	-0.0005125	0.0006738	0.0035	1.9		15570.55	15570.55	1.07		Si
SLV 1	7.33	-10347.37	-22996	-0.0001635	0.0006738	0.0035	1.9		20259.22	20259.22	1.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	4.83	256.17	-29014	-20698	-481	1.9	1.9	-38907	10833	5763	115546	19119	9690	28809	No	59.9	Si
SLU 77	7.33	-1579.27	-23199	-16549	1503	1.9	1.9	-31108	10833	5763	115546	19119	9690	28809	No	19.17	Si
SLU 80	4.83	268.63	-28600	-20403	-476	1.9	1.9	-38351	10833	5763	115546	19119	9690	28809	No	60.55	Si
SLU 80	7.33	-1558.67	-22776	-16248	1476	1.9	1.9	-30542	10833	5763	115546	19119	9690	28809	No	19.52	Si
SLU 84	4.83	384.1	-29091	-20753	-370	1.9	1.9	-39010	10833	5763	115546	19119	9690	28809	No	77.83	Si
SLU 84	7.33	-1658.17	-23392	-16688	1593	1.9	1.9	-31368	10833	5763	115546	19119	9690	28809	No	18.09	Si
SLU 74	4.83	277.98	-28534	-20356	-442	1.9	1.9	-38263	10833	5763	115546	19119	9690	28809	No	65.11	Si
SLU 74	7.33	-1566.27	-22806	-16269	1493	1.9	1.9	-30581	10833	5763	115546	19119	9690	28809	No	19.29	Si
SLU 79	4.83	260.33	-28629	-20423	-478	1.9	1.9	-38390	10833	5763	115546	19119	9690	28809	No	60.24	Si
SLU 79	7.33	-1556.29	-22821	-16280	1476	1.9	1.9	-30601	10833	5763	115546	19119	9690	28809	No	19.51	Si
SLU 83	4.83	375.8	-29121	-20774	-373	1.9	1.9	-39049	10833	5763	115546	19119	9690	28809	No	77.31	Si
SLU 83	7.33	-1655.79	-23437	-16719	1594	1.9	1.9	-31427	10833	5763	115546	19119	9690	28809	No	18.08	Si
SLU 75	4.83	286.28	-28505	-20335	-440	1.9	1.9	-38224	10833	5763	115546	19119	9690	28809	No	65.48	Si
SLU 75	7.33	-1568.65	-22762	-16238	1493	1.9	1.9	-30522	10833	5763	115546	19119	9690	28809	No	19.3	Si
SLU 81	4.83	397.61	-28640	-20431	-334	1.9	1.9	-38405	10833	5763	115546	19119	9690	28809	No	86.21	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	7.33	-1642.8	-23044	-16439	1584	1.9	1.9	-30900	10833	5763	115546	19119	9690	28809	No	18.19	Si
SLU 82	4.83	405.91	-28611	-20411	-332	1.9	1.9	-38366	10833	5763	115546	19119	9690	28809	No	86.86	Si
SLU 82	7.33	-1645.17	-23000	-16407	1583	1.9	1.9	-30841	10833	5763	115546	19119	9690	28809	No	18.19	Si
SLU 78	4.83	264.47	-28985	-20678	-478	1.9	1.9	-38868	10833	5763	115546	19119	9690	28809	No	60.21	Si
SLU 78	7.33	-1581.65	-23154	-16518	1502	1.9	1.9	-31049	10833	5763	115546	19119	9690	28809	No	19.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	4.83	15213.47	-15506	-11061	12806	1.52	0	0	0	0	115546	22942	7752	30694		2.4	Si
SLV 3	7.33	-10331.75	-18502	-13199	10981	1.52	1.1748	0	0	0	115546	22942	7752	30694		2.8	Si
SLV 2	4.83	14549.7	-18530	-13219	12802	1.9	0.4944	-102421	16250	2249	115546	28678	9690	38368		3	Si
SLV 2	7.33	-10341.32	-22970	-16387	11179	1.9	1.4994	-39784	16250	6822	115546	28678	9690	38368		3.43	Si
SLV 1	4.83	14577.84	-18529	-13218	12823	1.9	0.4897	-103524	16250	2228	115546	28678	9690	38368		2.99	Si
SLV 1	7.33	-10347.37	-22996	-16405	11194	1.9	1.5001	-39810	16250	6826	115546	28678	9690	38368		3.43	Si
SLV 4	4.83	15185.34	-15506	-11062	12784	1.52	0	0	0	0	115546	22942	7752	30694		2.4	Si
SLV 4	7.33	-10325.7	-18477	-13181	10966	1.52	1.1734	0	0	0	115546	22942	7752	30694		2.8	Si
SLD 16	4.83	-5999.82	-20168	-14387	-5997	1.9	1.9	-27044	16250	8645	115546	28678	9690	38368		6.4	Si
SLD 16	7.33	2953.38	-11977	-8544	-3466	1.9	1.9	-16060	15712	8359	115546	28678	9690	38368		11.07	Si
SLV 14	4.83	-14895.66	-23880	-17036	-13528	1.52	0.9787	0	0	0	115546	22942	7752	30694		2.27	Si
SLV 14	7.33	8272.64	-12099	-8631	-9132	1.9	0.7987	-16223	15745	3521	115546	28678	9690	38368		4.2	Si
SLV 15	4.83	-14231.89	-20856	-14878	-13524	1.52	0.8028	0	0	0	115546	22942	7752	30694		2.27	Si
SLV 15	7.33	8282.22	-7631	-5443	-9330	1.52	0	0	0	0	115546	22942	7752	30694		3.29	Si
SLD 15	4.83	-5987.73	-20167	-14387	-5988	1.9	1.9	-27043	16250	8645	115546	28678	9690	38368		6.41	Si
SLD 15	7.33	2950.78	-11988	-8552	-3459	1.9	1.9	-16075	15715	8360	115546	28678	9690	38368		11.09	Si
SLV 13	4.83	-14867.53	-23879	-17035	-13506	1.52	0.9822	0	0	0	115546	22942	7752	30694		2.27	Si
SLV 13	7.33	8266.6	-12124	-8649	-9117	1.9	0.8045	-16258	15752	3548	115546	28678	9690	38368		4.21	Si
SLV 16	4.83	-14260.02	-20857	-14879	-13545	1.52	0.7989	0	0	0	115546	22942	7752	30694		2.27	Si
SLV 16	7.33	8288.27	-7605	-5425	-9345	1.52	0	0	0	0	115546	22942	7752	30694		3.28	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-9762	0.38	197.97	1229.87	1716.65	1473.26	7.44	Si
SLV 7	-9774	0.38	197.97	1231.15	1718.37	1474.76	7.45	Si
SLV 12	-10284	0.38	197.97	1287.91	1795.15	1541.53	7.79	Si
SLV 11	-10295	0.38	197.97	1289.17	1796.86	1543.01	7.79	Si
SLV 4	-14431	0.38	197.97	1721.29	2414.16	2067.72	10.44	Si
SLV 3	-14448	0.38	197.97	1723.01	2416.76	2069.88	10.46	Si
SLV 16	-16170	0.38	197.97	1888.38	2669.79	2279.09	11.51	Si
SLV 15	-16187	0.38	197.97	1890.02	2672.36	2281.19	11.52	Si
SLV 2	-18957	0.38	197.97	2137.96	3074.38	2606.17	13.16	Si
SLV 1	-18974	0.38	197.97	2139.45	3076.89	2608.17	13.17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-22129	-23929	-220	0.482	2516.6	0.968	7.22798	11.63229	No
SLV 6	-22122	-23929	-220	0.482	2515.9	0.968	7.22986	11.63229	No
SLV 9	-22257	-25534	-157	0.482	2529.6	0.968	7.23101	11.63229	No
SLV 10	-22250	-25535	-157	0.482	2528.9	0.968	7.23289	11.63229	No
SLV 13	-16832	-23879	54	0.617	1977.6	0.96	9.33532	5.55889	Si
SLV 14	-16822	-23880	54	0.617	1976.5	0.96	9.34046	5.55889	Si
SLV 1	-16407	-18529	-156	0.625	1934.4	0.959	9.46307	5.55889	Si
SLV 2	-16397	-18530	-156	0.625	1933.3	0.959	9.46823	5.55889	Si
SLV 11	-6327	-15456	235	1.351	912.8	0.923	21.25958	11.63229	Si
SLV 12	-6321	-15457	235	1.352	912.1	0.923	21.27806	11.63229	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.512	SLU 61	Si
V_SLU	18.077	SLU 83	Si
PF_SLV	0.871	SLV 16	No
V_SLV	2.266	SLV 16	Si
PFFP_SLV	7.442	SLV 8	Si
R_SLV	0.621	SLV 5	No

Maschio 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.006	-11.143	1.006	L5	L6	0.665	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	4.83	-154.49	-11603	-0.0001058	0.0004492	0.0035	0.6647	1888.69	2914.01	2914.01	18.86	No	Si
SLU 60	7.33	69.6	-10588	-0.0000898	0.0004492	0.0035	0.6647	1880.53	2664.47	2664.47	38.28	No	Si
SLU 62	4.83	-157.94	-11813	-0.0001081	0.0004492	0.0035	0.6647	1886.61	2946.35	2946.35	18.66	No	Si
SLU 62	7.33	72.22	-10770	-0.0000916	0.0004492	0.0035	0.6647	1884.21	2697.82	2697.82	37.35	No	Si
SLU 57	4.83	-155.47	-11707	-0.0001069	0.0004492	0.0035	0.6647	1887.81	2930.11	2930.11	18.85	No	Si
SLU 57	7.33	73.62	-10557	-0.0000898	0.0004492	0.0035	0.6647	1879.8	2658.73	2658.73	36.12	No	Si
SLU 56	4.83	-155.18	-11719	-0.000107	0.0004492	0.0035	0.6647	1887.7	2931.89	2931.89	18.89	No	Si
SLU 56	7.33	73.66	-10574	-0.00009	0.0004492	0.0035	0.6647	1880.2	2661.87	2661.87	36.14	No	Si
SLU 58	4.83	-154.77	-11566	-0.0001055	0.0004492	0.0035	0.6647	1888.92	2908.31	2908.31	18.79	No	Si
SLU 58	7.33	74.21	-10382	-0.0000883	0.0004492	0.0035	0.6647	1875.21	2626.84	2626.84	35.4	No	Si
SLU 54	4.83	-152.02	-11497	-0.0001047	0.0004492	0.0035	0.6647	1889.24	2897.78	2897.78	19.06	No	Si
SLU 54	7.33	71	-10374	-0.000088	0.0004492	0.0035	0.6647	1874.98	2625.38	2625.38	36.98	No	Si
SLU 55	4.83	-151.81	-11337	-0.0001032	0.0004492	0.0035	0.6647	1889.46	2873.02	2873.02	18.93	No	Si
SLU 55	7.33	71.53	-10171	-0.0000863	0.0004492	0.0035	0.6647	1868.47	2588.24	2588.24	36.19	No	Si
SLU 59	4.83	-155.06	-11554	-0.0001054	0.0004492	0.0035	0.6647	1888.98	2906.54	2906.54	18.74	No	Si
SLU 59	7.33	74.17	-10365	-0.0000882	0.0004492	0.0035	0.6647	1874.71	2623.69	2623.69	35.37	No	Si
SLU 63	4.83	-158.23	-11801	-0.000108	0.0004492	0.0035	0.6647	1886.76	2944.57	2944.57	18.61	No	Si
SLU 63	7.33	72.19	-10753	-0.0000915	0.0004492	0.0035	0.6647	1883.91	2694.67	2694.67	37.33	No	Si
SLU 61	4.83	-154.78	-11591	-0.0001057	0.0004492	0.0035	0.6647	1888.76	2912.24	2912.24	18.82	No	Si
SLU 61	7.33	69.56	-10571	-0.0000896	0.0004492	0.0035	0.6647	1880.13	2661.32	2661.32	38.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	4.83	2620.78	-3633	-0.0331827	0.0006738	0.0035	0.5318		1173.1	1173.1	0.45		No
SLV 4	7.33	-2687.45	-4906	-0.0088793	0.0006738	0.0035	0.5318		1629.07	1629.07	0.61		No
SLV 14	4.83	-2819.94	-13456	-0.0004841	0.0006738	0.0035	0.5318		3503.76	3503.76	1.24		Si
SLV 14	7.33	2760.01	-10768	-0.0008472	0.0006738	0.0035	0.6647		2906.85	2906.85	1.05		Si
SLD 4	4.83	1065.7	-6426	-0.0001349	0.0006738	0.0035	0.6647		1899.3	1899.3	1.78		Si
SLD 4	7.33	-1130.74	-6566	-0.0001441	0.0006738	0.0035	0.6647		2064.53	2064.53	1.83		Si
SLV 15	4.83	-2821.87	-12062	-0.0005825	0.0006738	0.0035	0.5318		3281.31	3281.31	1.16		Si
SLV 15	7.33	2777.01	-8959	-0.0083929	0.0006738	0.0035	0.5318		2505.08	2505.08	0.9		No
SLV 1	4.83	2641.4	-4965	-0.0274721	0.0006738	0.0035	0.5318		1545.72	1545.72	0.59		No
SLV 1	7.33	-2723.8	-6672	-0.0073181	0.0006738	0.0035	0.5318		2091.65	2091.65	0.77		No
SLD 3	4.83	1069.72	-6413	-0.0001354	0.0006738	0.0035	0.6647		1896.11	1896.11	1.77		Si
SLD 3	7.33	-1134.9	-6556	-0.0001448	0.0006738	0.0035	0.6647		2062.13	2062.13	1.82		Si
SLV 16	4.83	-2831.22	-12093	-0.0005872	0.0006738	0.0035	0.5318		3286.27	3286.27	1.16		Si
SLV 16	7.33	2786.69	-8981	-0.0084732	0.0006738	0.0035	0.5318		2510.31	2510.31	0.9		No
SLV 3	4.83	2630.13	-3602	-0.0334981	0.0006738	0.0035	0.5318		1164.14	1164.14	0.44		No
SLV 3	7.33	-2697.13	-4884	-0.0089489	0.0006738	0.0035	0.5318		1623.23	1623.23	0.6		No
SLV 13	4.83	-2810.6	-13425	-0.000481	0.0006738	0.0035	0.5318		3498.8	3498.8	1.24		Si
SLV 13	7.33	2750.34	-10746	-0.000827	0.0006738	0.0035	0.6647		2902.78	2902.78	1.06		Si
SLV 2	4.83	2632.06	-4996	-0.0271431	0.0006738	0.0035	0.5318		1554.22	1554.22	0.59		No
SLV 2	7.33	-2714.12	-6694	-0.0072349	0.0006738	0.0035	0.5318		2097.25	2097.25	0.77		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	4.83	-139.75	-10652	-7599	-108	0.6647	0.6647	-40830	10833	2016	115546	6689	3390	10078	No	93.44	Si
SLU 48	7.33	72.18	-9243	-6594	-104	0.6647	0.6647	-35429	10833	2016	115546	6689	3390	10078	No	97.27	Si
SLU 46	4.83	-136.6	-10431	-7441	-104	0.6647	0.6647	-39981	10833	2016	115546	6689	3390	10078	No	97.17	Si
SLU 46	7.33	69.52	-9044	-6452	-100	0.6647	0.6647	-34665	10833	2016	115546	6689	3390	10078	No	101.07	Si
SLU 50	4.83	-139.35	-10499	-7490	-111	0.6647	0.6647	-40243	10833	2016	115546	6689	3390	10078	No	90.94	Si
SLU 50	7.33	72.73	-9052	-6457	-107	0.6647	0.6647	-34695	10833	2016	115546	6689	3390	10078	No	94.42	Si
SLU 51	4.83	-139.64	-10488	-7482	-111	0.6647	0.6647	-40199	10833	2016	115546	6689	3390	10078	No	90.5	Si
SLU 51	7.33	72.69	-9035	-6445	-107	0.6647	0.6647	-34629	10833	2016	115546	6689	3390	10078	No	93.93	Si
SLU 59	4.83	-155.06	-11554	-8243	-87	0.6647	0.6647	-44287	10833	2016	115546	6689	3390	10078	No	115.43	Si
SLU 59	7.33	74.17	-10365	-7394	-96	0.6647	0.6647	-39730	10833	2016	115546	6689	3390	10078	No	104.82	Si
SLU 47	4.83	-136.39	-10270	-7326	-107	0.6647	0.6647	-39364	10833	2016	115546	6689	3390	10078	No	94.15	Si
SLU 47	7.33	70.05	-8841	-6307	-103	0.6647	0.6647	-33886	10833	2016	115546	6689	3390	10078	No	97.64	Si
SLU 43	4.83	-132.45	-10079	-7190	-101	0.6647	0.6647	-38632	10833	2016	115546	6689	3390	10078	No	99.34	Si
SLU 43	7.33	67.49	-8687	-6197	-98	0.6647	0.6647	-33298	10833	2016	115546	6689	3390	10078	No	102.99	Si
SLU 49	4.83	-140.04	-10641	-7591	-108	0.6647	0.6647	-40786	10833	2016	115546	6689	3390	10078	No	92.97	Si
SLU 49	7.33	72.14	-9226	-6582	-104	0.6647	0.6647	-35363	10833	2016	115546	6689	3390	10078	No	96.76	Si
SLU 44	4.83	-132.94	-10060	-7176	-102	0.6647	0.6647	-38559	10833	2016	115546	6689	3390	10078	No	98.46	Si
SLU 44	7.33	67.42	-8658	-6177	-99	0.6647	0.6647	-33188	10833	2016	115546	6689	3390	10078	No	102.03	Si
SLU 45	4.83	-136.31	-10442	-7449	-103	0.6647	0.6647	-40025	10833	2016	115546	6689	3390	10078	No	97.68	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	7.33	69.56	-9061	-6464	-99	0.6647	0.6647	-34730	10833	2016	115546	6689	3390	10078	No	101.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	4.83	-2810.6	-13425	-9577	-2474	0.5318	0.369	0	0	0	115546	8026	2712	10738		4.34	Si
SLV 13	7.33	2750.34	-10746	-7666	-2125	0.6647	0.2292	-136710	16250	1043	115546	10033	3390	13423		6.32	Si
SLD 16	4.83	-1264.85	-10042	-7164	-1118	0.6647	0.6192	-38490	16250	2817	115546	10033	3390	13423		12	Si
SLD 16	7.33	1209.32	-8306	-5925	-978	0.6647	0.5603	-31837	16250	2549	115546	10033	3390	13423		13.72	Si
SLV 3	4.83	2630.13	-3602	-2570	2414	0.5318	0	0	0	0	115546	8026	2712	10738		4.45	Si
SLV 3	7.33	-2697.13	-4884	-3484	2063	0.5318	0	0	0	0	115546	8026	2712	10738		5.21	Si
SLV 1	4.83	2641.4	-4965	-3542	2501	0.5318	0	0	0	0	115546	8026	2712	10738		4.29	Si
SLV 1	7.33	-2723.8	-6672	-4759	2169	0.5318	0	0	0	0	115546	8026	2712	10738		4.95	Si
SLV 14	4.83	-2819.94	-13456	-9599	-2482	0.5318	0.3683	0	0	0	115546	8026	2712	10738		4.33	Si
SLV 14	7.33	2760.01	-10768	-7682	-2133	0.6647	0.2281	-138213	16250	1038	115546	10033	3390	13423		6.29	Si
SLV 4	4.83	2620.78	-3633	-2592	2406	0.5318	0	0	0	0	115546	8026	2712	10738		4.46	Si
SLV 4	7.33	-2687.45	-4906	-3500	2054	0.5318	0	0	0	0	115546	8026	2712	10738		5.23	Si
SLV 2	4.83	2632.06	-4996	-3564	2492	0.5318	0	0	0	0	115546	8026	2712	10738		4.31	Si
SLV 2	7.33	-2714.12	-6694	-4775	2161	0.5318	0	0	0	0	115546	8026	2712	10738		4.97	Si
SLV 16	4.83	-2831.22	-12093	-8627	-2569	0.5318	0.2947	0	0	0	115546	8026	2712	10738		4.18	Si
SLV 16	7.33	2786.69	-8981	-6407	-2240	0.5318	0.0661	0	0	0	115546	8026	2712	10738		4.79	Si
SLD 15	4.83	-1260.84	-10028	-7154	-1115	0.6647	0.6199	-38439	16250	2820	115546	10033	3390	13423		12.04	Si
SLD 15	7.33	1205.16	-8297	-5919	-974	0.6647	0.5613	-31801	16250	2554	115546	10033	3390	13423		13.78	Si
SLV 15	4.83	-2821.87	-12062	-8605	-2560	0.5318	0.2952	0	0	0	115546	8026	2712	10738		4.19	Si
SLV 15	7.33	2777.01	-8959	-6391	-2231	0.5318	0.0671	0	0	0	115546	8026	2712	10738		4.81	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-4455	0.38	69.26	542.22	737.2	639.71	9.24	Si
SLV 8	-4468	0.38	69.26	543.61	739.2	641.41	9.26	Si
SLV 3	-4784	0.38	69.26	575.79	786.17	680.98	9.83	Si
SLV 4	-4804	0.38	69.26	577.87	789.25	683.56	9.87	Si
SLV 11	-5726	0.38	69.26	667.07	925.54	796.31	11.5	Si
SLV 12	-5739	0.38	69.26	668.33	927.52	797.92	11.52	Si
SLV 1	-6340	0.38	69.26	722.61	1015.25	868.93	12.55	Si
SLV 2	-6360	0.38	69.26	724.42	1018.23	871.33	12.58	Si
SLV 15	-9021	0.38	69.26	928.95	1398.74	1163.84	16.8	Si
SLV 16	-9042	0.38	69.26	930.31	1401.61	1165.96	16.84	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-7374	-12079	-22	0.509	843	0.967	7.64772	11.63229	No
SLV 9	-7349	-12059	-22	0.51	840.4	0.967	7.671	11.63229	No
SLV 6	-6374	-9541	-46	0.573	741.2	0.963	8.6455	11.63229	No
SLV 5	-6348	-9521	-46	0.575	738.6	0.963	8.67601	11.63229	No
SLV 14	-6894	-13456	33	0.537	794.2	0.965	8.09288	5.55889	Si
SLV 13	-6855	-13425	33	0.54	790.2	0.965	8.13371	5.55889	Si
SLV 12	-2648	-7537	54	1.183	363.1	0.931	18.47918	11.63229	Si
SLV 11	-2623	-7517	54	1.192	360.5	0.93	18.62886	11.63229	Si
SLV 16	-5477	-12093	56	0.65	649.9	0.958	9.85921	5.55889	Si
SLV 15	-5437	-12062	56	0.654	646	0.958	9.92179	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.61	SLU 63	Si
V_SLU	90.498	SLU 51	Si
PF_SLV	0.443	SLV 3	No
V_SLV	4.181	SLV 16	Si
PFFP_SLV	9.237	SLV 7	Si
R_SLV	0.657	SLV 10	No

Maschio 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L5	L6	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	4.83	2446.63	-31586	-0.0001097	0.0004492	0.0035	1.9353	15983.73	22983.51	22983.51	9.39	No	Si
SLU 64	7.33	1389.72	-24882	-0.0000793	0.0004492	0.0035	1.9353	15029.15	19391.57	19391.57	13.95	No	Si
SLU 70	4.83	2529.63	-33220	-0.0001158	0.0004492	0.0035	1.9353	16017.29	23858.95	23858.95	9.43	No	Si
SLU 70	7.33	1477.71	-26358	-0.0000845	0.0004492	0.0035	1.9353	15352.11	20182.47	20182.47	13.66	No	Si
SLU 66	4.83	2498.87	-32657	-0.0001137	0.0004492	0.0035	1.9353	16014.54	23557.22	23557.22	9.43	No	Si
SLU 66	7.33	1448.74	-25855	-0.0000827	0.0004492	0.0035	1.9353	15249.23	19913.01	19913.01	13.75	No	Si
SLU 72	4.83	2509.23	-32736	-0.0001141	0.0004492	0.0035	1.9353	16015.48	23599.46	23599.46	9.41	No	Si
SLU 72	7.33	1450.34	-25910	-0.0000829	0.0004492	0.0035	1.9353	15260.8	19942.38	19942.38	13.75	No	Si
SLU 69	4.83	2530.71	-33243	-0.0001159	0.0004492	0.0035	1.9353	16017.2	23871.45	23871.45	9.43	No	Si
SLU 69	7.33	1480.38	-26381	-0.0000846	0.0004492	0.0035	1.9353	15356.48	20194.35	20194.35	13.64	No	Si
SLU 65	4.83	2444.83	-31547	-0.0001096	0.0004492	0.0035	1.9353	15981.98	22962.67	22962.67	9.39	No	Si
SLU 65	7.33	1385.27	-24845	-0.0000791	0.0004492	0.0035	1.9353	15020.24	19371.77	19371.77	13.98	No	Si
SLU 23	4.83	2085.48	-26073	-0.0000892	0.0004492	0.0035	1.9353	15294.55	20029.34	20029.34	9.6	No	Si
SLU 23	7.33	1087.08	-20675	-0.0000643	0.0004492	0.0035	1.9353	13759.14	16734.38	16734.38	15.39	No	Si
SLU 68	4.83	2476.67	-32134	-0.0001118	0.0004492	0.0035	1.9353	16003.67	23276.9	23276.9	9.4	No	Si
SLU 68	7.33	1416.92	-25370	-0.000081	0.0004492	0.0035	1.9353	15143	19653.11	19653.11	13.87	No	Si
SLU 71	4.83	2510.31	-32759	-0.0001141	0.0004492	0.0035	1.9353	16015.72	23611.96	23611.96	9.41	No	Si
SLU 71	7.33	1453.01	-25932	-0.000083	0.0004492	0.0035	1.9353	15265.46	19954.26	19954.26	13.73	No	Si
SLU 67	4.83	2497.79	-32634	-0.0001136	0.0004492	0.0035	1.9353	16014.22	23544.72	23544.72	9.43	No	Si
SLU 67	7.33	1446.07	-25833	-0.0000826	0.0004492	0.0035	1.9353	15244.52	19901.13	19901.13	13.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	4.83	7361.34	-26964	-0.0001352	0.0006738	0.0035	1.9353		21819.64	21819.64	2.96		Si
SLD 3	7.33	-1995.6	-19352	-0.0000668	0.0006738	0.0035	1.9353		18345.26	18345.26	9.19		Si
SLV 4	4.83	14688.16	-30420	-0.0002332	0.0006738	0.0035	1.9353		24101.66	24101.66	1.64		Si
SLV 4	7.33	-6141.85	-19505	-0.0001024	0.0006738	0.0035	1.9353		18458.39	18458.39	3.01		Si
SLV 1	4.83	15068.77	-33019	-0.0002412	0.0006738	0.0035	1.9353		25518.26	25518.26	1.69		Si
SLV 1	7.33	-6005.46	-21714	-0.0001077	0.0006738	0.0035	1.9353		20034.33	20034.33	3.34		Si
SLV 3	4.83	14785.8	-30359	-0.000235	0.0006738	0.0035	1.9353		24068.59	24068.59	1.63		Si
SLV 3	7.33	-6176.48	-19407	-0.0001024	0.0006738	0.0035	1.9353		18385.95	18385.95	2.98		Si
SLV 13	4.83	-11046.58	-18507	-0.0001789	0.0006738	0.0035	1.5482		17721.93	17721.93	1.6		Si
SLV 13	7.33	8398.32	-19177	-0.0001258	0.0006738	0.0035	1.9353		16354.08	16354.08	1.95		Si
SLV 2	4.83	14971.13	-33079	-0.0002397	0.0006738	0.0035	1.9353		25551.33	25551.33	1.71		Si
SLV 2	7.33	-5970.83	-21812	-0.0001077	0.0006738	0.0035	1.9353		20102.82	20102.82	3.37		Si
SLD 4	4.83	7319.4	-26991	-0.0001349	0.0006738	0.0035	1.9353		21837.93	21837.93	2.98		Si
SLD 4	7.33	-1980.72	-19394	-0.0000668	0.0006738	0.0035	1.9353		18376.38	18376.38	9.28		Si
SLV 15	4.83	-11329.55	-15847	-0.0002296	0.0006738	0.0035	1.5482		15719.3	15719.3	1.39		Si
SLV 15	7.33	8227.3	-16870	-0.0001219	0.0006738	0.0035	1.9353		14735.02	14735.02	1.79		Si
SLV 16	4.83	-11427.19	-15908	-0.0002342	0.0006738	0.0035	1.5482		15766.52	15766.52	1.38		Si
SLV 16	7.33	8261.94	-16968	-0.0001224	0.0006738	0.0035	1.9353		14803.93	14803.93	1.79		Si
SLV 14	4.83	-11144.22	-18568	-0.0001814	0.0006738	0.0035	1.5482		17766.7	17766.7	1.59		Si
SLV 14	7.33	8432.96	-19275	-0.0001264	0.0006738	0.0035	1.9353		16422.99	16422.99	1.95		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	4.83	2529.63	-33220	-23698	2095	1.9353	1.9353	-43733	10833	5870	115546	19474	9870	29344	No	14.01	Si
SLU 70	7.33	1477.71	-26358	-18803	-517	1.9353	1.9353	-34700	10833	5870	115546	19474	9870	29344	No	56.75	Si
SLU 84	4.83	2627.36	-37013	-26404	2120	1.9353	1.9353	-48726	10833	5870	115546	19474	9870	29344	No	13.84	Si
SLU 84	7.33	1764.84	-29881	-21317	-492	1.9353	1.9353	-39338	10833	5870	115546	19474	9870	29344	No	59.64	Si
SLU 75	4.83	2602.77	-36038	-25709	2113	1.9353	1.9353	-47443	10833	5870	115546	19474	9870	29344	No	13.89	Si
SLU 75	7.33	1688.37	-28981	-20674	-499	1.9353	1.9353	-38152	10833	5870	115546	19474	9870	29344	No	58.83	Si
SLU 74	4.83	2603.85	-36061	-25725	2113	1.9353	1.9353	-47474	10833	5870	115546	19474	9870	29344	No	13.89	Si
SLU 74	7.33	1691.04	-29003	-20690	-499	1.9353	1.9353	-38181	10833	5870	115546	19474	9870	29344	No	58.82	Si
SLU 77	4.83	2635.69	-36648	-26144	2141	1.9353	1.9353	-48246	10833	5870	115546	19474	9870	29344	No	13.7	Si
SLU 77	7.33	1722.68	-29528	-21064	-514	1.9353	1.9353	-38872	10833	5870	115546	19474	9870	29344	No	57.09	Si
SLU 76	4.83	2581.65	-35538	-25352	2100	1.9353	1.9353	-46785	10833	5870	115546	19474	9870	29344	No	13.97	Si
SLU 76	7.33	1659.22	-28518	-20344	-493	1.9353	1.9353	-37543	10833	5870	115546	19474	9870	29344	No	59.48	Si
SLU 78	4.83	2634.61	-36625	-26127	2142	1.9353	1.9353	-48215	10833	5870	115546	19474	9870	29344	No	13.7	Si
SLU 78	7.33	1720.01	-29506	-21049	-514	1.9353	1.9353	-38843	10833	5870	115546	19474	9870	29344	No	57.11	Si
SLU 83	4.83	2628.44	-37036	-26421	2120	1.9353	1.9353	-48757	10833	5870	115546	19474	9870	29344	No	13.84	Si
SLU 83	7.33	1767.51	-29903	-21332	-492	1.9353	1.9353	-39367	10833	5870	115546	19474	9870	29344	No	59.62	Si
SLU 79	4.83	2615.29	-36164	-25798	2128	1.9353	1.9353	-47608	10833	5870	115546	19474	9870	29344	No	13.79	Si
SLU 79	7.33	1695.31	-29080	-20745	-509	1.9353	1.9353	-38283	10833	5870	115546	19474	9870	29344	No	57.69	Si
SLU 80	4.83	2614.21	-36140	-25782	2129	1.9353	1.9353	-47578	10833	5870	115546	19474	9870	29344	No	13.79	Si
SLU 80	7.33	1692.64	-29058	-20729	-508	1.9353	1.9353	-38253	10833	5870	115546	19474	9870	29344	No	57.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	4.83	-11046.58	-18507	-13202	-9640	1.5482	1.1123	0	0	0	115546	23369	7896	31265		3.24	Si
SLV 13	7.33	8398.32	-19177	-13680	-6205	1.9353	1.5891	-25246	16250	7231	115546	29211	9870	39081		6.3	Si
SLV 1	4.83	15068.77	-33019	-23555	12914	1.9353	1.5338	-43468	16250	6979	115546	29211	9870	39081		3.03	Si
SLV 1	7.33	-6005.46	-21714	-15490	6043	1.9353	1.9353	-28585	16250	8806	115546	29211	9870	39081		6.47	Si
SLV 14	4.83	-11144.22	-18568	-13246	-9713	1.5482	1.1024	0	0	0	115546	23369	7896	31265		3.22	Si
SLV 14	7.33	8432.96	-19275	-13750	-6233	1.9353	1.5904	-25375	16250	7236	115546	29211	9870	39081		6.27	Si
SLV 2	4.83	14971.13	-33079	-23598	12841	1.9353	1.5452	-43548	16250	7031	115546	29211	9870	39081		3.04	Si
SLV 2	7.33	-5970.83	-21812	-15560	6015	1.9353	1.9353	-28715	16250	8806	115546	29211	9870	39081		6.5	Si
SLV 15	4.83	-11329.55	-15847	-11305	-9843	1.5482	0.7582	0	0	0	115546	23369	7896	31265		3.18	Si
SLV 15	7.33	8227.3	-16870	-12035	-6823	1.9353	1.4399	-22209	16250	6551	115546	29211	9870	39081		5.73	Si
SLV 16	4.83	-11427.19	-15908	-11348	-9917	1.5482	0.748	0	0	0	115546	23369	7896	31265		3.15	Si
SLV 16	7.33	8261.94	-16968	-12105	-6850	1.9353	1.4422	-22338	16250	6562	115546	29211	9870	39081		5.71	Si
SLD 2	4.83	7444.99	-28167	-20094	6349	1.9353	1.9353	-37081	16250	8806	115546	29211	9870	39081		6.16	Si
SLD 2	7.33	-1905.25	-20416	-14564	2343	1.9353	1.9353	-26876	16250	8806	115546	29211	9870	39081		16.68	Si
SLD 1	4.83	7486.93	-28141	-20075	6380	1.9353	1.9353	-37047	16250	8806	115546	29211	9870	39081		6.13	Si
SLD 1	7.33	-1920.12	-20373	-14534	2354	1.9353	1.9353	-26821	16250	8806	115546	29211	9870	39081		16.6	Si
SLV 4	4.83	14688.16	-30420	-21701	12638	1.9353	1.4544	-40047	16250	6618	115546	29211	9870	39081		3.09	Si
SLV 4	7.33	-6141.85	-19505	-13914	5398	1.9353	1.9353	-25678	16250	8806	115546	29211	9870	39081		7.24	Si
SLV 3	4.83	14785.8	-30359	-21657	12711	1.9353	1.4419	-39967	16250	6561	115546	29211	9870	39081		3.07	Si
SLV 3	7.33	-6176.48	-19407	-13844	5426	1.9353	1.9353	-25548	16250	8806	115546	29211	9870	39081		7.2	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-14201	0.38	201.65	1703.87	2405.34	2054.61	10.19	Si
SLV 16	-14262	0.38	201.65	1709.93	2414.36	2062.15	10.23	Si
SLV 11	-16245	0.38	201.65	1902.27	2706.24	2304.26	11.43	Si
SLV 12	-16284	0.38	201.65	1906	2712.05	2309.02	11.45	Si
SLV 13	-16804	0.38	201.65	1954.53	2788.33	2371.43	11.76	Si
SLV 14	-16865	0.38	201.65	1960.14	2797.24	2378.69	11.8	Si
SLV 7	-20590	0.38	201.65	2285.02	3335.64	2810.33	13.94	Si
SLV 8	-20630	0.38	201.65	2288.26	3341.33	2814.8	13.96	Si
SLV 9	-24921	0.38	201.65	2613.51	3951.54	3282.53	16.28	Si
SLV 10	-24961	0.38	201.65	2616.27	3956.99	3286.63	16.3	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-20327	-31093	-701	0.504	2338.1	0.965	7.59074	11.63229	No
SLV 5	-20249	-31053	-702	0.506	2330.1	0.965	7.61637	11.63229	No
SLV 10	-19499	-26739	-683	0.523	2253.8	0.964	7.88622	11.63229	No
SLV 9	-19420	-26699	-684	0.525	2245.9	0.964	7.91401	11.63229	No
SLV 8	-13317	-22227	708	0.72	1625.3	0.952	10.99759	11.63229	No
SLV 7	-13239	-22188	708	0.724	1617.4	0.952	11.05437	11.63229	No
SLV 12	-12489	-17874	726	0.759	1541.2	0.95	11.61194	11.63229	No
SLV 11	-12411	-17834	726	0.763	1533.3	0.949	11.67569	11.63229	Si
SLV 2	-18860	-33079	-229	0.56	2188.9	0.963	8.45353	5.55889	Si
SLV 1	-18740	-33019	-229	0.563	2176.7	0.963	8.50106	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.392	SLU 65	Si
V_SLU	13.702	SLU 78	Si
PF_SLV	1.38	SLV 16	Si
V_SLV	3.026	SLV 1	Si
PFFP_SLV	10.189	SLV 15	Si
R_SLV	0.653	SLV 6	No

Maschio 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L5	L6	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	4.83	1844.34	-23923	-0.0001084	0.0004492	0.0035	1.55	10176.26	14164.54	14164.54	7.68	No	Si
SLU 50	6.93	-1352.76	-22733	-0.0000965	0.0004492	0.0035	1.55	10065.43	14703.4	14703.4	10.87	No	Si
SLU 46	4.83	1822.26	-23789	-0.0001075	0.0004492	0.0035	1.55	10165.89	14105.48	14105.48	7.74	No	Si
SLU 46	6.93	-1339.56	-22613	-0.0000958	0.0004492	0.0035	1.55	10051.95	14651.89	14651.89	10.94	No	Si
SLU 65	4.83	1907.48	-25642	-0.0001162	0.0004492	0.0035	1.55	10263.3	14925.08	14925.08	7.82	No	Si
SLU 65	6.93	-1396.51	-24779	-0.0001051	0.0004492	0.0035	1.55	10230.4	15530.39	15530.39	11.12	No	Si
SLU 43	4.83	1807.48	-22947	-0.0001039	0.0004492	0.0035	1.55	10088.39	13732.64	13732.64	7.6	No	Si
SLU 43	6.93	-1339.82	-21767	-0.0000926	0.0004492	0.0035	1.55	9945.07	14288.87	14288.87	10.66	No	Si
SLU 48	4.83	1840.55	-24289	-0.0001098	0.0004492	0.0035	1.55	10202.04	14326.59	14326.59	7.78	No	Si
SLU 48	6.93	-1343.38	-23112	-0.0000978	0.0004492	0.0035	1.55	10105.24	14866.2	14866.2	11.07	No	Si
SLU 45	4.83	1822.12	-23801	-0.0001075	0.0004492	0.0035	1.55	10166.81	14110.64	14110.64	7.74	No	Si
SLU 45	6.93	-1336.91	-22629	-0.0000958	0.0004492	0.0035	1.55	10053.82	14658.93	14658.93	10.96	No	Si
SLU 49	4.83	1840.69	-24277	-0.0001097	0.0004492	0.0035	1.55	10201.28	14321.43	14321.43	7.78	No	Si
SLU 49	6.93	-1346.03	-23096	-0.0000978	0.0004492	0.0035	1.55	10103.61	14859.16	14859.16	11.04	No	Si
SLU 47	4.83	1826.15	-23415	-0.0001061	0.0004492	0.0035	1.55	10134.05	13939.99	13939.99	7.63	No	Si
SLU 47	6.93	-1350.71	-22223	-0.0000945	0.0004492	0.0035	1.55	10005.24	14484.4	14484.4	10.72	No	Si
SLU 51	4.83	1844.49	-23911	-0.0001083	0.0004492	0.0035	1.55	10175.37	14159.38	14159.38	7.68	No	Si
SLU 51	6.93	-1355.41	-22717	-0.0000965	0.0004492	0.0035	1.55	10063.61	14696.36	14696.36	10.84	No	Si
SLU 44	4.83	1807.71	-22927	-0.0001039	0.0004492	0.0035	1.55	10086.36	13724.04	13724.04	7.59	No	Si
SLU 44	6.93	-1344.24	-21740	-0.0000925	0.0004492	0.0035	1.55	9941.27	14277.14	14277.14	10.62	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	4.83	10876.99	-15556	-0.0046156	0.0006738	0.0035	1.55		10578.24	10578.24	0.97		No
SLV 2	6.93	-8924.2	-17969	-0.0002404	0.0006738	0.0035	1.24		13140.68	13140.68	1.47		Si
SLD 2	4.83	5463.03	-18037	-0.0001334	0.0006738	0.0035	1.55		12005.44	12005.44	2.2		Si
SLD 2	6.93	-4400.5	-18724	-0.00012	0.0006738	0.0035	1.55		13565.01	13565.01	3.08		Si
SLV 4	4.83	10364.59	-14601	-0.0049165	0.0006738	0.0035	1.55		10029.19	10029.19	0.97		No
SLV 4	6.93	-9018.26	-15715	-0.0002993	0.0006738	0.0035	1.24		11862.64	11862.64	1.32		Si
SLV 1	4.83	10888.86	-15547	-0.0047039	0.0006738	0.0035	1.55		10573.12	10573.12	0.97		No
SLV 1	6.93	-8971.79	-17790	-0.0002454	0.0006738	0.0035	1.24		13040.24	13040.24	1.45		Si
SLV 3	4.83	10376.46	-14592	-0.0050051	0.0006738	0.0035	1.55		10024.08	10024.08	0.97		No
SLV 3	6.93	-9065.84	-15537	-0.0003127	0.0006738	0.0035	1.24		11756.5	11756.5	1.3		Si
SLV 16	4.83	-8056.61	-24208	-0.0001991	0.0006738	0.0035	1.55		16395.95	16395.95	2.04		Si
SLV 16	6.93	6922.97	-20729	-0.0001676	0.0006738	0.0035	1.55		13553.59	13553.59	1.96		Si
SLV 14	4.83	-7544.22	-25162	-0.0001917	0.0006738	0.0035	1.55		16849.52	16849.52	2.23		Si
SLV 14	6.93	7017.03	-22982	-0.0001753	0.0006738	0.0035	1.55		14774.55	14774.55	2.11		Si
SLV 13	4.83	-7532.35	-25153	-0.0001914	0.0006738	0.0035	1.55		16845.37	16845.37	2.24		Si
SLV 13	6.93	6969.44	-22803	-0.0001739	0.0006738	0.0035	1.55		14694.15	14694.15	2.11		Si
SLD 1	4.83	5468.13	-18033	-0.0001335	0.0006738	0.0035	1.55		12003.24	12003.24	2.2		Si
SLD 1	6.93	-4420.94	-18647	-0.00012	0.0006738	0.0035	1.55		13521.87	13521.87	3.06		Si
SLV 15	4.83	-8044.74	-24199	-0.0001988	0.0006738	0.0035	1.55		16391.52	16391.52	2.04		Si
SLV 15	6.93	6875.39	-20550	-0.0001662	0.0006738	0.0035	1.55		13450.75	13450.75	1.96		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	4.83	1925.91	-26130	-18640	2007	1.55	1.55	-42950	10833	4702	115546	15597	7905	23502	No	11.71	Si
SLU 68	6.93	-1402.98	-25261	-18021	2008	1.55	1.55	-41523	10833	4702	115546	15597	7905	23502	No	11.71	Si
SLU 80	4.83	1842.53	-29196	-20828	2017	1.55	1.55	-47991	10833	4702	115546	15597	7905	23502	No	11.65	Si
SLU 80	6.93	-1285.37	-28715	-20484	2018	1.55	1.55	-47199	10833	4702	115546	15597	7905	23502	No	11.65	Si
SLU 70	4.83	1940.46	-26992	-19255	2015	1.55	1.55	-44367	10833	4702	115546	15597	7905	23502	No	11.67	Si
SLU 70	6.93	-1398.3	-26134	-18644	2016	1.55	1.55	-42958	10833	4702	115546	15597	7905	23502	No	11.66	Si
SLU 71	4.83	1944.11	-26637	-19002	2017	1.55	1.55	-43784	10833	4702	115546	15597	7905	23502	No	11.65	Si
SLU 71	6.93	-1405.03	-25772	-18385	2018	1.55	1.55	-42361	10833	4702	115546	15597	7905	23502	No	11.64	Si
SLU 69	4.83	1940.32	-27003	-19263	2015	1.55	1.55	-44386	10833	4702	115546	15597	7905	23502	No	11.67	Si
SLU 69	6.93	-1395.64	-26151	-18655	2016	1.55	1.55	-42985	10833	4702	115546	15597	7905	23502	No	11.66	Si
SLU 77	4.83	1838.6	-29574	-21098	2014	1.55	1.55	-48612	10833	4702	115546	15597	7905	23502	No	11.67	Si
SLU 77	6.93	-1273.34	-29110	-20766	2015	1.55	1.55	-47849	10833	4702	115546	15597	7905	23502	No	11.66	Si
SLU 79	4.83	1842.39	-29208	-20836	2017	1.55	1.55	-48010	10833	4702	115546	15597	7905	23502	No	11.65	Si
SLU 79	6.93	-1282.72	-28731	-20496	2018	1.55	1.55	-47226	10833	4702	115546	15597	7905	23502	No	11.65	Si
SLU 72	4.83	1944.25	-26625	-18994	2017	1.55	1.55	-43765	10833	4702	115546	15597	7905	23502	No	11.65	Si
SLU 72	6.93	-1407.68	-25755	-18373	2018	1.55	1.55	-42334	10833	4702	115546	15597	7905	23502	No	11.64	Si
SLU 78	4.83	1838.74	-29563	-21089	2014	1.55	1.55	-48593	10833	4702	115546	15597	7905	23502	No	11.67	Si
SLU 78	6.93	-1275.99	-29094	-20755	2015	1.55	1.55	-47822	10833	4702	115546	15597	7905	23502	No	11.66	Si
SLU 76	4.83	1824.19	-28700	-20474	2006	1.55	1.55	-47176	10833	4702	115546	15597	7905	23502	No	11.72	Si
SLU 76	6.93	-1280.67	-28221	-20132	2007	1.55	1.55	-46387	10833	4702	115546	15597	7905	23502	No	11.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	4.83	10364.59	-14601	-10416	10483	1.55	0.1954	-211578	16250	889	115546	23395	7905	31300		2.99	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	6.93	-9018.26	-15715	-11211	10087	1.24	0.6035	0	0	0	115546	18716	6324	25040		2.48	Si
SLD 2	4.83	5463.03	-18037	-12867	5555	1.55	1.4164	-29648	16250	6444	115546	23395	7905	31300		5.63	Si
SLD 2	6.93	-4400.5	-18724	-13357	5366	1.55	1.55	-30777	16250	7052	115546	23395	7905	31300		5.83	Si
SLV 2	4.83	10876.99	-15556	-11097	10986	1.55	0.2273	-208187	16250	1034	115546	23395	7905	31300		2.85	Si
SLV 2	6.93	-8924.2	-17969	-12818	10543	1.24	0.835	0	0	0	115546	18716	6324	25040		2.38	Si
SLV 15	4.83	-8044.74	-24199	-17263	-7994	1.55	1.3277	-47573	16250	6041	115546	23395	7905	31300		3.92	Si
SLV 15	6.93	6875.39	-20550	-14660	-7549	1.55	1.3213	-33778	16250	6012	115546	23395	7905	31300		4.15	Si
SLD 1	4.83	5468.13	-18033	-12864	5547	1.55	1.4153	-29642	16250	6440	115546	23395	7905	31300		5.64	Si
SLD 1	6.93	-4420.94	-18647	-13302	5357	1.55	1.55	-30651	16250	7052	115546	23395	7905	31300		5.84	Si
SLV 1	4.83	10888.86	-15547	-11091	10967	1.55	0.2238	-209493	16250	1018	115546	23395	7905	31300		2.85	Si
SLV 1	6.93	-8971.79	-17790	-12691	10523	1.24	0.812	0	0	0	115546	18716	6324	25040		2.38	Si
SLV 13	4.83	-7532.35	-25153	-17944	-7491	1.55	1.4266	-45982	16250	6491	115546	23395	7905	31300		4.18	Si
SLV 13	6.93	6969.44	-22803	-16267	-7093	1.55	1.4081	-37482	16250	6407	115546	23395	7905	31300		4.41	Si
SLV 3	4.83	10376.46	-14592	-10410	10464	1.55	0.1917	-212965	16250	872	115546	23395	7905	31300		2.99	Si
SLV 3	6.93	-9065.84	-15537	-11083	10068	1.24	0.5745	0	0	0	115546	18716	6324	25040		2.49	Si
SLV 14	4.83	-7544.22	-25162	-17950	-7472	1.55	1.4255	-46035	16250	6486	115546	23395	7905	31300		4.19	Si
SLV 14	6.93	7017.03	-22982	-16395	-7074	1.55	1.409	-37776	16250	6411	115546	23395	7905	31300		4.42	Si
SLV 16	4.83	-8056.61	-24208	-17269	-7975	1.55	1.3266	-47632	16250	6036	115546	23395	7905	31300		3.92	Si
SLV 16	6.93	6922.97	-20729	-14787	-7530	1.55	1.3231	-34072	16250	6020	115546	23395	7905	31300		4.16	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-14949	0.38	161.5	1699.57	2446.09	2072.83	12.83	Si
SLV 8	-15066	0.38	161.5	1709.72	2462.88	2086.3	12.92	Si
SLV 3	-15724	0.38	161.5	1766.24	2557.8	2162.02	13.39	Si
SLV 4	-15903	0.38	161.5	1781.32	2583.57	2182.45	13.51	Si
SLV 11	-16506	0.38	161.5	1831.36	2670.52	2250.94	13.94	Si
SLV 12	-16623	0.38	161.5	1840.88	2687.32	2264.1	14.02	Si
SLV 1	-17973	0.38	161.5	1947.65	2881.67	2414.66	14.95	Si
SLV 2	-18151	0.38	161.5	1961.32	2907.41	2434.36	15.07	Si
SLV 15	-20915	0.38	161.5	2158.19	3295.14	2726.67	16.88	Si
SLV 16	-21094	0.38	161.5	2170	3319.78	2744.89	17	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-19323	-22912	-313	0.448	2182.3	0.97	6.71199	11.63229	No
SLV 9	-19170	-22906	-313	0.451	2166.7	0.97	6.75866	11.63229	No
SLV 6	-17679	-20030	-326	0.482	2014.9	0.968	7.24692	11.63229	No
SLV 5	-17525	-20024	-326	0.486	1999.4	0.967	7.30221	11.63229	No
SLV 12	-10427	-19730	313	0.756	1277.5	0.951	11.54573	11.63229	No
SLV 11	-10274	-19724	313	0.765	1261.9	0.951	11.69647	11.63229	Si
SLV 8	-8783	-16848	300	0.873	1110.7	0.945	13.42471	11.63229	Si
SLV 7	-8630	-16842	300	0.885	1095.1	0.944	13.63101	11.63229	Si
SLV 14	-18168	-25162	-79	0.484	2064.8	0.968	7.26481	5.55889	Si
SLV 13	-17933	-25153	-79	0.489	2040.9	0.968	7.34805	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.592	SLU 44	Si
V_SLU	11.644	SLU 72	Si
PF_SLV	0.966	SLV 3	No
V_SLV	2.375	SLV 2	Si
PFFP_SLV	12.835	SLV 7	Si
R_SLV	0.577	SLV 10	No

Maschio 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L5	L6	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	4.83	5753.55	-40138	-0.0000633	0.0004492	0.0035	3.98	56329.59	67424.75	67424.75	11.72	No	Si
SLU 44	6.93	-160.37	-34662	-0.0000445	0.0004492	0.0035	3.98	51418.94	67676.6	67676.6	422.01	No	Si
SLU 51	4.83	5887.33	-41834	-0.000066	0.0004492	0.0035	3.98	57673.44	69882.01	69882.01	11.87	No	Si
SLU 51	6.93	-116.44	-36371	-0.0000467	0.0004492	0.0035	3.98	53045.36	70147.57	70147.57	602.45	No	Si
SLU 43	4.83	5765.22	-40121	-0.0000633	0.0004492	0.0035	3.98	56316.44	67401.45	67401.45	11.69	No	Si
SLU 43	6.93	-132.78	-34651	-0.0000444	0.0004492	0.0035	3.98	51407.92	67660.3	67660.3	509.55	No	Si
SLU 50	4.83	5894.33	-41825	-0.000066	0.0004492	0.0035	3.98	57666.03	69868.02	69868.02	11.85	No	Si
SLU 50	6.93	-99.89	-36364	-0.0000466	0.0004492	0.0035	3.98	53039.09	70137.79	70137.79	702.16	No	Si
SLU 49	4.83	5935.41	-42434	-0.0000669	0.0004492	0.0035	3.98	58128.23	70750.39	70750.39	11.92	No	Si
SLU 49	6.93	-9.7	-37008	-0.0000473	0.0004492	0.0035	3.98	53630.47	71027.03	71027.03	7323.19	No	Si
SLU 64	4.83	6129.88	-44513	-0.0000703	0.0004492	0.0035	3.98	59624.03	73761.96	73761.96	12.03	No	Si
SLU 64	6.93	590.31	-39524	-0.0000519	0.0004492	0.0035	3.98	55822.78	66535.94	66535.94	112.71	No	Si
SLU 45	4.83	5877.86	-41573	-0.0000656	0.0004492	0.0035	3.98	57471.72	69503.12	69503.12	11.82	No	Si
SLU 45	6.93	-9.6	-36145	-0.0000461	0.0004492	0.0035	3.98	52835.44	69821.21	69821.21	7274.7	No	Si
SLU 48	4.83	5942.41	-42424	-0.0000669	0.0004492	0.0035	3.98	58120.99	70736.41	70736.41	11.9	No	Si
SLU 48	6.93	6.85	-37002	-0.0000473	0.0004492	0.0035	3.98	53624.33	62883.14	62883.14	9179.74	No	Si
SLU 46	4.83	5870.85	-41582	-0.0000656	0.0004492	0.0035	3.98	57479.2	69517.1	69517.1	11.84	No	Si
SLU 46	6.93	-26.15	-36152	-0.0000462	0.0004492	0.0035	3.98	52841.75	69830.99	69830.99	2670.71	No	Si
SLU 47	4.83	5818.11	-40989	-0.0000646	0.0004492	0.0035	3.98	57014.58	68658.04	68658.04	11.8	No	Si
SLU 47	6.93	-143.92	-35519	-0.0000456	0.0004492	0.0035	3.98	52244.96	68915.34	68915.34	478.85	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	4.83	9448.36	-29293	-0.0000549	0.0006738	0.0035	3.98		54161.04	54161.04	5.73		Si
SLD 3	6.93	-5016.91	-23053	-0.0000382	0.0006738	0.0035	3.98		51145.89	51145.89	10.19		Si
SLV 3	4.83	15844.9	-22452	-0.0000584	0.0006738	0.0035	3.98		42912.03	42912.03	2.71		Si
SLV 3	6.93	-12525.38	-12901	-0.0000419	0.0006738	0.0035	3.98		33468.89	33468.89	2.67		Si
SLD 1	4.83	10209.24	-28807	-0.0000557	0.0006738	0.0035	3.98		53449.11	53449.11	5.24		Si
SLD 1	6.93	-4749.63	-24052	-0.000039	0.0006738	0.0035	3.98		52822.33	52822.33	11.12		Si
SLV 1	4.83	17589.74	-21321	-0.0000612	0.0006738	0.0035	3.98		40970.48	40970.48	2.33		Si
SLV 1	6.93	-11911.36	-15208	-0.0000417	0.0006738	0.0035	3.98		37542.01	37542.01	3.15		Si
SLV 4	4.83	16128.39	-22168	-0.0000587	0.0006738	0.0035	3.98		42424.28	42424.28	2.63		Si
SLV 4	6.93	-12767.47	-13135	-0.0000427	0.0006738	0.0035	3.98		33886.94	33886.94	2.65		Si
SLD 2	4.83	10331.01	-28685	-0.0000558	0.0006738	0.0035	3.98		53270.52	53270.52	5.16		Si
SLD 2	6.93	-4853.61	-24152	-0.0000393	0.0006738	0.0035	3.98		52991.62	52991.62	10.92		Si
SLV 5	4.83	11152.75	-28805	-0.0000576	0.0006738	0.0035	3.98		53446.55	53446.55	4.79		Si
SLV 5	6.93	-2184.97	-29472	-0.000041	0.0006738	0.0035	3.98		61775.57	61775.57	28.27		Si
SLD 4	4.83	9570.13	-29171	-0.000055	0.0006738	0.0035	3.98		53982.45	53982.45	5.64		Si
SLD 4	6.93	-5120.89	-23154	-0.0000385	0.0006738	0.0035	3.98		51315.18	51315.18	10.02		Si
SLV 6	4.83	11337.46	-28620	-0.0000577	0.0006738	0.0035	3.98		53175.63	53175.63	4.69		Si
SLV 6	6.93	-2342.71	-29625	-0.0000415	0.0006738	0.0035	3.98		62019.54	62019.54	26.47		Si
SLV 2	4.83	17873.23	-21037	-0.0000617	0.0006738	0.0035	3.98		40482.72	40482.72	2.26		Si
SLV 2	6.93	-12153.44	-15443	-0.0000425	0.0006738	0.0035	3.98		37955.86	37955.86	3.12		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	4.83	5765.22	-40121	-28622	2670	3.98	3.98	-25683	10833	12073	115546	40049	20298	60347	No	22.6	Si
SLU 43	6.93	-132.78	-34651	-24719	2664	3.98	3.98	-22181	10833	12073	115546	40049	20298	60347	No	22.65	Si
SLU 51	4.83	5887.33	-41834	-29844	2714	3.98	3.98	-26780	10833	12073	115546	40049	20298	60347	No	22.24	Si
SLU 51	6.93	-116.44	-36371	-25946	2708	3.98	3.98	-23282	10833	12073	115546	40049	20298	60347	No	22.29	Si
SLU 45	4.83	5877.86	-41573	-29657	2624	3.98	3.98	-26612	10833	12073	115546	40049	20298	60347	No	23	Si
SLU 45	6.93	-9.6	-36145	-25785	2618	3.98	3.98	-23138	10833	12073	115546	40049	20298	60347	No	23.05	Si
SLU 46	4.83	5870.85	-41582	-29664	2631	3.98	3.98	-26619	10833	12073	115546	40049	20298	60347	No	22.93	Si
SLU 46	6.93	-26.15	-36152	-25790	2625	3.98	3.98	-23142	10833	12073	115546	40049	20298	60347	No	22.99	Si
SLU 48	4.83	5942.41	-42424	-30264	2642	3.98	3.98	-27158	10833	12073	115546	40049	20298	60347	No	22.84	Si
SLU 48	6.93	6.85	-37002	-26396	2636	3.98	3.98	-23686	10833	12073	115546	40049	20298	60347	No	22.89	Si
SLU 47	4.83	5818.11	-40989	-29241	2700	3.98	3.98	-26239	10833	12073	115546	40049	20298	60347	No	22.35	Si
SLU 47	6.93	-143.92	-35519	-25338	2694	3.98	3.98	-22737	10833	12073	115546	40049	20298	60347	No	22.4	Si
SLU 44	4.83	5753.55	-40138	-28633	2682	3.98	3.98	-25694	10833	12073	115546	40049	20298	60347	No	22.5	Si
SLU 44	6.93	-160.37	-34662	-24727	2676	3.98	3.98	-22189	10833	12073	115546	40049	20298	60347	No	22.55	Si
SLU 50	4.83	5894.33	-41825	-29837	2706	3.98	3.98	-26774	10833	12073	115546	40049	20298	60347	No	22.3	Si
SLU 50	6.93	-99.89	-36364	-25941	2700	3.98	3.98	-23278	10833	12073	115546	40049	20298	60347	No	22.35	Si
SLU 72	4.83	6251.99	-46226	-32977	1977	3.98	3.98	-29591	10833	12073	115546	40049	20298	60347	No	30.53	Si
SLU 72	6.93	606.66	-41244	-29422	1970	3.98	3.98	-26402	10833	12073	115546	40049	20298	60347	No	30.63	Si
SLU 49	4.83	5935.41	-42434	-30271	2650	3.98	3.98	-27164	10833	12073	115546	40049	20298	60347	No	22.77	Si
SLU 49	6.93	-9.7	-37008	-26401	2644	3.98	3.98	-23691	10833	12073	115546	40049	20298	60347	No	22.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	4.83	9570.13	-29171	-20810	8657	3.98	3.98	-18674	16235	18092	115546	60073	20298	80371		9.28	Si
SLD 4	6.93	-5120.89	-23154	-16518	8230	3.98	3.98	-14822	15464	17234	115546	60073	20298	80371		9.77	Si
SLV 2	4.83	17873.23	-21037	-15007	17579	3.98	3.4212	-13467	15193	14554	115546	60073	20298	80371		4.57	Si
SLV 2	6.93	-12153.44	-15443	-11017	16651	3.98	3.609	-10946	14689	14844	115546	60073	20298	80371		4.83	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	4.83	-8503.74	-47747	-34061	-14889	3.98	3.98	-30565	16250	18109	115546	60073	20298	80371		5.4	Si
SLV 15	6.93	13338.02	-45846	-32705	-13971	3.98	3.98	-29348	16250	18109	115546	60073	20298	80371		5.75	Si
SLV 3	4.83	15844.9	-22452	-16017	18694	3.98	3.8529	-14373	15375	16586	115546	60073	20298	80371		4.3	Si
SLV 3	6.93	-12525.38	-12901	-9203	17689	3.98	3.0573	-10795	14659	12549	115546	60073	20298	80371		4.54	Si
SLV 14	4.83	-6475.41	-46331	-33052	-16004	3.98	3.98	-29659	16250	18109	115546	60073	20298	80371		5.02	Si
SLV 14	6.93	13709.97	-48388	-34519	-15009	3.98	3.98	-30975	16250	18109	115546	60073	20298	80371		5.36	Si
SLV 1	4.83	17589.74	-21321	-15210	17821	3.98	3.495	-13649	15230	14904	115546	60073	20298	80371		4.51	Si
SLV 1	6.93	-11911.36	-15208	-10849	16892	3.98	3.6204	-10746	14649	14850	115546	60073	20298	80371		4.76	Si
SLV 16	4.83	-8220.25	-47462	-33859	-15131	3.98	3.98	-30383	16250	18109	115546	60073	20298	80371		5.31	Si
SLV 16	6.93	13095.94	-46080	-32873	-14212	3.98	3.98	-29498	16250	18109	115546	60073	20298	80371		5.66	Si
SLV 13	4.83	-6758.9	-46616	-33254	-15763	3.98	3.98	-29841	16250	18109	115546	60073	20298	80371		5.1	Si
SLV 13	6.93	13952.05	-48153	-34352	-14767	3.98	3.98	-30825	16250	18109	115546	60073	20298	80371		5.44	Si
SLV 4	4.83	16128.39	-22168	-15814	18453	3.98	3.7874	-14191	15338	16266	115546	60073	20298	80371		4.36	Si
SLV 4	6.93	-12767.47	-13135	-9370	17448	3.98	3.054	-11003	14701	12571	115546	60073	20298	80371		4.61	Si
SLD 3	4.83	9448.36	-29293	-20897	8761	3.98	3.98	-18752	16250	18109	115546	60073	20298	80371		9.17	Si
SLD 3	6.93	-5016.91	-23053	-16446	8333	3.98	3.98	-14757	15451	17219	115546	60073	20298	80371		9.64	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-13636	0.38	414.7	1781.59	2607.98	2194.79	5.29	Si
SLV 4	-13871	0.38	414.7	1810.02	2643.89	2226.96	5.37	Si
SLV 1	-15996	0.38	414.7	2064.1	2966.63	2515.36	6.07	Si
SLV 2	-16231	0.38	414.7	2091.77	3002.19	2546.98	6.14	Si
SLV 7	-22415	0.38	414.7	2793.68	3934.11	3363.89	8.11	Si
SLV 8	-22568	0.38	414.7	2810.37	3957.03	3383.7	8.16	Si
SLV 5	-30283	0.38	414.7	3610.99	5099.44	4355.21	10.5	Si
SLV 6	-30435	0.38	414.7	3626.03	5121.76	4373.89	10.55	Si
SLV 11	-32265	0.38	414.7	3803.5	5388.74	4596.12	11.08	Si
SLV 12	-32418	0.38	414.7	3818.13	5411.07	4614.6	11.13	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-32501	-36208	-1158	0.632	3862.2	0.958	9.59081	11.63229	No
SLV 9	-32321	-36393	-1158	0.635	3843.8	0.957	9.63763	11.63229	No
SLV 6	-27401	-28620	-1061	0.733	3343.9	0.952	11.18781	11.63229	No
SLV 5	-27221	-28805	-1061	0.737	3325.6	0.952	11.25236	11.63229	No
SLV 12	-27173	-39978	1080	0.737	3320.7	0.952	11.26071	11.63229	No
SLV 11	-26992	-40164	1079	0.741	3302.4	0.951	11.32675	11.63229	No
SLV 8	-22073	-32390	1176	0.872	2803.2	0.944	13.43355	11.63229	Si
SLV 7	-21892	-32575	1176	0.878	2784.9	0.944	13.52936	11.63229	Si
SLV 14	-36634	-46331	-487	0.588	4282.5	0.961	8.88423	5.55889	Si
SLV 13	-36358	-46616	-488	0.592	4254.3	0.961	8.94356	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.691	SLU 43	Si
V_SLU	22.239	SLU 51	Si
PF_SLV	2.265	SLV 2	Si
V_SLV	4.299	SLV 3	Si
PFFP_SLV	5.293	SLV 3	Si
R_SLV	0.824	SLV 10	No

Maschio 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.384	-11.003	-0.694	Z medio 736 cm	L6	2.69	0.28	0.988	1.777	0.2			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 33	8.15	-443.53	-18735	-0.0000408	0.0003743	0.0035	2.6902	19044.45	22699.37	22699.37	51.18	No	Si
SLU 33	8.35	-741.52	-18557	-0.0000419	0.0003743	0.0035	2.6902	18921.08	22538.97	22538.97	30.4	No	Si
SLU 41	8.15	-550.36	-19076	-0.0000421	0.0003743	0.0035	2.6902	19277.29	22998.68	22998.68	41.79	No	Si
SLU 41	8.35	-846.05	-18898	-0.0000431	0.0003743	0.0035	2.6902	19155.99	22844.71	22844.71	27	No	Si
SLU 40	8.15	-625.82	-18364	-0.0000409	0.0003743	0.0035	2.6902	18786.83	22364.83	22364.83	35.74	No	Si
SLU 40	8.35	-922.69	-18173	-0.0000419	0.0003743	0.0035	2.6902	18651.98	22190.34	22190.34	24.05	No	Si
SLU 42	8.15	-581.18	-19040	-0.0000422	0.0003743	0.0035	2.6902	19252.76	22968.05	22968.05	39.52	No	Si
SLU 42	8.35	-884.17	-18860	-0.0000432	0.0003743	0.0035	2.6902	19130.43	22811.38	22811.38	25.8	No	Si
SLU 31	8.15	-455.22	-17867	-0.000039	0.0003743	0.0035	2.6902	18434.15	21909.61	21909.61	48.13	No	Si
SLU 31	8.35	-762.7	-17674	-0.00004	0.0003743	0.0035	2.6902	18295.04	21732.69	21732.69	28.49	No	Si
SLU 82	8.15	-397.25	-22362	-0.0000487	0.0003743	0.0035	2.6902	21309.04	25741.91	25741.91	64.8	No	Si
SLU 82	8.35	-798.86	-22103	-0.0000501	0.0003743	0.0035	2.6902	21162.14	25533.2	25533.2	31.96	No	Si
SLU 34	8.15	-410.58	-18543	-0.0000403	0.0003743	0.0035	2.6902	18911.86	22527	22527	54.87	No	Si
SLU 34	8.35	-724.18	-18362	-0.0000413	0.0003743	0.0035	2.6902	18785.52	22363.13	22363.13	30.88	No	Si
SLU 39	8.15	-595	-18400	-0.0000408	0.0003743	0.0035	2.6902	18812.22	22397.73	22397.73	37.64	No	Si
SLU 39	8.35	-884.56	-18210	-0.0000418	0.0003743	0.0035	2.6902	18678.43	22224.54	22224.54	25.12	No	Si
SLU 50	8.15	695.89	-20544	-0.0000461	0.0003743	0.0035	2.6902	20231.18	22324.82	22324.82	32.08	No	Si
SLU 50	8.35	251.32	-20290	-0.0000434	0.0003743	0.0035	2.6902	20071.53	22127.33	22127.33	88.04	No	Si
SLU 32	8.15	-412.71	-18771	-0.0000408	0.0003743	0.0035	2.6902	19069.37	22731.81	22731.81	55.08	No	Si
SLU 32	8.35	-703.4	-18594	-0.0000418	0.0003743	0.0035	2.6902	18947.03	22572.68	22572.68	32.09	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	8.15	-5730.86	-9307	-0.0000459	0.0005615	0.0035	2.6902		13590.89	13590.89	2.37		Si
SLV 8	8.35	-6414.78	-8775	-0.0000517	0.0005615	0.0035	2.6902		12963.01	12963.01	2.02		Si
SLV 12	8.15	-5641	-8980	-0.0000451	0.0005615	0.0035	2.6902		13205.53	13205.53	2.34		Si
SLV 12	8.35	-6466.9	-8473	-0.0000527	0.0005615	0.0035	2.1522		12608.93	12608.93	1.95		Si
SLD 12	8.15	-2414.17	-12884	-0.0000367	0.0005615	0.0035	2.6902		17716.74	17716.74	7.34		Si
SLD 12	8.35	-2953.17	-12544	-0.0000384	0.0005615	0.0035	2.6902		17328.14	17328.14	5.87		Si
SLV 10	8.15	6081.5	-22750	-0.0000751	0.0005615	0.0035	2.6902		26088.38	26088.38	4.29		Si
SLV 10	8.35	6146.51	-22878	-0.0000757	0.0005615	0.0035	2.6902		26220.43	26220.43	4.27		Si
SLV 7	8.15	-5772.21	-9198	-0.0000462	0.0005615	0.0035	2.6902		13462.37	13462.37	2.33		Si
SLV 7	8.35	-6473.94	-8663	-0.0000524	0.0005615	0.0035	2.6902		12831.66	12831.66	1.98		Si
SLV 11	8.15	-5682.35	-8872	-0.0000453	0.0005615	0.0035	2.6902		13077.43	13077.43	2.3		Si
SLV 11	8.35	-6526.06	-8361	-0.0000536	0.0005615	0.0035	2.1522		12478.29	12478.29	1.91		Si
SLV 5	8.15	5950.29	-22968	-0.0000749	0.0005615	0.0035	2.6902		26313.27	26313.27	4.42		Si
SLV 5	8.35	6139.48	-23068	-0.0000761	0.0005615	0.0035	2.6902		26416.88	26416.88	4.3		Si
SLD 11	8.15	-2432.26	-12836	-0.0000366	0.0005615	0.0035	2.6902		17662.27	17662.27	7.26		Si
SLD 11	8.35	-2979.05	-12495	-0.0000384	0.0005615	0.0035	2.6902		17272.36	17272.36	5.8		Si
SLV 9	8.15	6040.15	-22642	-0.0000746	0.0005615	0.0035	2.6902		25976.17	25976.17	4.3		Si
SLV 9	8.35	6087.35	-22766	-0.0000751	0.0005615	0.0035	2.6902		26105.03	26105.03	4.29		Si
SLV 6	8.15	5991.64	-23077	-0.0000754	0.0005615	0.0035	2.6902		26425.75	26425.75	4.41		Si
SLV 6	8.35	6198.63	-23180	-0.0000766	0.0005615	0.0035	2.6902		26532.54	26532.54	4.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	8.15	597.75	-20035	-16683	3650	2.6902	2.6902	-22148	9898	7455	9516	22556	6860	16971	No	4.65	Si
SLU 45	8.35	170.04	-19771	-16464	3665	2.6902	2.6902	-21857	9859	7426	9516	22556	6860	16942	No	4.62	Si
SLU 49	8.15	611.57	-20675	-17216	3760	2.6902	2.6902	-22856	9992	7527	9516	22556	6860	17042	No	4.53	Si
SLU 49	8.35	170.44	-20422	-17005	3777	2.6902	2.6902	-22576	9955	7498	9516	22556	6860	17014	No	4.5	Si
SLU 72	8.15	329.2	-22139	-18435	3750	2.6902	2.6902	-24474	10208	7689	9516	22556	6860	17205	No	4.59	Si
SLU 72	8.35	-103.8	-21901	-18237	3753	2.6902	2.6902	-24211	10173	7663	9516	22556	6860	17178	No	4.58	Si
SLU 46	8.15	566.93	-19999	-16653	3677	2.6902	2.6902	-22108	9892	7451	9516	22556	6860	16967	No	4.61	Si
SLU 46	8.35	131.92	-19734	-16433	3692	2.6902	2.6902	-21815	9853	7422	9516	22556	6860	16938	No	4.59	Si
SLU 48	8.15	642.39	-20711	-17246	3732	2.6902	2.6902	-22896	9997	7531	9516	22556	6860	17046	No	4.57	Si
SLU 48	8.35	208.56	-20459	-17037	3749	2.6902	2.6902	-22617	9960	7503	9516	22556	6860	17018	No	4.54	Si
SLU 50	8.15	695.89	-20544	-17107	3781	2.6902	2.6902	-22710	9972	7512	9516	22556	6860	17027	No	4.5	Si
SLU 50	8.35	251.32	-20290	-16896	3802	2.6902	2.6902	-22430	9935	7484	9516	22556	6860	16999	No	4.47	Si
SLU 51	8.15	665.07	-20507	-17077	3809	2.6902	2.6902	-22670	9967	7508	9516	22556	6860	17023	No	4.47	Si
SLU 51	8.35	213.2	-20252	-16864	3830	2.6902	2.6902	-22388	9930	7480	9516	22556	6860	16995	No	4.44	Si
SLU 44	8.15	555.24	-19131	-15930	3662	2.6902	2.6902	-21149	9764	7355	9516	22556	6860	16871	No	4.61	Si
SLU 44	8.35	110.75	-18852	-15698	3679	2.6902	2.6902	-20840	9723	7324	9516	22556	6860	16840	No	4.58	Si
SLU 71	8.15	360.02	-22175	-18465	3722	2.6902	2.6902	-24514	10213	7693	9516	22556	6860	17209	No	4.62	Si
SLU 71	8.35	-65.68	-21938	-18268	3726	2.6902	2.6902	-24252	10178	7667	9516	22556	6860	17182	No	4.61	Si
SLU 47	8.15	599.88	-19807	-16494	3745	2.6902	2.6902	-21896	9864	7430	9516	22556	6860	16946	No	4.53	Si
SLU 47	8.35	149.27	-19539	-16271	3764	2.6902	2.6902	-21600	9824	7400	9516	22556	6860	16916	No	4.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	8.15	-5641	-8980	-7478	4329	2.6902	2.1509	-12487	12914	7778	9516	33834	6860	17293		4	Si
SLV 12	8.35	-6466.9	-8473	-7056	4248	2.1522	1.7456	0	0	0	9516	27067	5488	9516		2.24	Si
SLV 8	8.15	-5730.86	-9307	-7750	4004	2.6902	2.188	-12724	12962	7941	9516	33834	6860	17456		4.36	Si
SLV 8	8.35	-6414.78	-8775	-7307	3962	2.6902	1.8421	-14258	13269	6844	9516	33834	6860	16360		4.13	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	8.15	-1422.23	-13448	-11199	3650	2.6902	2.6902	-14867	13390	10086	9516	33834	6860	19602		5.37	Si
SLV 16	8.35	-2097.2	-13193	-10986	3563	2.6902	2.6902	-14584	13334	10044	9516	33834	6860	19559		5.49	Si
SLD 11	8.15	-2432.26	-12836	-10689	3444	2.6902	2.6902	-14190	13255	9984	9516	33834	6860	19500		5.66	Si
SLD 11	8.35	-2979.05	-12495	-10405	3405	2.6902	2.6902	-13813	13179	9927	9516	33834	6860	19443		5.71	Si
SLD 7	8.15	-2470.82	-12976	-10805	3305	2.6902	2.6902	-14344	13286	10008	9516	33834	6860	19523		5.91	Si
SLD 7	8.35	-2956.78	-12624	-10512	3284	2.6902	2.6902	-13956	13208	9949	9516	33834	6860	19465		5.93	Si
SLV 7	8.15	-5772.21	-9198	-7659	4075	2.6902	2.1527	-12782	12973	7820	9516	33834	6860	17335		4.25	Si
SLV 7	8.35	-6473.94	-8663	-7214	4034	2.6902	1.7934	-14460	13309	6683	9516	33834	6860	16199		4.02	Si
SLV 11	8.15	-5682.35	-8872	-7388	4400	2.6902	2.1138	-12552	12927	7651	9516	33834	6860	17167		3.9	Si
SLV 11	8.35	-6526.06	-8361	-6963	4320	2.1522	1.6938	0	0	0	9516	27067	5488	9516		2.2	Si
SLV 15	8.15	-1485.7	-13282	-11060	3760	2.6902	2.6902	-14682	13353	10058	9516	33834	6860	19574		5.21	Si
SLV 15	8.35	-2187.99	-13021	-10843	3673	2.6902	2.6902	-14395	13296	10015	9516	33834	6860	19531		5.32	Si
SLD 12	8.15	-2414.17	-12884	-10728	3413	2.6902	2.6902	-14242	13265	9992	9516	33834	6860	19508		5.72	Si
SLD 12	8.35	-2953.17	-12544	-10446	3374	2.6902	2.6902	-13867	13190	9936	9516	33834	6860	19451		5.76	Si
SLD 8	8.15	-2452.73	-13023	-10845	3274	2.6902	2.6902	-14397	13296	10015	9516	33834	6860	19531		5.97	Si
SLD 8	8.35	-2930.9	-12673	-10553	3252	2.6902	2.6902	-14010	13219	9957	9516	33834	6860	19473		5.99	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 8.25 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.42	11000	-8286	24.11	1076.51	44.65	Si
SLV 12	179667	0.42	11148	-8398	24.11	1089.85	45.2	Si
SLV 7	179667	0.42	11409	-8594	24.11	1113.28	46.17	Si
SLV 8	179667	0.42	11557	-8705	24.11	1126.53	46.72	Si
SLV 15	179667	0.42	17168	-12932	24.11	1606.95	66.65	Si
SLV 16	179667	0.42	17395	-13103	24.11	1625.47	67.42	Si
SLV 3	179667	0.42	18530	-13958	24.11	1717	71.21	Si
SLV 4	179667	0.42	18757	-14129	24.11	1735.09	71.96	Si
SLV 13	179667	0.42	22897	-17247	24.11	2052.61	85.13	Si
SLV 14	179667	0.42	23124	-17418	24.11	2069.33	85.83	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 8.25 Wa = 0.05 Ta = 0.0058

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-23180	-23077	-455	0.76	2465.8	0.987	11.19795	3.84559	Si
SLV 5	-23068	-22968	-455	0.763	2454.4	0.986	11.24169	3.84559	Si
SLV 10	-22878	-22750	380	0.771	2435.1	0.986	11.36379	3.84559	Si
SLV 9	-22766	-22642	380	0.774	2423.7	0.986	11.40852	3.84559	Si
SLV 2	-18519	-18667	-1389	0.862	1990.9	0.983	12.73411	3.66242	Si
SLV 1	-18348	-18500	-1388	0.868	1973.4	0.983	12.83221	3.66242	Si
SLV 14	-17514	-17579	1395	0.901	1888.5	0.983	13.32866	3.66242	Si
SLV 13	-17343	-17412	1396	0.908	1871	0.982	13.43729	3.66242	Si
SLV 4	-14198	-14536	-1353	1.073	1550.5	0.979	15.93488	3.66242	Si
SLV 3	-14027	-14369	-1353	1.084	1533.1	0.979	16.10042	3.66242	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.05	SLU 40	Si
V_SLU	4.438	SLU 51	Si
PF_SLV	1.912	SLV 11	Si
V_SLV	2.203	SLV 11	Si
PFFP_SLV	44.648	SLV 11	Si
R_SLV	2.912	SLV 6	Si

Maschio 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.526	L5	L6	3.35	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	4.83	-8025.27	-15415	-0.0000812	0.0004492	0.0035	3.35	18874.6	28991.92	28991.92	3.61	No	Si
SLU 60	8.35	-192.41	-11351	-0.0000308	0.0004492	0.0035	3.35	15246.53	23571.03	23571.03	122.51	No	Si
SLU 39	4.83	-7759.66	-13922	-0.0000754	0.0004492	0.0035	3.35	17653.86	27062.48	27062.48	3.49	No	Si
SLU 39	8.35	-280.38	-10573	-0.0000291	0.0004492	0.0035	3.35	14442.08	22505.62	22505.62	80.27	No	Si
SLU 83	4.83	-8851.4	-17781	-0.0000926	0.0004492	0.0035	3.35	20542.17	32005.27	32005.27	3.62	No	Si
SLU 83	8.35	-291.87	-13541	-0.0000372	0.0004492	0.0035	3.35	17321.66	26570.4	26570.4	91.03	No	Si
SLU 18	4.83	-6818.34	-12432	-0.0000663	0.0004492	0.0035	3.35	16306.38	25052.54	25052.54	3.67	No	Si
SLU 18	8.35	-197.11	-9259	-0.0000251	0.0004492	0.0035	3.35	13003.55	20660.43	20660.43	104.82	No	Si
SLU 61	4.83	-7964.08	-15477	-0.0000811	0.0004492	0.0035	3.35	18922.16	29071.51	29071.51	3.65	No	Si
SLU 61	8.35	-224.97	-11412	-0.0000311	0.0004492	0.0035	3.35	15308.72	23655.4	23655.4	105.15	No	Si
SLU 40	4.83	-7698.47	-13983	-0.0000753	0.0004492	0.0035	3.35	17706.79	27142.07	27142.07	3.53	No	Si
SLU 40	8.35	-312.94	-10634	-0.0000294	0.0004492	0.0035	3.35	14507.07	22589.99	22589.99	72.19	No	Si
SLU 73	4.83	-8348.77	-16771	-0.0000869	0.0004492	0.0035	3.35	19870.04	30743.69	30743.69	3.68	No	Si
SLU 73	8.35	-294.67	-12530	-0.0000345	0.0004492	0.0035	3.35	16399.01	25186.75	25186.75	85.48	No	Si
SLU 82	4.83	-8905.4	-16966	-0.0000904	0.0004492	0.0035	3.35	20004.58	30996.03	30996.03	3.48	No	Si
SLU 82	8.35	-308.24	-12726	-0.0000351	0.0004492	0.0035	3.35	16581.97	25454.25	25454.25	82.58	No	Si
SLU 84	4.83	-8790.21	-17843	-0.0000924	0.0004492	0.0035	3.35	20581.21	32080.08	32080.08	3.65	No	Si
SLU 84	8.35	-324.43	-13602	-0.0000375	0.0004492	0.0035	3.35	17375.97	26649.99	26649.99	82.14	No	Si
SLU 81	4.83	-8966.59	-16904	-0.0000905	0.0004492	0.0035	3.35	19962.39	30916.45	30916.45	3.45	No	Si
SLU 81	8.35	-275.68	-12664	-0.0000347	0.0004492	0.0035	3.35	16524.5	25369.88	25369.88	92.03	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	4.83	-8750.81	-14655	-0.000081	0.0006738	0.0035	3.35		28537.39	28537.39	3.26		Si
SLV 15	8.35	-2012.94	-10744	-0.0000375	0.0006738	0.0035	3.35		23032.95	23032.95	11.44		Si
SLV 6	4.83	-2964.99	-9006	-0.0000374	0.0006738	0.0035	3.35		20482.4	20482.4	6.91		Si
SLV 6	8.35	5950.92	-6383	-0.0000504	0.0006738	0.0035	3.35		11311.42	11311.42	1.9		Si
SLV 12	4.83	-8512.34	-15414	-0.0000819	0.0006738	0.0035	3.35		29555.02	29555.02	3.47		Si
SLV 12	8.35	-6092.91	-11591	-0.0000594	0.0006738	0.0035	3.35		24228.34	24228.34	3.98		Si
SLV 11	4.83	-8458.48	-15449	-0.0000817	0.0006738	0.0035	3.35		29601.95	29601.95	3.5		Si
SLV 11	8.35	-6204.55	-11626	-0.00006	0.0006738	0.0035	3.35		24277.75	24277.75	3.91		Si
SLV 14	4.83	-7613.98	-12963	-0.0000706	0.0006738	0.0035	3.35		26164.44	26164.44	3.44		Si
SLV 14	8.35	1772.76	-9312	-0.0000325	0.0006738	0.0035	3.35		15727.1	15727.1	8.87		Si
SLV 5	4.83	-2911.13	-9041	-0.0000372	0.0006738	0.0035	3.35		20534.29	20534.29	7.05		Si
SLV 5	8.35	5839.28	-6418	-0.0000491	0.0006738	0.0035	3.35		11365.24	11365.24	1.95		Si
SLV 13	4.83	-7531.32	-13017	-0.0000703	0.0006738	0.0035	3.35		26240.27	26240.27	3.48		Si
SLV 13	8.35	1601.42	-9366	-0.0000319	0.0006738	0.0035	3.35		15807.22	15807.22	9.87		Si
SLV 10	4.83	-4447.39	-9955	-0.000047	0.0006738	0.0035	3.35		21888.4	21888.4	4.92		Si
SLV 10	8.35	5954.95	-6997	-0.0000498	0.0006738	0.0035	3.35		12249.75	12249.75	2.06		Si
SLV 9	4.83	-4393.53	-9990	-0.0000468	0.0006738	0.0035	3.35		21940.28	21940.28	4.99		Si
SLV 9	8.35	5843.31	-7032	-0.0000488	0.0006738	0.0035	3.35		12302.76	12302.76	2.11		Si
SLV 16	4.83	-8833.47	-14601	-0.0000813	0.0006738	0.0035	3.35		28465.37	28465.37	3.22		Si
SLV 16	8.35	-1841.6	-10690	-0.0000366	0.0006738	0.0035	3.35		22957.12	22957.12	12.47		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	4.83	-8429.22	-17590	-9753	-2313	3.35	3.35	-20795	10833	5081	115546	16855	17085	33940	No	14.67	Si
SLU 75	8.35	-286.14	-13350	-7402	-2313	3.35	3.35	-15782	10438	4895	115546	16855	17085	33940	No	14.67	Si
SLU 74	4.83	-8490.42	-17529	-9719	-2340	3.35	3.35	-20722	10833	5081	115546	16855	17085	33940	No	14.5	Si
SLU 74	8.35	-253.58	-13288	-7368	-2340	3.35	3.35	-15709	10428	4891	115546	16855	17085	33940	No	14.5	Si
SLU 79	4.83	-8220.38	-18422	-10214	-2258	3.35	3.35	-21778	10833	5081	115546	16855	17085	33940	No	15.03	Si
SLU 79	8.35	-272.78	-14181	-7863	-2258	3.35	3.35	-16765	10569	4957	115546	16855	17085	33940	No	15.03	Si
SLU 77	4.83	-8375.23	-18405	-10205	-2303	3.35	3.35	-21759	10833	5081	115546	16855	17085	33940	No	14.74	Si
SLU 77	8.35	-269.76	-14165	-7854	-2303	3.35	3.35	-16746	10566	4956	115546	16855	17085	33940	No	14.74	Si
SLU 81	4.83	-8966.59	-16904	-9373	-2469	3.35	3.35	-19984	10833	5081	115546	16855	17085	33940	No	13.75	Si
SLU 81	8.35	-275.68	-12664	-7022	-2469	3.35	3.35	-14971	10330	4845	115546	16855	17085	33940	No	13.75	Si
SLU 82	4.83	-8905.4	-16966	-9407	-2442	3.35	3.35	-20057	10833	5081	115546	16855	17085	33940	No	13.9	Si
SLU 82	8.35	-308.24	-12726	-7056	-2442	3.35	3.35	-15044	10339	4849	115546	16855	17085	33940	No	13.9	Si
SLU 83	4.83	-8851.4	-17781	-9859	-2432	3.35	3.35	-21021	10833	5081	115546	16855	17085	33940	No	13.96	Si
SLU 83	8.35	-291.87	-13541	-7508	-2432	3.35	3.35	-16008	10468	4909	115546	16855	17085	33940	No	13.96	Si
SLU 84	4.83	-8790.21	-17843	-9893	-2405	3.35	3.35	-21094	10833	5081	115546	16855	17085	33940	No	14.11	Si
SLU 84	8.35	-324.43	-13602	-7542	-2405	3.35	3.35	-16081	10477	4914	115546	16855	17085	33940	No	14.11	Si
SLU 78	4.83	-8314.03	-18467	-10239	-2276	3.35	3.35	-21832	10833	5081	115546	16855	17085	33940	No	14.91	Si
SLU 78	8.35	-302.32	-14227	-7888	-2276	3.35	3.35	-16819	10576	4960	115546	16855	17085	33940	No	14.91	Si
SLU 73	4.83	-8348.77	-16771	-9299	-2288	3.35	3.35	-19826	10833	5081	115546	16855	17085	33940	No	14.83	Si
SLU 73	8.35	-294.67	-12530	-6947	-2288	3.35	3.35	-14813	10308	4835	115546	16855	17085	33940	No	14.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	4.83	-7613.98	-12963	-7188	-2971	3.35	3.263	-15851	15670	7158	115546	25282	17085	42367		14.26	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	8.35	1772.76	-9312	-5163	-2734	3.35	3.35	-11009	14702	6895	115546	25282	17085	42367		15.5	Si
SLD 10	4.83	-5108.87	-11205	-6213	-2558	3.35	3.35	-13246	15149	7105	115546	25282	17085	42367		16.56	Si
SLD 10	8.35	2563.87	-8105	-4494	-1946	3.35	3.35	-9582	14416	6761	115546	25282	17085	42367		21.77	Si
SLV 16	4.83	-8833.47	-14601	-8096	-1782	3.35	3.21	-18167	16133	7250	115546	25282	17085	42367		23.77	Si
SLV 16	8.35	-1841.6	-10690	-5927	-2410	3.35	3.35	-12638	15028	7048	115546	25282	17085	42367		17.58	Si
SLV 13	4.83	-7531.32	-13017	-7217	-2899	3.35	3.2893	-15790	15658	7210	115546	25282	17085	42367		14.62	Si
SLV 13	8.35	1601.42	-9366	-5193	-2662	3.35	3.35	-11072	14714	6901	115546	25282	17085	42367		15.92	Si
SLV 5	4.83	-2911.13	-9041	-5013	-3318	3.35	3.35	-10688	14638	6865	115546	25282	17085	42367		12.77	Si
SLV 5	8.35	5839.28	-6418	-3558	-1818	3.35	2.2954	-7587	14017	4505	115546	25282	17085	42367		23.3	Si
SLD 9	4.83	-5085.31	-11220	-6221	-2538	3.35	3.35	-13264	15153	7107	115546	25282	17085	42367		16.69	Si
SLD 9	8.35	2515.03	-8120	-4502	-1925	3.35	3.35	-9600	14420	6763	115546	25282	17085	42367		22	Si
SLV 6	4.83	-2964.99	-9006	-4993	-3365	3.35	3.35	-10647	14629	6861	115546	25282	17085	42367		12.59	Si
SLV 6	8.35	5950.92	-6383	-3539	-1865	3.35	2.2279	-7546	14009	4370	115546	25282	17085	42367		22.71	Si
SLD 6	4.83	-4517.26	-10830	-6005	-2377	3.35	3.35	-12803	15061	7063	115546	25282	17085	42367		17.82	Si
SLD 6	8.35	2560.77	-7859	-4358	-1719	3.35	3.35	-9291	14358	6734	115546	25282	17085	42367		24.64	Si
SLV 9	4.83	-4393.53	-9990	-5539	-3770	3.35	3.35	-11810	14862	6970	115546	25282	17085	42367		11.24	Si
SLV 9	8.35	5843.31	-7032	-3899	-2388	3.35	2.532	-8313	14163	5020	115546	25282	17085	42367		17.74	Si
SLV 10	4.83	-4447.39	-9955	-5520	-3817	3.35	3.35	-11769	14854	6966	115546	25282	17085	42367		11.1	Si
SLV 10	8.35	5954.95	-6997	-3879	-2435	3.35	2.4717	-8272	14154	4898	115546	25282	17085	42367		17.4	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-7873	0.38	182.46	500.64	898.97	699.81	3.84	Si
SLV 5	-7908	0.38	182.46	502.64	901.93	702.29	3.85	Si
SLV 10	-8342	0.38	182.46	527.27	938.63	732.95	4.02	Si
SLV 9	-8377	0.38	182.46	529.24	941.6	735.42	4.03	Si
SLV 2	-8945	0.38	182.46	560.99	989.67	775.33	4.25	Si
SLV 1	-8999	0.38	182.46	563.97	994.22	779.09	4.27	Si
SLV 4	-10340	0.38	182.46	636.76	1107.54	872.15	4.78	Si
SLV 3	-10394	0.38	182.46	639.61	1112.04	875.82	4.8	Si
SLV 14	-10508	0.38	182.46	645.62	1121.54	883.58	4.84	Si
SLV 13	-10561	0.38	182.46	648.46	1126.04	887.25	4.86	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-11626	-15449	135	1.447	1416.9	0.952	22.08507	16.49386	Si
SLV 12	-11591	-15414	135	1.451	1413.3	0.952	22.1459	16.49386	Si
SLV 7	-11012	-14500	-142	1.517	1354.5	0.95	23.19444	16.49386	Si
SLV 8	-10977	-14465	-142	1.521	1350.9	0.95	23.26154	16.49386	Si
SLV 9	-7032	-9990	132	2.217	951.2	0.933	34.54198	16.49386	Si
SLV 10	-6997	-9955	132	2.226	947.7	0.933	34.69091	16.49386	Si
SLV 5	-6418	-9041	-146	2.386	889.2	0.929	37.32418	16.49386	Si
SLV 6	-6383	-9006	-146	2.397	885.7	0.929	37.49793	16.49386	Si
SLV 15	-10744	-14655	457	1.524	1327.3	0.949	23.32371	10.00749	Si
SLV 16	-10690	-14601	457	1.53	1321.8	0.949	23.42986	10.00749	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.448	SLU 81	Si
V_SLU	13.746	SLU 81	Si
PF_SLV	1.901	SLV 6	Si
V_SLV	11.099	SLV 10	Si
PFFP_SLV	3.835	SLV 6	Si
R_SLV	1.339	SLV 11	Si

Maschio 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L5	L6	3.64	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	4.83	-3419.21	-28381	-0.0000867	0.0004492	0.0035	3.64	28109.93	48935.23	48935.23	14.31	No	Si
SLU 73	6.93	-2907.02	-20277	-0.0000624	0.0004492	0.0035	3.64	24886.41	38850.53	38850.53	13.36	No	Si
SLU 61	4.83	-3213.46	-26794	-0.0000814	0.0004492	0.0035	3.64	27780.92	47096.42	47096.42	14.66	No	Si
SLU 61	6.93	-2722.43	-19102	-0.0000585	0.0004492	0.0035	3.64	24100.27	37293.17	37293.17	13.7	No	Si
SLU 82	4.83	-3412.21	-29178	-0.0000889	0.0004492	0.0035	3.64	28219.59	49858.46	49858.46	14.61	No	Si
SLU 82	6.93	-2964	-20796	-0.000064	0.0004492	0.0035	3.64	25208.07	39538.69	39538.69	13.34	No	Si
SLU 81	4.83	-3378.03	-29181	-0.0000888	0.0004492	0.0035	3.64	28219.97	49862.25	49862.25	14.76	No	Si
SLU 81	6.93	-2915.95	-20797	-0.0000638	0.0004492	0.0035	3.64	25208.5	39539.63	39539.63	13.56	No	Si
SLU 75	4.83	-3445.7	-29073	-0.0000888	0.0004492	0.0035	3.64	28207.28	49736.94	49736.94	14.43	No	Si
SLU 75	6.93	-2900.56	-20836	-0.0000639	0.0004492	0.0035	3.64	25231.78	39590.78	39590.78	13.65	No	Si
SLU 83	4.83	-3424.81	-29658	-0.0000903	0.0004492	0.0035	3.64	28267.76	50414.88	50414.88	14.72	No	Si
SLU 83	6.93	-2930.13	-21201	-0.000065	0.0004492	0.0035	3.64	25447.74	40074.82	40074.82	13.68	No	Si
SLU 76	4.83	-3465.99	-28858	-0.0000883	0.0004492	0.0035	3.64	28180.03	49487.86	49487.86	14.28	No	Si
SLU 76	6.93	-2921.2	-20681	-0.0000636	0.0004492	0.0035	3.64	25137.93	39385.72	39385.72	13.48	No	Si
SLU 80	4.83	-3489.98	-29337	-0.0000897	0.0004492	0.0035	3.64	28237.06	50043.02	50043.02	14.34	No	Si
SLU 80	6.93	-2903.35	-21085	-0.0000645	0.0004492	0.0035	3.64	25380.2	39921.54	39921.54	13.75	No	Si
SLU 52	4.83	-3220.45	-25997	-0.0000792	0.0004492	0.0035	3.64	27560.2	46137.29	46137.29	14.33	No	Si
SLU 52	6.93	-2665.46	-18583	-0.0000569	0.0004492	0.0035	3.64	23727.18	36605.01	36605.01	13.73	No	Si
SLU 84	4.83	-3458.99	-29655	-0.0000905	0.0004492	0.0035	3.64	28267.47	50411.1	50411.1	14.57	No	Si
SLU 84	6.93	-2978.18	-21200	-0.0000652	0.0004492	0.0035	3.64	25447.33	40073.88	40073.88	13.46	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	4.83	-1699.75	-20432	-0.0000566	0.0006738	0.0035	3.64		40026.71	40026.71	23.55		Si
SLV 9	6.93	4087.6	-13761	-0.0000496	0.0006738	0.0035	3.64		24305.77	24305.77	5.95		Si
SLD 7	4.83	-2888.17	-20582	-0.000062	0.0006738	0.0035	3.64		40234.26	40234.26	13.93		Si
SLD 7	6.93	-4835.33	-15126	-0.0000561	0.0006738	0.0035	3.64		32283.47	32283.47	6.68		Si
SLV 11	4.83	-3224	-21220	-0.000065	0.0006738	0.0035	3.64		41117.74	41117.74	12.75		Si
SLV 11	6.93	-8204.76	-17240	-0.0000755	0.0006738	0.0035	3.64		35403.76	35403.76	4.32		Si
SLV 6	4.83	-1825.67	-19610	-0.0000551	0.0006738	0.0035	3.64		38865.36	38865.36	21.29		Si
SLV 6	6.93	4162.62	-12042	-0.0000457	0.0006738	0.0035	3.64		21616.81	21616.81	5.19		Si
SLV 5	4.83	-1794.75	-19967	-0.0000559	0.0006738	0.0035	3.64		39383.78	39383.78	21.94		Si
SLV 5	6.93	3916.58	-12215	-0.0000451	0.0006738	0.0035	3.64		21890.49	21890.49	5.59		Si
SLV 12	4.83	-3254.92	-20863	-0.0000642	0.0006738	0.0035	3.64		40623.95	40623.95	12.48		Si
SLV 12	6.93	-7958.72	-17067	-0.000074	0.0006738	0.0035	3.64		35151.58	35151.58	4.42		Si
SLV 10	4.83	-1730.66	-20075	-0.0000559	0.0006738	0.0035	3.64		39532.92	39532.92	22.84		Si
SLV 10	6.93	4333.64	-13588	-0.0000502	0.0006738	0.0035	3.64		24036.6	24036.6	5.55		Si
SLV 8	4.83	-3349.92	-20399	-0.0000634	0.0006738	0.0035	3.64		39981.03	39981.03	11.93		Si
SLV 8	6.93	-8129.74	-15521	-0.0000707	0.0006738	0.0035	3.64		32890.54	32890.54	4.05		Si
SLV 7	4.83	-3319.01	-20755	-0.0000642	0.0006738	0.0035	3.64		40474.82	40474.82	12.19		Si
SLV 7	6.93	-8375.78	-15694	-0.0000722	0.0006738	0.0035	3.64		33146.11	33146.11	3.96		Si
SLV 3	4.83	-2888.1	-20033	-0.0000606	0.0006738	0.0035	3.64		39474.89	39474.89	13.67		Si
SLV 3	6.93	-4338.77	-12719	-0.0000481	0.0006738	0.0035	3.64		28584.79	28584.79	6.59		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	4.83	-3411.51	-29076	-16121	-5675	3.64	3.64	-31636	10833	5521	115546	18314	18564	36878	No	6.5	Si
SLU 74	6.93	-2852.52	-20836	-11553	-5536	3.64	3.64	-22670	10833	5521	115546	18314	18564	36878	No	6.66	Si
SLU 79	4.83	-3455.8	-29340	-16268	-5709	3.64	3.64	-31923	10833	5521	115546	18314	18564	36878	No	6.46	Si
SLU 79	6.93	-2855.31	-21086	-11691	-5566	3.64	3.64	-22942	10833	5521	115546	18314	18564	36878	No	6.63	Si
SLU 75	4.83	-3445.7	-29073	-16120	-5655	3.64	3.64	-31632	10833	5521	115546	18314	18564	36878	No	6.52	Si
SLU 75	6.93	-2900.56	-20836	-11552	-5544	3.64	3.64	-22670	10833	5521	115546	18314	18564	36878	No	6.65	Si
SLU 81	4.83	-3378.03	-29181	-16180	-5762	3.64	3.64	-31750	10833	5521	115546	18314	18564	36878	No	6.4	Si
SLU 81	6.93	-2915.95	-20797	-11531	-5638	3.64	3.64	-22628	10833	5521	115546	18314	18564	36878	No	6.54	Si
SLU 78	4.83	-3492.48	-29550	-16384	-5742	3.64	3.64	-32151	10833	5521	115546	18314	18564	36878	No	6.42	Si
SLU 78	6.93	-2914.74	-21239	-11776	-5628	3.64	3.64	-23109	10833	5521	115546	18314	18564	36878	No	6.55	Si
SLU 83	4.83	-3424.81	-29658	-16444	-5849	3.64	3.64	-32269	10833	5521	115546	18314	18564	36878	No	6.3	Si
SLU 83	6.93	-2930.13	-21201	-11755	-5722	3.64	3.64	-23067	10833	5521	115546	18314	18564	36878	No	6.44	Si
SLU 77	4.83	-3458.29	-29553	-16386	-5762	3.64	3.64	-32154	10833	5521	115546	18314	18564	36878	No	6.4	Si
SLU 77	6.93	-2866.7	-21240	-11777	-5620	3.64	3.64	-23110	10833	5521	115546	18314	18564	36878	No	6.56	Si
SLU 82	4.83	-3412.21	-29178	-16178	-5742	3.64	3.64	-31746	10833	5521	115546	18314	18564	36878	No	6.42	Si
SLU 82	6.93	-2964	-20796	-11531	-5646	3.64	3.64	-22627	10833	5521	115546	18314	18564	36878	No	6.53	Si
SLU 80	4.83	-3489.98	-29337	-16266	-5689	3.64	3.64	-31919	10833	5521	115546	18314	18564	36878	No	6.48	Si
SLU 80	6.93	-2903.35	-21085	-11691	-5575	3.64	3.64	-22941	10833	5521	115546	18314	18564	36878	No	6.62	Si
SLU 84	4.83	-3458.99	-29655	-16442	-5829	3.64	3.64	-32265	10833	5521	115546	18314	18564	36878	No	6.33	Si
SLU 84	6.93	-2978.18	-21200	-11755	-5730	3.64	3.64	-23066	10833	5521	115546	18314	18564	36878	No	6.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	4.83	-2200.7	-20216	-11209	-5751	3.64	3.64	-21995	16250	8281	115546	27471	18564	46035		8	Si
SLD 5	6.93	610.51	-13579	-7529	-4907	3.64	3.64	-14774	15455	7876	115546	27471	18564	46035		9.38	Si
SLV 1	4.83	-2430.82	-19797	-10976	-6937	3.64	3.64	-21539	16250	8281	115546	27471	18564	46035		6.64	Si
SLV 1	6.93	-651.06	-11675	-6473	-5679	3.64	3.64	-12702	15040	7665	115546	27471	18564	46035		8.11	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	4.83	-1699.75	-20432	-11328	-6984	3.64	3.64	-22230	16250	8281	115546	27471	18564	46035		6.59	Si
SLV 9	6.93	4087.6	-13761	-7630	-5634	3.64	3.64	-14972	15494	7896	115546	27471	18564	46035		8.17	Si
SLD 6	4.83	-2214.23	-20060	-11122	-5733	3.64	3.64	-21825	16250	8281	115546	27471	18564	46035		8.03	Si
SLD 6	6.93	718.15	-13503	-7487	-4912	3.64	3.64	-14692	15438	7867	115546	27471	18564	46035		9.37	Si
SLV 6	4.83	-1825.67	-19610	-10873	-8096	3.64	3.64	-21337	16250	8281	115546	27471	18564	46035		5.69	Si
SLV 6	6.93	4162.62	-12042	-6677	-6394	3.64	3.64	-13102	15120	7705	115546	27471	18564	46035		7.2	Si
SLD 9	4.83	-2147.98	-20405	-11314	-5261	3.64	3.64	-22201	16250	8281	115546	27471	18564	46035		8.75	Si
SLD 9	6.93	685.55	-14231	-7891	-4588	3.64	3.64	-15484	15597	7948	115546	27471	18564	46035		10.03	Si
SLV 5	4.83	-1794.75	-19967	-11071	-8138	3.64	3.64	-21725	16250	8281	115546	27471	18564	46035		5.66	Si
SLV 5	6.93	3916.58	-12215	-6772	-6384	3.64	3.64	-13290	15158	7724	115546	27471	18564	46035		7.21	Si
SLV 2	4.83	-2478.26	-19249	-10673	-6873	3.64	3.64	-20943	16250	8281	115546	27471	18564	46035		6.7	Si
SLV 2	6.93	-273.45	-11410	-6326	-5695	3.64	3.64	-12414	14983	7635	115546	27471	18564	46035		8.08	Si
SLD 10	4.83	-2161.5	-20249	-11227	-5243	3.64	3.64	-22031	16250	8281	115546	27471	18564	46035		8.78	Si
SLD 10	6.93	793.19	-14156	-7849	-4593	3.64	3.64	-15402	15580	7940	115546	27471	18564	46035		10.02	Si
SLV 10	4.83	-1730.66	-20075	-11131	-6942	3.64	3.64	-21842	16250	8281	115546	27471	18564	46035		6.63	Si
SLV 10	6.93	4333.64	-13588	-7534	-5644	3.64	3.64	-14784	15457	7877	115546	27471	18564	46035		8.16	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 6.59 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-13181	0.38	198.25	792.48	1358.72	1075.6	5.43	Si
SLV 6	-13500	0.38	198.25	808.39	1385	1096.69	5.53	Si
SLV 1	-13524	0.38	198.25	809.61	1387.01	1098.31	5.54	Si
SLV 5	-13723	0.38	198.25	819.47	1403.44	1111.45	5.61	Si
SLV 4	-14164	0.38	198.25	841.12	1439.68	1140.4	5.75	Si
SLV 3	-14506	0.38	198.25	857.74	1467.72	1162.73	5.86	Si
SLV 10	-14704	0.38	198.25	867.23	1483.86	1175.54	5.93	Si
SLV 9	-14927	0.38	198.25	877.9	1502.14	1190.02	6	Si
SLV 8	-16774	0.38	198.25	963.32	1653.61	1308.47	6.6	Si
SLV 7	-16998	0.38	198.25	973.3	1671.47	1322.39	6.67	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-11696	-20863	138	1.548	1444.5	0.949	23.69563	16.49386	Si
SLV 11	-11657	-21220	139	1.552	1440.4	0.949	23.76815	16.49386	Si
SLV 10	-10374	-20075	130	1.717	1310.3	0.945	26.40964	16.49386	Si
SLV 9	-10335	-20432	131	1.723	1306.3	0.945	26.49982	16.49386	Si
SLV 8	-9723	-20399	-131	1.815	1244.3	0.942	27.98262	16.49386	Si
SLV 7	-9683	-20755	-130	1.821	1240.3	0.942	28.08507	16.49386	Si
SLV 6	-8401	-19610	-139	2.051	1110.4	0.937	31.81831	16.49386	Si
SLV 5	-8361	-19967	-139	2.059	1106.4	0.936	31.95071	16.49386	Si
SLV 16	-13547	-21034	449	1.341	1632.4	0.955	20.41544	10.00749	Si
SLV 15	-13486	-21581	450	1.346	1626.2	0.954	20.49917	10.00749	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	13.34	SLU 82	Si
V_SLU	6.305	SLU 83	Si
PF_SLV	3.957	SLV 7	Si
V_SLV	5.657	SLV 5	Si
PFFP_SLV	5.425	SLV 2	Si
R_SLV	1.437	SLV 12	Si

Maschio 110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L5	L6	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	5.73	1514.71	-22235	-0.0000723	0.0003743	0.0035	2.13	15008.5	17685.82	17685.82	11.68	No	Si
SLU 75	7.53	-2813.19	-23521	-0.0000871	0.0003743	0.0035	2.13	15346.02	19124.73	19124.73	6.8	No	Si
SLU 78	5.73	1505.53	-22739	-0.0000738	0.0003743	0.0035	2.13	15147.83	17902.15	17902.15	11.89	No	Si
SLU 78	7.53	-2848.49	-24079	-0.0000892	0.0003743	0.0035	2.13	15474.47	19406.05	19406.05	6.81	No	Si
SLU 60	5.73	1496.67	-20316	-0.0000663	0.0003743	0.0035	2.13	14396.94	16640.51	16640.51	11.12	No	Si
SLU 60	7.53	-2646.79	-21323	-0.0000787	0.0003743	0.0035	2.13	14734.09	18067.18	18067.18	6.83	No	Si
SLU 81	5.73	1586.37	-22257	-0.000073	0.0003743	0.0035	2.13	15014.79	17695.26	17695.26	11.15	No	Si
SLU 81	7.53	-2862.23	-23659	-0.000088	0.0003743	0.0035	2.13	15378.82	19193.86	19193.86	6.71	No	Si
SLU 79	5.73	1516.5	-22595	-0.0000734	0.0003743	0.0035	2.13	15109.06	17840.33	17840.33	11.76	No	Si
SLU 79	7.53	-2833.64	-23891	-0.0000885	0.0003743	0.0035	2.13	15432.55	19311	19311	6.81	No	Si
SLU 83	5.73	1577.19	-22761	-0.0000744	0.0003743	0.0035	2.13	15153.73	17911.67	17911.67	11.36	No	Si
SLU 83	7.53	-2897.53	-24217	-0.0000901	0.0003743	0.0035	2.13	15504.56	19476.44	19476.44	6.72	No	Si
SLU 77	5.73	1524.02	-22843	-0.0000743	0.0003743	0.0035	2.13	15175.29	17946.76	17946.76	11.78	No	Si
SLU 77	7.53	-2867.94	-24179	-0.0000897	0.0003743	0.0035	2.13	15496.34	19457.03	19457.03	6.78	No	Si
SLU 82	5.73	1567.89	-22153	-0.0000725	0.0003743	0.0035	2.13	14985.2	17651.14	17651.14	11.26	No	Si
SLU 82	7.53	-2842.78	-23559	-0.0000875	0.0003743	0.0035	2.13	15355.12	19143.73	19143.73	6.73	No	Si
SLU 74	5.73	1533.2	-22338	-0.0000728	0.0003743	0.0035	2.13	15037.8	17730.01	17730.01	11.56	No	Si
SLU 74	7.53	-2832.64	-23621	-0.0000876	0.0003743	0.0035	2.13	15369.86	19174.8	19174.8	6.77	No	Si
SLU 84	5.73	1558.71	-22658	-0.000074	0.0003743	0.0035	2.13	15125.97	17867.12	17867.12	11.46	No	Si
SLU 84	7.53	-2878.08	-24117	-0.0000896	0.0003743	0.0035	2.13	15482.82	19425.4	19425.4	6.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	5.73	2128.75	-8333	-0.0000362	0.0005615	0.0035	2.13		8494.82	8494.82	3.99		Si
SLV 7	7.53	-2949.88	-9361	-0.0000448	0.0005615	0.0035	2.13		10431.71	10431.71	3.54		Si
SLD 4	5.73	2267.61	-13717	-0.0000516	0.0005615	0.0035	2.13		12868.6	12868.6	5.67		Si
SLD 4	7.53	-3424.02	-15347	-0.0000647	0.0005615	0.0035	2.13		15535.73	15535.73	4.54		Si
SLV 2	5.73	3852.55	-15418	-0.0000681	0.0005615	0.0035	2.13		14258.8	14258.8	3.7		Si
SLV 2	7.53	-5606.79	-18766	-0.000091	0.0005615	0.0035	2.13		18174.2	18174.2	3.24		Si
SLV 8	5.73	1790.41	-8301	-0.0000337	0.0005615	0.0035	2.13		8465.54	8465.54	4.73		Si
SLV 8	7.53	-2543.83	-9070	-0.0000411	0.0005615	0.0035	2.13		10172.77	10172.77	4		Si
SLD 1	5.73	2502.14	-15474	-0.0000581	0.0005615	0.0035	2.13		14304.95	14304.95	5.72		Si
SLD 1	7.53	-3791.65	-17414	-0.0000732	0.0005615	0.0035	2.13		17154.74	17154.74	4.52		Si
SLD 3	5.73	2490.64	-13738	-0.0000533	0.0005615	0.0035	2.13		12885.69	12885.69	5.17		Si
SLD 3	7.53	-3691.69	-15539	-0.0000672	0.0005615	0.0035	2.13		15690.16	15690.16	4.25		Si
SLD 2	5.73	2279.11	-15453	-0.0000564	0.0005615	0.0035	2.13		14287.6	14287.6	6.27		Si
SLD 2	7.53	-3523.98	-17222	-0.0000707	0.0005615	0.0035	2.13		17003.82	17003.82	4.83		Si
SLV 4	5.73	3827.19	-11504	-0.000057	0.0005615	0.0035	2.13		11091.77	11091.77	2.9		Si
SLV 4	7.53	-5383.88	-14534	-0.0000772	0.0005615	0.0035	2.13		14868.58	14868.58	2.76		Si
SLV 1	5.73	4371.8	-15467	-0.0000721	0.0005615	0.0035	2.13		14299.2	14299.2	3.27		Si
SLV 1	7.53	-6229.97	-19213	-0.0000971	0.0005615	0.0035	2.13		18503.35	18503.35	2.97		Si
SLV 3	5.73	4346.45	-11553	-0.0000611	0.0005615	0.0035	2.13		11130.74	11130.74	2.56		Si
SLV 3	7.53	-6007.06	-14981	-0.0000836	0.0005615	0.0035	2.13		15237.08	15237.08	2.54		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	5.73	1505.53	-22739	-18935	5099	2.13	2.13	-31749	10833	6461	40441	17859	5431	23290	No	4.57	Si
SLU 78	7.53	-2848.49	-24079	-20051	5074	2.13	2.13	-33620	10833	6461	40441	17859	5431	23290	No	4.59	Si
SLU 84	5.73	1558.71	-22658	-18867	5220	2.13	2.13	-31636	10833	6461	40441	17859	5431	23290	No	4.46	Si
SLU 84	7.53	-2878.08	-24117	-20082	5195	2.13	2.13	-33673	10833	6461	40441	17859	5431	23290	No	4.48	Si
SLU 81	5.73	1586.37	-22257	-18534	5168	2.13	2.13	-31076	10833	6461	40441	17859	5431	23290	No	4.51	Si
SLU 81	7.53	-2862.23	-23659	-19701	5182	2.13	2.13	-33033	10833	6461	40441	17859	5431	23290	No	4.49	Si
SLU 75	5.73	1514.71	-22235	-18515	5050	2.13	2.13	-31045	10833	6461	40441	17859	5431	23290	No	4.61	Si
SLU 75	7.53	-2813.19	-23521	-19586	5025	2.13	2.13	-32841	10833	6461	40441	17859	5431	23290	No	4.63	Si
SLU 83	5.73	1577.19	-22761	-18954	5216	2.13	2.13	-31780	10833	6461	40441	17859	5431	23290	No	4.46	Si
SLU 83	7.53	-2897.53	-24217	-20166	5231	2.13	2.13	-33813	10833	6461	40441	17859	5431	23290	No	4.45	Si
SLU 80	5.73	1498.02	-22492	-18729	5050	2.13	2.13	-31404	10833	6461	40441	17859	5431	23290	No	4.61	Si
SLU 80	7.53	-2814.19	-23791	-19811	5024	2.13	2.13	-33218	10833	6461	40441	17859	5431	23290	No	4.64	Si
SLU 74	5.73	1533.2	-22338	-18601	5047	2.13	2.13	-31190	10833	6461	40441	17859	5431	23290	No	4.61	Si
SLU 74	7.53	-2832.64	-23621	-19669	5061	2.13	2.13	-32980	10833	6461	40441	17859	5431	23290	No	4.6	Si
SLU 79	5.73	1516.5	-22595	-18816	5046	2.13	2.13	-31549	10833	6461	40441	17859	5431	23290	No	4.62	Si
SLU 79	7.53	-2833.64	-23891	-19895	5060	2.13	2.13	-33358	10833	6461	40441	17859	5431	23290	No	4.6	Si
SLU 77	5.73	1524.02	-22843	-19021	5095	2.13	2.13	-31894	10833	6461	40441	17859	5431	23290	No	4.57	Si
SLU 77	7.53	-2867.94	-24179	-20134	5109	2.13	2.13	-33760	10833	6461	40441	17859	5431	23290	No	4.56	Si
SLU 82	5.73	1567.89	-22153	-18447	5171	2.13	2.13	-30932	10833	6461	40441	17859	5431	23290	No	4.5	Si
SLU 82	7.53	-2842.78	-23559	-19618	5147	2.13	2.13	-32894	10833	6461	40441	17859	5431	23290	No	4.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	5.73	1874.92	-21349	-17777	5517	2.13	2.13	-29808	16250	9691	40441	26788	5431	32219		5.84	Si
SLV 6	7.53	-3286.87	-23175	-19298	5331	2.13	2.13	-32359	16250	9691	40441	26788	5431	32219		6.04	Si
SLD 4	5.73	2267.61	-13717	-11422	5673	2.13	2.13	-19152	14247	8497	40441	26788	5431	32219		5.68	Si
SLD 4	7.53	-3424.02	-15347	-12780	5414	2.13	2.13	-21429	14702	8768	40441	26788	5431	32219		5.95	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	5.73	2502.14	-15474	-12885	6211	2.13	2.13	-21605	14738	8789	40441	26788	5431	32219		5.19	Si
SLD 1	7.53	-3791.65	-17414	-14501	5949	2.13	2.13	-24315	15280	9113	40441	26788	5431	32219		5.42	Si
SLD 3	5.73	2490.64	-13738	-11440	6052	2.13	2.13	-19182	14253	8500	40441	26788	5431	32219		5.32	Si
SLD 3	7.53	-3691.69	-15539	-12940	5791	2.13	2.13	-21697	14756	8800	40441	26788	5431	32219		5.56	Si
SLV 4	5.73	3827.19	-11504	-9579	8639	2.13	2.13	-16062	13629	8128	40441	26788	5431	32219		3.73	Si
SLV 4	7.53	-5383.88	-14534	-12103	8020	2.13	2.0837	-20958	14608	8523	40441	26788	5431	32219		4.02	Si
SLV 1	5.73	4371.8	-15467	-12879	9881	2.13	2.13	-21596	14736	8788	40441	26788	5431	32219		3.26	Si
SLV 1	7.53	-6229.97	-19213	-15999	9255	2.13	2.13	-26826	15782	9412	40441	26788	5431	32219		3.48	Si
SLV 5	5.73	2213.26	-21381	-17804	6092	2.13	2.13	-29853	16250	9691	40441	26788	5431	32219		5.29	Si
SLV 5	7.53	-3692.92	-23467	-19541	5903	2.13	2.13	-32766	16250	9691	40441	26788	5431	32219		5.46	Si
SLV 3	5.73	4346.45	-11553	-9620	9521	2.13	2.0663	-16130	13643	7893	40441	26788	5431	32219		3.38	Si
SLV 3	7.53	-6007.06	-14981	-12475	8898	2.13	1.9921	-22607	14938	8332	40441	26788	5431	32219		3.62	Si
SLV 2	5.73	3852.55	-15418	-12839	9000	2.13	2.13	-21527	14722	8780	40441	26788	5431	32219		3.58	Si
SLV 2	7.53	-5606.79	-18766	-15626	8377	2.13	2.13	-26201	15657	9338	40441	26788	5431	32219		3.85	Si
SLD 2	5.73	2279.11	-15453	-12868	5833	2.13	2.13	-21576	14732	8786	40441	26788	5431	32219		5.52	Si
SLD 2	7.53	-3523.98	-17222	-14341	5571	2.13	2.13	-24046	15226	9081	40441	26788	5431	32219		5.78	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.38	14398	-8587	216.89	1088.84	5.02	Si
SLV 11	179667	0.38	14828	-8844	216.89	1117.89	5.15	Si
SLV 8	179667	0.38	15221	-9077	216.89	1144.18	5.28	Si
SLV 7	179667	0.38	15651	-9334	216.89	1172.85	5.41	Si
SLV 16	179667	0.38	21498	-12821	216.89	1542.3	7.11	Si
SLV 15	179667	0.38	22158	-13215	216.89	1581.68	7.29	Si
SLV 4	179667	0.38	24239	-14456	216.89	1702.63	7.85	Si
SLV 3	179667	0.38	24900	-14850	216.89	1740.03	8.02	Si
SLV 14	179667	0.38	28505	-17000	216.89	1935.77	8.93	Si
SLV 13	179667	0.38	29165	-17394	216.89	1970.09	9.08	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-20126	-19904	-711	0.554	2344.8	0.962	8.37206	11.63229	No
SLV 10	-20004	-19519	-715	0.557	2332.4	0.962	8.41457	11.63229	No
SLV 5	-19790	-21041	-702	0.563	2310.7	0.962	8.50324	11.63229	No
SLV 6	-19668	-20656	-706	0.566	2298.2	0.962	8.54721	11.63229	No
SLV 11	-9190	-9123	735	1.06	1234.7	0.934	16.49572	11.63229	Si
SLV 12	-9067	-8738	731	1.072	1222.3	0.933	16.68865	11.63229	Si
SLV 7	-8854	-10260	744	1.091	1200.7	0.932	17.00687	11.63229	Si
SLV 8	-8731	-9875	740	1.104	1188.4	0.932	17.21226	11.63229	Si
SLV 13	-16724	-14907	-214	0.675	1998.8	0.956	10.25849	5.55889	Si
SLV 14	-16535	-14316	-220	0.681	1979.7	0.956	10.35637	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.706	SLU 81	Si
V_SLU	4.452	SLU 83	Si
PF_SLV	2.537	SLV 3	Si
V_SLV	3.261	SLV 1	Si
PFFP_SLV	5.02	SLV 12	Si
R_SLV	0.72	SLV 9	No

Maschio 111

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L5	L6	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	5.73	1767.94	-13804	-0.0000564	0.0003743	0.0035	1.93	9978.9	10961.69	10961.69	6.2	No	Si
SLU 47	7.53	55.15	-11954	-0.0000347	0.0003743	0.0035	1.93	9029.13	9826.98	9826.98	178.17	No	Si
SLU 48	5.73	1847.5	-14532	-0.0000595	0.0003743	0.0035	1.93	10319.65	11366.83	11366.83	6.15	No	Si
SLU 48	7.53	61.91	-12652	-0.0000369	0.0003743	0.0035	1.93	9401.52	10320.22	10320.22	166.71	No	Si
SLU 49	5.73	1831.29	-14450	-0.000059	0.0003743	0.0035	1.93	10282	11320.64	11320.64	6.18	No	Si
SLU 49	7.53	75.23	-12600	-0.0000369	0.0003743	0.0035	1.93	9374.3	10286.94	10286.94	136.75	No	Si
SLU 50	5.73	1822.54	-14317	-0.0000585	0.0003743	0.0035	1.93	10220.68	11246.2	11246.2	6.17	No	Si
SLU 50	7.53	59.44	-12441	-0.0000362	0.0003743	0.0035	1.93	9290.7	10182.42	10182.42	171.32	No	Si
SLU 51	5.73	1806.32	-14234	-0.0000581	0.0003743	0.0035	1.93	10182.4	11200.22	11200.22	6.2	No	Si
SLU 51	7.53	72.76	-12388	-0.0000362	0.0003743	0.0035	1.93	9263.09	10147.14	10147.14	139.47	No	Si
SLU 46	5.73	1803.72	-14075	-0.0000576	0.0003743	0.0035	1.93	10107.71	11111.54	11111.54	6.16	No	Si
SLU 46	7.53	48.75	-12199	-0.0000354	0.0003743	0.0035	1.93	9162.25	10015.1	10015.1	205.46	No	Si
SLU 45	5.73	1819.93	-14157	-0.000058	0.0003743	0.0035	1.93	10146.45	11157.37	11157.37	6.13	No	Si
SLU 45	7.53	35.43	-12252	-0.0000354	0.0003743	0.0035	1.93	9190.2	10052.2	10052.2	283.76	No	Si
SLU 44	5.73	1740.38	-13429	-0.0000549	0.0003743	0.0035	1.93	9796.13	10755.28	10755.28	6.18	No	Si
SLU 44	7.53	28.67	-11553	-0.0000333	0.0003743	0.0035	1.93	8808.01	9520.77	9520.77	332.05	No	Si
SLU 53	5.73	1857.45	-15284	-0.000062	0.0003743	0.0035	1.93	10651.84	11791.49	11791.49	6.35	No	Si
SLU 53	7.53	203.81	-13656	-0.0000413	0.0003743	0.0035	1.93	9907.52	10880.28	10880.28	53.39	No	Si
SLU 43	5.73	1767.4	-13567	-0.0000556	0.0003743	0.0035	1.93	9863.68	10830.82	10830.82	6.13	No	Si
SLU 43	7.53	6.47	-11640	-0.0000333	0.0003743	0.0035	1.93	8856.52	9587.09	9587.09	1481.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	5.73	350.03	-2246	-0.0000091	0.0005615	0.0035	1.93		2304.86	2304.86	6.58		Si
SLV 12	7.53	1756.1	-1096	-0.0046698	0.0005615	0.0035	1.93		1233.27	1233.27	0.7		No
SLV 3	5.73	5124.71	-7187	-0.0001078	0.0005615	0.0035	1.93		6658.21	6658.21	1.3		Si
SLV 3	7.53	-3314.7	-1750	-0.0008664	0.0005615	0.0035	1.544		2700.04	2700.04	0.81		No
SLV 16	5.73	-2228.81	-10020	-0.0000477	0.0005615	0.0035	1.93		9797.25	9797.25	4.4		Si
SLV 16	7.53	3881.04	-12215	-0.0000692	0.0005615	0.0035	1.93		10434.44	10434.44	2.69		Si
SLD 3	5.73	2994.13	-9617	-0.0000533	0.0005615	0.0035	1.93		8601.12	8601.12	2.87		Si
SLD 3	7.53	-1327.59	-6568	-0.0000297	0.0005615	0.0035	1.93		6959.58	6959.58	5.24		Si
SLV 8	5.73	2373.54	-1395	-0.0076868	0.0005615	0.0035	1.93		1513.49	1513.49	0.64		No
SLV 8	7.53	-246.39	1733	0.1384283	0.0005615	0.0035	1.544		0	0	0		No
SLV 1	5.73	5028.64	-13000	-0.0000833	0.0005615	0.0035	1.93		10998.46	10998.46	2.19		Si
SLV 1	7.53	-3573.58	-8297	-0.0000564	0.0005615	0.0035	1.93		8403.47	8403.47	2.35		Si
SLV 2	5.73	4420.14	-12996	-0.0000767	0.0005615	0.0035	1.93		10995.42	10995.42	2.49		Si
SLV 2	7.53	-3052.81	-9332	-0.000053	0.0005615	0.0035	1.93		9244.16	9244.16	3.03		Si
SLV 4	5.73	4516.21	-7183	-0.0000789	0.0005615	0.0035	1.93		6654.65	6654.65	1.47		Si
SLV 4	7.53	-2793.93	-2786	-0.000228	0.0005615	0.0035	1.544		3647.99	3647.99	1.31		Si
SLV 11	5.73	746.52	-2249	-0.0000125	0.0005615	0.0035	1.93		2307.37	2307.37	3.09		Si
SLV 11	7.53	1416.78	-421	-0.0070698	0.0005615	0.0035	1.93		596.54	596.54	0.42		No
SLV 7	5.73	2770.03	-1397	-0.0107378	0.0005615	0.0035	1.93		1516.05	1516.05	0.55		No
SLV 7	7.53	-585.71	2408	0.1934962	0.0005615	0.0035	1.544		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 3	5.73	1426.31	-11388	-9483	433	1.93	1.93	-17547	9284	5017	40441	16182	4922	21104	No	48.75	Si
SLU 3	7.53	82.24	-9997	-8325	435	1.93	1.93	-15405	8998	4863	40441	16182	4922	21104	No	48.46	Si
SLU 45	5.73	1819.93	-14157	-11789	641	1.93	1.93	-21815	9853	5325	40441	16182	4922	21104	No	32.94	Si
SLU 45	7.53	35.43	-12252	-10202	644	1.93	1.93	-18879	9462	5113	40441	16182	4922	21104	No	32.77	Si
SLU 47	5.73	1767.94	-13804	-11495	580	1.93	1.93	-21271	9781	5285	40441	16182	4922	21104	No	36.41	Si
SLU 47	7.53	55.15	-11954	-9954	567	1.93	1.93	-18419	9400	5080	40441	16182	4922	21104	No	37.21	Si
SLU 50	5.73	1822.54	-14317	-11922	613	1.93	1.93	-22061	9886	5342	40441	16182	4922	21104	No	34.43	Si
SLU 50	7.53	59.44	-12441	-10359	616	1.93	1.93	-19170	9500	5134	40441	16182	4922	21104	No	34.25	Si
SLU 51	5.73	1806.32	-14234	-11853	585	1.93	1.93	-21933	9869	5333	40441	16182	4922	21104	No	36.06	Si
SLU 51	7.53	72.76	-12388	-10316	579	1.93	1.93	-19089	9490	5128	40441	16182	4922	21104	No	36.44	Si
SLU 46	5.73	1803.72	-14075	-11720	613	1.93	1.93	-21688	9836	5316	40441	16182	4922	21104	No	34.43	Si
SLU 46	7.53	48.75	-12199	-10159	607	1.93	1.93	-18798	9451	5107	40441	16182	4922	21104	No	34.78	Si
SLU 44	5.73	1740.38	-13429	-11183	592	1.93	1.93	-20693	9704	5244	40441	16182	4922	21104	No	35.62	Si
SLU 44	7.53	28.67	-11553	-9621	580	1.93	1.93	-17803	9318	5036	40441	16182	4922	21104	No	36.39	Si
SLU 48	5.73	1847.5	-14532	-12101	628	1.93	1.93	-22393	9930	5366	40441	16182	4922	21104	No	33.61	Si
SLU 48	7.53	61.91	-12652	-10535	631	1.93	1.93	-19495	9544	5158	40441	16182	4922	21104	No	33.44	Si
SLU 43	5.73	1767.4	-13567	-11297	639	1.93	1.93	-20905	9732	5259	40441	16182	4922	21104	No	33.04	Si
SLU 43	7.53	6.47	-11640	-9693	642	1.93	1.93	-17937	9336	5045	40441	16182	4922	21104	No	32.88	Si
SLU 49	5.73	1831.29	-14450	-12033	600	1.93	1.93	-22266	9913	5357	40441	16182	4922	21104	No	35.16	Si
SLU 49	7.53	75.23	-12600	-10492	594	1.93	1.93	-19415	9533	5152	40441	16182	4922	21104	No	35.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	5.73	5028.64	-13000	-10825	6501	1.93	1.7346	-20032	14423	7005	40441	24273	4922	29195		4.49	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	7.53	-3573.58	-8297	-6909	5859	1.93	1.6028	-15509	13518	6067	40441	24273	4922	29195		4.98	Si
SLD 3	5.73	2994.13	-9617	-8008	3185	1.93	1.93	-14818	13380	7231	40441	24273	4922	29195		9.17	Si
SLD 3	7.53	-1327.59	-6568	-5469	2873	1.93	1.93	-10120	12441	6723	40441	24273	4922	29195		10.16	Si
SLV 7	5.73	2770.03	-1397	-1164	3341	1.93	0	0	16250	0	40441	24273	4922	29195		8.74	Si
SLV 7	7.53	-585.71	2408	2005	2985	1.544	1.93	0	0	0	40441	19419	3937	23356		7.82	Si
SLV 14	5.73	-2324.88	-15833	-13185	-6432	1.93	1.93	-24398	15296	8266	40441	24273	4922	29195		4.54	Si
SLV 14	7.53	3622.15	-18761	-15623	-5693	1.93	1.93	-28910	16199	8754	40441	24273	4922	29195		5.13	Si
SLV 13	5.73	-1716.38	-15838	-13188	-5247	1.93	1.93	-24404	15297	8267	40441	24273	4922	29195		5.56	Si
SLV 13	7.53	3101.38	-17726	-14760	-4508	1.93	1.93	-27313	15879	8581	40441	24273	4922	29195		6.48	Si
SLV 3	5.73	5124.71	-7187	-5985	7035	1.93	0.7559	-11075	12632	2673	40441	24273	4922	29195		4.15	Si
SLV 3	7.53	-3314.7	-1750	-1457	6302	1.544	0	0	0	0	40441	19419	3937	23356		3.71	Si
SLV 16	5.73	-2228.81	-10020	-8344	-5897	1.93	1.93	-15440	13505	7298	40441	24273	4922	29195		4.95	Si
SLV 16	7.53	3881.04	-12215	-10171	-5250	1.93	1.93	-18821	14181	7663	40441	24273	4922	29195		5.56	Si
SLV 15	5.73	-1620.31	-10024	-8347	-4713	1.93	1.93	-15447	13506	7299	40441	24273	4922	29195		6.2	Si
SLV 15	7.53	3360.27	-11179	-9309	-4065	1.93	1.93	-17225	13862	7491	40441	24273	4922	29195		7.18	Si
SLV 4	5.73	4516.21	-7183	-5981	5851	1.93	1.0088	-11068	12630	3568	40441	24273	4922	29195		4.99	Si
SLV 4	7.53	-2793.93	-2786	-2320	5118	1.544	0	0	0	0	40441	19419	3937	23356		4.56	Si
SLV 2	5.73	4420.14	-12996	-10822	5316	1.93	1.8747	-20026	14422	7570	40441	24273	4922	29195		5.49	Si
SLV 2	7.53	-3052.81	-9332	-7771	4674	1.93	1.9137	-14380	13293	7123	40441	24273	4922	29195		6.25	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.38	0	1	196.53	0	0	No, Trazione
SLV 7	179667	0.38	0	337	196.53	0	0	No, Trazione
SLV 11	179667	0.38	2609	-1410	196.53	194	0.99	No, M>Mu
SLV 12	179667	0.38	3231	-1746	196.53	239.26	1.22	Si
SLV 3	179667	0.38	8864	-4790	196.53	631.73	3.21	Si
SLV 4	179667	0.38	9819	-5306	196.53	695.11	3.54	Si
SLV 15	179667	0.38	19638	-10612	196.53	1294.68	6.59	Si
SLV 1	179667	0.38	20371	-11009	196.53	1335.64	6.8	Si
SLV 16	179667	0.38	20592	-11128	196.53	1347.88	6.86	Si
SLV 2	179667	0.38	21326	-11525	196.53	1388.14	7.06	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-20850	-19122	-508	0.501	2390.6	0.966	7.53266	11.63229	No
SLV 9	-20300	-18978	-509	0.512	2334.6	0.965	7.71163	11.63229	No
SLV 6	-19180	-16736	-413	0.542	2220.6	0.964	8.17588	11.63229	No
SLV 5	-18630	-16592	-413	0.556	2164.7	0.963	8.3879	11.63229	No
SLV 14	-15635	-16271	-294	0.652	1860	0.957	9.89251	5.55889	Si
SLV 13	-14790	-16051	-295	0.683	1774.2	0.956	10.38706	5.55889	Si
SLV 2	-10067	-8316	24	0.964	1294.8	0.942	14.87924	5.55889	Si
SLV 16	-9368	-11408	-15	1.023	1224	0.939	15.8384	5.55889	Si
SLV 1	-9223	-8096	23	1.035	1209.3	0.938	16.04034	5.55889	Si
SLV 15	-8523	-11188	-16	1.104	1138.6	0.935	17.16224	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.128	SLU 43	Si
V_SLU	32.774	SLU 45	Si
PF_SLV	0	SLV 7	No
V_SLV	3.706	SLV 3	Si
PFFP_SLV	0	SLV 8	No
R_SLV	0.648	SLV 10	No

Maschio 112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	1.266	L5	L6	4.58	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	4.83	10756.05	-49554	-0.0000798	0.0004492	0.0035	4.5801	77592.37	87761.6	87761.6	8.16	No	Si
SLU 73	6.93	7558.45	-41202	-0.0000628	0.0004492	0.0035	4.5801	69544.41	76132.59	76132.59	10.07	No	Si
SLU 83	4.83	11485.33	-52289	-0.0000849	0.0004492	0.0035	4.5801	79785.2	91690.53	91690.53	7.98	No	Si
SLU 83	6.93	7889.56	-43540	-0.0000665	0.0004492	0.0035	4.5801	72002.64	79341.6	79341.6	10.06	No	Si
SLU 84	4.83	11457.96	-52342	-0.0000849	0.0004492	0.0035	4.5801	79825.24	91766.72	91766.72	8.01	No	Si
SLU 84	6.93	7860.43	-43602	-0.0000666	0.0004492	0.0035	4.5801	72065.35	79426.46	79426.46	10.1	No	Si
SLU 82	4.83	11308.32	-51417	-0.0000833	0.0004492	0.0035	4.5801	79109.99	90431.47	90431.47	8	No	Si
SLU 82	6.93	7711.91	-42688	-0.0000651	0.0004492	0.0035	4.5801	71124.67	78166.82	78166.82	10.14	No	Si
SLU 79	4.83	11100.96	-51315	-0.0000828	0.0004492	0.0035	4.5801	79029.43	90284.36	90284.36	8.13	No	Si
SLU 79	6.93	7904.03	-42928	-0.0000657	0.0004492	0.0035	4.5801	71374.42	78497.85	78497.85	9.93	No	Si
SLU 77	4.83	11252.78	-51859	-0.0000839	0.0004492	0.0035	4.5801	79454.75	91068.38	91068.38	8.09	No	Si
SLU 77	6.93	8000.84	-43431	-0.0000666	0.0004492	0.0035	4.5801	71890.91	79190.85	79190.85	9.9	No	Si
SLU 81	4.83	11335.69	-51365	-0.0000833	0.0004492	0.0035	4.5801	79068.53	90355.68	90355.68	7.97	No	Si
SLU 81	6.93	7741.04	-42626	-0.0000651	0.0004492	0.0035	4.5801	71060.3	78081.96	78081.96	10.09	No	Si
SLU 74	4.83	11103.13	-50935	-0.0000823	0.0004492	0.0035	4.5801	78726.45	89736.82	89736.82	8.08	No	Si
SLU 74	6.93	7852.33	-42516	-0.0000651	0.0004492	0.0035	4.5801	70945.65	77931.22	77931.22	9.92	No	Si
SLU 78	4.83	11225.41	-51912	-0.0000839	0.0004492	0.0035	4.5801	79495.45	91144.38	91144.38	8.12	No	Si
SLU 78	6.93	7971.71	-43492	-0.0000666	0.0004492	0.0035	4.5801	71953.82	79275.66	79275.66	9.94	No	Si
SLU 75	4.83	11075.76	-50987	-0.0000823	0.0004492	0.0035	4.5801	78768.57	89812.42	89812.42	8.11	No	Si
SLU 75	6.93	7823.19	-42578	-0.0000651	0.0004492	0.0035	4.5801	71010.21	78016.03	78016.03	9.97	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	4.83	8376.62	-18985	-0.000035	0.0006738	0.0035	4.5801		41769.26	41769.26	4.99		Si
SLV 5	6.93	21104.73	-15534	-0.0000602	0.0006738	0.0035	4.5801		34747.85	34747.85	1.65		Si
SLV 10	4.83	10495.39	-30256	-0.0000521	0.0006738	0.0035	4.5801		62382.29	62382.29	5.94		Si
SLV 10	6.93	22122.96	-22378	-0.0000622	0.0006738	0.0035	4.5801		48522.34	48522.34	2.19		Si
SLV 1	4.83	3824.18	-12453	-0.0000202	0.0006738	0.0035	4.5801		28336.29	28336.29	7.41		Si
SLV 1	6.93	10016.34	-14457	-0.0000321	0.0006738	0.0035	4.5801		32521.8	32521.8	3.25		Si
SLV 9	4.83	11266.85	-30851	-0.0000541	0.0006738	0.0035	4.5801		63398.24	63398.24	5.63		Si
SLV 9	6.93	20654.72	-22505	-0.0000592	0.0006738	0.0035	4.5801		48770.86	48770.86	2.36		Si
SLD 9	4.83	9110.65	-32962	-0.0000533	0.0006738	0.0035	4.5801		67017.25	67017.25	7.36		Si
SLD 9	6.93	12256.73	-26057	-0.0000497	0.0006738	0.0035	4.5801		55264.2	55264.2	4.51		Si
SLD 10	4.83	8773.16	-32701	-0.0000525	0.0006738	0.0035	4.5801		66569.86	66569.86	7.59		Si
SLD 10	6.93	12899.04	-26002	-0.0000506	0.0006738	0.0035	4.5801		55171.1	55171.1	4.28		Si
SLV 2	4.83	2640.2	-11540	-0.0000174	0.0006738	0.0035	4.5801		26408.28	26408.28	10		Si
SLV 2	6.93	12269.69	-14264	-0.0000355	0.0006738	0.0035	4.5801		32120.39	32120.39	2.62		Si
SLV 6	4.83	7605.15	-18390	-0.0000331	0.0006738	0.0035	4.5801		40574.92	40574.92	5.34		Si
SLV 6	6.93	22572.97	-15408	-0.0000678	0.0006738	0.0035	4.5801		34486.34	34486.34	1.53		Si
SLD 6	4.83	7525.79	-27632	-0.0000442	0.0006738	0.0035	4.5801		57924.01	57924.01	7.7		Si
SLD 6	6.93	13092.22	-23019	-0.0000473	0.0006738	0.0035	4.5801		49772.66	49772.66	3.8		Si
SLD 5	4.83	7863.28	-27892	-0.0000451	0.0006738	0.0035	4.5801		58364.71	58364.71	7.42		Si
SLD 5	6.93	12449.91	-23074	-0.0000463	0.0006738	0.0035	4.5801		49880.4	49880.4	4.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 58	4.83	9956.34	-46444	-38675	857	4.5801	4.5801	-30158	10833	13893	40441	46087	11679	54334	No	63.42	Si
SLU 58	6.93	7375.13	-38804	-32313	828	4.5801	4.5801	-25197	10833	13893	40441	46087	11679	54334	No	65.6	Si
SLU 46	4.83	8685.09	-41686	-34712	866	4.5801	4.5801	-27068	10833	13893	40441	46087	11679	54334	No	62.75	Si
SLU 46	6.93	6981.53	-34893	-29056	840	4.5801	4.5801	-22657	10833	13893	40441	46087	11679	54334	No	64.66	Si
SLU 45	4.83	8712.46	-41633	-34668	869	4.5801	4.5801	-27034	10833	13893	40441	46087	11679	54334	No	62.53	Si
SLU 45	6.93	7010.66	-34831	-29004	843	4.5801	4.5801	-22617	10833	13893	40441	46087	11679	54334	No	64.42	Si
SLU 44	4.83	8365.39	-40253	-33519	869	4.5801	4.5801	-26137	10833	13893	40441	46087	11679	54334	No	62.54	Si
SLU 44	6.93	6716.79	-33517	-27910	844	4.5801	4.5801	-21764	10833	13893	40441	46087	11679	54334	No	64.38	Si
SLU 50	4.83	8710.29	-42014	-34986	877	4.5801	4.5801	-27281	10833	13893	40441	46087	11679	54334	No	61.92	Si
SLU 50	6.93	7062.37	-35243	-29347	852	4.5801	4.5801	-22884	10833	13893	40441	46087	11679	54334	No	63.78	Si
SLU 43	4.83	8411	-40165	-33446	874	4.5801	4.5801	-26080	10833	13893	40441	46087	11679	54334	No	62.17	Si
SLU 43	6.93	6765.34	-33414	-27825	849	4.5801	4.5801	-21697	10833	13893	40441	46087	11679	54334	No	63.99	Si
SLU 47	4.83	8515.03	-41177	-34289	871	4.5801	4.5801	-26738	10833	13893	40441	46087	11679	54334	No	62.41	Si
SLU 47	6.93	6865.3	-34431	-28671	845	4.5801	4.5801	-22357	10833	13893	40441	46087	11679	54334	No	64.28	Si
SLU 48	4.83	8862.11	-42558	-35438	871	4.5801	4.5801	-27634	10833	13893	40441	46087	11679	54334	No	62.4	Si
SLU 48	6.93	7159.18	-35745	-29766	845	4.5801	4.5801	-23211	10833	13893	40441	46087	11679	54334	No	64.31	Si
SLU 51	4.83	8682.92	-42067	-35029	874	4.5801	4.5801	-27315	10833	13893	40441	46087	11679	54334	No	62.14	Si
SLU 51	6.93	7033.24	-35304	-29399	849	4.5801	4.5801	-22924	10833	13893	40441	46087	11679	54334	No	64.01	Si
SLU 49	4.83	8834.74	-42610	-35482	868	4.5801	4.5801	-27668	10833	13893	40441	46087	11679	54334	No	62.62	Si
SLU 49	6.93	7130.05	-35807	-29817	842	4.5801	4.5801	-23251	10833	13893	40441	46087	11679	54334	No	64.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	4.83	2640.2	-11540	-9609	-8550	4.5801	4.5801	-7493	13999	17952	40441	69130	11679	58393		6.83	Si
SLV 2	6.93	12269.69	-14264	-11877	-7774	4.5801	4.2894	-9262	14352	17238	40441	69130	11679	57679		7.42	Si
SLV 15	4.83	12269.66	-58137	-48411	9669	4.5801	4.5801	-37750	16250	20839	40441	69130	11679	61280		6.34	Si
SLV 15	6.93	-1101.54	-43710	-36398	8849	4.5801	4.5801	-28382	16250	20839	40441	69130	11679	61280		6.92	Si
SLV 10	4.83	10495.39	-30256	-25194	-12478	4.5801	4.5801	-19646	16250	20839	40441	69130	11679	61280		4.91	Si
SLV 10	6.93	22122.96	-22378	-18635	-9454	4.5801	3.9043	-14531	15406	16842	40441	69130	11679	57283		6.06	Si
SLV 9	4.83	11266.85	-30851	-25690	-10206	4.5801	4.5801	-20032	16250	20839	40441	69130	11679	61280		6	Si
SLV 9	6.93	20654.72	-22505	-18740	-7181	4.5801	4.1167	-14613	15423	17777	40441	69130	11679	58218		8.11	Si
SLV 6	4.83	7605.15	-18390	-15313	-14568	4.5801	4.5801	-11941	14888	19093	40441	69130	11679	59534		4.09	Si
SLV 6	6.93	22572.97	-15408	-12831	-11607	4.5801	2.475	-10005	14501	10049	40441	69130	11679	50490		4.35	Si
SLV 7	4.83	4414.47	-39421	-32826	13597	4.5801	4.5801	-25597	16250	20839	40441	69130	11679	61280		4.51	Si
SLV 7	6.93	-10954.81	-35595	-29641	10530	4.5801	4.5801	-23113	16250	20839	40441	69130	11679	61280		5.82	Si
SLV 11	4.83	7304.7	-51287	-42707	15687	4.5801	4.5801	-33302	16250	20839	40441	69130	11679	61280		3.91	Si
SLV 11	6.93	-11404.82	-42565	-35445	12683	4.5801	4.5801	-27639	16250	20839	40441	69130	11679	61280		4.83	Si
SLV 5	4.83	8376.62	-18985	-15809	-12296	4.5801	4.5801	-12327	14965	19192	40441	69130	11679	59633		4.85	Si
SLV 5	6.93	21104.73	-15534	-12936	-9334	4.5801	2.7943	-10087	14517	11359	40441	69130	11679	51800		5.55	Si
SLV 8	4.83	3643	-38826	-32331	11326	4.5801	4.5801	-25211	16250	20839	40441	69130	11679	61280		5.41	Si
SLV 8	6.93	-9486.57	-35469	-29535	8257	4.5801	4.5801	-23031	16250	20839	40441	69130	11679	61280		7.42	Si
SLV 12	4.83	6533.24	-50692	-42212	13415	4.5801	4.5801	-32916	16250	20839	40441	69130	11679	61280		4.57	Si
SLV 12	6.93	-9936.58	-42439	-35340	10410	4.5801	4.5801	-27557	16250	20839	40441	69130	11679	61280		5.89	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	215625	0.38	12108	-15528	466.37	2030.28	4.35	Si
SLV 1	215625	0.38	12259	-15722	466.37	2053.82	4.4	Si
SLV 6	215625	0.38	12828	-16450	466.37	2141.86	4.59	Si
SLV 5	215625	0.38	12926	-16577	466.37	2157.07	4.63	Si
SLV 4	215625	0.38	16753	-21484	466.37	2732.8	5.86	Si
SLV 3	215625	0.38	16904	-21678	466.37	2754.96	5.91	Si
SLV 10	215625	0.38	18066	-23168	466.37	2923.8	6.27	Si
SLV 9	215625	0.38	18164	-23294	466.37	2937.99	6.3	Si
SLV 8	215625	0.38	28308	-36303	466.37	4297.43	9.21	Si
SLV 7	215625	0.38	28407	-36429	466.37	4309.64	9.24	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-37705	-51287	333	0.652	4475.3	0.958	9.88572	11.63229	No
SLV 12	-37402	-50692	334	0.656	4444.5	0.958	9.95618	11.63229	No
SLV 7	-33611	-39421	-208	0.721	4059.2	0.954	10.98912	11.63229	No
SLV 8	-33307	-38826	-207	0.727	4028.3	0.954	11.0772	11.63229	No
SLV 15	-34434	-58137	924	0.688	4142.8	0.955	10.47463	5.55889	Si
SLV 16	-33968	-57224	924	0.696	4095.5	0.954	10.6003	5.55889	Si
SLV 9	-14480	-30851	219	1.424	2122.7	0.921	22.46768	11.63229	Si
SLV 10	-14177	-30256	219	1.447	2092.3	0.92	22.85186	11.63229	Si
SLV 13	-27466	-52006	889	0.833	3435.3	0.947	12.78023	5.55889	Si
SLV 14	-27001	-51093	890	0.845	3388.1	0.946	12.97103	5.55889	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.971	SLU 81	Si
V_SLU	61.922	SLU 50	Si
PF_SLV	1.528	SLV 6	Si
V_SLV	3.906	SLV 11	Si
PFFP_SLV	4.353	SLV 2	Si
R_SLV	0.85	SLV 11	No

Maschio 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	2.066	-0.133	5.826	L5	L6	3.76	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	4.83	-6818.9	-32497	-0.000065	0.0004492	0.0035	3.7599	45659.9	53942.23	53942.23	7.91	No	Si
SLU 44	6.93	-3289.14	-26470	-0.0000467	0.0004492	0.0035	3.7599	39522.81	46278.28	46278.28	14.07	No	Si
SLU 47	4.83	-6946.3	-33286	-0.0000666	0.0004492	0.0035	3.7599	46384.94	54870.86	54870.86	7.9	No	Si
SLU 47	6.93	-3348.19	-27226	-0.000048	0.0004492	0.0035	3.7599	40351.05	47274.26	47274.26	14.12	No	Si
SLU 67	4.83	-7504.89	-37418	-0.0000749	0.0004492	0.0035	3.7599	49882.64	59607.76	59607.76	7.94	No	Si
SLU 67	6.93	-4108.2	-30955	-0.0000558	0.0004492	0.0035	3.7599	44190.51	52023.63	52023.63	12.66	No	Si
SLU 68	4.83	-7514.97	-36976	-0.0000741	0.0004492	0.0035	3.7599	49532.7	59118.01	59118.01	7.87	No	Si
SLU 68	6.93	-4046.91	-30480	-0.0000548	0.0004492	0.0035	3.7599	43724.43	51433.73	51433.73	12.71	No	Si
SLU 70	4.83	-7632.29	-38207	-0.0000765	0.0004492	0.0035	3.7599	50494.15	60458.17	60458.17	7.92	No	Si
SLU 70	6.93	-4167.25	-31711	-0.0000571	0.0004492	0.0035	3.7599	44919.61	52970	52970	12.71	No	Si
SLU 72	4.83	-7587.49	-37765	-0.0000757	0.0004492	0.0035	3.7599	50154.12	59982.79	59982.79	7.91	No	Si
SLU 72	6.93	-4090.87	-31264	-0.0000562	0.0004492	0.0035	3.7599	44490.85	52409.91	52409.91	12.81	No	Si
SLU 78	4.83	-8006.24	-41423	-0.000083	0.0004492	0.0035	3.7599	52797.56	63698.75	63698.75	7.96	No	Si
SLU 78	6.93	-4955.54	-34573	-0.0000637	0.0004492	0.0035	3.7599	47527.72	56362.55	56362.55	11.37	No	Si
SLU 76	4.83	-7888.92	-40192	-0.0000806	0.0004492	0.0035	3.7599	51951.8	62581.36	62581.36	7.93	No	Si
SLU 76	6.93	-4835.19	-33342	-0.0000614	0.0004492	0.0035	3.7599	46435.51	54935.81	54935.81	11.36	No	Si
SLU 51	4.83	-7018.82	-34075	-0.0000681	0.0004492	0.0035	3.7599	47091.44	55784.17	55784.17	7.95	No	Si
SLU 51	6.93	-3392.15	-28010	-0.0000493	0.0004492	0.0035	3.7599	41192.03	48315.48	48315.48	14.24	No	Si
SLU 65	4.83	-7387.57	-36187	-0.0000725	0.0004492	0.0035	3.7599	48892.79	58231.85	58231.85	7.88	No	Si
SLU 65	6.93	-3987.86	-29724	-0.0000535	0.0004492	0.0035	3.7599	42968.12	50500.05	50500.05	12.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	4.83	-4988.3	-12352	-0.0000288	0.0006738	0.0035	3.7599		25961.95	25961.95	5.2		Si
SLV 7	6.93	-13058.56	-10491	-0.0000595	0.0006738	0.0035	3.008		22840.41	22840.41	1.75		Si
SLD 7	4.83	-5317.46	-21105	-0.0000424	0.0006738	0.0035	3.7599		40237.45	40237.45	7.57		Si
SLD 7	6.93	-7526.66	-17519	-0.0000422	0.0006738	0.0035	3.7599		34509.3	34509.3	4.58		Si
SLV 11	4.83	-5995.26	-20330	-0.0000429	0.0006738	0.0035	3.7599		39042.09	39042.09	6.51		Si
SLV 11	6.93	-15476.16	-16216	-0.0000634	0.0006738	0.0035	3.7599		32407.32	32407.32	2.09		Si
SLV 4	4.83	-4750.01	-11851	-0.0000275	0.0006738	0.0035	3.7599		25122.45	25122.45	5.29		Si
SLV 4	6.93	-1467.11	-10527	-0.0000182	0.0006738	0.0035	3.7599		22900.71	22900.71	15.61		Si
SLV 8	4.83	-5957.83	-13100	-0.0000321	0.0006738	0.0035	3.7599		27220.11	27220.11	4.57		Si
SLV 8	6.93	-12011.09	-10434	-0.0000514	0.0006738	0.0035	3.008		22743.68	22743.68	1.89		Si
SLD 8	4.83	-5741.6	-21432	-0.0000439	0.0006738	0.0035	3.7599		40743.77	40743.77	7.1		Si
SLD 8	6.93	-7068.42	-17494	-0.0000411	0.0006738	0.0035	3.7599		34468.83	34468.83	4.88		Si
SLV 12	4.83	-6964.79	-21078	-0.0000462	0.0006738	0.0035	3.7599		40196.65	40196.65	5.77		Si
SLV 12	6.93	-14428.69	-16159	-0.0000591	0.0006738	0.0035	3.7599		32315.55	32315.55	2.24		Si
SLV 15	4.83	-6618.59	-37299	-0.0000702	0.0006738	0.0035	3.7599		63799.09	63799.09	9.64		Si
SLV 15	6.93	-11133.36	-29697	-0.0000692	0.0006738	0.0035	3.7599		53228.28	53228.28	4.78		Si
SLD 12	4.83	-6171.69	-24845	-0.00005	0.0006738	0.0035	3.7599		46041.85	46041.85	7.46		Si
SLD 12	6.93	-8102.61	-19943	-0.0000472	0.0006738	0.0035	3.7599		38440.14	38440.14	4.74		Si
SLD 11	4.83	-5747.56	-24518	-0.0000486	0.0006738	0.0035	3.7599		45547.02	45547.02	7.92		Si
SLD 11	6.93	-8560.85	-19968	-0.0000483	0.0006738	0.0035	3.7599		38479.18	38479.18	4.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	4.83	-7923.91	-41422	-34493	-2952	3.7599	3.7599	-32764	10833	11405	40441	37834	9588	47422	No	16.07	Si
SLU 77	6.93	-4932.89	-34615	-28824	-2956	3.7599	3.7599	-27379	10833	11405	40441	37834	9588	47422	No	16.04	Si
SLU 78	4.83	-8006.24	-41423	-34493	-3032	3.7599	3.7599	-32764	10833	11405	40441	37834	9588	47422	No	15.64	Si
SLU 78	6.93	-4955.54	-34573	-28789	-2990	3.7599	3.7599	-27346	10833	11405	40441	37834	9588	47422	No	15.86	Si
SLU 82	4.83	-7866.9	-40781	-33959	-2979	3.7599	3.7599	-32256	10833	11405	40441	37834	9588	47422	No	15.92	Si
SLU 82	6.93	-5098.88	-33840	-28179	-2936	3.7599	3.7599	-26766	10833	11405	40441	37834	9588	47422	No	16.15	Si
SLU 75	4.83	-7878.84	-40634	-33836	-2970	3.7599	3.7599	-32140	10833	11405	40441	37834	9588	47422	No	15.97	Si
SLU 75	6.93	-4896.48	-33817	-28160	-2928	3.7599	3.7599	-26748	10833	11405	40441	37834	9588	47422	No	16.2	Si
SLU 79	4.83	-7879.11	-40981	-34125	-2971	3.7599	3.7599	-32414	10833	11405	40441	37834	9588	47422	No	15.96	Si
SLU 79	6.93	-4856.51	-34168	-28452	-2975	3.7599	3.7599	-27025	10833	11405	40441	37834	9588	47422	No	15.94	Si
SLU 76	4.83	-7888.92	-40192	-33469	-3043	3.7599	3.7599	-31790	10833	11405	40441	37834	9588	47422	No	15.58	Si
SLU 76	6.93	-4835.19	-33342	-27765	-2970	3.7599	3.7599	-26372	10833	11405	40441	37834	9588	47422	No	15.97	Si
SLU 83	4.83	-7911.97	-41570	-34616	-2960	3.7599	3.7599	-32880	10833	11405	40441	37834	9588	47422	No	16.02	Si
SLU 83	6.93	-5135.29	-34638	-28844	-2964	3.7599	3.7599	-27398	10833	11405	40441	37834	9588	47422	No	16	Si
SLU 84	4.83	-7994.3	-41570	-34616	-3041	3.7599	3.7599	-32880	10833	11405	40441	37834	9588	47422	No	15.6	Si
SLU 84	6.93	-5157.93	-34597	-28809	-2998	3.7599	3.7599	-27365	10833	11405	40441	37834	9588	47422	No	15.82	Si
SLU 80	4.83	-7961.44	-40981	-34126	-3052	3.7599	3.7599	-32415	10833	11405	40441	37834	9588	47422	No	15.54	Si
SLU 80	6.93	-4879.15	-34126	-28417	-3009	3.7599	3.7599	-26993	10833	11405	40441	37834	9588	47422	No	15.76	Si
SLU 73	4.83	-7761.52	-39403	-32811	-2981	3.7599	3.7599	-31166	10833	11405	40441	37834	9588	47422	No	15.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	6.93	-4776.14	-32586	-27135	-2907	3.7599	3.7599	-25774	10833	11405	40441	37834	9588	47422	No	16.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	4.83	-5957.83	-13100	-10908	5338	3.7599	3.7599	-10361	14572	15341	40441	56752	9588	55782		10.45	Si
SLV 8	6.93	-12011.09	-10434	-8689	2877	3.008	2.1865	0	0	0	40441	45401	7670	40441		14.06	Si
SLV 14	4.83	-7856.06	-45183	-37625	-7879	3.7599	3.7599	-35738	16250	17108	40441	56752	9588	57549		7.3	Si
SLV 14	6.93	-3145.73	-35427	-29500	-7172	3.7599	3.7599	-28021	16250	17108	40441	56752	9588	57549		8.02	Si
SLV 6	4.83	-5122.84	-35556	-29608	-9818	3.7599	3.7599	-28124	16250	17108	40441	56752	9588	57549		5.86	Si
SLV 6	6.93	9255.74	-29825	-24836	-7344	3.7599	3.7599	-23590	16250	17108	40441	56752	9588	57549		7.84	Si
SLD 6	4.83	-5370.55	-31369	-26121	-5500	3.7599	3.7599	-24811	16250	17108	40441	56752	9588	57549		10.46	Si
SLD 6	6.93	2340.42	-26073	-21711	-4405	3.7599	3.7599	-20623	16250	17108	40441	56752	9588	57549		13.06	Si
SLV 10	4.83	-6129.81	-43535	-36252	-11164	3.7599	3.7599	-34434	16250	17108	40441	56752	9588	57549		5.16	Si
SLV 10	6.93	6838.14	-35550	-29603	-8708	3.7599	3.7599	-28119	16250	17108	40441	56752	9588	57549		6.61	Si
SLV 7	4.83	-4988.3	-12352	-10285	7019	3.7599	3.7599	-9770	14454	15217	40441	56752	9588	55658		7.93	Si
SLV 7	6.93	-13058.56	-10491	-8736	4558	3.008	1.9058	0	0	0	40441	45401	7670	40441		8.87	Si
SLV 11	4.83	-5995.26	-20330	-16929	5673	3.7599	3.7599	-16080	15716	16546	40441	56752	9588	56987		10.04	Si
SLV 11	6.93	-15476.16	-16216	-13503	3193	3.7599	2.7768	-17487	15998	12438	40441	56752	9588	52879		16.56	Si
SLV 5	4.83	-4153.32	-34808	-28985	-8137	3.7599	3.7599	-27532	16250	17108	40441	56752	9588	57549		7.07	Si
SLV 5	6.93	8208.27	-29882	-24883	-5663	3.7599	3.7599	-23636	16250	17108	40441	56752	9588	57549		10.16	Si
SLD 10	4.83	-5800.64	-34782	-28963	-6075	3.7599	3.7599	-27511	16250	17108	40441	56752	9588	57549		9.47	Si
SLD 10	6.93	1306.23	-28522	-23751	-4988	3.7599	3.7599	-22560	16250	17108	40441	56752	9588	57549		11.54	Si
SLV 9	4.83	-5160.28	-42787	-35629	-9482	3.7599	3.7599	-33843	16250	17108	40441	56752	9588	57549		6.07	Si
SLV 9	6.93	5790.66	-35607	-29650	-7027	3.7599	3.7599	-28164	16250	17108	40441	56752	9588	57549		8.19	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 6.59 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	215625	0.38	9924	-10448	382.86	1383.49	3.61	Si
SLV 7	215625	0.38	10042	-10572	382.86	1399.02	3.65	Si
SLV 4	215625	0.38	10095	-10628	382.86	1405.91	3.67	Si
SLV 8	215625	0.38	10153	-10689	382.86	1413.62	3.69	Si
SLV 1	215625	0.38	15743	-16574	382.86	2121.01	5.54	Si
SLV 2	215625	0.38	15913	-16753	382.86	2141.83	5.59	Si
SLV 11	215625	0.38	15937	-16778	382.86	2144.67	5.6	Si
SLV 12	215625	0.38	16048	-16895	382.86	2158.21	5.64	Si
SLV 5	215625	0.38	29438	-30992	382.86	3641.95	9.51	Si
SLV 6	215625	0.38	29549	-31109	382.86	3653.07	9.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 6.59 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-31452	-43535	555	0.635	3724.6	0.958	9.62473	11.63229	No
SLV 9	-31212	-42787	555	0.639	3700.2	0.958	9.68977	11.63229	No
SLV 6	-28155	-35556	-250	0.707	3389.5	0.955	10.75735	11.63229	No
SLV 5	-27915	-34808	-250	0.712	3365.1	0.955	10.83856	11.63229	No
SLV 14	-27316	-45183	1391	0.688	3304.2	0.954	10.47998	5.55889	Si
SLV 13	-26948	-44036	1391	0.696	3266.9	0.953	10.60505	5.55889	Si
SLV 16	-20419	-38446	1302	0.88	2604.3	0.943	13.55535	5.55889	Si
SLV 15	-20051	-37299	1302	0.893	2567	0.942	13.76907	5.55889	Si
SLV 12	-8463	-21078	259	1.819	1400.6	0.908	29.11937	11.63229	Si
SLV 11	-8223	-20330	259	1.856	1376.9	0.907	29.74371	11.63229	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.867	SLU 68	Si
V_SLU	15.539	SLU 80	Si
PF_SLV	1.749	SLV 7	Si
V_SLV	5.155	SLV 10	Si
PFFP_SLV	3.614	SLV 3	Si
R_SLV	0.827	SLV 10	No

Maschio 114

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L6	L7	9.141	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	8.35	-9720.49	-54423	-0.0000364	0.0004492	0.0035	9.1407	205445.28	241445.18	241445.18	24.84	No	Si
SLU 40	11.87	-2922.71	-30055	-0.0000188	0.0004492	0.0035	9.1407	124160.61	151956.53	151956.53	51.99	No	Si
SLU 84	8.35	-10442.64	-66335	-0.0000443	0.0004492	0.0035	9.1407	238863.83	280647.57	280647.57	26.88	No	Si
SLU 84	11.87	-2768.29	-37347	-0.0000231	0.0004492	0.0035	9.1407	150305.63	180053.6	180053.6	65.04	No	Si
SLU 76	8.35	-10125.03	-64162	-0.0000427	0.0004492	0.0035	9.1407	233077.96	273760.5	273760.5	27.04	No	Si
SLU 76	11.87	-2824.04	-36296	-0.0000225	0.0004492	0.0035	9.1407	146632.26	176198.55	176198.55	62.39	No	Si
SLU 34	8.35	-9147.25	-53914	-0.0000359	0.0004492	0.0035	9.1407	203926.36	239735.33	239735.33	26.21	No	Si
SLU 34	11.87	-2644.95	-30588	-0.000019	0.0004492	0.0035	9.1407	126124.49	154008.81	154008.81	58.23	No	Si
SLU 39	8.35	-9074.94	-54414	-0.0000361	0.0004492	0.0035	9.1407	205418.68	241415.25	241415.25	26.6	No	Si
SLU 39	11.87	-2413.02	-30061	-0.0000186	0.0004492	0.0035	9.1407	124180.74	151977.51	151977.51	62.98	No	Si
SLU 42	8.35	-9464.86	-56087	-0.0000374	0.0004492	0.0035	9.1407	210362.97	247004.62	247004.62	26.1	No	Si
SLU 42	11.87	-2589.2	-31639	-0.0000196	0.0004492	0.0035	9.1407	129973.27	158070.74	158070.74	61.05	No	Si
SLU 19	8.35	-8170.02	-48359	-0.000032	0.0004492	0.0035	9.1407	186840.56	220176.3	220176.3	26.95	No	Si
SLU 19	11.87	-2517.08	-26536	-0.0000165	0.0004492	0.0035	9.1407	110985.9	138139.75	138139.75	54.88	No	Si
SLU 31	8.35	-9402.89	-52250	-0.0000349	0.0004492	0.0035	9.1407	198903.01	234063.73	234063.73	24.89	No	Si
SLU 31	11.87	-2978.46	-29004	-0.0000182	0.0004492	0.0035	9.1407	120263.15	147929.91	147929.91	49.67	No	Si
SLU 73	8.35	-10380.66	-62498	-0.0000418	0.0004492	0.0035	9.1407	228553.03	268402.34	268402.34	25.86	No	Si
SLU 73	11.87	-3157.56	-34712	-0.0000217	0.0004492	0.0035	9.1407	141035.25	170065.5	170065.5	53.86	No	Si
SLU 82	8.35	-10698.27	-64670	-0.0000433	0.0004492	0.0035	9.1407	234444.57	275382.31	275382.31	25.74	No	Si
SLU 82	11.87	-3101.81	-35763	-0.0000223	0.0004492	0.0035	9.1407	144757.31	174201.96	174201.96	56.16	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	8.35	-90835.73	-39030	-0.0000629	0.0006738	0.0035	9.1407		190882.87	190882.87	2.1		Si
SLV 12	11.87	-56788.63	-24088	-0.0000388	0.0006738	0.0035	9.1407		129920.24	129920.24	2.29		Si
SLV 6	8.35	76699.54	-49660	-0.0000592	0.0006738	0.0035	9.1407		212451.29	212451.29	2.77		Si
SLV 6	11.87	50961.89	-25478	-0.0000352	0.0006738	0.0035	9.1407		115221.3	115221.3	2.26		Si
SLV 7	8.35	-93403.93	-45543	-0.0000655	0.0006738	0.0035	9.1407		216416.45	216416.45	2.32		Si
SLV 7	11.87	-55468.09	-24632	-0.0000378	0.0006738	0.0035	9.1407		132197.36	132197.36	2.38		Si
SLV 11	8.35	-88645.27	-38887	-0.0000613	0.0006738	0.0035	9.1407		190326.76	190326.76	2.15		Si
SLV 11	11.87	-53693.53	-24028	-0.0000366	0.0006738	0.0035	9.1407		129668.47	129668.47	2.41		Si
SLD 8	8.35	-45588.63	-44857	-0.000044	0.0006738	0.0035	9.1407		213706.77	213706.77	4.69		Si
SLD 8	11.87	-26646.95	-24725	-0.0000245	0.0006738	0.0035	9.1407		132586.77	132586.77	4.98		Si
SLD 12	8.35	-43553.29	-42006	-0.0000415	0.0006738	0.0035	9.1407		202504.49	202504.49	4.65		Si
SLD 12	11.87	-25887.59	-24465	-0.0000241	0.0006738	0.0035	9.1407		131497.96	131497.96	5.08		Si
SLV 10	8.35	81458.2	-43004	-0.000058	0.0006738	0.0035	9.1407		186478.61	186478.61	2.29		Si
SLV 10	11.87	52736.45	-24873	-0.0000361	0.0006738	0.0035	9.1407		112697.15	112697.15	2.14		Si
SLV 8	8.35	-95594.39	-45686	-0.0000669	0.0006738	0.0035	9.1407		216980.93	216980.93	2.27		Si
SLV 8	11.87	-58563.19	-24692	-0.00004	0.0006738	0.0035	9.1407		132449.54	132449.54	2.26		Si
SLV 5	8.35	78890	-49517	-0.0000601	0.0006738	0.0035	9.1407		211896.23	211896.23	2.69		Si
SLV 5	11.87	54056.99	-25417	-0.000037	0.0006738	0.0035	9.1407		114970.96	114970.96	2.13		Si
SLV 9	8.35	83648.66	-42861	-0.0000591	0.0006738	0.0035	9.1407		185916.57	185916.57	2.22		Si
SLV 9	11.87	55831.54	-24813	-0.0000381	0.0006738	0.0035	9.1407		112444.11	112444.11	2.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	8.35	-9720.49	-54423	-45319	-2433	9.1407	9.1407	-17707	10694	27371	40441	91978	23309	67812	No	27.87	Si
SLU 40	11.87	-2922.71	-30055	-25027	-2555	9.1407	9.1407	-9779	9637	24665	40441	91978	23309	65106	No	25.48	Si
SLU 73	8.35	-10380.66	-62498	-52043	-2096	9.1407	9.1407	-20334	10833	27727	40441	91978	23309	68168	No	32.52	Si
SLU 73	11.87	-3157.56	-34712	-28905	-2300	9.1407	9.1407	-11294	9839	25182	40441	91978	23309	65623	No	28.53	Si
SLU 33	8.35	-8816.77	-54791	-45625	-2154	9.1407	9.1407	-17827	10710	27412	40441	91978	23309	67853	No	31.5	Si
SLU 33	11.87	-2334.8	-31282	-26049	-2276	9.1407	9.1407	-10178	9690	24801	40441	91978	23309	65242	No	28.67	Si
SLU 84	8.35	-10442.64	-66335	-55238	-2319	9.1407	9.1407	-21582	10833	27727	40441	91978	23309	68168	No	29.39	Si
SLU 84	11.87	-2768.29	-37347	-31100	-2441	9.1407	9.1407	-12151	9953	25475	40441	91978	23309	65916	No	27.01	Si
SLU 39	8.35	-9074.94	-54414	-45311	-2367	9.1407	9.1407	-17704	10694	27370	40441	91978	23309	67811	No	28.65	Si
SLU 39	11.87	-2413.02	-30061	-25032	-2366	9.1407	9.1407	-9780	9637	24666	40441	91978	23309	65107	No	27.52	Si
SLU 31	8.35	-9402.89	-52250	-43510	-2192	9.1407	9.1407	-17000	10600	27130	40441	91978	23309	67571	No	30.82	Si
SLU 31	11.87	-2978.46	-29004	-24152	-2397	9.1407	9.1407	-9437	9592	24549	40441	91978	23309	64989	No	27.11	Si
SLU 82	8.35	-10698.27	-64670	-53852	-2337	9.1407	9.1407	-21041	10833	27727	40441	91978	23309	68168	No	29.17	Si
SLU 82	11.87	-3101.81	-35763	-29780	-2459	9.1407	9.1407	-11636	9885	25299	40441	91978	23309	65740	No	26.74	Si
SLU 41	8.35	-8819.31	-56078	-46697	-2349	9.1407	9.1407	-18245	10766	27555	40441	91978	23309	67995	No	28.94	Si
SLU 41	11.87	-2079.51	-31645	-26351	-2348	9.1407	9.1407	-10296	9706	24842	40441	91978	23309	65283	No	27.81	Si
SLU 42	8.35	-9464.86	-56087	-46704	-2415	9.1407	9.1407	-18248	10766	27556	40441	91978	23309	67996	No	28.15	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	11.87	-2589.2	-31639	-26347	-2537	9.1407	9.1407	-10294	9706	24841	40441	91978	23309	65282	No	25.73	Si
SLU 34	8.35	-9147.25	-53914	-44895	-2175	9.1407	9.1407	-17541	10672	27314	40441	91978	23309	67755	No	31.16	Si
SLU 34	11.87	-2644.95	-30588	-25471	-2379	9.1407	9.1407	-9952	9660	24724	40441	91978	23309	65165	No	27.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	8.35	-88645.27	-38887	-32381	-22174	9.1407	6.8723	-16940	15888	30573	40441	137967	23309	71014		3.2	Si
SLV 11	11.87	-53693.53	-24028	-20008	-29974	9.1407	7.0071	-10231	14546	28540	40441	137967	23309	68981		2.3	Si
SLV 5	8.35	78890	-49517	-41234	18635	9.1407	8.9315	-16111	15722	39318	40441	137967	23309	79759		4.28	Si
SLV 5	11.87	54056.99	-25417	-21165	26440	9.1407	7.3307	-8270	14154	29052	40441	137967	23309	69493		2.63	Si
SLV 10	8.35	81458.2	-43004	-35810	19745	9.1407	8.0284	-13991	15298	34390	40441	137967	23309	74831		3.79	Si
SLV 10	11.87	52736.45	-24873	-20712	27567	9.1407	7.3504	-8093	14119	29058	40441	137967	23309	69499		2.52	Si
SLV 6	8.35	76699.54	-49660	-41353	20118	9.1407	9.0776	-16157	15731	39985	40441	137967	23309	80426		4	Si
SLV 6	11.87	50961.89	-25478	-21216	27921	9.1407	7.7102	-8289	14158	30565	40441	137967	23309	71006		2.54	Si
SLD 11	8.35	-42595.04	-41943	-34927	-10385	9.1407	9.1407	-13647	15229	38978	40441	137967	23309	79419		7.65	Si
SLD 11	11.87	-24533.58	-24439	-20351	-13842	9.1407	9.1407	-7951	14090	36063	40441	137967	23309	76503		5.53	Si
SLD 7	8.35	-44630.38	-44794	-37301	-10226	9.1407	9.1407	-14574	15415	39453	40441	137967	23309	79894		7.81	Si
SLD 7	11.87	-25292.95	-24699	-20567	-13691	9.1407	9.1407	-8036	14107	36106	40441	137967	23309	76547		5.59	Si
SLV 7	8.35	-93403.93	-45543	-37925	-21801	9.1407	7.5584	-18049	16110	34094	40441	137967	23309	74535		3.42	Si
SLV 7	11.87	-55468.09	-24632	-20512	-29620	9.1407	6.9555	-10567	14614	28460	40441	137967	23309	68901		2.33	Si
SLV 8	8.35	-95594.39	-45686	-38044	-20318	9.1407	7.4338	-18411	16182	33683	40441	137967	23309	74124		3.65	Si
SLV 8	11.87	-58563.19	-24692	-20562	-28139	9.1407	6.5959	-11178	14736	27215	40441	137967	23309	67656		2.4	Si
SLV 9	8.35	83648.66	-42861	-35691	18262	9.1407	7.8561	-13945	15289	33631	40441	137967	23309	74072		4.06	Si
SLV 9	11.87	55831.54	-24813	-20662	26086	9.1407	6.9608	-8073	14115	27510	40441	137967	23309	67951		2.6	Si
SLV 12	8.35	-90835.73	-39030	-32500	-20691	9.1407	6.729	-17367	15974	30096	40441	137967	23309	70537		3.41	Si
SLV 12	11.87	-56788.63	-24088	-20059	-28493	9.1407	6.6384	-10833	14667	27262	40441	137967	23309	67703		2.38	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	215625	0.46	11336	-29013	1110.16	3810.66	3.43	Si
SLV 16	215625	0.46	11389	-29149	1110.16	3827.28	3.45	Si
SLV 13	215625	0.46	11425	-29240	1110.16	3838.43	3.46	Si
SLV 14	215625	0.46	11478	-29376	1110.16	3855.04	3.47	Si
SLV 11	215625	0.46	12577	-32189	1110.16	4197.2	3.78	Si
SLV 12	215625	0.46	12611	-32277	1110.16	4207.87	3.79	Si
SLV 9	215625	0.46	12872	-32944	1110.16	4288.23	3.86	Si
SLV 10	215625	0.46	12906	-33032	1110.16	4298.86	3.87	Si
SLV 7	215625	0.46	13721	-35117	1110.16	4548.3	4.1	Si
SLV 8	215625	0.46	13755	-35205	1110.16	4558.82	4.11	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-25478	-49660	-1161	1.544	3893.6	0.916	24.48691	13.33129	Si
SLV 5	-25417	-49517	-1161	1.546	3887.6	0.916	24.53225	13.33129	Si
SLV 10	-24873	-43004	1091	1.573	3833.2	0.915	24.9835	13.33129	Si
SLV 9	-24813	-42861	1091	1.576	3827.2	0.915	25.03066	13.33129	Si
SLV 8	-24692	-45686	-1108	1.581	3815.1	0.915	25.11734	13.33129	Si
SLV 7	-24632	-45543	-1108	1.584	3809.1	0.915	25.16499	13.33129	Si
SLV 12	-24088	-39030	1143	1.609	3754.8	0.914	25.5868	13.33129	Si
SLV 11	-24028	-38887	1143	1.612	3748.8	0.914	25.6363	13.33129	Si
SLV 2	-25924	-56074	-3769	1.447	3938.3	0.917	22.94105	6.37081	Si
SLV 1	-25831	-55854	-3769	1.451	3929	0.917	23.00534	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.839	SLU 40	Si
V_SLU	25.478	SLU 40	Si
PF_SLV	2.014	SLV 9	Si
V_SLV	2.301	SLV 11	Si
PFFP_SLV	3.433	SLV 15	Si
R_SLV	1.837	SLV 6	Si

Maschio 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	5.826	-22.713	5.826	L6	L7	1.92	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	9.25	519.08	-9395	-0.0000314	0.0003743	0.0035	1.92	7471.19	7863.93	7863.93	15.15	No	Si
SLU 38	11.05	833.16	-8887	-0.0000327	0.0003743	0.0035	1.92	7146.01	7497.13	7497.13	9	No	Si
SLU 35	9.25	526.78	-9698	-0.0000324	0.0003743	0.0035	1.92	7660.57	8084.4	8084.4	15.35	No	Si
SLU 35	11.05	840.52	-9182	-0.0000337	0.0003743	0.0035	1.92	7335.65	7709.28	7709.28	9.17	No	Si
SLU 44	9.25	870.56	-9299	-0.0000343	0.0003743	0.0035	1.92	7410.5	7794.36	7794.36	8.95	No	Si
SLU 44	11.05	342.97	-7447	-0.0000241	0.0003743	0.0035	1.92	6176.29	6481.29	6481.29	18.9	No	Si
SLU 34	9.25	502.42	-8873	-0.0000297	0.0003743	0.0035	1.92	7137.07	7487.24	7487.24	14.9	No	Si
SLU 34	11.05	774.75	-8340	-0.0000306	0.0003743	0.0035	1.92	6786.64	7107.77	7107.77	9.17	No	Si
SLU 43	9.25	866.92	-9491	-0.0000349	0.0003743	0.0035	1.92	7531.44	7933.5	7933.5	9.15	No	Si
SLU 43	11.05	325.94	-7602	-0.0000244	0.0003743	0.0035	1.92	6284.15	6589.02	6589.02	20.22	No	Si
SLU 42	9.25	459.71	-9117	-0.0000301	0.0003743	0.0035	1.92	7294.28	7662.58	7662.58	16.67	No	Si
SLU 42	11.05	842.72	-8738	-0.0000324	0.0003743	0.0035	1.92	7048.97	7390.39	7390.39	8.77	No	Si
SLU 47	9.25	888.67	-9745	-0.0000358	0.0003743	0.0035	1.92	7689.47	8118.51	8118.51	9.14	No	Si
SLU 47	11.05	408.2	-7931	-0.0000261	0.0003743	0.0035	1.92	6510.59	6819.27	6819.27	16.71	No	Si
SLU 41	9.25	457.53	-9232	-0.0000304	0.0003743	0.0035	1.92	7367.73	7745.66	7745.66	16.93	No	Si
SLU 41	11.05	832.49	-8831	-0.0000326	0.0003743	0.0035	1.92	7109.57	7456.91	7456.91	8.96	No	Si
SLU 40	9.25	441.6	-8671	-0.0000286	0.0003743	0.0035	1.92	7005.48	7342.94	7342.94	16.63	No	Si
SLU 40	11.05	777.49	-8253	-0.0000303	0.0003743	0.0035	1.92	6728.37	7046.13	7046.13	9.06	No	Si
SLU 36	9.25	528.97	-9583	-0.0000321	0.0003743	0.0035	1.92	7589	8000.46	8000.46	15.12	No	Si
SLU 36	11.05	850.74	-9089	-0.0000335	0.0003743	0.0035	1.92	7276.19	7642.25	7642.25	8.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	9.25	308.59	-2745	-0.0000102	0.0005615	0.0035	1.92		2744.42	2744.42	8.89		Si
SLD 7	11.05	934.01	-3184	-0.0000168	0.0005615	0.0035	1.92		3142.84	3142.84	3.36		Si
SLD 8	9.25	377.57	-2584	-0.0000103	0.0005615	0.0035	1.92		2598.64	2598.64	6.88		Si
SLD 8	11.05	858.52	-2905	-0.0000154	0.0005615	0.0035	1.92		2889.67	2889.67	3.37		Si
SLV 15	9.25	1046.37	-4663	-0.000022	0.0005615	0.0035	1.92		4457.84	4457.84	4.26		Si
SLV 15	11.05	-842.41	-3248	-0.0000162	0.0005615	0.0035	1.92		4047.19	4047.19	4.8		Si
SLV 3	9.25	-316.02	-4557	-0.0000153	0.0005615	0.0035	1.92		5195.31	5195.31	16.44		Si
SLV 3	11.05	2315.1	-5922	-0.0000372	0.0005615	0.0035	1.92		5549.09	5549.09	2.4		Si
SLV 4	9.25	-74.02	-3994	-0.0000117	0.0005615	0.0035	1.92		4707.79	4707.79	63.6		Si
SLV 4	11.05	2050.26	-4942	-0.0000323	0.0005615	0.0035	1.92		4701.3	4701.3	2.29		Si
SLV 11	9.25	345.51	3610	0.2832757	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	11.05	653.26	1999	0.1534065	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	9.25	-63.21	3642	0.2883011	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	11.05	1600.51	1197	0.0717704	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	9.25	94.48	4008	0.3163774	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	11.05	1427.95	1836	0.1313659	0.0005615	0.0035	1.536		0	0	0		No
SLV 16	9.25	1288.38	-4100	-0.0000225	0.0005615	0.0035	1.92		3961.39	3961.39	3.07		Si
SLV 16	11.05	-1107.24	-2268	-0.0000169	0.0005615	0.0035	1.92		3160.97	3160.97	2.85		Si
SLV 12	9.25	503.2	3977	0.3112461	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	11.05	480.7	2638	0.205418	0.0005615	0.0035	1.536		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	9.25	528.97	-9583	-7980	-831	1.92	1.92	-14844	8924	4797	40441	16098	4896	20994	No	25.25	Si
SLU 36	11.05	850.74	-9089	-7568	-818	1.92	1.92	-14078	8822	4742	40441	16098	4896	20994	No	25.67	Si
SLU 37	9.25	516.9	-9510	-7919	-795	1.92	1.92	-14731	8909	4789	40441	16098	4896	20994	No	26.4	Si
SLU 37	11.05	822.94	-8980	-7478	-797	1.92	1.92	-13909	8799	4730	40441	16098	4896	20994	No	26.34	Si
SLU 42	9.25	459.71	-9117	-7592	-927	1.92	1.92	-14122	8827	4746	40441	16098	4896	20994	No	22.65	Si
SLU 42	11.05	842.72	-8738	-7276	-913	1.92	1.92	-13534	8749	4703	40441	16098	4896	20994	No	22.99	Si
SLU 39	9.25	439.42	-8786	-7316	-856	1.92	1.92	-13610	8759	4709	40441	16098	4896	20994	No	24.53	Si
SLU 39	11.05	767.27	-8346	-6950	-857	1.92	1.92	-12928	8668	4660	40441	16098	4896	20994	No	24.49	Si
SLU 84	9.25	678.54	-11113	-9254	-796	1.92	1.92	-17214	9240	4967	40441	16098	4896	20994	No	26.37	Si
SLU 84	11.05	862.16	-10204	-8497	-783	1.92	1.92	-15805	9052	4866	40441	16098	4896	20994	No	26.82	Si
SLU 41	9.25	457.53	-9232	-7688	-903	1.92	1.92	-14300	8851	4758	40441	16098	4896	20994	No	23.26	Si
SLU 41	11.05	832.49	-8831	-7353	-904	1.92	1.92	-13678	8768	4714	40441	16098	4896	20994	No	23.22	Si
SLU 40	9.25	441.6	-8671	-7221	-880	1.92	1.92	-13431	8735	4696	40441	16098	4896	20994	No	23.85	Si
SLU 40	11.05	777.49	-8253	-6873	-866	1.92	1.92	-12784	8649	4650	40441	16098	4896	20994	No	24.23	Si
SLU 38	9.25	519.08	-9395	-7824	-820	1.92	1.92	-14553	8885	4776	40441	16098	4896	20994	No	25.62	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	11.05	833.16	-8887	-7400	-806	1.92	1.92	-13765	8780	4720	40441	16098	4896	20994	No	26.05	Si
SLU 34	9.25	502.42	-8873	-7389	-789	1.92	1.92	-13744	8777	4718	40441	16098	4896	20994	No	26.61	Si
SLU 34	11.05	774.75	-8340	-6945	-765	1.92	1.92	-12919	8667	4659	40441	16098	4896	20994	No	27.44	Si
SLU 35	9.25	526.78	-9698	-8076	-807	1.92	1.92	-15022	8947	4810	40441	16098	4896	20994	No	26.01	Si
SLU 35	11.05	840.52	-9182	-7646	-809	1.92	1.92	-14222	8841	4753	40441	16098	4896	20994	No	25.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	9.25	1263.72	-19273	-16049	2942	1.92	1.92	-29854	16250	8736	40441	24147	4896	29043		9.87	Si
SLV 10	11.05	-766.95	-14541	-12108	2494	1.92	1.92	-22523	14921	8022	40441	24147	4896	29043		11.65	Si
SLV 3	9.25	-316.02	-4557	-3795	-3528	1.92	1.92	-7058	11828	6359	40441	24147	4896	29043		8.23	Si
SLV 3	11.05	2315.1	-5922	-4931	-2686	1.92	1.7071	-9172	12251	5856	40441	24147	4896	29043		10.81	Si
SLV 11	9.25	345.51	3610	3006	-1862	1.536	1.92	0	0	0	40441	19318	3917	23234		12.48	Si
SLV 11	11.05	653.26	1999	1665	-1885	1.536	1.8998	0	0	0	40441	19318	3917	23234		12.33	Si
SLV 13	9.25	1274.53	-11638	-9691	2652	1.92	1.92	-18027	14022	7538	40441	24147	4896	29043		10.95	Si
SLV 13	11.05	-1216.7	-8401	-6996	1808	1.92	1.92	-13014	13019	6999	40441	24147	4896	29043		16.06	Si
SLV 14	9.25	1516.53	-11075	-9222	3156	1.92	1.92	-17155	13848	7444	40441	24147	4896	29043		9.2	Si
SLV 14	11.05	-1481.54	-7422	-6180	2312	1.92	1.92	-11496	12716	6836	40441	24147	4896	29043		12.56	Si
SLV 9	9.25	1106.03	-19640	-16355	2614	1.92	1.92	-30422	16250	8736	40441	24147	4896	29043		11.11	Si
SLV 9	11.05	-594.39	-15179	-12640	2166	1.92	1.92	-23512	15119	8128	40441	24147	4896	29043		13.41	Si
SLV 1	9.25	-87.86	-11532	-9603	-2185	1.92	1.92	-17862	13989	7520	40441	24147	4896	29043		13.29	Si
SLV 1	11.05	1940.8	-11075	-9222	-1471	1.92	1.92	-17155	13848	7444	40441	24147	4896	29043		19.74	Si
SLV 7	9.25	-63.21	3642	3032	-3314	1.536	1.92	0	0	0	40441	19318	3917	23234		7.01	Si
SLV 7	11.05	1600.51	1197	997	-2868	1.536	0	0	0	0	40441	19318	3917	23234		8.1	Si
SLV 8	9.25	94.48	4008	3338	-2985	1.536	1.92	0	0	0	40441	19318	3917	23234		7.78	Si
SLV 8	11.05	1427.95	1836	1529	-2540	1.536	0.5464	0	0	0	40441	19318	3917	23234		9.15	Si
SLV 4	9.25	-74.02	-3994	-3326	-3024	1.92	1.92	-6187	11654	6265	40441	24147	4896	29043		9.6	Si
SLV 4	11.05	2050.26	-4942	-4115	-2182	1.92	1.6353	-7655	11948	5471	40441	24147	4896	29043		13.31	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.46	0	2402	233.19	0	0	No, Trazione
SLV 12	179667	0.46	0	3035	233.19	0	0	No, Trazione
SLV 11	179667	0.46	0	2507	233.19	0	0	No, Trazione
SLV 7	179667	0.46	0	1874	233.19	0	0	No, Trazione
SLV 16	179667	0.46	5556	-2987	233.19	402.98	1.73	Si
SLV 15	179667	0.46	7063	-3797	233.19	507.01	2.17	Si
SLV 4	179667	0.46	9482	-5097	233.19	669.31	2.87	Si
SLV 3	179667	0.46	10988	-5907	233.19	767.52	3.29	Si
SLV 14	179667	0.46	16561	-8903	233.19	1111.26	4.77	Si
SLV 13	179667	0.46	18068	-9713	233.19	1198.95	5.14	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-12915	-18708	411	0.754	1582.3	0.951	11.52262	13.33129	No
SLV 6	-12420	-18237	411	0.779	1532	0.95	11.92251	13.33129	No
SLV 9	-12559	-17949	290	0.78	1546.2	0.95	11.93696	13.33129	No
SLV 10	-12064	-17478	291	0.807	1495.9	0.949	12.36303	13.33129	No
SLV 1	-8551	-12208	305	1.068	1140	0.935	16.60189	6.37081	Si
SLV 2	-7791	-11485	305	1.151	1063.2	0.931	17.95299	6.37081	Si
SLV 13	-7365	-9679	-98	1.226	1020.2	0.929	19.17265	6.37081	Si
SLV 14	-6605	-8956	-97	1.334	943.6	0.925	20.97185	6.37081	Si
SLV 3	-4342	-5770	93	1.82	717.2	0.908	29.12256	6.37081	Si
SLV 4	-3582	-5047	94	2.076	642.2	0.902	33.45904	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.77	SLU 42	Si
V_SLU	22.651	SLU 42	Si
PF_SLV	0	SLV 7	No
V_SLV	7.012	SLV 7	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.864	SLV 5	No

Maschio 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-21.813	5.826	-19.613	5.826	L6	L7	2.2	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	9.25	220.67	-12842	-0.0000337	0.0003743	0.0035	2.2	11233.91	12134.81	12134.81	54.99	No	Si
SLU 46	11.05	-1257.24	-11803	-0.0000382	0.0003743	0.0035	2.2	10539.84	12524.71	12524.71	9.96	No	Si
SLU 47	9.25	233.44	-12538	-0.000033	0.0003743	0.0035	2.2	11034.6	11866.58	11866.58	50.83	No	Si
SLU 47	11.05	-1248.61	-11520	-0.0000374	0.0003743	0.0035	2.2	10344.51	12291.37	12291.37	9.84	No	Si
SLU 60	9.25	277.5	-12947	-0.0000344	0.0003743	0.0035	2.2	11301.73	12227.28	12227.28	44.06	No	Si
SLU 60	11.05	-1301.88	-12064	-0.0000392	0.0003743	0.0035	2.2	10717.66	12726.72	12726.72	9.78	No	Si
SLU 52	9.25	273.11	-12483	-0.0000331	0.0003743	0.0035	2.2	10998.53	11818.59	11818.59	43.27	No	Si
SLU 52	11.05	-1291.05	-11563	-0.0000378	0.0003743	0.0035	2.2	10374.28	12327.59	12327.59	9.55	No	Si
SLU 65	9.25	225.54	-13040	-0.0000342	0.0003743	0.0035	2.2	11361.55	12309.34	12309.34	54.58	No	Si
SLU 65	11.05	-1278.63	-12088	-0.0000391	0.0003743	0.0035	2.2	10734.16	12745.67	12745.67	9.97	No	Si
SLU 45	9.25	226.92	-12945	-0.000034	0.0003743	0.0035	2.2	11300.28	12225.29	12225.29	53.87	No	Si
SLU 45	11.05	-1253.78	-11888	-0.0000384	0.0003743	0.0035	2.2	10598.31	12590.68	12590.68	10.04	No	Si
SLU 61	9.25	271.25	-12844	-0.000034	0.0003743	0.0035	2.2	11235.38	12136.8	12136.8	44.74	No	Si
SLU 61	11.05	-1305.34	-11978	-0.000039	0.0003743	0.0035	2.2	10659.72	12660.45	12660.45	9.7	No	Si
SLU 44	9.25	287.18	-11800	-0.0000314	0.0003743	0.0035	2.2	10537.89	11220.62	11220.62	39.07	No	Si
SLU 44	11.05	-1252.31	-10726	-0.0000353	0.0003743	0.0035	2.2	9781.19	11627.31	11627.31	9.28	No	Si
SLU 43	9.25	297.59	-11971	-0.0000319	0.0003743	0.0035	2.2	10654.54	11369.04	11369.04	38.2	No	Si
SLU 43	11.05	-1246.54	-10869	-0.0000356	0.0003743	0.0035	2.2	9883.86	11745.44	11745.44	9.42	No	Si
SLU 55	9.25	219.38	-13221	-0.0000347	0.0003743	0.0035	2.2	11477.55	12469.91	12469.91	56.84	No	Si
SLU 55	11.05	-1287.35	-12357	-0.0000399	0.0003743	0.0035	2.2	10914.32	12955	12955	10.06	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	9.25	701.75	-9680	-0.0000283	0.0005615	0.0035	2.2		10061.65	10061.65	14.34		Si
SLV 13	11.05	-3038.14	-10209	-0.0000455	0.0005615	0.0035	2.2		11575.51	11575.51	3.81		Si
SLV 16	9.25	852	-3312	-0.0000135	0.0005615	0.0035	2.2		3801.56	3801.56	4.46		Si
SLV 16	11.05	-2957.32	-4975	-0.0000351	0.0005615	0.0035	2.2		6526.41	6526.41	2.21		Si
SLV 15	9.25	585.61	-4072	-0.0000136	0.0005615	0.0035	2.2		4584.62	4584.62	7.83		Si
SLV 15	11.05	-2603.07	-5398	-0.0000311	0.0005615	0.0035	2.2		6948.53	6948.53	2.67		Si
SLD 15	9.25	359.03	-7473	-0.0000205	0.0005615	0.0035	2.2		7977.62	7977.62	22.22		Si
SLD 15	11.05	-1673.2	-7624	-0.0000297	0.0005615	0.0035	2.2		9136.11	9136.11	5.46		Si
SLV 12	9.25	260	586	0.0404227	0.0005615	0.0035	1.76		0	0	0		No
SLV 12	11.05	-978.7	-664	-0.0001089	0.0005615	0.0035	1.76		2057.9	2057.9	2.1		Si
SLV 14	9.25	968.14	-8920	-0.0000282	0.0005615	0.0035	2.2		9364.42	9364.42	9.67		Si
SLV 14	11.05	-3392.39	-9786	-0.0000468	0.0005615	0.0035	2.2		11182.7	11182.7	3.3		Si
SLD 16	9.25	473.46	-7146	-0.0000205	0.0005615	0.0035	2.2		7661.18	7661.18	16.18		Si
SLD 16	11.05	-1825.36	-7442	-0.0000302	0.0005615	0.0035	2.2		8961.24	8961.24	4.91		Si
SLV 11	9.25	86.42	91	0.006137	0.0005615	0.0035	1.76		0	0	0		No
SLV 11	11.05	-747.88	-940	-0.0000108	0.0005615	0.0035	1.76		2352.03	2352.03	3.14		Si
SLV 7	9.25	-265.08	-2062	-0.0000067	0.0005615	0.0035	2.2		3539.38	3539.38	13.35		Si
SLV 7	11.05	460.12	-1993	-0.0000078	0.0005615	0.0035	2.2		2418.08	2418.08	5.26		Si
SLD 14	9.25	525.26	-9629	-0.000027	0.0005615	0.0035	2.2		10017.19	10017.19	19.07		Si
SLD 14	11.05	-2018.41	-9573	-0.0000369	0.0005615	0.0035	2.2		10985.68	10985.68	5.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	9.25	155.88	-14822	-12343	1927	2.2	2.2	-20037	9616	5924	40441	18446	5610	24056	No	12.48	Si
SLU 84	11.05	-1327.97	-14134	-11769	1926	2.2	2.2	-19106	9492	5847	40441	18446	5610	24056	No	12.49	Si
SLU 75	9.25	144.97	-14765	-12295	1872	2.2	2.2	-19960	9606	5917	40441	18446	5610	24056	No	12.85	Si
SLU 75	11.05	-1322.3	-14001	-11659	1871	2.2	2.2	-18926	9468	5832	40441	18446	5610	24056	No	12.86	Si
SLU 80	9.25	108.17	-15267	-12713	1883	2.2	2.2	-20638	9696	5973	40441	18446	5610	24056	No	12.77	Si
SLU 80	11.05	-1307.67	-14569	-12132	1883	2.2	2.2	-19694	9570	5895	40441	18446	5610	24056	No	12.78	Si
SLU 81	9.25	215.86	-14187	-11814	1915	2.2	2.2	-19178	9501	5853	40441	18446	5610	24056	No	12.56	Si
SLU 81	11.05	-1328.2	-13425	-11180	1916	2.2	2.2	-18148	9364	5768	40441	18446	5610	24056	No	12.56	Si
SLU 78	9.25	91.23	-15503	-12910	1874	2.2	2.2	-20957	9739	5999	40441	18446	5610	24056	No	12.84	Si
SLU 78	11.05	-1318.61	-14795	-12320	1873	2.2	2.2	-19999	9611	5920	40441	18446	5610	24056	No	12.84	Si
SLU 83	9.25	162.13	-14925	-12428	1918	2.2	2.2	-20175	9634	5935	40441	18446	5610	24056	No	12.54	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	11.05	-1324.5	-14219	-11840	1918	2.2	2.2	-19221	9507	5857	40441	18446	5610	24056	No	12.54	Si
SLU 82	9.25	209.61	-14084	-11728	1925	2.2	2.2	-19039	9483	5842	40441	18446	5610	24056	No	12.5	Si
SLU 82	11.05	-1331.66	-13340	-11108	1924	2.2	2.2	-18033	9349	5759	40441	18446	5610	24056	No	12.5	Si
SLU 76	9.25	157.74	-14461	-12042	1888	2.2	2.2	-19548	9551	5883	40441	18446	5610	24056	No	12.74	Si
SLU 76	11.05	-1313.67	-13718	-11423	1886	2.2	2.2	-18544	9417	5801	40441	18446	5610	24056	No	12.75	Si
SLU 73	9.25	211.47	-13723	-11427	1885	2.2	2.2	-18551	9418	5801	40441	18446	5610	24056	No	12.76	Si
SLU 73	11.05	-1317.37	-12925	-10763	1884	2.2	2.2	-17471	9274	5713	40441	18446	5610	24056	No	12.77	Si
SLU 79	9.25	114.42	-15370	-12799	1874	2.2	2.2	-20777	9715	5984	40441	18446	5610	24056	No	12.84	Si
SLU 79	11.05	-1304.21	-14654	-12203	1874	2.2	2.2	-19809	9586	5905	40441	18446	5610	24056	No	12.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	9.25	701.75	-9680	-8060	4218	2.2	2.2	-13085	13034	8029	40441	27669	5610	33279		7.89	Si
SLV 13	11.05	-3038.14	-10209	-8501	3219	2.2	2.2	-13800	13177	8117	40441	27669	5610	33279		10.34	Si
SLV 16	9.25	852	-3312	-2758	4685	2.2	2.2	-4477	11312	6968	40441	27669	5610	33279		7.1	Si
SLV 16	11.05	-2957.32	-4975	-4143	3963	2.2	1.5166	-9796	12376	5256	40441	27669	5610	33279		8.4	Si
SLD 13	9.25	410.84	-9955	-8290	2589	2.2	2.2	-13457	13108	8075	40441	27669	5610	33279		12.85	Si
SLD 13	11.05	-1866.25	-9755	-8123	2160	2.2	2.2	-13186	13054	8041	40441	27669	5610	33279		15.41	Si
SLV 14	9.25	968.14	-8920	-7428	4768	2.2	2.2	-12058	12828	7902	40441	27669	5610	33279		6.98	Si
SLV 14	11.05	-3392.39	-9786	-8149	3770	2.2	2.2	-13229	13062	8047	40441	27669	5610	33279		8.83	Si
SLV 12	9.25	260	586	488	2334	1.76	1.9695	0	0	0	40441	22135	4488	26623		11.4	Si
SLV 12	11.05	-978.7	-664	-553	2538	1.76	0	0	0	0	40441	22135	4488	26623		10.49	Si
SLD 16	9.25	473.46	-7146	-5951	2788	2.2	2.2	-9660	12349	7607	40441	27669	5610	33279		11.94	Si
SLD 16	11.05	-1825.36	-7442	-6197	2482	2.2	2.2	-10061	12429	7656	40441	27669	5610	33279		13.41	Si
SLV 15	9.25	585.61	-4072	-3391	4135	2.2	2.2	-5504	11518	7095	40441	27669	5610	33279		8.05	Si
SLV 15	11.05	-2603.07	-5398	-4495	3413	2.2	1.8532	-8695	12156	6308	40441	27669	5610	33279		9.75	Si
SLV 10	9.25	647.15	-18107	-15078	2613	2.2	2.2	-24477	15312	9432	40441	27669	5610	33279		12.74	Si
SLV 10	11.05	-2428.93	-16702	-13908	1893	2.2	2.2	-22578	14932	9198	40441	27669	5610	33279		17.58	Si
SLV 11	9.25	86.42	91	76	1976	1.76	0.4524	0	0	0	40441	22135	4488	26623		13.47	Si
SLV 11	11.05	-747.88	-940	-783	2180	1.76	0.9127	0	0	0	40441	22135	4488	26623		12.21	Si
SLD 14	9.25	525.26	-9629	-8018	2825	2.2	2.2	-13016	13020	8020	40441	27669	5610	33279		11.78	Si
SLD 14	11.05	-2018.41	-9573	-7971	2397	2.2	2.2	-12941	13005	8011	40441	27669	5610	33279		13.89	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	0	-373	267.2	0	0	No, e>t/2
SLV 8	179667	0.46	0	-1857	267.2	0	0	No, e>t/2
SLV 11	179667	0.46	0	-740	267.2	0	0	No, e>t/2
SLV 7	179667	0.46	3610	-2224	267.2	303.96	1.14	Si
SLV 16	179667	0.46	7484	-4610	267.2	613.82	2.3	Si
SLV 15	179667	0.46	8399	-5174	267.2	684.46	2.56	Si
SLV 4	179667	0.46	15515	-9557	267.2	1202.06	4.5	Si
SLV 14	179667	0.46	15926	-9811	267.2	1230.26	4.6	Si
SLV 3	179667	0.46	16429	-10120	267.2	1264.42	4.73	Si
SLV 13	179667	0.46	16841	-10374	267.2	1292.19	4.84	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-14105	-20024	469	0.785	1742.7	0.949	12.01764	13.33129	No
SLV 6	-13768	-19742	469	0.801	1708.4	0.948	12.27385	13.33129	No
SLV 9	-12881	-18528	538	0.842	1618.5	0.946	12.93332	13.33129	No
SLV 10	-12544	-18246	538	0.86	1584.3	0.945	13.23405	13.33129	No
SLV 1	-11527	-15592	34	0.96	1481.2	0.942	14.81327	6.37081	Si
SLV 2	-11009	-15159	34	0.997	1428.8	0.94	15.40981	6.37081	Si
SLV 3	-8016	-10233	-270	1.26	1126.3	0.927	19.7569	6.37081	Si
SLV 4	-7499	-9800	-270	1.327	1074.2	0.924	20.86665	6.37081	Si
SLV 13	-7448	-10605	264	1.335	1069.2	0.924	20.99142	6.37081	Si
SLV 7	-2403	-2158	-544	2.771	572	0.89	45.24658	13.33129	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.285	SLU 44	Si
V_SLU	12.483	SLU 84	Si
PF_SLV	0	SLV 11	No
V_SLV	6.979	SLV 14	Si
PFFP_SLV	0	SLV 8	No
R_SLV	0.901	SLV 5	No

Maschio 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L6	L7	2.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 78	9.25	-352.88	-13980	-0.0000388	0.0003743	0.0035	2.14	11530.38	13768.14	13768.14	39.02	No	Si
SLU 78	11.05	-1327.31	-12544	-0.0000421	0.0003743	0.0035	2.14	10662.14	12700.36	12700.36	9.57	No	Si
SLU 80	9.25	-341.48	-13756	-0.0000381	0.0003743	0.0035	2.14	11399.74	13608.75	13608.75	39.85	No	Si
SLU 80	11.05	-1298.58	-12312	-0.0000413	0.0003743	0.0035	2.14	10515.01	12523.47	12523.47	9.64	No	Si
SLU 83	9.25	-304.93	-13704	-0.0000377	0.0003743	0.0035	2.14	11369.38	13572.14	13572.14	44.51	No	Si
SLU 83	11.05	-1311.17	-12300	-0.0000413	0.0003743	0.0035	2.14	10507.52	12514.55	12514.55	9.54	No	Si
SLU 38	9.25	-229.82	-11613	-0.0000315	0.0003743	0.0035	2.14	10060.16	11995.09	11995.09	52.19	No	Si
SLU 38	11.05	-1158.9	-10617	-0.0000356	0.0003743	0.0035	2.14	9382.93	11191.53	11191.53	9.66	No	Si
SLU 77	9.25	-353.91	-13885	-0.0000386	0.0003743	0.0035	2.14	11475.44	13700.73	13700.73	38.71	No	Si
SLU 77	11.05	-1336.63	-12467	-0.000042	0.0003743	0.0035	2.14	10613.77	12641.83	12641.83	9.46	No	Si
SLU 79	9.25	-342.51	-13661	-0.0000379	0.0003743	0.0035	2.14	11344.07	13541.75	13541.75	39.54	No	Si
SLU 79	11.05	-1307.89	-12235	-0.0000411	0.0003743	0.0035	2.14	10466.02	12465.3	12465.3	9.53	No	Si
SLU 36	9.25	-241.22	-11837	-0.0000321	0.0003743	0.0035	2.14	10207.62	12164.38	12164.38	50.43	No	Si
SLU 36	11.05	-1187.64	-10849	-0.0000364	0.0003743	0.0035	2.14	9543.85	11378.49	11378.49	9.58	No	Si
SLU 41	9.25	-193.27	-11561	-0.000031	0.0003743	0.0035	2.14	10025.92	11955.41	11955.41	61.86	No	Si
SLU 41	11.05	-1171.5	-10605	-0.0000356	0.0003743	0.0035	2.14	9374.74	11182.09	11182.09	9.55	No	Si
SLU 35	9.25	-242.24	-11742	-0.0000319	0.0003743	0.0035	2.14	10145.58	12093.55	12093.55	49.92	No	Si
SLU 35	11.05	-1196.96	-10772	-0.0000363	0.0003743	0.0035	2.14	9490.93	11316.63	11316.63	9.45	No	Si
SLU 37	9.25	-230.84	-11518	-0.0000312	0.0003743	0.0035	2.14	9997.38	11922.3	11922.3	51.65	No	Si
SLU 37	11.05	-1168.22	-10540	-0.0000354	0.0003743	0.0035	2.14	9329.38	11130.04	11130.04	9.53	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	9.25	-2499.19	-3461	-0.0000354	0.0005615	0.0035	1.712		4866.39	4866.39	1.95		Si
SLV 13	11.05	1938.67	-1191	-0.0032802	0.0005615	0.0035	2.14		1507.88	1507.88	0.78		No
SLV 9	9.25	-656.27	3569	0.2567055	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	11.05	-1250.39	1858	0.136478	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	9.25	626.34	2465	0.171785	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	11.05	-3042.68	-361	-0.0010712	0.0005615	0.0035	1.712		1696.02	1696.02	0.56		No
SLV 1	9.25	1776.17	-7143	-0.0000303	0.0005615	0.0035	2.14		7424.65	7424.65	4.18		Si
SLV 1	11.05	-4035.6	-8588	-0.0000518	0.0005615	0.0035	2.14		9784.94	9784.94	2.42		Si
SLV 10	9.25	-434.81	3183	0.2283305	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	11.05	-1455.24	1174	0.0875588	0.0005615	0.0035	1.712		0	0	0		No
SLV 15	9.25	-2745.49	-10680	-0.0000465	0.0005615	0.0035	2.14		11669.98	11669.98	4.25		Si
SLV 15	11.05	2832.93	-6180	-0.0000361	0.0005615	0.0035	2.14		6506.18	6506.18	2.3		Si
SLV 2	9.25	2116.04	-7735	-0.0000343	0.0005615	0.0035	2.14		7981.53	7981.53	3.77		Si
SLV 2	11.05	-4349.99	-9637	-0.0000565	0.0005615	0.0035	2.14		10729.93	10729.93	2.47		Si
SLV 14	9.25	-2159.32	-4053	-0.0000268	0.0005615	0.0035	2.14		5455.56	5455.56	2.53		Si
SLV 14	11.05	1624.29	-2240	-0.000023	0.0005615	0.0035	2.14		2593.65	2593.65	1.6		Si
SLV 6	9.25	847.79	2079	0.1426812	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	11.05	-3247.52	-1045	-0.0008207	0.0005615	0.0035	1.712		2407.06	2407.06	0.74		No
SLV 16	9.25	-2405.62	-11272	-0.0000457	0.0005615	0.0035	2.14		12190.01	12190.01	5.07		Si
SLV 16	11.05	2518.55	-7229	-0.0000358	0.0005615	0.0035	2.14		7506.12	7506.12	2.98		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	9.25	-305.42	-13432	-11185	1216	2.14	2.14	-18667	9433	5652	40441	17943	5457	23399	No	19.25	Si
SLU 82	11.05	-1224.2	-11952	-9953	1216	2.14	2.14	-16610	9159	5488	40441	17943	5457	23399	No	19.24	Si
SLU 41	9.25	-193.27	-11561	-9627	1203	2.14	2.14	-16067	9087	5445	40441	17943	5457	23399	No	19.45	Si
SLU 41	11.05	-1171.5	-10605	-8831	1204	2.14	2.14	-14738	8910	5339	40441	17943	5457	23399	No	19.44	Si
SLU 77	9.25	-353.91	-13885	-11562	1288	2.14	2.14	-19297	9517	5703	40441	17943	5457	23399	No	18.16	Si
SLU 77	11.05	-1336.63	-12467	-10382	1289	2.14	2.14	-17326	9255	5545	40441	17943	5457	23399	No	18.15	Si
SLU 83	9.25	-304.93	-13704	-11412	1310	2.14	2.14	-19045	9484	5683	40441	17943	5457	23399	No	17.87	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	11.05	-1311.17	-12300	-10243	1310	2.14	2.14	-17094	9224	5527	40441	17943	5457	23399	No	17.86	Si
SLU 81	9.25	-306.45	-13338	-11107	1231	2.14	2.14	-18536	9416	5642	40441	17943	5457	23399	No	19.01	Si
SLU 81	11.05	-1233.52	-11875	-9889	1231	2.14	2.14	-16503	9145	5480	40441	17943	5457	23399	No	19	Si
SLU 78	9.25	-352.88	-13980	-11641	1273	2.14	2.14	-19428	9535	5713	40441	17943	5457	23399	No	18.38	Si
SLU 78	11.05	-1327.31	-12544	-10446	1274	2.14	2.14	-17433	9269	5554	40441	17943	5457	23399	No	18.37	Si
SLU 80	9.25	-341.48	-13756	-11455	1259	2.14	2.14	-19117	9493	5688	40441	17943	5457	23399	No	18.59	Si
SLU 80	11.05	-1298.58	-12312	-10252	1259	2.14	2.14	-17110	9226	5528	40441	17943	5457	23399	No	18.58	Si
SLU 79	9.25	-342.51	-13661	-11376	1274	2.14	2.14	-18985	9476	5678	40441	17943	5457	23399	No	18.37	Si
SLU 79	11.05	-1307.89	-12235	-10189	1275	2.14	2.14	-17004	9212	5520	40441	17943	5457	23399	No	18.36	Si
SLU 74	9.25	-355.42	-13519	-11257	1210	2.14	2.14	-18787	9449	5662	40441	17943	5457	23399	No	19.34	Si
SLU 74	11.05	-1258.98	-12042	-10028	1210	2.14	2.14	-16736	9176	5498	40441	17943	5457	23399	No	19.33	Si
SLU 84	9.25	-303.91	-13799	-11490	1294	2.14	2.14	-19176	9501	5693	40441	17943	5457	23399	No	18.08	Si
SLU 84	11.05	-1301.85	-12377	-10306	1295	2.14	2.14	-17200	9238	5535	40441	17943	5457	23399	No	18.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	9.25	847.79	2079	1731	5568	1.712	1.9865	0	0	0	40441	21531	4366	25897		4.65	Si
SLV 6	11.05	-3247.52	-1045	-870	5245	1.712	0	0	0	0	40441	21531	4366	25897		4.94	Si
SLV 11	9.25	-1477.24	-20494	-17066	-4188	2.14	2.14	-28481	16113	9655	40441	26914	5457	32371		7.73	Si
SLV 11	11.05	1730.47	-14771	-12300	-3864	2.14	2.14	-20528	14522	8702	40441	26914	5457	32371		8.38	Si
SLV 13	9.25	-2499.19	-3461	-2882	-3126	1.712	1.0437	0	0	0	40441	21531	4366	25897		8.28	Si
SLV 13	11.05	1938.67	-1191	-992	-2239	2.14	0	-90143	16250	0	40441	26914	5457	32371		14.46	Si
SLV 3	9.25	1529.87	-14362	-11959	3871	2.14	2.14	-19959	14408	8633	40441	26914	5457	32371		8.36	Si
SLV 3	11.05	-3141.34	-13576	-11305	2984	2.14	2.14	-18867	14190	8503	40441	26914	5457	32371		10.85	Si
SLV 2	9.25	2116.04	-7735	-6441	6499	2.14	2.14	-10750	12567	7530	40441	26914	5457	32371		4.98	Si
SLV 2	11.05	-4349.99	-9637	-8025	5581	2.14	1.8558	-15560	13529	7030	40441	26914	5457	32371		5.8	Si
SLV 4	9.25	1869.74	-14954	-12453	4506	2.14	2.14	-20782	14573	8732	40441	26914	5457	32371		7.18	Si
SLV 4	11.05	-3455.73	-14626	-12179	3619	2.14	2.14	-20325	14482	8677	40441	26914	5457	32371		8.94	Si
SLV 15	9.25	-2745.49	-10680	-8893	-5119	2.14	2.14	-14842	13385	8020	40441	26914	5457	32371		6.32	Si
SLV 15	11.05	2832.93	-6180	-5146	-4201	2.14	1.8347	-8588	12134	6234	40441	26914	5457	32371		7.71	Si
SLV 5	9.25	626.34	2465	2052	5154	1.712	2.14	0	0	0	40441	21531	4366	25897		5.02	Si
SLV 5	11.05	-3042.68	-361	-301	4831	1.712	0	0	0	0	40441	21531	4366	25897		5.36	Si
SLV 1	9.25	1776.17	-7143	-5948	5864	2.14	2.14	-9927	12402	7431	40441	26914	5457	32371		5.52	Si
SLV 1	11.05	-4035.6	-8588	-7151	4946	2.14	1.8002	-14284	13274	6690	40441	26914	5457	32371		6.54	Si
SLV 16	9.25	-2405.62	-11272	-9387	-4484	2.14	2.14	-15665	13550	8119	40441	26914	5457	32371		7.22	Si
SLV 16	11.05	2518.55	-7229	-6020	-3566	2.14	2.14	-10046	12426	7446	40441	26914	5457	32371		9.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	0	2272	259.91	0	0	No, Trazione
SLV 10	179667	0.46	0	1710	259.91	0	0	No, Trazione
SLV 6	179667	0.46	0	-46	259.91	0	0	No, e>t/2
SLV 5	179667	0.46	0	517	259.91	0	0	No, Trazione
SLV 13	179667	0.46	4017	-2407	259.91	328.08	1.26	Si
SLV 14	179667	0.46	5458	-3270	259.91	441.46	1.7	Si
SLV 1	179667	0.46	13781	-8257	259.91	1051.72	4.05	Si
SLV 15	179667	0.46	13854	-8301	259.91	1056.76	4.07	Si
SLV 2	179667	0.46	15222	-9121	259.91	1149.64	4.42	Si
SLV 16	179667	0.46	15295	-9165	259.91	1154.57	4.44	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-14635	-21789	601	0.735	1788	0.952	11.22486	13.33129	No
SLV 7	-14090	-21238	602	0.759	1732.6	0.95	11.60318	13.33129	No
SLV 12	-13485	-19215	410	0.799	1671.3	0.949	12.24654	13.33129	No
SLV 11	-12940	-18664	410	0.827	1615.9	0.947	12.69424	13.33129	No
SLV 4	-11012	-17084	470	0.94	1420.5	0.941	14.52244	6.37081	Si
SLV 3	-10175	-16239	470	1.003	1335.7	0.938	15.53745	6.37081	Si
SLV 16	-7180	-8504	-169	1.354	1033.4	0.924	21.29911	6.37081	Si
SLV 2	-6632	-10352	165	1.438	978.4	0.92	22.712	6.37081	Si
SLV 15	-6343	-7659	-168	1.487	949.4	0.919	23.52852	6.37081	Si
SLV 1	-5795	-9506	166	1.59	894.6	0.915	25.26166	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.455	SLU 35	Si
V_SLU	17.858	SLU 83	Si
PF_SLV	0	SLV 5	No
V_SLV	4.651	SLV 6	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.842	SLV 8	No

Maschio 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	10.35	-883.09	-15284	-0.000043	0.0003743	0.0035	2.28	13326.66	15828.12	15828.12	17.92	No	Si
SLU 38	11.15	-1182.39	-13493	-0.0000403	0.0003743	0.0035	2.28	12188.92	14421.87	14421.87	12.2	No	Si
SLU 36	10.35	-898.66	-15607	-0.000044	0.0003743	0.0035	2.28	13519.65	16078.56	16078.56	17.89	No	Si
SLU 36	11.15	-1210.23	-13800	-0.0000413	0.0003743	0.0035	2.28	12391.86	14672.47	14672.47	12.12	No	Si
SLU 57	10.35	-968.64	-16493	-0.0000468	0.0003743	0.0035	2.28	14031.1	16730.1	16730.1	17.27	No	Si
SLU 57	11.15	-1229.02	-14359	-0.0000429	0.0003743	0.0035	2.28	12753.09	15107.65	15107.65	12.29	No	Si
SLU 80	10.35	-1052.98	-17944	-0.0000512	0.0003743	0.0035	2.28	14808.65	17783.17	17783.17	16.89	No	Si
SLU 80	11.15	-1345.78	-15714	-0.0000472	0.0003743	0.0035	2.28	13582.91	16160.83	16160.83	12.01	No	Si
SLU 78	10.35	-1068.55	-18266	-0.0000522	0.0003743	0.0035	2.28	14971.55	18000.75	18000.75	16.85	No	Si
SLU 78	11.15	-1373.62	-16021	-0.0000482	0.0003743	0.0035	2.28	13761.94	16388.1	16388.1	11.93	No	Si
SLU 37	10.35	-882.16	-15245	-0.0000429	0.0003743	0.0035	2.28	13303.12	15797.45	15797.45	17.91	No	Si
SLU 37	11.15	-1178.33	-13459	-0.0000402	0.0003743	0.0035	2.28	12166.22	14393.86	14393.86	12.22	No	Si
SLU 35	10.35	-897.73	-15568	-0.0000439	0.0003743	0.0035	2.28	13496.55	16048.54	16048.54	17.88	No	Si
SLU 35	11.15	-1206.17	-13766	-0.0000412	0.0003743	0.0035	2.28	12369.53	14644.89	14644.89	12.14	No	Si
SLU 84	10.35	-1014.54	-17853	-0.0000507	0.0003743	0.0035	2.28	14762.25	17722.38	17722.38	17.47	No	Si
SLU 84	11.15	-1309.87	-15615	-0.0000467	0.0003743	0.0035	2.28	13524.55	16084.92	16084.92	12.28	No	Si
SLU 79	10.35	-1052.06	-17905	-0.0000511	0.0003743	0.0035	2.28	14788.74	17757.03	17757.03	16.88	No	Si
SLU 79	11.15	-1341.72	-15680	-0.0000471	0.0003743	0.0035	2.28	13562.86	16134.74	16134.74	12.03	No	Si
SLU 77	10.35	-1067.63	-18227	-0.0000521	0.0003743	0.0035	2.28	14952.08	17974.39	17974.39	16.84	No	Si
SLU 77	11.15	-1369.56	-15987	-0.0000481	0.0003743	0.0035	2.28	13742.26	16363.64	16363.64	11.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	10.35	-2043.15	-14103	-0.0000466	0.0005615	0.0035	2.28		15643.08	15643.08	7.66		Si
SLV 15	11.15	2516.74	-11013	-0.0000418	0.0005615	0.0035	2.28		11666.12	11666.12	4.64		Si
SLV 3	10.35	497.35	-12977	-0.0000339	0.0005615	0.0035	2.28		13313.3	13313.3	26.77		Si
SLV 3	11.15	-3628.44	-12117	-0.0000517	0.0005615	0.0035	2.28		13821.61	13821.61	3.81		Si
SLV 2	10.35	617.41	-9432	-0.000026	0.0005615	0.0035	2.28		10248.69	10248.69	16.6		Si
SLV 2	11.15	-4096.73	-9246	-0.0000478	0.0005615	0.0035	2.28		11091.09	11091.09	2.71		Si
SLV 6	10.35	-282.32	-5738	-0.0000151	0.0005615	0.0035	2.28		7551.57	7551.57	26.75		Si
SLV 6	11.15	-1978.82	-5357	-0.0000246	0.0005615	0.0035	2.28		7155.78	7155.78	3.62		Si
SLV 5	10.35	-355.51	-5760	-0.0000156	0.0005615	0.0035	2.28		7575.12	7575.12	21.31		Si
SLV 5	11.15	-1729.32	-5283	-0.0000229	0.0005615	0.0035	2.28		7078.62	7078.62	4.09		Si
SLV 4	10.35	609.68	-12942	-0.0000345	0.0005615	0.0035	2.28		13283.98	13283.98	21.79		Si
SLV 4	11.15	-4011.35	-12231	-0.0000544	0.0005615	0.0035	2.28		13926.92	13926.92	3.47		Si
SLV 13	10.35	-2035.42	-10593	-0.0000378	0.0005615	0.0035	2.28		12388.04	12388.04	6.09		Si
SLV 13	11.15	2431.37	-8028	-0.0000339	0.0005615	0.0035	2.28		8859.35	8859.35	3.64		Si
SLV 1	10.35	505.08	-9467	-0.0000254	0.0005615	0.0035	2.28		10282.35	10282.35	20.36		Si
SLV 1	11.15	-3713.82	-9132	-0.0000448	0.0005615	0.0035	2.28		10979.99	10979.99	2.96		Si
SLV 14	10.35	-1923.09	-10559	-0.000037	0.0005615	0.0035	2.28		12354.36	12354.36	6.42		Si
SLV 14	11.15	2048.45	-8142	-0.0000318	0.0005615	0.0035	2.28		8974.09	8974.09	4.38		Si
SLD 2	10.35	-143.46	-10743	-0.0000262	0.0005615	0.0035	2.28		12534.17	12534.17	87.37		Si
SLD 2	11.15	-2205.53	-9730	-0.0000367	0.0005615	0.0035	2.28		11554.63	11554.63	5.24		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	10.35	-1054.23	-16936	-14103	-1100	2.28	2.28	-22090	9890	6314	40441	19117	5814	24931	No	22.66	Si
SLU 69	11.15	-1233.86	-14749	-12282	-628	2.28	2.28	-19238	9509	6071	40441	19117	5814	24931	No	39.69	Si
SLU 73	10.35	-965.24	-16681	-13891	-1106	2.28	2.28	-21759	9846	6285	40441	19117	5814	24931	No	22.55	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	11.15	-1160.36	-14478	-12056	-622	2.28	2.28	-18884	9462	6041	40441	19117	5814	24931	No	40.08	Si
SLU 44	10.35	-851.94	-13617	-11339	-1096	2.28	2.28	-17761	9313	5945	40441	19117	5814	24931	No	22.74	Si
SLU 44	11.15	-880.07	-11578	-9642	-657	2.28	2.28	-15103	8958	5719	40441	19117	5814	24931	No	37.93	Si
SLU 70	10.35	-1055.16	-16975	-14135	-1104	2.28	2.28	-22141	9897	6318	40441	19117	5814	24931	No	22.58	Si
SLU 70	11.15	-1237.92	-14783	-12310	-626	2.28	2.28	-19282	9515	6075	40441	19117	5814	24931	No	39.8	Si
SLU 66	10.35	-1010.05	-16292	-13566	-1143	2.28	2.28	-21250	9778	6242	40441	19117	5814	24931	No	21.82	Si
SLU 66	11.15	-1139.8	-14119	-11757	-667	2.28	2.28	-18417	9400	6001	40441	19117	5814	24931	No	37.36	Si
SLU 64	10.35	-950.3	-15325	-12761	-1177	2.28	2.28	-19989	9610	6135	40441	19117	5814	24931	No	21.18	Si
SLU 64	11.15	-1017.9	-13183	-10978	-706	2.28	2.28	-17196	9237	5897	40441	19117	5814	24931	No	35.33	Si
SLU 65	10.35	-951.84	-15390	-12815	-1183	2.28	2.28	-20074	9621	6142	40441	19117	5814	24931	No	21.07	Si
SLU 65	11.15	-1024.67	-13240	-11025	-703	2.28	2.28	-17270	9247	5903	40441	19117	5814	24931	No	35.47	Si
SLU 72	10.35	-1039.59	-16652	-13866	-1097	2.28	2.28	-21720	9841	6282	40441	19117	5814	24931	No	22.74	Si
SLU 72	11.15	-1210.09	-14476	-12054	-626	2.28	2.28	-18882	9462	6041	40441	19117	5814	24931	No	39.85	Si
SLU 67	10.35	-1010.98	-16331	-13599	-1146	2.28	2.28	-21301	9785	6247	40441	19117	5814	24931	No	21.75	Si
SLU 67	11.15	-1143.86	-14153	-11786	-666	2.28	2.28	-18461	9406	6005	40441	19117	5814	24931	No	37.46	Si
SLU 68	10.35	-996.02	-16034	-13352	-1141	2.28	2.28	-20914	9733	6214	40441	19117	5814	24931	No	21.85	Si
SLU 68	11.15	-1118.73	-13869	-11549	-664	2.28	2.28	-18091	9357	5973	40441	19117	5814	24931	No	37.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	10.35	505.08	-9467	-7883	6606	2.28	2.28	-12349	12886	8227	40441	28675	5814	34489		5.22	Si
SLV 1	11.15	-3713.82	-9132	-7604	5147	2.28	2.2	-11911	12799	7884	40441	28675	5814	34489		6.7	Si
SLV 12	10.35	-1070.23	-17775	-14801	-4452	2.28	2.28	-23185	15054	9610	40441	28675	5814	34489		7.75	Si
SLV 12	11.15	149.33	-14976	-12471	-2627	2.28	2.28	-19534	14324	9144	40441	28675	5814	34489		13.13	Si
SLV 14	10.35	-1923.09	-10559	-8792	-7347	2.28	2.28	-13772	13171	8409	40441	28675	5814	34489		4.69	Si
SLV 14	11.15	2048.45	-8142	-6780	-5810	2.28	2.28	-10620	12541	8006	40441	28675	5814	34489		5.94	Si
SLV 3	10.35	497.35	-12977	-10806	5619	2.28	2.28	-16927	13802	8811	40441	28675	5814	34489		6.14	Si
SLV 3	11.15	-3628.44	-12117	-10090	4791	2.28	2.28	-15805	13578	8668	40441	28675	5814	34489		7.2	Si
SLV 13	10.35	-2035.42	-10593	-8821	-8196	2.28	2.28	-13817	13180	8414	40441	28675	5814	34489		4.21	Si
SLV 13	11.15	2431.37	-8028	-6685	-6500	2.28	2.28	-10471	12511	7987	40441	28675	5814	34489		5.31	Si
SLV 4	10.35	609.68	-12942	-10777	6468	2.28	2.28	-16881	13793	8805	40441	28675	5814	34489		5.33	Si
SLV 4	11.15	-4011.35	-12231	-10185	5480	2.28	2.28	-15954	13607	8687	40441	28675	5814	34489		6.29	Si
SLV 2	10.35	617.41	-9432	-7855	7455	2.28	2.28	-12303	12877	8221	40441	28675	5814	34489		4.63	Si
SLV 2	11.15	-4096.73	-9246	-7699	5837	2.28	2.0908	-13225	13062	7647	40441	28675	5814	34489		5.91	Si
SLV 11	10.35	-1143.42	-17798	-14820	-5006	2.28	2.28	-23214	15060	9614	40441	28675	5814	34489		6.89	Si
SLV 11	11.15	398.83	-14902	-12409	-3076	2.28	2.28	-19437	14304	9132	40441	28675	5814	34489		11.21	Si
SLV 16	10.35	-1930.82	-14068	-11715	-8334	2.28	2.28	-18350	14087	8993	40441	28675	5814	34489		4.14	Si
SLV 16	11.15	2133.83	-11127	-9266	-6167	2.28	2.28	-14514	13319	8503	40441	28675	5814	34489		5.59	Si
SLV 15	10.35	-2043.15	-14103	-11744	-9183	2.28	2.28	-18395	14096	8999	40441	28675	5814	34489		3.76	Si
SLV 15	11.15	2516.74	-11013	-9170	-6857	2.28	2.28	-14365	13290	8484	40441	28675	5814	34489		5.03	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	8406	-5366	276.91	709.94	2.56	Si
SLV 10	179667	0.46	8507	-5431	276.91	717.97	2.59	Si
SLV 5	179667	0.46	9130	-5829	276.91	767.21	2.77	Si
SLV 6	179667	0.46	9231	-5893	276.91	775.16	2.8	Si
SLV 13	179667	0.46	13390	-8548	276.91	1091.85	3.94	Si
SLV 14	179667	0.46	13546	-8648	276.91	1103.27	3.98	Si
SLV 1	179667	0.46	15804	-10089	276.91	1266.3	4.57	Si
SLV 2	179667	0.46	15959	-10188	276.91	1277.29	4.61	Si
SLV 15	179667	0.46	18410	-11753	276.91	1447.06	5.23	Si
SLV 16	179667	0.46	18565	-11852	276.91	1457.58	5.26	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-11582	-16924	616	0.942	1498.1	0.94	14.5539	13.33129	Si
SLV 7	-11538	-16842	616	0.945	1493.7	0.94	14.60169	13.33129	Si
SLV 12	-11443	-15479	647	0.949	1484.1	0.94	14.66948	13.33129	Si
SLV 11	-11399	-15397	647	0.952	1479.6	0.94	14.71817	13.33129	Si
SLV 6	-4394	-7237	-647	1.947	776.4	0.903	31.35758	13.33129	Si
SLV 5	-4350	-7155	-647	1.961	772.1	0.902	31.58204	13.33129	Si
SLV 10	-4255	-5792	-616	1.995	762.8	0.902	32.15184	13.33129	Si
SLV 9	-4211	-5710	-616	2.008	758.5	0.901	32.38701	13.33129	Si
SLV 4	-9240	-15241	138	1.172	1261.3	0.931	18.28518	6.37081	Si
SLV 3	-9172	-15115	138	1.179	1254.4	0.931	18.39822	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.931	SLU 78	Si
V_SLU	21.069	SLU 65	Si
PF_SLV	2.707	SLV 2	Si
V_SLV	3.756	SLV 15	Si
PFFP_SLV	2.564	SLV 9	Si
R_SLV	1.092	SLV 8	Si

Maschio 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	10.35	215.15	-5508	-0.0000835	0.0003743	0.0035	0.55	982.52	1154.96	1154.96	5.37	No	Si
SLU 84	11.15	135.84	-4824	-0.0000657	0.0003743	0.0035	0.55	918.36	1036.02	1036.02	7.63	No	Si
SLU 77	10.35	216.64	-5596	-0.0000848	0.0003743	0.0035	0.55	989.62	1164.5	1164.5	5.38	No	Si
SLU 77	11.15	146.64	-4891	-0.0000678	0.0003743	0.0035	0.55	925.36	1047.49	1047.49	7.14	No	Si
SLU 35	10.35	190.79	-4802	-0.000072	0.0003743	0.0035	0.55	916.07	1032.33	1032.33	5.41	No	Si
SLU 35	11.15	119.3	-4209	-0.0000567	0.0003743	0.0035	0.55	846.74	932.97	932.97	7.82	No	Si
SLU 41	10.35	188.43	-4698	-0.0000705	0.0003743	0.0035	0.55	904.83	1014.68	1014.68	5.38	No	Si
SLU 41	11.15	108.48	-4130	-0.0000545	0.0003743	0.0035	0.55	836.57	919.98	919.98	8.48	No	Si
SLU 80	10.35	212.67	-5510	-0.0000832	0.0003743	0.0035	0.55	982.72	1155.22	1155.22	5.43	No	Si
SLU 80	11.15	144.9	-4811	-0.0000666	0.0003743	0.0035	0.55	917.02	1033.85	1033.85	7.14	No	Si
SLU 78	10.35	217.51	-5612	-0.0000851	0.0003743	0.0035	0.55	990.81	1166.14	1166.14	5.36	No	Si
SLU 78	11.15	146.66	-4903	-0.0000679	0.0003743	0.0035	0.55	926.61	1049.56	1049.56	7.16	No	Si
SLU 79	10.35	211.8	-5495	-0.000083	0.0003743	0.0035	0.55	981.47	1153.42	1153.42	5.45	No	Si
SLU 79	11.15	144.87	-4799	-0.0000665	0.0003743	0.0035	0.55	915.73	1031.79	1031.79	7.12	No	Si
SLU 36	10.35	191.66	-4817	-0.0000723	0.0003743	0.0035	0.55	917.69	1034.93	1034.93	5.4	No	Si
SLU 36	11.15	119.33	-4221	-0.0000568	0.0003743	0.0035	0.55	848.27	934.96	934.96	7.84	No	Si
SLU 42	10.35	189.3	-4714	-0.0000708	0.0003743	0.0035	0.55	906.5	1017.25	1017.25	5.37	No	Si
SLU 42	11.15	108.5	-4142	-0.0000546	0.0003743	0.0035	0.55	838.14	921.95	921.95	8.5	No	Si
SLU 83	10.35	214.28	-5493	-0.0000832	0.0003743	0.0035	0.55	981.27	1153.02	1153.02	5.38	No	Si
SLU 83	11.15	135.82	-4812	-0.0000655	0.0003743	0.0035	0.55	917.08	1033.96	1033.96	7.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	10.35	-408.15	-1653	-0.0002141	0.0005615	0.0035	0.44		495.84	495.84	1.21		Si
SLV 16	11.15	685.11	-2420	-0.0077054	0.0005615	0.0035	0.44		629.73	629.73	0.92		No
SLV 1	10.35	661.2	-5472	-0.0001374	0.0005615	0.0035	0.55		1248.97	1248.97	1.89		Si
SLV 1	11.15	-469.31	-3791	-0.0000937	0.0005615	0.0035	0.55		983.47	983.47	2.1		Si
SLV 2	10.35	719.11	-5752	-0.0001499	0.0005615	0.0035	0.55		1294.53	1294.53	1.8		Si
SLV 2	11.15	-526.09	-3920	-0.000105	0.0005615	0.0035	0.55		1010.41	1010.41	1.92		Si
SLV 14	10.35	-445.61	-706	-0.0028831	0.0005615	0.0035	0.44		256.29	256.29	0.58		No
SLV 14	11.15	648.18	-1723	-0.0177418	0.0005615	0.0035	0.44		464.12	464.12	0.72		No
SLV 9	10.35	-129.48	-1136	-0.000025	0.0005615	0.0035	0.55		366.49	366.49	2.83		Si
SLV 9	11.15	241	-1572	-0.0000465	0.0005615	0.0035	0.55		427.01	427.01	1.77		Si
SLV 13	10.35	-503.52	-426	-0.0050298	0.0005615	0.0035	0.44		182.65	182.65	0.36		No
SLV 13	11.15	704.97	-1595	-0.0249014	0.0005615	0.0035	0.44		432.46	432.46	0.61		No
SLD 13	10.35	-143.16	-2214	-0.0000369	0.0005615	0.0035	0.55		630.78	630.78	4.41		Si
SLD 13	11.15	362.96	-2455	-0.0000709	0.0005615	0.0035	0.55		636.95	636.95	1.75		Si
SLV 15	10.35	-466.06	-1373	-0.0012572	0.0005615	0.0035	0.44		425.71	425.71	0.91		No
SLV 15	11.15	741.9	-2292	-0.0141611	0.0005615	0.0035	0.44		600.89	600.89	0.81		No
SLD 14	10.35	-118.29	-2335	-0.0000355	0.0005615	0.0035	0.55		659.63	659.63	5.58		Si
SLD 14	11.15	338.57	-2510	-0.0000655	0.0005615	0.0035	0.55		648.47	648.47	1.92		Si
SLD 15	10.35	-126.78	-2632	-0.0000394	0.0005615	0.0035	0.55		728.19	728.19	5.74		Si
SLD 15	11.15	379.45	-2762	-0.0000738	0.0005615	0.0035	0.55		699.68	699.68	1.84		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	10.35	215.15	-5508	-4586	519	0.55	0.55	-29783	10833	1668	40441	4611	1402	6014	No	11.58	Si
SLU 84	11.15	135.84	-4824	-4017	-182	0.55	0.55	-26084	10422	1605	40441	4611	1402	6014	No	33	Si
SLU 81	10.35	203.5	-5287	-4403	495	0.55	0.55	-28591	10757	1656	40441	4611	1402	6014	No	12.15	Si
SLU 81	11.15	131.82	-4638	-3862	-187	0.55	0.55	-25081	10289	1584	40441	4611	1402	6014	No	32.08	Si
SLU 74	10.35	205.86	-5391	-4489	483	0.55	0.55	-29152	10831	1668	40441	4611	1402	6014	No	12.45	Si
SLU 74	11.15	142.65	-4717	-3928	-180	0.55	0.55	-25508	10346	1593	40441	4611	1402	6014	No	33.37	Si
SLU 77	10.35	216.64	-5596	-4660	505	0.55	0.55	-30262	10833	1668	40441	4611	1402	6014	No	11.9	Si
SLU 77	11.15	146.64	-4891	-4073	-176	0.55	0.55	-26446	10471	1612	40441	4611	1402	6014	No	34.22	Si
SLU 75	10.35	206.73	-5406	-4502	485	0.55	0.55	-29234	10833	1668	40441	4611	1402	6014	No	12.39	Si
SLU 75	11.15	142.67	-4729	-3938	-179	0.55	0.55	-25573	10354	1594	40441	4611	1402	6014	No	33.51	Si
SLU 82	10.35	204.37	-5303	-4415	497	0.55	0.55	-28673	10767	1658	40441	4611	1402	6014	No	12.1	Si
SLU 82	11.15	131.84	-4650	-3872	-187	0.55	0.55	-25146	10297	1586	40441	4611	1402	6014	No	32.21	Si
SLU 78	10.35	217.51	-5612	-4673	507	0.55	0.55	-30344	10833	1668	40441	4611	1402	6014	No	11.85	Si
SLU 78	11.15	146.66	-4903	-4083	-175	0.55	0.55	-26511	10479	1614	40441	4611	1402	6014	No	34.37	Si
SLU 80	10.35	212.67	-5510	-4588	494	0.55	0.55	-29796	10833	1668	40441	4611	1402	6014	No	12.18	Si
SLU 80	11.15	144.9	-4811	-4006	-168	0.55	0.55	-26015	10413	1604	40441	4611	1402	6014	No	35.76	Si
SLU 83	10.35	214.28	-5493	-4574	517	0.55	0.55	-29701	10833	1668	40441	4611	1402	6014	No	11.63	Si
SLU 83	11.15	135.82	-4812	-4007	-183	0.55	0.55	-26019	10414	1604	40441	4611	1402	6014	No	32.86	Si
SLU 79	10.35	211.8	-5495	-4576	491	0.55	0.55	-29714	10833	1668	40441	4611	1402	6014	No	12.24	Si
SLU 79	11.15	144.87	-4799	-3996	-169	0.55	0.55	-25950	10404	1602	40441	4611	1402	6014	No	35.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	10.35	661.2	-5472	-4556	2383	0.55	0.4625	-29588	16250	2104	40441	6917	1402	8319		3.49	Si
SLV 1	11.15	-469.31	-3791	-3157	77	0.55	0.4536	-25178	15452	1962	40441	6917	1402	8319		107.49	Si
SLV 15	10.35	-466.06	-1373	-1143	-2038	0.44	0	0	0	0	40441	5534	1122	6655		3.27	Si
SLV 15	11.15	741.9	-2292	-1908	-373	0.44	0	0	0	0	40441	5534	1122	6655		17.85	Si
SLV 2	10.35	719.11	-5752	-4790	2596	0.55	0.4499	-31102	16250	2047	40441	6917	1402	8319		3.2	Si
SLV 2	11.15	-526.09	-3920	-3264	126	0.55	0.4223	-28010	16019	1894	40441	6917	1402	8319		66.17	Si
SLV 14	10.35	-445.61	-706	-588	-1869	0.44	0	0	0	0	40441	5534	1122	6655		3.56	Si
SLV 14	11.15	648.18	-1723	-1435	-327	0.44	0	0	0	0	40441	5534	1122	6655		20.37	Si
SLD 2	10.35	379.82	-4492	-3741	1270	0.55	0.55	-24291	15275	2352	40441	6917	1402	8319		6.55	Si
SLD 2	11.15	-163.64	-3449	-2872	-17	0.55	0.55	-18650	14147	2178	40441	6917	1402	8319		497.02	Si
SLV 16	10.35	-408.15	-1653	-1376	-1825	0.44	0.0841	0	0	0	40441	5534	1122	6655		3.65	Si
SLV 16	11.15	685.11	-2420	-2015	-325	0.44	0	0	0	0	40441	5534	1122	6655		20.51	Si
SLV 3	10.35	698.65	-6419	-5345	2427	0.55	0.4984	-34708	16250	2268	40441	6917	1402	8319		3.43	Si
SLV 3	11.15	-432.38	-4488	-3737	80	0.55	0.5359	-24268	15270	2291	40441	6917	1402	8319		104.52	Si
SLV 4	10.35	756.56	-6699	-5578	2640	0.55	0.4861	-36222	16250	2212	40441	6917	1402	8319		3.15	Si
SLV 4	11.15	-489.16	-4617	-3844	128	0.55	0.5071	-24964	15409	2188	40441	6917	1402	8319		65.03	Si
SLV 13	10.35	-503.52	-426	-355	-2082	0.44	0	0	0	0	40441	5534	1122	6655		3.2	Si
SLV 13	11.15	704.97	-1595	-1328	-375	0.44	0	0	0	0	40441	5534	1122	6655		17.75	Si
SLD 4	10.35	396.2	-4910	-4089	1289	0.55	0.55	-26551	15727	2422	40441	6917	1402	8319		6.46	Si
SLD 4	11.15	-147.16	-3756	-3128	-16	0.55	0.55	-20312	14479	2230	40441	6917	1402	8319		524.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	6238	-961	66.8	128.98	1.93	Si
SLV 10	179667	0.46	6762	-1041	66.8	139.34	2.09	Si
SLV 13	179667	0.46	7120	-1096	66.8	146.34	2.19	Si
SLV 14	179667	0.46	7925	-1220	66.8	161.99	2.43	Si
SLV 5	179667	0.46	10588	-1631	66.8	212.45	3.18	Si
SLV 6	179667	0.46	11113	-1711	66.8	222.15	3.33	Si
SLV 15	179667	0.46	12346	-1901	66.8	244.66	3.66	Si
SLV 16	179667	0.46	13152	-2025	66.8	259.13	3.88	Si
SLV 1	179667	0.46	21622	-3330	66.8	400.15	5.99	Si
SLV 2	179667	0.46	22427	-3454	66.8	412.51	6.18	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2553	-3796	-49	1.046	337	0.937	16.22404	13.33129	Si
SLV 7	-2482	-3782	-49	1.07	329.8	0.936	16.62057	13.33129	Si
SLV 12	-2058	-3669	-50	1.241	287	0.928	19.43351	13.33129	Si
SLV 11	-1987	-3654	-50	1.276	279.8	0.927	20.00896	13.33129	Si
SLV 6	-1279	-1208	42	1.775	209	0.909	28.38121	13.33129	Si
SLV 5	-1208	-1194	42	1.849	201.9	0.907	29.61838	13.33129	Si
SLV 4	-2704	-3043	-16	1.009	352.3	0.939	15.60997	6.37081	Si
SLV 3	-2594	-3021	-16	1.043	341.2	0.938	16.17295	6.37081	Si
SLV 2	-2322	-2266	12	1.142	313.6	0.933	17.78917	6.37081	Si
SLV 1	-2212	-2245	12	1.187	302.6	0.931	18.52531	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.361	SLU 78	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	11.582	SLU 84	Si
PF_SLV	0.363	SLV 13	No
V_SLV	3.151	SLV 4	Si
PFFP_SLV	1.931	SLV 9	Si
R_SLV	1.217	SLV 8	Si

Maschio 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L6	L7	4.82	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	8.35	-1436.69	-20259	-0.0000407	0.0004492	0.0035	4.82	36828.37	56422.59	56422.59	39.27	No	Si
SLU 44	11.87	-660.93	-10245	-0.00002	0.0004492	0.0035	4.82	21622.98	36335.4	36335.4	54.98	No	Si
SLU 10	8.35	-1256	-17952	-0.0000358	0.0004492	0.0035	4.82	33844.94	51963.87	51963.87	41.37	No	Si
SLU 10	11.87	-596.06	-8851	-0.0000173	0.0004492	0.0035	4.82	19040.85	33427.13	33427.13	56.08	No	Si
SLU 61	8.35	-1518.4	-22824	-0.0000458	0.0004492	0.0035	4.82	39779.3	61190.75	61190.75	40.3	No	Si
SLU 61	11.87	-750.39	-11220	-0.000022	0.0004492	0.0035	4.82	23360.36	38365	38365	51.13	No	Si
SLU 65	8.35	-1556.35	-22490	-0.0000452	0.0004492	0.0035	4.82	39416.49	60569.31	60569.31	38.92	No	Si
SLU 65	11.87	-628.14	-11377	-0.000022	0.0004492	0.0035	4.82	23634.59	38691.41	38691.41	61.6	No	Si
SLU 73	8.35	-1647.59	-24276	-0.0000489	0.0004492	0.0035	4.82	41280.21	63891.52	63891.52	38.78	No	Si
SLU 73	11.87	-709.22	-12053	-0.0000235	0.0004492	0.0035	4.82	24801.45	40099.9	40099.9	56.54	No	Si
SLU 52	8.35	-1527.93	-22046	-0.0000443	0.0004492	0.0035	4.82	38925.04	59744.8	59744.8	39.1	No	Si
SLU 52	11.87	-742.02	-10922	-0.0000215	0.0004492	0.0035	4.82	22834.58	37743.9	37743.9	50.87	No	Si
SLU 31	8.35	-1375.66	-20183	-0.0000404	0.0004492	0.0035	4.82	36733.86	56279.47	56279.47	40.91	No	Si
SLU 31	11.87	-563.26	-9982	-0.0000193	0.0004492	0.0035	4.82	21144.68	35787.76	35787.76	63.54	No	Si
SLU 76	8.35	-1577.33	-24927	-0.00005	0.0004492	0.0035	4.82	41912.76	65082.5	65082.5	41.26	No	Si
SLU 76	11.87	-476.14	-12628	-0.000024	0.0004492	0.0035	4.82	25773.13	41298.2	41298.2	86.74	No	Si
SLU 82	8.35	-1638.07	-25054	-0.0000504	0.0004492	0.0035	4.82	42033.09	65304.09	65304.09	39.87	No	Si
SLU 82	11.87	-717.6	-12351	-0.0000241	0.0004492	0.0035	4.82	25307.51	40721	40721	56.75	No	Si
SLU 23	8.35	-1284.42	-18396	-0.0000367	0.0004492	0.0035	4.82	34442.52	52837.85	52837.85	41.14	No	Si
SLU 23	11.87	-482.18	-9306	-0.0000179	0.0004492	0.0035	4.82	19895.94	34379.27	34379.27	71.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	8.35	7881.59	-21640	-0.0000578	0.0006738	0.0035	4.82		49482.22	49482.22	6.28		Si
SLV 6	11.87	4023.73	-11275	-0.0000294	0.0006738	0.0035	4.82		27901.94	27901.94	6.93		Si
SLV 11	8.35	-10088.5	-13046	-0.0000466	0.0006738	0.0035	4.82		42562.29	42562.29	4.22		Si
SLV 11	11.87	-4949.41	-6149	-0.0000221	0.0006738	0.0035	4.82		27630.35	27630.35	5.58		Si
SLV 15	8.35	-5628.03	-12023	-0.0000345	0.0006738	0.0035	4.82		40380.93	40380.93	7.17		Si
SLV 15	11.87	-2393.73	-4613	-0.0000136	0.0006738	0.0035	4.82		24191.1	24191.1	10.11		Si
SLV 8	8.35	-9137.31	-15681	-0.0000494	0.0006738	0.0035	4.82		48106.05	48106.05	5.26		Si
SLV 8	11.87	-4765.14	-8259	-0.0000256	0.0006738	0.0035	4.82		32299.49	32299.49	6.78		Si
SLV 12	8.35	-10518.2	-13007	-0.0000475	0.0006738	0.0035	4.82		42479.26	42479.26	4.04		Si
SLV 12	11.87	-5289.06	-6004	-0.0000227	0.0006738	0.0035	4.82		27307.97	27307.97	5.16		Si
SLV 7	8.35	-8707.61	-15720	-0.0000485	0.0006738	0.0035	4.82		48185.11	48185.11	5.53		Si
SLV 7	11.87	-4425.48	-8403	-0.0000251	0.0006738	0.0035	4.82		32617.66	32617.66	7.37		Si
SLV 5	8.35	8311.29	-21679	-0.0000589	0.0006738	0.0035	4.82		49559.96	49559.96	5.96		Si
SLV 5	11.87	4363.38	-11420	-0.0000305	0.0006738	0.0035	4.82		28215.74	28215.74	6.47		Si
SLV 16	8.35	-6287.51	-11963	-0.0000359	0.0006738	0.0035	4.82		40253.5	40253.5	6.4		Si
SLV 16	11.87	-2915.01	-4391	-0.0000144	0.0006738	0.0035	4.82		23690.66	23690.66	8.13		Si
SLV 9	8.35	6930.4	-19005	-0.0000506	0.0006738	0.0035	4.82		44170.48	44170.48	6.37		Si
SLV 9	11.87	3839.46	-9165	-0.0000251	0.0006738	0.0035	4.82		23287.18	23287.18	6.07		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	8.35	6500.7	-18967	-0.0000495	0.0006738	0.0035	4.82		44091.39	44091.39	6.78		Si
SLV 10	11.87	3499.81	-9021	-0.0000241	0.0006738	0.0035	4.82		22968.4	22968.4	6.56		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	8.35	-1247.54	-21573	-11961	-836	4.82	4.82	-17726	10697	7218	115546	24251	24582	48833	No	58.44	Si
SLU 51	11.87	-168.4	-11404	-6323	-943	4.82	4.82	-9371	9583	6466	115546	24251	24582	48833	No	51.78	Si
SLU 44	8.35	-1436.69	-20259	-11233	-558	4.82	4.82	-16646	10553	7121	115546	24251	24582	48833	No	87.56	Si
SLU 44	11.87	-660.93	-10245	-5681	-737	4.82	4.82	-8418	9456	6381	115546	24251	24582	48833	No	66.25	Si
SLU 68	8.35	-1486.09	-23141	-12830	-559	4.82	4.82	-19014	10833	7310	115546	24251	24582	48833	No	87.35	Si
SLU 68	11.87	-395.06	-11952	-6627	-738	4.82	4.82	-9821	9643	6507	115546	24251	24582	48833	No	66.18	Si
SLU 49	8.35	-1298.75	-21922	-12155	-749	4.82	4.82	-18013	10735	7244	115546	24251	24582	48833	No	65.24	Si
SLU 49	11.87	-278.07	-11691	-6482	-856	4.82	4.82	-9606	9614	6488	115546	24251	24582	48833	No	57.03	Si
SLU 9	8.35	-975.61	-17479	-9691	-672	4.82	4.82	-14362	10248	6916	115546	24251	24582	48833	No	72.71	Si
SLU 9	11.87	-22.44	-9334	-5175	-779	4.82	4.82	-7669	9356	6313	115546	24251	24582	48833	No	62.72	Si
SLU 50	8.35	-1174.6	-21591	-11971	-832	4.82	4.82	-17740	10699	7220	115546	24251	24582	48833	No	58.69	Si
SLU 50	11.87	-128.84	-11417	-6330	-833	4.82	4.82	-9381	9584	6467	115546	24251	24582	48833	No	58.61	Si
SLU 72	8.35	-1367.2	-23803	-13198	-697	4.82	4.82	-19558	10833	7310	115546	24251	24582	48833	No	70.08	Si
SLU 72	11.87	-135.6	-12536	-6951	-804	4.82	4.82	-10300	9707	6550	115546	24251	24582	48833	No	60.72	Si
SLU 48	8.35	-1225.81	-21940	-12165	-745	4.82	4.82	-18027	10737	7245	115546	24251	24582	48833	No	65.55	Si
SLU 48	11.87	-238.51	-11703	-6489	-746	4.82	4.82	-9616	9616	6489	115546	24251	24582	48833	No	65.42	Si
SLU 70	8.35	-1418.41	-24152	-13391	-610	4.82	4.82	-19845	10833	7310	115546	24251	24582	48833	No	80.08	Si
SLU 70	11.87	-245.27	-12822	-7109	-717	4.82	4.82	-10536	9738	6571	115546	24251	24582	48833	No	68.06	Si
SLU 47	8.35	-1366.43	-20910	-11594	-698	4.82	4.82	-17181	10624	7169	115546	24251	24582	48833	No	69.98	Si
SLU 47	11.87	-427.85	-10821	-6000	-877	4.82	4.82	-8891	9519	6423	115546	24251	24582	48833	No	55.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	8.35	7881.59	-21640	-11999	3870	4.82	4.82	-17781	16056	10835	115546	36376	24582	60958		15.75	Si
SLV 6	11.87	4023.73	-11275	-6252	8777	4.82	4.82	-9264	14353	9685	115546	36376	24582	60958		6.94	Si
SLV 11	8.35	-10088.5	-13046	-7233	-4352	4.82	4.82	-10719	14644	9882	115546	36376	24582	60958		14.01	Si
SLV 11	11.87	-4949.41	-6149	-3409	-9264	4.82	4.8152	-5052	13510	9108	115546	36376	24582	60958		6.58	Si
SLV 16	8.35	-6287.51	-11963	-6633	-6313	4.82	4.82	-9829	14466	9762	115546	36376	24582	60958		9.66	Si
SLV 16	11.87	-2915.01	-4391	-2435	-7807	4.82	4.82	-3608	13222	8922	115546	36376	24582	60958		7.81	Si
SLV 12	8.35	-10518.2	-13007	-7212	-4797	4.82	4.804	-10687	14637	9845	115546	36376	24582	60958		12.71	Si
SLV 12	11.87	-5289.06	-6004	-3329	-9709	4.82	4.5873	-5196	13539	8695	115546	36376	24582	60958		6.28	Si
SLV 7	8.35	-8707.61	-15720	-8716	-1431	4.82	4.82	-12916	15083	10178	115546	36376	24582	60958		42.59	Si
SLV 7	11.87	-4425.48	-8403	-4659	-6331	4.82	4.82	-6905	13881	9367	115546	36376	24582	60958		9.63	Si
SLV 2	8.35	3421.12	-22664	-12566	5147	4.82	4.82	-18622	16224	10948	115546	36376	24582	60958		11.84	Si
SLV 2	11.87	1468.06	-12811	-7103	6636	4.82	4.82	-10526	14605	9856	115546	36376	24582	60958		9.19	Si
SLV 8	8.35	-9137.31	-15681	-8694	-1876	4.82	4.82	-12884	15077	10174	115546	36376	24582	60958		32.49	Si
SLV 8	11.87	-4765.14	-8259	-4579	-6777	4.82	4.82	-6786	13857	9351	115546	36376	24582	60958		9	Si
SLV 1	8.35	4080.6	-22723	-12599	5830	4.82	4.82	-18671	16234	10955	115546	36376	24582	60958		10.46	Si
SLV 1	11.87	1989.33	-13033	-7226	7320	4.82	4.82	-10709	14642	9880	115546	36376	24582	60958		8.33	Si
SLV 5	8.35	8311.29	-21679	-12020	4315	4.82	4.82	-17813	16063	10839	115546	36376	24582	60958		14.13	Si
SLV 5	11.87	4363.38	-11420	-6332	9223	4.82	4.82	-9383	14377	9701	115546	36376	24582	60958		6.61	Si
SLV 15	8.35	-5628.03	-12023	-6666	-5630	4.82	4.82	-9878	14476	9768	115546	36376	24582	60958		10.83	Si
SLV 15	11.87	-2393.73	-4613	-2558	-7122	4.82	4.82	-3790	13258	8947	115546	36376	24582	60958		8.56	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-6409	0.46	313.12	425.38	864.49	644.94	2.06	Si
SLV 15	-6613	0.46	313.12	438.14	882.14	660.14	2.11	Si
SLV 14	-7713	0.46	313.12	506.25	977.43	741.84	2.37	Si
SLV 13	-7917	0.46	313.12	518.72	995.08	756.9	2.42	Si
SLV 12	-9106	0.46	313.12	590.49	1096.96	843.72	2.69	Si
SLV 11	-9239	0.46	313.12	598.41	1108.33	853.37	2.73	Si
SLV 8	-12692	0.46	313.12	797.24	1401.9	1099.57	3.51	Si
SLV 7	-12824	0.46	313.12	804.62	1413.12	1108.87	3.54	Si
SLV 10	-13453	0.46	313.12	839.3	1466.25	1152.78	3.68	Si
SLV 9	-13586	0.46	313.12	846.57	1477.47	1162.02	3.71	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-11420	-21679	-160	2.008	1500.3	0.938	31.12437	18.90294	Si
SLV 6	-11275	-21640	-160	2.03	1485.7	0.937	31.47391	18.90294	Si
SLV 9	-9165	-19005	168	2.404	1272.5	0.929	37.6185	18.90294	Si
SLV 10	-9021	-18967	168	2.435	1257.9	0.928	38.12924	18.90294	Si
SLV 7	-8403	-15720	-167	2.576	1195.8	0.925	40.47159	18.90294	Si
SLV 8	-8259	-15681	-167	2.612	1181.2	0.924	41.06218	18.90294	Si
SLV 1	-13033	-22723	-544	1.771	1663.7	0.943	27.30324	11.46918	Si
SLV 2	-12811	-22664	-544	1.797	1641.2	0.942	27.72382	11.46918	Si
SLV 3	-12128	-20935	-546	1.882	1572	0.94	29.09995	11.46918	Si
SLV 4	-11906	-20876	-546	1.912	1549.5	0.939	29.57816	11.46918	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	38.779	SLU 73	Si
V_SLU	51.783	SLU 51	Si
PF_SLV	4.039	SLV 12	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	6.278	SLV 12	Si
PFFP_SLV	2.06	SLV 16	Si
R_SLV	1.647	SLV 5	Si

Maschio 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.363	-3.314	L6	L7	1.03	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 69	9.25	228.34	-8925	-0.0000566	0.0003743	0.0035	1.03	3199.33	3601.63	3601.63	15.77	No	Si
SLU 69	11.05	543.43	-6804	-0.0000543	0.0003743	0.0035	1.03	2692.03	2941.16	2941.16	5.41	No	Si
SLU 50	9.25	194.04	-7909	-0.0000494	0.0003743	0.0035	1.03	2975.99	3279.19	3279.19	16.9	No	Si
SLU 50	11.05	488.48	-5906	-0.0000472	0.0003743	0.0035	1.03	2429.92	2624.82	2624.82	5.37	No	Si
SLU 47	9.25	196.84	-7613	-0.0000477	0.0003743	0.0035	1.03	2904.2	3187.36	3187.36	16.19	No	Si
SLU 47	11.05	460.87	-5624	-0.0000447	0.0003743	0.0035	1.03	2341.61	2508.51	2508.51	5.44	No	Si
SLU 51	9.25	197.04	-7924	-0.0000496	0.0003743	0.0035	1.03	2979.53	3283.85	3283.85	16.67	No	Si
SLU 51	11.05	488.73	-5916	-0.0000473	0.0003743	0.0035	1.03	2432.95	2628.9	2628.9	5.38	No	Si
SLU 68	9.25	217.74	-8432	-0.0000533	0.0003743	0.0035	1.03	3095.41	3443.77	3443.77	15.82	No	Si
SLU 68	11.05	513.99	-6353	-0.0000507	0.0003743	0.0035	1.03	2563.97	2799.54	2799.54	5.45	No	Si
SLU 70	9.25	231.35	-8940	-0.0000568	0.0003743	0.0035	1.03	3202.34	3606.44	3606.44	15.59	No	Si
SLU 70	11.05	543.67	-6814	-0.0000544	0.0003743	0.0035	1.03	2694.76	2944.13	2944.13	5.42	No	Si
SLU 8	9.25	155.79	-6448	-0.0000396	0.0003743	0.0035	1.03	2591.39	2832.14	2832.14	18.18	No	Si
SLU 8	11.05	402.7	-4874	-0.0000385	0.0003743	0.0035	1.03	2093.31	2205.35	2205.35	5.48	No	Si
SLU 9	9.25	158.79	-6463	-0.0000398	0.0003743	0.0035	1.03	2595.69	2837.16	2837.16	17.87	No	Si
SLU 9	11.05	402.94	-4883	-0.0000386	0.0003743	0.0035	1.03	2096.7	2209.28	2209.28	5.48	No	Si
SLU 72	9.25	217.94	-8742	-0.0000552	0.0003743	0.0035	1.03	3161.82	3542.79	3542.79	16.26	No	Si
SLU 72	11.05	541.84	-6646	-0.0000533	0.0003743	0.0035	1.03	2647.84	2893.72	2893.72	5.34	No	Si
SLU 71	9.25	214.94	-8728	-0.000055	0.0003743	0.0035	1.03	3158.71	3538.02	3538.02	16.46	No	Si
SLU 71	11.05	541.6	-6636	-0.0000532	0.0003743	0.0035	1.03	2645.06	2890.78	2890.78	5.34	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	9.25	3527.02	-11006	-0.0002383	0.0005615	0.0035	1.03		4609.22	4609.22	1.31		Si
SLV 4	11.05	-2025.13	-4363	-0.0003387	0.0005615	0.0035	0.824		2311.6	2311.6	1.14		Si
SLD 13	9.25	-1228.17	-4209	-0.0000691	0.0005615	0.0035	0.824		2243.54	2243.54	1.83		Si
SLD 13	11.05	1355.17	-4730	-0.0000763	0.0005615	0.0035	1.03		2283.15	2283.15	1.68		Si
SLV 15	9.25	-3115.22	-2631	-0.0079495	0.0005615	0.0035	0.824		1526.68	1526.68	0.49		No
SLV 15	11.05	2854.76	-5742	-0.006967	0.0005615	0.0035	0.824		2669.32	2669.32	0.94		No
SLV 3	9.25	3257.95	-10721	-0.0002085	0.0005615	0.0035	1.03		4520.86	4520.86	1.39		Si
SLV 3	11.05	-1828.53	-4451	-0.0001666	0.0005615	0.0035	0.824		2350.51	2350.51	1.29		Si
SLV 13	9.25	-3134.68	-1493	-0.0098905	0.0005615	0.0035	0.824		986.31	986.31	0.31		No
SLV 13	11.05	2711.87	-4885	-0.0104361	0.0005615	0.0035	0.824		2341.77	2341.77	0.86		No
SLV 1	9.25	3238.49	-9583	-0.0002254	0.0005615	0.0035	1.03		4172.77	4172.77	1.29		Si
SLV 1	11.05	-1971.41	-3595	-0.0009886	0.0005615	0.0035	0.824		1969.79	1969.79	1		No
SLV 14	9.25	-2865.61	-1779	-0.0082571	0.0005615	0.0035	0.824		1123.81	1123.81	0.39		No
SLV 14	11.05	2515.27	-4797	-0.0076072	0.0005615	0.0035	0.824		2308.41	2308.41	0.92		No
SLV 16	9.25	-2846.15	-2916	-0.0063052	0.0005615	0.0035	0.824		1658.73	1658.73	0.58		No
SLV 16	11.05	2658.15	-5653	-0.0020136	0.0005615	0.0035	0.824		2635.39	2635.39	0.99		No
SLV 2	9.25	3507.56	-9868	-0.0002672	0.0005615	0.0035	1.03		4259.41	4259.41	1.21		Si
SLV 2	11.05	-2168.02	-3506	-0.0018337	0.0005615	0.0035	0.824		1929.47	1929.47	0.89		No
SLD 15	9.25	-1220.3	-4709	-0.0000674	0.0005615	0.0035	1.03		2462.44	2462.44	2.02		Si
SLD 15	11.05	1418.7	-5108	-0.0000796	0.0005615	0.0035	1.03		2426.43	2426.43	1.71		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 63	9.25	388.9	-8649	-7202	366	1.03	1.03	-24973	10274	2963	40441	8636	2627	11262	No	30.76	Si
SLU 63	11.05	368.32	-6315	-5259	191	1.03	1.03	-18235	9376	2704	40441	8636	2627	11262	No	59.11	Si
SLU 62	9.25	385.89	-8634	-7190	362	1.03	1.03	-24930	10268	2961	40441	8636	2627	11262	No	31.14	Si
SLU 62	11.05	368.08	-6306	-5251	192	1.03	1.03	-18207	9372	2703	40441	8636	2627	11262	No	58.8	Si
SLU 84	9.25	409.79	-9468	-7884	364	1.03	1.03	-27337	10589	3054	40441	8636	2627	11262	No	30.91	Si
SLU 84	11.05	421.44	-7045	-5866	203	1.03	1.03	-20341	9657	2785	40441	8636	2627	11262	No	55.46	Si
SLU 40	9.25	369.34	-7686	-6400	350	1.03	1.03	-22192	9903	2856	40441	8636	2627	11262	No	32.2	Si
SLU 40	11.05	307.64	-5713	-4757	232	1.03	1.03	-16496	9144	2637	40441	8636	2627	11262	No	48.49	Si
SLU 60	9.25	383.69	-8314	-6923	370	1.03	1.03	-24005	10145	2926	40441	8636	2627	11262	No	30.46	Si
SLU 60	11.05	340.07	-6007	-5002	204	1.03	1.03	-17344	9257	2670	40441	8636	2627	11262	No	55.27	Si
SLU 83	9.25	406.79	-9453	-7872	360	1.03	1.03	-27294	10584	3052	40441	8636	2627	11262	No	31.29	Si
SLU 83	11.05	421.2	-7035	-5858	204	1.03	1.03	-20312	9653	2784	40441	8636	2627	11262	No	55.18	Si
SLU 19	9.25	348.44	-6867	-5719	352	1.03	1.03	-19828	9588	2765	40441	8636	2627	11262	No	32.04	Si
SLU 19	11.05	254.52	-4984	-4150	220	1.03	1.03	-14390	8863	2556	40441	8636	2627	11262	No	51.26	Si
SLU 82	9.25	407.59	-9147	-7617	372	1.03	1.03	-26411	10466	3018	40441	8636	2627	11262	No	30.24	Si
SLU 82	11.05	393.43	-6746	-5617	215	1.03	1.03	-19478	9542	2752	40441	8636	2627	11262	No	52.3	Si
SLU 61	9.25	386.7	-8329	-6935	374	1.03	1.03	-24048	10151	2927	40441	8636	2627	11262	No	30.09	Si
SLU 61	11.05	340.31	-6017	-5010	203	1.03	1.03	-17372	9261	2671	40441	8636	2627	11262	No	55.54	Si
SLU 81	9.25	404.59	-9132	-7605	368	1.03	1.03	-26368	10460	3017	40441	8636	2627	11262	No	30.6	Si
SLU 81	11.05	393.19	-6736	-5609	216	1.03	1.03	-19450	9538	2751	40441	8636	2627	11262	No	52.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	9.25	-3134.68	-1493	-1244	-5606	0.824	0	0	0	0	40441	10363	2101	12464		2.22	Si
SLV 13	11.05	2711.87	-4885	-4068	-2513	0.824	0	0	0	0	40441	10363	2101	12464		4.96	Si
SLV 15	9.25	-3115.22	-2631	-2191	-5451	0.824	0	0	0	0	40441	10363	2101	12464		2.29	Si
SLV 15	11.05	2854.76	-5742	-4781	-2787	0.824	0.0534	0	0	0	40441	10363	2101	12464		4.47	Si
SLD 4	9.25	1620.5	-8291	-6904	2580	1.03	0.9586	-23938	15204	4081	40441	12954	2627	15580		6.04	Si
SLD 4	11.05	-668.43	-4518	-3762	1093	1.03	1.03	-13045	13026	3757	40441	12954	2627	15580		14.26	Si
SLV 14	9.25	-2865.61	-1779	-1481	-5169	0.824	0	0	0	0	40441	10363	2101	12464		2.41	Si
SLV 14	11.05	2515.27	-4797	-3994	-2282	0.824	0	0	0	0	40441	10363	2101	12464		5.46	Si
SLV 2	9.25	3507.56	-9868	-8217	5706	1.03	0.4787	-28493	16115	2160	40441	12954	2627	15580		2.73	Si
SLV 2	11.05	-2168.02	-3506	-2920	2815	0.824	0	0	0	0	40441	10363	2101	12464		4.43	Si
SLV 4	9.25	3527.02	-11006	-9165	5862	1.03	0.5836	-31778	16250	2655	40441	12954	2627	15580		2.66	Si
SLV 4	11.05	-2025.13	-4363	-3633	2541	0.824	0.1526	0	0	0	40441	10363	2101	12464		4.91	Si
SLV 16	9.25	-2846.15	-2916	-2429	-5013	0.824	0	0	0	0	40441	10363	2101	12464		2.49	Si
SLV 16	11.05	2658.15	-5653	-4708	-2557	0.824	0.1345	0	0	0	40441	10363	2101	12464		4.88	Si
SLV 3	9.25	3257.95	-10721	-8927	5425	1.03	0.6333	-30954	16250	2882	40441	12954	2627	15580		2.87	Si
SLV 3	11.05	-1828.53	-4451	-3707	2310	0.824	0.3126	0	0	0	40441	10363	2101	12464		5.4	Si
SLD 13	9.25	-1228.17	-4209	-3505	-2324	0.824	0.6695	0	0	0	40441	10363	2101	12464		5.36	Si
SLD 13	11.05	1355.17	-4730	-3939	-1065	1.03	0.6855	-13657	13148	2524	40441	12954	2627	15580		14.63	Si
SLV 1	9.25	3238.49	-9583	-7980	5269	1.03	0.5312	-27669	15950	2372	40441	12954	2627	15580		2.96	Si
SLV 1	11.05	-1971.41	-3595	-2993	2585	0.824	0	0	0	0	40441	10363	2101	12464		4.82	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	3872	-1117	125.1	152.36	1.22	Si
SLV 14	179667	0.46	4861	-1402	125.1	190.02	1.52	Si
SLV 15	179667	0.46	7725	-2228	125.1	296.12	2.37	Si
SLV 16	179667	0.46	8714	-2513	125.1	331.77	2.65	Si
SLV 9	179667	0.46	9314	-2686	125.1	353.11	2.82	Si
SLV 10	179667	0.46	9958	-2872	125.1	375.86	3	Si
SLV 5	179667	0.46	17683	-5100	125.1	631.31	5.05	Si
SLV 6	179667	0.46	18328	-5286	125.1	651.2	5.21	Si
SLV 11	179667	0.46	22157	-6390	125.1	764.83	6.11	Si
SLV 12	179667	0.46	22802	-6576	125.1	783.19	6.26	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-4557	-6748	-50	1.095	608.5	0.935	17.01799	13.33129	Si
SLV 8	-4541	-6612	-50	1.098	606.8	0.935	17.06928	13.33129	Si
SLV 11	-4458	-7959	-40	1.116	598.4	0.934	17.36709	13.33129	Si
SLV 12	-4442	-7823	-40	1.119	596.8	0.934	17.42046	13.33129	Si
SLV 5	-3857	-3452	35	1.253	537.8	0.928	19.61824	13.33129	Si
SLV 6	-3840	-3316	35	1.257	536.1	0.928	19.68556	13.33129	Si
SLV 9	-3757	-4663	45	1.276	527.8	0.927	20.01022	13.33129	Si
SLV 10	-3741	-4527	46	1.281	526.1	0.927	20.08042	13.33129	Si
SLV 3	-4432	-4218	-32	1.123	595.8	0.934	17.47497	6.37081	Si
SLV 4	-4407	-4009	-32	1.128	593.3	0.934	17.55795	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.337	SLU 71	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	30.093	SLU 61	Si
PF_SLV	0.315	SLV 13	No
V_SLV	2.223	SLV 13	Si
PFFP_SLV	1.218	SLV 13	Si
R_SLV	1.277	SLV 7	Si

Maschio 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L6	L7	3.221	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	8.35	1750.79	-13583	-0.0000467	0.0004492	0.0035	3.2207	16480.49	20431.36	20431.36	11.67	No	Si
SLU 49	10.45	339.23	-10910	-0.0000316	0.0004492	0.0035	3.2207	14089.88	16985.98	16985.98	50.07	No	Si
SLU 45	8.35	1697.23	-13086	-0.000045	0.0004492	0.0035	3.2207	16067.9	19860.6	19860.6	11.7	No	Si
SLU 45	10.45	313.14	-10351	-0.0000299	0.0004492	0.0035	3.2207	13536.66	16231.74	16231.74	51.84	No	Si
SLU 51	8.35	1766.9	-13435	-0.0000464	0.0004492	0.0035	3.2207	16359.29	20261.61	20261.61	11.47	No	Si
SLU 51	10.45	379.51	-10776	-0.0000314	0.0004492	0.0035	3.2207	13959.15	16806.01	16806.01	44.28	No	Si
SLU 48	8.35	1787.94	-13608	-0.000047	0.0004492	0.0035	3.2207	16500.78	20459.95	20459.95	11.44	No	Si
SLU 48	10.45	371.79	-10933	-0.0000318	0.0004492	0.0035	3.2207	14111.82	17016.31	17016.31	45.77	No	Si
SLU 50	8.35	1804.05	-13460	-0.0000466	0.0004492	0.0035	3.2207	16379.79	20290.2	20290.2	11.25	No	Si
SLU 50	10.45	412.08	-10799	-0.0000317	0.0004492	0.0035	3.2207	13981.26	16836.35	16836.35	40.86	No	Si
SLU 47	8.35	1651.41	-12897	-0.0000442	0.0004492	0.0035	3.2207	15906.95	19626.34	19626.34	11.88	No	Si
SLU 47	10.45	299.15	-10179	-0.0000293	0.0004492	0.0035	3.2207	13363.41	15996.76	15996.76	53.47	No	Si
SLU 43	8.35	1622.62	-12417	-0.0000427	0.0004492	0.0035	3.2207	15489.12	18993.52	18993.52	11.71	No	Si
SLU 43	10.45	294.77	-9635	-0.0000278	0.0004492	0.0035	3.2207	12802.04	15250.83	15250.83	51.74	No	Si
SLU 8	8.35	1398.32	-10922	-0.0000372	0.0004492	0.0035	3.2207	14101.45	17001.97	17001.97	12.16	No	Si
SLU 8	10.45	328.47	-8862	-0.0000258	0.0004492	0.0035	3.2207	11975.17	14183.92	14183.92	43.18	No	Si
SLU 46	8.35	1660.07	-13061	-0.0000447	0.0004492	0.0035	3.2207	16046.85	19832.01	19832.01	11.95	No	Si
SLU 46	10.45	280.58	-10328	-0.0000296	0.0004492	0.0035	3.2207	13513.96	16200.82	16200.82	57.74	No	Si
SLU 44	8.35	1560.7	-12376	-0.0000422	0.0004492	0.0035	3.2207	15452.4	18938.86	18938.86	12.13	No	Si
SLU 44	10.45	240.5	-9597	-0.0000274	0.0004492	0.0035	3.2207	12762.61	15199.3	15199.3	63.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	8.35	5691.63	-14611	-0.0000697	0.0006738	0.0035	3.2207		22305.39	22305.39	3.92		Si
SLV 6	10.45	3831.98	-11723	-0.0000517	0.0006738	0.0035	3.2207		18393.5	18393.5	4.8		Si
SLV 10	8.35	6412.07	-14116	-0.0000721	0.0006738	0.0035	3.2207		21646.75	21646.75	3.38		Si
SLV 10	10.45	4472.79	-11103	-0.0000532	0.0006738	0.0035	3.2207		17536.76	17536.76	3.92		Si
SLV 7	8.35	-4143.93	-6873	-0.0000398	0.0006738	0.0035	3.2207		16193.15	16193.15	3.91		Si
SLV 7	10.45	-4154.19	-5311	-0.0000373	0.0006738	0.0035	3.2207		13932.45	13932.45	3.35		Si
SLV 9	8.35	6539.3	-14234	-0.0000731	0.0006738	0.0035	3.2207		21805.73	21805.73	3.33		Si
SLV 9	10.45	4651.4	-11197	-0.0000544	0.0006738	0.0035	3.2207		17668.15	17668.15	3.8		Si
SLV 5	8.35	5818.86	-14730	-0.0000707	0.0006738	0.0035	3.2207		22462.36	22462.36	3.86		Si
SLV 5	10.45	4010.59	-11817	-0.0000528	0.0006738	0.0035	3.2207		18522.65	18522.65	4.62		Si
SLV 14	8.35	3731.59	-10756	-0.0000484	0.0006738	0.0035	3.2207		17051.63	17051.63	4.57		Si
SLV 14	10.45	2314.98	-8079	-0.0000336	0.0006738	0.0035	3.2207		13256.1	13256.1	5.73		Si
SLV 12	8.35	-3550.72	-6259	-0.0000349	0.0006738	0.0035	3.2207		15317.08	15317.08	4.31		Si
SLV 12	10.45	-3691.99	-4598	-0.0000331	0.0006738	0.0035	3.2207		12879.83	12879.83	3.49		Si
SLV 11	8.35	-3423.49	-6377	-0.0000345	0.0006738	0.0035	3.2207		15486.11	15486.11	4.52		Si
SLV 11	10.45	-3513.38	-4692	-0.0000316	0.0006738	0.0035	3.2207		13020.05	13020.05	3.71		Si
SLV 8	8.35	-4271.16	-6754	-0.0000403	0.0006738	0.0035	3.2207		16024.12	16024.12	3.75		Si
SLV 8	10.45	-4332.8	-5217	-0.000039	0.0006738	0.0035	3.2207		13794.04	13794.04	3.18		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	8.35	3926.86	-10938	-0.0000499	0.0006738	0.0035	3.2207		17305.49	17305.49	4.41		Si
SLV 13	10.45	2589.09	-8223	-0.0000354	0.0006738	0.0035	3.2207		13464.6	13464.6	5.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	8.35	1259.36	-14961	-8295	1166	3.2207	3.2207	-18397	10786	4863	115546	16204	16426	32630	No	27.97	Si
SLU 81	10.45	60.75	-11716	-6496	1154	3.2207	3.2207	-14407	10254	4624	115546	16204	16426	32630	No	28.27	Si
SLU 62	8.35	1468.68	-14241	-7896	1119	3.2207	3.2207	-17511	10668	4810	115546	16204	16426	32630	No	29.17	Si
SLU 62	10.45	178.47	-11212	-6216	1107	3.2207	3.2207	-13787	10172	4586	115546	16204	16426	32630	No	29.47	Si
SLU 82	8.35	1222.2	-14936	-8281	1163	3.2207	3.2207	-18366	10782	4862	115546	16204	16426	32630	No	28.07	Si
SLU 82	10.45	28.18	-11693	-6483	1150	3.2207	3.2207	-14379	10251	4622	115546	16204	16426	32630	No	28.37	Si
SLU 60	8.35	1377.96	-13719	-7607	1149	3.2207	3.2207	-16870	10583	4772	115546	16204	16426	32630	No	28.39	Si
SLU 60	10.45	119.82	-10630	-5894	1138	3.2207	3.2207	-13071	10076	4543	115546	16204	16426	32630	No	28.66	Si
SLU 73	8.35	1270.83	-14529	-8055	1099	3.2207	3.2207	-17865	10715	4832	115546	16204	16426	32630	No	29.69	Si
SLU 73	10.45	58.96	-11380	-6310	1087	3.2207	3.2207	-13993	10199	4599	115546	16204	16426	32630	No	30.02	Si
SLU 63	8.35	1431.52	-14216	-7882	1115	3.2207	3.2207	-17481	10664	4808	115546	16204	16426	32630	No	29.27	Si
SLU 63	10.45	145.91	-11189	-6204	1103	3.2207	3.2207	-13759	10168	4585	115546	16204	16426	32630	No	29.58	Si
SLU 84	8.35	1312.92	-15457	-8570	1132	3.2207	3.2207	-19007	10833	4885	115546	16204	16426	32630	No	28.83	Si
SLU 84	10.45	86.84	-12275	-6806	1119	3.2207	3.2207	-15095	10346	4665	115546	16204	16426	32630	No	29.17	Si
SLU 83	8.35	1350.07	-15482	-8584	1136	3.2207	3.2207	-19038	10833	4885	115546	16204	16426	32630	No	28.73	Si
SLU 83	10.45	119.4	-12298	-6819	1123	3.2207	3.2207	-15122	10350	4667	115546	16204	16426	32630	No	29.06	Si
SLU 61	8.35	1340.81	-13694	-7593	1145	3.2207	3.2207	-16839	10579	4770	115546	16204	16426	32630	No	28.49	Si
SLU 61	10.45	87.26	-10607	-5881	1134	3.2207	3.2207	-13043	10072	4542	115546	16204	16426	32630	No	28.76	Si
SLU 74	8.35	1407.36	-15239	-8449	1097	3.2207	3.2207	-18739	10832	4884	115546	16204	16426	32630	No	29.74	Si
SLU 74	10.45	131.6	-12133	-6727	1084	3.2207	3.2207	-14920	10323	4654	115546	16204	16426	32630	No	30.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	8.35	3213.87	-12363	-6855	649	3.2207	3.2207	-15203	15541	7007	115546	24306	16426	40732		62.73	Si
SLD 5	10.45	1866.18	-9799	-5433	1221	3.2207	3.2207	-12049	14910	6723	115546	24306	16426	40732		33.35	Si
SLD 6	8.35	3158.2	-12311	-6826	652	3.2207	3.2207	-15139	15528	7001	115546	24306	16426	40732		62.49	Si
SLD 6	10.45	1788.05	-9757	-5410	1224	3.2207	3.2207	-11999	14900	6718	115546	24306	16426	40732		33.28	Si
SLD 10	8.35	3465.39	-12100	-6709	744	3.2207	3.2207	-14880	15476	6978	115546	24306	16426	40732		54.75	Si
SLD 10	10.45	2061.02	-9493	-5263	1314	3.2207	3.2207	-11673	14835	6689	115546	24306	16426	40732		31	Si
SLV 6	8.35	5691.63	-14611	-8101	478	3.2207	3.2207	-17967	16093	7256	115546	24306	16426	40732		85.21	Si
SLV 6	10.45	3831.98	-11723	-6500	1789	3.2207	3.2207	-14415	15383	6936	115546	24306	16426	40732		22.76	Si
SLV 10	8.35	6412.07	-14116	-7827	695	3.2207	3.2207	-17358	15972	7202	115546	24306	16426	40732		58.59	Si
SLV 10	10.45	4472.79	-11103	-6156	2002	3.2207	3.2207	-13654	15231	6867	115546	24306	16426	40732		20.35	Si
SLV 14	8.35	3731.59	-10756	-5964	1086	3.2207	3.2207	-13226	15145	6829	115546	24306	16426	40732		37.5	Si
SLV 14	10.45	2314.98	-8079	-4479	1464	3.2207	3.2207	-9934	14487	6532	115546	24306	16426	40732		27.82	Si
SLD 9	8.35	3521.05	-12152	-6738	741	3.2207	3.2207	-14943	15489	6984	115546	24306	16426	40732		54.94	Si
SLD 9	10.45	2139.16	-9534	-5286	1311	3.2207	3.2207	-11723	14845	6693	115546	24306	16426	40732		31.06	Si
SLV 13	8.35	3926.86	-10938	-6064	1077	3.2207	3.2207	-13450	15190	6849	115546	24306	16426	40732		37.81	Si
SLV 13	10.45	2589.09	-8223	-4559	1455	3.2207	3.2207	-10112	14522	6548	115546	24306	16426	40732		27.99	Si
SLV 9	8.35	6539.3	-14234	-7892	689	3.2207	3.2207	-17503	16001	7215	115546	24306	16426	40732		59.08	Si
SLV 9	10.45	4651.4	-11197	-6208	1996	3.2207	3.2207	-13769	15254	6878	115546	24306	16426	40732		20.41	Si
SLV 5	8.35	5818.86	-14730	-8167	472	3.2207	3.2207	-18113	16123	7270	115546	24306	16426	40732		86.26	Si
SLV 5	10.45	4010.59	-11817	-6552	1784	3.2207	3.2207	-14531	15406	6947	115546	24306	16426	40732		22.84	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-4925	0.46	209.23	324.2	632.88	478.54	2.29	Si
SLV 11	-5032	0.46	209.23	330.79	642.16	486.47	2.33	Si
SLV 8	-5454	0.46	209.23	356.6	678.68	517.64	2.47	Si
SLV 7	-5561	0.46	209.23	363.09	687.86	525.48	2.51	Si
SLV 16	-6659	0.46	209.23	428.57	781.98	605.27	2.89	Si
SLV 15	-6823	0.46	209.23	438.19	796.03	617.11	2.95	Si
SLV 4	-8423	0.46	209.23	529.54	932.17	730.85	3.49	Si
SLV 3	-8588	0.46	209.23	538.67	946.07	742.37	3.55	Si
SLV 14	-8699	0.46	209.23	544.84	955.5	750.17	3.59	Si
SLV 13	-8863	0.46	209.23	553.9	969.41	761.65	3.64	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-8251	-14730	-157	1.876	1065.2	0.941	28.97454	18.90294	Si
SLV 6	-8165	-14611	-157	1.892	1056.6	0.94	29.24227	18.90294	Si
SLV 9	-7793	-14234	44	1.98	1018.9	0.939	30.65942	18.90294	Si
SLV 10	-7708	-14116	44	1.998	1010.3	0.938	30.95743	18.90294	Si
SLV 1	-7127	-12589	-351	2.097	951.6	0.935	32.58929	11.46918	Si
SLV 2	-6996	-12408	-351	2.129	938.3	0.934	33.11779	11.46918	Si
SLV 7	-3451	-6873	-44	3.724	582.7	0.906	59.72395	18.90294	Si
SLV 8	-3366	-6754	-44	3.79	574.3	0.905	60.84014	18.90294	Si
SLV 3	-5688	-10232	-317	2.522	806.3	0.926	39.58582	11.46918	Si
SLV 11	-2994	-6377	157	4.081	537.6	0.901	65.80151	18.90294	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.247	SLU 50	Si
V_SLU	27.973	SLU 81	Si
PF_SLV	3.184	SLV 8	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	20.35	SLV 10	Si
PFFP_SLV	2.287	SLV 12	Si
R_SLV	1.533	SLV 5	Si

Maschio 126

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L6	L7	1.655	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	8.35	-45.13	-8666	-0.0000292	0.0003743	0.0035	1.655	5853.84	6897.34	6897.34	152.84	No	Si
SLU 19	10.45	1730.08	-8126	-0.0000481	0.0003743	0.0035	1.655	5566.4	5872.56	5872.56	3.39	No	Si
SLU 81	8.35	-172.98	-11478	-0.0000407	0.0003743	0.0035	1.655	7187.56	8525.59	8525.59	49.29	No	Si
SLU 81	10.45	2282.88	-11082	-0.0000662	0.0003743	0.0035	1.655	7016.42	7676.66	7676.66	3.36	No	Si
SLU 41	8.35	-163.95	-9847	-0.0000348	0.0003743	0.0035	1.655	6447.9	7605.19	7605.19	46.39	No	Si
SLU 41	10.45	2094.21	-9738	-0.0000586	0.0003743	0.0035	1.655	6394.98	6922.95	6922.95	3.31	No	Si
SLU 40	8.35	-147.34	-9528	-0.0000335	0.0003743	0.0035	1.655	6292.41	7413.93	7413.93	50.32	No	Si
SLU 40	10.45	2018.22	-9334	-0.0000562	0.0003743	0.0035	1.655	6196.09	6656.35	6656.35	3.3	No	Si
SLU 83	8.35	-186.41	-11822	-0.0000421	0.0003743	0.0035	1.655	7331.52	8708.38	8708.38	46.72	No	Si
SLU 83	10.45	2354.34	-11502	-0.0000687	0.0003743	0.0035	1.655	7197.82	7878.85	7878.85	3.35	No	Si
SLU 39	8.35	-150.52	-9503	-0.0000334	0.0003743	0.0035	1.655	6280.13	7398.82	7398.82	49.15	No	Si
SLU 39	10.45	2022.74	-9317	-0.0000562	0.0003743	0.0035	1.655	6187.55	6645.12	6645.12	3.29	No	Si
SLU 84	8.35	-183.22	-11847	-0.0000422	0.0003743	0.0035	1.655	7341.79	8721.7	8721.7	47.6	No	Si
SLU 84	10.45	2349.82	-11520	-0.0000687	0.0003743	0.0035	1.655	7205.05	7887.09	7887.09	3.36	No	Si
SLU 18	8.35	-48.31	-8641	-0.0000292	0.0003743	0.0035	1.655	5840.8	6882.02	6882.02	142.45	No	Si
SLU 18	10.45	1734.6	-8109	-0.0000481	0.0003743	0.0035	1.655	5557.14	5861.69	5861.69	3.38	No	Si
SLU 42	8.35	-160.76	-9872	-0.0000349	0.0003743	0.0035	1.655	6459.89	7619.94	7619.94	47.4	No	Si
SLU 42	10.45	2089.68	-9755	-0.0000587	0.0003743	0.0035	1.655	6403.27	6934.27	6934.27	3.32	No	Si
SLU 82	8.35	-169.8	-11503	-0.0000408	0.0003743	0.0035	1.655	7198.12	8538.75	8538.75	50.29	No	Si
SLU 82	10.45	2278.36	-11099	-0.0000662	0.0003743	0.0035	1.655	7023.9	7684.83	7684.83	3.37	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	8.35	-1719.17	-2651	-0.0000529	0.0005615	0.0035	1.324		2802.17	2802.17	1.63		Si
SLV 9	10.45	2967.62	-5932	-0.0000663	0.0005615	0.0035	1.655		4753.18	4753.18	1.6		Si
SLV 3	8.35	4214.46	-12934	-0.0000966	0.0005615	0.0035	1.655		9226.21	9226.21	2.19		Si
SLV 3	10.45	-2861.62	-5062	-0.0000706	0.0005615	0.0035	1.324		4621.12	4621.12	1.61		Si
SLV 16	8.35	-4560.35	-5630	-0.0004723	0.0005615	0.0035	1.324		5034.7	5034.7	1.1		Si
SLV 16	10.45	5541.95	-12351	-0.0001249	0.0005615	0.0035	1.655		8852.66	8852.66	1.6		Si
SLV 1	8.35	4175.94	-10429	-0.0000911	0.0005615	0.0035	1.655		7639.83	7639.83	1.83		Si
SLV 1	10.45	-2769.19	-3203	-0.0003513	0.0005615	0.0035	1.324		3225.92	3225.92	1.16		Si
SLV 14	8.35	-4598.87	-3125	-0.0024076	0.0005615	0.0035	1.324		3165.98	3165.98	0.69		No
SLV 14	10.45	5634.37	-10492	-0.0001401	0.0005615	0.0035	1.655		7679.39	7679.39	1.36		Si
SLV 4	8.35	4522.44	-13160	-0.0001023	0.0005615	0.0035	1.655		9371.5	9371.5	2.07		Si
SLV 4	10.45	-3211.9	-4727	-0.0001184	0.0005615	0.0035	1.324		4379.42	4379.42	1.36		Si
SLV 2	8.35	4483.91	-10655	-0.0000983	0.0005615	0.0035	1.655		7780.84	7780.84	1.74		Si
SLV 2	10.45	-3119.48	-2869	-0.0008104	0.0005615	0.0035	1.324		2969.82	2969.82	0.95		No
SLV 13	8.35	-4906.85	-2899	-0.0031775	0.0005615	0.0035	1.324		2993.09	2993.09	0.61		No
SLV 13	10.45	5984.66	-10827	-0.0001547	0.0005615	0.0035	1.655		7888.63	7888.63	1.32		Si
SLV 10	8.35	-1518.5	-2798	-0.000035	0.0005615	0.0035	1.324		2915.64	2915.64	1.92		Si
SLV 10	10.45	2739.38	-5714	-0.0000597	0.0005615	0.0035	1.655		4594.09	4594.09	1.68		Si
SLV 15	8.35	-4868.32	-5404	-0.0009236	0.0005615	0.0035	1.324		4869.93	4869.93	1		Si
SLV 15	10.45	5892.23	-12686	-0.000135	0.0005615	0.0035	1.655		9066.58	9066.58	1.54		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	8.35	-340.01	-11118	-9259	-1515	1.655	1.655	-19979	9608	4453	40441	13876	4220	18097	No	11.94	Si
SLU 72	10.45	1883.09	-11093	-9238	-3210	1.655	1.655	-19934	9602	4450	40441	13876	4220	18097	No	5.64	Si
SLU 66	8.35	-322.58	-10955	-9123	-1474	1.655	1.655	-19686	9569	4434	40441	13876	4220	18097	No	12.28	Si
SLU 66	10.45	1845.44	-10882	-9061	-3144	1.655	1.655	-19553	9552	4426	40441	13876	4220	18097	No	5.76	Si
SLU 71	8.35	-343.19	-11094	-9238	-1522	1.655	1.655	-19935	9602	4450	40441	13876	4220	18097	No	11.89	Si
SLU 71	10.45	1887.61	-11076	-9223	-3215	1.655	1.655	-19903	9598	4448	40441	13876	4220	18097	No	5.63	Si
SLU 69	8.35	-336	-11299	-9409	-1534	1.655	1.655	-20304	9652	4473	40441	13876	4220	18097	No	11.8	Si
SLU 69	10.45	1916.9	-11302	-9411	-3266	1.655	1.655	-20309	9652	4473	40441	13876	4220	18097	No	5.54	Si
SLU 79	8.35	-242.84	-11844	-9863	-1313	1.655	1.655	-21283	9782	4533	40441	13876	4220	18097	No	13.78	Si
SLU 79	10.45	2264.34	-11669	-9717	-3066	1.655	1.655	-20969	9740	4514	40441	13876	4220	18097	No	5.9	Si
SLU 67	8.35	-319.39	-10980	-9143	-1467	1.655	1.655	-19731	9575	4437	40441	13876	4220	18097	No	12.33	Si
SLU 67	10.45	1840.92	-10899	-9075	-3138	1.655	1.655	-19584	9556	4428	40441	13876	4220	18097	No	5.77	Si
SLU 70	8.35	-332.82	-11324	-9430	-1527	1.655	1.655	-20348	9658	4475	40441	13876	4220	18097	No	11.85	Si
SLU 70	10.45	1912.38	-11319	-9426	-3261	1.655	1.655	-20340	9656	4475	40441	13876	4220	18097	No	5.55	Si
SLU 68	8.35	-324.46	-10791	-8986	-1451	1.655	1.655	-19391	9530	4416	40441	13876	4220	18097	No	12.48	Si
SLU 68	10.45	1808.61	-10684	-8897	-3084	1.655	1.655	-19199	9504	4404	40441	13876	4220	18097	No	5.87	Si
SLU 77	8.35	-235.65	-12050	-10034	-1325	1.655	1.655	-21652	9831	4556	40441	13876	4220	18097	No	13.66	Si
SLU 77	10.45	2293.64	-11895	-9905	-3117	1.655	1.655	-21374	9794	4539	40441	13876	4220	18097	No	5.81	Si
SLU 78	8.35	-232.46	-12074	-10055	-1318	1.655	1.655	-21697	9837	4559	40441	13876	4220	18097	No	13.73	Si
SLU 78	10.45	2289.11	-11912	-9919	-3112	1.655	1.655	-21405	9798	4541	40441	13876	4220	18097	No	5.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.35	4214.46	-12934	-10771	6814	1.655	1.505	-23242	15065	6349	40441	20815	4220	25035		3.67	Si
SLV 3	10.45	-2861.62	-5062	-4215	4065	1.324	0.7865	0	0	0	40441	16652	3376	20028		4.93	Si
SLD 13	8.35	-2208.99	-5819	-4846	-4518	1.655	1.3437	-12957	13008	4894	40441	20815	4220	25035		5.54	Si
SLD 13	10.45	3353.56	-9068	-7551	-5018	1.655	1.3731	-16295	13676	5258	40441	20815	4220	25035		4.99	Si
SLV 15	8.35	-4868.32	-5404	-4500	-8792	1.324	0	0	0	0	40441	16652	3376	20028		2.28	Si
SLV 15	10.45	5892.23	-12686	-10563	-8450	1.655	1.0891	-22795	14976	4567	40441	20815	4220	25035		2.96	Si
SLV 4	8.35	4522.44	-13160	-10959	7348	1.655	1.4516	-23648	15146	6156	40441	20815	4220	25035		3.41	Si
SLV 4	10.45	-3211.9	-4727	-3937	4603	1.324	0.4442	0	0	0	40441	16652	3376	20028		4.35	Si
SLV 16	8.35	-4560.35	-5630	-4688	-8258	1.324	0.0526	0	0	0	40441	16652	3376	20028		2.43	Si
SLV 16	10.45	5541.95	-12351	-10285	-7911	1.655	1.1364	-22194	14855	4727	40441	20815	4220	25035		3.16	Si
SLV 9	8.35	-1719.17	-2651	-2208	-4281	1.324	0.5371	0	0	0	40441	16652	3376	20028		4.68	Si
SLV 9	10.45	2967.62	-5932	-4940	-4895	1.655	0.9817	-10660	12549	3449	40441	20815	4220	25035		5.11	Si
SLV 14	8.35	-4598.87	-3125	-2602	-8740	1.324	0	0	0	0	40441	16652	3376	20028		2.29	Si
SLV 14	10.45	5634.37	-10492	-8737	-8335	1.655	0.8715	-18854	14188	3462	40441	20815	4220	25035		3	Si
SLV 13	8.35	-4906.85	-2899	-2414	-9274	1.324	0	0	0	0	40441	16652	3376	20028		2.16	Si
SLV 13	10.45	5984.66	-10827	-9016	-8874	1.655	0.8243	-19455	14308	3302	40441	20815	4220	25035		2.82	Si
SLV 1	8.35	4175.94	-10429	-8684	6332	1.655	1.2813	-18740	14165	5082	40441	20815	4220	25035		3.95	Si
SLV 1	10.45	-2769.19	-3203	-2667	3641	1.324	0	0	0	0	40441	16652	3376	20028		5.5	Si
SLV 2	8.35	4483.91	-10655	-8872	6866	1.655	1.22	-19146	14246	4866	40441	20815	4220	25035		3.65	Si
SLV 2	10.45	-3119.48	-2869	-2389	4179	1.324	0	0	0	0	40441	16652	3376	20028		4.79	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	6817	-3159	201.01	422.52	2.1	Si
SLV 1	179667	0.46	7539	-3494	201.01	464.95	2.31	Si
SLV 6	179667	0.46	8026	-3719	201.01	493.33	2.45	Si
SLV 5	179667	0.46	8496	-3937	201.01	520.54	2.59	Si
SLV 4	179667	0.46	10828	-5018	201.01	652.7	3.25	Si
SLV 3	179667	0.46	11550	-5352	201.01	692.67	3.45	Si
SLV 10	179667	0.46	12966	-6008	201.01	769.75	3.83	Si
SLV 9	179667	0.46	13436	-6226	201.01	794.99	3.96	Si
SLV 8	179667	0.46	21397	-9916	201.01	1193.68	5.94	Si
SLV 7	179667	0.46	21868	-10134	201.01	1215.55	6.05	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-7850	-13408	269	1.015	1031	0.938	15.72883	13.33129	Si
SLV 7	-7827	-13261	269	1.017	1028.7	0.938	15.76755	13.33129	Si
SLV 12	-7287	-11149	369	1.066	974.1	0.935	16.576	13.33129	Si
SLV 11	-7264	-11002	369	1.069	971.8	0.935	16.61959	13.33129	Si
SLV 6	-3078	-5057	-369	2.017	552.6	0.901	32.51064	13.33129	Si
SLV 5	-3055	-4910	-369	2.027	550.4	0.901	32.68079	13.33129	Si
SLV 10	-2515	-2798	-269	2.321	497.7	0.896	37.65479	13.33129	Si
SLV 4	-6842	-13160	-71	1.157	929.2	0.932	18.0365	6.37081	Si
SLV 9	-2492	-2651	-269	2.334	495.5	0.896	37.8785	13.33129	Si
SLV 3	-6807	-12934	-71	1.162	925.6	0.932	18.11498	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.285	SLU 39	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	5.541	SLU 69	Si
PF_SLV	0.61	SLV 13	No
V_SLV	2.16	SLV 13	Si
PFFP_SLV	2.102	SLV 2	Si
R_SLV	1.18	SLV 8	Si

Maschio 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.386	L6	L7	5.38	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	8.35	-1355.2	-19985	-0.0000353	0.0004492	0.0035	5.38	42085.74	64876.99	64876.99	47.87	No	Si
SLU 31	11.87	-162.02	-11850	-0.0000195	0.0004492	0.0035	5.38	27772.68	46499.54	46499.54	286.99	No	Si
SLU 82	8.35	-1477.66	-24767	-0.0000438	0.0004492	0.0035	5.38	48693.73	75014.56	75014.56	50.77	No	Si
SLU 82	11.87	-168.44	-14496	-0.0000239	0.0004492	0.0035	5.38	32853.03	52643.69	52643.69	312.55	No	Si
SLU 40	8.35	-1422.07	-20706	-0.0000367	0.0004492	0.0035	5.38	43167.11	66459.91	66459.91	46.73	No	Si
SLU 40	11.87	-140.04	-12248	-0.0000201	0.0004492	0.0035	5.38	28561.44	47421.89	47421.89	338.63	No	Si
SLU 32	8.35	-1240.28	-21199	-0.0000372	0.0004492	0.0035	5.38	43890.52	67544.49	67544.49	54.46	No	Si
SLU 32	11.87	-13.79	-13023	-0.0000212	0.0004492	0.0035	5.38	30075.32	49223.26	49223.26	3570.3	No	Si
SLU 23	8.35	-1136.93	-18290	-0.0000321	0.0004492	0.0035	5.38	39421.7	61152.61	61152.61	53.79	No	Si
SLU 23	11.87	-145.02	-10903	-0.0000179	0.0004492	0.0035	5.38	25855.4	44301.06	44301.06	305.49	No	Si
SLU 39	8.35	-1382.07	-20697	-0.0000366	0.0004492	0.0035	5.38	43153.73	66440.04	66440.04	48.07	No	Si
SLU 39	11.87	-96.13	-12235	-0.00002	0.0004492	0.0035	5.38	28536.11	47392.1	47392.1	492.99	No	Si
SLU 81	8.35	-1437.66	-24758	-0.0000437	0.0004492	0.0035	5.38	48682.49	74995.83	74995.83	52.17	No	Si
SLU 81	11.87	-124.53	-14484	-0.0000238	0.0004492	0.0035	5.38	32829.38	52613.9	52613.9	422.51	No	Si
SLU 42	8.35	-1259.89	-21593	-0.0000379	0.0004492	0.0035	5.38	44457.49	68409.85	68409.85	54.3	No	Si
SLU 42	11.87	99.15	-13199	-0.0000216	0.0004492	0.0035	5.38	30412.29	35761.69	35761.69	360.68	No	Si
SLU 73	8.35	-1410.79	-24046	-0.0000424	0.0004492	0.0035	5.38	47783.43	73521.92	73521.92	52.11	No	Si
SLU 73	11.87	-190.42	-14099	-0.0000233	0.0004492	0.0035	5.38	32116.49	51721.34	51721.34	271.62	No	Si
SLU 33	8.35	-1280.28	-21209	-0.0000373	0.0004492	0.0035	5.38	43903.64	67564.36	67564.36	52.77	No	Si
SLU 33	11.87	-57.69	-13036	-0.0000213	0.0004492	0.0035	5.38	30100.06	49253.05	49253.05	853.69	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	8.35	16152.1	-28065	-0.0000766	0.0006738	0.0035	5.38		69522.08	69522.08	4.3		Si
SLV 9	11.87	8001.3	-14620	-0.0000383	0.0006738	0.0035	5.38		39619.93	39619.93	4.95		Si
SLV 7	8.35	-17900.44	-6114	-0.0002024	0.0006738	0.0035	4.304		32833.42	32833.42	1.83		Si
SLV 7	11.87	-7932.88	-5460	-0.0000255	0.0006738	0.0035	5.38		31194.86	31194.86	3.93		Si
SLV 5	8.35	13410.65	-24522	-0.0000652	0.0006738	0.0035	5.38		62437.19	62437.19	4.66		Si
SLV 5	11.87	8854.73	-14373	-0.0000395	0.0006738	0.0035	5.38		39032.17	39032.17	4.41		Si
SLV 12	8.35	-15085.92	-9837	-0.0000498	0.0006738	0.0035	4.304		42028.57	42028.57	2.79		Si
SLV 12	11.87	-9023.33	-5675	-0.0000298	0.0006738	0.0035	4.304		31735.17	31735.17	3.52		Si
SLV 8	8.35	-17827.37	-6294	-0.0001887	0.0006738	0.0035	4.304		33281.15	33281.15	1.87		Si
SLV 8	11.87	-8169.9	-5428	-0.0000265	0.0006738	0.0035	4.304		31115.14	31115.14	3.81		Si
SLV 3	8.35	-10159.45	-8375	-0.0000329	0.0006738	0.0035	5.38		38442.48	38442.48	3.78		Si
SLV 3	11.87	-998.18	-8300	-0.0000151	0.0006738	0.0035	5.38		38259.34	38259.34	38.33		Si
SLV 10	8.35	16225.16	-28246	-0.0000771	0.0006738	0.0035	5.38		69874.62	69874.62	4.31		Si
SLV 10	11.87	7764.28	-14588	-0.0000378	0.0006738	0.0035	5.38		39544.36	39544.36	5.09		Si
SLV 6	8.35	13483.72	-24703	-0.0000657	0.0006738	0.0035	5.38		62838.95	62838.95	4.66		Si
SLV 6	11.87	8617.71	-14341	-0.000039	0.0006738	0.0035	5.38		38956.59	38956.59	4.52		Si
SLV 4	8.35	-10047.31	-8652	-0.0000329	0.0006738	0.0035	5.38		39120.61	39120.61	3.89		Si
SLV 4	11.87	-1361.94	-8252	-0.0000157	0.0006738	0.0035	5.38		38139.98	38139.98	28		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	8.35	-15158.99	-9657	-0.0000504	0.0006738	0.0035	4.304		41586.72	41586.72	2.74		Si
SLV 11	11.87	-8786.31	-5707	-0.0000287	0.0006738	0.0035	4.304		31814.89	31814.89	3.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	8.35	-1335.88	-25270	-14011	2069	5.38	5.38	-18602	10814	8145	115546	27068	27438	54506	No	26.35	Si
SLU 75	11.87	-86.09	-15285	-8475	2055	5.38	5.38	-11252	9834	7407	115546	27068	27438	54506	No	26.52	Si
SLU 74	8.35	-1295.87	-25261	-14006	2071	5.38	5.38	-18595	10813	8144	115546	27068	27438	54506	No	26.32	Si
SLU 74	11.87	-42.18	-15272	-8468	2057	5.38	5.38	-11242	9832	7406	115546	27068	27438	54506	No	26.5	Si
SLU 63	8.35	-902.51	-23444	-12998	2057	5.38	5.38	-17258	10634	8010	115546	27068	27438	54506	No	26.5	Si
SLU 63	11.87	60.11	-13867	-7689	2044	5.38	5.38	-10208	9694	7302	115546	27068	27438	54506	No	26.67	Si
SLU 60	8.35	-1024.68	-22547	-12501	2129	5.38	5.38	-16597	10546	7943	115546	27068	27438	54506	No	25.61	Si
SLU 60	11.87	-135.17	-12904	-7154	2116	5.38	5.38	-9499	9600	7231	115546	27068	27438	54506	No	25.76	Si
SLU 81	8.35	-1437.66	-24758	-13727	2272	5.38	5.38	-18225	10763	8107	115546	27068	27438	54506	No	23.99	Si
SLU 81	11.87	-124.53	-14484	-8031	2258	5.38	5.38	-10662	9755	7347	115546	27068	27438	54506	No	24.14	Si
SLU 62	8.35	-862.51	-23435	-12993	2059	5.38	5.38	-17251	10633	8009	115546	27068	27438	54506	No	26.48	Si
SLU 62	11.87	104.02	-13855	-7682	2045	5.38	5.38	-10199	9693	7301	115546	27068	27438	54506	No	26.65	Si
SLU 84	8.35	-1315.49	-25654	-14224	2200	5.38	5.38	-18885	10833	8160	115546	27068	27438	54506	No	24.77	Si
SLU 84	11.87	70.76	-15447	-8565	2186	5.38	5.38	-11371	9850	7419	115546	27068	27438	54506	No	24.94	Si
SLU 83	8.35	-1275.48	-25645	-14219	2202	5.38	5.38	-18878	10833	8160	115546	27068	27438	54506	No	24.75	Si
SLU 83	11.87	114.66	-15435	-8558	2187	5.38	5.38	-11362	9848	7418	115546	27068	27438	54506	No	24.92	Si
SLU 61	8.35	-1064.69	-22556	-12506	2127	5.38	5.38	-16604	10547	7944	115546	27068	27438	54506	No	25.63	Si
SLU 61	11.87	-179.08	-12916	-7162	2114	5.38	5.38	-9508	9601	7232	115546	27068	27438	54506	No	25.78	Si
SLU 82	8.35	-1477.66	-24767	-13732	2270	5.38	5.38	-18232	10764	8108	115546	27068	27438	54506	No	24.01	Si
SLU 82	11.87	-168.44	-14496	-8038	2256	5.38	5.38	-10671	9756	7348	115546	27068	27438	54506	No	24.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	8.35	-17900.44	-6114	-3390	-2426	4.304	0	0	0	0	115546	32482	21950	54432		22.43	Si
SLV 7	11.87	-7932.88	-5460	-3027	-7650	5.38	3.7113	-5834	13667	7101	115546	40602	27438	68040		8.89	Si
SLV 4	8.35	-10047.31	-8652	-4797	-4930	5.38	4.586	-7496	13999	8988	115546	40602	27438	68040		13.8	Si
SLV 4	11.87	-1361.94	-8252	-4575	-6599	5.38	5.38	-6074	13715	10330	115546	40602	27438	68040		10.31	Si
SLV 6	8.35	13483.72	-24703	-13696	1500	5.38	5.38	-18184	16137	12154	115546	40602	27438	68040		45.35	Si
SLV 6	11.87	8617.71	-14341	-7952	6643	5.38	5.38	-10557	14611	11005	115546	40602	27438	68040		10.24	Si
SLV 3	8.35	-10159.45	-8375	-4644	-5314	5.38	4.4308	-7510	14002	8686	115546	40602	27438	68040		12.8	Si
SLV 3	11.87	-998.18	-8300	-4602	-6982	5.38	5.38	-6110	13722	10335	115546	40602	27438	68040		9.74	Si
SLV 13	8.35	8372.04	-25708	-14254	7524	5.38	5.38	-18925	16250	12239	115546	40602	27438	68040		9.04	Si
SLV 13	11.87	1193.33	-11796	-6541	9176	5.38	5.38	-8684	14237	10723	115546	40602	27438	68040		7.41	Si
SLV 16	8.35	-909.15	-20462	-11345	6805	5.38	5.38	-15063	15513	11684	115546	40602	27438	68040		10	Si
SLV 16	11.87	-4206.71	-9074	-5031	5347	5.38	5.38	-6680	13836	10421	115546	40602	27438	68040		12.73	Si
SLV 8	8.35	-17827.37	-6294	-3490	-2176	4.304	0	0	0	0	115546	32482	21950	54432		25.01	Si
SLV 8	11.87	-8169.9	-5428	-3010	-7400	4.304	3.5549	0	0	0	115546	32482	21950	54432		7.36	Si
SLV 10	8.35	16225.16	-28246	-15661	5021	5.38	5.38	-20793	16250	12239	115546	40602	27438	68040		13.55	Si
SLV 10	11.87	7764.28	-14588	-8088	10227	5.38	5.38	-10739	14648	11033	115546	40602	27438	68040		6.65	Si
SLV 9	8.35	16152.1	-28065	-15561	4771	5.38	5.38	-20660	16250	12239	115546	40602	27438	68040		14.26	Si
SLV 9	11.87	8001.3	-14620	-8106	9977	5.38	5.38	-10762	14652	11036	115546	40602	27438	68040		6.82	Si
SLV 14	8.35	8484.18	-25984	-14407	7908	5.38	5.38	-19128	16250	12239	115546	40602	27438	68040		8.6	Si
SLV 14	11.87	829.57	-11748	-6514	9559	5.38	5.38	-8648	14230	10718	115546	40602	27438	68040		7.12	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-5256	0.46	349.5	353.92	800.41	577.16	1.65	Si
SLV 8	-5300	0.46	349.5	356.74	804.25	580.5	1.66	Si
SLV 11	-5673	0.46	349.5	380.78	837.06	608.92	1.74	Si
SLV 12	-5717	0.46	349.5	383.59	840.88	612.23	1.75	Si
SLV 3	-10620	0.46	349.5	686.2	1264.62	975.41	2.79	Si
SLV 4	-10687	0.46	349.5	690.17	1270.33	980.25	2.8	Si
SLV 15	-12009	0.46	349.5	767.51	1383.13	1075.32	3.08	Si
SLV 16	-12076	0.46	349.5	771.38	1388.85	1080.12	3.09	Si
SLV 1	-15644	0.46	349.5	970.98	1688.81	1329.9	3.81	Si
SLV 2	-15711	0.46	349.5	974.61	1694.35	1334.48	3.82	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-14620	-28065	185	1.789	1864.3	0.943	27.56563	18.90294	Si
SLV 10	-14588	-28246	185	1.792	1861.1	0.943	27.619	18.90294	Si
SLV 5	-14373	-24522	-235	1.812	1839.3	0.942	27.94031	18.90294	Si
SLV 6	-14341	-24703	-235	1.815	1836.1	0.942	27.99524	18.90294	Si
SLV 13	-11796	-25708	692	2.105	1578.5	0.935	32.73664	11.46918	Si
SLV 14	-11748	-25984	692	2.112	1573.6	0.934	32.85418	11.46918	Si
SLV 1	-10974	-13898	-705	2.233	1495.5	0.932	34.8256	11.46918	Si
SLV 2	-10926	-14174	-705	2.241	1490.5	0.931	34.95861	11.46918	Si
SLV 11	-5707	-9657	236	3.731	967.6	0.906	59.85505	18.90294	Si
SLV 12	-5675	-9837	236	3.745	964.5	0.906	60.10215	18.90294	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	46.735	SLU 40	Si
V_SLU	23.991	SLU 81	Si
PF_SLV	1.834	SLV 7	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	6.653	SLV 10	Si
PFFP_SLV	1.651	SLV 7	Si
R_SLV	1.458	SLV 9	Si

Maschio 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.384	L6	L7	1.44	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	8.35	-498.32	-11494	-0.0000533	0.0003743	0.0035	1.4402	5959.9	7131.13	7131.13	14.31	No	Si
SLU 81	11.87	52.18	-5921	-0.0000231	0.0003743	0.0035	1.4402	3648.94	3844.42	3844.42	73.68	No	Si
SLU 39	8.35	-441.49	-9700	-0.0000447	0.0003743	0.0035	1.4402	5334.63	6307.46	6307.46	14.29	No	Si
SLU 39	11.87	89.72	-4918	-0.0000198	0.0003743	0.0035	1.4402	3117.38	3332.46	3332.46	37.14	No	Si
SLU 84	8.35	-511.88	-11846	-0.000055	0.0003743	0.0035	1.4402	6069.19	7286.49	7286.49	14.23	No	Si
SLU 84	11.87	25.17	-6243	-0.000024	0.0003743	0.0035	1.4402	3812.04	4011.29	4011.29	159.34	No	Si
SLU 42	8.35	-455.05	-10051	-0.0000464	0.0003743	0.0035	1.4402	5466.06	6472.96	6472.96	14.22	No	Si
SLU 42	11.87	62.72	-5240	-0.0000206	0.0003743	0.0035	1.4402	3291.79	3496.79	3496.79	55.76	No	Si
SLU 40	8.35	-450.89	-9748	-0.0000451	0.0003743	0.0035	1.4402	5352.79	6330.84	6330.84	14.04	No	Si
SLU 40	11.87	88.6	-4951	-0.0000199	0.0003743	0.0035	1.4402	3135.35	3349.75	3349.75	37.81	No	Si
SLU 31	8.35	-426.57	-9369	-0.0000431	0.0003743	0.0035	1.4402	5207.02	6144.07	6144.07	14.4	No	Si
SLU 31	11.87	59.81	-4879	-0.0000192	0.0003743	0.0035	1.4402	3095.71	3311.46	3311.46	55.37	No	Si
SLU 83	8.35	-502.48	-11798	-0.0000546	0.0003743	0.0035	1.4402	6054.55	7265.2	7265.2	14.46	No	Si
SLU 83	11.87	26.3	-6210	-0.0000238	0.0003743	0.0035	1.4402	3795.55	3994.17	3994.17	151.87	No	Si
SLU 73	8.35	-483.4	-11164	-0.0000516	0.0003743	0.0035	1.4402	5853.13	6986.9	6986.9	14.45	No	Si
SLU 73	11.87	22.27	-5882	-0.0000225	0.0003743	0.0035	1.4402	3628.67	3824.05	3824.05	171.74	No	Si
SLU 41	8.35	-445.65	-10003	-0.000046	0.0003743	0.0035	1.4402	5448.41	6450.74	6450.74	14.47	No	Si
SLU 41	11.87	63.84	-5207	-0.0000205	0.0003743	0.0035	1.4402	3274.15	3480.21	3480.21	54.51	No	Si
SLU 82	8.35	-507.72	-11542	-0.0000536	0.0003743	0.0035	1.4402	5975.04	7152.17	7152.17	14.09	No	Si
SLU 82	11.87	51.06	-5954	-0.0000232	0.0003743	0.0035	1.4402	3665.76	3861.38	3861.38	75.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	8.35	1114.73	-367	-0.0099716	0.0005615	0.0035	1.1522		380.66	380.66	0.34		No
SLV 9	11.87	-280.08	207	0.026031	0.0005615	0.0035	1.1522		0	0	0		No
SLV 6	8.35	761.55	-1629	-0.0000228	0.0005615	0.0035	1.4402		1261.78	1261.78	1.66		Si
SLV 6	11.87	-902.58	-204	-0.0006861	0.0005615	0.0035	1.1522		658.61	658.61	0.73		No
SLV 13	8.35	630.51	-3757	-0.0000236	0.0005615	0.0035	1.4402		2689.11	2689.11	4.26		Si
SLV 13	11.87	814.67	-2315	-0.0000222	0.0005615	0.0035	1.4402		1729.42	1729.42	2.12		Si
SLV 5	8.35	786.73	-1534	-0.0000262	0.0005615	0.0035	1.4402		1196.12	1196.12	1.52		Si
SLV 5	11.87	-871.93	-174	-0.0006815	0.0005615	0.0035	1.1522		637.18	637.18	0.73		No
SLV 16	8.35	-156.94	-7997	-0.0000325	0.0005615	0.0035	1.4402		5684.42	5684.42	36.22		Si
SLV 16	11.87	1107.11	-4910	-0.0000354	0.0005615	0.0035	1.4402		3432.43	3432.43	3.1		Si
SLV 14	8.35	591.87	-3903	-0.0000235	0.0005615	0.0035	1.4402		2784.16	2784.16	4.7		Si
SLV 14	11.87	767.62	-2362	-0.0000211	0.0005615	0.0035	1.4402		1761.22	1761.22	2.29		Si
SLV 10	8.35	1089.56	-462	-0.0087694	0.0005615	0.0035	1.1522		447.49	447.49	0.41		No
SLV 10	11.87	-310.74	176	0.0223149	0.0005615	0.0035	1.1522		0	0	0		No
SLV 2	8.35	-501.47	-7792	-0.0000371	0.0005615	0.0035	1.4402		5563.87	5563.87	11.1		Si
SLV 2	11.87	-1205.19	-3629	-0.0000334	0.0005615	0.0035	1.4402		2984.07	2984.07	2.48		Si
SLV 1	8.35	-462.83	-7647	-0.000036	0.0005615	0.0035	1.4402		5478.31	5478.31	11.84		Si
SLV 1	11.87	-1158.14	-3583	-0.0000322	0.0005615	0.0035	1.4402		2953.14	2953.14	2.55		Si
SLV 15	8.35	-118.31	-7851	-0.0000313	0.0005615	0.0035	1.4402		5598.54	5598.54	47.32		Si
SLV 15	11.87	1154.16	-4864	-0.000036	0.0005615	0.0035	1.4402		3402.6	3402.6	2.95		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	8.35	-476.05	-11691	-9735	-2779	1.4402	1.4402	-24142	10163	4098	40441	12075	3673	15748	No	5.67	Si
SLU 79	11.87	-27.62	-6405	-5333	199	1.4402	1.4402	-13226	8708	3512	40441	12075	3673	15748	No	79.33	Si
SLU 80	8.35	-485.45	-11739	-9775	-2794	1.4402	1.4402	-24241	10177	4104	40441	12075	3673	15748	No	5.64	Si
SLU 80	11.87	-28.74	-6438	-5361	193	1.4402	1.4402	-13293	8717	3515	40441	12075	3673	15748	No	81.52	Si
SLU 74	8.35	-483.02	-11532	-9603	-2851	1.4402	1.4402	-23813	10120	4081	40441	12075	3673	15748	No	5.52	Si
SLU 74	11.87	32.41	-6199	-5162	67	1.4402	1.4402	-12801	8651	3489	40441	12075	3673	15748	No	234.39	Si
SLU 78	8.35	-496.58	-11884	-9896	-2890	1.4402	1.4402	-24539	10216	4120	40441	12075	3673	15748	No	5.45	Si
SLU 78	11.87	5.41	-6521	-5430	134	1.4402	1.4402	-13466	8740	3524	40441	12075	3673	15748	No	117.22	Si
SLU 82	8.35	-507.72	-11542	-9611	-2958	1.4402	1.4402	-23834	10122	4082	40441	12075	3673	15748	No	5.32	Si
SLU 82	11.87	51.06	-5954	-4958	-90	1.4402	1.4402	-12295	8584	3461	40441	12075	3673	15748	No	174.65	Si
SLU 84	8.35	-511.88	-11846	-9864	-2983	1.4402	1.4402	-24462	10206	4116	40441	12075	3673	15748	No	5.28	Si
SLU 84	11.87	25.17	-6243	-5199	-18	1.4402	1.4402	-12891	8663	3494	40441	12075	3673	15748	No	890.94	Si
SLU 83	8.35	-502.48	-11798	-9825	-2968	1.4402	1.4402	-24363	10193	4110	40441	12075	3673	15748	No	5.31	Si
SLU 83	11.87	26.3	-6210	-5171	-12	1.4402	1.4402	-12824	8654	3490	40441	12075	3673	15748	No	1276.32	Si
SLU 75	8.35	-492.43	-11580	-9643	-2865	1.4402	1.4402	-23912	10133	4086	40441	12075	3673	15748	No	5.5	Si
SLU 75	11.87	31.29	-6232	-5190	62	1.4402	1.4402	-12869	8660	3492	40441	12075	3673	15748	No	254.61	Si
SLU 81	8.35	-498.32	-11494	-9572	-2944	1.4402	1.4402	-23735	10109	4077	40441	12075	3673	15748	No	5.35	Si
SLU 81	11.87	52.18	-5921	-4931	-85	1.4402	1.4402	-12227	8575	3458	40441	12075	3673	15748	No	185.64	Si
SLU 77	8.35	-487.18	-11836	-9856	-2875	1.4402	1.4402	-24440	10203	4115	40441	12075	3673	15748	No	5.48	Si
SLU 77	11.87	6.53	-6488	-5403	140	1.4402	1.4402	-13398	8731	3521	40441	12075	3673	15748	No	112.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	8.35	-156.94	-7997	-6659	-6528	1.4402	1.4402	-16513	13719	5532	40441	18113	3673	21786		3.34	Si
SLV 16	11.87	1107.11	-4910	-4089	-4206	1.4402	1.4402	-10140	12445	5018	40441	18113	3673	21786		5.18	Si
SLV 2	8.35	-501.47	-7792	-6489	3313	1.4402	1.4402	-16091	13635	5498	40441	18113	3673	21786		6.58	Si
SLV 2	11.87	-1205.19	-3629	-3022	4929	1.4402	1.1641	-9310	12279	4002	40441	18113	3673	21786		4.42	Si
SLV 12	8.35	-1406.5	-14109	-11749	-4385	1.4402	1.4402	-29134	16244	6550	40441	18113	3673	21786		4.97	Si
SLV 12	11.87	820.9	-8320	-6928	-4109	1.4402	1.4402	-17179	13853	5586	40441	18113	3673	21786		5.3	Si
SLV 14	8.35	591.87	-3903	-3250	-5705	1.4402	1.4402	-8059	12028	4851	40441	18113	3673	21786		3.82	Si
SLV 14	11.87	767.62	-2362	-1967	-2190	1.4402	1.1852	-4877	11392	3781	40441	18113	3673	21786		9.95	Si
SLV 11	8.35	-1381.33	-14014	-11670	-4580	1.4402	1.4402	-28939	16204	6535	40441	18113	3673	21786		4.76	Si
SLV 11	11.87	851.56	-8289	-6902	-4265	1.4402	1.4402	-17116	13840	5581	40441	18113	3673	21786		5.11	Si
SLV 13	8.35	630.51	-3757	-3129	-6005	1.4402	1.4402	-7758	11968	4826	40441	18113	3673	21786		3.63	Si
SLV 13	11.87	814.67	-2315	-1928	-2429	1.4402	1.1046	-4780	11373	3517	40441	18113	3673	21786		8.97	Si
SLV 15	8.35	-118.31	-7851	-6538	-6828	1.4402	1.4402	-16212	13659	5508	40441	18113	3673	21786		3.19	Si
SLV 15	11.87	1154.16	-4864	-4050	-4446	1.4402	1.4402	-10043	12425	5011	40441	18113	3673	21786		4.9	Si
SLV 5	8.35	786.73	-1534	-1278	870	1.4402	0.6221	-3168	11050	1925	40441	18113	3673	21786		25.05	Si
SLV 5	11.87	-871.93	-174	-144	4592	1.1522	0	0	0	0	40441	14491	2938	17429		3.8	Si
SLV 6	8.35	761.55	-1629	-1357	1065	1.4402	0.758	-3364	11090	2354	40441	18113	3673	21786		20.46	Si
SLV 6	11.87	-902.58	-204	-170	4748	1.1522	0	0	0	0	40441	14491	2938	17429		3.67	Si
SLV 1	8.35	-462.83	-7647	-6368	3013	1.4402	1.4402	-15790	13575	5474	40441	18113	3673	21786		7.23	Si
SLV 1	11.87	-1158.14	-3583	-2983	4690	1.4402	1.1905	-8985	12214	4071	40441	18113	3673	21786		4.65	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.46	0	180	178.99	0	0	No, Trazione
SLV 9	179667	0.46	0	176	178.99	0	0	No, Trazione
SLV 6	179667	0.46	0	174	178.99	0	0	No, Trazione
SLV 10	179667	0.46	0	171	178.99	0	0	No, Trazione
SLV 1	179667	0.46	9730	-3924	178.99	514.3	2.87	Si
SLV 2	179667	0.46	9749	-3932	178.99	515.27	2.88	Si
SLV 13	179667	0.46	9758	-3935	178.99	515.73	2.88	Si
SLV 14	179667	0.46	9778	-3943	178.99	516.7	2.89	Si
SLV 3	179667	0.46	18462	-7445	178.99	916.31	5.12	Si
SLV 4	179667	0.46	18482	-7453	178.99	917.16	5.12	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-8700	-15276	-132	0.842	1086.6	0.947	12.92741	13.33129	No
SLV 7	-8669	-15181	-133	0.845	1083.5	0.947	12.96509	13.33129	No
SLV 12	-8320	-14109	-75	0.88	1048.1	0.945	13.53069	13.33129	Si
SLV 11	-8289	-14014	-76	0.883	1045	0.945	13.57191	13.33129	Si
SLV 4	-6178	-11886	-122	1.115	831.2	0.934	17.35979	6.37081	Si
SLV 3	-6131	-11741	-124	1.122	826.5	0.933	17.46738	6.37081	Si
SLV 16	-4910	-7997	68	1.344	703.4	0.924	21.13706	6.37081	Si
SLV 15	-4864	-7851	67	1.355	698.7	0.924	21.30706	6.37081	Si
SLV 2	-3629	-7792	-56	1.687	575.1	0.912	26.88255	6.37081	Si
SLV 1	-3583	-7647	-58	1.703	570.4	0.912	27.14389	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.041	SLU 40	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	5.28	SLU 84	Si
PF_SLV	0	SLV 9	No
V_SLV	3.191	SLV 15	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.97	SLV 8	No

Maschio 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.384	-13.778	-0.354	Z medio 922 cm	L7	3.03	0.28	2.651	1.783	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	10.09	1556.86	-14084	-0.000031	0.0003743	0.0035	3.0298	17856.55	18730.69	18730.69	12.03	No	Si
SLU 19	11.87	946.71	-9818	-0.0000208	0.0003743	0.0035	3.0298	13182.4	14008.92	14008.92	14.8	No	Si
SLU 20	10.09	1590.48	-14662	-0.0000322	0.0003743	0.0035	3.0298	18441.02	19393.34	19393.34	12.19	No	Si
SLU 20	11.87	968.64	-10362	-0.0000219	0.0003743	0.0035	3.0298	13813.52	14594.35	14594.35	15.07	No	Si
SLU 41	10.09	1736.24	-16537	-0.0000363	0.0003743	0.0035	3.0298	20255.27	21580.07	21580.07	12.43	No	Si
SLU 41	11.87	1134.58	-11671	-0.0000249	0.0003743	0.0035	3.0298	15291.04	16023.87	16023.87	14.12	No	Si
SLU 40	10.09	1702.61	-15959	-0.0000351	0.0003743	0.0035	3.0298	19708.83	20898.77	20898.77	12.27	No	Si
SLU 40	11.87	1112.65	-11127	-0.0000238	0.0003743	0.0035	3.0298	14684.89	15427.02	15427.02	13.87	No	Si
SLU 60	10.09	1785.06	-17252	-0.0000379	0.0003743	0.0035	3.0298	20914.38	22431.54	22431.54	12.57	No	Si
SLU 60	11.87	1017.36	-12007	-0.0000251	0.0003743	0.0035	3.0298	15660.48	16395.12	16395.12	16.12	No	Si
SLU 18	10.09	1581.81	-14070	-0.000031	0.0003743	0.0035	3.0298	17842.1	18714.54	18714.54	11.83	No	Si
SLU 18	11.87	960.98	-9808	-0.0000208	0.0003743	0.0035	3.0298	13170.79	13998.28	13998.28	14.57	No	Si
SLU 61	10.09	1760.1	-17266	-0.0000378	0.0003743	0.0035	3.0298	20927.26	22448.48	22448.48	12.75	No	Si
SLU 61	11.87	1003.09	-12017	-0.0000251	0.0003743	0.0035	3.0298	15671.32	16406.11	16406.11	16.36	No	Si
SLU 21	10.09	1565.52	-14676	-0.0000321	0.0003743	0.0035	3.0298	18455.19	19409.63	19409.63	12.4	No	Si
SLU 21	11.87	954.37	-10371	-0.0000219	0.0003743	0.0035	3.0298	13824.94	14605.08	14605.08	15.3	No	Si
SLU 39	10.09	1727.57	-15945	-0.0000352	0.0003743	0.0035	3.0298	19695.31	20882.18	20882.18	12.09	No	Si
SLU 39	11.87	1126.92	-11117	-0.0000239	0.0003743	0.0035	3.0298	14673.73	15416.18	15416.18	13.68	No	Si
SLU 42	10.09	1711.28	-16551	-0.0000363	0.0003743	0.0035	3.0298	20268.5	21596.87	21596.87	12.62	No	Si
SLU 42	11.87	1120.31	-11681	-0.0000249	0.0003743	0.0035	3.0298	15302	16034.8	16034.8	14.31	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	10.09	3499.31	-12955	-0.0000353	0.0005615	0.0035	3.0298		18597.76	18597.76	5.31		Si
SLD 10	11.87	934.64	-8811	-0.0000187	0.0005615	0.0035	3.0298		13104.57	13104.57	14.02		Si
SLV 5	10.09	5847.43	-12632	-0.0000431	0.0005615	0.0035	3.0298		18179.43	18179.43	3.11		Si
SLV 5	11.87	1192.85	-7921	-0.0000181	0.0005615	0.0035	3.0298		11887.19	11887.19	9.97		Si
SLV 6	10.09	5789.21	-12712	-0.000043	0.0005615	0.0035	3.0298		18282.51	18282.51	3.16		Si
SLV 6	11.87	1167.88	-7968	-0.000018	0.0005615	0.0035	3.0298		11950.49	11950.49	10.23		Si
SLV 9	10.09	6673.93	-12121	-0.0000452	0.0005615	0.0035	3.0298		17512.47	17512.47	2.62		Si
SLV 9	11.87	1461.19	-8032	-0.0000192	0.0005615	0.0035	3.0298		12038.75	12038.75	8.24		Si
SLD 9	10.09	3524.78	-12920	-0.0000354	0.0005615	0.0035	3.0298		18552.8	18552.8	5.26		Si
SLD 9	11.87	945.56	-8791	-0.0000187	0.0005615	0.0035	3.0298		13076.86	13076.86	13.83		Si
SLV 13	10.09	4014.95	-12296	-0.0000359	0.0005615	0.0035	3.0298		17741.76	17741.76	4.42		Si
SLV 13	11.87	1239.93	-9127	-0.0000204	0.0005615	0.0035	3.0298		13531.46	13531.46	10.91		Si
SLV 8	10.09	-4607.41	-14978	-0.0000431	0.0005615	0.0035	3.0298		23177.71	23177.71	5.03		Si
SLV 8	11.87	-377.83	-10760	-0.0000203	0.0005615	0.0035	3.0298		17719.86	17719.86	46.9		Si
SLV 14	10.09	3925.6	-12418	-0.0000359	0.0005615	0.0035	3.0298		17901.03	17901.03	4.56		Si
SLV 14	11.87	1201.61	-9198	-0.0000204	0.0005615	0.0035	3.0298		13627.62	13627.62	11.34		Si
SLV 7	10.09	-4549.19	-14898	-0.0000427	0.0005615	0.0035	3.0298		23075.15	23075.15	5.07		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	11.87	-352.86	-10714	-0.0000201	0.0005615	0.0035	3.0298		17658.17	17658.17	50.04		Si
SLV 10	10.09	6615.72	-12200	-0.0000451	0.0005615	0.0035	3.0298		17616.55	17616.55	2.66		Si
SLV 10	11.87	1436.22	-8079	-0.0000192	0.0005615	0.0035	3.0298		12102.11	12102.11	8.43		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 43	10.09	1047.32	-15931	-13266	1047	3.0298	3.0298	-15638	9030	7660	28547	25403	7726	33129	No	31.65	Si
SLU 43	11.87	433.97	-11025	-9180	985	3.0298	3.0298	-10822	8387	7115	28547	25403	7726	33129	No	33.65	Si
SLU 51	10.09	1039.7	-17130	-14265	1205	3.0298	3.0298	-16815	9186	7793	28547	25403	7726	33129	No	27.49	Si
SLU 51	11.87	435.03	-12142	-10111	1095	3.0298	3.0298	-11918	8534	7239	28547	25403	7726	33129	No	30.25	Si
SLU 47	10.09	1014.39	-16547	-13779	1080	3.0298	3.0298	-16243	9110	7728	28547	25403	7726	33129	No	30.67	Si
SLU 47	11.87	417.85	-11595	-9655	994	3.0298	3.0298	-11381	8462	7179	28547	25403	7726	33129	No	33.31	Si
SLU 44	10.09	1005.72	-15955	-13286	982	3.0298	3.0298	-15661	9033	7663	28547	25403	7726	33129	No	33.75	Si
SLU 44	11.87	410.19	-11041	-9194	920	3.0298	3.0298	-10838	8390	7117	28547	25403	7726	33129	No	36.01	Si
SLU 50	10.09	1064.65	-17116	-14253	1244	3.0298	3.0298	-16801	9185	7792	28547	25403	7726	33129	No	26.63	Si
SLU 50	11.87	449.3	-12132	-10102	1134	3.0298	3.0298	-11908	8532	7238	28547	25403	7726	33129	No	29.22	Si
SLU 46	10.09	1089.45	-16982	-14142	937	3.0298	3.0298	-16670	9167	7777	28547	25403	7726	33129	No	35.36	Si
SLU 46	11.87	487.28	-11948	-9949	895	3.0298	3.0298	-11728	8508	7218	28547	25403	7726	33129	No	37.02	Si
SLU 49	10.09	1098.12	-17575	-14635	1036	3.0298	3.0298	-17251	9245	7843	28547	25403	7726	33129	No	31.99	Si
SLU 49	11.87	494.94	-12502	-10410	969	3.0298	3.0298	-12271	8581	7279	28547	25403	7726	33129	No	34.17	Si
SLU 48	10.09	1123.08	-17561	-14623	1075	3.0298	3.0298	-17237	9243	7841	28547	25403	7726	33129	No	30.83	Si
SLU 48	11.87	509.21	-12492	-10402	1008	3.0298	3.0298	-12262	8579	7278	28547	25403	7726	33129	No	32.86	Si
SLU 45	10.09	1114.41	-16968	-14130	976	3.0298	3.0298	-16656	9165	7775	28547	25403	7726	33129	No	33.94	Si
SLU 45	11.87	501.55	-11938	-9941	934	3.0298	3.0298	-11718	8507	7217	28547	25403	7726	33129	No	35.48	Si
SLU 58	10.09	1581.07	-18041	-15023	915	3.0298	3.0298	-17708	9306	7894	28547	25403	7726	33129	No	36.19	Si
SLU 58	11.87	857.67	-12819	-10675	562	3.0298	3.0298	-12583	8622	7315	28547	25403	7726	33129	No	58.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	10.09	6673.93	-12121	-10093	9433	3.0298	2.8928	-11897	12796	10365	28547	38104	7726	38911		4.13	Si
SLV 9	11.87	1461.19	-8032	-6689	11208	3.0298	3.0298	-7884	11994	10175	28547	38104	7726	38721		3.45	Si
SLV 11	10.09	-3722.68	-14387	-11980	-8831	3.0298	3.0298	-14122	13241	11233	28547	38104	7726	39779		4.5	Si
SLV 11	11.87	-84.52	-10825	-9014	-11035	3.0298	3.0298	-10626	12542	10640	28547	38104	7726	39186		3.55	Si
SLV 10	10.09	6615.72	-12200	-10159	9382	3.0298	2.9179	-11975	12812	10467	28547	38104	7726	39014		4.16	Si
SLV 10	11.87	1436.22	-8079	-6727	11199	3.0298	3.0298	-7930	12003	10182	28547	38104	7726	38729		3.46	Si
SLV 5	10.09	5847.43	-12632	-10519	9727	3.0298	3.0298	-12399	12897	10941	28547	38104	7726	39487		4.06	Si
SLV 5	11.87	1192.85	-7921	-6596	11621	3.0298	3.0298	-7775	11972	10156	28547	38104	7726	38703		3.33	Si
SLV 12	10.09	-3780.9	-14466	-12046	-8882	3.0298	3.0298	-14200	13257	11246	28547	38104	7726	39793		4.48	Si
SLV 12	11.87	-109.49	-10872	-9053	-11044	3.0298	3.0298	-10671	12551	10647	28547	38104	7726	39194		3.55	Si
SLD 6	10.09	3146.11	-13174	-10970	4519	3.0298	3.0298	-12931	13003	11031	28547	38104	7726	39577		8.76	Si
SLD 6	11.87	820.12	-8764	-7298	5302	3.0298	3.0298	-8603	12137	10296	28547	38104	7726	38843		7.33	Si
SLD 5	10.09	3171.57	-13139	-10941	4541	3.0298	3.0298	-12897	12996	11025	28547	38104	7726	39572		8.71	Si
SLD 5	11.87	831.04	-8744	-7281	5306	3.0298	3.0298	-8583	12133	10293	28547	38104	7726	38840		7.32	Si
SLV 8	10.09	-4607.41	-14978	-12472	-8587	3.0298	3.0298	-14702	13357	11331	28547	38104	7726	39878		4.64	Si
SLV 8	11.87	-377.83	-10760	-8960	-10631	3.0298	3.0298	-10562	12529	10629	28547	38104	7726	39175		3.68	Si
SLV 6	10.09	5789.21	-12712	-10585	9676	3.0298	3.0298	-12478	12912	10954	28547	38104	7726	39500		4.08	Si
SLV 6	11.87	1167.88	-7968	-6635	11612	3.0298	3.0298	-7821	11981	10164	28547	38104	7726	38710		3.33	Si
SLV 7	10.09	-4549.19	-14898	-12406	-8537	3.0298	3.0298	-14624	13341	11318	28547	38104	7726	39865		4.67	Si
SLV 7	11.87	-352.86	-10714	-8922	-10622	3.0298	3.0298	-10517	12520	10621	28547	38104	7726	39168		3.69	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.979 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.47	11065	-9387	222.15	1218.97	5.49	Si
SLV 10	179667	0.47	11149	-9458	222.15	1227.46	5.53	Si
SLV 5	179667	0.47	11550	-9799	222.15	1268.06	5.71	Si
SLV 6	179667	0.47	11634	-9870	222.15	1276.48	5.75	Si
SLV 13	179667	0.47	11974	-10158	222.15	1310.65	5.9	Si
SLV 14	179667	0.47	12103	-10267	222.15	1323.49	5.96	Si
SLV 15	179667	0.47	13258	-11247	222.15	1437.9	6.47	Si
SLV 16	179667	0.47	13386	-11356	222.15	1450.48	6.53	Si
SLV 1	179667	0.47	13591	-11530	222.15	1470.56	6.62	Si
SLV 2	179667	0.47	13720	-11639	222.15	1483.07	6.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.979 Wa = 0.05 Ta = 0.0419

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-10872	-14466	588	1.335	1426.5	0.938	20.68775	7.74328	Si
SLV 11	-10825	-14387	588	1.34	1421.8	0.938	20.76329	7.74328	Si
SLV 8	-10760	-14978	-271	1.371	1415.3	0.938	21.25498	7.74328	Si
SLV 7	-10714	-14898	-270	1.376	1410.6	0.937	21.33344	7.74328	Si
SLV 6	-7968	-12712	-563	1.71	1133.4	0.925	26.86498	7.74328	Si
SLV 10	-8079	-12200	296	1.719	1144.5	0.926	26.97692	7.74328	Si
SLV 5	-7921	-12632	-563	1.718	1128.7	0.925	26.99357	7.74328	Si
SLV 9	-8032	-12121	296	1.726	1139.9	0.926	27.10452	7.74328	Si
SLV 16	-10036	-13098	1488	1.349	1342	0.935	20.98024	5.18687	Si
SLV 15	-9965	-12976	1488	1.357	1334.8	0.934	21.10651	5.18687	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.831	SLU 18	Si
V_SLU	26.63	SLU 50	Si
PF_SLV	2.624	SLV 9	Si
V_SLV	3.33	SLV 5	Si
PFFP_SLV	5.487	SLV 9	Si
R_SLV	2.672	SLV 12	Si

Maschio 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L6	L7	2.105	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	9.25	1251.86	-12777	-0.0000431	0.0003743	0.0035	2.105	10584.12	11534.28	11534.28	9.21	No	Si
SLU 45	11.05	238.92	-10262	-0.0000284	0.0003743	0.0035	2.105	8953.42	9424.32	9424.32	39.45	No	Si
SLU 61	9.25	1315.4	-13668	-0.0000461	0.0003743	0.0035	2.105	11108.88	12131.24	12131.24	9.22	No	Si
SLU 61	11.05	311.48	-11153	-0.0000314	0.0003743	0.0035	2.105	9556.82	10162.2	10162.2	32.63	No	Si
SLU 43	9.25	1223.21	-12183	-0.0000412	0.0003743	0.0035	2.105	10218.89	11029.23	11029.23	9.02	No	Si
SLU 43	11.05	181.66	-9668	-0.0000264	0.0003743	0.0035	2.105	8535.77	8941.23	8941.23	49.22	No	Si
SLU 53	9.25	1321.35	-13824	-0.0000466	0.0003743	0.0035	2.105	11197.57	12226.01	12226.01	9.25	No	Si
SLU 53	11.05	330.76	-11309	-0.000032	0.0003743	0.0035	2.105	9659.23	10292.16	10292.16	31.12	No	Si
SLU 52	9.25	1280.91	-13213	-0.0000446	0.0003743	0.0035	2.105	10844.29	11846.98	11846.98	9.25	No	Si
SLU 52	11.05	271.19	-10698	-0.0000298	0.0003743	0.0035	2.105	9252.06	9783.65	9783.65	36.08	No	Si
SLU 81	9.25	1398.53	-14919	-0.0000504	0.0003743	0.0035	2.105	11798.16	12901.52	12901.52	9.23	No	Si
SLU 81	11.05	429.12	-12372	-0.0000357	0.0003743	0.0035	2.105	10336.86	11190.3	11190.3	26.08	No	Si
SLU 46	9.25	1244.8	-12767	-0.000043	0.0003743	0.0035	2.105	10578.05	11525.72	11525.72	9.26	No	Si
SLU 46	11.05	237.54	-10252	-0.0000284	0.0003743	0.0035	2.105	8946.46	9416.11	9416.11	39.64	No	Si
SLU 44	9.25	1211.43	-12166	-0.0000411	0.0003743	0.0035	2.105	10208.41	11015.03	11015.03	9.09	No	Si
SLU 44	11.05	179.35	-9651	-0.0000263	0.0003743	0.0035	2.105	8523.82	8927.7	8927.7	49.78	No	Si
SLU 64	9.25	1299.27	-13423	-0.0000453	0.0003743	0.0035	2.105	10967.5	11982.21	11982.21	9.22	No	Si
SLU 64	11.05	297.92	-10877	-0.0000305	0.0003743	0.0035	2.105	9372.6	9931.93	9931.93	33.34	No	Si
SLU 60	9.25	1322.47	-13678	-0.0000462	0.0003743	0.0035	2.105	11114.64	12137.35	12137.35	9.18	No	Si
SLU 60	11.05	312.86	-11163	-0.0000314	0.0003743	0.0035	2.105	9563.47	10170.58	10170.58	32.51	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	9.25	2421.67	-10286	-0.0000442	0.0005615	0.0035	2.105		9979.25	9979.25	4.12		Si
SLV 13	11.05	-2172.22	-8740	-0.0000382	0.0005615	0.0035	2.105		9758.05	9758.05	4.49		Si
SLD 16	9.25	1615.76	-10078	-0.0000377	0.0005615	0.0035	2.105		9817.5	9817.5	6.08		Si
SLD 16	11.05	-932.5	-8306	-0.0000279	0.0005615	0.0035	2.105		9364.21	9364.21	10.04		Si
SLV 15	9.25	2403.12	-9530	-0.000042	0.0005615	0.0035	2.105		9392.35	9392.35	3.91		Si
SLV 15	11.05	-2266.99	-8000	-0.0000369	0.0005615	0.0035	2.105		9082.4	9082.4	4.01		Si
SLV 14	9.25	2454.51	-10480	-0.000045	0.0005615	0.0035	2.105		10129.99	10129.99	4.13		Si
SLV 14	11.05	-2390.45	-8933	-0.0000403	0.0005615	0.0035	2.105		9928.78	9928.78	4.15		Si
SLV 4	9.25	-416.53	-10418	-0.0000297	0.0005615	0.0035	2.105		11239.14	11239.14	26.98		Si
SLV 4	11.05	2631.93	-8060	-0.0000398	0.0005615	0.0035	2.105		8134.94	8134.94	3.09		Si
SLV 2	9.25	-397.97	-11174	-0.0000316	0.0005615	0.0035	2.105		11894.07	11894.07	29.89		Si
SLV 2	11.05	2726.7	-8800	-0.0000425	0.0005615	0.0035	2.105		8801.74	8801.74	3.23		Si
SLV 1	9.25	-430.81	-10981	-0.0000313	0.0005615	0.0035	2.105		11729.55	11729.55	27.23		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	11.05	2944.93	-8607	-0.0000435	0.0005615	0.0035	2.105		8630.17	8630.17	2.93		Si
SLV 16	9.25	2435.95	-9723	-0.0000428	0.0005615	0.0035	2.105		9541.99	9541.99	3.92		Si
SLV 16	11.05	-2485.22	-8193	-0.000039	0.0005615	0.0035	2.105		9260.78	9260.78	3.73		Si
SLD 15	9.25	1601.66	-9995	-0.0000373	0.0005615	0.0035	2.105		9752.96	9752.96	6.09		Si
SLD 15	11.05	-838.76	-8223	-0.000027	0.0005615	0.0035	2.105		9288.13	9288.13	11.07		Si
SLV 3	9.25	-449.36	-10224	-0.0000294	0.0005615	0.0035	2.105		11067.59	11067.59	24.63		Si
SLV 3	11.05	2850.16	-7867	-0.0000409	0.0005615	0.0035	2.105		7957.11	7957.11	2.79		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 53	9.25	1321.35	-13824	-11511	590	2.105	2.105	-19530	9549	5628	40441	17649	5368	23017	No	39	Si
SLU 53	11.05	330.76	-11309	-9417	590	2.105	2.105	-15977	9075	5349	40441	17649	5368	23017	No	39	Si
SLU 45	9.25	1251.86	-12777	-10639	603	2.105	2.105	-18051	9351	5512	40441	17649	5368	23017	No	38.2	Si
SLU 45	11.05	238.92	-10262	-8545	603	2.105	2.105	-14498	8878	5232	40441	17649	5368	23017	No	38.2	Si
SLU 46	9.25	1244.8	-12767	-10631	599	2.105	2.105	-18037	9349	5510	40441	17649	5368	23017	No	38.4	Si
SLU 46	11.05	237.54	-10252	-8537	599	2.105	2.105	-14484	8876	5231	40441	17649	5368	23017	No	38.4	Si
SLU 60	9.25	1322.47	-13678	-11390	601	2.105	2.105	-19325	9521	5612	40441	17649	5368	23017	No	38.32	Si
SLU 60	11.05	312.86	-11163	-9296	601	2.105	2.105	-15772	9047	5332	40441	17649	5368	23017	No	38.32	Si
SLU 65	9.25	1287.49	-13406	-11164	591	2.105	2.105	-18941	9470	5582	40441	17649	5368	23017	No	38.95	Si
SLU 65	11.05	295.61	-10860	-9043	591	2.105	2.105	-15343	8990	5299	40441	17649	5368	23017	No	38.95	Si
SLU 61	9.25	1315.4	-13668	-11382	598	2.105	2.105	-19311	9519	5611	40441	17649	5368	23017	No	38.52	Si
SLU 61	11.05	311.48	-11153	-9287	598	2.105	2.105	-15758	9045	5331	40441	17649	5368	23017	No	38.52	Si
SLU 64	9.25	1299.27	-13423	-11178	596	2.105	2.105	-18965	9473	5583	40441	17649	5368	23017	No	38.6	Si
SLU 64	11.05	297.92	-10877	-9057	596	2.105	2.105	-15367	8993	5301	40441	17649	5368	23017	No	38.6	Si
SLU 44	9.25	1211.43	-12166	-10131	613	2.105	2.105	-17188	9236	5444	40441	17649	5368	23017	No	37.54	Si
SLU 44	11.05	179.35	-9651	-8036	613	2.105	2.105	-13635	8762	5165	40441	17649	5368	23017	No	37.54	Si
SLU 52	9.25	1280.91	-13213	-11002	601	2.105	2.105	-18667	9433	5560	40441	17649	5368	23017	No	38.31	Si
SLU 52	11.05	271.19	-10698	-8908	601	2.105	2.105	-15114	8960	5281	40441	17649	5368	23017	No	38.31	Si
SLU 43	9.25	1223.21	-12183	-10145	618	2.105	2.105	-17212	9239	5446	40441	17649	5368	23017	No	37.22	Si
SLU 43	11.05	181.66	-9668	-8050	618	2.105	2.105	-13659	8766	5166	40441	17649	5368	23017	No	37.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	9.25	2421.67	-10286	-8566	2599	2.105	2.105	-14533	13323	7853	40441	26474	5368	31841		12.25	Si
SLV 13	11.05	-2172.22	-8740	-7278	1969	2.105	2.105	-12348	12886	7595	40441	26474	5368	31841		16.17	Si
SLV 2	9.25	-397.97	-11174	-9305	-1610	2.105	2.105	-15787	13574	8000	40441	26474	5368	31841		19.77	Si
SLV 2	11.05	2726.7	-8800	-7328	-1022	2.105	2.105	-12433	12903	7605	40441	26474	5368	31841		31.16	Si
SLV 15	9.25	2403.12	-9530	-7936	2530	2.105	2.105	-13464	13110	7727	40441	26474	5368	31841		12.58	Si
SLV 15	11.05	-2266.99	-8000	-6661	1942	2.105	2.105	-11302	12677	7472	40441	26474	5368	31841		16.4	Si
SLV 1	9.25	-430.81	-10981	-9144	-1750	2.105	2.105	-15514	13519	7968	40441	26474	5368	31841		18.2	Si
SLV 1	11.05	2944.93	-8607	-7167	-1161	2.105	2.105	-12160	12849	7573	40441	26474	5368	31841		27.42	Si
SLV 4	9.25	-416.53	-10418	-8675	-1679	2.105	2.105	-14718	13360	7875	40441	26474	5368	31841		18.96	Si
SLV 4	11.05	2631.93	-8060	-6712	-1049	2.105	2.105	-11388	12694	7482	40441	26474	5368	31841		30.36	Si
SLV 16	9.25	2435.95	-9723	-8097	2670	2.105	2.105	-13737	13164	7759	40441	26474	5368	31841		11.93	Si
SLV 16	11.05	-2485.22	-8193	-6822	2081	2.105	2.105	-11575	12732	7504	40441	26474	5368	31841		15.3	Si
SLD 16	9.25	1615.76	-10078	-8392	1406	2.105	2.105	-14239	13264	7818	40441	26474	5368	31841		22.65	Si
SLD 16	11.05	-932.5	-8306	-6916	1154	2.105	2.105	-11735	12764	7523	40441	26474	5368	31841		27.59	Si
SLV 14	9.25	2454.51	-10480	-8727	2739	2.105	2.105	-14806	13378	7885	40441	26474	5368	31841		11.63	Si
SLV 14	11.05	-2390.45	-8933	-7439	2108	2.105	2.105	-12621	12941	7627	40441	26474	5368	31841		15.1	Si
SLV 3	9.25	-449.36	-10224	-8514	-1819	2.105	2.105	-14445	13306	7842	40441	26474	5368	31841		17.51	Si
SLV 3	11.05	2850.16	-7867	-6551	-1188	2.105	2.0706	-11115	12640	7328	40441	26474	5368	31841		26.79	Si
SLD 14	9.25	1623.88	-10409	-8668	1435	2.105	2.105	-14706	13358	7873	40441	26474	5368	31841		22.19	Si
SLD 14	11.05	-891.04	-8630	-7186	1166	2.105	2.105	-12193	12855	7577	40441	26474	5368	31841		27.31	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	13426	-7913	255.66	1010.44	3.95	Si
SLV 11	179667	0.46	13515	-7966	255.66	1016.53	3.98	Si
SLV 8	179667	0.46	13640	-8039	255.66	1024.96	4.01	Si
SLV 12	179667	0.46	13729	-8092	255.66	1031.02	4.03	Si
SLV 3	179667	0.46	14727	-8680	255.66	1097.99	4.29	Si
SLV 15	179667	0.46	15025	-8856	255.66	1117.82	4.37	Si
SLV 4	179667	0.46	15055	-8873	255.66	1119.78	4.38	Si
SLV 16	179667	0.46	15353	-9049	255.66	1139.51	4.46	Si
SLV 1	179667	0.46	15980	-9419	255.66	1180.62	4.62	Si
SLV 13	179667	0.46	16279	-9594	255.66	1200.05	4.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-8675	-9916	550	1.116	1179.1	0.932	17.40298	13.33129	Si
SLV 9	-8496	-9893	551	1.135	1161	0.931	17.70919	13.33129	Si
SLV 6	-7698	-11612	522	1.229	1080.5	0.927	19.26619	13.33129	Si
SLV 5	-7519	-11589	522	1.252	1062.5	0.926	19.64242	13.33129	Si
SLV 12	-6616	-7571	-518	1.381	971.7	0.921	21.79674	13.33129	Si
SLV 11	-6437	-7549	-518	1.41	953.7	0.92	22.28085	13.33129	Si
SLV 8	-5639	-9267	-547	1.552	873.8	0.915	24.66349	13.33129	Si
SLV 7	-5460	-9245	-547	1.589	856	0.913	25.28643	13.33129	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-9143	-7122	210	1.101	1226.3	0.934	17.13302	6.37081	Si
SLV 13	-8868	-7088	211	1.129	1198.5	0.933	17.57917	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.017	SLU 43	Si
V_SLU	37.217	SLU 43	Si
PF_SLV	2.792	SLV 3	Si
V_SLV	11.626	SLV 14	Si
PFFP_SLV	3.952	SLV 7	Si
R_SLV	1.305	SLV 10	Si

Maschio 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	9.25	3309.23	-35547	-0.0000581	0.0003743	0.0035	3.98	48575.95	54996.18	54996.18	16.62	No	Si
SLU 84	11.05	-1044.88	-31276	-0.0000464	0.0003743	0.0035	3.98	45082.39	54511.1	54511.1	52.17	No	Si
SLU 81	9.25	3292.51	-34832	-0.0000569	0.0003743	0.0035	3.98	48035.9	54113.76	54113.76	16.44	No	Si
SLU 81	11.05	-1256.47	-30561	-0.0000458	0.0003743	0.0035	3.98	44435.25	53627.39	53627.39	42.68	No	Si
SLU 63	9.25	3028.75	-32323	-0.0000524	0.0003743	0.0035	3.98	45997.85	51063.26	51063.26	16.86	No	Si
SLU 63	11.05	-1039.44	-28114	-0.0000416	0.0003743	0.0035	3.98	42084.06	50548.88	50548.88	48.63	No	Si
SLU 73	9.25	3140.36	-33618	-0.0000546	0.0003743	0.0035	3.98	47077.18	52628.23	52628.23	16.76	No	Si
SLU 73	11.05	-1183.06	-29347	-0.0000437	0.0003743	0.0035	3.98	43294.58	52114.14	52114.14	44.05	No	Si
SLU 83	9.25	3317.59	-35607	-0.0000582	0.0003743	0.0035	3.98	48620.3	55070.25	55070.25	16.6	No	Si
SLU 83	11.05	-1041.75	-31336	-0.0000465	0.0003743	0.0035	3.98	45135.7	54584.49	54584.49	52.4	No	Si
SLU 60	9.25	3012.02	-31608	-0.0000512	0.0003743	0.0035	3.98	45376.95	50202.71	50202.71	16.67	No	Si
SLU 60	11.05	-1251.03	-27400	-0.000041	0.0003743	0.0035	3.98	41357.65	49593.42	49593.42	39.64	No	Si
SLU 62	9.25	3037.1	-32383	-0.0000525	0.0003743	0.0035	3.98	46048.96	51135.06	51135.06	16.84	No	Si
SLU 62	11.05	-1036.31	-28174	-0.0000417	0.0003743	0.0035	3.98	42144	50625.87	50625.87	48.85	No	Si
SLU 76	9.25	3165.44	-34392	-0.0000559	0.0003743	0.0035	3.98	47694.58	53573.63	53573.63	16.92	No	Si
SLU 76	11.05	-968.34	-30121	-0.0000445	0.0003743	0.0035	3.98	44028.03	53077.24	53077.24	54.81	No	Si
SLU 82	9.25	3284.15	-34773	-0.0000568	0.0003743	0.0035	3.98	47989.92	54040.24	54040.24	16.45	No	Si
SLU 82	11.05	-1259.6	-30502	-0.0000457	0.0003743	0.0035	3.98	44380.32	53552.44	53552.44	42.52	No	Si
SLU 61	9.25	3003.67	-31548	-0.0000511	0.0003743	0.0035	3.98	45324.22	50130.99	50130.99	16.69	No	Si
SLU 61	11.05	-1254.16	-27340	-0.0000409	0.0003743	0.0035	3.98	41296.09	49513.13	49513.13	39.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	9.25	-6116.54	-28854	-0.0000525	0.0005615	0.0035	3.98		54594.63	54594.63	8.93		Si
SLV 2	11.05	10677.51	-25548	-0.0000573	0.0005615	0.0035	3.98		44815.67	44815.67	4.2		Si
SLV 16	9.25	10963.26	-18754	-0.000048	0.0005615	0.0035	3.98		34780.86	34780.86	3.17		Si
SLV 16	11.05	-13360.5	-15517	-0.0000496	0.0005615	0.0035	3.98		33167.76	33167.76	2.48		Si
SLV 15	9.25	10534.15	-19086	-0.0000476	0.0005615	0.0035	3.98		35263.77	35263.77	3.35		Si
SLV 15	11.05	-12309.75	-15849	-0.0000471	0.0005615	0.0035	3.98		33749.09	33749.09	2.74		Si
SLD 14	9.25	5991.16	-22527	-0.0000431	0.0005615	0.0035	3.98		40312.35	40312.35	6.73		Si
SLD 14	11.05	-6257.22	-19271	-0.000039	0.0005615	0.0035	3.98		39474.82	39474.82	6.31		Si
SLV 14	9.25	11043.08	-20572	-0.0000508	0.0005615	0.0035	3.98		37433.74	37433.74	3.39		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	11.05	-13535.13	-17336	-0.0000518	0.0005615	0.0035	3.98		36244.55	36244.55	2.68		Si
SLV 13	9.25	10613.96	-20905	-0.0000504	0.0005615	0.0035	3.98		37921.03	37921.03	3.57		Si
SLV 13	11.05	-12484.38	-17668	-0.0000497	0.0005615	0.0035	3.98		36795.47	36795.47	2.95		Si
SLV 3	9.25	-6625.46	-27368	-0.0000514	0.0005615	0.0035	3.98		52310.78	52310.78	7.9		Si
SLV 3	11.05	11902.88	-24061	-0.0000577	0.0005615	0.0035	3.98		42590.88	42590.88	3.58		Si
SLV 4	9.25	-6196.35	-27036	-0.00005	0.0005615	0.0035	3.98		51803.36	51803.36	8.36		Si
SLV 4	11.05	10852.13	-23729	-0.000055	0.0005615	0.0035	3.98		42095.86	42095.86	3.88		Si
SLD 16	9.25	5954.87	-21728	-0.0000418	0.0005615	0.0035	3.98		39131.52	39131.52	6.57		Si
SLD 16	11.05	-6180.47	-18471	-0.0000377	0.0005615	0.0035	3.98		38134.1	38134.1	6.17		Si
SLV 1	9.25	-6545.65	-29187	-0.0000539	0.0005615	0.0035	3.98		55107.05	55107.05	8.42		Si
SLV 1	11.05	11728.25	-25880	-0.00006	0.0005615	0.0035	3.98		45315.05	45315.05	3.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	9.25	3012.02	-31608	-26321	2361	3.98	3.98	-23619	10094	11248	40441	33370	10149	43519	No	18.44	Si
SLU 60	11.05	-1251.03	-27400	-22816	2361	3.98	3.98	-20474	9674	10781	40441	33370	10149	43519	No	18.44	Si
SLU 82	9.25	3284.15	-34773	-28956	2517	3.98	3.98	-25983	10409	11600	40441	33370	10149	43519	No	17.29	Si
SLU 82	11.05	-1259.6	-30502	-25399	2517	3.98	3.98	-22792	9983	11125	40441	33370	10149	43519	No	17.29	Si
SLU 84	9.25	3309.23	-35547	-29601	2411	3.98	3.98	-26562	10486	11686	40441	33370	10149	43519	No	18.05	Si
SLU 84	11.05	-1044.88	-31276	-26044	2411	3.98	3.98	-23370	10061	11211	40441	33370	10149	43519	No	18.05	Si
SLU 76	9.25	3165.44	-34392	-28639	2289	3.98	3.98	-25699	10371	11557	40441	33370	10149	43519	No	19.01	Si
SLU 76	11.05	-968.34	-30121	-25082	2289	3.98	3.98	-22508	9945	11083	40441	33370	10149	43519	No	19.01	Si
SLU 75	9.25	3214.62	-35281	-29379	2348	3.98	3.98	-26363	10460	11656	40441	33370	10149	43519	No	18.54	Si
SLU 75	11.05	-1025.1	-31010	-25822	2348	3.98	3.98	-23172	10034	11182	40441	33370	10149	43519	No	18.54	Si
SLU 81	9.25	3292.51	-34832	-29005	2520	3.98	3.98	-26028	10415	11606	40441	33370	10149	43519	No	17.27	Si
SLU 81	11.05	-1256.47	-30561	-25449	2520	3.98	3.98	-22836	9989	11132	40441	33370	10149	43519	No	17.27	Si
SLU 73	9.25	3140.36	-33618	-27994	2394	3.98	3.98	-25120	10294	11471	40441	33370	10149	43519	No	18.18	Si
SLU 73	11.05	-1183.06	-29347	-24438	2394	3.98	3.98	-21929	9868	10997	40441	33370	10149	43519	No	18.18	Si
SLU 74	9.25	3222.98	-35341	-29429	2351	3.98	3.98	-26408	10465	11663	40441	33370	10149	43519	No	18.51	Si
SLU 74	11.05	-1021.97	-31070	-25872	2351	3.98	3.98	-23216	10040	11189	40441	33370	10149	43519	No	18.51	Si
SLU 83	9.25	3317.59	-35607	-29650	2414	3.98	3.98	-26607	10492	11692	40441	33370	10149	43519	No	18.03	Si
SLU 83	11.05	-1041.75	-31336	-26094	2414	3.98	3.98	-23415	10066	11218	40441	33370	10149	43519	No	18.03	Si
SLU 61	9.25	3003.67	-31548	-26271	2358	3.98	3.98	-23574	10088	11242	40441	33370	10149	43519	No	18.46	Si
SLU 61	11.05	-1254.16	-27340	-22766	2358	3.98	3.98	-20429	9668	10774	40441	33370	10149	43519	No	18.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	9.25	-6116.54	-28854	-24027	-9862	3.98	3.98	-21561	14729	16414	40441	50055	10149	56855		5.76	Si
SLV 2	11.05	10677.51	-25548	-21274	-8618	3.98	3.98	-19090	14235	15863	40441	50055	10149	56304		6.53	Si
SLD 14	9.25	5991.16	-22527	-18759	7058	3.98	3.98	-16833	13783	15360	40441	50055	10149	55801		7.91	Si
SLD 14	11.05	-6257.22	-19271	-16047	6574	3.98	3.98	-14400	13297	14818	40441	50055	10149	55259		8.41	Si
SLV 14	9.25	11043.08	-20572	-17131	14254	3.98	3.98	-15372	13491	15035	40441	50055	10149	55475		3.89	Si
SLV 14	11.05	-13535.13	-17336	-14436	13125	3.98	3.6277	-14297	13276	13485	40441	50055	10149	53926		4.11	Si
SLV 1	9.25	-6545.65	-29187	-24304	-10684	3.98	3.98	-21809	14778	16469	40441	50055	10149	56910		5.33	Si
SLV 1	11.05	11728.25	-25880	-21551	-9440	3.98	3.98	-19338	14284	15918	40441	50055	10149	56359		5.97	Si
SLV 4	9.25	-6196.35	-27036	-22513	-10083	3.98	3.98	-20202	14457	16111	40441	50055	10149	56552		5.61	Si
SLV 4	11.05	10852.13	-23729	-19759	-8954	3.98	3.98	-17731	13963	15560	40441	50055	10149	56001		6.25	Si
SLD 16	9.25	5954.87	-21728	-18093	6961	3.98	3.98	-16236	13664	15227	40441	50055	10149	55668		8	Si
SLD 16	11.05	-6180.47	-18471	-15381	6429	3.98	3.98	-13802	13177	14685	40441	50055	10149	55126		8.57	Si
SLV 13	9.25	10613.96	-20905	-17408	13432	3.98	3.98	-15621	13541	15090	40441	50055	10149	55531		4.13	Si
SLV 13	11.05	-12484.38	-17668	-14712	12303	3.98	3.8502	-13735	13164	14191	40441	50055	10149	54632		4.44	Si
SLV 15	9.25	10534.15	-19086	-15893	13212	3.98	3.98	-14262	13269	14787	40441	50055	10149	55228		4.18	Si
SLV 15	11.05	-12309.75	-15849	-13198	11967	3.98	3.64	-13020	13021	13271	40441	50055	10149	53711		4.49	Si
SLV 3	9.25	-6625.46	-27368	-22790	-10905	3.98	3.98	-20450	14507	16166	40441	50055	10149	56607		5.19	Si
SLV 3	11.05	11902.88	-24061	-20036	-9776	3.98	3.98	-17979	14013	15616	40441	50055	10149	56057		5.73	Si
SLV 16	9.25	10963.26	-18754	-15617	14034	3.98	3.98	-14013	13219	14732	40441	50055	10149	55173		3.93	Si
SLV 16	11.05	-13360.5	-15517	-12921	12789	3.98	3.3869	-13714	13160	12480	40441	50055	10149	52921		4.14	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	15240	-16983	483.38	2140.39	4.43	Si
SLV 15	179667	0.46	15538	-17315	483.38	2177.53	4.5	Si
SLV 12	179667	0.46	16024	-17857	483.38	2237.71	4.63	Si
SLV 11	179667	0.46	16218	-18074	483.38	2261.62	4.68	Si
SLV 14	179667	0.46	16867	-18797	483.38	2340.87	4.84	Si
SLV 13	179667	0.46	17165	-19129	483.38	2377.02	4.92	Si
SLV 8	179667	0.46	18279	-20370	483.38	2510.49	5.19	Si
SLV 7	179667	0.46	18473	-20587	483.38	2533.51	5.24	Si
SLV 10	179667	0.46	21448	-23902	483.38	2876.27	5.95	Si
SLV 9	179667	0.46	21642	-24118	483.38	2898.03	6	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-18731	-28379	1234	0.995	2464.7	0.937	15.42366	13.33129	Si
SLV 6	-18621	-28031	1234	1	2453.6	0.937	15.50124	13.33129	Si
SLV 9	-17700	-24148	1213	1.042	2360.4	0.935	16.1973	13.33129	Si
SLV 10	-17590	-23800	1213	1.047	2349.3	0.935	16.283	13.33129	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-13322	-23506	-1210	1.303	1918.9	0.924	20.50204	13.33129	Si
SLV 8	-13212	-23158	-1211	1.311	1907.8	0.923	20.64026	13.33129	Si
SLV 11	-12291	-19274	-1231	1.384	1815.3	0.92	21.85492	13.33129	Si
SLV 12	-12181	-18926	-1231	1.393	1804.3	0.92	22.01232	13.33129	Si
SLV 1	-18071	-31703	402	1.063	2397.9	0.936	16.49859	6.37081	Si
SLV 2	-17902	-31169	402	1.071	2380.8	0.936	16.63067	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.435	SLU 81	Si
V_SLU	17.272	SLU 81	Si
PF_SLV	2.483	SLV 16	Si
V_SLV	3.892	SLV 14	Si
PFFP_SLV	4.428	SLV 16	Si
R_SLV	1.157	SLV 5	Si

Maschio 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 36	9.25	-517.52	-31200	-0.0000451	0.0003743	0.0035	3.98	45014.78	54418.17	54418.17	105.15	No	Si
SLU 36	11.05	-799.9	-27796	-0.0000406	0.0003743	0.0035	3.98	41762.8	50127.7	50127.7	62.67	No	Si
SLU 38	9.25	-533.44	-30368	-0.0000439	0.0003743	0.0035	3.98	44256.91	53384.89	53384.89	100.08	No	Si
SLU 38	11.05	-777.23	-26963	-0.0000393	0.0003743	0.0035	3.98	40905.48	49009.01	49009.01	63.06	No	Si
SLU 42	9.25	-486.25	-30622	-0.0000441	0.0003743	0.0035	3.98	44491.02	53703.67	53703.67	110.44	No	Si
SLU 42	11.05	-775.84	-27218	-0.0000397	0.0003743	0.0035	3.98	41169.98	49349.37	49349.37	63.61	No	Si
SLU 50	9.25	-772.93	-30234	-0.0000442	0.0003743	0.0035	3.98	44132.57	53217.27	53217.27	68.85	No	Si
SLU 50	11.05	-377.05	-25911	-0.0000369	0.0003743	0.0035	3.98	39787.25	47614.22	47614.22	126.28	No	Si
SLU 37	9.25	-534.12	-30407	-0.0000439	0.0003743	0.0035	3.98	44292.75	53433.42	53433.42	100.04	No	Si
SLU 37	11.05	-774.5	-27002	-0.0000393	0.0003743	0.0035	3.98	40945.95	49060.82	49060.82	63.35	No	Si
SLU 41	9.25	-486.93	-30661	-0.0000442	0.0003743	0.0035	3.98	44526.51	53751.8	53751.8	110.39	No	Si
SLU 41	11.05	-773.11	-27257	-0.0000397	0.0003743	0.0035	3.98	41210.1	49401.37	49401.37	63.9	No	Si
SLU 51	9.25	-772.25	-30195	-0.0000441	0.0003743	0.0035	3.98	44096.5	53168.85	53168.85	68.85	No	Si
SLU 51	11.05	-379.78	-25872	-0.0000368	0.0003743	0.0035	3.98	39745.29	47563.21	47563.21	125.24	No	Si
SLU 33	9.25	-500.66	-30337	-0.0000437	0.0003743	0.0035	3.98	44228.24	53346.14	53346.14	106.55	No	Si
SLU 33	11.05	-709.97	-26932	-0.0000391	0.0003743	0.0035	3.98	40873.12	48967.65	48967.65	68.97	No	Si
SLU 47	9.25	-754.93	-29305	-0.0000427	0.0003743	0.0035	3.98	43254.63	52062.11	52062.11	68.96	No	Si
SLU 47	11.05	-291.67	-24983	-0.0000353	0.0003743	0.0035	3.98	38768.54	46380.84	46380.84	159.02	No	Si
SLU 35	9.25	-518.2	-31239	-0.0000452	0.0003743	0.0035	3.98	45049.49	54465.86	54465.86	105.11	No	Si
SLU 35	11.05	-797.17	-27835	-0.0000406	0.0003743	0.0035	3.98	41802.14	50180.13	50180.13	62.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	9.25	-12657.09	-24120	-0.0000594	0.0005615	0.0035	3.98		47316.96	47316.96	3.74		Si
SLV 1	11.05	14922.74	-20733	-0.0000594	0.0005615	0.0035	3.98		37668.67	37668.67	2.52		Si
SLV 2	9.25	-11913.69	-24139	-0.0000578	0.0005615	0.0035	3.98		47348.04	47348.04	3.97		Si
SLV 2	11.05	13649.89	-20752	-0.0000565	0.0005615	0.0035	3.98		37696.88	37696.88	2.76		Si
SLD 1	9.25	-5728.05	-24334	-0.0000451	0.0005615	0.0035	3.98		47663.53	47663.53	8.32		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	11.05	6201.38	-20963	-0.0000413	0.0005615	0.0035	3.98		38006.3	38006.3	6.13		Si
SLD 3	9.25	-5774.5	-23502	-0.000044	0.0005615	0.0035	3.98		46319.74	46319.74	8.02		Si
SLD 3	11.05	6231.03	-20134	-0.0000401	0.0005615	0.0035	3.98		36792.03	36792.03	5.9		Si
SLV 3	9.25	-12760.95	-22229	-0.0000568	0.0005615	0.0035	3.98		44282.07	44282.07	3.47		Si
SLV 3	11.05	14988.26	-18851	-0.0000573	0.0005615	0.0035	3.98		34921.88	34921.88	2.33		Si
SLV 14	9.25	11661.95	-26720	-0.0000611	0.0005615	0.0035	3.98		46581.27	46581.27	3.99		Si
SLV 14	11.05	-15615.2	-23379	-0.0000646	0.0005615	0.0035	3.98		46121.9	46121.9	2.95		Si
SLV 13	9.25	10918.55	-26701	-0.0000595	0.0005615	0.0035	3.98		46552.22	46552.22	4.26		Si
SLV 13	11.05	-14342.34	-23359	-0.0000618	0.0005615	0.0035	3.98		46090.99	46090.99	3.21		Si
SLV 4	9.25	-12017.55	-22248	-0.0000553	0.0005615	0.0035	3.98		44312.71	44312.71	3.69		Si
SLV 4	11.05	13715.4	-18870	-0.0000541	0.0005615	0.0035	3.98		34949.82	34949.82	2.55		Si
SLV 15	9.25	10814.69	-24809	-0.0000565	0.0005615	0.0035	3.98		43708.86	43708.86	4.04		Si
SLV 15	11.05	-14276.83	-21478	-0.0000589	0.0005615	0.0035	3.98		43088.71	43088.71	3.02		Si
SLV 16	9.25	11558.1	-24829	-0.0000581	0.0005615	0.0035	3.98		43737.65	43737.65	3.78		Si
SLV 16	11.05	-15549.68	-21497	-0.0000618	0.0005615	0.0035	3.98		43119.19	43119.19	2.77		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	9.25	-772.25	-30195	-25144	-224	3.98	3.98	-22563	9953	11091	40441	33370	10149	43519	No	194.15	Si
SLU 51	11.05	-379.78	-25872	-21544	-224	3.98	3.98	-19333	9522	10611	40441	33370	10149	43519	No	194.15	Si
SLU 50	9.25	-772.93	-30234	-25176	-226	3.98	3.98	-22591	9957	11096	40441	33370	10149	43519	No	192.53	Si
SLU 50	11.05	-377.05	-25911	-21576	-226	3.98	3.98	-19362	9526	10616	40441	33370	10149	43519	No	192.53	Si
SLU 1	9.25	-569.14	-22792	-18980	-209	3.98	3.98	-17031	9215	10269	40441	33370	10149	43519	No	208.03	Si
SLU 1	11.05	-201	-19451	-16197	-209	3.98	3.98	-14534	8882	9898	40441	33370	10149	43519	No	208.03	Si
SLU 48	9.25	-757.01	-31066	-25869	-205	3.98	3.98	-23214	10040	11188	40441	33370	10149	43519	No	212.7	Si
SLU 48	11.05	-399.72	-26744	-22270	-205	3.98	3.98	-19984	9609	10708	40441	33370	10149	43519	No	212.7	Si
SLU 2	9.25	-568.01	-22728	-18926	-206	3.98	3.98	-16983	9209	10262	40441	33370	10149	43519	No	211.22	Si
SLU 2	11.05	-205.55	-19386	-16143	-206	3.98	3.98	-14486	8876	9891	40441	33370	10149	43519	No	211.22	Si
SLU 43	9.25	-739.2	-28506	-23738	-307	3.98	3.98	-21301	9785	10904	40441	33370	10149	43519	No	141.65	Si
SLU 43	11.05	-197.18	-24184	-20138	-307	3.98	3.98	-18071	9354	10424	40441	33370	10149	43519	No	141.65	Si
SLU 46	9.25	-739.47	-30164	-25118	-243	3.98	3.98	-22539	9950	11088	40441	33370	10149	43519	No	178.87	Si
SLU 46	11.05	-312.52	-25841	-21518	-243	3.98	3.98	-19309	9519	10608	40441	33370	10149	43519	No	178.87	Si
SLU 44	9.25	-738.07	-28442	-23684	-304	3.98	3.98	-21252	9778	10897	40441	33370	10149	43519	No	143.12	Si
SLU 44	11.05	-201.73	-24119	-20084	-304	3.98	3.98	-18022	9347	10417	40441	33370	10149	43519	No	143.12	Si
SLU 47	9.25	-754.93	-29305	-24403	-263	3.98	3.98	-21898	9864	10993	40441	33370	10149	43519	No	165.17	Si
SLU 47	11.05	-291.67	-24983	-20803	-263	3.98	3.98	-18668	9433	10513	40441	33370	10149	43519	No	165.17	Si
SLU 45	9.25	-740.15	-30203	-25150	-245	3.98	3.98	-22568	9954	11092	40441	33370	10149	43519	No	177.49	Si
SLU 45	11.05	-309.79	-25880	-21551	-245	3.98	3.98	-19338	9523	10612	40441	33370	10149	43519	No	177.49	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	9.25	-12657.09	-24120	-20085	-15976	3.98	3.98	-18023	14021	15625	40441	50055	10149	56066		3.51	Si
SLV 1	11.05	14922.74	-20733	-17264	-14806	3.98	3.8107	-15492	13515	14421	40441	50055	10149	54861		3.71	Si
SLV 13	9.25	10918.55	-26701	-22234	14732	3.98	3.98	-19952	14407	16055	40441	50055	10149	56496		3.83	Si
SLV 13	11.05	-14342.34	-23359	-19452	13501	3.98	3.98	-17455	13908	15499	40441	50055	10149	55940		4.14	Si
SLV 3	9.25	-12760.95	-22229	-18510	-16124	3.98	3.98	-16610	13739	15310	40441	50055	10149	55751		3.46	Si
SLV 3	11.05	14988.26	-18851	-15697	-14893	3.98	3.5847	-14086	13234	13283	40441	50055	10149	53724		3.61	Si
SLV 15	9.25	10814.69	-24809	-20659	14585	3.98	3.98	-18538	14124	15740	40441	50055	10149	56181		3.85	Si
SLV 15	11.05	-14276.83	-21478	-17885	13414	3.98	3.9758	-16049	13626	15169	40441	50055	10149	55610		4.15	Si
SLV 16	9.25	11558.1	-24829	-20675	15705	3.98	3.98	-18553	14127	15743	40441	50055	10149	56184		3.58	Si
SLV 16	11.05	-15549.68	-21497	-17901	14534	3.98	3.8	-16960	13809	14692	40441	50055	10149	55133		3.79	Si
SLV 4	9.25	-12017.55	-22248	-18526	-15004	3.98	3.98	-16624	13742	15314	40441	50055	10149	55755		3.72	Si
SLV 4	11.05	13715.4	-18870	-15713	-13773	3.98	3.7895	-14100	13237	14045	40441	50055	10149	54486		3.96	Si
SLV 2	9.25	-11913.69	-24139	-20101	-14856	3.98	3.98	-18038	14024	15629	40441	50055	10149	56069		3.77	Si
SLV 2	11.05	13649.89	-20752	-17280	-13686	3.98	3.98	-15506	13518	15064	40441	50055	10149	55505		4.06	Si
SLD 3	9.25	-5774.5	-23502	-19570	-6975	3.98	3.98	-17561	13929	15522	40441	50055	10149	55963		8.02	Si
SLD 3	11.05	6231.03	-20134	-16766	-6449	3.98	3.98	-15045	13426	14962	40441	50055	10149	55402		8.59	Si
SLD 1	9.25	-5728.05	-24334	-20263	-6910	3.98	3.98	-18183	14053	15661	40441	50055	10149	56102		8.12	Si
SLD 1	11.05	6201.38	-20963	-17456	-6409	3.98	3.98	-15664	13549	15100	40441	50055	10149	55540		8.67	Si
SLV 14	9.25	11661.95	-26720	-22250	15852	3.98	3.98	-19966	14410	16058	40441	50055	10149	56499		3.56	Si
SLV 14	11.05	-15615.2	-23379	-19468	14621	3.98	3.9662	-17469	13910	15448	40441	50055	10149	55889		3.82	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	17326	-19308	483.38	2396.42	4.96	Si
SLV 8	179667	0.46	17337	-19320	483.38	2397.77	4.96	Si
SLV 11	179667	0.46	18023	-20085	483.38	2480.03	5.13	Si
SLV 12	179667	0.46	18034	-20097	483.38	2481.37	5.13	Si
SLV 3	179667	0.46	18477	-20591	483.38	2533.98	5.24	Si
SLV 4	179667	0.46	18495	-20610	483.38	2536.02	5.25	Si
SLV 1	179667	0.46	20165	-22471	483.38	2730.6	5.65	Si
SLV 2	179667	0.46	20182	-22491	483.38	2732.58	5.65	Si
SLV 15	179667	0.46	20802	-23182	483.38	2803.35	5.8	Si
SLV 16	179667	0.46	20819	-23201	483.38	2805.31	5.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18788	-28213	1124	0.997	2470.4	0.938	15.46005	13.33129	Si
SLV 9	-18775	-28164	1124	0.998	2469.1	0.938	15.46908	13.33129	Si
SLV 6	-18392	-26813	1121	1.015	2430.4	0.937	15.74483	13.33129	Si
SLV 5	-18379	-26764	1121	1.015	2429.1	0.937	15.7542	13.33129	Si
SLV 12	-13696	-22429	-1118	1.281	1956.5	0.925	20.12959	13.33129	Si
SLV 11	-13683	-22380	-1118	1.282	1955.2	0.925	20.14506	13.33129	Si
SLV 8	-13300	-21029	-1122	1.31	1916.7	0.923	20.61278	13.33129	Si
SLV 7	-13287	-20979	-1122	1.311	1915.4	0.923	20.62901	13.33129	Si
SLV 14	-17471	-27836	343	1.095	2337.3	0.935	17.02031	6.37081	Si
SLV 13	-17452	-27760	343	1.096	2335.3	0.935	17.03661	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	62.668	SLU 36	Si
V_SLU	141.651	SLU 43	Si
PF_SLV	2.33	SLV 3	Si
V_SLV	3.458	SLV 3	Si
PFFP_SLV	4.958	SLV 7	Si
R_SLV	1.16	SLV 10	Si

Maschio 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.093	6.526	L6	L7	1.965	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	9.25	-1320.9	-13222	-0.0000491	0.0003743	0.0035	1.965	9924.63	11835.46	11835.46	8.96	No	Si
SLU 65	11.05	-606.66	-10707	-0.0000352	0.0003743	0.0035	1.965	8508.98	10112.69	10112.69	16.67	No	Si
SLU 50	9.25	-1318.27	-12540	-0.000047	0.0003743	0.0035	1.965	9562.81	11384.56	11384.56	8.64	No	Si
SLU 50	11.05	-500.26	-10054	-0.0000323	0.0003743	0.0035	1.965	8105.54	9634.64	9634.64	19.26	No	Si
SLU 48	9.25	-1343.2	-12914	-0.0000484	0.0003743	0.0035	1.965	9763.11	11630.45	11630.45	8.66	No	Si
SLU 48	11.05	-528.9	-10428	-0.0000337	0.0003743	0.0035	1.965	8338.42	9910.87	9910.87	18.74	No	Si
SLU 44	9.25	-1311.19	-11927	-0.0000451	0.0003743	0.0035	1.965	9223.24	10967.74	10967.74	8.36	No	Si
SLU 44	11.05	-421.49	-9441	-0.0000299	0.0003743	0.0035	1.965	7712.45	9180.17	9180.17	21.78	No	Si
SLU 51	9.25	-1319.72	-12541	-0.0000047	0.0003743	0.0035	1.965	9562.93	11384.69	11384.69	8.63	No	Si
SLU 51	11.05	-498.13	-10055	-0.0000323	0.0003743	0.0035	1.965	8105.67	9634.8	9634.8	19.34	No	Si
SLU 47	9.25	-1315.94	-12234	-0.0000461	0.0003743	0.0035	1.965	9394.77	11179.31	11179.31	8.5	No	Si
SLU 47	11.05	-459.1	-9748	-0.0000311	0.0003743	0.0035	1.965	7910.76	9406.46	9406.46	20.49	No	Si
SLU 46	9.25	-1339.9	-12607	-0.0000474	0.0003743	0.0035	1.965	9599.01	11428.36	11428.36	8.53	No	Si
SLU 46	11.05	-489.17	-10121	-0.0000324	0.0003743	0.0035	1.965	8147.57	9684.55	9684.55	19.8	No	Si
SLU 43	9.25	-1308.77	-11926	-0.0000451	0.0003743	0.0035	1.965	9223.04	10967.5	10967.5	8.38	No	Si
SLU 43	11.05	-425.04	-9440	-0.0000299	0.0003743	0.0035	1.965	7712.23	9179.91	9179.91	21.6	No	Si
SLU 45	9.25	-1338.45	-12607	-0.0000474	0.0003743	0.0035	1.965	9598.9	11428.22	11428.22	8.54	No	Si
SLU 45	11.05	-491.29	-10121	-0.0000325	0.0003743	0.0035	1.965	8147.44	9684.4	9684.4	19.71	No	Si
SLU 49	9.25	-1344.65	-12914	-0.0000484	0.0003743	0.0035	1.965	9763.22	11630.59	11630.59	8.65	No	Si
SLU 49	11.05	-526.77	-10428	-0.0000337	0.0003743	0.0035	1.965	8338.55	9911.03	9911.03	18.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	9.25	-4511.09	-10638	-0.0000699	0.0005615	0.0035	1.965		10474.07	10474.07	2.32		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	11.05	4079.41	-9007	-0.000062	0.0005615	0.0035	1.965		8326.71	8326.71	2.04		Si
SLV 13	9.25	2384.86	-10775	-0.00005	0.0005615	0.0035	1.965		9625.76	9625.76	4.04		Si
SLV 13	11.05	-4988.38	-8482	-0.0000794	0.0005615	0.0035	1.572		8715.4	8715.4	1.75		Si
SLV 4	9.25	-4394	-9588	-0.0000669	0.0005615	0.0035	1.965		9632.61	9632.61	2.19		Si
SLV 4	11.05	4022.58	-8025	-0.0000607	0.0005615	0.0035	1.965		7505.25	7505.25	1.87		Si
SLV 16	9.25	2766.01	-9582	-0.0000498	0.0005615	0.0035	1.965		8775.56	8775.56	3.17		Si
SLV 16	11.05	-5427.52	-7357	-0.000113	0.0005615	0.0035	1.572		7768.68	7768.68	1.43		Si
SLD 16	9.25	609.39	-9920	-0.0000324	0.0005615	0.0035	1.965		9017.61	9017.61	14.8		Si
SLD 16	11.05	-2598.35	-7864	-0.0000433	0.0005615	0.0035	1.965		8205.36	8205.36	3.16		Si
SLV 1	9.25	-4775.15	-10781	-0.0000735	0.0005615	0.0035	1.965		10587.1	10587.1	2.22		Si
SLV 1	11.05	4461.73	-9150	-0.0000677	0.0005615	0.0035	1.965		8445.38	8445.38	1.89		Si
SLV 14	9.25	2648.92	-10632	-0.0000518	0.0005615	0.0035	1.965		9523.71	9523.71	3.6		Si
SLV 14	11.05	-5370.7	-8339	-0.0000917	0.0005615	0.0035	1.572		8597.81	8597.81	1.6		Si
SLV 12	9.25	350.61	-8384	-0.0000258	0.0005615	0.0035	1.965		7808.48	7808.48	22.27		Si
SLV 12	11.05	-2119.68	-6470	-0.0000353	0.0005615	0.0035	1.965		7004.02	7004.02	3.3		Si
SLV 3	9.25	-4658.05	-9731	-0.0000709	0.0005615	0.0035	1.965		9751.05	9751.05	2.09		Si
SLV 3	11.05	4404.9	-8168	-0.0000675	0.0005615	0.0035	1.965		7625.94	7625.94	1.73		Si
SLV 15	9.25	2501.95	-9725	-0.0000479	0.0005615	0.0035	1.965		8879.99	8879.99	3.55		Si
SLV 15	11.05	-5045.21	-7500	-0.0000899	0.0005615	0.0035	1.572		7892.61	7892.61	1.56		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	9.25	-1311.19	-11927	-9932	-483	1.965	1.965	-18050	9351	5145	40441	16476	5011	21487	No	44.51	Si
SLU 44	11.05	-421.49	-9441	-7861	-483	1.965	1.965	-14288	8850	4869	40441	16476	5011	21487	No	44.51	Si
SLU 45	9.25	-1338.45	-12607	-10498	-459	1.965	1.965	-19080	9488	5221	40441	16476	5011	21487	No	46.8	Si
SLU 45	11.05	-491.29	-10121	-8428	-459	1.965	1.965	-15318	8987	4945	40441	16476	5011	21487	No	46.8	Si
SLU 50	9.25	-1318.27	-12540	-10443	-443	1.965	1.965	-18979	9475	5213	40441	16476	5011	21487	No	48.52	Si
SLU 50	11.05	-500.26	-10054	-8372	-443	1.965	1.965	-15217	8973	4937	40441	16476	5011	21487	No	48.52	Si
SLU 46	9.25	-1339.9	-12607	-10498	-461	1.965	1.965	-19080	9488	5221	40441	16476	5011	21487	No	46.6	Si
SLU 46	11.05	-489.17	-10121	-8428	-461	1.965	1.965	-15318	8987	4945	40441	16476	5011	21487	No	46.6	Si
SLU 48	9.25	-1343.2	-12914	-10754	-441	1.965	1.965	-19545	9550	5255	40441	16476	5011	21487	No	48.74	Si
SLU 48	11.05	-528.9	-10428	-8684	-441	1.965	1.965	-15782	9049	4979	40441	16476	5011	21487	No	48.74	Si
SLU 43	9.25	-1308.77	-11926	-9931	-479	1.965	1.965	-18050	9351	5145	40441	16476	5011	21487	No	44.82	Si
SLU 43	11.05	-425.04	-9440	-7861	-479	1.965	1.965	-14288	8849	4869	40441	16476	5011	21487	No	44.82	Si
SLU 51	9.25	-1319.72	-12541	-10443	-445	1.965	1.965	-18980	9475	5213	40441	16476	5011	21487	No	48.3	Si
SLU 51	11.05	-498.13	-10055	-8373	-445	1.965	1.965	-15217	8973	4937	40441	16476	5011	21487	No	48.3	Si
SLU 65	9.25	-1320.9	-13222	-11010	-385	1.965	1.965	-20011	9613	5289	40441	16476	5011	21487	No	55.79	Si
SLU 65	11.05	-606.66	-10707	-8916	-385	1.965	1.965	-16204	9105	5010	40441	16476	5011	21487	No	55.79	Si
SLU 49	9.25	-1344.65	-12914	-10754	-443	1.965	1.965	-19545	9550	5255	40441	16476	5011	21487	No	48.52	Si
SLU 49	11.05	-526.77	-10428	-8684	-443	1.965	1.965	-15783	9049	4979	40441	16476	5011	21487	No	48.52	Si
SLU 47	9.25	-1315.94	-12234	-10187	-464	1.965	1.965	-18515	9413	5179	40441	16476	5011	21487	No	46.26	Si
SLU 47	11.05	-459.1	-9748	-8117	-464	1.965	1.965	-14753	8911	4903	40441	16476	5011	21487	No	46.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	9.25	-4658.05	-9731	-8103	-5133	1.965	1.5116	-19319	14281	6044	40441	24714	5011	29724		5.79	Si
SLV 3	11.05	4404.9	-8168	-6801	-4666	1.965	1.3296	-12361	12889	4799	40441	24714	5011	29724		6.37	Si
SLV 16	9.25	2766.01	-9582	-7979	4766	1.965	1.965	-14502	13317	7327	40441	24714	5011	29724		6.24	Si
SLV 16	11.05	-5427.52	-7357	-6126	4157	1.572	0.7343	0	0	0	40441	19771	4009	23779		5.72	Si
SLV 1	9.25	-4775.15	-10781	-8978	-5328	1.965	1.6188	-20003	14417	6535	40441	24714	5011	29724		5.58	Si
SLV 1	11.05	4461.73	-9150	-7619	-4719	1.965	1.4847	-13848	13186	5482	40441	24714	5011	29724		6.3	Si
SLV 13	9.25	2384.86	-10775	-8973	4212	1.965	1.965	-16308	13678	7526	40441	24714	5011	29724		7.06	Si
SLV 13	11.05	-4988.38	-8482	-7063	3745	1.572	1.1832	0	0	0	40441	19771	4009	23779		6.35	Si
SLD 1	9.25	-2618.52	-10444	-8697	-2440	1.965	1.965	-15806	13578	7471	40441	24714	5011	29724		12.18	Si
SLD 1	11.05	1632.55	-8643	-7197	-2180	1.965	1.965	-13080	13033	7171	40441	24714	5011	29724		13.64	Si
SLV 4	9.25	-4394	-9588	-7984	-4774	1.965	1.5728	-18291	14075	6198	40441	24714	5011	29724		6.23	Si
SLV 4	11.05	4022.58	-8025	-6682	-4307	1.965	1.4437	-12145	12846	5193	40441	24714	5011	29724		6.9	Si
SLV 15	9.25	2501.95	-9725	-8098	4407	1.965	1.965	-14719	13360	7351	40441	24714	5011	29724		6.75	Si
SLV 15	11.05	-5045.21	-7500	-6245	3798	1.572	0.9294	0	0	0	40441	19771	4009	23779		6.26	Si
SLV 2	9.25	-4511.09	-10638	-8859	-4969	1.965	1.6754	-19063	14229	6675	40441	24714	5011	29724		5.98	Si
SLV 2	11.05	4079.41	-9007	-7500	-4360	1.965	1.5888	-13631	13143	5847	40441	24714	5011	29724		6.82	Si
SLV 14	9.25	2648.92	-10632	-8854	4572	1.965	1.965	-16091	13635	7502	40441	24714	5011	29724		6.5	Si
SLV 14	11.05	-5370.7	-8339	-6944	4104	1.572	1.0154	0	0	0	40441	19771	4009	23779		5.79	Si
SLD 3	9.25	-2565.51	-9982	-8312	-2355	1.965	1.965	-15108	13438	7394	40441	24714	5011	29724		12.62	Si
SLD 3	11.05	1606.53	-8209	-6836	-2155	1.965	1.965	-12425	12902	7099	40441	24714	5011	29724		13.79	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	13550	-7455	238.66	951.13	3.99	Si
SLV 8	179667	0.46	13715	-7546	238.66	961.56	4.03	Si
SLV 11	179667	0.46	13719	-7548	238.66	961.85	4.03	Si
SLV 7	179667	0.46	13884	-7639	238.66	972.25	4.07	Si
SLV 16	179667	0.46	15424	-8486	238.66	1068.09	4.48	Si
SLV 15	179667	0.46	15684	-8629	238.66	1084.03	4.54	Si
SLV 4	179667	0.46	15973	-8789	238.66	1101.71	4.62	Si
SLV 3	179667	0.46	16233	-8932	238.66	1117.51	4.68	Si
SLV 14	179667	0.46	17234	-9482	238.66	1177.69	4.93	Si
SLV 13	179667	0.46	17494	-9625	238.66	1193.15	5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-9215	-9735	549	1.003	1213.5	0.937	15.55657	13.33129	Si
SLV 6	-8973	-9871	549	1.025	1189.1	0.936	15.91123	13.33129	Si
SLV 9	-7288	-12457	557	1.208	1019	0.928	18.92157	13.33129	Si
SLV 10	-7047	-12593	557	1.24	994.6	0.926	19.45322	13.33129	Si
SLV 7	-6289	-6397	-556	1.353	918.4	0.922	21.34023	13.33129	Si
SLV 8	-6048	-6533	-556	1.394	894.2	0.92	22.02023	13.33129	Si
SLV 11	-4362	-9119	-547	1.769	726	0.907	28.33686	13.33129	Si
SLV 12	-4121	-9256	-547	1.841	702.1	0.905	29.54289	13.33129	Si
SLV 1	-10503	-5354	152	0.934	1344	0.942	14.40794	6.37081	Si
SLV 2	-10133	-5564	152	0.962	1306.4	0.941	14.86039	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.365	SLU 44	Si
V_SLU	44.513	SLU 44	Si
PF_SLV	1.431	SLV 16	Si
V_SLV	5.579	SLV 1	Si
PFFP_SLV	3.985	SLV 12	Si
R_SLV	1.167	SLV 5	Si

Maschio 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L6	L7	5.19	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 69	8.35	-9349.83	-42861	-0.0000528	0.0004492	0.0035	5.19	84376.5	110827.19	110827.19	11.85	No	Si
SLU 69	10.45	-7135.12	-36963	-0.0000441	0.0004492	0.0035	5.19	75951.13	99391.61	99391.61	13.93	No	Si
SLU 67	8.35	-9257.21	-41854	-0.0000516	0.0004492	0.0035	5.19	83010.36	108931.77	108931.77	11.77	No	Si
SLU 67	10.45	-7046.68	-36010	-0.000043	0.0004492	0.0035	5.19	74494.26	97482.32	97482.32	13.83	No	Si
SLU 68	8.35	-9144.72	-41051	-0.0000507	0.0004492	0.0035	5.19	81899.56	107420.09	107420.09	11.75	No	Si
SLU 68	10.45	-6708.24	-35083	-0.0000417	0.0004492	0.0035	5.19	73052.09	95625.67	95625.67	14.25	No	Si
SLU 66	8.35	-9181.78	-41798	-0.0000515	0.0004492	0.0035	5.19	82933.4	108826.21	108826.21	11.85	No	Si
SLU 66	10.45	-7014.8	-35961	-0.0000429	0.0004492	0.0035	5.19	74419.95	97385.86	97385.86	13.88	No	Si
SLU 47	8.35	-8619.73	-38236	-0.0000471	0.0004492	0.0035	5.19	77855.97	101942.29	101942.29	11.83	No	Si
SLU 47	10.45	-5547.65	-31402	-0.0000366	0.0004492	0.0035	5.19	67077.73	88233.84	88233.84	15.9	No	Si
SLU 46	8.35	-8732.22	-39039	-0.0000481	0.0004492	0.0035	5.19	79032.85	103550.81	103550.81	11.86	No	Si
SLU 46	10.45	-5886.09	-32329	-0.0000379	0.0004492	0.0035	5.19	68619.6	90109.91	90109.91	15.31	No	Si
SLU 72	8.35	-9262.48	-42077	-0.0000519	0.0004492	0.0035	5.19	83314.85	109350.69	109350.69	11.81	No	Si
SLU 72	10.45	-6807.31	-36052	-0.0000428	0.0004492	0.0035	5.19	74559.52	97567.11	97567.11	14.33	No	Si
SLU 65	8.35	-8976.68	-39988	-0.0000494	0.0004492	0.0035	5.19	80400.24	105419.11	105419.11	11.74	No	Si
SLU 65	10.45	-6587.91	-34081	-0.0000405	0.0004492	0.0035	5.19	71465.9	93619.92	93619.92	14.21	No	Si
SLU 70	8.35	-9425.25	-42917	-0.000053	0.0004492	0.0035	5.19	84451.71	110932.75	110932.75	11.77	No	Si
SLU 70	10.45	-7167	-37011	-0.0000442	0.0004492	0.0035	5.19	76024.03	99488.07	99488.07	13.88	No	Si
SLU 44	8.35	-8451.68	-37173	-0.0000459	0.0004492	0.0035	5.19	76269.19	99813.13	99813.13	11.81	No	Si
SLU 44	10.45	-5427.33	-30401	-0.0000355	0.0004492	0.0035	5.19	65383.84	86107.35	86107.35	15.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	8.35	-16197.91	-25530	-0.0000424	0.0006738	0.0035	5.19		77101.66	77101.66	4.76		Si
SLV 16	10.45	11019.12	-16853	-0.0000281	0.0006738	0.0035	5.19		44332.69	44332.69	4.02		Si
SLV 4	8.35	-2157.28	-39227	-0.00004	0.0006738	0.0035	5.19		106862.19	106862.19	49.54		Si
SLV 4	10.45	-24235.39	-38571	-0.0000646	0.0006738	0.0035	5.19		105500.48	105500.48	4.35		Si
SLV 8	8.35	-11451.91	-38319	-0.0000497	0.0006738	0.0035	5.19		104976.81	104976.81	9.17		Si
SLV 8	10.45	-15159.02	-34304	-0.0000499	0.0006738	0.0035	5.19		96418.95	96418.95	6.36		Si
SLV 2	8.35	1743.44	-35859	-0.0000362	0.0006738	0.0035	5.19		87366.36	87366.36	50.11		Si
SLV 2	10.45	-21424.57	-35694	-0.0000585	0.0006738	0.0035	5.19		99458.7	99458.7	4.64		Si
SLV 3	8.35	-1178.97	-38982	-0.0000387	0.0006738	0.0035	5.19		106354.35	106354.35	90.21		Si
SLV 3	10.45	-24140.23	-38440	-0.0000644	0.0006738	0.0035	5.19		105226.58	105226.58	4.36		Si
SLV 15	8.35	-15219.6	-25286	-0.000041	0.0006738	0.0035	5.19		76540.05	76540.05	5.03		Si
SLV 15	10.45	11114.28	-16721	-0.0000281	0.0006738	0.0035	5.19		44018.82	44018.82	3.96		Si
SLV 1	8.35	2721.75	-35615	-0.0000371	0.0006738	0.0035	5.19		86837.75	86837.75	31.91		Si
SLV 1	10.45	-21329.41	-35562	-0.0000583	0.0006738	0.0035	5.19		99170.3	99170.3	4.65		Si
SLV 13	8.35	-11318.89	-21918	-0.0000334	0.0006738	0.0035	5.19		68801.38	68801.38	6.08		Si
SLV 13	10.45	13925.1	-13844	-0.0000286	0.0006738	0.0035	5.19		37149.95	37149.95	2.67		Si
SLV 14	8.35	-12297.19	-22162	-0.0000347	0.0006738	0.0035	5.19		69362.98	69362.98	5.64		Si
SLV 14	10.45	13829.94	-13976	-0.0000286	0.0006738	0.0035	5.19		37468.62	37468.62	2.71		Si
SLV 12	8.35	-15664.1	-34210	-0.0000504	0.0006738	0.0035	5.19		96213.23	96213.23	6.14		Si
SLV 12	10.45	-4582.67	-27789	-0.0000315	0.0006738	0.0035	5.19		82164.11	82164.11	17.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	8.35	-8662.06	-39205	-27968	-2528	5.19	5.19	-19246	10833	15743	115546	52224	26469	78693	No	31.13	Si
SLU 50	10.45	-5614.85	-32323	-23059	-2518	5.19	5.19	-15868	10449	15185	115546	52224	26469	78693	No	31.25	Si
SLU 43	8.35	-8325.97	-37080	-26452	-2482	5.19	5.19	-18202	10760	15637	115546	52224	26469	78693	No	31.7	Si
SLU 43	10.45	-5374.21	-30321	-21630	-2473	5.19	5.19	-14885	10318	14994	115546	52224	26469	78693	No	31.82	Si
SLU 8	8.35	-6879.14	-31391	-22394	-1678	5.19	5.19	-15410	10388	15096	115546	52224	26469	78693	No	46.89	Si
SLU 8	10.45	-4680.74	-26297	-18760	-1670	5.19	5.19	-12909	10055	14611	115546	52224	26469	78693	No	47.11	Si
SLU 48	8.35	-8824.83	-40046	-28568	-2350	5.19	5.19	-19658	10833	15743	115546	52224	26469	78693	No	33.48	Si
SLU 48	10.45	-5974.54	-33282	-23743	-2340	5.19	5.19	-16338	10512	15276	115546	52224	26469	78693	No	33.62	Si
SLU 45	8.35	-8656.79	-38983	-27809	-2328	5.19	5.19	-19137	10833	15743	115546	52224	26469	78693	No	33.81	Si
SLU 45	10.45	-5854.22	-32281	-23029	-2318	5.19	5.19	-15847	10446	15180	115546	52224	26469	78693	No	33.95	Si
SLU 51	8.35	-8737.48	-39261	-28008	-2526	5.19	5.19	-19273	10833	15743	115546	52224	26469	78693	No	31.15	Si
SLU 51	10.45	-5646.73	-32372	-23093	-2515	5.19	5.19	-15891	10452	15189	115546	52224	26469	78693	No	31.29	Si
SLU 44	8.35	-8451.68	-37173	-26518	-2479	5.19	5.19	-18248	10766	15646	115546	52224	26469	78693	No	31.74	Si
SLU 44	10.45	-5427.33	-30401	-21687	-2468	5.19	5.19	-14924	10323	15002	115546	52224	26469	78693	No	31.89	Si
SLU 46	8.35	-8732.22	-39039	-27849	-2326	5.19	5.19	-19164	10833	15743	115546	52224	26469	78693	No	33.84	Si
SLU 46	10.45	-5886.09	-32329	-23063	-2315	5.19	5.19	-15870	10449	15185	115546	52224	26469	78693	No	34	Si
SLU 49	8.35	-8900.26	-40102	-28608	-2348	5.19	5.19	-19686	10833	15743	115546	52224	26469	78693	No	33.51	Si
SLU 49	10.45	-6006.42	-33331	-23777	-2337	5.19	5.19	-16362	10515	15280	115546	52224	26469	78693	No	33.67	Si
SLU 47	8.35	-8619.73	-38236	-27277	-2502	5.19	5.19	-18770	10833	15743	115546	52224	26469	78693	No	31.45	Si
SLU 47	10.45	-5547.65	-31402	-22402	-2490	5.19	5.19	-15415	10389	15097	115546	52224	26469	78693	No	31.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	8.35	-16197.91	-25530	-18212	-16870	5.19	5.19	-12533	15007	21807	115546	78337	26469	104806		6.21	Si
SLV 16	10.45	11019.12	-16853	-12023	-14943	5.19	5.19	-8273	14155	20570	115546	78337	26469	104806		7.01	Si
SLD 13	8.35	-8676.62	-26852	-19155	-8271	5.19	5.19	-13181	15136	21996	115546	78337	26469	104806		12.67	Si
SLD 13	10.45	3018.6	-20903	-14912	-7438	5.19	5.19	-10261	14552	21147	115546	78337	26469	104806		14.09	Si
SLV 4	8.35	-2157.28	-39227	-27983	16117	5.19	5.19	-19256	16250	23615	115546	78337	26469	104806		6.5	Si
SLV 4	10.45	-24235.39	-38571	-27516	14196	5.19	5.19	-18935	16250	23615	115546	78337	26469	104806		7.38	Si
SLD 14	8.35	-9096.82	-26956	-19230	-8352	5.19	5.19	-13233	15147	22011	115546	78337	26469	104806		12.55	Si
SLD 14	10.45	2977.73	-20959	-14952	-7519	5.19	5.19	-10289	14558	21155	115546	78337	26469	104806		13.94	Si
SLV 15	8.35	-15219.6	-25286	-18038	-16681	5.19	5.19	-12413	14983	21773	115546	78337	26469	104806		6.28	Si
SLV 15	10.45	11114.28	-16721	-11929	-14754	5.19	5.19	-8209	14142	20551	115546	78337	26469	104806		7.1	Si
SLV 2	8.35	1743.44	-35859	-25581	14768	5.19	5.19	-17603	16021	23281	115546	78337	26469	104806		7.1	Si
SLV 2	10.45	-21424.57	-35694	-25463	12857	5.19	5.19	-17522	16004	23258	115546	78337	26469	104806		8.15	Si
SLV 14	8.35	-12297.19	-22162	-15810	-18219	5.19	5.19	-10879	14676	21327	115546	78337	26469	104806		5.75	Si
SLV 14	10.45	13829.94	-13976	-9970	-16282	5.19	4.8163	-6861	13872	18707	115546	78337	26469	104806		6.44	Si
SLV 13	8.35	-11318.89	-21918	-15636	-18030	5.19	5.19	-10759	14652	21292	115546	78337	26469	104806		5.81	Si
SLV 13	10.45	13925.1	-13844	-9876	-16093	5.19	4.7674	-6796	13859	18500	115546	78337	26469	104806		6.51	Si
SLV 3	8.35	-1178.97	-38982	-27809	16306	5.19	5.19	-19136	16250	23615	115546	78337	26469	104806		6.43	Si
SLV 3	10.45	-24140.23	-38440	-27422	14385	5.19	5.19	-18870	16250	23615	115546	78337	26469	104806		7.29	Si
SLV 1	8.35	2721.75	-35615	-25407	14957	5.19	5.19	-17483	15997	23246	115546	78337	26469	104806		7.01	Si
SLV 1	10.45	-21329.41	-35562	-25369	13046	5.19	5.19	-17457	15991	23239	115546	78337	26469	104806		8.03	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-14812	0.46	645	1958.41	2945.3	2451.86	3.8	Si
SLV 14	-14944	0.46	645	1974.81	2965.47	2470.14	3.83	Si
SLV 15	-17663	0.46	645	2308.84	3381.33	2845.09	4.41	Si
SLV 16	-17795	0.46	645	2324.84	3401.46	2863.15	4.44	Si
SLV 9	-19087	0.46	645	2480.63	3598	3039.32	4.71	Si
SLV 10	-19172	0.46	645	2490.93	3611.02	3050.97	4.73	Si
SLV 5	-25581	0.46	645	3237.38	4580.26	3908.82	6.06	Si
SLV 6	-25667	0.46	645	3247.09	4593.13	3920.11	6.08	Si
SLV 11	-28589	0.46	645	3572.81	5030.32	4301.56	6.67	Si
SLV 12	-28675	0.46	645	3582.25	5043.07	4312.66	6.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-27786	-38319	1178	0.909	3554.3	0.943	14.01792	13.33129	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-27576	-38160	1178	0.915	3533	0.942	14.1095	13.33129	Si
SLV 12	-25506	-34210	1292	0.971	3323.4	0.939	15.02797	13.33129	Si
SLV 11	-25297	-34051	1292	0.978	3302.2	0.939	15.13415	13.33129	Si
SLV 6	-19465	-27093	-1304	1.204	2712.9	0.928	18.85824	13.33129	Si
SLV 5	-19255	-26934	-1303	1.215	2691.8	0.928	19.02784	13.33129	Si
SLV 10	-17186	-22984	-1190	1.331	2483.5	0.923	20.96324	13.33129	Si
SLV 9	-16976	-22825	-1189	1.344	2462.4	0.923	21.1726	13.33129	Si
SLV 4	-27589	-39227	177	0.946	3534.3	0.942	14.58376	6.37081	Si
SLV 3	-27267	-38982	177	0.955	3501.7	0.942	14.73171	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.744	SLU 65	Si
V_SLU	31.128	SLU 50	Si
PF_SLV	2.668	SLV 13	Si
V_SLV	5.753	SLV 14	Si
PFFP_SLV	3.801	SLV 13	Si
R_SLV	1.052	SLV 8	Si

Maschio 137

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L6	L7	3.68	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 25	8.35	-30.21	-29315	-0.0000403	0.0004492	0.0035	3.68	41379.93	53904.1	53904.1	1784.4	No	Si
SLU 25	10.45	1409.25	-25962	-0.0000387	0.0004492	0.0035	3.68	37918.99	42811.64	42811.64	30.38	No	Si
SLU 28	8.35	-108.65	-30272	-0.0000418	0.0004492	0.0035	3.68	42307.52	55191.66	55191.66	507.97	No	Si
SLU 28	10.45	1455.98	-26885	-0.0000401	0.0004492	0.0035	3.68	38904.6	44037.02	44037.02	30.25	No	Si
SLU 30	8.35	-194.47	-29421	-0.0000408	0.0004492	0.0035	3.68	41484.32	54047.15	54047.15	277.93	No	Si
SLU 30	10.45	1488.88	-25997	-0.0000389	0.0004492	0.0035	3.68	37957.08	42858.43	42858.43	28.79	No	Si
SLU 23	8.35	-55.79	-27525	-0.0000378	0.0004492	0.0035	3.68	39573.37	51487.38	51487.38	922.8	No	Si
SLU 23	10.45	1422.5	-24171	-0.0000362	0.0004492	0.0035	3.68	35936.07	40434.63	40434.63	28.43	No	Si
SLU 68	8.35	-182.56	-34858	-0.0000486	0.0004492	0.0035	3.68	46380.54	61229.54	61229.54	335.39	No	Si
SLU 68	10.45	1592.64	-30375	-0.0000455	0.0004492	0.0035	3.68	42405.96	48670.06	48670.06	30.56	No	Si
SLU 22	8.35	-10.26	-27480	-0.0000376	0.0004492	0.0035	3.68	39526.87	51423.25	51423.25	5010.23	No	Si
SLU 22	10.45	1354.77	-24120	-0.0000359	0.0004492	0.0035	3.68	35878.47	40367.22	40367.22	29.8	No	Si
SLU 72	8.35	-242.79	-35797	-0.0000502	0.0004492	0.0035	3.68	47138.81	62414.26	62414.26	257.07	No	Si
SLU 72	10.45	1612.29	-31278	-0.0000468	0.0004492	0.0035	3.68	43253.69	49868.47	49868.47	30.93	No	Si
SLU 26	8.35	-134.24	-28482	-0.0000393	0.0004492	0.0035	3.68	40551.02	52783.74	52783.74	393.21	No	Si
SLU 26	10.45	1469.23	-25094	-0.0000376	0.0004492	0.0035	3.68	36970	41660.01	41660.01	28.35	No	Si
SLU 65	8.35	-104.12	-33900	-0.0000471	0.0004492	0.0035	3.68	45581.24	60022.17	60022.17	576.48	No	Si
SLU 65	10.45	1545.9	-29452	-0.0000044	0.0004492	0.0035	3.68	41514.53	47444.67	47444.67	30.69	No	Si
SLU 29	8.35	-167.15	-29394	-0.0000407	0.0004492	0.0035	3.68	41457.92	54010.93	54010.93	323.13	No	Si
SLU 29	10.45	1448.24	-25966	-0.0000388	0.0004492	0.0035	3.68	37924.16	42817.99	42817.99	29.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	8.35	-18144.21	-21709	-0.0000728	0.0006738	0.0035	3.68		44032.37	44032.37	2.43		Si
SLV 16	10.45	22003.87	-22604	-0.0000887	0.0006738	0.0035	3.68		39593.69	39593.69	1.8		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	8.35	18443.22	-30313	-0.0000834	0.0006738	0.0035	3.68		50822.85	50822.85	2.76		Si
SLV 1	10.45	-20052.8	-22709	-0.0000803	0.0006738	0.0035	3.68		45590.9	45590.9	2.27		Si
SLV 15	8.35	-17723.39	-21661	-0.0000713	0.0006738	0.0035	3.68		43957.82	43957.82	2.48		Si
SLV 15	10.45	21569.54	-22366	-0.0000867	0.0006738	0.0035	3.68		39223.83	39223.83	1.82		Si
SLD 15	8.35	-7498.87	-24166	-0.0000494	0.0006738	0.0035	3.68		47858.7	47858.7	6.38		Si
SLD 15	10.45	9795.05	-22546	-0.0000523	0.0006738	0.0035	3.68		39503.01	39503.01	4.03		Si
SLV 2	8.35	18022.41	-30361	-0.0000825	0.0006738	0.0035	3.68		50887.07	50887.07	2.82		Si
SLV 2	10.45	-19618.47	-22947	-0.0000787	0.0006738	0.0035	3.68		45961.61	45961.61	2.34		Si
SLD 16	8.35	-7679.62	-24186	-0.0000499	0.0006738	0.0035	3.68		47890.72	47890.72	6.24		Si
SLD 16	10.45	9981.6	-22648	-0.0000529	0.0006738	0.0035	3.68		39661.53	39661.53	3.97		Si
SLV 14	8.35	-17597.06	-19488	-0.0000699	0.0006738	0.0035	3.68		40574.12	40574.12	2.31		Si
SLV 14	10.45	19773.54	-21009	-0.000079	0.0006738	0.0035	3.68		37084.14	37084.14	1.88		Si
SLV 13	8.35	-17176.24	-19440	-0.0000683	0.0006738	0.0035	3.68		40499.56	40499.56	2.36		Si
SLV 13	10.45	19339.21	-20771	-0.0000772	0.0006738	0.0035	3.68		36708.74	36708.74	1.9		Si
SLV 3	8.35	17896.07	-32534	-0.0000854	0.0006738	0.0035	3.68		53801.92	53801.92	3.01		Si
SLV 3	10.45	-17822.47	-24304	-0.000074	0.0006738	0.0035	3.68		48074.5	48074.5	2.7		Si
SLV 4	8.35	17475.26	-32582	-0.0000845	0.0006738	0.0035	3.68		53866.15	53866.15	3.08		Si
SLV 4	10.45	-17388.14	-24542	-0.000073	0.0006738	0.0035	3.68		48445.2	48445.2	2.79		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	8.35	-215.47	-35770	-25517	-1547	3.68	3.68	-24764	10833	11163	115546	37030	18768	55798	No	36.07	Si
SLU 71	10.45	1571.65	-31247	-22291	-1547	3.68	3.68	-21633	10833	11163	115546	37030	18768	55798	No	36.08	Si
SLU 65	8.35	-104.12	-33900	-24184	-1546	3.68	3.68	-23470	10833	11163	115546	37030	18768	55798	No	36.09	Si
SLU 65	10.45	1545.9	-29452	-21010	-1546	3.68	3.68	-20390	10833	11163	115546	37030	18768	55798	No	36.1	Si
SLU 30	8.35	-194.47	-29421	-20988	-1425	3.68	3.68	-20369	10833	11163	115546	37030	18768	55798	No	39.14	Si
SLU 30	10.45	1488.88	-25997	-18545	-1425	3.68	3.68	-17998	10733	11059	115546	37030	18768	55798	No	39.15	Si
SLU 64	8.35	-58.59	-33856	-24152	-1484	3.68	3.68	-23439	10833	11163	115546	37030	18768	55798	No	37.6	Si
SLU 64	10.45	1478.18	-29401	-20974	-1484	3.68	3.68	-20355	10833	11163	115546	37030	18768	55798	No	37.61	Si
SLU 67	8.35	-78.53	-35690	-25461	-1522	3.68	3.68	-24709	10833	11163	115546	37030	18768	55798	No	36.67	Si
SLU 67	10.45	1532.66	-31243	-22288	-1521	3.68	3.68	-21630	10833	11163	115546	37030	18768	55798	No	36.68	Si
SLU 66	8.35	-51.21	-35663	-25441	-1484	3.68	3.68	-24691	10833	11163	115546	37030	18768	55798	No	37.59	Si
SLU 66	10.45	1492.02	-31212	-22266	-1484	3.68	3.68	-21609	10833	11163	115546	37030	18768	55798	No	37.6	Si
SLU 72	8.35	-242.79	-35797	-25537	-1584	3.68	3.68	-24783	10833	11163	115546	37030	18768	55798	No	35.22	Si
SLU 72	10.45	1612.29	-31278	-22313	-1584	3.68	3.68	-21654	10833	11163	115546	37030	18768	55798	No	35.23	Si
SLU 70	8.35	-156.97	-36647	-26143	-1553	3.68	3.68	-25372	10833	11163	115546	37030	18768	55798	No	35.93	Si
SLU 70	10.45	1579.39	-32166	-22946	-1553	3.68	3.68	-22269	10833	11163	115546	37030	18768	55798	No	35.93	Si
SLU 68	8.35	-182.56	-34858	-24867	-1578	3.68	3.68	-24133	10833	11163	115546	37030	18768	55798	No	35.37	Si
SLU 68	10.45	1592.64	-30375	-21669	-1577	3.68	3.68	-21029	10833	11163	115546	37030	18768	55798	No	35.38	Si
SLU 69	8.35	-129.66	-36621	-26124	-1516	3.68	3.68	-25353	10833	11163	115546	37030	18768	55798	No	36.81	Si
SLU 69	10.45	1538.76	-32135	-22924	-1516	3.68	3.68	-22248	10833	11163	115546	37030	18768	55798	No	36.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	8.35	-17597.06	-19488	-13902	-24091	3.68	2.8111	-17791	16059	12640	115546	55545	18768	74313		3.08	Si
SLV 14	10.45	19773.54	-21009	-14988	-22997	3.68	2.6965	-14545	15409	11634	115546	55545	18768	74313		3.23	Si
SLV 15	8.35	-17723.39	-21661	-15452	-24588	3.68	3.0653	-18150	16130	13844	115546	55545	18768	74313		3.02	Si
SLV 15	10.45	21569.54	-22366	-15956	-23469	3.68	2.6269	-15485	15597	11472	115546	55545	18768	74313		3.17	Si
SLD 15	8.35	-7498.87	-24166	-17239	-11097	3.68	3.68	-16731	15846	16328	115546	55545	18768	74313		6.7	Si
SLD 15	10.45	9795.05	-22546	-16084	-10616	3.68	3.68	-15609	15622	16097	115546	55545	18768	74313		7	Si
SLV 1	8.35	18443.22	-30313	-21625	23180	3.68	3.68	-20987	16250	16744	115546	55545	18768	74313		3.21	Si
SLV 1	10.45	-20052.8	-22709	-16200	22061	3.68	2.8709	-20330	16250	13063	115546	55545	18768	74313		3.37	Si
SLV 13	8.35	-17176.24	-19440	-13868	-23492	3.68	2.8694	-17388	15978	12837	115546	55545	18768	74313		3.16	Si
SLV 13	10.45	19339.21	-20771	-14818	-22397	3.68	2.7269	-14381	15376	11740	115546	55545	18768	74313		3.32	Si
SLV 4	8.35	17475.26	-32582	-23243	21484	3.68	3.68	-22557	16250	16744	115546	55545	18768	74313		3.46	Si
SLV 4	10.45	-17388.14	-24542	-17508	20390	3.68	3.3945	-18563	16213	15409	115546	55545	18768	74313		3.64	Si
SLV 3	8.35	17896.07	-32534	-23209	22083	3.68	3.68	-22524	16250	16744	115546	55545	18768	74313		3.37	Si
SLV 3	10.45	-17822.47	-24304	-17338	20989	3.68	3.3201	-18787	16250	15106	115546	55545	18768	74313		3.54	Si
SLV 2	8.35	18022.41	-30361	-21659	22580	3.68	3.68	-21020	16250	16744	115546	55545	18768	74313		3.29	Si
SLV 2	10.45	-19618.47	-22947	-16370	21461	3.68	2.9552	-19959	16250	13446	115546	55545	18768	74313		3.46	Si
SLV 16	8.35	-18144.21	-21709	-15486	-25188	3.68	3.0126	-18511	16202	13667	115546	55545	18768	74313		2.95	Si
SLV 16	10.45	22003.87	-22604	-16125	-24068	3.68	2.5997	-15650	15630	11377	115546	55545	18768	74313		3.09	Si
SLD 16	8.35	-7679.62	-24186	-17254	-11354	3.68	3.68	-16745	15849	16331	115546	55545	18768	74313		6.55	Si
SLD 16	10.45	9981.6	-22648	-16157	-10874	3.68	3.68	-15680	15636	16111	115546	55545	18768	74313		6.83	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-20862	0.46	457.34	2597.99	3646.35	3122.17	6.83	Si
SLV 10	-21017	0.46	457.34	2614.89	3669.63	3142.26	6.87	Si
SLV 5	-21406	0.46	457.34	2657.16	3728.07	3192.62	6.98	Si
SLV 6	-21561	0.46	457.34	2673.94	3751.32	3212.63	7.02	Si
SLV 13	-21653	0.46	457.34	2683.86	3765.09	3224.48	7.05	Si
SLV 14	-21891	0.46	457.34	2709.5	3800.77	3255.14	7.12	Si
SLV 15	-22912	0.46	457.34	2818.47	3953.52	3386	7.4	Si
SLV 16	-23150	0.46	457.34	2843.67	3988.84	3416.26	7.47	Si
SLV 1	-23468	0.46	457.34	2877.25	4036.11	3456.68	7.56	Si
SLV 2	-23706	0.46	457.34	2902.26	4071.44	3486.85	7.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-21942	-31359	893	0.83	2747.4	0.947	12.73546	13.33129	No
SLV 7	-21907	-31327	893	0.831	2743.8	0.947	12.75308	13.33129	No
SLV 12	-20598	-28097	954	0.871	2611.1	0.944	13.41333	13.33129	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-20563	-28065	954	0.873	2607.5	0.944	13.43303	13.33129	Si
SLV 6	-16201	-23956	-954	1.059	2165.9	0.935	16.47016	13.33129	Si
SLV 5	-16166	-23925	-953	1.061	2162.3	0.935	16.50067	13.33129	Si
SLV 10	-14858	-20694	-893	1.138	2030.1	0.931	17.76464	13.33129	Si
SLV 9	-14822	-20663	-893	1.14	2026.6	0.931	17.80013	13.33129	Si
SLV 4	-21510	-32582	176	0.872	2703.6	0.946	13.40174	6.37081	Si
SLV 3	-21456	-32534	177	0.874	2698.1	0.946	13.43082	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	28.355	SLU 26	Si
V_SLU	35.222	SLU 72	Si
PF_SLV	1.799	SLV 16	Si
V_SLV	2.95	SLV 16	Si
PFFP_SLV	6.827	SLV 9	Si
R_SLV	0.955	SLV 8	No

Maschio 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L6	L7	1.9	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 19	8.35	191.58	-13645	-0.0000378	0.0004492	0.0035	1.9	10241.63	11607.9	11607.9	60.59	No	Si
SLU 19	10.85	-1009.51	-10892	-0.0000372	0.0004492	0.0035	1.9	8613.58	11065.12	11065.12	10.96	No	Si
SLU 63	8.35	237.81	-17465	-0.0000488	0.0004492	0.0035	1.9	12133.79	14211.34	14211.34	59.76	No	Si
SLU 63	10.85	-1204.14	-13465	-0.0000461	0.0004492	0.0035	1.9	10142.07	12988.18	12988.18	10.79	No	Si
SLU 82	8.35	20.2	-18185	-0.0000489	0.0004492	0.0035	1.9	12442.96	14702.52	14702.52	727.91	No	Si
SLU 82	10.85	-1258.92	-14599	-0.0000498	0.0004492	0.0035	1.9	10754.16	13798.17	13798.17	10.96	No	Si
SLU 60	8.35	278.22	-17086	-0.0000481	0.0004492	0.0035	1.9	11965.01	13952.88	13952.88	50.15	No	Si
SLU 60	10.85	-1204	-13195	-0.0000453	0.0004492	0.0035	1.9	9990.82	12786.51	12786.51	10.62	No	Si
SLU 18	8.35	197.81	-13699	-0.000038	0.0004492	0.0035	1.9	10271.3	11644.64	11644.64	58.87	No	Si
SLU 18	10.85	-1013.74	-10932	-0.0000374	0.0004492	0.0035	1.9	8638.81	11095.57	11095.57	10.95	No	Si
SLU 62	8.35	244.04	-17519	-0.000049	0.0004492	0.0035	1.9	12157.44	14248.07	14248.07	58.38	No	Si
SLU 62	10.85	-1208.37	-13505	-0.0000462	0.0004492	0.0035	1.9	10164.3	13018.05	13018.05	10.77	No	Si
SLU 84	8.35	-13.97	-18619	-0.0000501	0.0004492	0.0035	1.9	12621.46	16547.17	16547.17	1184.19	No	Si
SLU 84	10.85	-1263.29	-14909	-0.0000507	0.0004492	0.0035	1.9	10914.93	14016.87	14016.87	11.1	No	Si
SLU 81	8.35	26.43	-18239	-0.0000491	0.0004492	0.0035	1.9	12465.47	14739.26	14739.26	557.71	No	Si
SLU 81	10.85	-1263.14	-14639	-0.0000499	0.0004492	0.0035	1.9	10775.06	13826.38	13826.38	10.95	No	Si
SLU 83	8.35	-7.74	-18672	-0.0000502	0.0004492	0.0035	1.9	12643.28	16582.98	16582.98	2141.56	No	Si
SLU 83	10.85	-1267.52	-14949	-0.0000508	0.0004492	0.0035	1.9	10935.46	14045.09	14045.09	11.08	No	Si
SLU 61	8.35	271.99	-17032	-0.0000479	0.0004492	0.0035	1.9	11940.68	13916.15	13916.15	51.16	No	Si
SLU 61	10.85	-1199.77	-13155	-0.0000452	0.0004492	0.0035	1.9	9968.23	12756.64	12756.64	10.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	8.35	11536.1	-15537	-0.0002884	0.0006738	0.0035	1.9		13508.88	13508.88	1.17		Si
SLV 2	10.85	-9200.95	-17340	-0.0001454	0.0006738	0.0035	1.52		16268.99	16268.99	1.77		Si
SLV 4	8.35	10867.27	-10211	-0.0085779	0.0006738	0.0035	1.52		9396.68	9396.68	0.86		No
SLV 4	10.85	-8797	-13991	-0.0001535	0.0006738	0.0035	1.52		13737.6	13737.6	1.56		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	8.35	-11040.4	-16090	-0.0002235	0.0006738	0.0035	1.52		15349.85	15349.85	1.39		Si
SLV 14	10.85	7264.46	-5888	-0.0074732	0.0006738	0.0035	1.52		5737.84	5737.84	0.79		No
SLV 11	8.35	-4524.32	-4364	-0.0003334	0.0006738	0.0035	1.52		5765.4	5765.4	1.27		Si
SLV 11	10.85	2352.35	-2663	-0.0001335	0.0006738	0.0035	1.9		2871.44	2871.44	1.22		Si
SLV 15	8.35	-11632.41	-10774	-0.0014168	0.0006738	0.0035	1.52		11186.33	11186.33	0.96		No
SLV 15	10.85	7638.81	-2568	-0.0150367	0.0006738	0.0035	1.52		2784.96	2784.96	0.36		No
SLV 13	8.35	-10963.58	-16101	-0.0002188	0.0006738	0.0035	1.52		15357.92	15357.92	1.4		Si
SLV 13	10.85	7234.85	-5917	-0.0073182	0.0006738	0.0035	1.52		5763.53	5763.53	0.8		No
SLV 12	8.35	-4574.37	-4357	-0.0003479	0.0006738	0.0035	1.52		5759.08	5759.08	1.26		Si
SLV 12	10.85	2371.64	-2643	-0.0001614	0.0006738	0.0035	1.9		2853.89	2853.89	1.2		Si
SLV 1	8.35	11612.91	-15548	-0.0002965	0.0006738	0.0035	1.9		13516.45	13516.45	1.16		Si
SLV 1	10.85	-9230.56	-17370	-0.0001459	0.0006738	0.0035	1.52		16290.74	16290.74	1.76		Si
SLV 16	8.35	-11709.22	-10763	-0.0014635	0.0006738	0.0035	1.52		11177.43	11177.43	0.95		No
SLV 16	10.85	7668.41	-2538	-0.0151728	0.0006738	0.0035	1.52		2758.03	2758.03	0.36		No
SLV 3	8.35	10944.08	-10222	-0.0087888	0.0006738	0.0035	1.52		9405.75	9405.75	0.86		No
SLV 3	10.85	-8826.6	-14020	-0.0001543	0.0006738	0.0035	1.52		13760.46	13760.46	1.56		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	8.35	-60.21	-14799	-10557	-1	1.9	1.9	-19844	10833	5763	115546	19119	9690	28809	No	29582.82	Si
SLU 40	10.85	-1068.66	-12336	-8800	1231	1.9	1.9	-16541	10539	5607	115546	19119	9690	28809	No	23.41	Si
SLU 81	8.35	26.43	-18239	-13011	-20	1.9	1.9	-24458	10833	5763	115546	19119	9690	28809	No	1465.87	Si
SLU 81	10.85	-1263.14	-14639	-10443	1332	1.9	1.9	-19630	10833	5763	115546	19119	9690	28809	No	21.63	Si
SLU 84	8.35	-13.97	-18619	-13282	-82	1.9	1.9	-24966	10833	5763	115546	19119	9690	28809	No	353.48	Si
SLU 84	10.85	-1263.29	-14909	-10636	1337	1.9	1.9	-19992	10833	5763	115546	19119	9690	28809	No	21.55	Si
SLU 42	8.35	-94.38	-15232	-10866	-59	1.9	1.9	-20425	10833	5763	115546	19119	9690	28809	No	487.44	Si
SLU 42	10.85	-1073.04	-12646	-9021	1230	1.9	1.9	-16957	10594	5636	115546	19119	9690	28809	No	23.42	Si
SLU 75	8.35	-75.65	-18762	-13384	-149	1.9	1.9	-25159	10833	5763	115546	19119	9690	28809	No	193.96	Si
SLU 75	10.85	-1209.05	-14927	-10648	1264	1.9	1.9	-20016	10833	5763	115546	19119	9690	28809	No	22.78	Si
SLU 82	8.35	20.2	-18185	-12973	-23	1.9	1.9	-24385	10833	5763	115546	19119	9690	28809	No	1232.61	Si
SLU 82	10.85	-1258.92	-14599	-10414	1337	1.9	1.9	-19576	10833	5763	115546	19119	9690	28809	No	21.54	Si
SLU 83	8.35	-7.74	-18672	-13320	-78	1.9	1.9	-25038	10833	5763	115546	19119	9690	28809	No	370.38	Si
SLU 83	10.85	-1267.52	-14949	-10664	1332	1.9	1.9	-20045	10833	5763	115546	19119	9690	28809	No	21.64	Si
SLU 74	8.35	-69.42	-18816	-13423	-145	1.9	1.9	-25231	10833	5763	115546	19119	9690	28809	No	198.94	Si
SLU 74	10.85	-1213.28	-14967	-10677	1259	1.9	1.9	-20070	10833	5763	115546	19119	9690	28809	No	22.88	Si
SLU 77	8.35	-103.6	-19249	-13732	-203	1.9	1.9	-25812	10833	5763	115546	19119	9690	28809	No	141.96	Si
SLU 77	10.85	-1217.66	-15277	-10898	1258	1.9	1.9	-20485	10833	5763	115546	19119	9690	28809	No	22.89	Si
SLU 78	8.35	-109.83	-19195	-13693	-207	1.9	1.9	-25739	10833	5763	115546	19119	9690	28809	No	139.41	Si
SLU 78	10.85	-1213.43	-15237	-10870	1264	1.9	1.9	-20431	10833	5763	115546	19119	9690	28809	No	22.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	8.35	11536.1	-15537	-11084	10612	1.9	0.6225	-65961	16250	2833	115546	28678	9690	38368		3.62	Si
SLV 2	10.85	-9200.95	-17340	-12370	8786	1.52	1.2582	0	0	0	115546	22942	7752	30694		3.49	Si
SLV 13	8.35	-10963.58	-16101	-11486	-10694	1.52	0.8072	0	0	0	115546	22942	7752	30694		2.87	Si
SLV 13	10.85	7234.85	-5917	-4221	-8026	1.52	0	0	0	0	115546	22942	7752	30694		3.82	Si
SLD 16	8.35	-5038.02	-12093	-8627	-4800	1.9	1.6002	-19425	16250	7281	115546	28678	9690	38368		7.99	Si
SLD 16	10.85	2833.89	-6759	-4822	-2706	1.9	1.5922	-9064	14313	6381	115546	28678	9690	38368		14.18	Si
SLV 3	8.35	10944.08	-10222	-7292	10425	1.52	0	0	0	0	115546	22942	7752	30694		2.94	Si
SLV 3	10.85	-8826.6	-14020	-10002	9515	1.52	0.9613	0	0	0	115546	22942	7752	30694		3.23	Si
SLV 16	8.35	-11709.22	-10763	-7678	-11003	1.52	0	0	0	0	115546	22942	7752	30694		2.79	Si
SLV 16	10.85	7668.41	-2538	-1811	-7328	1.52	0	0	0	0	115546	22942	7752	30694		4.19	Si
SLV 14	8.35	-11040.4	-16090	-11478	-10755	1.52	0.7915	0	0	0	115546	22942	7752	30694		2.85	Si
SLV 14	10.85	7264.46	-5888	-4200	-8041	1.52	0	0	0	0	115546	22942	7752	30694		3.82	Si
SLV 1	8.35	11612.91	-15548	-11092	10673	1.9	0.6093	-67520	16250	2772	115546	28678	9690	38368		3.59	Si
SLV 1	10.85	-9230.56	-17370	-12391	8802	1.52	1.2558	0	0	0	115546	22942	7752	30694		3.49	Si
SLV 4	8.35	10867.27	-10211	-7284	10364	1.52	0	0	0	0	115546	22942	7752	30694		2.96	Si
SLV 4	10.85	-8797	-13991	-9981	9500	1.52	0.9637	0	0	0	115546	22942	7752	30694		3.23	Si
SLD 15	8.35	-5005.03	-12098	-8631	-4774	1.9	1.6089	-19327	16250	7320	115546	28678	9690	38368		8.04	Si
SLD 15	10.85	2821.18	-6772	-4831	-2699	1.9	1.6002	-9081	14316	6414	115546	28678	9690	38368		14.21	Si
SLV 15	8.35	-11632.41	-10774	-7686	-10942	1.52	0	0	0	0	115546	22942	7752	30694		2.81	Si
SLV 15	10.85	7638.81	-2568	-1832	-7313	1.52	0	0	0	0	115546	22942	7752	30694		4.2	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-4976	0.46	236.13	661.14	987.67	824.41	3.49	Si
SLV 12	-4981	0.46	236.13	661.7	988.36	825.03	3.49	Si
SLV 7	-5578	0.46	236.13	736.22	1079.9	908.06	3.85	Si
SLV 8	-5582	0.46	236.13	736.77	1080.59	908.68	3.85	Si
SLV 15	-8654	0.46	236.13	1104.02	1549.13	1326.58	5.62	Si
SLV 16	-8661	0.46	236.13	1104.81	1550.18	1327.5	5.62	Si
SLV 3	-10658	0.46	236.13	1329.07	1851.48	1590.27	6.73	Si
SLV 4	-10665	0.46	236.13	1329.82	1852.52	1591.17	6.74	Si
SLV 13	-12408	0.46	236.13	1516.11	2113.56	1814.84	7.69	Si
SLV 14	-12415	0.46	236.13	1516.83	2114.59	1815.71	7.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-14786	-21954	-245	0.677	1769.6	0.956	10.28972	13.33129	No
SLV 6	-14753	-21947	-245	0.678	1766.2	0.956	10.31002	13.33129	No
SLV 9	-14341	-22120	-191	0.698	1724.4	0.955	10.62071	13.33129	No
SLV 10	-14308	-22113	-191	0.699	1721	0.955	10.64231	13.33129	No
SLV 1	-11215	-15548	-151	0.861	1406.9	0.946	13.21688	6.37081	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-11164	-15537	-151	0.864	1401.7	0.946	13.26913	6.37081	Si
SLV 13	-9733	-16101	28	0.978	1256.7	0.941	15.10609	6.37081	Si
SLV 14	-9682	-16090	28	0.982	1251.5	0.941	15.17443	6.37081	Si
SLV 7	-3075	-4199	201	2.253	589.7	0.897	36.49173	13.33129	Si
SLV 8	-3042	-4191	201	2.269	586.5	0.897	36.75531	13.33129	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.62	SLU 60	Si
V_SLU	21.54	SLU 82	Si
PF_SLV	0.36	SLV 16	No
V_SLV	2.79	SLV 16	Si
PFFP_SLV	3.491	SLV 11	Si
R_SLV	0.772	SLV 5	No

Maschio 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.006	-11.143	1.006	L6	L7	0.665	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	8.35	161.87	-5451	-0.0000531	0.0004492	0.0035	0.6647	1377.42	1588.12	1588.12	9.81	No	Si
SLU 31	10.85	-140.11	-6033	-0.0000563	0.0004492	0.0035	0.6647	1473.11	1860.93	1860.93	13.28	No	Si
SLU 39	8.35	170.96	-5661	-0.0000555	0.0004492	0.0035	0.6647	1413.02	1637.64	1637.64	9.58	No	Si
SLU 39	10.85	-147.99	-6348	-0.0000595	0.0004492	0.0035	0.6647	1520.75	1934.33	1934.33	13.07	No	Si
SLU 33	8.35	168.09	-5799	-0.0000564	0.0004492	0.0035	0.6647	1435.84	1670.36	1670.36	9.94	No	Si
SLU 33	10.85	-145.2	-6421	-0.0000599	0.0004492	0.0035	0.6647	1531.41	1951.38	1951.38	13.44	No	Si
SLU 38	8.35	167.21	-5772	-0.0000561	0.0004492	0.0035	0.6647	1431.38	1663.89	1663.89	9.95	No	Si
SLU 38	10.85	-145.88	-6359	-0.0000594	0.0004492	0.0035	0.6647	1522.41	1936.96	1936.96	13.28	No	Si
SLU 37	8.35	167.23	-5792	-0.0000563	0.0004492	0.0035	0.6647	1434.63	1668.6	1668.6	9.98	No	Si
SLU 37	10.85	-145.52	-6375	-0.0000595	0.0004492	0.0035	0.6647	1524.81	1940.8	1940.8	13.34	No	Si
SLU 41	8.35	173.62	-5814	-0.0000569	0.0004492	0.0035	0.6647	1438.32	1673.96	1673.96	9.64	No	Si
SLU 41	10.85	-151	-6505	-0.000061	0.0004492	0.0035	0.6647	1543.51	1971.06	1971.06	13.05	No	Si
SLU 34	8.35	164.53	-5605	-0.0000546	0.0004492	0.0035	0.6647	1403.66	1624.44	1624.44	9.87	No	Si
SLU 34	10.85	-143.11	-6190	-0.0000578	0.0004492	0.0035	0.6647	1497.32	1897.67	1897.67	13.26	No	Si
SLU 42	8.35	173.59	-5794	-0.0000568	0.0004492	0.0035	0.6647	1435.08	1669.26	1669.26	9.62	No	Si
SLU 42	10.85	-151.35	-6489	-0.0000609	0.0004492	0.0035	0.6647	1541.17	1967.23	1967.23	13	No	Si
SLU 40	8.35	170.93	-5641	-0.0000553	0.0004492	0.0035	0.6647	1409.7	1632.94	1632.94	9.55	No	Si
SLU 40	10.85	-148.35	-6331	-0.0000593	0.0004492	0.0035	0.6647	1518.33	1930.49	1930.49	13.01	No	Si
SLU 32	8.35	168.11	-5819	-0.0000566	0.0004492	0.0035	0.6647	1439.08	1675.06	1675.06	9.96	No	Si
SLU 32	10.85	-144.85	-6437	-0.00006	0.0004492	0.0035	0.6647	1533.78	1955.22	1955.22	13.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	8.35	1015.1	-1164	-0.0136417	0.0006738	0.0035	0.5318		429.01	429.01	0.42		No
SLV 7	10.85	-914.11	-2740	-0.0005768	0.0006738	0.0035	0.5318		1012.05	1012.05	1.11		Si
SLV 16	8.35	-2629.54	-5896	-0.0076202	0.0006738	0.0035	0.5318		1893.34	1893.34	0.72		No
SLV 16	10.85	2411.13	-4239	-0.0264262	0.0006738	0.0035	0.5318		1345.14	1345.14	0.56		No
SLV 14	8.35	-2679.51	-7798	-0.0056007	0.0006738	0.0035	0.5318		2368.98	2368.98	0.88		No
SLV 14	10.85	2456.37	-5549	-0.0209558	0.0006738	0.0035	0.5318		1689.27	1689.27	0.69		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	8.35	-2614.92	-5840	-0.0075959	0.0006738	0.0035	0.5318		1878.59	1878.59	0.72		No
SLV 15	10.85	2397.4	-4221	-0.0262411	0.0006738	0.0035	0.5318		1340.37	1340.37	0.56		No
SLV 2	8.35	2819.35	-4002	-0.0352977	0.0006738	0.0035	0.5318		1278.35	1278.35	0.45		No
SLV 2	10.85	-2560.73	-5617	-0.0075185	0.0006738	0.0035	0.5318		1818.96	1818.96	0.71		No
SLV 13	8.35	-2664.89	-7741	-0.0055792	0.0006738	0.0035	0.5318		2355.15	2355.15	0.88		No
SLV 13	10.85	2442.64	-5531	-0.0207655	0.0006738	0.0035	0.5318		1685.17	1685.17	0.69		No
SLV 8	8.35	1005.57	-1201	-0.0132937	0.0006738	0.0035	0.5318		440.58	440.58	0.44		No
SLV 8	10.85	-905.16	-2752	-0.0005303	0.0006738	0.0035	0.5318		1015.41	1015.41	1.12		Si
SLV 3	8.35	2883.95	-2044	-0.0450184	0.0006738	0.0035	0.5318		702.21	702.21	0.24		No
SLV 3	10.85	-2619.7	-4289	-0.0090335	0.0006738	0.0035	0.5318		1457.79	1457.79	0.56		No
SLV 4	8.35	2869.33	-2101	-0.0445053	0.0006738	0.0035	0.5318		719.4	719.4	0.25		No
SLV 4	10.85	-2605.97	-4307	-0.0089494	0.0006738	0.0035	0.5318		1462.56	1462.56	0.56		No
SLV 1	8.35	2833.98	-3946	-0.0358276	0.0006738	0.0035	0.5318		1262.29	1262.29	0.45		No
SLV 1	10.85	-2574.46	-5599	-0.0076141	0.0006738	0.0035	0.5318		1814.38	1814.38	0.7		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	8.35	170.75	-5953	-4247	257	0.6647	0.6647	-22817	10833	2016	115546	6689	3390	10078	No	39.16	Si
SLU 36	10.85	-148.21	-6578	-4693	245	0.6647	0.6647	-25214	10833	2016	115546	6689	3390	10078	No	41.22	Si
SLU 40	8.35	170.93	-5641	-4024	267	0.6647	0.6647	-21621	10833	2016	115546	6689	3390	10078	No	37.72	Si
SLU 40	10.85	-148.35	-6331	-4516	248	0.6647	0.6647	-24267	10833	2016	115546	6689	3390	10078	No	40.69	Si
SLU 35	8.35	170.77	-5973	-4261	257	0.6647	0.6647	-22893	10833	2016	115546	6689	3390	10078	No	39.22	Si
SLU 35	10.85	-147.85	-6595	-4704	244	0.6647	0.6647	-25277	10833	2016	115546	6689	3390	10078	No	41.29	Si
SLU 82	8.35	173.02	-6920	-4937	266	0.6647	0.6647	-26525	10833	2016	115546	6689	3390	10078	No	37.89	Si
SLU 82	10.85	-144.92	-7352	-5245	247	0.6647	0.6647	-28179	10833	2016	115546	6689	3390	10078	No	40.78	Si
SLU 41	8.35	173.62	-5814	-4148	269	0.6647	0.6647	-22286	10833	2016	115546	6689	3390	10078	No	37.43	Si
SLU 41	10.85	-151	-6505	-4641	250	0.6647	0.6647	-24934	10833	2016	115546	6689	3390	10078	No	40.31	Si
SLU 84	8.35	175.68	-7074	-5046	268	0.6647	0.6647	-27114	10833	2016	115546	6689	3390	10078	No	37.54	Si
SLU 84	10.85	-147.93	-7509	-5357	250	0.6647	0.6647	-28783	10833	2016	115546	6689	3390	10078	No	40.34	Si
SLU 83	8.35	175.71	-7094	-5060	268	0.6647	0.6647	-27190	10833	2016	115546	6689	3390	10078	No	37.6	Si
SLU 83	10.85	-147.57	-7526	-5369	249	0.6647	0.6647	-28846	10833	2016	115546	6689	3390	10078	No	40.4	Si
SLU 42	8.35	173.59	-5794	-4134	270	0.6647	0.6647	-22210	10833	2016	115546	6689	3390	10078	No	37.38	Si
SLU 42	10.85	-151.35	-6489	-4629	250	0.6647	0.6647	-24871	10833	2016	115546	6689	3390	10078	No	40.25	Si
SLU 81	8.35	173.04	-6940	-4951	266	0.6647	0.6647	-26601	10833	2016	115546	6689	3390	10078	No	37.95	Si
SLU 81	10.85	-144.56	-7368	-5256	247	0.6647	0.6647	-28242	10833	2016	115546	6689	3390	10078	No	40.85	Si
SLU 39	8.35	170.96	-5661	-4038	267	0.6647	0.6647	-21697	10833	2016	115546	6689	3390	10078	No	37.78	Si
SLU 39	10.85	-147.99	-6348	-4528	247	0.6647	0.6647	-24330	10833	2016	115546	6689	3390	10078	No	40.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	8.35	2833.98	-3946	-2815	2557	0.5318	0	0	0	0	115546	8026	2712	10738		4.2	Si
SLV 1	10.85	-2574.46	-5599	-3995	2152	0.5318	0	0	0	0	115546	8026	2712	10738		4.99	Si
SLV 4	8.35	2869.33	-2101	-1499	2644	0.5318	0	0	0	0	115546	8026	2712	10738		4.06	Si
SLV 4	10.85	-2605.97	-4307	-3072	2101	0.5318	0	0	0	0	115546	8026	2712	10738		5.11	Si
SLD 3	8.35	1291.91	-3677	-2623	1220	0.5318	0	0	0	0	115546	8026	2712	10738		8.8	Si
SLD 3	10.85	-1167.23	-4641	-3311	986	0.5318	0.2425	0	0	0	115546	8026	2712	10738		10.9	Si
SLV 16	8.35	-2629.54	-5896	-4206	-2266	0.5318	0	0	0	0	115546	8026	2712	10738		4.74	Si
SLV 16	10.85	2411.13	-4239	-3024	-1867	0.5318	0	0	0	0	115546	8026	2712	10738		5.75	Si
SLV 13	8.35	-2664.89	-7741	-5522	-2353	0.5318	0	0	0	0	115546	8026	2712	10738		4.56	Si
SLV 13	10.85	2442.64	-5531	-3946	-1816	0.5318	0	0	0	0	115546	8026	2712	10738		5.91	Si
SLD 4	8.35	1285.63	-3701	-2640	1214	0.5318	0	0	0	0	115546	8026	2712	10738		8.84	Si
SLD 4	10.85	-1161.33	-4648	-3316	979	0.5318	0.2475	0	0	0	115546	8026	2712	10738		10.96	Si
SLV 15	8.35	-2614.92	-5840	-4166	-2252	0.5318	0	0	0	0	115546	8026	2712	10738		4.77	Si
SLV 15	10.85	2397.4	-4221	-3011	-1853	0.5318	0	0	0	0	115546	8026	2712	10738		5.8	Si
SLV 14	8.35	-2679.51	-7798	-5563	-2367	0.5318	0	0	0	0	115546	8026	2712	10738		4.54	Si
SLV 14	10.85	2456.37	-5549	-3958	-1830	0.5318	0	0	0	0	115546	8026	2712	10738		5.87	Si
SLV 2	8.35	2819.35	-4002	-2855	2543	0.5318	0	0	0	0	115546	8026	2712	10738		4.22	Si
SLV 2	10.85	-2560.73	-5617	-4007	2138	0.5318	0	0	0	0	115546	8026	2712	10738		5.02	Si
SLV 3	8.35	2883.95	-2044	-1458	2658	0.5318	0	0	0	0	115546	8026	2712	10738		4.04	Si
SLV 3	10.85	-2619.7	-4289	-3060	2115	0.5318	0	0	0	0	115546	8026	2712	10738		5.08	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-2080	0.46	82.61	273.47	377.55	325.51	3.94	Si
SLV 8	-2099	0.46	82.61	275.8	380.46	328.13	3.97	Si
SLV 11	-2210	0.46	82.61	289.37	397.48	343.42	4.16	Si
SLV 12	-2229	0.46	82.61	291.68	400.39	346.04	4.19	Si
SLV 3	-3675	0.46	82.61	459.09	620.16	539.62	6.53	Si
SLV 4	-3704	0.46	82.61	462.28	624.55	543.42	6.58	Si
SLV 15	-4108	0.46	82.61	505.87	685.37	595.62	7.21	Si
SLV 16	-4137	0.46	82.61	508.96	689.76	599.36	7.26	Si
SLV 1	-5176	0.46	82.61	614.73	844.64	729.68	8.83	Si
SLV 2	-5206	0.46	82.61	617.57	848.93	733.25	8.88	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-4276	-8678	-10	0.81	528	0.949	12.3963	13.33129	No
SLV 9	-4251	-8641	-10	0.814	525.4	0.949	12.46083	13.33129	No
SLV 6	-3814	-7539	-29	0.886	481.1	0.945	13.62963	13.33129	Si
SLV 5	-3789	-7502	-29	0.891	478.5	0.945	13.70865	13.33129	Si
SLV 14	-3702	-7798	26	0.909	469.8	0.944	13.99413	6.37081	Si
SLV 13	-3663	-7741	26	0.917	465.8	0.944	14.12332	6.37081	Si
SLV 12	-1078	-2340	32	2.274	206.5	0.897	36.83109	13.33129	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-1052	-2303	32	2.309	204	0.897	37.41836	13.33129	Si
SLV 16	-2743	-5896	39	1.156	372.7	0.932	18.0169	6.37081	Si
SLV 15	-2704	-5840	39	1.169	368.7	0.932	18.2349	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.553	SLU 40	Si
V_SLU	37.375	SLU 42	Si
PF_SLV	0.243	SLV 3	No
V_SLV	4.04	SLV 3	Si
PFFP_SLV	3.94	SLV 7	Si
R_SLV	0.93	SLV 10	No

Maschio 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L6	L7	1.935	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	8.35	1431.15	-21038	-0.0000683	0.0004492	0.0035	1.9353	13889.11	16986.43	16986.43	11.87	No	Si
SLU 68	10.85	458.12	-15324	-0.0000438	0.0004492	0.0035	1.9353	11396.6	13019.12	13019.12	28.42	No	Si
SLU 25	8.35	1250.99	-17814	-0.0000575	0.0004492	0.0035	1.9353	12600.1	14748.01	14748.01	11.79	No	Si
SLU 25	10.85	340.59	-13216	-0.0000371	0.0004492	0.0035	1.9353	10235.64	11554.92	11554.92	33.93	No	Si
SLU 22	8.35	1235.25	-16695	-0.0000542	0.0004492	0.0035	1.9353	12081.74	13971.15	13971.15	11.31	No	Si
SLU 22	10.85	298.05	-12187	-0.000034	0.0004492	0.0035	1.9353	9622.28	10840.83	10840.83	36.37	No	Si
SLU 23	8.35	1233.96	-16650	-0.0000541	0.0004492	0.0035	1.9353	12059.91	13939.58	13939.58	11.3	No	Si
SLU 23	10.85	291.32	-12147	-0.0000338	0.0004492	0.0035	1.9353	9597.74	10812.99	10812.99	37.12	No	Si
SLU 26	8.35	1254.02	-17248	-0.000056	0.0004492	0.0035	1.9353	12342.41	14354.95	14354.95	11.45	No	Si
SLU 26	10.85	301.12	-12685	-0.0000353	0.0004492	0.0035	1.9353	9922.98	11186.41	11186.41	37.15	No	Si
SLU 24	8.35	1251.76	-17841	-0.0000576	0.0004492	0.0035	1.9353	12612.28	14766.95	14766.95	11.8	No	Si
SLU 24	10.85	344.63	-13240	-0.0000372	0.0004492	0.0035	1.9353	10249.61	11571.62	11571.62	33.58	No	Si
SLU 64	8.35	1412.38	-20485	-0.0000666	0.0004492	0.0035	1.9353	13689.67	16602.63	16602.63	11.76	No	Si
SLU 64	10.85	455.05	-14827	-0.0000424	0.0004492	0.0035	1.9353	11134.3	12673.53	12673.53	27.85	No	Si
SLU 65	8.35	1411.09	-20440	-0.0000664	0.0004492	0.0035	1.9353	13672.87	16571.07	16571.07	11.74	No	Si
SLU 65	10.85	448.32	-14786	-0.0000423	0.0004492	0.0035	1.9353	11112.86	12645.69	12645.69	28.21	No	Si
SLU 30	8.35	1274.6	-17865	-0.0000579	0.0004492	0.0035	1.9353	12622.55	14782.94	14782.94	11.6	No	Si
SLU 30	10.85	313.61	-13239	-0.0000369	0.0004492	0.0035	1.9353	10249.07	11570.97	11570.97	36.9	No	Si
SLU 29	8.35	1275.37	-17892	-0.000058	0.0004492	0.0035	1.9353	12634.69	14801.88	14801.88	11.61	No	Si
SLU 29	10.85	317.65	-13263	-0.000037	0.0004492	0.0035	1.9353	10263.03	11587.68	11587.68	36.48	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	8.35	-8028.8	-15755	-0.000119	0.0006738	0.0035	1.9353		15647.59	15647.59	1.95		Si
SLV 13	10.85	7747.15	-15110	-0.0001147	0.0006738	0.0035	1.9353		13499.67	13499.67	1.74		Si
SLV 1	8.35	10228.2	-18074	-0.0001596	0.0006738	0.0035	1.9353		15579.8	15579.8	1.52		Si
SLV 1	10.85	-6628.76	-9627	-0.0001185	0.0006738	0.0035	1.5482		10724.44	10724.44	1.62		Si
SLV 15	8.35	-8081.67	-13252	-0.0001287	0.0006738	0.0035	1.5482		13697.08	13697.08	1.69		Si
SLV 15	10.85	7370.21	-13074	-0.0001116	0.0006738	0.0035	1.9353		11915.3	11915.3	1.62		Si
SLV 16	8.35	-8198.6	-13404	-0.000131	0.0006738	0.0035	1.5482		13818.14	13818.14	1.69		Si
SLV 16	10.85	7434.75	-13247	-0.0001124	0.0006738	0.0035	1.9353		12055.58	12055.58	1.62		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 3	8.35	4931.9	-15648	-0.0000812	0.0006738	0.0035	1.9353		13877.76	13877.76	2.81		Si
SLD 3	10.85	-2767.62	-9778	-0.0000472	0.0006738	0.0035	1.9353		10853.49	10853.49	3.92		Si
SLV 14	8.35	-8145.73	-15908	-0.000121	0.0006738	0.0035	1.9353		15766.24	15766.24	1.94		Si
SLV 14	10.85	7811.7	-15282	-0.0001157	0.0006738	0.0035	1.9353		13620.93	13620.93	1.74		Si
SLD 4	8.35	4881.67	-15714	-0.0000809	0.0006738	0.0035	1.9353		13923.73	13923.73	2.85		Si
SLD 4	10.85	-2739.89	-9852	-0.0000472	0.0006738	0.0035	1.9353		10914.27	10914.27	3.98		Si
SLV 2	8.35	10111.27	-18226	-0.0001563	0.0006738	0.0035	1.9353		15686.81	15686.81	1.55		Si
SLV 2	10.85	-6564.22	-9800	-0.0001129	0.0006738	0.0035	1.5482		10871.95	10871.95	1.66		Si
SLV 3	8.35	10175.33	-15570	-0.0001779	0.0006738	0.0035	1.9353		13822.87	13822.87	1.36		Si
SLV 3	10.85	-7005.71	-7592	-0.0003178	0.0006738	0.0035	1.5482		8976.18	8976.18	1.28		Si
SLV 4	8.35	10058.4	-15723	-0.0001714	0.0006738	0.0035	1.9353		13929.88	13929.88	1.38		Si
SLV 4	10.85	-6941.16	-7765	-0.0002745	0.0006738	0.0035	1.5482		9124.58	9124.58	1.31		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	8.35	1448.96	-22229	-15858	1528	1.9353	1.9353	-29264	10833	5870	115546	19474	9870	29344	No	19.2	Si
SLU 69	10.85	511.43	-16417	-11711	24	1.9353	1.9353	-21612	10833	5870	115546	19474	9870	29344	No	1215.18	Si
SLU 66	8.35	1428.89	-21631	-15431	1498	1.9353	1.9353	-28477	10833	5870	115546	19474	9870	29344	No	19.59	Si
SLU 66	10.85	501.63	-15879	-11328	17	1.9353	1.9353	-20904	10833	5870	115546	19474	9870	29344	No	1678.23	Si
SLU 79	8.35	1433.22	-23074	-16460	1492	1.9353	1.9353	-30376	10833	5870	115546	19474	9870	29344	No	19.67	Si
SLU 79	10.85	579.13	-17231	-12292	115	1.9353	1.9353	-22684	10833	5870	115546	19474	9870	29344	No	255.42	Si
SLU 70	8.35	1448.18	-22202	-15839	1528	1.9353	1.9353	-29229	10833	5870	115546	19474	9870	29344	No	19.2	Si
SLU 70	10.85	507.4	-16393	-11694	26	1.9353	1.9353	-21581	10833	5870	115546	19474	9870	29344	No	1137.84	Si
SLU 67	8.35	1428.12	-21604	-15412	1498	1.9353	1.9353	-28441	10833	5870	115546	19474	9870	29344	No	19.59	Si
SLU 67	10.85	497.6	-15855	-11311	19	1.9353	1.9353	-20873	10833	5870	115546	19474	9870	29344	No	1534.2	Si
SLU 71	8.35	1452.5	-21682	-15467	1531	1.9353	1.9353	-28543	10833	5870	115546	19474	9870	29344	No	19.17	Si
SLU 71	10.85	474.65	-15902	-11344	37	1.9353	1.9353	-20935	10833	5870	115546	19474	9870	29344	No	793.25	Si
SLU 80	8.35	1432.44	-23046	-16441	1492	1.9353	1.9353	-30340	10833	5870	115546	19474	9870	29344	No	19.67	Si
SLU 80	10.85	575.09	-17207	-12275	117	1.9353	1.9353	-22652	10833	5870	115546	19474	9870	29344	No	251.82	Si
SLU 77	8.35	1429.67	-23622	-16851	1489	1.9353	1.9353	-31097	10833	5870	115546	19474	9870	29344	No	19.71	Si
SLU 77	10.85	615.91	-17746	-12659	102	1.9353	1.9353	-23362	10833	5870	115546	19474	9870	29344	No	287.57	Si
SLU 72	8.35	1451.73	-21654	-15448	1531	1.9353	1.9353	-28507	10833	5870	115546	19474	9870	29344	No	19.17	Si
SLU 72	10.85	470.61	-15878	-11327	39	1.9353	1.9353	-20903	10833	5870	115546	19474	9870	29344	No	759.55	Si
SLU 68	8.35	1431.15	-21038	-15008	1501	1.9353	1.9353	-27696	10833	5870	115546	19474	9870	29344	No	19.55	Si
SLU 68	10.85	458.12	-15324	-10932	33	1.9353	1.9353	-20174	10833	5870	115546	19474	9870	29344	No	887.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	8.35	-8145.73	-15908	-11348	-7654	1.9353	1.3668	-30062	16250	6219	115546	29211	9870	39081		5.11	Si
SLV 14	10.85	7811.7	-15282	-10902	-5846	1.9353	1.3695	-20119	16250	6231	115546	29211	9870	39081		6.68	Si
SLV 13	8.35	-8028.8	-15755	-11239	-7569	1.9353	1.3742	-29607	16250	6252	115546	29211	9870	39081		5.16	Si
SLV 13	10.85	7747.15	-15110	-10779	-5797	1.9353	1.3648	-19891	16250	6210	115546	29211	9870	39081		6.74	Si
SLV 16	8.35	-8198.6	-13404	-9562	-7733	1.5482	1.068	0	0	0	115546	23369	7896	31265		4.04	Si
SLV 16	10.85	7434.75	-13247	-9450	-5604	1.9353	1.2192	-17439	15988	5458	115546	29211	9870	39081		6.97	Si
SLV 4	8.35	10058.4	-15723	-11216	9697	1.9353	0.9837	-20698	16250	4476	115546	29211	9870	39081		4.03	Si
SLV 4	10.85	-6941.16	-7765	-5539	5768	1.5482	0.2211	0	0	0	115546	23369	7896	31265		5.42	Si
SLV 3	8.35	10175.33	-15570	-11107	9782	1.9353	0.9424	-20498	16250	4288	115546	29211	9870	39081		4	Si
SLV 3	10.85	-7005.71	-7592	-5416	5818	1.5482	0.1346	0	0	0	115546	23369	7896	31265		5.37	Si
SLD 1	8.35	4954.09	-16757	-11954	4825	1.9353	1.9353	-22060	16250	8806	115546	29211	9870	39081		8.1	Si
SLD 1	10.85	-2600.28	-10679	-7618	2373	1.9353	1.9353	-14059	15312	8297	115546	29211	9870	39081		16.47	Si
SLD 3	8.35	4931.9	-15648	-11163	4791	1.9353	1.9353	-20601	16250	8806	115546	29211	9870	39081		8.16	Si
SLD 3	10.85	-2767.62	-9778	-6975	2481	1.9353	1.9353	-12872	15074	8169	115546	29211	9870	39081		15.75	Si
SLV 1	8.35	10228.2	-18074	-12893	9860	1.9353	1.2052	-23793	16250	5484	115546	29211	9870	39081		3.96	Si
SLV 1	10.85	-6628.76	-9627	-6868	5575	1.5482	0.8374	0	0	0	115546	23369	7896	31265		5.61	Si
SLV 2	8.35	10111.27	-18226	-13002	9775	1.9353	1.2386	-23994	16250	5636	115546	29211	9870	39081		4	Si
SLV 2	10.85	-6564.22	-9800	-6991	5525	1.5482	0.8936	0	0	0	115546	23369	7896	31265		5.66	Si
SLV 15	8.35	-8081.67	-13252	-9454	-7648	1.5482	1.0734	0	0	0	115546	23369	7896	31265		4.09	Si
SLV 15	10.85	7370.21	-13074	-9327	-5554	1.9353	1.2118	-17212	15942	5409	115546	29211	9870	39081		7.04	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-9492	0.46	240.51	1201.91	1701.4	1451.66	6.04	Si
SLV 12	-9592	0.46	240.51	1213.15	1716.34	1464.74	6.09	Si
SLV 7	-10196	0.46	240.51	1280.94	1807.28	1544.11	6.42	Si
SLV 8	-10296	0.46	240.51	1291.98	1822.23	1557.1	6.47	Si
SLV 15	-11551	0.46	240.51	1429.03	2010.81	1719.92	7.15	Si
SLV 16	-11703	0.46	240.51	1445.38	2033.72	1739.55	7.23	Si
SLV 3	-13898	0.46	240.51	1673.41	2360.26	2016.84	8.39	Si
SLV 13	-14042	0.46	240.51	1687.93	2381.7	2034.81	8.46	Si
SLV 4	-14050	0.46	240.51	1688.75	2382.91	2035.83	8.46	Si
SLV 14	-14194	0.46	240.51	1703.2	2404.35	2053.78	8.54	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-11351	-20309	-702	0.823	1425.8	0.946	12.64594	13.33129	No
SLV 10	-11333	-19613	-679	0.826	1423.9	0.946	12.68995	13.33129	No
SLV 5	-11258	-20209	-702	0.829	1416.3	0.946	12.7363	13.33129	No
SLV 9	-11240	-19514	-679	0.832	1414.4	0.946	12.78077	13.33129	No
SLV 12	-7321	-11269	717	1.171	1018	0.929	18.32378	13.33129	Si
SLV 8	-7340	-11964	695	1.171	1019.8	0.929	18.32407	13.33129	Si
SLV 7	-7247	-11865	695	1.183	1010.5	0.928	18.5184	13.33129	Si
SLV 11	-7228	-11169	717	1.183	1008.6	0.928	18.51851	13.33129	Si
SLV 2	-9994	-18226	-239	0.954	1288.1	0.941	14.7246	6.37081	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-9932	-15908	-165	0.965	1281.9	0.941	14.90115	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.297	SLU 23	Si
V_SLU	19.166	SLU 71	Si
PF_SLV	1.281	SLV 3	Si
V_SLV	3.964	SLV 1	Si
PFFP_SLV	6.036	SLV 11	Si
R_SLV	0.949	SLV 6	No

Maschio 141

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L6	L7	1.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	8.35	1317.65	-15500	-0.0000689	0.0004492	0.0035	1.55	8501.25	10170.59	10170.59	7.72	No	Si
SLU 50	10.45	-895.06	-13722	-0.0000569	0.0004492	0.0035	1.55	7882.77	10319.46	10319.46	11.53	No	Si
SLU 65	8.35	1344.45	-15703	-0.00007	0.0004492	0.0035	1.55	8566.21	10286.5	10286.5	7.65	No	Si
SLU 65	10.45	-916.03	-14383	-0.0000595	0.0004492	0.0035	1.55	8123.4	10677.61	10677.61	11.66	No	Si
SLU 51	8.35	1317.85	-15476	-0.0000688	0.0004492	0.0035	1.55	8493.56	10157.03	10157.03	7.71	No	Si
SLU 51	10.45	-898.55	-13708	-0.0000568	0.0004492	0.0035	1.55	7877.35	10311.22	10311.22	11.48	No	Si
SLU 46	8.35	1301.12	-15375	-0.0000682	0.0004492	0.0035	1.55	8460.74	10099.41	10099.41	7.76	No	Si
SLU 46	10.45	-894.14	-13675	-0.0000567	0.0004492	0.0035	1.55	7864.97	10292.42	10292.42	11.51	No	Si
SLU 44	8.35	1312.55	-14486	-0.0000652	0.0004492	0.0035	1.55	8159.86	9593.72	9593.72	7.31	No	Si
SLU 44	10.45	-932.49	-12809	-0.0000541	0.0004492	0.0035	1.55	7529.33	9800.16	9800.16	10.51	No	Si
SLU 1	8.35	1017.82	-11495	-0.0000507	0.0004492	0.0035	1.55	6977.39	7891.43	7891.43	7.75	No	Si
SLU 1	10.45	-708.48	-10287	-0.0000425	0.0004492	0.0035	1.55	6425.83	8321.94	8321.94	11.75	No	Si
SLU 47	8.35	1315.26	-14973	-0.000067	0.0004492	0.0035	1.55	8327.61	9870.85	9870.85	7.5	No	Si
SLU 47	10.45	-916.69	-13254	-0.0000555	0.0004492	0.0035	1.55	7704.42	10052.94	10052.94	10.97	No	Si
SLU 43	8.35	1312.22	-14526	-0.0000653	0.0004492	0.0035	1.55	8173.81	9616.33	9616.33	7.33	No	Si
SLU 43	10.45	-926.66	-12834	-0.0000542	0.0004492	0.0035	1.55	7538.99	9813.9	9813.9	10.59	No	Si
SLU 2	8.35	1018.14	-11455	-0.0000506	0.0004492	0.0035	1.55	6959.92	7868.82	7868.82	7.73	No	Si
SLU 2	10.45	-714.3	-10263	-0.0000425	0.0004492	0.0035	1.55	6414.37	8307.36	8307.36	11.63	No	Si
SLU 64	8.35	1344.13	-15743	-0.0000702	0.0004492	0.0035	1.55	8578.75	10309.11	10309.11	7.67	No	Si
SLU 64	10.45	-910.2	-14407	-0.0000595	0.0004492	0.0035	1.55	8131.95	10690.5	10690.5	11.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	8.35	7233.61	-7765	-0.0106643	0.0006738	0.0035	1.55		5879.72	5879.72	0.81		No
SLV 4	10.45	-6270.91	-9038	-0.0003636	0.0006738	0.0035	1.24		7715.9	7715.9	1.23		Si
SLV 16	8.35	-5296.21	-13676	-0.0001223	0.0006738	0.0035	1.55		10652.24	10652.24	2.01		Si
SLV 16	10.45	4814.87	-11478	-0.0001112	0.0006738	0.0035	1.55		8233.13	8233.13	1.71		Si
SLV 1	8.35	7268.25	-10476	-0.0006342	0.0006738	0.0035	1.55		7656.53	7656.53	1.05		Si
SLV 1	10.45	-6120.13	-10724	-0.0001874	0.0006738	0.0035	1.24		8817.57	8817.57	1.44		Si
SLV 7	8.35	2954.95	-6107	-0.0000706	0.0006738	0.0035	1.55		4742.45	4742.45	1.6		Si
SLV 7	10.45	-2760.35	-7488	-0.0000616	0.0006738	0.0035	1.55		6689.19	6689.19	2.42		Si
SLV 3	8.35	7307.48	-7482	-0.0118068	0.0006738	0.0035	1.55		5688.62	5688.62	0.78		No
SLV 3	10.45	-6368.06	-8819	-0.000448	0.0006738	0.0035	1.24		7571.64	7571.64	1.19		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	8.35	2906.81	-6292	-0.0000675	0.0006738	0.0035	1.55		4870.54	4870.54	1.68		Si
SLV 8	10.45	-2697.05	-7631	-0.0000605	0.0006738	0.0035	1.55		6787.73	6787.73	2.52		Si
SLV 2	8.35	7194.38	-10759	-0.0004286	0.0006738	0.0035	1.55		7819.24	7819.24	1.09		Si
SLV 2	10.45	-6022.98	-10944	-0.0001731	0.0006738	0.0035	1.24		8954.84	8954.84	1.49		Si
SLV 13	8.35	-5261.56	-16387	-0.0001252	0.0006738	0.0035	1.55		12252.36	12252.36	2.33		Si
SLV 13	10.45	4965.64	-13164	-0.0001142	0.0006738	0.0035	1.55		9202.81	9202.81	1.85		Si
SLV 15	8.35	-5222.33	-13393	-0.0001205	0.0006738	0.0035	1.55		10484.31	10484.31	2.01		Si
SLV 15	10.45	4717.72	-11259	-0.0001088	0.0006738	0.0035	1.55		8106.89	8106.89	1.72		Si
SLV 14	8.35	-5335.44	-16670	-0.0001272	0.0006738	0.0035	1.55		12411.29	12411.29	2.33		Si
SLV 14	10.45	5062.8	-13384	-0.0001166	0.0006738	0.0035	1.55		9329.04	9329.04	1.84		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	8.35	1349.56	-16717	-11926	1322	1.55	1.55	-27478	10833	4702	115546	15597	7905	23502	No	17.77	Si
SLU 71	10.45	-878.6	-15295	-10911	1323	1.55	1.55	-25141	10833	4702	115546	15597	7905	23502	No	17.77	Si
SLU 76	8.35	1203.98	-17008	-12133	1321	1.55	1.55	-27956	10833	4702	115546	15597	7905	23502	No	17.79	Si
SLU 76	10.45	-721.23	-16104	-11488	1321	1.55	1.55	-26471	10833	4702	115546	15597	7905	23502	No	17.79	Si
SLU 67	8.35	1333.02	-16592	-11836	1336	1.55	1.55	-27273	10833	4702	115546	15597	7905	23502	No	17.6	Si
SLU 67	10.45	-877.67	-15248	-10877	1336	1.55	1.55	-25063	10833	4702	115546	15597	7905	23502	No	17.59	Si
SLU 66	8.35	1332.83	-16616	-11853	1331	1.55	1.55	-27312	10833	4702	115546	15597	7905	23502	No	17.65	Si
SLU 66	10.45	-874.18	-15262	-10888	1332	1.55	1.55	-25087	10833	4702	115546	15597	7905	23502	No	17.65	Si
SLU 82	8.35	1139.76	-16887	-12047	1324	1.55	1.55	-27758	10833	4702	115546	15597	7905	23502	No	17.74	Si
SLU 82	10.45	-657.98	-16217	-11569	1325	1.55	1.55	-26656	10833	4702	115546	15597	7905	23502	No	17.74	Si
SLU 65	8.35	1344.45	-15703	-11202	1366	1.55	1.55	-25812	10833	4702	115546	15597	7905	23502	No	17.2	Si
SLU 65	10.45	-916.03	-14383	-10260	1367	1.55	1.55	-23641	10833	4702	115546	15597	7905	23502	No	17.2	Si
SLU 73	8.35	1201.26	-16521	-11786	1339	1.55	1.55	-27156	10833	4702	115546	15597	7905	23502	No	17.55	Si
SLU 73	10.45	-737.03	-15660	-11171	1339	1.55	1.55	-25740	10833	4702	115546	15597	7905	23502	No	17.55	Si
SLU 72	8.35	1349.75	-16693	-11909	1327	1.55	1.55	-27439	10833	4702	115546	15597	7905	23502	No	17.71	Si
SLU 72	10.45	-882.09	-15281	-10901	1327	1.55	1.55	-25118	10833	4702	115546	15597	7905	23502	No	17.71	Si
SLU 68	8.35	1347.17	-16190	-11550	1348	1.55	1.55	-26612	10833	4702	115546	15597	7905	23502	No	17.44	Si
SLU 68	10.45	-900.22	-14827	-10577	1348	1.55	1.55	-24371	10833	4702	115546	15597	7905	23502	No	17.43	Si
SLU 64	8.35	1344.13	-15743	-11231	1359	1.55	1.55	-25877	10833	4702	115546	15597	7905	23502	No	17.29	Si
SLU 64	10.45	-910.2	-14407	-10277	1359	1.55	1.55	-23681	10833	4702	115546	15597	7905	23502	No	17.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	8.35	7307.48	-7482	-5337	7776	1.55	0	-245284	16250	0	115546	23395	7905	31300		4.03	Si
SLV 3	10.45	-6368.06	-8819	-6291	7256	1.24	0.1587	0	0	0	115546	18716	6324	25040		3.45	Si
SLD 3	8.35	3689.82	-10090	-7198	3907	1.55	1.2279	-16585	15817	5438	115546	23395	7905	31300		8.01	Si
SLD 3	10.45	-3098.99	-10113	-7214	3686	1.55	1.4057	-18463	16193	6373	115546	23395	7905	31300		8.49	Si
SLV 13	8.35	-5261.56	-16387	-11690	-5653	1.55	1.3618	-31015	16250	6196	115546	23395	7905	31300		5.54	Si
SLV 13	10.45	4965.64	-13164	-9391	-5133	1.55	1.1934	-21638	16250	5430	115546	23395	7905	31300		6.1	Si
SLV 4	8.35	7233.61	-7765	-5539	7674	1.55	0	-242231	16250	0	115546	23395	7905	31300		4.08	Si
SLV 4	10.45	-6270.91	-9038	-6448	7155	1.24	0.2436	0	0	0	115546	18716	6324	25040		3.5	Si
SLV 1	8.35	7268.25	-10476	-7473	7349	1.55	0.2435	-118530	16250	1108	115546	23395	7905	31300		4.26	Si
SLV 1	10.45	-6120.13	-10724	-7651	6752	1.24	0.613	0	0	0	115546	18716	6324	25040		3.71	Si
SLV 14	8.35	-5335.44	-16670	-11892	-5754	1.55	1.3648	-31490	16250	6210	115546	23395	7905	31300		5.44	Si
SLV 14	10.45	5062.8	-13384	-9548	-5234	1.55	1.1902	-21999	16250	5415	115546	23395	7905	31300		5.98	Si
SLD 4	8.35	3658.09	-10211	-7285	3864	1.55	1.2503	-16785	15857	5551	115546	23395	7905	31300		8.1	Si
SLD 4	10.45	-3057.26	-10207	-7281	3643	1.55	1.4264	-18370	16174	6460	115546	23395	7905	31300		8.59	Si
SLV 2	8.35	7194.38	-10759	-7675	7248	1.55	0.3189	-90779	16250	1451	115546	23395	7905	31300		4.32	Si
SLV 2	10.45	-6022.98	-10944	-7807	6650	1.24	0.6739	0	0	0	115546	18716	6324	25040		3.77	Si
SLV 16	8.35	-5296.21	-13676	-9756	-5328	1.55	1.1632	-30382	16250	5293	115546	23395	7905	31300		5.88	Si
SLV 16	10.45	4814.87	-11478	-8188	-4729	1.55	1.0666	-18867	16250	4853	115546	23395	7905	31300		6.62	Si
SLV 15	8.35	-5222.33	-13393	-9555	-5226	1.55	1.1552	-29952	16250	5256	115546	23395	7905	31300		5.99	Si
SLV 15	10.45	4717.72	-11259	-8032	-4628	1.55	1.0679	-18506	16201	4844	115546	23395	7905	31300		6.76	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-7829	0.46	192.63	988.18	1392.63	1190.41	6.18	Si
SLV 8	-7972	0.46	192.63	1004.22	1414.16	1209.19	6.28	Si
SLV 11	-8593	0.46	192.63	1073.05	1507.52	1290.28	6.7	Si
SLV 12	-8736	0.46	192.63	1088.71	1529.02	1308.86	6.79	Si
SLV 3	-9064	0.46	192.63	1124.41	1578.41	1351.41	7.02	Si
SLV 4	-9284	0.46	192.63	1148.05	1611.4	1379.73	7.16	Si
SLV 1	-10920	0.46	192.63	1318.93	1855.23	1587.08	8.24	Si
SLV 2	-11140	0.46	192.63	1341.14	1887.85	1614.5	8.38	Si
SLV 15	-11611	0.46	192.63	1388.25	1957.92	1673.08	8.69	Si
SLV 16	-11830	0.46	192.63	1409.92	1990.5	1700.21	8.83	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12184	-18045	-288	0.665	1456	0.956	10.10038	13.33129	No
SLV 9	-11999	-17860	-287	0.673	1437.2	0.956	10.23759	13.33129	No
SLV 6	-11298	-16271	-306	0.707	1366	0.954	10.77053	13.33129	No
SLV 5	-11113	-16087	-306	0.717	1347.2	0.953	10.92807	13.33129	No
SLV 12	-4855	-8065	298	1.398	713.9	0.921	22.06723	13.33129	Si
SLV 11	-4670	-7881	298	1.44	695.3	0.919	22.76192	13.33129	Si
SLV 14	-10702	-16670	-61	0.76	1305.4	0.952	11.60491	6.37081	Si
SLV 13	-10418	-16387	-60	0.778	1276.6	0.951	11.8823	6.37081	Si
SLV 8	-3969	-6292	279	1.627	625.2	0.913	25.90235	13.33129	Si
SLV 7	-3784	-6107	280	1.684	606.8	0.911	26.86178	13.33129	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita

dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.309	SLU 44	Si
V_SLU	17.197	SLU 65	Si
PF_SLV	0.778	SLV 3	No
V_SLV	3.451	SLV 3	Si
PFFP_SLV	6.18	SLV 7	Si
R_SLV	0.758	SLV 10	No

Maschio 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L6	L7	3.98	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	8.35	5076.53	-28108	-0.0000455	0.0004492	0.0035	3.98	44389.07	50003.66	50003.66	9.85	No	Si
SLU 46	10.45	2702.04	-23180	-0.0000343	0.0004492	0.0035	3.98	38275.81	42866.42	42866.42	15.86	No	Si
SLU 45	8.35	5082.28	-28104	-0.0000455	0.0004492	0.0035	3.98	44384.06	49997.44	49997.44	9.84	No	Si
SLU 45	10.45	2714.95	-23180	-0.0000344	0.0004492	0.0035	3.98	38275.98	42866.61	42866.61	15.79	No	Si
SLU 48	8.35	5149.19	-28909	-0.0000468	0.0004492	0.0035	3.98	45315.48	51163.53	51163.53	9.94	No	Si
SLU 48	10.45	2840.29	-23986	-0.0000357	0.0004492	0.0035	3.98	39324.56	44034.13	44034.13	15.5	No	Si
SLU 51	8.35	5049.03	-28267	-0.0000457	0.0004492	0.0035	3.98	44573.63	50232.87	50232.87	9.95	No	Si
SLU 51	10.45	2570.2	-23233	-0.0000341	0.0004492	0.0035	3.98	38345.43	42943.28	42943.28	16.71	No	Si
SLU 50	8.35	5054.78	-28262	-0.0000457	0.0004492	0.0035	3.98	44568.64	50226.66	50226.66	9.94	No	Si
SLU 50	10.45	2583.11	-23233	-0.0000342	0.0004492	0.0035	3.98	38345.59	42943.46	42943.46	16.62	No	Si
SLU 64	8.35	5049.65	-28590	-0.0000461	0.0004492	0.0035	3.98	44948.37	50701.1	50701.1	10.04	No	Si
SLU 64	10.45	2983.49	-24292	-0.0000363	0.0004492	0.0035	3.98	39716.6	44476.16	44476.16	14.91	No	Si
SLU 44	8.35	4911.39	-26659	-0.0000433	0.0004492	0.0035	3.98	42665.04	47904.83	47904.83	9.75	No	Si
SLU 44	10.45	2310.91	-21621	-0.0000315	0.0004492	0.0035	3.98	36193.66	40556.91	40556.91	17.55	No	Si
SLU 43	8.35	4920.97	-26652	-0.0000433	0.0004492	0.0035	3.98	42656.39	47894.47	47894.47	9.73	No	Si
SLU 43	10.45	2332.44	-21621	-0.0000316	0.0004492	0.0035	3.98	36193.94	40557.26	40557.26	17.39	No	Si
SLU 49	8.35	5143.44	-28913	-0.0000467	0.0004492	0.0035	3.98	45320.39	51169.75	51169.75	9.95	No	Si
SLU 49	10.45	2827.37	-23986	-0.0000356	0.0004492	0.0035	3.98	39324.4	44033.95	44033.95	15.57	No	Si
SLU 47	8.35	4978.3	-27464	-0.0000445	0.0004492	0.0035	3.98	43630.48	49070.92	49070.92	9.86	No	Si
SLU 47	10.45	2436.25	-22427	-0.0000328	0.0004492	0.0035	3.98	37278.99	41775.64	41775.64	17.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 14	8.35	2105.57	-25158	-0.0000353	0.0006738	0.0035	3.98		47503.65	47503.65	22.56		Si
SLD 14	10.45	7484.44	-23100	-0.000043	0.0006738	0.0035	3.98		44024.48	44024.48	5.88		Si
SLV 14	8.35	-191.57	-29524	-0.0000372	0.0006738	0.0035	3.98		61858.69	61858.69	322.9		Si
SLV 14	10.45	14299.44	-28965	-0.0000639	0.0006738	0.0035	3.98		53680.2	53680.2	3.75		Si
SLV 1	8.35	7785.2	-15748	-0.0000341	0.0006738	0.0035	3.98		31194.28	31194.28	4.01		Si
SLV 1	10.45	-8327.15	-10026	-0.0000284	0.0006738	0.0035	3.98		28229.89	28229.89	3.39		Si
SLV 13	8.35	92	-29272	-0.0000367	0.0006738	0.0035	3.98		54129.48	54129.48	588.38		Si
SLV 13	10.45	14116.8	-28712	-0.0000632	0.0006738	0.0035	3.98		53310.31	53310.31	3.78		Si
SLV 2	8.35	7501.63	-16000	-0.0000339	0.0006738	0.0035	3.98		31642.97	31642.97	4.22		Si
SLV 2	10.45	-8144.52	-10279	-0.0000282	0.0006738	0.0035	3.98		28695.61	28695.61	3.52		Si
SLV 16	8.35	-130.55	-28017	-0.0000352	0.0006738	0.0035	3.98		59453.3	59453.3	455.4		Si
SLV 16	10.45	13076.44	-27375	-0.0000594	0.0006738	0.0035	3.98		51200.69	51200.69	3.92		Si
SLV 4	8.35	7562.65	-14492	-0.0000321	0.0006738	0.0035	3.98		28935.31	28935.31	3.83		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	10.45	-9367.51	-8690	-0.0000313	0.0006738	0.0035	3.98		25767.18	25767.18	2.75		Si
SLV 15	8.35	153.01	-27764	-0.0000349	0.0006738	0.0035	3.98		51846.26	51846.26	338.83		Si
SLV 15	10.45	12893.81	-27123	-0.0000587	0.0006738	0.0035	3.98		50780.79	50780.79	3.94		Si
SLV 3	8.35	7846.21	-14240	-0.0000323	0.0006738	0.0035	3.98		28480.81	28480.81	3.63		Si
SLV 3	10.45	-9550.15	-8437	-0.0000323	0.0006738	0.0035	3.184		25301.46	25301.46	2.65		Si
SLV 10	8.35	2479.26	-26506	-0.0000378	0.0006738	0.0035	3.98		49756.66	49756.66	20.07		Si
SLV 10	10.45	7839.06	-24235	-0.0000452	0.0006738	0.0035	3.98		45944.15	45944.15	5.86		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 36	8.35	4069.84	-26317	-18774	-2407	3.98	3.98	-16847	10580	11790	115546	40049	20298	60347	No	25.07	Si
SLU 36	10.45	3891.47	-24479	-17462	-2417	3.98	3.98	-15670	10423	11615	115546	40049	20298	60347	No	24.97	Si
SLU 40	8.35	3798.51	-24534	-17502	-2758	3.98	3.98	-15705	10427	11620	115546	40049	20298	60347	No	21.88	Si
SLU 40	10.45	3717.73	-23016	-16419	-2767	3.98	3.98	-14734	10298	11476	115546	40049	20298	60347	No	21.81	Si
SLU 42	8.35	3865.41	-25339	-18076	-2786	3.98	3.98	-16220	10496	11697	115546	40049	20298	60347	No	21.66	Si
SLU 42	10.45	3843.07	-23822	-16994	-2796	3.98	3.98	-15250	10367	11553	115546	40049	20298	60347	No	21.58	Si
SLU 33	8.35	4002.94	-25512	-18200	-2378	3.98	3.98	-16331	10511	11713	115546	40049	20298	60347	No	25.37	Si
SLU 33	10.45	3766.14	-23672	-16887	-2388	3.98	3.98	-15154	10354	11538	115546	40049	20298	60347	No	25.27	Si
SLU 83	8.35	4972.83	-30974	-22096	-2361	3.98	3.98	-19828	10833	12073	115546	40049	20298	60347	No	25.56	Si
SLU 83	10.45	4222.53	-28108	-20051	-2372	3.98	3.98	-17993	10732	11960	115546	40049	20298	60347	No	25.44	Si
SLU 32	8.35	4008.68	-25508	-18197	-2386	3.98	3.98	-16329	10510	11713	115546	40049	20298	60347	No	25.29	Si
SLU 32	10.45	3779.05	-23673	-16887	-2395	3.98	3.98	-15154	10354	11538	115546	40049	20298	60347	No	25.19	Si
SLU 84	8.35	4967.08	-30978	-22099	-2353	3.98	3.98	-19830	10833	12073	115546	40049	20298	60347	No	25.64	Si
SLU 84	10.45	4209.62	-28107	-20051	-2365	3.98	3.98	-17993	10732	11960	115546	40049	20298	60347	No	25.52	Si
SLU 39	8.35	3804.25	-24529	-17499	-2765	3.98	3.98	-15702	10427	11620	115546	40049	20298	60347	No	21.82	Si
SLU 39	10.45	3730.65	-23016	-16419	-2775	3.98	3.98	-14734	10298	11476	115546	40049	20298	60347	No	21.75	Si
SLU 35	8.35	4075.59	-26313	-18771	-2415	3.98	3.98	-16844	10579	11789	115546	40049	20298	60347	No	24.99	Si
SLU 35	10.45	3904.39	-24479	-17463	-2424	3.98	3.98	-15670	10423	11615	115546	40049	20298	60347	No	24.89	Si
SLU 41	8.35	3871.16	-25334	-18073	-2794	3.98	3.98	-16218	10496	11696	115546	40049	20298	60347	No	21.6	Si
SLU 41	10.45	3855.98	-23822	-16994	-2804	3.98	3.98	-15250	10367	11553	115546	40049	20298	60347	No	21.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	8.35	153.01	-27764	-19806	-10645	3.98	3.98	-17773	16055	17891	115546	60073	20298	80371		7.55	Si
SLV 15	10.45	12893.81	-27123	-19349	-9134	3.98	3.98	-17362	15972	17800	115546	60073	20298	80371		8.8	Si
SLV 4	8.35	7562.65	-14492	-10338	10713	3.98	3.98	-9277	14355	15998	115546	60073	20298	80371		7.5	Si
SLV 4	10.45	-9367.51	-8690	-6199	9217	3.98	2.736	-8115	14123	10820	115546	60073	20298	80371		8.72	Si
SLV 14	8.35	-191.57	-29524	-21062	-11837	3.98	3.98	-18900	16250	18109	115546	60073	20298	80371		6.79	Si
SLV 14	10.45	14299.44	-28965	-20663	-10357	3.98	3.98	-18542	16208	18063	115546	60073	20298	80371		7.76	Si
SLV 1	8.35	7785.2	-15748	-11234	9965	3.98	3.98	-10081	14516	16177	115546	60073	20298	80371		8.07	Si
SLV 1	10.45	-8327.15	-10026	-7153	8440	3.98	3.4784	-7367	13973	13610	115546	60073	20298	80371		9.52	Si
SLV 3	8.35	7846.21	-14240	-10158	10935	3.98	3.98	-9115	14323	15962	115546	60073	20298	80371		7.35	Si
SLV 3	10.45	-9550.15	-8437	-6019	9440	3.184	2.5741	0	0	0	115546	48059	16238	64297		6.81	Si
SLV 13	8.35	92	-29272	-20882	-11615	3.98	3.98	-18738	16248	18106	115546	60073	20298	80371		6.92	Si
SLV 13	10.45	14116.8	-28712	-20482	-10134	3.98	3.98	-18380	16176	18027	115546	60073	20298	80371		7.93	Si
SLV 10	8.35	2479.26	-26506	-18909	-5377	3.98	3.98	-16968	15894	17712	115546	60073	20298	80371		14.95	Si
SLV 10	10.45	7839.06	-24235	-17289	-4983	3.98	3.98	-15514	15603	17388	115546	60073	20298	80371		16.13	Si
SLD 14	8.35	2105.57	-25158	-17947	-5328	3.98	3.98	-16105	15721	17520	115546	60073	20298	80371		15.08	Si
SLD 14	10.45	7484.44	-23100	-16479	-4699	3.98	3.98	-14787	15457	17226	115546	60073	20298	80371		17.1	Si
SLV 2	8.35	7501.63	-16000	-11414	9743	3.98	3.98	-10242	14548	16213	115546	60073	20298	80371		8.25	Si
SLV 2	10.45	-8144.52	-10279	-7333	8218	3.98	3.593	-7306	13961	14046	115546	60073	20298	80371		9.78	Si
SLV 16	8.35	-130.55	-28017	-19986	-10867	3.98	3.98	-17935	16087	17927	115546	60073	20298	80371		7.4	Si
SLV 16	10.45	13076.44	-27375	-19529	-9357	3.98	3.98	-17524	16005	17836	115546	60073	20298	80371		8.59	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.07 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-9202	0.46	494.62	1230.2	1928.23	1579.21	3.19	Si
SLV 4	-9454	0.46	494.62	1262.35	1967.33	1614.84	3.26	Si
SLV 1	-10784	0.46	494.62	1430	2171.29	1800.64	3.64	Si
SLV 2	-11036	0.46	494.62	1461.61	2210.01	1835.81	3.71	Si
SLV 7	-13902	0.46	494.62	1813.75	2648.6	2231.17	4.51	Si
SLV 8	-14066	0.46	494.62	1833.65	2673.8	2253.72	4.56	Si
SLV 5	-19175	0.46	494.62	2432.43	3448.14	2940.28	5.94	Si
SLV 6	-19339	0.46	494.62	2451.14	3472.84	2961.99	5.99	Si
SLV 11	-19474	0.46	494.62	2466.43	3493.06	2979.75	6.02	Si
SLV 12	-19639	0.46	494.62	2485.08	3517.77	3001.42	6.07	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18537	-26506	-1035	1.012	2445.1	0.937	15.7009	13.33129	Si
SLV 9	-18480	-26341	-1035	1.015	2439.3	0.937	15.74157	13.33129	Si
SLV 12	-16414	-21480	1047	1.115	2230.5	0.932	17.38869	13.33129	Si
SLV 11	-16357	-21315	1046	1.118	2224.8	0.932	17.43959	13.33129	Si
SLV 6	-16069	-22449	-1048	1.134	2195.7	0.931	17.69897	13.33129	Si
SLV 5	-16013	-22284	-1048	1.137	2190	0.931	17.751	13.33129	Si
SLV 8	-13946	-17423	1033	1.268	1981.7	0.925	19.91134	13.33129	Si
SLV 7	-13890	-17258	1033	1.272	1976	0.925	19.97827	13.33129	Si
SLV 14	-20688	-29524	-290	0.957	2662.9	0.941	14.7691	6.37081	Si
SLV 13	-20601	-29272	-291	0.96	2654	0.941	14.82239	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.733	SLU 43	Si
V_SLU	21.525	SLU 41	Si
PF_SLV	2.649	SLV 3	Si
V_SLV	6.79	SLV 14	Si
PFFP_SLV	3.193	SLV 3	Si
R_SLV	1.178	SLV 10	Si

Maschio 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.383	L6	L7	1.441	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	8.35	-352.78	-10328	-0.0000458	0.0003743	0.0035	1.4409	5569.84	6605.64	6605.64	18.72	No	Si
SLU 42	11.87	-61.99	-5045	-0.0000199	0.0003743	0.0035	1.4409	3188.05	3805.29	3805.29	61.39	No	Si
SLU 81	8.35	-391.02	-11854	-0.0000529	0.0003743	0.0035	1.4409	6075.67	7294.22	7294.22	18.65	No	Si
SLU 81	11.87	-59.53	-5675	-0.0000223	0.0003743	0.0035	1.4409	3523.62	4171.69	4171.69	70.08	No	Si
SLU 83	8.35	-396.83	-12188	-0.0000545	0.0003743	0.0035	1.4409	6175.35	7430.49	7430.49	18.72	No	Si
SLU 83	11.87	-88.04	-5990	-0.000024	0.0003743	0.0035	1.4409	3685.99	4354.54	4354.54	49.46	No	Si
SLU 82	8.35	-397.94	-11886	-0.0000532	0.0003743	0.0035	1.4409	6085.51	7308.64	7308.64	18.37	No	Si
SLU 82	11.87	-61.66	-5697	-0.0000224	0.0003743	0.0035	1.4409	3535.16	4184.48	4184.48	67.86	No	Si
SLU 75	8.35	-388.46	-11931	-0.0000532	0.0003743	0.0035	1.4409	6098.94	7328.42	7328.42	18.87	No	Si
SLU 75	11.87	-74.68	-5974	-0.0000237	0.0003743	0.0035	1.4409	3677.99	4345.38	4345.38	58.19	No	Si
SLU 73	8.35	-381.07	-11506	-0.0000513	0.0003743	0.0035	1.4409	5967.65	7140.53	7140.53	18.74	No	Si
SLU 73	11.87	-73.09	-5627	-0.0000223	0.0003743	0.0035	1.4409	3498.59	4144.03	4144.03	56.69	No	Si
SLU 76	8.35	-386.88	-11840	-0.0000528	0.0003743	0.0035	1.4409	6071.41	7288	7288	18.84	No	Si
SLU 76	11.87	-101.6	-5942	-0.000024	0.0003743	0.0035	1.4409	3661.48	4326.54	4326.54	42.58	No	Si
SLU 78	8.35	-394.27	-12264	-0.0000548	0.0003743	0.0035	1.4409	6197.73	7457.75	7457.75	18.92	No	Si
SLU 78	11.87	-103.18	-6289	-0.0000254	0.0003743	0.0035	1.4409	3837.05	4524.49	4524.49	43.85	No	Si
SLU 40	8.35	-346.97	-9994	-0.0000443	0.0003743	0.0035	1.4409	5448.38	6450.05	6450.05	18.59	No	Si
SLU 40	11.87	-33.48	-4730	-0.0000182	0.0003743	0.0035	1.4409	3015.24	3614.84	3614.84	107.97	No	Si
SLU 84	8.35	-403.75	-12220	-0.0000547	0.0003743	0.0035	1.4409	6184.82	7442.07	7442.07	18.43	No	Si
SLU 84	11.87	-90.17	-6012	-0.0000241	0.0003743	0.0035	1.4409	3697.28	4367.47	4367.47	48.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	8.35	119.94	-5836	-0.0000236	0.0005615	0.0035	1.4409		4015.23	4015.23	33.48		Si
SLV 1	11.87	521.06	-3102	-0.0000194	0.0005615	0.0035	1.4409		2258.98	2258.98	4.34		Si
SLV 9	8.35	723.88	-2958	-0.000022	0.0005615	0.0035	1.4409		2162.69	2162.69	2.99		Si
SLV 9	11.87	-545.02	-1052	-0.0000183	0.0005615	0.0035	1.1527		1251	1251	2.3		Si
SLV 6	8.35	778.77	-2475	-0.0000216	0.0005615	0.0035	1.4409		1839.05	1839.05	2.36		Si
SLV 6	11.87	-116.8	-990	-0.0000054	0.0005615	0.0035	1.4409		1208.4	1208.4	10.35		Si
SLV 14	8.35	-19.02	-7161	-0.0000271	0.0005615	0.0035	1.4409		5196.73	5196.73	273.29		Si
SLV 14	11.87	-814.5	-3224	-0.0000244	0.0005615	0.0035	1.4409		2717.94	2717.94	3.34		Si
SLV 2	8.35	133.81	-5745	-0.0000234	0.0005615	0.0035	1.4409		3958.76	3958.76	29.59		Si
SLV 2	11.87	550.01	-3076	-0.0000198	0.0005615	0.0035	1.4409		2241.31	2241.31	4.08		Si
SLV 5	8.35	769.73	-2534	-0.0000215	0.0005615	0.0035	1.4409		1878.91	1878.91	2.44		Si
SLV 5	11.87	-135.66	-1007	-0.0000057	0.0005615	0.0035	1.4409		1220.32	1220.32	9		Si
SLV 10	8.35	732.92	-2899	-0.0000219	0.0005615	0.0035	1.4409		2123.27	2123.27	2.9		Si
SLV 10	11.87	-526.15	-1034	-0.0000171	0.0005615	0.0035	1.1527		1239.08	1239.08	2.35		Si
SLV 13	8.35	-32.88	-7251	-0.0000276	0.0005615	0.0035	1.4409		5249.5	5249.5	159.64		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	11.87	-843.45	-3250	-0.000025	0.0005615	0.0035	1.4409		2735.32	2735.32	3.24		Si
SLV 3	8.35	-480.8	-9077	-0.0000418	0.0005615	0.0035	1.4409		6306.01	6306.01	13.12		Si
SLV 3	11.87	678.93	-4938	-0.0000288	0.0005615	0.0035	1.4409		3452.07	3452.07	5.08		Si
SLV 4	8.35	-466.94	-8987	-0.0000413	0.0005615	0.0035	1.4409		6255.11	6255.11	13.4		Si
SLV 4	11.87	707.89	-4912	-0.0000292	0.0005615	0.0035	1.4409		3435.26	3435.26	4.85		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	8.35	-388.07	-12152	-10119	-1989	1.4409	1.4409	-25082	10289	4151	40441	12081	3674	15755	No	7.92	Si
SLU 80	11.87	-128.68	-6242	-5198	689	1.4409	1.4409	-12883	8662	3495	40441	12081	3674	15755	No	22.87	Si
SLU 78	8.35	-394.27	-12264	-10213	-2037	1.4409	1.4409	-25313	10320	4163	40441	12081	3674	15755	No	7.74	Si
SLU 78	11.87	-103.18	-6289	-5237	644	1.4409	1.4409	-12980	8675	3500	40441	12081	3674	15755	No	24.46	Si
SLU 81	8.35	-391.02	-11854	-9871	-2060	1.4409	1.4409	-24466	10207	4118	40441	12081	3674	15755	No	7.65	Si
SLU 81	11.87	-59.53	-5675	-4726	428	1.4409	1.4409	-11713	8506	3432	40441	12081	3674	15755	No	36.77	Si
SLU 77	8.35	-387.35	-12232	-10186	-2026	1.4409	1.4409	-25247	10311	4160	40441	12081	3674	15755	No	7.77	Si
SLU 77	11.87	-101.05	-6267	-5218	653	1.4409	1.4409	-12934	8669	3498	40441	12081	3674	15755	No	24.14	Si
SLU 74	8.35	-381.54	-11898	-9908	-1999	1.4409	1.4409	-24558	10219	4123	40441	12081	3674	15755	No	7.88	Si
SLU 74	11.87	-72.55	-5952	-4956	565	1.4409	1.4409	-12284	8582	3463	40441	12081	3674	15755	No	27.9	Si
SLU 82	8.35	-397.94	-11886	-9898	-2070	1.4409	1.4409	-24533	10216	4121	40441	12081	3674	15755	No	7.61	Si
SLU 82	11.87	-61.66	-5697	-4744	420	1.4409	1.4409	-11758	8512	3434	40441	12081	3674	15755	No	37.53	Si
SLU 83	8.35	-396.83	-12188	-10149	-2087	1.4409	1.4409	-25155	10298	4155	40441	12081	3674	15755	No	7.55	Si
SLU 83	11.87	-88.04	-5990	-4988	516	1.4409	1.4409	-12362	8593	3467	40441	12081	3674	15755	No	30.51	Si
SLU 84	8.35	-403.75	-12220	-10176	-2098	1.4409	1.4409	-25222	10307	4159	40441	12081	3674	15755	No	7.51	Si
SLU 84	11.87	-90.17	-6012	-5006	508	1.4409	1.4409	-12408	8599	3469	40441	12081	3674	15755	No	31.03	Si
SLU 75	8.35	-388.46	-11931	-9935	-2009	1.4409	1.4409	-24625	10228	4126	40441	12081	3674	15755	No	7.84	Si
SLU 75	11.87	-74.68	-5974	-4975	556	1.4409	1.4409	-12330	8588	3465	40441	12081	3674	15755	No	28.33	Si
SLU 79	8.35	-381.15	-12120	-10092	-1979	1.4409	1.4409	-25015	10280	4147	40441	12081	3674	15755	No	7.96	Si
SLU 79	11.87	-126.55	-6220	-5179	698	1.4409	1.4409	-12837	8656	3492	40441	12081	3674	15755	No	22.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	8.35	119.94	-5836	-4860	-5056	1.4409	1.4409	-12045	12826	5175	40441	18122	3674	21796		4.31	Si
SLV 1	11.87	521.06	-3102	-2583	-2507	1.4409	1.4409	-6403	11697	4719	40441	18122	3674	21796		8.69	Si
SLV 14	8.35	-19.02	-7161	-5963	2493	1.4409	1.4409	-14779	13373	5395	40441	18122	3674	21796		8.74	Si
SLV 14	11.87	-814.5	-3224	-2684	5416	1.4409	1.4034	-6654	11747	4616	40441	18122	3674	21796		4.02	Si
SLV 13	8.35	-32.88	-7251	-6038	2756	1.4409	1.4409	-14966	13410	5410	40441	18122	3674	21796		7.91	Si
SLV 13	11.87	-843.45	-3250	-2706	5661	1.4409	1.3828	-6708	11758	4553	40441	18122	3674	21796		3.85	Si
SLV 2	8.35	133.81	-5745	-4784	-5319	1.4409	1.4409	-11858	12788	5159	40441	18122	3674	21796		4.1	Si
SLV 2	11.87	550.01	-3076	-2561	-2753	1.4409	1.4409	-6349	11686	4715	40441	18122	3674	21796		7.92	Si
SLV 9	8.35	723.88	-2958	-2463	-63	1.4409	1.4273	-6106	11638	4651	40441	18122	3674	21796		346.2	Si
SLV 9	11.87	-545.02	-1052	-876	4930	1.1527	0.6067	0	0	0	40441	14497	2939	17437		3.54	Si
SLV 15	8.35	-633.63	-10493	-8737	2790	1.4409	1.4409	-21657	14748	5950	40441	18122	3674	21796		7.81	Si
SLV 15	11.87	-685.58	-5086	-4235	3801	1.4409	1.4409	-10498	12516	5050	40441	18122	3674	21796		5.73	Si
SLV 3	8.35	-480.8	-9077	-7559	-5023	1.4409	1.4409	-18736	14164	5714	40441	18122	3674	21796		4.34	Si
SLV 3	11.87	678.93	-4938	-4112	-4367	1.4409	1.4409	-10193	12455	5025	40441	18122	3674	21796		4.99	Si
SLV 10	8.35	732.92	-2899	-2414	-234	1.4409	1.403	-5984	11613	4562	40441	18122	3674	21796		92.95	Si
SLV 10	11.87	-526.15	-1034	-861	4770	1.1527	0.6355	0	0	0	40441	14497	2939	17437		3.66	Si
SLV 4	8.35	-466.94	-8987	-7484	-5286	1.4409	1.4409	-18549	14126	5699	40441	18122	3674	21796		4.12	Si
SLV 4	11.87	707.89	-4912	-4090	-4613	1.4409	1.4409	-10138	12444	5021	40441	18122	3674	21796		4.72	Si
SLV 8	8.35	-1223.7	-13280	-11058	-2467	1.4409	1.4409	-27409	15898	6414	40441	18122	3674	21796		8.84	Si
SLV 8	11.87	409.46	-7110	-5921	-3882	1.4409	1.4409	-14676	13352	5387	40441	18122	3674	21796		5.61	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.46	0	-820	179.07	0	0	No, e>t/2
SLV 6	179667	0.46	0	-759	179.07	0	0	No, e>t/2
SLV 10	179667	0.46	3207	-1294	179.07	177.35	0.99	No, M>Mu
SLV 9	179667	0.46	3359	-1355	179.07	185.54	1.04	Si
SLV 2	179667	0.46	8262	-3333	179.07	441.43	2.47	Si
SLV 1	179667	0.46	8495	-3427	179.07	453.12	2.53	Si
SLV 14	179667	0.46	12683	-5117	179.07	656.9	3.67	Si
SLV 13	179667	0.46	12916	-5211	179.07	667.83	3.73	Si
SLV 4	179667	0.46	15093	-6089	179.07	768.25	4.29	Si
SLV 3	179667	0.46	15325	-6183	179.07	778.77	4.35	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-7172	-13763	134	0.988	931.9	0.94	15.27578	13.33129	Si
SLV 12	-7155	-13704	136	0.989	930.1	0.94	15.30423	13.33129	Si
SLV 7	-7128	-13339	94	0.997	927.4	0.939	15.43157	13.33129	Si
SLV 8	-7110	-13280	96	0.999	925.6	0.939	15.46051	13.33129	Si
SLV 15	-5086	-10493	96	1.304	721.2	0.926	20.47842	6.37081	Si
SLV 16	-5060	-10402	98	1.309	718.5	0.925	20.5597	6.37081	Si
SLV 3	-4938	-9077	-39	1.344	706.3	0.925	21.12157	6.37081	Si
SLV 4	-4912	-8987	-36	1.35	703.7	0.924	21.22069	6.37081	Si
SLV 9	-1052	-2958	-109	3.489	327.3	0.89	56.97776	13.33129	Si
SLV 10	-1034	-2899	-108	3.515	325.8	0.89	57.39866	13.33129	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.366	SLU 82	Si
V_SLU	7.51	SLU 84	Si
PF_SLV	2.295	SLV 9	Si
V_SLV	3.537	SLV 9	Si
PFFP_SLV	0	SLV 5	No
R_SLV	1.146	SLV 11	Si

Maschio 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.383	-11.003	-0.694	L6	Z medio 1088 cm	2.689	0.28	2.528	1.737	3.32			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	8.35	-237.4	-21393	-0.0000458	0.0003743	0.0035	2.6886	20731.9	24951.03	24951.03	105.1	No	Si
SLU 82	10.09	-1280	-17122	-0.0000413	0.0003743	0.0035	2.6886	17875.3	21214.82	21214.82	16.57	No	Si
SLU 42	8.35	-413.86	-18252	-0.0000397	0.0003743	0.0035	2.6886	18693.67	22247.81	22247.81	53.76	No	Si
SLU 42	10.09	-1265.84	-14829	-0.0000362	0.0003743	0.0035	2.6886	16078.07	19037.59	19037.59	15.04	No	Si
SLU 81	8.35	-203.88	-21430	-0.0000457	0.0003743	0.0035	2.6886	20754.09	24980.53	24980.53	122.53	No	Si
SLU 81	10.09	-1256.68	-17158	-0.0000412	0.0003743	0.0035	2.6886	17902.42	21247.85	21247.85	16.91	No	Si
SLU 41	8.35	-380.33	-18290	-0.0000396	0.0003743	0.0035	2.6886	18719.98	22281.87	22281.87	58.59	No	Si
SLU 41	10.09	-1242.51	-14865	-0.0000362	0.0003743	0.0035	2.6886	16108.12	19072.5	19072.5	15.35	No	Si
SLU 21	8.35	-129.28	-16703	-0.0000349	0.0003743	0.0035	2.6886	17561.09	20837.91	20837.91	161.19	No	Si
SLU 21	10.09	-1108.44	-13497	-0.0000326	0.0003743	0.0035	2.6886	14948.87	17712.13	17712.13	15.98	No	Si
SLU 20	8.35	-95.75	-16741	-0.0000348	0.0003743	0.0035	2.6886	17589.44	20871.48	20871.48	217.98	No	Si
SLU 20	10.09	-1085.11	-13533	-0.0000325	0.0003743	0.0035	2.6886	14980.62	17749.55	17749.55	16.36	No	Si
SLU 19	8.35	-176.57	-16030	-0.0000337	0.0003743	0.0035	2.6886	17042.85	20198.92	20198.92	114.4	No	Si
SLU 19	10.09	-1118.14	-12853	-0.0000312	0.0003743	0.0035	2.6886	14381.45	17057.07	17057.07	15.25	No	Si
SLU 39	8.35	-427.62	-17617	-0.0000383	0.0003743	0.0035	2.6886	18239.19	21665.15	21665.15	50.66	No	Si
SLU 39	10.09	-1252.21	-14222	-0.0000348	0.0003743	0.0035	2.6886	15571.59	18452.65	18452.65	14.74	No	Si
SLU 40	8.35	-461.15	-17579	-0.0000384	0.0003743	0.0035	2.6886	18211.99	21630.95	21630.95	46.91	No	Si
SLU 40	10.09	-1275.54	-14186	-0.0000348	0.0003743	0.0035	2.6886	15540.71	18416	18416	14.44	No	Si
SLU 18	8.35	-143.04	-16068	-0.0000336	0.0003743	0.0035	2.6886	17072.09	20234.98	20234.98	141.46	No	Si
SLU 18	10.09	-1094.81	-12890	-0.0000312	0.0003743	0.0035	2.6886	14414.03	17093.99	17093.99	15.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 11	8.35	-2202.66	-11877	-0.0000336	0.0005615	0.0035	2.6886		16558.47	16558.47	7.52		Si
SLD 11	10.09	-2362.84	-9430	-0.0000293	0.0005615	0.0035	2.6886		13729.01	13729.01	5.81		Si
SLV 5	8.35	5672.23	-22732	-0.0000732	0.0005615	0.0035	2.6886		26052.23	26052.23	4.59		Si
SLV 5	10.09	3905.77	-17768	-0.0000539	0.0005615	0.0035	2.6886		21019.48	21019.48	5.38		Si
SLV 11	8.35	-5261.12	-7636	-0.0000418	0.0005615	0.0035	2.6886		11606.84	11606.84	2.21		Si
SLV 11	10.09	-4816.71	-6203	-0.0000391	0.0005615	0.0035	2.1509		9845.45	9845.45	2.04		Si
SLV 8	8.35	-5276.71	-8156	-0.000042	0.0005615	0.0035	2.6886		12228.89	12228.89	2.32		Si
SLV 8	10.09	-4407.23	-5382	-0.0000366	0.0005615	0.0035	2.1509		8845.8	8845.8	2.01		Si
SLV 7	8.35	-5318.7	-8040	-0.0000423	0.0005615	0.0035	2.6886		12090.9	12090.9	2.27		Si
SLV 7	10.09	-4478.67	-5341	-0.0000377	0.0005615	0.0035	2.1509		8796.22	8796.22	1.96		Si
SLV 12	8.35	-5219.14	-7752	-0.0000414	0.0005615	0.0035	2.6886		11746.91	11746.91	2.25		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	10.09	-4745.27	-6243	-0.0000382	0.0005615	0.0035	2.1509		9894.57	9894.57	2.09		Si
SLD 12	8.35	-2184.29	-11928	-0.0000337	0.0005615	0.0035	2.6886		16616.19	16616.19	7.61		Si
SLD 12	10.09	-2331.59	-9448	-0.0000292	0.0005615	0.0035	2.6886		13749.85	13749.85	5.9		Si
SLV 6	8.35	5714.22	-22848	-0.0000736	0.0005615	0.0035	2.6886		26172.38	26172.38	4.58		Si
SLV 6	10.09	3977.21	-17808	-0.0000543	0.0005615	0.0035	2.6886		21059.58	21059.58	5.3		Si
SLV 10	8.35	5771.8	-22444	-0.000073	0.0005615	0.0035	2.6886		25755.37	25755.37	4.46		Si
SLV 10	10.09	3639.17	-18670	-0.0000546	0.0005615	0.0035	2.6886		21920.52	21920.52	6.02		Si
SLV 9	8.35	5729.81	-22327	-0.0000725	0.0005615	0.0035	2.6886		25635.57	25635.57	4.47		Si
SLV 9	10.09	3567.74	-18630	-0.0000542	0.0005615	0.0035	2.6886		21880.18	21880.18	6.13		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	8.35	400.92	-21355	-17782	1810	2.6886	2.6886	-23621	10094	7599	28547	22543	6856	29399	No	16.24	Si
SLU 69	10.09	-340.63	-17031	-14182	1461	2.6886	2.6886	-18839	9456	7119	28547	22543	6856	29399	No	20.13	Si
SLU 77	8.35	6.39	-22465	-18707	1782	2.6886	2.6886	-24849	10258	7722	28547	22543	6856	29399	No	16.5	Si
SLU 77	10.09	-970.66	-18138	-15104	1639	2.6886	2.6886	-20063	9620	7242	28547	22543	6856	29399	No	17.94	Si
SLU 79	8.35	59.8	-22300	-18570	1822	2.6886	2.6886	-24667	10233	7704	28547	22543	6856	29399	No	16.14	Si
SLU 79	10.09	-967.26	-17970	-14964	1680	2.6886	2.6886	-19877	9595	7223	28547	22543	6856	29399	No	17.5	Si
SLU 78	8.35	-27.14	-22427	-18676	1774	2.6886	2.6886	-24807	10252	7718	28547	22543	6856	29399	No	16.57	Si
SLU 78	10.09	-993.99	-18102	-15074	1627	2.6886	2.6886	-20023	9614	7238	28547	22543	6856	29399	No	18.06	Si
SLU 80	8.35	26.27	-22263	-18539	1814	2.6886	2.6886	-24625	10228	7700	28547	22543	6856	29399	No	16.21	Si
SLU 80	10.09	-990.59	-17934	-14934	1669	2.6886	2.6886	-19837	9589	7219	28547	22543	6856	29399	No	17.62	Si
SLU 71	8.35	454.33	-21190	-17645	1850	2.6886	2.6886	-23439	10070	7581	28547	22543	6856	29399	No	15.89	Si
SLU 71	10.09	-337.23	-16863	-14042	1502	2.6886	2.6886	-18653	9432	7100	28547	22543	6856	29399	No	19.57	Si
SLU 51	8.35	705.38	-19604	-16324	1791	2.6886	2.6886	-21684	9836	7405	28547	22543	6856	29399	No	16.42	Si
SLU 51	10.09	-203.16	-15495	-12903	1502	2.6886	2.6886	-17139	9230	6948	28547	22543	6856	29399	No	19.58	Si
SLU 70	8.35	367.4	-21317	-17751	1802	2.6886	2.6886	-23580	10088	7595	28547	22543	6856	29399	No	16.31	Si
SLU 70	10.09	-363.96	-16995	-14152	1449	2.6886	2.6886	-18798	9451	7115	28547	22543	6856	29399	No	20.28	Si
SLU 50	8.35	738.91	-19641	-16356	1798	2.6886	2.6886	-21726	9841	7409	28547	22543	6856	29399	No	16.35	Si
SLU 50	10.09	-179.83	-15531	-12933	1513	2.6886	2.6886	-17179	9235	6952	28547	22543	6856	29399	No	19.44	Si
SLU 72	8.35	420.81	-21153	-17614	1843	2.6886	2.6886	-23398	10064	7576	28547	22543	6856	29399	No	15.96	Si
SLU 72	10.09	-360.56	-16827	-14012	1491	2.6886	2.6886	-18613	9426	7096	28547	22543	6856	29399	No	19.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	8.35	1747.01	-18030	-15014	1874	2.6886	2.6886	-19943	14405	10845	28547	33814	6856	39391		21.02	Si
SLV 1	10.09	1346.5	-12403	-10328	3348	2.6886	2.6886	-13719	13160	9907	28547	33814	6856	38454		11.49	Si
SLV 9	8.35	5729.81	-22327	-18592	1086	2.6886	2.6886	-24697	15356	11560	28547	33814	6856	40107		36.93	Si
SLV 9	10.09	3567.74	-18630	-15513	3516	2.6886	2.6886	-20607	14538	10945	28547	33814	6856	39491		11.23	Si
SLD 6	8.35	2655.75	-18607	-15494	1376	2.6886	2.6886	-20581	14533	10941	28547	33814	6856	39487		28.71	Si
SLD 6	10.09	1523.34	-14581	-12142	2575	2.6886	2.6886	-16129	13642	10270	28547	33814	6856	38817		15.08	Si
SLV 5	8.35	5672.23	-22732	-18929	1447	2.6886	2.6886	-25144	15445	11628	28547	33814	6856	40174		27.77	Si
SLV 5	10.09	3905.77	-17768	-14796	4358	2.6886	2.6886	-19654	14347	10801	28547	33814	6856	39348		9.03	Si
SLV 6	8.35	5714.22	-22848	-19026	1473	2.6886	2.6886	-25273	15471	11647	28547	33814	6856	40194		27.28	Si
SLV 6	10.09	3977.21	-17808	-14829	4405	2.6886	2.6886	-19698	14356	10808	28547	33814	6856	39354		8.93	Si
SLV 11	8.35	-5261.12	-7636	-6358	1126	2.6886	1.9659	-11612	12739	7012	28547	33814	6856	35559		31.59	Si
SLV 11	10.09	-4816.71	-6203	-5165	-2142	2.1509	1.7034	0	0	0	28547	27051	5485	28547		13.33	Si
SLV 10	8.35	5771.8	-22444	-18689	1113	2.6886	2.6886	-24826	15382	11580	28547	33814	6856	40126		36.06	Si
SLV 10	10.09	3639.17	-18670	-15547	3563	2.6886	2.6886	-20651	14547	10951	28547	33814	6856	39498		11.09	Si
SLV 12	8.35	-5219.14	-7752	-6455	1152	2.6886	2.0132	-11512	12719	7170	28547	33814	6856	35716		30.99	Si
SLV 12	10.09	-4745.27	-6243	-5199	-2095	2.1509	1.7528	0	0	0	28547	27051	5485	28547		13.63	Si
SLV 2	8.35	1811.45	-18208	-15162	1915	2.6886	2.6886	-20141	14445	10874	28547	33814	6856	39421		20.58	Si
SLV 2	10.09	1456.13	-12464	-10379	3420	2.6886	2.6886	-13787	13174	9918	28547	33814	6856	38464		11.25	Si
SLD 5	8.35	2637.39	-18556	-15452	1364	2.6886	2.6886	-20525	14522	10932	28547	33814	6856	39479		28.95	Si
SLD 5	10.09	1492.09	-14564	-12127	2554	2.6886	2.6886	-16109	13638	10267	28547	33814	6856	38814		15.2	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.219 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.44	9329	-7023	165.35	923.13	5.58	Si
SLV 8	179667	0.44	9442	-7108	165.35	933.65	5.65	Si
SLV 11	179667	0.44	9637	-7255	165.35	951.58	5.76	Si
SLV 12	179667	0.44	9751	-7340	165.35	962.05	5.82	Si
SLV 3	179667	0.44	15147	-11403	165.35	1438.1	8.7	Si
SLV 4	179667	0.44	15322	-11535	165.35	1452.82	8.79	Si
SLV 15	179667	0.44	16175	-12177	165.35	1524.16	9.22	Si
SLV 16	179667	0.44	16349	-12308	165.35	1538.64	9.31	Si
SLV 1	179667	0.44	20469	-15409	165.35	1868.16	11.3	Si
SLV 2	179667	0.44	20643	-15541	165.35	1881.6	11.38	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.219 Wa = 0.05 Ta = 0.0381

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-18670	-22444	-57	0.798	2168.9	0.963	12.04575	6.78963	Si
SLV 9	-18630	-22327	-58	0.8	2164.8	0.963	12.06859	6.78963	Si
SLV 6	-17808	-22848	16	0.833	2081.3	0.962	12.59086	6.78963	Si
SLV 5	-17768	-22732	16	0.835	2077.2	0.961	12.61621	6.78963	Si
SLV 14	-15337	-16861	-141	0.938	1829.9	0.957	14.25492	4.7367	Si
SLV 13	-15275	-16683	-141	0.942	1823.7	0.957	14.30542	4.7367	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-12464	-18208	106	1.12	1538.1	0.95	17.13926	4.7367	Si
SLV 1	-12403	-18030	105	1.125	1531.9	0.949	17.21415	4.7367	Si
SLV 16	-11609	-12454	-138	1.186	1451.3	0.947	18.19826	4.7367	Si
SLV 15	-11547	-12275	-139	1.191	1445	0.947	18.28258	4.7367	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.438	SLU 40	Si
V_SLU	15.889	SLU 71	Si
PF_SLV	1.964	SLV 7	Si
V_SLV	8.934	SLV 6	Si
PFFP_SLV	5.583	SLV 7	Si
R_SLV	1.774	SLV 10	Si

Maschio 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.383	-11.003	-0.694	Z medio 1088 cm	L7	2.689	0.28	0.992	1.783	0.2			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 29	11.67	294.09	-10178	-0.0000218	0.0003743	0.0035	2.6886	11865.23	12499.7	12499.7	42.5	No	Si
SLU 29	11.87	397.67	-9856	-0.0000216	0.0003743	0.0035	2.6886	11545.4	12191.26	12191.26	30.66	No	Si
SLU 35	11.67	272.04	-10624	-0.0000226	0.0003743	0.0035	2.6886	12302.28	12929.73	12929.73	47.53	No	Si
SLU 35	11.87	433.39	-10313	-0.0000227	0.0003743	0.0035	2.6886	11998.75	12630.02	12630.02	29.14	No	Si
SLU 38	11.67	264.51	-10436	-0.0000222	0.0003743	0.0035	2.6886	12119.41	12748.57	12748.57	48.2	No	Si
SLU 38	11.87	416.82	-10120	-0.0000222	0.0003743	0.0035	2.6886	11808.67	12444.78	12444.78	29.86	No	Si
SLU 36	11.67	245.49	-10591	-0.0000225	0.0003743	0.0035	2.6886	12270.49	12898.11	12898.11	52.54	No	Si
SLU 36	11.87	409.51	-10280	-0.0000225	0.0003743	0.0035	2.6886	11966.16	12598.12	12598.12	30.76	No	Si
SLU 37	11.67	291.06	-10469	-0.0000224	0.0003743	0.0035	2.6886	12151.38	12780.11	12780.11	43.91	No	Si
SLU 37	11.87	440.71	-10154	-0.0000224	0.0003743	0.0035	2.6886	11841.45	12476.59	12476.59	28.31	No	Si
SLU 77	11.67	324.13	-12692	-0.0000272	0.0003743	0.0035	2.6886	14236.97	14964.73	14964.73	46.17	No	Si
SLU 77	11.87	480	-12269	-0.000027	0.0003743	0.0035	2.6886	13853.32	14542.75	14542.75	30.3	No	Si
SLU 41	11.67	232.77	-9993	-0.0000211	0.0003743	0.0035	2.6886	11682.09	12322.45	12322.45	52.94	No	Si
SLU 41	11.87	395.31	-9674	-0.0000212	0.0003743	0.0035	2.6886	11363.76	12018.37	12018.37	30.4	No	Si
SLU 16	11.67	288.03	-9498	-0.0000204	0.0003743	0.0035	2.6886	11185.99	11850.71	11850.71	41.14	No	Si
SLU 16	11.87	387.21	-9163	-0.0000201	0.0003743	0.0035	2.6886	10845.68	11533.92	11533.92	29.79	No	Si
SLU 79	11.67	343.15	-12537	-0.000027	0.0003743	0.0035	2.6886	14097.3	14809.98	14809.98	43.16	No	Si
SLU 79	11.87	487.31	-12109	-0.0000267	0.0003743	0.0035	2.6886	13706.98	14384.33	14384.33	29.52	No	Si
SLU 14	11.67	269.01	-9653	-0.0000206	0.0003743	0.0035	2.6886	11342.16	11997.92	11997.92	44.6	No	Si
SLU 14	11.87	379.89	-9323	-0.0000204	0.0003743	0.0035	2.6886	11008.53	11684.83	11684.83	30.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	11.67	-1476.67	-6242	-0.0000188	0.0005615	0.0035	2.6886		9893.47	9893.47	6.7		Si
SLD 7	11.87	-862.22	-5980	-0.0000156	0.0005615	0.0035	2.6886		9573.32	9573.32	11.1		Si
SLV 12	11.67	-3493.36	-4372	-0.0000285	0.0005615	0.0035	2.1509		7589.73	7589.73	2.17		Si
SLV 12	11.87	-2384.25	-4022	-0.0000189	0.0005615	0.0035	2.6886		7147.06	7147.06	3		Si
SLV 6	11.67	3913.69	-12392	-0.0000425	0.0005615	0.0035	2.6886		15669.21	15669.21	4		Si
SLV 6	11.87	2933.76	-12051	-0.0000373	0.0005615	0.0035	2.6886		15283.44	15283.44	5.21		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	11.67	-3495.02	-3586	-0.0000344	0.0005615	0.0035	2.1509		6595.47	6595.47	1.89		Si
SLV 8	11.87	-2195.01	-3432	-0.0000172	0.0005615	0.0035	2.6886		6399.32	6399.32	2.92		Si
SLV 10	11.67	3915.36	-13178	-0.0000441	0.0005615	0.0035	2.6886		16523.55	16523.55	4.22		Si
SLV 10	11.87	2744.52	-12641	-0.0000377	0.0005615	0.0035	2.6886		15951.26	15951.26	5.81		Si
SLV 9	11.67	3849.21	-13144	-0.0000438	0.0005615	0.0035	2.6886		16489.41	16489.41	4.28		Si
SLV 9	11.87	2683.14	-12606	-0.0000373	0.0005615	0.0035	2.6886		15911.49	15911.49	5.93		Si
SLV 11	11.67	-3559.51	-4338	-0.0000294	0.0005615	0.0035	2.1509		7546.15	7546.15	2.12		Si
SLV 11	11.87	-2445.63	-3987	-0.0000192	0.0005615	0.0035	2.6886		7102.77	7102.77	2.9		Si
SLD 8	11.67	-1447.73	-6257	-0.0000187	0.0005615	0.0035	2.6886		9911.87	9911.87	6.85		Si
SLD 8	11.87	-835.37	-5995	-0.0000155	0.0005615	0.0035	2.6886		9591.98	9591.98	11.48		Si
SLV 5	11.67	3847.54	-12358	-0.0000421	0.0005615	0.0035	2.6886		15630.2	15630.2	4.06		Si
SLV 5	11.87	2872.38	-12016	-0.0000369	0.0005615	0.0035	2.6886		15243.84	15243.84	5.31		Si
SLV 7	11.67	-3561.17	-3552	-0.0000369	0.0005615	0.0035	2.1509		6551.75	6551.75	1.84		Si
SLV 7	11.87	-2256.39	-3397	-0.0000176	0.0005615	0.0035	2.6886		6354.63	6354.63	2.82		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	11.67	316.61	-11242	-9362	1142	2.6886	2.6886	-12435	8602	6476	9516	22543	6856	15992	No	14	Si
SLU 51	11.87	366.89	-10788	-8983	1124	2.6886	2.6886	-11933	8535	6426	9516	22543	6856	15941	No	14.18	Si
SLU 71	11.67	346.18	-12246	-10197	1082	2.6886	2.6886	-13546	8751	6588	9516	22543	6856	16103	No	14.89	Si
SLU 71	11.87	444.27	-11811	-9835	1055	2.6886	2.6886	-13065	8686	6539	9516	22543	6856	16055	No	15.21	Si
SLU 43	11.67	229.19	-10073	-8388	1109	2.6886	2.6886	-11142	8430	6346	9516	22543	6856	15862	No	14.3	Si
SLU 43	11.87	263.09	-9607	-8000	1089	2.6886	2.6886	-10626	8361	6295	9516	22543	6856	15810	No	14.52	Si
SLU 48	11.67	324.14	-11430	-9518	1141	2.6886	2.6886	-12643	8630	6497	9516	22543	6856	16012	No	14.03	Si
SLU 48	11.87	383.46	-10981	-9144	1121	2.6886	2.6886	-12146	8564	6447	9516	22543	6856	15963	No	14.24	Si
SLU 49	11.67	297.59	-11397	-9491	1126	2.6886	2.6886	-12607	8625	6493	9516	22543	6856	16009	No	14.22	Si
SLU 49	11.87	359.57	-10948	-9116	1105	2.6886	2.6886	-12109	8559	6443	9516	22543	6856	15959	No	14.44	Si
SLU 46	11.67	240.61	-10796	-8990	1102	2.6886	2.6886	-11942	8537	6427	9516	22543	6856	15942	No	14.47	Si
SLU 46	11.87	295.73	-10340	-8611	1080	2.6886	2.6886	-11438	8469	6376	9516	22543	6856	15892	No	14.72	Si
SLU 50	11.67	343.16	-11275	-9389	1157	2.6886	2.6886	-12471	8607	6480	9516	22543	6856	15995	No	13.82	Si
SLU 50	11.87	390.78	-10821	-9011	1140	2.6886	2.6886	-11969	8540	6429	9516	22543	6856	15945	No	13.99	Si
SLU 44	11.67	184.94	-10018	-8342	1083	2.6886	2.6886	-11081	8422	6340	9516	22543	6856	15856	No	14.63	Si
SLU 44	11.87	223.28	-9552	-7954	1063	2.6886	2.6886	-10565	8353	6288	9516	22543	6856	15804	No	14.87	Si
SLU 45	11.67	267.16	-10829	-9017	1117	2.6886	2.6886	-11978	8541	6430	9516	22543	6856	15946	No	14.27	Si
SLU 45	11.87	319.62	-10374	-8638	1096	2.6886	2.6886	-11474	8474	6380	9516	22543	6856	15895	No	14.51	Si
SLU 47	11.67	241.93	-10619	-8843	1108	2.6886	2.6886	-11746	8511	6407	9516	22543	6856	15922	No	14.37	Si
SLU 47	11.87	287.12	-10159	-8459	1088	2.6886	2.6886	-11237	8443	6356	9516	22543	6856	15871	No	14.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	11.67	-3561.17	-3552	-2958	-5558	2.1509	1.0251	0	0	0	9516	27051	5485	9516		1.71	Si
SLV 7	11.87	-2256.39	-3397	-2829	-5649	2.6886	2.0404	-4958	11408	6518	9516	33814	6856	16033		2.84	Si
SLD 5	11.67	1801.2	-10137	-8441	3578	2.6886	2.6886	-11213	12659	9530	9516	33814	6856	19046		5.32	Si
SLD 5	11.87	1404.42	-9791	-8153	3603	2.6886	2.6886	-10830	12583	9473	9516	33814	6856	18988		5.27	Si
SLV 12	11.67	-3493.36	-4372	-3641	-5586	2.1509	1.636	0	0	0	9516	27051	5485	9516		1.7	Si
SLV 12	11.87	-2384.25	-4022	-3349	-5719	2.6886	2.2546	-5317	11480	7247	9516	33814	6856	16763		2.93	Si
SLV 8	11.67	-3495.02	-3586	-2986	-5535	2.1509	1.1093	0	0	0	9516	27051	5485	9516		1.72	Si
SLV 8	11.87	-2195.01	-3432	-2858	-5624	2.6886	2.1144	-4836	11384	6740	9516	33814	6856	16255		2.89	Si
SLV 6	11.67	3913.69	-12392	-10319	7138	2.6886	2.6886	-13708	13158	9906	9516	33814	6856	19421		2.72	Si
SLV 6	11.87	2933.76	-12051	-10035	7227	2.6886	2.6886	-13330	13083	9849	9516	33814	6856	19364		2.68	Si
SLV 10	11.67	3915.36	-13178	-10974	7087	2.6886	2.6886	-14577	13332	10037	9516	33814	6856	19552		2.76	Si
SLV 10	11.87	2744.52	-12641	-10527	7133	2.6886	2.6886	-13983	13213	9947	9516	33814	6856	19463		2.73	Si
SLV 11	11.67	-3559.51	-4338	-3612	-5609	2.1509	1.5712	0	0	0	9516	27051	5485	9516		1.7	Si
SLV 11	11.87	-2445.63	-3987	-3320	-5744	2.6886	2.1927	-5419	11500	7061	9516	33814	6856	16576		2.89	Si
SLV 5	11.67	3847.54	-12358	-10291	7115	2.6886	2.6886	-13669	13151	9900	9516	33814	6856	19416		2.73	Si
SLV 5	11.87	2872.38	-12016	-10006	7202	2.6886	2.6886	-13292	13075	9843	9516	33814	6856	19359		2.69	Si
SLV 9	11.67	3849.21	-13144	-10945	7064	2.6886	2.6886	-14539	13324	10031	9516	33814	6856	19546		2.77	Si
SLV 9	11.87	2683.14	-12606	-10497	7108	2.6886	2.6886	-13944	13205	9941	9516	33814	6856	19457		2.74	Si
SLD 6	11.67	1830.14	-10152	-8454	3588	2.6886	2.6886	-11229	12663	9533	9516	33814	6856	19048		5.31	Si
SLD 6	11.87	1431.28	-9807	-8166	3614	2.6886	2.6886	-10847	12586	9475	9516	33814	6856	18991		5.25	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 11.77 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.49	4372	-3291	28.53	447.62	15.69	Si
SLV 8	179667	0.49	4420	-3328	28.53	452.38	15.85	Si
SLV 11	179667	0.49	5129	-3861	28.53	522.39	18.31	Si
SLV 12	179667	0.49	5177	-3897	28.53	527.11	18.47	Si
SLV 3	179667	0.49	7562	-5693	28.53	757.5	26.55	Si
SLV 4	179667	0.49	7635	-5748	28.53	764.49	26.79	Si
SLV 15	179667	0.49	10084	-7591	28.53	992.59	34.79	Si
SLV 16	179667	0.49	10157	-7647	28.53	999.32	35.02	Si
SLV 1	179667	0.49	11063	-8329	28.53	1081.53	37.9	Si
SLV 2	179667	0.49	11137	-8384	28.53	1088.16	38.14	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 11.77 Wa = 0.05 Ta = 0.0059

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12641	-13178	428	1.251	1392.2	0.977	18.6107	4.37347	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-12606	-13144	428	1.254	1388.6	0.977	18.6552	4.37347	Si
SLV 6	-12051	-12392	-609	1.288	1332.1	0.976	19.18376	4.37347	Si
SLV 5	-12016	-12358	-609	1.291	1328.6	0.976	19.23237	4.37347	Si
SLV 14	-10322	-11022	1702	1.369	1156	0.972	20.46238	4.16383	Si
SLV 13	-10268	-10969	1702	1.375	1150.5	0.972	20.55492	4.16383	Si
SLV 2	-8356	-8403	-1752	1.63	955.8	0.967	24.51257	4.16383	Si
SLV 1	-8302	-8350	-1752	1.639	950.4	0.967	24.65174	4.16383	Si
SLV 16	-7736	-8380	1758	1.74	892.8	0.965	26.21006	4.16383	Si
SLV 15	-7682	-8328	1759	1.75	887.3	0.964	26.37019	4.16383	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	28.31	SLU 37	Si
V_SLU	13.821	SLU 50	Si
PF_SLV	1.84	SLV 7	Si
V_SLV	1.697	SLV 11	Si
PFFP_SLV	15.687	SLV 7	Si
R_SLV	4.255	SLV 10	Si

Maschio 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.386	L6	L7	3.21	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 1	8.35	512.4	-8447	-0.0000257	0.0004492	0.0035	3.21	11471.83	13550.92	13550.92	26.45	No	Si
SLU 1	11.87	257.45	-5407	-0.0000159	0.0004492	0.0035	3.21	7823.33	9225.86	9225.86	35.84	No	Si
SLU 45	8.35	710.54	-11399	-0.0000351	0.0004492	0.0035	3.21	14497.13	17574.19	17574.19	24.73	No	Si
SLU 45	11.87	325.86	-7504	-0.0000221	0.0004492	0.0035	3.21	10398.26	12229.84	12229.84	37.53	No	Si
SLU 51	8.35	725.62	-12354	-0.0000379	0.0004492	0.0035	3.21	15366.79	18836.04	18836.04	25.96	No	Si
SLU 51	11.87	230.37	-8459	-0.0000242	0.0004492	0.0035	3.21	11485.32	13567.82	13567.82	58.9	No	Si
SLU 3	8.35	559.46	-9307	-0.0000283	0.0004492	0.0035	3.21	12406.4	14743.72	14743.72	26.35	No	Si
SLU 3	11.87	254.93	-6267	-0.0000183	0.0004492	0.0035	3.21	8910.84	10468.14	10468.14	41.06	No	Si
SLU 46	8.35	682.29	-11460	-0.0000351	0.0004492	0.0035	3.21	14554.83	17656.74	17656.74	25.88	No	Si
SLU 46	11.87	297.52	-7566	-0.0000221	0.0004492	0.0035	3.21	10469.99	12317.17	12317.17	41.4	No	Si
SLU 49	8.35	727.49	-12337	-0.0000378	0.0004492	0.0035	3.21	15352.31	18814.5	18814.5	25.86	No	Si
SLU 49	11.87	262.68	-8443	-0.0000244	0.0004492	0.0035	3.21	11467.11	13545.01	13545.01	51.56	No	Si
SLU 43	8.35	663.48	-10538	-0.0000324	0.0004492	0.0035	3.21	13667.75	16420.93	16420.93	24.75	No	Si
SLU 43	11.87	328.38	-6644	-0.0000197	0.0004492	0.0035	3.21	9372.98	11009.8	11009.8	33.53	No	Si
SLU 50	8.35	753.87	-12292	-0.0000378	0.0004492	0.0035	3.21	15312.3	18755.08	18755.08	24.88	No	Si
SLU 50	11.87	258.7	-8397	-0.0000242	0.0004492	0.0035	3.21	11416.8	13482.08	13482.08	52.11	No	Si
SLU 6	8.35	604.65	-10184	-0.0000311	0.0004492	0.0035	3.21	13314.24	15941.61	15941.61	26.36	No	Si
SLU 6	11.87	220.09	-7144	-0.0000205	0.0004492	0.0035	3.21	9974.53	11719.35	11719.35	53.25	No	Si
SLU 48	8.35	755.74	-12276	-0.0000378	0.0004492	0.0035	3.21	15297.76	18733.54	18733.54	24.79	No	Si
SLU 48	11.87	291.02	-8381	-0.0000243	0.0004492	0.0035	3.21	11398.54	13459.27	13459.27	46.25	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	8.35	-5290.7	-11118	-0.0000578	0.0006738	0.0035	3.21		22094.98	22094.98	4.18		Si
SLV 7	11.87	-3106.01	-7970	-0.0000375	0.0006738	0.0035	3.21		17702.16	17702.16	5.7		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	8.35	3074.23	-7851	-0.000037	0.0006738	0.0035	3.21		12876.29	12876.29	4.19		Si
SLD 6	11.87	1734.99	-4795	-0.0000217	0.0006738	0.0035	3.21		8399.77	8399.77	4.84		Si
SLV 5	8.35	6212.25	-6450	-0.0000592	0.0006738	0.0035	3.21		10843.4	10843.4	1.75		Si
SLV 5	11.87	3470.51	-3432	-0.0000336	0.0006738	0.0035	3.21		6352.81	6352.81	1.83		Si
SLD 10	8.35	3066.88	-8019	-0.0000375	0.0006738	0.0035	3.21		13118.96	13118.96	4.28		Si
SLD 10	11.87	1768.36	-4959	-0.0000223	0.0006738	0.0035	3.21		8643.4	8643.4	4.89		Si
SLV 9	8.35	6185.72	-6865	-0.0000574	0.0006738	0.0035	3.21		11450.36	11450.36	1.85		Si
SLV 9	11.87	3546.2	-3836	-0.0000327	0.0006738	0.0035	3.21		6961.98	6961.98	1.96		Si
SLV 10	8.35	6294.91	-6830	-0.0000589	0.0006738	0.0035	3.21		11399.13	11399.13	1.81		Si
SLV 10	11.87	3656.27	-3801	-0.0000344	0.0006738	0.0035	3.21		6909.09	6909.09	1.89		Si
SLV 11	8.35	-5317.24	-11532	-0.0000591	0.0006738	0.0035	3.21		22657.04	22657.04	4.26		Si
SLV 11	11.87	-3030.32	-8373	-0.0000383	0.0006738	0.0035	3.21		18275.63	18275.63	6.03		Si
SLD 5	8.35	3026.46	-7866	-0.0000368	0.0006738	0.0035	3.21		12898.34	12898.34	4.26		Si
SLD 5	11.87	1686.84	-4810	-0.0000215	0.0006738	0.0035	3.21		8422.54	8422.54	4.99		Si
SLV 6	8.35	6321.44	-6415	-0.000061	0.0006738	0.0035	3.21		10792.18	10792.18	1.71		Si
SLV 6	11.87	3580.58	-3397	-0.0000359	0.0006738	0.0035	3.21		6299.92	6299.92	1.76		Si
SLV 8	8.35	-5181.52	-11083	-0.0000571	0.0006738	0.0035	3.21		22047.54	22047.54	4.26		Si
SLV 8	11.87	-2995.94	-7935	-0.0000369	0.0006738	0.0035	3.21		17652.38	17652.38	5.89		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	8.35	735.17	-13629	-7557	129	3.21	3.21	-16815	10575	4753	115546	16150	16371	32521	No	252.1	Si
SLU 70	11.87	281.08	-9566	-5304	129	3.21	3.21	-11802	9907	4452	115546	16150	16371	32521	No	252.1	Si
SLU 72	8.35	733.31	-13645	-7566	138	3.21	3.21	-16835	10578	4754	115546	16150	16371	32521	No	236.25	Si
SLU 72	11.87	248.77	-9582	-5313	138	3.21	3.21	-11822	9910	4453	115546	16150	16371	32521	No	236.25	Si
SLU 51	8.35	725.62	-12354	-6849	141	3.21	3.21	-15241	10366	4658	115546	16150	16371	32521	No	231.14	Si
SLU 51	11.87	230.37	-8459	-4690	141	3.21	3.21	-10437	9725	4370	115546	16150	16371	32521	No	231.14	Si
SLU 9	8.35	574.54	-10262	-5690	118	3.21	3.21	-12661	10022	4504	115546	16150	16371	32521	No	275.78	Si
SLU 9	11.87	159.44	-7222	-4004	118	3.21	3.21	-8910	9521	4279	115546	16150	16371	32521	No	275.78	Si
SLU 47	8.35	661.6	-11518	-6386	118	3.21	3.21	-14210	10228	4596	115546	16150	16371	32521	No	275.66	Si
SLU 47	11.87	246.32	-7623	-4227	118	3.21	3.21	-9405	9587	4309	115546	16150	16371	32521	No	275.66	Si
SLU 48	8.35	755.74	-12276	-6806	132	3.21	3.21	-15145	10353	4653	115546	16150	16371	32521	No	246.33	Si
SLU 48	11.87	291.02	-8381	-4647	132	3.21	3.21	-10340	9712	4365	115546	16150	16371	32521	No	246.33	Si
SLU 50	8.35	753.87	-12292	-6815	141	3.21	3.21	-15165	10355	4654	115546	16150	16371	32521	No	231.18	Si
SLU 50	11.87	258.7	-8397	-4656	141	3.21	3.21	-10361	9715	4366	115546	16150	16371	32521	No	231.18	Si
SLU 71	8.35	761.56	-13584	-7532	138	3.21	3.21	-16759	10568	4749	115546	16150	16371	32521	No	236.3	Si
SLU 71	11.87	277.1	-9521	-5279	138	3.21	3.21	-11746	9899	4449	115546	16150	16371	32521	No	236.3	Si
SLU 69	8.35	763.42	-13567	-7522	129	3.21	3.21	-16739	10565	4748	115546	16150	16371	32521	No	252.14	Si
SLU 69	11.87	309.42	-9504	-5270	129	3.21	3.21	-11726	9897	4448	115546	16150	16371	32521	No	252.14	Si
SLU 49	8.35	727.49	-12337	-6840	132	3.21	3.21	-15221	10363	4657	115546	16150	16371	32521	No	246.29	Si
SLU 49	11.87	262.68	-8443	-4681	132	3.21	3.21	-10416	9722	4369	115546	16150	16371	32521	No	246.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	8.35	-5317.24	-11532	-6394	224	3.21	3.21	-14228	15346	6896	115546	24225	16371	40596		181.44	Si
SLV 11	11.87	-3030.32	-8373	-4642	-1228	3.21	3.21	-10330	14566	6546	115546	24225	16371	40596		33.05	Si
SLV 6	8.35	6321.44	-6415	-3557	-95	3.21	1.8587	-7914	14083	3665	115546	24225	16371	40596		428.32	Si
SLV 6	11.87	3580.58	-3397	-1884	1357	3.21	1.6532	-4192	13338	3087	115546	24225	16371	40596		29.91	Si
SLV 5	8.35	6212.25	-6450	-3576	-95	3.21	1.9255	-7958	14092	3799	115546	24225	16371	40596		429.46	Si
SLV 5	11.87	3470.51	-3432	-1903	1357	3.21	1.7817	-4235	13347	3329	115546	24225	16371	40596		29.91	Si
SLV 9	8.35	6185.72	-6865	-3806	-128	3.21	2.1117	-8469	14194	4196	115546	24225	16371	40596		318.14	Si
SLV 9	11.87	3546.2	-3836	-2127	1332	3.21	2.0414	-4732	13446	3843	115546	24225	16371	40596		30.47	Si
SLV 7	8.35	-5290.7	-11118	-6164	257	3.21	3.21	-13716	15243	6850	115546	24225	16371	40596		158.08	Si
SLV 7	11.87	-3106.01	-7970	-4419	-1203	3.21	3.21	-9833	14467	6501	115546	24225	16371	40596		33.75	Si
SLD 6	8.35	3074.23	-7851	-4353	-7	3.21	3.21	-9686	14437	6488	115546	24225	16371	40596		6168.11	Si
SLD 6	11.87	1734.99	-4795	-2658	637	3.21	3.21	-5916	13683	6149	115546	24225	16371	40596		63.73	Si
SLV 10	8.35	6294.91	-6830	-3787	-128	3.21	2.0499	-8426	14185	4071	115546	24225	16371	40596		317.52	Si
SLV 10	11.87	3656.27	-3801	-2107	1332	3.21	1.929	-4689	13438	3629	115546	24225	16371	40596		30.48	Si
SLV 8	8.35	-5181.52	-11083	-6145	257	3.21	3.21	-13673	15235	6846	115546	24225	16371	40596		158.23	Si
SLV 8	11.87	-2995.94	-7935	-4399	-1203	3.21	3.21	-9789	14458	6497	115546	24225	16371	40596		33.74	Si
SLV 12	8.35	-5208.05	-11497	-6375	223	3.21	3.21	-14185	15337	6892	115546	24225	16371	40596		181.65	Si
SLV 12	11.87	-2920.24	-8338	-4623	-1228	3.21	3.21	-10287	14557	6542	115546	24225	16371	40596		33.05	Si
SLD 5	8.35	3026.46	-7866	-4361	-6	3.21	3.21	-9705	14441	6490	115546	24225	16371	40596		6272.67	Si
SLD 5	11.87	1686.84	-4810	-2667	637	3.21	3.21	-5935	13687	6151	115546	24225	16371	40596		63.72	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-4924	0.46	208.53	324.1	632.74	478.42	2.29	Si
SLV 5	-4959	0.46	208.53	326.26	635.78	481.02	2.31	Si
SLV 10	-5286	0.46	208.53	346.27	664.08	505.18	2.42	Si
SLV 9	-5321	0.46	208.53	348.4	667.11	507.76	2.43	Si
SLV 2	-5997	0.46	208.53	389.24	725.14	557.19	2.67	Si
SLV 1	-6051	0.46	208.53	392.45	729.74	561.1	2.69	Si
SLV 14	-7202	0.46	208.53	460.07	828.32	644.2	3.09	Si
SLV 13	-7256	0.46	208.53	463.18	832.91	648.04	3.11	Si
SLV 4	-7286	0.46	208.53	464.93	835.51	650.22	3.12	Si
SLV 3	-7340	0.46	208.53	468.02	840.1	654.06	3.14	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-8373	-11532	129	1.85	1076.9	0.942	28.55827	18.90294	Si
SLV 12	-8338	-11497	129	1.857	1073.3	0.941	28.66459	18.90294	Si
SLV 7	-7970	-11118	-135	1.928	1036	0.94	29.82249	18.90294	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-7935	-11083	-135	1.935	1032.5	0.939	29.93849	18.90294	Si
SLV 15	-7265	-10392	440	2.048	964.7	0.936	31.79962	11.46918	Si
SLV 16	-7211	-10338	440	2.06	959.3	0.936	32.00584	11.46918	Si
SLV 9	-3836	-6865	138	3.427	620.1	0.91	54.7274	18.90294	Si
SLV 10	-3801	-6830	138	3.45	616.6	0.91	55.11284	18.90294	Si
SLV 5	-3432	-6450	-126	3.713	580	0.906	59.54885	18.90294	Si
SLV 6	-3397	-6415	-126	3.74	576.6	0.906	60.00288	18.90294	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	24.733	SLU 45	Si
V_SLU	231.143	SLU 51	Si
PF_SLV	1.707	SLV 6	Si
V_SLV	29.907	SLV 5	Si
PFFP_SLV	2.294	SLV 6	Si
R_SLV	1.511	SLV 11	Si

Maschio 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L6	L7	1.67	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	8.35	634.66	-9574	-0.0000392	0.0003743	0.0035	1.67	6386.76	6879.76	6879.76	10.84	No	Si
SLU 40	10.45	-2527.17	-9892	-0.0000639	0.0003743	0.0035	1.67	6543.57	7709.44	7709.44	3.05	No	Si
SLU 42	8.35	636.51	-9953	-0.0000406	0.0003743	0.0035	1.67	6573.47	7132.8	7132.8	11.21	No	Si
SLU 42	10.45	-2579.72	-10313	-0.0000661	0.0003743	0.0035	1.67	6745.91	7952.25	7952.25	3.08	No	Si
SLU 31	8.35	641.96	-9280	-0.0000383	0.0003743	0.0035	1.67	6238.55	6684.81	6684.81	10.41	No	Si
SLU 31	10.45	-2336.19	-9623	-0.0000605	0.0003743	0.0035	1.67	6411.01	7546.96	7546.96	3.23	No	Si
SLU 83	8.35	694.54	-11995	-0.0000487	0.0003743	0.0035	1.67	7492.51	8213.81	8213.81	11.83	No	Si
SLU 83	10.45	-2872.26	-12166	-0.000077	0.0003743	0.0035	1.67	7562.66	8988.49	8988.49	3.13	No	Si
SLU 81	8.35	692.69	-11616	-0.0000473	0.0003743	0.0035	1.67	7332.95	8029.05	8029.05	11.59	No	Si
SLU 81	10.45	-2819.71	-11745	-0.0000747	0.0003743	0.0035	1.67	7387.69	8760.19	8760.19	3.11	No	Si
SLU 84	8.35	699.49	-12004	-0.0000488	0.0003743	0.0035	1.67	7496.17	8218.14	8218.14	11.75	No	Si
SLU 84	10.45	-2880.02	-12185	-0.0000772	0.0003743	0.0035	1.67	7570.4	8998.85	8998.85	3.12	No	Si
SLU 41	8.35	631.57	-9944	-0.0000405	0.0003743	0.0035	1.67	6569.18	7126.88	7126.88	11.28	No	Si
SLU 41	10.45	-2571.96	-10294	-0.0000659	0.0003743	0.0035	1.67	6736.93	7941.44	7941.44	3.09	No	Si
SLU 82	8.35	697.64	-11625	-0.0000474	0.0003743	0.0035	1.67	7336.73	8033.33	8033.33	11.52	No	Si
SLU 82	10.45	-2827.47	-11764	-0.0000749	0.0003743	0.0035	1.67	7395.71	8770.41	8770.41	3.1	No	Si
SLU 39	8.35	629.72	-9565	-0.0000392	0.0003743	0.0035	1.67	6382.35	6873.88	6873.88	10.92	No	Si
SLU 39	10.45	-2519.41	-9873	-0.0000637	0.0003743	0.0035	1.67	6534.31	7698.08	7698.08	3.06	No	Si
SLU 33	8.35	654.58	-9796	-0.0000403	0.0003743	0.0035	1.67	6496.63	7027.62	7027.62	10.74	No	Si
SLU 33	10.45	-2437.4	-10230	-0.000064	0.0003743	0.0035	1.67	6706.44	7904.9	7904.9	3.24	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	8.35	2729.37	-6767	-0.0000569	0.0005615	0.0035	1.67		5405.4	5405.4	1.98		Si
SLD 4	10.45	-4032.08	-10602	-0.0000866	0.0005615	0.0035	1.67		8532.32	8532.32	2.12		Si
SLV 14	8.35	-4425.4	-11339	-0.0000954	0.0005615	0.0035	1.67		9013.95	9013.95	2.04		Si
SLV 14	10.45	3373.52	-3041	-0.0093234	0.0005615	0.0035	1.336		2615.58	2615.58	0.78		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	8.35	-4196.75	-12737	-0.0000941	0.0005615	0.0035	1.67		9890.47	9890.47	2.36		Si
SLV 16	10.45	3050.7	-4407	-0.0001175	0.0005615	0.0035	1.67		3665.38	3665.38	1.2		Si
SLD 2	8.35	2628.4	-6156	-0.0000547	0.0005615	0.0035	1.67		4964.33	4964.33	1.89		Si
SLD 2	10.45	-3888.97	-9999	-0.000083	0.0005615	0.0035	1.67		8139.57	8139.57	2.09		Si
SLV 1	8.35	5188.74	-3642	-0.0217067	0.0005615	0.0035	1.336		3081.14	3081.14	0.59		No
SLV 1	10.45	-6466.99	-12041	-0.0001589	0.0005615	0.0035	1.336		9457.18	9457.18	1.46		Si
SLV 2	8.35	5486.13	-3451	-0.0257454	0.0005615	0.0035	1.336		2934.06	2934.06	0.53		No
SLV 2	10.45	-6813.77	-12396	-0.0001727	0.0005615	0.0035	1.336		9677.49	9677.49	1.42		Si
SLV 15	8.35	-4494.13	-12928	-0.0000993	0.0005615	0.0035	1.67		10010.33	10010.33	2.23		Si
SLV 15	10.45	3397.48	-4052	-0.0017931	0.0005615	0.0035	1.336		3396.31	3396.31	1		No
SLV 3	8.35	5417.39	-5040	-0.0143324	0.0005615	0.0035	1.336		4140.8	4140.8	0.76		No
SLV 3	10.45	-6789.82	-13407	-0.0001608	0.0005615	0.0035	1.336		10309.38	10309.38	1.52		Si
SLV 4	8.35	5714.78	-4848	-0.0182533	0.0005615	0.0035	1.336		3997.39	3997.39	0.7		No
SLV 4	10.45	-7136.6	-13762	-0.0001731	0.0005615	0.0035	1.336		10517.61	10517.61	1.47		Si
SLV 13	8.35	-4722.79	-11531	-0.0001019	0.0005615	0.0035	1.67		9137.89	9137.89	1.93		Si
SLV 13	10.45	3720.3	-2686	-0.0149445	0.0005615	0.0035	1.336		2338.08	2338.08	0.63		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	8.35	719.4	-12226	-10181	1972	1.67	1.67	-21772	9847	4605	40441	14002	4259	18261	No	9.26	Si
SLU 78	10.45	-2790.26	-12523	-10428	3782	1.67	1.67	-22301	9918	4638	40441	14002	4259	18261	No	4.83	Si
SLU 69	8.35	723.78	-11518	-9591	2050	1.67	1.67	-20511	9679	4526	40441	14002	4259	18261	No	8.91	Si
SLU 69	10.45	-2324.81	-11847	-9865	3790	1.67	1.67	-21097	9757	4563	40441	14002	4259	18261	No	4.82	Si
SLU 70	8.35	728.73	-11527	-9598	2060	1.67	1.67	-20527	9681	4527	40441	14002	4259	18261	No	8.86	Si
SLU 70	10.45	-2332.57	-11866	-9881	3802	1.67	1.67	-21130	9762	4565	40441	14002	4259	18261	No	4.8	Si
SLU 75	8.35	717.55	-11847	-9865	1940	1.67	1.67	-21097	9757	4563	40441	14002	4259	18261	No	9.41	Si
SLU 75	10.45	-2737.7	-12102	-10077	3688	1.67	1.67	-21551	9818	4591	40441	14002	4259	18261	No	4.95	Si
SLU 66	8.35	721.93	-11139	-9275	2019	1.67	1.67	-19836	9589	4484	40441	14002	4259	18261	No	9.05	Si
SLU 66	10.45	-2272.26	-11426	-9514	3696	1.67	1.67	-20347	9657	4516	40441	14002	4259	18261	No	4.94	Si
SLU 72	8.35	714.66	-11384	-9480	2012	1.67	1.67	-20273	9648	4511	40441	14002	4259	18261	No	9.07	Si
SLU 72	10.45	-2278.74	-11667	-9715	3715	1.67	1.67	-20777	9715	4543	40441	14002	4259	18261	No	4.92	Si
SLU 67	8.35	726.88	-11148	-9283	2028	1.67	1.67	-19852	9591	4485	40441	14002	4259	18261	No	9	Si
SLU 67	10.45	-2280.01	-11445	-9530	3707	1.67	1.67	-20381	9662	4518	40441	14002	4259	18261	No	4.93	Si
SLU 80	8.35	705.34	-12084	-10062	1924	1.67	1.67	-21519	9814	4589	40441	14002	4259	18261	No	9.49	Si
SLU 80	10.45	-2736.42	-12324	-10263	3695	1.67	1.67	-21947	9871	4616	40441	14002	4259	18261	No	4.94	Si
SLU 71	8.35	709.71	-11375	-9472	2003	1.67	1.67	-20257	9645	4510	40441	14002	4259	18261	No	9.12	Si
SLU 71	10.45	-2270.98	-11648	-9700	3703	1.67	1.67	-20743	9710	4541	40441	14002	4259	18261	No	4.93	Si
SLU 77	8.35	714.46	-12217	-10174	1962	1.67	1.67	-21757	9845	4604	40441	14002	4259	18261	No	9.31	Si
SLU 77	10.45	-2782.5	-12504	-10412	3771	1.67	1.67	-22267	9913	4636	40441	14002	4259	18261	No	4.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	8.35	5714.78	-4848	-4037	10357	1.336	0	0	0	0	40441	16803	3407	20209		1.95	Si
SLV 4	10.45	-7136.6	-13762	-11460	10628	1.336	0.9493	0	0	0	40441	16803	3407	20209		1.9	Si
SLV 16	8.35	-4196.75	-12737	-10606	-7014	1.67	1.5165	-25264	15469	6569	40441	21003	4259	25262		3.6	Si
SLV 16	10.45	3050.7	-4407	-3670	-4472	1.67	0.4284	-31093	16250	1949	40441	21003	4259	25262		5.65	Si
SLD 4	8.35	2729.37	-6767	-5635	5220	1.67	1.295	-12051	12827	4651	40441	21003	4259	25262		4.84	Si
SLD 4	10.45	-4032.08	-10602	-8829	6013	1.67	1.3641	-23389	15095	5765	40441	21003	4259	25262		4.2	Si
SLV 15	8.35	-4494.13	-12928	-10766	-7540	1.67	1.4622	-26571	15731	6440	40441	21003	4259	25262		3.35	Si
SLV 15	10.45	3397.48	-4052	-3374	-4993	1.336	0	0	0	0	40441	16803	3407	20209		4.05	Si
SLV 2	8.35	5486.13	-3451	-2873	10297	1.336	0	0	0	0	40441	16803	3407	20209		1.96	Si
SLV 2	10.45	-6813.77	-12396	-10322	10111	1.336	0.8559	0	0	0	40441	16803	3407	20209		2	Si
SLV 3	8.35	5417.39	-5040	-4196	9832	1.336	0	0	0	0	40441	16803	3407	20209		2.06	Si
SLV 3	10.45	-6789.82	-13407	-11164	10107	1.336	0.9857	0	0	0	40441	16803	3407	20209		2	Si
SLV 13	8.35	-4722.79	-11531	-9602	-7599	1.67	1.2763	-27253	15867	5670	40441	21003	4259	25262		3.32	Si
SLV 13	10.45	3720.3	-2686	-2236	-5510	1.336	0	0	0	0	40441	16803	3407	20209		3.67	Si
SLV 14	8.35	-4425.4	-11339	-9442	-7074	1.67	1.3342	-25605	15538	5805	40441	21003	4259	25262		3.57	Si
SLV 14	10.45	3373.52	-3041	-2532	-4989	1.336	0	0	0	0	40441	16803	3407	20209		4.05	Si
SLV 1	8.35	5188.74	-3642	-3033	9772	1.336	0	0	0	0	40441	16803	3407	20209		2.07	Si
SLV 1	10.45	-6466.99	-12041	-10026	9590	1.336	0.8937	0	0	0	40441	16803	3407	20209		2.11	Si
SLV 8	8.35	2460.7	-9273	-7722	4255	1.67	1.67	-16514	13719	6415	40441	21003	4259	25262		5.94	Si
SLV 8	10.45	-3887.26	-12021	-10010	5855	1.67	1.5349	-23545	15126	6500	40441	21003	4259	25262		4.31	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.46	6366	-2977	202.83	399.39	1.97	Si
SLV 14	179667	0.46	7126	-3332	202.83	444.71	2.19	Si
SLV 15	179667	0.46	9304	-4351	202.83	571.97	2.82	Si
SLV 16	179667	0.46	10063	-4706	202.83	615.38	3.03	Si
SLV 9	179667	0.46	10076	-4712	202.83	616.09	3.04	Si
SLV 10	179667	0.46	10571	-4943	202.83	644.1	3.18	Si
SLV 5	179667	0.46	16080	-7519	202.83	941.82	4.64	Si
SLV 6	179667	0.46	16575	-7750	202.83	967.29	4.77	Si
SLV 11	179667	0.46	19868	-9290	202.83	1131.44	5.58	Si
SLV 12	179667	0.46	20363	-9522	202.83	1155.3	5.7	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-6308	-11765	282	1.215	877.5	0.929	19.02293	13.33129	Si
SLV 12	-6305	-11640	283	1.216	877.2	0.928	19.03	13.33129	Si
SLV 7	-5822	-9398	361	1.283	828.5	0.925	20.1504	13.33129	Si
SLV 8	-5819	-9273	361	1.283	828.2	0.925	20.15844	13.33129	Si
SLV 9	-3802	-7106	-362	1.758	626.3	0.908	28.12721	13.33129	Si
SLV 10	-3799	-6981	-362	1.759	626	0.908	28.14436	13.33129	Si
SLV 5	-3316	-4739	-284	1.948	578.3	0.904	31.33761	13.33129	Si
SLV 6	-3313	-4614	-283	1.95	578	0.904	31.35857	13.33129	Si
SLV 15	-5998	-12928	-35	1.297	846.3	0.926	20.34895	6.37081	Si
SLV 16	-5994	-12737	-34	1.298	845.8	0.926	20.36247	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.051	SLU 40	Si
V_SLU	4.803	SLU 70	Si
PF_SLV	0.535	SLV 2	No
V_SLV	1.901	SLV 4	Si
PFFP_SLV	1.969	SLV 13	Si
R_SLV	1.427	SLV 11	Si

Maschio 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	1.006	L6	L7	4.32	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	8.35	2291.32	-19798	-0.0000476	0.0004492	0.0035	4.32	31307.03	39079.77	39079.77	17.06	No	Si
SLU 51	11.87	1057.89	-11597	-0.0000265	0.0004492	0.0035	4.32	21118.48	24908.78	24908.78	23.55	No	Si
SLU 47	8.35	2224.02	-19203	-0.0000461	0.0004492	0.0035	4.32	30700.6	38157.91	38157.91	17.16	No	Si
SLU 47	11.87	1029.24	-10973	-0.0000252	0.0004492	0.0035	4.32	20181.88	23736.11	23736.11	23.06	No	Si
SLU 49	8.35	2337.91	-20179	-0.0000485	0.0004492	0.0035	4.32	31684.51	39670.09	39670.09	16.97	No	Si
SLU 49	11.87	1156.65	-11925	-0.0000275	0.0004492	0.0035	4.32	21601.15	25524.53	25524.53	22.07	No	Si
SLU 48	8.35	2366.79	-20178	-0.0000486	0.0004492	0.0035	4.32	31684.02	39669.32	39669.32	16.76	No	Si
SLU 48	11.87	1168	-11926	-0.0000275	0.0004492	0.0035	4.32	21602.6	25526.39	25526.39	21.85	No	Si
SLU 43	8.35	2224.12	-18608	-0.0000448	0.0004492	0.0035	4.32	30072.27	37234.27	37234.27	16.74	No	Si
SLU 43	11.87	1027.06	-10351	-0.0000239	0.0004492	0.0035	4.32	19226.08	22567.04	22567.04	21.97	No	Si
SLU 46	8.35	2289.87	-19584	-0.0000471	0.0004492	0.0035	4.32	31090.97	38747.72	38747.72	16.92	No	Si
SLU 46	11.87	1135.56	-11301	-0.0000261	0.0004492	0.0035	4.32	20677.5	24353.09	24353.09	21.45	No	Si
SLU 50	8.35	2320.2	-19798	-0.0000477	0.0004492	0.0035	4.32	31306.53	39079.01	39079.01	16.84	No	Si
SLU 50	11.87	1069.24	-11598	-0.0000266	0.0004492	0.0035	4.32	21119.95	24910.64	24910.64	23.3	No	Si
SLU 1	8.35	1707.25	-14918	-0.0000354	0.0004492	0.0035	4.32	25717.92	31008.04	31008.04	18.16	No	Si
SLU 1	11.87	818.47	-8290	-0.000019	0.0004492	0.0035	4.32	15897.03	18611.05	18611.05	22.74	No	Si
SLU 45	8.35	2318.75	-19583	-0.0000472	0.0004492	0.0035	4.32	31090.47	38746.95	38746.95	16.71	No	Si
SLU 45	11.87	1146.91	-11302	-0.0000262	0.0004492	0.0035	4.32	20678.98	24354.95	24354.95	21.24	No	Si
SLU 44	8.35	2175.98	-18609	-0.0000447	0.0004492	0.0035	4.32	30073.15	37235.54	37235.54	17.11	No	Si
SLU 44	11.87	1008.15	-10349	-0.0000238	0.0004492	0.0035	4.32	19223.51	22563.89	22563.89	22.38	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	8.35	4785.28	-15576	-0.0000452	0.0006738	0.0035	4.32		32749.89	32749.89	6.84		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	11.87	2367.03	-8515	-0.0000237	0.0006738	0.0035	4.32		19245.06	19245.06	8.13		Si
SLV 6	8.35	8726.05	-14861	-0.0000551	0.0006738	0.0035	4.32		31426.51	31426.51	3.6		Si
SLV 6	11.87	4290.21	-8054	-0.0000282	0.0006738	0.0035	4.32		18334.9	18334.9	4.27		Si
SLD 10	8.35	4449.77	-16122	-0.0000454	0.0006738	0.0035	4.32		33758.59	33758.59	7.59		Si
SLD 10	11.87	2057.14	-9004	-0.0000238	0.0006738	0.0035	4.32		20208.6	20208.6	9.82		Si
SLV 5	8.35	8545.24	-14873	-0.0000546	0.0006738	0.0035	4.32		31449.21	31449.21	3.68		Si
SLV 5	11.87	4108.17	-8091	-0.0000278	0.0006738	0.0035	4.32		18408.81	18408.81	4.48		Si
SLD 5	8.35	4706.18	-15581	-0.000045	0.0006738	0.0035	4.32		32759.65	32759.65	6.96		Si
SLD 5	11.87	2287.4	-8532	-0.0000235	0.0006738	0.0035	4.32		19277.39	19277.39	8.43		Si
SLV 1	8.35	4813.04	-13820	-0.0000416	0.0006738	0.0035	4.32		29469.86	29469.86	6.12		Si
SLV 1	11.87	2813.87	-6923	-0.0000217	0.0006738	0.0035	4.32		16084.9	16084.9	5.72		Si
SLV 10	8.35	7941.84	-16140	-0.0000556	0.0006738	0.0035	4.32		33791.52	33791.52	4.25		Si
SLV 10	11.87	3565.62	-9197	-0.0000285	0.0006738	0.0035	4.32		20589.78	20589.78	5.77		Si
SLD 9	8.35	4370.68	-16127	-0.0000452	0.0006738	0.0035	4.32		33768.35	33768.35	7.73		Si
SLD 9	11.87	1977.51	-9020	-0.0000237	0.0006738	0.0035	4.32		20240.94	20240.94	10.24		Si
SLV 2	8.35	5090.54	-13801	-0.0000424	0.0006738	0.0035	4.32		29435.03	29435.03	5.78		Si
SLV 2	11.87	3093.24	-6866	-0.0000224	0.0006738	0.0035	4.32		15969.68	15969.68	5.16		Si
SLV 9	8.35	7761.03	-16152	-0.0000551	0.0006738	0.0035	4.32		33813.84	33813.84	4.36		Si
SLV 9	11.87	3383.59	-9235	-0.0000281	0.0006738	0.0035	4.32		20663.69	20663.69	6.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 31	8.35	1542.34	-19151	-10619	-1152	4.32	4.32	-17557	10674	6456	115546	21735	22032	43767	No	37.99	Si
SLU 31	11.87	909.13	-10309	-5716	-1157	4.32	4.32	-9451	9593	5802	115546	21735	22032	43767	No	37.84	Si
SLU 81	8.35	2063.17	-23673	-13125	-1115	4.32	4.32	-21702	10833	6552	115546	21735	22032	43767	No	39.25	Si
SLU 81	11.87	1137.39	-12705	-7045	-1120	4.32	4.32	-11648	9886	5979	115546	21735	22032	43767	No	39.07	Si
SLU 82	8.35	2034.29	-23673	-13126	-1140	4.32	4.32	-21702	10833	6552	115546	21735	22032	43767	No	38.39	Si
SLU 82	11.87	1126.04	-12704	-7044	-1145	4.32	4.32	-11647	9886	5979	115546	21735	22032	43767	No	38.21	Si
SLU 36	8.35	1704.26	-20721	-11489	-1104	4.32	4.32	-18997	10833	6552	115546	21735	22032	43767	No	39.63	Si
SLU 36	11.87	1057.63	-11884	-6589	-1110	4.32	4.32	-10895	9786	5919	115546	21735	22032	43767	No	39.41	Si
SLU 41	8.35	1594.34	-20577	-11409	-1322	4.32	4.32	-18865	10833	6552	115546	21735	22032	43767	No	33.11	Si
SLU 41	11.87	949.89	-11268	-6248	-1327	4.32	4.32	-10330	9711	5873	115546	21735	22032	43767	No	32.98	Si
SLU 42	8.35	1565.46	-20578	-11410	-1347	4.32	4.32	-18865	10833	6552	115546	21735	22032	43767	No	32.49	Si
SLU 42	11.87	938.55	-11267	-6247	-1352	4.32	4.32	-10329	9711	5873	115546	21735	22032	43767	No	32.36	Si
SLU 33	8.35	1656.22	-20127	-11159	-1162	4.32	4.32	-18451	10793	6528	115546	21735	22032	43767	No	37.67	Si
SLU 33	11.87	1036.54	-11261	-6244	-1167	4.32	4.32	-10323	9710	5872	115546	21735	22032	43767	No	37.5	Si
SLU 40	8.35	1517.42	-19983	-11080	-1405	4.32	4.32	-18320	10776	6517	115546	21735	22032	43767	No	31.16	Si
SLU 40	11.87	917.46	-10643	-5901	-1409	4.32	4.32	-9757	9634	5827	115546	21735	22032	43767	No	31.06	Si
SLU 39	8.35	1546.3	-19983	-11079	-1380	4.32	4.32	-18319	10776	6517	115546	21735	22032	43767	No	31.72	Si
SLU 39	11.87	928.8	-10644	-5902	-1384	4.32	4.32	-9758	9634	5827	115546	21735	22032	43767	No	31.62	Si
SLU 32	8.35	1685.1	-20126	-11159	-1137	4.32	4.32	-18451	10793	6528	115546	21735	22032	43767	No	38.5	Si
SLU 32	11.87	1047.89	-11262	-6244	-1142	4.32	4.32	-10324	9710	5873	115546	21735	22032	43767	No	38.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	8.35	-5197.47	-17381	-9637	-4018	4.32	4.32	-15934	15687	9487	115546	32602	22032	54634		13.6	Si
SLV 12	11.87	-2408.62	-9643	-5346	-7531	4.32	4.32	-8840	14268	8629	115546	32602	22032	54634		7.25	Si
SLV 4	8.35	1148.74	-14174	-7859	-2931	4.32	4.32	-12994	15099	9132	115546	32602	22032	54634		18.64	Si
SLV 4	11.87	1300.97	-7000	-3881	-3949	4.32	4.32	-6417	13783	8336	115546	32602	22032	54634		13.83	Si
SLV 11	8.35	-5378.29	-17393	-9644	-4108	4.32	4.32	-15945	15689	9489	115546	32602	22032	54634		13.3	Si
SLV 11	11.87	-2590.65	-9680	-5367	-7622	4.32	4.32	-8874	14275	8633	115546	32602	22032	54634		7.17	Si
SLV 10	8.35	7941.84	-16140	-8949	4596	4.32	4.32	-14796	15459	9350	115546	32602	22032	54634		11.89	Si
SLV 10	11.87	3565.62	-9197	-5099	8081	4.32	4.32	-8431	14186	8580	115546	32602	22032	54634		6.76	Si
SLV 5	8.35	8545.24	-14873	-8247	3605	4.32	4.32	-13635	15227	9209	115546	32602	22032	54634		15.16	Si
SLV 5	11.87	4108.17	-8091	-4486	7110	4.32	4.32	-7418	13984	8457	115546	32602	22032	54634		7.68	Si
SLV 3	8.35	871.25	-14192	-7869	-3069	4.32	4.32	-13011	15102	9134	115546	32602	22032	54634		17.8	Si
SLV 3	11.87	1021.6	-7057	-3913	-4089	4.32	4.32	-6470	13794	8343	115546	32602	22032	54634		13.36	Si
SLV 8	8.35	-4413.27	-16103	-8928	-4919	4.32	4.32	-14762	15452	9346	115546	32602	22032	54634		11.11	Si
SLV 8	11.87	-1684.03	-8499	-4713	-8411	4.32	4.32	-7792	14058	8503	115546	32602	22032	54634		6.5	Si
SLV 9	8.35	7761.03	-16152	-8955	4506	4.32	4.32	-14807	15461	9351	115546	32602	22032	54634		12.13	Si
SLV 9	11.87	3383.59	-9235	-5120	7990	4.32	4.32	-8466	14193	8584	115546	32602	22032	54634		6.84	Si
SLV 6	8.35	8726.05	-14861	-8240	3695	4.32	4.32	-13624	15225	9208	115546	32602	22032	54634		14.79	Si
SLV 6	11.87	4290.21	-8054	-4465	7201	4.32	4.32	-7383	13977	8453	115546	32602	22032	54634		7.59	Si
SLV 7	8.35	-4594.08	-16115	-8935	-5009	4.32	4.32	-14773	15455	9347	115546	32602	22032	54634		10.91	Si
SLV 7	11.87	-1866.06	-8537	-4733	-8502	4.32	4.32	-7826	14065	8507	115546	32602	22032	54634		6.43	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-9357	0.46	280.64	599.71	1090.98	845.35	3.01	Si
SLV 1	-9395	0.46	280.64	601.91	1094.21	848.06	3.02	Si
SLV 4	-9481	0.46	280.64	606.9	1101.53	854.21	3.04	Si
SLV 3	-9519	0.46	280.64	609.09	1104.76	856.92	3.05	Si
SLV 6	-11811	0.46	280.64	738.7	1299.05	1018.87	3.63	Si
SLV 5	-11836	0.46	280.64	740.05	1301.13	1020.59	3.64	Si
SLV 8	-12224	0.46	280.64	761.3	1333.87	1047.58	3.73	Si
SLV 7	-12248	0.46	280.64	762.64	1335.95	1049.29	3.74	Si
SLV 10	-14033	0.46	280.64	857.95	1484.25	1171.1	4.17	Si
SLV 9	-14058	0.46	280.64	859.24	1486.28	1172.76	4.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-9680	-17393	63	2.11	1288.5	0.935	32.78398	18.90294	Si
SLV 12	-9643	-17381	63	2.117	1284.7	0.935	32.89477	18.90294	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-9235	-16152	153	2.186	1243.5	0.934	34.02683	18.90294	Si
SLV 10	-9197	-16140	153	2.193	1239.7	0.933	34.14657	18.90294	Si
SLV 7	-8537	-16115	-153	2.33	1173.1	0.93	36.40132	18.90294	Si
SLV 8	-8499	-16103	-153	2.339	1169.3	0.93	36.53825	18.90294	Si
SLV 5	-8091	-14873	-64	2.442	1128.1	0.928	38.23913	18.90294	Si
SLV 6	-8054	-14861	-64	2.451	1124.3	0.928	38.38959	18.90294	Si
SLV 15	-10868	-18453	347	1.894	1408.7	0.94	29.27675	11.46918	Si
SLV 16	-10811	-18435	347	1.902	1402.9	0.94	29.41421	11.46918	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	16.71	SLU 45	Si
V_SLU	31.061	SLU 40	Si
PF_SLV	3.601	SLV 6	Si
V_SLV	6.426	SLV 7	Si
PFFP_SLV	3.012	SLV 2	Si
R_SLV	1.734	SLV 11	Si

Maschio 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L6	L7	1.02	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 70	9.25	108.64	-8660	-0.0000516	0.0003743	0.0035	1.02	3101.23	3475.23	3475.23	31.99	No	Si
SLU 70	11.05	-858.52	-7095	-0.0000676	0.0003743	0.0035	1.02	2735.54	3226.41	3226.41	3.76	No	Si
SLU 71	9.25	101.39	-8483	-0.0000503	0.0003743	0.0035	1.02	3064.15	3419.09	3419.09	33.72	No	Si
SLU 71	11.05	-835.08	-6913	-0.0000656	0.0003743	0.0035	1.02	2687.4	3165.39	3165.39	3.79	No	Si
SLU 68	9.25	116.31	-8171	-0.0000489	0.0003743	0.0035	1.02	2996.17	3321.01	3321.01	28.55	No	Si
SLU 68	11.05	-817.19	-6640	-0.0000633	0.0003743	0.0035	1.02	2613.15	3071.75	3071.75	3.76	No	Si
SLU 65	9.25	123.8	-7848	-0.0000472	0.0003743	0.0035	1.02	2922.29	3220.43	3220.43	26.01	No	Si
SLU 65	11.05	-791.25	-6348	-0.0000606	0.0003743	0.0035	1.02	2530.61	2968.17	2968.17	3.75	No	Si
SLU 23	9.25	126.68	-6407	-0.0000389	0.0003743	0.0035	1.02	2547.59	2784.78	2784.78	21.98	No	Si
SLU 23	11.05	-669.56	-5281	-0.0000501	0.0003743	0.0035	1.02	2204.03	2577.33	2577.33	3.85	No	Si
SLU 64	9.25	116.37	-7838	-0.0000469	0.0003743	0.0035	1.02	2919.81	3217.16	3217.16	27.65	No	Si
SLU 64	11.05	-783.19	-6328	-0.0000602	0.0003743	0.0035	1.02	2524.9	2961.08	2961.08	3.78	No	Si
SLU 66	9.25	111.67	-8331	-0.0000497	0.0003743	0.0035	1.02	3031.51	3371.28	3371.28	30.19	No	Si
SLU 66	11.05	-827.74	-6791	-0.0000646	0.0003743	0.0035	1.02	2654.42	3124.28	3124.28	3.77	No	Si
SLU 72	9.25	105.85	-8489	-0.0000505	0.0003743	0.0035	1.02	3065.5	3421.09	3421.09	32.32	No	Si
SLU 72	11.05	-839.91	-6925	-0.0000659	0.0003743	0.0035	1.02	2690.58	3169.36	3169.36	3.77	No	Si
SLU 69	9.25	104.18	-8654	-0.0000514	0.0003743	0.0035	1.02	3099.92	3473.22	3473.22	33.34	No	Si
SLU 69	11.05	-853.69	-7083	-0.0000673	0.0003743	0.0035	1.02	2732.43	3222.4	3222.4	3.77	No	Si
SLU 67	9.25	116.13	-8338	-0.0000499	0.0003743	0.0035	1.02	3032.89	3373.27	3373.27	29.05	No	Si
SLU 67	11.05	-832.57	-6803	-0.0000648	0.0003743	0.0035	1.02	2657.66	3128.41	3128.41	3.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	9.25	3620.1	-2723	-0.055441	0.0005615	0.0035	0.816		1387.34	1387.34	0.38		No
SLV 4	11.05	-3111.06	-6802	-0.0007695	0.0005615	0.0035	0.816		3297.6	3297.6	1.06		Si
SLD 4	9.25	1584.07	-4634	-0.0001038	0.0005615	0.0035	1.02		2218.72	2218.72	1.4		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	11.05	-1664.52	-5692	-0.000098	0.0005615	0.0035	0.816		2851.74	2851.74	1.71		Si
SLV 1	9.25	3268.86	-1918	-0.0565068	0.0005615	0.0035	0.816		1010.52	1010.52	0.31		No
SLV 1	11.05	-2647.2	-5561	-0.0007658	0.0005615	0.0035	0.816		2796.89	2796.89	1.06		Si
SLV 3	9.25	3363.61	-2993	-0.0462209	0.0005615	0.0035	0.816		1511.72	1511.72	0.45		No
SLV 3	11.05	-2943.59	-6722	-0.0004459	0.0005615	0.0035	0.816		3266.22	3266.22	1.11		Si
SLV 2	9.25	3525.36	-1648	-0.0662214	0.0005615	0.0035	0.816		881.58	881.58	0.25		No
SLV 2	11.05	-2814.67	-5641	-0.0014041	0.0005615	0.0035	0.816		2830.55	2830.55	1.01		Si
SLV 14	9.25	-3242.33	-9109	-0.0002509	0.0005615	0.0035	0.816		4162.6	4162.6	1.28		Si
SLV 14	11.05	1784.67	-2975	-0.0095331	0.0005615	0.0035	0.816		1503.62	1503.62	0.84		No
SLV 13	9.25	-3498.82	-9380	-0.0003037	0.0005615	0.0035	0.816		4258.11	4258.11	1.22		Si
SLV 13	11.05	1952.14	-2895	-0.0142223	0.0005615	0.0035	0.816		1466.86	1466.86	0.75		No
SLV 15	9.25	-3404.08	-10455	-0.0002385	0.0005615	0.0035	0.816		4626.56	4626.56	1.36		Si
SLV 15	11.05	1655.76	-4056	-0.0001567	0.0005615	0.0035	1.02		1987.59	1987.59	1.2		Si
SLD 2	9.25	1541.18	-4162	-0.0001131	0.0005615	0.0035	1.02		2031.53	2031.53	1.32		Si
SLD 2	11.05	-1532.94	-5179	-0.0000901	0.0005615	0.0035	0.816		2636.73	2636.73	1.72		Si
SLV 16	9.25	-3147.58	-10184	-0.0002077	0.0005615	0.0035	0.816		4538.25	4538.25	1.44		Si
SLV 16	11.05	1488.29	-4136	-0.0001038	0.0005615	0.0035	1.02		2020.81	2020.81	1.36		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 64	9.25	116.37	-7838	-6527	491	1.02	1.02	-22852	9991	2854	40441	8552	2601	11153	No	22.72	Si
SLU 64	11.05	-783.19	-6328	-5269	408	1.02	1.02	-18450	9404	2686	40441	8552	2601	11153	No	27.34	Si
SLU 65	9.25	123.8	-7848	-6535	504	1.02	1.02	-22883	9996	2855	40441	8552	2601	11153	No	22.14	Si
SLU 65	11.05	-791.25	-6348	-5286	417	1.02	1.02	-18508	9412	2688	40441	8552	2601	11153	No	26.75	Si
SLU 66	9.25	111.67	-8331	-6937	504	1.02	1.02	-24291	10183	2908	40441	8552	2601	11153	No	22.12	Si
SLU 66	11.05	-827.74	-6791	-5655	430	1.02	1.02	-19799	9584	2737	40441	8552	2601	11153	No	25.96	Si
SLU 72	9.25	105.85	-8489	-7069	496	1.02	1.02	-24752	10245	2926	40441	8552	2601	11153	No	22.48	Si
SLU 72	11.05	-839.91	-6925	-5766	441	1.02	1.02	-20190	9636	2752	40441	8552	2601	11153	No	25.3	Si
SLU 68	9.25	116.31	-8171	-6804	503	1.02	1.02	-23824	10121	2891	40441	8552	2601	11153	No	22.2	Si
SLU 68	11.05	-817.19	-6640	-5529	431	1.02	1.02	-19361	9526	2721	40441	8552	2601	11153	No	25.9	Si
SLU 67	9.25	116.13	-8338	-6943	512	1.02	1.02	-24309	10186	2909	40441	8552	2601	11153	No	21.79	Si
SLU 67	11.05	-832.57	-6803	-5665	435	1.02	1.02	-19834	9589	2739	40441	8552	2601	11153	No	25.64	Si
SLU 69	9.25	104.18	-8654	-7206	503	1.02	1.02	-25231	10309	2944	40441	8552	2601	11153	No	22.18	Si
SLU 69	11.05	-853.69	-7083	-5898	443	1.02	1.02	-20652	9698	2770	40441	8552	2601	11153	No	25.16	Si
SLU 71	9.25	101.39	-8483	-7064	488	1.02	1.02	-24733	10242	2925	40441	8552	2601	11153	No	22.84	Si
SLU 71	11.05	-835.08	-6913	-5756	435	1.02	1.02	-20156	9632	2751	40441	8552	2601	11153	No	25.62	Si
SLU 70	9.25	108.64	-8660	-7211	511	1.02	1.02	-25250	10311	2945	40441	8552	2601	11153	No	21.84	Si
SLU 70	11.05	-858.52	-7095	-5908	449	1.02	1.02	-20687	9703	2771	40441	8552	2601	11153	No	24.86	Si
SLU 25	9.25	119.01	-6896	-5743	473	1.02	1.02	-20107	9625	2749	40441	8552	2601	11153	No	23.59	Si
SLU 25	11.05	-710.89	-5735	-4776	371	1.02	1.02	-16723	9174	2620	40441	8552	2601	11153	No	30.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	9.25	3268.86	-1918	-1597	5737	0.816	0	0	0	0	40441	10263	2081	12343		2.15	Si
SLV 1	11.05	-2647.2	-5561	-4631	2356	0.816	0.102	0	0	0	40441	10263	2081	12343		5.24	Si
SLV 13	9.25	-3498.82	-9380	-7811	-5792	0.816	0.4109	0	0	0	40441	10263	2081	12343		2.13	Si
SLV 13	11.05	1952.14	-2895	-2411	-2356	0.816	0	0	0	0	40441	10263	2081	12343		5.24	Si
SLV 16	9.25	-3147.58	-10184	-8481	-5072	0.816	0.6028	0	0	0	40441	10263	2081	12343		2.43	Si
SLV 16	11.05	1488.29	-4136	-3444	-1809	1.02	0.4504	-12059	12828	1618	40441	12828	2601	15429		8.53	Si
SLV 2	9.25	3525.36	-1648	-1372	6145	0.816	0	0	0	0	40441	10263	2081	12343		2.01	Si
SLV 2	11.05	-2814.67	-5641	-4698	2545	0.816	0.0332	0	0	0	40441	10263	2081	12343		4.85	Si
SLD 2	9.25	1541.18	-4162	-3466	2816	1.02	0.419	-12134	12843	1507	40441	12828	2601	15429		5.48	Si
SLD 2	11.05	-1532.94	-5179	-4313	1242	0.816	0.6421	0	0	0	40441	10263	2081	12343		9.94	Si
SLV 14	9.25	-3242.33	-9109	-7585	-5384	0.816	0.4622	0	0	0	40441	10263	2081	12343		2.29	Si
SLV 14	11.05	1784.67	-2975	-2478	-2167	0.816	0	0	0	0	40441	10263	2081	12343		5.7	Si
SLV 4	9.25	3620.1	-2723	-2267	6457	0.816	0	0	0	0	40441	10263	2081	12343		1.91	Si
SLV 4	11.05	-3111.06	-6802	-5664	2903	0.816	0.1578	0	0	0	40441	10263	2081	12343		4.25	Si
SLV 3	9.25	3363.61	-2993	-2492	6049	0.816	0	0	0	0	40441	10263	2081	12343		2.04	Si
SLV 3	11.05	-2943.59	-6722	-5597	2714	0.816	0.2163	0	0	0	40441	10263	2081	12343		4.55	Si
SLV 15	9.25	-3404.08	-10455	-8706	-5480	0.816	0.5532	0	0	0	40441	10263	2081	12343		2.25	Si
SLV 15	11.05	1655.76	-4056	-3377	-1998	1.02	0.3053	-40417	16250	1389	40441	12828	2601	15429		7.72	Si
SLD 4	9.25	1584.07	-4634	-3859	2954	1.02	0.5046	-13512	13119	1853	40441	12828	2601	15429		5.22	Si
SLD 4	11.05	-1664.52	-5692	-4740	1401	0.816	0.6527	0	0	0	40441	10263	2081	12343		8.81	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.46	4482	-1280	123.88	173.96	1.4	Si
SLV 1	179667	0.46	5429	-1550	123.88	209.35	1.69	Si
SLV 4	179667	0.46	8032	-2294	123.88	304.27	2.46	Si
SLV 3	179667	0.46	8979	-2564	123.88	337.9	2.73	Si
SLV 6	179667	0.46	9627	-2749	123.88	360.65	2.91	Si
SLV 5	179667	0.46	10243	-2926	123.88	382.1	3.08	Si
SLV 10	179667	0.46	17445	-4982	123.88	617.83	4.99	Si
SLV 9	179667	0.46	18061	-5158	123.88	636.76	5.14	Si
SLV 8	179667	0.46	21459	-6129	123.88	737.46	5.95	Si
SLV 7	179667	0.46	22076	-6305	123.88	755.09	6.1	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-6393	-8691	-56	0.822	793.1	0.948	12.59515	13.33129	No
SLV 7	-6316	-8559	-56	0.83	785.2	0.948	12.73059	13.33129	No
SLV 12	-5028	-7085	-62	1.001	654.7	0.939	15.48794	13.33129	Si
SLV 11	-4951	-6953	-62	1.014	646.9	0.939	15.69617	13.33129	Si
SLV 6	-3594	-4803	56	1.309	509.8	0.926	20.55292	13.33129	Si
SLV 5	-3516	-4672	56	1.331	502	0.925	20.92323	13.33129	Si
SLV 4	-7027	-9239	-11	0.765	857.4	0.952	11.68492	6.37081	Si
SLV 3	-6907	-9037	-10	0.776	845.3	0.951	11.86216	6.37081	Si
SLV 2	-6187	-8073	23	0.849	772.2	0.947	13.03291	6.37081	Si
SLV 1	-6067	-7871	23	0.863	760	0.947	13.25518	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.751	SLU 65	Si
V_SLU	21.79	SLU 67	Si
PF_SLV	0.25	SLV 2	No
V_SLV	1.912	SLV 4	Si
PFFP_SLV	1.404	SLV 2	Si
R_SLV	0.945	SLV 8	No

Maschio 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L6	L7	3.64	0.14	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	8.35	-3482.04	-10748	-0.0000401	0.0004492	0.0035	3.64	16184.94	25255.51	25255.51	7.25	No	Si
SLU 39	10.45	-1838.27	-8206	-0.0000271	0.0004492	0.0035	3.64	12967.35	21262.45	21262.45	11.57	No	Si
SLU 40	8.35	-3521.57	-10742	-0.0000403	0.0004492	0.0035	3.64	16177.98	25246.8	25246.8	7.17	No	Si
SLU 40	10.45	-1871.18	-8199	-0.0000272	0.0004492	0.0035	3.64	12956.65	21249.88	21249.88	11.36	No	Si
SLU 84	8.35	-4073.04	-13428	-0.0000494	0.0004492	0.0035	3.64	19168.15	29253.28	29253.28	7.18	No	Si
SLU 84	10.45	-2143.75	-10241	-0.0000334	0.0004492	0.0035	3.64	15572.98	24467.34	24467.34	11.41	No	Si
SLU 82	8.35	-4031.32	-13102	-0.0000484	0.0004492	0.0035	3.64	18827.73	28767.04	28767.04	7.14	No	Si
SLU 82	10.45	-2169.65	-9930	-0.0000327	0.0004492	0.0035	3.64	15191.04	23978.32	23978.32	11.05	No	Si
SLU 42	8.35	-3563.29	-11068	-0.0000413	0.0004492	0.0035	3.64	16563.35	25733.04	25733.04	7.22	No	Si
SLU 42	10.45	-1845.28	-8509	-0.0000278	0.0004492	0.0035	3.64	13370.02	21738.9	21738.9	11.78	No	Si
SLU 83	8.35	-4033.51	-13433	-0.0000493	0.0004492	0.0035	3.64	19174.2	29261.99	29261.99	7.25	No	Si
SLU 83	10.45	-2110.84	-10249	-0.0000333	0.0004492	0.0035	3.64	15582.72	24479.91	24479.91	11.6	No	Si
SLU 76	8.35	-3867.41	-13200	-0.000048	0.0004492	0.0035	3.64	18931.53	28914.36	28914.36	7.48	No	Si
SLU 76	10.45	-2050.15	-10036	-0.0000325	0.0004492	0.0035	3.64	15321	24143.91	24143.91	11.78	No	Si
SLU 41	8.35	-3523.77	-11074	-0.0000411	0.0004492	0.0035	3.64	16570.2	25741.75	25741.75	7.31	No	Si
SLU 41	10.45	-1812.37	-8517	-0.0000277	0.0004492	0.0035	3.64	13380.57	21751.47	21751.47	12	No	Si
SLU 81	8.35	-3991.79	-13107	-0.0000483	0.0004492	0.0035	3.64	18833.89	28775.75	28775.75	7.21	No	Si
SLU 81	10.45	-2136.74	-9938	-0.0000326	0.0004492	0.0035	3.64	15200.93	23990.89	23990.89	11.23	No	Si
SLU 73	8.35	-3825.68	-12874	-0.000047	0.0004492	0.0035	3.64	18586.78	28428.12	28428.12	7.43	No	Si
SLU 73	10.45	-2076.05	-9725	-0.0000318	0.0004492	0.0035	3.64	14935.34	23654.89	23654.89	11.39	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	8.35	-11073.94	-11015	-0.0000805	0.0006738	0.0035	3.64		25953.28	25953.28	2.34		Si
SLV 12	10.45	-6602.83	-9726	-0.0000499	0.0006738	0.0035	3.64		23874.43	23874.43	3.62		Si
SLV 3	8.35	-2057.58	-9058	-0.0000298	0.0006738	0.0035	3.64		22798.2	22798.2	11.08		Si
SLV 3	10.45	-6717.52	-2621	-0.00023	0.0006738	0.0035	2.912		12121.52	12121.52	1.8		Si
SLV 11	8.35	-11574.3	-10995	-0.0000855	0.0006738	0.0035	2.912		25921.17	25921.17	2.24		Si
SLV 11	10.45	-7025.1	-9687	-0.0000519	0.0006738	0.0035	3.64		23811.43	23811.43	3.39		Si
SLV 10	8.35	4598.1	-8344	-0.0000382	0.0006738	0.0035	3.64		15664.79	15664.79	3.41		Si
SLV 10	10.45	6133.59	-7356	-0.0000436	0.0006738	0.0035	3.64		14034.73	14034.73	2.29		Si
SLV 7	8.35	-9651.86	-10535	-0.000069	0.0006738	0.0035	3.64		25179.31	25179.31	2.61		Si
SLV 7	10.45	-8888.46	-6813	-0.0000776	0.0006738	0.0035	2.912		19177.3	19177.3	2.16		Si
SLV 9	8.35	4097.74	-8324	-0.0000362	0.0006738	0.0035	3.64		15632.18	15632.18	3.81		Si
SLV 9	10.45	5711.32	-7317	-0.0000411	0.0006738	0.0035	3.64		13969.75	13969.75	2.45		Si
SLV 6	8.35	6520.53	-7884	-0.0000464	0.0006738	0.0035	3.64		14911.59	14911.59	2.29		Si
SLV 6	10.45	4270.24	-4482	-0.00003	0.0006738	0.0035	3.64		9203.48	9203.48	2.16		Si
SLV 5	8.35	6020.18	-7864	-0.0000436	0.0006738	0.0035	3.64		14878.99	14878.99	2.47		Si
SLV 5	10.45	3847.97	-4443	-0.000027	0.0006738	0.0035	3.64		9136.45	9136.45	2.37		Si
SLV 8	8.35	-9151.51	-10555	-0.0000654	0.0006738	0.0035	3.64		25211.43	25211.43	2.75		Si
SLV 8	10.45	-8466.19	-6852	-0.0000689	0.0006738	0.0035	2.912		19241.18	19241.18	2.27		Si
SLV 4	8.35	-1289.67	-9089	-0.0000268	0.0006738	0.0035	3.64		22847.48	22847.48	17.72		Si
SLV 4	10.45	-6069.45	-2680	-0.0001839	0.0006738	0.0035	2.912		12224.04	12224.04	2.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	8.35	-3920.59	-13612	-7547	-1347	3.64	3.64	-14810	10308	5253	115546	18314	18564	36878	No	27.38	Si
SLU 78	10.45	-2020.6	-10426	-5781	-1379	3.64	3.64	-11344	9846	5017	115546	18314	18564	36878	No	26.74	Si
SLU 75	8.35	-3878.87	-13286	-7367	-1300	3.64	3.64	-14456	10261	5229	115546	18314	18564	36878	No	28.36	Si
SLU 75	10.45	-2046.5	-10116	-5609	-1336	3.64	3.64	-11006	9801	4994	115546	18314	18564	36878	No	27.6	Si
SLU 84	8.35	-4073.04	-13428	-7445	-1359	3.64	3.64	-14609	10281	5239	115546	18314	18564	36878	No	27.14	Si
SLU 84	10.45	-2143.75	-10241	-5678	-1402	3.64	3.64	-11142	9819	5004	115546	18314	18564	36878	No	26.3	Si
SLU 74	8.35	-3839.35	-13292	-7370	-1296	3.64	3.64	-14462	10262	5229	115546	18314	18564	36878	No	28.45	Si
SLU 74	10.45	-2013.6	-10124	-5613	-1330	3.64	3.64	-11015	9802	4995	115546	18314	18564	36878	No	27.73	Si
SLU 80	8.35	-3882.78	-13530	-7502	-1333	3.64	3.64	-14721	10296	5247	115546	18314	18564	36878	No	27.67	Si
SLU 80	10.45	-2002.31	-10351	-5739	-1360	3.64	3.64	-11262	9835	5012	115546	18314	18564	36878	No	27.11	Si
SLU 77	8.35	-3881.07	-13618	-7551	-1343	3.64	3.64	-14817	10309	5253	115546	18314	18564	36878	No	27.46	Si
SLU 77	10.45	-1987.7	-10434	-5785	-1373	3.64	3.64	-11353	9847	5018	115546	18314	18564	36878	No	26.87	Si
SLU 81	8.35	-3991.79	-13107	-7268	-1308	3.64	3.64	-14261	10235	5216	115546	18314	18564	36878	No	28.19	Si
SLU 81	10.45	-2136.74	-9938	-5510	-1353	3.64	3.64	-10813	9775	4981	115546	18314	18564	36878	No	27.25	Si
SLU 83	8.35	-4033.51	-13433	-7448	-1355	3.64	3.64	-14616	10282	5240	115546	18314	18564	36878	No	27.22	Si
SLU 83	10.45	-2110.84	-10249	-5683	-1396	3.64	3.64	-11151	9820	5004	115546	18314	18564	36878	No	26.41	Si
SLU 82	8.35	-4031.32	-13102	-7264	-1312	3.64	3.64	-14255	10234	5215	115546	18314	18564	36878	No	28.11	Si
SLU 82	10.45	-2169.65	-9930	-5506	-1359	3.64	3.64	-10805	9774	4981	115546	18314	18564	36878	No	27.13	Si
SLU 79	8.35	-3843.25	-13536	-7505	-1329	3.64	3.64	-14727	10297	5247	115546	18314	18564	36878	No	27.76	Si
SLU 79	10.45	-1969.41	-10359	-5744	-1354	3.64	3.64	-11271	9836	5013	115546	18314	18564	36878	No	27.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	8.35	-9151.51	-10555	-5852	-779	3.64	2.8589	-14715	15443	6181	115546	27471	18564	46035		59.1	Si
SLV 8	10.45	-8466.19	-6852	-3799	-2272	2.912	1.7533	0	0	0	115546	21976	14851	36828		16.21	Si
SLV 3	8.35	-2057.58	-9058	-5022	-1596	3.64	3.64	-9855	14471	7374	115546	27471	18564	46035		28.84	Si
SLV 3	10.45	-6717.52	-2621	-1453	-1065	2.912	0	0	0	0	115546	21976	14851	36828		34.59	Si
SLV 11	8.35	-11574.3	-10995	-6096	-360	2.912	2.3019	0	0	0	115546	21976	14851	36828		102.24	Si
SLV 11	10.45	-7025.1	-9687	-5371	-2458	3.64	3.2843	-11733	14847	6826	115546	27471	18564	46035		18.72	Si
SLD 11	8.35	-6514.75	-10124	-5613	-626	3.64	3.5295	-11420	14784	7305	115546	27471	18564	46035		73.51	Si
SLD 11	10.45	-3894.18	-8212	-4553	-1556	3.64	3.64	-8935	14287	7281	115546	27471	18564	46035		29.58	Si
SLV 2	8.35	3411.94	-8288	-4595	-1662	3.64	3.64	-9017	14303	7289	115546	27471	18564	46035		27.71	Si
SLV 2	10.45	-2248.52	-1970	-1092	-100	2.912	2.035	0	0	0	115546	21976	14851	36828		368.7	Si
SLV 12	8.35	-11073.94	-11015	-6107	-300	3.64	2.4439	-17976	16097	5508	115546	27471	18564	46035		153.21	Si
SLV 12	10.45	-6602.83	-9726	-5392	-2426	3.64	3.4233	-11308	14762	7075	115546	27471	18564	46035		18.97	Si
SLD 12	8.35	-6295.86	-10133	-5618	-600	3.64	3.5959	-11024	14705	7403	115546	27471	18564	46035		76.71	Si
SLD 12	10.45	-3709.45	-8229	-4563	-1542	3.64	3.64	-8953	14291	7283	115546	27471	18564	46035		29.85	Si
SLV 7	8.35	-9651.86	-10535	-5841	-839	3.64	2.7115	-15492	15599	5921	115546	27471	18564	46035		54.89	Si
SLV 7	10.45	-8888.46	-6813	-3777	-2304	2.912	1.5461	0	0	0	115546	21976	14851	36828		15.98	Si
SLV 1	8.35	2644.03	-8257	-4578	-1753	3.64	3.64	-8984	14297	7286	115546	27471	18564	46035		26.26	Si
SLV 1	10.45	-2896.6	-1910	-1059	-149	2.912	0.9093	0	0	0	115546	21976	14851	36828		246.79	Si
SLV 15	8.35	-8465.7	-10592	-5873	-1	3.64	3.0622	-13786	15257	6541	115546	27471	18564	46035		33106.77	Si
SLV 15	10.45	-506.34	-12199	-6764	-1579	3.64	3.64	-13273	15155	7723	115546	27471	18564	46035		29.15	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 10.11 Ta 0.15 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-1570	0.46	236.47	0	363.3	181.65	0.77	No
SLV 2	-1627	0.46	236.47	0	368.48	184.24	0.78	No
SLV 3	-2327	0.46	236.47	0	431.3	215.65	0.91	No
SLV 4	-2384	0.46	236.47	0	436.37	218.18	0.92	No
SLV 5	-4597	0.46	236.47	305.96	630.9	468.43	1.98	Si
SLV 6	-4634	0.46	236.47	308.3	634.12	471.21	1.99	Si
SLV 7	-7119	0.46	236.47	460.38	848.52	654.45	2.77	Si
SLV 8	-7157	0.46	236.47	462.58	851.69	657.13	2.78	Si
SLV 9	-7940	0.46	236.47	508.54	918.68	713.61	3.02	Si
SLV 10	-7977	0.46	236.47	510.7	921.85	716.27	3.03	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.03 Ta = 0.1478

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-6174	-11015	145	2.631	885.7	0.924	41.37285	18.90294	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-6130	-10995	145	2.646	881.3	0.924	41.62021	18.90294	Si
SLV 8	-6072	-10555	-160	2.663	875.5	0.923	41.91879	18.90294	Si
SLV 7	-6028	-10535	-159	2.679	871	0.923	42.17426	18.90294	Si
SLV 10	-3836	-8344	160	3.748	652.2	0.906	60.14838	18.90294	Si
SLV 9	-3791	-8324	160	3.778	647.8	0.905	60.66435	18.90294	Si
SLV 6	-3734	-7884	-145	3.822	642.1	0.905	61.39766	18.90294	Si
SLV 5	-3689	-7864	-144	3.854	637.7	0.904	61.93636	18.90294	Si
SLV 16	-5486	-10622	505	2.833	816.7	0.919	44.78425	11.46918	Si
SLV 15	-5418	-10592	506	2.86	809.9	0.919	45.2375	11.46918	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.136	SLU 82	Si
V_SLU	26.297	SLU 84	Si
PF_SLV	1.804	SLV 3	Si
V_SLV	15.983	SLV 7	Si
PFFP_SLV	0.768	SLV 1	No
R_SLV	2.189	SLV 12	Si

Maschio 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L6	L7	0.55	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	10.35	-87.54	-4599	-0.0000574	0.0003743	0.0035	0.55	893.84	1062.01	1062.01	12.13	No	Si
SLU 65	11.15	-228.62	-4159	-0.000069	0.0003743	0.0035	0.55	840.37	996.01	996.01	4.36	No	Si
SLU 72	10.35	-104.16	-5005	-0.000064	0.0003743	0.0035	0.55	937.1	1115.57	1115.57	10.71	No	Si
SLU 72	11.15	-238.4	-4525	-0.0000744	0.0003743	0.0035	0.55	885.32	1051.91	1051.91	4.41	No	Si
SLU 64	10.35	-87.89	-4590	-0.0000573	0.0003743	0.0035	0.55	892.8	1060.78	1060.78	12.07	No	Si
SLU 64	11.15	-227	-4152	-0.0000687	0.0003743	0.0035	0.55	839.43	994.75	994.75	4.38	No	Si
SLU 68	10.35	-95.78	-4804	-0.0000607	0.0003743	0.0035	0.55	916.39	1088.81	1088.81	11.37	No	Si
SLU 68	11.15	-233.83	-4344	-0.0000717	0.0003743	0.0035	0.55	863.61	1025.83	1025.83	4.39	No	Si
SLU 71	10.35	-104.37	-5000	-0.000064	0.0003743	0.0035	0.55	936.56	1114.83	1114.83	10.68	No	Si
SLU 71	11.15	-237.43	-4521	-0.0000743	0.0003743	0.0035	0.55	884.82	1051.31	1051.31	4.43	No	Si
SLU 66	10.35	-101.32	-4904	-0.0000625	0.0003743	0.0035	0.55	926.8	1101.96	1101.96	10.88	No	Si
SLU 66	11.15	-234.29	-4428	-0.0000728	0.0003743	0.0035	0.55	873.8	1038.12	1038.12	4.43	No	Si
SLU 70	10.35	-109.35	-5114	-0.0000659	0.0003743	0.0035	0.55	947.69	1130.28	1130.28	10.34	No	Si
SLU 70	11.15	-240.47	-4617	-0.0000758	0.0003743	0.0035	0.55	895.79	1064.31	1064.31	4.43	No	Si
SLU 44	10.35	-70.55	-4057	-0.0000493	0.0003743	0.0035	0.55	827.06	978.39	978.39	13.87	No	Si
SLU 44	11.15	-205.93	-3677	-0.0000607	0.0003743	0.0035	0.55	774.03	909.32	909.32	4.42	No	Si
SLU 67	10.35	-101.11	-4909	-0.0000625	0.0003743	0.0035	0.55	927.37	1102.68	1102.68	10.91	No	Si
SLU 67	11.15	-235.26	-4432	-0.000073	0.0003743	0.0035	0.55	874.32	1038.74	1038.74	4.42	No	Si
SLU 69	10.35	-109.56	-5109	-0.0000659	0.0003743	0.0035	0.55	947.17	1129.53	1129.53	10.31	No	Si
SLU 69	11.15	-239.5	-4612	-0.0000756	0.0003743	0.0035	0.55	895.3	1063.73	1063.73	4.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	10.35	176.83	-2490	-0.0000434	0.0005615	0.0035	0.55		644.3	644.3	3.64		Si
SLD 4	11.15	-462.23	-2724	-0.0000968	0.0005615	0.0035	0.44		749.26	749.26	1.62		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	10.35	519.02	-222	-0.0396084	0.0005615	0.0035	0.44		78.18	78.18	0.15		No
SLV 1	11.15	-772.09	-1518	-0.0059168	0.0005615	0.0035	0.44		462.18	462.18	0.6		No
SLD 3	10.35	150.75	-2633	-0.0000421	0.0005615	0.0035	0.55		673.68	673.68	4.47		Si
SLD 3	11.15	-436.3	-2791	-0.0000874	0.0005615	0.0035	0.44		764.56	764.56	1.75		Si
SLV 2	10.35	579.73	111	-0.0534507	0.0005615	0.0035	0.44		0	0	0		No
SLV 2	11.15	-832.47	-1363	-0.0073625	0.0005615	0.0035	0.44		423.19	423.19	0.51		No
SLD 1	10.35	180.97	-2121	-0.0000401	0.0005615	0.0035	0.55		560.34	560.34	3.1		Si
SLD 1	11.15	-425.63	-2482	-0.0000892	0.0005615	0.0035	0.44		693.83	693.83	1.63		Si
SLD 2	10.35	207.05	-1977	-0.0000417	0.0005615	0.0035	0.55		525.91	525.91	2.54		Si
SLD 2	11.15	-451.56	-2415	-0.000103	0.0005615	0.0035	0.44		678.53	678.53	1.5		Si
SLV 5	10.35	198.31	-855	-0.0000729	0.0005615	0.0035	0.55		245.54	245.54	1.24		Si
SLV 5	11.15	-302.25	-1667	-0.0000649	0.0005615	0.0035	0.44		499.28	499.28	1.65		Si
SLV 6	10.35	237.87	-638	-0.0057359	0.0005615	0.0035	0.44		188.95	188.95	0.79		No
SLV 6	11.15	-341.59	-1565	-0.0001023	0.0005615	0.0035	0.44		473.93	473.93	1.39		Si
SLV 3	10.35	450.49	-1381	-0.0085313	0.0005615	0.0035	0.44		379.26	379.26	0.84		No
SLV 3	11.15	-795.73	-2219	-0.00395	0.0005615	0.0035	0.44		631.92	631.92	0.79		No
SLV 4	10.35	511.2	-1047	-0.0201913	0.0005615	0.0035	0.44		294.93	294.93	0.58		No
SLV 4	11.15	-856.11	-2063	-0.0055571	0.0005615	0.0035	0.44		594.58	594.58	0.69		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	10.35	-92.37	-4572	-3807	-92	0.55	0.55	-24720	10240	1577	40441	4612	1403	6014	No	65.24	Si
SLU 49	11.15	-217.78	-4134	-3443	214	0.55	0.55	-22355	9925	1529	40441	4612	1403	6014	No	28.08	Si
SLU 50	10.35	-87.39	-4458	-3712	-83	0.55	0.55	-24104	10158	1564	40441	4612	1403	6014	No	72.26	Si
SLU 50	11.15	-214.74	-4039	-3363	218	0.55	0.55	-21838	9856	1518	40441	4612	1403	6014	No	27.65	Si
SLU 45	10.35	-84.34	-4362	-3632	-76	0.55	0.55	-23583	10089	1554	40441	4612	1403	6014	No	79	Si
SLU 45	11.15	-211.6	-3945	-3285	212	0.55	0.55	-21333	9789	1508	40441	4612	1403	6014	No	28.33	Si
SLU 83	10.35	-138.58	-5501	-4581	-211	0.55	0.55	-29744	10833	1668	40441	4612	1403	6014	No	28.47	Si
SLU 83	11.15	-220.39	-4944	-4117	191	0.55	0.55	-26732	10509	1618	40441	4612	1403	6014	No	31.48	Si
SLU 47	10.35	-78.8	-4262	-3549	-61	0.55	0.55	-23045	10017	1543	40441	4612	1403	6014	No	98.38	Si
SLU 47	11.15	-211.14	-3861	-3215	214	0.55	0.55	-20879	9728	1498	40441	4612	1403	6014	No	28.1	Si
SLU 51	10.35	-87.18	-4463	-3717	-81	0.55	0.55	-24133	10162	1565	40441	4612	1403	6014	No	74.28	Si
SLU 51	11.15	-215.7	-4043	-3367	217	0.55	0.55	-21861	9859	1518	40441	4612	1403	6014	No	27.73	Si
SLU 48	10.35	-92.58	-4566	-3803	-94	0.55	0.55	-24691	10237	1576	40441	4612	1403	6014	No	63.67	Si
SLU 48	11.15	-216.81	-4130	-3439	215	0.55	0.55	-22332	9922	1528	40441	4612	1403	6014	No	28	Si
SLU 46	10.35	-84.13	-4367	-3637	-74	0.55	0.55	-23613	10093	1554	40441	4612	1403	6014	No	81.42	Si
SLU 46	11.15	-212.56	-3950	-3289	212	0.55	0.55	-21357	9792	1508	40441	4612	1403	6014	No	28.41	Si
SLU 44	10.35	-70.55	-4057	-3379	-43	0.55	0.55	-21938	9869	1520	40441	4612	1403	6014	No	140.49	Si
SLU 44	11.15	-205.93	-3677	-3062	212	0.55	0.55	-19880	9595	1478	40441	4612	1403	6014	No	28.44	Si
SLU 43	10.35	-70.91	-4048	-3371	-47	0.55	0.55	-21889	9863	1519	40441	4612	1403	6014	No	129.11	Si
SLU 43	11.15	-204.31	-3669	-3056	213	0.55	0.55	-19841	9590	1477	40441	4612	1403	6014	No	28.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	10.35	-724.46	-7217	-6010	-2608	0.55	0.5239	-39025	16250	2384	40441	6917	1403	8320		3.19	Si
SLV 15	11.15	497.93	-5056	-4210	-301	0.55	0.5296	-27336	15884	2355	40441	6917	1403	8320		27.64	Si
SLV 13	10.35	-655.93	-6059	-5045	-2543	0.55	0.5003	-32760	16250	2276	40441	6917	1403	8320		3.27	Si
SLV 13	11.15	521.57	-4355	-3627	-104	0.55	0.4657	-23548	15126	1973	40441	6917	1403	8320		80.27	Si
SLV 1	10.35	519.02	-222	-185	2243	0.44	0	0	0	0	40441	5534	1122	6656		2.97	Si
SLV 1	11.15	-772.09	-1518	-1264	541	0.44	0	0	0	0	40441	5534	1122	6656		12.31	Si
SLV 3	10.35	450.49	-1381	-1150	2178	0.44	0	0	0	0	40441	5534	1122	6656		3.06	Si
SLV 3	11.15	-795.73	-2219	-1848	343	0.44	0	0	0	0	40441	5534	1122	6656		19.39	Si
SLV 14	10.35	-595.22	-5725	-4768	-2319	0.55	0.5131	-30957	16250	2335	40441	6917	1403	8320		3.59	Si
SLV 14	11.15	461.2	-4199	-3497	-31	0.55	0.4956	-22706	14958	2075	40441	6917	1403	8320		270.22	Si
SLV 4	10.35	511.2	-1047	-872	2401	0.44	0	0	0	0	40441	5534	1122	6656		2.77	Si
SLV 4	11.15	-856.11	-2063	-1718	416	0.44	0	0	0	0	40441	5534	1122	6656		15.99	Si
SLV 2	10.35	579.73	111	93	2466	0.44	0	0	0	0	40441	5534	1122	6656		2.7	Si
SLV 2	11.15	-832.47	-1363	-1135	614	0.44	0	0	0	0	40441	5534	1122	6656		10.85	Si
SLD 15	10.35	-351.78	-5129	-4271	-1156	0.55	0.55	-27731	15963	2458	40441	6917	1403	8320		7.2	Si
SLD 15	11.15	117.03	-4003	-3334	-41	0.55	0.55	-21646	14746	2271	40441	6917	1403	8320		203.18	Si
SLD 13	10.35	-321.56	-4616	-3844	-1128	0.55	0.55	-24960	15409	2373	40441	6917	1403	8320		7.38	Si
SLD 13	11.15	127.69	-3694	-3076	46	0.55	0.55	-19974	14411	2219	40441	6917	1403	8320		179.35	Si
SLV 16	10.35	-663.75	-6884	-5732	-2385	0.55	0.5358	-37222	16250	2438	40441	6917	1403	8320		3.49	Si
SLV 16	11.15	437.56	-4900	-4080	-228	0.55	0.55	-26494	15716	2420	40441	6917	1403	8320		36.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	4158	-640	66.8	87.2	1.31	Si
SLV 5	179667	0.46	4997	-770	66.8	104.22	1.56	Si
SLV 2	179667	0.46	6028	-928	66.8	124.84	1.87	Si
SLV 1	179667	0.46	7317	-1127	66.8	150.19	2.25	Si
SLV 10	179667	0.46	9781	-1506	66.8	197.38	2.95	Si
SLV 9	179667	0.46	10621	-1636	66.8	213.06	3.19	Si
SLV 4	179667	0.46	13447	-2071	66.8	264.4	3.96	Si
SLV 3	179667	0.46	14736	-2269	66.8	287.05	4.3	Si
SLV 14	179667	0.46	24773	-3815	66.8	447.48	6.7	Si
SLV 13	179667	0.46	26061	-4014	66.8	466.01	6.98	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2865	-4662	-11	0.964	368.6	0.941	14.87625	13.33129	Si
SLV 12	-2780	-4617	-11	0.988	360	0.94	15.266	13.33129	Si
SLV 7	-2296	-4541	-13	1.152	311	0.933	17.95433	13.33129	Si
SLV 8	-2211	-4495	-13	1.187	302.4	0.931	18.53032	13.33129	Si
SLV 9	-1216	-1036	4	1.862	202.7	0.907	29.82256	13.33129	Si
SLV 15	-2975	-3548	-4	0.936	379.8	0.943	14.43248	6.37081	Si
SLV 16	-2845	-3478	-4	0.971	366.6	0.941	15.00067	6.37081	Si
SLV 10	-1131	-991	4	1.957	194.4	0.905	31.43727	13.33129	Si
SLV 13	-2480	-2460	1	1.087	329.7	0.936	16.88175	6.37081	Si
SLV 14	-2350	-2390	1	1.135	316.5	0.934	17.66756	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.357	SLU 65	Si
V_SLU	27.645	SLU 50	Si
PF_SLV	0	SLV 2	No
V_SLV	2.699	SLV 2	Si
PFFP_SLV	1.305	SLV 6	Si
R_SLV	1.116	SLV 11	Si

Maschio 159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L6	L7	2.28	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	10.35	1230.69	-17347	-0.0000508	0.0003743	0.0035	2.28	14497.41	15963.79	15963.79	12.97	No	Si
SLU 72	11.15	906.75	-14777	-0.0000419	0.0003743	0.0035	2.28	13015.55	14258.87	14258.87	15.73	No	Si
SLU 41	10.35	1064.23	-15895	-0.0000458	0.0003743	0.0035	2.28	13689.03	14993	14993	14.09	No	Si
SLU 41	11.15	1031.55	-13818	-0.0000402	0.0003743	0.0035	2.28	12403.44	13489.01	13489.01	13.08	No	Si
SLU 35	10.35	1107.76	-16295	-0.0000472	0.0003743	0.0035	2.28	13919.12	15257.99	15257.99	13.77	No	Si
SLU 35	11.15	1060.65	-14199	-0.0000414	0.0003743	0.0035	2.28	12650.25	13821.81	13821.81	13.03	No	Si
SLU 69	10.35	1251.38	-17661	-0.0000518	0.0003743	0.0035	2.28	14662.57	16177.06	16177.06	12.93	No	Si
SLU 69	11.15	954.15	-15085	-0.000043	0.0003743	0.0035	2.28	13205.42	14459.64	14459.64	15.15	No	Si
SLU 71	10.35	1229.28	-17314	-0.0000507	0.0003743	0.0035	2.28	14480	15941.63	15941.63	12.97	No	Si
SLU 71	11.15	909.85	-14750	-0.0000418	0.0003743	0.0035	2.28	12998.64	14241.21	14241.21	15.65	No	Si
SLU 66	10.35	1207.3	-17008	-0.0000498	0.0003743	0.0035	2.28	14315.4	15735.06	15735.06	13.03	No	Si
SLU 66	11.15	882.73	-14458	-0.0000409	0.0003743	0.0035	2.28	12815.79	14033.24	14033.24	15.9	No	Si
SLU 36	10.35	1109.17	-16328	-0.0000473	0.0003743	0.0035	2.28	13937.69	15279.75	15279.75	13.78	No	Si
SLU 36	11.15	1057.55	-14226	-0.0000414	0.0003743	0.0035	2.28	12667.69	13844.51	13844.51	13.09	No	Si
SLU 67	10.35	1208.7	-17041	-0.0000499	0.0003743	0.0035	2.28	14333.16	15757.1	15757.1	13.04	No	Si
SLU 67	11.15	879.63	-14485	-0.0000409	0.0003743	0.0035	2.28	12832.98	14054.68	14054.68	15.98	No	Si
SLU 68	10.35	1187.54	-16716	-0.0000488	0.0003743	0.0035	2.28	14155.14	15538.81	15538.81	13.08	No	Si
SLU 68	11.15	833.26	-14168	-0.0000398	0.0003743	0.0035	2.28	12630.81	13796.38	13796.38	16.56	No	Si
SLU 70	10.35	1252.79	-17694	-0.0000519	0.0003743	0.0035	2.28	14679.58	16199.35	16199.35	12.93	No	Si
SLU 70	11.15	951.05	-15112	-0.000043	0.0003743	0.0035	2.28	13222.01	14477.41	14477.41	15.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	10.35	-379.55	-9504	-0.0000247	0.0005615	0.0035	2.28		11338	11338	29.87		Si
SLV 13	11.15	3953.62	-9175	-0.0000466	0.0005615	0.0035	2.28		9995.81	9995.81	2.53		Si
SLV 4	10.35	2105.9	-15097	-0.0000495	0.0005615	0.0035	2.28		15123.66	15123.66	7.18		Si
SLV 4	11.15	-2730.46	-11589	-0.0000446	0.0005615	0.0035	2.28		13335.75	13335.75	4.88		Si
SLV 14	10.35	-290.03	-9445	-0.000024	0.0005615	0.0035	2.28		11281.38	11281.38	38.9		Si
SLV 14	11.15	3515.99	-8954	-0.000043	0.0005615	0.0035	2.28		9778	9778	2.78		Si
SLD 13	10.35	330.65	-11076	-0.0000282	0.0005615	0.0035	2.28		11718.31	11718.31	35.44		Si
SLD 13	11.15	2038.78	-9840	-0.0000359	0.0005615	0.0035	2.28		10644.38	10644.38	5.22		Si
SLV 16	10.35	-215.33	-13455	-0.0000333	0.0005615	0.0035	2.28		15062.72	15062.72	69.95		Si
SLV 16	11.15	3850.42	-12545	-0.0000542	0.0005615	0.0035	2.28		12948.07	12948.07	3.36		Si
SLD 15	10.35	363.94	-12849	-0.0000328	0.0005615	0.0035	2.28		13204.96	13204.96	36.28		Si
SLD 15	11.15	2186.71	-11428	-0.0000408	0.0005615	0.0035	2.28		12011.36	12011.36	5.49		Si
SLV 2	10.35	2031.2	-11087	-0.0000389	0.0005615	0.0035	2.28		11727.95	11727.95	5.77		Si
SLV 2	11.15	-3064.89	-7998	-0.0000378	0.0005615	0.0035	2.28		9849.63	9849.63	3.21		Si
SLV 9	10.35	361.32	-5391	-0.0000148	0.0005615	0.0035	2.28		6164.25	6164.25	17.06		Si
SLV 9	11.15	1183.9	-4612	-0.000018	0.0005615	0.0035	2.28		5347.4	5347.4	4.52		Si
SLV 15	10.35	-304.84	-13514	-0.000034	0.0005615	0.0035	2.28		15116.31	15116.31	49.59		Si
SLV 15	11.15	4288.05	-12766	-0.0000576	0.0005615	0.0035	2.28		13134.53	13134.53	3.06		Si
SLV 1	10.35	1941.68	-11147	-0.0000385	0.0005615	0.0035	2.28		11777.21	11777.21	6.07		Si
SLV 1	11.15	-2627.26	-8219	-0.0000356	0.0005615	0.0035	2.28		10072.48	10072.48	3.83		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	10.35	1252.79	-17694	-14734	2219	2.28	2.28	-23079	10022	6398	40441	19116	5814	24930	No	11.23	Si
SLU 70	11.15	951.05	-15112	-12584	1485	2.28	2.28	-19712	9573	6111	40441	19116	5814	24930	No	16.79	Si
SLU 65	10.35	1143.46	-16063	-13376	2231	2.28	2.28	-20953	9738	6217	40441	19116	5814	24930	No	11.17	Si
SLU 65	11.15	761.84	-13542	-11276	1513	2.28	2.28	-17664	9300	5937	40441	19116	5814	24930	No	16.48	Si
SLU 64	10.35	1141.11	-16009	-13331	2207	2.28	2.28	-20882	9729	6211	40441	19116	5814	24930	No	11.29	Si
SLU 64	11.15	767.01	-13496	-11239	1498	2.28	2.28	-17604	9292	5932	40441	19116	5814	24930	No	16.64	Si
SLU 72	10.35	1230.69	-17347	-14445	2230	2.28	2.28	-22627	9961	6359	40441	19116	5814	24930	No	11.18	Si
SLU 72	11.15	906.75	-14777	-12305	1497	2.28	2.28	-19275	9514	6074	40441	19116	5814	24930	No	16.65	Si
SLU 68	10.35	1187.54	-16716	-13920	2235	2.28	2.28	-21804	9852	6289	40441	19116	5814	24930	No	11.15	Si
SLU 68	11.15	833.26	-14168	-11798	1508	2.28	2.28	-18481	9409	6006	40441	19116	5814	24930	No	16.53	Si
SLU 69	10.35	1251.38	-17661	-14706	2205	2.28	2.28	-23037	10016	6394	40441	19116	5814	24930	No	11.31	Si
SLU 69	11.15	954.15	-15085	-12561	1476	2.28	2.28	-19676	9568	6108	40441	19116	5814	24930	No	16.89	Si
SLU 47	10.35	1052.36	-14836	-12354	2118	2.28	2.28	-19351	9525	6080	40441	19116	5814	24930	No	11.77	Si
SLU 47	11.15	668.66	-12405	-10330	1438	2.28	2.28	-16182	9102	5811	40441	19116	5814	24930	No	17.33	Si
SLU 67	10.35	1208.7	-17041	-14190	2215	2.28	2.28	-22228	9908	6325	40441	19116	5814	24930	No	11.26	Si
SLU 67	11.15	879.63	-14485	-12062	1490	2.28	2.28	-18895	9464	6042	40441	19116	5814	24930	No	16.74	Si
SLU 66	10.35	1207.3	-17008	-14163	2201	2.28	2.28	-22185	9902	6322	40441	19116	5814	24930	No	11.33	Si
SLU 66	11.15	882.73	-14458	-12040	1481	2.28	2.28	-18859	9459	6039	40441	19116	5814	24930	No	16.84	Si
SLU 71	10.35	1229.28	-17314	-14418	2216	2.28	2.28	-22584	9956	6356	40441	19116	5814	24930	No	11.25	Si
SLU 71	11.15	909.85	-14750	-12282	1489	2.28	2.28	-19239	9510	6071	40441	19116	5814	24930	No	16.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	10.35	1395.71	-13526	-11263	5206	2.28	2.28	-17643	13945	8903	40441	28675	5814	34489		6.63	Si
SLD 4	11.15	-815.61	-10924	-9097	3841	2.28	2.28	-14249	13267	8469	40441	28675	5814	34489		8.98	Si
SLV 4	10.35	2105.9	-15097	-12572	9976	2.28	2.28	-19693	14355	9164	40441	28675	5814	34489		3.46	Si
SLV 4	11.15	-2730.46	-11589	-9650	7503	2.28	2.28	-15117	13440	8580	40441	28675	5814	34489		4.6	Si
SLV 14	10.35	-290.03	-9445	-7865	-5793	2.28	2.28	-12320	12881	8223	40441	28675	5814	34489		5.95	Si
SLV 14	11.15	3515.99	-8954	-7456	-4555	2.28	2.2419	-11679	12752	8005	40441	28675	5814	34489		7.57	Si
SLV 1	10.35	1941.68	-11147	-9282	8710	2.28	2.28	-14540	13325	8506	40441	28675	5814	34489		3.96	Si
SLV 1	11.15	-2627.26	-8219	-6844	6854	2.28	2.28	-10721	12561	8019	40441	28675	5814	34489		5.03	Si
SLV 2	10.35	2031.2	-11087	-9233	9621	2.28	2.28	-14462	13309	8496	40441	28675	5814	34489		3.58	Si
SLV 2	11.15	-3064.89	-7998	-6660	7594	2.28	2.2704	-10433	12503	7948	40441	28675	5814	34489		4.54	Si
SLV 13	10.35	-379.55	-9504	-7914	-6705	2.28	2.28	-12397	12896	8233	40441	28675	5814	34489		5.14	Si
SLV 13	11.15	3953.62	-9175	-7640	-5295	2.28	2.1272	-11967	12810	7630	40441	28675	5814	34489		6.51	Si
SLV 16	10.35	-215.33	-13455	-11204	-5438	2.28	2.28	-17551	13927	8891	40441	28675	5814	34489		6.34	Si
SLV 16	11.15	3850.42	-12545	-10446	-4647	2.28	2.28	-16363	13689	8739	40441	28675	5814	34489		7.42	Si
SLV 15	10.35	-304.84	-13514	-11254	-6350	2.28	2.28	-17628	13942	8901	40441	28675	5814	34489		5.43	Si
SLV 15	11.15	4288.05	-12766	-10630	-5387	2.28	2.28	-16651	13747	8776	40441	28675	5814	34489		6.4	Si
SLD 2	10.35	1362.41	-11753	-9787	5051	2.28	2.28	-15330	13483	8607	40441	28675	5814	34489		6.83	Si
SLD 2	11.15	-963.54	-9336	-7774	3881	2.28	2.28	-12178	12852	8205	40441	28675	5814	34489		8.89	Si
SLV 3	10.35	2016.39	-15157	-12621	9064	2.28	2.28	-19770	14371	9174	40441	28675	5814	34489		3.8	Si
SLV 3	11.15	-2292.83	-11810	-9834	6763	2.28	2.28	-15405	13498	8617	40441	28675	5814	34489		5.1	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	7279	-4647	276.91	619.56	2.24	Si
SLV 5	179667	0.46	7523	-4803	276.91	639.25	2.31	Si
SLV 10	179667	0.46	8273	-5281	276.91	699.34	2.53	Si
SLV 9	179667	0.46	8517	-5437	276.91	718.75	2.6	Si
SLV 2	179667	0.46	12924	-8251	276.91	1057.36	3.82	Si
SLV 1	179667	0.46	13299	-8490	276.91	1085.08	3.92	Si
SLV 14	179667	0.46	16237	-10366	276.91	1296.92	4.68	Si
SLV 13	179667	0.46	16612	-10605	276.91	1323.19	4.78	Si
SLV 4	179667	0.46	18813	-12010	276.91	1474.29	5.32	Si
SLV 3	179667	0.46	19188	-12249	276.91	1499.43	5.41	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-12223	-16379	688	0.896	1563.1	0.943	13.81672	13.33129	Si
SLV 11	-12250	-17702	599	0.901	1565.8	0.943	13.88684	13.33129	Si
SLV 8	-12131	-16267	688	0.902	1553.7	0.942	13.90712	13.33129	Si
SLV 12	-12158	-17590	599	0.906	1556.5	0.942	13.97754	13.33129	Si
SLV 9	-3791	-6297	-688	2.138	717.4	0.898	34.59858	13.33129	Si
SLV 5	-3764	-4974	-599	2.163	714.7	0.898	35.01576	13.33129	Si
SLV 10	-3699	-6184	-688	2.172	708.4	0.897	35.1726	13.33129	Si
SLV 6	-3672	-4861	-599	2.198	705.8	0.897	35.59942	13.33129	Si
SLV 3	-9255	-10874	342	1.152	1262.8	0.931	17.97703	6.37081	Si
SLV 4	-9114	-10701	342	1.166	1248.5	0.931	18.21007	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.927	SLU 69	Si
V_SLU	11.152	SLU 68	Si
PF_SLV	2.528	SLV 13	Si
V_SLV	3.457	SLV 4	Si
PFFP_SLV	2.237	SLV 6	Si
R_SLV	1.036	SLV 7	Si

Maschio 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L6	L7	2.15	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 38	9.25	534.05	-11876	-0.0000342	0.0003743	0.0035	2.15	10293.12	11012.44	11012.44	20.62	No	Si
SLU 38	11.05	874.01	-10563	-0.0000332	0.0003743	0.0035	2.15	9398.66	9902.54	9902.54	11.33	No	Si
SLU 32	9.25	519.29	-11614	-0.0000334	0.0003743	0.0035	2.15	10119.11	10788.23	10788.23	20.77	No	Si
SLU 32	11.05	873.5	-10313	-0.0000325	0.0003743	0.0035	2.15	9221	9693.86	9693.86	11.1	No	Si
SLU 41	9.25	468.51	-11802	-0.0000335	0.0003743	0.0035	2.15	10244	10948.6	10948.6	23.37	No	Si
SLU 41	11.05	932.34	-10585	-0.0000336	0.0003743	0.0035	2.15	9413.8	9920.5	9920.5	10.64	No	Si
SLU 39	9.25	453.6	-11383	-0.0000323	0.0003743	0.0035	2.15	9964.5	10592.61	10592.61	23.35	No	Si
SLU 39	11.05	879.19	-10140	-0.0000321	0.0003743	0.0035	2.15	9097.47	9551.05	9551.05	10.86	No	Si
SLU 36	9.25	538.32	-12084	-0.0000348	0.0003743	0.0035	2.15	10428.93	11191.06	11191.06	20.79	No	Si
SLU 36	11.05	914.89	-10789	-0.0000341	0.0003743	0.0035	2.15	9556.74	10091.4	10091.4	11.03	No	Si
SLU 33	9.25	523.41	-11665	-0.0000336	0.0003743	0.0035	2.15	10153.57	10832.27	10832.27	20.7	No	Si
SLU 33	11.05	861.73	-10345	-0.0000325	0.0003743	0.0035	2.15	9243.59	9720.16	9720.16	11.28	No	Si
SLU 40	9.25	457.72	-11435	-0.0000325	0.0003743	0.0035	2.15	9999.38	10636.47	10636.47	23.24	No	Si
SLU 40	11.05	867.42	-10172	-0.0000321	0.0003743	0.0035	2.15	9120.25	9577.26	9577.26	11.04	No	Si
SLU 37	9.25	529.93	-11824	-0.0000341	0.0003743	0.0035	2.15	10259.04	10968.06	10968.06	20.7	No	Si
SLU 37	11.05	885.78	-10532	-0.0000332	0.0003743	0.0035	2.15	9376.32	9876.08	9876.08	11.15	No	Si
SLU 42	9.25	472.63	-11853	-0.0000337	0.0003743	0.0035	2.15	10278.12	10992.85	10992.85	23.26	No	Si
SLU 42	11.05	920.58	-10617	-0.0000336	0.0003743	0.0035	2.15	9436.09	9946.99	9946.99	10.81	No	Si
SLU 35	9.25	534.2	-12032	-0.0000346	0.0003743	0.0035	2.15	10395.22	11146.51	11146.51	20.87	No	Si
SLU 35	11.05	926.66	-10757	-0.0000341	0.0003743	0.0035	2.15	9534.65	10064.83	10064.83	10.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	9.25	2800.82	-12080	-0.0000504	0.0005615	0.0035	2.15		11682.89	11682.89	4.17		Si
SLV 3	11.05	-2906.49	-7873	-0.00004	0.0005615	0.0035	2.15		9160.22	9160.22	3.15		Si
SLV 4	9.25	3171.28	-11423	-0.0000513	0.0005615	0.0035	2.15		11155.97	11155.97	3.52		Si
SLV 4	11.05	-3250.14	-6725	-0.0000408	0.0005615	0.0035	2.15		8083.66	8083.66	2.49		Si
SLV 5	9.25	1190.26	2814	0.193234	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	11.05	703.61	1649	0.1131105	0.0005615	0.0035	1.72		0	0	0		No
SLV 13	9.25	-2005.12	-7406	-0.0000324	0.0005615	0.0035	2.15		8719.63	8719.63	4.35		Si
SLV 13	11.05	4235.86	-8937	-0.0000539	0.0005615	0.0035	2.15		9141.97	9141.97	2.16		Si
SLV 2	9.25	3175.11	-4188	-0.0000477	0.0005615	0.0035	2.15		4583.97	4583.97	1.44		Si
SLV 2	11.05	-2606.02	-1389	-0.0004372	0.0005615	0.0035	1.72		2772.89	2772.89	1.06		Si
SLV 9	9.25	-252.68	2046	0.1467387	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	11.05	2653.08	-271	-0.014709	0.0005615	0.0035	2.15		548.29	548.29	0.21		No
SLV 6	9.25	1431.63	3243	0.2221912	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	11.05	479.7	2397	0.1680389	0.0005615	0.0035	1.72		0	0	0		No
SLV 1	9.25	2804.66	-4845	-0.0000349	0.0005615	0.0035	2.15		5236.27	5236.27	1.87		Si
SLV 1	11.05	-2262.38	-2537	-0.0000482	0.0005615	0.0035	1.72		3951.51	3951.51	1.75		Si
SLV 14	9.25	-1634.66	-6748	-0.0000281	0.0005615	0.0035	2.15		8105.13	8105.13	4.96		Si
SLV 14	11.05	3892.21	-7789	-0.0000489	0.0005615	0.0035	2.15		8074.09	8074.09	2.07		Si
SLV 10	9.25	-11.3	2474	0.1761531	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	11.05	2429.17	477	-0.0154356	0.0005615	0.0035	2.15		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	9.25	468.51	-11802	-9827	-668	2.15	2.15	-16324	9121	5491	40441	18027	5483	23509	No	35.19	Si
SLU 41	11.05	932.34	-10585	-8814	-669	2.15	2.15	-14641	8897	5356	40441	18027	5483	23509	No	35.14	Si
SLU 35	9.25	534.2	-12032	-10019	-594	2.15	2.15	-16643	9163	5516	40441	18027	5483	23509	No	39.58	Si
SLU 35	11.05	926.66	-10757	-8958	-595	2.15	2.15	-14880	8928	5375	40441	18027	5483	23509	No	39.51	Si
SLU 39	9.25	453.6	-11383	-9479	-631	2.15	2.15	-15746	9044	5444	40441	18027	5483	23509	No	37.24	Si
SLU 39	11.05	879.19	-10140	-8444	-632	2.15	2.15	-14027	8815	5306	40441	18027	5483	23509	No	37.21	Si
SLU 84	9.25	660.11	-14050	-11699	-583	2.15	2.15	-19434	9536	5741	40441	18027	5483	23509	No	40.3	Si
SLU 84	11.05	976.24	-12278	-10224	-584	2.15	2.15	-16983	9209	5544	40441	18027	5483	23509	No	40.24	Si
SLU 83	9.25	655.99	-13998	-11656	-604	2.15	2.15	-19363	9526	5735	40441	18027	5483	23509	No	38.92	Si
SLU 83	11.05	988.01	-12246	-10197	-605	2.15	2.15	-16939	9203	5540	40441	18027	5483	23509	No	38.86	Si
SLU 81	9.25	641.08	-13580	-11308	-567	2.15	2.15	-18784	9449	5688	40441	18027	5483	23509	No	41.45	Si
SLU 81	11.05	934.85	-11801	-9827	-568	2.15	2.15	-16324	9121	5491	40441	18027	5483	23509	No	41.41	Si
SLU 37	9.25	529.93	-11824	-9846	-563	2.15	2.15	-16356	9125	5493	40441	18027	5483	23509	No	41.78	Si
SLU 37	11.05	885.78	-10532	-8770	-564	2.15	2.15	-14568	8887	5350	40441	18027	5483	23509	No	41.7	Si
SLU 36	9.25	538.32	-12084	-10062	-573	2.15	2.15	-16714	9173	5522	40441	18027	5483	23509	No	41.01	Si
SLU 36	11.05	914.89	-10789	-8984	-574	2.15	2.15	-14924	8934	5378	40441	18027	5483	23509	No	40.94	Si
SLU 40	9.25	457.72	-11435	-9522	-610	2.15	2.15	-15817	9053	5450	40441	18027	5483	23509	No	38.51	Si
SLU 40	11.05	867.42	-10172	-8470	-611	2.15	2.15	-14070	8820	5310	40441	18027	5483	23509	No	38.48	Si
SLU 42	9.25	472.63	-11853	-9870	-647	2.15	2.15	-16396	9131	5497	40441	18027	5483	23509	No	36.31	Si
SLU 42	11.05	920.58	-10617	-8841	-648	2.15	2.15	-14685	8902	5359	40441	18027	5483	23509	No	36.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	9.25	1418.84	-20875	-17383	4092	2.15	2.15	-28875	16192	9747	40441	27040	5483	32523		7.95	Si
SLV 8	11.05	-1667.36	-15391	-12816	3762	2.15	2.15	-21290	14675	8834	40441	27040	5483	32523		8.65	Si
SLV 2	9.25	3175.11	-4188	-3487	4324	2.15	0.9505	-5793	11575	3081	40441	27040	5483	32523		7.52	Si
SLV 2	11.05	-2606.02	-1389	-1157	3369	1.72	0	0	0	0	40441	21632	4386	26018		7.72	Si
SLV 9	9.25	-252.68	2046	1704	-4348	1.72	2.15	0	0	0	40441	21632	4386	26018		5.98	Si
SLV 9	11.05	2653.08	-271	-226	-4019	2.15	0	0	0	0	40441	27040	5483	32523		8.09	Si
SLV 15	9.25	-2008.96	-14641	-12192	-4580	2.15	2.15	-20252	14467	8709	40441	27040	5483	32523		7.1	Si
SLV 15	11.05	3591.74	-14273	-11886	-3626	2.15	2.15	-19744	14365	8648	40441	27040	5483	32523		8.97	Si
SLV 3	9.25	2800.82	-12080	-10059	5155	2.15	2.15	-16710	13759	8283	40441	27040	5483	32523		6.31	Si
SLV 3	11.05	-2906.49	-7873	-6556	4177	2.15	2.1176	-10891	12595	7468	40441	27040	5483	32523		7.79	Si
SLV 10	9.25	-11.3	2474	2060	-3899	1.72	2.15	0	0	0	40441	21632	4386	26018		6.67	Si
SLV 10	11.05	2429.17	477	397	-3570	2.15	0	0	9939	0	40441	27040	5483	32523		9.11	Si
SLV 14	9.25	-1634.66	-6748	-5620	-5411	2.15	2.15	-9335	12284	7395	40441	27040	5483	32523		6.01	Si
SLV 14	11.05	3892.21	-7789	-6486	-4434	2.15	1.726	-10774	12572	6075	40441	27040	5483	32523		7.34	Si
SLV 13	9.25	-2005.12	-7406	-6167	-6101	2.15	2.15	-10244	12465	7504	40441	27040	5483	32523		5.33	Si
SLV 13	11.05	4235.86	-8937	-7442	-5123	2.15	1.8031	-12362	12889	6507	40441	27040	5483	32523		6.35	Si
SLV 16	9.25	-1638.5	-13984	-11645	-3890	2.15	2.15	-19343	14285	8600	40441	27040	5483	32523		8.36	Si
SLV 16	11.05	3248.1	-13126	-10930	-2937	2.15	2.15	-18156	14048	8457	40441	27040	5483	32523		11.07	Si
SLV 4	9.25	3171.28	-11423	-9512	5845	2.15	2.15	-15801	13577	8173	40441	27040	5483	32523		5.56	Si
SLV 4	11.05	-3250.14	-6725	-5600	4866	2.15	1.7752	-11325	12682	6304	40441	27040	5483	32523		6.68	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	0	474	261.13	0	0	No, Trazione
SLV 5	179667	0.46	0	1870	261.13	0	0	No, Trazione
SLV 6	179667	0.46	0	2487	261.13	0	0	No, Trazione
SLV 10	179667	0.46	0	1092	261.13	0	0	No, Trazione
SLV 2	179667	0.46	4756	-2863	261.13	388.35	1.49	Si
SLV 1	179667	0.46	6330	-3811	261.13	511.4	1.96	Si
SLV 14	179667	0.46	12484	-7515	261.13	966.14	3.7	Si
SLV 13	179667	0.46	14058	-8463	261.13	1075.75	4.12	Si
SLV 4	179667	0.46	14927	-8986	261.13	1135.12	4.35	Si
SLV 3	179667	0.46	16502	-9934	261.13	1240.49	4.75	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-14791	-22114	566	0.734	1805.3	0.952	11.20194	13.33129	No
SLV 12	-14196	-21516	566	0.759	1744.8	0.95	11.61125	13.33129	No
SLV 7	-13923	-20010	431	0.78	1717.1	0.95	11.94022	13.33129	No
SLV 8	-13328	-19412	431	0.809	1656.7	0.948	12.40363	13.33129	No
SLV 15	-10666	-16639	373	0.977	1386.8	0.94	15.10751	6.37081	Si
SLV 16	-9752	-15722	374	1.05	1294.3	0.936	16.3049	6.37081	Si
SLV 3	-7772	-9626	-77	1.287	1094.5	0.927	20.1896	6.37081	Si
SLV 4	-6858	-8709	-76	1.418	1002.6	0.922	22.35482	6.37081	Si
SLV 13	-6125	-9705	73	1.544	929.1	0.917	24.46563	6.37081	Si
SLV 14	-5211	-8788	74	1.737	837.8	0.911	27.71506	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.64	SLU 41	Si
V_SLU	35.144	SLU 41	Si
PF_SLV	0	SLV 5	No
V_SLV	5.331	SLV 13	Si
PFFP_SLV	0	SLV 10	No
R_SLV	0.84	SLV 11	No

Maschio 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-5.093	5.826	L6	L7	2.13	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 53	9.25	1230.81	-16744	-0.0000536	0.0003743	0.0035	2.13	12914.7	14264.1	14264.1	11.59	No	Si
SLU 53	11.05	-1558.09	-14306	-0.0000491	0.0003743	0.0035	2.13	11645.83	13926.2	13926.2	8.94	No	Si
SLU 44	9.25	1091.84	-14449	-0.000046	0.0003743	0.0035	2.13	11725.99	12808.83	12808.83	11.73	No	Si
SLU 44	11.05	-1446.98	-12010	-0.0000418	0.0003743	0.0035	2.13	10260.8	12230.22	12230.22	8.45	No	Si
SLU 61	9.25	1319.23	-16244	-0.0000528	0.0003743	0.0035	2.13	12671.7	13942.83	13942.83	10.57	No	Si
SLU 61	11.05	-1532.97	-13806	-0.0000475	0.0003743	0.0035	2.13	11360.1	13570.43	13570.43	8.85	No	Si
SLU 45	9.25	1070.37	-15511	-0.0000488	0.0003743	0.0035	2.13	12299.27	13476.07	13476.07	12.59	No	Si
SLU 45	11.05	-1505.62	-13073	-0.0000452	0.0003743	0.0035	2.13	10924.97	13038.79	13038.79	8.66	No	Si
SLU 46	9.25	1073.09	-15459	-0.0000487	0.0003743	0.0035	2.13	12272.13	13443.09	13443.09	12.53	No	Si
SLU 46	11.05	-1489.07	-13021	-0.0000449	0.0003743	0.0035	2.13	10893.37	12998.67	12998.67	8.73	No	Si
SLU 52	9.25	1252.29	-15681	-0.0000507	0.0003743	0.0035	2.13	12387.37	13584.12	13584.12	10.85	No	Si
SLU 52	11.05	-1499.45	-13243	-0.0000457	0.0003743	0.0035	2.13	11027.62	13170.35	13170.35	8.78	No	Si
SLU 43	9.25	1087.29	-14535	-0.0000462	0.0003743	0.0035	2.13	11774.26	12862.79	12862.79	11.83	No	Si
SLU 43	11.05	-1474.57	-12097	-0.0000422	0.0003743	0.0035	2.13	10316.48	12295.35	12295.35	8.34	No	Si
SLU 64	9.25	1171.71	-16191	-0.0000515	0.0003743	0.0035	2.13	12645.32	13908.81	13908.81	11.87	No	Si
SLU 64	11.05	-1524.84	-13721	-0.0000472	0.0003743	0.0035	2.13	11310.6	13510.36	13510.36	8.86	No	Si
SLU 60	9.25	1316.5	-16296	-0.000053	0.0003743	0.0035	2.13	12697.41	13976.14	13976.14	10.62	No	Si
SLU 60	11.05	-1549.52	-13858	-0.0000478	0.0003743	0.0035	2.13	11390.26	13607.26	13607.26	8.78	No	Si
SLU 47	9.25	1065.62	-15104	-0.0000476	0.0003743	0.0035	2.13	12084.56	13219.16	13219.16	12.41	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	11.05	-1449.99	-12666	-0.0000437	0.0003743	0.0035	2.13	10675.47	12726.66	12726.66	8.78	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	9.25	1442.66	-16342	-0.0000526	0.0005615	0.0035	2.13		15023.24	15023.24	10.41		Si
SLV 6	11.05	-3442.32	-14493	-0.0000624	0.0005615	0.0035	2.13		14835.4	14835.4	4.31		Si
SLV 7	9.25	1517.3	-6637	-0.0000274	0.0005615	0.0035	2.13		6909.08	6909.08	4.55		Si
SLV 7	11.05	-85.59	-4794	-0.0000125	0.0005615	0.0035	2.13		6148.18	6148.18	71.83		Si
SLV 2	9.25	2588.47	-10827	-0.0000461	0.0005615	0.0035	2.13		10555.55	10555.55	4.08		Si
SLV 2	11.05	-3534.37	-9090	-0.0000485	0.0005615	0.0035	2.13		10190.95	10190.95	2.88		Si
SLV 1	9.25	3003.23	-10563	-0.0000484	0.0005615	0.0035	2.13		10347.82	10347.82	3.45		Si
SLV 1	11.05	-3790.17	-8827	-0.0000501	0.0005615	0.0035	2.13		9956.4	9956.4	2.63		Si
SLD 2	9.25	1638.64	-11775	-0.0000417	0.0005615	0.0035	2.13		11307.75	11307.75	6.9		Si
SLD 2	11.05	-2192.95	-9950	-0.0000409	0.0005615	0.0035	2.13		10957.5	10957.5	5		Si
SLD 1	9.25	1816.78	-11662	-0.0000427	0.0005615	0.0035	2.13		11217.65	11217.65	6.17		Si
SLD 1	11.05	-2302.82	-9837	-0.0000414	0.0005615	0.0035	2.13		10856.06	10856.06	4.71		Si
SLD 3	9.25	1791.07	-10395	-0.0000392	0.0005615	0.0035	2.13		10215.62	10215.62	5.7		Si
SLD 3	11.05	-1834.67	-8570	-0.0000347	0.0005615	0.0035	2.13		9722.17	9722.17	5.3		Si
SLV 3	9.25	2944.54	-7703	-0.0000405	0.0005615	0.0035	2.13		7910.12	7910.12	2.69		Si
SLV 3	11.05	-2733.15	-5968	-0.0000351	0.0005615	0.0035	2.13		7285.04	7285.04	2.67		Si
SLV 5	9.25	1712.9	-16170	-0.0000542	0.0005615	0.0035	2.13		14880.74	14880.74	8.69		Si
SLV 5	11.05	-3608.99	-14322	-0.0000632	0.0005615	0.0035	2.13		14694.84	14694.84	4.07		Si
SLV 4	9.25	2529.79	-7967	-0.0000381	0.0005615	0.0035	2.13		8154.92	8154.92	3.22		Si
SLV 4	11.05	-2477.35	-6232	-0.0000333	0.0005615	0.0035	2.13		7539.42	7539.42	3.04		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	9.25	1403.65	-17900	-14906	1635	2.13	2.13	-24993	10277	6129	40441	17859	5431	23290	No	14.24	Si
SLU 82	11.05	-1583.24	-15430	-12849	1635	2.13	2.13	-21544	9817	5855	40441	17859	5431	23290	No	14.24	Si
SLU 84	9.25	1377.43	-18556	-15452	1622	2.13	2.13	-25909	10399	6202	40441	17859	5431	23290	No	14.36	Si
SLU 84	11.05	-1586.26	-16086	-13395	1622	2.13	2.13	-22460	9939	5928	40441	17859	5431	23290	No	14.36	Si
SLU 81	9.25	1400.92	-17952	-14949	1643	2.13	2.13	-25066	10287	6135	40441	17859	5431	23290	No	14.18	Si
SLU 81	11.05	-1599.79	-15482	-12892	1643	2.13	2.13	-21617	9827	5861	40441	17859	5431	23290	No	14.18	Si
SLU 60	9.25	1316.5	-16296	-13570	1568	2.13	2.13	-22754	9978	5951	40441	17859	5431	23290	No	14.85	Si
SLU 60	11.05	-1549.52	-13858	-11540	1568	2.13	2.13	-19349	9524	5680	40441	17859	5431	23290	No	14.85	Si
SLU 83	9.25	1374.7	-18608	-15495	1630	2.13	2.13	-25981	10409	6208	40441	17859	5431	23290	No	14.29	Si
SLU 83	11.05	-1602.81	-16138	-13438	1630	2.13	2.13	-22532	9949	5933	40441	17859	5431	23290	No	14.29	Si
SLU 73	9.25	1336.71	-17337	-14437	1579	2.13	2.13	-24207	10172	6067	40441	17859	5431	23290	No	14.75	Si
SLU 73	11.05	-1549.72	-14867	-12380	1579	2.13	2.13	-20758	9712	5792	40441	17859	5431	23290	No	14.75	Si
SLU 77	9.25	1289.01	-19056	-15868	1587	2.13	2.13	-26606	10492	6257	40441	17859	5431	23290	No	14.68	Si
SLU 77	11.05	-1611.38	-16585	-13811	1587	2.13	2.13	-23157	10032	5983	40441	17859	5431	23290	No	14.68	Si
SLU 75	9.25	1317.96	-18348	-15278	1592	2.13	2.13	-25618	10360	6179	40441	17859	5431	23290	No	14.63	Si
SLU 75	11.05	-1591.81	-15877	-13221	1592	2.13	2.13	-22169	9900	5904	40441	17859	5431	23290	No	14.63	Si
SLU 78	9.25	1291.74	-19004	-15825	1579	2.13	2.13	-26534	10482	6252	40441	17859	5431	23290	No	14.75	Si
SLU 78	11.05	-1594.82	-16533	-13768	1579	2.13	2.13	-23085	10022	5977	40441	17859	5431	23290	No	14.75	Si
SLU 74	9.25	1315.23	-18400	-15322	1600	2.13	2.13	-25690	10370	6185	40441	17859	5431	23290	No	14.56	Si
SLU 74	11.05	-1608.36	-15930	-13265	1600	2.13	2.13	-22242	9910	5910	40441	17859	5431	23290	No	14.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	9.25	2529.79	-7967	-6634	3139	2.13	2.13	-11123	12641	7539	40441	26788	5431	32219		10.26	Si
SLV 4	11.05	-2477.35	-6232	-5189	2496	2.13	2.0023	-9293	12275	6882	40441	26788	5431	32219		12.91	Si
SLV 3	9.25	2944.54	-7703	-6414	3512	2.13	2.0482	-10755	12568	7208	40441	26788	5431	32219		9.17	Si
SLV 3	11.05	-2733.15	-5968	-4970	2868	2.13	1.8211	-9790	12375	6310	40441	26788	5431	32219		11.23	Si
SLD 3	9.25	1791.07	-10395	-8656	2157	2.13	2.13	-14514	13319	7944	40441	26788	5431	32219		14.94	Si
SLD 3	11.05	-1834.67	-8570	-7137	1882	2.13	2.13	-11966	12810	7640	40441	26788	5431	32219		17.12	Si
SLV 5	9.25	1712.9	-16170	-13465	3084	2.13	2.13	-22578	14932	8905	40441	26788	5431	32219		10.45	Si
SLV 5	11.05	-3608.99	-14322	-11926	2843	2.13	2.13	-19997	14416	8598	40441	26788	5431	32219		11.33	Si
SLV 1	9.25	3003.23	-10563	-8796	4150	2.13	2.13	-14749	13366	7972	40441	26788	5431	32219		7.76	Si
SLV 1	11.05	-3790.17	-8827	-7350	3480	2.13	1.9068	-13839	13185	7039	40441	26788	5431	32219		9.26	Si
SLD 2	9.25	1638.64	-11775	-9805	2279	2.13	2.13	-16441	13705	8173	40441	26788	5431	32219		14.14	Si
SLD 2	11.05	-2192.95	-9950	-8285	1992	2.13	2.13	-13892	13195	7869	40441	26788	5431	32219		16.17	Si
SLV 2	9.25	2588.47	-10827	-9015	3777	2.13	2.13	-15117	13440	8016	40441	26788	5431	32219		8.53	Si
SLV 2	11.05	-3534.37	-9090	-7569	3107	2.13	2.0285	-13409	13099	7440	40441	26788	5431	32219		10.37	Si
SLD 4	9.25	1612.92	-10508	-8750	1997	2.13	2.13	-14672	13351	7963	40441	26788	5431	32219		16.14	Si
SLD 4	11.05	-1724.8	-8684	-7231	1722	2.13	2.13	-12124	12842	7659	40441	26788	5431	32219		18.71	Si
SLD 1	9.25	1816.78	-11662	-9711	2439	2.13	2.13	-16283	13673	8155	40441	26788	5431	32219		13.21	Si
SLD 1	11.05	-2302.82	-9837	-8191	2152	2.13	2.13	-13734	13164	7851	40441	26788	5431	32219		14.97	Si
SLV 6	9.25	1442.66	-16342	-13608	2841	2.13	2.13	-22817	14980	8934	40441	26788	5431	32219		11.34	Si
SLV 6	11.05	-3442.32	-14493	-12069	2600	2.13	2.13	-20236	14464	8626	40441	26788	5431	32219		12.39	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	9695	-5782	258.69	758.11	2.93	Si
SLV 8	179667	0.46	9983	-5954	258.69	779.05	3.01	Si
SLV 3	179667	0.46	11388	-6792	258.69	879.93	3.4	Si
SLV 4	179667	0.46	11830	-7055	258.69	911.21	3.52	Si
SLV 11	179667	0.46	12970	-7735	258.69	990.94	3.83	Si
SLV 12	179667	0.46	13258	-7907	258.69	1010.85	3.91	Si
SLV 1	179667	0.46	16179	-9649	258.69	1207.79	4.67	Si
SLV 2	179667	0.46	16621	-9913	258.69	1236.75	4.78	Si
SLV 15	179667	0.46	22303	-13302	258.69	1590.25	6.15	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	179667	0.46	22745	-13565	258.69	1616.26	6.25	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-12728	-18420	-667	0.818	1593	0.947	12.5535	13.33129	No
SLV 9	-12403	-18511	-667	0.835	1560.1	0.946	12.83752	13.33129	No
SLV 6	-10217	-17881	-657	0.98	1338.5	0.938	15.18097	13.33129	Si
SLV 5	-9892	-17972	-657	1.006	1305.7	0.937	15.6032	13.33129	Si
SLV 12	-6351	-8348	658	1.421	948.8	0.919	22.47571	13.33129	Si
SLV 11	-6027	-8439	658	1.478	916.3	0.917	23.4242	13.33129	Si
SLV 14	-13512	-15500	-216	0.807	1672.6	0.949	12.36601	6.37081	Si
SLV 13	-13015	-15639	-216	0.833	1622.1	0.948	12.77708	6.37081	Si
SLV 16	-11599	-12478	181	0.919	1478.5	0.943	14.15845	6.37081	Si
SLV 15	-11102	-12617	181	0.953	1428.1	0.941	14.70389	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.338	SLU 43	Si
V_SLU	14.178	SLU 81	Si
PF_SLV	2.627	SLV 1	Si
V_SLV	7.764	SLV 1	Si
PFFP_SLV	2.931	SLV 7	Si
R_SLV	0.942	SLV 10	No

Maschio 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L6	L7	1.93	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	9.25	1070.36	-11009	-0.0000411	0.0003743	0.0035	1.93	8497.94	9107.53	9107.53	8.51	No	Si
SLU 50	11.05	394.83	-8964	-0.0000288	0.0003743	0.0035	1.93	7241.02	7598.93	7598.93	19.25	No	Si
SLU 1	9.25	797.94	-8084	-0.0000298	0.0003743	0.0035	1.93	6654.76	6970.72	6970.72	8.74	No	Si
SLU 1	11.05	276.66	-6538	-0.0000207	0.0003743	0.0035	1.93	5559.7	5897.86	5897.86	21.32	No	Si
SLU 44	9.25	1023.55	-10102	-0.0000379	0.0003743	0.0035	1.93	7958.75	8429.67	8429.67	8.24	No	Si
SLU 44	11.05	311.86	-8045	-0.0000254	0.0003743	0.0035	1.93	6628.17	6943.19	6943.19	22.26	No	Si
SLU 51	9.25	1057.92	-10945	-0.0000408	0.0003743	0.0035	1.93	8460.72	9059.13	9059.13	8.56	No	Si
SLU 51	11.05	403.31	-8928	-0.0000288	0.0003743	0.0035	1.93	7217.44	7572.85	7572.85	18.78	No	Si
SLU 43	9.25	1044.29	-10209	-0.0000384	0.0003743	0.0035	1.93	8023.86	8508.83	8508.83	8.15	No	Si
SLU 43	11.05	297.73	-8105	-0.0000254	0.0003743	0.0035	1.93	6669.32	6985.82	6985.82	23.46	No	Si
SLU 46	9.25	1068.87	-10782	-0.0000404	0.0003743	0.0035	1.93	8365.62	8936.57	8936.57	8.36	No	Si
SLU 46	11.05	367.79	-8735	-0.0000279	0.0003743	0.0035	1.93	7091.27	7434.47	7434.47	20.21	No	Si
SLU 47	9.25	1036.58	-10502	-0.0000392	0.0003743	0.0035	1.93	8200.09	8726.98	8726.98	8.42	No	Si
SLU 47	11.05	360.41	-8474	-0.0000271	0.0003743	0.0035	1.93	6918.17	7247.84	7247.84	20.11	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	9.25	1081.31	-10846	-0.0000407	0.0003743	0.0035	1.93	8403.2	8984.81	8984.81	8.31	No	Si
SLU 45	11.05	359.3	-8771	-0.0000279	0.0003743	0.0035	1.93	7115.1	7460.45	7460.45	20.76	No	Si
SLU 49	9.25	1081.9	-11182	-0.0000417	0.0003743	0.0035	1.93	8597.43	9238.15	9238.15	8.54	No	Si
SLU 49	11.05	416.34	-9165	-0.0000296	0.0003743	0.0035	1.93	7370.86	7743.88	7743.88	18.6	No	Si
SLU 48	9.25	1094.35	-11246	-0.0000421	0.0003743	0.0035	1.93	8634.12	9286.78	9286.78	8.49	No	Si
SLU 48	11.05	407.86	-9201	-0.0000297	0.0003743	0.0035	1.93	7394.14	7770.11	7770.11	19.05	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	9.25	2149.11	-11048	-0.00005	0.0005615	0.0035	1.93		9605.18	9605.18	4.47		Si
SLV 1	11.05	-2349.55	-6112	-0.0000376	0.0005615	0.0035	1.93		6577.32	6577.32	2.8		Si
SLV 16	9.25	-580.72	-5927	-0.0000214	0.0005615	0.0035	1.93		6422.7	6422.7	11.06		Si
SLV 16	11.05	3089.43	-8100	-0.0000501	0.0005615	0.0035	1.93		7418.93	7418.93	2.4		Si
SLV 11	9.25	-3.39	3098	0.2451867	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	11.05	2155.51	354	-0.0181433	0.0005615	0.0035	1.93		0	0	0		No
SLV 7	9.25	633.27	3455	0.2694182	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	11.05	828.04	2064	0.157278	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	9.25	-181.12	2691	0.2139562	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	11.05	2341.35	-342	-0.015135	0.0005615	0.0035	1.93		521.83	521.83	0.22		No
SLV 15	9.25	-307.96	-5303	-0.0000173	0.0005615	0.0035	1.93		5877.24	5877.24	19.08		Si
SLV 15	11.05	2804.21	-7031	-0.0000447	0.0005615	0.0035	1.93		6526.59	6526.59	2.33		Si
SLV 3	9.25	1814.24	-4112	-0.0000279	0.0005615	0.0035	1.93		3995.01	3995.01	2.2		Si
SLV 3	11.05	-1620.7	-1332	-0.0002145	0.0005615	0.0035	1.544		2314.4	2314.4	1.43		Si
SLV 8	9.25	455.54	3048	0.2383963	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	11.05	1013.87	1367	0.0989217	0.0005615	0.0035	1.544		0	0	0		No
SLV 4	9.25	1541.47	-4736	-0.0000263	0.0005615	0.0035	1.93		4548.55	4548.55	2.95		Si
SLV 4	11.05	-1335.48	-2401	-0.0000207	0.0005615	0.0035	1.544		3297.65	3297.65	2.47		Si
SLD 11	9.25	439.22	-3357	-0.0000129	0.0005615	0.0035	1.93		3317.95	3317.95	7.55		Si
SLD 11	11.05	1151.02	-3793	-0.0000202	0.0005615	0.0035	1.93		3709.66	3709.66	3.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 41	9.25	750.93	-10128	-8434	-458	1.93	1.93	-15607	9025	4877	40441	16182	4922	21104	No	46.05	Si
SLU 41	11.05	714.2	-9313	-7755	-460	1.93	1.93	-14351	8858	4787	40441	16182	4922	21104	No	45.86	Si
SLU 34	9.25	742.12	-9790	-8153	-384	1.93	1.93	-15086	8956	4840	40441	16182	4922	21104	No	55	Si
SLU 34	11.05	665.83	-8895	-7407	-404	1.93	1.93	-13706	8772	4740	40441	16182	4922	21104	No	52.29	Si
SLU 43	9.25	1044.29	-10209	-8501	376	1.93	1.93	-15731	9042	4886	40441	16182	4922	21104	No	56.06	Si
SLU 43	11.05	297.73	-8105	-6749	375	1.93	1.93	-12489	8610	4653	40441	16182	4922	21104	No	56.29	Si
SLU 40	9.25	725.45	-9664	-8048	-444	1.93	1.93	-14892	8930	4826	40441	16182	4922	21104	No	47.56	Si
SLU 40	11.05	674.13	-8848	-7368	-456	1.93	1.93	-13633	8762	4735	40441	16182	4922	21104	No	46.26	Si
SLU 37	9.25	775.9	-10297	-8575	-384	1.93	1.93	-15867	9060	4896	40441	16182	4922	21104	No	54.93	Si
SLU 37	11.05	700.25	-9384	-7814	-386	1.93	1.93	-14460	8872	4795	40441	16182	4922	21104	No	54.61	Si
SLU 35	9.25	799.88	-10534	-8772	-378	1.93	1.93	-16232	9109	4922	40441	16182	4922	21104	No	55.82	Si
SLU 35	11.05	713.27	-9621	-8012	-380	1.93	1.93	-14825	8921	4821	40441	16182	4922	21104	No	55.49	Si
SLU 39	9.25	737.9	-9729	-8101	-423	1.93	1.93	-14991	8943	4833	40441	16182	4922	21104	No	49.92	Si
SLU 39	11.05	665.65	-8884	-7398	-424	1.93	1.93	-13689	8770	4739	40441	16182	4922	21104	No	49.72	Si
SLU 38	9.25	763.45	-10233	-8521	-405	1.93	1.93	-15768	9047	4889	40441	16182	4922	21104	No	52.08	Si
SLU 38	11.05	708.73	-9348	-7784	-418	1.93	1.93	-14405	8865	4791	40441	16182	4922	21104	No	50.46	Si
SLU 36	9.25	787.44	-10470	-8718	-399	1.93	1.93	-16133	9096	4915	40441	16182	4922	21104	No	52.88	Si
SLU 36	11.05	721.75	-9585	-7982	-412	1.93	1.93	-14770	8914	4817	40441	16182	4922	21104	No	51.21	Si
SLU 42	9.25	738.49	-10064	-8381	-479	1.93	1.93	-15508	9012	4870	40441	16182	4922	21104	No	44.04	Si
SLU 42	11.05	722.68	-9277	-7725	-492	1.93	1.93	-14295	8850	4783	40441	16182	4922	21104	No	42.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	9.25	-3.39	3098	2580	-3694	1.544	1.93	0	0	0	40441	19419	3937	23356		6.32	Si
SLV 11	11.05	2155.51	354	295	-3412	1.93	0	0	9312	0	40441	24273	4922	29195		8.56	Si
SLV 1	9.25	2149.11	-11048	-9200	4624	1.93	1.93	-17024	13821	7469	40441	24273	4922	29195		6.31	Si
SLV 1	11.05	-2349.55	-6112	-5090	3784	1.93	1.7418	-10476	12512	6102	40441	24273	4922	29195		7.72	Si
SLV 8	9.25	455.54	3048	2538	-2005	1.544	1.93	0	0	0	40441	19419	3937	23356		11.65	Si
SLV 8	11.05	1013.87	1367	1139	-2220	1.544	0.6705	0	0	0	40441	19419	3937	23356		10.52	Si
SLV 6	9.25	1571.78	-20073	-16715	3825	1.93	1.93	-30931	16250	8782	40441	24273	4922	29195		7.63	Si
SLV 6	11.05	-1415.63	-14566	-12129	3540	1.93	1.93	-22445	14906	8055	40441	24273	4922	29195		8.25	Si
SLV 2	9.25	1876.34	-11673	-9720	4076	1.93	1.93	-17986	14014	7573	40441	24273	4922	29195		7.16	Si
SLV 2	11.05	-2064.34	-7181	-5980	3236	1.93	1.93	-11065	12630	6825	40441	24273	4922	29195		9.02	Si
SLV 5	9.25	1749.51	-19666	-16376	4182	1.93	1.93	-30304	16250	8782	40441	24273	4922	29195		6.98	Si
SLV 5	11.05	-1601.47	-13870	-11550	3897	1.93	1.93	-21372	14691	7939	40441	24273	4922	29195		7.49	Si
SLV 16	9.25	-580.72	-5927	-4936	-4493	1.93	1.93	-9133	12243	6616	40441	24273	4922	29195		6.5	Si
SLV 16	11.05	3089.43	-8100	-6745	-3656	1.93	1.7508	-12481	12913	6330	40441	24273	4922	29195		7.99	Si
SLV 3	9.25	1814.24	-4112	-3424	2875	1.93	1.5713	-6336	11684	5141	40441	24273	4922	29195		10.16	Si
SLV 3	11.05	-1620.7	-1332	-1109	2056	1.544	0	0	0	0	40441	19419	3937	23356		11.36	Si
SLV 15	9.25	-307.96	-5303	-4416	-3945	1.93	1.93	-8171	12051	6512	40441	24273	4922	29195		7.4	Si
SLV 15	11.05	2804.21	-7031	-5855	-3108	1.93	1.6985	-10834	12584	5985	40441	24273	4922	29195		9.39	Si
SLV 12	9.25	-181.12	2691	2241	-4051	1.544	1.93	0	0	0	40441	19419	3937	23356		5.77	Si
SLV 12	11.05	2341.35	-342	-285	-3769	1.93	0	0	16250	0	40441	24273	4922	29195		7.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	0	2424	234.41	0	0	No, Trazione
SLV 8	179667	0.46	0	1846	234.41	0	0	No, Trazione
SLV 11	179667	0.46	0	1144	234.41	0	0	No, Trazione
SLV 12	179667	0.46	0	566	234.41	0	0	No, Trazione

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.46	4689	-2534	234.41	343.83	1.47	Si
SLV 4	179667	0.46	6330	-3421	234.41	459.07	1.96	Si
SLV 15	179667	0.46	12585	-6801	234.41	873.7	3.73	Si
SLV 16	179667	0.46	14227	-7688	234.41	976.09	4.16	Si
SLV 1	179667	0.46	15167	-8196	234.41	1033.52	4.41	Si
SLV 2	179667	0.46	16809	-9083	234.41	1131.71	4.83	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-13490	-19305	-379	0.732	1642.1	0.952	11.17679	13.33129	No
SLV 9	-12953	-18786	-380	0.758	1587.6	0.951	11.58057	13.33129	No
SLV 6	-12601	-17938	-257	0.784	1551.9	0.95	11.99372	13.33129	No
SLV 5	-12065	-17419	-257	0.813	1497.4	0.948	12.4575	13.33129	No
SLV 14	-9847	-13683	-297	0.958	1272.6	0.941	14.79819	6.37081	Si
SLV 13	-9024	-12888	-298	1.028	1189.2	0.937	15.94402	6.37081	Si
SLV 2	-6885	-9127	110	1.296	973.3	0.926	20.33549	6.37081	Si
SLV 1	-6062	-8331	109	1.429	890.5	0.921	22.55228	6.37081	Si
SLV 16	-5714	-7379	-105	1.495	855.6	0.919	23.65025	6.37081	Si
SLV 15	-4890	-6584	-106	1.676	773.3	0.912	26.69895	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.148	SLU 43	Si
V_SLU	42.897	SLU 42	Si
PF_SLV	0	SLV 7	No
V_SLV	5.765	SLV 12	Si
PFFP_SLV	0	SLV 12	No
R_SLV	0.838	SLV 10	No

Maschio 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L6	L7	9.14	0.28	3.52	3.52	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	8.35	-5613.01	-55420	-0.0000354	0.0004492	0.0035	9.14	208382.57	244753.21	244753.21	43.6	No	Si
SLU 40	11.87	-940.3	-30866	-0.0000185	0.0004492	0.0035	9.14	127132.96	155067.19	155067.19	164.91	No	Si
SLU 39	8.35	-5211.83	-55405	-0.0000352	0.0004492	0.0035	9.14	208339.73	244704.72	244704.72	46.95	No	Si
SLU 39	11.87	-682.98	-30858	-0.0000184	0.0004492	0.0035	9.14	127104.87	155037.63	155037.63	227	No	Si
SLU 73	8.35	-5879.56	-63612	-0.0000407	0.0004492	0.0035	9.14	231569.67	271974.28	271974.28	46.26	No	Si
SLU 73	11.87	-786.88	-35607	-0.0000213	0.0004492	0.0035	9.14	144194.87	173581.7	173581.7	220.6	No	Si
SLU 42	8.35	-5589.6	-57128	-0.0000365	0.0004492	0.0035	9.14	213377.67	250478.07	250478.07	44.81	No	Si
SLU 42	11.87	-822.9	-32510	-0.0000194	0.0004492	0.0035	9.14	133126.28	161438.11	161438.11	196.18	No	Si
SLU 34	8.35	-5399.76	-54930	-0.000035	0.0004492	0.0035	9.14	206932.91	243117.96	243117.96	45.02	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	11.87	-808.48	-31468	-0.0000188	0.0004492	0.0035	9.14	129335.54	157393.33	157393.33	194.68	No	Si
SLU 41	8.35	-5188.42	-57113	-0.0000363	0.0004492	0.0035	9.14	213335.56	250429.21	250429.21	48.27	No	Si
SLU 41	11.87	-565.59	-32503	-0.0000193	0.0004492	0.0035	9.14	133098.56	161408.34	161408.34	285.38	No	Si
SLU 31	8.35	-5423.17	-53222	-0.0000339	0.0004492	0.0035	9.14	201828.1	237370.28	237370.28	43.77	No	Si
SLU 31	11.87	-925.87	-29823	-0.0000178	0.0004492	0.0035	9.14	123292.08	151052.93	151052.93	163.15	No	Si
SLU 84	8.35	-6045.99	-67518	-0.0000432	0.0004492	0.0035	9.14	241933.2	284381.92	284381.92	47.04	No	Si
SLU 84	11.87	-683.91	-38295	-0.0000229	0.0004492	0.0035	9.14	153574.68	183515.83	183515.83	268.33	No	Si
SLU 76	8.35	-5856.15	-65320	-0.0000418	0.0004492	0.0035	9.14	236155.89	277407.96	277407.96	47.37	No	Si
SLU 76	11.87	-669.49	-37252	-0.0000222	0.0004492	0.0035	9.14	149960.25	179689.41	179689.41	268.4	No	Si
SLU 82	8.35	-6069.4	-65810	-0.0000422	0.0004492	0.0035	9.14	237456.68	278959.35	278959.35	45.96	No	Si
SLU 82	11.87	-801.3	-36650	-0.0000219	0.0004492	0.0035	9.14	147859.44	177488.93	177488.93	221.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 10	8.35	35397.63	-47739	-0.0000418	0.0006738	0.0035	9.14		204981.95	204981.95	5.79		Si
SLD 10	11.87	24710.89	-25783	-0.0000244	0.0006738	0.0035	9.14		116481.52	116481.52	4.71		Si
SLV 9	8.35	81511.47	-51321	-0.0000623	0.0006738	0.0035	9.14		218324.39	218324.39	2.68		Si
SLV 9	11.87	52503.7	-26327	-0.0000364	0.0006738	0.0035	9.14		118747.26	118747.26	2.26		Si
SLV 7	8.35	-90648.43	-38833	-0.0000628	0.0006738	0.0035	9.14		190105.1	190105.1	2.1		Si
SLV 7	11.87	-55920.65	-24419	-0.0000381	0.0006738	0.0035	9.14		131295.28	131295.28	2.35		Si
SLV 11	8.35	-91870.22	-46510	-0.0000649	0.0006738	0.0035	9.14		220220.53	220220.53	2.4		Si
SLV 11	11.87	-54979.89	-25405	-0.0000376	0.0006738	0.0035	9.14		135425.12	135425.12	2.46		Si
SLV 8	8.35	-88052.09	-38774	-0.0000609	0.0006738	0.0035	9.14		189873.07	189873.07	2.16		Si
SLV 8	11.87	-52526.9	-24410	-0.0000359	0.0006738	0.0035	9.14		131258.6	131258.6	2.5		Si
SLV 6	8.35	85329.61	-43585	-0.0000603	0.0006738	0.0035	9.14		188749.29	188749.29	2.21		Si
SLV 6	11.87	54956.7	-25333	-0.0000376	0.0006738	0.0035	9.14		114609.98	114609.98	2.09		Si
SLV 10	8.35	84107.81	-51262	-0.0000633	0.0006738	0.0035	9.14		218125.39	218125.39	2.59		Si
SLV 10	11.87	55897.46	-26318	-0.0000383	0.0006738	0.0035	9.14		118710.77	118710.77	2.12		Si
SLV 12	8.35	-89273.88	-46451	-0.0000635	0.0006738	0.0035	9.14		219984.52	219984.52	2.46		Si
SLV 12	11.87	-51586.14	-25396	-0.0000356	0.0006738	0.0035	9.14		135388.37	135388.37	2.62		Si
SLD 6	8.35	35923.83	-44452	-0.00004	0.0006738	0.0035	9.14		192165.7	192165.7	5.35		Si
SLD 6	11.87	24309.95	-25360	-0.000024	0.0006738	0.0035	9.14		114723.29	114723.29	4.72		Si
SLV 5	8.35	82733.26	-43644	-0.0000589	0.0006738	0.0035	9.14		188984.1	188984.1	2.28		Si
SLV 5	11.87	51562.95	-25342	-0.0000355	0.0006738	0.0035	9.14		114646.41	114646.41	2.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	8.35	-5613.01	-55420	-46149	-1757	9.14	9.14	-18033	10738	27480	40441	91971	23307	67921	No	38.66	Si
SLU 40	11.87	-940.3	-30866	-25702	-1688	9.14	9.14	-10043	9672	24754	40441	91971	23307	65195	No	38.62	Si
SLU 42	8.35	-5589.6	-57128	-47571	-1791	9.14	9.14	-18588	10812	27669	40441	91971	23307	68110	No	38.04	Si
SLU 42	11.87	-822.9	-32510	-27072	-1722	9.14	9.14	-10578	9744	24936	40441	91971	23307	65377	No	37.97	Si
SLU 78	8.35	-5492.29	-67951	-56584	-1743	9.14	9.14	-22110	10833	27725	40441	91971	23307	68166	No	39.1	Si
SLU 78	11.87	-264.42	-39615	-32988	-1674	9.14	9.14	-12890	10052	25725	40441	91971	23307	66166	No	39.52	Si
SLU 84	8.35	-6045.99	-67518	-56223	-1837	9.14	9.14	-21969	10833	27725	40441	91971	23307	68166	No	37.1	Si
SLU 84	11.87	-683.91	-38295	-31888	-1768	9.14	9.14	-12460	9995	25578	40441	91971	23307	66019	No	37.34	Si
SLU 76	8.35	-5856.15	-65320	-54393	-1868	9.14	9.14	-21254	10833	27725	40441	91971	23307	68166	No	36.49	Si
SLU 76	11.87	-669.49	-37252	-31020	-1754	9.14	9.14	-12121	9949	25463	40441	91971	23307	65904	No	37.57	Si
SLU 73	8.35	-5879.56	-63612	-52971	-1834	9.14	9.14	-20698	10833	27725	40441	91971	23307	68166	No	37.16	Si
SLU 73	11.87	-786.88	-35607	-29650	-1721	9.14	9.14	-11586	9878	25280	40441	91971	23307	65721	No	38.19	Si
SLU 31	8.35	-5423.17	-53222	-44319	-1788	9.14	9.14	-17317	10642	27236	40441	91971	23307	67677	No	37.85	Si
SLU 31	11.87	-925.87	-29823	-24834	-1675	9.14	9.14	-9704	9627	24638	40441	91971	23307	65079	No	38.86	Si
SLU 80	8.35	-5565.29	-67018	-55807	-1781	9.14	9.14	-21806	10833	27725	40441	91971	23307	68166	No	38.27	Si
SLU 80	11.87	-380.55	-38892	-32386	-1712	9.14	9.14	-12655	10021	25645	40441	91971	23307	66086	No	38.61	Si
SLU 82	8.35	-6069.4	-65810	-54801	-1803	9.14	9.14	-21413	10833	27725	40441	91971	23307	68166	No	37.8	Si
SLU 82	11.87	-801.3	-36650	-30519	-1734	9.14	9.14	-11925	9923	25396	40441	91971	23307	65837	No	37.96	Si
SLU 34	8.35	-5399.76	-54930	-45741	-1822	9.14	9.14	-17873	10716	27425	40441	91971	23307	67866	No	37.26	Si
SLU 34	11.87	-808.48	-31468	-26204	-1708	9.14	9.14	-10239	9699	24820	40441	91971	23307	65261	No	38.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	8.35	-88052.09	-38774	-32287	-22106	9.14	6.8973	-16829	15866	30641	40441	137957	23307	71082		3.22	Si
SLV 8	11.87	-52526.9	-24410	-20327	-30516	9.14	7.2545	-10042	14508	29470	40441	137957	23307	69911		2.29	Si
SLV 5	8.35	82733.26	-43644	-36343	20028	9.14	8.0231	-14201	15340	34461	40441	137957	23307	74902		3.74	Si
SLV 5	11.87	51562.95	-25342	-21102	28399	9.14	7.6059	-8246	14149	30133	40441	137957	23307	70574		2.49	Si
SLV 12	8.35	-89273.88	-46451	-38680	-21953	9.14	7.9443	-17512	16002	35596	40441	137957	23307	76037		3.46	Si
SLV 12	11.87	-51586.14	-25396	-21147	-30320	9.14	7.6161	-9953	14491	30902	40441	137957	23307	71343		2.35	Si
SLV 9	8.35	81511.47	-51321	-42736	20181	9.14	8.9452	-16699	15840	39673	40441	137957	23307	80114		3.97	Si
SLV 9	11.87	52503.7	-26327	-21923	28595	9.14	7.7272	-8566	14213	30752	40441	137957	23307	71193		2.49	Si
SLV 10	8.35	84107.81	-51262	-42686	18649	9.14	8.7877	-16679	15836	38965	40441	137957	23307	79406		4.26	Si
SLV 10	11.87	55897.46	-26318	-21916	27064	9.14	7.3383	-8564	14213	29203	40441	137957	23307	69644		2.57	Si
SLD 12	8.35	-41328.63	-45617	-37986	-10249	9.14	9.14	-14843	15469	39587	40441	137957	23307	80028		7.81	Si
SLD 12	11.87	-22848.49	-25373	-21129	-13959	9.14	9.14	-8256	14151	36216	40441	137957	23307	76657		5.49	Si
SLV 6	8.35	85329.61	-43585	-36294	18496	9.14	7.8366	-14182	15336	33652	40441	137957	23307	74093		4.01	Si
SLV 6	11.87	54956.7	-25333	-21095	26868	9.14	7.2019	-8243	14149	28531	40441	137957	23307	68972		2.57	Si
SLD 8	8.35	-40802.43	-42330	-35249	-10314	9.14	9.14	-13773	15255	39040	40441	137957	23307	79481		7.71	Si
SLD 8	11.87	-23249.43	-24951	-20777	-14042	9.14	9.14	-8118	14124	36145	40441	137957	23307	76586		5.45	Si
SLV 11	8.35	-91870.22	-46510	-38730	-20421	9.14	7.7842	-17898	16080	35047	40441	137957	23307	75488		3.7	Si
SLV 11	11.87	-54979.89	-25405	-21155	-28789	9.14	7.2175	-10506	14601	29508	40441	137957	23307	69949		2.43	Si
SLV 7	8.35	-90648.43	-38833	-32337	-20574	9.14	6.7071	-17335	15967	29987	40441	137957	23307	70428		3.42	Si
SLV 7	11.87	-55920.65	-24419	-20334	-28986	9.14	6.8399	-10658	14632	28022	40441	137957	23307	68463		2.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 10.11 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	215625	0.46	11469	-29352	1110.08	3852.08	3.47	Si
SLV 3	215625	0.46	11485	-29393	1110.08	3857.12	3.47	Si
SLV 2	215625	0.46	11580	-29636	1110.08	3886.94	3.5	Si
SLV 1	215625	0.46	11596	-29678	1110.08	3891.97	3.51	Si
SLV 8	215625	0.46	12782	-32711	1110.08	4260.23	3.84	Si
SLV 7	215625	0.46	12792	-32738	1110.08	4263.45	3.84	Si
SLV 6	215625	0.46	13153	-33661	1110.08	4374.33	3.94	Si
SLV 5	215625	0.46	13163	-33688	1110.08	4377.54	3.94	Si
SLV 12	215625	0.46	14016	-35870	1110.08	4637.77	4.18	Si
SLV 11	215625	0.46	14027	-35897	1110.08	4640.95	4.18	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 10.11 Wa = 0.05 Ta = 0.0739

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-26327	-51321	1152	1.507	3978.5	0.917	23.8667	13.33129	Si
SLV 10	-26318	-51262	1152	1.507	3977.7	0.917	23.87294	13.33129	Si
SLV 11	-25405	-46510	1123	1.548	3886.2	0.916	24.55816	13.33129	Si
SLV 12	-25396	-46451	1123	1.548	3885.3	0.916	24.56477	13.33129	Si
SLV 5	-25342	-43644	-1105	1.551	3879.9	0.916	24.61442	13.33129	Si
SLV 6	-25333	-43585	-1105	1.552	3879	0.916	24.62109	13.33129	Si
SLV 7	-24419	-38833	-1134	1.593	3787.7	0.914	25.32107	13.33129	Si
SLV 8	-24410	-38774	-1134	1.594	3786.8	0.914	25.32813	13.33129	Si
SLV 13	-27156	-58609	3775	1.398	4061.6	0.919	22.11191	6.37081	Si
SLV 14	-27143	-58518	3775	1.398	4060.2	0.919	22.12056	6.37081	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	43.605	SLU 40	Si
V_SLU	36.489	SLU 76	Si
PF_SLV	2.085	SLV 6	Si
V_SLV	2.291	SLV 8	Si
PFFP_SLV	3.47	SLV 4	Si
R_SLV	1.79	SLV 9	Si

Maschio 164

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-24.633	-3.314	-24.633	5.826	L7	L8	9.141	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	11.87	-3306.48	-33292	-0.0000209	0.0004492	0.0035	9.1407	135956.12	164495.64	164495.64	49.75	No	Si
SLU 73	15.03	321.23	-5845	-0.0000035	0.0004492	0.0035	9.1407	26214.98	30221.2	30221.2	94.08	No	Si
SLU 34	11.87	-2851.92	-29175	-0.0000182	0.0004492	0.0035	9.1407	120899.79	148583.91	148583.91	52.1	No	Si
SLU 34	15.03	250.55	-6485	-0.0000038	0.0004492	0.0035	9.1407	29024.47	33054.89	33054.89	131.93	No	Si
SLU 31	11.87	-3222.68	-27608	-0.0000174	0.0004492	0.0035	9.1407	115040.59	142529.1	142529.1	44.23	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	15.03	314.62	-5055	-0.000003	0.0004492	0.0035	9.1407	22728.08	26714.21	26714.21	84.91	No	Si
SLU 52	11.87	-2756.06	-30183	-0.0000188	0.0004492	0.0035	9.1407	124633.6	152449.57	152449.57	55.31	No	Si
SLU 52	15.03	229.05	-4789	-0.0000028	0.0004492	0.0035	9.1407	21553.63	25535.25	25535.25	111.48	No	Si
SLU 10	11.87	-2672.26	-24500	-0.0000153	0.0004492	0.0035	9.1407	103201.76	129845.23	129845.23	48.59	No	Si
SLU 10	15.03	222.44	-3999	-0.0000024	0.0004492	0.0035	9.1407	18042.34	22017.8	22017.8	98.98	No	Si
SLU 40	11.87	-3161.96	-28479	-0.0000179	0.0004492	0.0035	9.1407	118306.1	145928.13	145928.13	46.15	No	Si
SLU 40	15.03	345.57	-5144	-0.0000031	0.0004492	0.0035	9.1407	23121.02	27108.9	27108.9	78.45	No	Si
SLU 82	11.87	-3245.76	-34162	-0.0000214	0.0004492	0.0035	9.1407	139077	167906.22	167906.22	51.73	No	Si
SLU 82	15.03	352.18	-5934	-0.0000036	0.0004492	0.0035	9.1407	26605.86	30615.07	30615.07	86.93	No	Si
SLU 42	11.87	-2791.2	-30046	-0.0000187	0.0004492	0.0035	9.1407	124125.43	151919.9	151919.9	54.43	No	Si
SLU 42	15.03	281.5	-6574	-0.0000039	0.0004492	0.0035	9.1407	29413.69	33447.97	33447.97	118.82	No	Si
SLU 19	11.87	-2611.54	-25371	-0.0000158	0.0004492	0.0035	9.1407	106546.36	133382.02	133382.02	51.07	No	Si
SLU 19	15.03	253.39	-4088	-0.0000024	0.0004492	0.0035	9.1407	18438.02	22413.61	22413.61	88.45	No	Si
SLU 23	11.87	-2444.44	-25590	-0.0000159	0.0004492	0.0035	9.1407	107385.18	134275.83	134275.83	54.93	No	Si
SLU 23	15.03	231.37	-4871	-0.0000029	0.0004492	0.0035	9.1407	21917.56	25900.46	25900.46	111.94	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	11.87	-57236.02	-23540	-0.0000392	0.0006738	0.0035	9.1407		127629.45	127629.45	2.23		Si
SLV 11	15.03	8437.35	-3833	-0.0000056	0.0006738	0.0035	9.1407		21337.71	21337.71	2.53		Si
SLV 12	11.87	-60345.11	-23595	-0.0000418	0.0006738	0.0035	7.3126		127860.37	127860.37	2.12		Si
SLV 12	15.03	8679.88	-3850	-0.0000058	0.0006738	0.0035	9.1407		21414.14	21414.14	2.47		Si
SLV 10	11.87	57167.59	-24349	-0.000039	0.0006738	0.0035	9.1407		110487.94	110487.94	1.93		Si
SLV 10	15.03	-4948.23	-3770	-0.000004	0.0006738	0.0035	9.1407		42392.73	42392.73	8.57		Si
SLV 6	11.87	54660	-24381	-0.0000373	0.0006738	0.0035	9.1407		110624.47	110624.47	2.02		Si
SLV 6	15.03	-8082.35	-4558	-0.0000057	0.0006738	0.0035	9.1407		45885.5	45885.5	5.68		Si
SLV 15	11.87	-12349.78	-23751	-0.0000185	0.0006738	0.0035	9.1407		128512.02	128512.02	10.41		Si
SLV 15	15.03	7259.14	-2880	-0.0000049	0.0006738	0.0035	9.1407		17064.77	17064.77	2.35		Si
SLV 8	11.87	-62852.7	-23628	-0.0000442	0.0006738	0.0035	7.3126		127995.54	127995.54	2.04		Si
SLV 8	15.03	5545.76	-4639	-0.0000047	0.0006738	0.0035	9.1407		24945.51	24945.51	4.5		Si
SLV 16	11.87	-17121.4	-23836	-0.0000204	0.0006738	0.0035	9.1407		128866.58	128866.58	7.53		Si
SLV 16	15.03	7631.37	-2906	-0.0000052	0.0006738	0.0035	9.1407		17182.2	17182.2	2.25		Si
SLV 5	11.87	57769.1	-24326	-0.0000395	0.0006738	0.0035	9.1407		110391.18	110391.18	1.91		Si
SLV 5	15.03	-8324.89	-4541	-0.0000058	0.0006738	0.0035	9.1407		45810.02	45810.02	5.5		Si
SLV 9	11.87	60276.69	-24294	-0.0000415	0.0006738	0.0035	9.1407		110254.44	110254.44	1.83		Si
SLV 9	15.03	-5190.76	-3753	-0.0000041	0.0006738	0.0035	9.1407		42317.12	42317.12	8.15		Si
SLV 7	11.87	-59743.61	-23572	-0.0000413	0.0006738	0.0035	7.3126		127764.61	127764.61	2.14		Si
SLV 7	15.03	5303.22	-4622	-0.0000046	0.0006738	0.0035	9.1407		24869.16	24869.16	4.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 23	11.87	-2444.44	-25590	-21309	-1077	9.1407	9.1407	-8326	9443	24170	35683	91978	23309	59853	No	55.55	Si
SLU 23	15.03	231.37	-4871	-4057	-941	9.1407	9.1407	-1585	8545	21869	35683	91978	23309	57552	No	61.14	Si
SLU 31	11.87	-3222.68	-27608	-22990	-1634	9.1407	9.1407	-8983	9531	24394	35683	91978	23309	60077	No	36.76	Si
SLU 31	15.03	314.62	-5055	-4209	-1498	9.1407	9.1407	-1645	8553	21889	35683	91978	23309	57573	No	38.44	Si
SLU 48	11.87	-284.27	-31956	-26610	1274	9.1407	9.1407	-10397	9720	24876	35683	91978	23309	60560	No	47.53	Si
SLU 48	15.03	4.71	-7429	-6186	1273	9.1407	9.1407	-2417	8656	22153	35683	91978	23309	57836	No	45.42	Si
SLU 42	11.87	-2791.2	-30046	-25019	-1202	9.1407	9.1407	-9775	9637	24664	35683	91978	23309	60347	No	50.2	Si
SLU 42	15.03	281.5	-6574	-5474	-1121	9.1407	9.1407	-2139	8619	22058	35683	91978	23309	57741	No	51.52	Si
SLU 82	11.87	-3245.76	-34162	-28447	-1216	9.1407	9.1407	-11115	9815	25121	35683	91978	23309	60804	No	49.99	Si
SLU 82	15.03	352.18	-5934	-4941	-1134	9.1407	9.1407	-1931	8591	21987	35683	91978	23309	57670	No	50.85	Si
SLU 34	11.87	-2851.92	-29175	-24294	-1319	9.1407	9.1407	-9492	9599	24568	35683	91978	23309	60251	No	45.68	Si
SLU 34	15.03	250.55	-6485	-5400	-1183	9.1407	9.1407	-2110	8615	22048	35683	91978	23309	57732	No	48.79	Si
SLU 50	11.87	-250.66	-31312	-26074	1299	9.1407	9.1407	-10187	9692	24805	35683	91978	23309	60488	No	46.58	Si
SLU 50	15.03	5.85	-7493	-6240	1298	9.1407	9.1407	-2438	8658	22160	35683	91978	23309	57843	No	44.57	Si
SLU 10	11.87	-2672.26	-24500	-20402	-1078	9.1407	9.1407	-7971	9396	24048	35683	91978	23309	59732	No	55.42	Si
SLU 10	15.03	222.44	-3999	-3330	-941	9.1407	9.1407	-1301	8507	21772	35683	91978	23309	57455	No	61.03	Si
SLU 73	11.87	-3306.48	-33292	-27722	-1333	9.1407	9.1407	-10832	9778	25025	35683	91978	23309	60708	No	45.54	Si
SLU 73	15.03	321.23	-5845	-4867	-1197	9.1407	9.1407	-1902	8587	21977	35683	91978	23309	57660	No	48.18	Si
SLU 40	11.87	-3161.96	-28479	-23715	-1517	9.1407	9.1407	-9266	9569	24490	35683	91978	23309	60173	No	39.66	Si
SLU 40	15.03	345.57	-5144	-4283	-1435	9.1407	9.1407	-1673	8556	21899	35683	91978	23309	57583	No	40.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	11.87	54660	-24381	-20303	45035	9.1407	6.9854	-7933	14087	27552	35683	137967	23309	63235		1.4	Si
SLV 6	15.03	-8082.35	-4558	-3796	45945	9.1407	8.3918	-1615	12823	30130	35683	137967	23309	65814		1.43	Si
SLV 9	11.87	60276.69	-24294	-20230	46269	9.1407	6.2675	-7904	14081	24710	35683	137967	23309	60394		1.31	Si
SLV 9	15.03	-5190.76	-3753	-3125	46455	9.1407	9.1407	-1221	12744	32617	35683	137967	23309	68301		1.47	Si
SLV 16	11.87	-17121.4	-23836	-19849	-16707	9.1407	9.1407	-7755	14051	35962	35683	137967	23309	71645		4.29	Si
SLV 16	15.03	7631.37	-2906	-2420	-18077	9.1407	5.8332	-946	12689	20725	35683	137967	23309	56408		3.12	Si
SLV 11	11.87	-57236.02	-23540	-19602	-44937	9.1407	6.4168	-10952	14691	26395	35683	137967	23309	62078		1.38	Si
SLV 11	15.03	8437.35	-3833	-3192	-45845	9.1407	7.107	-1247	12749	25371	35683	137967	23309	61054		1.33	Si
SLD 5	11.87	24855.75	-24120	-20085	20877	9.1407	9.1407	-7848	14070	36009	35683	137967	23309	71693		3.43	Si
SLD 5	15.03	-3545.52	-4343	-3616	21278	9.1407	9.1407	-1413	12783	32716	35683	137967	23309	68399		3.21	Si
SLV 5	11.87	57769.1	-24326	-20257	47144	9.1407	6.5866	-7915	14083	25973	35683	137967	23309	61656		1.31	Si
SLV 5	15.03	-8324.89	-4541	-3782	48053	9.1407	8.2116	-1644	12829	29497	35683	137967	23309	65180		1.36	Si
SLV 12	11.87	-60345.11	-23595	-19648	-47045	7.3126	6.0385	0	0	0	35683	110374	18647	35683		0.76	No
SLV 12	15.03	8679.88	-3850	-3206	-47954	9.1407	6.9473	-1253	12751	24803	35683	137967	23309	60486		1.26	Si
SLV 7	11.87	-59743.61	-23572	-19629	-44062	7.3126	6.1076	0	0	0	35683	110374	18647	35683		0.81	No
SLV 7	15.03	5303.22	-4622	-3848	-44247	9.1407	9.1407	-1504	12801	32762	35683	137967	23309	68445		1.55	Si
SLV 10	11.87	57167.59	-24349	-20276	44161	9.1407	6.6675	-7922	14084	26294	35683	137967	23309	61977		1.4	Si
SLV 10	15.03	-4948.23	-3770	-3139	44346	9.1407	9.1407	-1226	12745	32620	35683	137967	23309	68303		1.54	Si
SLV 8	11.87	-62852.7	-23628	-19675	-46170	7.3126	5.7307	0	0	0	35683	110374	18647	35683		0.77	No
SLV 8	15.03	5545.76	-4639	-3863	-46355	9.1407	9.1407	-1509	12802	32765	35683	137967	23309	68448		1.48	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	215625	0.53	5212	-13340	1031.88	1814.44	1.76	Si
SLV 4	215625	0.53	5235	-13399	1031.88	1822.28	1.77	Si
SLV 1	215625	0.53	5244	-13422	1031.88	1825.38	1.77	Si
SLV 2	215625	0.53	5268	-13482	1031.88	1833.21	1.78	Si
SLV 7	215625	0.53	5392	-13801	1031.88	1875.28	1.82	Si
SLV 8	215625	0.53	5407	-13840	1031.88	1880.38	1.82	Si
SLV 5	215625	0.53	5500	-14077	1031.88	1911.64	1.85	Si
SLV 6	215625	0.53	5515	-14116	1031.88	1916.73	1.86	Si
SLV 11	215625	0.53	5576	-14270	1031.88	1937.05	1.88	Si
SLV 12	215625	0.53	5591	-14309	1031.88	1942.14	1.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-4639	-23628	-1546	4.25	1748.9	0.894	69.10602	11.6001	Si
SLV 7	-4622	-23572	-1546	4.256	1747.5	0.894	69.19835	11.6001	Si
SLV 6	-4558	-24381	-1632	4.271	1742.4	0.894	69.42228	11.6001	Si
SLV 5	-4541	-24326	-1632	4.277	1741	0.894	69.51539	11.6001	Si
SLV 12	-3850	-23595	1664	4.537	1685.7	0.898	73.40212	11.6001	Si
SLV 11	-3833	-23540	1664	4.544	1684.4	0.898	73.50311	11.6001	Si
SLV 10	-3770	-24349	1578	4.578	1679.5	0.899	74.0069	11.6001	Si
SLV 9	-3753	-24294	1578	4.585	1678.2	0.899	74.10908	11.6001	Si
SLV 4	-5535	-23944	-5321	3.661	1824.4	0.891	59.73317	6.40952	Si
SLV 2	-5511	-24170	-5347	3.666	1822.3	0.891	59.80736	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	44.227	SLU 31	Si
V_SLU	36.763	SLU 31	Si
PF_SLV	1.829	SLV 9	Si
V_SLV	0.758	SLV 12	No
PFFP_SLV	1.758	SLV 3	Si
R_SLV	5.957	SLV 8	Si

Maschio 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.713	5.826	-24.633	5.826	L7	L8	1.92	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 30	12.77	-350.78	-4741	-0.0000163	0.0003743	0.0035	1.92	4157.41	5285.08	5285.08	15.07	No	Si
SLU 30	14.57	-1780.4	-4058	-0.0000279	0.0003743	0.0035	1.92	3607.17	4705.11	4705.11	2.64	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	12.77	-354.08	-5610	-0.0000188	0.0003743	0.0035	1.92	4833.77	6003.3	6003.3	16.95	No	Si
SLU 80	14.57	-1913.54	-4752	-0.0000307	0.0003743	0.0035	1.92	4165.53	5293.4	5293.4	2.77	No	Si
SLU 79	12.77	-370.19	-5666	-0.0000191	0.0003743	0.0035	1.92	4876.23	6050.09	6050.09	16.34	No	Si
SLU 79	14.57	-1926.94	-4747	-0.0000309	0.0003743	0.0035	1.92	4161.45	5289.22	5289.22	2.74	No	Si
SLU 37	12.77	-197.15	-4508	-0.0000143	0.0003743	0.0035	1.92	3971.28	5090.5	5090.5	25.82	No	Si
SLU 37	14.57	-1835.72	-4045	-0.0000287	0.0003743	0.0035	1.92	3596.03	4693.25	4693.25	2.56	No	Si
SLU 28	12.77	-375.05	-4984	-0.0000172	0.0003743	0.0035	1.92	4348.98	5483.17	5483.17	14.62	No	Si
SLU 28	14.57	-1818.15	-4393	-0.0000289	0.0003743	0.0035	1.92	3878.95	4993.27	4993.27	2.75	No	Si
SLU 29	12.77	-366.9	-4797	-0.0000166	0.0003743	0.0035	1.92	4201.56	5330.42	5330.42	14.53	No	Si
SLU 29	14.57	-1793.81	-4053	-0.0000281	0.0003743	0.0035	1.92	3602.97	4700.64	4700.64	2.62	No	Si
SLU 38	12.77	-181.04	-4452	-0.000014	0.0003743	0.0035	1.92	3926.56	5043.45	5043.45	27.86	No	Si
SLU 38	14.57	-1822.32	-4050	-0.0000285	0.0003743	0.0035	1.92	3600.23	4697.72	4697.72	2.58	No	Si
SLU 27	12.77	-391.17	-5040	-0.0000175	0.0003743	0.0035	1.92	4392.66	5528.84	5528.84	14.13	No	Si
SLU 27	14.57	-1831.56	-4388	-0.0000291	0.0003743	0.0035	1.92	3874.82	4988.9	4988.9	2.72	No	Si
SLU 36	12.77	-205.3	-4695	-0.0000149	0.0003743	0.0035	1.92	4120.6	5247.04	5247.04	25.56	No	Si
SLU 36	14.57	-1860.07	-4385	-0.0000294	0.0003743	0.0035	1.92	3872.11	4986.05	4986.05	2.68	No	Si
SLU 35	12.77	-221.42	-4751	-0.0000152	0.0003743	0.0035	1.92	4164.84	5292.7	5292.7	23.9	No	Si
SLU 35	14.57	-1873.48	-4380	-0.0000296	0.0003743	0.0035	1.92	3867.97	4981.68	4981.68	2.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	12.77	815.89	-1112	-0.0000173	0.0005615	0.0035	1.92		1239.85	1239.85	1.52		Si
SLV 16	14.57	-1422.51	-2742	-0.000022	0.0005615	0.0035	1.92		3591.12	3591.12	2.52		Si
SLD 12	12.77	61.75	-972	-0.0000032	0.0005615	0.0035	1.92		1109.35	1109.35	17.97		Si
SLD 12	14.57	-1095.21	-2465	-0.0000168	0.0005615	0.0035	1.92		3339.63	3339.63	3.05		Si
SLV 8	12.77	-9.35	2341	0.1851769	0.0005615	0.0035	1.536		0	0	0		No
SLV 8	14.57	-1220.16	-1778	-0.0000228	0.0005615	0.0035	1.536		2713.89	2713.89	2.22		Si
SLV 3	12.77	-1120.55	-2932	-0.0000179	0.0005615	0.0035	1.92		3762.37	3762.37	3.36		Si
SLV 3	14.57	-482.39	-2457	-0.0000109	0.0005615	0.0035	1.92		3332.59	3332.59	6.91		Si
SLV 11	12.77	622.39	2395	0.1851192	0.0005615	0.0035	1.536		0	0	0		No
SLV 11	14.57	-1545.26	-2015	-0.0000366	0.0005615	0.0035	1.536		2930.42	2930.42	1.9		Si
SLD 11	12.77	76.96	-1120	-0.0000037	0.0005615	0.0035	1.92		1247.38	1247.38	16.21		Si
SLD 11	14.57	-1108.11	-2510	-0.000017	0.0005615	0.0035	1.92		3380.74	3380.74	3.05		Si
SLV 12	12.77	587.6	2732	0.2121238	0.0005615	0.0035	1.536		0	0	0		No
SLV 12	14.57	-1515.77	-1912	-0.0000397	0.0005615	0.0035	1.536		2836.07	2836.07	1.87		Si
SLV 4	12.77	-1173.94	-2415	-0.000018	0.0005615	0.0035	1.92		3294.39	3294.39	2.81		Si
SLV 4	14.57	-437.13	-2298	-0.0000101	0.0005615	0.0035	1.92		3188.39	3188.39	7.29		Si
SLV 15	12.77	869.28	-1629	-0.0000134	0.0005615	0.0035	1.92		1720.93	1720.93	1.98		Si
SLV 15	14.57	-1467.76	-2901	-0.0000226	0.0005615	0.0035	1.92		3733.98	3733.98	2.54		Si
SLV 7	12.77	25.44	2004	0.1583135	0.0005615	0.0035	1.536		0	0	0		No
SLV 7	14.57	-1249.64	-1882	-0.0000224	0.0005615	0.0035	1.536		2808.63	2808.63	2.25		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	12.77	-78.75	-3955	-3293	1543	1.92	1.92	-6125	7761	4172	35683	16098	4896	20994	No	13.61	Si
SLU 42	14.57	-1434.42	-3612	-3008	1553	1.92	1.6887	-6389	7796	3686	35683	16098	4896	20994	No	13.52	Si
SLU 79	12.77	-370.19	-5666	-4718	1638	1.92	1.92	-8776	8115	4362	35683	16098	4896	20994	No	12.82	Si
SLU 79	14.57	-1926.94	-4747	-3952	1635	1.92	1.6621	-8544	8084	3762	35683	16098	4896	20994	No	12.84	Si
SLU 84	12.77	-251.79	-5112	-4257	1538	1.92	1.92	-7919	8000	4301	35683	16098	4896	20994	No	13.65	Si
SLU 84	14.57	-1525.64	-4314	-3592	1548	1.92	1.819	-7086	7889	4018	35683	16098	4896	20994	No	13.56	Si
SLU 36	12.77	-205.3	-4695	-3910	1726	1.92	1.92	-7273	7914	4255	35683	16098	4896	20994	No	12.16	Si
SLU 36	14.57	-1860.07	-4385	-3651	1735	1.92	1.6073	-8159	8032	3615	35683	16098	4896	20994	No	12.1	Si
SLU 78	12.77	-378.34	-5853	-4874	1722	1.92	1.92	-9066	8153	4383	35683	16098	4896	20994	No	12.19	Si
SLU 78	14.57	-1951.29	-5086	-4236	1731	1.92	1.7291	-8793	8117	3930	35683	16098	4896	20994	No	12.13	Si
SLU 77	12.77	-394.46	-5909	-4920	1694	1.92	1.92	-9152	8165	4389	35683	16098	4896	20994	No	12.39	Si
SLU 77	14.57	-1964.7	-5081	-4231	1692	1.92	1.72	-8829	8122	3911	35683	16098	4896	20994	No	12.41	Si
SLU 37	12.77	-197.15	-4508	-3754	1642	1.92	1.92	-6983	7875	4234	35683	16098	4896	20994	No	12.78	Si
SLU 37	14.57	-1835.72	-4045	-3368	1640	1.92	1.5184	-7964	8006	3404	35683	16098	4896	20994	No	12.81	Si
SLU 38	12.77	-181.04	-4452	-3708	1670	1.92	1.92	-6897	7864	4228	35683	16098	4896	20994	No	12.57	Si
SLU 38	14.57	-1822.32	-4050	-3372	1679	1.92	1.5301	-7913	8000	3427	35683	16098	4896	20994	No	12.51	Si
SLU 80	12.77	-354.08	-5610	-4672	1665	1.92	1.92	-8690	8103	4356	35683	16098	4896	20994	No	12.61	Si
SLU 80	14.57	-1913.54	-4752	-3957	1674	1.92	1.6718	-8503	8078	3782	35683	16098	4896	20994	No	12.54	Si
SLU 35	12.77	-221.42	-4751	-3956	1699	1.92	1.92	-7359	7926	4261	35683	16098	4896	20994	No	12.36	Si
SLU 35	14.57	-1873.48	-4380	-3647	1696	1.92	1.5967	-8204	8038	3594	35683	16098	4896	20994	No	12.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.77	-1285.56	-10539	-8776	-3136	1.92	1.92	-16325	13682	7355	35683	24147	4896	29043		9.26	Si
SLV 5	14.57	-20.34	-3890	-3239	-3389	1.92	1.92	-6025	11622	6248	35683	24147	4896	29043		8.57	Si
SLV 12	12.77	587.6	2732	2275	4468	1.536	1.92	0	0	0	35683	19318	3917	23234		5.2	Si
SLV 12	14.57	-1515.77	-1912	-1592	4721	1.536	0.5012	0	0	0	35683	19318	3917	23234		4.92	Si
SLV 15	12.77	869.28	-1629	-1356	2433	1.92	1.279	-2523	10921	3911	35683	24147	4896	29043		11.94	Si
SLV 15	14.57	-1467.76	-2901	-2415	3386	1.92	1.3619	-6349	11687	4457	35683	24147	4896	29043		8.58	Si
SLV 7	12.77	25.44	2004	1669	3913	1.536	1.92	0	0	0	35683	19318	3917	23234		5.94	Si
SLV 7	14.57	-1249.64	-1882	-1567	3587	1.536	0.8876	0	0	0	35683	19318	3917	23234		6.48	Si
SLV 6	12.77	-1320.35	-10202	-8496	-3047	1.92	1.92	-15803	13577	7299	35683	24147	4896	29043		9.53	Si
SLV 6	14.57	9.15	-3787	-3153	-3300	1.92	1.92	-5865	11590	6231	35683	24147	4896	29043		8.8	Si
SLV 9	12.77	-688.61	-10148	-8451	-2669	1.92	1.92	-15719	13561	7290	35683	24147	4896	29043		10.88	Si
SLV 9	14.57	-315.95	-4023	-3350	-2344	1.92	1.92	-6232	11663	6270	35683	24147	4896	29043		12.39	Si
SLV 16	12.77	815.89	-1112	-926	2569	1.92	0.6781	-1722	10761	2043	35683	24147	4896	29043		11.3	Si
SLV 16	14.57	-1422.51	-2742	-2283	3522	1.92	1.3237	-6175	11652	4319	35683	24147	4896	29043		8.25	Si
SLV 10	12.77	-723.4	-9811	-8170	-2580	1.92	1.92	-15197	13456	7234	35683	24147	4896	29043		11.25	Si
SLV 10	14.57	-286.46	-3920	-3264	-2255	1.92	1.92	-6072	11631	6253	35683	24147	4896	29043		12.88	Si
SLV 11	12.77	622.39	2395	1995	4380	1.536	1.92	0	0	0	35683	19318	3917	23234		5.31	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	14.57	-1545.26	-2015	-1678	4632	1.536	0.5791	0	0	0	35683	19318	3917	23234		5.02	Si
SLV 8	12.77	-9.35	2341	1950	4002	1.536	1.92	0	0	0	35683	19318	3917	23234		5.81	Si
SLV 8	14.57	-1220.16	-1778	-1481	3676	1.536	0.8217	0	0	0	35683	19318	3917	23234		6.32	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.53	0	867	216.74	0	0	No, Trazione
SLV 11	179667	0.53	0	625	216.74	0	0	No, Trazione
SLV 8	179667	0.53	0	619	216.74	0	0	No, Trazione
SLV 7	179667	0.53	0	377	216.74	0	0	No, Trazione
SLV 16	179667	0.53	3238	-1741	216.74	238.51	1.1	Si
SLV 15	179667	0.53	3928	-2112	216.74	288.03	1.33	Si
SLV 4	179667	0.53	4776	-2567	216.74	348.2	1.61	Si
SLV 3	179667	0.53	5466	-2939	216.74	396.67	1.83	Si
SLV 14	179667	0.53	7959	-4279	216.74	567.8	2.62	Si
SLV 13	179667	0.53	8649	-4650	216.74	614.11	2.83	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-2793	-11127	-419	2.458	535.3	0.897	39.80973	11.6001	Si
SLV 6	-2760	-10671	-418	2.477	532.1	0.897	40.12575	11.6001	Si
SLV 9	-2571	-10799	-258	2.628	513.7	0.895	42.66722	11.6001	Si
SLV 10	-2538	-10343	-257	2.65	510.5	0.895	43.02328	11.6001	Si
SLV 7	-1865	2383	261	3.165	446.6	0.89	51.68337	11.6001	Si, Trazione
SLV 8	-1833	2839	262	3.195	443.5	0.89	52.18878	11.6001	Si, Trazione
SLV 11	-1643	2712	422	3.332	426	0.889	54.47827	11.6001	Si, Trazione
SLV 12	-1610	3167	423	3.367	423	0.889	55.0422	11.6001	Si, Trazione
SLV 1	-2737	-6904	-369	2.502	529.8	0.897	40.54071	6.40952	Si
SLV 2	-2686	-6205	-368	2.531	524.9	0.896	41.0429	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.557	SLU 37	Si
V_SLU	12.097	SLU 36	Si
PF_SLV	0	SLV 7	No
V_SLV	4.922	SLV 12	Si
PFFP_SLV	0	SLV 12	No
R_SLV	3.432	SLV 5	Si

Maschio 166

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	5.826	-21.813	5.826	L7	L8	2.2	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	12.77	-58.14	-6091	-0.0000152	0.0003743	0.0035	2.2	6049.06	7511.73	7511.73	129.21	No	Si
SLU 43	14.57	1695.72	-4496	-0.0000222	0.0003743	0.0035	2.2	4590.97	4940.53	4940.53	2.91	No	Si
SLU 61	12.77	-95.15	-5719	-0.0000146	0.0003743	0.0035	2.2	5717.74	7158.71	7158.71	75.24	No	Si
SLU 61	14.57	1666.27	-4219	-0.0000213	0.0003743	0.0035	2.2	4328.47	4665.88	4665.88	2.8	No	Si
SLU 81	12.77	-23.54	-6354	-0.0000157	0.0003743	0.0035	2.2	6281.64	7764.72	7764.72	329.9	No	Si
SLU 81	14.57	1677.76	-4904	-0.0000231	0.0003743	0.0035	2.2	4972.54	5339.16	5339.16	3.18	No	Si
SLU 44	12.77	-61.62	-6033	-0.0000151	0.0003743	0.0035	2.2	5998.39	7457.19	7457.19	121.01	No	Si
SLU 44	14.57	1654.33	-4481	-0.0000219	0.0003743	0.0035	2.2	4577.29	4926.11	4926.11	2.98	No	Si
SLU 19	12.77	-63.4	-4472	-0.0000113	0.0003743	0.0035	2.2	4568.83	5953.77	5953.77	93.91	No	Si
SLU 19	14.57	1271.43	-3360	-0.0000165	0.0003743	0.0035	2.2	3497.65	3806.57	3806.57	2.99	No	Si
SLU 1	12.77	-26.39	-4843	-0.0000119	0.0003743	0.0035	2.2	4916.38	6324.53	6324.53	239.69	No	Si
SLU 1	14.57	1300.88	-3637	-0.0000174	0.0003743	0.0035	2.2	3768.5	4085	4085	3.14	No	Si
SLU 60	12.77	-93.06	-5754	-0.0000146	0.0003743	0.0035	2.2	5748.53	7191.16	7191.16	77.28	No	Si
SLU 60	14.57	1691.1	-4227	-0.0000215	0.0003743	0.0035	2.2	4336.76	4674.48	4674.48	2.76	No	Si
SLU 10	12.77	-54.32	-4551	-0.0000114	0.0003743	0.0035	2.2	4642.48	6031.62	6031.62	111.04	No	Si
SLU 10	14.57	1256.26	-3434	-0.0000166	0.0003743	0.0035	2.2	3570.94	3881.76	3881.76	3.09	No	Si
SLU 52	12.77	-86.07	-5798	-0.0000147	0.0003743	0.0035	2.2	5787.97	7232.83	7232.83	84.04	No	Si
SLU 52	14.57	1651.1	-4293	-0.0000214	0.0003743	0.0035	2.2	4399.51	4739.77	4739.77	2.87	No	Si
SLU 18	12.77	-61.3	-4507	-0.0000113	0.0003743	0.0035	2.2	4601.12	5987.86	5987.86	97.67	No	Si
SLU 18	14.57	1296.26	-3368	-0.0000167	0.0003743	0.0035	2.2	3506.2	3815.34	3815.34	2.94	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	12.77	921.51	-412	-0.0014322	0.0005615	0.0035	1.76		724.03	724.03	0.79		No
SLV 12	14.57	295.64	-2270	-0.0000074	0.0005615	0.0035	2.2		2712.1	2712.1	9.17		Si
SLV 10	12.77	-37.44	-8157	-0.0000201	0.0005615	0.0035	2.2		9652.37	9652.37	257.81		Si
SLV 10	14.57	2595.66	-4252	-0.0000309	0.0005615	0.0035	2.2		4769.94	4769.94	1.84		Si
SLV 9	12.77	-50.13	-8511	-0.000021	0.0005615	0.0035	2.2		9994.08	9994.08	199.36		Si
SLV 9	14.57	2495.19	-4373	-0.0000294	0.0005615	0.0035	2.2		4893.31	4893.31	1.96		Si
SLV 13	12.77	1330.23	-4760	-0.0000202	0.0005615	0.0035	2.2		5287.72	5287.72	3.98		Si
SLV 13	14.57	1894.95	-2650	-0.0000244	0.0005615	0.0035	2.2		3110.37	3110.37	1.64		Si
SLV 11	12.77	908.82	-766	-0.0002503	0.0005615	0.0035	1.76		1106.49	1106.49	1.22		Si
SLV 11	14.57	195.17	-2391	-0.000007	0.0005615	0.0035	2.2		2838.57	2838.57	14.54		Si
SLV 16	12.77	1637.39	-1893	-0.0000286	0.0005615	0.0035	2.2		2311.87	2311.87	1.41		Si
SLV 16	14.57	1359.15	-1871	-0.0000177	0.0005615	0.0035	2.2		2287.68	2287.68	1.68		Si
SLV 14	12.77	1349.71	-4217	-0.000019	0.0005615	0.0035	2.2		4733.54	4733.54	3.51		Si
SLV 14	14.57	2049.16	-2465	-0.0000327	0.0005615	0.0035	2.2		2916.71	2916.71	1.42		Si
SLV 6	12.77	-935.83	-9129	-0.0000285	0.0005615	0.0035	2.2		10577.65	10577.65	11.3		Si
SLV 6	14.57	2397.12	-5162	-0.0000289	0.0005615	0.0035	2.2		5692.9	5692.9	2.37		Si
SLV 15	12.77	1617.92	-2437	-0.0000197	0.0005615	0.0035	2.2		2886.83	2886.83	1.78		Si
SLV 15	14.57	1204.94	-2055	-0.0000141	0.0005615	0.0035	2.2		2484.07	2484.07	2.06		Si
SLD 14	12.77	566.84	-4653	-0.0000149	0.0005615	0.0035	2.2		5179.4	5179.4	9.14		Si
SLD 14	14.57	1623.67	-3221	-0.0000191	0.0005615	0.0035	2.2		3706.8	3706.8	2.28		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	12.77	138.58	-7735	-6441	-1790	2.2	2.2	-10456	8339	5137	35683	18446	5610	24056	No	13.44	Si
SLU 74	14.57	1739.17	-6393	-5323	-1792	2.2	2.2	-8642	8097	4988	35683	18446	5610	24056	No	13.42	Si
SLU 75	12.77	136.49	-7701	-6413	-1794	2.2	2.2	-10410	8332	5133	35683	18446	5610	24056	No	13.41	Si
SLU 75	14.57	1714.34	-6384	-5316	-1794	2.2	2.2	-8630	8095	4987	35683	18446	5610	24056	No	13.41	Si
SLU 82	12.77	-25.63	-6320	-5263	-1782	2.2	2.2	-8543	8084	4980	35683	18446	5610	24056	No	13.5	Si
SLU 82	14.57	1652.93	-4895	-4076	-1781	2.2	2.2	-6617	7827	4821	35683	18446	5610	24056	No	13.51	Si
SLU 81	12.77	-23.54	-6354	-5291	-1778	2.2	2.2	-8590	8090	4983	35683	18446	5610	24056	No	13.53	Si
SLU 81	14.57	1677.76	-4904	-4084	-1779	2.2	2.2	-6629	7828	4822	35683	18446	5610	24056	No	13.52	Si
SLU 78	12.77	240.59	-8751	-7287	-1769	2.2	2.2	-11829	8522	5249	35683	18446	5610	24056	No	13.6	Si
SLU 78	14.57	1656.48	-7538	-6277	-1770	2.2	2.2	-10189	8303	5115	35683	18446	5610	24056	No	13.59	Si
SLU 73	12.77	-16.55	-6398	-5328	-1767	2.2	2.2	-8649	8098	4988	35683	18446	5610	24056	No	13.61	Si
SLU 73	14.57	1637.76	-4970	-4139	-1764	2.2	2.2	-6718	7840	4830	35683	18446	5610	24056	No	13.64	Si
SLU 77	12.77	242.68	-8785	-7315	-1766	2.2	2.2	-11876	8528	5253	35683	18446	5610	24056	No	13.62	Si
SLU 77	14.57	1681.32	-7546	-6284	-1769	2.2	2.2	-10201	8305	5116	35683	18446	5610	24056	No	13.6	Si
SLU 54	12.77	66.97	-7100	-5912	-1774	2.2	2.2	-9598	8224	5066	35683	18446	5610	24056	No	13.56	Si
SLU 54	14.57	1727.68	-5708	-4753	-1773	2.2	2.2	-7716	7973	4912	35683	18446	5610	24056	No	13.57	Si
SLU 53	12.77	69.06	-7134	-5941	-1771	2.2	2.2	-9644	8230	5070	35683	18446	5610	24056	No	13.59	Si
SLU 53	14.57	1752.51	-5716	-4760	-1772	2.2	2.2	-7727	7975	4913	35683	18446	5610	24056	No	13.58	Si
SLU 61	12.77	-95.15	-5719	-4763	-1762	2.2	2.2	-7732	7975	4913	35683	18446	5610	24056	No	13.65	Si
SLU 61	14.57	1666.27	-4219	-3513	-1760	2.2	2.1151	-5703	7705	4563	35683	18446	5610	24056	No	13.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	12.77	10.43	-1738	-1448	-1750	2.2	2.2	-2350	10887	6706	35683	27669	5610	33279		19.02	Si
SLV 7	14.57	-3.38	-3300	-2748	-2348	2.2	2.2	-4461	11309	6966	35683	27669	5610	33279		14.17	Si
SLV 16	12.77	1637.39	-1893	-1577	-2982	2.2	0.7056	-8009	12018	2375	35683	27669	5610	33279		11.16	Si
SLV 16	14.57	1359.15	-1871	-1558	-932	2.2	1.1203	-2529	10922	3426	35683	27669	5610	33279		35.69	Si
SLV 13	12.77	1330.23	-4760	-3964	-2157	2.2	2.2	-6435	11704	7210	35683	27669	5610	33279		15.43	Si
SLV 13	14.57	1894.95	-2650	-2207	-117	2.2	1.1549	-3582	11133	3600	35683	27669	5610	33279		285.3	Si
SLV 14	12.77	1349.71	-4217	-3511	-2451	2.2	2.2	-5700	11557	7119	35683	27669	5610	33279		13.58	Si
SLV 14	14.57	2049.16	-2465	-2053	-410	2.2	0.8063	-3332	11083	2502	35683	27669	5610	33279		81.07	Si
SLV 4	12.77	-1357.25	-5135	-4276	-505	2.2	2.2	-6942	11805	7272	35683	27669	5610	33279		65.89	Si
SLV 4	14.57	697.34	-4903	-4082	-2547	2.2	2.2	-6627	11742	7233	35683	27669	5610	33279		13.07	Si
SLV 15	12.77	1617.92	-2437	-2029	-2688	2.2	1.3081	-3294	11075	4057	35683	27669	5610	33279		12.38	Si
SLV 15	14.57	1204.94	-2055	-1712	-639	2.2	1.5414	-2779	10972	4736	35683	27669	5610	33279		52.11	Si
SLV 11	12.77	908.82	-766	-638	-2493	1.76	0	0	0	0	35683	22135	4488	26623		10.68	Si
SLV 11	14.57	195.17	-2391	-1991	-1864	2.2	2.2	-3232	11063	6815	35683	27669	5610	33279		17.86	Si
SLV 12	12.77	921.51	-412	-343	-2684	1.76	0	0	0	0	35683	22135	4488	26623		9.92	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	14.57	295.64	-2270	-1890	-2055	2.2	2.2	-3069	11030	6795	35683	27669	5610	33279		16.19	Si
SLV 8	12.77	23.12	-1384	-1153	-1941	2.2	2.2	-1871	10791	6647	35683	27669	5610	33279		17.14	Si
SLV 8	14.57	97.1	-3180	-2648	-2539	2.2	2.2	-4299	11276	6946	35683	27669	5610	33279		13.11	Si
SLV 3	12.77	-1376.72	-5678	-4729	-211	2.2	2.2	-7676	11952	7362	35683	27669	5610	33279		157.52	Si
SLV 3	14.57	543.13	-5087	-4236	-2253	2.2	2.2	-6877	11792	7264	35683	27669	5610	33279		14.77	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	0	-1511	248.36	0	0	No, e>t/2
SLV 12	179667	0.53	0	-1248	248.36	0	0	No, e>t/2
SLV 16	179667	0.53	3131	-1929	248.36	264.51	1.07	Si
SLV 8	179667	0.53	3615	-2227	248.36	304.42	1.23	Si
SLV 15	179667	0.53	3786	-2332	248.36	318.38	1.28	Si
SLV 7	179667	0.53	4042	-2490	248.36	339.35	1.37	Si
SLV 14	179667	0.53	5765	-3551	248.36	478.42	1.93	Si
SLV 13	179667	0.53	6419	-3954	248.36	530.35	2.14	Si
SLV 4	179667	0.53	8428	-5192	248.36	686.74	2.77	Si
SLV 3	179667	0.53	9083	-5595	248.36	736.7	2.97	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-3482	-1084	619	2.302	640.7	0.9	37.18105	11.6001	Si
SLV 8	-3384	-740	615	2.346	631.2	0.899	37.92163	11.6001	Si
SLV 5	-3003	-11219	-461	2.563	594.1	0.896	41.57585	11.6001	Si
SLV 6	-2905	-10875	-466	2.614	584.7	0.895	42.45142	11.6001	Si
SLV 11	-2880	197	455	2.631	582.2	0.895	42.73334	11.6001	Si, Trazione
SLV 12	-2782	541	450	2.688	572.9	0.894	43.68912	11.6001	Si, Trazione
SLV 9	-2401	-9937	-626	2.888	536.5	0.891	47.09477	11.6001	Si
SLV 10	-2303	-9593	-630	2.955	527.3	0.891	48.22155	11.6001	Si
SLV 3	-4043	-6218	434	2.115	695.9	0.905	33.98728	6.40952	Si
SLV 4	-3893	-5691	427	2.172	681.1	0.903	34.93681	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.764	SLU 60	Si
V_SLU	13.407	SLU 75	Si
PF_SLV	0.786	SLV 12	No
V_SLV	9.918	SLV 12	Si
PFFP_SLV	0	SLV 11	No
R_SLV	3.205	SLV 7	Si

Maschio 167

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.493	-3.314	-24.633	-3.314	L7	L8	2.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 77	12.77	-194.34	-6601	-0.000018	0.0003743	0.0035	2.14	6298.95	7778.61	7778.61	40.02	No	Si
SLU 77	14.57	-2147.89	-5628	-0.0000294	0.0003743	0.0035	2.14	5466.64	6877.41	6877.41	3.2	No	Si
SLU 38	12.77	-100.96	-5287	-0.0000139	0.0003743	0.0035	2.14	5166.5	6564.94	6564.94	65.03	No	Si
SLU 38	14.57	-1895.24	-4552	-0.0000249	0.0003743	0.0035	2.14	4507.59	5872.36	5872.36	3.1	No	Si
SLU 36	12.77	-128.56	-5531	-0.0000147	0.0003743	0.0035	2.14	5381.47	6788.01	6788.01	52.8	No	Si
SLU 36	14.57	-1942.32	-4869	-0.000026	0.0003743	0.0035	2.14	4793.59	6176.91	6176.91	3.18	No	Si
SLU 79	12.77	-166.74	-6357	-0.0000171	0.0003743	0.0035	2.14	6093.15	7553.38	7553.38	45.3	No	Si
SLU 79	14.57	-2100.8	-5312	-0.0000283	0.0003743	0.0035	2.14	5189.07	6588.23	6588.23	3.14	No	Si
SLU 71	12.77	-325.45	-6429	-0.0000185	0.0003743	0.0035	2.14	6154.3	7621.16	7621.16	23.42	No	Si
SLU 71	14.57	-2045.13	-5269	-0.0000277	0.0003743	0.0035	2.14	5151.13	6549.07	6549.07	3.2	No	Si
SLU 37	12.77	-90.55	-5224	-0.0000137	0.0003743	0.0035	2.14	5111.33	6507.93	6507.93	71.87	No	Si
SLU 37	14.57	-1906.38	-4555	-0.000025	0.0003743	0.0035	2.14	4509.7	5874.6	5874.6	3.08	No	Si
SLU 80	12.77	-177.14	-6419	-0.0000174	0.0003743	0.0035	2.14	6145.84	7611.77	7611.77	42.97	No	Si
SLU 80	14.57	-2089.65	-5310	-0.0000282	0.0003743	0.0035	2.14	5187.03	6586.12	6586.12	3.15	No	Si
SLU 30	12.77	-259.67	-5359	-0.0000152	0.0003743	0.0035	2.14	5230.36	6630.83	6630.83	25.54	No	Si
SLU 30	14.57	-1839.56	-4510	-0.0000243	0.0003743	0.0035	2.14	4468.51	5830.79	5830.79	3.17	No	Si
SLU 29	12.77	-249.26	-5297	-0.000015	0.0003743	0.0035	2.14	5175.35	6574.07	6574.07	26.37	No	Si
SLU 29	14.57	-1850.71	-4512	-0.0000244	0.0003743	0.0035	2.14	4470.62	5833.03	5833.03	3.15	No	Si
SLU 35	12.77	-118.16	-5469	-0.0000145	0.0003743	0.0035	2.14	5326.83	6730.98	6730.98	56.97	No	Si
SLU 35	14.57	-1953.47	-4871	-0.0000261	0.0003743	0.0035	2.14	4795.67	6179.09	6179.09	3.16	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	12.77	901.31	3042	0.211184	0.0005615	0.0035	1.712		0	0	0		No
SLV 9	14.57	-2321.82	-2206	-0.0001159	0.0005615	0.0035	1.712		3599.05	3599.05	1.55		Si
SLV 6	12.77	1081.76	2494	0.1707316	0.0005615	0.0035	1.712		0	0	0		No
SLV 6	14.57	-2509.93	-2927	-0.0000487	0.0005615	0.0035	1.712		4329.6	4329.6	1.72		Si
SLV 13	12.77	-34.63	-1534	-0.000004	0.0005615	0.0035	2.14		2911.04	2911.04	84.06		Si
SLV 13	14.57	-1153.7	-1902	-0.0000144	0.0005615	0.0035	1.712		3287.7	3287.7	2.85		Si
SLD 6	12.77	395.22	-1268	-0.0000058	0.0005615	0.0035	2.14		1587.96	1587.96	4.02		Si
SLD 6	14.57	-1667.38	-3064	-0.0000206	0.0005615	0.0035	2.14		4467.71	4467.71	2.68		Si
SLV 14	12.77	90.16	-2040	-0.0000056	0.0005615	0.0035	2.14		2387.9	2387.9	26.49		Si
SLV 14	14.57	-1223.28	-2086	-0.0000152	0.0005615	0.0035	1.712		3475.68	3475.68	2.84		Si
SLV 5	12.77	1000.45	2824	0.1949661	0.0005615	0.0035	1.712		0	0	0		No
SLV 5	14.57	-2464.59	-2807	-0.0000513	0.0005615	0.0035	1.712		4208.44	4208.44	1.71		Si
SLV 10	12.77	982.62	2712	0.1870485	0.0005615	0.0035	1.712		0	0	0		No
SLV 10	14.57	-2367.15	-2326	-0.0000988	0.0005615	0.0035	1.712		3720.88	3720.88	1.57		Si
SLD 9	12.77	316.91	-1031	-0.0000047	0.0005615	0.0035	2.14		1340.35	1340.35	4.23		Si
SLD 9	14.57	-1586.4	-2755	-0.0000197	0.0005615	0.0035	2.14		4155.42	4155.42	2.62		Si
SLD 5	12.77	359.65	-1124	-0.0000052	0.0005615	0.0035	2.14		1437.47	1437.47	4		Si
SLD 5	14.57	-1647.55	-3012	-0.0000203	0.0005615	0.0035	2.14		4415.07	4415.07	2.68		Si
SLD 10	12.77	352.48	-1175	-0.0000053	0.0005615	0.0035	2.14		1491.16	1491.16	4.23		Si
SLD 10	14.57	-1606.23	-2807	-0.0000199	0.0005615	0.0035	2.14		4208.58	4208.58	2.62		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	12.77	-56.54	-5942	-4948	1868	2.14	2.14	-8258	8046	4821	35683	17943	5457	23399	No	12.53	Si
SLU 83	14.57	-1777.17	-4818	-4012	1866	2.14	2.1034	-6696	7837	4616	35683	17943	5457	23399	No	12.54	Si
SLU 70	12.77	-363.46	-6736	-5609	1849	2.14	2.14	-9361	8193	4909	35683	17943	5457	23399	No	12.65	Si
SLU 70	14.57	-2081.07	-5583	-4649	1846	2.14	2.0917	-7982	8009	4691	35683	17943	5457	23399	No	12.67	Si
SLU 69	12.77	-353.05	-6674	-5557	1900	2.14	2.14	-9274	8181	4902	35683	17943	5457	23399	No	12.32	Si
SLU 69	14.57	-2092.21	-5585	-4651	1897	2.14	2.0862	-8006	8012	4680	35683	17943	5457	23399	No	12.34	Si
SLU 77	12.77	-194.34	-6601	-5497	2087	2.14	2.14	-9174	8168	4894	35683	17943	5457	23399	No	11.21	Si
SLU 77	14.57	-2147.89	-5628	-4687	2084	2.14	2.0651	-8151	8031	4644	35683	17943	5457	23399	No	11.23	Si
SLU 56	12.77	-235.9	-6250	-5204	1856	2.14	2.14	-8685	8102	4855	35683	17943	5457	23399	No	12.61	Si
SLU 56	14.57	-1910.98	-5179	-4313	1853	2.14	2.1031	-7198	7904	4654	35683	17943	5457	23399	No	12.63	Si
SLU 71	12.77	-325.45	-6429	-5354	1846	2.14	2.14	-8935	8136	4875	35683	17943	5457	23399	No	12.67	Si
SLU 71	14.57	-2045.13	-5269	-4388	1843	2.14	2.0456	-7701	7971	4566	35683	17943	5457	23399	No	12.7	Si
SLU 79	12.77	-166.74	-6357	-5294	2034	2.14	2.14	-8834	8122	4867	35683	17943	5457	23399	No	11.5	Si
SLU 79	14.57	-2100.8	-5312	-4424	2031	2.14	2.0236	-7848	7991	4528	35683	17943	5457	23399	No	11.52	Si
SLU 35	12.77	-118.16	-5469	-4554	1890	2.14	2.14	-7600	7958	4768	35683	17943	5457	23399	No	12.38	Si
SLU 35	14.57	-1953.47	-4871	-4056	1887	2.14	2.0068	-7252	7911	4446	35683	17943	5457	23399	No	12.4	Si
SLU 80	12.77	-177.14	-6419	-5345	1984	2.14	2.14	-8921	8134	4874	35683	17943	5457	23399	No	11.8	Si
SLU 80	14.57	-2089.65	-5310	-4422	1980	2.14	2.0294	-7822	7987	4539	35683	17943	5457	23399	No	11.82	Si
SLU 78	12.77	-204.75	-6664	-5549	2037	2.14	2.14	-9260	8179	4901	35683	17943	5457	23399	No	11.49	Si
SLU 78	14.57	-2136.74	-5626	-4685	2034	2.14	2.0706	-8126	8028	4654	35683	17943	5457	23399	No	11.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	12.77	295.82	-2259	-1881	3864	2.14	2.14	-3139	11045	6618	35683	26914	5457	32371		8.38	Si
SLV 1	14.57	-1629.62	-3904	-3251	2410	2.14	1.9578	-5943	11605	6362	35683	26914	5457	32371		13.43	Si
SLV 6	12.77	1081.76	2494	2077	6601	1.712	1.9089	0	0	0	35683	21531	4366	25897		3.92	Si
SLV 6	14.57	-2509.93	-2927	-2437	6119	1.712	0.6375	0	0	0	35683	21531	4366	25897		4.23	Si
SLV 9	12.77	901.31	3042	2533	5928	1.712	2.14	0	0	0	35683	21531	4366	25897		4.37	Si
SLV 9	14.57	-2321.82	-2206	-1837	6308	1.712	0.0531	0	0	0	35683	21531	4366	25897		4.11	Si
SLV 12	12.77	-1298.93	-11339	-9442	-4568	2.14	2.14	-15757	13568	8130	35683	26914	5457	32371		7.09	Si
SLV 12	14.57	459.77	-3550	-2956	-4087	2.14	2.14	-4933	11403	6833	35683	26914	5457	32371		7.92	Si
SLV 5	12.77	1000.45	2824	2352	6655	1.712	2.14	0	0	0	35683	21531	4366	25897		3.89	Si
SLV 5	14.57	-2464.59	-2807	-2338	6173	1.712	0.5761	0	0	0	35683	21531	4366	25897		4.2	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	12.77	982.62	2712	2258	5873	1.712	2.1229	0	0	0	35683	21531	4366	25897		4.41	Si
SLV 10	14.57	-2367.15	-2326	-1937	6254	1.712	0.1572	0	0	0	35683	21531	4366	25897		4.14	Si
SLV 8	12.77	-1199.8	-11556	-9623	-3840	2.14	2.14	-16060	13629	8166	35683	26914	5457	32371		8.43	Si
SLV 8	14.57	316.99	-4151	-3456	-4222	2.14	2.14	-5768	11570	6933	35683	26914	5457	32371		7.67	Si
SLV 2	12.77	420.61	-2765	-2303	3780	2.14	2.14	-3843	11185	6702	35683	26914	5457	32371		8.56	Si
SLV 2	14.57	-1699.2	-4088	-3404	2327	2.14	1.9631	-6207	11658	6408	35683	26914	5457	32371		13.91	Si
SLV 11	12.77	-1380.24	-11009	-9167	-4513	2.14	2.14	-15299	13476	8075	35683	26914	5457	32371		7.17	Si
SLV 11	14.57	505.11	-3430	-2856	-4033	2.14	2.14	-4767	11370	6813	35683	26914	5457	32371		8.03	Si
SLV 7	12.77	-1281.11	-11226	-9348	-3786	2.14	2.14	-15601	13537	8111	35683	26914	5457	32371		8.55	Si
SLV 7	14.57	362.33	-4031	-3357	-4168	2.14	2.14	-5602	11537	6913	35683	26914	5457	32371		7.77	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.53	0	534	241.58	0	0	No, Trazione
SLV 5	179667	0.53	0	661	241.58	0	0	No, Trazione
SLV 9	179667	0.53	0	778	241.58	0	0	No, Trazione
SLV 6	179667	0.53	0	417	241.58	0	0	No, Trazione
SLV 13	179667	0.53	3514	-2106	241.58	288.04	1.19	Si
SLV 14	179667	0.53	4139	-2480	241.58	337.81	1.4	Si
SLV 1	179667	0.53	4162	-2494	241.58	339.66	1.41	Si
SLV 2	179667	0.53	4787	-2868	241.58	388.99	1.61	Si
SLV 15	179667	0.53	7927	-4750	241.58	630.47	2.61	Si
SLV 16	179667	0.53	8552	-5124	241.58	677.21	2.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2985	-12137	450	2.528	584.1	0.896	40.99067	11.6001	Si
SLV 7	-2947	-11665	449	2.548	580.5	0.896	41.33081	11.6001	Si
SLV 12	-2512	-11379	271	2.849	538.6	0.893	46.39206	11.6001	Si
SLV 11	-2474	-10907	271	2.874	535	0.892	46.81707	11.6001	Si
SLV 6	-2306	1552	-273	2.992	519.1	0.891	48.79954	11.6001	Si, Trazione
SLV 5	-2269	2025	-273	3.02	515.6	0.891	49.26496	11.6001	Si, Trazione
SLV 10	-1833	2310	-452	3.336	475	0.889	54.53418	11.6001	Si, Trazione
SLV 9	-1796	2783	-452	3.371	471.6	0.889	55.11327	11.6001	Si, Trazione
SLV 4	-3309	-8356	405	2.376	615.7	0.899	38.40811	6.40952	Si
SLV 3	-3252	-7631	405	2.403	610.1	0.899	38.86879	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.082	SLU 37	Si
V_SLU	11.21	SLU 77	Si
PF_SLV	0	SLV 5	No
V_SLV	3.891	SLV 5	Si
PFFP_SLV	0	SLV 10	No
R_SLV	3.534	SLV 8	Si

Maschio 168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.593	-3.314	L7	L8	2.28	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 29	13.87	134.87	-6850	-0.000017	0.0003743	0.0035	2.28	6986.41	7487.91	7487.91	55.52	No	Si
SLU 29	14.67	181.83	-5461	-0.0000139	0.0003743	0.0035	2.28	5702.24	6122.37	6122.37	33.67	No	Si
SLU 68	13.87	52.47	-7316	-0.0000176	0.0003743	0.0035	2.28	7401.09	7866.48	7866.48	149.93	No	Si
SLU 68	14.67	170.43	-5620	-0.0000142	0.0003743	0.0035	2.28	5853.12	6281.4	6281.4	36.86	No	Si
SLU 26	13.87	63.26	-6114	-0.0000148	0.0003743	0.0035	2.28	6314.61	6771.34	6771.34	107.03	No	Si
SLU 26	14.67	150.46	-4769	-0.0000121	0.0003743	0.0035	2.28	5038.2	5424.96	5424.96	36.06	No	Si
SLU 8	13.87	120.01	-6226	-0.0000154	0.0003743	0.0035	2.28	6417.68	6881.45	6881.45	57.34	No	Si
SLU 8	14.67	162.6	-4889	-0.0000124	0.0003743	0.0035	2.28	5154.57	5547.33	5547.33	34.12	No	Si
SLU 72	13.87	122.81	-8062	-0.0000199	0.0003743	0.0035	2.28	8051.05	8476.81	8476.81	69.02	No	Si
SLU 72	14.67	205.19	-6317	-0.0000161	0.0003743	0.0035	2.28	6501.37	6970.94	6970.94	33.97	No	Si
SLU 50	13.87	109.21	-7427	-0.0000182	0.0003743	0.0035	2.28	7499.46	7957.1	7957.1	72.86	No	Si
SLU 50	14.67	182.57	-5740	-0.0000146	0.0003743	0.0035	2.28	5965.91	6400.61	6400.61	35.06	No	Si
SLU 71	13.87	124.07	-8052	-0.0000198	0.0003743	0.0035	2.28	8041.87	8468	8468	68.25	No	Si
SLU 71	14.67	201.8	-6312	-0.0000161	0.0003743	0.0035	2.28	6496.52	6965.79	6965.79	34.52	No	Si
SLU 51	13.87	107.95	-7438	-0.0000182	0.0003743	0.0035	2.28	7508.87	7965.8	7965.8	73.79	No	Si
SLU 51	14.67	185.96	-5745	-0.0000146	0.0003743	0.0035	2.28	5970.87	6405.86	6405.86	34.45	No	Si
SLU 30	13.87	133.61	-6861	-0.000017	0.0003743	0.0035	2.28	6996.04	7497.11	7497.11	56.11	No	Si
SLU 30	14.67	185.22	-5466	-0.000014	0.0003743	0.0035	2.28	5707.25	6127.64	6127.64	33.08	No	Si
SLU 9	13.87	118.75	-6237	-0.0000154	0.0003743	0.0035	2.28	6427.54	6892	6892	58.04	No	Si
SLU 9	14.67	165.99	-4895	-0.0000125	0.0003743	0.0035	2.28	5159.69	5552.72	5552.72	33.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	13.87	-202.46	-7173	-0.000018	0.0005615	0.0035	2.28		9025.03	9025.03	44.58		Si
SLV 11	14.67	543.78	-5118	-0.0000152	0.0005615	0.0035	2.28		5879.4	5879.4	10.81		Si
SLV 13	13.87	-705.97	-5280	-0.0000166	0.0005615	0.0035	2.28		7075.77	7075.77	10.02		Si
SLV 13	14.67	446.57	-3923	-0.0000118	0.0005615	0.0035	2.28		4615.13	4615.13	10.33		Si
SLV 15	13.87	-691.91	-6478	-0.0000194	0.0005615	0.0035	2.28		8322.43	8322.43	12.03		Si
SLV 15	14.67	629.03	-4693	-0.0000148	0.0005615	0.0035	2.28		5432.61	5432.61	8.64		Si
SLV 14	13.87	-625.14	-5275	-0.0000161	0.0005615	0.0035	2.28		7070.68	7070.68	11.31		Si
SLV 14	14.67	348.49	-3958	-0.0000113	0.0005615	0.0035	2.28		4652.38	4652.38	13.35		Si
SLV 6	13.87	196.74	-2575	-0.0000072	0.0005615	0.0035	2.28		3162.04	3162.04	16.07		Si
SLV 6	14.67	-369.2	-2163	-0.0000072	0.0005615	0.0035	2.28		3766.14	3766.14	10.2		Si
SLV 4	13.87	700.26	-4469	-0.0000147	0.0005615	0.0035	2.28		5195.11	5195.11	7.42		Si
SLV 4	14.67	-272	-3358	-0.0000094	0.0005615	0.0035	2.28		5057.72	5057.72	18.59		Si
SLV 3	13.87	619.43	-4474	-0.0000142	0.0005615	0.0035	2.28		5200.32	5200.32	8.4		Si
SLV 3	14.67	-173.91	-3323	-0.0000088	0.0005615	0.0035	2.28		5020.16	5020.16	28.87		Si
SLV 16	13.87	-611.08	-6473	-0.0000189	0.0005615	0.0035	2.28		8317.38	8317.38	13.61		Si
SLV 16	14.67	530.94	-4728	-0.0000142	0.0005615	0.0035	2.28		5469.69	5469.69	10.3		Si
SLV 2	13.87	686.2	-3271	-0.0000117	0.0005615	0.0035	2.28		3915.27	3915.27	5.71		Si
SLV 2	14.67	-454.46	-2588	-0.0000087	0.0005615	0.0035	2.28		4227.58	4227.58	9.3		Si
SLV 1	13.87	605.37	-3275	-0.0000113	0.0005615	0.0035	2.28		3920.58	3920.58	6.48		Si
SLV 1	14.67	-356.37	-2553	-0.0000081	0.0005615	0.0035	2.28		4189.7	4189.7	11.76		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	13.87	107.95	-7438	-6194	-877	2.28	2.28	-9702	8238	5259	35683	19117	5814	24931	No	28.42	Si
SLU 51	14.67	185.96	-5745	-4784	-715	2.28	2.28	-7494	7944	5071	35683	19117	5814	24931	No	34.87	Si
SLU 70	13.87	112.06	-8433	-7023	-965	2.28	2.28	-11000	8411	5370	35683	19117	5814	24931	No	25.84	Si
SLU 70	14.67	190.32	-6666	-5551	-792	2.28	2.28	-8695	8104	5173	35683	19117	5814	24931	No	31.49	Si
SLU 48	13.87	98.46	-7798	-6494	-890	2.28	2.28	-10172	8301	5299	35683	19117	5814	24931	No	28	Si
SLU 48	14.67	167.69	-6089	-5070	-727	2.28	2.28	-7942	8003	5109	35683	19117	5814	24931	No	34.3	Si
SLU 71	13.87	124.07	-8052	-6705	-923	2.28	2.28	-10502	8345	5327	35683	19117	5814	24931	No	27.02	Si
SLU 71	14.67	201.8	-6312	-5256	-764	2.28	2.28	-8233	8042	5134	35683	19117	5814	24931	No	32.63	Si
SLU 67	13.87	42.55	-7679	-6395	-928	2.28	2.28	-10017	8280	5286	35683	19117	5814	24931	No	26.88	Si
SLU 67	14.67	153.3	-5966	-4968	-760	2.28	2.28	-7781	7982	5096	35683	19117	5814	24931	No	32.79	Si
SLU 49	13.87	97.2	-7809	-6503	-905	2.28	2.28	-10186	8303	5300	35683	19117	5814	24931	No	27.55	Si
SLU 49	14.67	171.09	-6094	-5075	-735	2.28	2.28	-7949	8004	5110	35683	19117	5814	24931	No	33.93	Si
SLU 66	13.87	43.81	-7669	-6386	-913	2.28	2.28	-10003	8278	5285	35683	19117	5814	24931	No	27.3	Si
SLU 66	14.67	149.91	-5960	-4963	-753	2.28	2.28	-7774	7981	5095	35683	19117	5814	24931	No	33.13	Si
SLU 69	13.87	113.32	-8423	-7014	-950	2.28	2.28	-10986	8409	5369	35683	19117	5814	24931	No	26.23	Si
SLU 69	14.67	186.93	-6660	-5546	-784	2.28	2.28	-8688	8103	5173	35683	19117	5814	24931	No	31.81	Si
SLU 72	13.87	122.81	-8062	-6714	-937	2.28	2.28	-10516	8347	5329	35683	19117	5814	24931	No	26.6	Si
SLU 72	14.67	205.19	-6317	-5260	-772	2.28	2.28	-8239	8043	5135	35683	19117	5814	24931	No	32.3	Si
SLU 68	13.87	52.47	-7316	-6092	-910	2.28	2.28	-9542	8217	5246	35683	19117	5814	24931	No	27.41	Si
SLU 68	14.67	170.43	-5620	-4680	-746	2.28	2.28	-7331	7922	5057	35683	19117	5814	24931	No	33.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	13.87	-262.91	-5567	-4636	-1586	2.28	2.28	-7262	11869	7577	35683	28675	5814	34489		21.74	Si
SLD 16	14.67	278.72	-4111	-3423	-1093	2.28	2.28	-5362	11489	7335	35683	28675	5814	34489		31.55	Si
SLV 13	13.87	-705.97	-5280	-4397	-2440	2.28	2.28	-6887	11794	7529	35683	28675	5814	34489		14.13	Si
SLV 13	14.67	446.57	-3923	-3266	-1767	2.28	2.28	-5117	11440	7303	35683	28675	5814	34489		19.51	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 15	13.87	-297.62	-5569	-4638	-1709	2.28	2.28	-7264	11870	7578	35683	28675	5814	34489		20.18	Si
SLD 15	14.67	320.86	-4096	-3411	-1196	2.28	2.28	-5343	11485	7332	35683	28675	5814	34489		28.83	Si
SLV 14	13.87	-625.14	-5275	-4393	-2154	2.28	2.28	-6881	11793	7529	35683	28675	5814	34489		16.01	Si
SLV 14	14.67	348.49	-3958	-3296	-1527	2.28	2.28	-5162	11449	7309	35683	28675	5814	34489		22.58	Si
SLV 1	13.87	605.37	-3275	-2728	1691	2.28	2.28	-4272	11271	7196	35683	28675	5814	34489		20.4	Si
SLV 1	14.67	-356.37	-2553	-2126	880	2.28	2.28	-3330	11083	7075	35683	28675	5814	34489		39.18	Si
SLV 16	13.87	-611.08	-6473	-5390	-2891	2.28	2.28	-8443	12105	7728	35683	28675	5814	34489		11.93	Si
SLV 16	14.67	530.94	-4728	-3937	-1879	2.28	2.28	-6167	11650	7437	35683	28675	5814	34489		18.35	Si
SLV 2	13.87	686.2	-3271	-2723	1977	2.28	2.28	-4266	11270	7195	35683	28675	5814	34489		17.44	Si
SLV 2	14.67	-454.46	-2588	-2155	1120	2.28	2.28	-3376	11092	7081	35683	28675	5814	34489		30.78	Si
SLV 12	13.87	-149.79	-7170	-5971	-2356	2.28	2.28	-9353	12287	7844	35683	28675	5814	34489		14.64	Si
SLV 12	14.67	479.86	-5141	-4281	-1405	2.28	2.28	-6705	11758	7506	35683	28675	5814	34489		24.54	Si
SLV 15	13.87	-691.91	-6478	-5394	-3178	2.28	2.28	-8450	12107	7729	35683	28675	5814	34489		10.85	Si
SLV 15	14.67	629.03	-4693	-3908	-2119	2.28	2.28	-6121	11641	7432	35683	28675	5814	34489		16.27	Si
SLV 11	13.87	-202.46	-7173	-5973	-2542	2.28	2.28	-9357	12288	7845	35683	28675	5814	34489		13.57	Si
SLV 11	14.67	543.78	-5118	-4262	-1562	2.28	2.28	-6676	11752	7502	35683	28675	5814	34489		22.08	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	4910	-3134	257.39	424.7	1.65	Si
SLV 6	179667	0.53	4993	-3187	257.39	431.63	1.68	Si
SLV 9	179667	0.53	5070	-3237	257.39	438.07	1.7	Si
SLV 10	179667	0.53	5153	-3289	257.39	444.99	1.73	Si
SLV 1	179667	0.53	6636	-4236	257.39	567.33	2.2	Si
SLV 2	179667	0.53	6763	-4318	257.39	577.71	2.24	Si
SLV 13	179667	0.53	7170	-4577	257.39	610.71	2.37	Si
SLV 14	179667	0.53	7297	-4658	257.39	621.01	2.41	Si
SLV 3	179667	0.53	8295	-5295	257.39	701.1	2.72	Si
SLV 4	179667	0.53	8422	-5377	257.39	711.23	2.76	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-3871	-8586	723	2.183	689.8	0.902	35.18147	11.6001	Si
SLV 11	-3860	-8511	723	2.187	688.8	0.902	35.24801	11.6001	Si
SLV 8	-3482	-8920	694	2.346	651.7	0.899	37.93272	11.6001	Si
SLV 7	-3472	-8844	694	2.35	650.7	0.899	38.00959	11.6001	Si
SLV 10	-2407	-2802	-680	2.936	548.3	0.891	47.89243	11.6001	Si
SLV 9	-2396	-2726	-680	2.943	547.3	0.891	48.01278	11.6001	Si
SLV 6	-2018	-3136	-709	3.221	512	0.889	52.64797	11.6001	Si
SLV 5	-2008	-3060	-709	3.23	511.1	0.889	52.7916	11.6001	Si
SLV 16	-3814	-6193	266	2.286	684.2	0.902	36.85364	6.40952	Si
SLV 15	-3798	-6077	266	2.292	682.7	0.901	36.96185	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	33.082	SLU 30	Si
V_SLU	25.843	SLU 70	Si
PF_SLV	5.706	SLV 2	Si
V_SLV	10.853	SLV 15	Si
PFFP_SLV	1.65	SLV 5	Si
R_SLV	3.033	SLV 12	Si

Maschio 169

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.263	-3.314	-18.813	-3.314	L7	L8	0.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	13.87	87.84	-2019	-0.0000294	0.0003743	0.0035	0.55	483.67	507.92	507.92	5.78	No	Si
SLU 35	14.67	-12.74	-1878	-0.0000198	0.0003743	0.0035	0.55	454.53	537.46	537.46	42.19	No	Si
SLU 15	13.87	83.69	-1904	-0.0000277	0.0003743	0.0035	0.55	460	484.99	484.99	5.79	No	Si
SLU 15	14.67	-16.68	-1730	-0.0000187	0.0003743	0.0035	0.55	423.2	503.51	503.51	30.19	No	Si
SLU 38	13.87	82.83	-1881	-0.0000274	0.0003743	0.0035	0.55	455.12	480.33	480.33	5.8	No	Si
SLU 38	14.67	-12.43	-1742	-0.0000184	0.0003743	0.0035	0.55	425.74	506.23	506.23	40.73	No	Si
SLU 37	13.87	82.73	-1878	-0.0000274	0.0003743	0.0035	0.55	454.59	479.83	479.83	5.8	No	Si
SLU 37	14.67	-12.83	-1743	-0.0000184	0.0003743	0.0035	0.55	425.97	506.48	506.48	39.49	No	Si
SLU 36	13.87	87.94	-2021	-0.0000294	0.0003743	0.0035	0.55	484.19	508.43	508.43	5.78	No	Si
SLU 36	14.67	-12.34	-1877	-0.0000197	0.0003743	0.0035	0.55	454.3	537.22	537.22	43.53	No	Si
SLU 78	13.87	100.77	-2408	-0.0000349	0.0003743	0.0035	0.55	560.42	587.29	587.29	5.83	No	Si
SLU 78	14.67	-11.8	-2196	-0.0000229	0.0003743	0.0035	0.55	519.35	609.15	609.15	51.64	No	Si
SLU 77	13.87	100.67	-2405	-0.0000348	0.0003743	0.0035	0.55	559.94	586.76	586.76	5.83	No	Si
SLU 77	14.67	-12.19	-2197	-0.000023	0.0003743	0.0035	0.55	519.57	609.38	609.38	49.98	No	Si
SLU 14	13.87	83.59	-1901	-0.0000277	0.0003743	0.0035	0.55	459.47	484.48	484.48	5.8	No	Si
SLU 14	14.67	-17.08	-1731	-0.0000188	0.0003743	0.0035	0.55	423.43	503.75	503.75	29.5	No	Si
SLU 17	13.87	78.58	-1763	-0.0000257	0.0003743	0.0035	0.55	430.35	457.16	457.16	5.82	No	Si
SLU 17	14.67	-16.77	-1595	-0.0000174	0.0003743	0.0035	0.55	393.94	472.5	472.5	28.18	No	Si
SLU 16	13.87	78.48	-1761	-0.0000257	0.0003743	0.0035	0.55	429.81	456.66	456.66	5.82	No	Si
SLU 16	14.67	-17.17	-1596	-0.0000174	0.0003743	0.0035	0.55	394.17	472.75	472.75	27.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	13.87	6.31	-1305	-0.0000133	0.0005615	0.0035	0.55		360.27	360.27	57.11		Si
SLV 11	14.67	152.89	-849	-0.0000319	0.0005615	0.0035	0.55		244.05	244.05	1.6		Si
SLV 13	13.87	-166.41	-280	-0.0006315	0.0005615	0.0035	0.44		143.84	143.84	0.86		No
SLV 13	14.67	337.22	-990	-0.0069839	0.0005615	0.0035	0.44		280.16	280.16	0.83		No
SLV 2	13.87	254.6	-2530	-0.0000525	0.0005615	0.0035	0.55		652.7	652.7	2.56		Si
SLV 2	14.67	-354.53	-1768	-0.0000879	0.0005615	0.0035	0.44		523.85	523.85	1.48		Si
SLV 14	13.87	-138.57	-427	-0.0002333	0.0005615	0.0035	0.44		183	183	1.32		Si
SLV 14	14.67	300.09	-1023	-0.0023844	0.0005615	0.0035	0.44		288.78	288.78	0.96		No
SLV 1	13.87	226.77	-2383	-0.0000478	0.0005615	0.0035	0.55		621.87	621.87	2.74		Si
SLV 1	14.67	-317.4	-1735	-0.000069	0.0005615	0.0035	0.44		515.81	515.81	1.63		Si
SLD 15	13.87	-36.12	-1011	-0.0000135	0.0005615	0.0035	0.55		335.09	335.09	9.28		Si
SLD 15	14.67	156.44	-1078	-0.0000295	0.0005615	0.0035	0.55		302.71	302.71	1.93		Si
SLV 3	13.87	240.73	-2505	-0.0000506	0.0005615	0.0035	0.55		647.31	647.31	2.69		Si
SLV 3	14.67	-293.74	-1547	-0.0000663	0.0005615	0.0035	0.44		469.28	469.28	1.6		Si
SLV 16	13.87	-124.61	-549	-0.0000401	0.0005615	0.0035	0.44		215.04	215.04	1.73		Si
SLV 16	14.67	323.74	-835	-0.0090457	0.0005615	0.0035	0.44		240.48	240.48	0.74		No
SLV 15	13.87	-152.44	-401	-0.0003537	0.0005615	0.0035	0.44		176.12	176.12	1.16		Si
SLV 15	14.67	360.88	-802	-0.0128395	0.0005615	0.0035	0.44		231.78	231.78	0.64		No
SLV 4	13.87	268.57	-2652	-0.0000554	0.0005615	0.0035	0.55		677.44	677.44	2.52		Si
SLV 4	14.67	-330.88	-1580	-0.000089	0.0005615	0.0035	0.44		477.69	477.69	1.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	13.87	95.66	-2267	-1888	389	0.55	0.55	-12259	8579	1321	35683	4611	1402	6014	No	15.46	Si
SLU 80	14.67	-11.88	-2061	-1716	-138	0.55	0.55	-11146	8431	1298	35683	4611	1402	6014	No	43.57	Si
SLU 57	13.87	96.52	-2290	-1907	401	0.55	0.55	-12385	8596	1324	35683	4611	1402	6014	No	14.99	Si
SLU 57	14.67	-16.13	-2049	-1707	-129	0.55	0.55	-11082	8422	1297	35683	4611	1402	6014	No	46.75	Si
SLU 56	13.87	96.42	-2288	-1905	402	0.55	0.55	-12371	8594	1323	35683	4611	1402	6014	No	14.95	Si
SLU 56	14.67	-16.53	-2050	-1707	-130	0.55	0.55	-11088	8423	1297	35683	4611	1402	6014	No	46.3	Si
SLU 77	13.87	100.67	-2405	-2003	414	0.55	0.55	-13006	8679	1336	35683	4611	1402	6014	No	14.54	Si
SLU 77	14.67	-12.19	-2197	-1830	-146	0.55	0.55	-11882	8529	1313	35683	4611	1402	6014	No	41.15	Si
SLU 74	13.87	89.18	-2254	-1877	378	0.55	0.55	-12188	8570	1320	35683	4611	1402	6014	No	15.9	Si
SLU 74	14.67	-8.7	-2033	-1693	-143	0.55	0.55	-10995	8411	1295	35683	4611	1402	6014	No	42.14	Si
SLU 83	13.87	87.46	-2129	-1773	378	0.55	0.55	-11512	8479	1306	35683	4611	1402	6014	No	15.89	Si
SLU 83	14.67	-16.05	-1913	-1593	-138	0.55	0.55	-10346	8324	1282	35683	4611	1402	6014	No	43.71	Si
SLU 78	13.87	100.77	-2408	-2005	413	0.55	0.55	-13020	8680	1337	35683	4611	1402	6014	No	14.58	Si
SLU 78	14.67	-11.8	-2196	-1829	-145	0.55	0.55	-11876	8528	1313	35683	4611	1402	6014	No	41.5	Si
SLU 58	13.87	91.31	-2147	-1788	379	0.55	0.55	-11610	8492	1308	35683	4611	1402	6014	No	15.87	Si
SLU 58	14.67	-16.62	-1915	-1595	-123	0.55	0.55	-10357	8325	1282	35683	4611	1402	6014	No	48.89	Si
SLU 59	13.87	91.41	-2150	-1790	378	0.55	0.55	-11624	8494	1308	35683	4611	1402	6014	No	15.92	Si
SLU 59	14.67	-16.22	-1914	-1594	-122	0.55	0.55	-10352	8325	1282	35683	4611	1402	6014	No	49.39	Si
SLU 79	13.87	95.56	-2264	-1886	390	0.55	0.55	-12245	8577	1321	35683	4611	1402	6014	No	15.42	Si
SLU 79	14.67	-12.28	-2062	-1717	-139	0.55	0.55	-11152	8431	1298	35683	4611	1402	6014	No	43.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	13.87	-138.57	-427	-356	-807	0.44	0	0	0	0	35683	5534	1122	6655		8.24	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	14.67	300.09	-1023	-852	-92	0.44	0	0	0	0	35683	5534	1122	6655		72.11	Si
SLV 13	13.87	-166.41	-280	-233	-926	0.44	0	0	0	0	35683	5534	1122	6655		7.19	Si
SLV 13	14.67	337.22	-990	-824	-137	0.44	0	0	0	0	35683	5534	1122	6655		48.74	Si
SLD 2	13.87	138.28	-1921	-1600	710	0.55	0.55	-10387	12494	1924	35683	6917	1402	8319		11.72	Si
SLD 2	14.67	-150.1	-1492	-1243	-122	0.55	0.5233	-8071	12031	1763	35683	6917	1402	8319		68.06	Si
SLV 3	13.87	240.73	-2505	-2086	1241	0.55	0.5366	-13543	13125	1972	35683	6917	1402	8319		6.7	Si
SLV 3	14.67	-293.74	-1547	-1288	-100	0.44	0.2553	0	0	0	35683	5534	1122	6655		66.35	Si
SLV 4	13.87	268.57	-2652	-2208	1359	0.55	0.5212	-14340	13285	1939	35683	6917	1402	8319		6.12	Si
SLV 4	14.67	-330.88	-1580	-1316	-56	0.44	0.1969	0	0	0	35683	5534	1122	6655		118.73	Si
SLV 15	13.87	-152.44	-401	-334	-935	0.44	0	0	0	0	35683	5534	1122	6655		7.12	Si
SLV 15	14.67	360.88	-802	-668	-37	0.44	0	0	0	0	35683	5534	1122	6655		181.18	Si
SLD 4	13.87	144.17	-1974	-1643	705	0.55	0.55	-10672	12551	1933	35683	6917	1402	8319		11.8	Si
SLD 4	14.67	-139.57	-1410	-1175	-78	0.55	0.5281	-7627	11942	1766	35683	6917	1402	8319		106.43	Si
SLV 1	13.87	226.77	-2383	-1984	1250	0.55	0.5395	-12886	12994	1963	35683	6917	1402	8319		6.66	Si
SLV 1	14.67	-317.4	-1735	-1444	-200	0.44	0.276	0	0	0	35683	5534	1122	6655		33.26	Si
SLV 2	13.87	254.6	-2530	-2107	1368	0.55	0.5231	-13683	13153	1927	35683	6917	1402	8319		6.08	Si
SLV 2	14.67	-354.53	-1768	-1472	-156	0.44	0.2235	0	0	0	35683	5534	1122	6655		42.7	Si
SLV 16	13.87	-124.61	-549	-457	-816	0.44	0.1438	0	0	0	35683	5534	1122	6655		8.15	Si
SLV 16	14.67	323.74	-835	-696	8	0.44	0	0	0	0	35683	5534	1122	6655		884.66	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.53	0	-137	62.09	0	0	No, e>t/2
SLV 6	179667	0.53	0	-164	62.09	0	0	No, e>t/2
SLV 10	179667	0.53	0	-297	62.09	0	0	No, e>t/2
SLV 9	179667	0.53	0	-270	62.09	0	0	No, e>t/2
SLV 1	179667	0.53	3255	-501	62.09	68.68	1.11	Si
SLV 2	179667	0.53	3531	-544	62.09	74.36	1.2	Si
SLV 13	179667	0.53	6131	-944	62.09	126.88	2.04	Si
SLV 3	179667	0.53	6188	-953	62.09	128	2.06	Si
SLV 14	179667	0.53	6407	-987	62.09	132.34	2.13	Si
SLV 4	179667	0.53	6464	-995	62.09	133.45	2.15	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1233	-527	14	1.896	196	0.912	30.22412	11.6001	Si
SLV 5	-1217	-478	14	1.914	194.4	0.911	30.52343	11.6001	Si
SLV 10	-1074	-390	12	2.093	180.2	0.907	33.54407	11.6001	Si
SLV 9	-1058	-342	12	2.114	178.6	0.906	33.91181	11.6001	Si
SLV 8	-683	-2071	-3	2.815	142	0.894	45.7839	11.6001	Si
SLV 7	-667	-2022	-3	2.855	140.5	0.893	46.45545	11.6001	Si
SLV 12	-524	-1934	-5	3.272	126.9	0.89	53.44514	11.6001	Si
SLV 11	-508	-1886	-5	3.326	125.5	0.889	54.34425	11.6001	Si
SLV 2	-1230	-1239	11	1.901	195.8	0.912	30.30407	6.40952	Si
SLV 1	-1206	-1164	11	1.929	193.3	0.911	30.76779	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.781	SLU 36	Si
V_SLU	14.541	SLU 77	Si
PF_SLV	0.642	SLV 15	No
V_SLV	6.08	SLV 2	Si
PFFP_SLV	0	SLV 5	No
R_SLV	2.606	SLV 6	Si

Maschio 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.613	1.006	-19.613	5.826	L7	L8	4.82	0.14	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	11.87	-577.81	-9734	-0.0000189	0.0004492	0.0035	4.82	20688.89	35270.16	35270.16	61.04	No	Si
SLU 43	15.03	-966.76	-363	-0.0000133	0.0004492	0.0035	3.856	0	14525.83	14525.83	15.03	No	Si
SLU 19	11.87	-184.65	-8396	-0.0000155	0.0004492	0.0035	4.82	18173.6	32428.79	32428.79	175.62	No	Si
SLU 19	15.03	-1012.08	-267	-0.0000198	0.0004492	0.0035	3.856	0	14302.56	14302.56	14.13	No	Si
SLU 52	11.87	-512.41	-10183	-0.0000196	0.0004492	0.0035	4.82	21509.99	36205.61	36205.61	70.66	No	Si
SLU 52	15.03	-1138.06	-335	-0.0000207	0.0004492	0.0035	3.856	0	14461.8	14461.8	12.71	No	Si
SLU 73	11.87	-313.52	-11121	-0.0000208	0.0004492	0.0035	4.82	23186.57	38159.02	38159.02	121.71	No	Si
SLU 73	15.03	-1062.05	-457	-0.0000108	0.0004492	0.0035	3.856	1095.22	14742.91	14742.91	13.88	No	Si
SLU 39	11.87	96.74	-9348	-0.0000171	0.0004492	0.0035	4.82	19974.15	23451.09	23451.09	242.42	No	Si
SLU 39	15.03	-967.76	-384	-0.000012	0.0004492	0.0035	3.856	0	14574.89	14574.89	15.06	No	Si
SLU 60	11.87	-287.95	-10409	-0.0000195	0.0004492	0.0035	4.82	21918.09	36675.62	36675.62	127.37	No	Si
SLU 60	15.03	-1286.9	-315	-0.0000261	0.0004492	0.0035	3.856	0	14413.45	14413.45	11.2	No	Si
SLU 18	11.87	-102.15	-8410	-0.0000154	0.0004492	0.0035	4.82	18200.34	32459.37	32459.37	317.76	No	Si
SLU 18	15.03	-1043.76	-263	-0.0000209	0.0004492	0.0035	3.856	0	14293.78	14293.78	13.69	No	Si
SLU 81	11.87	-89.06	-11347	-0.0000207	0.0004492	0.0035	4.82	23582.3	38629.03	38629.03	433.75	No	Si
SLU 81	15.03	-1210.9	-436	-0.0000179	0.0004492	0.0035	3.856	0	14694.56	14694.56	12.14	No	Si
SLU 82	11.87	-171.56	-11333	-0.0000209	0.0004492	0.0035	4.82	23557.95	38600.01	38600.01	224.99	No	Si
SLU 82	15.03	-1179.22	-440	-0.0000165	0.0004492	0.0035	3.856	0	14703.35	14703.35	12.47	No	Si
SLU 61	11.87	-370.45	-10395	-0.0000196	0.0004492	0.0035	4.82	21892.98	36646.6	36646.6	98.92	No	Si
SLU 61	15.03	-1255.22	-318	-0.000025	0.0004492	0.0035	3.856	0	14422.23	14422.23	11.49	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	11.87	5281.33	-8544	-0.0000273	0.0006738	0.0035	4.82		21919.52	21919.52	4.15		Si
SLV 10	15.03	-2672.11	-176	-0.0000662	0.0006738	0.0035	3.856		14079.09	14079.09	5.27		Si
SLV 9	11.87	5843.82	-8681	-0.0000288	0.0006738	0.0035	4.82		22219.85	22219.85	3.8		Si
SLV 9	15.03	-2801.52	-199	-0.0000693	0.0006738	0.0035	3.856		14131.17	14131.17	5.04		Si
SLV 6	11.87	7048.03	-10544	-0.000035	0.0006738	0.0035	4.82		26316.89	26316.89	3.73		Si
SLV 6	15.03	-3294.43	-403	-0.0000787	0.0006738	0.0035	3.856		14602.92	14602.92	4.43		Si
SLV 5	11.87	7610.52	-10680	-0.0000365	0.0006738	0.0035	4.82		26612.52	26612.52	3.5		Si
SLV 5	15.03	-3423.84	-425	-0.0000817	0.0006738	0.0035	3.856		14654.58	14654.58	4.28		Si
SLV 16	11.87	-5670.3	-4258	-0.0000228	0.0006738	0.0035	4.82		23391.17	23391.17	4.13		Si
SLV 16	15.03	1055.19	48	-0.0002373	0.0006738	0.0035	3.856		2266.28	2266.28	2.15		Si
SLV 8	11.87	-6398.25	-7595	-0.0000281	0.0006738	0.0035	4.82		30840.07	30840.07	4.82		Si
SLV 8	15.03	1269.66	-474	-0.0000674	0.0006738	0.0035	4.82		3493.68	3493.68	2.75		Si
SLV 12	11.87	-8164.96	-5595	-0.0000341	0.0006738	0.0035	3.856		26396.96	26396.96	3.23		Si
SLV 12	15.03	1891.98	-247	-0.0003044	0.0006738	0.0035	3.856		2961.59	2961.59	1.57		Si
SLV 7	11.87	-5835.76	-7731	-0.000027	0.0006738	0.0035	4.82		31139.83	31139.83	5.34		Si
SLV 7	15.03	1140.25	-497	-0.000021	0.0006738	0.0035	4.82		3546.47	3546.47	3.11		Si
SLV 11	11.87	-7602.47	-5732	-0.0000307	0.0006738	0.0035	4.82		26700.69	26700.69	3.51		Si
SLV 11	15.03	1762.57	-270	-0.0002654	0.0006738	0.0035	3.856		3014.37	3014.37	1.71		Si
SLV 15	11.87	-4807.03	-4467	-0.0000193	0.0006738	0.0035	4.82		23862.65	23862.65	4.96		Si
SLV 15	15.03	856.58	14	-0.0001806	0.0006738	0.0035	3.856		2347.54	2347.54	2.74		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 60	11.87	-287.95	-10409	-5771	1148	4.82	4.82	-8552	9474	6393	101952	24251	24582	48833	No	42.52	Si
SLU 60	15.03	-1286.9	-315	-174	1149	3.856	0	0	0	0	101952	19400	19666	39066	No	34.01	Si
SLU 18	11.87	-102.15	-8410	-4663	1062	4.82	4.82	-6910	9255	6245	101952	24251	24582	48833	No	45.99	Si
SLU 18	15.03	-1043.76	-263	-146	1062	3.856	0	0	0	0	101952	19400	19666	39066	No	36.79	Si
SLU 19	11.87	-184.65	-8396	-4655	890	4.82	4.82	-6899	9253	6244	101952	24251	24582	48833	No	54.86	Si
SLU 19	15.03	-1012.08	-267	-148	963	3.856	0	0	0	0	101952	19400	19666	39066	No	40.57	Si
SLU 39	11.87	96.74	-9348	-5183	1222	4.82	4.82	-7681	9357	6314	101952	24251	24582	48833	No	39.96	Si
SLU 39	15.03	-967.76	-384	-213	1217	3.856	0	0	0	0	101952	19400	19666	39066	No	32.1	Si
SLU 40	11.87	14.23	-9334	-5175	1050	4.82	4.82	-7669	9356	6313	101952	24251	24582	48833	No	46.49	Si
SLU 40	15.03	-936.07	-388	-215	1118	3.856	0	0	0	0	101952	19400	19666	39066	No	34.94	Si
SLU 53	11.87	-272.49	-11038	-6120	964	4.82	4.82	-9070	9543	6439	101952	24251	24582	48833	No	50.64	Si
SLU 53	15.03	-916.89	-571	-317	950	3.856	2.4167	0	0	0	101952	19400	19666	39066	No	41.11	Si
SLU 81	11.87	-89.06	-11347	-6291	1309	4.82	4.82	-9323	9576	6462	101952	24251	24582	48833	No	37.31	Si
SLU 81	15.03	-1210.9	-436	-242	1304	3.856	0	0	0	0	101952	19400	19666	39066	No	29.96	Si
SLU 73	11.87	-313.52	-11121	-6166	846	4.82	4.82	-9138	9552	6445	101952	24251	24582	48833	No	57.75	Si
SLU 73	15.03	-1062.05	-457	-253	960	3.856	0.2578	0	0	0	101952	19400	19666	39066	No	40.7	Si
SLU 61	11.87	-370.45	-10395	-5763	977	4.82	4.82	-8541	9472	6392	101952	24251	24582	48833	No	50	Si
SLU 61	15.03	-1255.22	-318	-176	1050	3.856	0	0	0	0	101952	19400	19666	39066	No	37.22	Si
SLU 82	11.87	-171.56	-11333	-6283	1137	4.82	4.82	-9312	9575	6461	101952	24251	24582	48833	No	42.95	Si
SLU 82	15.03	-1179.22	-440	-244	1205	3.856	0	0	0	0	101952	19400	19666	39066	No	32.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.87	4252.6	-11808	-6547	7691	4.82	4.82	-9702	14440	9744	101952	36376	24582	60958		7.93	Si
SLV 2	15.03	-2388.44	-686	-381	7837	3.856	0	0	0	0	101952	29101	19666	48766		6.22	Si
SLV 9	11.87	5843.82	-8681	-4813	11010	4.82	4.82	-7133	13927	9398	101952	36376	24582	60958		5.54	Si
SLV 9	15.03	-2801.52	-199	-110	11415	3.856	0	0	0	0	101952	29101	19666	48766		4.27	Si
SLV 16	11.87	-5670.3	-4258	-2361	-7728	4.82	3.235	-5217	13544	6134	101952	36376	24582	60958		7.89	Si
SLV 16	15.03	1055.19	48	27	-7894	3.856	0	0	0	0	101952	29101	19666	48766		6.18	Si
SLV 8	11.87	-6398.25	-7595	-4211	-9739	4.82	4.7027	-6415	13783	9074	101952	36376	24582	60958		6.26	Si
SLV 8	15.03	1269.66	-474	-263	-10155	4.82	0	-11702	15528	0	101952	36376	24582	60958		6	Si
SLV 1	11.87	5115.87	-12018	-6663	9000	4.82	4.82	-9874	14475	9768	101952	36376	24582	60958		6.77	Si
SLV 1	15.03	-2587.05	-721	-400	9154	3.856	0	0	0	0	101952	29101	19666	48766		5.33	Si
SLV 10	11.87	5281.33	-8544	-4738	10157	4.82	4.82	-7021	13904	9383	101952	36376	24582	60958		6	Si
SLV 10	15.03	-2672.11	-176	-98	10557	3.856	0	0	0	0	101952	29101	19666	48766		4.62	Si
SLV 12	11.87	-8164.96	-5595	-3102	-12340	3.856	2.8522	0	0	0	101952	29101	19666	48766		3.95	Si
SLV 12	15.03	1891.98	-247	-137	-12775	3.856	0	0	0	0	101952	29101	19666	48766		3.82	Si
SLV 5	11.87	7610.52	-10680	-5922	13611	4.82	4.82	-8776	14255	9619	101952	36376	24582	60958		4.48	Si
SLV 5	15.03	-3423.84	-425	-236	14034	3.856	0	0	0	0	101952	29101	19666	48766		3.47	Si
SLV 6	11.87	7048.03	-10544	-5846	12758	4.82	4.82	-8664	14233	9604	101952	36376	24582	60958		4.78	Si
SLV 6	15.03	-3294.43	-403	-223	13176	3.856	0	0	0	0	101952	29101	19666	48766		3.7	Si
SLV 11	11.87	-7602.47	-5732	-3178	-11487	4.82	3.2507	-6994	13900	6326	101952	36376	24582	60958		5.31	Si
SLV 11	15.03	1762.57	-270	-150	-11917	3.856	0	0	0	0	101952	29101	19666	48766		4.09	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-1056	0.53	291.04	0	385.56	192.78	0.66	No
SLV 15	-1245	0.53	291.04	0	403.43	201.72	0.69	No
SLV 14	-1551	0.53	291.04	0	432.07	216.04	0.74	No
SLV 13	-1741	0.53	291.04	0	449.66	224.83	0.77	No
SLV 12	-2588	0.53	291.04	0	527.17	263.58	0.91	No
SLV 11	-2711	0.53	291.04	0	538.29	269.14	0.92	No
SLV 10	-4238	0.53	291.04	286.52	674.45	480.48	1.65	Si
SLV 9	-4362	0.53	291.04	294.55	685.36	489.95	1.68	Si
SLV 8	-4368	0.53	291.04	294.95	685.9	490.43	1.69	Si
SLV 7	-4491	0.53	291.04	302.97	696.81	499.89	1.72	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.03 Ta = 0.1191

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-497	-7731	-34	11.233	408.5	0.925	176.58052	21.18883	Si
SLV 8	-474	-7595	-34	11.338	407.2	0.926	177.86941	21.18883	Si
SLV 5	-425	-10680	-85	11.552	404.6	0.931	180.35673	21.18883	Si
SLV 6	-403	-10544	-85	11.664	403.4	0.933	181.66633	21.18883	Si
SLV 11	-270	-5732	85	12.371	397.3	0.949	189.5062	21.18883	Si
SLV 12	-247	-5595	85	12.499	396.4	0.952	190.84021	21.18883	Si
SLV 9	-199	-8681	34	12.811	394.7	0.959	194.09267	21.18883	Si
SLV 10	-176	-8544	34	12.948	394	0.963	195.42059	21.18883	Si
SLV 3	-742	-11133	-190	10.14	424.3	0.909	162.18146	10.20971	Si
SLV 1	-721	-12018	-205	10.216	422.8	0.91	163.2061	10.20971	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.2	SLU 60	Si
V_SLU	29.962	SLU 81	Si
PF_SLV	1.565	SLV 12	Si
V_SLV	3.475	SLV 5	Si
PFFP_SLV	0.662	SLV 16	No
R_SLV	8.334	SLV 7	Si

Maschio 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L7	L8	3.221	0.14	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 29	11.87	1095.13	-7100	-0.0000248	0.0004492	0.0035	3.2207	9959.72	11703.3	11703.3	10.69	No	Si
SLU 29	13.97	957.45	-4666	-0.0000174	0.0004492	0.0035	3.2207	6877.73	8174.49	8174.49	8.54	No	Si
SLU 79	11.87	1364.21	-8750	-0.0000309	0.0004492	0.0035	3.2207	11852.46	14027.54	14027.54	10.28	No	Si
SLU 79	13.97	1012.88	-5433	-0.0000198	0.0004492	0.0035	3.2207	7886.32	9302.41	9302.41	9.18	No	Si
SLU 36	11.87	1136.13	-7503	-0.0000262	0.0004492	0.0035	3.2207	10437.52	12277.46	12277.46	10.81	No	Si
SLU 36	13.97	884.53	-4787	-0.0000174	0.0004492	0.0035	3.2207	7039.22	8352.96	8352.96	9.44	No	Si
SLU 17	11.87	1025.34	-6689	-0.0000233	0.0004492	0.0035	3.2207	9463.59	11118.85	11118.85	10.84	No	Si
SLU 17	13.97	802.24	-4232	-0.0000154	0.0004492	0.0035	3.2207	6291.72	7534.67	7534.67	9.39	No	Si
SLU 37	11.87	1187.62	-7445	-0.0000263	0.0004492	0.0035	3.2207	10368.76	12194.12	12194.12	10.27	No	Si
SLU 37	13.97	1018.75	-4793	-0.0000181	0.0004492	0.0035	3.2207	7046.27	8360.77	8360.77	8.21	No	Si
SLU 30	11.87	1055.49	-7078	-0.0000246	0.0004492	0.0035	3.2207	9933.19	11671.74	11671.74	11.06	No	Si
SLU 30	13.97	951.39	-4662	-0.0000174	0.0004492	0.0035	3.2207	6872.15	8168.34	8168.34	8.59	No	Si
SLU 38	11.87	1147.97	-7423	-0.000026	0.0004492	0.0035	3.2207	10342.67	12162.56	12162.56	10.59	No	Si
SLU 38	13.97	1012.69	-4788	-0.000018	0.0004492	0.0035	3.2207	7040.73	8354.63	8354.63	8.25	No	Si
SLU 35	11.87	1175.77	-7526	-0.0000264	0.0004492	0.0035	3.2207	10463.5	12309.02	12309.02	10.47	No	Si
SLU 35	13.97	890.59	-4791	-0.0000174	0.0004492	0.0035	3.2207	7044.77	8359.11	8359.11	9.39	No	Si
SLU 16	11.87	1064.98	-6711	-0.0000236	0.0004492	0.0035	3.2207	9490.63	11150.41	11150.41	10.47	No	Si
SLU 16	13.97	808.3	-4236	-0.0000155	0.0004492	0.0035	3.2207	6297.4	7540.81	7540.81	9.33	No	Si
SLU 80	11.87	1324.57	-8728	-0.0000306	0.0004492	0.0035	3.2207	11828.06	13996.56	13996.56	10.57	No	Si
SLU 80	13.97	1006.82	-5429	-0.0000198	0.0004492	0.0035	3.2207	7880.94	9296.37	9296.37	9.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	11.87	2237.86	-5666	-0.0000265	0.0006738	0.0035	3.2207		9734.58	9734.58	4.35		Si
SLV 13	13.97	915.16	-2782	-0.000012	0.0006738	0.0035	3.2207		5391.56	5391.56	5.89		Si
SLV 5	11.87	4696.67	-8314	-0.0000465	0.0006738	0.0035	3.2207		13596.52	13596.52	2.89		Si
SLV 5	13.97	1163.35	-3841	-0.0000161	0.0006738	0.0035	3.2207		6999.46	6999.46	6.02		Si
SLV 10	11.87	4573.38	-7808	-0.0000445	0.0006738	0.0035	3.2207		12864.72	12864.72	2.81		Si
SLV 10	13.97	1279.87	-3587	-0.000016	0.0006738	0.0035	3.2207		6615.19	6615.19	5.17		Si
SLD 9	11.87	2554.03	-6566	-0.0000306	0.0006738	0.0035	3.2207		11057.49	11057.49	4.33		Si
SLD 9	13.97	754.32	-3244	-0.0000124	0.0006738	0.0035	3.2207		6094.94	6094.94	8.08		Si
SLV 6	11.87	4491.39	-8214	-0.0000451	0.0006738	0.0035	3.2207		13451.27	13451.27	2.99		Si
SLV 6	13.97	1103.59	-3835	-0.0000158	0.0006738	0.0035	3.2207		6990.25	6990.25	6.33		Si
SLV 9	11.87	4778.66	-7908	-0.000046	0.0006738	0.0035	3.2207		13009.97	13009.97	2.72		Si
SLV 9	13.97	1339.63	-3593	-0.0000163	0.0006738	0.0035	3.2207		6624.39	6624.39	4.94		Si
SLV 8	11.87	-3198.15	-3085	-0.0000311	0.0006738	0.0035	2.5766		10618.87	10618.87	3.32		Si
SLV 8	13.97	-742.43	-2338	-0.0000099	0.0006738	0.0035	3.2207		9493.26	9493.26	12.79		Si
SLV 7	11.87	-2992.87	-3186	-0.0000275	0.0006738	0.0035	2.5766		10770.49	10770.49	3.6		Si
SLV 7	13.97	-682.67	-2345	-0.0000097	0.0006738	0.0035	3.2207		9502.42	9502.42	13.92		Si
SLV 12	11.87	-3116.16	-2679	-0.0000343	0.0006738	0.0035	2.5766		10006.63	10006.63	3.21		Si
SLV 12	13.97	-566.14	-2091	-0.0000084	0.0006738	0.0035	3.2207		9116.46	9116.46	16.1		Si
SLV 11	11.87	-2910.88	-2780	-0.0000285	0.0006738	0.0035	2.5766		10158.24	10158.24	3.49		Si
SLV 11	13.97	-506.39	-2097	-0.0000081	0.0006738	0.0035	3.2207		9125.71	9125.71	18.02		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 53	11.87	1107.87	-7508	-4163	1045	3.2207	3.2207	-9232	9564	4313	101952	16204	16426	32630	No	31.23	Si
SLU 53	13.97	411.26	-4206	-2332	1044	3.2207	3.2207	-5172	9023	4068	101952	16204	16426	32630	No	31.26	Si
SLU 61	11.87	997.86	-6964	-3861	1104	3.2207	3.2207	-8564	9475	4272	101952	16204	16426	32630	No	29.55	Si
SLU 61	13.97	296.6	-3588	-1989	1102	3.2207	3.2207	-4412	8922	4023	101952	16204	16426	32630	No	29.6	Si
SLU 81	11.87	1160.14	-7720	-4281	1154	3.2207	3.2207	-9493	9599	4328	101952	16204	16426	32630	No	28.27	Si
SLU 81	13.97	513.11	-4148	-2300	1153	3.2207	3.2207	-5101	9013	4064	101952	16204	16426	32630	No	28.31	Si
SLU 75	11.87	1190.87	-8220	-4557	1035	3.2207	3.2207	-10108	9681	4365	101952	16204	16426	32630	No	31.53	Si
SLU 75	13.97	615.64	-4758	-2638	1034	3.2207	3.2207	-5851	9113	4109	101952	16204	16426	32630	No	31.55	Si
SLU 73	11.87	1054.43	-7535	-4178	1026	3.2207	3.2207	-9266	9569	4315	101952	16204	16426	32630	No	31.79	Si
SLU 73	13.97	476.74	-4087	-2266	1025	3.2207	3.2207	-5026	9003	4060	101952	16204	16426	32630	No	31.84	Si
SLU 82	11.87	1120.5	-7698	-4268	1124	3.2207	3.2207	-9466	9595	4327	101952	16204	16426	32630	No	29.02	Si
SLU 82	13.97	507.05	-4144	-2298	1123	3.2207	3.2207	-5096	9013	4064	101952	16204	16426	32630	No	29.06	Si
SLU 83	11.87	1281.99	-8309	-4607	1025	3.2207	3.2207	-10217	9696	4372	101952	16204	16426	32630	No	31.84	Si
SLU 83	13.97	776.13	-4818	-2671	1024	3.2207	3.2207	-5924	9123	4114	101952	16204	16426	32630	No	31.85	Si
SLU 54	11.87	1068.23	-7486	-4151	1015	3.2207	3.2207	-9205	9561	4311	101952	16204	16426	32630	No	32.15	Si
SLU 54	13.97	405.19	-4202	-2330	1014	3.2207	3.2207	-5167	9022	4068	101952	16204	16426	32630	No	32.18	Si
SLU 74	11.87	1230.51	-8242	-4570	1065	3.2207	3.2207	-10135	9685	4367	101952	16204	16426	32630	No	30.65	Si
SLU 74	13.97	621.71	-4762	-2641	1064	3.2207	3.2207	-5856	9114	4110	101952	16204	16426	32630	No	30.66	Si
SLU 60	11.87	1037.5	-6986	-3874	1134	3.2207	3.2207	-8591	9479	4274	101952	16204	16426	32630	No	28.77	Si
SLU 60	13.97	302.66	-3592	-1992	1132	3.2207	3.2207	-4417	8922	4023	101952	16204	16426	32630	No	28.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	11.87	4696.67	-8314	-4610	3484	3.2207	3.1364	-10224	14545	6387	101952	24306	16426	40732		11.69	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	13.97	1163.35	-3841	-2129	4115	3.2207	3.2207	-4723	13445	6062	101952	24306	16426	40732		9.9	Si
SLD 9	11.87	2554.03	-6566	-3641	1897	3.2207	3.2207	-8074	14115	6364	101952	24306	16426	40732		21.47	Si
SLD 9	13.97	754.32	-3244	-1799	2180	3.2207	3.2207	-3989	13298	5996	101952	24306	16426	40732		18.68	Si
SLV 7	11.87	-2992.87	-3186	-1766	-1745	2.5766	2.0128	0	0	0	101952	19445	13140	32585		18.67	Si
SLV 7	13.97	-682.67	-2345	-1300	-2393	3.2207	3.2207	-2883	13077	5896	101952	24306	16426	40732		17.02	Si
SLV 6	11.87	4491.39	-8214	-4554	3343	3.2207	3.1906	-10100	14520	6486	101952	24306	16426	40732		12.18	Si
SLV 6	13.97	1103.59	-3835	-2126	3973	3.2207	3.2207	-4715	13443	6061	101952	24306	16426	40732		10.25	Si
SLD 5	11.87	2518.27	-6739	-3736	1951	3.2207	3.2207	-8287	14157	6383	101952	24306	16426	40732		20.88	Si
SLD 5	13.97	679.02	-3349	-1857	2228	3.2207	3.2207	-4119	13324	6008	101952	24306	16426	40732		18.28	Si
SLV 8	11.87	-3198.15	-3085	-1711	-1887	2.5766	1.7213	0	0	0	101952	19445	13140	32585		17.27	Si
SLV 8	13.97	-742.43	-2338	-1297	-2535	3.2207	3.2207	-2876	13075	5896	101952	24306	16426	40732		16.07	Si
SLV 12	11.87	-3116.16	-2679	-1485	-2015	2.5766	1.3416	0	0	0	101952	19445	13140	32585		16.18	Si
SLV 12	13.97	-566.14	-2091	-1159	-2647	3.2207	3.2207	-2571	13014	5868	101952	24306	16426	40732		15.39	Si
SLV 9	11.87	4778.66	-7908	-4385	3357	3.2207	3.0182	-9725	14445	6104	101952	24306	16426	40732		12.13	Si
SLV 9	13.97	1339.63	-3593	-1992	4003	3.2207	3.2207	-4418	13384	6035	101952	24306	16426	40732		10.18	Si
SLV 10	11.87	4573.38	-7808	-4329	3215	3.2207	3.0738	-9601	14420	6205	101952	24306	16426	40732		12.67	Si
SLV 10	13.97	1279.87	-3587	-1989	3861	3.2207	3.2207	-4411	13382	6034	101952	24306	16426	40732		10.55	Si
SLV 11	11.87	-2910.88	-2780	-1541	-1873	2.5766	1.6894	0	0	0	101952	19445	13140	32585		17.4	Si
SLV 11	13.97	-506.39	-2097	-1163	-2506	3.2207	3.2207	-2579	13016	5869	101952	24306	16426	40732		16.26	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-2355	0.53	194.47	0	408.17	204.09	1.05	Si
SLV 11	-2403	0.53	194.47	0	412.38	206.19	1.06	Si
SLV 8	-2537	0.53	194.47	0	424.25	212.12	1.09	Si
SLV 7	-2584	0.53	194.47	0	428.45	214.23	1.1	Si
SLV 16	-3056	0.53	194.47	206.01	470.09	338.05	1.74	Si
SLV 15	-3129	0.53	194.47	210.73	476.49	343.61	1.77	Si
SLV 4	-3661	0.53	194.47	244.9	523.08	383.99	1.97	Si
SLV 3	-3734	0.53	194.47	249.55	529.43	389.49	2	Si
SLV 14	-3849	0.53	194.47	256.88	539.49	398.18	2.05	Si
SLV 13	-3922	0.53	194.47	261.5	545.84	403.67	2.08	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.03 Ta = 0.1191

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1512	-8214	-156	6.45	369.7	0.89	105.37753	21.18883	Si
SLV 5	-1506	-8314	-156	6.464	369.1	0.89	105.61382	21.18883	Si
SLV 8	-1465	-3085	-18	6.61	365.3	0.889	108.01667	21.18883	Si
SLV 7	-1459	-3186	-18	6.625	364.8	0.889	108.2623	21.18883	Si
SLV 10	-1387	-7808	18	6.804	358.1	0.889	111.22996	21.18883	Si
SLV 9	-1380	-7908	18	6.82	357.5	0.889	111.48877	21.18883	Si
SLV 12	-1340	-2679	156	6.873	353.8	0.889	112.36077	21.18883	Si
SLV 11	-1334	-2780	156	6.889	353.2	0.889	112.62595	21.18883	Si
SLV 2	-1644	-6866	-311	6.108	382	0.89	99.69306	10.20971	Si
SLV 1	-1634	-7020	-311	6.128	381.1	0.89	100.02334	10.20971	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.207	SLU 37	Si
V_SLU	28.273	SLU 81	Si
PF_SLV	2.723	SLV 9	Si
V_SLV	9.899	SLV 5	Si
PFFP_SLV	1.049	SLV 12	Si
R_SLV	4.973	SLV 6	Si

Maschio 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.033	1.006	-15.033	6.386	L7	L8	5.38	0.14	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 18	11.87	1711.59	-9939	-0.0000192	0.0004492	0.0035	5.38	23849.43	27980.88	27980.88	16.35	No	Si
SLU 18	15.03	3646.78	-2489	-0.0000117	0.0004492	0.0035	5.38	6514.65	9389.64	9389.64	2.57	No	Si
SLU 31	11.87	1736.34	-11071	-0.0000211	0.0004492	0.0035	5.38	26198.63	30708.23	30708.23	17.69	No	Si
SLU 31	15.03	4607.95	-3350	-0.0000147	0.0004492	0.0035	5.38	8682.37	11587.37	11587.37	2.51	No	Si
SLU 61	11.87	1767.33	-12154	-0.000023	0.0004492	0.0035	5.38	28375.6	33291.63	33291.63	18.84	No	Si
SLU 61	15.03	4170.85	-2878	-0.0000134	0.0004492	0.0035	5.38	7500.97	10384.18	10384.18	2.49	No	Si
SLU 82	11.87	2155.24	-13559	-0.000026	0.0004492	0.0035	5.38	31100.15	36607.02	36607.02	16.99	No	Si
SLU 82	15.03	5253.01	-3755	-0.0000168	0.0004492	0.0035	5.38	9689.05	12623.2	12623.2	2.4	No	Si
SLU 73	11.87	1849.72	-13267	-0.000025	0.0004492	0.0035	5.38	30544.01	35922.85	35922.85	19.42	No	Si
SLU 73	15.03	5015.1	-3678	-0.000016	0.0004492	0.0035	5.38	9498.29	12426.16	12426.16	2.48	No	Si
SLU 39	11.87	2099.5	-11345	-0.0000222	0.0004492	0.0035	5.38	26755.9	31361.87	31361.87	14.94	No	Si
SLU 39	15.03	4728.94	-3366	-0.0000151	0.0004492	0.0035	5.38	8722.69	11628.66	11628.66	2.46	No	Si
SLU 60	11.87	1824.97	-12136	-0.000023	0.0004492	0.0035	5.38	28340.1	33248.84	33248.84	18.22	No	Si
SLU 60	15.03	4053.94	-2818	-0.000013	0.0004492	0.0035	5.38	7347.09	10228.43	10228.43	2.52	No	Si
SLU 40	11.87	2041.87	-11363	-0.0000221	0.0004492	0.0035	5.38	26792.23	31404.65	31404.65	15.38	No	Si
SLU 40	15.03	4845.85	-3427	-0.0000155	0.0004492	0.0035	5.38	8874.61	11784.41	11784.41	2.43	No	Si
SLU 81	11.87	2212.88	-13541	-0.0000261	0.0004492	0.0035	5.38	31066.12	36564.99	36564.99	16.52	No	Si
SLU 81	15.03	5136.1	-3694	-0.0000164	0.0004492	0.0035	5.38	9538.3	12467.45	12467.45	2.43	No	Si
SLU 19	11.87	1653.96	-9957	-0.0000191	0.0004492	0.0035	5.38	23887.23	28024.41	28024.41	16.94	No	Si
SLU 19	15.03	3763.69	-2550	-0.0000121	0.0004492	0.0035	5.38	6669.7	9545.39	9545.39	2.54	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	11.87	-9586.61	-5842	-0.0000322	0.0006738	0.0035	4.304		32155.9	32155.9	3.35		Si
SLV 12	15.03	11140.2	-4886	-0.0000705	0.0006738	0.0035	5.38		15586.25	15586.25	1.4		Si
SLV 10	11.87	11266.91	-13222	-0.000042	0.0006738	0.0035	5.38		36267.91	36267.91	3.22		Si
SLV 10	15.03	-11754.51	2160	-0.0002438	0.0006738	0.0035	4.304		11711.12	11711.12	1		No
SLV 14	11.87	3515.63	-10683	-0.0000236	0.0006738	0.0035	5.38		30089.92	30089.92	8.56		Si
SLV 14	15.03	-11412.5	2061	-0.0002367	0.0006738	0.0035	4.304		11969.5	11969.5	1.05		Si
SLV 3	11.87	-1295.34	-8379	-0.0000158	0.0006738	0.0035	5.38		38452.06	38452.06	29.68		Si
SLV 3	15.03	17639.91	-6912	-0.0002854	0.0006738	0.0035	5.38		20724.44	20724.44	1.17		Si
SLV 7	11.87	-9046.62	-5840	-0.0000296	0.0006738	0.0035	4.304		32150.88	32150.88	3.55		Si
SLV 7	15.03	17981.92	-7011	-0.0003097	0.0006738	0.0035	5.38		20973.86	20973.86	1.17		Si
SLV 9	11.87	11464.21	-13268	-0.0000424	0.0006738	0.0035	5.38		36380.52	36380.52	3.17		Si
SLV 9	15.03	-11408.84	2036	-0.0002368	0.0006738	0.0035	4.304		12035.71	12035.71	1.05		Si
SLV 8	11.87	-9243.92	-5794	-0.0000306	0.0006738	0.0035	4.304		32033.97	32033.97	3.47		Si
SLV 8	15.03	17636.24	-6887	-0.0002974	0.0006738	0.0035	5.38		20659.89	20659.89	1.17		Si
SLV 13	11.87	3818.43	-10754	-0.0000242	0.0006738	0.0035	5.38		30265.48	30265.48	7.93		Si
SLV 13	15.03	-10881.99	1870	-0.000226	0.0006738	0.0035	4.304		12467.65	12467.65	1.15		Si
SLV 4	11.87	-1598.14	-8308	-0.0000162	0.0006738	0.0035	5.38		38277.02	38277.02	23.95		Si
SLV 4	15.03	17109.39	-6721	-0.0002675	0.0006738	0.0035	5.38		20238.8	20238.8	1.18		Si
SLV 11	11.87	-9389.31	-5889	-0.0000311	0.0006738	0.0035	4.304		32272.81	32272.81	3.44		Si
SLV 11	15.03	11485.87	-5011	-0.0000747	0.0006738	0.0035	5.38		15902.69	15902.69	1.38		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 56	11.87	1809.1	-14001	-7763	2173	5.38	5.38	-10306	9708	7312	101952	27068	27438	54506	No	25.09	Si
SLU 56	15.03	4493.15	-4593	-2546	2191	5.38	5.135	-3381	8784	6315	101952	27068	27438	54506	No	24.87	Si
SLU 62	11.87	2009.74	-13107	-7267	2177	5.38	5.38	-9648	9620	7246	101952	27068	27438	54506	No	25.04	Si
SLU 62	15.03	4428.11	-3792	-2103	2194	5.38	4.5671	-2792	8706	5566	101952	27068	27438	54506	No	24.84	Si
SLU 60	11.87	1824.97	-12136	-6729	2240	5.38	5.38	-8933	9524	7174	101952	27068	27438	54506	No	24.33	Si
SLU 60	15.03	4053.94	-2818	-1562	2255	5.38	3.7535	-2074	8610	4524	101952	27068	27438	54506	No	24.17	Si
SLU 75	11.87	1954.6	-14453	-8013	2161	5.38	5.38	-10639	9752	7345	101952	27068	27438	54506	No	25.22	Si
SLU 75	15.03	5318.05	-4555	-2526	2180	5.38	4.5677	-3353	8780	5615	101952	27068	27438	54506	No	25	Si
SLU 53	11.87	1624.32	-13029	-7224	2236	5.38	5.38	-9591	9612	7240	101952	27068	27438	54506	No	24.38	Si
SLU 53	15.03	4118.97	-3618	-2006	2252	5.38	4.6544	-2663	8688	5661	101952	27068	27438	54506	No	24.21	Si
SLU 83	11.87	2397.65	-14512	-8046	2194	5.38	5.38	-10683	9758	7350	101952	27068	27438	54506	No	24.84	Si
SLU 83	15.03	5510.27	-4669	-2589	2215	5.38	4.5294	-3437	8792	5575	101952	27068	27438	54506	No	24.61	Si
SLU 81	11.87	2212.88	-13541	-7508	2257	5.38	5.38	-9968	9662	7278	101952	27068	27438	54506	No	24.15	Si
SLU 81	15.03	5136.1	-3694	-2048	2275	5.38	3.899	-2719	8696	4747	101952	27068	27438	54506	No	23.96	Si
SLU 74	11.87	2012.23	-14435	-8004	2253	5.38	5.38	-10626	9750	7344	101952	27068	27438	54506	No	24.19	Si
SLU 74	15.03	5201.14	-4494	-2492	2272	5.38	4.5982	-3308	8774	5649	101952	27068	27438	54506	No	23.99	Si
SLU 82	11.87	2155.24	-13559	-7518	2166	5.38	5.38	-9981	9664	7279	101952	27068	27438	54506	No	25.17	Si
SLU 82	15.03	5253.01	-3755	-2082	2183	5.38	3.8733	-2764	8702	4719	101952	27068	27438	54506	No	24.97	Si
SLU 77	11.87	2197.01	-15406	-8542	2190	5.38	5.38	-11341	9845	7416	101952	27068	27438	54506	No	24.89	Si
SLU 77	15.03	5575.31	-5469	-3032	2211	5.38	5.0118	-4026	8870	6224	101952	27068	27438	54506	No	24.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	11.87	-9586.61	-5842	-3239	-8659	4.304	3.1473	0	0	0	101952	32482	21950	54432		6.29	Si
SLV 12	15.03	11140.2	-4886	-2709	-9199	5.38	1.2303	-15819	15666	2698	101952	40602	27438	68040		7.4	Si
SLV 11	11.87	-9389.31	-5889	-3265	-8772	4.304	3.2867	0	0	0	101952	32482	21950	54432		6.2	Si
SLV 11	15.03	11485.87	-5011	-2778	-9313	5.38	1.1937	-16721	15847	2648	101952	40602	27438	68040		7.31	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	11.87	11266.91	-13222	-7331	15332	5.38	5.38	-9733	14447	10881	101952	40602	27438	68040		4.44	Si
SLV 10	15.03	-11754.51	2160	1198	15983	4.304	0	0	0	0	101952	32482	21950	54432		3.41	Si
SLV 8	11.87	-9243.92	-5794	-3212	-12294	4.304	3.2836	0	0	0	101952	32482	21950	54432		4.43	Si
SLV 8	15.03	17636.24	-6887	-3818	-12923	5.38	0.3871	-58707	16250	881	101952	40602	27438	68040		5.26	Si
SLV 7	11.87	-9046.62	-5840	-3238	-12408	4.304	3.423	0	0	0	101952	32482	21950	54432		4.39	Si
SLV 7	15.03	17981.92	-7011	-3887	-13037	5.38	0.3759	-60695	16250	855	101952	40602	27438	68040		5.22	Si
SLV 6	11.87	11609.6	-13173	-7304	11697	5.38	5.38	-9697	14439	10876	101952	40602	27438	68040		5.82	Si
SLV 6	15.03	-5258.46	160	89	12259	4.304	0	0	0	0	101952	32482	21950	54432		4.44	Si
SLV 5	11.87	11806.9	-13220	-7330	11583	5.38	5.38	-9731	14446	10881	101952	40602	27438	68040		5.87	Si
SLV 5	15.03	-4912.79	35	20	12145	4.304	0	0	0	0	101952	32482	21950	54432		4.48	Si
SLV 13	11.87	3818.43	-10754	-5963	11033	5.38	5.38	-7917	14083	10608	101952	40602	27438	68040		6.17	Si
SLV 13	15.03	-10881.99	1870	1037	11370	4.304	0	0	0	0	101952	32482	21950	54432		4.79	Si
SLV 9	11.87	11464.21	-13268	-7357	15219	5.38	5.38	-9767	14453	10886	101952	40602	27438	68040		4.47	Si
SLV 9	15.03	-11408.84	2036	1129	15869	4.304	0	0	0	0	101952	32482	21950	54432		3.43	Si
SLV 14	11.87	3515.63	-10683	-5923	11207	5.38	5.38	-7864	14073	10600	101952	40602	27438	68040		6.07	Si
SLV 14	15.03	-11412.5	2061	1143	11544	4.304	0	0	0	0	101952	32482	21950	54432		4.72	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-3186	0.53	324.86	0	616.04	308.02	0.95	No
SLV 15	-3342	0.53	324.86	0	630.11	315.06	0.97	No
SLV 12	-3862	0.53	324.86	0	676.66	338.33	1.04	Si
SLV 11	-3963	0.53	324.86	0	685.71	342.86	1.06	Si
SLV 14	-4177	0.53	324.86	0	704.68	352.34	1.08	Si
SLV 13	-4332	0.53	324.86	0	718.55	359.27	1.11	Si
SLV 8	-5408	0.53	324.86	363.75	813.79	588.77	1.81	Si
SLV 7	-5510	0.53	324.86	370.3	822.73	596.51	1.84	Si
SLV 10	-7163	0.53	324.86	475.42	966.96	721.19	2.22	Si
SLV 9	-7265	0.53	324.86	481.78	975.77	728.78	2.24	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.03 Ta = 0.1191

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-7011	-5840	-214	3.305	1056.7	0.918	52.34469	21.18883	Si
SLV 8	-6887	-5794	-213	3.351	1044.2	0.917	53.1049	21.18883	Si
SLV 11	-5011	-5889	177	4.229	857.6	0.905	67.90351	21.18883	Si
SLV 12	-4886	-5842	177	4.303	845.3	0.904	69.16808	21.18883	Si
SLV 3	-6912	-8379	-650	3.293	1046.8	0.917	52.18402	10.20971	Si
SLV 4	-6721	-8308	-650	3.364	1027.6	0.916	53.36922	10.20971	Si
SLV 1	-4798	-10593	-634	4.292	836.6	0.904	69.03207	10.20971	Si
SLV 2	-4607	-10521	-634	4.413	817.7	0.902	71.08579	10.20971	Si
SLV 5	35	-13220	-159	14.194	436.7	1	206.2887	21.18883	Si, Trazione
SLV 6	160	-13173	-159	14.622	436.7	1	212.51014	21.18883	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.403	SLU 82	Si
V_SLU	23.958	SLU 81	Si
PF_SLV	0.996	SLV 10	No
V_SLV	3.406	SLV 10	Si
PFFP_SLV	0.948	SLV 16	No
R_SLV	2.47	SLV 7	Si

Maschio 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.454	-13.778	-0.354	L7	L8	3.101	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 37	11.87	-8.01	-11097	-0.0000194	0.0003743	0.0035	3.1007	15044.39	18383.8	18383.8	2293.87	No	Si
SLU 37	15.03	1574.43	-3359	-0.0000109	0.0003743	0.0035	3.1007	5009.43	5510.2	5510.2	3.5	No	Si
SLU 34	11.87	-121.17	-10541	-0.0000187	0.0003743	0.0035	3.1007	14392.69	17674.72	17674.72	145.87	No	Si
SLU 34	15.03	1259	-2575	-0.0000085	0.0003743	0.0035	3.1007	3876.52	4361.2	4361.2	3.46	No	Si
SLU 41	11.87	-158.98	-10641	-0.000019	0.0003743	0.0035	3.1007	14510.65	17801.66	17801.66	111.97	No	Si
SLU 41	15.03	1291.26	-2581	-0.0000086	0.0003743	0.0035	3.1007	3884.25	4369	4369	3.38	No	Si
SLU 38	11.87	-51.2	-11108	-0.0000195	0.0003743	0.0035	3.1007	15057.05	18397.77	18397.77	359.34	No	Si
SLU 38	15.03	1591.49	-3358	-0.000011	0.0003743	0.0035	3.1007	5007.76	5508.5	5508.5	3.46	No	Si
SLU 31	11.87	-162.34	-9966	-0.0000179	0.0003743	0.0035	3.1007	13708.29	16950.04	16950.04	104.41	No	Si
SLU 31	15.03	915.14	-1794	-0.000006	0.0003743	0.0035	3.1007	2724.99	3201.16	3201.16	3.5	No	Si
SLU 36	11.87	-67.97	-11444	-0.0000202	0.0003743	0.0035	3.1007	15444.95	18830.04	18830.04	277.05	No	Si
SLU 36	15.03	1537.54	-3278	-0.0000107	0.0003743	0.0035	3.1007	4893.05	5391.69	5391.69	3.51	No	Si
SLU 39	11.87	-200.16	-10066	-0.0000182	0.0003743	0.0035	3.1007	13828.27	17075.65	17075.65	85.31	No	Si
SLU 39	15.03	947.4	-1799	-0.0000062	0.0003743	0.0035	3.1007	2732.85	3209.14	3209.14	3.39	No	Si
SLU 35	11.87	-24.78	-11433	-0.00002	0.0003743	0.0035	3.1007	15432.42	18815.93	18815.93	759.26	No	Si
SLU 35	15.03	1520.48	-3279	-0.0000106	0.0003743	0.0035	3.1007	4894.72	5393.39	5393.39	3.55	No	Si
SLU 40	11.87	-243.34	-10077	-0.0000183	0.0003743	0.0035	3.1007	13841.32	17089.35	17089.35	70.23	No	Si
SLU 40	15.03	964.46	-1798	-0.0000062	0.0003743	0.0035	3.1007	2731.12	3207.38	3207.38	3.33	No	Si
SLU 42	11.87	-202.16	-10652	-0.0000192	0.0003743	0.0035	3.1007	14523.48	17815.51	17815.51	88.12	No	Si
SLU 42	15.03	1308.32	-2580	-0.0000087	0.0003743	0.0035	3.1007	3882.55	4367.28	4367.28	3.34	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	11.87	-5434.62	-10358	-0.0000361	0.0005615	0.0035	3.1007		17827.88	17827.88	3.28		Si
SLV 8	15.03	4015.8	-999	-0.0070545	0.0005615	0.0035	3.1007		2008.84	2008.84	0.5		No
SLD 8	11.87	-2312.21	-9568	-0.0000242	0.0005615	0.0035	3.1007		16767.58	16767.58	7.25		Si
SLD 8	15.03	2078.06	-1239	-0.0003099	0.0005615	0.0035	3.1007		2373.39	2373.39	1.14		Si
SLV 16	11.87	-1623.94	-9796	-0.0000223	0.0005615	0.0035	3.1007		17072.98	17072.98	10.51		Si
SLV 16	15.03	1888.95	-1089	-0.0003439	0.0005615	0.0035	3.1007		2144.41	2144.41	1.14		Si
SLV 7	11.87	-5389.57	-10319	-0.0000359	0.0005615	0.0035	3.1007		17774.58	17774.58	3.3		Si
SLV 7	15.03	4007.01	-988	-0.0070836	0.0005615	0.0035	3.1007		1991.2	1991.2	0.5		No
SLV 15	11.87	-1554.79	-9735	-0.0000219	0.0005615	0.0035	3.1007		16991.59	16991.59	10.93		Si
SLV 15	15.03	1875.46	-1071	-0.0003588	0.0005615	0.0035	3.1007		2117.31	2117.31	1.13		Si
SLD 7	11.87	-2292.51	-9551	-0.0000241	0.0005615	0.0035	3.1007		16744.08	16744.08	7.3		Si
SLD 7	15.03	2074.21	-1234	-0.0003141	0.0005615	0.0035	3.1007		2365.66	2365.66	1.14		Si
SLV 12	11.87	-5480.02	-10583	-0.0000366	0.0005615	0.0035	3.1007		18130.67	18130.67	3.31		Si
SLV 12	15.03	4183.57	-878	-0.0082322	0.0005615	0.0035	3.1007		1824.43	1824.43	0.44		No
SLD 11	11.87	-2311.84	-9646	-0.0000243	0.0005615	0.0035	3.1007		16872.89	16872.89	7.3		Si
SLD 11	15.03	2145.67	-1182	-0.0005006	0.0005615	0.0035	3.1007		2286.51	2286.51	1.07		Si
SLV 11	11.87	-5434.97	-10544	-0.0000364	0.0005615	0.0035	3.1007		18077.27	18077.27	3.33		Si
SLV 11	15.03	4174.78	-867	-0.0082616	0.0005615	0.0035	3.1007		1806.77	1806.77	0.43		No
SLD 12	11.87	-2331.55	-9663	-0.0000244	0.0005615	0.0035	3.1007		16896.07	16896.07	7.25		Si
SLD 12	15.03	2149.51	-1187	-0.0004959	0.0005615	0.0035	3.1007		2294.24	2294.24	1.07		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	11.87	321.46	-13000	-10825	-581	3.1007	3.1007	-12469	8607	7472	35683	25997	7907	33904	No	58.4	Si
SLU 72	15.03	1447.25	-3563	-2967	1619	3.1007	3.1007	-3417	7400	6425	35683	25997	7907	33904	No	20.94	Si
SLU 50	11.87	468.49	-11848	-9866	140	3.1007	3.1007	-11364	8460	7345	35683	25997	7907	33904	No	242.23	Si
SLU 50	15.03	1078.41	-3061	-2549	2204	3.1007	3.1007	-2936	7336	6369	35683	25997	7907	33904	No	15.38	Si
SLU 42	11.87	-202.16	-10652	-8870	-1617	3.1007	3.1007	-10216	8307	7212	35683	25997	7907	33904	No	20.97	Si
SLU 42	15.03	1308.32	-2580	-2148	-229	3.1007	3.1007	-2474	7274	6315	35683	25997	7907	33904	No	147.88	Si
SLU 8	11.87	351.99	-9680	-8061	-47	3.1007	3.1007	-9285	8182	7104	35683	25997	7907	33904	No	719.73	Si
SLU 8	15.03	1081.03	-2848	-2372	1793	3.1007	3.1007	-2732	7309	6345	35683	25997	7907	33904	No	18.91	Si
SLU 9	11.87	308.81	-9691	-8070	-157	3.1007	3.1007	-9295	8184	7105	35683	25997	7907	33904	No	215.39	Si
SLU 9	15.03	1098.09	-2847	-2371	1674	3.1007	3.1007	-2731	7309	6345	35683	25997	7907	33904	No	20.26	Si
SLU 49	11.87	408.54	-12195	-10155	-214	3.1007	3.1007	-11697	8504	7383	35683	25997	7907	33904	No	158.46	Si
SLU 49	15.03	1041.52	-2980	-2481	1862	3.1007	3.1007	-2858	7326	6360	35683	25997	7907	33904	No	18.21	Si
SLU 51	11.87	425.3	-11859	-9875	30	3.1007	3.1007	-11375	8461	7346	35683	25997	7907	33904	No	1142.96	Si
SLU 51	15.03	1095.47	-3060	-2548	2085	3.1007	3.1007	-2935	7336	6369	35683	25997	7907	33904	No	16.26	Si
SLU 71	11.87	364.65	-12989	-10816	-470	3.1007	3.1007	-12459	8606	7471	35683	25997	7907	33904	No	72.1	Si
SLU 71	15.03	1430.19	-3564	-2968	1739	3.1007	3.1007	-3418	7400	6425	35683	25997	7907	33904	No	19.5	Si
SLU 48	11.87	451.72	-12184	-10146	-104	3.1007	3.1007	-11686	8503	7382	35683	25997	7907	33904	No	327.07	Si
SLU 48	15.03	1024.46	-2981	-2482	1981	3.1007	3.1007	-2859	7326	6360	35683	25997	7907	33904	No	17.11	Si
SLU 40	11.87	-243.34	-10077	-8391	-1630	3.1007	3.1007	-9665	8233	7148	35683	25997	7907	33904	No	20.8	Si
SLU 40	15.03	964.46	-1798	-1497	-707	3.1007	3.042	-1725	7174	6111	35683	25997	7907	33904	No	47.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	11.87	-5434.97	-10544	-8780	-15250	3.1007	3.1007	-10113	12439	10800	35683	38996	7907	46483		3.05	Si
SLV 11	15.03	4174.78	-867	-722	-17925	3.1007	0	0	16250	0	35683	38996	7907	35683		1.99	Si
SLD 12	11.87	-2331.55	-9663	-8047	-7036	3.1007	3.1007	-9268	12270	10653	35683	38996	7907	46336		6.59	Si
SLD 12	15.03	2149.51	-1187	-989	-7688	3.1007	0	-64483	16250	0	35683	38996	7907	35683		4.64	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	11.87	5768.52	-7327	-6102	14420	3.1007	2.2892	-7028	11822	7578	35683	38996	7907	43261		3	Si
SLV 6	15.03	-3106.22	-1996	-1662	18952	2.4805	0	0	0	0	35683	31197	6325	35683		1.88	Si
SLV 8	11.87	-5434.62	-10358	-8626	-15004	3.1007	3.077	-10058	12428	10708	35683	38996	7907	46391		3.09	Si
SLV 8	15.03	4015.8	-999	-832	-17174	3.1007	0	0	16250	0	35683	38996	7907	35683		2.08	Si
SLV 10	11.87	5723.12	-7552	-6289	14040	3.1007	2.3776	-7244	11865	7899	35683	38996	7907	43582		3.1	Si
SLV 10	15.03	-2938.45	-1875	-1561	18102	2.4805	0	0	0	0	35683	31197	6325	35683		1.97	Si
SLV 12	11.87	-5480.02	-10583	-8813	-15384	3.1007	3.0976	-10151	12447	10796	35683	38996	7907	46479		3.02	Si
SLV 12	15.03	4183.57	-878	-731	-18024	3.1007	0	0	16250	0	35683	38996	7907	35683		1.98	Si
SLV 9	11.87	5768.17	-7513	-6256	14174	3.1007	2.3476	-7206	11858	7795	35683	38996	7907	43478		3.07	Si
SLV 9	15.03	-2947.23	-1863	-1551	18201	2.4805	0	0	0	0	35683	31197	6325	35683		1.96	Si
SLD 11	11.87	-2311.84	-9646	-8032	-6977	3.1007	3.1007	-9252	12267	10650	35683	38996	7907	46333		6.64	Si
SLD 11	15.03	2145.67	-1182	-984	-7645	3.1007	0	-64562	16250	0	35683	38996	7907	35683		4.67	Si
SLV 7	11.87	-5389.57	-10319	-8593	-14870	3.1007	3.0841	-9996	12416	10722	35683	38996	7907	46405		3.12	Si
SLV 7	15.03	4007.01	-988	-823	-17075	3.1007	0	0	16250	0	35683	38996	7907	35683		2.09	Si
SLV 5	11.87	5813.58	-7288	-6069	14554	3.1007	2.2578	-6990	11815	7469	35683	38996	7907	43152		2.97	Si
SLV 5	15.03	-3115.01	-1984	-1652	19050	2.4805	0	0	0	0	35683	31197	6325	35683		1.87	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.53	3175	-2757	358.17	377.92	1.06	Si
SLV 10	179667	0.53	3238	-2811	358.17	385.19	1.08	Si
SLV 5	179667	0.53	3434	-2982	358.17	408.03	1.14	Si
SLV 6	179667	0.53	3497	-3036	358.17	415.27	1.16	Si
SLV 13	179667	0.53	4725	-4102	358.17	556.51	1.55	Si
SLV 14	179667	0.53	4821	-4185	358.17	567.42	1.58	Si
SLV 1	179667	0.53	5588	-4851	358.17	654.33	1.83	Si
SLV 2	179667	0.53	5684	-4934	358.17	665.12	1.86	Si
SLV 15	179667	0.53	6326	-5492	358.17	737.06	2.06	Si
SLV 16	179667	0.53	6422	-5575	358.17	747.73	2.09	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1996	-7327	-523	3.852	629.1	0.89	62.90707	11.6001	Si
SLV 5	-1984	-7288	-524	3.862	628.1	0.89	63.06432	11.6001	Si
SLV 10	-1875	-7552	257	4.02	618.6	0.891	65.58927	11.6001	Si
SLV 9	-1863	-7513	257	4.031	617.6	0.891	65.75743	11.6001	Si
SLV 8	-999	-10358	-258	5.023	549	0.907	80.48453	11.6001	Si
SLV 7	-988	-10319	-258	5.039	548.1	0.907	80.71448	11.6001	Si
SLV 12	-878	-10583	523	5.124	540.6	0.912	81.67391	11.6001	Si
SLV 11	-867	-10544	523	5.142	539.8	0.912	81.9105	11.6001	Si
SLV 2	-1792	-8136	-1341	3.843	611.5	0.891	62.65628	6.40952	Si
SLV 1	-1774	-8076	-1341	3.859	610	0.892	62.90453	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.326	SLU 40	Si
V_SLU	15.38	SLU 50	Si
PF_SLV	0.433	SLV 11	No
V_SLV	1.873	SLV 5	Si
PFFP_SLV	1.055	SLV 9	Si
R_SLV	5.423	SLV 6	Si

Maschio 177

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.823	6.526	-17.718	6.526	L7	L8	2.105	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 28	12.77	560.57	-5372	-0.0000177	0.0003743	0.0035	2.105	5147.63	5509.54	5509.54	9.83	No	Si
SLU 28	14.57	1362.14	-3373	-0.0000185	0.0003743	0.0035	2.105	3350.48	3629.15	3629.15	2.66	No	Si
SLU 35	12.77	517.11	-5158	-0.0000169	0.0003743	0.0035	2.105	4961.81	5312.02	5312.02	10.27	No	Si
SLU 35	14.57	1402.55	-3159	-0.0000184	0.0003743	0.0035	2.105	3149.64	3422.46	3422.46	2.44	No	Si
SLU 29	12.77	516.96	-4927	-0.0000163	0.0003743	0.0035	2.105	4760.12	5099.47	5099.47	9.86	No	Si
SLU 29	14.57	1272.53	-2929	-0.0000168	0.0003743	0.0035	2.105	2931.81	3198.95	3198.95	2.51	No	Si
SLU 17	12.77	474.44	-4651	-0.0000152	0.0003743	0.0035	2.105	4516.02	4842.1	4842.1	10.21	No	Si
SLU 17	14.57	1073.27	-2682	-0.0000145	0.0003743	0.0035	2.105	2696.26	2957.74	2957.74	2.76	No	Si
SLU 42	12.77	428.7	-4553	-0.0000146	0.0003743	0.0035	2.105	4428.07	4749.81	4749.81	11.08	No	Si
SLU 42	14.57	1031.88	-2554	-0.0000139	0.0003743	0.0035	2.105	2573.48	2831.94	2831.94	2.74	No	Si
SLU 36	12.77	511.22	-5136	-0.0000168	0.0003743	0.0035	2.105	4943.25	5292.38	5292.38	10.35	No	Si
SLU 36	14.57	1419.57	-3138	-0.0000186	0.0003743	0.0035	2.105	3129.6	3401.9	3401.9	2.4	No	Si
SLU 37	12.77	467.6	-4692	-0.0000153	0.0003743	0.0035	2.105	4552.08	4880.01	4880.01	10.44	No	Si
SLU 37	14.57	1329.96	-2693	-0.0000171	0.0003743	0.0035	2.105	2707.26	2969.04	2969.04	2.23	No	Si
SLU 30	12.77	511.06	-4906	-0.0000162	0.0003743	0.0035	2.105	4741.4	5079.67	5079.67	9.94	No	Si
SLU 30	14.57	1289.55	-2907	-0.0000169	0.0003743	0.0035	2.105	2911.59	3178.21	3178.21	2.46	No	Si
SLU 27	12.77	566.47	-5393	-0.0000178	0.0003743	0.0035	2.105	5166.01	5528.96	5528.96	9.76	No	Si
SLU 27	14.57	1345.12	-3394	-0.0000184	0.0003743	0.0035	2.105	3370.35	3649.67	3649.67	2.71	No	Si
SLU 38	12.77	461.7	-4671	-0.0000152	0.0003743	0.0035	2.105	4533.18	4860.13	4860.13	10.53	No	Si
SLU 38	14.57	1346.98	-2672	-0.0000173	0.0003743	0.0035	2.105	2686.86	2948.1	2948.1	2.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	12.77	947.57	-2954	-0.0000142	0.0005615	0.0035	2.105		3259.33	3259.33	3.44		Si
SLV 7	14.57	1200.55	-965	-0.0006634	0.0005615	0.0035	2.105		1243.85	1243.85	1.04		Si
SLV 4	12.77	1330.17	-2065	-0.0000178	0.0005615	0.0035	2.105		2367.16	2367.16	1.78		Si
SLV 4	14.57	1963.99	-50	-0.0126749	0.0005615	0.0035	2.105		297.17	297.17	0.15		No
SLD 1	12.77	894.4	-3790	-0.0000159	0.0005615	0.0035	2.105		4086	4086	4.57		Si
SLD 1	14.57	1045.17	-1796	-0.0000134	0.0005615	0.0035	2.105		2093.34	2093.34	2		Si
SLV 3	12.77	1518.11	-1814	-0.0000299	0.0005615	0.0035	2.105		2110.76	2110.76	1.39		Si
SLV 3	14.57	2069.8	201	-0.0151592	0.0005615	0.0035	2.105		0	0	0		No
SLV 1	12.77	1440.76	-2416	-0.0000187	0.0005615	0.0035	2.105		2719.84	2719.84	1.89		Si
SLV 1	14.57	1890.98	-401	-0.0094098	0.0005615	0.0035	2.105		662.35	662.35	0.35		No
SLD 2	12.77	813.67	-3899	-0.0000156	0.0005615	0.0035	2.105		4192.5	4192.5	5.15		Si
SLD 2	14.57	999.72	-1905	-0.0000127	0.0005615	0.0035	2.105		2203.42	2203.42	2.2		Si
SLD 3	12.77	929.04	-3528	-0.0000155	0.0005615	0.0035	2.105		3827.14	3827.14	4.12		Si
SLD 3	14.57	1122.06	-1534	-0.0000168	0.0005615	0.0035	2.105		1826.26	1826.26	1.63		Si
SLV 8	12.77	825.11	-3119	-0.0000137	0.0005615	0.0035	2.105		3422.64	3422.64	4.15		Si
SLV 8	14.57	1131.61	-1129	-0.000076	0.0005615	0.0035	2.105		1412.63	1412.63	1.25		Si
SLV 2	12.77	1252.82	-2668	-0.0000161	0.0005615	0.0035	2.105		2972.29	2972.29	2.37		Si
SLV 2	14.57	1785.17	-653	-0.0067324	0.0005615	0.0035	2.105		922.78	922.78	0.52		No
SLD 4	12.77	848.32	-3636	-0.0000152	0.0005615	0.0035	2.105		3933.75	3933.75	4.64		Si
SLD 4	14.57	1076.61	-1642	-0.0000145	0.0005615	0.0035	2.105		1936.2	1936.2	1.8		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 37	12.77	467.6	-4692	-3907	-462	2.105	2.105	-6629	7828	4614	35683	17649	5368	23017	No	49.79	Si
SLU 37	14.57	1329.96	-2693	-2243	-462	2.105	1.676	-3805	7452	3497	35683	17649	5368	23017	No	49.79	Si
SLU 38	12.77	461.7	-4671	-3889	-475	2.105	2.105	-6599	7824	4612	35683	17649	5368	23017	No	48.45	Si
SLU 38	14.57	1346.98	-2672	-2225	-475	2.105	1.645	-3775	7448	3431	35683	17649	5368	23017	No	48.45	Si
SLU 29	12.77	516.96	-4927	-4103	-403	2.105	2.105	-6961	7873	4640	35683	17649	5368	23017	No	57.12	Si
SLU 29	14.57	1272.53	-2929	-2439	-403	2.105	1.8539	-4137	7496	3891	35683	17649	5368	23017	No	57.12	Si
SLU 36	12.77	511.22	-5136	-4277	-488	2.105	2.105	-7257	7912	4663	35683	17649	5368	23017	No	47.18	Si
SLU 36	14.57	1419.57	-3138	-2613	-488	2.105	1.8001	-4433	7535	3798	35683	17649	5368	23017	No	47.18	Si
SLU 27	12.77	566.47	-5393	-4491	-416	2.105	2.105	-7619	7960	4692	35683	17649	5368	23017	No	55.36	Si
SLU 27	14.57	1345.12	-3394	-2826	-416	2.105	1.9686	-4796	7584	4180	35683	17649	5368	23017	No	55.36	Si
SLU 77	12.77	673.28	-6613	-5507	-384	2.105	2.105	-9343	8190	4827	35683	17649	5368	23017	No	59.88	Si
SLU 77	14.57	1404.53	-4033	-3359	-384	2.105	2.105	-5699	7704	4541	35683	17649	5368	23017	No	59.88	Si
SLU 28	12.77	560.57	-5372	-4473	-429	2.105	2.105	-7589	7956	4689	35683	17649	5368	23017	No	53.71	Si
SLU 28	14.57	1362.14	-3373	-2809	-429	2.105	1.946	-4765	7580	4130	35683	17649	5368	23017	No	53.71	Si
SLU 35	12.77	517.11	-5158	-4295	-475	2.105	2.105	-7287	7916	4666	35683	17649	5368	23017	No	48.44	Si
SLU 35	14.57	1402.55	-3159	-2630	-475	2.105	1.8255	-4463	7539	3854	35683	17649	5368	23017	No	48.44	Si
SLU 30	12.77	511.06	-4906	-4085	-416	2.105	2.105	-6931	7869	4638	35683	17649	5368	23017	No	55.37	Si
SLU 30	14.57	1289.55	-2907	-2421	-416	2.105	1.8268	-4107	7492	3832	35683	17649	5368	23017	No	55.37	Si
SLU 78	12.77	667.38	-6592	-5489	-397	2.105	2.105	-9313	8186	4825	35683	17649	5368	23017	No	57.96	Si
SLU 78	14.57	1421.55	-4012	-3341	-397	2.105	2.0945	-5668	7700	4516	35683	17649	5368	23017	No	57.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	12.77	-353.66	-7559	-6294	976	2.105	2.105	-10679	12553	7398	35683	26474	5368	31841		32.64	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	14.57	-1135.96	-5618	-4678	55	2.105	2.105	-7937	12004	7075	35683	26474	5368	31841		583.52	Si
SLV 10	12.77	28.94	-6670	-5554	498	2.105	2.105	-9423	12301	7250	35683	26474	5368	31841		63.95	Si
SLV 10	14.57	-372.53	-4703	-3916	56	2.105	2.105	-6644	11746	6923	35683	26474	5368	31841		568.83	Si
SLV 15	12.77	-276.31	-6956	-5793	853	2.105	2.105	-9828	12382	7298	35683	26474	5368	31841		37.34	Si
SLV 15	14.57	-957.14	-5015	-4176	41	2.105	2.105	-7085	11834	6975	35683	26474	5368	31841		777.83	Si
SLV 3	12.77	1518.11	-1814	-1510	-814	2.105	0.6462	-8378	12092	2188	35683	26474	5368	31841		39.12	Si
SLV 3	14.57	2069.8	201	168	107	2.105	0	0	7171	0	35683	26474	5368	31841		297.08	Si
SLV 16	12.77	-464.25	-7208	-6002	807	2.105	2.105	-10184	12453	7340	35683	26474	5368	31841		39.45	Si
SLV 16	14.57	-1062.95	-5267	-4386	-5	2.105	2.105	-7441	11905	7017	35683	26474	5368	31841		6783.73	Si
SLV 14	12.77	-541.6	-7811	-6504	930	2.105	2.105	-11035	12624	7440	35683	26474	5368	31841		34.24	Si
SLV 14	14.57	-1241.77	-5869	-4888	9	2.105	2.105	-8292	12075	7117	35683	26474	5368	31841		3562.37	Si
SLV 2	12.77	1252.82	-2668	-2222	-737	2.105	1.7487	-3769	11171	5469	35683	26474	5368	31841		43.22	Si
SLV 2	14.57	1785.17	-653	-544	75	2.105	0	0	16250	0	35683	26474	5368	31841		423.51	Si
SLV 4	12.77	1330.17	-2065	-1720	-859	2.105	1.2254	-2918	11000	3774	35683	26474	5368	31841		37.05	Si
SLV 4	14.57	1963.99	-50	-42	62	2.105	0	0	0	0	35683	26474	5368	31841		517.31	Si
SLV 9	12.77	151.4	-6506	-5417	528	2.105	2.105	-9191	12255	7223	35683	26474	5368	31841		60.34	Si
SLV 9	14.57	-303.58	-4539	-3780	86	2.105	2.105	-6413	11699	6895	35683	26474	5368	31841		371.51	Si
SLV 1	12.77	1440.76	-2416	-2012	-691	2.105	1.3685	-3414	11099	4253	35683	26474	5368	31841		46.08	Si
SLV 1	14.57	1890.98	-401	-334	121	2.105	0	0	16250	0	35683	26474	5368	31841		263.56	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.53	0	-1518	237.63	0	0	No, e>t/2
SLV 3	179667	0.53	0	-1267	237.63	0	0	No, e>t/2
SLV 1	179667	0.53	3141	-1851	237.63	253.84	1.07	Si
SLV 2	179667	0.53	3568	-2103	237.63	287.55	1.21	Si
SLV 7	179667	0.53	3976	-2344	237.63	319.57	1.34	Si
SLV 8	179667	0.53	4255	-2508	237.63	341.3	1.44	Si
SLV 11	179667	0.53	6471	-3814	237.63	511.33	2.15	Si
SLV 12	179667	0.53	6749	-3978	237.63	532.31	2.24	Si
SLV 5	179667	0.53	7283	-4292	237.63	572.29	2.41	Si
SLV 6	179667	0.53	7561	-4457	237.63	593.03	2.5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-3966	-6684	651	2.038	675.5	0.905	32.70812	11.6001	Si
SLV 9	-3831	-6494	650	2.087	662.1	0.904	33.53962	11.6001	Si
SLV 6	-2558	-5493	652	2.7	538.1	0.893	43.93961	11.6001	Si
SLV 5	-2422	-5303	651	2.788	525.2	0.892	45.41959	11.6001	Si
SLV 12	-2108	-4737	-661	3.014	495.5	0.89	49.2089	11.6001	Si
SLV 11	-1972	-4547	-661	3.124	482.8	0.89	51.04122	11.6001	Si
SLV 14	-4994	-7442	190	1.799	777.7	0.914	28.61147	6.40952	Si
SLV 13	-4787	-7151	190	1.856	757	0.912	29.56297	6.40952	Si
SLV 16	-4437	-6858	-203	1.957	722.2	0.909	31.2781	6.40952	Si
SLV 15	-4229	-6567	-204	2.025	701.6	0.908	32.41382	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.189	SLU 38	Si
V_SLU	47.179	SLU 36	Si
PF_SLV	0	SLV 3	No
V_SLV	32.637	SLV 13	Si
PFFP_SLV	0	SLV 3	No
R_SLV	2.82	SLV 10	Si

Maschio 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.818	6.526	-12.838	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	12.77	3175.82	-13770	-0.0000252	0.0003743	0.0035	3.98	24076.51	25315.11	25315.11	7.97	No	Si
SLU 83	14.57	1082.04	-9123	-0.0000144	0.0003743	0.0035	3.98	16694.84	17851.08	17851.08	16.5	No	Si
SLU 81	12.77	3065.3	-12878	-0.0000237	0.0003743	0.0035	3.98	22718.18	24038.71	24038.71	7.84	No	Si
SLU 81	14.57	588.11	-8226	-0.0000122	0.0003743	0.0035	3.98	15182.49	16265.83	16265.83	27.66	No	Si
SLU 18	12.77	2297.75	-9485	-0.0000174	0.0003743	0.0035	3.98	17297.17	18488.49	18488.49	8.05	No	Si
SLU 18	14.57	296.27	-5936	-0.0000085	0.0003743	0.0035	3.98	11193.85	12128.67	12128.67	40.94	No	Si
SLU 84	12.77	3154.75	-13717	-0.0000251	0.0003743	0.0035	3.98	23996.4	25238.75	25238.75	8	No	Si
SLU 84	14.57	1095.36	-9070	-0.0000144	0.0003743	0.0035	3.98	16606.08	17757.41	17757.41	16.21	No	Si
SLU 42	12.77	2690.09	-10938	-0.0000202	0.0003743	0.0035	3.98	19667.65	21004.98	21004.98	7.81	No	Si
SLU 42	14.57	1101.9	-7332	-0.000012	0.0003743	0.0035	3.98	13648.43	14667.35	14667.35	13.31	No	Si
SLU 39	12.77	2600.64	-10099	-0.0000189	0.0003743	0.0035	3.98	18307.63	19554.87	19554.87	7.52	No	Si
SLU 39	14.57	594.65	-6488	-0.0000099	0.0003743	0.0035	3.98	12173.4	13138.93	13138.93	22.1	No	Si
SLU 82	12.77	3044.23	-12825	-0.0000236	0.0003743	0.0035	3.98	22636.41	23963.11	23963.11	7.87	No	Si
SLU 82	14.57	601.44	-8173	-0.0000122	0.0003743	0.0035	3.98	15092.06	16171.02	16171.02	26.89	No	Si
SLU 41	12.77	2711.16	-10991	-0.0000204	0.0003743	0.0035	3.98	19752.93	21095.32	21095.32	7.78	No	Si
SLU 41	14.57	1088.57	-7385	-0.0000121	0.0003743	0.0035	3.98	13740.43	14762.96	14762.96	13.56	No	Si
SLU 40	12.77	2579.57	-10046	-0.0000188	0.0003743	0.0035	3.98	18220.68	19462.78	19462.78	7.54	No	Si
SLU 40	14.57	607.97	-6435	-0.0000098	0.0003743	0.0035	3.98	12079.73	13042.38	13042.38	21.45	No	Si
SLU 31	12.77	2444.71	-10154	-0.0000186	0.0003743	0.0035	3.98	18398.43	19651.2	19651.2	8.04	No	Si
SLU 31	14.57	623.74	-6546	-0.00001	0.0003743	0.0035	3.98	12275.11	13243.76	13243.76	21.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	12.77	1658.65	-8387	-0.0000145	0.0005615	0.0035	3.98		16830.32	16830.32	10.15		Si
SLD 4	14.57	2281.98	-5042	-0.0000112	0.0005615	0.0035	3.98		10582.43	10582.43	4.64		Si
SLV 11	12.77	2908.8	-7399	-0.0000157	0.0005615	0.0035	3.98		15000.82	15000.82	5.16		Si
SLV 11	14.57	-175.38	-3892	-0.0000055	0.0005615	0.0035	3.98		12157.48	12157.48	69.32		Si
SLD 3	12.77	1805.8	-8373	-0.0000148	0.0005615	0.0035	3.98		16804.41	16804.41	9.31		Si
SLD 3	14.57	2258.8	-5027	-0.0000112	0.0005615	0.0035	3.98		10552.7	10552.7	4.67		Si
SLV 1	12.77	1182.06	-8257	-0.0000134	0.0005615	0.0035	3.98		16589.34	16589.34	14.03		Si
SLV 1	14.57	4326.83	-5083	-0.0000157	0.0005615	0.0035	3.98		10658.65	10658.65	2.46		Si
SLV 8	12.77	2137.8	-5732	-0.0000119	0.0005615	0.0035	3.98		11884.91	11884.91	5.56		Si
SLV 8	14.57	2356.45	-2493	-0.0000084	0.0005615	0.0035	3.98		5701.53	5701.53	2.42		Si
SLV 3	12.77	1458.78	-6170	-0.0000111	0.0005615	0.0035	3.98		12706.94	12706.94	8.71		Si
SLV 3	14.57	4741.21	-3108	-0.0000237	0.0005615	0.0035	3.98		6888.61	6888.61	1.45		Si
SLV 15	12.77	3284.73	-11799	-0.0000224	0.0005615	0.0035	3.98		23003.73	23003.73	7		Si
SLV 15	14.57	-3581.02	-7848	-0.0000176	0.0005615	0.0035	3.98		19551.85	19551.85	5.46		Si
SLV 7	12.77	2361.02	-5711	-0.0000123	0.0005615	0.0035	3.98		11845.11	11845.11	5.02		Si
SLV 7	14.57	2321.29	-2470	-0.0000082	0.0005615	0.0035	3.98		5655.54	5655.54	2.44		Si
SLV 2	12.77	839.48	-8290	-0.0000127	0.0005615	0.0035	3.98		16649.64	16649.64	19.83		Si
SLV 2	14.57	4380.79	-5119	-0.0000159	0.0005615	0.0035	3.98		10727.89	10727.89	2.45		Si
SLV 4	12.77	1116.2	-6203	-0.0000105	0.0005615	0.0035	3.98		12767.71	12767.71	11.44		Si
SLV 4	14.57	4795.18	-3144	-0.0000239	0.0005615	0.0035	3.98		6958.94	6958.94	1.45		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	12.77	3175.82	-13770	-11466	1106	3.98	3.98	-10289	8316	9268	35683	33370	10149	43519	No	39.34	Si
SLU 83	14.57	1082.04	-9123	-7597	1110	3.98	3.98	-6817	7853	8752	35683	33370	10149	43519	No	39.2	Si
SLU 52	12.77	2606.48	-12320	-10259	1216	3.98	3.98	-9206	8172	9107	35683	33370	10149	43519	No	35.78	Si
SLU 52	14.57	318.83	-7731	-6437	1221	3.98	3.98	-5777	7715	8597	35683	33370	10149	43519	No	35.63	Si
SLU 73	12.77	2909.37	-12933	-10770	1217	3.98	3.98	-9664	8233	9175	35683	33370	10149	43519	No	35.75	Si
SLU 73	14.57	617.21	-8284	-6898	1223	3.98	3.98	-6190	7770	8659	35683	33370	10149	43519	No	35.58	Si
SLU 61	12.77	2741.34	-12211	-10168	1301	3.98	3.98	-9124	8161	9095	35683	33370	10149	43519	No	33.46	Si
SLU 61	14.57	303.05	-7620	-6345	1307	3.98	3.98	-5694	7704	8585	35683	33370	10149	43519	No	33.29	Si
SLU 81	12.77	3065.3	-12878	-10724	1321	3.98	3.98	-9623	8227	9169	35683	33370	10149	43519	No	32.95	Si
SLU 81	14.57	588.11	-8226	-6850	1328	3.98	3.98	-6147	7764	8652	35683	33370	10149	43519	No	32.77	Si
SLU 74	12.77	3073.63	-14761	-12291	1097	3.98	3.98	-11030	8415	9378	35683	33370	10149	43519	No	39.68	Si
SLU 74	14.57	990.74	-10119	-8427	1098	3.98	3.98	-7562	7953	8862	35683	33370	10149	43519	No	39.62	Si
SLU 60	12.77	2762.41	-12264	-10213	1320	3.98	3.98	-9164	8166	9101	35683	33370	10149	43519	No	32.98	Si
SLU 60	14.57	289.73	-7673	-6389	1326	3.98	3.98	-5733	7709	8591	35683	33370	10149	43519	No	32.81	Si
SLU 53	12.77	2770.75	-14147	-11780	1095	3.98	3.98	-10571	8354	9310	35683	33370	10149	43519	No	39.73	Si
SLU 53	14.57	692.36	-9567	-7966	1097	3.98	3.98	-7148	7898	8801	35683	33370	10149	43519	No	39.68	Si
SLU 62	12.77	2872.93	-13156	-10955	1105	3.98	3.98	-9831	8255	9200	35683	33370	10149	43519	No	39.39	Si
SLU 62	14.57	783.66	-8570	-7136	1108	3.98	3.98	-6404	7798	8690	35683	33370	10149	43519	No	39.27	Si
SLU 82	12.77	3044.23	-12825	-10679	1302	3.98	3.98	-9583	8222	9163	35683	33370	10149	43519	No	33.43	Si
SLU 82	14.57	601.44	-8173	-6805	1309	3.98	3.98	-6107	7759	8646	35683	33370	10149	43519	No	33.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	12.77	2942.16	-11832	-9852	5483	3.98	3.98	-8841	12185	13579	35683	50055	10149	49262		8.99	Si
SLV 16	14.57	-3527.05	-7885	-6566	3394	3.98	3.98	-5892	11595	12921	35683	50055	10149	48605		14.32	Si
SLV 3	12.77	1458.78	-6170	-5138	-3754	3.98	3.98	-4610	11339	12636	35683	50055	10149	48319		12.87	Si
SLV 3	14.57	4741.21	-3108	-2588	-1564	3.98	1.3934	-2322	10881	4245	35683	50055	10149	39929		25.53	Si
SLV 15	12.77	3284.73	-11799	-9825	5704	3.98	3.98	-8817	12180	13573	35683	50055	10149	49257		8.64	Si
SLV 15	14.57	-3581.02	-7848	-6535	3618	3.98	3.98	-5864	11590	12915	35683	50055	10149	48599		13.43	Si
SLD 13	12.77	2465.56	-11702	-9744	2957	3.98	3.98	-8744	12165	13557	35683	50055	10149	49240		16.65	Si
SLD 13	14.57	-1482.21	-7925	-6599	2026	3.98	3.98	-5922	11601	12928	35683	50055	10149	48611		24	Si
SLV 4	12.77	1116.2	-6203	-5165	-3975	3.98	3.98	-4635	11344	12641	35683	50055	10149	48325		12.16	Si
SLV 4	14.57	4795.18	-3144	-2618	-1788	3.98	1.395	-2350	10887	4252	35683	50055	10149	39936		22.33	Si
SLD 15	12.77	2588.88	-10781	-8977	2944	3.98	3.98	-8056	12028	13404	35683	50055	10149	49087		16.67	Si
SLD 15	14.57	-1300.45	-7051	-5872	2054	3.98	3.98	-5269	11470	12783	35683	50055	10149	48466		23.6	Si
SLV 1	12.77	1182.06	-8257	-6876	-3723	3.98	3.98	-6170	11651	12984	35683	50055	10149	48667		13.07	Si
SLV 1	14.57	4326.83	-5083	-4232	-1629	3.98	3.4161	-3798	11176	10690	35683	50055	10149	46373		28.47	Si
SLV 2	12.77	839.48	-8290	-6903	-3944	3.98	3.98	-6195	11656	12989	35683	50055	10149	48672		12.34	Si
SLV 2	14.57	4380.79	-5119	-4263	-1853	3.98	3.4027	-3825	11182	10653	35683	50055	10149	46337		25	Si
SLV 13	12.77	3008.01	-13887	-11564	5734	3.98	3.98	-10376	12492	13921	35683	50055	10149	49604		8.65	Si
SLV 13	14.57	-3995.41	-9823	-8180	3553	3.98	3.98	-7340	11885	13244	35683	50055	10149	48927		13.77	Si
SLV 14	12.77	2665.44	-13919	-11591	5514	3.98	3.98	-10401	12497	13926	35683	50055	10149	49610		9	Si
SLV 14	14.57	-3941.44	-9859	-8210	3329	3.98	3.98	-7367	11890	13250	35683	50055	10149	48934		14.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.53	3895	-4340	449.3	592.13	1.32	Si
SLV 8	179667	0.53	3916	-4364	449.3	595.29	1.32	Si
SLV 3	179667	0.53	4597	-5123	449.3	695.67	1.55	Si
SLV 4	179667	0.53	4630	-5160	449.3	700.47	1.56	Si
SLV 11	179667	0.53	5174	-5766	449.3	779.87	1.74	Si
SLV 12	179667	0.53	5195	-5790	449.3	782.97	1.74	Si
SLV 1	179667	0.53	6484	-7226	449.3	968.64	2.16	Si
SLV 2	179667	0.53	6517	-7262	449.3	973.31	2.17	Si
SLV 15	179667	0.53	8862	-9875	449.3	1302.34	2.9	Si
SLV 16	179667	0.53	8894	-9912	449.3	1306.85	2.91	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-9046	-13757	1385	1.773	1430.8	0.912	28.23573	11.6001	Si
SLV 9	-8979	-13823	1385	1.782	1424.1	0.912	28.39652	11.6001	Si
SLV 6	-7204	-14131	1379	2.08	1248.1	0.904	33.43633	11.6001	Si
SLV 5	-7137	-14196	1378	2.093	1241.5	0.904	33.66078	11.6001	Si
SLV 14	-8784	-11328	427	1.891	1404.7	0.911	30.15437	6.40952	Si
SLV 13	-8681	-11429	426	1.907	1394.5	0.911	30.42488	6.40952	Si
SLV 12	-2107	-8112	-1376	4.047	768.7	0.893	65.87681	11.6001	Si
SLV 16	-6702	-9635	-402	2.283	1198.7	0.902	36.78942	6.40952	Si
SLV 11	-2040	-8178	-1376	4.099	763.2	0.894	66.66473	11.6001	Si
SLV 15	-6599	-9735	-402	2.306	1188.6	0.901	37.18799	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.519	SLU 39	Si
V_SLU	32.769	SLU 81	Si
PF_SLV	1.451	SLV 4	Si
V_SLV	8.636	SLV 15	Si
PFFP_SLV	1.318	SLV 7	Si
R_SLV	2.434	SLV 10	Si

Maschio 179

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.938	6.526	-7.958	6.526	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 42	12.77	-757.17	-10206	-0.0000153	0.0003743	0.0035	3.98	18483.3	23453.36	23453.36	30.98	No	Si
SLU 42	14.57	-2312.19	-6613	-0.0000135	0.0003743	0.0035	3.98	12392.13	17136.55	17136.55	7.41	No	Si
SLU 39	12.77	-642.32	-9284	-0.0000138	0.0003743	0.0035	3.98	16963.88	21889.76	21889.76	34.08	No	Si
SLU 39	14.57	-1906.63	-5681	-0.0000114	0.0003743	0.0035	3.98	10738.33	15406.67	15406.67	8.08	No	Si
SLU 34	12.77	-779.58	-10406	-0.0000156	0.0003743	0.0035	3.98	18808.35	23791.69	23791.69	30.52	No	Si
SLU 34	14.57	-2176.02	-6817	-0.0000135	0.0003743	0.0035	3.98	12751.18	17495.86	17495.86	8.04	No	Si
SLU 35	12.77	-794.05	-12231	-0.0000182	0.0003743	0.0035	3.98	21715.76	26936.24	26936.24	33.92	No	Si
SLU 35	14.57	-2575.92	-8659	-0.0000168	0.0003743	0.0035	3.98	15916.08	20761.95	20761.95	8.06	No	Si
SLU 80	12.77	-1011.41	-14059	-0.0000212	0.0003743	0.0035	3.98	24510.14	29912.32	29912.32	29.57	No	Si
SLU 80	14.57	-2744.93	-9440	-0.0000183	0.0003743	0.0035	3.98	17223.41	22159.89	22159.89	8.07	No	Si
SLU 38	12.77	-855.89	-11402	-0.0000171	0.0003743	0.0035	3.98	20409.97	25498.24	25498.24	29.79	No	Si
SLU 38	14.57	-2600.87	-7824	-0.0000157	0.0003743	0.0035	3.98	14495.62	19268.24	19268.24	7.41	No	Si
SLU 79	12.77	-988.29	-14103	-0.0000212	0.0003743	0.0035	3.98	24576.97	29985.94	29985.94	30.34	No	Si
SLU 79	14.57	-2756.51	-9485	-0.0000184	0.0003743	0.0035	3.98	17297.47	22236.51	22236.51	8.07	No	Si
SLU 37	12.77	-832.76	-11447	-0.0000171	0.0003743	0.0035	3.98	20480.97	25575.43	25575.43	30.71	No	Si
SLU 37	14.57	-2612.45	-7868	-0.0000158	0.0003743	0.0035	3.98	14572.21	19347.6	19347.6	7.41	No	Si
SLU 41	12.77	-734.04	-10251	-0.0000153	0.0003743	0.0035	3.98	18556.16	23528.99	23528.99	32.05	No	Si
SLU 41	14.57	-2323.77	-6657	-0.0000136	0.0003743	0.0035	3.98	12470.62	17216.95	17216.95	7.41	No	Si
SLU 36	12.77	-817.17	-12186	-0.0000181	0.0003743	0.0035	3.98	21645.99	26860.04	26860.04	32.87	No	Si
SLU 36	14.57	-2564.35	-8614	-0.0000168	0.0003743	0.0035	3.98	15840.73	20681.44	20681.44	8.06	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	12.77	-5357.43	-10540	-0.0000249	0.0005615	0.0035	3.98		24403.08	24403.08	4.55		Si
SLV 1	14.57	4250.82	-6989	-0.0000178	0.0005615	0.0035	3.98		14239.06	14239.06	3.35		Si
SLV 11	12.77	783.75	-6826	-0.0000106	0.0005615	0.0035	3.98		13935.16	13935.16	17.78		Si
SLV 11	14.57	-3104.2	-3493	-0.0000111	0.0005615	0.0035	3.98		11399.78	11399.78	3.67		Si
SLV 3	12.77	-5399.61	-9001	-0.0000229	0.0005615	0.0035	3.98		21624.46	21624.46	4		Si
SLV 3	14.57	4064.1	-5591	-0.0000156	0.0005615	0.0035	3.98		11620.48	11620.48	2.86		Si
SLV 14	12.77	4175.81	-9995	-0.0000218	0.0005615	0.0035	3.98		19762.62	19762.62	4.73		Si
SLV 14	14.57	-6526.77	-6305	-0.0000234	0.0005615	0.0035	3.98		16697.18	16697.18	2.56		Si
SLV 16	12.77	4133.63	-8456	-0.0000196	0.0005615	0.0035	3.98		16956.37	16956.37	4.1		Si
SLV 16	14.57	-6713.49	-4907	-0.0000279	0.0005615	0.0035	3.184		14078.62	14078.62	2.1		Si
SLV 2	12.77	-5433.01	-10591	-0.0000251	0.0005615	0.0035	3.98		24495.52	24495.52	4.51		Si
SLV 2	14.57	4135.27	-7038	-0.0000176	0.0005615	0.0035	3.98		14330.19	14330.19	3.47		Si
SLV 13	12.77	4251.39	-9944	-0.0000218	0.0005615	0.0035	3.98		19670.52	19670.52	4.63		Si
SLV 13	14.57	-6411.22	-6256	-0.0000229	0.0005615	0.0035	3.98		16606.2	16606.2	2.59		Si
SLV 15	12.77	4209.21	-8405	-0.0000197	0.0005615	0.0035	3.98		16862.76	16862.76	4.01		Si
SLV 15	14.57	-6597.94	-4859	-0.0000272	0.0005615	0.0035	3.184		13986.81	13986.81	2.12		Si
SLV 12	12.77	734.5	-6859	-0.0000106	0.0005615	0.0035	3.98		13997.19	13997.19	19.06		Si
SLV 12	14.57	-3179.49	-3525	-0.0000114	0.0005615	0.0035	3.98		11460.33	11460.33	3.6		Si
SLV 4	12.77	-5475.19	-9052	-0.0000231	0.0005615	0.0035	3.98		21715.79	21715.79	3.97		Si
SLV 4	14.57	3948.55	-5640	-0.0000154	0.0005615	0.0035	3.98		11712.41	11712.41	2.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	12.77	-1011.41	-14059	-11707	907	3.98	3.98	-10505	8345	9300	35683	33370	10149	43519	No	47.96	Si
SLU 80	14.57	-2744.93	-9440	-7861	896	3.98	3.98	-7054	7885	8787	35683	33370	10149	43519	No	48.58	Si
SLU 79	12.77	-988.29	-14103	-11744	927	3.98	3.98	-10538	8350	9305	35683	33370	10149	43519	No	46.97	Si
SLU 79	14.57	-2756.51	-9485	-7898	915	3.98	3.98	-7088	7889	8792	35683	33370	10149	43519	No	47.56	Si
SLU 41	12.77	-734.04	-10251	-8536	843	3.98	3.98	-7660	7966	8877	35683	33370	10149	43519	No	51.62	Si
SLU 41	14.57	-2323.77	-6657	-5544	844	3.98	3.98	-4975	7608	8478	35683	33370	10149	43519	No	51.55	Si
SLU 77	12.77	-949.57	-14887	-12397	924	3.98	3.98	-11124	8428	9392	35683	33370	10149	43519	No	47.12	Si
SLU 77	14.57	-2719.98	-10276	-8557	910	3.98	3.98	-7678	7968	8880	35683	33370	10149	43519	No	47.82	Si
SLU 38	12.77	-855.89	-11402	-9495	922	3.98	3.98	-8520	8080	9005	35683	33370	10149	43519	No	47.2	Si
SLU 38	14.57	-2600.87	-7824	-6515	915	3.98	3.98	-5846	7724	8608	35683	33370	10149	43519	No	47.54	Si
SLU 37	12.77	-832.76	-11447	-9532	941	3.98	3.98	-8553	8085	9010	35683	33370	10149	43519	No	46.24	Si
SLU 37	14.57	-2612.45	-7868	-6552	935	3.98	3.98	-5880	7728	8613	35683	33370	10149	43519	No	46.56	Si
SLU 36	12.77	-817.17	-12186	-10148	919	3.98	3.98	-9106	8159	9092	35683	33370	10149	43519	No	47.35	Si
SLU 36	14.57	-2564.35	-8614	-7173	910	3.98	3.98	-6437	7803	8695	35683	33370	10149	43519	No	47.8	Si
SLU 78	12.77	-972.69	-14843	-12360	904	3.98	3.98	-11091	8423	9387	35683	33370	10149	43519	No	48.12	Si
SLU 78	14.57	-2708.41	-10231	-8519	891	3.98	3.98	-7645	7964	8875	35683	33370	10149	43519	No	48.86	Si
SLU 83	12.77	-889.57	-12907	-10748	828	3.98	3.98	-9645	8230	9172	35683	33370	10149	43519	No	52.54	Si
SLU 83	14.57	-2467.83	-8274	-6890	825	3.98	3.98	-6183	7769	8658	35683	33370	10149	43519	No	52.78	Si
SLU 35	12.77	-794.05	-12231	-10185	938	3.98	3.98	-9139	8163	9097	35683	33370	10149	43519	No	46.38	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 35	14.57	-2575.92	-8659	-7210	930	3.98	3.98	-6470	7807	8700	35683	33370	10149	43519	No	46.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	12.77	4209.21	-8405	-6999	6738	3.98	3.98	-6280	11673	13008	35683	50055	10149	48691		7.23	Si
SLV 15	14.57	-6597.94	-4859	-4046	5468	3.184	1.896	0	0	0	35683	40044	8119	35683		6.53	Si
SLV 1	12.77	-5357.43	-10540	-8777	-6134	3.98	3.98	-7876	11992	13364	35683	50055	10149	49047		8	Si
SLV 1	14.57	4250.82	-6989	-5820	-4888	3.98	3.98	-5222	11461	12772	35683	50055	10149	48455		9.91	Si
SLV 3	12.77	-5399.61	-9001	-7495	-5961	3.98	3.98	-6726	11762	13107	35683	50055	10149	48791		8.19	Si
SLV 3	14.57	4064.1	-5591	-4656	-4755	3.98	3.7893	-4178	11252	11939	35683	50055	10149	47622		10.01	Si
SLV 16	12.77	4133.63	-8456	-7041	6757	3.98	3.98	-6318	11680	13017	35683	50055	10149	48700		7.21	Si
SLV 16	14.57	-6713.49	-4907	-4086	5493	3.184	1.8659	0	0	0	35683	40044	8119	35683		6.5	Si
SLV 13	12.77	4251.39	-9944	-8281	6564	3.98	3.98	-7431	11903	13265	35683	50055	10149	48948		7.46	Si
SLV 13	14.57	-6411.22	-6256	-5210	5335	3.98	2.8957	-6442	11705	9490	35683	50055	10149	45174		8.47	Si
SLV 14	12.77	4175.81	-9995	-8323	6583	3.98	3.98	-7469	11910	13273	35683	50055	10149	48956		7.44	Si
SLV 14	14.57	-6526.77	-6305	-5250	5359	3.98	2.8645	-6563	11729	9408	35683	50055	10149	45091		8.41	Si
SLD 15	12.77	1449.48	-9020	-7511	3061	3.98	3.98	-6740	11765	13111	35683	50055	10149	48794		15.94	Si
SLD 15	14.57	-3530.79	-5468	-4554	2513	3.98	3.98	-4086	11234	12519	35683	50055	10149	48202		19.18	Si
SLV 2	12.77	-5433.01	-10591	-8820	-6115	3.98	3.98	-7914	11999	13372	35683	50055	10149	49055		8.02	Si
SLV 2	14.57	4135.27	-7038	-5860	-4864	3.98	3.98	-5259	11468	12780	35683	50055	10149	48464		9.96	Si
SLD 16	12.77	1417.02	-9042	-7529	3070	3.98	3.98	-6756	11768	13114	35683	50055	10149	48797		15.9	Si
SLD 16	14.57	-3580.42	-5489	-4571	2523	3.98	3.98	-4102	11237	12523	35683	50055	10149	48206		19.11	Si
SLV 4	12.77	-5475.19	-9052	-7537	-5942	3.98	3.98	-6764	11769	13116	35683	50055	10149	48799		8.21	Si
SLV 4	14.57	3948.55	-5640	-4696	-4731	3.98	3.8697	-4214	11260	12200	35683	50055	10149	47883		10.12	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	5096	-5679	449.3	768.49	1.71	Si
SLV 12	179667	0.53	5124	-5711	449.3	772.65	1.72	Si
SLV 7	179667	0.53	5323	-5932	449.3	801.54	1.78	Si
SLV 8	179667	0.53	5352	-5964	449.3	805.68	1.79	Si
SLV 15	179667	0.53	6437	-7173	449.3	961.88	2.14	Si
SLV 16	179667	0.53	6480	-7222	449.3	968.14	2.15	Si
SLV 3	179667	0.53	7194	-8017	449.3	1069.57	2.38	Si
SLV 4	179667	0.53	7238	-8066	449.3	1075.76	2.39	Si
SLV 13	179667	0.53	7820	-8714	449.3	1157.54	2.58	Si
SLV 14	179667	0.53	7864	-8763	449.3	1163.68	2.59	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5974	-13434	1281	2.364	1127.5	0.898	38.25518	11.6001	Si
SLV 5	-5934	-13420	1281	2.375	1123.6	0.898	38.42961	11.6001	Si
SLV 10	-5628	-13608	1278	2.456	1093.8	0.897	39.81089	11.6001	Si
SLV 9	-5588	-13594	1278	2.467	1089.9	0.896	39.99924	11.6001	Si
SLV 8	-1983	-8595	-1284	4.161	758.5	0.894	67.63193	11.6001	Si
SLV 7	-1943	-8580	-1284	4.193	755.2	0.895	68.12449	11.6001	Si
SLV 12	-1637	-8769	-1287	4.457	730.9	0.899	72.05352	11.6001	Si
SLV 11	-1596	-8754	-1287	4.495	727.8	0.9	72.59749	11.6001	Si
SLV 2	-4993	-11541	386	2.753	1032.5	0.894	44.76388	6.40952	Si
SLV 1	-4931	-11519	386	2.774	1026.5	0.894	45.11366	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.406	SLU 37	Si
V_SLU	46.236	SLU 37	Si
PF_SLV	2.097	SLV 16	Si
V_SLV	6.497	SLV 16	Si
PFFP_SLV	1.71	SLV 11	Si
R_SLV	3.298	SLV 6	Si

Maschio 180

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.058	6.526	-5.233	6.526	L7	L8	1.825	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	12.77	-99.81	-4048	-0.0000128	0.0003743	0.0035	1.825	3406.55	4337.66	4337.66	43.46	No	Si
SLU 40	14.57	-778.05	-2336	-0.0000142	0.0003743	0.0035	1.825	2035.6	2916.85	2916.85	3.75	No	Si
SLU 38	12.77	-116.85	-4560	-0.0000145	0.0003743	0.0035	1.825	3796.37	4742.96	4742.96	40.59	No	Si
SLU 38	14.57	-955.3	-2851	-0.0000175	0.0003743	0.0035	1.825	2459.22	3358.85	3358.85	3.52	No	Si
SLU 36	12.77	-140.8	-4949	-0.0000159	0.0003743	0.0035	1.825	4086.17	5049.45	5049.45	35.86	No	Si
SLU 36	14.57	-1039.61	-3244	-0.0000195	0.0003743	0.0035	1.825	2775.59	3677.52	3677.52	3.54	No	Si
SLU 32	12.77	-145.28	-4745	-0.0000153	0.0003743	0.0035	1.825	3934.61	4887.93	4887.93	33.65	No	Si
SLU 32	14.57	-932.16	-3039	-0.0000178	0.0003743	0.0035	1.825	2611.09	3511.23	3511.23	3.77	No	Si
SLU 41	12.77	-84.38	-4242	-0.0000132	0.0003743	0.0035	1.825	3555.48	4494.7	4494.7	53.26	No	Si
SLU 41	14.57	-915.14	-2530	-0.0000163	0.0003743	0.0035	1.825	2196.39	3083.07	3083.07	3.37	No	Si
SLU 33	12.77	-150.75	-4750	-0.0000154	0.0003743	0.0035	1.825	3938.33	4891.86	4891.86	32.45	No	Si
SLU 33	14.57	-917.34	-3044	-0.0000177	0.0003743	0.0035	1.825	2615.38	3515.53	3515.53	3.83	No	Si
SLU 35	12.77	-135.33	-4944	-0.0000158	0.0003743	0.0035	1.825	4082.48	5045.47	5045.47	37.28	No	Si
SLU 35	14.57	-1054.43	-3239	-0.0000196	0.0003743	0.0035	1.825	2771.34	3673.19	3673.19	3.48	No	Si
SLU 39	12.77	-94.34	-4043	-0.0000127	0.0003743	0.0035	1.825	3402.71	4333.59	4333.59	45.94	No	Si
SLU 39	14.57	-792.87	-2330	-0.0000144	0.0003743	0.0035	1.825	2031.18	2912.31	2912.31	3.67	No	Si
SLU 37	12.77	-111.37	-4555	-0.0000144	0.0003743	0.0035	1.825	3792.61	4739.05	4739.05	42.55	No	Si
SLU 37	14.57	-970.12	-2846	-0.0000177	0.0003743	0.0035	1.825	2454.89	3354.36	3354.36	3.46	No	Si
SLU 42	12.77	-89.85	-4247	-0.0000133	0.0003743	0.0035	1.825	3559.29	4498.71	4498.71	50.07	No	Si
SLU 42	14.57	-900.32	-2535	-0.0000161	0.0003743	0.0035	1.825	2200.78	3087.63	3087.63	3.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	12.77	983.41	-557	-0.0025691	0.0005615	0.0035	1.46		688.46	688.46	0.7		No
SLV 15	14.57	-4756.71	1132	0.1107817	0.0005615	0.0035	1.46		0	0	0		No
SLV 11	12.77	291.08	-2213	-0.0000092	0.0005615	0.0035	1.825		2150.52	2150.52	7.39		Si
SLV 11	14.57	-2343.19	-596	-0.0010523	0.0005615	0.0035	1.46		1416.27	1416.27	0.6		No
SLV 12	12.77	297.47	-1972	-0.0000085	0.0005615	0.0035	1.825		1941.3	1941.3	6.53		Si
SLV 12	14.57	-2549.91	-351	-0.0014255	0.0005615	0.0035	1.46		1198.2	1198.2	0.47		No
SLV 16	12.77	993.21	-187	-0.0061217	0.0005615	0.0035	1.46		356.25	356.25	0.36		No
SLV 16	14.57	-5073.96	1509	0.1458192	0.0005615	0.0035	1.46		0	0	0		No
SLD 14	12.77	241.32	-2833	-0.0000105	0.0005615	0.0035	1.825		2686.72	2686.72	11.13		Si
SLD 14	14.57	-2239.62	-1124	-0.0007006	0.0005615	0.0035	1.46		1882.37	1882.37	0.84		No
SLD 15	12.77	285.41	-2695	-0.0000105	0.0005615	0.0035	1.825		2567.3	2567.3	9		Si
SLD 15	14.57	-2293.32	-1007	-0.0007892	0.0005615	0.0035	1.46		1779.79	1779.79	0.78		No
SLV 13	12.77	874.72	-1232	-0.0000215	0.0005615	0.0035	1.825		1289.82	1289.82	1.47		Si
SLV 13	14.57	-4324.55	502	0.033147	0.0005615	0.0035	1.46		0	0	0		No
SLV 14	12.77	884.52	-863	-0.0004643	0.0005615	0.0035	1.46		961.06	961.06	1.09		Si
SLV 14	14.57	-4641.81	878	0.0807762	0.0005615	0.0035	1.46		0	0	0		No
SLD 13	12.77	237.12	-2992	-0.0000109	0.0005615	0.0035	1.825		2823.23	2823.23	11.91		Si
SLD 13	14.57	-2103.35	-1286	-0.000549	0.0005615	0.0035	1.46		2024.76	2024.76	0.96		No
SLD 16	12.77	289.61	-2536	-0.0000101	0.0005615	0.0035	1.825		2429.92	2429.92	8.39		Si
SLD 16	14.57	-2429.59	-846	-0.0009667	0.0005615	0.0035	1.46		1637.12	1637.12	0.67		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	12.77	-116.85	-4560	-3797	439	1.825	1.825	-7431	7935	4055	35683	15302	4654	19956	No	45.43	Si
SLU 38	14.57	-955.3	-2851	-2374	421	1.825	1.7324	-4646	7564	3669	35683	15302	4654	19956	No	47.41	Si
SLU 36	12.77	-140.8	-4949	-4121	472	1.825	1.825	-8064	8020	4098	35683	15302	4654	19956	No	42.27	Si
SLU 36	14.57	-1039.61	-3244	-2701	453	1.825	1.7761	-5286	7649	3804	35683	15302	4654	19956	No	44.07	Si
SLU 41	12.77	-84.38	-4242	-3533	436	1.825	1.825	-6913	7866	4020	35683	15302	4654	19956	No	45.75	Si
SLU 41	14.57	-915.14	-2530	-2107	418	1.825	1.6524	-4564	7553	3495	35683	15302	4654	19956	No	47.74	Si
SLU 33	12.77	-150.75	-4750	-3955	400	1.825	1.825	-7740	7976	4076	35683	15302	4654	19956	No	49.83	Si
SLU 33	14.57	-917.34	-3044	-2535	380	1.825	1.825	-4961	7606	3887	35683	15302	4654	19956	No	52.57	Si
SLU 32	12.77	-145.28	-4745	-3951	412	1.825	1.825	-7732	7975	4075	35683	15302	4654	19956	No	48.49	Si
SLU 32	14.57	-932.16	-3039	-2531	391	1.825	1.8173	-4952	7605	3870	35683	15302	4654	19956	No	51.04	Si
SLU 35	12.77	-135.33	-4944	-4117	483	1.825	1.825	-8056	8019	4098	35683	15302	4654	19956	No	41.3	Si
SLU 35	14.57	-1054.43	-3239	-2697	464	1.825	1.7608	-5278	7648	3771	35683	15302	4654	19956	No	42.98	Si
SLU 42	12.77	-89.85	-4247	-3537	425	1.825	1.825	-6921	7867	4020	35683	15302	4654	19956	No	46.94	Si
SLU 42	14.57	-900.32	-2535	-2111	407	1.825	1.6722	-4520	7547	3534	35683	15302	4654	19956	No	49.08	Si
SLU 77	12.77	-241.81	-6223	-5182	433	1.825	1.825	-10141	8297	4240	35683	15302	4654	19956	No	46.13	Si
SLU 77	14.57	-1079.86	-4025	-3352	404	1.825	1.825	-6560	7819	3996	35683	15302	4654	19956	No	49.34	Si
SLU 78	12.77	-247.28	-6228	-5186	422	1.825	1.825	-10149	8298	4240	35683	15302	4654	19956	No	47.34	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	14.57	-1065.04	-4031	-3356	393	1.825	1.825	-6568	7820	3996	35683	15302	4654	19956	No	50.77	Si
SLU 37	12.77	-111.37	-4555	-3793	450	1.825	1.825	-7423	7934	4054	35683	15302	4654	19956	No	44.32	Si
SLU 37	14.57	-970.12	-2846	-2370	432	1.825	1.7149	-4951	7605	3651	35683	15302	4654	19956	No	46.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	12.77	-1470.54	-8401	-6996	-3447	1.825	1.825	-13690	13155	6722	35683	22953	4654	27606		8.01	Si
SLV 1	14.57	4169.65	-6726	-5601	-2953	1.825	0.8777	-10960	12609	3099	35683	22953	4654	27606		9.35	Si
SLV 12	12.77	297.47	-1972	-1642	1651	1.825	1.825	-3213	11059	5651	35683	22953	4654	27606		16.72	Si
SLV 12	14.57	-2549.91	-351	-292	1417	1.46	0	0	0	0	35683	18362	3723	22085		15.59	Si
SLV 14	12.77	884.52	-863	-718	3339	1.46	0	0	0	0	35683	18362	3723	22085		6.61	Si
SLV 14	14.57	-4641.81	878	731	2829	1.46	0	0	0	0	35683	18362	3723	22085		7.81	Si
SLV 13	12.77	874.72	-1232	-1026	3163	1.825	0.6083	-6041	11625	1980	35683	22953	4654	27606		8.73	Si
SLV 13	14.57	-4324.55	502	418	2645	1.46	0	0	0	0	35683	18362	3723	22085		8.35	Si
SLV 3	12.77	-1361.85	-7725	-6433	-3145	1.825	1.825	-12589	12934	6610	35683	22953	4654	27606		8.78	Si
SLV 3	14.57	3737.49	-6095	-5076	-2686	1.825	0.898	-9933	12403	3119	35683	22953	4654	27606		10.28	Si
SLV 4	12.77	-1352.05	-7355	-6125	-2968	1.825	1.825	-11986	12814	6548	35683	22953	4654	27606		9.3	Si
SLV 4	14.57	3420.24	-5719	-4762	-2501	1.825	0.9433	-9319	12280	3243	35683	22953	4654	27606		11.04	Si
SLV 16	12.77	993.21	-187	-156	3642	1.46	0	0	0	0	35683	18362	3723	22085		6.06	Si
SLV 16	14.57	-5073.96	1509	1257	3096	1.46	0	0	0	0	35683	18362	3723	22085		7.13	Si
SLV 15	12.77	983.41	-557	-464	3465	1.46	0	0	0	0	35683	18362	3723	22085		6.37	Si
SLV 15	14.57	-4756.71	1132	943	2912	1.46	0	0	0	0	35683	18362	3723	22085		7.58	Si
SLD 16	12.77	289.61	-2536	-2112	1614	1.825	1.825	-4132	11243	5745	35683	22953	4654	27606		17.1	Si
SLD 16	14.57	-2429.59	-846	-704	1366	1.46	0	0	0	0	35683	18362	3723	22085		16.16	Si
SLV 2	12.77	-1460.74	-8031	-6688	-3271	1.825	1.825	-13087	13034	6660	35683	22953	4654	27606		8.44	Si
SLV 2	14.57	3852.39	-6349	-5287	-2768	1.825	0.9173	-10346	12486	3207	35683	22953	4654	27606		9.97	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.53	0	-496	206.02	0	0	No, e>t/2
SLV 15	179667	0.53	0	194	206.02	0	0	No, Trazione
SLV 12	179667	0.53	0	-1227	206.02	0	0	No, e>t/2
SLV 16	179667	0.53	0	571	206.02	0	0	No, Trazione
SLV 14	179667	0.53	0	-119	206.02	0	0	No, e>t/2
SLV 11	179667	0.53	2882	-1473	206.02	202.27	0.98	No, M>Mu
SLV 8	179667	0.53	6656	-3401	206.02	455.45	2.21	Si
SLV 10	179667	0.53	6900	-3526	206.02	471.3	2.29	Si
SLV 7	179667	0.53	7137	-3647	206.02	486.71	2.36	Si
SLV 9	179667	0.53	7380	-3771	206.02	502.45	2.44	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-4573	-5654	546	1.665	698.6	0.916	26.41652	11.6001	Si
SLV 6	-4309	-5508	546	1.74	672.1	0.914	27.66917	11.6001	Si
SLV 1	-6843	-5755	157	1.269	926.8	0.933	19.77308	6.40952	Si
SLV 2	-6436	-5530	157	1.332	885.8	0.93	20.81198	6.40952	Si
SLV 3	-6146	-5299	-174	1.379	856.5	0.928	21.58938	6.40952	Si
SLV 4	-5739	-5074	-174	1.454	815.6	0.925	22.8391	6.40952	Si
SLV 7	-2251	-4135	-557	2.679	469.7	0.893	43.57464	11.6001	Si
SLV 9	-1992	-5146	549	2.879	445.1	0.891	46.93826	11.6001	Si
SLV 8	-1986	-3989	-557	2.882	444.5	0.891	46.99076	11.6001	Si
SLV 10	-1728	-4999	549	3.115	420.3	0.89	50.88179	11.6001	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.369	SLU 41	Si
V_SLU	41.302	SLU 35	Si
PF_SLV	0	SLV 13	No
V_SLV	6.064	SLV 16	Si
PFFP_SLV	0	SLV 16	No
R_SLV	2.277	SLV 5	Si

Maschio 181

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.443	1.006	-24.633	1.006	L7	L8	5.19	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	11.87	-3448.24	-19458	-0.0000224	0.0004492	0.0035	5.19	44960.96	62389.01	62389.01	18.09	No	Si
SLU 75	13.97	-4916.92	-16314	-0.000021	0.0004492	0.0035	5.19	38445.6	55332.21	55332.21	11.25	No	Si
SLU 36	11.87	-2464.39	-15942	-0.0000179	0.0004492	0.0035	5.19	37655.44	54497.09	54497.09	22.11	No	Si
SLU 36	13.97	-4575.12	-14174	-0.0000185	0.0004492	0.0035	5.19	33846.06	50396.28	50396.28	11.02	No	Si
SLU 78	11.87	-3549.66	-20371	-0.0000234	0.0004492	0.0035	5.19	46797.12	64436.32	64436.32	18.15	No	Si
SLU 78	13.97	-5217.71	-17175	-0.0000221	0.0004492	0.0035	5.19	40259.11	57265.3	57265.3	10.98	No	Si
SLU 35	11.87	-2402.72	-15888	-0.0000177	0.0004492	0.0035	5.19	37541.13	54376.63	54376.63	22.63	No	Si
SLU 35	13.97	-4588.23	-14158	-0.0000185	0.0004492	0.0035	5.19	33811.57	50358.88	50358.88	10.98	No	Si
SLU 83	11.87	-2855.31	-17752	-0.00002	0.0004492	0.0035	5.19	41460.03	58558.31	58558.31	20.51	No	Si
SLU 83	13.97	-4575.34	-14749	-0.0000191	0.0004492	0.0035	5.19	35093.72	51754.61	51754.61	11.31	No	Si
SLU 77	11.87	-3488	-20317	-0.0000233	0.0004492	0.0035	5.19	46689.76	64315.86	64315.86	18.44	No	Si
SLU 77	13.97	-5230.83	-17160	-0.0000221	0.0004492	0.0035	5.19	40226.01	57229.81	57229.81	10.94	No	Si
SLU 33	11.87	-2362.97	-15030	-0.0000169	0.0004492	0.0035	5.19	35701.21	52419.81	52419.81	22.18	No	Si
SLU 33	13.97	-4274.33	-13313	-0.0000173	0.0004492	0.0035	5.19	31957	48359.33	48359.33	11.31	No	Si
SLU 32	11.87	-2301.31	-14976	-0.0000167	0.0004492	0.0035	5.19	35585.47	52292.88	52292.88	22.72	No	Si
SLU 32	13.97	-4287.44	-13297	-0.0000173	0.0004492	0.0035	5.19	31922.11	48321.94	48321.94	11.27	No	Si
SLU 84	11.87	-2916.97	-17805	-0.0000202	0.0004492	0.0035	5.19	41571.42	58678.77	58678.77	20.12	No	Si
SLU 84	13.97	-4562.23	-14764	-0.0000191	0.0004492	0.0035	5.19	35127.93	51792	51792	11.35	No	Si
SLU 74	11.87	-3386.58	-19405	-0.0000223	0.0004492	0.0035	5.19	44852.17	62268.55	62268.55	18.39	No	Si
SLU 74	13.97	-4930.04	-16298	-0.000021	0.0004492	0.0035	5.19	38412.11	55296.72	55296.72	11.22	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	11.87	1063.47	-15442	-0.0000157	0.0006738	0.0035	5.19		40972.57	40972.57	38.53		Si
SLV 1	13.97	-11975.84	-14595	-0.000027	0.0006738	0.0035	5.19		51801.08	51801.08	4.33		Si
SLV 3	11.87	-1314.34	-17807	-0.0000183	0.0006738	0.0035	5.19		59356.34	59356.34	45.16		Si
SLV 3	13.97	-12019.08	-15059	-0.0000275	0.0006738	0.0035	5.19		52902.17	52902.17	4.4		Si
SLV 2	11.87	427.16	-15796	-0.0000154	0.0006738	0.0035	5.19		41815.19	41815.19	97.89		Si
SLV 2	13.97	-11658.87	-14549	-0.0000266	0.0006738	0.0035	5.19		51692.55	51692.55	4.43		Si
SLD 1	11.87	-1167.42	-14697	-0.0000151	0.0006738	0.0035	5.19		52044.04	52044.04	44.58		Si
SLD 1	13.97	-6782.68	-12451	-0.0000192	0.0006738	0.0035	5.19		46677.41	46677.41	6.88		Si
SLV 14	11.87	-4413.39	-10531	-0.0000147	0.0006738	0.0035	5.19		42062.76	42062.76	9.53		Si
SLV 14	13.97	6218.16	-6649	-0.000013	0.0006738	0.0035	5.19		19553.55	19553.55	3.14		Si
SLV 4	11.87	-1950.65	-18161	-0.0000193	0.0006738	0.0035	5.19		60169.51	60169.51	30.85		Si
SLV 4	13.97	-11702.11	-15013	-0.0000271	0.0006738	0.0035	5.19		52793.65	52793.65	4.51		Si
SLV 15	11.87	-6154.89	-12543	-0.0000186	0.0006738	0.0035	5.19		46898.08	46898.08	7.62		Si
SLV 15	13.97	5857.94	-7159	-0.0000131	0.0006738	0.0035	5.19		20824.45	20824.45	3.55		Si
SLD 3	11.87	-2213.81	-15742	-0.0000173	0.0006738	0.0035	5.19		54520	54520	24.63		Si
SLD 3	13.97	-6799.44	-12655	-0.0000194	0.0006738	0.0035	5.19		47168.44	47168.44	6.94		Si
SLV 16	11.87	-6791.2	-12897	-0.0000196	0.0006738	0.0035	5.19		47747.98	47747.98	7.03		Si
SLV 16	13.97	6174.92	-7113	-0.0000134	0.0006738	0.0035	5.19		20710.42	20710.42	3.35		Si
SLV 13	11.87	-3777.08	-10177	-0.0000137	0.0006738	0.0035	5.19		41203.02	41203.02	10.91		Si
SLV 13	13.97	5901.18	-6695	-0.0000127	0.0006738	0.0035	5.19		19667.57	19667.57	3.33		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	11.87	-1730.29	-12465	-8892	2655	5.19	5.19	-6119	9149	13296	101952	52224	26469	78693	No	29.64	Si
SLU 40	13.97	-3618.84	-10902	-7777	2658	5.19	5.19	-5352	9047	13147	101952	52224	26469	78693	No	29.61	Si
SLU 41	11.87	-1770.04	-13323	-9504	2651	5.19	5.19	-6540	9205	13377	101952	52224	26469	78693	No	29.68	Si
SLU 41	13.97	-3932.74	-11747	-8380	2655	5.19	5.19	-5767	9102	13227	101952	52224	26469	78693	No	29.64	Si
SLU 36	11.87	-2464.39	-15942	-11373	2494	5.19	5.19	-7826	9377	13626	101952	52224	26469	78693	No	31.56	Si
SLU 36	13.97	-4575.12	-14174	-10112	2496	5.19	5.19	-6958	9261	13458	101952	52224	26469	78693	No	31.53	Si
SLU 35	11.87	-2402.72	-15888	-11334	2477	5.19	5.19	-7800	9373	13621	101952	52224	26469	78693	No	31.77	Si
SLU 35	13.97	-4588.23	-14158	-10100	2480	5.19	5.19	-6950	9260	13457	101952	52224	26469	78693	No	31.73	Si
SLU 32	11.87	-2301.31	-14976	-10684	2464	5.19	5.19	-7352	9314	13534	101952	52224	26469	78693	No	31.94	Si
SLU 32	13.97	-4287.44	-13297	-9486	2467	5.19	5.19	-6528	9204	13375	101952	52224	26469	78693	No	31.9	Si
SLU 84	11.87	-2916.97	-17805	-12702	2228	5.19	5.19	-8741	9499	13804	101952	52224	26469	78693	No	35.33	Si
SLU 84	13.97	-4562.23	-14764	-10533	2231	5.19	5.19	-7248	9300	13514	101952	52224	26469	78693	No	35.27	Si
SLU 42	11.87	-1831.7	-13377	-9543	2668	5.19	5.19	-6567	9209	13382	101952	52224	26469	78693	No	29.49	Si
SLU 42	13.97	-3919.63	-11763	-8392	2670	5.19	5.19	-5775	9103	13229	101952	52224	26469	78693	No	29.47	Si
SLU 39	11.87	-1668.62	-12411	-8854	2638	5.19	5.19	-6093	9146	13290	101952	52224	26469	78693	No	29.83	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	13.97	-3631.95	-10886	-7766	2642	5.19	5.19	-5344	9046	13145	101952	52224	26469	78693	No	29.79	Si
SLU 82	11.87	-2815.56	-16893	-12051	2214	5.19	5.19	-8293	9439	13717	101952	52224	26469	78693	No	35.54	Si
SLU 82	13.97	-4261.43	-13903	-9918	2218	5.19	5.19	-6825	9243	13432	101952	52224	26469	78693	No	35.48	Si
SLU 33	11.87	-2362.97	-15030	-10722	2480	5.19	5.19	-7378	9317	13540	101952	52224	26469	78693	No	31.73	Si
SLU 33	13.97	-4274.33	-13313	-9497	2483	5.19	5.19	-6535	9205	13376	101952	52224	26469	78693	No	31.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	11.87	-5893.49	-18786	-13401	6019	5.19	5.19	-9222	14344	20845	101952	78337	26469	104806		17.41	Si
SLV 7	13.97	-5757.35	-12828	-9151	4884	5.19	5.19	-6297	13759	19995	101952	78337	26469	104806		21.46	Si
SLV 13	11.87	-3777.08	-10177	-7260	-6907	5.19	5.19	-4996	13499	19617	101952	78337	26469	104806		15.17	Si
SLV 13	13.97	5901.18	-6695	-4776	-3134	5.19	5.1406	-3286	13157	18938	101952	78337	26469	104806		33.45	Si
SLV 8	11.87	-6308.1	-19016	-13566	6024	5.19	5.19	-9335	14367	20878	101952	78337	26469	104806		17.4	Si
SLV 8	13.97	-5550.82	-12798	-9130	4890	5.19	5.19	-6283	13757	19991	101952	78337	26469	104806		21.43	Si
SLV 3	11.87	-1314.34	-17807	-12703	7770	5.19	5.19	-8742	14248	20706	101952	78337	26469	104806		13.49	Si
SLV 3	13.97	-12019.08	-15059	-10743	4004	5.19	5.19	-7393	13979	20314	101952	78337	26469	104806		26.18	Si
SLV 14	11.87	-4413.39	-10531	-7513	-6899	5.19	5.19	-5170	13534	19668	101952	78337	26469	104806		15.19	Si
SLV 14	13.97	6218.16	-6649	-4743	-3125	5.19	4.9793	-3264	13153	18338	101952	78337	26469	104806		33.54	Si
SLV 10	11.87	165.77	-9553	-6815	-5147	5.19	5.19	-4689	13438	19528	101952	78337	26469	104806		20.36	Si
SLV 10	13.97	-43.57	-8880	-6335	-4006	5.19	5.19	-4359	13372	19432	101952	78337	26469	104806		26.16	Si
SLV 4	11.87	-1950.65	-18161	-12956	7779	5.19	5.19	-8915	14283	20756	101952	78337	26469	104806		13.47	Si
SLV 4	13.97	-11702.11	-15013	-10710	4012	5.19	5.19	-7370	13974	20307	101952	78337	26469	104806		26.12	Si
SLV 2	11.87	427.16	-15796	-11268	5547	5.19	5.19	-7754	14051	20419	101952	78337	26469	104806		18.89	Si
SLV 2	13.97	-11658.87	-14549	-10379	1786	5.19	5.19	-7142	13928	20241	101952	78337	26469	104806		58.69	Si
SLV 1	11.87	1063.47	-15442	-11016	5539	5.19	5.19	-7581	14016	20368	101952	78337	26469	104806		18.92	Si
SLV 1	13.97	-11975.84	-14595	-10411	1777	5.19	5.19	-7164	13933	20247	101952	78337	26469	104806		58.97	Si
SLV 9	11.87	580.38	-9322	-6650	-5153	5.19	5.19	-4576	13415	19495	101952	78337	26469	104806		20.34	Si
SLV 9	13.97	-250.11	-8910	-6356	-4011	5.19	5.19	-4374	13375	19436	101952	78337	26469	104806		26.13	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-7280	0.53	599.52	991.37	1782.32	1386.84	2.31	Si
SLV 14	-7324	0.53	599.52	997.17	1789.19	1393.18	2.32	Si
SLV 15	-8159	0.53	599.52	1107.33	1919.35	1513.34	2.52	Si
SLV 16	-8203	0.53	599.52	1113.1	1926.15	1519.62	2.53	Si
SLV 9	-8774	0.53	599.52	1187.91	2014.59	1601.25	2.67	Si
SLV 10	-8803	0.53	599.52	1191.65	2019.02	1605.34	2.68	Si
SLV 5	-10927	0.53	599.52	1467.07	2348.15	1907.61	3.18	Si
SLV 6	-10956	0.53	599.52	1470.74	2352.56	1911.65	3.19	Si
SLV 11	-11705	0.53	599.52	1566.69	2468.22	2017.46	3.37	Si
SLV 12	-11734	0.53	599.52	1570.34	2472.64	2021.49	3.37	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-9110	-10902	-752	2.203	1599.5	0.903	35.44831	11.6001	Si
SLV 6	-9078	-11132	-752	2.208	1596.4	0.903	35.53678	11.6001	Si
SLV 9	-8804	-9322	-703	2.258	1569.4	0.902	36.37645	11.6001	Si
SLV 10	-8772	-9553	-702	2.263	1566.3	0.902	36.46932	11.6001	Si
SLV 7	-8669	-18786	695	2.281	1556.2	0.901	36.78095	11.6001	Si
SLV 8	-8638	-19016	696	2.287	1553.1	0.901	36.87389	11.6001	Si
SLV 11	-8363	-17206	745	2.332	1526.2	0.9	37.64753	11.6001	Si
SLV 12	-8331	-17437	745	2.338	1523.1	0.9	37.74495	11.6001	Si
SLV 1	-9321	-15442	-303	2.202	1620.4	0.904	35.4097	6.40952	Si
SLV 2	-9273	-15796	-302	2.21	1615.6	0.904	35.54343	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.941	SLU 77	Si
V_SLU	29.468	SLU 42	Si
PF_SLV	3.145	SLV 14	Si
V_SLV	13.473	SLV 4	Si
PFFP_SLV	2.313	SLV 13	Si
R_SLV	3.056	SLV 5	Si

Maschio 182

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.963	1.006	-18.643	1.006	L7	L8	3.68	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	11.87	-594.73	-18546	-0.0000264	0.0004492	0.0035	3.68	29097.97	38369.08	38369.08	64.51	No	Si
SLU 72	13.97	1264.84	-14844	-0.0000228	0.0004492	0.0035	3.68	24093.35	26675.01	26675.01	21.09	No	Si
SLU 26	11.87	-632.11	-13880	-0.00002	0.0004492	0.0035	3.68	22723.77	31106.15	31106.15	49.21	No	Si
SLU 26	13.97	1068.84	-11071	-0.0000172	0.0004492	0.0035	3.68	18579.36	20566.4	20566.4	19.24	No	Si
SLU 30	11.87	-622.12	-14867	-0.0000214	0.0004492	0.0035	3.68	24125.3	32682.17	32682.17	52.53	No	Si
SLU 30	13.97	1184.42	-12055	-0.0000188	0.0004492	0.0035	3.68	20057.94	22173.6	22173.6	18.72	No	Si
SLU 28	11.87	-501.88	-15871	-0.0000225	0.0004492	0.0035	3.68	25521.31	34284.82	34284.82	68.31	No	Si
SLU 28	13.97	1106.73	-13184	-0.0000201	0.0004492	0.0035	3.68	21718.92	24013.03	24013.03	21.7	No	Si
SLU 9	11.87	-334.53	-14597	-0.0000203	0.0004492	0.0035	3.68	23744.13	32250.36	32250.36	96.4	No	Si
SLU 9	13.97	940.69	-11689	-0.0000177	0.0004492	0.0035	3.68	19510.28	21574.7	21574.7	22.94	No	Si
SLU 27	11.87	-451.69	-15849	-0.0000223	0.0004492	0.0035	3.68	25491.48	34250.22	34250.22	75.83	No	Si
SLU 27	13.97	1036.91	-13183	-0.00002	0.0004492	0.0035	3.68	21716.62	24010.5	24010.5	23.16	No	Si
SLU 23	11.87	-608.64	-12879	-0.0000186	0.0004492	0.0035	3.68	21272.63	29507.07	29507.07	48.48	No	Si
SLU 23	13.97	906.71	-10086	-0.0000155	0.0004492	0.0035	3.68	17070.83	18929.91	18929.91	20.88	No	Si
SLU 71	11.87	-544.54	-18524	-0.0000262	0.0004492	0.0035	3.68	29069.83	38336.3	38336.3	70.4	No	Si
SLU 71	13.97	1195.01	-14843	-0.0000226	0.0004492	0.0035	3.68	24091.13	26672.49	26672.49	22.32	No	Si
SLU 29	11.87	-571.92	-14845	-0.0000212	0.0004492	0.0035	3.68	24094.83	32647.57	32647.57	57.08	No	Si
SLU 29	13.97	1114.6	-12054	-0.0000186	0.0004492	0.0035	3.68	20055.59	22171.03	22171.03	19.89	No	Si
SLU 68	11.87	-604.73	-17559	-0.000025	0.0004492	0.0035	3.68	27802.58	36875.76	36875.76	60.98	No	Si
SLU 68	13.97	1149.25	-13860	-0.0000212	0.0004492	0.0035	3.68	22695.02	25096.45	25096.45	21.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	11.87	8426.07	-15425	-0.0000393	0.0006738	0.0035	3.68		28096.07	28096.07	3.33		Si
SLV 4	13.97	-10661.16	-8902	-0.0000458	0.0006738	0.0035	2.944		23187.59	23187.59	2.17		Si
SLV 3	11.87	8869.39	-15396	-0.0000402	0.0006738	0.0035	3.68		28048.47	28048.47	3.16		Si
SLV 3	13.97	-11187.19	-8787	-0.0000513	0.0006738	0.0035	2.944		22992.4	22992.4	2.06		Si
SLV 2	11.87	10752.13	-13985	-0.0000432	0.0006738	0.0035	3.68		25713.82	25713.82	2.39		Si
SLV 2	13.97	-14270.79	-9293	-0.0000986	0.0006738	0.0035	2.944		23854.95	23854.95	1.67		Si
SLV 16	11.87	-11697.01	-10779	-0.0000473	0.0006738	0.0035	2.944		26365.09	26365.09	2.25		Si
SLV 16	13.97	15737.39	-10056	-0.000127	0.0006738	0.0035	3.68		19117.33	19117.33	1.21		Si
SLV 11	11.87	-7001.58	-14061	-0.0000342	0.0006738	0.0035	3.68		31781.19	31781.19	4.54		Si
SLV 11	13.97	10274.74	-9101	-0.0000424	0.0006738	0.0035	3.68		17483.95	17483.95	1.7		Si
SLV 14	11.87	-9370.95	-9339	-0.0000368	0.0006738	0.0035	3.68		23933.12	23933.12	2.55		Si
SLV 14	13.97	12127.75	-10448	-0.0000512	0.0006738	0.0035	3.68		19786.37	19786.37	1.63		Si
SLV 12	11.87	-7290.44	-14080	-0.0000349	0.0006738	0.0035	3.68		31812.27	31812.27	4.36		Si
SLV 12	13.97	10617.49	-9176	-0.0000445	0.0006738	0.0035	3.68		17611.45	17611.45	1.66		Si
SLV 1	11.87	11195.45	-13956	-0.0000446	0.0006738	0.0035	3.68		25665.44	25665.44	2.29		Si
SLV 1	13.97	-14796.82	-9178	-0.0001224	0.0006738	0.0035	2.944		23659.76	23659.76	1.6		Si
SLV 15	11.87	-11253.7	-10750	-0.0000449	0.0006738	0.0035	2.944		26315.92	26315.92	2.34		Si
SLV 15	13.97	15211.35	-9942	-0.0001104	0.0006738	0.0035	3.68		18921.64	18921.64	1.24		Si
SLV 13	11.87	-8927.63	-9309	-0.0000348	0.0006738	0.0035	3.68		23883.31	23883.31	2.68		Si
SLV 13	13.97	11601.72	-10333	-0.0000478	0.0006738	0.0035	3.68		19590.69	19590.69	1.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	11.87	-233.77	-18563	-13242	-2010	3.68	3.68	-12852	10047	10352	101952	37030	18768	55798	No	27.76	Si
SLU 78	13.97	676.31	-15261	-10887	-2010	3.68	3.68	-10566	9742	10038	101952	37030	18768	55798	No	27.75	Si
SLU 67	11.87	-451.03	-18548	-13232	-2097	3.68	3.68	-12842	10046	10351	101952	37030	18768	55798	No	26.61	Si
SLU 67	13.97	1025.01	-14988	-10692	-2097	3.68	3.68	-10377	9717	10012	101952	37030	18768	55798	No	26.61	Si
SLU 68	11.87	-604.73	-17559	-12526	-2117	3.68	3.68	-12157	9954	10257	101952	37030	18768	55798	No	26.36	Si
SLU 68	13.97	1149.25	-13860	-9887	-2117	3.68	3.68	-9596	9613	9905	101952	37030	18768	55798	No	26.35	Si
SLU 71	11.87	-544.54	-18524	-13215	-2114	3.68	3.68	-12825	10043	10349	101952	37030	18768	55798	No	26.4	Si
SLU 71	13.97	1195.01	-14843	-10589	-2114	3.68	3.68	-10276	9703	9998	101952	37030	18768	55798	No	26.4	Si
SLU 72	11.87	-594.73	-18546	-13230	-2157	3.68	3.68	-12840	10045	10351	101952	37030	18768	55798	No	25.87	Si
SLU 72	13.97	1264.84	-14844	-10590	-2157	3.68	3.68	-10277	9704	9999	101952	37030	18768	55798	No	25.87	Si
SLU 66	11.87	-400.83	-18527	-13216	-2053	3.68	3.68	-12827	10044	10349	101952	37030	18768	55798	No	27.17	Si
SLU 66	13.97	955.19	-14986	-10691	-2054	3.68	3.68	-10376	9717	10012	101952	37030	18768	55798	No	27.17	Si
SLU 65	11.87	-581.26	-16557	-11812	-2049	3.68	3.68	-11463	9862	10162	101952	37030	18768	55798	No	27.23	Si
SLU 65	13.97	987.12	-12875	-9184	-2049	3.68	3.68	-8913	9522	9811	101952	37030	18768	55798	No	27.23	Si
SLU 69	11.87	-424.31	-19528	-13931	-2122	3.68	3.68	-13520	10136	10444	101952	37030	18768	55798	No	26.3	Si
SLU 69	13.97	1117.32	-15972	-11394	-2122	3.68	3.68	-11058	9808	10106	101952	37030	18768	55798	No	26.29	Si
SLU 80	11.87	-354	-17559	-12526	-2002	3.68	3.68	-12157	9954	10257	101952	37030	18768	55798	No	27.87	Si
SLU 80	13.97	754	-14132	-10082	-2002	3.68	3.68	-9784	9638	9931	101952	37030	18768	55798	No	27.87	Si
SLU 70	11.87	-474.5	-19550	-13946	-2165	3.68	3.68	-13535	10138	10446	101952	37030	18768	55798	No	25.77	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	13.97	1187.15	-15973	-11395	-2165	3.68	3.68	-11059	9808	10106	101952	37030	18768	55798	No	25.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.87	10752.13	-13985	-9976	14014	3.68	3.2135	-9682	14436	12989	101952	55545	18768	74313		5.3	Si
SLV 2	13.97	-14270.79	-9293	-6629	12374	2.944	0.913	0	0	0	101952	44436	15014	59450		4.8	Si
SLV 14	11.87	-9370.95	-9339	-6662	-15975	3.68	2.5096	-9514	14403	10121	101952	55545	18768	74313		4.65	Si
SLV 14	13.97	12127.75	-10448	-7453	-14373	3.68	2.0376	-7233	13947	7957	101952	55545	18768	74313		5.17	Si
SLV 16	11.87	-11697.01	-10779	-7689	-17346	2.944	2.2645	0	0	0	101952	44436	15014	59450		3.43	Si
SLV 16	13.97	15737.39	-10056	-7174	-15708	3.68	0.8253	-31471	16250	3755	101952	55545	18768	74313		4.73	Si
SLV 13	11.87	-8927.63	-9309	-6641	-15405	3.68	2.643	-9005	14301	10584	101952	55545	18768	74313		4.82	Si
SLV 13	13.97	11601.72	-10333	-7371	-13803	3.68	2.1517	-7154	13931	8393	101952	55545	18768	74313		5.38	Si
SLV 4	11.87	8426.07	-15425	-11004	12643	3.68	3.68	-10679	14636	15081	101952	55545	18768	74313		5.88	Si
SLV 4	13.97	-10661.16	-8902	-6350	11040	2.944	1.927	0	0	0	101952	44436	15014	59450		5.38	Si
SLD 16	11.87	-5163.5	-11699	-8346	-8219	3.68	3.68	-8100	14120	14549	101952	55545	18768	74313		9.04	Si
SLD 16	13.97	7025.01	-9803	-6993	-7519	3.68	3.3702	-6787	13857	13077	101952	55545	18768	74313		9.88	Si
SLV 3	11.87	8869.39	-15396	-10983	13214	3.68	3.68	-10659	14632	15077	101952	55545	18768	74313		5.62	Si
SLV 3	13.97	-11187.19	-8787	-6269	11611	2.944	1.7006	0	0	0	101952	44436	15014	59450		5.12	Si
SLV 12	11.87	-7290.44	-14080	-10045	-8350	3.68	3.68	-9748	14450	14889	101952	55545	18768	74313		8.9	Si
SLV 12	13.97	10617.49	-9176	-6546	-7803	3.68	2.0487	-6353	13771	7899	101952	55545	18768	74313		9.52	Si
SLV 15	11.87	-11253.7	-10750	-7669	-16776	2.944	2.3794	0	0	0	101952	44436	15014	59450		3.54	Si
SLV 15	13.97	15211.35	-9942	-7092	-15137	3.68	0.93	-27576	16250	4231	101952	55545	18768	74313		4.91	Si
SLV 1	11.87	11195.45	-13956	-9956	14584	3.68	3.1133	-9662	14432	12581	101952	55545	18768	74313		5.1	Si
SLV 1	13.97	-14796.82	-9178	-6548	12945	2.944	0.6836	0	0	0	101952	44436	15014	59450		4.59	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-9765	0.53	425.09	1296.46	1963.59	1630.02	3.83	Si
SLV 9	-9792	0.53	425.09	1299.75	1967.62	1633.69	3.84	Si
SLV 15	-9827	0.53	425.09	1304.21	1973.07	1638.64	3.85	Si
SLV 10	-9852	0.53	425.09	1307.35	1976.91	1642.13	3.86	Si
SLV 14	-9858	0.53	425.09	1308.11	1977.85	1642.98	3.87	Si
SLV 5	-9862	0.53	425.09	1308.59	1978.43	1643.51	3.87	Si
SLV 16	-9920	0.53	425.09	1315.86	1987.3	1651.58	3.89	Si
SLV 6	-9923	0.53	425.09	1316.18	1987.7	1651.94	3.89	Si
SLV 11	-9998	0.53	425.09	1325.56	1999.16	1662.36	3.91	Si
SLV 1	-10000	0.53	425.09	1325.88	1999.56	1662.72	3.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-7781	-9260	-392	1.95	1265	0.91	31.14821	11.6001	Si
SLV 10	-7747	-9279	-392	1.956	1261.6	0.909	31.25119	11.6001	Si
SLV 5	-7555	-10654	-446	1.986	1242.4	0.909	31.76221	11.6001	Si
SLV 6	-7521	-10673	-446	1.992	1239.1	0.908	31.86949	11.6001	Si
SLV 11	-6352	-14061	460	2.236	1123.5	0.903	36.00218	11.6001	Si
SLV 12	-6317	-14080	460	2.244	1120.2	0.902	36.13894	11.6001	Si
SLV 7	-6125	-15455	406	2.297	1101.3	0.901	37.02908	11.6001	Si
SLV 8	-6091	-15474	406	2.305	1097.9	0.901	37.1732	11.6001	Si
SLV 13	-7554	-9309	-31	2.025	1242.4	0.909	32.39599	6.40952	Si
SLV 14	-7502	-9339	-31	2.035	1237.2	0.908	32.5643	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.721	SLU 30	Si
V_SLU	25.77	SLU 70	Si
PF_SLV	1.215	SLV 16	Si
V_SLV	3.427	SLV 16	Si
PFFP_SLV	3.835	SLV 13	Si
R_SLV	2.685	SLV 9	Si

Maschio 183

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.263	1.006	-14.163	1.006	L7	L8	1.9	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	11.87	356.11	-8835	-0.0000261	0.0004492	0.0035	1.9	7252.61	8094.94	8094.94	22.73	No	Si
SLU 52	14.37	-1576.85	-7942	-0.000034	0.0004492	0.0035	1.9	6622.78	8731.55	8731.55	5.54	No	Si
SLU 45	11.87	200.52	-10604	-0.0000295	0.0004492	0.0035	1.9	8430.4	9493.83	9493.83	47.35	No	Si
SLU 45	14.37	-1764.99	-9237	-0.0000391	0.0004492	0.0035	1.9	7528.2	9760.05	9760.05	5.53	No	Si
SLU 62	11.87	400.58	-8939	-0.0000267	0.0004492	0.0035	1.9	7324.1	8178.63	8178.63	20.42	No	Si
SLU 62	14.37	-1578.99	-7987	-0.0000341	0.0004492	0.0035	1.9	6654.99	8768.83	8768.83	5.55	No	Si
SLU 54	11.87	349.93	-9915	-0.0000289	0.0004492	0.0035	1.9	7982.38	8955.21	8955.21	25.59	No	Si
SLU 54	14.37	-1810.64	-9206	-0.0000395	0.0004492	0.0035	1.9	7507.05	9735.55	9735.55	5.38	No	Si
SLU 53	11.87	367.55	-9965	-0.0000292	0.0004492	0.0035	1.9	8015.72	8995.44	8995.44	24.47	No	Si
SLU 53	14.37	-1819.49	-9209	-0.0000395	0.0004492	0.0035	1.9	7509.1	9737.92	9737.92	5.35	No	Si
SLU 56	11.87	311.07	-10258	-0.0000295	0.0004492	0.0035	1.9	8207.45	9224.14	9224.14	29.65	No	Si
SLU 56	14.37	-1783.52	-9261	-0.0000394	0.0004492	0.0035	1.9	7544.42	9778.87	9778.87	5.48	No	Si
SLU 61	11.87	439.44	-8595	-0.0000261	0.0004492	0.0035	1.9	7085.78	7900.35	7900.35	17.98	No	Si
SLU 61	14.37	-1606.11	-7932	-0.0000342	0.0004492	0.0035	1.9	6615.59	8723.24	8723.24	5.43	No	Si
SLU 57	11.87	293.46	-10208	-0.0000292	0.0004492	0.0035	1.9	8174.54	9184.69	9184.69	31.3	No	Si
SLU 57	14.37	-1774.67	-9258	-0.0000393	0.0004492	0.0035	1.9	7542.37	9776.5	9776.5	5.51	No	Si
SLU 60	11.87	457.06	-8646	-0.0000264	0.0004492	0.0035	1.9	7121.07	7941.35	7941.35	17.37	No	Si
SLU 60	14.37	-1614.96	-7935	-0.0000343	0.0004492	0.0035	1.9	6617.75	8725.73	8725.73	5.4	No	Si
SLU 46	11.87	182.91	-10553	-0.0000292	0.0004492	0.0035	1.9	8398	9454.37	9454.37	51.69	No	Si
SLU 46	14.37	-1756.13	-9234	-0.0000391	0.0004492	0.0035	1.9	7526.15	9757.68	9757.68	5.56	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	11.87	7253.56	-5263	-0.0087808	0.0006738	0.0035	1.52		5192.22	5192.22	0.72		No
SLV 4	14.37	-6720.98	-9814	-0.0001279	0.0006738	0.0035	1.52		10408.05	10408.05	1.55		Si
SLV 14	11.87	-7145.27	-9066	-0.0001935	0.0006738	0.0035	1.52		9796.84	9796.84	1.37		Si
SLV 14	14.37	4384.42	-2965	-0.0051577	0.0006738	0.0035	1.52		3146.82	3146.82	0.72		No
SLV 1	11.87	8731.33	-9253	-0.0033475	0.0006738	0.0035	1.52		8605.81	8605.81	0.99		No
SLV 1	14.37	-7540.37	-9781	-0.000191	0.0006738	0.0035	1.52		10381.52	10381.52	1.38		Si
SLV 3	11.87	7322.69	-5327	-0.0088467	0.0006738	0.0035	1.52		5248.35	5248.35	0.72		No
SLV 3	14.37	-6749.92	-9805	-0.0001296	0.0006738	0.0035	1.52		10400.79	10400.79	1.54		Si
SLV 12	11.87	-4652.67	-613	-0.0007834	0.0006738	0.0035	1.52		2389.67	2389.67	0.51		No
SLV 12	14.37	1928.49	-5404	-0.0000299	0.0006738	0.0035	1.9		5316.46	5316.46	2.76		Si
SLV 2	11.87	8662.2	-9190	-0.0032069	0.0006738	0.0035	1.52		8552.88	8552.88	0.99		No
SLV 2	14.37	-7511.44	-9790	-0.0001874	0.0006738	0.0035	1.52		10388.78	10388.78	1.38		Si
SLV 15	11.87	-8484.78	-5203	-0.0014222	0.0006738	0.0035	1.52		6502.67	6502.67	0.77		No
SLV 15	14.37	5145.95	-2980	-0.0074289	0.0006738	0.0035	1.52		3160.3	3160.3	0.61		No
SLV 11	11.87	-4607.62	-654	-0.0007704	0.0006738	0.0035	1.52		2427.69	2427.69	0.53		No
SLV 11	14.37	1909.63	-5398	-0.0000297	0.0006738	0.0035	1.9		5311.31	5311.31	2.78		Si
SLV 13	11.87	-7076.14	-9130	-0.0001809	0.0006738	0.0035	1.52		9850.82	9850.82	1.39		Si
SLV 13	14.37	4355.49	-2956	-0.0050846	0.0006738	0.0035	1.52		3138.67	3138.67	0.72		No
SLV 16	11.87	-8553.91	-5140	-0.0014611	0.0006738	0.0035	1.52		6447.11	6447.11	0.75		No
SLV 16	14.37	5174.88	-2989	-0.007494	0.0006738	0.0035	1.52		3168.46	3168.46	0.61		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	11.87	-48.33	-10602	-7563	901	1.9	1.9	-14216	10229	5442	101952	19119	9690	28809	No	31.96	Si
SLU 67	14.37	-1728.45	-9705	-6923	1901	1.9	1.9	-13013	10068	5356	101952	19119	9690	28809	No	15.15	Si
SLU 57	11.87	293.46	-10208	-7282	1085	1.9	1.9	-13688	10158	5404	101952	19119	9690	28809	No	26.56	Si
SLU 57	14.37	-1774.67	-9258	-6604	1906	1.9	1.9	-12414	9989	5314	101952	19119	9690	28809	No	15.11	Si
SLU 54	11.87	349.93	-9915	-7073	1201	1.9	1.9	-13295	10106	5376	101952	19119	9690	28809	No	23.99	Si
SLU 54	14.37	-1810.64	-9206	-6567	1963	1.9	1.9	-12345	9979	5309	101952	19119	9690	28809	No	14.68	Si
SLU 53	11.87	367.55	-9965	-7109	1206	1.9	1.9	-13363	10115	5381	101952	19119	9690	28809	No	23.89	Si
SLU 53	14.37	-1819.49	-9209	-6569	1951	1.9	1.9	-12349	9980	5309	101952	19119	9690	28809	No	14.76	Si
SLU 78	11.87	62.22	-10256	-7317	1017	1.9	1.9	-13753	10167	5409	101952	19119	9690	28809	No	28.34	Si
SLU 78	14.37	-1746.99	-9729	-6940	2041	1.9	1.9	-13045	10073	5359	101952	19119	9690	28809	No	14.11	Si
SLU 74	11.87	136.31	-10014	-7144	1138	1.9	1.9	-13428	10124	5386	101952	19119	9690	28809	No	25.32	Si
SLU 74	14.37	-1791.81	-9680	-6905	2087	1.9	1.9	-12980	10064	5354	101952	19119	9690	28809	No	13.81	Si
SLU 75	11.87	118.69	-9963	-7108	1133	1.9	1.9	-13360	10115	5381	101952	19119	9690	28809	No	25.43	Si
SLU 75	14.37	-1782.96	-9677	-6903	2098	1.9	1.9	-12976	10063	5354	101952	19119	9690	28809	No	13.73	Si
SLU 82	11.87	208.2	-8644	-6166	1140	1.9	1.9	-11591	9879	5255	101952	19119	9690	28809	No	25.27	Si
SLU 82	14.37	-1578.43	-8402	-5994	1944	1.9	1.9	-11267	9836	5233	101952	19119	9690	28809	No	14.82	Si
SLU 81	11.87	225.82	-8694	-6202	1145	1.9	1.9	-11658	9888	5260	101952	19119	9690	28809	No	25.17	Si
SLU 81	14.37	-1587.28	-8405	-5996	1933	1.9	1.9	-11271	9836	5233	101952	19119	9690	28809	No	14.91	Si
SLU 77	11.87	79.84	-10307	-7353	1021	1.9	1.9	-13821	10176	5414	101952	19119	9690	28809	No	28.21	Si
SLU 77	14.37	-1755.84	-9732	-6942	2030	1.9	1.9	-13049	10073	5359	101952	19119	9690	28809	No	14.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	11.87	7253.56	-5263	-3754	8022	1.52	0	0	0	0	101952	22942	7752	30694		3.83	Si
SLV 4	14.37	-6720.98	-9814	-7001	6920	1.52	0.7955	0	0	0	101952	22942	7752	30694		4.44	Si
SLV 16	11.87	-8553.91	-5140	-3667	-7081	1.52	0	0	0	0	101952	22942	7752	30694		4.33	Si
SLV 16	14.37	5174.88	-2989	-2132	-3397	1.52	0	0	0	0	101952	22942	7752	30694		9.04	Si
SLV 14	11.87	-7145.27	-9066	-6468	-6647	1.52	0.4857	0	0	0	101952	22942	7752	30694		4.62	Si
SLV 14	14.37	4384.42	-2965	-2115	-4309	1.52	0	0	0	0	101952	22942	7752	30694		7.12	Si
SLV 1	11.87	8731.33	-9253	-6601	8496	1.52	0.0192	0	0	0	101952	22942	7752	30694		3.61	Si
SLV 1	14.37	-7540.37	-9781	-6978	5990	1.52	0.5373	0	0	0	101952	22942	7752	30694		5.12	Si
SLV 3	11.87	7322.69	-5327	-3800	8062	1.52	0	0	0	0	101952	22942	7752	30694		3.81	Si
SLV 3	14.37	-6749.92	-9805	-6995	6903	1.52	0.7847	0	0	0	101952	22942	7752	30694		4.45	Si
SLV 2	11.87	8662.2	-9190	-6556	8456	1.52	0.0222	0	0	0	101952	22942	7752	30694		3.63	Si
SLV 2	14.37	-7511.44	-9790	-6984	6007	1.52	0.5482	0	0	0	101952	22942	7752	30694		5.11	Si
SLV 7	11.87	134.62	-691	-493	2262	1.9	1.9	-927	12685	6749	101952	28678	9690	38368		16.96	Si
SLV 7	14.37	-1659.13	-7445	-5311	4360	1.9	1.9	-9984	14497	7712	101952	28678	9690	38368		8.8	Si
SLV 8	11.87	89.57	-650	-463	2236	1.9	1.9	-871	12674	6743	101952	28678	9690	38368		17.16	Si
SLV 8	14.37	-1640.27	-7451	-5316	4371	1.9	1.9	-9992	14498	7713	101952	28678	9690	38368		8.78	Si
SLV 15	11.87	-8484.78	-5203	-3712	-7042	1.52	0	0	0	0	101952	22942	7752	30694		4.36	Si
SLV 15	14.37	5145.95	-2980	-2126	-3414	1.52	0	0	0	0	101952	22942	7752	30694		8.99	Si
SLV 13	11.87	-7076.14	-9130	-6513	-6607	1.52	0.5249	0	0	0	101952	22942	7752	30694		4.65	Si
SLV 13	14.37	4355.49	-2956	-2109	-4326	1.52	0	0	0	0	101952	22942	7752	30694		7.09	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-4094	0.53	219.48	549.05	851.38	700.22	3.19	Si
SLV 11	-4096	0.53	219.48	549.34	851.73	700.54	3.19	Si
SLV 8	-4499	0.53	219.48	600.74	914.05	757.4	3.45	Si
SLV 7	-4501	0.53	219.48	601.03	914.4	757.72	3.45	Si
SLV 16	-5098	0.53	219.48	676.42	1006.34	841.38	3.83	Si
SLV 15	-5102	0.53	219.48	676.85	1006.87	841.86	3.84	Si
SLV 14	-6364	0.53	219.48	832.86	1200.58	1016.72	4.63	Si
SLV 13	-6368	0.53	219.48	833.29	1201.11	1017.2	4.63	Si
SLV 4	-6448	0.53	219.48	842.99	1213.36	1028.18	4.68	Si
SLV 3	-6451	0.53	219.48	843.41	1213.89	1028.65	4.69	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-5040	-13739	-38	1.677	755.2	0.918	26.54039	11.6001	Si
SLV 5	-5036	-13780	-38	1.678	754.8	0.918	26.55644	11.6001	Si
SLV 8	-4999	-650	37	1.688	751	0.918	26.71687	11.6001	Si
SLV 7	-4995	-691	37	1.689	750.7	0.918	26.73358	11.6001	Si
SLV 10	-4949	-13702	-34	1.701	746.1	0.918	26.93526	11.6001	Si
SLV 9	-4945	-13743	-35	1.702	745.7	0.918	26.95179	11.6001	Si
SLV 12	-4908	-613	41	1.711	741.9	0.917	27.09949	11.6001	Si
SLV 11	-4904	-654	41	1.712	741.5	0.917	27.1167	11.6001	Si
SLV 2	-5133	-9190	-16	1.658	764.5	0.919	26.21106	6.40952	Si
SLV 1	-5127	-9253	-16	1.659	763.9	0.919	26.23503	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.352	SLU 53	Si
V_SLU	13.73	SLU 75	Si
PF_SLV	0.514	SLV 12	No
V_SLV	3.613	SLV 1	Si
PFFP_SLV	3.19	SLV 12	Si
R_SLV	2.288	SLV 6	Si

Maschio 184

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.478	1.006	-11.143	1.006	L7	L8	0.665	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	11.87	160.54	-2100	-0.0000265	0.0004492	0.0035	0.6647	633.45	709.8	709.8	4.42	No	Si
SLU 34	14.37	-95.46	-3001	-0.000029	0.0004492	0.0035	0.6647	865.85	1071.51	1071.51	11.23	No	Si
SLU 35	11.87	169.56	-2458	-0.0000299	0.0004492	0.0035	0.6647	728.64	815.13	815.13	4.81	No	Si
SLU 35	14.37	-97.11	-3551	-0.0000334	0.0004492	0.0035	0.6647	995.86	1224.97	1224.97	12.61	No	Si
SLU 42	11.87	169.06	-2030	-0.0000265	0.0004492	0.0035	0.6647	614.52	689.06	689.06	4.08	No	Si
SLU 42	14.37	-104.02	-2976	-0.0000294	0.0004492	0.0035	0.6647	859.59	1064.26	1064.26	10.23	No	Si
SLU 40	11.87	151.71	-1927	-0.0000246	0.0004492	0.0035	0.6647	586.15	658.09	658.09	4.34	No	Si
SLU 40	14.37	-75.53	-2800	-0.000026	0.0004492	0.0035	0.6647	816.1	1014.51	1014.51	13.43	No	Si
SLU 31	11.87	143.19	-1997	-0.0000245	0.0004492	0.0035	0.6647	605.29	678.94	678.94	4.74	No	Si
SLU 31	14.37	-66.97	-2826	-0.0000256	0.0004492	0.0035	0.6647	822.49	1021.76	1021.76	15.26	No	Si
SLU 41	11.87	169.04	-2048	-0.0000267	0.0004492	0.0035	0.6647	619.29	694.3	694.3	4.11	No	Si
SLU 41	14.37	-104.1	-2984	-0.0000294	0.0004492	0.0035	0.6647	861.69	1066.69	1066.69	10.25	No	Si
SLU 36	11.87	169.58	-2441	-0.0000297	0.0004492	0.0035	0.6647	724.09	810.02	810.02	4.78	No	Si
SLU 36	14.37	-97.04	-3542	-0.0000333	0.0004492	0.0035	0.6647	993.9	1222.65	1222.65	12.6	No	Si
SLU 38	11.87	177.88	-2215	-0.0000286	0.0004492	0.0035	0.6647	664.41	743.62	743.62	4.18	No	Si
SLU 38	14.37	-123.99	-3183	-0.0000324	0.0004492	0.0035	0.6647	909.68	1122.89	1122.89	9.06	No	Si
SLU 39	11.87	151.69	-1944	-0.0000247	0.0004492	0.0035	0.6647	590.97	663.33	663.33	4.37	No	Si
SLU 39	14.37	-75.61	-2809	-0.0000261	0.0004492	0.0035	0.6647	818.24	1016.94	1016.94	13.45	No	Si
SLU 37	11.87	177.86	-2232	-0.0000287	0.0004492	0.0035	0.6647	669.09	748.76	748.76	4.21	No	Si
SLU 37	14.37	-124.07	-3191	-0.0000324	0.0004492	0.0035	0.6647	911.73	1125.32	1125.32	9.07	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	11.87	2496.74	-631	-0.0437207	0.0006738	0.0035	0.5318		259.38	259.38	0.1		No
SLV 4	14.37	-2114.74	-3192	-0.0072692	0.0006738	0.0035	0.5318		1144.26	1144.26	0.54		No
SLV 3	11.87	2507.68	-575	-0.0441557	0.0006738	0.0035	0.5318		241.46	241.46	0.1		No
SLV 3	14.37	-2124.45	-3199	-0.0073147	0.0006738	0.0035	0.5318		1146.27	1146.27	0.54		No
SLV 15	11.87	-2234.13	-2598	-0.0082868	0.0006738	0.0035	0.5318		969.18	969.18	0.43		No
SLV 15	14.37	2093.36	-1619	-0.0320342	0.0006738	0.0035	0.5318		571.26	571.26	0.27		No
SLV 2	11.87	2397.66	-1860	-0.0367038	0.0006738	0.0035	0.5318		645.73	645.73	0.27		No
SLV 2	14.37	-2105.13	-3680	-0.006823	0.0006738	0.0035	0.5318		1285.91	1285.91	0.61		No
SLV 1	11.87	2408.6	-1804	-0.0371457	0.0006738	0.0035	0.5318		628.55	628.55	0.26		No
SLV 1	14.37	-2114.84	-3687	-0.0068698	0.0006738	0.0035	0.5318		1287.91	1287.91	0.61		No
SLV 7	11.87	961.73	141	-0.0182072	0.0006738	0.0035	0.5318		8.45	8.45	0.01		No
SLV 7	14.37	-657.74	-2075	-0.000292	0.0006738	0.0035	0.5318		811.35	811.35	1.23		Si
SLV 16	11.87	-2245.08	-2654	-0.008306	0.0006738	0.0035	0.5318		985.98	985.98	0.44		No
SLV 16	14.37	2103.06	-1612	-0.0322454	0.0006738	0.0035	0.5318		569.13	569.13	0.27		No
SLV 13	11.87	-2333.21	-3827	-0.0079157	0.0006738	0.0035	0.5318		1328.71	1328.71	0.57		No
SLV 13	14.37	2102.97	-2107	-0.0301182	0.0006738	0.0035	0.5318		721.27	721.27	0.34		No
SLV 8	11.87	954.61	105	-0.0179223	0.0006738	0.0035	0.5318		20.37	20.37	0.02		No
SLV 8	14.37	-651.41	-2071	-0.0002768	0.0006738	0.0035	0.5318		809.99	809.99	1.24		Si
SLV 14	11.87	-2344.16	-3883	-0.0079283	0.0006738	0.0035	0.5318		1344.5	1344.5	0.57		No
SLV 14	14.37	2112.67	-2100	-0.0303305	0.0006738	0.0035	0.5318		719.17	719.17	0.34		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	11.87	172.41	-2941	-2098	275	0.6647	0.6647	-11272	9836	1831	101952	6689	3390	10078	No	36.69	Si
SLU 80	14.37	-95.85	-3838	-2738	264	0.6647	0.6647	-14710	10295	1916	101952	6689	3390	10078	No	38.12	Si
SLU 84	11.87	163.59	-2756	-1966	265	0.6647	0.6647	-10564	9742	1813	101952	6689	3390	10078	No	38.07	Si
SLU 84	14.37	-75.88	-3631	-2590	249	0.6647	0.6647	-13918	10189	1896	101952	6689	3390	10078	No	40.49	Si
SLU 78	11.87	164.11	-3167	-2259	271	0.6647	0.6647	-12137	9952	1852	101952	6689	3390	10078	No	37.21	Si
SLU 78	14.37	-68.89	-4198	-2994	261	0.6647	0.6647	-16089	10479	1950	101952	6689	3390	10078	No	38.61	Si
SLU 79	11.87	172.39	-2958	-2110	274	0.6647	0.6647	-11339	9845	1832	101952	6689	3390	10078	No	36.78	Si
SLU 79	14.37	-95.92	-3846	-2744	264	0.6647	0.6647	-14743	10299	1917	101952	6689	3390	10078	No	38.22	Si
SLU 36	11.87	169.58	-2441	-1741	270	0.6647	0.6647	-9355	9581	1783	101952	6689	3390	10078	No	37.29	Si
SLU 36	14.37	-97.04	-3542	-2527	260	0.6647	0.6647	-13578	10144	1888	101952	6689	3390	10078	No	38.81	Si
SLU 37	11.87	177.86	-2232	-1593	273	0.6647	0.6647	-8557	9474	1763	101952	6689	3390	10078	No	36.86	Si
SLU 37	14.37	-124.07	-3191	-2276	262	0.6647	0.6647	-12231	9964	1854	101952	6689	3390	10078	No	38.41	Si
SLU 42	11.87	169.06	-2030	-1448	264	0.6647	0.6647	-7782	9371	1744	101952	6689	3390	10078	No	38.15	Si
SLU 42	14.37	-104.02	-2976	-2123	248	0.6647	0.6647	-11406	9854	1834	101952	6689	3390	10078	No	40.71	Si
SLU 35	11.87	169.56	-2458	-1754	270	0.6647	0.6647	-9422	9590	1785	101952	6689	3390	10078	No	37.38	Si
SLU 35	14.37	-97.11	-3551	-2533	259	0.6647	0.6647	-13610	10148	1889	101952	6689	3390	10078	No	38.9	Si
SLU 77	11.87	164.09	-3184	-2271	270	0.6647	0.6647	-12204	9961	1854	101952	6689	3390	10078	No	37.3	Si
SLU 77	14.37	-68.97	-4206	-3001	260	0.6647	0.6647	-16122	10483	1951	101952	6689	3390	10078	No	38.71	Si
SLU 38	11.87	177.88	-2215	-1580	274	0.6647	0.6647	-8490	9465	1762	101952	6689	3390	10078	No	36.77	Si
SLU 38	14.37	-123.99	-3183	-2270	263	0.6647	0.6647	-12199	9960	1854	101952	6689	3390	10078	No	38.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	11.87	-2245.08	-2654	-1893	-2033	0.5318	0	0	0	0	101952	8026	2712	10738		5.28	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	14.37	2103.06	-1612	-1150	-1395	0.5318	0	0	0	0	101952	8026	2712	10738		7.7	Si
SLV 1	11.87	2408.6	-1804	-1287	2310	0.5318	0	0	0	0	101952	8026	2712	10738		4.65	Si
SLV 1	14.37	-2114.84	-3687	-2630	1667	0.5318	0	0	0	0	101952	8026	2712	10738		6.44	Si
SLV 2	11.87	2397.66	-1860	-1327	2297	0.5318	0	0	0	0	101952	8026	2712	10738		4.67	Si
SLV 2	14.37	-2105.13	-3680	-2625	1654	0.5318	0	0	0	0	101952	8026	2712	10738		6.49	Si
SLV 13	11.87	-2333.21	-3827	-2730	-2177	0.5318	0	0	0	0	101952	8026	2712	10738		4.93	Si
SLV 13	14.37	2102.97	-2107	-1503	-1536	0.5318	0	0	0	0	101952	8026	2712	10738		6.99	Si
SLV 4	11.87	2496.74	-631	-450	2455	0.5318	0	0	0	0	101952	8026	2712	10738		4.37	Si
SLV 4	14.37	-2114.74	-3192	-2277	1808	0.5318	0	0	0	0	101952	8026	2712	10738		5.94	Si
SLV 15	11.87	-2234.13	-2598	-1854	-2019	0.5318	0	0	0	0	101952	8026	2712	10738		5.32	Si
SLV 15	14.37	2093.36	-1619	-1155	-1382	0.5318	0	0	0	0	101952	8026	2712	10738		7.77	Si
SLV 14	11.87	-2344.16	-3883	-2770	-2190	0.5318	0	0	0	0	101952	8026	2712	10738		4.9	Si
SLV 14	14.37	2112.67	-2100	-1498	-1549	0.5318	0	0	0	0	101952	8026	2712	10738		6.93	Si
SLD 3	11.87	1119.79	-1513	-1079	1136	0.5318	0	0	0	0	101952	8026	2712	10738		9.45	Si
SLD 3	14.37	-911.69	-2881	-2055	858	0.5318	0.0477	0	0	0	101952	8026	2712	10738		12.52	Si
SLD 4	11.87	1115.09	-1537	-1096	1130	0.5318	0	0	0	0	101952	8026	2712	10738		9.5	Si
SLD 4	14.37	-907.52	-2878	-2053	852	0.5318	0.0511	0	0	0	101952	8026	2712	10738		12.6	Si
SLV 3	11.87	2507.68	-575	-410	2468	0.5318	0	0	0	0	101952	8026	2712	10738		4.35	Si
SLV 3	14.37	-2124.45	-3199	-2282	1821	0.5318	0	0	0	0	101952	8026	2712	10738		5.9	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-1277	0.53	76.78	172.14	253.72	212.93	2.77	Si
SLV 12	-1288	0.53	76.78	173.47	255.31	214.39	2.79	Si
SLV 7	-1438	0.53	76.78	192.86	278.62	235.74	3.07	Si
SLV 8	-1449	0.53	76.78	194.18	280.21	237.2	3.09	Si
SLV 15	-1724	0.53	76.78	229.19	322.9	276.05	3.6	Si
SLV 16	-1740	0.53	76.78	231.18	325.32	278.25	3.62	Si
SLV 3	-2260	0.53	76.78	295.49	405.2	350.34	4.56	Si
SLV 13	-2271	0.53	76.78	296.71	406.75	351.73	4.58	Si
SLV 4	-2276	0.53	76.78	297.4	407.62	352.51	4.59	Si
SLV 14	-2286	0.53	76.78	298.63	409.17	353.9	4.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-1124	-3956	-38	2.293	200.7	0.902	36.9589	11.6001	Si
SLV 6	-1122	-3992	-38	2.297	200.5	0.902	37.01089	11.6001	Si
SLV 7	-1103	141	55	2.313	198.6	0.901	37.29324	11.6001	Si, Trazione
SLV 8	-1101	105	55	2.316	198.4	0.901	37.34747	11.6001	Si, Trazione
SLV 9	-971	-4563	-52	2.514	185.7	0.898	40.70952	11.6001	Si
SLV 10	-968	-4599	-52	2.518	185.4	0.897	40.7725	11.6001	Si
SLV 11	-949	-466	40	2.559	183.6	0.897	41.4568	11.6001	Si
SLV 12	-947	-502	40	2.562	183.4	0.897	41.52304	11.6001	Si
SLV 3	-1290	-575	40	2.087	217.1	0.907	33.46219	6.40952	Si
SLV 4	-1287	-631	40	2.091	216.7	0.906	33.52939	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.076	SLU 42	Si
V_SLU	36.69	SLU 80	Si
PF_SLV	0.009	SLV 7	No
V_SLV	4.351	SLV 3	Si
PFFP_SLV	2.773	SLV 11	Si
R_SLV	3.186	SLV 5	Si

Maschio 185

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	1.006	-9.398	1.006	L7	L8	1.935	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	11.87	1247.97	-6885	-0.0000276	0.0004492	0.0035	1.9353	5969.36	6597.96	6597.96	5.29	No	Si
SLU 31	14.37	-781.13	-3338	-0.0000146	0.0004492	0.0035	1.9353	3067.11	5194.45	5194.45	6.65	No	Si
SLU 34	11.87	1277.58	-7556	-0.0000296	0.0004492	0.0035	1.9353	6476.93	7164.58	7164.58	5.61	No	Si
SLU 34	14.37	-771.18	-3890	-0.000016	0.0004492	0.0035	1.9353	3542.93	5682.1	5682.1	7.37	No	Si
SLU 40	11.87	1237.85	-6626	-0.0000269	0.0004492	0.0035	1.9353	5770.33	6376.71	6376.71	5.15	No	Si
SLU 40	14.37	-805.21	-3155	-0.0000143	0.0004492	0.0035	1.9353	2907.18	5032.56	5032.56	6.25	No	Si
SLU 23	11.87	1271.78	-7519	-0.0000295	0.0004492	0.0035	1.9353	6449.59	7133.83	7133.83	5.61	No	Si
SLU 23	14.37	-717.27	-3791	-0.0000153	0.0004492	0.0035	1.9353	3458.11	5594.5	5594.5	7.8	No	Si
SLU 22	11.87	1271.98	-7553	-0.0000296	0.0004492	0.0035	1.9353	6474.62	7161.98	7161.98	5.63	No	Si
SLU 22	14.37	-709.05	-3818	-0.0000153	0.0004492	0.0035	1.9353	3481.31	5618.43	5618.43	7.92	No	Si
SLU 41	11.87	1267.58	-7317	-0.0000289	0.0004492	0.0035	1.9353	6298.12	6964.28	6964.28	5.49	No	Si
SLU 41	14.37	-790.33	-3723	-0.0000157	0.0004492	0.0035	1.9353	3399.92	5534.58	5534.58	7	No	Si
SLU 42	11.87	1267.45	-7297	-0.0000289	0.0004492	0.0035	1.9353	6282.96	6947.39	6947.39	5.48	No	Si
SLU 42	14.37	-795.26	-3707	-0.0000157	0.0004492	0.0035	1.9353	3385.96	5520.22	5520.22	6.94	No	Si
SLU 81	11.87	1434.97	-8776	-0.0000342	0.0004492	0.0035	1.9353	7366.23	8180.05	8180.05	5.7	No	Si
SLU 81	14.37	-852.94	-4270	-0.0000176	0.0004492	0.0035	1.9353	3865.08	6017.56	6017.56	7.06	No	Si
SLU 39	11.87	1237.97	-6646	-0.0000269	0.0004492	0.0035	1.9353	5785.88	6393.92	6393.92	5.16	No	Si
SLU 39	14.37	-800.28	-3171	-0.0000143	0.0004492	0.0035	1.9353	2921.4	5046.92	5046.92	6.31	No	Si
SLU 82	11.87	1434.85	-8755	-0.0000341	0.0004492	0.0035	1.9353	7351.94	8163.47	8163.47	5.69	No	Si
SLU 82	14.37	-857.87	-4253	-0.0000176	0.0004492	0.0035	1.9353	3851.38	6003.21	6003.21	7	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	11.87	7117.39	-6801	-0.0043652	0.0006738	0.0035	1.9353		6626.63	6626.63	0.93		No
SLV 3	14.37	-5295.64	-1195	-0.0007523	0.0006738	0.0035	1.5482		3254.63	3254.63	0.61		No
SLV 4	11.87	7055.63	-6966	-0.0033996	0.0006738	0.0035	1.9353		6772.06	6772.06	0.96		No
SLV 4	14.37	-5269.2	-1349	-0.0007381	0.0006738	0.0035	1.5482		3397.42	3397.42	0.64		No
SLV 2	11.87	7140.28	-8169	-0.0003445	0.0006738	0.0035	1.9353		7817.74	7817.74	1.09		Si
SLV 2	14.37	-5023.55	-2124	-0.0006371	0.0006738	0.0035	1.5482		4111.39	4111.39	0.82		No
SLV 14	11.87	-4997.23	-7638	-0.0000822	0.0006738	0.0035	1.5482		9015.72	9015.72	1.8		Si
SLV 14	14.37	4196.73	-6079	-0.0000739	0.0006738	0.0035	1.9353		5988.25	5988.25	1.43		Si
SLV 8	11.87	2719.51	-5348	-0.0000385	0.0006738	0.0035	1.9353		5337.64	5337.64	1.96		Si
SLV 8	14.37	-2333.3	-1803	-0.0001968	0.0006738	0.0035	1.5482		3816.76	3816.76	1.64		Si
SLV 15	11.87	-5020.12	-6270	-0.0001237	0.0006738	0.0035	1.5482		7841.32	7841.32	1.56		Si
SLV 15	14.37	3924.64	-5149	-0.000085	0.0006738	0.0035	1.9353		5159.42	5159.42	1.31		Si
SLV 13	11.87	-4935.47	-7473	-0.000082	0.0006738	0.0035	1.5482		8874.35	8874.35	1.8		Si
SLV 13	14.37	4170.29	-5924	-0.0000758	0.0006738	0.0035	1.9353		5851.8	5851.8	1.4		Si
SLV 7	11.87	2759.75	-5241	-0.0000392	0.0006738	0.0035	1.9353		5241.34	5241.34	1.9		Si
SLV 7	14.37	-2350.53	-1702	-0.0002101	0.0006738	0.0035	1.5482		3723.72	3723.72	1.58		Si
SLV 1	11.87	7202.04	-8004	-0.0004993	0.0006738	0.0035	1.9353		7674.67	7674.67	1.07		Si
SLV 1	14.37	-5049.99	-1969	-0.000654	0.0006738	0.0035	1.5482		3969.88	3969.88	0.79		No
SLV 16	11.87	-5081.88	-6435	-0.0001201	0.0006738	0.0035	1.5482		7982.69	7982.69	1.57		Si
SLV 16	14.37	3951.08	-5304	-0.0000806	0.0006738	0.0035	1.9353		5298.09	5298.09	1.34		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	11.87	1528.08	-11003	-7849	1642	1.9353	1.9353	-14485	10265	5562	101952	19474	9870	29344	No	17.87	Si
SLU 72	14.37	-746.74	-6004	-4283	1093	1.9353	1.9353	-7904	9387	5087	101952	19474	9870	29344	No	26.85	Si
SLU 69	11.87	1521.45	-11665	-8321	1660	1.9353	1.9353	-15356	10381	5625	101952	19474	9870	29344	No	17.68	Si
SLU 69	14.37	-729.76	-6596	-4706	1103	1.9353	1.9353	-8684	9491	5143	101952	19474	9870	29344	No	26.61	Si
SLU 67	11.87	1491.72	-10974	-7828	1610	1.9353	1.9353	-14446	10260	5559	101952	19474	9870	29344	No	18.23	Si
SLU 67	14.37	-744.64	-6028	-4300	1021	1.9353	1.9353	-7936	9391	5089	101952	19474	9870	29344	No	28.74	Si
SLU 66	11.87	1491.84	-10994	-7843	1609	1.9353	1.9353	-14473	10263	5561	101952	19474	9870	29344	No	18.23	Si
SLU 66	14.37	-739.71	-6044	-4312	1020	1.9353	1.9353	-7957	9394	5091	101952	19474	9870	29344	No	28.78	Si
SLU 77	11.87	1497.64	-11030	-7869	1586	1.9353	1.9353	-14521	10269	5565	101952	19474	9870	29344	No	18.5	Si
SLU 77	14.37	-793.62	-6144	-4383	1197	1.9353	1.9353	-8088	9412	5100	101952	19474	9870	29344	No	24.51	Si
SLU 71	11.87	1528.2	-11023	-7864	1642	1.9353	1.9353	-14512	10268	5564	101952	19474	9870	29344	No	17.87	Si
SLU 71	14.37	-741.81	-6020	-4295	1091	1.9353	1.9353	-7926	9390	5088	101952	19474	9870	29344	No	26.89	Si
SLU 68	11.87	1498.39	-10319	-7361	1593	1.9353	1.9353	-13585	10145	5497	101952	19474	9870	29344	No	18.43	Si
SLU 68	14.37	-759.98	-5441	-3882	1011	1.9353	1.9353	-7163	9288	5033	101952	19474	9870	29344	No	29.03	Si
SLU 78	11.87	1497.52	-11010	-7854	1586	1.9353	1.9353	-14495	10266	5563	101952	19474	9870	29344	No	18.5	Si
SLU 78	14.37	-798.55	-6127	-4371	1199	1.9353	1.9353	-8066	9409	5099	101952	19474	9870	29344	No	24.48	Si
SLU 70	11.87	1521.33	-11644	-8307	1660	1.9353	1.9353	-15330	10377	5623	101952	19474	9870	29344	No	17.68	Si
SLU 70	14.37	-734.69	-6580	-4694	1104	1.9353	1.9353	-8663	9488	5142	101952	19474	9870	29344	No	26.58	Si
SLU 80	11.87	1504.27	-10369	-7397	1569	1.9353	1.9353	-13650	10153	5502	101952	19474	9870	29344	No	18.71	Si
SLU 80	14.37	-810.6	-5551	-3960	1187	1.9353	1.9353	-7308	9308	5044	101952	19474	9870	29344	No	24.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.87	7140.28	-8169	-5827	6888	1.9353	0.2806	-76221	16250	1277	101952	29211	9870	39081		5.67	Si
SLV 2	14.37	-5023.55	-2124	-1515	3945	1.5482	0	0	0	0	101952	23369	7896	31265		7.93	Si
SLV 1	11.87	7202.04	-8004	-5710	6924	1.9353	0.2035	-100659	16250	926	101952	29211	9870	39081		5.64	Si
SLV 1	14.37	-5049.99	-1969	-1405	3944	1.5482	0	0	0	0	101952	23369	7896	31265		7.93	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 1	11.87	3686.62	-7563	-5396	3599	1.9353	1.4407	-9957	14491	5846	101952	29211	9870	39081		10.86	Si
SLD 1	14.37	-2471.69	-2929	-2090	2069	1.5482	0.3717	0	0	0	101952	23369	7896	31265		15.11	Si
SLV 13	11.87	-4935.47	-7473	-5331	-4565	1.5482	0.9217	0	0	0	101952	23369	7896	31265		6.85	Si
SLV 13	14.37	4170.29	-5924	-4226	-2766	1.9353	0.7911	-7799	14060	3114	101952	29211	9870	39081		14.13	Si
SLV 4	11.87	7055.63	-6966	-4969	6794	1.9353	0	-164160	16250	0	101952	29211	9870	39081		5.75	Si
SLV 4	14.37	-5269.2	-1349	-962	4107	1.5482	0	0	0	0	101952	23369	7896	31265		7.61	Si
SLV 3	11.87	7117.39	-6801	-4852	6829	1.9353	0	-163059	16250	0	101952	29211	9870	39081		5.72	Si
SLV 3	14.37	-5295.64	-1195	-852	4106	1.5482	0	0	0	0	101952	23369	7896	31265		7.61	Si
SLD 2	11.87	3660.1	-7634	-5446	3584	1.9353	1.4647	-10050	14510	5951	101952	29211	9870	39081		10.9	Si
SLD 2	14.37	-2460.33	-2996	-2137	2069	1.5482	0.4391	0	0	0	101952	23369	7896	31265		15.11	Si
SLV 14	11.87	-4997.23	-7638	-5449	-4601	1.5482	0.9401	0	0	0	101952	23369	7896	31265		6.8	Si
SLV 14	14.37	4196.73	-6079	-4336	-2766	1.9353	0.8317	-8002	14100	3284	101952	29211	9870	39081		14.13	Si
SLV 15	11.87	-5020.12	-6270	-4473	-4660	1.5482	0.5011	0	0	0	101952	23369	7896	31265		6.71	Si
SLV 15	14.37	3924.64	-5149	-3674	-2604	1.9353	0.6165	-21491	16250	2805	101952	29211	9870	39081		15.01	Si
SLV 16	11.87	-5081.88	-6435	-4591	-4695	1.5482	0.5338	0	0	0	101952	23369	7896	31265		6.66	Si
SLV 16	14.37	3951.08	-5304	-3784	-2603	1.9353	0.6682	-20415	16250	3040	101952	29211	9870	39081		15.01	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-3476	0.53	223.55	469.57	780.79	625.18	2.8	Si
SLV 12	-3583	0.53	223.55	483.52	797.4	640.46	2.86	Si
SLV 7	-3625	0.53	223.55	488.95	803.87	646.41	2.89	Si
SLV 8	-3732	0.53	223.55	502.85	820.48	661.67	2.96	Si
SLV 15	-4633	0.53	223.55	618.3	959.95	789.12	3.53	Si
SLV 16	-4797	0.53	223.55	639.16	985.35	812.25	3.63	Si
SLV 3	-5129	0.53	223.55	681.03	1036.32	858.67	3.84	Si
SLV 4	-5294	0.53	223.55	701.65	1061.57	881.61	3.94	Si
SLV 13	-5798	0.53	223.55	764.3	1138.84	951.57	4.26	Si
SLV 14	-5962	0.53	223.55	784.61	1164.1	974.36	4.36	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-3164	-9198	-295	2.306	573.5	0.901	37.21253	11.6001	Si
SLV 9	-3095	-9091	-295	2.34	566.8	0.9	37.78441	11.6001	Si
SLV 6	-3083	-9357	-306	2.344	565.6	0.9	37.84879	11.6001	Si
SLV 5	-3014	-9250	-306	2.379	558.9	0.899	38.44045	11.6001	Si
SLV 12	-2175	-5189	306	2.906	477.9	0.892	47.35969	11.6001	Si
SLV 11	-2106	-5082	306	2.96	471.3	0.891	48.2707	11.6001	Si
SLV 8	-2094	-5348	295	2.973	470.2	0.891	48.47916	11.6001	Si
SLV 7	-2024	-5241	295	3.029	463.7	0.891	49.43045	11.6001	Si
SLV 14	-2931	-7638	-73	2.474	550.7	0.899	40.01974	6.40952	Si
SLV 13	-2825	-7473	-73	2.533	540.4	0.898	41.02043	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.151	SLU 40	Si
V_SLU	17.679	SLU 70	Si
PF_SLV	0.615	SLV 3	No
V_SLV	5.645	SLV 1	Si
PFFP_SLV	2.797	SLV 11	Si
R_SLV	3.208	SLV 10	Si

Maschio 186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-4.913	1.006	-6.463	1.006	L7	L8	1.55	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 2	11.87	681.38	-5710	-0.0000268	0.0004492	0.0035	1.55	3948.9	4394.32	4394.32	6.45	No	Si
SLU 2	13.97	-617.29	-4776	-0.0000229	0.0004492	0.0035	1.55	3368.29	4770.41	4770.41	7.73	No	Si
SLU 47	11.87	862.65	-7927	-0.0000365	0.0004492	0.0035	1.55	5225.22	5861.27	5861.27	6.79	No	Si
SLU 47	13.97	-747.57	-6508	-0.0000302	0.0004492	0.0035	1.55	4424.51	5936.76	5936.76	7.94	No	Si
SLU 22	11.87	658.47	-5715	-0.0000265	0.0004492	0.0035	1.55	3951.91	4397.66	4397.66	6.68	No	Si
SLU 22	13.97	-548.64	-5010	-0.0000228	0.0004492	0.0035	1.55	3515.72	4927.57	4927.57	8.98	No	Si
SLU 64	11.87	868.58	-7446	-0.0000349	0.0004492	0.0035	1.55	4960.21	5548.01	5548.01	6.39	No	Si
SLU 64	13.97	-750.08	-6357	-0.0000298	0.0004492	0.0035	1.55	4336.15	5835.35	5835.35	7.78	No	Si
SLU 44	11.87	891.5	-7441	-0.0000352	0.0004492	0.0035	1.55	4957.44	5544.78	5544.78	6.22	No	Si
SLU 44	13.97	-818.73	-6124	-0.0000299	0.0004492	0.0035	1.55	4197.91	5678.19	5678.19	6.94	No	Si
SLU 65	11.87	871.94	-7416	-0.0000349	0.0004492	0.0035	1.55	4943.6	5528.63	5528.63	6.34	No	Si
SLU 65	13.97	-761.41	-6366	-0.0000299	0.0004492	0.0035	1.55	4341.18	5841.1	5841.1	7.67	No	Si
SLU 68	11.87	843.1	-7902	-0.0000361	0.0004492	0.0035	1.55	5211.74	5845.42	5845.42	6.93	No	Si
SLU 68	13.97	-690.25	-6749	-0.0000303	0.0004492	0.0035	1.55	4565.06	6099.67	6099.67	8.84	No	Si
SLU 43	11.87	888.14	-7471	-0.0000353	0.0004492	0.0035	1.55	4974.02	5564.16	5564.16	6.26	No	Si
SLU 43	13.97	-807.41	-6115	-0.0000297	0.0004492	0.0035	1.55	4192.82	5672.44	5672.44	7.03	No	Si
SLU 23	11.87	661.83	-5685	-0.0000264	0.0004492	0.0035	1.55	3933.8	4377.61	4377.61	6.61	No	Si
SLU 23	13.97	-559.97	-5018	-0.000023	0.0004492	0.0035	1.55	3521.08	4933.32	4933.32	8.81	No	Si
SLU 1	11.87	678.03	-5740	-0.0000268	0.0004492	0.0035	1.55	3966.98	4414.37	4414.37	6.51	No	Si
SLU 1	13.97	-605.96	-4768	-0.0000227	0.0004492	0.0035	1.55	3362.86	4764.66	4764.66	7.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	11.87	-2989.95	-8317	-0.0000672	0.0006738	0.0035	1.55		7241.72	7241.72	2.42		Si
SLV 14	13.97	2938.74	-5051	-0.0000889	0.0006738	0.0035	1.55		4001.56	4001.56	1.36		Si
SLV 13	11.87	-2906.21	-8014	-0.0000652	0.0006738	0.0035	1.55		7042.62	7042.62	2.42		Si
SLV 13	13.97	2818.27	-5020	-0.0000795	0.0006738	0.0035	1.55		3979.97	3979.97	1.41		Si
SLV 1	11.87	4033.77	-4960	-0.002605	0.0006738	0.0035	1.55		3937.35	3937.35	0.98		No
SLV 1	13.97	-3653.02	-4181	-0.0004225	0.0006738	0.0035	1.24		4394.43	4394.43	1.2		Si
SLV 3	11.87	4245.15	-2788	-0.0106547	0.0006738	0.0035	1.24		2372.27	2372.27	0.56		No
SLV 3	13.97	-4018.9	-4467	-0.0005023	0.0006738	0.0035	1.24		4597.01	4597.01	1.14		Si
SLV 16	11.87	-2778.56	-6145	-0.0000637	0.0006738	0.0035	1.24		5763.47	5763.47	2.07		Si
SLV 16	13.97	2572.85	-5336	-0.0000609	0.0006738	0.0035	1.55		4202.74	4202.74	1.63		Si
SLD 3	11.87	2176.78	-4354	-0.0000527	0.0006738	0.0035	1.55		3505.97	3505.97	1.61		Si
SLD 3	13.97	-2031.26	-4637	-0.0000456	0.0006738	0.0035	1.24		4717.8	4717.8	2.32		Si
SLV 2	11.87	3950.03	-5263	-0.0008021	0.0006738	0.0035	1.55		4150.95	4150.95	1.05		Si
SLV 2	13.97	-3532.55	-4212	-0.0003703	0.0006738	0.0035	1.24		4416.17	4416.17	1.25		Si
SLV 8	11.87	1993.63	-1572	-0.0031718	0.0006738	0.0035	1.24		1473.36	1473.36	0.74		No
SLV 8	13.97	-2081.34	-5118	-0.0000461	0.0006738	0.0035	1.55		5056.09	5056.09	2.43		Si
SLV 7	11.87	2048.19	-1375	-0.0042017	0.0006738	0.0035	1.24		1326.14	1326.14	0.65		No
SLV 7	13.97	-2159.84	-5098	-0.0000482	0.0006738	0.0035	1.24		5042.34	5042.34	2.33		Si
SLV 4	11.87	4161.42	-3090	-0.0094997	0.0006738	0.0035	1.24		2593.92	2593.92	0.62		No
SLV 4	13.97	-3898.44	-4497	-0.000449	0.0006738	0.0035	1.24		4618.76	4618.76	1.18		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	11.87	813.17	-8380	-5978	1060	1.55	1.55	-13774	10170	4414	101952	15597	7905	23502	No	22.18	Si
SLU 67	13.97	-657.83	-7327	-5227	1060	1.55	1.55	-12044	9939	4314	101952	15597	7905	23502	No	22.18	Si
SLU 43	11.87	888.14	-7471	-5329	1069	1.55	1.55	-12279	9971	4327	101952	15597	7905	23502	No	21.97	Si
SLU 43	13.97	-807.41	-6115	-4363	1070	1.55	1.55	-10052	9674	4198	101952	15597	7905	23502	No	21.97	Si
SLU 73	11.87	715.02	-6784	-4839	1079	1.55	1.55	-11150	9820	4262	101952	15597	7905	23502	No	21.78	Si
SLU 73	13.97	-588.15	-6092	-4346	1079	1.55	1.55	-10013	9668	4196	101952	15597	7905	23502	No	21.77	Si
SLU 65	11.87	871.94	-7416	-5290	1139	1.55	1.55	-12190	9959	4322	101952	15597	7905	23502	No	20.63	Si
SLU 65	13.97	-761.41	-6366	-4541	1139	1.55	1.55	-10463	9728	4222	101952	15597	7905	23502	No	20.63	Si
SLU 44	11.87	891.5	-7441	-5308	1087	1.55	1.55	-12231	9964	4324	101952	15597	7905	23502	No	21.61	Si
SLU 44	13.97	-818.73	-6124	-4369	1088	1.55	1.55	-10066	9675	4199	101952	15597	7905	23502	No	21.61	Si
SLU 64	11.87	868.58	-7446	-5312	1121	1.55	1.55	-12239	9965	4325	101952	15597	7905	23502	No	20.96	Si
SLU 64	13.97	-750.08	-6357	-4535	1121	1.55	1.55	-10449	9727	4221	101952	15597	7905	23502	No	20.96	Si
SLU 81	11.87	644.41	-6542	-4667	1036	1.55	1.55	-10754	9767	4239	101952	15597	7905	23502	No	22.69	Si
SLU 81	13.97	-502.57	-5966	-4256	1036	1.55	1.55	-9806	9641	4184	101952	15597	7905	23502	No	22.69	Si
SLU 82	11.87	646.42	-6525	-4654	1046	1.55	1.55	-10725	9763	4237	101952	15597	7905	23502	No	22.46	Si
SLU 82	13.97	-509.37	-5971	-4259	1046	1.55	1.55	-9814	9642	4185	101952	15597	7905	23502	No	22.46	Si
SLU 68	11.87	843.1	-7902	-5637	1061	1.55	1.55	-12989	10065	4368	101952	15597	7905	23502	No	22.14	Si
SLU 68	13.97	-690.25	-6749	-4815	1062	1.55	1.55	-11094	9813	4259	101952	15597	7905	23502	No	22.14	Si
SLU 66	11.87	811.15	-8398	-5991	1049	1.55	1.55	-13804	10174	4415	101952	15597	7905	23502	No	22.41	Si
SLU 66	13.97	-651.03	-7322	-5223	1049	1.55	1.55	-12036	9938	4313	101952	15597	7905	23502	No	22.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	11.87	3950.03	-5263	-3754	4163	1.55	0.0733	-129354	16250	333	101952	23395	7905	31300		7.52	Si
SLV 2	13.97	-3532.55	-4212	-3005	3439	1.24	0	0	0	0	101952	18716	6324	25040		7.28	Si
SLV 14	11.87	-2989.95	-8317	-5933	-3653	1.55	1.2465	-17127	15926	5558	101952	23395	7905	31300		8.57	Si
SLV 14	13.97	2938.74	-5051	-3603	-2918	1.55	0.5795	-8302	14160	2298	101952	23395	7905	31300		10.73	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	11.87	4033.77	-4960	-3538	4339	1.55	0	-159040	16250	0	101952	23395	7905	31300		7.21	Si
SLV 1	13.97	-3653.02	-4181	-2983	3615	1.24	0	0	0	0	101952	18716	6324	25040		6.93	Si
SLV 13	11.87	-2906.21	-8014	-5717	-3477	1.55	1.2371	-16624	15825	5482	101952	23395	7905	31300		9	Si
SLV 13	13.97	2818.27	-5020	-3581	-2742	1.55	0.6408	-8252	14150	2539	101952	23395	7905	31300		11.41	Si
SLV 15	11.87	-2694.82	-5842	-4167	-2495	1.24	0.9411	0	0	0	101952	18716	6324	25040		10.04	Si
SLV 15	13.97	2452.38	-5305	-3785	-1771	1.55	0.9383	-8721	14244	3742	101952	23395	7905	31300		17.67	Si
SLV 8	11.87	1993.63	-1572	-1122	3585	1.24	0	0	0	0	101952	18716	6324	25040		6.98	Si
SLV 8	13.97	-2081.34	-5118	-3651	3349	1.55	1.1051	-11857	14872	4602	101952	23395	7905	31300		9.35	Si
SLV 3	11.87	4245.15	-2788	-1989	5321	1.24	0	0	0	0	101952	18716	6324	25040		4.71	Si
SLV 3	13.97	-4018.9	-4467	-3186	4586	1.24	0	0	0	0	101952	18716	6324	25040		5.46	Si
SLV 7	11.87	2048.19	-1375	-981	3700	1.24	0	0	0	0	101952	18716	6324	25040		6.77	Si
SLV 7	13.97	-2159.84	-5098	-3637	3464	1.24	1.0541	0	0	0	101952	18716	6324	25040		7.23	Si
SLV 4	11.87	4161.42	-3090	-2205	5145	1.24	0	0	0	0	101952	18716	6324	25040		4.87	Si
SLV 4	13.97	-3898.44	-4497	-3208	4410	1.24	0	0	0	0	101952	18716	6324	25040		5.68	Si
SLV 16	11.87	-2778.56	-6145	-4384	-2671	1.24	0.9685	0	0	0	101952	18716	6324	25040		9.37	Si
SLV 16	13.97	2572.85	-5336	-3807	-1947	1.55	0.8785	-8771	14254	3506	101952	23395	7905	31300		16.07	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-4125	0.53	179.05	547.5	828.21	687.86	3.84	Si
SLV 7	-4206	0.53	179.05	557.71	840.73	699.22	3.91	Si
SLV 4	-4209	0.53	179.05	558.02	841.11	699.56	3.91	Si
SLV 8	-4261	0.53	179.05	564.56	849.13	706.84	3.95	Si
SLV 1	-4362	0.53	179.05	577.23	864.71	720.97	4.03	Si
SLV 2	-4446	0.53	179.05	587.68	877.6	732.64	4.09	Si
SLV 11	-4501	0.53	179.05	594.5	886.02	740.26	4.13	Si
SLV 12	-4556	0.53	179.05	601.28	894.42	747.85	4.18	Si
SLV 5	-4998	0.53	179.05	655.8	962.27	809.04	4.52	Si
SLV 6	-5053	0.53	179.05	662.5	970.66	816.58	4.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-3350	-2291	17	1.952	540	0.91	31.15623	11.6001	Si
SLV 12	-3349	-2489	16	1.952	539.9	0.91	31.16112	11.6001	Si
SLV 7	-3267	-1375	10	1.989	531.7	0.909	31.77685	11.6001	Si
SLV 8	-3266	-1572	9	1.989	531.7	0.909	31.78189	11.6001	Si
SLV 9	-2262	-9532	-6	2.548	432.8	0.898	41.26555	11.6001	Si
SLV 10	-2262	-9729	-7	2.548	432.8	0.898	41.26804	11.6001	Si
SLV 5	-2179	-8616	-13	2.607	424.7	0.897	42.26705	11.6001	Si
SLV 6	-2178	-8813	-14	2.607	424.7	0.897	42.26972	11.6001	Si
SLV 15	-3066	-5842	17	2.077	511.8	0.907	33.28165	6.40952	Si
SLV 16	-3066	-6145	16	2.078	511.8	0.907	33.28999	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.22	SLU 44	Si
V_SLU	20.631	SLU 65	Si
PF_SLV	0.559	SLV 3	No
V_SLV	4.706	SLV 3	Si
PFFP_SLV	3.842	SLV 3	Si
R_SLV	2.686	SLV 11	Si

Maschio 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	1.006	-4.113	1.006	L7	L8	3.98	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 28	11.87	1794.93	-12898	-0.0000194	0.0004492	0.0035	3.98	23235.53	25683.35	25683.35	14.31	No	Si
SLU 28	13.97	2851.09	-10865	-0.0000188	0.0004492	0.0035	3.98	19896.23	22060.61	22060.61	7.74	No	Si
SLU 33	11.87	1085.75	-10919	-0.0000155	0.0004492	0.0035	3.98	19986.17	22157.71	22157.71	20.41	No	Si
SLU 33	13.97	2667.85	-9751	-0.000017	0.0004492	0.0035	3.98	18015.81	20051.02	20051.02	7.52	No	Si
SLU 36	11.87	1109.76	-11630	-0.0000165	0.0004492	0.0035	3.98	21167.11	23433.84	23433.84	21.12	No	Si
SLU 36	13.97	2921.99	-10445	-0.0000184	0.0004492	0.0035	3.98	19191	21302.38	21302.38	7.29	No	Si
SLU 27	11.87	1792.35	-12891	-0.0000193	0.0004492	0.0035	3.98	23225.08	25671.86	25671.86	14.32	No	Si
SLU 27	13.97	2852.87	-10859	-0.0000188	0.0004492	0.0035	3.98	19885.33	22048.84	22048.84	7.73	No	Si
SLU 32	11.87	1083.18	-10912	-0.0000155	0.0004492	0.0035	3.98	19975.35	22146.02	22146.02	20.45	No	Si
SLU 32	13.97	2669.63	-9745	-0.000017	0.0004492	0.0035	3.98	18004.69	20039.26	20039.26	7.51	No	Si
SLU 77	11.87	1838.58	-14933	-0.000022	0.0004492	0.0035	3.98	26458.08	29251	29251	15.91	No	Si
SLU 77	13.97	3343.02	-12652	-0.000022	0.0004492	0.0035	3.98	22838.54	25247.61	25247.61	7.55	No	Si
SLU 78	11.87	1841.16	-14940	-0.000022	0.0004492	0.0035	3.98	26468.13	29262.29	29262.29	15.89	No	Si
SLU 78	13.97	3341.24	-12659	-0.000022	0.0004492	0.0035	3.98	22849.1	25259.18	25259.18	7.56	No	Si
SLU 35	11.87	1107.18	-11624	-0.0000164	0.0004492	0.0035	3.98	21156.43	23422.35	23422.35	21.15	No	Si
SLU 35	13.97	2923.77	-10438	-0.0000184	0.0004492	0.0035	3.98	19180.01	21290.62	21290.62	7.28	No	Si
SLU 14	11.87	1500.65	-11806	-0.0000174	0.0004492	0.0035	3.98	21456.97	23746.02	23746.02	15.82	No	Si
SLU 14	13.97	2695.26	-9977	-0.0000174	0.0004492	0.0035	3.98	18399.23	20457.66	20457.66	7.59	No	Si
SLU 15	11.87	1503.23	-11812	-0.0000174	0.0004492	0.0035	3.98	21467.62	23757.51	23757.51	15.8	No	Si
SLU 15	13.97	2693.48	-9983	-0.0000174	0.0004492	0.0035	3.98	18410.3	20469.42	20469.42	7.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	11.87	1315.72	-12210	-0.0000175	0.0006738	0.0035	3.98		24797.06	24797.06	18.85		Si
SLV 9	13.97	5256.53	-10059	-0.0000222	0.0006738	0.0035	3.98		20845.12	20845.12	3.97		Si
SLV 15	11.87	1800.54	-13530	-0.00002	0.0006738	0.0035	3.98		27203.66	27203.66	15.11		Si
SLV 15	13.97	5647.7	-11102	-0.0000242	0.0006738	0.0035	3.98		22773.03	22773.03	4.03		Si
SLV 13	11.87	1568.37	-14011	-0.0000202	0.0006738	0.0035	3.98		28069.57	28069.57	17.9		Si
SLV 13	13.97	6958.11	-11766	-0.0000275	0.0006738	0.0035	3.98		23985.81	23985.81	3.45		Si
SLV 3	11.87	1912.66	-6751	-0.0000118	0.0006738	0.0035	3.98		14664.31	14664.31	7.67		Si
SLV 3	13.97	-3693.35	-3954	-0.0000122	0.0006738	0.0035	3.98		16914.41	16914.41	4.58		Si
SLV 4	11.87	1791.89	-6807	-0.0000117	0.0006738	0.0035	3.98		14770.68	14770.68	8.24		Si
SLV 4	13.97	-3469.71	-4072	-0.0000116	0.0006738	0.0035	3.98		17137.05	17137.05	4.94		Si
SLD 14	11.87	1576.15	-11978	-0.0000177	0.0006738	0.0035	3.98		24373.3	24373.3	15.46		Si
SLD 14	13.97	4080.15	-9621	-0.0000194	0.0006738	0.0035	3.98		20032.58	20032.58	4.91		Si
SLV 16	11.87	1679.77	-13586	-0.0000199	0.0006738	0.0035	3.98		27305.33	27305.33	16.26		Si
SLV 16	13.97	5871.33	-11220	-0.0000248	0.0006738	0.0035	3.98		22989.1	22989.1	3.92		Si
SLV 10	11.87	1237.03	-12247	-0.0000174	0.0006738	0.0035	3.98		24864.32	24864.32	20.1		Si
SLV 10	13.97	5402.24	-10136	-0.0000226	0.0006738	0.0035	3.98		20988.04	20988.04	3.89		Si
SLD 13	11.87	1628.02	-11954	-0.0000177	0.0006738	0.0035	3.98		24328.96	24328.96	14.94		Si
SLD 13	13.97	3984.09	-9570	-0.0000192	0.0006738	0.0035	3.98		19938.37	19938.37	5		Si
SLV 14	11.87	1447.61	-14068	-0.0000201	0.0006738	0.0035	3.98		28171.25	28171.25	19.46		Si
SLV 14	13.97	7181.75	-11884	-0.0000281	0.0006738	0.0035	3.98		24201.87	24201.87	3.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	11.87	1347.43	-12140	-8660	-3892	3.98	3.98	-7771	9369	10441	101952	40049	20298	60347	No	15.51	Si
SLU 81	13.97	2407.7	-9982	-7121	-3894	3.98	3.98	-6390	9185	10236	101952	40049	20298	60347	No	15.5	Si
SLU 78	11.87	1841.16	-14940	-10658	-3984	3.98	3.98	-9564	9608	10708	101952	40049	20298	60347	No	15.15	Si
SLU 78	13.97	3341.24	-12659	-9030	-3984	3.98	3.98	-8103	9414	10491	101952	40049	20298	60347	No	15.15	Si
SLU 84	11.87	1374.02	-12857	-9172	-3982	3.98	3.98	-8231	9431	10510	101952	40049	20298	60347	No	15.15	Si
SLU 84	13.97	2660.06	-10682	-7620	-3983	3.98	3.98	-6838	9245	10303	101952	40049	20298	60347	No	15.15	Si
SLU 74	11.87	1814.57	-14222	-10146	-3893	3.98	3.98	-9104	9547	10639	101952	40049	20298	60347	No	15.5	Si
SLU 74	13.97	3088.88	-11959	-8531	-3895	3.98	3.98	-7655	9354	10424	101952	40049	20298	60347	No	15.49	Si
SLU 77	11.87	1838.58	-14933	-10653	-3986	3.98	3.98	-9559	9608	10707	101952	40049	20298	60347	No	15.14	Si
SLU 77	13.97	3343.02	-12652	-9026	-3986	3.98	3.98	-8099	9413	10490	101952	40049	20298	60347	No	15.14	Si
SLU 36	11.87	1109.76	-11630	-8297	-3972	3.98	3.98	-7445	9326	10393	101952	40049	20298	60347	No	15.19	Si
SLU 36	13.97	2921.99	-10445	-7451	-3971	3.98	3.98	-6686	9225	10280	101952	40049	20298	60347	No	15.2	Si
SLU 35	11.87	1107.18	-11624	-8292	-3974	3.98	3.98	-7441	9325	10392	101952	40049	20298	60347	No	15.18	Si
SLU 35	13.97	2923.77	-10438	-7446	-3973	3.98	3.98	-6682	9224	10280	101952	40049	20298	60347	No	15.19	Si
SLU 41	11.87	640.04	-9541	-6807	-3973	3.98	3.98	-6108	9148	10194	101952	40049	20298	60347	No	15.19	Si
SLU 41	13.97	2242.59	-8462	-6036	-3972	3.98	3.98	-5417	9056	10092	101952	40049	20298	60347	No	15.19	Si
SLU 42	11.87	642.62	-9548	-6811	-3971	3.98	3.98	-6112	9148	10195	101952	40049	20298	60347	No	15.2	Si
SLU 42	13.97	2240.81	-8468	-6041	-3970	3.98	3.98	-5421	9056	10092	101952	40049	20298	60347	No	15.2	Si
SLU 83	11.87	1371.44	-12851	-9168	-3985	3.98	3.98	-8226	9430	10509	101952	40049	20298	60347	No	15.15	Si
SLU 83	13.97	2661.84	-10676	-7616	-3985	3.98	3.98	-6834	9245	10302	101952	40049	20298	60347	No	15.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	11.87	1568.37	-14011	-9995	-5854	3.98	3.98	-8969	14294	15929	101952	60073	20298	80371		13.73	Si
SLV 13	13.97	6958.11	-11766	-8393	-3042	3.98	3.98	-7532	14006	15609	101952	60073	20298	80371		26.42	Si
SLD 13	11.87	1628.02	-11954	-8527	-3559	3.98	3.98	-7652	14030	15636	101952	60073	20298	80371		22.59	Si
SLD 13	13.97	3984.09	-9570	-6827	-2356	3.98	3.98	-6126	13725	15295	101952	60073	20298	80371		34.12	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	11.87	1679.77	-13586	-9692	-4883	3.98	3.98	-8697	14239	15868	101952	60073	20298	80371		16.46	Si
SLV 16	13.97	5871.33	-11220	-8004	-2109	3.98	3.98	-7183	13937	15531	101952	60073	20298	80371		38.1	Si
SLV 10	11.87	1237.03	-12247	-8736	-4950	3.98	3.98	-7839	14068	15677	101952	60073	20298	80371		16.24	Si
SLV 10	13.97	5402.24	-10136	-7231	-4050	3.98	3.98	-6488	13798	15376	101952	60073	20298	80371		19.85	Si
SLV 5	11.87	1349.35	-10176	-7259	-2679	3.98	3.98	-6514	13803	15382	101952	60073	20298	80371		30	Si
SLV 5	13.97	2454.21	-7914	-5646	-3455	3.98	3.98	-5066	13513	15059	101952	60073	20298	80371		23.26	Si
SLV 6	11.87	1270.67	-10213	-7286	-2824	3.98	3.98	-6538	13808	15387	101952	60073	20298	80371		28.46	Si
SLV 6	13.97	2599.93	-7991	-5701	-3600	3.98	3.98	-5116	13523	15070	101952	60073	20298	80371		22.32	Si
SLV 15	11.87	1800.54	-13530	-9652	-4660	3.98	3.98	-8661	14232	15860	101952	60073	20298	80371		17.25	Si
SLV 15	13.97	5647.7	-11102	-7920	-1887	3.98	3.98	-7107	13921	15514	101952	60073	20298	80371		42.6	Si
SLD 14	11.87	1576.15	-11978	-8545	-3654	3.98	3.98	-7667	14033	15639	101952	60073	20298	80371		22	Si
SLD 14	13.97	4080.15	-9621	-6863	-2451	3.98	3.98	-6159	13732	15303	101952	60073	20298	80371		32.79	Si
SLV 14	11.87	1447.61	-14068	-10036	-6077	3.98	3.98	-9005	14301	15937	101952	60073	20298	80371		13.23	Si
SLV 14	13.97	7181.75	-11884	-8478	-3265	3.98	3.98	-7607	14021	15626	101952	60073	20298	80371		24.62	Si
SLV 9	11.87	1315.72	-12210	-8710	-4805	3.98	3.98	-7816	14063	15672	101952	60073	20298	80371		16.73	Si
SLV 9	13.97	5256.53	-10059	-7176	-3905	3.98	3.98	-6439	13788	15365	101952	60073	20298	80371		20.58	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.06 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-4427	0.53	459.74	606.32	1186.09	896.21	1.95	Si
SLV 4	-4534	0.53	459.74	620.67	1202.93	911.8	1.98	Si
SLV 1	-5057	0.53	459.74	690.42	1285.03	987.72	2.15	Si
SLV 2	-5164	0.53	459.74	704.68	1301.85	1003.26	2.18	Si
SLV 7	-6184	0.53	459.74	839.58	1460.9	1150.24	2.5	Si
SLV 8	-6254	0.53	459.74	848.76	1471.74	1160.25	2.52	Si
SLV 5	-8284	0.53	459.74	1112.75	1786.32	1449.53	3.15	Si
SLV 11	-8305	0.53	459.74	1115.37	1789.47	1452.42	3.16	Si
SLV 6	-8354	0.53	459.74	1121.73	1797.12	1459.42	3.17	Si
SLV 12	-8374	0.53	459.74	1124.35	1800.27	1462.31	3.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-6811	-12247	-703	2.228	1209.4	0.902	35.88826	11.6001	Si
SLV 9	-6801	-12210	-702	2.23	1208.4	0.902	35.92714	11.6001	Si
SLV 6	-6508	-10213	-680	2.299	1179.7	0.901	37.08463	11.6001	Si
SLV 5	-6498	-10176	-679	2.301	1178.7	0.901	37.12602	11.6001	Si
SLV 12	-6474	-10643	679	2.307	1176.3	0.901	37.22439	11.6001	Si
SLV 11	-6463	-10606	679	2.309	1175.3	0.901	37.26504	11.6001	Si
SLV 8	-6171	-8609	702	2.378	1146.7	0.899	38.42765	11.6001	Si
SLV 7	-6161	-8572	702	2.38	1145.7	0.899	38.47095	11.6001	Si
SLV 14	-7048	-14068	-246	2.222	1232.8	0.903	35.74602	6.40952	Si
SLV 13	-7033	-14011	-246	2.225	1231.2	0.903	35.80416	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.282	SLU 35	Si
V_SLU	15.138	SLU 77	Si
PF_SLV	3.37	SLV 14	Si
V_SLV	13.227	SLV 14	Si
PFFP_SLV	1.949	SLV 3	Si
R_SLV	3.094	SLV 10	Si

Maschio 188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.454	-11.003	-0.694	L7	L8	2.76	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 37	11.87	870.68	-10259	-0.0000238	0.0003743	0.0035	2.7596	12308.75	12876.9	12876.9	14.79	No	Si
SLU 37	15.03	2051.42	-3415	-0.0000155	0.0003743	0.0035	2.7596	4506.79	4947.69	4947.69	2.41	No	Si
SLU 40	11.87	772.08	-9126	-0.0000211	0.0003743	0.0035	2.7596	11130.73	11740.33	11740.33	15.21	No	Si
SLU 40	15.03	1389.56	-2194	-0.0000103	0.0003743	0.0035	2.7596	2942.61	3357.62	3357.62	2.42	No	Si
SLU 41	11.87	861.44	-9778	-0.0000228	0.0003743	0.0035	2.7596	11814.92	12392.61	12392.61	14.39	No	Si
SLU 41	15.03	1747.76	-2831	-0.0000131	0.0003743	0.0035	2.7596	3765.42	4192.94	4192.94	2.4	No	Si
SLU 36	11.87	821.45	-10389	-0.0000239	0.0003743	0.0035	2.7596	12441.46	13009.06	13009.06	15.84	No	Si
SLU 36	15.03	2063.12	-3420	-0.0000156	0.0003743	0.0035	2.7596	4513.18	4954.2	4954.2	2.4	No	Si
SLU 80	11.87	987.13	-12213	-0.0000284	0.0003743	0.0035	2.7596	14235.02	14886.43	14886.43	15.08	No	Si
SLU 80	15.03	2157.06	-3667	-0.0000164	0.0003743	0.0035	2.7596	4824.07	5271.58	5271.58	2.44	No	Si
SLU 35	11.87	855.85	-10417	-0.0000241	0.0003743	0.0035	2.7596	12469.97	13037.57	13037.57	15.23	No	Si
SLU 35	15.03	2042.26	-3411	-0.0000155	0.0003743	0.0035	2.7596	4502.6	4943.41	4943.41	2.42	No	Si
SLU 42	11.87	827.04	-9750	-0.0000226	0.0003743	0.0035	2.7596	11785.79	12364.4	12364.4	14.95	No	Si
SLU 42	15.03	1768.62	-2839	-0.0000132	0.0003743	0.0035	2.7596	3776.18	4203.97	4203.97	2.38	No	Si
SLU 34	11.87	758.39	-9587	-0.000022	0.0003743	0.0035	2.7596	11616.02	12200.81	12200.81	16.09	No	Si
SLU 34	15.03	1707.13	-2783	-0.0000128	0.0003743	0.0035	2.7596	3704.21	4130.27	4130.27	2.42	No	Si
SLU 38	11.87	836.28	-10231	-0.0000236	0.0003743	0.0035	2.7596	12280.09	12848.47	12848.47	15.36	No	Si
SLU 38	15.03	2072.28	-3423	-0.0000156	0.0003743	0.0035	2.7596	4517.38	4958.48	4958.48	2.39	No	Si
SLU 84	11.87	977.89	-11733	-0.0000273	0.0003743	0.0035	2.7596	13774.11	14386.88	14386.88	14.71	No	Si
SLU 84	15.03	1853.39	-3084	-0.000014	0.0003743	0.0035	2.7596	4087.87	4520.15	4520.15	2.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	11.87	-835	-5660	-0.0000144	0.0005615	0.0035	2.7596		9640.04	9640.04	11.54		Si
SLV 4	15.03	529.1	-148	-0.0005196	0.0005615	0.0035	2.2076		617.26	617.26	1.17		Si
SLV 2	11.87	2000.19	-7898	-0.0000237	0.0005615	0.0035	2.7596		10721.57	10721.57	5.36		Si
SLV 2	15.03	-1515.05	305	0.0179387	0.0005615	0.0035	2.2076		0	0	0		No
SLV 12	11.87	-4020.96	-4764	-0.0000316	0.0005615	0.0035	2.2076		8499.66	8499.66	2.11		Si
SLV 12	15.03	4676.55	-2877	-0.0023382	0.0005615	0.0035	2.7596		4286.98	4286.98	0.92		No
SLV 1	11.87	1885.11	-7851	-0.0000231	0.0005615	0.0035	2.7596		10662.83	10662.83	5.66		Si
SLV 1	15.03	-1442.64	258	0.0152346	0.0005615	0.0035	2.2076		0	0	0		No
SLV 5	11.87	5289.25	-11397	-0.0000448	0.0005615	0.0035	2.7596		14961.67	14961.67	2.83		Si
SLV 5	15.03	-2897.78	-387	-0.0004831	0.0005615	0.0035	2.2076		2733.19	2733.19	0.94		No
SLV 3	11.87	-950.09	-5613	-0.0000147	0.0005615	0.0035	2.7596		9580.48	9580.48	10.08		Si
SLV 3	15.03	601.51	-194	-0.0005293	0.0005615	0.0035	2.2076		680.98	680.98	1.13		Si
SLV 11	11.87	-4095.95	-4733	-0.0000327	0.0005615	0.0035	2.2076		8460.2	8460.2	2.07		Si
SLV 11	15.03	4723.73	-2908	-0.0023771	0.0005615	0.0035	2.7596		4326.95	4326.95	0.92		No
SLV 6	11.87	5364.24	-11428	-0.0000452	0.0005615	0.0035	2.7596		14997.98	14997.98	2.8		Si
SLV 6	15.03	-2944.97	-357	-0.0005068	0.0005615	0.0035	2.2076		2692.2	2692.2	0.91		No
SLV 8	11.87	-4086.42	-3969	-0.0000403	0.0005615	0.0035	2.2076		7470.55	7470.55	1.83		Si
SLV 8	15.03	3868.86	-1865	-0.0044908	0.0005615	0.0035	2.7596		2937.4	2937.4	0.76		No
SLV 7	11.87	-4161.4	-3938	-0.0000433	0.0005615	0.0035	2.2076		7430.6	7430.6	1.79		Si
SLV 7	15.03	3916.04	-1895	-0.0045362	0.0005615	0.0035	2.7596		2978.07	2978.07	0.76		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	11.87	795.04	-11071	-9219	-9	2.7596	2.7596	-11931	8535	6595	35683	23137	7037	30174	No	3259.68	Si
SLU 49	15.03	1582.39	-2976	-2478	2118	2.7596	2.5442	-3207	7372	5252	35683	23137	7037	30174	No	14.24	Si
SLU 71	11.87	914.84	-11904	-9913	-74	2.7596	2.7596	-12829	8655	6687	35683	23137	7037	30174	No	407.82	Si
SLU 71	15.03	1960.28	-3515	-2927	2236	2.7596	2.4661	-3788	7449	5144	35683	23137	7037	30174	No	13.49	Si
SLU 70	11.87	865.62	-12034	-10021	-167	2.7596	2.7596	-12970	8674	6702	35683	23137	7037	30174	No	180.84	Si
SLU 70	15.03	1971.97	-3520	-2931	2155	2.7596	2.4585	-3793	7450	5129	35683	23137	7037	30174	No	14	Si
SLU 77	11.87	1006.7	-12400	-10325	-307	2.7596	2.7596	-13363	8726	6742	35683	23137	7037	30174	No	98.21	Si
SLU 77	15.03	2127.03	-3655	-3044	2033	2.7596	2.3937	-3940	7470	5006	35683	23137	7037	30174	No	14.84	Si
SLU 72	11.87	880.44	-11876	-9889	-123	2.7596	2.7596	-12799	8651	6684	35683	23137	7037	30174	No	244.56	Si
SLU 72	15.03	1981.14	-3523	-2934	2176	2.7596	2.4523	-3797	7451	5116	35683	23137	7037	30174	No	13.87	Si
SLU 79	11.87	1021.53	-12241	-10193	-264	2.7596	2.7596	-13192	8703	6725	35683	23137	7037	30174	No	114.4	Si
SLU 79	15.03	2136.2	-3659	-3047	2055	2.7596	2.3878	-3943	7470	4994	35683	23137	7037	30174	No	14.69	Si
SLU 51	11.87	809.87	-10913	-9087	34	2.7596	2.7596	-11761	8513	6577	35683	23137	7037	30174	No	881.9	Si
SLU 51	15.03	1591.56	-2979	-2481	2140	2.7596	2.5367	-3211	7373	5237	35683	23137	7037	30174	No	14.1	Si
SLU 69	11.87	900.02	-12063	-10045	-117	2.7596	2.7596	-13000	8678	6705	35683	23137	7037	30174	No	256.89	Si
SLU 69	15.03	1951.11	-3511	-2924	2215	2.7596	2.4723	-3784	7449	5157	35683	23137	7037	30174	No	13.62	Si
SLU 50	11.87	844.27	-10941	-9110	84	2.7596	2.7596	-11791	8517	6581	35683	23137	7037	30174	No	360.9	Si
SLU 50	15.03	1570.7	-2971	-2474	2200	2.7596	2.5532	-3202	7371	5270	35683	23137	7037	30174	No	13.71	Si
SLU 48	11.87	829.44	-11099	-9242	40	2.7596	2.7596	-11962	8539	6598	35683	23137	7037	30174	No	751.81	Si
SLU 48	15.03	1561.53	-2968	-2471	2179	2.7596	2.5607	-3198	7371	5285	35683	23137	7037	30174	No	13.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	11.87	-4020.96	-4764	-3967	-6196	2.2076	1.6071	0	0	0	35683	27765	5629	33394		5.39	Si
SLV 12	15.03	4676.55	-2877	-2396	-8592	2.7596	0	-120215	16250	0	35683	34706	7037	35683		4.15	Si
SLV 5	11.87	5289.25	-11397	-9491	6611	2.7596	2.7471	-12283	12873	9902	35683	34706	7037	41743		6.31	Si
SLV 5	15.03	-2897.78	-387	-322	10889	2.2076	0	0	0	0	35683	27765	5629	33394		3.07	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	11.87	-4086.42	-3969	-3305	-5522	2.2076	1.0504	0	0	0	35683	27765	5629	33394		6.05	Si
SLV 8	15.03	3868.86	-1865	-1553	-9493	2.7596	0	-96231	16250	0	35683	34706	7037	35683		3.76	Si
SLV 6	11.87	5364.24	-11428	-9516	6729	2.7596	2.7312	-12316	12880	9850	35683	34706	7037	41743		6.2	Si
SLV 6	15.03	-2944.97	-357	-297	10976	2.2076	0	0	0	0	35683	27765	5629	33394		3.04	Si
SLD 9	11.87	2721.55	-9892	-8237	2746	2.7596	2.7596	-10661	12549	9696	35683	34706	7037	41743		15.2	Si
SLD 9	15.03	-437.02	-1521	-1267	5854	2.7596	2.7596	-1639	10744	8302	35683	34706	7037	41743		7.13	Si
SLV 10	11.87	5429.69	-12223	-10178	6055	2.7596	2.7596	-13173	13051	10084	35683	34706	7037	41743		6.89	Si
SLV 10	15.03	-2137.28	-1369	-1140	11876	2.2076	0	0	0	0	35683	27765	5629	33394		2.81	Si
SLV 11	11.87	-4095.95	-4733	-3941	-6315	2.2076	1.5432	0	0	0	35683	27765	5629	33394		5.29	Si
SLV 11	15.03	4723.73	-2908	-2421	-8678	2.7596	0	-120604	16250	0	35683	34706	7037	35683		4.11	Si
SLD 10	11.87	2754.35	-9905	-8248	2798	2.7596	2.7596	-10675	12552	9698	35683	34706	7037	41743		14.92	Si
SLD 10	15.03	-457.66	-1508	-1255	5891	2.7596	2.7596	-1625	10742	8300	35683	34706	7037	41743		7.09	Si
SLV 7	11.87	-4161.4	-3938	-3279	-5641	2.2076	0.9691	0	0	0	35683	27765	5629	33394		5.92	Si
SLV 7	15.03	3916.04	-1895	-1578	-9579	2.7596	0	-96918	16250	0	35683	34706	7037	35683		3.73	Si
SLV 9	11.87	5354.7	-12192	-10153	5937	2.7596	2.7596	-13140	13045	10079	35683	34706	7037	41743		7.03	Si
SLV 9	15.03	-2090.09	-1400	-1166	11790	2.2076	0	0	0	0	35683	27765	5629	33394		2.83	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.53	3504	-2707	318.77	370.33	1.16	Si
SLV 1	179667	0.53	3566	-2755	318.77	376.73	1.18	Si
SLV 4	179667	0.53	3636	-2809	318.77	383.91	1.2	Si
SLV 3	179667	0.53	3698	-2857	318.77	390.29	1.22	Si
SLV 6	179667	0.53	5337	-4123	318.77	557.11	1.75	Si
SLV 5	179667	0.53	5377	-4155	318.77	561.17	1.76	Si
SLV 8	179667	0.53	5776	-4463	318.77	601.13	1.89	Si
SLV 7	179667	0.53	5816	-4494	318.77	605.17	1.9	Si
SLV 10	179667	0.53	7030	-5432	318.77	725.45	2.28	Si
SLV 9	179667	0.53	7070	-5463	318.77	729.42	2.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2908	-4733	319	3.037	663.1	0.891	49.55078	11.6001	Si
SLV 12	-2877	-4764	319	3.055	660.3	0.891	49.84819	11.6001	Si
SLV 7	-1895	-3938	-230	3.799	570.3	0.889	62.08053	11.6001	Si
SLV 8	-1865	-3969	-229	3.828	567.6	0.89	62.53331	11.6001	Si
SLV 9	-1400	-12192	234	4.315	527.9	0.894	70.1694	11.6001	Si
SLV 10	-1369	-12223	235	4.351	525.5	0.894	70.71963	11.6001	Si
SLV 15	-3569	-8263	929	2.588	726.2	0.895	42.04831	6.40952	Si
SLV 16	-3523	-8310	930	2.609	721.7	0.894	42.39539	6.40952	Si
SLV 13	-3117	-10501	903	2.809	682.9	0.892	45.7801	6.40952	Si
SLV 14	-3070	-10548	905	2.834	678.5	0.892	46.18771	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.377	SLU 42	Si
V_SLU	13.492	SLU 71	Si
PF_SLV	0	SLV 1	No
V_SLV	2.812	SLV 10	Si
PFFP_SLV	1.162	SLV 2	Si
R_SLV	4.272	SLV 11	Si

Maschio 190

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.708	3.176	-9.708	6.386	L7	L8	3.21	0.14	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 60	11.87	390.5	-7407	-0.0000221	0.0004492	0.0035	3.21	10285	12092.49	12092.49	30.97	No	Si
SLU 60	15.03	5339.69	-3914	-0.0001003	0.0004492	0.0035	3.21	5834.01	7031.56	7031.56	1.32	No	Si
SLU 61	11.87	362.16	-7469	-0.0000222	0.0004492	0.0035	3.21	10357.08	12179.82	12179.82	33.63	No	Si
SLU 61	15.03	5369.54	-3975	-0.0000961	0.0004492	0.0035	3.21	5918.67	7123.68	7123.68	1.33	No	Si
SLU 43	11.87	328.38	-6619	-0.0000196	0.0004492	0.0035	3.21	9343.49	10975.46	10975.46	33.42	No	Si
SLU 43	15.03	3859.38	-3126	-0.0000501	0.0004492	0.0035	3.21	4731.6	5853.31	5853.31	1.52	No	Si
SLU 82	11.87	380.56	-8571	-0.0000253	0.0004492	0.0035	3.21	11608.97	13723.27	13723.27	36.06	No	Si
SLU 82	15.03	5827.95	-4928	-0.0000703	0.0004492	0.0035	3.21	7199.88	8525.33	8525.33	1.46	No	Si
SLU 52	11.87	324.64	-7274	-0.0000214	0.0004492	0.0035	3.21	10127.78	11902.93	11902.93	36.67	No	Si
SLU 52	15.03	4945.35	-3780	-0.0000772	0.0004492	0.0035	3.21	5649.49	6831.61	6831.61	1.38	No	Si
SLU 19	11.87	291.23	-6232	-0.0000184	0.0004492	0.0035	3.21	8867.1	10417.21	10417.21	35.77	No	Si
SLU 19	15.03	4599.81	-3505	-0.0000723	0.0004492	0.0035	3.21	5266.94	6420.63	6420.63	1.4	No	Si
SLU 73	11.87	343.04	-8375	-0.0000246	0.0004492	0.0035	3.21	11392.26	13451.43	13451.43	39.21	No	Si
SLU 73	15.03	5403.76	-4733	-0.0000612	0.0004492	0.0035	3.21	6941.57	8238.33	8238.33	1.52	No	Si
SLU 10	11.87	253.71	-6037	-0.0000176	0.0004492	0.0035	3.21	8623.69	10135.27	10135.27	39.95	No	Si
SLU 10	15.03	4175.62	-3310	-0.0000575	0.0004492	0.0035	3.21	4992.39	6128.57	6128.57	1.47	No	Si
SLU 18	11.87	319.57	-6170	-0.0000184	0.0004492	0.0035	3.21	8790.57	10328.29	10328.29	32.32	No	Si
SLU 18	15.03	4569.96	-3444	-0.0000749	0.0004492	0.0035	3.21	5180.59	6328.52	6328.52	1.38	No	Si
SLU 81	11.87	408.9	-8509	-0.0000253	0.0004492	0.0035	3.21	11540.86	13637.53	13637.53	33.35	No	Si
SLU 81	15.03	5798.09	-4867	-0.000071	0.0004492	0.0035	3.21	7118.65	8434.81	8434.81	1.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	11.87	-452.49	-7041	-0.0000213	0.0006738	0.0035	3.21		16381.67	16381.67	36.2		Si
SLV 16	15.03	5842.7	-4220	-0.0001159	0.0006738	0.0035	3.21		7542.67	7542.67	1.29		Si
SLV 15	11.87	-621.42	-7095	-0.0000223	0.0006738	0.0035	3.21		16458.08	16458.08	26.48		Si
SLV 15	15.03	5917.45	-4274	-0.0001175	0.0006738	0.0035	3.21		7623.84	7623.84	1.29		Si
SLV 11	11.87	-3086.77	-8111	-0.0000378	0.0006738	0.0035	3.21		17903.37	17903.37	5.8		Si
SLV 11	15.03	7740.24	-5252	-0.0002525	0.0006738	0.0035	3.21		9079.49	9079.49	1.17		Si
SLV 12	11.87	-2976.7	-8076	-0.0000371	0.0006738	0.0035	3.21		17853.59	17853.59	6		Si
SLV 12	15.03	7691.54	-5217	-0.0002516	0.0006738	0.0035	3.21		9027.44	9027.44	1.17		Si
SLV 7	11.87	-3205.43	-7754	-0.0000374	0.0006738	0.0035	3.21		17395.96	17395.96	5.43		Si
SLV 7	15.03	7012.58	-4911	-0.000172	0.0006738	0.0035	3.21		8572.96	8572.96	1.22		Si
SLD 8	11.87	-1212.92	-6684	-0.0000242	0.0006738	0.0035	3.21		15873.87	15873.87	13.09		Si
SLD 8	15.03	5047.51	-3884	-0.0000756	0.0006738	0.0035	3.21		7034.49	7034.49	1.39		Si
SLD 12	11.87	-1162.42	-6829	-0.0000244	0.0006738	0.0035	3.21		16080.58	16080.58	13.83		Si
SLD 12	15.03	5346.36	-4022	-0.0000872	0.0006738	0.0035	3.21		7243.37	7243.37	1.35		Si
SLD 7	11.87	-1261.07	-6699	-0.0000245	0.0006738	0.0035	3.21		15895.65	15895.65	12.6		Si
SLD 7	15.03	5068.82	-3899	-0.000076	0.0006738	0.0035	3.21		7057.62	7057.62	1.39		Si
SLD 11	11.87	-1210.57	-6844	-0.0000247	0.0006738	0.0035	3.21		16102.36	16102.36	13.3		Si
SLD 11	15.03	5367.66	-4037	-0.0000876	0.0006738	0.0035	3.21		7266.51	7266.51	1.35		Si
SLV 8	11.87	-3095.36	-7719	-0.0000368	0.0006738	0.0035	3.21		17346.17	17346.17	5.6		Si
SLV 8	15.03	6963.87	-4876	-0.0001709	0.0006738	0.0035	3.21		8520.9	8520.9	1.22		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	11.87	337.97	-7272	-4032	-1484	3.21	3.21	-8972	9530	4283	101952	16150	16371	32521	No	21.91	Si
SLU 39	15.03	5028.36	-4396	-2438	-1484	3.21	1.3838	-5424	9057	1755	101952	16150	16371	32521	No	21.91	Si
SLU 60	11.87	390.5	-7407	-4107	-1566	3.21	3.21	-9139	9552	4293	101952	16150	16371	32521	No	20.76	Si
SLU 60	15.03	5339.69	-3914	-2170	-1566	3.21	0.7221	-21757	10833	1095	101952	16150	16371	32521	No	20.76	Si
SLU 81	11.87	408.9	-8509	-4718	-1705	3.21	3.21	-10498	9733	4374	101952	16150	16371	32521	No	19.07	Si
SLU 81	15.03	5798.09	-4867	-2698	-1705	3.21	1.2408	-6004	9134	1587	101952	16150	16371	32521	No	19.07	Si
SLU 75	11.87	359.41	-9195	-5098	-1493	3.21	3.21	-11344	9846	4425	101952	16150	16371	32521	No	21.78	Si
SLU 75	15.03	5077.26	-5552	-3079	-1493	3.21	2.0717	-6850	9247	2682	101952	16150	16371	32521	No	21.78	Si
SLU 61	11.87	362.16	-7469	-4141	-1585	3.21	3.21	-9215	9562	4297	101952	16150	16371	32521	No	20.52	Si
SLU 61	15.03	5369.54	-3975	-2204	-1585	3.21	0.763	-20917	10833	1157	101952	16150	16371	32521	No	20.52	Si
SLU 84	11.87	345.72	-9448	-5238	-1531	3.21	3.21	-11656	9887	4443	101952	16150	16371	32521	No	21.25	Si
SLU 84	15.03	5182.4	-5805	-3219	-1531	3.21	2.1368	-7162	9288	2779	101952	16150	16371	32521	No	21.25	Si
SLU 82	11.87	380.56	-8571	-4752	-1724	3.21	3.21	-10574	9743	4379	101952	16150	16371	32521	No	18.87	Si
SLU 82	15.03	5827.95	-4928	-2732	-1724	3.21	1.2673	-6080	9144	1622	101952	16150	16371	32521	No	18.87	Si
SLU 73	11.87	343.04	-8375	-4644	-1601	3.21	3.21	-10333	9711	4364	101952	16150	16371	32521	No	20.31	Si
SLU 73	15.03	5403.76	-4733	-2624	-1601	3.21	1.3898	-5839	9112	1773	101952	16150	16371	32521	No	20.31	Si
SLU 40	11.87	309.63	-7334	-4066	-1503	3.21	3.21	-9048	9540	4287	101952	16150	16371	32521	No	21.64	Si
SLU 40	15.03	5058.22	-4458	-2472	-1503	3.21	1.4112	-5500	9067	1791	101952	16150	16371	32521	No	21.64	Si
SLU 83	11.87	374.06	-9386	-5204	-1512	3.21	3.21	-11580	9877	4439	101952	16150	16371	32521	No	21.51	Si
SLU 83	15.03	5152.54	-5744	-3185	-1512	3.21	2.1237	-7086	9278	2759	101952	16150	16371	32521	No	21.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	11.87	-2976.7	-8076	-4478	-3137	3.21	3.21	-9964	14493	6513	101952	24225	16371	40596		12.94	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	15.03	7691.54	-5217	-2893	-3930	3.21	0.392	-51602	16250	892	101952	24225	16371	40596		10.33	Si
SLD 12	11.87	-1162.42	-6829	-3786	-1956	3.21	3.21	-8426	14185	6375	101952	24225	16371	40596		20.76	Si
SLD 12	15.03	5346.36	-4022	-2230	-2302	3.21	0.8272	-19420	16250	1882	101952	24225	16371	40596		17.64	Si
SLD 8	11.87	-1212.92	-6684	-3706	-1875	3.21	3.21	-8246	14149	6359	101952	24225	16371	40596		21.65	Si
SLD 8	15.03	5047.51	-3884	-2153	-2224	3.21	0.916	-16923	15885	2037	101952	24225	16371	40596		18.25	Si
SLV 11	11.87	-3086.77	-8111	-4497	-3187	3.21	3.21	-10007	14501	6517	101952	24225	16371	40596		12.74	Si
SLV 11	15.03	7740.24	-5252	-2912	-3980	3.21	0.3937	-51771	16250	896	101952	24225	16371	40596		10.2	Si
SLV 8	11.87	-3095.36	-7719	-4280	-2938	3.21	3.21	-9524	14405	6473	101952	24225	16371	40596		13.82	Si
SLV 8	15.03	6963.87	-4876	-2704	-3739	3.21	0.5306	-36578	16250	1207	101952	24225	16371	40596		10.86	Si
SLV 7	11.87	-3205.43	-7754	-4299	-2989	3.21	3.21	-9567	14413	6477	101952	24225	16371	40596		13.58	Si
SLV 7	15.03	7012.58	-4911	-2723	-3789	3.21	0.5314	-36793	16250	1209	101952	24225	16371	40596		10.71	Si
SLD 7	11.87	-1261.07	-6699	-3714	-1897	3.21	3.21	-8265	14153	6360	101952	24225	16371	40596		21.4	Si
SLD 7	15.03	5068.82	-3899	-2162	-2246	3.21	0.915	-17010	15902	2037	101952	24225	16371	40596		18.07	Si
SLV 15	11.87	-621.42	-7095	-3934	-2007	3.21	3.21	-8753	14251	6404	101952	24225	16371	40596		20.23	Si
SLV 15	15.03	5917.45	-4274	-2370	-2233	3.21	0.6614	-25811	16250	1505	101952	24225	16371	40596		18.18	Si
SLD 11	11.87	-1210.57	-6844	-3795	-1978	3.21	3.21	-8444	14189	6376	101952	24225	16371	40596		20.53	Si
SLD 11	15.03	5367.66	-4037	-2239	-2324	3.21	0.8265	-19512	16250	1880	101952	24225	16371	40596		17.47	Si
SLV 16	11.87	-452.49	-7041	-3904	-1930	3.21	3.21	-8687	14237	6398	101952	24225	16371	40596		21.04	Si
SLV 16	15.03	5842.7	-4220	-2340	-2156	3.21	0.6616	-25472	16250	1505	101952	24225	16371	40596		18.83	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-2135	0.53	193.83	0	388.5	194.25	1	Si
SLV 5	-2170	0.53	193.83	0	391.61	195.8	1.01	Si
SLV 10	-2497	0.53	193.83	0	420.61	210.3	1.09	Si
SLV 9	-2532	0.53	193.83	0	423.71	211.85	1.09	Si
SLV 2	-3188	0.53	193.83	214.55	481.63	348.09	1.8	Si
SLV 1	-3242	0.53	193.83	218.02	486.36	352.19	1.82	Si
SLV 14	-4395	0.53	193.83	291.22	586.82	439.02	2.27	Si
SLV 13	-4449	0.53	193.83	294.58	591.48	443.03	2.29	Si
SLV 4	-4462	0.53	193.83	295.39	592.61	444	2.29	Si
SLV 3	-4515	0.53	193.83	298.74	597.27	448	2.31	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.03 Ta = 0.1191

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-5252	-8111	123	2.769	737.9	0.927	43.40723	21.18883	Si
SLV 12	-5217	-8076	123	2.784	734.3	0.927	43.65234	21.18883	Si
SLV 7	-4911	-7754	-141	2.917	703.6	0.924	45.86889	21.18883	Si
SLV 8	-4876	-7719	-141	2.934	700	0.924	46.14256	21.18883	Si
SLV 15	-4274	-7095	437	3.196	639.6	0.919	50.56553	10.20971	Si
SLV 16	-4220	-7041	437	3.227	634.2	0.918	51.08469	10.20971	Si
SLV 9	-1295	-3991	141	6.986	349	0.889	114.21338	21.18883	Si
SLV 10	-1260	-3956	141	7.082	345.8	0.889	115.78396	21.18883	Si
SLV 5	-954	-3634	-123	8.056	318.8	0.891	131.41036	21.18883	Si
SLV 6	-919	-3599	-123	8.184	315.9	0.892	133.41499	21.18883	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.317	SLU 60	Si
V_SLU	18.865	SLU 82	Si
PF_SLV	1.173	SLV 11	Si
V_SLV	10.199	SLV 11	Si
PFFP_SLV	1.002	SLV 6	Si
R_SLV	2.049	SLV 11	Si

Maschio 192

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	1.006	L7	L8	4.32	0.14	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 32	11.87	607.43	-10384	-0.0000227	0.0004492	0.0035	4.32	19277.35	22629.75	22629.75	37.26	No	Si
SLU 32	15.03	486.53	-2856	-0.000007	0.0004492	0.0035	4.32	5929.69	7778.19	7778.19	15.99	No	Si
SLU 34	11.87	487.85	-10071	-0.0000217	0.0004492	0.0035	4.32	18788.84	22032.02	22032.02	45.16	No	Si
SLU 34	15.03	497.5	-2870	-0.0000071	0.0004492	0.0035	4.32	5957.94	7807.25	7807.25	15.69	No	Si
SLU 38	11.87	571.59	-10708	-0.0000233	0.0004492	0.0035	4.32	19777.28	23238.16	23238.16	40.66	No	Si
SLU 38	15.03	588.08	-3572	-0.0000088	0.0004492	0.0035	4.32	7343.24	9247.08	9247.08	15.72	No	Si
SLU 36	11.87	644.1	-11020	-0.0000241	0.0004492	0.0035	4.32	20253.78	23825.13	23825.13	36.99	No	Si
SLU 36	15.03	598.71	-3557	-0.0000088	0.0004492	0.0035	4.32	7313.34	9215.68	9215.68	15.39	No	Si
SLU 42	11.87	378.22	-10306	-0.0000219	0.0004492	0.0035	4.32	19157.11	22482.28	22482.28	59.44	No	Si
SLU 42	15.03	535.25	-2897	-0.0000073	0.0004492	0.0035	4.32	6012.66	7863.56	7863.56	14.69	No	Si
SLU 35	11.87	672.34	-11020	-0.0000242	0.0004492	0.0035	4.32	20254	23825.41	23825.41	35.44	No	Si
SLU 35	15.03	585.75	-3558	-0.0000087	0.0004492	0.0035	4.32	7314.68	9217.09	9217.09	15.74	No	Si
SLU 40	11.87	313.3	-9670	-0.0000204	0.0004492	0.0035	4.32	18153.89	21264.83	21264.83	67.87	No	Si
SLU 40	15.03	436.02	-2195	-0.0000056	0.0004492	0.0035	4.32	4600.56	6424.66	6424.66	14.73	No	Si
SLU 33	11.87	579.19	-10384	-0.0000226	0.0004492	0.0035	4.32	19277.12	22629.47	22629.47	39.07	No	Si
SLU 33	15.03	499.49	-2855	-0.0000071	0.0004492	0.0035	4.32	5928.32	7776.79	7776.79	15.57	No	Si
SLU 39	11.87	341.54	-9670	-0.0000205	0.0004492	0.0035	4.32	18154.13	21265.11	21265.11	62.26	No	Si
SLU 39	15.03	423.06	-2196	-0.0000055	0.0004492	0.0035	4.32	4601.95	6426.07	6426.07	15.19	No	Si
SLU 41	11.87	406.45	-10307	-0.000022	0.0004492	0.0035	4.32	19157.34	22482.56	22482.56	55.31	No	Si
SLU 41	15.03	522.28	-2898	-0.0000072	0.0004492	0.0035	4.32	6014.02	7864.96	7864.96	15.06	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	11.87	-4552.89	-9005	-0.0000309	0.0006738	0.0035	4.32		29306.36	29306.36	6.44		Si
SLV 12	15.03	2214.53	-1698	-0.0000114	0.0006738	0.0035	4.32		5412.82	5412.82	2.44		Si
SLV 8	11.87	-4287.36	-8174	-0.0000284	0.0006738	0.0035	4.32		27718.84	27718.84	6.47		Si
SLV 8	15.03	2501.6	-1414	-0.0000209	0.0006738	0.0035	4.32		4820.83	4820.83	1.93		Si
SLV 11	11.87	-4822.94	-9041	-0.0000317	0.0006738	0.0035	4.32		29374.87	29374.87	6.09		Si
SLV 11	15.03	2270.26	-1704	-0.0000118	0.0006738	0.0035	4.32		5427.08	5427.08	2.39		Si
SLV 4	11.87	-153.75	-6976	-0.0000144	0.0006738	0.0035	4.32		25358.58	25358.58	164.94		Si
SLV 4	15.03	1260	-1237	-0.0000062	0.0006738	0.0035	4.32		4450.95	4450.95	3.53		Si
SLV 9	11.87	5895.97	-8411	-0.0000335	0.0006738	0.0035	4.32		19039.97	19039.97	3.23		Si
SLV 9	15.03	-2191.45	-2151	-0.0000108	0.0006738	0.0035	4.32		15664.1	15664.1	7.15		Si
SLV 7	11.87	-4557.41	-8210	-0.0000293	0.0006738	0.0035	4.32		27789.52	27789.52	6.1		Si
SLV 7	15.03	2557.33	-1421	-0.0000228	0.0006738	0.0035	4.32		4835.16	4835.16	1.89		Si
SLV 5	11.87	6161.51	-7581	-0.0000327	0.0006738	0.0035	4.32		17401.93	17401.93	2.82		Si
SLV 5	15.03	-1904.39	-1867	-0.0000094	0.0006738	0.0035	4.32		15085.77	15085.77	7.92		Si
SLV 10	11.87	6166.02	-8375	-0.0000342	0.0006738	0.0035	4.32		18969.17	18969.17	3.08		Si
SLV 10	15.03	-2247.19	-2144	-0.0000111	0.0006738	0.0035	4.32		15650.16	15650.16	6.96		Si
SLV 3	11.87	-568.2	-7031	-0.0000157	0.0006738	0.0035	4.32		25467.04	25467.04	44.82		Si
SLV 3	15.03	1345.53	-1248	-0.0000066	0.0006738	0.0035	4.32		4472.94	4472.94	3.32		Si
SLV 6	11.87	6431.55	-7545	-0.0000335	0.0006738	0.0035	4.32		17330.01	17330.01	2.69		Si
SLV 6	15.03	-1960.12	-1860	-0.0000096	0.0006738	0.0035	4.32		15071.83	15071.83	7.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 39	11.87	341.54	-9670	-5362	-1553	4.32	4.32	-8865	9515	5755	101952	21735	22032	43767	No	28.19	Si
SLU 39	15.03	423.06	-2196	-1217	-1524	4.32	4.32	-2013	8602	5202	101952	21735	22032	43767	No	28.72	Si
SLU 31	11.87	422.94	-9435	-5231	-1416	4.32	4.32	-8649	9487	5737	101952	21735	22032	43767	No	30.91	Si
SLU 31	15.03	398.27	-2168	-1202	-1388	4.32	4.32	-1987	8598	5200	101952	21735	22032	43767	No	31.54	Si
SLU 40	11.87	313.3	-9670	-5362	-1616	4.32	4.32	-8865	9515	5755	101952	21735	22032	43767	No	27.08	Si
SLU 40	15.03	436.02	-2195	-1217	-1587	4.32	4.32	-2012	8602	5202	101952	21735	22032	43767	No	27.57	Si
SLU 32	11.87	607.43	-10384	-5757	-1375	4.32	4.32	-9519	9603	5808	101952	21735	22032	43767	No	31.84	Si
SLU 32	15.03	486.53	-2856	-1583	-1332	4.32	4.32	-2618	8682	5251	101952	21735	22032	43767	No	32.86	Si
SLU 81	11.87	680.65	-11661	-6466	-1389	4.32	4.32	-10690	9759	5902	101952	21735	22032	43767	No	31.5	Si
SLU 81	15.03	373.73	-2520	-1397	-1359	4.32	4.32	-2310	8641	5226	101952	21735	22032	43767	No	32.21	Si
SLU 84	11.87	717.32	-12297	-6818	-1385	4.32	4.32	-11274	9836	5949	101952	21735	22032	43767	No	31.6	Si
SLU 84	15.03	485.92	-3222	-1786	-1338	4.32	4.32	-2953	8727	5278	101952	21735	22032	43767	No	32.71	Si
SLU 42	11.87	378.22	-10306	-5714	-1548	4.32	4.32	-9449	9593	5802	101952	21735	22032	43767	No	28.27	Si
SLU 42	15.03	535.25	-2897	-1606	-1503	4.32	4.32	-2656	8687	5254	101952	21735	22032	43767	No	29.12	Si
SLU 82	11.87	652.41	-11661	-6465	-1453	4.32	4.32	-10690	9759	5902	101952	21735	22032	43767	No	30.12	Si
SLU 82	15.03	386.69	-2520	-1397	-1423	4.32	4.32	-2310	8641	5226	101952	21735	22032	43767	No	30.77	Si
SLU 41	11.87	406.45	-10307	-5715	-1485	4.32	4.32	-9449	9593	5802	101952	21735	22032	43767	No	29.48	Si
SLU 41	15.03	522.28	-2898	-1607	-1439	4.32	4.32	-2657	8688	5254	101952	21735	22032	43767	No	30.41	Si
SLU 33	11.87	579.19	-10384	-5757	-1438	4.32	4.32	-9519	9603	5808	101952	21735	22032	43767	No	30.43	Si
SLU 33	15.03	499.49	-2855	-1583	-1396	4.32	4.32	-2617	8682	5251	101952	21735	22032	43767	No	31.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	11.87	-4552.89	-9005	-4993	-10387	4.32	4.32	-8255	14151	8559	101952	32602	22032	54634		5.26	Si
SLV 12	15.03	2214.53	-1698	-941	-11132	4.32	2.5663	-1556	12811	4603	101952	32602	22032	54634		4.91	Si
SLV 11	11.87	-4822.94	-9041	-5013	-10849	4.32	4.32	-8288	14158	8563	101952	32602	22032	54634		5.04	Si
SLV 11	15.03	2270.26	-1704	-945	-11594	4.32	2.4839	-1563	12813	4456	101952	32602	22032	54634		4.71	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	11.87	6166.02	-8375	-4644	11015	4.32	4.2714	-7678	14036	8393	101952	32602	22032	54634		4.96	Si
SLV 10	15.03	-2247.19	-2144	-1189	11853	4.32	3.3354	-2546	13009	6075	101952	32602	22032	54634		4.61	Si
SLV 9	11.87	5895.97	-8411	-4664	10553	4.32	4.32	-7711	14042	8493	101952	32602	22032	54634		5.18	Si
SLV 9	15.03	-2191.45	-2151	-1192	11391	4.32	3.4232	-2490	12998	6229	101952	32602	22032	54634		4.8	Si
SLV 8	11.87	-4287.36	-8174	-4532	-11506	4.32	4.32	-7494	13999	8466	101952	32602	22032	54634		4.75	Si
SLV 8	15.03	2501.6	-1414	-784	-12303	4.32	1.1721	-4786	13457	2208	101952	32602	22032	54634		4.44	Si
SLV 5	11.87	6161.51	-7581	-4203	9434	4.32	4.0417	-6950	13890	7859	101952	32602	22032	54634		5.79	Si
SLV 5	15.03	-1904.39	-1867	-1035	10221	4.32	3.42	-2163	12933	6192	101952	32602	22032	54634		5.35	Si
SLV 6	11.87	6431.55	-7545	-4183	9896	4.32	3.9227	-6917	13883	7624	101952	32602	22032	54634		5.52	Si
SLV 6	15.03	-1960.12	-1860	-1031	10683	4.32	3.3189	-2220	12944	6014	101952	32602	22032	54634		5.11	Si
SLD 7	11.87	-1569.87	-8264	-4582	-5555	4.32	4.32	-7576	14015	8476	101952	32602	22032	54634		9.84	Si
SLD 7	15.03	1217.72	-1625	-901	-5893	4.32	4.2322	-1490	12798	7583	101952	32602	22032	54634		9.27	Si
SLV 7	11.87	-4557.41	-8210	-4552	-11967	4.32	4.32	-7527	14005	8470	101952	32602	22032	54634		4.57	Si
SLV 7	15.03	2557.33	-1421	-788	-12765	4.32	1.08	-5217	13544	2048	101952	32602	22032	54634		4.28	Si
SLV 3	11.87	-568.2	-7031	-3898	-5905	4.32	4.32	-6445	13789	8340	101952	32602	22032	54634		9.25	Si
SLV 3	15.03	1345.53	-1248	-692	-6210	4.32	3.2452	-1144	12729	5783	101952	32602	22032	54634		8.8	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	-4058	0.53	260.85	273.67	632.38	453.02	1.74	Si
SLV 3	-4060	0.53	260.85	273.8	632.55	453.18	1.74	Si
SLV 2	-4073	0.53	260.85	274.61	633.66	454.13	1.74	Si
SLV 1	-4075	0.53	260.85	274.74	633.83	454.28	1.74	Si
SLV 8	-5126	0.53	260.85	342.24	726.12	534.18	2.05	Si
SLV 7	-5127	0.53	260.85	342.32	726.23	534.28	2.05	Si
SLV 6	-5174	0.53	260.85	345.29	730.31	537.8	2.06	Si
SLV 5	-5176	0.53	260.85	345.37	730.43	537.9	2.06	Si
SLV 12	-6056	0.53	260.85	400.74	807.09	603.92	2.32	Si
SLV 11	-6057	0.53	260.85	400.82	807.21	604.02	2.32	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.03 Ta = 0.1191

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-2151	-8411	135	6.266	507.3	0.89	102.30882	21.18883	Si
SLV 10	-2144	-8375	135	6.277	506.6	0.89	102.49328	21.18883	Si
SLV 5	-1867	-7581	-50	6.783	481	0.889	110.8878	21.18883	Si
SLV 6	-1860	-7545	-50	6.796	480.3	0.889	111.10061	21.18883	Si
SLV 11	-1704	-9041	51	7.104	466.1	0.889	116.15742	21.18883	Si
SLV 12	-1698	-9005	51	7.119	465.5	0.889	116.3889	21.18883	Si
SLV 7	-1421	-8210	-134	7.717	440.9	0.89	126.05184	21.18883	Si
SLV 8	-1414	-8174	-134	7.734	440.3	0.89	126.3195	21.18883	Si
SLV 13	-2327	-9610	322	5.948	523.9	0.891	97.00026	10.20971	Si
SLV 14	-2317	-9555	322	5.963	522.9	0.891	97.25874	10.20971	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	14.691	SLU 42	Si
V_SLU	27.08	SLU 40	Si
PF_SLV	1.891	SLV 7	Si
V_SLV	4.28	SLV 7	Si
PFFP_SLV	1.737	SLV 4	Si
R_SLV	4.828	SLV 9	Si

Maschio 194

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.163	2.046	-5.163	5.686	L7	L8	3.64	0.14	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	11.87	420.68	-7443	-0.0000195	0.0004492	0.0035	3.64	11926.84	14027.14	14027.14	33.34	No	Si
SLU 79	13.97	1807.88	-4162	-0.000017	0.0004492	0.0035	3.64	7068.55	8596.53	8596.53	4.76	No	Si
SLU 38	11.87	341.04	-6262	-0.0000163	0.0004492	0.0035	3.64	10250.51	12095.93	12095.93	35.47	No	Si
SLU 38	13.97	1709.02	-3599	-0.0000153	0.0004492	0.0035	3.64	6170.97	7639.33	7639.33	4.47	No	Si
SLU 36	11.87	371.38	-6316	-0.0000165	0.0004492	0.0035	3.64	10329.42	12185.13	12185.13	32.81	No	Si
SLU 36	13.97	1738.88	-3642	-0.0000155	0.0004492	0.0035	3.64	6240.24	7712.5	7712.5	4.44	No	Si
SLU 29	11.87	371.01	-5888	-0.0000155	0.0004492	0.0035	3.64	9702.49	11481.74	11481.74	30.95	No	Si
SLU 29	13.97	1499.79	-3289	-0.0000137	0.0004492	0.0035	3.64	5670.53	7114.06	7114.06	4.74	No	Si
SLU 35	11.87	406.81	-6323	-0.0000167	0.0004492	0.0035	3.64	10338.72	12195.65	12195.65	29.98	No	Si
SLU 35	13.97	1749.2	-3649	-0.0000156	0.0004492	0.0035	3.64	6251.22	7724.11	7724.11	4.42	No	Si
SLU 28	11.87	365.92	-5936	-0.0000156	0.0004492	0.0035	3.64	9773.13	11560.4	11560.4	31.59	No	Si
SLU 28	13.97	1519.33	-3326	-0.0000139	0.0004492	0.0035	3.64	5729.47	7175.62	7175.62	4.72	No	Si
SLU 37	11.87	376.47	-6268	-0.0000164	0.0004492	0.0035	3.64	10259.83	12106.46	12106.46	32.16	No	Si
SLU 37	13.97	1719.34	-3605	-0.0000153	0.0004492	0.0035	3.64	6181.97	7650.94	7650.94	4.45	No	Si
SLU 27	11.87	401.35	-5942	-0.0000158	0.0004492	0.0035	3.64	9782.58	11570.93	11570.93	28.83	No	Si
SLU 27	13.97	1529.65	-3333	-0.0000139	0.0004492	0.0035	3.64	5740.58	7187.23	7187.23	4.7	No	Si
SLU 78	11.87	415.59	-7491	-0.0000196	0.0004492	0.0035	3.64	11993.13	14104.44	14104.44	33.94	No	Si
SLU 78	13.97	1827.41	-4198	-0.0000172	0.0004492	0.0035	3.64	7125.64	8658.09	8658.09	4.74	No	Si
SLU 77	11.87	451.02	-7497	-0.0000197	0.0004492	0.0035	3.64	12001.99	14114.79	14114.79	31.3	No	Si
SLU 77	13.97	1837.74	-4205	-0.0000173	0.0004492	0.0035	3.64	7136.4	8669.7	8669.7	4.72	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	11.87	5657.75	-3967	-0.0000593	0.0006738	0.0035	3.64		8320.31	8320.31	1.47		Si
SLV 2	13.97	-4050.04	1701	-0.0001762	0.0006738	0.0035	2.912		4597.4	4597.4	1.14		Si
SLV 1	11.87	5012.85	-3942	-0.0000419	0.0006738	0.0035	3.64		8277.48	8277.48	1.65		Si
SLV 1	13.97	-4247.84	1779	-0.0001853	0.0006738	0.0035	2.912		4458.98	4458.98	1.05		Si
SLV 14	11.87	-1442.95	-4977	-0.0000175	0.0006738	0.0035	3.64		16117.07	16117.07	11.17		Si
SLV 14	13.97	5925.87	-6200	-0.0000419	0.0006738	0.0035	3.64		12111.65	12111.65	2.04		Si
SLV 6	11.87	6734.87	-3180	-0.000946	0.0006738	0.0035	3.64		6970.11	6970.11	1.03		Si
SLV 6	13.97	-516.99	-181	-0.000018	0.0006738	0.0035	2.912		7904.36	7904.36	15.29		Si
SLV 4	11.87	2507.99	-4941	-0.0000216	0.0006738	0.0035	3.64		9984.98	9984.98	3.98		Si
SLV 4	13.97	-4115.14	956	-0.0001947	0.0006738	0.0035	2.912		5912.98	5912.98	1.44		Si
SLV 10	11.87	4604.66	-3483	-0.0000408	0.0006738	0.0035	3.64		7489.97	7489.97	1.63		Si
SLV 10	13.97	2475.78	-2551	-0.0000173	0.0006738	0.0035	3.64		5875.09	5875.09	2.37		Si
SLV 3	11.87	1863.1	-4916	-0.000019	0.0006738	0.0035	3.64		9942.81	9942.81	5.34		Si
SLV 3	13.97	-4312.94	1034	-0.0002042	0.0006738	0.0035	2.912		5775.31	5775.31	1.34		Si
SLV 9	11.87	4184.46	-3467	-0.0000328	0.0006738	0.0035	3.64		7462.06	7462.06	1.78		Si
SLV 9	13.97	2346.9	-2500	-0.0000163	0.0006738	0.0035	3.64		5786.41	5786.41	2.47		Si
SLV 5	11.87	6314.67	-3164	-0.0006703	0.0006738	0.0035	3.64		6942.15	6942.15	1.1		Si
SLV 5	13.97	-645.87	-130	-0.0000265	0.0006738	0.0035	2.912		7815.27	7815.27	12.1		Si
SLV 13	11.87	-2087.84	-4952	-0.00002	0.0006738	0.0035	3.64		16075.03	16075.03	7.7		Si
SLV 13	13.97	5728.07	-6122	-0.0000404	0.0006738	0.0035	3.64		11979.64	11979.64	2.09		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	11.87	321.63	-7305	-4051	-1139	3.64	3.64	-7948	9393	4787	101952	18314	18564	36878	No	32.37	Si
SLU 84	13.97	1625.78	-4052	-2247	-1179	3.64	3.64	-4408	8921	4546	101952	18314	18564	36878	No	31.28	Si
SLU 35	11.87	406.81	-6323	-3506	-1132	3.64	3.64	-6879	9251	4714	101952	18314	18564	36878	No	32.58	Si
SLU 35	13.97	1749.2	-3649	-2023	-1168	3.64	3.64	-3970	8863	4516	101952	18314	18564	36878	No	31.58	Si
SLU 78	11.87	415.59	-7491	-4153	-1228	3.64	3.64	-8150	9420	4800	101952	18314	18564	36878	No	30.04	Si
SLU 78	13.97	1827.41	-4198	-2328	-1247	3.64	3.64	-4568	8942	4557	101952	18314	18564	36878	No	29.57	Si
SLU 37	11.87	376.47	-6268	-3475	-1123	3.64	3.64	-6820	9243	4710	101952	18314	18564	36878	No	32.85	Si
SLU 37	13.97	1719.34	-3605	-1999	-1154	3.64	3.64	-3923	8856	4513	101952	18314	18564	36878	No	31.96	Si
SLU 36	11.87	371.38	-6316	-3502	-1145	3.64	3.64	-6872	9250	4714	101952	18314	18564	36878	No	32.21	Si
SLU 36	13.97	1738.88	-3642	-2019	-1178	3.64	3.64	-3962	8862	4516	101952	18314	18564	36878	No	31.3	Si
SLU 38	11.87	341.04	-6262	-3472	-1136	3.64	3.64	-6813	9242	4710	101952	18314	18564	36878	No	32.47	Si
SLU 38	13.97	1709.02	-3599	-1995	-1164	3.64	3.64	-3915	8855	4513	101952	18314	18564	36878	No	31.67	Si
SLU 77	11.87	451.02	-7497	-4157	-1214	3.64	3.64	-8157	9421	4801	101952	18314	18564	36878	No	30.36	Si
SLU 77	13.97	1837.74	-4205	-2332	-1237	3.64	3.64	-4575	8943	4558	101952	18314	18564	36878	No	29.82	Si
SLU 83	11.87	357.07	-7312	-4054	-1126	3.64	3.64	-7955	9394	4787	101952	18314	18564	36878	No	32.75	Si
SLU 83	13.97	1636.1	-4059	-2250	-1168	3.64	3.64	-4416	8922	4547	101952	18314	18564	36878	No	31.57	Si
SLU 80	11.87	385.25	-7436	-4123	-1219	3.64	3.64	-8091	9412	4796	101952	18314	18564	36878	No	30.26	Si
SLU 80	13.97	1797.56	-4155	-2304	-1233	3.64	3.64	-4521	8936	4554	101952	18314	18564	36878	No	29.9	Si
SLU 79	11.87	420.68	-7443	-4127	-1206	3.64	3.64	-8098	9413	4797	101952	18314	18564	36878	No	30.59	Si
SLU 79	13.97	1807.88	-4162	-2308	-1223	3.64	3.64	-4528	8937	4554	101952	18314	18564	36878	No	30.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	11.87	-5894.52	-6730	-3731	-3717	3.64	2.8323	-9445	14389	5706	101952	27471	18564	46035		12.38	Si
SLV 12	13.97	2258.8	-5037	-2793	-4723	3.64	3.64	-5480	13596	6929	101952	27471	18564	46035		9.75	Si
SLV 6	11.87	6734.87	-3180	-1763	2706	3.64	0	-94349	16250	0	101952	27471	18564	46035		17.01	Si
SLV 6	13.97	-516.99	-181	-100	3674	2.912	0	0	0	0	101952	21976	14851	36828		10.02	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	11.87	-4592.7	-5951	-3300	-1832	3.64	3.1449	-7520	14004	6166	101952	27471	18564	46035		25.13	Si
SLV 16	13.97	5860.77	-6946	-3851	-3325	3.64	2.9286	-7557	14011	5745	101952	27471	18564	46035		13.84	Si
SLV 11	11.87	-6314.72	-6713	-3722	-3891	3.64	2.6382	-10118	14524	5364	101952	27471	18564	46035		11.83	Si
SLV 11	13.97	2129.91	-4986	-2764	-4862	3.64	3.64	-5424	13585	6923	101952	27471	18564	46035		9.47	Si
SLV 15	11.87	-5237.59	-5926	-3286	-2099	3.64	2.8087	-8382	14177	5575	101952	27471	18564	46035		21.93	Si
SLV 15	13.97	5662.97	-6868	-3808	-3539	3.64	2.9862	-7472	13994	5851	101952	27471	18564	46035		13.01	Si
SLV 7	11.87	-4184.51	-6410	-3554	-3621	3.64	3.5017	-7274	13955	6841	101952	27471	18564	46035		12.71	Si
SLV 7	13.97	-862.86	-2615	-1450	-3821	3.64	3.64	-2845	13069	6660	101952	27471	18564	46035		12.05	Si
SLV 5	11.87	6314.67	-3164	-1754	2532	3.64	0	-87500	16250	0	101952	27471	18564	46035		18.18	Si
SLV 5	13.97	-645.87	-130	-72	3535	2.912	0	0	0	0	101952	21976	14851	36828		10.42	Si
SLV 1	11.87	5012.85	-3942	-2186	647	3.64	1.6453	-4289	13358	3077	101952	27471	18564	46035		71.15	Si
SLV 1	13.97	-4247.84	1779	987	2137	2.912	0	0	0	0	101952	21976	14851	36828		17.23	Si
SLV 2	11.87	5657.75	-3967	-2200	914	3.64	1.1816	-13381	15176	2511	101952	27471	18564	46035		50.36	Si
SLV 2	13.97	-4050.04	1701	943	2351	2.912	0	0	0	0	101952	21976	14851	36828		15.66	Si
SLV 8	11.87	-3764.31	-6427	-3563	-3447	3.64	3.64	-6992	13898	7083	101952	27471	18564	46035		13.35	Si
SLV 8	13.97	-733.97	-2666	-1478	-3682	3.64	3.64	-2901	13080	6666	101952	27471	18564	46035		12.5	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 13.45 Ta 0.12 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 4	1886	0.53	219.79	0	0	0	0	No
SLV 3	1942	0.53	219.79	0	0	0	0	No
SLV 2	2618	0.53	219.79	0	0	0	0	No
SLV 1	2673	0.53	219.79	0	0	0	0	No
SLV 5	-287	0.53	219.79	0	243.7	121.85	0.55	No
SLV 6	-323	0.53	219.79	0	247.2	123.6	0.56	No
SLV 7	-2727	0.53	219.79	0	466.84	233.42	1.06	Si
SLV 8	-2763	0.53	219.79	0	470.04	235.02	1.07	Si
SLD 1	-661	0.22	90.95	0	279.5	139.75	1.54	Si
SLD 2	-685	0.22	90.95	0	281.75	140.87	1.55	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.03 Ta = 0.1191

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-3033	-6730	73	4.575	545	0.901	73.75859	21.18883	Si
SLV 11	-2998	-6713	74	4.61	541.6	0.901	74.36136	21.18883	Si
SLV 8	-1779	-6427	-82	6.34	424.3	0.89	103.54093	21.18883	Si
SLV 7	-1744	-6410	-81	6.41	421.1	0.89	104.6962	21.18883	Si
SLV 16	-3600	-5951	256	4.027	601	0.907	64.51392	10.20971	Si
SLV 15	-3547	-5926	257	4.07	595.7	0.907	65.23605	10.20971	Si
SLV 14	-2825	-4977	258	4.753	524.6	0.899	76.82185	10.20971	Si
SLV 13	-2771	-4952	259	4.813	519.4	0.899	77.83513	10.20971	Si
SLV 10	-447	-3483	80	10.776	312.9	0.917	170.72645	21.18883	Si
SLV 9	-413	-3467	81	10.977	310.7	0.921	173.2937	21.18883	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.416	SLU 35	Si
V_SLU	29.57	SLU 78	Si
PF_SLV	1.035	SLV 6	Si
V_SLV	9.467	SLV 11	Si
PFFP_SLV	0	SLV 1	No
R_SLV	3.481	SLV 12	Si

Maschio 197

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-2.963	5.826	-4.953	5.826	L7	L8	1.99	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 63	12.77	-114.35	-6672	-0.000019	0.0003743	0.0035	1.99	5857.44	7110.62	7110.62	62.18	No	Si
SLU 63	14.57	-2601.95	-4054	-0.0000418	0.0003743	0.0035	1.592	3745.75	4869.26	4869.26	1.87	No	Si
SLU 61	12.77	16.2	-5885	-0.000016	0.0003743	0.0035	1.99	5248.4	5610.59	5610.59	346.3	No	Si
SLU 61	14.57	-2398.2	-3268	-0.0000455	0.0003743	0.0035	1.592	3064.53	4172.51	4172.51	1.74	No	Si
SLU 81	12.77	-72.06	-6497	-0.0000182	0.0003743	0.0035	1.99	5724.35	6967.48	6967.48	96.69	No	Si
SLU 81	14.57	-2515.47	-3854	-0.0000409	0.0003743	0.0035	1.592	3574.2	4690.21	4690.21	1.86	No	Si
SLU 44	12.77	-3.75	-6022	-0.0000163	0.0003743	0.0035	1.99	5355.43	6577.01	6577.01	1752.53	No	Si
SLU 44	14.57	-2362.77	-3404	-0.0000411	0.0003743	0.0035	1.592	3184.06	4292.06	4292.06	1.82	No	Si
SLU 52	12.77	7.55	-5910	-0.000016	0.0003743	0.0035	1.99	5267.79	5631.38	5631.38	746.35	No	Si
SLU 52	14.57	-2391.24	-3293	-0.0000445	0.0003743	0.0035	1.592	3086.19	4194.09	4194.09	1.75	No	Si
SLU 82	12.77	-77.78	-6463	-0.0000181	0.0003743	0.0035	1.99	5697.65	6938.99	6938.99	89.22	No	Si
SLU 82	14.57	-2523.34	-3819	-0.0000416	0.0003743	0.0035	1.592	3544.27	4659.22	4659.22	1.85	No	Si
SLU 60	12.77	21.92	-5920	-0.0000162	0.0003743	0.0035	1.99	5275.8	5639.92	5639.92	257.26	No	Si
SLU 60	14.57	-2390.33	-3303	-0.0000443	0.0003743	0.0035	1.592	3095.13	4203.01	4203.01	1.76	No	Si
SLU 73	12.77	-86.43	-6487	-0.0000183	0.0003743	0.0035	1.99	5716.54	6959.15	6959.15	80.51	No	Si
SLU 73	14.57	-2516.38	-3844	-0.0000411	0.0003743	0.0035	1.592	3565.45	4681.14	4681.14	1.86	No	Si
SLU 43	12.77	5.78	-6080	-0.0000165	0.0003743	0.0035	1.99	5400.81	5774.01	5774.01	998.51	No	Si
SLU 43	14.57	-2349.65	-3462	-0.0000397	0.0003743	0.0035	1.592	3234.76	4343.1	4343.1	1.85	No	Si
SLU 55	12.77	-123	-6696	-0.0000191	0.0003743	0.0035	1.99	5876.16	7130.9	7130.9	57.97	No	Si
SLU 55	14.57	-2594.99	-4079	-0.0000414	0.0003743	0.0035	1.592	3766.73	4891.46	4891.46	1.88	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 1	12.77	-280.28	-2269	-0.0000082	0.0005615	0.0035	1.99		3267.73	3267.73	11.66		Si
SLD 1	14.57	-4663.8	-489	-0.002784	0.0005615	0.0035	1.592		1564.96	1564.96	0.34		No
SLV 8	12.77	-1503.98	-1790	-0.0000397	0.0005615	0.0035	1.592		2813.77	2813.77	1.87		Si
SLV 8	14.57	-2225.37	226	0.0125232	0.0005615	0.0035	1.592		0	0	0		No
SLD 2	12.77	-257.47	-2613	-0.000009	0.0005615	0.0035	1.99		3592.91	3592.91	13.95		Si
SLD 2	14.57	-4365.24	-833	-0.0020862	0.0005615	0.0035	1.592		1897.95	1897.95	0.43		No
SLV 3	12.77	-1334.98	2266	0.1851789	0.0005615	0.0035	1.592		0	0	0		No
SLV 3	14.57	-7667.94	3803	0.3196442	0.0005615	0.0035	1.592		0	0	0		No
SLV 2	12.77	-557.94	551	0.0455188	0.0005615	0.0035	1.592		0	0	0		No
SLV 2	14.57	-7673.94	1998	0.1718671	0.0005615	0.0035	1.592		0	0	0		No
SLD 3	12.77	-601	-1864	-0.0000097	0.0005615	0.0035	1.99		2884.61	2884.61	4.8		Si
SLD 3	14.57	-4351.88	-47	-0.003164	0.0005615	0.0035	1.592		1133	1133	0.26		No
SLV 1	12.77	-611.04	1352	0.1099654	0.0005615	0.0035	1.592		0	0	0		No
SLV 1	14.57	-8369.03	2800	0.2382525	0.0005615	0.0035	1.592		0	0	0		No
SLV 7	12.77	-1538.57	-1267	-0.0001834	0.0005615	0.0035	1.592		2315.05	2315.05	1.5		Si
SLV 7	14.57	-2678.28	749	0.064289	0.0005615	0.0035	1.592		0	0	0		No
SLD 4	12.77	-578.2	-2209	-0.0000105	0.0005615	0.0035	1.99		3210.9	3210.9	5.55		Si
SLD 4	14.57	-4053.33	-391	-0.0022392	0.0005615	0.0035	1.592		1469.98	1469.98	0.36		No
SLV 4	12.77	-1281.88	1464	0.1206495	0.0005615	0.0035	1.592		0	0	0		No
SLV 4	14.57	-6972.85	3001	0.2532492	0.0005615	0.0035	1.592		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	12.77	-231.23	-7598	-6327	1424	1.99	1.99	-11355	8458	4713	35683	16685	5074	21759	No	15.28	Si
SLU 75	14.57	-2788.11	-4954	-4126	1424	1.592	1.2967	0	0	0	35683	13348	4060	17407	No	12.22	Si
SLU 76	12.77	-216.98	-7273	-6057	1395	1.99	1.99	-10870	8394	4677	35683	16685	5074	21759	No	15.6	Si
SLU 76	14.57	-2720.13	-4630	-3855	1395	1.592	1.2225	0	0	0	35683	13348	4060	17407	No	12.48	Si
SLU 84	12.77	-208.33	-7249	-6036	1403	1.99	1.99	-10833	8389	4674	35683	16685	5074	21759	No	15.51	Si
SLU 84	14.57	-2727.09	-4605	-3835	1403	1.592	1.2085	0	0	0	35683	13348	4060	17407	No	12.4	Si
SLU 63	12.77	-114.35	-6672	-5555	1386	1.99	1.99	-9970	8274	4610	35683	16685	5074	21759	No	15.7	Si
SLU 63	14.57	-2601.95	-4054	-3376	1386	1.592	1.0597	0	0	0	35683	13348	4060	17407	No	12.56	Si
SLU 53	12.77	-131.53	-7055	-5875	1406	1.99	1.99	-10544	8350	4653	35683	16685	5074	21759	No	15.47	Si
SLU 53	14.57	-2655.11	-4438	-3696	1406	1.592	1.1903	0	0	0	35683	13348	4060	17407	No	12.38	Si
SLU 74	12.77	-225.51	-7633	-6356	1423	1.99	1.99	-11407	8465	4717	35683	16685	5074	21759	No	15.29	Si
SLU 74	14.57	-2780.24	-4989	-4155	1423	1.592	1.3132	0	0	0	35683	13348	4060	17407	No	12.23	Si
SLU 58	12.77	-244.02	-7540	-6279	1416	1.99	1.99	-11269	8447	4707	35683	16685	5074	21759	No	15.37	Si
SLU 58	14.57	-2785.62	-4923	-4100	1416	1.592	1.2875	0	0	0	35683	13348	4060	17407	No	12.29	Si
SLU 54	12.77	-137.26	-7021	-5846	1407	1.99	1.99	-10492	8343	4649	35683	16685	5074	21759	No	15.46	Si
SLU 54	14.57	-2662.98	-4403	-3667	1407	1.592	1.1707	0	0	0	35683	13348	4060	17407	No	12.37	Si
SLU 59	12.77	-249.74	-7505	-6250	1417	1.99	1.99	-11217	8440	4703	35683	16685	5074	21759	No	15.35	Si
SLU 59	14.57	-2793.49	-4888	-4071	1417	1.592	1.2706	0	0	0	35683	13348	4060	17407	No	12.28	Si
SLU 83	12.77	-202.61	-7283	-6065	1402	1.99	1.99	-10885	8396	4678	35683	16685	5074	21759	No	15.52	Si
SLU 83	14.57	-2719.22	-4640	-3864	1402	1.592	1.2269	0	0	0	35683	13348	4060	17407	No	12.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 5	12.77	367.42	-4705	-3918	2119	1.99	1.99	-7031	11823	6588	35683	25027	5074	30102		14.21	Si
SLD 5	14.57	-3245.51	-2808	-2339	1950	1.592	0	0	0	0	35683	20022	4060	24081		12.35	Si
SLD 1	12.77	-280.28	-2269	-1889	2533	1.99	1.99	-3391	11095	6182	35683	25027	5074	30102		11.88	Si
SLD 1	14.57	-4663.8	-489	-407	2166	1.592	0	0	0	0	35683	20022	4060	24081		11.12	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	12.77	874.55	-4312	-3591	3527	1.99	1.99	-6444	11705	6522	35683	25027	5074	30102		8.53	Si
SLV 5	14.57	-5015.24	-2594	-2160	3132	1.592	0	0	0	0	35683	20022	4060	24081		7.69	Si
SLV 2	12.77	-557.94	551	458	4176	1.592	0	0	0	0	35683	20022	4060	24081		5.77	Si
SLV 2	14.57	-7673.94	1998	1664	3320	1.592	0	0	0	0	35683	20022	4060	24081		7.25	Si
SLV 16	12.77	523.12	-11276	-9390	-2482	1.99	1.99	-16852	13787	7682	35683	25027	5074	30102		12.13	Si
SLV 16	14.57	4600.4	-8668	-7218	-1625	1.99	1.3928	-12955	13008	5073	35683	25027	5074	30102		18.52	Si
SLV 4	12.77	-1281.88	1464	1219	3262	1.592	0.3581	0	0	0	35683	20022	4060	24081		7.38	Si
SLV 4	14.57	-6972.85	3001	2499	2496	1.592	0	0	0	0	35683	20022	4060	24081		9.65	Si
SLV 3	12.77	-1334.98	2266	1887	3619	1.592	1.2174	0	0	0	35683	20022	4060	24081		6.65	Si
SLV 3	14.57	-7667.94	3803	3166	2853	1.592	0	0	0	0	35683	20022	4060	24081		8.44	Si
SLV 6	12.77	909.15	-4834	-4026	3295	1.99	1.99	-7225	11862	6609	35683	25027	5074	30102		9.14	Si
SLV 6	14.57	-4562.33	-3116	-2595	2899	1.592	0	0	0	0	35683	20022	4060	24081		8.31	Si
SLV 1	12.77	-611.04	1352	1126	4533	1.592	1.6295	0	0	0	35683	20022	4060	24081		5.31	Si
SLV 1	14.57	-8369.03	2800	2331	3676	1.592	0	0	0	0	35683	20022	4060	24081		6.55	Si
SLD 2	12.77	-257.47	-2613	-2176	2380	1.99	1.99	-3905	11198	6239	35683	25027	5074	30102		12.65	Si
SLD 2	14.57	-4365.24	-833	-694	2013	1.592	0	0	0	0	35683	20022	4060	24081		11.96	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.53	0	-454	224.65	0	0	No, e>t/2
SLV 4	179667	0.53	0	2113	224.65	0	0	No, Trazione
SLV 8	179667	0.53	0	-976	224.65	0	0	No, e>t/2
SLV 2	179667	0.53	0	1182	224.65	0	0	No, Trazione
SLV 3	179667	0.53	0	2914	224.65	0	0	No, Trazione
SLV 1	179667	0.53	0	1984	224.65	0	0	No, Trazione
SLV 5	179667	0.53	6382	-3556	224.65	477.06	2.12	Si
SLV 6	179667	0.53	7320	-4079	224.65	543.64	2.42	Si
SLV 11	179667	0.53	7451	-4152	224.65	552.9	2.46	Si
SLV 12	179667	0.53	8389	-4674	224.65	618.46	2.75	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-4795	-10041	-685	1.7	742.5	0.915	27.01408	11.6001	Si
SLV 9	-4275	-9654	-685	1.847	690.7	0.91	29.49004	11.6001	Si
SLV 14	-8585	-11711	-248	1.126	1124.3	0.938	17.43947	6.40952	Si
SLV 16	-8130	-10148	152	1.186	1078.3	0.936	18.41919	6.40952	Si
SLV 13	-7788	-11117	-248	1.218	1043.6	0.934	18.94469	6.40952	Si
SLV 12	-3278	-4832	649	2.224	592.2	0.901	35.87035	11.6001	Si
SLV 15	-7333	-9554	153	1.289	997.7	0.932	20.09499	6.40952	Si
SLV 11	-2758	-4445	650	2.485	541.5	0.896	40.29481	11.6001	Si
SLV 6	-1210	-7136	-659	3.833	397.6	0.891	62.54833	11.6001	Si
SLV 5	-690	-6749	-659	4.699	355.8	0.904	75.50708	11.6001	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.74	SLU 61	Si
V_SLU	12.22	SLU 75	Si
PF_SLV	0	SLV 1	No
V_SLV	5.313	SLV 1	Si
PFFP_SLV	0	SLV 4	No
R_SLV	2.329	SLV 10	Si

Maschio 198

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	5.826	-2.063	5.826	L7	L8	1.93	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 29	12.77	471.95	-5240	-0.0000187	0.0003743	0.0035	1.93	4575.44	4885.55	4885.55	10.35	No	Si
SLU 29	14.57	1937.46	-4151	-0.00003	0.0003743	0.0035	1.93	3703.9	3964.32	3964.32	2.05	No	Si
SLU 30	12.77	465.77	-5214	-0.0000185	0.0003743	0.0035	1.93	4555.13	4863.88	4863.88	10.44	No	Si
SLU 30	14.57	1927.98	-4161	-0.0000298	0.0003743	0.0035	1.93	3712.01	3972.87	3972.87	2.06	No	Si
SLU 37	12.77	350.23	-5044	-0.000017	0.0003743	0.0035	1.93	4421.59	4721.54	4721.54	13.48	No	Si
SLU 37	14.57	1965.75	-4149	-0.0000304	0.0003743	0.0035	1.93	3701.65	3961.95	3961.95	2.02	No	Si
SLU 35	12.77	384.55	-5325	-0.0000181	0.0003743	0.0035	1.93	4641.37	4956.17	4956.17	12.89	No	Si
SLU 35	14.57	1997.05	-4493	-0.0000311	0.0003743	0.0035	1.93	3981.98	4256.65	4256.65	2.13	No	Si
SLU 36	12.77	378.38	-5299	-0.000018	0.0003743	0.0035	1.93	4621.14	4934.45	4934.45	13.04	No	Si
SLU 36	14.57	1987.57	-4503	-0.000031	0.0003743	0.0035	1.93	3989.97	4265.03	4265.03	2.15	No	Si
SLU 28	12.77	500.09	-5495	-0.0000196	0.0003743	0.0035	1.93	4773.24	5098.08	5098.08	10.19	No	Si
SLU 28	14.57	1959.28	-4506	-0.0000306	0.0003743	0.0035	1.93	3992.18	4267.35	4267.35	2.18	No	Si
SLU 38	12.77	344.05	-5018	-0.0000169	0.0003743	0.0035	1.93	4401.1	4699.74	4699.74	13.66	No	Si
SLU 38	14.57	1956.26	-4159	-0.0000303	0.0003743	0.0035	1.93	3709.76	3970.5	3970.5	2.03	No	Si
SLU 27	12.77	506.27	-5521	-0.0000198	0.0003743	0.0035	1.93	4793.29	5119.69	5119.69	10.11	No	Si
SLU 27	14.57	1968.77	-4496	-0.0000307	0.0003743	0.0035	1.93	3984.2	4258.98	4258.98	2.16	No	Si
SLU 79	12.77	531.66	-6295	-0.0000222	0.0003743	0.0035	1.93	5379.77	5729.37	5729.37	10.78	No	Si
SLU 79	14.57	2091.77	-4890	-0.0000329	0.0003743	0.0035	1.93	4299.85	4592.27	4592.27	2.2	No	Si
SLU 16	12.77	441.64	-4870	-0.0000173	0.0003743	0.0035	1.93	4283.83	4575.3	4575.3	10.36	No	Si
SLU 16	14.57	1650.77	-3751	-0.0000256	0.0003743	0.0035	1.93	3373.22	3618.08	3618.08	2.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 7	12.77	-109.02	-1281	-0.0000044	0.0005615	0.0035	1.93		2266.89	2266.89	20.79		Si
SLD 7	14.57	1415.03	-2758	-0.0000216	0.0005615	0.0035	1.93		2773.02	2773.02	1.96		Si
SLV 4	12.77	36.92	-2418	-0.0000069	0.0005615	0.0035	1.93		2462.33	2462.33	66.69		Si
SLV 4	14.57	1152.49	-2615	-0.0000176	0.0005615	0.0035	1.93		2642.78	2642.78	2.29		Si
SLV 8	12.77	-847.75	2268	0.1834957	0.0005615	0.0035	1.544		0	0	0		No
SLV 8	14.57	2107.02	-2483	-0.0000785	0.0005615	0.0035	1.93		2521.9	2521.9	1.2		Si
SLD 12	12.77	-134.56	-1473	-0.0000052	0.0005615	0.0035	1.93		2444.77	2444.77	18.17		Si
SLD 12	14.57	1450.94	-2884	-0.0000221	0.0005615	0.0035	1.93		2887.75	2887.75	1.99		Si
SLV 3	12.77	112.36	-1904	-0.0000061	0.0005615	0.0035	1.93		1987.58	1987.58	17.69		Si
SLV 3	14.57	1129.13	-2482	-0.0000171	0.0005615	0.0035	1.93		2520.69	2520.69	2.23		Si
SLD 11	12.77	-113.06	-1326	-0.0000046	0.0005615	0.0035	1.93		2309.09	2309.09	20.42		Si
SLD 11	14.57	1444.28	-2845	-0.000022	0.0005615	0.0035	1.93		2852.99	2852.99	1.98		Si
SLV 11	12.77	-807.84	2497	0.2014727	0.0005615	0.0035	1.544		0	0	0		No
SLV 11	14.57	2160.17	-2601	-0.0000709	0.0005615	0.0035	1.93		2629.69	2629.69	1.22		Si
SLV 12	12.77	-856.99	2162	0.1750612	0.0005615	0.0035	1.544		0	0	0		No
SLV 12	14.57	2175.39	-2688	-0.0000629	0.0005615	0.0035	1.93		2709.22	2709.22	1.25		Si
SLD 8	12.77	-130.53	-1428	-0.000005	0.0005615	0.0035	1.93		2402.88	2402.88	18.41		Si
SLD 8	14.57	1421.69	-2796	-0.0000216	0.0005615	0.0035	1.93		2807.79	2807.79	1.97		Si
SLV 7	12.77	-798.6	2603	0.209894	0.0005615	0.0035	1.544		0	0	0		No
SLV 7	14.57	2091.79	-2396	-0.0000968	0.0005615	0.0035	1.93		2442.25	2442.25	1.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 28	12.77	500.09	-5495	-4576	-1292	1.93	1.93	-8467	8073	4363	35683	16182	4922	21104	No	16.33	Si
SLU 28	14.57	1959.28	-4506	-3752	-1295	1.93	1.5906	-6943	7870	3505	35683	16182	4922	21104	No	16.29	Si
SLU 70	12.77	681.52	-6746	-5617	-1283	1.93	1.93	-10395	8330	4502	35683	16182	4922	21104	No	16.44	Si
SLU 70	14.57	2085.31	-5248	-4370	-1286	1.93	1.7029	-8086	8023	3825	35683	16182	4922	21104	No	16.4	Si
SLU 38	12.77	344.05	-5018	-4179	-1446	1.93	1.93	-7733	7975	4310	35683	16182	4922	21104	No	14.59	Si
SLU 38	14.57	1956.26	-4159	-3463	-1449	1.93	1.4838	-6408	7799	3240	35683	16182	4922	21104	No	14.56	Si
SLU 80	12.77	525.48	-6269	-5220	-1438	1.93	1.93	-9660	8232	4449	35683	16182	4922	21104	No	14.68	Si
SLU 80	14.57	2082.29	-4900	-4081	-1441	1.93	1.6203	-7551	7951	3607	35683	16182	4922	21104	No	14.65	Si
SLU 79	12.77	531.66	-6295	-5242	-1425	1.93	1.93	-9700	8238	4452	35683	16182	4922	21104	No	14.81	Si
SLU 79	14.57	2091.77	-4890	-4072	-1419	1.93	1.6119	-7536	7949	3588	35683	16182	4922	21104	No	14.87	Si
SLU 35	12.77	384.55	-5325	-4434	-1466	1.93	1.93	-8205	8038	4344	35683	16182	4922	21104	No	14.39	Si
SLU 35	14.57	1997.05	-4493	-3742	-1460	1.93	1.5617	-6924	7868	3440	35683	16182	4922	21104	No	14.45	Si
SLU 37	12.77	350.23	-5044	-4201	-1434	1.93	1.93	-7773	7981	4313	35683	16182	4922	21104	No	14.72	Si
SLU 37	14.57	1965.75	-4149	-3455	-1427	1.93	1.4736	-6393	7797	3217	35683	16182	4922	21104	No	14.78	Si
SLU 36	12.77	378.38	-5299	-4413	-1479	1.93	1.93	-8165	8033	4341	35683	16182	4922	21104	No	14.27	Si
SLU 36	14.57	1987.57	-4503	-3750	-1482	1.93	1.5709	-6939	7870	3462	35683	16182	4922	21104	No	14.24	Si
SLU 77	12.77	565.98	-6576	-5476	-1458	1.93	1.93	-10133	8295	4483	35683	16182	4922	21104	No	14.48	Si
SLU 77	14.57	2123.08	-5235	-4359	-1452	1.93	1.6784	-8067	8020	3769	35683	16182	4922	21104	No	14.54	Si
SLU 78	12.77	559.81	-6550	-5454	-1470	1.93	1.93	-10093	8290	4480	35683	16182	4922	21104	No	14.35	Si
SLU 78	14.57	2113.59	-5245	-4368	-1473	1.93	1.6861	-8082	8022	3787	35683	16182	4922	21104	No	14.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	12.77	1686.65	-11220	-9343	4432	1.93	1.93	-17289	13874	7498	35683	24273	4922	29195		6.59	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	14.57	-403.91	-3478	-2896	3905	1.93	1.93	-5359	11489	6208	35683	24273	4922	29195		7.48	Si
SLV 10	12.77	1677.41	-11327	-9432	4087	1.93	1.93	-17453	13907	7516	35683	24273	4922	29195		7.14	Si
SLV 10	14.57	-335.54	-3683	-3067	4594	1.93	1.93	-5675	11552	6243	35683	24273	4922	29195		6.35	Si
SLV 3	12.77	112.36	-1904	-1585	-1464	1.93	1.93	-2934	11003	5946	35683	24273	4922	29195		19.94	Si
SLV 3	14.57	1129.13	-2482	-2066	-3183	1.93	1.53	-3824	11181	4790	35683	24273	4922	29195		9.17	Si
SLV 5	12.77	1735.8	-10885	-9064	4335	1.93	1.93	-16773	13771	7442	35683	24273	4922	29195		6.74	Si
SLV 5	14.57	-419.14	-3391	-2824	3808	1.93	1.93	-5225	11462	6194	35683	24273	4922	29195		7.67	Si
SLV 8	12.77	-847.75	2268	1889	-5069	1.544	1.7739	0	0	0	35683	19419	3937	23356		4.61	Si
SLV 8	14.57	2107.02	-2483	-2068	-5573	1.93	0.3493	-21313	14682	1436	35683	24273	4922	29195		5.24	Si
SLV 11	12.77	-807.84	2497	2079	-5511	1.544	1.9243	0	0	0	35683	19419	3937	23356		4.24	Si
SLV 11	14.57	2160.17	-2601	-2166	-4980	1.93	0.4034	-19335	14285	1614	35683	24273	4922	29195		5.86	Si
SLV 9	12.77	1726.56	-10992	-9153	3990	1.93	1.93	-16937	13804	7460	35683	24273	4922	29195		7.32	Si
SLV 9	14.57	-350.76	-3596	-2994	4497	1.93	1.93	-5541	11525	6228	35683	24273	4922	29195		6.49	Si
SLV 7	12.77	-798.6	2603	2168	-5166	1.544	1.93	0	0	0	35683	19419	3937	23356		4.52	Si
SLV 7	14.57	2091.79	-2396	-1995	-5670	1.93	0.2758	-25971	15620	1206	35683	24273	4922	29195		5.15	Si
SLV 4	12.77	36.92	-2418	-2013	-1316	1.93	1.93	-3726	11162	6032	35683	24273	4922	29195		22.19	Si
SLV 4	14.57	1152.49	-2615	-2178	-3034	1.93	1.573	-4030	11223	4943	35683	24273	4922	29195		9.62	Si
SLV 12	12.77	-856.99	2162	1800	-5414	1.544	1.7058	0	0	0	35683	19419	3937	23356		4.31	Si
SLV 12	14.57	2175.39	-2688	-2238	-4883	1.93	0.4671	-17251	13867	1814	35683	24273	4922	29195		5.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.53	0	365	217.88	0	0	No, Trazione
SLV 7	179667	0.53	0	688	217.88	0	0	No, Trazione
SLV 8	179667	0.53	0	454	217.88	0	0	No, Trazione
SLV 12	179667	0.53	0	132	217.88	0	0	No, Trazione
SLV 3	179667	0.53	3565	-1927	217.88	263.42	1.21	Si
SLV 4	179667	0.53	4228	-2285	217.88	311	1.43	Si
SLV 15	179667	0.53	5555	-3002	217.88	405.01	1.86	Si
SLV 16	179667	0.53	6218	-3360	217.88	451.29	2.07	Si
SLV 1	179667	0.53	8408	-4544	217.88	601.07	2.76	Si
SLV 2	179667	0.53	9070	-4902	217.88	645.48	2.96	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-2596	-11500	-413	2.584	517.6	0.895	41.9348	11.6001	Si
SLV 9	-2573	-11028	-412	2.598	515.3	0.895	42.17779	11.6001	Si
SLV 6	-2377	-10955	-249	2.768	496.5	0.893	45.0182	11.6001	Si
SLV 5	-2354	-10483	-249	2.784	494.3	0.893	45.29254	11.6001	Si
SLV 12	-2027	1861	247	3.036	463.1	0.891	49.53875	11.6001	Si, Trazione
SLV 11	-2004	2333	247	3.056	461	0.891	49.86266	11.6001	Si, Trazione
SLV 8	-1808	2407	410	3.183	442.6	0.89	52.01123	11.6001	Si, Trazione
SLV 7	-1784	2878	411	3.205	440.5	0.889	52.37047	11.6001	Si, Trazione
SLV 14	-2659	-7586	-373	2.556	523.6	0.896	41.45068	6.40952	Si
SLV 13	-2623	-6861	-372	2.577	520.2	0.896	41.81523	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.015	SLU 37	Si
V_SLU	14.239	SLU 36	Si
PF_SLV	0	SLV 7	No
V_SLV	4.238	SLV 11	Si
PFFP_SLV	0	SLV 12	No
R_SLV	3.615	SLV 10	Si

Maschio 199

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-0.133	5.826	L7	L8	9.14	0.28	3.16	3.16	3.16			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	11.87	882.12	-32656	-0.0000195	0.0004492	0.0035	9.14	133652.05	141490.68	141490.68	160.4	No	Si
SLU 48	15.03	-935.21	-7597	-0.0000047	0.0004492	0.0035	9.14	33873.65	59210.27	59210.27	63.31	No	Si
SLU 70	11.87	252.21	-36012	-0.0000213	0.0004492	0.0035	9.14	145621.31	153273.18	153273.18	607.72	No	Si
SLU 70	15.03	-1025.7	-8679	-0.0000054	0.0004492	0.0035	9.14	38561.73	63915.56	63915.56	62.31	No	Si
SLU 7	11.87	381.71	-26917	-0.0000159	0.0004492	0.0035	9.14	112421.27	118900.46	118900.46	311.5	No	Si
SLU 7	15.03	-881.4	-6799	-0.0000043	0.0004492	0.0035	9.14	30393.83	55723.61	55723.61	63.22	No	Si
SLU 78	11.87	-185.81	-38025	-0.0000225	0.0004492	0.0035	9.14	152642.73	182524.25	182524.25	982.33	No	Si
SLU 78	15.03	-1017.55	-8842	-0.0000055	0.0004492	0.0035	9.14	39265.71	64622.82	64622.82	63.51	No	Si
SLU 49	11.87	580.44	-32663	-0.0000194	0.0004492	0.0035	9.14	133676.79	141517.34	141517.34	243.81	No	Si
SLU 49	15.03	-941.57	-7587	-0.0000047	0.0004492	0.0035	9.14	33831.92	59168.39	59168.39	62.84	No	Si
SLU 28	11.87	53.48	-30266	-0.0000178	0.0004492	0.0035	9.14	124928.29	132181.7	132181.7	2471.79	No	Si
SLU 28	15.03	-965.53	-7890	-0.0000049	0.0004492	0.0035	9.14	35148.79	60489.01	60489.01	62.65	No	Si
SLU 69	11.87	553.89	-36005	-0.0000214	0.0004492	0.0035	9.14	145597.24	153250.71	153250.71	276.68	No	Si
SLU 69	15.03	-1019.34	-8688	-0.0000054	0.0004492	0.0035	9.14	38603.15	63957.21	63957.21	62.74	No	Si
SLU 6	11.87	683.39	-26910	-0.000016	0.0004492	0.0035	9.14	112395.39	118872.84	118872.84	173.95	No	Si
SLU 6	15.03	-875.04	-6808	-0.0000043	0.0004492	0.0035	9.14	30435.77	55765.57	55765.57	63.73	No	Si
SLU 36	11.87	-384.54	-32279	-0.0000191	0.0004492	0.0035	9.14	132287.78	160538.85	160538.85	417.48	No	Si
SLU 36	15.03	-957.38	-8053	-0.000005	0.0004492	0.0035	9.14	35856.54	61200.39	61200.39	63.92	No	Si
SLU 27	11.87	355.16	-30259	-0.0000179	0.0004492	0.0035	9.14	124903.07	132154.51	132154.51	372.1	No	Si
SLU 27	15.03	-959.17	-7900	-0.0000049	0.0004492	0.0035	9.14	35190.44	60530.81	60530.81	63.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	11.87	56550.55	-24686	-0.0000386	0.0006738	0.0035	9.14		111899.25	111899.25	1.98		Si
SLV 5	15.03	-6731.88	-4272	-0.000005	0.0006738	0.0035	9.14		44616.67	44616.67	6.63		Si
SLV 6	11.87	59951.9	-24679	-0.0000411	0.0006738	0.0035	9.14		111869.22	111869.22	1.87		Si
SLV 6	15.03	-7055.11	-4282	-0.0000051	0.0006738	0.0035	9.14		44658.19	44658.19	6.33		Si
SLV 12	11.87	-56413.76	-24339	-0.0000385	0.0006738	0.0035	9.14		130961.73	130961.73	2.32		Si
SLV 12	15.03	6095.03	-4197	-0.0000047	0.0006738	0.0035	9.14		22968.12	22968.12	3.77		Si
SLD 6	11.87	26588.25	-24585	-0.0000244	0.0006738	0.0035	9.14		111475.91	111475.91	4.19		Si
SLD 6	15.03	-3288.84	-4253	-0.0000037	0.0006738	0.0035	9.14		44530.7	44530.7	13.54		Si
SLV 7	11.87	-62550.41	-24482	-0.0000434	0.0006738	0.0035	7.312		131558.59	131558.59	2.1		Si
SLV 7	15.03	6428.95	-4586	-0.000005	0.0006738	0.0035	9.14		24708.78	24708.78	3.84		Si
SLV 8	11.87	-59149.06	-24475	-0.0000405	0.0006738	0.0035	9.14		131528.71	131528.71	2.22		Si
SLV 8	15.03	6105.72	-4596	-0.0000049	0.0006738	0.0035	9.14		24750.7	24750.7	4.05		Si
SLV 10	11.87	62687.2	-24543	-0.0000435	0.0006738	0.0035	9.14		111298.91	111298.91	1.78		Si
SLV 10	15.03	-7065.8	-3884	-0.0000049	0.0006738	0.0035	9.14		42895.01	42895.01	6.07		Si
SLV 11	11.87	-59815.11	-24347	-0.0000411	0.0006738	0.0035	9.14		130991.6	130991.6	2.19		Si
SLV 11	15.03	6418.27	-4188	-0.0000048	0.0006738	0.0035	9.14		22926.2	22926.2	3.57		Si
SLD 10	11.87	27757.7	-24528	-0.0000248	0.0006738	0.0035	9.14		111232.55	111232.55	4.01		Si
SLD 10	15.03	-3293.57	-4083	-0.0000036	0.0006738	0.0035	9.14		43776.68	43776.68	13.29		Si
SLV 9	11.87	59285.85	-24550	-0.0000406	0.0006738	0.0035	9.14		111328.97	111328.97	1.88		Si
SLV 9	15.03	-6742.56	-3874	-0.0000048	0.0006738	0.0035	9.14		42853.51	42853.51	6.36		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	11.87	757.04	-31028	-25838	1352	9.14	9.14	-10096	9679	24772	35683	91971	23307	60455	No	44.72	Si
SLU 45	15.03	-657.54	-6095	-5076	1351	9.14	9.14	-1983	8598	22003	35683	91971	23307	57687	No	42.7	Si
SLU 56	11.87	444.1	-34669	-28869	1398	9.14	9.14	-11281	9837	25176	35683	91971	23307	60859	No	43.53	Si
SLU 56	15.03	-927.05	-7760	-6462	1396	9.14	9.14	-2525	8670	22188	35683	91971	23307	57871	No	41.44	Si
SLU 50	11.87	736.22	-31982	-26632	1332	9.14	9.14	-10406	9721	24878	35683	91971	23307	60561	No	45.45	Si
SLU 50	15.03	-912.21	-7668	-6385	1330	9.14	9.14	-2495	8666	22178	35683	91971	23307	57861	No	43.49	Si
SLU 6	11.87	683.39	-26910	-22408	1201	9.14	9.14	-8756	9501	24314	35683	91971	23307	59998	No	49.96	Si
SLU 6	15.03	-875.04	-6808	-5669	1199	9.14	9.14	-2215	8629	22083	35683	91971	23307	57766	No	48.17	Si
SLU 58	11.87	298.2	-33995	-28308	1221	9.14	9.14	-11061	9808	25101	35683	91971	23307	60784	No	49.79	Si
SLU 58	15.03	-904.05	-7831	-6521	1219	9.14	9.14	-2548	8673	22196	35683	91971	23307	57879	No	47.48	Si
SLU 53	11.87	319.02	-33041	-27514	1240	9.14	9.14	-10751	9767	24995	35683	91971	23307	60678	No	48.91	Si
SLU 53	15.03	-649.39	-6258	-5211	1240	9.14	9.14	-2036	8605	22022	35683	91971	23307	57705	No	46.55	Si
SLU 69	11.87	553.89	-36005	-29982	1230	9.14	9.14	-11715	9895	25324	35683	91971	23307	61007	No	49.61	Si
SLU 69	15.03	-1019.34	-8688	-7235	1228	9.14	9.14	-2827	8710	22291	35683	91971	23307	57975	No	47.22	Si
SLU 49	11.87	580.44	-32663	-27199	1243	9.14	9.14	-10628	9750	24953	35683	91971	23307	60636	No	48.79	Si
SLU 49	15.03	-941.57	-7587	-6318	1294	9.14	9.14	-2469	8662	22169	35683	91971	23307	57852	No	44.72	Si
SLU 57	11.87	142.42	-34676	-28875	1131	9.14	9.14	-11283	9838	25177	35683	91971	23307	60860	No	53.79	Si
SLU 57	15.03	-933.41	-7750	-6454	1182	9.14	9.14	-2522	8670	22187	35683	91971	23307	57870	No	48.94	Si
SLU 48	11.87	882.12	-32656	-27193	1509	9.14	9.14	-10626	9750	24952	35683	91971	23307	60636	No	40.17	Si
SLU 48	15.03	-935.21	-7597	-6326	1508	9.14	9.14	-2472	8663	22170	35683	91971	23307	57853	No	38.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	11.87	62687.2	-24543	-20438	49705	9.14	6.0476	-7986	14097	23871	35683	137957	23307	59554		1.2	Si
SLV 10	15.03	-7065.8	-3884	-3234	50815	9.14	8.2518	-1399	12780	29528	35683	137957	23307	65211		1.28	Si
SLV 6	11.87	59951.9	-24679	-20550	47699	9.14	6.4221	-8030	14106	25365	35683	137957	23307	61049		1.28	Si
SLV 6	15.03	-7055.11	-4282	-3565	48616	9.14	8.7669	-1453	12791	31397	35683	137957	23307	67080		1.38	Si
SLV 8	11.87	-59149.06	-24475	-20381	-46275	9.14	6.4598	-11313	14763	26702	35683	137957	23307	62385		1.35	Si
SLV 8	15.03	6105.72	-4596	-3827	-47385	9.14	9.14	-1495	12799	32755	35683	137957	23307	68439		1.44	Si
SLD 10	11.87	27757.7	-24528	-20424	22313	9.14	9.14	-7981	14096	36075	35683	137957	23307	71758		3.22	Si
SLD 10	15.03	-3293.57	-4083	-3400	22809	9.14	9.14	-1328	12766	32670	35683	137957	23307	68353		3	Si
SLV 11	11.87	-59815.11	-24347	-20274	-46505	9.14	6.3395	-11467	14794	26260	35683	137957	23307	61943		1.33	Si
SLV 11	15.03	6418.27	-4188	-3488	-47422	9.14	9.1125	-1363	12773	32589	35683	137957	23307	68272		1.44	Si
SLV 5	11.87	56550.55	-24686	-20556	45464	9.14	6.8376	-8032	14106	27007	35683	137957	23307	62690		1.38	Si
SLV 5	15.03	-6731.88	-4272	-3558	46380	9.14	8.983	-1415	12783	32152	35683	137957	23307	67835		1.46	Si
SLV 12	11.87	-56413.76	-24339	-20268	-44269	9.14	6.7566	-10755	14651	27718	35683	137957	23307	63401		1.43	Si
SLV 12	15.03	6095.03	-4197	-3495	-45186	9.14	9.14	-1366	12773	32689	35683	137957	23307	68372		1.51	Si
SLD 6	11.87	26588.25	-24585	-20473	21456	9.14	9.14	-8000	14100	36085	35683	137957	23307	71768		3.34	Si
SLD 6	15.03	-3288.84	-4253	-3542	21871	9.14	9.14	-1384	12777	32698	35683	137957	23307	68382		3.13	Si
SLV 7	11.87	-62550.41	-24482	-20386	-48511	7.312	6.0451	0	0	0	35683	110366	18646	35683		0.74	No
SLV 7	15.03	6428.95	-4586	-3819	-49621	9.14	9.14	-1492	12798	32754	35683	137957	23307	68437		1.38	Si
SLV 9	11.87	59285.85	-24550	-20443	47470	9.14	6.4654	-7988	14098	25521	35683	137957	23307	61204		1.29	Si
SLV 9	15.03	-6742.56	-3874	-3226	48578	9.14	8.4889	-1357	12771	30356	35683	137957	23307	66040		1.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.45 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 16	215625	0.53	5448	-13941	1067.79	1893.78	1.77	Si
SLV 15	215625	0.53	5452	-13953	1067.79	1895.33	1.77	Si
SLV 14	215625	0.53	5456	-13963	1067.79	1896.57	1.78	Si
SLV 13	215625	0.53	5460	-13974	1067.79	1898.12	1.78	Si
SLV 12	215625	0.53	5618	-14378	1067.79	1951.17	1.83	Si
SLV 11	215625	0.53	5621	-14385	1067.79	1952.18	1.83	Si
SLV 10	215625	0.53	5646	-14448	1067.79	1960.46	1.84	Si
SLV 9	215625	0.53	5649	-14456	1067.79	1961.47	1.84	Si
SLV 8	215625	0.53	5772	-14771	1067.79	2002.83	1.88	Si
SLV 7	215625	0.53	5775	-14779	1067.79	2003.83	1.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.45 Wa = 0.05 Ta = 0.0596

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-4596	-24475	-1653	4.256	1745.3	0.894	69.18995	11.6001	Si
SLV 7	-4586	-24482	-1653	4.259	1744.5	0.894	69.24084	11.6001	Si
SLV 6	-4282	-24679	-1514	4.382	1719.8	0.896	71.11612	11.6001	Si
SLV 5	-4272	-24686	-1514	4.386	1719.1	0.896	71.16921	11.6001	Si
SLV 12	-4197	-24339	1447	4.42	1713	0.896	71.68845	11.6001	Si
SLV 11	-4188	-24347	1447	4.424	1712.3	0.896	71.7417	11.6001	Si
SLV 10	-3884	-24543	1586	4.531	1688.2	0.898	73.31418	11.6001	Si
SLV 9	-3874	-24550	1586	4.534	1687.5	0.898	73.36941	11.6001	Si
SLV 4	-4953	-24702	-5220	3.841	1774.9	0.892	62.55243	6.40952	Si
SLV 3	-4938	-24713	-5220	3.846	1773.7	0.893	62.62179	6.40952	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	62.314	SLU 70	Si
V_SLU	38.371	SLU 48	Si
PF_SLV	1.775	SLV 10	Si
V_SLV	0.736	SLV 7	No
PFFP_SLV	1.774	SLV 16	Si
R_SLV	5.965	SLV 8	Si

Maschio 201

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.333	-3.314	-17.203	-3.314	L7	F1	0.87	0.28	3.224	3.224	3.225			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 72	11.87	-466.75	-5422	-0.0000557	0.0003743	0.0035	0.87	1842.84	2136.46	2136.46	4.58	No	Si
SLU 72	13.97	-19.34	-3972	-0.0000257	0.0003743	0.0035	0.87	1451	1672.81	1672.81	86.51	No	Si
SLU 23	11.87	-350.73	-3737	-0.0000388	0.0003743	0.0035	0.87	1380.78	1592.96	1592.96	4.54	No	Si
SLU 23	13.97	23.61	-2614	-0.0000172	0.0003743	0.0035	0.87	1017.09	1095.95	1095.95	46.42	No	Si
SLU 64	11.87	-426.92	-4702	-0.0000488	0.0003743	0.0035	0.87	1657.6	1913.45	1913.45	4.48	No	Si
SLU 64	13.97	27.23	-3266	-0.0000215	0.0003743	0.0035	0.87	1233.55	1321.92	1321.92	48.54	No	Si
SLU 22	11.87	-349.42	-3733	-0.0000387	0.0003743	0.0035	0.87	1379.31	1591.3	1591.3	4.55	No	Si
SLU 22	13.97	22.61	-2610	-0.0000171	0.0003743	0.0035	0.87	1016.02	1094.8	1094.8	48.42	No	Si
SLU 71	11.87	-465.97	-5419	-0.0000556	0.0003743	0.0035	0.87	1842.12	2135.58	2135.58	4.58	No	Si
SLU 71	13.97	-19.93	-3970	-0.0000257	0.0003743	0.0035	0.87	1450.44	1672.18	1672.18	83.89	No	Si
SLU 65	11.87	-428.23	-4707	-0.0000489	0.0003743	0.0035	0.87	1658.91	1914.98	1914.98	4.47	No	Si
SLU 65	13.97	28.23	-3269	-0.0000215	0.0003743	0.0035	0.87	1234.55	1322.91	1322.91	46.86	No	Si
SLU 26	11.87	-370.25	-4096	-0.0000421	0.0003743	0.0035	0.87	1487.42	1714.78	1714.78	4.63	No	Si
SLU 26	13.97	0.02	-2966	-0.0000184	0.0003743	0.0035	0.87	1135.77	1223.15	1223.15	49553.01	No	Si
SLU 68	11.87	-447.75	-5065	-0.0000523	0.0003743	0.0035	0.87	1753.36	2026.97	2026.97	4.53	No	Si
SLU 68	13.97	4.65	-3621	-0.0000228	0.0003743	0.0035	0.87	1345.13	1429.24	1429.24	307.63	No	Si
SLU 67	11.87	-454.83	-5315	-0.0000544	0.0003743	0.0035	0.87	1816.44	2103.81	2103.81	4.63	No	Si
SLU 67	13.97	-13.72	-3868	-0.0000248	0.0003743	0.0035	0.87	1420.14	1637.56	1637.56	119.32	No	Si
SLU 66	11.87	-454.04	-5312	-0.0000543	0.0003743	0.0035	0.87	1815.72	2102.93	2102.93	4.63	No	Si
SLU 66	13.97	-14.32	-3866	-0.0000248	0.0003743	0.0035	0.87	1419.58	1636.92	1636.92	114.29	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	11.87	884.2	-4364	-0.0000688	0.0005615	0.0035	0.87		1777.95	1777.95	2.01		Si
SLV 4	13.97	-1302.03	-4273	-0.0001254	0.0005615	0.0035	0.696		1840.23	1840.23	1.41		Si
SLV 16	11.87	-1423.22	-2728	-0.0018677	0.0005615	0.0035	0.696		1262.29	1262.29	0.89		No
SLV 16	13.97	1160.77	-656	-0.0244462	0.0005615	0.0035	0.696		328.34	328.34	0.28		No
SLV 3	11.87	816.8	-4334	-0.0000642	0.0005615	0.0035	0.87		1766.98	1766.98	2.16		Si
SLV 3	13.97	-1228.31	-4185	-0.0001119	0.0005615	0.0035	0.696		1808.53	1808.53	1.47		Si
SLV 15	11.87	-1490.62	-2698	-0.0024102	0.0005615	0.0035	0.696		1250.54	1250.54	0.84		No
SLV 15	13.97	1234.49	-569	-0.0276145	0.0005615	0.0035	0.696		291.28	291.28	0.24		No
SLD 13	11.87	-824.22	-3172	-0.0000662	0.0005615	0.0035	0.696		1432.58	1432.58	1.74		Si
SLD 13	13.97	570.31	-1671	-0.0000652	0.0005615	0.0035	0.87		747.11	747.11	1.31		Si
SLV 13	11.87	-1508.76	-2694	-0.0025598	0.0005615	0.0035	0.696		1249.02	1249.02	0.83		No
SLV 13	13.97	1320.56	-627	-0.0293227	0.0005615	0.0035	0.696		315.97	315.97	0.24		No
SLD 15	11.87	-816.16	-3174	-0.0000652	0.0005615	0.0035	0.696		1433.56	1433.56	1.76		Si
SLD 15	13.97	533.24	-1645	-0.0000538	0.0005615	0.0035	0.87		736.58	736.58	1.38		Si
SLD 14	11.87	-795.26	-3185	-0.0000627	0.0005615	0.0035	0.87		1437.46	1437.46	1.81		Si
SLD 14	13.97	538.64	-1708	-0.0000516	0.0005615	0.0035	0.87		762.28	762.28	1.42		Si
SLD 16	11.87	-787.21	-3187	-0.0000618	0.0005615	0.0035	0.87		1438.43	1438.43	1.83		Si
SLD 16	13.97	501.57	-1682	-0.0000442	0.0005615	0.0035	0.87		751.76	751.76	1.5		Si
SLV 14	11.87	-1441.36	-2725	-0.0019963	0.0005615	0.0035	0.696		1260.76	1260.76	0.87		No
SLV 14	13.97	1246.84	-715	-0.0261625	0.0005615	0.0035	0.696		352.81	352.81	0.28		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	11.87	-473.57	-5670	-4721	-765	0.87	0.87	-19382	9529	2321	35683	7294	2219	9513	No	12.43	Si
SLU 69	13.97	-37.91	-4218	-3512	-5	0.87	0.87	-14419	8867	2160	35683	7294	2219	9513	No	1913.57	Si
SLU 72	11.87	-466.75	-5422	-4515	-747	0.87	0.87	-18533	9415	2294	35683	7294	2219	9513	No	12.74	Si
SLU 72	13.97	-19.34	-3972	-3307	-24	0.87	0.87	-13577	8755	2133	35683	7294	2219	9513	No	393.15	Si
SLU 71	11.87	-465.97	-5419	-4512	-747	0.87	0.87	-18523	9414	2293	35683	7294	2219	9513	No	12.74	Si
SLU 71	13.97	-19.93	-3970	-3306	-23	0.87	0.87	-13570	8754	2132	35683	7294	2219	9513	No	417.39	Si
SLU 77	11.87	-449.86	-5543	-4615	-782	0.87	0.87	-18947	9471	2307	35683	7294	2219	9513	No	12.17	Si
SLU 77	13.97	-76.2	-4153	-3458	66	0.87	0.87	-14197	8837	2153	35683	7294	2219	9513	No	143.72	Si
SLU 79	11.87	-442.26	-5291	-4406	-763	0.87	0.87	-18088	9356	2279	35683	7294	2219	9513	No	12.47	Si
SLU 79	13.97	-58.23	-3905	-3252	48	0.87	0.87	-13348	8724	2125	35683	7294	2219	9513	No	196.66	Si
SLU 75	11.87	-431.12	-5187	-4320	-743	0.87	0.87	-17732	9309	2268	35683	7294	2219	9513	No	12.81	Si
SLU 75	13.97	-52.02	-3803	-3167	43	0.87	0.87	-13000	8678	2114	35683	7294	2219	9513	No	222.69	Si
SLU 74	11.87	-430.33	-5184	-4317	-742	0.87	0.87	-17722	9307	2267	35683	7294	2219	9513	No	12.81	Si
SLU 74	13.97	-52.62	-3801	-3165	44	0.87	0.87	-12993	8677	2114	35683	7294	2219	9513	No	215.6	Si
SLU 80	11.87	-443.04	-5294	-4409	-763	0.87	0.87	-18098	9357	2279	35683	7294	2219	9513	No	12.47	Si
SLU 80	13.97	-57.63	-3907	-3253	47	0.87	0.87	-13354	8725	2125	35683	7294	2219	9513	No	202.55	Si
SLU 78	11.87	-450.65	-5546	-4618	-782	0.87	0.87	-18957	9472	2307	35683	7294	2219	9513	No	12.17	Si
SLU 78	13.97	-75.6	-4155	-3460	65	0.87	0.87	-14203	8838	2153	35683	7294	2219	9513	No	146.83	Si
SLU 70	11.87	-474.36	-5673	-4724	-766	0.87	0.87	-19392	9530	2322	35683	7294	2219	9513	No	12.43	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 70	13.97	-37.31	-4220	-3514	-6	0.87	0.87	-14425	8868	2160	35683	7294	2219	9513	No	1491.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	11.87	-1508.76	-2694	-2244	-1383	0.696	0	0	0	0	35683	8753	1775	10528		7.61	Si
SLV 13	13.97	1320.56	-627	-522	-1739	0.696	0	0	0	0	35683	8753	1775	10528		6.06	Si
SLD 15	11.87	-816.16	-3174	-2643	-839	0.696	0.5336	0	0	0	35683	8753	1775	10528		12.54	Si
SLD 15	13.97	533.24	-1645	-1370	-728	0.87	0.3323	-14824	13381	1245	35683	10942	2219	13160		18.07	Si
SLV 3	11.87	816.8	-4334	-3609	341	0.87	0.7396	-14815	13380	2771	35683	10942	2219	13160		38.65	Si
SLV 3	13.97	-1228.31	-4185	-3485	1567	0.696	0.4245	0	0	0	35683	8753	1775	10528		6.72	Si
SLD 13	11.87	-824.22	-3172	-2641	-880	0.696	0.5254	0	0	0	35683	8753	1775	10528		11.96	Si
SLD 13	13.97	570.31	-1671	-1391	-761	0.87	0.281	-17838	13985	1100	35683	10942	2219	13160		17.29	Si
SLV 4	11.87	884.2	-4364	-3634	376	0.87	0.6972	-14918	13400	2616	35683	10942	2219	13160		34.97	Si
SLV 4	13.97	-1302.03	-4273	-3558	1678	0.696	0.3908	0	0	0	35683	8753	1775	10528		6.27	Si
SLV 16	11.87	-1423.22	-2728	-2272	-1254	0.696	0	0	0	0	35683	8753	1775	10528		8.4	Si
SLV 16	13.97	1160.77	-656	-547	-1551	0.696	0	0	0	0	35683	8753	1775	10528		6.79	Si
SLV 15	11.87	-1490.62	-2698	-2247	-1289	0.696	0	0	0	0	35683	8753	1775	10528		8.17	Si
SLV 15	13.97	1234.49	-569	-473	-1663	0.696	0	0	0	0	35683	8753	1775	10528		6.33	Si
SLV 14	11.87	-1441.36	-2725	-2269	-1348	0.696	0	0	0	0	35683	8753	1775	10528		7.81	Si
SLV 14	13.97	1246.84	-715	-595	-1627	0.696	0	0	0	0	35683	8753	1775	10528		6.47	Si
SLV 2	11.87	866.06	-4360	-3631	282	0.87	0.7091	-14905	13398	2660	35683	10942	2219	13160		46.61	Si
SLV 2	13.97	-1215.95	-4331	-3607	1602	0.696	0.4628	0	0	0	35683	8753	1775	10528		6.57	Si
SLV 1	11.87	798.66	-4330	-3606	247	0.87	0.7516	-14801	13377	2815	35683	10942	2219	13160		53.39	Si
SLV 1	13.97	-1142.23	-4243	-3534	1491	0.696	0.4975	0	0	0	35683	8753	1775	10528		7.06	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.482 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.53	3843	-936	102.37	127.76	1.25	Si
SLV 13	179667	0.53	4130	-1006	102.37	137.03	1.34	Si
SLV 16	179667	0.53	4160	-1013	102.37	138	1.35	Si
SLV 14	179667	0.53	4447	-1083	102.37	147.23	1.44	Si
SLV 11	179667	0.53	8395	-2045	102.37	270.56	2.64	Si
SLV 12	179667	0.53	8601	-2095	102.37	276.82	2.7	Si
SLV 9	179667	0.53	9351	-2278	102.37	299.38	2.92	Si
SLV 10	179667	0.53	9558	-2328	102.37	305.55	2.98	Si
SLV 7	179667	0.53	12536	-3054	102.37	392.44	3.83	Si
SLV 8	179667	0.53	12743	-3104	102.37	398.32	3.89	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.482 Wa = 0.05 Ta = 0.062

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1756	-3267	-64	2.014	293.1	0.907	32.26369	12.13971	Si
SLV 10	-1725	-3287	-64	2.039	290.1	0.907	32.68837	12.13971	Si
SLV 5	-1394	-3758	-69	2.351	257.5	0.9	37.98116	12.13971	Si
SLV 6	-1363	-3778	-69	2.385	254.5	0.899	38.56647	12.13971	Si
SLV 11	-1189	-3281	66	2.602	237.5	0.895	42.24509	12.13971	Si
SLV 12	-1158	-3300	66	2.645	234.6	0.895	42.96107	12.13971	Si
SLV 7	-827	-3771	62	3.209	203.2	0.889	52.42847	12.13971	Si
SLV 8	-796	-3791	62	3.274	200.3	0.889	53.50484	12.13971	Si
SLV 13	-1988	-2694	-13	1.863	316.1	0.912	29.70073	6.53399	Si
SLV 14	-1940	-2725	-13	1.896	311.4	0.911	30.25197	6.53399	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.472	SLU 65	Si
V_SLU	12.169	SLU 78	Si
PF_SLV	0.236	SLV 15	No
V_SLV	6.055	SLV 13	Si
PFFP_SLV	1.248	SLV 15	Si
R_SLV	2.658	SLV 9	Si

Maschio 202

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L7	F1	1.655	0.28	3.222	3.222	3.223			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	11.87	-802.72	-5080	-0.0000261	0.0003743	0.0035	1.655	3751.2	4543.24	4543.24	5.66	No	Si
SLU 65	13.97	1580.94	-5746	-0.0000378	0.0003743	0.0035	1.655	4175.62	4402.21	4402.21	2.78	No	Si
SLU 67	11.87	-832.73	-5668	-0.0000284	0.0003743	0.0035	1.655	4126.95	4948.37	4948.37	5.94	No	Si
SLU 67	13.97	1807.88	-6695	-0.0000439	0.0003743	0.0035	1.655	4754.25	4977.51	4977.51	2.75	No	Si
SLU 72	11.87	-818.7	-5809	-0.0000288	0.0003743	0.0035	1.655	4214.94	5046.35	5046.35	6.16	No	Si
SLU 72	13.97	1827.79	-6872	-0.0000448	0.0003743	0.0035	1.655	4858.07	5085.83	5085.83	2.78	No	Si
SLU 68	11.87	-810.73	-5449	-0.0000274	0.0003743	0.0035	1.655	3988.61	4796.74	4796.74	5.92	No	Si
SLU 68	13.97	1704.09	-6311	-0.0000413	0.0003743	0.0035	1.655	4523.96	4742.96	4742.96	2.78	No	Si
SLU 48	11.87	-688.2	-5859	-0.0000274	0.0003743	0.0035	1.655	4246.07	5080.95	5080.95	7.38	No	Si
SLU 48	13.97	1778.65	-6714	-0.0000436	0.0003743	0.0035	1.655	4765.46	4989.13	4989.13	2.81	No	Si
SLU 64	11.87	-802.64	-5055	-0.000026	0.0003743	0.0035	1.655	3734.8	4526.04	4526.04	5.64	No	Si
SLU 64	13.97	1582.29	-5733	-0.0000377	0.0003743	0.0035	1.655	4167.59	4394.54	4394.54	2.78	No	Si
SLU 71	11.87	-818.66	-5794	-0.0000287	0.0003743	0.0035	1.655	4205.49	5035.77	5035.77	6.15	No	Si
SLU 71	13.97	1828.6	-6864	-0.0000448	0.0003743	0.0035	1.655	4853.55	5081.09	5081.09	2.78	No	Si
SLU 70	11.87	-840.74	-6037	-0.0000298	0.0003743	0.0035	1.655	4356.74	5203.72	5203.72	6.19	No	Si
SLU 70	13.97	1931.04	-7261	-0.0000475	0.0003743	0.0035	1.655	5083.75	5327.14	5327.14	2.76	No	Si
SLU 66	11.87	-832.68	-5653	-0.0000284	0.0003743	0.0035	1.655	4117.43	4937.83	4937.83	5.93	No	Si
SLU 66	13.97	1808.69	-6688	-0.0000439	0.0003743	0.0035	1.655	4749.69	4972.79	4972.79	2.75	No	Si
SLU 69	11.87	-840.69	-6022	-0.0000298	0.0003743	0.0035	1.655	4347.42	5193.38	5193.38	6.18	No	Si
SLU 69	13.97	1931.85	-7253	-0.0000474	0.0003743	0.0035	1.655	5079.34	5322.35	5322.35	2.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	11.87	-3251.9	-2415	-0.0012252	0.0005615	0.0035	1.324		2618.09	2618.09	0.81		No
SLV 15	13.97	3181.17	-6704	-0.0000696	0.0005615	0.0035	1.655		5306.51	5306.51	1.67		Si
SLD 15	11.87	-1726.03	-3209	-0.0000396	0.0005615	0.0035	1.324		3229.94	3229.94	1.87		Si
SLD 15	13.97	2027.44	-5308	-0.0000428	0.0005615	0.0035	1.655		4297.01	4297.01	2.12		Si
SLD 16	11.87	-1672.57	-3256	-0.0000371	0.0005615	0.0035	1.324		3266.23	3266.23	1.95		Si
SLD 16	13.97	1971.59	-5262	-0.0000417	0.0005615	0.0035	1.655		4262.68	4262.68	2.16		Si
SLD 14	11.87	-1704.31	-2608	-0.0000535	0.0005615	0.0035	1.324		2768.46	2768.46	1.62		Si
SLD 14	13.97	1982.98	-4993	-0.0000416	0.0005615	0.0035	1.655		4064.96	4064.96	2.05		Si
SLD 13	11.87	-1757.77	-2560	-0.0000644	0.0005615	0.0035	1.324		2731.39	2731.39	1.55		Si
SLD 13	13.97	2038.84	-5040	-0.0000428	0.0005615	0.0035	1.655		4099.61	4099.61	2.01		Si
SLV 16	11.87	-3127.44	-2526	-0.0010274	0.0005615	0.0035	1.324		2704.4	2704.4	0.86		No
SLV 16	13.97	3051.14	-6595	-0.0000661	0.0005615	0.0035	1.655		5228.55	5228.55	1.71		Si
SLV 10	11.87	-1458.32	-761	-0.0005677	0.0005615	0.0035	1.324		1310.93	1310.93	0.9		No
SLV 10	13.97	1754.11	-3835	-0.0000371	0.0005615	0.0035	1.655		3197.13	3197.13	1.82		Si
SLV 14	11.87	-3199.89	-1059	-0.0021946	0.0005615	0.0035	1.324		1549.5	1549.5	0.48		No
SLV 14	13.97	3076.27	-5987	-0.00007	0.0005615	0.0035	1.655		4792.42	4792.42	1.56		Si
SLV 13	11.87	-3324.35	-949	-0.0025062	0.0005615	0.0035	1.324		1460.97	1460.97	0.44		No
SLV 13	13.97	3206.3	-6096	-0.0000744	0.0005615	0.0035	1.655		4870.66	4870.66	1.52		Si
SLV 9	11.87	-1539.41	-689	-0.0006651	0.0005615	0.0035	1.324		1253.17	1253.17	0.81		No
SLV 9	13.97	1838.83	-3906	-0.0000392	0.0005615	0.0035	1.655		3251.22	3251.22	1.77		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	11.87	-818.66	-5794	-4824	-2566	1.655	1.655	-10411	8333	3861	35683	13876	4220	18097	No	7.05	Si
SLU 71	13.97	1828.6	-6864	-5716	-2558	1.655	1.655	-12334	8589	3980	35683	13876	4220	18097	No	7.08	Si
SLU 79	11.87	-826.72	-5551	-4622	-2591	1.655	1.655	-9975	8274	3834	35683	13876	4220	18097	No	6.98	Si
SLU 79	13.97	1766.32	-6746	-5617	-2579	1.655	1.655	-12122	8561	3967	35683	13876	4220	18097	No	7.02	Si
SLU 70	11.87	-840.74	-6037	-5027	-2685	1.655	1.655	-10849	8391	3888	35683	13876	4220	18097	No	6.74	Si
SLU 70	13.97	1931.04	-7261	-6046	-2678	1.655	1.655	-13047	8684	4024	35683	13876	4220	18097	No	6.76	Si
SLU 69	11.87	-840.69	-6022	-5015	-2689	1.655	1.655	-10822	8387	3887	35683	13876	4220	18097	No	6.73	Si
SLU 69	13.97	1931.85	-7253	-6040	-2681	1.655	1.655	-13034	8682	4023	35683	13876	4220	18097	No	6.75	Si
SLU 74	11.87	-840.75	-5411	-4505	-2574	1.655	1.655	-9722	8241	3819	35683	13876	4220	18097	No	7.03	Si
SLU 74	13.97	1746.41	-6570	-5471	-2566	1.655	1.655	-11806	8519	3948	35683	13876	4220	18097	No	7.05	Si
SLU 72	11.87	-818.7	-5809	-4837	-2563	1.655	1.655	-10438	8336	3863	35683	13876	4220	18097	No	7.06	Si
SLU 72	13.97	1827.79	-6872	-5722	-2554	1.655	1.655	-12348	8591	3981	35683	13876	4220	18097	No	7.08	Si
SLU 80	11.87	-826.77	-5566	-4635	-2588	1.655	1.655	-10002	8278	3836	35683	13876	4220	18097	No	6.99	Si
SLU 80	13.97	1765.51	-6754	-5624	-2576	1.655	1.655	-12136	8563	3968	35683	13876	4220	18097	No	7.03	Si
SLU 77	11.87	-848.75	-5780	-4813	-2714	1.655	1.655	-10386	8329	3860	35683	13876	4220	18097	No	6.67	Si
SLU 77	13.97	1869.57	-7135	-5942	-2703	1.655	1.655	-12822	8654	4010	35683	13876	4220	18097	No	6.7	Si
SLU 78	11.87	-848.8	-5795	-4826	-2711	1.655	1.655	-10413	8333	3862	35683	13876	4220	18097	No	6.68	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	13.97	1868.75	-7143	-5948	-2699	1.655	1.655	-12835	8656	4011	35683	13876	4220	18097	No	6.7	Si
SLU 75	11.87	-840.79	-5426	-4518	-2570	1.655	1.655	-9750	8244	3820	35683	13876	4220	18097	No	7.04	Si
SLU 75	13.97	1745.6	-6578	-5477	-2562	1.655	1.655	-11819	8520	3948	35683	13876	4220	18097	No	7.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	11.87	-1458.32	-761	-634	-3489	1.324	0	0	0	0	35683	16652	3376	20028		5.74	Si
SLV 10	13.97	1754.11	-3835	-3193	-3247	1.655	1.1103	-6891	11795	3667	35683	20815	4220	25035		7.71	Si
SLV 13	11.87	-3324.35	-949	-790	-6281	1.324	0	0	0	0	35683	16652	3376	20028		3.19	Si
SLV 13	13.97	3206.3	-6096	-5076	-5199	1.655	0.9045	-10953	12607	3193	35683	20815	4220	25035		4.82	Si
SLD 16	11.87	-1672.57	-3256	-2711	-3422	1.324	0.9415	0	0	0	35683	16652	3376	20028		5.85	Si
SLD 16	13.97	1971.59	-5262	-4381	-2934	1.655	1.3584	-9455	12308	4681	35683	20815	4220	25035		8.53	Si
SLD 13	11.87	-1757.77	-2560	-2132	-3661	1.324	0.4229	0	0	0	35683	16652	3376	20028		5.47	Si
SLD 13	13.97	2038.84	-5040	-4197	-3196	1.655	1.2689	-9056	12228	4344	35683	20815	4220	25035		7.83	Si
SLV 14	11.87	-3199.89	-1059	-882	-6074	1.324	0	0	0	0	35683	16652	3376	20028		3.3	Si
SLV 14	13.97	3076.27	-5987	-4985	-4991	1.655	0.9409	-10757	12568	3311	35683	20815	4220	25035		5.02	Si
SLD 15	11.87	-1726.03	-3209	-2672	-3511	1.324	0.8687	0	0	0	35683	16652	3376	20028		5.7	Si
SLD 15	13.97	2027.44	-5308	-4420	-3023	1.655	1.3367	-9539	12324	4613	35683	20815	4220	25035		8.28	Si
SLV 9	11.87	-1539.41	-689	-574	-3624	1.324	0	0	0	0	35683	16652	3376	20028		5.53	Si
SLV 9	13.97	1838.83	-3906	-3252	-3383	1.655	1.0701	-7018	11820	3542	35683	20815	4220	25035		7.4	Si
SLV 16	11.87	-3127.44	-2526	-2103	-5735	1.324	0	0	0	0	35683	16652	3376	20028		3.49	Si
SLV 16	13.97	3051.14	-6595	-5492	-4595	1.655	1.0946	-11851	12787	3919	35683	20815	4220	25035		5.45	Si
SLD 14	11.87	-1704.31	-2608	-2172	-3572	1.324	0.5219	0	0	0	35683	16652	3376	20028		5.61	Si
SLD 14	13.97	1982.98	-4993	-4158	-3107	1.655	1.291	-8972	12211	4414	35683	20815	4220	25035		8.06	Si
SLV 15	11.87	-3251.9	-2415	-2011	-5942	1.324	0	0	0	0	35683	16652	3376	20028		3.37	Si
SLV 15	13.97	3181.17	-6704	-5582	-4804	1.655	1.0589	-12046	12826	3803	35683	20815	4220	25035		5.21	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.481 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.53	4796	-2223	194.5	301.38	1.55	Si
SLV 1	179667	0.53	4968	-2302	194.5	311.81	1.6	Si
SLV 6	179667	0.53	5015	-2324	194.5	314.65	1.62	Si
SLV 5	179667	0.53	5126	-2376	194.5	321.42	1.65	Si
SLV 4	179667	0.53	6646	-3080	194.5	412.38	2.12	Si
SLV 3	179667	0.53	6817	-3159	194.5	422.54	2.17	Si
SLV 10	179667	0.53	7026	-3256	194.5	434.84	2.24	Si
SLV 9	179667	0.53	7138	-3308	194.5	441.42	2.27	Si
SLV 8	179667	0.53	11180	-5181	194.5	672.2	3.46	Si
SLV 7	179667	0.53	11291	-5233	194.5	678.39	3.49	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.481 Wa = 0.05 Ta = 0.0619

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2480	-6877	-26	2.483	472.9	0.898	40.19883	12.12287	Si
SLV 7	-2462	-6805	-26	2.495	471.1	0.897	40.39701	12.12287	Si
SLV 12	-2418	-5649	-25	2.524	466.8	0.897	40.88654	12.12287	Si
SLV 11	-2400	-5577	-25	2.536	465.1	0.897	41.09129	12.12287	Si
SLV 6	-2025	-1989	26	2.813	429	0.893	45.779	12.12287	Si
SLV 5	-2007	-1917	26	2.828	427.2	0.893	46.03133	12.12287	Si
SLV 10	-1963	-761	26	2.865	423	0.892	46.65712	12.12287	Si
SLV 9	-1944	-689	26	2.88	421.3	0.892	46.91871	12.12287	Si
SLV 4	-2398	-6618	-8	2.541	465	0.897	41.17778	6.53009	Si
SLV 3	-2371	-6507	-8	2.56	462.3	0.896	41.49664	6.53009	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.749	SLU 66	Si
V_SLU	6.668	SLU 77	Si
PF_SLV	0.439	SLV 13	No
V_SLV	3.188	SLV 13	Si
PFFP_SLV	1.549	SLV 2	Si
R_SLV	3.316	SLV 8	Si

Maschio 204

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.454	L7	F1	1.369	0.28	2.766	2.389	3.144			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.025	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 9	11.87	-263.9	-4072	-0.0000202	0.0003743	0.0035	1.3693	2497.12	3065.51	3065.51	11.62	No	Si
SLU 9	14.26	214.31	-515	-0.0000066	0.0003743	0.0035	1.3693	348.03	451.85	451.85	2.11	No	Si
SLU 27	11.87	-346.3	-4563	-0.0000236	0.0003743	0.0035	1.3693	2758.84	3344.6	3344.6	9.66	No	Si
SLU 27	14.26	271.83	-668	-0.0000083	0.0003743	0.0035	1.3693	449.72	553.77	553.77	2.04	No	Si
SLU 37	11.87	-402.16	-4629	-0.0000248	0.0003743	0.0035	1.3693	2793.43	3382.65	3382.65	8.41	No	Si
SLU 37	14.26	278.48	-689	-0.0000085	0.0003743	0.0035	1.3693	463.24	567.4	567.4	2.04	No	Si
SLU 36	11.87	-421.06	-4731	-0.0000256	0.0003743	0.0035	1.3693	2846.64	3441.74	3441.74	8.17	No	Si
SLU 36	14.26	290.51	-757	-0.0000087	0.0003743	0.0035	1.3693	508.37	612.84	612.84	2.11	No	Si
SLU 38	11.87	-411.82	-4658	-0.0000251	0.0003743	0.0035	1.3693	2808.66	3399.5	3399.5	8.25	No	Si
SLU 38	14.26	282.59	-700	-0.0000086	0.0003743	0.0035	1.3693	470.79	575.02	575.02	2.03	No	Si
SLU 35	11.87	-411.4	-4702	-0.0000253	0.0003743	0.0035	1.3693	2831.48	3424.84	3424.84	8.32	No	Si
SLU 35	14.26	286.4	-746	-0.0000086	0.0003743	0.0035	1.3693	500.84	605.26	605.26	2.11	No	Si
SLU 28	11.87	-355.96	-4592	-0.0000239	0.0003743	0.0035	1.3693	2774.14	3361.4	3361.4	9.44	No	Si
SLU 28	14.26	275.94	-680	-0.0000084	0.0003743	0.0035	1.3693	457.28	561.39	561.39	2.03	No	Si
SLU 30	11.87	-346.73	-4519	-0.0000234	0.0003743	0.0035	1.3693	2735.81	3319.42	3319.42	9.57	No	Si
SLU 30	14.26	268.02	-623	-0.0000085	0.0003743	0.0035	1.3693	419.55	523.43	523.43	1.95	No	Si
SLU 8	11.87	-254.24	-4043	-0.0000199	0.0003743	0.0035	1.3693	2481.29	3049.11	3049.11	11.99	No	Si
SLU 8	14.26	210.21	-504	-0.0000065	0.0003743	0.0035	1.3693	340.4	444.25	444.25	2.11	No	Si
SLU 29	11.87	-337.07	-4490	-0.0000232	0.0003743	0.0035	1.3693	2720.43	3302.67	3302.67	9.8	No	Si
SLU 29	14.26	263.91	-611	-0.0000083	0.0003743	0.0035	1.3693	411.96	515.82	515.82	1.95	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	11.87	700.7	-199	-0.006436	0.0005615	0.0035	1.0955		240	240	0.34		No
SLV 10	14.26	-230.32	863	0.0856669	0.0005615	0.0035	1.0955		0	0	0		No
SLD 9	11.87	172.85	-2147	-0.000011	0.0005615	0.0035	1.3693		1527.4	1527.4	8.84		Si
SLD 9	14.26	-31.78	68	0.0067852	0.0005615	0.0035	1.0955		0	0	0		No
SLD 5	11.87	264.61	-2254	-0.000013	0.0005615	0.0035	1.3693		1597.07	1597.07	6.04		Si
SLD 5	14.26	-72.5	188	0.0189226	0.0005615	0.0035	1.0955		0	0	0		No
SLV 2	11.87	436.09	-3123	-0.0000192	0.0005615	0.0035	1.3693		2152.19	2152.19	4.94		Si
SLV 2	14.26	-152.84	388	0.0388471	0.0005615	0.0035	1.0955		0	0	0		No
SLV 9	11.87	692.43	-178	-0.0065198	0.0005615	0.0035	1.0955		225.72	225.72	0.33		No
SLV 9	14.26	-230.5	850	0.0844715	0.0005615	0.0035	1.0955		0	0	0		No
SLD 10	11.87	176.47	-2156	-0.0000111	0.0005615	0.0035	1.3693		1533.4	1533.4	8.69		Si
SLD 10	14.26	-31.7	73	0.0073149	0.0005615	0.0035	1.0955		0	0	0		No
SLV 1	11.87	423.41	-3091	-0.0000189	0.0005615	0.0035	1.3693		2131.59	2131.59	5.03		Si
SLV 1	14.26	-153.11	370	0.0370094	0.0005615	0.0035	1.0955		0	0	0		No
SLD 6	11.87	268.23	-2264	-0.0000131	0.0005615	0.0035	1.3693		1603.07	1603.07	5.98		Si
SLD 6	14.26	-72.42	194	0.0194419	0.0005615	0.0035	1.0955		0	0	0		No
SLV 6	11.87	915.38	-450	-0.0071335	0.0005615	0.0035	1.0955		409.17	409.17	0.45		No
SLV 6	14.26	-325.59	1145	0.1138647	0.0005615	0.0035	1.0955		0	0	0		No
SLV 5	11.87	907.12	-429	-0.007206	0.0005615	0.0035	1.0955		394.99	394.99	0.44		No
SLV 5	14.26	-325.77	1133	0.1126686	0.0005615	0.0035	1.0955		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	11.87	-443.28	-5566	-4449	-1729	1.3693	1.3693	-11604	8492	3256	30925	11481	4365	15846	No	9.16	Si
SLU 80	14.26	296.56	-815	-651	-1790	1.3693	0.9624	-1699	7171	1932	30925	11481	4365	15846	No	8.85	Si
SLU 83	11.87	-434.14	-5344	-4272	-1758	1.3693	1.3693	-11141	8430	3232	30925	11481	4365	15846	No	9.01	Si
SLU 83	14.26	247.57	-838	-670	-1541	1.3693	1.1675	-1747	7177	2346	30925	11481	4365	15846	No	10.29	Si
SLU 78	11.87	-452.51	-5639	-4507	-1863	1.3693	1.3693	-11756	8512	3264	30925	11481	4365	15846	No	8.5	Si
SLU 78	14.26	304.48	-872	-697	-1847	1.3693	1.0065	-1818	7187	2025	30925	11481	4365	15846	No	8.58	Si
SLU 38	11.87	-411.82	-4658	-3723	-1628	1.3693	1.3693	-9711	8239	3159	30925	11481	4365	15846	No	9.73	Si
SLU 38	14.26	282.59	-700	-560	-1772	1.3693	0.8432	-1460	7139	1686	30925	11481	4365	15846	No	8.94	Si
SLU 77	11.87	-442.85	-5610	-4484	-1823	1.3693	1.3693	-11695	8504	3260	30925	11481	4365	15846	No	8.69	Si
SLU 77	14.26	300.38	-861	-688	-1814	1.3693	1.0069	-1794	7184	2025	30925	11481	4365	15846	No	8.74	Si
SLU 36	11.87	-421.06	-4731	-3782	-1762	1.3693	1.3693	-9863	8260	3167	30925	11481	4365	15846	No	8.99	Si
SLU 36	14.26	290.51	-757	-605	-1828	1.3693	0.903	-1579	7155	1809	30925	11481	4365	15846	No	8.67	Si
SLU 75	11.87	-425.14	-5387	-4306	-1806	1.3693	1.3693	-11230	8442	3237	30925	11481	4365	15846	No	8.77	Si
SLU 75	14.26	253.36	-873	-698	-1544	1.3693	1.1834	-1820	7187	2381	30925	11481	4365	15846	No	10.26	Si
SLU 74	11.87	-415.48	-5358	-4282	-1766	1.3693	1.3693	-11169	8434	3234	30925	11481	4365	15846	No	8.97	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	14.26	249.25	-862	-689	-1511	1.3693	1.1861	-1796	7184	2386	30925	11481	4365	15846	No	10.48	Si
SLU 35	11.87	-411.4	-4702	-3758	-1722	1.3693	1.3693	-9802	8251	3164	30925	11481	4365	15846	No	9.2	Si
SLU 35	14.26	286.4	-746	-596	-1795	1.3693	0.9019	-1555	7152	1806	30925	11481	4365	15846	No	8.83	Si
SLU 84	11.87	-443.8	-5374	-4295	-1798	1.3693	1.3693	-11202	8438	3235	30925	11481	4365	15846	No	8.81	Si
SLU 84	14.26	251.68	-849	-679	-1573	1.3693	1.1649	-1770	7180	2342	30925	11481	4365	15846	No	10.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	11.87	-1390.64	-6982	-5581	-6902	1.3693	1.3693	-14556	13328	5110	30925	17222	4365	21586		3.13	Si
SLV 12	14.26	580.69	-2250	-1798	-4648	1.3693	1.2797	-4690	11355	4069	30925	17222	4365	21586		4.64	Si
SLV 2	11.87	436.09	-3123	-2497	3803	1.3693	1.3693	-6511	11719	4493	30925	17222	4365	21586		5.68	Si
SLV 2	14.26	-152.84	388	310	2616	1.0955	0.8736	0	0	0	30925	13777	3492	17269		6.6	Si
SLV 10	11.87	700.7	-199	-159	3051	1.0955	0	0	0	0	30925	13777	3492	17269		5.66	Si
SLV 10	14.26	-230.32	863	689	1901	1.0955	1.2529	0	0	0	30925	13777	3492	17269		9.08	Si
SLV 7	11.87	-1184.22	-7213	-5765	-5016	1.3693	1.3693	-15036	13424	5147	30925	17222	4365	21586		4.3	Si
SLV 7	14.26	485.24	-1980	-1582	-3302	1.3693	1.3187	-4127	11242	4151	30925	17222	4365	21586		6.54	Si
SLV 5	11.87	907.12	-429	-343	4937	1.0955	0	0	0	0	30925	13777	3492	17269		3.5	Si
SLV 5	14.26	-325.77	1133	905	3247	1.0955	1.1912	0	0	0	30925	13777	3492	17269		5.32	Si
SLV 15	11.87	-919.61	-4288	-3427	-5769	1.3693	1.3693	-8939	12204	4679	30925	17222	4365	21586		3.74	Si
SLV 15	14.26	407.76	-1506	-1203	-4017	1.3693	1.2415	-3139	11044	3839	30925	17222	4365	21586		5.37	Si
SLV 16	11.87	-906.93	-4320	-3453	-5674	1.3693	1.3693	-9007	12218	4685	30925	17222	4365	21586		3.8	Si
SLV 16	14.26	408.03	-1487	-1188	-3960	1.3693	1.2307	-3100	11037	3803	30925	17222	4365	21586		5.45	Si
SLV 8	11.87	-1175.95	-7234	-5782	-4954	1.3693	1.3693	-15080	13433	5150	30925	17222	4365	21586		4.36	Si
SLV 8	14.26	485.42	-1968	-1573	-3265	1.3693	1.3138	-4102	11237	4134	30925	17222	4365	21586		6.61	Si
SLV 6	11.87	915.38	-450	-360	4998	1.0955	0	0	0	0	30925	13777	3492	17269		3.46	Si
SLV 6	14.26	-325.59	1145	915	3285	1.0955	1.2009	0	0	0	30925	13777	3492	17269		5.26	Si
SLV 11	11.87	-1398.9	-6961	-5564	-6964	1.3693	1.3693	-14512	13319	5107	30925	17222	4365	21586		3.1	Si
SLV 11	14.26	580.51	-2262	-1808	-4686	1.3693	1.2842	-4716	11360	4085	30925	17222	4365	21586		4.61	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.064 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.52	0	-763	119.37	0	0	No, e>t/2
SLV 1	179667	0.52	0	-768	119.37	0	0	No, e>t/2
SLV 5	179667	0.52	0	1127	119.37	0	0	No, Trazione
SLV 6	179667	0.52	0	1131	119.37	0	0	No, Trazione
SLV 10	179667	0.52	0	941	119.37	0	0	No, Trazione
SLV 9	179667	0.52	0	938	119.37	0	0	No, Trazione
SLV 14	179667	0.52	3636	-1394	119.37	190.53	1.6	Si
SLV 13	179667	0.52	3649	-1399	119.37	191.19	1.6	Si
SLV 4	179667	0.52	6718	-2576	119.37	344.73	2.89	Si
SLV 3	179667	0.52	6730	-2581	119.37	345.35	2.89	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.064 Wa = 0.05 Ta = 0.0456

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2262	-6961	-121	2.419	385	0.906	38.82569	8.88581	Si
SLV 12	-2250	-6982	-121	2.428	383.8	0.905	38.97695	8.88581	Si
SLV 7	-1980	-7213	-69	2.665	357.2	0.901	42.97743	8.88581	Si
SLV 8	-1968	-7234	-69	2.676	356	0.901	43.16101	8.88581	Si
SLV 15	-1506	-4288	-114	3.15	311.2	0.894	51.21769	5.71706	Si
SLV 16	-1487	-4320	-115	3.174	309.4	0.894	51.61652	5.71706	Si
SLV 13	-572	-2253	-57	5.084	226.4	0.895	82.5392	5.71706	Si
SLV 3	-564	-5126	59	5.108	225.8	0.895	82.90696	5.71706	Si
SLV 14	-553	-2285	-57	5.146	224.9	0.896	83.47542	5.71706	Si
SLV 4	-545	-5159	58	5.172	224.3	0.896	83.86376	5.71706	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.953	SLU 30	Si
V_SLU	8.505	SLU 78	Si
PF_SLV	0	SLD 5	No
V_SLV	3.1	SLV 11	Si
PFFP_SLV	0	SLV 10	No
R_SLV	4.369	SLV 11	Si

Maschio 205

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.454	L7	F1	1.37	0.28	2.764	2.386	3.142			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 36	11.87	-315.19	-4536	-0.0000233	0.0003743	0.0035	1.37	2746.1	10150.8	10150.8	32.2	No	Si
SLU 36	14.26	298.55	-170	-0.0000339	0.0003743	0.0035	1.37	0	7507.47	7507.47	25.15	No	Si
SLU 78	11.87	-340.47	-5415	-0.0000274	0.0003743	0.0035	1.37	3194.81	10473.84	10473.84	30.76	No	Si
SLU 78	14.26	315.88	-248	-0.0000304	0.0003743	0.0035	1.37	0	7610.89	7610.89	24.09	No	Si
SLU 71	11.87	-292.45	-5248	-0.0000259	0.0003743	0.0035	1.37	3111.92	10416.29	10416.29	35.62	No	Si
SLU 71	14.26	306.69	-196	-0.0000331	0.0003743	0.0035	1.37	0	7541.73	7541.73	24.59	No	Si
SLU 72	11.87	-300.82	-5268	-0.0000261	0.0003743	0.0035	1.37	3121.9	10423.21	10423.21	34.65	No	Si
SLU 72	14.26	310.14	-202	-0.0000331	0.0003743	0.0035	1.37	0	7549.63	7549.63	24.34	No	Si
SLU 70	11.87	-303.04	-5305	-0.0000263	0.0003743	0.0035	1.37	3140.37	10436.02	10436.02	34.44	No	Si
SLU 70	14.26	310.7	-239	-0.0000303	0.0003743	0.0035	1.37	0	7599.17	7599.17	24.46	No	Si
SLU 77	11.87	-332.1	-5395	-0.0000272	0.0003743	0.0035	1.37	3184.94	10466.97	10466.97	31.52	No	Si
SLU 77	14.26	312.43	-242	-0.0000303	0.0003743	0.0035	1.37	0	7603.03	7603.03	24.33	No	Si
SLU 79	11.87	-329.88	-5358	-0.000027	0.0003743	0.0035	1.37	3166.58	10454.22	10454.22	31.69	No	Si
SLU 79	14.26	311.87	-204	-0.0000332	0.0003743	0.0035	1.37	0	7553.51	7553.51	24.22	No	Si
SLU 80	11.87	-338.25	-5378	-0.0000272	0.0003743	0.0035	1.37	3176.48	10461.1	10461.1	30.93	No	Si
SLU 80	14.26	315.32	-210	-0.0000333	0.0003743	0.0035	1.37	0	7561.4	7561.4	23.98	No	Si
SLU 38	11.87	-312.97	-4499	-0.0000231	0.0003743	0.0035	1.37	2726.63	10136.74	10136.74	32.39	No	Si
SLU 38	14.26	297.99	-133	-0.0000375	0.0003743	0.0035	1.37	0	7457.61	7457.61	25.03	No	Si
SLU 69	11.87	-294.67	-5285	-0.000026	0.0003743	0.0035	1.37	3130.42	10429.12	10429.12	35.39	No	Si
SLU 69	14.26	307.25	-233	-0.0000302	0.0003743	0.0035	1.37	0	7591.3	7591.3	24.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	11.87	-1291.27	-6230	-0.0000469	0.0005615	0.0035	1.37		11762.71	11762.71	9.11		Si
SLV 8	14.26	261.57	-2373	-0.0000136	0.0005615	0.0035	1.37		9842.65	9842.65	37.63		Si
SLV 6	11.87	588.51	-894	-0.0000301	0.0005615	0.0035	1.37		8654.68	8654.68	14.71		Si
SLV 6	14.26	200.39	1576	0.0034561	0.0005615	0.0035	1.096		0	0	0		No
SLV 3	11.87	-1022.78	-4402	-0.0000347	0.0005615	0.0035	1.37		10982.11	10982.11	10.74		Si
SLV 3	14.26	471.54	-1294	-0.0000141	0.0005615	0.0035	1.37		9029.29	9029.29	19.15		Si
SLV 4	11.87	-1041.73	-4386	-0.000035	0.0005615	0.0035	1.37		10973.88	10973.88	10.53		Si
SLV 4	14.26	476.15	-1299	-0.0000142	0.0005615	0.0035	1.37		9034.4	9034.4	18.97		Si
SLV 7	11.87	-1278.93	-6241	-0.0000468	0.0005615	0.0035	1.37		11767.02	11767.02	9.2		Si
SLV 7	14.26	258.57	-2370	-0.0000135	0.0005615	0.0035	1.37		9840.2	9840.2	38.06		Si
SLV 10	11.87	935.72	-871	-0.0000813	0.0005615	0.0035	1.37		8633.34	8633.34	9.23		Si
SLV 10	14.26	-1.2	1839	0.0041376	0.0005615	0.0035	1.096		0	0	0		No
SLV 12	11.87	-944.06	-6208	-0.0000408	0.0005615	0.0035	1.37		11753.66	11753.66	12.45		Si
SLV 12	14.26	59.98	-2110	-0.0000092	0.0005615	0.0035	1.37		9662.73	9662.73	161.09		Si
SLV 5	11.87	600.85	-904	-0.0000311	0.0005615	0.0035	1.37		8664.84	8664.84	14.42		Si
SLV 5	14.26	197.39	1579	0.0034656	0.0005615	0.0035	1.096		0	0	0		No
SLV 9	11.87	948.06	-882	-0.0000824	0.0005615	0.0035	1.37		8643.52	8643.52	9.12		Si
SLV 9	14.26	-4.2	1843	0.004147	0.0005615	0.0035	1.096		0	0	0		No
SLV 13	11.87	698.52	-2727	-0.0000225	0.0005615	0.0035	1.37		10079.15	10079.15	14.43		Si
SLV 13	14.26	-218.78	769	0.0015218	0.0005615	0.0035	1.096		2695.96	2695.96	12.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	11.87	-312.97	-4499	-3746	-1258	1.37	1.37	-9766	8247	3163	10864	11487	3494	14027	No	11.15	Si
SLU 38	14.26	297.99	-133	-111	-1508	1.37	0	0	8066	0	10864	11487	3494	10864	No	7.2	Si
SLU 30	11.87	-275.55	-4389	-3655	-1078	1.37	1.37	-9528	8215	3151	10864	11487	3494	14015	No	13	Si
SLU 30	14.26	292.81	-124	-103	-1435	1.37	0	0	8088	0	10864	11487	3494	10864	No	7.57	Si
SLU 78	11.87	-340.47	-5415	-4509	-1451	1.37	1.37	-11754	8512	3265	10864	11487	3494	14129	No	9.74	Si
SLU 78	14.26	315.88	-248	-206	-1504	1.37	0	-3837	7825	0	10864	11487	3494	10864	No	7.22	Si
SLU 37	11.87	-304.6	-4479	-3730	-1229	1.37	1.37	-9722	8241	3161	10864	11487	3494	14025	No	11.41	Si
SLU 37	14.26	294.54	-127	-106	-1484	1.37	0	0	8080	0	10864	11487	3494	10864	No	7.32	Si
SLU 79	11.87	-329.88	-5358	-4461	-1335	1.37	1.37	-11631	8495	3259	10864	11487	3494	14122	No	10.58	Si
SLU 79	14.26	311.87	-204	-170	-1487	1.37	0	-3578	7892	0	10864	11487	3494	10864	No	7.31	Si
SLU 77	11.87	-332.1	-5395	-4492	-1422	1.37	1.37	-11711	8506	3263	10864	11487	3494	14126	No	9.94	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	14.26	312.43	-242	-201	-1480	1.37	0	-3780	7821	0	10864	11487	3494	10864	No	7.34	Si
SLU 35	11.87	-306.82	-4516	-3760	-1316	1.37	1.37	-9803	8251	3165	10864	11487	3494	14029	No	10.66	Si
SLU 35	14.26	295.11	-164	-137	-1476	1.37	0	-3202	7918	0	10864	11487	3494	10864	No	7.36	Si
SLU 36	11.87	-315.19	-4536	-3777	-1345	1.37	1.37	-9846	8257	3167	10864	11487	3494	14031	No	10.43	Si
SLU 36	14.26	298.55	-170	-142	-1501	1.37	0	-3265	7917	0	10864	11487	3494	10864	No	7.24	Si
SLU 80	11.87	-338.25	-5378	-4478	-1364	1.37	1.37	-11674	8501	3261	10864	11487	3494	14125	No	10.36	Si
SLU 80	14.26	315.32	-210	-175	-1511	1.37	0	-3639	7894	0	10864	11487	3494	10864	No	7.19	Si
SLU 72	11.87	-300.82	-5268	-4387	-1184	1.37	1.37	-11436	8469	3249	10864	11487	3494	14112	No	11.92	Si
SLU 72	14.26	310.14	-202	-168	-1438	1.37	0	-3547	7891	0	10864	11487	3494	10864	No	7.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	11.87	935.72	-871	-726	3855	1.37	0	-11794	13978	0	10864	17230	3494	10864		2.82	Si
SLV 10	14.26	-1.2	1839	1532	1716	1.096	1.37	0	0	0	10864	13784	2795	10864		6.33	Si
SLV 14	11.87	679.57	-2710	-2257	3664	1.37	1.3028	-6203	11657	4252	10864	17230	3494	15116		4.13	Si
SLV 14	14.26	-214.17	763	636	2457	1.096	1.2133	0	0	0	10864	13784	2795	10864		4.42	Si
SLV 13	11.87	698.52	-2727	-2271	3742	1.37	1.2865	-6319	11681	4207	10864	17230	3494	15071		4.03	Si
SLV 13	14.26	-218.78	769	640	2497	1.096	1.2014	0	0	0	10864	13784	2795	10864		4.35	Si
SLV 3	11.87	-1022.78	-4402	-3666	-5192	1.37	1.358	-9683	12353	4697	10864	17230	3494	15561		3	Si
SLV 3	14.26	471.54	-1294	-1077	-3404	1.37	0.9615	-3976	11214	3019	10864	17230	3494	13883		4.08	Si
SLV 1	11.87	-458.85	-2801	-2333	-3013	1.37	1.37	-6081	11633	4462	10864	17230	3494	15326		5.09	Si
SLV 1	14.26	453.19	-109	-91	-2536	1.37	0	0	16250	0	10864	17230	3494	10864		4.28	Si
SLV 4	11.87	-1041.73	-4386	-3652	-5271	1.37	1.3425	-9759	12369	4649	10864	17230	3494	15513		2.94	Si
SLV 4	14.26	476.15	-1299	-1082	-3444	1.37	0.9556	-4017	11222	3003	10864	17230	3494	13866		4.03	Si
SLV 2	11.87	-477.79	-2785	-2319	-3092	1.37	1.37	-6045	11626	4460	10864	17230	3494	15323		4.96	Si
SLV 2	14.26	457.79	-115	-95	-2576	1.37	0	0	15792	0	10864	17230	3494	10864		4.22	Si
SLV 7	11.87	-1278.93	-6241	-5197	-5383	1.37	1.37	-13548	13126	5035	10864	17230	3494	15899		2.95	Si
SLV 7	14.26	258.57	-2370	-1973	-2663	1.37	1.37	-5144	11445	4390	10864	17230	3494	15254		5.73	Si
SLV 8	11.87	-1291.27	-6230	-5188	-5435	1.37	1.37	-13525	13122	5033	10864	17230	3494	15897		2.93	Si
SLV 8	14.26	261.57	-2373	-1976	-2688	1.37	1.37	-5152	11447	4391	10864	17230	3494	15255		5.67	Si
SLV 9	11.87	948.06	-882	-735	3906	1.37	0	-11946	14027	0	10864	17230	3494	10864		2.78	Si
SLV 9	14.26	-4.2	1843	1535	1741	1.096	1.37	0	0	0	10864	13784	2795	10864		6.24	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.063 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.52	0	-509	119.22	0	0	No, e>t/2
SLV 6	179667	0.52	0	287	119.22	0	0	No, Trazione
SLV 10	179667	0.52	0	611	119.22	0	0	No, Trazione
SLV 13	179667	0.52	0	-504	119.22	0	0	No, e>t/2
SLV 5	179667	0.52	0	291	119.22	0	0	No, Trazione
SLV 9	179667	0.52	0	615	119.22	0	0	No, Trazione
SLV 1	179667	0.52	4126	-1583	119.22	215.61	1.81	Si
SLV 2	179667	0.52	4141	-1589	119.22	216.38	1.81	Si
SLV 15	179667	0.52	4658	-1787	119.22	242.51	2.03	Si
SLV 16	179667	0.52	4673	-1793	119.22	243.28	2.04	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.063 Wa = 0.05 Ta = 0.0456

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-2373	-6230	52	2.362	396	0.907	37.84056	8.87331	Si
SLV 7	-2370	-6241	52	2.365	395.6	0.907	37.88191	8.87331	Si
SLV 12	-2110	-6208	69	2.555	370	0.903	41.11766	8.87331	Si
SLV 11	-2106	-6219	70	2.558	369.6	0.903	41.16652	8.87331	Si
SLV 4	-1299	-4386	-12	3.482	291.4	0.891	56.77606	5.71372	Si
SLV 3	-1294	-4402	-11	3.49	290.9	0.891	56.92086	5.71372	Si
SLV 16	-421	-4311	45	5.647	214.7	0.904	90.78733	5.71372	Si
SLV 15	-416	-4328	46	5.669	214.3	0.904	91.10194	5.71372	Si
SLV 2	-115	-2785	-50	7.249	196.8	0.954	110.39628	5.71372	Si
SLV 1	-109	-2801	-49	7.287	196.6	0.956	110.77856	5.71372	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	23.98	SLU 80	Si
V_SLU	7.189	SLU 80	Si
PF_SLV	0	SLV 5	No
V_SLV	2.781	SLV 9	Si
PFFP_SLV	0	SLV 10	No
R_SLV	4.265	SLV 8	Si

Maschio 207

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L7	F1	1.67	0.28	3.219	3.218	3.219			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	11.87	1219.53	-5055	-0.0000306	0.0003743	0.0035	1.67	3772.86	4038.29	4038.29	3.31	No	Si
SLU 84	13.97	-2056.86	-6387	-0.0000456	0.0003743	0.0035	1.67	4617.98	5487.18	5487.18	2.67	No	Si
SLU 74	11.87	1219.6	-5302	-0.0000314	0.0003743	0.0035	1.67	3933.86	4188.42	4188.42	3.43	No	Si
SLU 74	13.97	-2155.95	-6703	-0.0000479	0.0003743	0.0035	1.67	4808.76	5696.73	5696.73	2.64	No	Si
SLU 65	11.87	1093.77	-4998	-0.0000289	0.0003743	0.0035	1.67	3735.23	4001.91	4001.91	3.66	No	Si
SLU 65	13.97	-1910.59	-5827	-0.0000419	0.0003743	0.0035	1.67	4270.1	5106.77	5106.77	2.67	No	Si
SLU 81	11.87	1200.11	-4696	-0.0000291	0.0003743	0.0035	1.67	3534.69	3798.75	3798.75	3.17	No	Si
SLU 81	13.97	-1948.85	-5824	-0.0000424	0.0003743	0.0035	1.67	4268.09	5104.54	5104.54	2.62	No	Si
SLU 64	11.87	1093.03	-4986	-0.0000288	0.0003743	0.0035	1.67	3727.36	3994.25	3994.25	3.65	No	Si
SLU 64	13.97	-1906.73	-5815	-0.0000418	0.0003743	0.0035	1.67	4262.52	5098.36	5098.36	2.67	No	Si
SLU 73	11.87	1168.72	-4795	-0.0000291	0.0003743	0.0035	1.67	3600.76	3868.52	3868.52	3.31	No	Si
SLU 73	13.97	-1940.07	-5833	-0.0000423	0.0003743	0.0035	1.67	4273.99	5111.09	5111.09	2.63	No	Si
SLU 83	11.87	1219.09	-5048	-0.0000305	0.0003743	0.0035	1.67	3768.16	4033.76	4033.76	3.31	No	Si
SLU 83	13.97	-2054.54	-6380	-0.0000455	0.0003743	0.0035	1.67	4613.57	5482.41	5482.41	2.67	No	Si
SLU 67	11.87	1145.1	-5511	-0.0000312	0.0003743	0.0035	1.67	4069.32	4313.5	4313.5	3.77	No	Si
SLU 67	13.97	-2128.78	-6704	-0.0000475	0.0003743	0.0035	1.67	4809.38	5697.42	5697.42	2.68	No	Si
SLU 75	11.87	1220.05	-5309	-0.0000314	0.0003743	0.0035	1.67	3938.5	4192.67	4192.67	3.44	No	Si
SLU 75	13.97	-2158.26	-6710	-0.000048	0.0003743	0.0035	1.67	4813.09	5701.54	5701.54	2.64	No	Si
SLU 82	11.87	1200.55	-4704	-0.0000291	0.0003743	0.0035	1.67	3539.49	3803.88	3803.88	3.17	No	Si
SLU 82	13.97	-1951.16	-5831	-0.0000425	0.0003743	0.0035	1.67	4272.63	5109.58	5109.58	2.62	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	11.87	-2165.01	-5340	-0.0000447	0.0005615	0.0035	1.67		4867.28	4867.28	2.25		Si
SLV 14	13.97	1322.94	-1021	-0.0036674	0.0005615	0.0035	1.336		1009.35	1009.35	0.76		No
SLV 6	11.87	1481.11	-1837	-0.0002091	0.0005615	0.0035	1.336		1666.6	1666.6	1.13		Si
SLV 6	13.97	-1685.05	-4062	-0.0000345	0.0005615	0.0035	1.67		3908.14	3908.14	2.32		Si
SLV 5	11.87	1411.46	-1885	-0.0000803	0.0005615	0.0035	1.67		1704.68	1704.68	1.21		Si
SLV 5	13.97	-1600.71	-3972	-0.0000328	0.0005615	0.0035	1.67		3839.78	3839.78	2.4		Si
SLV 4	11.87	3890.82	-2075	-0.0208235	0.0005615	0.0035	1.336		1855.64	1855.64	0.48		No
SLV 4	13.97	-4290.28	-7781	-0.0001031	0.0005615	0.0035	1.336		6629.08	6629.08	1.55		Si
SLV 3	11.87	3783.93	-2148	-0.0193092	0.0005615	0.0035	1.336		1913.97	1913.97	0.51		No
SLV 3	13.97	-4160.84	-7644	-0.0000985	0.0005615	0.0035	1.336		6530.91	6530.91	1.57		Si
SLV 13	11.87	-2271.89	-5413	-0.000047	0.0005615	0.0035	1.67		4921.27	4921.27	2.17		Si
SLV 13	13.97	1452.38	-884	-0.006322	0.0005615	0.0035	1.336		897.66	897.66	0.62		No
SLD 1	11.87	2015.76	-2729	-0.0001065	0.0005615	0.0035	1.67		2371.98	2371.98	1.18		Si
SLD 1	13.97	-2443.29	-5430	-0.000051	0.0005615	0.0035	1.67		4934.07	4934.07	2.02		Si
SLV 2	11.87	3741.34	-1308	-0.0251754	0.0005615	0.0035	1.336		1240.78	1240.78	0.33		No
SLV 2	13.97	-3950.07	-7049	-0.0000958	0.0005615	0.0035	1.336		6107.91	6107.91	1.55		Si
SLD 2	11.87	2061.67	-2697	-0.0001463	0.0005615	0.0035	1.67		2347.31	2347.31	1.14		Si
SLD 2	13.97	-2498.89	-5489	-0.0000523	0.0005615	0.0035	1.336		4977.45	4977.45	1.99		Si
SLV 1	11.87	3634.46	-1381	-0.0235784	0.0005615	0.0035	1.336		1300.07	1300.07	0.36		No
SLV 1	13.97	-3820.63	-6912	-0.0000911	0.0005615	0.0035	1.336		6010.82	6010.82	1.57		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 69	11.87	1163.63	-5856	-4876	3070	1.67	1.67	-10428	8335	3897	35683	14002	4259	18261	No	5.95	Si
SLU 69	13.97	-2232.15	-7253	-6039	3064	1.67	1.5817	-12916	8667	3838	35683	14002	4259	18261	No	5.96	Si
SLU 70	11.87	1164.08	-5863	-4882	3071	1.67	1.67	-10441	8337	3898	35683	14002	4259	18261	No	5.95	Si
SLU 70	13.97	-2234.47	-7260	-6045	3065	1.67	1.5817	-12929	8668	3839	35683	14002	4259	18261	No	5.96	Si
SLU 75	11.87	1220.05	-5309	-4421	3064	1.67	1.67	-9454	8205	3837	35683	14002	4259	18261	No	5.96	Si
SLU 75	13.97	-2158.26	-6710	-5587	3058	1.67	1.5401	-13072	8687	3746	35683	14002	4259	18261	No	5.97	Si
SLU 78	11.87	1239.03	-5660	-4713	3205	1.67	1.67	-10080	8288	3876	35683	14002	4259	18261	No	5.7	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	13.97	-2263.95	-7266	-6051	3197	1.67	1.5703	-12940	8670	3812	35683	14002	4259	18261	No	5.71	Si
SLU 79	11.87	1205.94	-5486	-4569	3071	1.67	1.67	-9770	8247	3856	35683	14002	4259	18261	No	5.95	Si
SLU 79	13.97	-2147.6	-6934	-5774	3063	1.67	1.5759	-12348	8591	3791	35683	14002	4259	18261	No	5.96	Si
SLU 83	11.87	1219.09	-5048	-4204	2987	1.67	1.67	-8989	8143	3808	35683	14002	4259	18261	No	6.11	Si
SLU 83	13.97	-2054.54	-6380	-5313	2980	1.67	1.539	-12432	8602	3707	35683	14002	4259	18261	No	6.13	Si
SLU 84	11.87	1219.53	-5055	-4209	2989	1.67	1.67	-9002	8145	3809	35683	14002	4259	18261	No	6.11	Si
SLU 84	13.97	-2056.86	-6387	-5319	2981	1.67	1.539	-12446	8604	3708	35683	14002	4259	18261	No	6.12	Si
SLU 77	11.87	1238.59	-5653	-4707	3204	1.67	1.67	-10067	8287	3875	35683	14002	4259	18261	No	5.7	Si
SLU 77	13.97	-2261.64	-7259	-6045	3196	1.67	1.5703	-12927	8668	3811	35683	14002	4259	18261	No	5.71	Si
SLU 80	11.87	1206.39	-5494	-4575	3073	1.67	1.67	-9783	8249	3857	35683	14002	4259	18261	No	5.94	Si
SLU 80	13.97	-2149.91	-6941	-5780	3064	1.67	1.5758	-12361	8593	3791	35683	14002	4259	18261	No	5.96	Si
SLU 74	11.87	1219.6	-5302	-4415	3062	1.67	1.67	-9441	8203	3836	35683	14002	4259	18261	No	5.96	Si
SLU 74	13.97	-2155.95	-6703	-5581	3057	1.67	1.5401	-13058	8685	3745	35683	14002	4259	18261	No	5.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	11.87	2061.67	-2697	-2246	4208	1.67	0.212	-38029	16250	965	35683	21003	4259	25262		6	Si
SLD 2	13.97	-2498.89	-5489	-4571	3589	1.336	1.1394	0	0	0	35683	16803	3407	20209		5.63	Si
SLD 1	11.87	2015.76	-2729	-2272	4124	1.67	0.289	-28388	16100	1303	35683	21003	4259	25262		6.13	Si
SLD 1	13.97	-2443.29	-5430	-4522	3504	1.67	1.1553	-14071	13231	4280	35683	21003	4259	25262		7.21	Si
SLV 6	11.87	1481.11	-1837	-1530	3348	1.336	0.0863	0	0	0	35683	16803	3407	20209		6.04	Si
SLV 6	13.97	-1685.05	-4062	-3382	2502	1.67	1.2605	-9625	12342	4356	35683	21003	4259	25262		10.1	Si
SLV 4	11.87	3890.82	-2075	-1728	7341	1.336	0	0	0	0	35683	16803	3407	20209		2.75	Si
SLV 4	13.97	-4290.28	-7781	-6480	6172	1.336	0.851	0	0	0	35683	16803	3407	20209		3.27	Si
SLD 4	11.87	2128.9	-3035	-2527	4275	1.67	0.4007	-22773	14972	1680	35683	21003	4259	25262		5.91	Si
SLD 4	13.97	-2649.42	-5813	-4840	3777	1.336	1.1376	0	0	0	35683	16803	3407	20209		5.35	Si
SLV 1	11.87	3634.46	-1381	-1150	6992	1.336	0	0	0	0	35683	16803	3407	20209		2.89	Si
SLV 1	13.97	-3820.63	-6912	-5756	5551	1.336	0.8468	0	0	0	35683	16803	3407	20209		3.64	Si
SLD 3	11.87	2082.99	-3067	-2554	4191	1.67	0.4673	-19707	14358	1879	35683	21003	4259	25262		6.03	Si
SLD 3	13.97	-2593.83	-5754	-4791	3693	1.67	1.1526	-14950	13407	4327	35683	21003	4259	25262		6.84	Si
SLV 3	11.87	3783.93	-2148	-1789	7145	1.336	0	0	0	0	35683	16803	3407	20209		2.83	Si
SLV 3	13.97	-4160.84	-7644	-6365	5976	1.336	0.8721	0	0	0	35683	16803	3407	20209		3.38	Si
SLV 2	11.87	3741.34	-1308	-1089	7188	1.336	0	0	0	0	35683	16803	3407	20209		2.81	Si
SLV 2	13.97	-3950.07	-7049	-5870	5748	1.336	0.824	0	0	0	35683	16803	3407	20209		3.52	Si
SLV 8	11.87	1979.37	-4393	-3658	3856	1.67	1.1534	-7824	11981	3870	35683	21003	4259	25262		6.55	Si
SLV 8	13.97	-2819.1	-6501	-5414	3917	1.67	1.2042	-16181	13653	4604	35683	21003	4259	25262		6.45	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.479 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.53	3125	-1461	195.82	200.36	1.02	Si
SLV 14	179667	0.53	3356	-1569	195.82	214.88	1.1	Si
SLV 9	179667	0.53	4712	-2203	195.82	298.97	1.53	Si
SLV 15	179667	0.53	4848	-2267	195.82	307.28	1.57	Si
SLV 10	179667	0.53	4863	-2274	195.82	308.23	1.57	Si
SLV 16	179667	0.53	5079	-2375	195.82	321.45	1.64	Si
SLV 5	179667	0.53	7762	-3629	195.82	482.3	2.46	Si
SLV 6	179667	0.53	7913	-3700	195.82	491.16	2.51	Si
SLV 11	179667	0.53	10456	-4889	195.82	637.64	3.26	Si
SLV 12	179667	0.53	10607	-4960	195.82	646.15	3.3	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.479 Wa = 0.05 Ta = 0.0618

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-2150	-4441	256	2.664	442.8	0.894	43.30284	12.09201	Si
SLV 8	-2147	-4393	256	2.666	442.5	0.894	43.34325	12.09201	Si
SLV 11	-2151	-5651	237	2.669	442.9	0.894	43.38452	12.09201	Si
SLV 12	-2148	-5603	237	2.671	442.6	0.894	43.425	12.09201	Si
SLV 9	-1541	-3094	-253	3.216	385.3	0.889	52.55154	12.09201	Si
SLV 10	-1538	-3047	-253	3.219	385	0.889	52.61005	12.09201	Si
SLV 5	-1541	-1885	-234	3.223	385.3	0.889	52.67305	12.09201	Si
SLV 6	-1537	-1837	-234	3.227	385	0.889	52.73171	12.09201	Si
SLV 3	-1937	-2148	107	2.879	422.5	0.892	46.90343	6.52302	Si
SLV 4	-1932	-2075	107	2.883	422	0.892	46.97462	6.52302	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.619	SLU 82	Si
V_SLU	5.698	SLU 78	Si
PF_SLV	0.332	SLV 2	No
V_SLV	2.753	SLV 4	Si
PFFP_SLV	1.023	SLV 13	Si
R_SLV	3.581	SLV 7	Si

Maschio 209

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.413	-3.314	-8.433	-3.314	L7	F1	1.02	0.28	3.217	3.216	3.217			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 26	12.77	84.67	-4288	-0.0000255	0.0003743	0.0035	1.02	1864.24	1952.66	1952.66	23.06	No	Si
SLU 26	14.57	-195.06	-2913	-0.0000214	0.0003743	0.0035	1.02	1336.9	1612.94	1612.94	8.27	No	Si
SLU 23	12.77	108.38	-3841	-0.0000238	0.0003743	0.0035	1.02	1700.26	1782.6	1782.6	16.45	No	Si
SLU 23	14.57	-196.89	-2594	-0.0000197	0.0003743	0.0035	1.02	1204.8	1471.32	1471.32	7.47	No	Si
SLU 2	12.77	46.82	-3606	-0.0000206	0.0003743	0.0035	1.02	1610.87	1694.17	1694.17	36.19	No	Si
SLU 2	14.57	-170.58	-2327	-0.0000175	0.0003743	0.0035	1.02	1091.91	1353.14	1353.14	7.93	No	Si
SLU 22	12.77	103.97	-3834	-0.0000236	0.0003743	0.0035	1.02	1697.64	1779.97	1779.97	17.12	No	Si
SLU 22	14.57	-192.99	-2584	-0.0000196	0.0003743	0.0035	1.02	1200.76	1467.01	1467.01	7.6	No	Si
SLU 68	12.77	76.29	-5286	-0.0000308	0.0003743	0.0035	1.02	2205.91	2346.06	2346.06	30.75	No	Si
SLU 68	14.57	-236.04	-3517	-0.000026	0.0003743	0.0035	1.02	1576.79	1870.51	1870.51	7.92	No	Si
SLU 64	12.77	95.59	-4833	-0.0000289	0.0003743	0.0035	1.02	2055.19	2165.24	2165.24	22.65	No	Si
SLU 64	14.57	-233.97	-3188	-0.0000241	0.0003743	0.0035	1.02	1447.63	1730.33	1730.33	7.4	No	Si
SLU 65	12.77	99.99	-4840	-0.0000291	0.0003743	0.0035	1.02	2057.57	2168	2168	21.68	No	Si
SLU 65	14.57	-237.87	-3198	-0.0000243	0.0003743	0.0035	1.02	1451.46	1734.47	1734.47	7.29	No	Si
SLU 44	12.77	38.43	-4605	-0.0000258	0.0003743	0.0035	1.02	1976.44	2075.46	2075.46	54	No	Si
SLU 44	14.57	-211.56	-2931	-0.000022	0.0003743	0.0035	1.02	1344.21	1620.66	1620.66	7.66	No	Si
SLU 1	12.77	42.41	-3599	-0.0000204	0.0003743	0.0035	1.02	1608.19	1691.56	1691.56	39.89	No	Si
SLU 1	14.57	-166.68	-2318	-0.0000173	0.0003743	0.0035	1.02	1087.78	1348.88	1348.88	8.09	No	Si
SLU 43	12.77	34.03	-4598	-0.0000256	0.0003743	0.0035	1.02	1974	2072.73	2072.73	60.91	No	Si
SLU 43	14.57	-207.66	-2922	-0.0000219	0.0003743	0.0035	1.02	1340.29	1616.52	1616.52	7.78	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	12.77	1259.11	-3066	-0.0001176	0.0005615	0.0035	1.02		1545.13	1545.13	1.23		Si
SLV 8	14.57	-833.08	-3243	-0.0000461	0.0005615	0.0035	1.02		1791.35	1791.35	2.15		Si
SLV 3	12.77	2205.71	-1879	-0.0312012	0.0005615	0.0035	0.816		992.31	992.31	0.45		No
SLV 3	14.57	-1418.73	-3776	-0.0001054	0.0005615	0.0035	0.816		2032.28	2032.28	1.43		Si
SLV 7	12.77	1186.5	-3139	-0.0000885	0.0005615	0.0035	1.02		1578.43	1578.43	1.33		Si
SLV 7	14.57	-801.79	-3214	-0.0000443	0.0005615	0.0035	1.02		1778.06	1778.06	2.22		Si
SLV 13	12.77	-2207.08	-5495	-0.0002046	0.0005615	0.0035	0.816		2768.87	2768.87	1.25		Si
SLV 13	14.57	1138.26	-896	-0.0167864	0.0005615	0.0035	0.816		516.88	516.88	0.45		No
SLV 2	12.77	1983.63	-1758	-0.0272775	0.0005615	0.0035	0.816		934.23	934.23	0.47		No
SLV 2	14.57	-1288.96	-3532	-0.0000904	0.0005615	0.0035	0.816		1922.19	1922.19	1.49		Si
SLV 14	12.77	-2095.63	-5382	-0.0001767	0.0005615	0.0035	0.816		2721.56	2721.56	1.3		Si
SLV 14	14.57	1090.24	-941	-0.0151026	0.0005615	0.0035	0.816		539.07	539.07	0.49		No
SLV 1	12.77	1872.18	-1870	-0.0233694	0.0005615	0.0035	0.816		988.01	988.01	0.53		No
SLV 1	14.57	-1240.94	-3488	-0.0000836	0.0005615	0.0035	0.816		1901.81	1901.81	1.53		Si
SLV 16	12.77	-1762.1	-5391	-0.0001114	0.0005615	0.0035	0.816		2725.37	2725.37	1.55		Si
SLV 16	14.57	912.45	-1230	-0.0075182	0.0005615	0.0035	0.816		680.11	680.11	0.75		No
SLV 15	12.77	-1873.55	-5504	-0.000124	0.0005615	0.0035	0.816		2772.69	2772.69	1.48		Si
SLV 15	14.57	960.48	-1185	-0.0092187	0.0005615	0.0035	0.816		658.2	658.2	0.69		No
SLV 4	12.77	2317.16	-1767	-0.0351631	0.0005615	0.0035	0.816		938.57	938.57	0.41		No
SLV 4	14.57	-1466.75	-3821	-0.0001142	0.0005615	0.0035	0.816		2052.49	2052.49	1.4		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 23	12.77	108.38	-3841	-3199	381	1.02	1.02	-11200	8438	2410	35683	8552	2601	11153	No	29.27	Si
SLU 23	14.57	-196.89	-2594	-2160	351	1.02	1.02	-7562	7953	2271	35683	8552	2601	11153	No	31.74	Si
SLU 73	12.77	82.63	-4717	-3928	401	1.02	1.02	-13752	8778	2507	35683	8552	2601	11153	No	27.84	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	14.57	-203.04	-3075	-2561	398	1.02	1.02	-8966	8140	2325	35683	8552	2601	11153	No	27.99	Si
SLU 22	12.77	103.97	-3834	-3193	374	1.02	1.02	-11180	8435	2409	35683	8552	2601	11153	No	29.84	Si
SLU 22	14.57	-192.99	-2584	-2152	345	1.02	1.02	-7534	7949	2270	35683	8552	2601	11153	No	32.35	Si
SLU 65	12.77	99.99	-4840	-4030	415	1.02	1.02	-14112	8826	2521	35683	8552	2601	11153	No	26.88	Si
SLU 65	14.57	-237.87	-3198	-2663	393	1.02	1.02	-9323	8188	2338	35683	8552	2601	11153	No	28.38	Si
SLU 64	12.77	95.59	-4833	-4025	408	1.02	1.02	-14092	8823	2520	35683	8552	2601	11153	No	27.36	Si
SLU 64	14.57	-233.97	-3188	-2655	386	1.02	1.02	-9295	8184	2337	35683	8552	2601	11153	No	28.87	Si
SLU 68	12.77	76.29	-5286	-4402	384	1.02	1.02	-15413	9000	2570	35683	8552	2601	11153	No	29.02	Si
SLU 68	14.57	-236.04	-3517	-2929	369	1.02	1.02	-10255	8312	2374	35683	8552	2601	11153	No	30.2	Si
SLU 76	12.77	58.93	-5163	-4299	370	1.02	1.02	-15054	8952	2557	35683	8552	2601	11153	No	30.14	Si
SLU 76	14.57	-201.21	-3395	-2827	375	1.02	1.02	-9898	8264	2360	35683	8552	2601	11153	No	29.76	Si
SLU 81	12.77	70.79	-4657	-3878	387	1.02	1.02	-13578	8755	2500	35683	8552	2601	11153	No	28.8	Si
SLU 81	14.57	-184.21	-3013	-2509	394	1.02	1.02	-8785	8116	2318	35683	8552	2601	11153	No	28.29	Si
SLU 82	12.77	73.43	-4661	-3881	392	1.02	1.02	-13590	8756	2501	35683	8552	2601	11153	No	28.49	Si
SLU 82	14.57	-186.55	-3019	-2514	398	1.02	1.02	-8802	8118	2319	35683	8552	2601	11153	No	28.01	Si
SLU 84	12.77	49.73	-5107	-4253	361	1.02	1.02	-14891	8930	2550	35683	8552	2601	11153	No	30.89	Si
SLU 84	14.57	-184.72	-3338	-2780	375	1.02	1.02	-9734	8242	2354	35683	8552	2601	11153	No	29.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	12.77	2205.71	-1879	-1565	3851	0.816	0	0	0	0	35683	10263	2081	12343		3.21	Si
SLV 3	14.57	-1418.73	-3776	-3145	2117	0.816	0.4029	0	0	0	35683	10263	2081	12343		5.83	Si
SLV 4	12.77	2317.16	-1767	-1471	4013	0.816	0	0	0	0	35683	10263	2081	12343		3.08	Si
SLV 4	14.57	-1466.75	-3821	-3182	2234	0.816	0.3785	0	0	0	35683	10263	2081	12343		5.53	Si
SLV 2	12.77	1983.63	-1758	-1464	3605	0.816	0	0	0	0	35683	10263	2081	12343		3.42	Si
SLV 2	14.57	-1288.96	-3532	-2942	2176	0.816	0.4353	0	0	0	35683	10263	2081	12343		5.67	Si
SLV 13	12.77	-2207.08	-5495	-4576	-3447	0.816	0.325	0	0	0	35683	10263	2081	12343		3.58	Si
SLV 13	14.57	1138.26	-896	-746	-1678	0.816	0	0	0	0	35683	10263	2081	12343		7.35	Si
SLV 8	12.77	1259.11	-3066	-2553	2049	1.02	0.2978	-31125	16250	1355	35683	12828	2601	15429		7.53	Si
SLV 8	14.57	-833.08	-3243	-2701	972	1.02	0.7594	-12778	12972	2758	35683	12828	2601	15429		15.87	Si
SLV 14	12.77	-2095.63	-5382	-4482	-3285	0.816	0.3619	0	0	0	35683	10263	2081	12343		3.76	Si
SLV 14	14.57	1090.24	-941	-784	-1562	0.816	0	0	0	0	35683	10263	2081	12343		7.9	Si
SLV 15	12.77	-1873.55	-5504	-4583	-3040	0.816	0.5088	0	0	0	35683	10263	2081	12343		4.06	Si
SLV 15	14.57	960.48	-1185	-987	-1621	0.816	0	0	0	0	35683	10263	2081	12343		7.61	Si
SLV 16	12.77	-1762.1	-5391	-4489	-2877	0.816	0.5495	0	0	0	35683	10263	2081	12343		4.29	Si
SLV 16	14.57	912.45	-1230	-1024	-1504	0.816	0	0	0	0	35683	10263	2081	12343		8.21	Si
SLV 7	12.77	1186.5	-3139	-2614	1943	1.02	0.396	-9152	12247	1358	35683	12828	2601	15429		7.94	Si
SLV 7	14.57	-801.79	-3214	-2676	896	1.02	0.7816	-12294	12875	2818	35683	12828	2601	15429		17.22	Si
SLV 1	12.77	1872.18	-1870	-1557	3443	0.816	0	0	0	0	35683	10263	2081	12343		3.59	Si
SLV 1	14.57	-1240.94	-3488	-2904	2060	0.816	0.4625	0	0	0	35683	10263	2081	12343		5.99	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.478 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.53	4728	-1350	119.45	183.18	1.53	Si
SLV 2	179667	0.53	5004	-1429	119.45	193.52	1.62	Si
SLV 3	179667	0.53	5122	-1463	119.45	197.94	1.66	Si
SLV 1	179667	0.53	5398	-1542	119.45	208.22	1.74	Si
SLV 8	179667	0.53	8885	-2538	119.45	334.6	2.8	Si
SLV 7	179667	0.53	9142	-2611	119.45	343.67	2.88	Si
SLV 6	179667	0.53	9806	-2801	119.45	366.92	3.07	Si
SLV 5	179667	0.53	10063	-2874	119.45	375.86	3.15	Si
SLV 12	179667	0.53	12666	-3618	119.45	464.45	3.89	Si
SLV 11	179667	0.53	12923	-3691	119.45	473.01	3.96	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.478 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-1679	-3504	-75	2.315	305.9	0.9	37.35966	12.07491	Si
SLV 5	-1676	-3440	-75	2.317	305.6	0.9	37.40596	12.07491	Si
SLV 10	-1502	-2209	-80	2.484	288.7	0.897	40.24019	12.07491	Si
SLV 9	-1499	-2145	-80	2.488	288.4	0.897	40.2937	12.07491	Si
SLV 8	-1239	-5506	84	2.794	263.3	0.893	45.47432	12.07491	Si
SLV 7	-1236	-5442	84	2.798	263	0.893	45.54304	12.07491	Si
SLV 12	-1063	-4211	79	3.053	246.6	0.89	49.8266	12.07491	Si
SLV 11	-1060	-4148	79	3.058	246.3	0.89	49.90807	12.07491	Si
SLV 2	-1731	-5732	-14	2.292	311	0.901	36.95677	6.51915	Si
SLV 1	-1726	-5635	-14	2.296	310.6	0.901	37.0257	6.51915	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.292	SLU 65	Si
V_SLU	26.885	SLU 65	Si
PF_SLV	0.405	SLV 4	No
V_SLV	3.076	SLV 4	Si
PFFP_SLV	1.534	SLV 4	Si
R_SLV	3.094	SLV 6	Si

Maschio 210

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.513	-3.314	L7	F1	0.55	0.28	3.215	3.215	3.215			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	13.87	-30.66	-1816	-0.0000211	0.0003743	0.0035	0.55	441.54	523.29	523.29	17.07	No	Si
SLU 65	14.67	-104.87	-1740	-0.0000284	0.0003743	0.0035	0.55	425.44	505.91	505.91	4.82	No	Si
SLU 44	13.87	-26.03	-1712	-0.0000195	0.0003743	0.0035	0.55	419.48	499.53	499.53	19.19	No	Si
SLU 44	14.67	-94.31	-1613	-0.0000259	0.0003743	0.0035	0.55	397.86	476.62	476.62	5.05	No	Si
SLU 64	13.87	-29.21	-1814	-0.0000209	0.0003743	0.0035	0.55	441.14	522.85	522.85	17.9	No	Si
SLU 64	14.67	-106.09	-1749	-0.0000286	0.0003743	0.0035	0.55	427.27	507.88	507.88	4.79	No	Si
SLU 2	13.87	-21.58	-1345	-0.0000154	0.0003743	0.0035	0.55	338.14	412.92	412.92	19.13	No	Si
SLU 2	14.67	-75.05	-1272	-0.0000204	0.0003743	0.0035	0.55	321.46	395.13	395.13	5.26	No	Si
SLU 22	13.87	-24.76	-1447	-0.0000167	0.0003743	0.0035	0.55	361.11	437.75	437.75	17.68	No	Si
SLU 22	14.67	-86.83	-1408	-0.000023	0.0003743	0.0035	0.55	352.49	428.39	428.39	4.93	No	Si
SLU 1	13.87	-20.13	-1343	-0.0000152	0.0003743	0.0035	0.55	337.7	412.45	412.45	20.49	No	Si
SLU 1	14.67	-76.27	-1281	-0.0000206	0.0003743	0.0035	0.55	323.43	397.22	397.22	5.21	No	Si
SLU 66	13.87	-47.09	-2108	-0.0000259	0.0003743	0.0035	0.55	501.85	590.1	590.1	12.53	No	Si
SLU 66	14.67	-107.78	-2082	-0.0000322	0.0003743	0.0035	0.55	496.48	584.17	584.17	5.42	No	Si
SLU 23	13.87	-26.21	-1448	-0.0000169	0.0003743	0.0035	0.55	361.53	438.22	438.22	16.72	No	Si
SLU 23	14.67	-85.6	-1400	-0.0000228	0.0003743	0.0035	0.55	350.55	426.29	426.29	4.98	No	Si
SLU 68	13.87	-41.1	-1980	-0.0000239	0.0003743	0.0035	0.55	475.7	560.88	560.88	13.65	No	Si
SLU 68	14.67	-104.72	-1965	-0.0000307	0.0003743	0.0035	0.55	472.61	557.44	557.44	5.32	No	Si
SLU 43	13.87	-24.58	-1710	-0.0000194	0.0003743	0.0035	0.55	419.07	499.09	499.09	20.3	No	Si
SLU 43	14.67	-95.54	-1621	-0.0000261	0.0003743	0.0035	0.55	399.73	478.59	478.59	5.01	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	13.87	-301.98	-2800	-0.000061	0.0005615	0.0035	0.55		766.5	766.5	2.54		Si
SLV 15	14.67	265.87	-1650	-0.0000524	0.0005615	0.0035	0.55		446.21	446.21	1.68		Si
SLV 1	13.87	214.36	-131	-0.0151362	0.0005615	0.0035	0.44		53.67	53.67	0.25		No
SLV 1	14.67	-377.14	-977	-0.0011952	0.0005615	0.0035	0.44		326.45	326.45	0.87		No
SLV 3	13.87	149.39	-187	-0.0079098	0.0005615	0.0035	0.44		68.77	68.77	0.46		No
SLV 3	14.67	-360.49	-467	-0.0022905	0.0005615	0.0035	0.44		193.43	193.43	0.54		No
SLD 3	13.87	49.22	-871	-0.0000135	0.0005615	0.0035	0.55		249.58	249.58	5.07		Si
SLD 3	14.67	-197.35	-947	-0.0000511	0.0005615	0.0035	0.44		318.66	318.66	1.61		Si
SLV 7	13.87	-77.84	-1137	-0.0000191	0.0005615	0.0035	0.55		366.8	366.8	4.71		Si
SLV 7	14.67	-128.81	-284	-0.0003668	0.0005615	0.0035	0.44		145.09	145.09	1.13		Si
SLD 4	13.87	65.37	-798	-0.0000145	0.0005615	0.0035	0.55		230.81	230.81	3.53		Si
SLD 4	14.67	-214.54	-945	-0.0000707	0.0005615	0.0035	0.44		318.09	318.09	1.48		Si
SLV 2	13.87	251.96	38	-0.0228177	0.0005615	0.0035	0.44		0	0	0		No
SLV 2	14.67	-417.15	-972	-0.0016674	0.0005615	0.0035	0.44		325.14	325.14	0.78		No
SLV 8	13.87	-53.34	-1027	-0.0000155	0.0005615	0.0035	0.55		339.26	339.26	6.36		Si
SLV 8	14.67	-154.89	-281	-0.0005448	0.0005615	0.0035	0.44		144.2	144.2	0.93		No
SLV 4	13.87	186.99	-18	-0.0156412	0.0005615	0.0035	0.44		23.04	23.04	0.12		No
SLV 4	14.67	-400.51	-462	-0.002957	0.0005615	0.0035	0.44		192.08	192.08	0.48		No
SLV 6	13.87	163.23	-841	-0.0000372	0.0005615	0.0035	0.55		241.84	241.84	1.48		Si
SLV 6	14.67	-210.38	-1983	-0.0000421	0.0005615	0.0035	0.55		575.29	575.29	2.73		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	13.87	-52.89	-2169	-1806	-127	0.55	0.55	-11726	8508	1310	35683	4612	1403	6014	No	47.53	Si
SLU 48	14.67	-97.09	-2179	-1814	217	0.55	0.55	-11781	8515	1311	35683	4612	1403	6014	No	27.67	Si
SLU 71	13.87	-50.08	-2142	-1783	-91	0.55	0.55	-11580	8488	1307	35683	4612	1403	6014	No	66.09	Si
SLU 71	14.67	-105.81	-2198	-1830	213	0.55	0.55	-11884	8529	1314	35683	4612	1403	6014	No	28.24	Si
SLU 45	13.87	-42.46	-2005	-1669	-96	0.55	0.55	-10840	8390	1292	35683	4612	1403	6014	No	62.84	Si
SLU 45	14.67	-97.23	-1954	-1627	204	0.55	0.55	-10566	8353	1286	35683	4612	1403	6014	No	29.49	Si
SLU 70	13.87	-58.39	-2273	-1893	-115	0.55	0.55	-12292	8583	1322	35683	4612	1403	6014	No	52.15	Si
SLU 70	14.67	-106.91	-2301	-1916	209	0.55	0.55	-12442	8603	1325	35683	4612	1403	6014	No	28.8	Si
SLU 72	13.87	-50.95	-2143	-1784	-93	0.55	0.55	-11586	8489	1307	35683	4612	1403	6014	No	64.97	Si
SLU 72	14.67	-105.07	-2193	-1826	209	0.55	0.55	-11856	8525	1313	35683	4612	1403	6014	No	28.74	Si
SLU 51	13.87	-46.32	-2039	-1698	-105	0.55	0.55	-11027	8415	1296	35683	4612	1403	6014	No	57.1	Si
SLU 51	14.67	-94.52	-2065	-1720	214	0.55	0.55	-11167	8433	1299	35683	4612	1403	6014	No	28.1	Si
SLU 69	13.87	-57.52	-2272	-1892	-114	0.55	0.55	-12286	8583	1322	35683	4612	1403	6014	No	52.87	Si
SLU 69	14.67	-107.64	-2306	-1920	213	0.55	0.55	-12470	8607	1326	35683	4612	1403	6014	No	28.29	Si
SLU 49	13.87	-53.76	-2170	-1807	-128	0.55	0.55	-11732	8509	1310	35683	4612	1403	6014	No	46.95	Si
SLU 49	14.67	-96.36	-2174	-1810	214	0.55	0.55	-11753	8511	1311	35683	4612	1403	6014	No	28.16	Si
SLU 50	13.87	-45.45	-2038	-1697	-104	0.55	0.55	-11020	8414	1296	35683	4612	1403	6014	No	57.96	Si
SLU 50	14.67	-95.25	-2070	-1724	218	0.55	0.55	-11194	8437	1299	35683	4612	1403	6014	No	27.62	Si
SLU 46	13.87	-43.33	-2006	-1670	-97	0.55	0.55	-10846	8391	1292	35683	4612	1403	6014	No	61.83	Si
SLU 46	14.67	-96.5	-1949	-1623	200	0.55	0.55	-10538	8350	1286	35683	4612	1403	6014	No	30.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	13.87	251.96	38	32	1267	0.44	0	0	0	0	35683	5534	1122	6656		5.25	Si
SLV 2	14.67	-417.15	-972	-809	281	0.44	0	0	0	0	35683	5534	1122	6656		23.65	Si
SLV 14	13.87	-199.4	-2575	-2144	-1182	0.55	0.55	-13921	13201	2033	35683	6917	1403	8320		7.04	Si
SLV 14	14.67	209.2	-2156	-1795	374	0.55	0.5339	-11656	12748	1906	35683	6917	1403	8320		22.27	Si
SLV 4	13.87	186.99	-18	-15	1246	0.44	0	0	0	0	35683	5534	1122	6656		5.34	Si
SLV 4	14.67	-400.51	-462	-384	-29	0.44	0	0	0	0	35683	5534	1122	6656		228.26	Si
SLV 16	13.87	-264.37	-2631	-2190	-1202	0.55	0.5235	-14223	13261	1944	35683	6917	1403	8320		6.92	Si
SLV 16	14.67	225.85	-1645	-1370	63	0.55	0.4132	-8895	12196	1411	35683	6917	1403	8320		132.17	Si
SLV 13	13.87	-237.01	-2744	-2285	-1321	0.55	0.55	-14835	13384	2061	35683	6917	1403	8320		6.3	Si
SLV 13	14.67	249.22	-2161	-1799	301	0.55	0.479	-11683	12753	1711	35683	6917	1403	8320		27.62	Si
SLV 10	13.87	27.82	-1624	-1353	-325	0.55	0.55	-8783	12173	1875	35683	6917	1403	8320		25.6	Si
SLV 10	14.67	-22.47	-2338	-1947	691	0.55	0.55	-12641	12945	1994	35683	6917	1403	8320		12.04	Si
SLV 3	13.87	149.39	-187	-156	1107	0.44	0	0	0	0	35683	5534	1122	6656		6.01	Si
SLV 3	14.67	-360.49	-467	-389	-101	0.44	0	0	0	0	35683	5534	1122	6656		65.6	Si
SLV 15	13.87	-301.98	-2800	-2331	-1341	0.55	0.5014	-15137	13444	1888	35683	6917	1403	8320		6.2	Si
SLV 15	14.67	265.87	-1650	-1374	-9	0.55	0.3417	-8923	12201	1167	35683	6917	1403	8320		889.03	Si
SLV 6	13.87	163.23	-841	-700	410	0.55	0.2425	-4545	11326	769	35683	6917	1403	8320		20.31	Si
SLV 6	14.67	-210.38	-1983	-1651	664	0.55	0.5067	-10721	12561	1782	35683	6917	1403	8320		12.54	Si
SLV 1	13.87	214.36	-131	-109	1128	0.44	0	0	0	0	35683	5534	1122	6656		5.9	Si
SLV 1	14.67	-377.14	-977	-814	209	0.44	0	0	0	0	35683	5534	1122	6656		31.82	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.478 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.53	0	24	64.35	0	0	No, Trazione
SLV 5	179667	0.53	0	-273	64.35	0	0	No, e>t/2
SLV 6	179667	0.53	0	-234	64.35	0	0	No, e>t/2
SLV 9	179667	0.53	0	-14	64.35	0	0	No, e>t/2
SLV 14	179667	0.53	0	-402	64.35	0	0	No, e>t/2
SLV 13	179667	0.53	2989	-460	64.35	63.19	0.98	No, M>Mu
SLV 16	179667	0.53	6714	-1034	64.35	138.39	2.15	Si
SLV 15	179667	0.53	7095	-1093	64.35	145.87	2.27	Si
SLV 2	179667	0.53	8204	-1264	64.35	167.39	2.6	Si
SLV 1	179667	0.53	8586	-1322	64.35	174.7	2.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.478 Wa = 0.05 Ta = 0.0617

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-1664	-284	-17	1.509	240.4	0.923	23.76403	12.06199	Si
SLV 10	-1657	-226	-17	1.514	239.7	0.923	23.84777	12.06199	Si
SLV 5	-1297	-240	-12	1.82	203.7	0.913	28.97356	12.06199	Si
SLV 6	-1290	-183	-12	1.828	203	0.913	29.09834	12.06199	Si
SLV 13	-1600	-1094	-10	1.559	234	0.921	24.58015	6.51618	Si
SLV 14	-1589	-1006	-10	1.567	232.9	0.921	24.71779	6.51618	Si
SLV 15	-1177	-1732	0	1.96	191.7	0.909	31.31565	6.51618	Si
SLV 16	-1165	-1644	0	1.973	190.6	0.909	31.54584	6.51618	Si
SLV 11	-253	-2410	17	4.467	104.6	0.896	72.41519	12.06199	Si
SLV 12	-246	-2353	17	4.514	104	0.897	73.12001	12.06199	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.787	SLU 64	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLU	27.617	SLU 50	Si
PF_SLV	0	SLV 2	No
V_SLV	5.254	SLV 2	Si
PFFP_SLV	0	SLV 10	No
R_SLV	1.97	SLV 9	Si

Maschio 211

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.183	-3.314	-5.463	-3.314	L7	F1	2.28	0.28	3.213	3.212	3.214			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 9	13.87	66.77	-6634	-0.000016	0.0003743	0.0035	2.28	6790.35	7280.06	7280.06	109.04	No	Si
SLU 9	14.67	-281	-5153	-0.0000138	0.0003743	0.0035	2.28	5408.17	6865.91	6865.91	24.43	No	Si
SLU 43	13.87	234.9	-6410	-0.0000165	0.0003743	0.0035	2.28	6587.09	7062.06	7062.06	30.06	No	Si
SLU 43	14.67	-245.34	-4650	-0.0000124	0.0003743	0.0035	2.28	4921.5	6349.01	6349.01	25.88	No	Si
SLU 48	13.87	127.28	-8311	-0.0000205	0.0003743	0.0035	2.28	8262.56	8681.46	8681.46	68.21	No	Si
SLU 48	14.67	-306.23	-6423	-0.000017	0.0003743	0.0035	2.28	6598.37	8118.34	8118.34	26.51	No	Si
SLU 47	13.87	170.9	-7175	-0.000018	0.0003743	0.0035	2.28	7276.32	7752.35	7752.35	45.36	No	Si
SLU 47	14.67	-293.36	-5355	-0.0000144	0.0003743	0.0035	2.28	5602.04	7066.5	7066.5	24.09	No	Si
SLU 50	13.87	119.72	-7935	-0.0000195	0.0003743	0.0035	2.28	7941.17	8371.65	8371.65	69.93	No	Si
SLU 50	14.67	-344.84	-6061	-0.0000164	0.0003743	0.0035	2.28	6265.28	7758.86	7758.86	22.5	No	Si
SLU 8	13.87	70.61	-6632	-0.0000161	0.0003743	0.0035	2.28	6789.13	7278.74	7278.74	103.08	No	Si
SLU 8	14.67	-282.03	-5153	-0.0000138	0.0003743	0.0035	2.28	5408.22	6865.96	6865.96	24.34	No	Si
SLU 72	13.87	135.21	-8607	-0.0000213	0.0003743	0.0035	2.28	8512.19	8927.09	8927.09	66.03	No	Si
SLU 72	14.67	-320.35	-6685	-0.0000177	0.0003743	0.0035	2.28	6836.71	8377.38	8377.38	26.15	No	Si
SLU 44	13.87	228.48	-6413	-0.0000165	0.0003743	0.0035	2.28	6589.16	7064.26	7064.26	30.92	No	Si
SLU 44	14.67	-243.62	-4650	-0.0000124	0.0003743	0.0035	2.28	4921.41	6348.92	6348.92	26.06	No	Si
SLU 71	13.87	139.06	-8605	-0.0000213	0.0003743	0.0035	2.28	8511.05	8925.96	8925.96	64.19	No	Si
SLU 71	14.67	-321.39	-6685	-0.0000178	0.0003743	0.0035	2.28	6836.76	8377.44	8377.44	26.07	No	Si
SLU 51	13.87	115.87	-7936	-0.0000195	0.0003743	0.0035	2.28	7942.34	8372.76	8372.76	72.26	No	Si
SLU 51	14.67	-343.8	-6061	-0.0000164	0.0003743	0.0035	2.28	6265.23	7758.81	7758.81	22.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 2	13.87	585.24	-5503	-0.0000164	0.0005615	0.0035	2.28		6281.69	6281.69	10.73		Si
SLD 2	14.67	-419.67	-4030	-0.0000119	0.0005615	0.0035	2.28		5774.96	5774.96	13.76		Si
SLV 16	13.87	-642.54	-4776	-0.000015	0.0005615	0.0035	2.28		6554.31	6554.31	10.2		Si
SLV 16	14.67	328.86	-3610	-0.0000104	0.0005615	0.0035	2.28		4280.34	4280.34	13.02		Si
SLV 1	13.87	1014.36	-5801	-0.0000198	0.0005615	0.0035	2.28		6590.8	6590.8	6.5		Si
SLV 1	14.67	-620.2	-4233	-0.0000136	0.0005615	0.0035	2.28		5989.05	5989.05	9.66		Si
SLV 6	13.87	719.24	-3532	-0.0000126	0.0005615	0.0035	2.28		4197.42	4197.42	5.84		Si
SLV 6	14.67	-525.81	-2454	-0.0000089	0.0005615	0.0035	2.28		4081.96	4081.96	7.76		Si
SLV 3	13.87	858.45	-7063	-0.0000218	0.0005615	0.0035	2.28		7886.51	7886.51	9.19		Si
SLV 3	14.67	-514.6	-5250	-0.0000154	0.0005615	0.0035	2.28		7044.48	7044.48	13.69		Si
SLV 5	13.87	653.05	-3526	-0.0000121	0.0005615	0.0035	2.28		4190.5	4190.5	6.42		Si
SLV 5	14.67	-419.52	-2481	-0.0000083	0.0005615	0.0035	2.28		4111.1	4111.1	9.8		Si
SLV 13	13.87	-588.21	-3503	-0.0000117	0.0005615	0.0035	2.28		5213.39	5213.39	8.86		Si
SLV 13	14.67	386.37	-2635	-0.0000084	0.0005615	0.0035	2.28		3226.41	3226.41	8.35		Si
SLV 2	13.87	1115.94	-5811	-0.0000204	0.0005615	0.0035	2.28		6601.08	6601.08	5.92		Si
SLV 2	14.67	-783.32	-4192	-0.0000145	0.0005615	0.0035	2.28		5945.51	5945.51	7.59		Si
SLV 15	13.87	-744.12	-4766	-0.0000156	0.0005615	0.0035	2.28		6544.1	6544.1	8.79		Si
SLV 15	14.67	491.98	-3651	-0.0000115	0.0005615	0.0035	2.28		4324.7	4324.7	8.79		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	13.87	960.03	-7073	-0.0000225	0.0005615	0.0035	2.28		7896.57	7896.57	8.23		Si
SLV 4	14.67	-677.71	-5209	-0.0000163	0.0005615	0.0035	2.28		7001.63	7001.63	10.33		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	13.87	127.28	-8311	-6920	1570	2.28	2.28	-10840	8390	5356	35683	19116	5814	24930	No	15.88	Si
SLU 48	14.67	-306.23	-6423	-5348	1285	2.28	2.28	-8378	8061	5146	35683	19116	5814	24930	No	19.4	Si
SLU 66	13.87	204.2	-8219	-6844	1543	2.28	2.28	-10721	8374	5346	35683	19116	5814	24930	No	16.16	Si
SLU 66	14.67	-233.03	-6341	-5280	1265	2.28	2.28	-8271	8047	5137	35683	19116	5814	24930	No	19.7	Si
SLU 50	13.87	119.72	-7935	-6607	1589	2.28	2.28	-10350	8324	5314	35683	19116	5814	24930	No	15.69	Si
SLU 50	14.67	-344.84	-6061	-5047	1304	2.28	2.28	-7906	7999	5106	35683	19116	5814	24930	No	19.12	Si
SLU 72	13.87	135.21	-8607	-7167	1628	2.28	2.28	-11226	8441	5389	35683	19116	5814	24930	No	15.32	Si
SLU 72	14.67	-320.35	-6685	-5566	1343	2.28	2.28	-8719	8107	5175	35683	19116	5814	24930	No	18.57	Si
SLU 49	13.87	123.43	-8312	-6921	1566	2.28	2.28	-10842	8390	5356	35683	19116	5814	24930	No	15.92	Si
SLU 49	14.67	-305.19	-6423	-5348	1280	2.28	2.28	-8378	8061	5146	35683	19116	5814	24930	No	19.48	Si
SLU 68	13.87	190.23	-7845	-6533	1555	2.28	2.28	-10233	8309	5304	35683	19116	5814	24930	No	16.03	Si
SLU 68	14.67	-269.91	-5979	-4979	1274	2.28	2.28	-7799	7984	5097	35683	19116	5814	24930	No	19.56	Si
SLU 51	13.87	115.87	-7936	-6608	1586	2.28	2.28	-10352	8325	5314	35683	19116	5814	24930	No	15.72	Si
SLU 51	14.67	-343.8	-6061	-5047	1298	2.28	2.28	-7906	7999	5106	35683	19116	5814	24930	No	19.21	Si
SLU 71	13.87	139.06	-8605	-7166	1632	2.28	2.28	-11225	8441	5389	35683	19116	5814	24930	No	15.28	Si
SLU 71	14.67	-321.39	-6685	-5566	1348	2.28	2.28	-8719	8107	5175	35683	19116	5814	24930	No	18.49	Si
SLU 70	13.87	142.77	-8982	-7480	1608	2.28	2.28	-11717	8507	5431	35683	19116	5814	24930	No	15.5	Si
SLU 70	14.67	-281.74	-7046	-5868	1324	2.28	2.28	-9191	8170	5216	35683	19116	5814	24930	No	18.83	Si
SLU 69	13.87	146.61	-8981	-7479	1612	2.28	2.28	-11715	8506	5430	35683	19116	5814	24930	No	15.46	Si
SLU 69	14.67	-282.78	-7046	-5868	1330	2.28	2.28	-9191	8170	5216	35683	19116	5814	24930	No	18.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	13.87	960.03	-7073	-5890	3732	2.28	2.28	-9226	12262	7828	35683	28675	5814	34489		9.24	Si
SLV 4	14.67	-677.71	-5209	-4337	2639	2.28	2.28	-6794	11775	7517	35683	28675	5814	34489		13.07	Si
SLV 3	13.87	858.45	-7063	-5882	3321	2.28	2.28	-9213	12259	7826	35683	28675	5814	34489		10.38	Si
SLV 3	14.67	-514.6	-5250	-4372	2287	2.28	2.28	-6848	11786	7524	35683	28675	5814	34489		15.08	Si
SLD 1	13.87	541.61	-5499	-4579	2010	2.28	2.28	-7173	11851	7566	35683	28675	5814	34489		17.16	Si
SLD 1	14.67	-349.61	-4048	-3371	1583	2.28	2.28	-5280	11473	7324	35683	28675	5814	34489		21.79	Si
SLV 1	13.87	1014.36	-5801	-4831	3263	2.28	2.28	-7567	11930	7616	35683	28675	5814	34489		10.57	Si
SLV 1	14.67	-620.2	-4233	-3525	2521	2.28	2.28	-5522	11521	7355	35683	28675	5814	34489		13.68	Si
SLV 8	13.87	199.54	-7740	-6445	2031	2.28	2.28	-10096	12436	7939	35683	28675	5814	34489		16.98	Si
SLV 8	14.67	-173.79	-5842	-4865	1114	2.28	2.28	-7621	11941	7623	35683	28675	5814	34489		30.95	Si
SLV 2	13.87	1115.94	-5811	-4839	3674	2.28	2.28	-7580	11933	7618	35683	28675	5814	34489		9.39	Si
SLV 2	14.67	-783.32	-4192	-3491	2872	2.28	2.28	-5468	11510	7348	35683	28675	5814	34489		12.01	Si
SLD 2	13.87	585.24	-5503	-4583	2187	2.28	2.28	-7179	11852	7567	35683	28675	5814	34489		15.77	Si
SLD 2	14.67	-419.67	-4030	-3356	1734	2.28	2.28	-5257	11468	7321	35683	28675	5814	34489		19.89	Si
SLD 4	13.87	516.02	-6060	-5046	2213	2.28	2.28	-7905	11998	7659	35683	28675	5814	34489		15.58	Si
SLD 4	14.67	-373.39	-4479	-3729	1631	2.28	2.28	-5842	11585	7396	35683	28675	5814	34489		21.14	Si
SLV 6	13.87	719.24	-3532	-2942	1838	2.28	2.28	-4608	11338	7238	35683	28675	5814	34489		18.77	Si
SLV 6	14.67	-525.81	-2454	-2043	1892	2.28	2.28	-3201	11057	7059	35683	28675	5814	34489		18.23	Si
SLD 3	13.87	472.39	-6056	-5043	2037	2.28	2.28	-7899	11997	7659	35683	28675	5814	34489		16.93	Si
SLD 3	14.67	-303.33	-4496	-3744	1480	2.28	2.28	-5865	11590	7399	35683	28675	5814	34489		23.3	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.476 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.53	4256	-2717	266.44	369.75	1.39	Si
SLV 5	179667	0.53	4424	-2824	266.44	383.92	1.44	Si
SLV 10	179667	0.53	4542	-2900	266.44	393.87	1.48	Si
SLV 9	179667	0.53	4710	-3007	266.44	407.99	1.53	Si
SLV 2	179667	0.53	6201	-3959	266.44	531.69	2	Si
SLV 1	179667	0.53	6459	-4123	266.44	552.85	2.07	Si
SLV 14	179667	0.53	7155	-4568	266.44	609.55	2.29	Si
SLV 13	179667	0.53	7414	-4733	266.44	630.42	2.37	Si
SLV 4	179667	0.53	8193	-5230	266.44	692.97	2.6	Si
SLV 3	179667	0.53	8451	-5395	266.44	713.52	2.68	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.476 Wa = 0.05 Ta = 0.0616

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-4067	-9472	690	2.106	714.3	0.903	33.89387	12.04713	Si
SLV 7	-4064	-9590	690	2.107	714	0.903	33.91554	12.04713	Si
SLV 12	-3657	-9782	688	2.26	674	0.9	36.51342	12.04713	Si
SLV 11	-3653	-9900	688	2.262	673.7	0.9	36.53848	12.04713	Si
SLV 6	-2292	-2312	-678	2.994	543	0.89	48.88613	12.04713	Si
SLV 5	-2288	-2430	-678	2.996	542.6	0.89	48.93023	12.04713	Si
SLV 10	-1881	-2622	-680	3.318	505.1	0.889	54.25582	12.04713	Si
SLV 9	-1878	-2740	-680	3.322	504.7	0.889	54.30918	12.04713	Si
SLV 4	-3926	-6573	214	2.239	700.5	0.902	36.07849	6.51271	Si
SLV 3	-3921	-6755	214	2.241	699.9	0.902	36.1148	6.51271	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	22.5	SLU 50	Si
V_SLU	15.28	SLU 71	Si
PF_SLV	5.836	SLV 6	Si
V_SLV	9.24	SLV 4	Si
PFFP_SLV	1.388	SLV 6	Si
R_SLV	2.813	SLV 8	Si

Maschio 212

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.283	-3.314	L7	F1	2.15	0.28	3.211	3.21	3.212			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 27	12.77	537.65	-5748	-0.0000181	0.0003743	0.0035	2.15	5599.51	5994.99	5994.99	11.15	No	Si
SLU 27	14.57	1564.32	-4832	-0.0000229	0.0003743	0.0035	2.15	4785.01	5132.72	5132.72	3.28	No	Si
SLU 16	12.77	391.61	-5064	-0.0000153	0.0003743	0.0035	2.15	4994.26	5353.18	5353.18	13.67	No	Si
SLU 16	14.57	1362.01	-4129	-0.0000197	0.0003743	0.0035	2.15	4139.52	4457.91	4457.91	3.27	No	Si
SLU 38	12.77	342.7	-5453	-0.000016	0.0003743	0.0035	2.15	5340.08	5719.3	5719.3	16.69	No	Si
SLU 38	14.57	1582.27	-4573	-0.0000224	0.0003743	0.0035	2.15	4549.33	4885.82	4885.82	3.09	No	Si
SLU 36	12.77	355.35	-5672	-0.0000166	0.0003743	0.0035	2.15	5532.93	5924.77	5924.77	16.67	No	Si
SLU 36	14.57	1653.07	-4896	-0.0000237	0.0003743	0.0035	2.15	4842.6	5193.27	5193.27	3.14	No	Si
SLU 37	12.77	341.12	-5427	-0.0000159	0.0003743	0.0035	2.15	5317.68	5695.41	5695.41	16.7	No	Si
SLU 37	14.57	1584.49	-4575	-0.0000224	0.0003743	0.0035	2.15	4551.06	4887.63	4887.63	3.08	No	Si
SLU 17	12.77	393.19	-5090	-0.0000154	0.0003743	0.0035	2.15	5016.98	5377.2	5377.2	13.68	No	Si
SLU 17	14.57	1359.8	-4127	-0.0000197	0.0003743	0.0035	2.15	4137.76	4456.07	4456.07	3.28	No	Si
SLU 28	12.77	539.22	-5773	-0.0000182	0.0003743	0.0035	2.15	5621.62	6018.39	6018.39	11.16	No	Si
SLU 28	14.57	1562.11	-4830	-0.0000229	0.0003743	0.0035	2.15	4783.29	5130.91	5130.91	3.28	No	Si
SLU 35	12.77	353.77	-5646	-0.0000165	0.0003743	0.0035	2.15	5510.72	5901.3	5901.3	16.68	No	Si
SLU 35	14.57	1655.28	-4898	-0.0000237	0.0003743	0.0035	2.15	4844.32	5195.08	5195.08	3.14	No	Si
SLU 30	12.77	526.58	-5554	-0.0000175	0.0003743	0.0035	2.15	5429.55	5815.08	5815.08	11.04	No	Si
SLU 30	14.57	1491.32	-4508	-0.0000216	0.0003743	0.0035	2.15	4489.28	4823.13	4823.13	3.23	No	Si
SLU 29	12.77	525	-5529	-0.0000174	0.0003743	0.0035	2.15	5407.24	5791.15	5791.15	11.03	No	Si
SLU 29	14.57	1493.53	-4509	-0.0000216	0.0003743	0.0035	2.15	4491.02	4824.95	4824.95	3.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 6	12.77	163.77	-1325	-0.0000044	0.0005615	0.0035	2.15		1656.99	1656.99	10.12		Si
SLD 6	14.57	1019.12	-2772	-0.0000138	0.0005615	0.0035	2.15		3152.66	3152.66	3.09		Si
SLD 10	12.77	131.71	-1341	-0.0000042	0.0005615	0.0035	2.15		1674.04	1674.04	12.71		Si
SLD 10	14.57	1221.09	-2996	-0.0000158	0.0005615	0.0035	2.15		3381.64	3381.64	2.77		Si
SLV 9	12.77	-308.17	2154	0.1546495	0.0005615	0.0035	1.72		0	0	0		No
SLV 9	14.57	1873.06	-2872	-0.0000241	0.0005615	0.0035	2.15		3254.98	3254.98	1.74		Si
SLD 5	12.77	120.64	-1480	-0.0000044	0.0005615	0.0035	2.15		1819.64	1819.64	15.08		Si
SLD 5	14.57	1045.24	-2841	-0.0000141	0.0005615	0.0035	2.15		3223.12	3223.12	3.08		Si
SLV 10	12.77	-209.57	2510	0.1795708	0.0005615	0.0035	1.72		0	0	0		No
SLV 10	14.57	1813.35	-2714	-0.0000236	0.0005615	0.0035	2.15		3093.91	3093.91	1.71		Si
SLD 9	12.77	88.57	-1497	-0.0000043	0.0005615	0.0035	2.15		1836.66	1836.66	20.74		Si
SLD 9	14.57	1247.21	-3065	-0.0000161	0.0005615	0.0035	2.15		3452.04	3452.04	2.77		Si
SLV 5	12.77	-234.21	2192	0.1570624	0.0005615	0.0035	1.72		0	0	0		No
SLV 5	14.57	1401.22	-2349	-0.0000173	0.0005615	0.0035	2.15		2719.35	2719.35	1.94		Si
SLV 13	12.77	17.17	-2710	-0.0000068	0.0005615	0.0035	2.15		3089.19	3089.19	179.96		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	14.57	1844.72	-4009	-0.0000231	0.0005615	0.0035	2.15		4404.15	4404.15	2.39		Si
SLV 6	12.77	-135.61	2548	0.1819649	0.0005615	0.0035	1.72		0	0	0		No
SLV 6	14.57	1341.52	-2191	-0.0000167	0.0005615	0.0035	2.15		2557.66	2557.66	1.91		Si
SLV 14	12.77	168.49	-2164	-0.0000065	0.0005615	0.0035	2.15		2529.51	2529.51	15.01		Si
SLV 14	14.57	1753.08	-3767	-0.0000218	0.0005615	0.0035	2.15		4161.26	4161.26	2.37		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 74	12.77	459.95	-6398	-5327	-1291	2.15	2.15	-8849	8124	4891	35683	18027	5483	23509	No	18.21	Si
SLU 74	14.57	1477.92	-5175	-4309	-1287	2.15	2.15	-7158	7899	4755	35683	18027	5483	23509	No	18.27	Si
SLU 35	12.77	353.77	-5646	-4702	-1406	2.15	2.15	-7810	7986	4808	35683	18027	5483	23509	No	16.72	Si
SLU 35	14.57	1655.28	-4898	-4078	-1401	2.15	2.15	-6775	7848	4724	35683	18027	5483	23509	No	16.78	Si
SLU 80	12.77	501.24	-6625	-5517	-1360	2.15	2.15	-9164	8166	4916	35683	18027	5483	23509	No	17.28	Si
SLU 80	14.57	1706.41	-5343	-4449	-1355	2.15	2.15	-7391	7930	4774	35683	18027	5483	23509	No	17.36	Si
SLU 83	12.77	368.5	-6135	-5109	-1305	2.15	2.15	-8486	8076	4862	35683	18027	5483	23509	No	18.02	Si
SLU 83	14.57	1446.11	-4880	-4064	-1301	2.15	2.15	-6750	7844	4722	35683	18027	5483	23509	No	18.07	Si
SLU 36	12.77	355.35	-5672	-4723	-1388	2.15	2.15	-7845	7990	4810	35683	18027	5483	23509	No	16.94	Si
SLU 36	14.57	1653.07	-4896	-4077	-1382	2.15	2.15	-6772	7847	4724	35683	18027	5483	23509	No	17.01	Si
SLU 78	12.77	513.89	-6844	-5699	-1454	2.15	2.15	-9467	8207	4940	35683	18027	5483	23509	No	16.16	Si
SLU 78	14.57	1777.2	-5666	-4718	-1449	2.15	2.15	-7837	7989	4810	35683	18027	5483	23509	No	16.23	Si
SLU 77	12.77	512.31	-6819	-5678	-1473	2.15	2.15	-9432	8202	4938	35683	18027	5483	23509	No	15.96	Si
SLU 77	14.57	1779.42	-5668	-4720	-1467	2.15	2.15	-7840	7990	4810	35683	18027	5483	23509	No	16.02	Si
SLU 37	12.77	341.12	-5427	-4519	-1312	2.15	2.15	-7507	7945	4783	35683	18027	5483	23509	No	17.91	Si
SLU 37	14.57	1584.49	-4575	-3810	-1307	2.15	2.15	-6328	7788	4689	35683	18027	5483	23509	No	17.99	Si
SLU 79	12.77	499.66	-6600	-5496	-1379	2.15	2.15	-9129	8162	4913	35683	18027	5483	23509	No	17.05	Si
SLU 79	14.57	1708.63	-5345	-4451	-1373	2.15	2.15	-7394	7930	4774	35683	18027	5483	23509	No	17.12	Si
SLU 38	12.77	342.7	-5453	-4540	-1294	2.15	2.15	-7542	7950	4786	35683	18027	5483	23509	No	18.17	Si
SLU 38	14.57	1582.27	-4573	-3808	-1288	2.15	2.15	-6326	7788	4688	35683	18027	5483	23509	No	18.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	12.77	17.17	-2710	-2257	-3504	2.15	2.15	-3748	11166	6722	35683	27040	5483	32523		9.28	Si
SLV 13	14.57	1844.72	-4009	-3338	-2183	2.15	1.8445	-5545	11526	5952	35683	27040	5483	32523		14.9	Si
SLV 5	12.77	-234.21	2192	1826	-4532	1.72	2.15	0	0	0	35683	21632	4386	26018		5.74	Si
SLV 5	14.57	1401.22	-2349	-1956	-4886	2.15	1.4352	-3249	11066	4447	35683	27040	5483	32523		6.66	Si
SLV 7	12.77	1017.18	-11305	-9414	4298	2.15	2.15	-15638	13544	8154	35683	27040	5483	32523		7.57	Si
SLV 7	14.57	-298.14	-3732	-3108	3871	2.15	2.15	-5162	11449	6892	35683	27040	5483	32523		8.4	Si
SLV 6	12.77	-135.61	2548	2122	-4562	1.72	2.15	0	0	0	35683	21632	4386	26018		5.7	Si
SLV 6	14.57	1341.52	-2191	-1825	-4917	2.15	1.3883	-3031	11023	4285	35683	27040	5483	32523		6.61	Si
SLV 11	12.77	943.22	-11344	-9446	3342	2.15	2.15	-15691	13555	8160	35683	27040	5483	32523		9.73	Si
SLV 11	14.57	173.69	-4255	-3543	3700	2.15	2.15	-5886	11594	6980	35683	27040	5483	32523		8.79	Si
SLV 9	12.77	-308.17	2154	1794	-5487	1.72	2.15	0	0	0	35683	21632	4386	26018		4.74	Si
SLV 9	14.57	1873.06	-2872	-2391	-5057	2.15	1.2684	-3973	11211	3982	35683	27040	5483	32523		6.43	Si
SLV 14	12.77	168.49	-2164	-1802	-3551	2.15	2.15	-2993	11015	6631	35683	27040	5483	32523		9.16	Si
SLV 14	14.57	1753.08	-3767	-3137	-2230	2.15	1.8289	-5211	11459	5868	35683	27040	5483	32523		14.58	Si
SLV 12	12.77	1041.82	-10988	-9150	3312	2.15	2.15	-15199	13456	8101	35683	27040	5483	32523		9.82	Si
SLV 12	14.57	113.99	-4098	-3412	3670	2.15	2.15	-5668	11550	6953	35683	27040	5483	32523		8.86	Si
SLV 8	12.77	1115.78	-10950	-9118	4268	2.15	2.15	-15146	13446	8094	35683	27040	5483	32523		7.62	Si
SLV 8	14.57	-357.85	-3574	-2976	3841	2.15	2.15	-4944	11406	6866	35683	27040	5483	32523		8.47	Si
SLV 10	12.77	-209.57	2510	2090	-5518	1.72	2.15	0	0	0	35683	21632	4386	26018		4.72	Si
SLV 10	14.57	1813.35	-2714	-2260	-5088	2.15	1.2209	-3755	11168	3818	35683	27040	5483	32523		6.39	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 13.475 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.53	0	496	250.81	0	0	No, Trazione
SLV 9	179667	0.53	0	154	250.81	0	0	No, Trazione
SLV 5	179667	0.53	0	222	250.81	0	0	No, Trazione
SLV 10	179667	0.53	0	427	250.81	0	0	No, Trazione
SLV 2	179667	0.53	3895	-2345	250.81	319.86	1.28	Si
SLV 14	179667	0.53	4273	-2572	250.81	350.03	1.4	Si
SLV 1	179667	0.53	4591	-2764	250.81	375.3	1.5	Si
SLV 13	179667	0.53	4969	-2991	250.81	405.17	1.62	Si
SLV 4	179667	0.53	8156	-4910	250.81	650.66	2.59	Si
SLV 16	179667	0.53	8534	-5137	250.81	679.05	2.71	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 13.475 Wa = 0.05 Ta = 0.0615

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-2729	-12254	426	2.668	565.6	0.894	43.378	12.02335	Si
SLV 12	-2666	-11740	426	2.705	559.6	0.893	44.01346	12.02335	Si
SLV 7	-2494	-11668	259	2.853	543.1	0.892	46.48043	12.02335	Si
SLV 8	-2431	-11154	259	2.895	537.1	0.892	47.19617	12.02335	Si
SLV 9	-2297	1707	-259	2.99	524.5	0.891	48.78548	12.02335	Si, Trazione
SLV 10	-2234	2221	-259	3.037	518.5	0.89	49.56792	12.02335	Si, Trazione
SLV 5	-2061	2293	-426	3.129	502.4	0.89	51.11486	12.02335	Si, Trazione
SLV 6	-1998	2807	-426	3.181	496.6	0.889	51.97855	12.02335	Si, Trazione
SLV 15	-2869	-8189	381	2.598	579.1	0.895	42.18798	6.50726	Si
SLV 16	-2773	-7400	381	2.653	569.8	0.894	43.11626	6.50726	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.085	SLU 37	Si
V_SLU	15.963	SLU 77	Si
PF_SLV	0	SLV 5	No
V_SLV	4.715	SLV 10	Si
PFFP_SLV	0	SLV 10	No
R_SLV	3.608	SLV 11	Si

Maschio 219

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.013	-4.784	-13.763	-4.784	L2	L3	2.75	0.45	1.98	1.98	1.98			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	-1.56	-3886.97	-14633	-0.000029	0.0003743	0.0035	2.75	17783.27	20428.26	20428.26	5.26	No	Si
SLU 75	0.42	1137.55	-17802	-0.0000255	0.0003743	0.0035	2.75	21018.86	21686.3	21686.3	19.06	No	Si
SLU 77	-1.56	-3938.13	-14803	-0.0000294	0.0003743	0.0035	2.75	17962.5	20618.33	20618.33	5.24	No	Si
SLU 77	0.42	1168.79	-18063	-0.0000259	0.0003743	0.0035	2.75	21275.85	21955.74	21955.74	18.79	No	Si
SLU 84	-1.56	-4001.95	-15093	-0.00003	0.0003743	0.0035	2.75	18267.13	20943.69	20943.69	5.23	No	Si
SLU 84	0.42	1075.1	-18669	-0.0000265	0.0003743	0.0035	2.75	21866.65	22583.12	22583.12	21.01	No	Si
SLU 80	-1.56	-3904.3	-14704	-0.0000292	0.0003743	0.0035	2.75	17858.4	20507.82	20507.82	5.25	No	Si
SLU 80	0.42	1119.89	-17913	-0.0000256	0.0003743	0.0035	2.75	21128.6	21801.11	21801.11	19.47	No	Si
SLU 82	-1.56	-3959.17	-14933	-0.0000296	0.0003743	0.0035	2.75	18099.16	20763.94	20763.94	5.24	No	Si
SLU 82	0.42	1063.77	-18407	-0.0000261	0.0003743	0.0035	2.75	21612.14	22311.47	22311.47	20.97	No	Si
SLU 81	-1.56	-3967.55	-14943	-0.0000297	0.0003743	0.0035	2.75	18109.34	20774.81	20774.81	5.24	No	Si
SLU 81	0.42	1083.68	-18406	-0.0000262	0.0003743	0.0035	2.75	21611.17	22310.44	22310.44	20.59	No	Si
SLU 74	-1.56	-3895.35	-14642	-0.0000291	0.0003743	0.0035	2.75	17793.51	20439.09	20439.09	5.25	No	Si
SLU 74	0.42	1157.46	-17801	-0.0000256	0.0003743	0.0035	2.75	21017.88	21685.27	21685.27	18.74	No	Si
SLU 83	-1.56	-4010.33	-15103	-0.00003	0.0003743	0.0035	2.75	18277.27	20954.58	20954.58	5.23	No	Si
SLU 83	0.42	1095.01	-18668	-0.0000265	0.0003743	0.0035	2.75	21865.68	22582.09	22582.09	20.62	No	Si
SLU 79	-1.56	-3912.68	-14714	-0.0000292	0.0003743	0.0035	2.75	17868.64	20518.67	20518.67	5.24	No	Si
SLU 79	0.42	1139.8	-17912	-0.0000257	0.0003743	0.0035	2.75	21127.62	21800.08	21800.08	19.13	No	Si
SLU 78	-1.56	-3929.75	-14793	-0.0000294	0.0003743	0.0035	2.75	17952.28	20607.48	20607.48	5.24	No	Si
SLU 78	0.42	1148.88	-18064	-0.0000259	0.0003743	0.0035	2.75	21276.83	21956.77	21956.77	19.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	-1.56	-5890.91	-10225	-0.000029	0.0005615	0.0035	2.75		15513.34	15513.34	2.63		Si
SLV 16	0.42	17303.3	-10488	-0.0130161	0.0005615	0.0035	2.75		14162.01	14162.01	0.82		No
SLV 3	-1.56	550.38	-9421	-0.000013	0.0005615	0.0035	2.75		12812.27	12812.27	23.28		Si
SLV 3	0.42	-15185.2	-12368	-0.0001959	0.0005615	0.0035	2.2		18190.3	18190.3	1.2		Si
SLV 2	-1.56	826.94	-10190	-0.0000148	0.0005615	0.0035	2.75		13784.7	13784.7	16.67		Si
SLV 2	0.42	-16875.84	-13358	-0.0002689	0.0005615	0.0035	2.2		19411.27	19411.27	1.15		Si
SLV 1	-1.56	455.82	-10206	-0.0000138	0.0005615	0.0035	2.75		13805.72	13805.72	30.29		Si
SLV 1	0.42	-15585.02	-13233	-0.0001614	0.0005615	0.0035	2.2		19261.47	19261.47	1.24		Si
SLV 4	-1.56	921.49	-9404	-0.000014	0.0005615	0.0035	2.75		12791.18	12791.18	13.88		Si
SLV 4	0.42	-16476.02	-12492	-0.0003565	0.0005615	0.0035	2.2		18346.2	18346.2	1.11		Si
SLV 13	-1.56	-6356.58	-11027	-0.0000314	0.0005615	0.0035	2.75		16511.82	16511.82	2.6		Si
SLV 13	0.42	18194.3	-11229	-0.0129061	0.0005615	0.0035	2.75		15085.51	15085.51	0.83		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-1.56	-6262.02	-10241	-0.0000304	0.0005615	0.0035	2.75		15534.04	15534.04	2.48		Si
SLV 15	0.42	18594.12	-10364	-0.017717	0.0005615	0.0035	2.75		14005.17	14005.17	0.75		No
SLD 13	-1.56	-4274.3	-10566	-0.0000245	0.0005615	0.0035	2.75		15938.21	15938.21	3.73		Si
SLD 13	0.42	8267.49	-11594	-0.0000401	0.0005615	0.0035	2.75		15538.85	15538.85	1.88		Si
SLV 14	-1.56	-5985.46	-11010	-0.00003	0.0005615	0.0035	2.75		16491.04	16491.04	2.76		Si
SLV 14	0.42	16903.48	-11354	-0.0082855	0.0005615	0.0035	2.75		15240.1	15240.1	0.9		No
SLD 15	-1.56	-4232.04	-10222	-0.000024	0.0005615	0.0035	2.75		15509.95	15509.95	3.66		Si
SLD 15	0.42	8442.33	-11217	-0.0000413	0.0005615	0.0035	2.75		15070.13	15070.13	1.79		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-1.56	-3886.97	-14633	-13007	-9417	2.75	2.75	-10511	8346	10328	21410	37056	7013	31738	No	3.37	Si
SLU 75	0.42	1137.55	-17802	-15824	-7341	2.75	2.75	-12787	8649	10704	21410	37056	7013	32114	No	4.37	Si
SLU 83	-1.56	-4010.33	-15103	-13425	-9696	2.75	2.75	-10848	8391	10384	21410	37056	7013	31794	No	3.28	Si
SLU 83	0.42	1095.01	-18668	-16594	-7593	2.75	2.75	-13409	8732	10806	21410	37056	7013	32216	No	4.24	Si
SLU 77	-1.56	-3938.13	-14803	-13158	-9569	2.75	2.75	-10633	8362	10348	21410	37056	7013	31758	No	3.32	Si
SLU 77	0.42	1168.79	-18063	-16056	-7453	2.75	2.75	-12975	8674	10735	21410	37056	7013	32144	No	4.31	Si
SLU 79	-1.56	-3912.68	-14714	-13079	-9495	2.75	2.75	-10569	8354	10338	21410	37056	7013	31748	No	3.34	Si
SLU 79	0.42	1139.8	-17912	-15922	-7391	2.75	2.75	-12866	8660	10717	21410	37056	7013	32127	No	4.35	Si
SLU 78	-1.56	-3929.75	-14793	-13149	-9528	2.75	2.75	-10626	8361	10347	21410	37056	7013	31757	No	3.33	Si
SLU 78	0.42	1148.88	-18064	-16057	-7422	2.75	2.75	-12975	8674	10735	21410	37056	7013	32145	No	4.33	Si
SLU 74	-1.56	-3895.35	-14642	-13016	-9458	2.75	2.75	-10518	8347	10329	21410	37056	7013	31739	No	3.36	Si
SLU 74	0.42	1157.46	-17801	-15823	-7373	2.75	2.75	-12786	8649	10703	21410	37056	7013	32113	No	4.36	Si
SLU 82	-1.56	-3959.17	-14933	-13274	-9543	2.75	2.75	-10726	8375	10364	21410	37056	7013	31773	No	3.33	Si
SLU 82	0.42	1063.77	-18407	-16362	-7481	2.75	2.75	-13222	8707	10775	21410	37056	7013	32185	No	4.3	Si
SLU 81	-1.56	-3967.55	-14943	-13282	-9585	2.75	2.75	-10733	8376	10365	21410	37056	7013	31775	No	3.32	Si
SLU 81	0.42	1083.68	-18406	-16361	-7513	2.75	2.75	-13221	8707	10775	21410	37056	7013	32185	No	4.28	Si
SLU 84	-1.56	-4001.95	-15093	-13416	-9654	2.75	2.75	-10841	8390	10383	21410	37056	7013	31793	No	3.29	Si
SLU 84	0.42	1075.1	-18669	-16595	-7562	2.75	2.75	-13410	8732	10806	21410	37056	7013	32216	No	4.26	Si
SLU 80	-1.56	-3904.3	-14704	-13070	-9453	2.75	2.75	-10562	8353	10336	21410	37056	7013	31746	No	3.36	Si
SLU 80	0.42	1119.89	-17913	-15923	-7359	2.75	2.75	-12867	8660	10717	21410	37056	7013	32127	No	4.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	-1.56	826.94	-10190	-9057	22638	2.75	2.75	-7319	11880	14702	21410	55584	7013	36112		1.6	Si
SLV 2	0.42	-16875.84	-13358	-11873	19674	2.2	0.3348	0	0	0	21410	44468	5610	21410		1.09	Si
SLD 13	-1.56	-4274.3	-10566	-9392	-19322	2.75	2.75	-7590	11935	14769	21410	55584	7013	36179		1.87	Si
SLD 13	0.42	8267.49	-11594	-10306	-15826	2.75	1.9857	-8328	12082	10796	21410	55584	7013	32206		2.04	Si
SLV 1	-1.56	455.82	-10206	-9072	20284	2.75	2.75	-7331	11883	14705	21410	55584	7013	36115		1.78	Si
SLV 1	0.42	-15585.02	-13233	-11763	17778	2.2	0.5919	0	0	0	21410	44468	5610	21410		1.2	Si
SLV 15	-1.56	-6262.02	-10241	-9104	-35834	2.75	2.2907	-8868	12190	12566	21410	55584	7013	33976		0.95	No
SLV 15	0.42	18594.12	-10364	-9213	-29878	2.75	0	-245205	16250	0	21410	55584	7013	21410		0.72	No
SLD 15	-1.56	-4232.04	-10222	-9086	-19094	2.75	2.75	-7342	11885	14708	21410	55584	7013	36118		1.89	Si
SLD 15	0.42	8442.33	-11217	-9971	-15692	2.75	1.8671	-8057	12028	10106	21410	55584	7013	31516		2.01	Si
SLV 3	-1.56	550.38	-9421	-8374	20808	2.75	2.75	-6767	11770	14565	21410	55584	7013	35975		1.73	Si
SLV 3	0.42	-15185.2	-12368	-10994	18087	2.2	0.4417	0	0	0	21410	44468	5610	21410		1.18	Si
SLV 16	-1.56	-5890.91	-10225	-9089	-33480	2.75	2.3966	-8461	12109	13059	21410	55584	7013	34469		1.03	Si
SLV 16	0.42	17303.3	-10488	-9323	-27983	2.75	0	-219070	16250	0	21410	55584	7013	21410		0.77	No
SLV 14	-1.56	-5985.46	-11010	-9787	-34003	2.75	2.4941	-8749	12167	13655	21410	55584	7013	35065		1.03	Si
SLV 14	0.42	16903.48	-11354	-10092	-28291	2.75	0	-191023	16250	0	21410	55584	7013	21410		0.76	No
SLV 13	-1.56	-6356.58	-11027	-9801	-36357	2.75	2.3956	-9132	12243	13198	21410	55584	7013	34608		0.95	No
SLV 13	0.42	18194.3	-11229	-9982	-30186	2.75	0	-225651	16250	0	21410	55584	7013	21410		0.71	No
SLV 4	-1.56	921.49	-9404	-8359	23162	2.75	2.75	-6755	11768	14563	21410	55584	7013	35972		1.55	Si
SLV 4	0.42	-16476.02	-12492	-11104	19982	2.2	0.1684	0	0	0	21410	44468	5610	21410		1.07	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.57 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.24	7768	-9613	88.9	2052.84	23.09	Si
SLV 12	179667	0.24	7805	-9659	88.9	2062.12	23.2	Si
SLV 7	179667	0.24	7996	-9894	88.9	2109.7	23.73	Si
SLV 8	179667	0.24	8033	-9940	88.9	2118.95	23.84	Si
SLV 15	179667	0.24	8339	-10319	88.9	2195.09	24.69	Si
SLV 16	179667	0.24	8396	-10390	88.9	2209.21	24.85	Si
SLV 13	179667	0.24	9065	-11218	88.9	2374.14	26.71	Si
SLV 3	179667	0.24	9098	-11259	88.9	2382.31	26.8	Si
SLV 14	179667	0.24	9122	-11288	88.9	2388.1	26.86	Si
SLV 4	179667	0.24	9155	-11329	88.9	2396.28	26.96	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.57 Wa = 0.08 Ta = 0.0145

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-13644	-11396	-280	1.086	1736.4	0.943	16.73439	2.8947	Si
SLV 5	-13563	-11407	-278	1.092	1728.2	0.943	16.81754	2.8947	Si
SLV 10	-13043	-11642	-271	1.125	1675.5	0.942	17.3668	2.8947	Si
SLV 9	-12962	-11653	-269	1.131	1667.3	0.942	17.45687	2.8947	Si
SLV 2	-13358	-10190	-377	1.098	1707.4	0.943	16.92845	2.55178	Si
SLV 1	-13233	-10206	-374	1.106	1694.8	0.942	17.06049	2.55178	Si
SLV 8	-10760	-8778	-525	1.284	1444.5	0.934	19.97559	2.8947	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-10679	-8789	-523	1.291	1436.3	0.934	20.09923	2.8947	Si
SLV 4	-12492	-9404	-451	1.151	1619.8	0.94	17.7941	2.55178	Si
SLV 3	-12368	-9421	-447	1.16	1607.2	0.94	17.94191	2.55178	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.225	SLU 83	Si
V_SLU	3.279	SLU 83	Si
PF_SLV	0.753	SLV 15	No
V_SLV	0.709	SLV 13	No
PFFP_SLV	23.092	SLV 11	Si
R_SLV	5.781	SLV 6	Si

Maschio 230

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-22.543	-3.314	-24.633	-3.314	L4	L6	2.09	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 36	2.31	-216.71	-17054	-0.0000476	0.0003743	0.0035	2.09	12720.07	15291.99	15291.99	70.57	No	Si
SLU 36	4.21	-831.38	-16927	-0.0000522	0.0003743	0.0035	2.09	12663.14	15212.07	15212.07	18.3	No	Si
SLU 83	2.31	-295.69	-20442	-0.0000583	0.0003743	0.0035	2.09	14032.37	17005.02	17005.02	57.51	No	Si
SLU 83	4.21	-946.28	-20104	-0.0000627	0.0003743	0.0035	2.09	13919.69	16843.72	16843.72	17.8	No	Si
SLU 78	2.31	-311.89	-20322	-0.0000581	0.0003743	0.0035	2.09	13992.81	16947.52	16947.52	54.34	No	Si
SLU 78	4.21	-944.93	-19973	-0.0000623	0.0003743	0.0035	2.09	13874.58	16781.2	16781.2	17.76	No	Si
SLU 79	2.31	-321.79	-20125	-0.0000576	0.0003743	0.0035	2.09	13926.74	16853.58	16853.58	52.37	No	Si
SLU 79	4.21	-923.79	-19718	-0.0000613	0.0003743	0.0035	2.09	13785.62	16661.14	16661.14	18.04	No	Si
SLU 82	2.31	-290.06	-20115	-0.0000573	0.0003743	0.0035	2.09	13923.4	16848.91	16848.91	58.09	No	Si
SLU 82	4.21	-917.41	-19791	-0.0000615	0.0003743	0.0035	2.09	13811.42	16695.53	16695.53	18.2	No	Si
SLU 77	2.31	-323.03	-20319	-0.0000582	0.0003743	0.0035	2.09	13991.73	16945.96	16945.96	52.46	No	Si
SLU 77	4.21	-936	-19922	-0.0000621	0.0003743	0.0035	2.09	13857.13	16757.32	16757.32	17.9	No	Si
SLU 84	2.31	-284.54	-20445	-0.0000582	0.0003743	0.0035	2.09	14033.43	17006.58	17006.58	59.77	No	Si
SLU 84	4.21	-955.2	-20155	-0.0000629	0.0003743	0.0035	2.09	13936.81	16867.75	16867.75	17.66	No	Si
SLU 42	2.31	-189.36	-17177	-0.0000478	0.0003743	0.0035	2.09	12774.81	15369.86	15369.86	81.17	No	Si
SLU 42	4.21	-841.66	-17110	-0.0000528	0.0003743	0.0035	2.09	12744.86	15327.13	15327.13	18.21	No	Si
SLU 80	2.31	-310.64	-20128	-0.0000575	0.0003743	0.0035	2.09	13927.84	16855.13	16855.13	54.26	No	Si
SLU 80	4.21	-932.72	-19768	-0.0000616	0.0003743	0.0035	2.09	13803.42	16684.84	16684.84	17.89	No	Si
SLU 75	2.31	-317.4	-19992	-0.0000571	0.0003743	0.0035	2.09	13881.35	16790.51	16790.51	52.9	No	Si
SLU 75	4.21	-907.13	-19608	-0.0000609	0.0003743	0.0035	2.09	13746.85	16610.1	16610.1	18.31	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2.31	6384.75	-17150	-0.0000954	0.0005615	0.0035	2.09		15325.19	15325.19	2.4		Si
SLV 2	4.21	-5058.24	-23016	-0.0001022	0.0005615	0.0035	2.09		20573.46	20573.46	4.07		Si
SLV 6	2.31	3755.81	-10870	-0.0000564	0.0005615	0.0035	2.09		10478.82	10478.82	2.79		Si
SLV 6	4.21	-2319.74	-8563	-0.0000392	0.0005615	0.0035	2.09		9367.28	9367.28	4.04		Si
SLV 16	2.31	-6281.05	-9909	-0.0000897	0.0005615	0.0035	1.672		10558.36	10558.36	1.68		Si
SLV 16	4.21	3399.34	-4427	-0.000058	0.0005615	0.0035	2.09		4673.01	4673.01	1.37		Si
SLV 9	2.31	-111.82	-8358	-0.0000223	0.0005615	0.0035	2.09		9187.41	9187.41	82.16		Si
SLV 9	4.21	503.36	-950	-0.0000064	0.0005615	0.0035	2.09		1218.99	1218.99	2.42		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.31	5116.19	-19694	-0.0000925	0.0005615	0.0035	2.09		17371.08	17371.08	3.4		Si
SLV 4	4.21	-4850.74	-28169	-0.0001165	0.0005615	0.0035	2.09		23579.22	23579.22	4.86		Si
SLV 13	2.31	-5700.75	-8015	-0.0000892	0.0005615	0.0035	1.672		8878.11	8878.11	1.56		Si
SLV 13	4.21	3726.04	1478	0.0500283	0.0005615	0.0035	1.672		0	0	0		No
SLV 5	2.31	3307.35	-11294	-0.0000542	0.0005615	0.0035	2.09		10796.88	10796.88	3.26		Si
SLV 5	4.21	-1971.66	-8073	-0.0000353	0.0005615	0.0035	2.09		8930.7	8930.7	4.53		Si
SLV 14	2.31	-5012.48	-7365	-0.0000742	0.0005615	0.0035	1.672		8279.08	8279.08	1.65		Si
SLV 14	4.21	3191.84	726	-0.0142691	0.0005615	0.0035	1.672		0	0	0		No
SLV 1	2.31	5696.49	-17801	-0.0000915	0.0005615	0.0035	2.09		15843.75	15843.75	2.78		Si
SLV 1	4.21	-4524.05	-22264	-0.0000955	0.0005615	0.0035	2.09		20079.35	20079.35	4.44		Si
SLV 15	2.31	-6969.32	-10560	-0.0001031	0.0005615	0.0035	1.672		11123.76	11123.76	1.6		Si
SLV 15	4.21	3933.54	-3675	-0.0012122	0.0005615	0.0035	1.672		3942.55	3942.55	1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	2.31	-317.4	-19992	-16648	1448	2.09	2.09	-28448	10738	6284	80882	17523	5329	22853	No	15.79	Si
SLU 75	4.21	-907.13	-19608	-16328	1506	2.09	2.09	-27902	10665	6241	80882	17523	5329	22853	No	15.18	Si
SLU 77	2.31	-323.03	-20319	-16920	1452	2.09	2.09	-28913	10800	6320	80882	17523	5329	22853	No	15.74	Si
SLU 77	4.21	-936	-19922	-16589	1511	2.09	2.09	-28348	10724	6276	80882	17523	5329	22853	No	15.13	Si
SLU 81	2.31	-301.2	-20112	-16748	1463	2.09	2.09	-28619	10760	6297	80882	17523	5329	22853	No	15.62	Si
SLU 81	4.21	-908.49	-19740	-16438	1522	2.09	2.09	-28090	10690	6256	80882	17523	5329	22853	No	15.02	Si
SLU 76	2.31	-308.73	-19801	-16488	1461	2.09	2.09	-28176	10701	6262	80882	17523	5329	22853	No	15.65	Si
SLU 76	4.21	-900.87	-19438	-16186	1518	2.09	2.09	-27659	10632	6222	80882	17523	5329	22853	No	15.05	Si
SLU 84	2.31	-284.54	-20445	-17025	1541	2.09	2.09	-29093	10824	6334	80882	17523	5329	22853	No	14.83	Si
SLU 84	4.21	-955.2	-20155	-16783	1600	2.09	2.09	-28680	10768	6302	80882	17523	5329	22853	No	14.28	Si
SLU 83	2.31	-295.69	-20442	-17022	1504	2.09	2.09	-29088	10823	6333	80882	17523	5329	22853	No	15.19	Si
SLU 83	4.21	-946.28	-20104	-16741	1563	2.09	2.09	-28608	10759	6296	80882	17523	5329	22853	No	14.62	Si
SLU 82	2.31	-290.06	-20115	-16750	1499	2.09	2.09	-28624	10761	6297	80882	17523	5329	22853	No	15.24	Si
SLU 82	4.21	-917.41	-19791	-16480	1558	2.09	2.09	-28162	10699	6261	80882	17523	5329	22853	No	14.67	Si
SLU 79	2.31	-321.79	-20125	-16759	1441	2.09	2.09	-28638	10763	6298	80882	17523	5329	22853	No	15.86	Si
SLU 79	4.21	-923.79	-19718	-16419	1499	2.09	2.09	-28057	10685	6253	80882	17523	5329	22853	No	15.25	Si
SLU 80	2.31	-310.64	-20128	-16761	1477	2.09	2.09	-28642	10763	6299	80882	17523	5329	22853	No	15.47	Si
SLU 80	4.21	-932.72	-19768	-16461	1536	2.09	2.09	-28129	10695	6259	80882	17523	5329	22853	No	14.88	Si
SLU 78	2.31	-311.89	-20322	-16923	1489	2.09	2.09	-28918	10800	6320	80882	17523	5329	22853	No	15.35	Si
SLU 78	4.21	-944.93	-19973	-16631	1547	2.09	2.09	-28420	10734	6281	80882	17523	5329	22853	No	14.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	2.31	-6281.05	-9909	-8251	-6795	1.672	1.2333	0	0	0	80882	21028	4264	25292		3.72	Si
SLV 16	4.21	3399.34	-4427	-3687	-6659	2.09	0.8315	-6300	11677	2719	80882	26285	5329	31614		4.75	Si
SLV 4	2.31	5116.19	-19694	-16400	11103	2.09	2.09	-28024	16022	9376	80882	26285	5329	31614		2.85	Si
SLV 4	4.21	-4850.74	-28169	-23457	10910	2.09	2.09	-40084	16250	9509	80882	26285	5329	31614		2.9	Si
SLV 1	2.31	5696.49	-17801	-14823	8592	2.09	2.09	-25330	15483	9060	80882	26285	5329	31614		3.68	Si
SLV 1	4.21	-4524.05	-22264	-18539	8536	2.09	2.09	-31680	16250	9509	80882	26285	5329	31614		3.7	Si
SLV 15	2.31	-6969.32	-10560	-8793	-8208	1.672	1.155	0	0	0	80882	21028	4264	25292		3.08	Si
SLV 15	4.21	3933.54	-3675	-3060	-8075	1.672	0	0	0	0	80882	21028	4264	25292		3.13	Si
SLV 2	2.31	6384.75	-17150	-14281	10006	2.09	2.0181	-24404	15297	8644	80882	26285	5329	31614		3.16	Si
SLV 2	4.21	-5058.24	-23016	-19166	9951	2.09	2.09	-32751	16250	9509	80882	26285	5329	31614		3.18	Si
SLD 4	2.31	2030.54	-16343	-13609	5263	2.09	2.09	-23256	15068	8818	80882	26285	5329	31614		6.01	Si
SLD 4	4.21	-2396.12	-19684	-16391	5199	2.09	2.09	-28010	16019	9374	80882	26285	5329	31614		6.08	Si
SLV 14	2.31	-5012.48	-7365	-6133	-7892	1.672	1.0931	0	0	0	80882	21028	4264	25292		3.2	Si
SLV 14	4.21	3191.84	726	604	-7618	1.672	0	0	0	0	80882	21028	4264	25292		3.32	Si
SLV 8	2.31	-472.74	-19351	-16114	5874	2.09	2.09	-27536	15924	9319	80882	26285	5329	31614		5.38	Si
SLV 8	4.21	-1628.07	-25741	-21435	5633	2.09	2.09	-36628	16250	9509	80882	26285	5329	31614		5.61	Si
SLV 13	2.31	-5700.75	-8015	-6674	-9306	1.672	1.0012	0	0	0	80882	21028	4264	25292		2.72	Si
SLV 13	4.21	3726.04	1478	1231	-9034	1.672	0	0	0	0	80882	21028	4264	25292		2.8	Si
SLV 3	2.31	4427.92	-20345	-16942	9690	2.09	2.09	-28950	16207	9484	80882	26285	5329	31614		3.26	Si
SLV 3	4.21	-4316.54	-27417	-22830	9495	2.09	2.09	-39013	16250	9509	80882	26285	5329	31614		3.33	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.35	0	-1443	749.8	0	0	No, e>t/2
SLV 13	179667	0.35	0	-2489	749.8	0	0	No, e>t/2
SLV 14	179667	0.35	0	-2831	749.8	0	0	No, e>t/2
SLV 10	179667	0.35	0	-1665	749.8	0	0	No, e>t/2
SLV 5	179667	0.35	9343	-5468	749.8	718.64	0.96	No, M>Mu
SLV 6	179667	0.35	9724	-5690	749.8	745.9	0.99	No, M>Mu
SLV 15	179667	0.35	12752	-7462	749.8	957.48	1.28	Si
SLV 16	179667	0.35	13335	-7804	749.8	997.12	1.33	Si
SLV 1	179667	0.35	27180	-15906	749.8	1830.49	2.44	Si
SLV 2	179667	0.35	27764	-16247	749.8	1861.09	2.48	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-19173	-20390	364	0.522	2529.6	0.937	8.09195	15.32354	No
SLV 3	-18292	-20787	365	0.542	2440.5	0.935	8.42046	15.32354	No
SLV 2	-12598	-20028	286	0.729	1866.6	0.92	11.5245	15.32354	No

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-11717	-20424	287	0.77	1778.4	0.917	12.20429	15.32354	No
SLV 8	-23109	-16092	223	0.453	2928.2	0.944	6.97521	7.6122	No
SLV 7	-22535	-16350	224	0.463	2870	0.943	7.12815	7.6122	No
SLV 16	-8938	-6702	-298	0.935	1501.6	0.907	14.98178	15.32354	No
SLV 12	-20038	-11985	24	0.518	2617.1	0.939	8.01519	7.6122	Si
SLV 15	-8057	-7098	-297	1.003	1414.6	0.903	16.14885	15.32354	Si
SLV 11	-19464	-12243	25	0.53	2559	0.938	8.21611	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	17.659	SLU 84	Si
V_SLU	14.283	SLU 84	Si
PF_SLV	0	SLV 13	No
V_SLV	2.718	SLV 13	Si
PFFP_SLV	0	SLV 9	No
R_SLV	0.528	SLV 4	No

Maschio 231

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.313	-3.314	-21.543	-3.314	L4	L6	2.23	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	6.83	-2109.27	-28376	-0.0000913	0.0003743	0.0035	2.23	17516.83	22516.02	22516.02	10.67	No	Si
SLU 84	7.63	-1666.04	-24496	-0.000076	0.0003743	0.0035	2.23	16788.63	20838.41	20838.41	12.51	No	Si
SLU 70	6.83	-1989.28	-25491	-0.0000814	0.0003743	0.0035	2.23	17025.62	21383.79	21383.79	10.75	No	Si
SLU 70	7.63	-1472.02	-21871	-0.0000668	0.0003743	0.0035	2.23	15996.55	19477.07	19477.07	13.23	No	Si
SLU 77	6.83	-2122.74	-28116	-0.0000906	0.0003743	0.0035	2.23	17484.46	22425.58	22425.58	10.56	No	Si
SLU 77	7.63	-1661.97	-24267	-0.0000752	0.0003743	0.0035	2.23	16729.09	20715.01	20715.01	12.46	No	Si
SLU 75	6.83	-2071.26	-27541	-0.0000884	0.0003743	0.0035	2.23	17404.7	22229.28	22229.28	10.73	No	Si
SLU 75	7.63	-1604.45	-23733	-0.0000732	0.0003743	0.0035	2.23	16583.24	20430.87	20430.87	12.73	No	Si
SLU 69	6.83	-1989.96	-25457	-0.0000813	0.0003743	0.0035	2.23	17018.23	21365.24	21365.24	10.74	No	Si
SLU 69	7.63	-1461.57	-21836	-0.0000666	0.0003743	0.0035	2.23	15984.43	19459.8	19459.8	13.31	No	Si
SLU 80	6.83	-2103.16	-27845	-0.0000896	0.0003743	0.0035	2.23	17448.31	22332.56	22332.56	10.62	No	Si
SLU 80	7.63	-1648.12	-24023	-0.0000744	0.0003743	0.0035	2.23	16663.79	20584.81	20584.81	12.49	No	Si
SLU 78	6.83	-2122.06	-28149	-0.0000907	0.0003743	0.0035	2.23	17488.73	22437.1	22437.1	10.57	No	Si
SLU 78	7.63	-1672.42	-24301	-0.0000754	0.0003743	0.0035	2.23	16738.24	20733.68	20733.68	12.4	No	Si
SLU 83	6.83	-2109.95	-28343	-0.0000912	0.0003743	0.0035	2.23	17512.82	22504.4	22504.4	10.67	No	Si
SLU 83	7.63	-1655.59	-24461	-0.0000758	0.0003743	0.0035	2.23	16779.71	20819.64	20819.64	12.58	No	Si
SLU 79	6.83	-2103.85	-27812	-0.0000895	0.0003743	0.0035	2.23	17443.68	22321.17	22321.17	10.61	No	Si
SLU 79	7.63	-1637.67	-23988	-0.0000742	0.0003743	0.0035	2.23	16654.3	20566.3	20566.3	12.56	No	Si
SLU 74	6.83	-2071.94	-27508	-0.0000883	0.0003743	0.0035	2.23	17399.72	22218.01	22218.01	10.72	No	Si
SLU 74	7.63	-1594	-23698	-0.000073	0.0003743	0.0035	2.23	16573.39	20412.53	20412.53	12.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	6.83	316.96	-20259	-0.0000522	0.0005615	0.0035	2.23		19212.68	19212.68	60.62		Si
SLV 4	7.63	-5507.87	-20004	-0.0000875	0.0005615	0.0035	2.23		20125.62	20125.62	3.65		Si
SLV 15	6.83	-3269.68	-20704	-0.0000738	0.0005615	0.0035	2.23		20672.67	20672.67	6.32		Si
SLV 15	7.63	3144.82	-15116	-0.000058	0.0005615	0.0035	2.23		14758.11	14758.11	4.69		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLD 4	6.83	-687.87	-19290	-0.0000522	0.0005615	0.0035	2.23		19568.4	19568.4	28.45		Si
SLD 4	7.63	-2936.77	-17630	-0.0000632	0.0005615	0.0035	2.23		18240.19	18240.19	6.21		Si
SLV 1	6.83	218.83	-16697	-0.0000424	0.0005615	0.0035	2.23		16109.06	16109.06	73.62		Si
SLV 1	7.63	-4683.19	-16481	-0.0000721	0.0005615	0.0035	2.23		17296.53	17296.53	3.69		Si
SLV 13	6.83	-3185.53	-16787	-0.0000627	0.0005615	0.0035	2.23		17546	17546	5.51		Si
SLV 13	7.63	3475.82	-11628	-0.0000511	0.0005615	0.0035	2.23		11844.55	11844.55	3.41		Si
SLV 2	6.83	401.11	-16342	-0.0000427	0.0005615	0.0035	2.23		15803.65	15803.65	39.4		Si
SLV 2	7.63	-5176.88	-16517	-0.0000756	0.0005615	0.0035	2.23		17325.72	17325.72	3.35		Si
SLV 3	6.83	134.68	-20615	-0.0000519	0.0005615	0.0035	2.23		19501.39	19501.39	144.8		Si
SLV 3	7.63	-5014.18	-19968	-0.000084	0.0005615	0.0035	2.23		20097.52	20097.52	4.01		Si
SLD 2	6.83	-647.88	-17565	-0.0000475	0.0005615	0.0035	2.23		18186.9	18186.9	28.07		Si
SLD 2	7.63	-2793.43	-16094	-0.0000582	0.0005615	0.0035	2.23		16977.15	16977.15	6.08		Si
SLV 14	6.83	-3003.25	-16431	-0.0000605	0.0005615	0.0035	2.23		17255.94	17255.94	5.75		Si
SLV 14	7.63	2982.12	-11664	-0.0000479	0.0005615	0.0035	2.23		11874.02	11874.02	3.98		Si
SLV 16	6.83	-3087.4	-20348	-0.0000716	0.0005615	0.0035	2.23		20396.03	20396.03	6.61		Si
SLV 16	7.63	2651.13	-15152	-0.0000548	0.0005615	0.0035	2.23		14788.51	14788.51	5.58		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	6.83	-2122.06	-28149	-23440	-4765	2.23	2.23	-37540	10833	6764	80882	18697	5687	24384	No	5.12	Si
SLU 78	7.63	-1672.42	-24301	-20236	-3030	2.23	2.23	-32409	10833	6764	80882	18697	5687	24384	No	8.05	Si
SLU 84	6.83	-2109.27	-28376	-23629	-4808	2.23	2.23	-37843	10833	6764	80882	18697	5687	24384	No	5.07	Si
SLU 84	7.63	-1666.04	-24496	-20398	-3055	2.23	2.23	-32668	10833	6764	80882	18697	5687	24384	No	7.98	Si
SLU 75	6.83	-2071.26	-27541	-22934	-4725	2.23	2.23	-36729	10833	6764	80882	18697	5687	24384	No	5.16	Si
SLU 75	7.63	-1604.45	-23733	-19763	-3010	2.23	2.23	-31650	10833	6764	80882	18697	5687	24384	No	8.1	Si
SLU 83	6.83	-2109.95	-28343	-23602	-4824	2.23	2.23	-37799	10833	6764	80882	18697	5687	24384	No	5.05	Si
SLU 83	7.63	-1655.59	-24461	-20369	-3069	2.23	2.23	-32622	10833	6764	80882	18697	5687	24384	No	7.95	Si
SLU 77	6.83	-2122.74	-28116	-23412	-4781	2.23	2.23	-37495	10833	6764	80882	18697	5687	24384	No	5.1	Si
SLU 77	7.63	-1661.97	-24267	-20207	-3044	2.23	2.23	-32362	10833	6764	80882	18697	5687	24384	No	8.01	Si
SLU 80	6.83	-2103.16	-27845	-23187	-4731	2.23	2.23	-37134	10833	6764	80882	18697	5687	24384	No	5.15	Si
SLU 80	7.63	-1648.12	-24023	-20004	-3013	2.23	2.23	-32037	10833	6764	80882	18697	5687	24384	No	8.09	Si
SLU 81	6.83	-2059.15	-27735	-23096	-4784	2.23	2.23	-36988	10833	6764	80882	18697	5687	24384	No	5.1	Si
SLU 81	7.63	-1587.62	-23892	-19896	-3048	2.23	2.23	-31863	10833	6764	80882	18697	5687	24384	No	8	Si
SLU 74	6.83	-2071.94	-27508	-22906	-4741	2.23	2.23	-36685	10833	6764	80882	18697	5687	24384	No	5.14	Si
SLU 74	7.63	-1594	-23698	-19734	-3024	2.23	2.23	-31604	10833	6764	80882	18697	5687	24384	No	8.06	Si
SLU 79	6.83	-2103.85	-27812	-23159	-4747	2.23	2.23	-37090	10833	6764	80882	18697	5687	24384	No	5.14	Si
SLU 79	7.63	-1637.67	-23988	-19975	-3027	2.23	2.23	-31991	10833	6764	80882	18697	5687	24384	No	8.06	Si
SLU 82	6.83	-2058.47	-27769	-23123	-4768	2.23	2.23	-37033	10833	6764	80882	18697	5687	24384	No	5.11	Si
SLU 82	7.63	-1598.07	-23927	-19924	-3034	2.23	2.23	-31910	10833	6764	80882	18697	5687	24384	No	8.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	6.83	-2142.4	-19327	-16094	-7814	2.23	2.23	-25775	15572	9723	80882	28046	5687	33733		4.32	Si
SLD 16	7.63	549.33	-15554	-12952	-5495	2.23	2.23	-20743	14565	9095	80882	28046	5687	33733		6.14	Si
SLD 15	6.83	-2220.69	-19480	-16221	-8439	2.23	2.23	-25979	15612	9749	80882	28046	5687	33733		4	Si
SLD 15	7.63	761.38	-15539	-12939	-5954	2.23	2.23	-20723	14561	9092	80882	28046	5687	33733		5.67	Si
SLD 13	6.83	-2180.7	-17755	-14785	-8436	2.23	2.23	-23679	15152	9461	80882	28046	5687	33733		4	Si
SLD 13	7.63	904.72	-14003	-11660	-5995	2.23	2.23	-18674	14152	8836	80882	28046	5687	33733		5.63	Si
SLV 15	6.83	-3269.68	-20704	-17240	-15225	2.23	2.23	-27611	15939	9952	80882	28046	5687	33733		2.22	Si
SLV 15	7.63	3144.82	-15116	-12587	-11011	2.23	2.23	-20159	14448	9022	80882	28046	5687	33733		3.06	Si
SLV 2	6.83	401.11	-16342	-13608	8495	2.23	2.23	-21794	14775	9226	80882	28046	5687	33733		3.97	Si
SLV 2	7.63	-5176.88	-16517	-13754	6675	2.23	2.23	-22027	14822	9255	80882	28046	5687	33733		5.05	Si
SLD 14	6.83	-2102.4	-17603	-14658	-7811	2.23	2.23	-23475	15112	9436	80882	28046	5687	33733		4.32	Si
SLD 14	7.63	692.66	-14018	-11673	-5537	2.23	2.23	-18695	14156	8839	80882	28046	5687	33733		6.09	Si
SLV 14	6.83	-3003.25	-16431	-13682	-13778	2.23	2.23	-21913	14799	9241	80882	28046	5687	33733		2.45	Si
SLV 14	7.63	2982.12	-11664	-9713	-10065	2.23	2.23	-15556	13528	8447	80882	28046	5687	33733		3.35	Si
SLV 13	6.83	-3185.53	-16787	-13978	-15233	2.23	2.23	-22387	14894	9300	80882	28046	5687	33733		2.21	Si
SLV 13	7.63	3475.82	-11628	-9683	-11132	2.23	2.23	-15508	13518	8441	80882	28046	5687	33733		3.03	Si
SLV 4	6.83	316.96	-20259	-16870	8503	2.23	2.23	-27018	15820	9878	80882	28046	5687	33733		3.97	Si
SLV 4	7.63	-5507.87	-20004	-16658	6796	2.23	2.23	-26678	15752	9836	80882	28046	5687	33733		4.96	Si
SLV 16	6.83	-3087.4	-20348	-16944	-13769	2.23	2.23	-27137	15844	9893	80882	28046	5687	33733		2.45	Si
SLV 16	7.63	2651.13	-15152	-12617	-9944	2.23	2.23	-20207	14458	9028	80882	28046	5687	33733		3.39	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.35	17151	-10709	800.04	1330.9	1.66	Si
SLV 9	179667	0.35	17276	-10788	800.04	1339.4	1.67	Si
SLV 14	179667	0.35	18732	-11696	800.04	1436.64	1.8	Si
SLV 13	179667	0.35	18925	-11817	800.04	1449.34	1.81	Si
SLV 6	179667	0.35	20423	-12752	800.04	1546.58	1.93	Si
SLV 5	179667	0.35	20549	-12831	800.04	1554.62	1.94	Si
SLV 16	179667	0.35	23389	-14604	800.04	1731.43	2.16	Si
SLV 15	179667	0.35	23581	-14724	800.04	1743.1	2.18	Si
SLV 2	179667	0.35	29640	-18508	800.04	2088.17	2.61	Si
SLV 1	179667	0.35	29833	-18628	800.04	2098.46	2.62	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-16535	-22991	21	0.636	2302.8	0.928	9.95644	15.32354	No
SLV 4	-16498	-22958	21	0.637	2299.1	0.928	9.97459	15.32354	No
SLV 15	-13845	-10420	273	0.715	2032.2	0.921	11.28368	15.32354	No
SLV 16	-13809	-10387	273	0.717	2028.6	0.921	11.30749	15.32354	No
SLV 1	-13465	-19980	-274	0.73	1994.1	0.92	11.5372	15.32354	No
SLV 2	-13429	-19947	-274	0.732	1990.4	0.92	11.5619	15.32354	No
SLV 13	-10776	-7409	-22	0.878	1725.2	0.911	13.99787	15.32354	No
SLV 14	-10740	-7376	-22	0.88	1721.6	0.911	14.03352	15.32354	No
SLV 7	-19168	-22098	454	0.547	2568.7	0.934	8.50679	7.6122	Si
SLV 8	-19145	-22076	454	0.547	2566.3	0.934	8.51567	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	10.564	SLU 77	Si
V_SLU	5.055	SLU 83	Si
PF_SLV	3.347	SLV 2	Si
V_SLV	2.214	SLV 13	Si
PFFP_SLV	1.664	SLV 10	Si
R_SLV	0.65	SLV 3	No

Maschio 232

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.313	-3.314	-18.813	-3.314	L4	L6	0.5	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 64	6.83	18.81	-6639	-0.0000816	0.0003743	0.0035	0.5	886.61	1125.2	1125.2	59.82	No	Si
SLU 64	7.63	307.68	-6469	-0.000125	0.0003743	0.0035	0.5	883.19	1106.15	1106.15	3.6	No	Si
SLU 77	6.83	48.49	-7887	-0.0001041	0.0003743	0.0035	0.5	880.64	1214.12	1214.12	25.04	No	Si
SLU 77	7.63	328.9	-7671	-0.0001482	0.0003743	0.0035	0.5	885.57	1202.74	1202.74	3.66	No	Si
SLU 72	6.83	26.65	-7014	-0.000088	0.0003743	0.0035	0.5	890.56	1165.66	1165.66	43.74	No	Si
SLU 72	7.63	319.33	-6812	-0.0001324	0.0003743	0.0035	0.5	889.04	1144.5	1144.5	3.58	No	Si
SLU 68	6.83	24.05	-6845	-0.0000852	0.0003743	0.0035	0.5	889.39	1148.27	1148.27	47.74	No	Si
SLU 68	7.63	312.66	-6657	-0.0001288	0.0003743	0.0035	0.5	886.91	1127.2	1127.2	3.61	No	Si
SLU 71	6.83	25.51	-6998	-0.0000876	0.0003743	0.0035	0.5	890.49	1164.11	1164.11	45.63	No	Si
SLU 71	7.63	320.05	-6797	-0.0001323	0.0003743	0.0035	0.5	888.88	1142.9	1142.9	3.57	No	Si
SLU 69	6.83	27.36	-7085	-0.0000891	0.0003743	0.0035	0.5	890.75	1172.21	1172.21	42.84	No	Si
SLU 69	7.63	322.48	-6880	-0.000134	0.0003743	0.0035	0.5	889.71	1152.13	1152.13	3.57	No	Si
SLU 70	6.83	28.5	-7101	-0.0000895	0.0003743	0.0035	0.5	890.77	1173.65	1173.65	41.18	No	Si
SLU 70	7.63	321.75	-6894	-0.0001341	0.0003743	0.0035	0.5	889.83	1153.7	1153.7	3.59	No	Si
SLU 65	6.83	20.7	-6666	-0.0000822	0.0003743	0.0035	0.5	887.06	1128.23	1128.23	54.5	No	Si
SLU 65	7.63	306.48	-6493	-0.0001252	0.0003743	0.0035	0.5	883.73	1108.81	1108.81	3.62	No	Si
SLU 67	6.83	25.15	-6922	-0.0000865	0.0003743	0.0035	0.5	890.04	1156.53	1156.53	45.99	No	Si
SLU 67	7.63	315.57	-6730	-0.0001305	0.0003743	0.0035	0.5	888.02	1135.41	1135.41	3.6	No	Si
SLU 66	6.83	24.01	-6905	-0.0000861	0.0003743	0.0035	0.5	889.92	1154.86	1154.86	48.1	No	Si
SLU 66	7.63	316.29	-6716	-0.0001304	0.0003743	0.0035	0.5	887.81	1133.82	1133.82	3.58	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	6.83	-744.17	-1699	-0.0107663	0.0005615	0.0035	0.4		429.32	429.32	0.58		No

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	7.63	1069.3	-4267	-0.0147559	0.0005615	0.0035	0.4		914.58	914.58	0.86		No
SLD 16	6.83	-274.26	-3829	-0.0000791	0.0005615	0.0035	0.5		862.55	862.55	3.15		Si
SLD 16	7.63	553.16	-4740	-0.0001376	0.0005615	0.0035	0.5		994.82	994.82	1.8		Si
SLD 13	6.83	-319.88	-3184	-0.0000785	0.0005615	0.0035	0.5		739.5	739.5	2.31		Si
SLD 13	7.63	576.52	-4196	-0.0001451	0.0005615	0.0035	0.5		900.4	900.4	1.56		Si
SLV 10	6.83	-226.17	-2201	-0.0000542	0.0005615	0.0035	0.5		538.46	538.46	2.38		Si
SLV 10	7.63	387.49	-2716	-0.0000946	0.0005615	0.0035	0.5		613.36	613.36	1.58		Si
SLD 15	6.83	-307.87	-3687	-0.000082	0.0005615	0.0035	0.5		836.12	836.12	2.72		Si
SLD 15	7.63	590.17	-4710	-0.0001474	0.0005615	0.0035	0.5		990.38	990.38	1.68		Si
SLD 14	6.83	-286.27	-3327	-0.0000747	0.0005615	0.0035	0.5		766.93	766.93	2.68		Si
SLD 14	7.63	539.5	-4226	-0.0001332	0.0005615	0.0035	0.5		906.4	906.4	1.68		Si
SLV 9	6.83	-277.15	-1985	-0.0000657	0.0005615	0.0035	0.4		491.82	491.82	1.77		Si
SLV 9	7.63	443.64	-2671	-0.0001216	0.0005615	0.0035	0.5		604.78	604.78	1.36		Si
SLV 13	6.83	-773.38	-555	-0.0179169	0.0005615	0.0035	0.4		166.47	166.47	0.22		No
SLV 13	7.63	1039.37	-3102	-0.0342136	0.0005615	0.0035	0.4		686.63	686.63	0.66		No
SLV 14	6.83	-695.13	-887	-0.0137937	0.0005615	0.0035	0.4		244.59	244.59	0.35		No
SLV 14	7.63	953.19	-3172	-0.0242915	0.0005615	0.0035	0.4		700.03	700.03	0.73		No
SLV 16	6.83	-665.92	-2031	-0.0067983	0.0005615	0.0035	0.4		501.82	501.82	0.75		No
SLV 16	7.63	983.12	-4337	-0.0076754	0.0005615	0.0035	0.4		928.31	928.31	0.94		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	6.83	50.12	-7801	-6496	175	0.5	0.5	-46399	10833	1517	80882	4192	1275	5467	No	31.31	Si
SLU 82	7.63	316.15	-7613	-6340	-727	0.5	0.5	-45285	10833	1517	80882	4192	1275	5467	No	7.52	Si
SLU 77	6.83	48.49	-7887	-6567	151	0.5	0.5	-46911	10833	1517	80882	4192	1275	5467	No	36.26	Si
SLU 77	7.63	328.9	-7671	-6388	-712	0.5	0.5	-45629	10833	1517	80882	4192	1275	5467	No	7.67	Si
SLU 78	6.83	49.62	-7903	-6581	156	0.5	0.5	-47007	10833	1517	80882	4192	1275	5467	No	35.15	Si
SLU 78	7.63	328.18	-7685	-6400	-713	0.5	0.5	-45715	10833	1517	80882	4192	1275	5467	No	7.67	Si
SLU 84	6.83	53.47	-7980	-6645	182	0.5	0.5	-47467	10833	1517	80882	4192	1275	5467	No	30.1	Si
SLU 84	7.63	322.33	-7778	-6477	-732	0.5	0.5	-46263	10833	1517	80882	4192	1275	5467	No	7.46	Si
SLU 75	6.83	46.27	-7723	-6431	149	0.5	0.5	-45940	10833	1517	80882	4192	1275	5467	No	36.8	Si
SLU 75	7.63	322	-7521	-6263	-707	0.5	0.5	-44737	10833	1517	80882	4192	1275	5467	No	7.73	Si
SLU 80	6.83	47.77	-7816	-6508	149	0.5	0.5	-46490	10833	1517	80882	4192	1275	5467	No	36.64	Si
SLU 80	7.63	325.76	-7603	-6331	-706	0.5	0.5	-45223	10833	1517	80882	4192	1275	5467	No	7.74	Si
SLU 79	6.83	46.64	-7800	-6495	144	0.5	0.5	-46394	10833	1517	80882	4192	1275	5467	No	37.85	Si
SLU 79	7.63	326.48	-7588	-6319	-706	0.5	0.5	-45138	10833	1517	80882	4192	1275	5467	No	7.75	Si
SLU 81	6.83	48.99	-7784	-6482	170	0.5	0.5	-46303	10833	1517	80882	4192	1275	5467	No	32.19	Si
SLU 81	7.63	316.87	-7599	-6328	-726	0.5	0.5	-45200	10833	1517	80882	4192	1275	5467	No	7.53	Si
SLU 74	6.83	45.13	-7707	-6418	144	0.5	0.5	-45844	10833	1517	80882	4192	1275	5467	No	38.02	Si
SLU 74	7.63	322.72	-7507	-6251	-707	0.5	0.5	-44652	10833	1517	80882	4192	1275	5467	No	7.74	Si
SLU 83	6.83	52.34	-7964	-6632	177	0.5	0.5	-47370	10833	1517	80882	4192	1275	5467	No	30.92	Si
SLU 83	7.63	323.05	-7763	-6465	-732	0.5	0.5	-46177	10833	1517	80882	4192	1275	5467	No	7.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	6.83	356.79	-7135	-5942	1443	0.5	0.5	-42441	16250	2275	80882	6288	1275	7563		5.24	Si
SLD 4	7.63	-113.45	-5858	-4878	-262	0.5	0.5	-34842	16250	2275	80882	6288	1275	7563		28.92	Si
SLV 9	6.83	-277.15	-1985	-1653	-1267	0.4	0.3311	0	0	0	80882	5030	1020	6050		4.78	Si
SLV 9	7.63	443.64	-2671	-2224	-588	0.5	0.2517	-15887	13594	958	80882	6288	1275	7563		12.87	Si
SLV 14	6.83	-695.13	-887	-739	-2896	0.4	0	0	0	0	80882	5030	1020	6050		2.09	Si
SLV 14	7.63	953.19	-3172	-2642	-919	0.4	0	0	0	0	80882	5030	1020	6050		6.58	Si
SLV 4	6.83	810.28	-9764	-8130	3311	0.5	0.5	-58077	16250	2275	80882	6288	1275	7563		2.28	Si
SLV 4	7.63	-576.3	-6951	-5788	36	0.5	0.5	-41347	16250	2275	80882	6288	1275	7563		210.38	Si
SLV 1	6.83	702.83	-8288	-6902	2810	0.5	0.4956	-49300	16250	2255	80882	6288	1275	7563		2.69	Si
SLV 1	7.63	-520.04	-5717	-4760	-4	0.5	0.4771	-34004	16250	2171	80882	6288	1275	7563		1775.52	Si
SLV 15	6.83	-744.17	-1699	-1415	-3023	0.4	0	0	0	0	80882	5030	1020	6050		2	Si
SLV 15	7.63	1069.3	-4267	-3553	-1047	0.4	0	0	0	0	80882	5030	1020	6050		5.78	Si
SLV 13	6.83	-773.38	-555	-463	-3210	0.4	0	0	0	0	80882	5030	1020	6050		1.88	Si
SLV 13	7.63	1039.37	-3102	-2583	-1003	0.4	0	0	0	0	80882	5030	1020	6050		6.03	Si
SLV 2	6.83	781.07	-8620	-7178	3124	0.5	0.4781	-51273	16250	2176	80882	6288	1275	7563		2.42	Si
SLV 2	7.63	-606.23	-5787	-4819	80	0.5	0.4357	-34420	16250	1982	80882	6288	1275	7563		94.54	Si
SLV 3	6.83	732.04	-9432	-7854	2997	0.5	0.5	-56103	16250	2275	80882	6288	1275	7563		2.52	Si
SLV 3	7.63	-490.11	-6881	-5730	-48	0.5	0.5	-40931	16250	2275	80882	6288	1275	7563		156.55	Si
SLV 16	6.83	-665.92	-2031	-1691	-2709	0.4	0	0	0	0	80882	5030	1020	6050		2.23	Si
SLV 16	7.63	983.12	-4337	-3611	-963	0.4	0.0699	0	0	0	80882	5030	1020	6050		6.28	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.35	20635	-2889	179.37	349.79	1.95	Si
SLV 9	179667	0.35	20987	-2938	179.37	354.8	1.98	Si
SLV 6	179667	0.35	21135	-2959	179.37	356.91	1.99	Si
SLV 5	179667	0.35	21487	-3008	179.37	361.87	2.02	Si
SLV 14	179667	0.35	24047	-3366	179.37	397.08	2.21	Si
SLV 13	179667	0.35	24586	-3442	179.37	404.29	2.25	Si
SLV 2	179667	0.35	25714	-3600	179.37	419.11	2.34	Si
SLV 1	179667	0.35	26253	-3675	179.37	426.09	2.38	Si
SLV 16	179667	0.35	27551	-3857	179.37	442.56	2.47	Si
SLV 15	179667	0.35	28090	-3933	179.37	449.28	2.5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-4092	-6442	-4	0.588	555.1	0.932	9.17236	15.32354	No
SLV 3	-3995	-6656	-4	0.6	545.4	0.931	9.35835	15.32354	No
SLV 2	-3416	-7274	1	0.679	487	0.925	10.66358	15.32354	No
SLV 1	-3320	-7489	1	0.694	477.3	0.924	10.91498	15.32354	No
SLV 16	-1986	-6655	-14	1.003	344.2	0.904	16.12557	15.32354	Si
SLV 15	-1890	-6869	-14	1.038	334.7	0.902	16.709	15.32354	Si
SLV 8	-4126	-5583	-13	0.583	558.6	0.933	9.08039	7.6122	Si
SLV 7	-4063	-5722	-13	0.59	552.2	0.932	9.19863	7.6122	Si
SLV 12	-3495	-5647	-16	0.663	494.9	0.926	10.41285	7.6122	Si
SLV 11	-3432	-5786	-16	0.673	488.6	0.925	10.5693	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.571	SLU 71	Si
V_SLU	7.465	SLU 84	Si
PF_SLV	0.215	SLV 13	No
V_SLV	1.885	SLV 13	Si
PFFP_SLV	1.95	SLV 10	Si
R_SLV	0.599	SLV 4	No

Maschio 233

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.383	-3.314	-17.313	-3.314	L4	L6	0.93	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	2.31	1895.36	-17808	-0.0002281	0.0003743	0.0035	0.93	2718.52	4492.82	4492.82	2.37	No	Si
SLU 81	4.21	756.58	-12759	-0.0001165	0.0003743	0.0035	0.93	3077.65	3983.41	3983.41	5.27	No	Si
SLU 82	2.31	1901.03	-17816	-0.0002286	0.0003743	0.0035	0.93	2717.2	4492.74	4492.74	2.36	No	Si
SLU 82	4.21	754.24	-12755	-0.0001164	0.0003743	0.0035	0.93	3077.58	3982.56	3982.56	5.28	No	Si
SLU 74	2.31	1842.44	-17583	-0.0002221	0.0003743	0.0035	0.93	2753.56	4492.5	4492.5	2.44	No	Si
SLU 74	4.21	763.51	-12678	-0.0001162	0.0003743	0.0035	0.93	3076.12	3966.1	3966.1	5.19	No	Si
SLU 77	2.31	1867.15	-17871	-0.0002271	0.0003743	0.0035	0.93	2708.45	4492.21	4492.21	2.41	No	Si
SLU 77	4.21	779.31	-12919	-0.0001189	0.0003743	0.0035	0.93	3079.99	4017.8	4017.8	5.16	No	Si
SLU 78	2.31	1872.82	-17879	-0.0002276	0.0003743	0.0035	0.93	2707.11	4492.14	4492.14	2.4	No	Si
SLU 78	4.21	776.97	-12915	-0.0001188	0.0003743	0.0035	0.93	3079.94	4016.95	4016.95	5.17	No	Si
SLU 75	2.31	1848.12	-17591	-0.0002225	0.0003743	0.0035	0.93	2752.31	4492.62	4492.62	2.43	No	Si
SLU 75	4.21	761.18	-12674	-0.000116	0.0003743	0.0035	0.93	3076.04	3965.25	3965.25	5.21	No	Si
SLU 83	2.31	1920.06	-18096	-0.0002333	0.0003743	0.0035	0.93	2671.13	4490.05	4490.05	2.34	No	Si
SLU 83	4.21	772.37	-13000	-0.0001192	0.0003743	0.0035	0.93	3080.83	4033.39	4033.39	5.22	No	Si
SLU 84	2.31	1925.74	-18104	-0.0002338	0.0003743	0.0035	0.93	2669.73	4489.91	4489.91	2.33	No	Si
SLU 84	4.21	770.04	-12996	-0.0001191	0.0003743	0.0035	0.93	3080.79	4032.91	4032.91	5.24	No	Si
SLU 80	2.31	1855.65	-17708	-0.0002244	0.0003743	0.0035	0.93	2734.34	4493.77	4493.77	2.42	No	Si
SLU 80	4.21	768.63	-12786	-0.0001173	0.0003743	0.0035	0.93	3078.1	3989.12	3989.12	5.19	No	Si
SLU 79	2.31	1849.97	-17700	-0.0002239	0.0003743	0.0035	0.93	2735.63	4493.72	4493.72	2.43	No	Si
SLU 79	4.21	770.97	-12790	-0.0001174	0.0003743	0.0035	0.93	3078.17	3989.97	3989.97	5.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	2.31	-1984.07	-6373	-0.0001635	0.0005615	0.0035	0.744		2825.21	2825.21	1.42		Si
SLV 16	4.21	1317.56	-11694	-0.0001257	0.0005615	0.0035	0.93		4259.73	4259.73	3.23		Si
SLV 14	2.31	-1721.27	-5062	-0.0001584	0.0005615	0.0035	0.744		2344.56	2344.56	1.36		Si
SLV 14	4.21	1372.35	-10947	-0.0001226	0.0005615	0.0035	0.93		4042.15	4042.15	2.95		Si
SLV 13	2.31	-1991.12	-4857	-0.0003738	0.0005615	0.0035	0.744		2266.94	2266.94	1.14		Si
SLV 13	4.21	1491.38	-11465	-0.0001315	0.0005615	0.0035	0.93		4192.86	4192.86	2.81		Si
SLV 15	2.31	-2253.93	-6168	-0.0002618	0.0005615	0.0035	0.744		2751.92	2751.92	1.22		Si
SLV 15	4.21	1436.58	-12212	-0.0001346	0.0005615	0.0035	0.93		4412.45	4412.45	3.07		Si
SLV 4	2.31	4485.46	-19276	-0.0004091	0.0005615	0.0035	0.93		5852.53	5852.53	1.3		Si
SLV 4	4.21	-426.79	-5909	-0.0000509	0.0005615	0.0035	0.93		2658.36	2658.36	6.23		Si
SLV 5	2.31	2567.69	-11750	-0.0001932	0.0005615	0.0035	0.93		4276.27	4276.27	1.67		Si
SLV 5	4.21	400.74	-6744	-0.0000551	0.0005615	0.0035	0.93		2729.37	2729.37	6.81		Si
SLV 2	2.31	4748.27	-17965	-0.0004682	0.0005615	0.0035	0.93		5661.62	5661.62	1.19		Si
SLV 2	4.21	-372	-5162	-0.0000442	0.0005615	0.0035	0.93		2382.49	2382.49	6.4		Si
SLV 6	2.31	2743.53	-11884	-0.0002083	0.0005615	0.0035	0.93		4315.57	4315.57	1.57		Si
SLV 6	4.21	323.19	-6406	-0.00005	0.0005615	0.0035	0.93		2606.02	2606.02	8.06		Si
SLV 1	2.31	4478.41	-17760	-0.000413	0.0005615	0.0035	0.93		5618.44	5618.44	1.25		Si
SLV 1	4.21	-252.97	-5681	-0.0000428	0.0005615	0.0035	0.93		2576.05	2576.05	10.18		Si
SLV 3	2.31	4215.6	-19070	-0.0003718	0.0005615	0.0035	0.93		5830.47	5830.47	1.38		Si
SLV 3	4.21	-307.77	-6428	-0.0000495	0.0005615	0.0035	0.93		2844.6	2844.6	9.24		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	2.31	1920.06	-18096	-15069	2287	0.93	0.93	-57867	10833	2821	80882	7798	2372	10169	No	4.45	Si
SLU 83	4.21	772.37	-13000	-10825	-510	0.93	0.93	-41572	10833	2821	80882	7798	2372	10169	No	19.95	Si
SLU 79	2.31	1849.97	-17700	-14739	2174	0.93	0.93	-56600	10833	2821	80882	7798	2372	10169	No	4.68	Si
SLU 79	4.21	770.97	-12790	-10650	-523	0.93	0.93	-40899	10833	2821	80882	7798	2372	10169	No	19.46	Si
SLU 82	2.31	1901.03	-17816	-14836	2272	0.93	0.93	-56973	10833	2821	80882	7798	2372	10169	No	4.47	Si
SLU 82	4.21	754.24	-12755	-10621	-492	0.93	0.93	-40789	10833	2821	80882	7798	2372	10169	No	20.66	Si
SLU 78	2.31	1872.82	-17879	-14888	2205	0.93	0.93	-57173	10833	2821	80882	7798	2372	10169	No	4.61	Si
SLU 78	4.21	776.97	-12915	-10755	-524	0.93	0.93	-41300	10833	2821	80882	7798	2372	10169	No	19.42	Si
SLU 80	2.31	1855.65	-17708	-14745	2183	0.93	0.93	-56626	10833	2821	80882	7798	2372	10169	No	4.66	Si
SLU 80	4.21	768.63	-12786	-10647	-518	0.93	0.93	-40887	10833	2821	80882	7798	2372	10169	No	19.64	Si
SLU 74	2.31	1842.44	-17583	-14642	2172	0.93	0.93	-56227	10833	2821	80882	7798	2372	10169	No	4.68	Si
SLU 74	4.21	763.51	-12678	-10557	-516	0.93	0.93	-40543	10833	2821	80882	7798	2372	10169	No	19.72	Si
SLU 81	2.31	1895.36	-17808	-14829	2263	0.93	0.93	-56947	10833	2821	80882	7798	2372	10169	No	4.49	Si
SLU 81	4.21	756.58	-12759	-10625	-497	0.93	0.93	-40801	10833	2821	80882	7798	2372	10169	No	20.46	Si
SLU 75	2.31	1848.12	-17591	-14648	2181	0.93	0.93	-56254	10833	2821	80882	7798	2372	10169	No	4.66	Si
SLU 75	4.21	761.18	-12674	-10554	-511	0.93	0.93	-40530	10833	2821	80882	7798	2372	10169	No	19.91	Si
SLU 84	2.31	1925.74	-18104	-15075	2297	0.93	0.93	-57893	10833	2821	80882	7798	2372	10169	No	4.43	Si
SLU 84	4.21	770.04	-12996	-10822	-505	0.93	0.93	-41559	10833	2821	80882	7798	2372	10169	No	20.14	Si
SLU 77	2.31	1867.15	-17871	-14881	2196	0.93	0.93	-57147	10833	2821	80882	7798	2372	10169	No	4.63	Si
SLU 77	4.21	779.31	-12919	-10758	-528	0.93	0.93	-41313	10833	2821	80882	7798	2372	10169	No	19.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	2.31	4485.46	-19276	-16051	7681	0.93	0.6969	-61640	16250	3171	80882	11696	2372	14068		1.83	Si
SLV 4	4.21	-426.79	-5909	-4921	2673	0.93	0.93	-18896	14196	3697	80882	11696	2372	14068		5.26	Si
SLD 4	2.31	2634.54	-15136	-12604	4112	0.93	0.8728	-48401	16250	3971	80882	11696	2372	14068		3.42	Si
SLD 4	4.21	122.23	-7499	-6244	931	0.93	0.93	-23980	15213	3961	80882	11696	2372	14068		15.11	Si
SLV 15	2.31	-2253.93	-6168	-5136	-5061	0.744	0.2987	0	0	0	80882	9357	1897	11254		2.22	Si
SLV 15	4.21	1436.58	-12212	-10169	-3338	0.93	0.93	-39052	16250	4232	80882	11696	2372	14068		4.21	Si
SLV 1	2.31	4478.41	-17760	-14789	7445	0.93	0.6385	-56792	16250	2905	80882	11696	2372	14068		1.89	Si
SLV 1	4.21	-252.97	-5681	-4730	2309	0.93	0.93	-18166	14050	3659	80882	11696	2372	14068		6.09	Si
SLV 13	2.31	-1991.12	-4857	-4044	-4791	0.744	0.1651	0	0	0	80882	9357	1897	11254		2.35	Si
SLV 13	4.21	1491.38	-11465	-9547	-3405	0.93	0.93	-36664	16250	4232	80882	11696	2372	14068		4.13	Si
SLD 2	2.31	2737.37	-14610	-12166	4224	0.93	0.8329	-46721	16250	3790	80882	11696	2372	14068		3.33	Si
SLD 2	4.21	146.83	-7188	-5986	906	0.93	0.93	-22986	15014	3910	80882	11696	2372	14068		15.52	Si
SLV 3	2.31	4215.6	-19070	-15880	7175	0.93	0.7318	-60984	16250	3330	80882	11696	2372	14068		1.96	Si
SLV 3	4.21	-307.77	-6428	-5352	2376	0.93	0.93	-20554	14527	3783	80882	11696	2372	14068		5.92	Si
SLV 16	2.31	-1984.07	-6373	-5307	-4555	0.744	0.461	0	0	0	80882	9357	1897	11254		2.47	Si
SLV 16	4.21	1317.56	-11694	-9737	-3041	0.93	0.93	-37394	16250	4232	80882	11696	2372	14068		4.63	Si
SLV 14	2.31	-1721.27	-5062	-4215	-4285	0.744	0.3749	0	0	0	80882	9357	1897	11254		2.63	Si
SLV 14	4.21	1372.35	-10947	-9116	-3109	0.93	0.93	-35006	16250	4232	80882	11696	2372	14068		4.53	Si
SLV 2	2.31	4748.27	-17965	-14960	7951	0.93	0.6021	-57448	16250	2739	80882	11696	2372	14068		1.77	Si
SLV 2	4.21	-372	-5162	-4299	2606	0.93	0.93	-16508	13718	3572	80882	11696	2372	14068		5.4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.35	18530	-4825	333.64	593.57	1.78	Si
SLV 1	179667	0.35	19867	-5173	333.64	630.06	1.89	Si
SLV 6	179667	0.35	20797	-5416	333.64	654.94	1.96	Si
SLV 5	179667	0.35	21668	-5642	333.64	677.86	2.03	Si
SLV 4	179667	0.35	22183	-5777	333.64	691.24	2.07	Si
SLV 3	179667	0.35	23520	-6125	333.64	725.39	2.17	Si
SLV 10	179667	0.35	26194	-6821	333.64	791.14	2.37	Si
SLV 9	179667	0.35	27065	-7048	333.64	811.82	2.43	Si
SLV 8	179667	0.35	32974	-8586	333.64	942.54	2.82	Si
SLV 7	179667	0.35	33845	-8813	333.64	960.4	2.88	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-8078	-10349	65	0.555	1079.7	0.935	8.63041	15.32354	No
SLV 16	-7846	-9976	66	0.568	1056.2	0.934	8.84526	15.32354	No
SLV 13	-7201	-9430	100	0.604	991.1	0.93	9.44276	15.32354	No
SLV 14	-6968	-9057	101	0.62	967.7	0.929	9.70315	15.32354	No
SLV 3	-3877	-8824	-100	0.957	658.3	0.906	15.35776	15.32354	Si
SLV 4	-3645	-8451	-100	0.998	635.3	0.904	16.05867	15.32354	Si
SLV 11	-7591	-10823	-33	0.587	1030.5	0.932	9.149	7.6122	Si
SLV 1	-3000	-7904	-65	1.142	572.2	0.898	18.4937	15.32354	Si
SLV 12	-7439	-10580	-33	0.596	1015.2	0.931	9.30504	7.6122	Si
SLV 2	-2767	-7531	-65	1.202	549.6	0.896	19.50052	15.32354	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.332	SLU 84	Si
V_SLU	4.427	SLU 84	Si
PF_SLV	1.139	SLV 13	Si
V_SLV	1.769	SLV 2	Si
PFFP_SLV	1.779	SLV 2	Si
R_SLV	0.563	SLV 15	No

Maschio 234

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.518	-3.314	-18.518	-0.094	L4	L6	3.221	0.14	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	4.83	2836.9	-20440	-0.0000731	0.0004492	0.0035	3.2207	20703.59	28312.05	28312.05	9.98	No	Si
SLU 44	6.93	453.95	-16149	-0.0000472	0.0004492	0.0035	3.2207	18382.57	23380.29	23380.29	51.5	No	Si
SLU 45	4.83	2910.97	-21181	-0.0000758	0.0004492	0.0035	3.2207	20995.4	29163.65	29163.65	10.02	No	Si
SLU 45	6.93	532.05	-16904	-0.0000498	0.0004492	0.0035	3.2207	18869.05	24248.16	24248.16	45.58	No	Si
SLU 51	4.83	2958.68	-21440	-0.0000769	0.0004492	0.0035	3.2207	21090.12	29462.27	29462.27	9.96	No	Si
SLU 51	6.93	472.17	-17163	-0.0000503	0.0004492	0.0035	3.2207	19028.16	24545.69	24545.69	51.98	No	Si
SLU 43	4.83	2837.03	-20449	-0.0000731	0.0004492	0.0035	3.2207	20707.29	28322.27	28322.27	9.98	No	Si
SLU 43	6.93	505.58	-16180	-0.0000476	0.0004492	0.0035	3.2207	18403.17	23415.88	23415.88	46.31	No	Si
SLU 50	4.83	2958.75	-21446	-0.0000769	0.0004492	0.0035	3.2207	21092.03	29468.4	29468.4	9.96	No	Si
SLU 50	6.93	503.15	-17181	-0.0000505	0.0004492	0.0035	3.2207	19039.43	24567.05	24567.05	48.83	No	Si
SLU 59	4.83	3080.58	-23509	-0.000084	0.0004492	0.0035	3.2207	21703.45	31839.5	31839.5	10.34	No	Si
SLU 59	6.93	706.3	-19005	-0.000057	0.0004492	0.0035	3.2207	20047.57	26663.64	26663.64	37.75	No	Si
SLU 47	4.83	2897.76	-20938	-0.000075	0.0004492	0.0035	3.2207	20903.49	28885.11	28885.11	9.97	No	Si
SLU 47	6.93	452.74	-16649	-0.0000487	0.0004492	0.0035	3.2207	18708.93	23955.87	23955.87	52.91	No	Si
SLU 49	4.83	2971.76	-21674	-0.0000776	0.0004492	0.0035	3.2207	21171.87	29730.58	29730.58	10	No	Si
SLU 49	6.93	499.86	-17386	-0.0000511	0.0004492	0.0035	3.2207	19162.29	24802.39	24802.39	49.62	No	Si
SLU 46	4.83	2910.9	-21175	-0.0000758	0.0004492	0.0035	3.2207	20993.41	29157.51	29157.51	10.02	No	Si
SLU 46	6.93	501.07	-16885	-0.0000496	0.0004492	0.0035	3.2207	18857.48	24226.8	24226.8	48.35	No	Si
SLU 48	4.83	2971.84	-21679	-0.0000777	0.0004492	0.0035	3.2207	21173.7	29736.71	29736.71	10.01	No	Si
SLU 48	6.93	530.83	-17405	-0.0000513	0.0004492	0.0035	3.2207	19173.31	24823.74	24823.74	46.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	4.83	889	-15471	-0.0000469	0.0006738	0.0035	3.2207		23444.45	23444.45	26.37		Si
SLV 12	6.93	-3289.67	-10627	-0.0000457	0.0006738	0.0035	3.2207		21501.28	21501.28	6.54		Si
SLV 8	4.83	1541.1	-17798	-0.000057	0.0006738	0.0035	3.2207		26170.72	26170.72	16.98		Si
SLV 8	6.93	-3337.06	-12755	-0.000052	0.0006738	0.0035	3.2207		24395.14	24395.14	7.31		Si
SLV 11	4.83	844.08	-15609	-0.0000471	0.0006738	0.0035	3.2207		23627.42	23627.42	27.99		Si
SLV 11	6.93	-3103.27	-10748	-0.0000451	0.0006738	0.0035	3.2207		21665.2	21665.2	6.98		Si
SLV 7	4.83	1496.19	-17936	-0.0000571	0.0006738	0.0035	3.2207		26331.1	26331.1	17.6		Si
SLV 7	6.93	-3150.66	-12876	-0.0000514	0.0006738	0.0035	3.2207		24559.06	24559.06	7.79		Si
SLV 1	4.83	3669.07	-21831	-0.0000801	0.0006738	0.0035	3.2207		30854.7	30854.7	8.41		Si
SLV 1	6.93	1795.55	-18460	-0.0000602	0.0006738	0.0035	3.2207		26939.93	26939.93	15		Si
SLV 9	4.83	3035.01	-17366	-0.0000636	0.0006738	0.0035	3.2207		25668.51	25668.51	8.46		Si
SLV 9	6.93	4514.66	-15470	-0.000066	0.0006738	0.0035	3.2207		23442.99	23442.99	5.19		Si
SLV 10	4.83	3079.92	-17228	-0.0000635	0.0006738	0.0035	3.2207		25508.13	25508.13	8.28		Si
SLV 10	6.93	4328.26	-15349	-0.0000646	0.0006738	0.0035	3.2207		23283.22	23283.22	5.38		Si
SLV 6	4.83	3732.03	-19555	-0.0000737	0.0006738	0.0035	3.2207		28211.65	28211.65	7.56		Si
SLV 6	6.93	4280.88	-17477	-0.0000706	0.0006738	0.0035	3.2207		25798.02	25798.02	6.03		Si
SLV 2	4.83	3738.01	-21619	-0.0000798	0.0006738	0.0035	3.2207		30608.55	30608.55	8.19		Si
SLV 2	6.93	1509.48	-18275	-0.0000582	0.0006738	0.0035	3.2207		26725.01	26725.01	17.7		Si
SLV 5	4.83	3687.12	-19693	-0.0000739	0.0006738	0.0035	3.2207		28372.03	28372.03	7.69		Si
SLV 5	6.93	4467.28	-17598	-0.0000719	0.0006738	0.0035	3.2207		25938.05	25938.05	5.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	4.83	3201	-26192	-14523	2808	3.2207	3.2207	-32208	10833	4885	231091	16204	16426	32630	No	11.62	Si
SLU 84	6.93	1049.92	-21369	-11848	2819	3.2207	3.2207	-26277	10833	4885	231091	16204	16426	32630	No	11.58	Si
SLU 82	4.83	3140.14	-25694	-14246	2780	3.2207	3.2207	-31595	10833	4885	231091	16204	16426	32630	No	11.74	Si
SLU 82	6.93	1051.13	-20869	-11571	2791	3.2207	3.2207	-25662	10833	4885	231091	16204	16426	32630	No	11.69	Si
SLU 77	4.83	3222.78	-26043	-14440	2761	3.2207	3.2207	-32025	10833	4885	231091	16204	16426	32630	No	11.82	Si
SLU 77	6.93	1007.02	-21322	-11822	2771	3.2207	3.2207	-26220	10833	4885	231091	16204	16426	32630	No	11.77	Si
SLU 78	4.83	3222.7	-26038	-14437	2786	3.2207	3.2207	-32018	10833	4885	231091	16204	16426	32630	No	11.71	Si
SLU 78	6.93	976.04	-21304	-11812	2796	3.2207	3.2207	-26197	10833	4885	231091	16204	16426	32630	No	11.67	Si
SLU 76	4.83	3148.7	-25302	-14029	2774	3.2207	3.2207	-31114	10833	4885	231091	16204	16426	32630	No	11.76	Si
SLU 76	6.93	928.92	-20567	-11404	2784	3.2207	3.2207	-25291	10833	4885	231091	16204	16426	32630	No	11.72	Si
SLU 83	4.83	3201.08	-26198	-14526	2783	3.2207	3.2207	-32215	10833	4885	231091	16204	16426	32630	No	11.72	Si
SLU 83	6.93	1080.9	-21388	-11859	2794	3.2207	3.2207	-26300	10833	4885	231091	16204	16426	32630	No	11.68	Si
SLU 80	4.83	3209.62	-25805	-14308	2785	3.2207	3.2207	-31731	10833	4885	231091	16204	16426	32630	No	11.72	Si
SLU 80	6.93	948.36	-21080	-11688	2796	3.2207	3.2207	-25922	10833	4885	231091	16204	16426	32630	No	11.67	Si
SLU 75	4.83	3161.84	-25539	-14160	2758	3.2207	3.2207	-31405	10833	4885	231091	16204	16426	32630	No	11.83	Si
SLU 75	6.93	977.26	-20803	-11534	2768	3.2207	3.2207	-25581	10833	4885	231091	16204	16426	32630	No	11.79	Si
SLU 63	4.83	3071.96	-23897	-13250	2768	3.2207	3.2207	-29385	10833	4885	231091	16204	16426	32630	No	11.79	Si
SLU 63	6.93	807.86	-19294	-10698	2778	3.2207	3.2207	-23726	10833	4885	231091	16204	16426	32630	No	11.74	Si
SLU 79	4.83	3209.69	-25810	-14310	2760	3.2207	3.2207	-31738	10833	4885	231091	16204	16426	32630	No	11.82	Si
SLU 79	6.93	979.34	-21099	-11698	2771	3.2207	3.2207	-25945	10833	4885	231091	16204	16426	32630	No	11.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	4.83	1496.19	-17936	-9945	5297	3.2207	3.2207	-22056	16250	7327	231091	24306	16426	40732		7.69	Si
SLV 7	6.93	-3150.66	-12876	-7139	3884	3.2207	3.2207	-15833	15667	7064	231091	24306	16426	40732		10.49	Si
SLD 11	4.83	1653.4	-16743	-9283	3456	3.2207	3.2207	-20589	16250	7327	231091	24306	16426	40732		11.79	Si
SLD 11	6.93	-1038.14	-12652	-7015	2945	3.2207	3.2207	-15558	15612	7039	231091	24306	16426	40732		13.83	Si
SLD 7	4.83	1924.14	-17724	-9827	3441	3.2207	3.2207	-21794	16250	7327	231091	24306	16426	40732		11.84	Si
SLD 7	6.93	-1063.62	-13554	-7515	2834	3.2207	3.2207	-16667	15833	7139	231091	24306	16426	40732		14.37	Si
SLV 11	4.83	844.08	-15609	-8654	5320	3.2207	3.2207	-19194	16250	7327	231091	24306	16426	40732		7.66	Si
SLV 11	6.93	-3103.27	-10748	-5959	4154	3.2207	3.2207	-13216	15143	6828	231091	24306	16426	40732		9.8	Si
SLD 8	4.83	1943.79	-17663	-9794	3483	3.2207	3.2207	-21720	16250	7327	231091	24306	16426	40732		11.69	Si
SLD 8	6.93	-1145.16	-13502	-7486	2876	3.2207	3.2207	-16603	15821	7133	231091	24306	16426	40732		14.16	Si
SLV 12	4.83	889	-15471	-8578	5416	3.2207	3.2207	-19024	16250	7327	231091	24306	16426	40732		7.52	Si
SLV 12	6.93	-3289.67	-10627	-5892	4251	3.2207	3.2207	-13068	15114	6815	231091	24306	16426	40732		9.58	Si
SLV 16	4.83	907.04	-13333	-7393	3129	3.2207	3.2207	-16396	15779	7115	231091	24306	16426	40732		13.02	Si
SLV 16	6.93	-617.95	-9765	-5414	3161	3.2207	3.2207	-12007	14901	6719	231091	24306	16426	40732		12.88	Si
SLV 8	4.83	1541.1	-17798	-9868	5394	3.2207	3.2207	-21886	16250	7327	231091	24306	16426	40732		7.55	Si
SLV 8	6.93	-3337.06	-12755	-7072	3980	3.2207	3.2207	-15685	15637	7051	231091	24306	16426	40732		10.23	Si
SLD 12	4.83	1673.05	-16683	-9250	3498	3.2207	3.2207	-20514	16250	7327	231091	24306	16426	40732		11.64	Si
SLD 12	6.93	-1119.69	-12599	-6986	2988	3.2207	3.2207	-15493	15599	7033	231091	24306	16426	40732		13.63	Si
SLV 4	4.83	3080.73	-21092	-11694	3053	3.2207	3.2207	-25936	16250	7327	231091	24306	16426	40732		13.34	Si
SLV 4	6.93	-775.9	-16859	-9347	2258	3.2207	3.2207	-20731	16250	7327	231091	24306	16426	40732		18.04	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 4.88 Ta 0.57 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-13333	0.35	618.03	782.75	1341.11	1061.93	1.72	Si
SLV 15	-13545	0.35	618.03	792.76	1358.46	1075.61	1.74	Si
SLV 14	-13861	0.35	618.03	807.51	1384.29	1095.9	1.77	Si
SLV 13	-14072	0.35	618.03	817.33	1401.66	1109.49	1.8	Si
SLV 12	-15471	0.35	618.03	880.22	1515.05	1197.63	1.94	Si
SLV 11	-15609	0.35	618.03	886.25	1526.1	1206.17	1.95	Si
SLV 10	-17228	0.35	618.03	954.55	1655.78	1305.16	2.11	Si
SLV 9	-17366	0.35	618.03	960.17	1666.85	1313.51	2.13	Si
SLV 8	-17798	0.35	618.03	977.55	1701.52	1339.53	2.17	Si
SLV 7	-17936	0.35	618.03	983.04	1712.59	1347.81	2.18	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.03 Ta = 0.5745

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-12776	-23533	-397	1.147	1747.2	0.931	17.89802	10.73086	Si
SLV 2	-12627	-23239	-397	1.158	1732.2	0.931	18.0788	10.73086	Si
SLV 3	-11030	-24393	-362	1.292	1571.3	0.925	20.30571	10.73086	Si
SLV 4	-10881	-24098	-363	1.306	1556.2	0.924	20.53765	10.73086	Si
SLV 13	-9973	-22653	363	1.398	1465	0.921	22.06851	10.73086	Si
SLV 14	-9824	-22359	363	1.415	1450	0.92	22.34212	10.73086	Si
SLV 15	-8227	-23513	398	1.615	1290.2	0.913	25.69773	10.73086	Si
SLV 16	-8078	-23218	398	1.637	1275.3	0.913	26.06783	10.73086	Si
SLV 5	-13806	-22171	-171	1.09	1851.3	0.934	16.95339	2.39674	Si
SLV 6	-13709	-21979	-171	1.096	1841.4	0.934	17.05746	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.958	SLU 51	Si
V_SLU	11.576	SLU 84	Si
PF_SLV	5.193	SLV 9	Si
V_SLV	7.52	SLV 12	Si
PFFP_SLV	1.718	SLV 16	Si
R_SLV	1.668	SLV 1	Si

Maschio 237

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.314	-15.433	-3.314	L4	L6	1.655	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	4.83	947.89	-19767	-0.0000829	0.0003743	0.0035	1.655	9504.16	11530.37	11530.37	12.16	No	Si
SLU 81	6.93	2161.52	-17761	-0.0000914	0.0003743	0.0035	1.655	9164.56	10848.75	10848.75	5.02	No	Si
SLU 82	4.83	952.95	-19787	-0.000083	0.0003743	0.0035	1.655	9506.78	11537.17	11537.17	12.11	No	Si
SLU 82	6.93	2154.5	-17774	-0.0000913	0.0003743	0.0035	1.655	9167.26	10853.19	10853.19	5.04	No	Si
SLU 84	4.83	965.89	-20150	-0.0000847	0.0003743	0.0035	1.655	9552.88	11663.64	11663.64	12.08	No	Si
SLU 84	6.93	2191.84	-18157	-0.0000935	0.0003743	0.0035	1.655	9242.8	10982.36	10982.36	5.01	No	Si
SLU 39	4.83	822.21	-16789	-0.0000691	0.0003743	0.0035	1.655	8949.27	10526.44	10526.44	12.8	No	Si
SLU 39	6.93	1937.38	-15179	-0.0000777	0.0003743	0.0035	1.655	8519.53	9724.33	9724.33	5.02	No	Si
SLU 40	4.83	827.27	-16809	-0.0000693	0.0003743	0.0035	1.655	8953.93	10532.86	10532.86	12.73	No	Si
SLU 40	6.93	1930.36	-15192	-0.0000777	0.0003743	0.0035	1.655	8523.44	9731.25	9731.25	5.04	No	Si
SLU 79	4.83	898.05	-19644	-0.0000816	0.0003743	0.0035	1.655	9487.32	11487.56	11487.56	12.79	No	Si
SLU 79	6.93	2062.28	-17809	-0.0000902	0.0003743	0.0035	1.655	9174.31	10864.83	10864.83	5.27	No	Si
SLU 41	4.83	835.15	-17152	-0.0000707	0.0003743	0.0035	1.655	9033.52	10645.86	10645.86	12.75	No	Si
SLU 41	6.93	1974.72	-15562	-0.0000798	0.0003743	0.0035	1.655	8629.94	9925.28	9925.28	5.03	No	Si
SLU 83	4.83	960.83	-20130	-0.0000845	0.0003743	0.0035	1.655	9550.51	11656.79	11656.79	12.13	No	Si
SLU 83	6.93	2198.86	-18144	-0.0000935	0.0003743	0.0035	1.655	9240.28	10977.87	10977.87	4.99	No	Si
SLU 42	4.83	840.21	-17172	-0.0000709	0.0003743	0.0035	1.655	9037.94	10652.34	10652.34	12.68	No	Si
SLU 42	6.93	1967.7	-15575	-0.0000797	0.0003743	0.0035	1.655	8633.67	9932.26	9932.26	5.05	No	Si
SLU 20	4.83	764.74	-15271	-0.0000625	0.0003743	0.0035	1.655	8546.64	9772.65	9772.65	12.78	No	Si
SLU 20	6.93	1689.83	-13612	-0.0000682	0.0003743	0.0035	1.655	8014.32	8920.32	8920.32	5.28	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	4.83	-4187.51	-9348	-0.0000919	0.0005615	0.0035	1.324		7628.57	7628.57	1.82		Si
SLV 13	6.93	6792.45	-16397	-0.0001559	0.0005615	0.0035	1.655		11277.55	11277.55	1.66		Si
SLV 15	4.83	-4117.12	-11278	-0.0000909	0.0005615	0.0035	1.655		8885.51	8885.51	2.16		Si
SLV 15	6.93	6829.19	-18527	-0.000159	0.0005615	0.0035	1.655		12324.19	12324.19	1.8		Si
SLV 4	4.83	5327.51	-17013	-0.0001269	0.0005615	0.0035	1.655		11577.84	11577.84	2.17		Si
SLV 4	6.93	-4252.3	-7346	-0.0001115	0.0005615	0.0035	1.324		6259.29	6259.29	1.47		Si
SLV 3	4.83	4978.64	-16861	-0.000121	0.0005615	0.0035	1.655		11503.27	11503.27	2.31		Si
SLV 3	6.93	-3771.54	-7869	-0.0000837	0.0005615	0.0035	1.324		6626.52	6626.52	1.76		Si
SLV 16	4.83	-3768.26	-11430	-0.0000851	0.0005615	0.0035	1.655		8983.52	8983.52	2.38		Si
SLV 16	6.93	6348.43	-18004	-0.000148	0.0005615	0.0035	1.655		12065.09	12065.09	1.9		Si
SLV 9	4.83	-1025.33	-9078	-0.0000419	0.0005615	0.0035	1.655		7445.35	7445.35	7.26		Si
SLV 9	6.93	2955.57	-10092	-0.0000692	0.0005615	0.0035	1.655		7430.03	7430.03	2.51		Si
SLD 13	4.83	-1461.44	-11533	-0.0000558	0.0005615	0.0035	1.655		9049.56	9049.56	6.19		Si
SLD 13	6.93	3631.29	-13791	-0.0000911	0.0005615	0.0035	1.655		9779.79	9779.79	2.69		Si
SLV 1	4.83	4908.26	-14931	-0.0001136	0.0005615	0.0035	1.655		10524.15	10524.15	2.14		Si
SLV 1	6.93	-3808.29	-5740	-0.0001323	0.0005615	0.0035	1.324		5114.79	5114.79	1.34		Si
SLV 14	4.83	-3838.65	-9501	-0.0000831	0.0005615	0.0035	1.655		7730.73	7730.73	2.01		Si
SLV 14	6.93	6311.69	-15875	-0.0001436	0.0005615	0.0035	1.655		11023.59	11023.59	1.75		Si
SLV 2	4.83	5257.12	-15084	-0.0001202	0.0005615	0.0035	1.655		10614.01	10614.01	2.02		Si
SLV 2	6.93	-4289.05	-5217	-0.0004747	0.0005615	0.0035	1.324		4733.58	4733.58	1.1		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 67	4.83	728.5	-17543	-14608	-163	1.655	1.655	-31523	10833	5020	80882	13876	4220	18097	No	110.74	Si
SLU 67	6.93	1620.32	-15978	-13305	-2550	1.655	1.655	-28711	10773	4992	80882	13876	4220	18097	No	7.1	Si
SLU 71	4.83	721.38	-17662	-14707	-194	1.655	1.655	-31737	10833	5020	80882	13876	4220	18097	No	93.16	Si
SLU 71	6.93	1656.44	-16134	-13435	-2606	1.655	1.655	-28992	10810	5009	80882	13876	4220	18097	No	6.94	Si
SLU 78	4.83	918.12	-19887	-16560	137	1.655	1.655	-35736	10833	5020	80882	13876	4220	18097	No	132.02	Si
SLU 78	6.93	2063.5	-18036	-15018	-2486	1.655	1.655	-32409	10833	5020	80882	13876	4220	18097	No	7.28	Si
SLU 79	4.83	898.05	-19644	-16358	116	1.655	1.655	-35299	10833	5020	80882	13876	4220	18097	No	156.16	Si
SLU 79	6.93	2062.28	-17809	-14830	-2475	1.655	1.655	-32002	10833	5020	80882	13876	4220	18097	No	7.31	Si
SLU 66	4.83	723.44	-17523	-14592	-172	1.655	1.655	-31488	10833	5020	80882	13876	4220	18097	No	105.15	Si
SLU 66	6.93	1627.34	-15964	-13294	-2556	1.655	1.655	-28687	10769	4991	80882	13876	4220	18097	No	7.08	Si
SLU 77	4.83	913.06	-19868	-16544	128	1.655	1.655	-35701	10833	5020	80882	13876	4220	18097	No	140.95	Si
SLU 77	6.93	2070.52	-18022	-15007	-2493	1.655	1.655	-32385	10833	5020	80882	13876	4220	18097	No	7.26	Si
SLU 69	4.83	736.38	-17886	-14894	-182	1.655	1.655	-32140	10833	5020	80882	13876	4220	18097	No	99.57	Si
SLU 69	6.93	1664.68	-16347	-13613	-2624	1.655	1.655	-29375	10833	5020	80882	13876	4220	18097	No	6.9	Si
SLU 72	4.83	726.44	-17681	-14724	-186	1.655	1.655	-31773	10833	5020	80882	13876	4220	18097	No	97.51	Si
SLU 72	6.93	1649.42	-16147	-13446	-2600	1.655	1.655	-29016	10813	5011	80882	13876	4220	18097	No	6.96	Si
SLU 68	4.83	716.87	-17332	-14432	-170	1.655	1.655	-31144	10833	5020	80882	13876	4220	18097	No	106.36	Si
SLU 68	6.93	1607.4	-15773	-13134	-2528	1.655	1.655	-28343	10724	4969	80882	13876	4220	18097	No	7.16	Si
SLU 70	4.83	741.44	-17905	-14910	-173	1.655	1.655	-32175	10833	5020	80882	13876	4220	18097	No	104.56	Si
SLU 70	6.93	1657.67	-16360	-13624	-2617	1.655	1.655	-29399	10833	5020	80882	13876	4220	18097	No	6.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	4.83	-4187.51	-9348	-7784	-8772	1.324	1.1387	0	0	0	80882	16652	3376	20028		2.28	Si
SLV 13	6.93	6792.45	-16397	-13654	-9212	1.655	1.2398	-29465	16250	5641	80882	20815	4220	25035		2.72	Si
SLV 15	4.83	-4117.12	-11278	-9391	-8625	1.655	1.3873	-24481	15313	5948	80882	20815	4220	25035		2.9	Si
SLV 15	6.93	6829.19	-18527	-15427	-9396	1.655	1.3767	-33292	16250	6264	80882	20815	4220	25035		2.66	Si
SLV 3	4.83	4978.64	-16861	-14040	8038	1.655	1.5967	-30298	16250	7265	80882	20815	4220	25035		3.11	Si
SLV 3	6.93	-3771.54	-7869	-6553	4984	1.324	1.0446	0	0	0	80882	16652	3376	20028		4.02	Si
SLV 14	4.83	-3838.65	-9501	-7911	-8112	1.655	1.2704	-22481	14913	5305	80882	20815	4220	25035		3.09	Si
SLV 14	6.93	6311.69	-15875	-13219	-8537	1.655	1.2897	-28526	16122	5822	80882	20815	4220	25035		2.93	Si
SLV 1	4.83	4908.26	-14931	-12433	7891	1.655	1.4963	-26830	15783	6613	80882	20815	4220	25035		3.17	Si
SLV 1	6.93	-3808.29	-5740	-4779	5168	1.324	0.492	0	0	0	80882	16652	3376	20028		3.88	Si
SLV 4	4.83	5327.51	-17013	-14167	8698	1.655	1.5431	-30572	16250	7021	80882	20815	4220	25035		2.88	Si
SLV 4	6.93	-4252.3	-7346	-6117	5659	1.324	0.746	0	0	0	80882	16652	3376	20028		3.54	Si
SLV 16	4.83	-3768.26	-11430	-9518	-7965	1.655	1.4935	-22990	15015	6279	80882	20815	4220	25035		3.14	Si
SLV 16	6.93	6348.43	-18004	-14992	-8721	1.655	1.4247	-32352	16250	6482	80882	20815	4220	25035		2.87	Si
SLD 13	4.83	-1461.44	-11533	-9604	-3770	1.655	1.655	-20725	14562	6748	80882	20815	4220	25035		6.64	Si
SLD 13	6.93	3631.29	-13791	-11484	-4954	1.655	1.655	-24782	15373	7124	80882	20815	4220	25035		5.05	Si
SLD 15	4.83	-1436.83	-12376	-10305	-3710	1.655	1.655	-22238	14864	6888	80882	20815	4220	25035		6.75	Si
SLD 15	6.93	3647.06	-14733	-12268	-5037	1.655	1.655	-26474	15711	7281	80882	20815	4220	25035		4.97	Si
SLV 2	4.83	5257.12	-15084	-12560	8551	1.655	1.4369	-27104	15838	6372	80882	20815	4220	25035		2.93	Si
SLV 2	6.93	-4289.05	-5217	-4344	5843	1.324	0.0161	0	0	0	80882	16652	3376	20028		3.43	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.35	19589	-9078	593.75	1107.85	1.87	Si
SLV 10	179667	0.35	19803	-9177	593.75	1118.18	1.88	Si
SLV 13	179667	0.35	20173	-9348	593.75	1135.86	1.91	Si
SLV 14	179667	0.35	20502	-9501	593.75	1151.53	1.94	Si
SLV 5	179667	0.35	23203	-10752	593.75	1276.63	2.15	Si
SLV 6	179667	0.35	23418	-10852	593.75	1286.3	2.17	Si
SLV 15	179667	0.35	24336	-11278	593.75	1327.26	2.24	Si
SLV 16	179667	0.35	24666	-11430	593.75	1341.77	2.26	Si
SLV 1	179667	0.35	32220	-14931	593.75	1649.32	2.78	Si
SLV 2	179667	0.35	32550	-15084	593.75	1661.63	2.8	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-12010	-16135	-95	0.641	1682.7	0.927	10.05191	15.32354	No
SLV 3	-11920	-15971	-94	0.645	1673.6	0.927	10.11547	15.32354	No
SLV 2	-9670	-14974	-237	0.746	1447.5	0.919	11.80016	15.32354	No
SLV 1	-9580	-14810	-236	0.751	1438.5	0.918	11.88915	15.32354	No
SLV 16	-8590	-8665	275	0.811	1339.5	0.914	12.89443	15.32354	No
SLV 15	-8500	-8502	275	0.817	1330.5	0.913	12.99869	15.32354	No
SLV 14	-6250	-7504	132	1.029	1107.4	0.902	16.56773	15.32354	Si
SLV 13	-6160	-7341	133	1.039	1098.6	0.902	16.73678	15.32354	Si
SLV 8	-13527	-14847	201	0.578	1835.8	0.932	9.00357	7.6122	Si
SLV 7	-13469	-14740	201	0.58	1829.8	0.932	9.036	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.993	SLU 83	Si
V_SLU	6.898	SLU 69	Si
PF_SLV	1.104	SLV 2	Si
V_SLV	2.283	SLV 13	Si
PFFP_SLV	1.866	SLV 9	Si
R_SLV	0.656	SLV 4	No

Maschio 242

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-4.824	-13.778	-3.385	L4	L6	1.439	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 52	1.41	-148.63	-19295	-0.0000824	0.0003743	0.0035	1.4386	7349.26	9566.91	9566.91	64.37	No	Si
SLU 52	8.35	-414.17	-10162	-0.0000462	0.0003743	0.0035	1.4386	5498.46	6515.95	6515.95	15.73	No	Si
SLU 63	1.41	-204.04	-20550	-0.0000895	0.0003743	0.0035	1.4386	7374.9	9891.17	9891.17	48.48	No	Si
SLU 63	8.35	-427.44	-10871	-0.0000495	0.0003743	0.0035	1.4386	5746.96	6850.39	6850.39	16.03	No	Si
SLU 46	1.41	-54.89	-17691	-0.0000731	0.0003743	0.0035	1.4386	7236.02	9176.67	9176.67	167.18	No	Si
SLU 46	8.35	-385.73	-9562	-0.0000433	0.0003743	0.0035	1.4386	5274.25	6231.77	6231.77	16.16	No	Si
SLU 51	1.41	-49.94	-17811	-0.0000736	0.0003743	0.0035	1.4386	7247.59	9204.83	9204.83	184.3	No	Si
SLU 51	8.35	-392.71	-9707	-0.000044	0.0003743	0.0035	1.4386	5329.53	6302.81	6302.81	16.05	No	Si
SLU 55	1.41	-155.05	-19632	-0.0000841	0.0003743	0.0035	1.4386	7361.55	9651.94	9651.94	62.25	No	Si
SLU 55	8.35	-421.66	-10463	-0.0000476	0.0003743	0.0035	1.4386	5605.98	6656.78	6656.78	15.79	No	Si
SLU 59	1.41	-162.3	-19964	-0.0000858	0.0003743	0.0035	1.4386	7369.79	9737.24	9737.24	59.99	No	Si
SLU 59	8.35	-422.27	-10732	-0.0000488	0.0003743	0.0035	1.4386	5699.67	6784.4	6784.4	16.07	No	Si
SLU 54	1.41	-167.25	-19844	-0.0000854	0.0003743	0.0035	1.4386	7367.26	9706.3	9706.3	58.03	No	Si
SLU 54	8.35	-415.29	-10587	-0.0000481	0.0003743	0.0035	1.4386	5649.6	6715.6	6715.6	16.17	No	Si
SLU 47	1.41	-42.69	-17479	-0.0000719	0.0003743	0.0035	1.4386	7214.28	9127.22	9127.22	213.82	No	Si
SLU 47	8.35	-392.1	-9437	-0.0000428	0.0003743	0.0035	1.4386	5226.14	6170.2	6170.2	15.74	No	Si
SLU 61	1.41	-197.62	-20214	-0.0000877	0.0003743	0.0035	1.4386	7373.45	9802.37	9802.37	49.6	No	Si
SLU 61	8.35	-419.95	-10571	-0.0000481	0.0003743	0.0035	1.4386	5643.74	6707.63	6707.63	15.97	No	Si
SLU 44	1.41	-36.27	-17143	-0.0000702	0.0003743	0.0035	1.4386	7176.6	9050	9050	249.55	No	Si
SLU 44	8.35	-384.61	-9136	-0.0000415	0.0003743	0.0035	1.4386	5107.79	6020.32	6020.32	15.65	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	1.41	-824.71	-14497	-0.0000696	0.0005615	0.0035	1.4386		9112.42	9112.42	11.05		Si
SLV 10	8.35	1124.29	-605	-0.0079658	0.0005615	0.0035	1.1509		547.43	547.43	0.49		No
SLV 9	1.41	-764.32	-14420	-0.0000683	0.0005615	0.0035	1.4386		9074.61	9074.61	11.87		Si
SLV 9	8.35	1183.58	-558	-0.0091616	0.0005615	0.0035	1.1509		513.76	513.76	0.43		No
SLV 2	1.41	-1145.83	-15537	-0.0000794	0.0005615	0.0035	1.4386		9591.58	9591.58	8.37		Si
SLV 2	8.35	-1316.04	-6883	-0.0000466	0.0005615	0.0035	1.4386		5021.1	5021.1	3.82		Si
SLV 1	1.41	-1053.15	-15418	-0.0000774	0.0005615	0.0035	1.4386		9537.41	9537.41	9.06		Si
SLV 1	8.35	-1225.05	-6809	-0.0000448	0.0005615	0.0035	1.4386		4976.57	4976.57	4.06		Si
SLV 3	1.41	-511.2	-15562	-0.0000688	0.0005615	0.0035	1.4386		9603.31	9603.31	18.79		Si
SLV 3	8.35	-1866.33	-11024	-0.0000724	0.0005615	0.0035	1.4386		7362.39	7362.39	3.94		Si
SLV 13	1.41	388.78	-14109	-0.0000607	0.0005615	0.0035	1.4386		8515.88	8515.88	21.9		Si
SLV 13	8.35	1353.9	-4737	-0.0000391	0.0005615	0.0035	1.4386		3317.6	3317.6	2.45		Si
SLV 4	1.41	-603.88	-15681	-0.0000709	0.0005615	0.0035	1.4386		9657.63	9657.63	15.99		Si
SLV 4	8.35	-1957.32	-11098	-0.0000742	0.0005615	0.0035	1.4386		7401.73	7401.73	3.78		Si
SLV 5	1.41	-1196.9	-14812	-0.0000772	0.0005615	0.0035	1.4386		9259.73	9259.73	7.74		Si
SLV 5	8.35	409.89	-1179	-0.0000111	0.0005615	0.0035	1.4386		948.51	948.51	2.31		Si
SLV 6	1.41	-1257.29	-14890	-0.0000786	0.0005615	0.0035	1.4386		9295.5	9295.5	7.39		Si
SLV 6	8.35	350.6	-1227	-0.0000099	0.0005615	0.0035	1.4386		981.67	981.67	2.8		Si
SLV 14	1.41	296.09	-14227	-0.0000597	0.0005615	0.0035	1.4386		8564.03	8564.03	28.92		Si
SLV 14	8.35	1262.91	-4811	-0.0000377	0.0005615	0.0035	1.4386		3364.57	3364.57	2.66		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	1.41	-245.91	-21968	-18293	-3868	1.4386	1.4386	-45413	10833	4364	80882	12062	3668	15731	No	4.07	Si
SLU 80	8.35	-441.65	-11927	-9932	1997	1.4386	1.4386	-24656	10232	4122	80882	12062	3668	15731	No	7.88	Si
SLU 84	1.41	-287.65	-22554	-18781	-4061	1.4386	1.4386	-46625	10833	4364	80882	12062	3668	15731	No	3.87	Si
SLU 84	8.35	-446.82	-12066	-10047	1943	1.4386	1.4386	-24943	10270	4137	80882	12062	3668	15731	No	8.09	Si
SLU 83	1.41	-288.91	-22548	-18776	-4081	1.4386	1.4386	-46612	10833	4364	80882	12062	3668	15731	No	3.85	Si
SLU 83	8.35	-436.5	-12019	-10008	1921	1.4386	1.4386	-24846	10257	4132	80882	12062	3668	15731	No	8.19	Si
SLU 79	1.41	-247.17	-21962	-18288	-3888	1.4386	1.4386	-45400	10833	4364	80882	12062	3668	15731	No	4.05	Si
SLU 79	8.35	-431.32	-11880	-9893	1975	1.4386	1.4386	-24559	10219	4116	80882	12062	3668	15731	No	7.97	Si
SLU 81	1.41	-282.49	-22212	-18496	-4021	1.4386	1.4386	-45917	10833	4364	80882	12062	3668	15731	No	3.91	Si
SLU 81	8.35	-429.01	-11718	-9758	1873	1.4386	1.4386	-24225	10174	4098	80882	12062	3668	15731	No	8.4	Si
SLU 82	1.41	-281.23	-22218	-18501	-4001	1.4386	1.4386	-45930	10833	4364	80882	12062	3668	15731	No	3.93	Si
SLU 82	8.35	-439.33	-11765	-9797	1895	1.4386	1.4386	-24321	10187	4104	80882	12062	3668	15731	No	8.3	Si
SLU 74	1.41	-252.12	-21842	-18188	-3890	1.4386	1.4386	-45152	10833	4364	80882	12062	3668	15731	No	4.04	Si
SLU 74	8.35	-424.35	-11735	-9772	1936	1.4386	1.4386	-24260	10179	4100	80882	12062	3668	15731	No	8.12	Si
SLU 77	1.41	-258.54	-22178	-18468	-3950	1.4386	1.4386	-45847	10833	4364	80882	12062	3668	15731	No	3.98	Si
SLU 77	8.35	-431.84	-12036	-10023	1984	1.4386	1.4386	-24881	10262	4134	80882	12062	3668	15731	No	7.93	Si
SLU 78	1.41	-257.28	-22185	-18473	-3930	1.4386	1.4386	-45861	10833	4364	80882	12062	3668	15731	No	4	Si
SLU 78	8.35	-442.16	-12083	-10061	2007	1.4386	1.4386	-24978	10275	4139	80882	12062	3668	15731	No	7.84	Si
SLU 75	1.41	-250.86	-21848	-18193	-3870	1.4386	1.4386	-45166	10833	4364	80882	12062	3668	15731	No	4.06	Si
SLU 75	8.35	-434.67	-11782	-9811	1959	1.4386	1.4386	-24356	10192	4105	80882	12062	3668	15731	No	8.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	1.41	296.09	-14227	-11847	-9384	1.4386	1.4386	-29411	16250	6546	80882	18093	3668	21762		2.32	Si
SLV 14	8.35	1262.91	-4811	-4006	-2585	1.4386	1.3704	-9945	12406	4760	80882	18093	3668	21762		8.42	Si
SLV 15	1.41	930.73	-14253	-11869	-7959	1.4386	1.4386	-29464	16250	6546	80882	18093	3668	21762		2.73	Si
SLV 15	8.35	712.62	-8952	-7455	-1898	1.4386	1.4386	-18506	14118	5687	80882	18093	3668	21762		11.46	Si
SLV 16	1.41	838.05	-14372	-11967	-7577	1.4386	1.4386	-29709	16250	6546	80882	18093	3668	21762		2.87	Si
SLV 16	8.35	621.63	-9026	-7516	-1590	1.4386	1.4386	-18658	14148	5699	80882	18093	3668	21762		13.68	Si
SLV 4	1.41	-603.88	-15681	-13058	4777	1.4386	1.4386	-32416	16250	6546	80882	18093	3668	21762		4.56	Si
SLV 4	8.35	-1957.32	-11098	-9241	5769	1.4386	1.4386	-22942	15005	6044	80882	18093	3668	21762		3.77	Si
SLV 3	1.41	-511.2	-15562	-12959	4395	1.4386	1.4386	-32171	16250	6546	80882	18093	3668	21762		4.95	Si
SLV 3	8.35	-1866.33	-11024	-9180	5461	1.4386	1.4386	-22790	14975	6032	80882	18093	3668	21762		3.98	Si
SLV 13	1.41	388.78	-14109	-11749	-9766	1.4386	1.4386	-29166	16250	6546	80882	18093	3668	21762		2.23	Si
SLV 13	8.35	1353.9	-4737	-3945	-2893	1.4386	1.3005	-9793	12375	4506	80882	18093	3668	21762		7.52	Si
SLV 9	1.41	-764.32	-14420	-12007	-7485	1.4386	1.4386	-29809	16250	6546	80882	18093	3668	21762		2.91	Si
SLV 9	8.35	1183.58	-558	-464	-1425	1.1509	0	0	0	0	80882	14474	2935	17409		12.22	Si
SLV 10	1.41	-824.71	-14497	-12072	-7236	1.4386	1.4386	-29968	16250	6546	80882	18093	3668	21762		3.01	Si
SLV 10	8.35	1124.29	-605	-504	-1224	1.1509	0	0	0	0	80882	14474	2935	17409		14.22	Si
SLD 14	1.41	61.81	-14604	-12161	-5451	1.4386	1.4386	-30190	16250	6546	80882	18093	3668	21762		3.99	Si
SLD 14	8.35	371.66	-6558	-5461	-287	1.4386	1.4386	-13556	13128	5288	80882	18093	3668	21762		75.71	Si
SLD 13	1.41	101.62	-14553	-12119	-5615	1.4386	1.4386	-30085	16250	6546	80882	18093	3668	21762		3.88	Si
SLD 13	8.35	410.74	-6526	-5434	-420	1.4386	1.4386	-13491	13115	5283	80882	18093	3668	21762		51.85	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.35	12705	-5118	528.12	656.9	1.24	Si
SLV 6	179667	0.35	12783	-5149	528.12	660.56	1.25	Si
SLV 9	179667	0.35	12831	-5168	528.12	662.78	1.25	Si
SLV 10	179667	0.35	12909	-5200	528.12	666.43	1.26	Si
SLV 1	179667	0.35	20834	-8392	528.12	1014.63	1.92	Si
SLV 2	179667	0.35	20954	-8440	528.12	1019.53	1.93	Si
SLV 13	179667	0.35	21252	-8560	528.12	1031.69	1.95	Si
SLV 14	179667	0.35	21371	-8609	528.12	1036.55	1.96	Si
SLV 3	179667	0.35	27945	-11256	528.12	1287.54	2.44	Si
SLV 4	179667	0.35	28064	-11305	528.12	1291.81	2.45	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-11098	-15681	-141	0.607	1529	0.93	9.48837	15.32354	No
SLV 3	-11024	-15562	-141	0.61	1521.6	0.93	9.5404	15.32354	No
SLV 16	-9026	-14372	97	0.716	1320.4	0.921	11.29732	15.32354	No
SLV 15	-8952	-14253	97	0.721	1313.1	0.921	11.37249	15.32354	No
SLV 2	-6883	-15537	-93	0.875	1106.1	0.911	13.97084	15.32354	No
SLV 1	-6809	-15418	-93	0.882	1098.8	0.91	14.08385	15.32354	No
SLV 8	-15277	-15370	-114	0.471	1951.8	0.943	7.25744	7.6122	No
SLV 7	-15229	-15293	-114	0.472	1946.9	0.943	7.27685	7.6122	No
SLV 12	-14656	-14977	-42	0.491	1888.8	0.941	7.58601	7.6122	No
SLV 11	-14608	-14900	-43	0.493	1883.9	0.941	7.6071	7.6122	No

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.653	SLU 44	Si
V_SLU	3.855	SLU 83	Si
PF_SLV	0.434	SLV 9	No
V_SLV	2.228	SLV 13	Si
PFFP_SLV	1.244	SLV 5	Si
R_SLV	0.619	SLV 4	No

Maschio 243

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-3.385	-13.778	-0.354	L4	Z medio 570 cm	3.031	0.28	4.291	5.163	3.42			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.41	-233.35	-43385	-0.0000868	0.0003743	0.0035	3.0314	32744.14	44055.94	44055.94	188.8	No	Si
SLU 84	4.83	2642.81	-40656	-0.0000908	0.0003743	0.0035	3.0314	32630.51	41537.79	41537.79	15.72	No	Si
SLU 41	1.41	-247.84	-36691	-0.0000718	0.0003743	0.0035	3.0314	31999.84	40850.18	40850.18	164.83	No	Si
SLU 41	4.83	2423.34	-34633	-0.0000762	0.0003743	0.0035	3.0314	31455.05	37709.7	37709.7	15.56	No	Si
SLU 18	1.41	-131.76	-32339	-0.000062	0.0003743	0.0035	3.0314	30672.72	37886.05	37886.05	287.54	No	Si
SLU 18	4.83	2136.7	-30277	-0.0000656	0.0003743	0.0035	3.0314	29812	34937.71	34937.71	16.35	No	Si
SLU 81	1.41	-214.87	-42800	-0.0000854	0.0003743	0.0035	3.0314	32741.77	43759.45	43759.45	203.65	No	Si
SLU 81	4.83	2660.76	-39996	-0.0000893	0.0003743	0.0035	3.0314	32563.76	41105.14	41105.14	15.45	No	Si
SLU 42	1.41	-239.49	-36685	-0.0000718	0.0003743	0.0035	3.0314	31998.54	40847.68	40847.68	170.56	No	Si
SLU 42	4.83	2401.1	-34640	-0.0000761	0.0003743	0.0035	3.0314	31457.14	37713.93	37713.93	15.71	No	Si
SLU 82	1.41	-206.53	-42794	-0.0000853	0.0003743	0.0035	3.0314	32741.68	43756.6	43756.6	211.86	No	Si
SLU 82	4.83	2638.51	-40003	-0.0000892	0.0003743	0.0035	3.0314	32564.54	41109.68	41109.68	15.58	No	Si
SLU 40	1.41	-212.68	-36095	-0.0000704	0.0003743	0.0035	3.0314	31857.25	40491.8	40491.8	190.39	No	Si
SLU 40	4.83	2396.8	-33986	-0.0000747	0.0003743	0.0035	3.0314	31253.24	37316.46	37316.46	15.57	No	Si
SLU 60	1.41	-125.61	-39038	-0.0000765	0.0003743	0.0035	3.0314	32439.75	41916.63	41916.63	333.7	No	Si
SLU 60	4.83	2378.42	-36294	-0.0000797	0.0003743	0.0035	3.0314	31906.17	38735.52	38735.52	16.29	No	Si
SLU 83	1.41	-241.69	-43390	-0.0000868	0.0003743	0.0035	3.0314	32744.1	44058.84	44058.84	182.29	No	Si
SLU 83	4.83	2665.06	-40649	-0.0000909	0.0003743	0.0035	3.0314	32629.89	41533.36	41533.36	15.58	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	1.41	-221.02	-36100	-0.0000704	0.0003743	0.0035	3.0314	31858.67	40495.36	40495.36	183.22	No	Si
SLU 39	4.83	2419.04	-33979	-0.0000748	0.0003743	0.0035	3.0314	31251	37312.26	37312.26	15.42	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.41	-1497.03	-25967	-0.0000526	0.0005615	0.0035	3.0314		35979.24	35979.24	24.03		Si
SLV 5	4.83	5192.87	-24295	-0.000063	0.0005615	0.0035	3.0314		31595.79	31595.79	6.08		Si
SLV 6	1.41	-1408.01	-25769	-0.0000519	0.0005615	0.0035	3.0314		35771.86	35771.86	25.41		Si
SLV 6	4.83	5209.02	-24225	-0.0000629	0.0005615	0.0035	3.0314		31513.86	31513.86	6.05		Si
SLD 10	1.41	-677.85	-29587	-0.0000565	0.0005615	0.0035	3.0314		39755.79	39755.79	58.65		Si
SLD 10	4.83	3135.95	-26181	-0.0000591	0.0005615	0.0035	3.0314		33814.01	33814.01	10.78		Si
SLV 2	1.41	-454.33	-20448	-0.0000383	0.0005615	0.0035	3.0314		29785.28	29785.28	65.56		Si
SLV 2	4.83	2416.49	-23480	-0.0000512	0.0005615	0.0035	3.0314		30645.28	30645.28	12.68		Si
SLD 5	1.41	-718.32	-27602	-0.0000529	0.0005615	0.0035	3.0314		37697.84	37697.84	52.48		Si
SLD 5	4.83	3088.7	-25558	-0.0000577	0.0005615	0.0035	3.0314		33077.65	33077.65	10.71		Si
SLV 10	1.41	-1404.76	-30617	-0.0000613	0.0005615	0.0035	3.0314		40775.31	40775.31	29.03		Si
SLV 10	4.83	5303.77	-25757	-0.0000663	0.0005615	0.0035	3.0314		33313.18	33313.18	6.28		Si
SLD 9	1.41	-716.79	-29674	-0.0000569	0.0005615	0.0035	3.0314		39841.19	39841.19	55.58		Si
SLD 9	4.83	3128.89	-26212	-0.0000591	0.0005615	0.0035	3.0314		33850.3	33850.3	10.82		Si
SLV 1	1.41	-590.95	-20752	-0.0000394	0.0005615	0.0035	3.0314		30141.02	30141.02	51		Si
SLV 1	4.83	2391.71	-23588	-0.0000513	0.0005615	0.0035	3.0314		30770.5	30770.5	12.87		Si
SLD 6	1.41	-679.38	-27516	-0.0000526	0.0005615	0.0035	3.0314		37606.06	37606.06	55.35		Si
SLD 6	4.83	3095.76	-25527	-0.0000576	0.0005615	0.0035	3.0314		33041.51	33041.51	10.67		Si
SLV 9	1.41	-1493.77	-30815	-0.000062	0.0005615	0.0035	3.0314		40972.43	40972.43	27.43		Si
SLV 9	4.83	5287.62	-25827	-0.0000664	0.0005615	0.0035	3.0314		33395.93	33395.93	6.32		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 48	1.41	-147.42	-34892	-29055	3445	3.0314	3.0314	-34231	10833	9195	47578	25416	7730	33146	No	9.62	Si
SLU 48	4.83	1418.41	-32062	-26698	4784	3.0314	3.0314	-31455	10833	9195	47578	25416	7730	33146	No	6.93	Si
SLU 44	1.41	-61.47	-33319	-27745	3510	3.0314	3.0314	-32688	10833	9195	47578	25416	7730	33146	No	9.44	Si
SLU 44	4.83	1333.05	-30314	-25243	4771	3.0314	3.0314	-29741	10833	9195	47578	25416	7730	33146	No	6.95	Si
SLU 70	1.41	-228.34	-38648	-32182	3321	3.0314	3.0314	-37916	10833	9195	47578	25416	7730	33146	No	9.98	Si
SLU 70	4.83	1678.51	-35771	-29787	4799	3.0314	3.0314	-35094	10833	9195	47578	25416	7730	33146	No	6.91	Si
SLU 49	1.41	-139.08	-34886	-29050	3505	3.0314	3.0314	-34226	10833	9195	47578	25416	7730	33146	No	9.46	Si
SLU 49	4.83	1396.16	-32069	-26704	4838	3.0314	3.0314	-31462	10833	9195	47578	25416	7730	33146	No	6.85	Si
SLU 71	1.41	-218.27	-38272	-31869	3303	3.0314	3.0314	-37547	10833	9195	47578	25416	7730	33146	No	10.04	Si
SLU 71	4.83	1661.07	-35312	-29405	4777	3.0314	3.0314	-34644	10833	9195	47578	25416	7730	33146	No	6.94	Si
SLU 68	1.41	-177.55	-37671	-31369	3364	3.0314	3.0314	-36958	10833	9195	47578	25416	7730	33146	No	9.85	Si
SLU 68	4.83	1619.69	-34670	-28871	4799	3.0314	3.0314	-34014	10833	9195	47578	25416	7730	33146	No	6.91	Si
SLU 47	1.41	-88.28	-33910	-28237	3549	3.0314	3.0314	-33268	10833	9195	47578	25416	7730	33146	No	9.34	Si
SLU 47	4.83	1337.35	-30968	-25787	4839	3.0314	3.0314	-30382	10833	9195	47578	25416	7730	33146	No	6.85	Si
SLU 72	1.41	-209.92	-38266	-31864	3363	3.0314	3.0314	-37541	10833	9195	47578	25416	7730	33146	No	9.86	Si
SLU 72	4.83	1638.82	-35319	-29411	4831	3.0314	3.0314	-34651	10833	9195	47578	25416	7730	33146	No	6.86	Si
SLU 50	1.41	-129	-34510	-28737	3487	3.0314	3.0314	-33857	10833	9195	47578	25416	7730	33146	No	9.5	Si
SLU 50	4.83	1378.72	-31610	-26322	4816	3.0314	3.0314	-31011	10833	9195	47578	25416	7730	33146	No	6.88	Si
SLU 51	1.41	-120.66	-34504	-28732	3547	3.0314	3.0314	-33851	10833	9195	47578	25416	7730	33146	No	9.34	Si
SLU 51	4.83	1356.48	-31617	-26328	4871	3.0314	3.0314	-31018	10833	9195	47578	25416	7730	33146	No	6.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.41	1170.61	-27075	-22546	14317	3.0314	3.0314	-26563	15729	13351	47578	38125	7730	45855		3.2	Si
SLV 7	4.83	-2482.29	-27327	-22756	12899	3.0314	3.0314	-26810	15779	13393	47578	38125	7730	45855		3.55	Si
SLV 5	1.41	-1497.03	-25967	-21623	-8989	3.0314	3.0314	-25475	15512	13166	47578	38125	7730	45855		5.1	Si
SLV 5	4.83	5192.87	-24295	-20231	-5634	3.0314	3.0314	-23835	15184	12888	47578	38125	7730	45855		8.14	Si
SLV 9	1.41	-1493.77	-30815	-25660	-9404	3.0314	3.0314	-30231	16250	13793	47578	38125	7730	45855		4.88	Si
SLV 9	4.83	5287.62	-25827	-21507	-5804	3.0314	3.0314	-25338	15484	13143	47578	38125	7730	45855		7.9	Si
SLV 8	1.41	1259.63	-26877	-22381	14313	3.0314	3.0314	-26368	15690	13318	47578	38125	7730	45855		3.2	Si
SLV 8	4.83	-2466.15	-27257	-22698	12879	3.0314	3.0314	-26741	15765	13381	47578	38125	7730	45855		3.56	Si
SLV 12	1.41	1262.88	-31725	-26418	13898	3.0314	3.0314	-31124	16250	13793	47578	38125	7730	45855		3.3	Si
SLV 12	4.83	-2371.4	-28790	-23973	12709	3.0314	3.0314	-28244	16066	13636	47578	38125	7730	45855		3.61	Si
SLD 8	1.41	482.64	-28018	-23331	7697	3.0314	3.0314	-27488	15914	13508	47578	38125	7730	45855		5.96	Si
SLD 8	4.83	-307.42	-26873	-22378	7653	3.0314	3.0314	-26364	15690	13317	47578	38125	7730	45855		5.99	Si
SLV 6	1.41	-1408.01	-25769	-21458	-8994	3.0314	3.0314	-25281	15473	13133	47578	38125	7730	45855		5.1	Si
SLV 6	4.83	5209.02	-24225	-20173	-5653	3.0314	3.0314	-23766	15170	12876	47578	38125	7730	45855		8.11	Si
SLD 7	1.41	443.7	-28105	-23403	7699	3.0314	3.0314	-27573	15931	13522	47578	38125	7730	45855		5.96	Si
SLD 7	4.83	-314.48	-26904	-22403	7662	3.0314	3.0314	-26394	15696	13322	47578	38125	7730	45855		5.98	Si
SLV 10	1.41	-1404.76	-30617	-25495	-9408	3.0314	3.0314	-30037	16250	13793	47578	38125	7730	45855		4.87	Si
SLV 10	4.83	5303.77	-25757	-21448	-5823	3.0314	3.0314	-25270	15471	13131	47578	38125	7730	45855		7.87	Si
SLV 11	1.41	1173.86	-31923	-26583	13903	3.0314	3.0314	-31319	16250	13793	47578	38125	7730	45855		3.3	Si
SLV 11	4.83	-2387.55	-28860	-24032	12729	3.0314	3.0314	-28313	16079	13648	47578	38125	7730	45855		3.6	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.12 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.31	27244	-23124	380.27	2659.86	6.99	Si
SLV 3	179667	0.31	27373	-23233	380.27	2669.67	7.02	Si
SLV 2	179667	0.31	27419	-23272	380.27	2673.18	7.03	Si
SLV 1	179667	0.31	27547	-23382	380.27	2682.95	7.06	Si
SLV 8	179667	0.31	30405	-25808	380.27	2893.71	7.61	Si
SLV 7	179667	0.31	30489	-25879	380.27	2899.7	7.63	Si
SLV 6	179667	0.31	30987	-26302	380.27	2935.07	7.72	Si
SLV 5	179667	0.31	31071	-26373	380.27	2940.98	7.73	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.31	33271	-28240	380.27	3092.22	8.13	Si
SLV 11	179667	0.31	33354	-28311	380.27	3097.83	8.15	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.12 Wa = 0.05 Ta = 0.1098

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-28860	-31923	256	0.558	3452.1	0.956	8.47787	14.11901	No
SLV 12	-28790	-31725	256	0.559	3445	0.956	8.49599	14.11901	No
SLV 7	-27327	-27075	-158	0.587	3296.4	0.954	8.9437	14.11901	No
SLV 8	-27257	-26877	-158	0.589	3289.3	0.954	8.96396	14.11901	No
SLV 9	-25827	-30815	142	0.616	3144	0.952	9.40662	14.11901	No
SLV 10	-25757	-30617	142	0.618	3136.9	0.952	9.42902	14.11901	No
SLV 5	-24295	-25967	-272	0.644	2988.4	0.95	9.85206	14.11901	No
SLV 6	-24225	-25769	-272	0.646	2981.3	0.95	9.87704	14.11901	No
SLV 15	-29605	-37244	699	0.532	3527.8	0.957	8.08522	6.31303	Si
SLV 16	-29497	-36940	699	0.534	3516.9	0.957	8.11107	6.31303	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.424	SLU 39	Si
V_SLU	6.805	SLU 51	Si
PF_SLV	6.05	SLV 6	Si
V_SLV	3.203	SLV 7	Si
PFFP_SLV	6.995	SLV 4	Si
R_SLV	0.6	SLV 11	No

Maschio 244

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.778	-0.354	-13.778	1.006	L5	L8	1.36	0.28	10.2	10.2	10.2			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 33	4.83	257.37	-15826	-0.000073	0.0003743	0.0035	1.36	6368.8	12721.12	12721.12	49.43	No	Si
SLU 33	15.03	560.16	-588	-0.0000449	0.0003743	0.0035	1.36	0	7862.53	7862.53	14.04	No	Si
SLU 82	4.83	386.59	-18965	-0.0000915	0.0003743	0.0035	1.36	6587.8	13013.43	13013.43	33.66	No	Si
SLU 82	15.03	579.66	-584	-0.0000481	0.0003743	0.0035	1.36	0	7859.35	7859.35	13.56	No	Si
SLU 75	4.83	310.24	-18837	-0.0000892	0.0003743	0.0035	1.36	6585.64	13028.73	13028.73	42	No	Si
SLU 75	15.03	629.63	-697	-0.0000482	0.0003743	0.0035	1.36	0	7960.42	7960.42	12.64	No	Si
SLU 77	4.83	314.4	-19159	-0.0000909	0.0003743	0.0035	1.36	6590	12991.02	12991.02	41.32	No	Si
SLU 77	15.03	600.18	-727	-0.0000419	0.0003743	0.0035	1.36	0	7987.74	7987.74	13.31	No	Si
SLU 74	4.83	309.4	-18853	-0.0000892	0.0003743	0.0035	1.36	6585.94	13026.83	13026.83	42.1	No	Si
SLU 74	15.03	620.43	-697	-0.0000468	0.0003743	0.0035	1.36	0	7961.06	7961.06	12.83	No	Si
SLU 81	4.83	385.75	-18980	-0.0000915	0.0003743	0.0035	1.36	6588.03	13011.58	13011.58	33.73	No	Si
SLU 81	15.03	570.46	-585	-0.0000466	0.0003743	0.0035	1.36	0	7860	7860	13.78	No	Si
SLU 66	4.83	126.96	-17288	-0.0000775	0.0003743	0.0035	1.36	6513.78	12891.1	12891.1	101.54	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 66	15.03	572.86	-710	-0.0000389	0.0003743	0.0035	1.36	0	7972.93	7972.93	13.92	No	Si
SLU 67	4.83	127.8	-17272	-0.0000774	0.0003743	0.0035	1.36	6512.63	12889.47	12889.47	100.86	No	Si
SLU 67	15.03	582.06	-710	-0.0000403	0.0003743	0.0035	1.36	0	7972.29	7972.29	13.7	No	Si
SLU 73	4.83	308.96	-18284	-0.0000863	0.0003743	0.0035	1.36	6569.63	12985.45	12985.45	42.03	No	Si
SLU 73	15.03	565.41	-590	-0.0000456	0.0003743	0.0035	1.36	0	7864.05	7864.05	13.91	No	Si
SLU 78	4.83	315.24	-19143	-0.0000909	0.0003743	0.0035	1.36	6589.87	12992.79	12992.79	41.22	No	Si
SLU 78	15.03	609.38	-726	-0.0000433	0.0003743	0.0035	1.36	0	7987.1	7987.1	13.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	4.83	518.51	-11058	-0.000054	0.0005615	0.0035	1.36		13288.97	13288.97	25.63		Si
SLV 11	15.03	1731.75	-547	-0.0002636	0.0005615	0.0035	1.36		8157.98	8157.98	4.71		Si
SLD 12	4.83	321.01	-12100	-0.0000549	0.0005615	0.0035	1.36		13608.68	13608.68	42.39		Si
SLD 12	15.03	982.54	-490	-0.0001226	0.0005615	0.0035	1.36		8081.53	8081.53	8.23		Si
SLD 11	4.83	320.52	-12110	-0.0000549	0.0005615	0.0035	1.36		13611.6	13611.6	42.47		Si
SLD 11	15.03	976.96	-490	-0.0001217	0.0005615	0.0035	1.36		8080.87	8080.87	8.27		Si
SLV 12	4.83	519.64	-11036	-0.000054	0.0005615	0.0035	1.36		13282.04	13282.04	25.56		Si
SLV 12	15.03	1744.5	-548	-0.0002661	0.0005615	0.0035	1.36		8159.48	8159.48	4.68		Si
SLV 6	4.83	-200.43	-14839	-0.0000646	0.0005615	0.0035	1.36		14385.17	14385.17	71.77		Si
SLV 6	15.03	-972.82	-348	-0.0001374	0.0005615	0.0035	1.36		7895.35	7895.35	8.12		Si
SLV 8	4.83	842.63	-11173	-0.0000605	0.0005615	0.0035	1.36		13324.82	13324.82	15.81		Si
SLV 8	15.03	1576.43	-346	-0.000265	0.0005615	0.0035	1.36		7884.33	7884.33	5		Si
SLV 5	4.83	-201.56	-14861	-0.0000647	0.0005615	0.0035	1.36		14390.23	14390.23	71.39		Si
SLV 5	15.03	-985.57	-347	-0.0001401	0.0005615	0.0035	1.36		7893.82	7893.82	8.01		Si
SLV 16	4.83	-221.95	-12153	-0.0000533	0.0005615	0.0035	1.36		13633.79	13633.79	61.43		Si
SLV 16	15.03	1051.75	-783	-0.0001085	0.0005615	0.0035	1.36		8430.87	8430.87	8.02		Si
SLV 15	4.83	-223.69	-12187	-0.0000535	0.0005615	0.0035	1.36		13644.01	13644.01	61		Si
SLV 15	15.03	1032.18	-782	-0.0001053	0.0005615	0.0035	1.36		8429.24	8429.24	8.17		Si
SLV 7	4.83	841.5	-11195	-0.0000605	0.0005615	0.0035	1.36		13331.71	13331.71	15.84		Si
SLV 7	15.03	1563.68	-345	-0.0002623	0.0005615	0.0035	1.36		7882.8	7882.8	5.04		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	4.83	315.24	-19143	-15941	687	1.36	1.36	-41861	10833	4125	10784	11403	3468	14871	No	21.64	Si
SLU 78	15.03	609.38	-726	-605	-2339	1.36	0	-7931	8296	0	10784	11403	3468	10784	No	4.61	Si
SLU 77	4.83	314.4	-19159	-15954	674	1.36	1.36	-41895	10833	4125	10784	11403	3468	14871	No	22.06	Si
SLU 77	15.03	600.18	-727	-605	-2291	1.36	0	-7801	8261	0	10784	11403	3468	10784	No	4.71	Si
SLU 74	4.83	309.4	-18853	-15699	642	1.36	1.36	-41226	10833	4125	10784	11403	3468	14871	No	23.18	Si
SLU 74	15.03	620.43	-697	-581	-2389	1.36	0	-8090	8378	0	10784	11403	3468	10784	No	4.51	Si
SLU 73	4.83	308.96	-18284	-15225	650	1.36	1.36	-39981	10833	4125	10784	11403	3468	14871	No	22.89	Si
SLU 73	15.03	565.41	-590	-491	-2233	1.36	0	-7350	8315	0	10784	11403	3468	10784	No	4.83	Si
SLU 32	4.83	256.54	-15842	-13192	380	1.36	1.36	-34642	10833	4125	10784	11403	3468	14871	No	39.15	Si
SLU 32	15.03	550.96	-589	-490	-2183	1.36	0	-7178	8261	0	10784	11403	3468	10784	No	4.94	Si
SLU 75	4.83	310.24	-18837	-15686	655	1.36	1.36	-41192	10833	4125	10784	11403	3468	14871	No	22.72	Si
SLU 75	15.03	629.63	-697	-580	-2437	1.36	0	-8206	8414	0	10784	11403	3468	10784	No	4.43	Si
SLU 81	4.83	385.75	-18980	-15805	664	1.36	1.36	-41505	10833	4125	10784	11403	3468	14871	No	22.4	Si
SLU 81	15.03	570.46	-585	-487	-2274	1.36	0	-7402	8341	0	10784	11403	3468	10784	No	4.74	Si
SLU 84	4.83	391.59	-19270	-16047	710	1.36	1.36	-42139	10833	4125	10784	11403	3468	14871	No	20.96	Si
SLU 84	15.03	559.41	-614	-511	-2224	1.36	0	-7298	8258	0	10784	11403	3468	10784	No	4.85	Si
SLU 33	4.83	257.37	-15826	-13179	393	1.36	1.36	-34608	10833	4125	10784	11403	3468	14871	No	37.85	Si
SLU 33	15.03	560.16	-588	-490	-2231	1.36	0	-7287	8297	0	10784	11403	3468	10784	No	4.83	Si
SLU 82	4.83	386.59	-18965	-15792	677	1.36	1.36	-41471	10833	4125	10784	11403	3468	14871	No	21.97	Si
SLU 82	15.03	579.66	-584	-487	-2322	1.36	0	-7505	8378	0	10784	11403	3468	10784	No	4.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 11	4.83	320.52	-12110	-10084	1541	1.36	1.36	-26482	15713	5984	10784	17104	3468	16768		10.88	Si
SLD 11	15.03	976.96	-490	-408	-4502	1.36	0	0	15589	0	10784	17104	3468	10784		2.4	Si
SLD 12	4.83	321.01	-12100	-10076	1544	1.36	1.36	-26460	15709	5982	10784	17104	3468	16766		10.86	Si
SLD 12	15.03	982.54	-490	-408	-4530	1.36	0	0	15633	0	10784	17104	3468	10784		2.38	Si
SLV 7	4.83	841.5	-11195	-9322	2766	1.36	1.36	-24480	15313	5831	10784	17104	3468	16615		6.01	Si
SLV 7	15.03	1563.68	-345	-288	-7939	1.36	0	0	16250	0	10784	17104	3468	10784		1.36	Si
SLV 12	4.83	519.64	-11036	-9189	2863	1.36	1.36	-24132	15243	5805	10784	17104	3468	16589		5.79	Si
SLV 12	15.03	1744.5	-548	-456	-8452	1.36	0	0	16250	0	10784	17104	3468	10784		1.28	Si
SLV 9	4.83	-524.55	-14724	-12261	-1765	1.36	1.36	-32198	16250	6188	10784	17104	3468	16972		9.62	Si
SLV 9	15.03	-817.5	-548	-456	5162	1.36	0	-9505	14149	0	10784	17104	3468	10784		2.09	Si
SLV 10	4.83	-523.42	-14702	-12242	-1760	1.36	1.36	-32149	16250	6188	10784	17104	3468	16972		9.65	Si
SLV 10	15.03	-804.75	-549	-457	5100	1.36	0	-9415	14060	0	10784	17104	3468	10784		2.11	Si
SLV 6	4.83	-200.43	-14839	-12357	-1852	1.36	1.36	-32449	16250	6188	10784	17104	3468	16972		9.16	Si
SLV 6	15.03	-972.82	-348	-290	5550	1.36	0	0	16250	0	10784	17104	3468	10784		1.94	Si
SLV 11	4.83	518.51	-11058	-9208	2858	1.36	1.36	-24180	15253	5808	10784	17104	3468	16593		5.81	Si
SLV 11	15.03	1731.75	-547	-455	-8389	1.36	0	0	16250	0	10784	17104	3468	10784		1.29	Si
SLV 8	4.83	842.63	-11173	-9304	2771	1.36	1.36	-24432	15303	5827	10784	17104	3468	16612		6	Si
SLV 8	15.03	1576.43	-346	-288	-8002	1.36	0	0	16250	0	10784	17104	3468	10784		1.35	Si
SLV 5	4.83	-201.56	-14861	-12375	-1857	1.36	1.36	-32498	16250	6188	10784	17104	3468	16972		9.14	Si
SLV 5	15.03	-985.57	-347	-289	5612	1.36	0	0	16250	0	10784	17104	3468	10784		1.92	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.93 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.45	0	-3522	1407.48	0	0	No, e>t/2
SLV 11	179667	0.45	0	-3522	1407.48	0	0	No, e>t/2
SLV 2	179667	0.45	0	-7391	1407.48	0	0	No, e>t/2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.45	0	-2782	1407.48	0	0	No, e>t/2
SLV 13	179667	0.45	0	-9858	1407.48	0	0	No, e>t/2
SLV 14	179667	0.45	0	-9858	1407.48	0	0	No, e>t/2
SLV 7	179667	0.45	0	-2782	1407.48	0	0	No, e>t/2
SLV 3	179667	0.45	0	-4865	1407.48	0	0	No, e>t/2
SLV 4	179667	0.45	0	-4865	1407.48	0	0	No, e>t/2
SLV 1	179667	0.45	0	-7391	1407.48	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.93 Wa = 0.05 Ta = 0.6205

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-784	-13253	-17	1.806	737.4	0.93	28.20929	10.72384	Si
SLV 13	-782	-13287	-17	1.807	737.3	0.93	28.21779	10.72384	Si
SLV 16	-783	-12153	14	1.807	737.4	0.93	28.22202	10.72384	Si
SLV 15	-782	-12187	14	1.807	737.3	0.931	28.23043	10.72384	Si
SLV 2	-113	-13710	-18	2.139	713.4	0.985	31.55889	10.72384	Si
SLV 1	-111	-13744	-18	2.14	713.4	0.985	31.56708	10.72384	Si
SLV 4	-112	-12610	14	2.14	713.4	0.985	31.57656	10.72384	Si
SLV 3	-111	-12644	14	2.141	713.4	0.985	31.58466	10.72384	Si
SLV 10	-549	-14702	-55	1.901	726.1	0.945	29.24438	2.39674	Si
SLV 9	-548	-14724	-55	1.901	726	0.945	29.25	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.643	SLU 75	Si
V_SLU	4.426	SLU 75	Si
PF_SLV	4.677	SLV 12	Si
V_SLV	1.276	SLV 12	Si
PFFP_SLV	0	SLV 1	No
R_SLV	2.631	SLV 14	Si

Maschio 246

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.638	-4.824	-13.143	-4.824	L3	F1	0.495	0.3	13.838	13.838	13.838			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	0.42	131.49	-6151	-0.0000868	0.0003743	0.0035	0.495	902.94	1081.36	1081.36	8.22	No	Si
SLU 65	2.92	21.95	-5866	-0.0000674	0.0003743	0.0035	0.495	888.47	1051.5	1051.5	47.9	No	Si
SLU 72	0.42	136.85	-6368	-0.0000904	0.0003743	0.0035	0.495	912.18	1104.52	1104.52	8.07	No	Si
SLU 72	2.92	22.88	-6091	-0.0000703	0.0003743	0.0035	0.495	900.11	1075.01	1075.01	46.98	No	Si
SLU 70	0.42	138.11	-6441	-0.0000916	0.0003743	0.0035	0.495	914.93	1112.28	1112.28	8.05	No	Si
SLU 70	2.92	21.51	-6152	-0.0000709	0.0003743	0.0035	0.495	903	1081.51	1081.51	50.28	No	Si
SLU 64	0.42	134.02	-6159	-0.0000873	0.0003743	0.0035	0.495	903.34	1082.28	1082.28	8.08	No	Si
SLU 64	2.92	18.58	-5835	-0.0000665	0.0003743	0.0035	0.495	886.72	1048.26	1048.26	56.41	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	0.42	133.66	-6258	-0.0000885	0.0003743	0.0035	0.495	907.68	1092.71	1092.71	8.18	No	Si
SLU 68	2.92	23.09	-5984	-0.000069	0.0003743	0.0035	0.495	894.82	1063.86	1063.86	46.07	No	Si
SLU 48	0.42	123.6	-5778	-0.0000808	0.0003743	0.0035	0.495	883.47	1042.41	1042.41	8.43	No	Si
SLU 48	2.92	24.13	-5545	-0.0000638	0.0003743	0.0035	0.495	868.97	1018.55	1018.55	42.22	No	Si
SLU 67	0.42	135.94	-6334	-0.0000898	0.0003743	0.0035	0.495	910.83	1100.86	1100.86	8.1	No	Si
SLU 67	2.92	20.37	-6034	-0.0000692	0.0003743	0.0035	0.495	897.31	1069	1069	52.48	No	Si
SLU 71	0.42	138.37	-6373	-0.0000907	0.0003743	0.0035	0.495	912.38	1105.07	1105.07	7.99	No	Si
SLU 71	2.92	20.86	-6072	-0.0000698	0.0003743	0.0035	0.495	899.2	1073.03	1073.03	51.44	No	Si
SLU 69	0.42	139.63	-6446	-0.0000919	0.0003743	0.0035	0.495	915.12	1112.83	1112.83	7.97	No	Si
SLU 69	2.92	19.49	-6133	-0.0000703	0.0003743	0.0035	0.495	902.13	1079.52	1079.52	55.4	No	Si
SLU 66	0.42	137.45	-6339	-0.0000901	0.0003743	0.0035	0.495	911.04	1101.42	1101.42	8.01	No	Si
SLU 66	2.92	18.35	-6015	-0.0000687	0.0003743	0.0035	0.495	896.36	1067.03	1067.03	58.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	0.42	382.33	-7478	-0.0001342	0.0005615	0.0035	0.495		1415.42	1415.42	3.7		Si
SLV 9	2.92	-561.23	77	-0.016516	0.0005615	0.0035	0.396		0	0	0		No
SLV 15	0.42	1103.83	-10340	-0.000309	0.0005615	0.0035	0.495		1721.39	1721.39	1.56		Si
SLV 15	2.92	-1944.69	4558	3.6860726	0.0005615	0.0035	0.396		0	0	0		No
SLV 1	0.42	-825.57	409	0.2750154	0.0005615	0.0035	0.396		0	0	0		No
SLV 1	2.92	1843.97	-12954	-0.0017607	0.0005615	0.0035	0.495		1880.54	1880.54	1.02		Si
SLV 4	0.42	-889.65	1333	1.0905995	0.0005615	0.0035	0.396		0	0	0		No
SLV 4	2.92	1956.12	-14611	-0.004238	0.0005615	0.0035	0.495		1934.92	1934.92	0.99		No
SLD 13	0.42	520.61	-7381	-0.000153	0.0005615	0.0035	0.495		1400.54	1400.54	2.69		Si
SLD 13	2.92	-814.21	-228	-0.021596	0.0005615	0.0035	0.396		86.55	86.55	0.11		No
SLV 2	0.42	-907.26	800	0.6361347	0.0005615	0.0035	0.396		0	0	0		No
SLV 2	2.92	1975.15	-13638	-0.0049217	0.0005615	0.0035	0.495		1920.35	1920.35	0.97		No
SLV 14	0.42	1004.54	-10481	-0.0002842	0.0005615	0.0035	0.495		1735.61	1735.61	1.73		Si
SLV 14	2.92	-1794.47	4847	3.9094106	0.0005615	0.0035	0.396		0	0	0		No
SLV 16	0.42	1022.15	-9949	-0.0002821	0.0005615	0.0035	0.495		1678.61	1678.61	1.64		Si
SLV 16	2.92	-1813.51	3874	3.1391226	0.0005615	0.0035	0.396		0	0	0		No
SLV 3	0.42	-807.96	942	0.7729903	0.0005615	0.0035	0.396		0	0	0		No
SLV 3	2.92	1824.93	-13927	-0.0011975	0.0005615	0.0035	0.495		1931.86	1931.86	1.06		Si
SLV 13	0.42	1086.23	-10873	-0.0003102	0.0005615	0.0035	0.495		1760.31	1760.31	1.62		Si
SLV 13	2.92	-1925.66	5531	4.4563579	0.0005615	0.0035	0.396		0	0	0		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	0.42	133.64	-7066	-5950	607	0.495	0.495	-40071	10833	1609	161764	4447	1262	5709	No	9.41	Si
SLU 78	2.92	21.21	-6787	-5715	-395	0.495	0.495	-38487	10833	1609	161764	4447	1262	5709	No	14.46	Si
SLU 77	0.42	135.16	-7071	-5955	608	0.495	0.495	-40101	10833	1609	161764	4447	1262	5709	No	9.38	Si
SLU 77	2.92	19.19	-6768	-5699	-388	0.495	0.495	-38381	10833	1609	161764	4447	1262	5709	No	14.73	Si
SLU 75	0.42	131.46	-6959	-5860	597	0.495	0.495	-39465	10833	1609	161764	4447	1262	5709	No	9.56	Si
SLU 75	2.92	20.07	-6668	-5615	-386	0.495	0.495	-37814	10833	1609	161764	4447	1262	5709	No	14.77	Si
SLU 84	0.42	128.28	-7154	-6025	605	0.495	0.495	-40573	10833	1609	161764	4447	1262	5709	No	9.44	Si
SLU 84	2.92	21.32	-6878	-5792	-395	0.495	0.495	-39008	10833	1609	161764	4447	1262	5709	No	14.44	Si
SLU 80	0.42	132.38	-6993	-5889	602	0.495	0.495	-39659	10833	1609	161764	4447	1262	5709	No	9.49	Si
SLU 80	2.92	22.59	-6725	-5663	-396	0.495	0.495	-38138	10833	1609	161764	4447	1262	5709	No	14.4	Si
SLU 79	0.42	133.89	-6998	-5893	603	0.495	0.495	-39688	10833	1609	161764	4447	1262	5709	No	9.46	Si
SLU 79	2.92	20.56	-6706	-5647	-389	0.495	0.495	-38032	10833	1609	161764	4447	1262	5709	No	14.66	Si
SLU 81	0.42	127.63	-7053	-5939	597	0.495	0.495	-39996	10833	1609	161764	4447	1262	5709	No	9.57	Si
SLU 81	2.92	18.16	-6741	-5677	-380	0.495	0.495	-38228	10833	1609	161764	4447	1262	5709	No	15.02	Si
SLU 83	0.42	129.8	-7160	-6029	606	0.495	0.495	-40602	10833	1609	161764	4447	1262	5709	No	9.41	Si
SLU 83	2.92	19.3	-6860	-5777	-388	0.495	0.495	-38901	10833	1609	161764	4447	1262	5709	No	14.7	Si
SLU 82	0.42	126.11	-7048	-5935	595	0.495	0.495	-39967	10833	1609	161764	4447	1262	5709	No	9.59	Si
SLU 82	2.92	20.18	-6760	-5692	-387	0.495	0.495	-38335	10833	1609	161764	4447	1262	5709	No	14.74	Si
SLU 74	0.42	132.98	-6964	-5865	599	0.495	0.495	-39495	10833	1609	161764	4447	1262	5709	No	9.54	Si
SLU 74	2.92	18.05	-6649	-5599	-379	0.495	0.495	-37708	10833	1609	161764	4447	1262	5709	No	15.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	0.42	1086.23	-10873	-9156	1131	0.495	0.4428	-61659	16250	2158	161764	6670	1262	7932		7.02	Si
SLV 13	2.92	-1925.66	5531	4658	5216	0.396	0	0	0	0	161764	5336	1010	6346		1.22	Si
SLV 15	0.42	1103.83	-10340	-8707	1053	0.495	0.4222	-58638	16250	2058	161764	6670	1262	7932		7.54	Si
SLV 15	2.92	-1944.69	4558	3838	5027	0.396	0	0	0	0	161764	5336	1010	6346		1.26	Si
SLV 1	0.42	-825.57	409	344	-137	0.396	0	0	0	0	161764	5336	1010	6346		46.43	Si
SLV 1	2.92	1843.97	-12954	-10908	-5210	0.495	0.3154	-73460	16250	1538	161764	6670	1262	7932		1.52	Si
SLD 13	0.42	520.61	-7381	-6216	725	0.495	0.495	-41860	16250	2413	161764	6670	1262	7932		10.94	Si
SLD 13	2.92	-814.21	-228	-192	2072	0.396	0	0	0	0	161764	5336	1010	6346		3.06	Si
SLV 2	0.42	-907.26	800	674	-210	0.396	0	0	0	0	161764	5336	1010	6346		30.18	Si
SLV 2	2.92	1975.15	-13638	-11484	-5581	0.495	0.308	-77339	16250	1501	161764	6670	1262	7932		1.42	Si
SLD 4	0.42	-324.03	-2158	-1818	117	0.396	0.2921	0	0	0	161764	5336	1010	6346		54.03	Si
SLD 4	2.92	844.67	-8852	-7454	-2626	0.495	0.4562	-50200	16250	2224	161764	6670	1262	7932		3.02	Si
SLV 4	0.42	-889.65	1333	1123	-288	0.396	0	0	0	0	161764	5336	1010	6346		22.01	Si
SLV 4	2.92	1956.12	-14611	-12304	-5770	0.495	0.3408	-82857	16250	1662	161764	6670	1262	7932		1.37	Si
SLV 3	0.42	-807.96	942	793	-215	0.396	0	0	0	0	161764	5336	1010	6346		29.54	Si
SLV 3	2.92	1824.93	-13927	-11728	-5399	0.495	0.3494	-78979	16250	1703	161764	6670	1262	7932		1.47	Si
SLV 14	0.42	1004.54	-10481	-8826	1057	0.495	0.4549	-59440	16250	2218	161764	6670	1262	7932		7.5	Si
SLV 14	2.92	-1794.47	4847	4082	4844	0.396	0	0	0	0	161764	5336	1010	6346		1.31	Si
SLV 16	0.42	1022.15	-9949	-8378	979	0.495	0.4342	-56418	16250	2117	161764	6670	1262	7932		8.1	Si
SLV 16	2.92	-1813.51	3874	3262	4656	0.396	0	0	0	0	161764	5336	1010	6346		1.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.339 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.4	0	120	867.51	0	0	No, Trazione
SLV 15	179667	0.4	0	-1754	867.51	0	0	No, e>t/2
SLV 6	179667	0.4	0	-264	867.51	0	0	No, e>t/2
SLV 5	179667	0.4	0	-137	867.51	0	0	No, e>t/2
SLV 11	179667	0.4	0	-5728	867.51	0	0	No, e>t/2
SLV 10	179667	0.4	0	1043	867.51	0	0	No, Trazione
SLV 13	179667	0.4	0	315	867.51	0	0	No, Trazione
SLV 2	179667	0.4	0	-4238	867.51	0	0	No, e>t/2
SLV 9	179667	0.4	0	1170	867.51	0	0	No, Trazione
SLV 1	179667	0.4	0	-4043	867.51	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.339 Wa = 0.05 Ta = 1.066

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-722	1333	-44	1.083	409.3	0.908	17.32749	2.39674	Si, Trazione
SLV 3	-707	942	-44	1.089	408.3	0.909	17.41134	2.39674	Si, Trazione
SLV 8	-687	-2062	-39	1.099	406.9	0.91	17.55603	2.39674	Si
SLV 7	-678	-2317	-39	1.104	406.3	0.911	17.61151	2.39674	Si
SLV 2	-528	800	-33	1.175	396.6	0.92	18.54667	2.39674	Si, Trazione
SLV 1	-514	409	-33	1.182	395.8	0.922	18.63736	2.39674	Si, Trazione
SLV 12	-466	-5447	-24	1.21	393	0.926	18.99319	2.39674	Si
SLV 11	-457	-5702	-24	1.215	392.5	0.926	19.05357	2.39674	Si
SLV 6	-43	-3838	-3	1.489	377.2	0.989	21.88128	2.39674	Si
SLV 5	-33	-4093	-3	1.497	377.2	0.991	21.93976	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.97	SLU 69	Si
V_SLU	9.384	SLU 77	Si
PF_SLV	0	SLV 1	No
V_SLV	1.217	SLV 13	Si
PFFP_SLV	0	SLV 14	No
R_SLV	7.23	SLV 4	Si

Maschio 247

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.743	-4.824	-11.143	-4.824	L3	F1	0.6	0.3	13.836	13.837	13.836			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 62	0.42	383.25	-6315	-0.0000933	0.0003743	0.0035	0.6	1241.7	1444.06	1444.06	3.77	No	Si
SLU 62	2.92	-372.51	-8917	-0.000122	0.0003743	0.0035	0.6	1373.55	1802.99	1802.99	4.84	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	0.42	411.3	-6790	-0.0001013	0.0003743	0.0035	0.6	1282.34	1510.73	1510.73	3.67	No	Si
SLU 81	2.92	-410.32	-9627	-0.000135	0.0003743	0.0035	0.6	1371.03	1856.23	1856.23	4.52	No	Si
SLU 60	0.42	378.56	-6202	-0.0000916	0.0003743	0.0035	0.6	1231.03	1422.73	1422.73	3.76	No	Si
SLU 60	2.92	-367.41	-8755	-0.0001195	0.0003743	0.0035	0.6	1371.81	1783.01	1783.01	4.85	No	Si
SLU 84	0.42	414.13	-6910	-0.0001029	0.0003743	0.0035	0.6	1291.44	1524.95	1524.95	3.68	No	Si
SLU 84	2.92	-413.05	-9787	-0.0001373	0.0003743	0.0035	0.6	1368.18	1865.82	1865.82	4.52	No	Si
SLU 63	0.42	381.39	-6323	-0.0000932	0.0003743	0.0035	0.6	1242.44	1445.56	1445.56	3.79	No	Si
SLU 63	2.92	-370.14	-8915	-0.0001192	0.0003743	0.0035	0.6	1373.53	1802.69	1802.69	4.87	No	Si
SLU 39	0.42	351.75	-5693	-0.0000836	0.0003743	0.0035	0.6	1177.39	1327.61	1327.61	3.77	No	Si
SLU 39	2.92	-349.69	-8130	-0.0001103	0.0003743	0.0035	0.6	1357.06	1708.86	1708.86	4.89	No	Si
SLU 61	0.42	376.71	-6210	-0.0000915	0.0003743	0.0035	0.6	1231.79	1424.22	1424.22	3.78	No	Si
SLU 61	2.92	-365.04	-8752	-0.0001192	0.0003743	0.0035	0.6	1371.78	1782.72	1782.72	4.88	No	Si
SLU 83	0.42	415.98	-6902	-0.000103	0.0003743	0.0035	0.6	1290.86	1524.01	1524.01	3.66	No	Si
SLU 83	2.92	-415.42	-9789	-0.0001376	0.0003743	0.0035	0.6	1368.13	1865.96	1865.96	4.49	No	Si
SLU 82	0.42	409.45	-6798	-0.0001012	0.0003743	0.0035	0.6	1282.95	1511.66	1511.66	3.69	No	Si
SLU 82	2.92	-407.95	-9624	-0.0001347	0.0003743	0.0035	0.6	1371.06	1856.08	1856.08	4.55	No	Si
SLU 41	0.42	356.43	-5805	-0.0000852	0.0003743	0.0035	0.6	1189.94	1348.33	1348.33	3.78	No	Si
SLU 41	2.92	-354.79	-8292	-0.0001127	0.0003743	0.0035	0.6	1362.12	1727.74	1727.74	4.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	0.42	1827.61	1850	0.2617876	0.0005615	0.0035	0.48		0	0	0		No
SLV 13	2.92	-2852.97	-15564	-0.0047783	0.0005615	0.0035	0.48		2777.85	2777.85	0.97		No
SLV 4	0.42	-1303.82	-11153	-0.0002411	0.0005615	0.0035	0.6		2386.73	2386.73	1.83		Si
SLV 4	2.92	2303.9	2584	0.5188051	0.0005615	0.0035	0.48		0	0	0		No
SLV 1	0.42	-1123.37	-11150	-0.0002169	0.0005615	0.0035	0.6		2386.31	2386.31	2.12		Si
SLV 1	2.92	2229.22	3314	1.0095059	0.0005615	0.0035	0.48		0	0	0		No
SLV 2	0.42	-1247.05	-11646	-0.0002384	0.0005615	0.0035	0.6		2442.7	2442.7	1.96		Si
SLV 2	2.92	2403.97	3981	1.2951666	0.0005615	0.0035	0.48		0	0	0		No
SLV 3	0.42	-1180.14	-10656	-0.0002186	0.0005615	0.0035	0.6		2331.52	2331.52	1.98		Si
SLV 3	2.92	2129.14	1917	0.1342312	0.0005615	0.0035	0.48		0	0	0		No
SLV 16	0.42	1647.17	1846	0.3698261	0.0005615	0.0035	0.48		0	0	0		No
SLV 16	2.92	-2778.29	-16294	-0.0023966	0.0005615	0.0035	0.48		2828.42	2828.42	1.02		Si
SLV 14	0.42	1703.94	1353	0.0057457	0.0005615	0.0035	0.48		0	0	0		No
SLV 14	2.92	-2678.22	-14897	-0.0018096	0.0005615	0.0035	0.48		2732.09	2732.09	1.02		Si
SLV 6	0.42	-126.42	-7585	-0.000078	0.0005615	0.0035	0.6		1876.3	1876.3	14.84		Si
SLV 6	2.92	711.52	-1113	-0.0260659	0.0005615	0.0035	0.48		343.87	343.87	0.48		No
SLV 15	0.42	1770.84	2343	0.6376586	0.0005615	0.0035	0.48		0	0	0		No
SLV 15	2.92	-2953.05	-16961	-0.0049914	0.0005615	0.0035	0.48		2845.36	2845.36	0.96		No
SLD 15	0.42	906.61	-1659	-0.0289724	0.0005615	0.0035	0.48		494.92	494.92	0.55		No
SLD 15	2.92	-1420.53	-10977	-0.0002586	0.0005615	0.0035	0.6		2367.02	2367.02	1.67		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	0.42	411.3	-6790	-5718	223	0.6	0.6	-31765	10833	1950	161764	5390	1530	6920	No	31.05	Si
SLU 81	2.92	-410.32	-9627	-8107	1366	0.6	0.6	-45036	10833	1950	161764	5390	1530	6920	No	5.07	Si
SLU 83	0.42	415.98	-6902	-5812	224	0.6	0.6	-32290	10833	1950	161764	5390	1530	6920	No	30.89	Si
SLU 83	2.92	-415.42	-9789	-8244	1384	0.6	0.6	-45797	10833	1950	161764	5390	1530	6920	No	5	Si
SLU 79	0.42	395.74	-6782	-5711	205	0.6	0.6	-31725	10833	1950	161764	5390	1530	6920	No	33.69	Si
SLU 79	2.92	-403.84	-9571	-8059	1352	0.6	0.6	-44773	10833	1950	161764	5390	1530	6920	No	5.12	Si
SLU 78	0.42	397.75	-6846	-5765	205	0.6	0.6	-32029	10833	1950	161764	5390	1530	6920	No	33.74	Si
SLU 78	2.92	-407.31	-9662	-8136	1362	0.6	0.6	-45201	10833	1950	161764	5390	1530	6920	No	5.08	Si
SLU 80	0.42	393.89	-6789	-5717	204	0.6	0.6	-31762	10833	1950	161764	5390	1530	6920	No	33.99	Si
SLU 80	2.92	-401.46	-9568	-8057	1347	0.6	0.6	-44762	10833	1950	161764	5390	1530	6920	No	5.14	Si
SLU 74	0.42	394.92	-6726	-5664	206	0.6	0.6	-31467	10833	1950	161764	5390	1530	6920	No	33.64	Si
SLU 74	2.92	-404.59	-9502	-8002	1348	0.6	0.6	-44451	10833	1950	161764	5390	1530	6920	No	5.13	Si
SLU 77	0.42	399.6	-6839	-5759	207	0.6	0.6	-31992	10833	1950	161764	5390	1530	6920	No	33.45	Si
SLU 77	2.92	-409.69	-9664	-8138	1367	0.6	0.6	-45212	10833	1950	161764	5390	1530	6920	No	5.06	Si
SLU 84	0.42	414.13	-6910	-5819	222	0.6	0.6	-32327	10833	1950	161764	5390	1530	6920	No	31.14	Si
SLU 84	2.92	-413.05	-9787	-8242	1380	0.6	0.6	-45785	10833	1950	161764	5390	1530	6920	No	5.02	Si
SLU 75	0.42	393.07	-6734	-5671	204	0.6	0.6	-31504	10833	1950	161764	5390	1530	6920	No	33.94	Si
SLU 75	2.92	-402.21	-9499	-8000	1344	0.6	0.6	-44440	10833	1950	161764	5390	1530	6920	No	5.15	Si
SLU 82	0.42	409.45	-6798	-5725	221	0.6	0.6	-31802	10833	1950	161764	5390	1530	6920	No	31.31	Si
SLU 82	2.92	-407.95	-9624	-8105	1361	0.6	0.6	-45025	10833	1950	161764	5390	1530	6920	No	5.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	0.42	650.22	-1718	-1447	380	0.48	0	0	0	0	161764	6468	1224	7692		20.22	Si
SLV 11	2.92	-1260.6	-11867	-9993	3640	0.6	0.5813	-55516	16250	2834	161764	8085	1530	9615		2.64	Si
SLV 3	0.42	-1180.14	-10656	-8974	-835	0.6	0.5678	-49853	16250	2768	161764	8085	1530	9615		11.51	Si
SLV 3	2.92	2129.14	1917	1614	-4901	0.48	0	0	0	0	161764	6468	1224	7692		1.57	Si
SLV 13	0.42	1827.61	1850	1558	1216	0.48	0	0	0	0	161764	6468	1224	7692		6.33	Si
SLV 13	2.92	-2852.97	-15564	-13107	7196	0.48	0.3501	0	0	0	161764	6468	1224	7692		1.07	Si
SLV 15	0.42	1770.84	2343	1973	1163	0.48	0	0	0	0	161764	6468	1224	7692		6.62	Si
SLV 15	2.92	-2953.05	-16961	-14283	7612	0.48	0.3777	0	0	0	161764	6468	1224	7692		1.01	Si
SLD 15	0.42	906.61	-1659	-1397	572	0.48	0	0	0	0	161764	6468	1224	7692		13.45	Si
SLD 15	2.92	-1420.53	-10977	-9244	3787	0.6	0.5118	-62643	16250	2495	161764	8085	1530	9615		2.54	Si
SLV 2	0.42	-1247.05	-11646	-9808	-899	0.6	0.5788	-54484	16250	2822	161764	8085	1530	9615		10.69	Si
SLV 2	2.92	2403.97	3981	3352	-5760	0.48	0	0	0	0	161764	6468	1224	7692		1.34	Si
SLV 4	0.42	-1303.82	-11153	-9392	-953	0.6	0.5493	-52177	16250	2678	161764	8085	1530	9615		10.09	Si
SLV 4	2.92	2303.9	2584	2176	-5344	0.48	0	0	0	0	161764	6468	1224	7692		1.44	Si
SLV 16	0.42	1647.17	1846	1554	1045	0.48	0	0	0	0	161764	6468	1224	7692		7.36	Si
SLV 16	2.92	-2778.29	-16294	-13721	7169	0.48	0.3885	0	0	0	161764	6468	1224	7692		1.07	Si
SLV 1	0.42	-1123.37	-11150	-9389	-782	0.6	0.5978	-52160	16250	2914	161764	8085	1530	9615		12.3	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	2.92	2229.22	3314	2790	-5317	0.48	0	0	0	0	161764	6468	1224	7692		1.45	Si
SLV 14	0.42	1703.94	1353	1139	1099	0.48	0	0	0	0	161764	6468	1224	7692		7	Si
SLV 14	2.92	-2678.22	-14897	-12545	6753	0.48	0.3607	0	0	0	161764	6468	1224	7692		1.14	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 7.338 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.4	0	635	1051.29	0	0	No, Trazione
SLV 3	179667	0.4	0	206	1051.29	0	0	No, Trazione
SLV 8	179667	0.4	0	-4876	1051.29	0	0	No, e>t/2
SLV 9	179667	0.4	0	-1710	1051.29	0	0	No, e>t/2
SLV 1	179667	0.4	0	2077	1051.29	0	0	No, Trazione
SLV 6	179667	0.4	0	1359	1051.29	0	0	No, Trazione
SLV 10	179667	0.4	0	-1431	1051.29	0	0	No, e>t/2
SLV 7	179667	0.4	0	-5156	1051.29	0	0	No, e>t/2
SLV 2	179667	0.4	0	2506	1051.29	0	0	No, Trazione
SLV 5	179667	0.4	0	1079	1051.29	0	0	No, Trazione

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 7.338 Wa = 0.05 Ta = 1.0657

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-821	2343	-60	1.1	492.4	0.911	17.54879	2.39674	Si, Trazione
SLV 16	-805	1846	-60	1.105	491.3	0.911	17.62656	2.39674	Si, Trazione
SLV 11	-696	-1718	-59	1.146	484.2	0.917	18.16512	2.39674	Si
SLV 12	-686	-2042	-59	1.15	483.5	0.918	18.21783	2.39674	Si
SLV 13	-688	1850	-44	1.155	483.7	0.918	18.28852	2.39674	Si, Trazione
SLV 14	-672	1353	-44	1.161	482.7	0.919	18.37006	2.39674	Si, Trazione
SLV 7	-459	-5618	-41	1.253	470.6	0.934	19.48794	2.39674	Si
SLV 8	-448	-5942	-41	1.257	470.1	0.935	19.544	2.39674	Si
SLV 9	-253	-3362	-4	1.37	461.8	0.956	20.8177	2.39674	Si
SLV 10	-243	-3686	-4	1.376	461.4	0.958	20.8749	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.664	SLU 83	Si
V_SLU	4.999	SLU 83	Si
PF_SLV	0	SLV 1	No
V_SLV	1.011	SLV 15	Si
PFFP_SLV	0	SLV 6	No
R_SLV	7.322	SLV 15	Si

Maschio 249

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-4.824	-11.003	-3.384	L4	L6	1.439	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 55	1.41	116.42	-21272	-0.0000913	0.0003743	0.0035	1.4393	7371.98	9901.07	9901.07	85.05	No	Si
SLU 55	8.35	-606.81	-10830	-0.0000523	0.0003743	0.0035	1.4393	5736.66	6834.71	6834.71	11.26	No	Si
SLU 82	1.41	39.23	-23988	-0.0001036	0.0003743	0.0035	1.4393	7170.55	10259.13	10259.13	261.5	No	Si
SLU 82	8.35	-658.52	-12052	-0.0000585	0.0003743	0.0035	1.4393	6125.62	7370.05	7370.05	11.19	No	Si
SLU 63	1.41	84.64	-22279	-0.0000957	0.0003743	0.0035	1.4393	7327.46	10031.62	10031.62	118.52	No	Si
SLU 63	8.35	-625.56	-11227	-0.0000543	0.0003743	0.0035	1.4393	5868.77	7008.99	7008.99	11.2	No	Si
SLU 61	1.41	89.74	-21918	-0.000094	0.0003743	0.0035	1.4393	7347.54	9985.34	9985.34	111.27	No	Si
SLU 61	8.35	-613.42	-10896	-0.0000527	0.0003743	0.0035	1.4393	5758.98	6865.64	6865.64	11.19	No	Si
SLU 52	1.41	121.52	-20911	-0.0000896	0.0003743	0.0035	1.4393	7379.29	9841.46	9841.46	80.99	No	Si
SLU 52	8.35	-594.67	-10499	-0.0000507	0.0003743	0.0035	1.4393	5622.27	6677.51	6677.51	11.23	No	Si
SLU 81	1.41	35.23	-23989	-0.0001035	0.0003743	0.0035	1.4393	7170.43	10259.27	10259.27	291.24	No	Si
SLU 81	8.35	-650.58	-12018	-0.0000582	0.0003743	0.0035	1.4393	6115.73	7357.57	7357.57	11.31	No	Si
SLU 83	1.41	30.13	-24350	-0.0001053	0.0003743	0.0035	1.4393	7124.07	10309.29	10309.29	342.21	No	Si
SLU 83	8.35	-662.72	-12350	-0.0000598	0.0003743	0.0035	1.4393	6212.47	7476.3	7476.3	11.28	No	Si
SLU 76	1.41	65.91	-23342	-0.0001008	0.0003743	0.0035	1.4393	7241.85	10171.49	10171.49	154.32	No	Si
SLU 76	8.35	-651.9	-11986	-0.000058	0.0003743	0.0035	1.4393	6105.97	7343.21	7343.21	11.26	No	Si
SLU 84	1.41	34.13	-24349	-0.0001053	0.0003743	0.0035	1.4393	7124.21	10309.15	10309.15	302.04	No	Si
SLU 84	8.35	-670.66	-12383	-0.0000601	0.0003743	0.0035	1.4393	6221.98	7487.56	7487.56	11.16	No	Si
SLU 73	1.41	71.01	-22981	-0.000099	0.0003743	0.0035	1.4393	7275.42	10123.28	10123.28	142.56	No	Si
SLU 73	8.35	-639.76	-11655	-0.0000564	0.0003743	0.0035	1.4393	6005	7196.24	7196.24	11.25	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	1.41	-415.82	-15689	-0.0000677	0.0005615	0.0035	1.4393		9667.1	9667.1	23.25		Si
SLV 6	8.35	1283.73	-3093	-0.0000363	0.0005615	0.0035	1.4393		2249.69	2249.69	1.75		Si
SLV 15	1.41	-648.27	-17970	-0.0000813	0.0005615	0.0035	1.4393		10668.56	10668.56	16.46		Si
SLV 15	8.35	-1828.51	-9558	-0.0000656	0.0005615	0.0035	1.4393		6569.55	6569.55	3.59		Si
SLV 10	1.41	-984.99	-16832	-0.0000822	0.0005615	0.0035	1.4393		10177.76	10177.76	10.33		Si
SLV 10	8.35	734.31	-2975	-0.0000223	0.0005615	0.0035	1.4393		2171.39	2171.39	2.96		Si
SLV 5	1.41	-466.4	-15737	-0.0000688	0.0005615	0.0035	1.4393		9688.95	9688.95	20.77		Si
SLV 5	8.35	1232.32	-3107	-0.0000343	0.0005615	0.0035	1.4393		2259.56	2259.56	1.83		Si
SLV 2	1.41	835.12	-14207	-0.0000685	0.0005615	0.0035	1.4393		8561.25	8561.25	10.25		Si
SLV 2	8.35	938.7	-6834	-0.0000403	0.0005615	0.0035	1.4393		4619.22	4619.22	4.92		Si
SLV 12	1.41	653.26	-16441	-0.0000749	0.0005615	0.0035	1.4393		9482.37	9482.37	14.52		Si
SLV 12	8.35	-2122.13	-13284	-0.0000862	0.0005615	0.0035	1.4393		8529.29	8529.29	4.02		Si
SLV 13	1.41	-1139.74	-18088	-0.0000903	0.0005615	0.0035	1.4393		10719.19	10719.19	9.4		Si
SLV 13	8.35	-971.58	-6465	-0.0000394	0.0005615	0.0035	1.4393		4769.28	4769.28	4.91		Si
SLV 9	1.41	-1035.57	-16879	-0.0000833	0.0005615	0.0035	1.4393		10198.05	10198.05	9.85		Si
SLV 9	8.35	682.91	-2990	-0.0000215	0.0005615	0.0035	1.4393		2181.26	2181.26	3.19		Si
SLV 16	1.41	-570.64	-17897	-0.0000797	0.0005615	0.0035	1.4393		10636.8	10636.8	18.64		Si
SLV 16	8.35	-1749.62	-9535	-0.0000642	0.0005615	0.0035	1.4393		6556.67	6556.67	3.75		Si
SLV 11	1.41	602.68	-16488	-0.0000742	0.0005615	0.0035	1.4393		9502.2	9502.2	15.77		Si
SLV 11	8.35	-2173.54	-13299	-0.0000871	0.0005615	0.0035	1.4393		8536.39	8536.39	3.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.41	34.13	-24349	-20276	-2648	1.4393	1.4393	-50312	10833	4366	80882	12068	3670	15738	No	5.94	Si
SLU 84	8.35	-670.66	-12383	-10311	2804	1.4393	1.4393	-25586	10356	4174	80882	12068	3670	15738	No	5.61	Si
SLU 76	1.41	65.91	-23342	-19438	-2442	1.4393	1.4393	-48231	10833	4366	80882	12068	3670	15738	No	6.45	Si
SLU 76	8.35	-651.9	-11986	-9981	2777	1.4393	1.4393	-24766	10247	4129	80882	12068	3670	15738	No	5.67	Si
SLU 77	1.41	43.69	-23913	-19913	-2539	1.4393	1.4393	-49410	10833	4366	80882	12068	3670	15738	No	6.2	Si
SLU 77	8.35	-652.5	-12378	-10308	2838	1.4393	1.4393	-25577	10355	4173	80882	12068	3670	15738	No	5.54	Si
SLU 79	1.41	54.13	-23706	-19740	-2496	1.4393	1.4393	-48982	10833	4366	80882	12068	3670	15738	No	6.31	Si
SLU 79	8.35	-650.81	-12261	-10210	2822	1.4393	1.4393	-25335	10322	4160	80882	12068	3670	15738	No	5.58	Si
SLU 80	1.41	58.14	-23705	-19739	-2488	1.4393	1.4393	-48980	10833	4366	80882	12068	3670	15738	No	6.33	Si
SLU 80	8.35	-658.75	-12295	-10238	2834	1.4393	1.4393	-25404	10332	4164	80882	12068	3670	15738	No	5.55	Si
SLU 83	1.41	30.13	-24350	-20277	-2655	1.4393	1.4393	-50314	10833	4366	80882	12068	3670	15738	No	5.93	Si
SLU 83	8.35	-662.72	-12350	-10284	2792	1.4393	1.4393	-25517	10347	4170	80882	12068	3670	15738	No	5.64	Si
SLU 75	1.41	52.79	-23550	-19611	-2490	1.4393	1.4393	-48661	10833	4366	80882	12068	3670	15738	No	6.32	Si
SLU 75	8.35	-648.3	-12081	-10060	2785	1.4393	1.4393	-24961	10273	4140	80882	12068	3670	15738	No	5.65	Si
SLU 78	1.41	47.69	-23912	-19912	-2531	1.4393	1.4393	-49408	10833	4366	80882	12068	3670	15738	No	6.22	Si
SLU 78	8.35	-660.44	-12412	-10335	2849	1.4393	1.4393	-25645	10364	4177	80882	12068	3670	15738	No	5.52	Si
SLU 70	1.41	115.61	-21564	-17957	-2062	1.4393	1.4393	-44557	10833	4366	80882	12068	3670	15738	No	7.63	Si
SLU 70	8.35	-604.33	-11434	-9521	2770	1.4393	1.4393	-23625	10094	4068	80882	12068	3670	15738	No	5.68	Si
SLU 74	1.41	48.79	-23551	-19612	-2497	1.4393	1.4393	-48663	10833	4366	80882	12068	3670	15738	No	6.3	Si
SLU 74	8.35	-640.36	-12047	-10032	2774	1.4393	1.4393	-24893	10263	4136	80882	12068	3670	15738	No	5.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	1.41	-570.64	-17897	-14903	4683	1.4393	1.4393	-36980	16250	6549	80882	18102	3670	21772		4.65	Si
SLV 16	8.35	-1749.62	-9535	-7940	6153	1.4393	1.4393	-19702	14357	5786	80882	18102	3670	21772		3.54	Si
SLV 5	1.41	-466.4	-15737	-13104	-6500	1.4393	1.4393	-32516	16250	6549	80882	18102	3670	21772		3.35	Si
SLV 5	8.35	1232.32	-3107	-2588	-526	1.4393	0.9692	-6421	11701	3175	80882	18102	3670	21772		41.39	Si
SLV 2	1.41	835.12	-14207	-11830	-8216	1.4393	1.4393	-29355	16250	6549	80882	18102	3670	21772		2.65	Si
SLV 2	8.35	938.7	-6834	-5690	-2487	1.4393	1.4393	-14120	13241	5336	80882	18102	3670	21772		8.75	Si
SLV 13	1.41	-1139.74	-18088	-15062	3035	1.4393	1.4393	-37374	16250	6549	80882	18102	3670	21772		7.17	Si
SLV 13	8.35	-971.58	-6465	-5384	5604	1.4393	1.4393	-13359	13088	5275	80882	18102	3670	21772		3.89	Si
SLV 3	1.41	1248.96	-14163	-11793	-5697	1.4393	1.4393	-29263	16250	6549	80882	18102	3670	21772		3.82	Si
SLV 3	8.35	2.87	-9949	-8285	-1271	1.4393	1.4393	-20557	14528	5855	80882	18102	3670	21772		17.13	Si
SLV 1	1.41	757.49	-14280	-11891	-7780	1.4393	1.4393	-29506	16250	6549	80882	18102	3670	21772		2.8	Si
SLV 1	8.35	859.81	-6856	-5709	-2154	1.4393	1.4393	-14167	13250	5340	80882	18102	3670	21772		10.11	Si
SLV 14	1.41	-1062.11	-18015	-15001	2600	1.4393	1.4393	-37223	16250	6549	80882	18102	3670	21772		8.37	Si
SLV 14	8.35	-892.68	-6442	-5365	5270	1.4393	1.4393	-13312	13079	5271	80882	18102	3670	21772		4.13	Si
SLV 6	1.41	-415.82	-15689	-13065	-6784	1.4393	1.4393	-32418	16250	6549	80882	18102	3670	21772		3.21	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	8.35	1283.73	-3093	-2575	-744	1.4393	0.9137	-6390	11695	2992	80882	18102	3670	21772		29.28	Si
SLV 4	1.41	1326.59	-14090	-11733	-6133	1.4393	1.4393	-29113	16239	6545	80882	18102	3670	21772		3.55	Si
SLV 4	8.35	81.77	-9926	-8266	-1605	1.4393	1.4393	-20510	14519	5851	80882	18102	3670	21772		13.56	Si
SLV 15	1.41	-648.27	-17970	-14964	5118	1.4393	1.4393	-37131	16250	6549	80882	18102	3670	21772		4.25	Si
SLV 15	8.35	-1828.51	-9558	-7959	6486	1.4393	1.4393	-19749	14366	5790	80882	18102	3670	21772		3.36	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.35	17322	-6981	528.37	866.47	1.64	Si
SLV 9	179667	0.35	17329	-6984	528.37	866.78	1.64	Si
SLV 6	179667	0.35	18080	-7287	528.37	899.34	1.7	Si
SLV 5	179667	0.35	18088	-7289	528.37	899.65	1.7	Si
SLV 14	179667	0.35	22311	-8991	528.37	1074.91	2.03	Si
SLV 13	179667	0.35	22322	-8996	528.37	1075.35	2.04	Si
SLV 2	179667	0.35	24839	-10010	528.37	1173.51	2.22	Si
SLV 1	179667	0.35	24850	-10015	528.37	1173.93	2.22	Si
SLV 16	179667	0.35	27347	-11021	528.37	1266.67	2.4	Si
SLV 15	179667	0.35	27358	-11026	528.37	1267.07	2.4	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-9949	-14163	-109	0.664	1413.4	0.925	10.42782	15.32354	No
SLV 4	-9926	-14090	-108	0.665	1411.2	0.925	10.4486	15.32354	No
SLV 15	-9558	-17970	150	0.682	1374.1	0.924	10.72191	15.32354	No
SLV 16	-9535	-17897	151	0.683	1371.8	0.924	10.74135	15.32354	No
SLV 1	-6856	-14280	-162	0.871	1103.7	0.911	13.89933	15.32354	No
SLV 2	-6834	-14207	-161	0.873	1101.4	0.91	13.93594	15.32354	No
SLV 13	-6465	-18088	97	0.915	1064.8	0.908	14.63978	15.32354	No
SLV 14	-6442	-18015	98	0.917	1062.6	0.908	14.67637	15.32354	No
SLV 11	-13299	-16488	120	0.527	1751.6	0.937	8.17084	7.6122	Si
SLV 12	-13284	-16441	121	0.527	1750.1	0.937	8.17795	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.165	SLU 84	Si
V_SLU	5.523	SLU 78	Si
PF_SLV	1.752	SLV 6	Si
V_SLV	2.65	SLV 2	Si
PFFP_SLV	1.64	SLV 10	Si
R_SLV	0.681	SLV 3	No

Maschio 251

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-3.314	-11.003	-0.354	Z medio 398 cm	Z medio 748 cm	2.96	0.28	3.507	1.784	3.52			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 18	4.83	2234.1	-31007	-0.0000696	0.0003743	0.0035	2.96	29027.36	34288.77	34288.77	15.35	No	Si
SLU 18	6.61	2868.01	-24428	-0.000058	0.0003743	0.0035	2.96	25687.34	28592.39	28592.39	9.97	No	Si
SLU 39	4.83	2474.89	-34592	-0.0000787	0.0003743	0.0035	2.96	30208.16	36413.73	36413.73	14.71	No	Si
SLU 39	6.61	3209.94	-27270	-0.0000655	0.0003743	0.0035	2.96	27316.25	31177.17	31177.17	9.71	No	Si
SLU 84	4.83	3175.27	-41873	-0.000099	0.0003743	0.0035	2.96	31219.13	40961.79	40961.79	12.9	No	Si
SLU 84	6.61	3605.58	-33247	-0.0000805	0.0003743	0.0035	2.96	29818.02	35608.6	35608.6	9.88	No	Si
SLU 83	4.83	3181.48	-41879	-0.000099	0.0003743	0.0035	2.96	31219.19	40965.32	40965.32	12.88	No	Si
SLU 83	6.61	3620.34	-33272	-0.0000806	0.0003743	0.0035	2.96	29825.93	35623.59	35623.59	9.84	No	Si
SLU 40	4.83	2468.68	-34586	-0.0000786	0.0003743	0.0035	2.96	30206.54	36410.04	36410.04	14.75	No	Si
SLU 40	6.61	3195.19	-27245	-0.0000654	0.0003743	0.0035	2.96	27303.02	31153.85	31153.85	9.75	No	Si
SLU 41	4.83	2519.57	-35320	-0.0000805	0.0003743	0.0035	2.96	30392.96	36855.96	36855.96	14.63	No	Si
SLU 41	6.61	3219.34	-27985	-0.0000671	0.0003743	0.0035	2.96	27681.64	31840.47	31840.47	9.89	No	Si
SLU 82	4.83	3130.59	-41145	-0.000097	0.0003743	0.0035	2.96	31201.73	40530.23	40530.23	12.95	No	Si
SLU 82	6.61	3596.19	-32532	-0.0000788	0.0003743	0.0035	2.96	29584.65	35186.44	35186.44	9.78	No	Si
SLU 19	4.83	2227.88	-31001	-0.0000696	0.0003743	0.0035	2.96	29024.96	34285.19	34285.19	15.39	No	Si
SLU 19	6.61	2853.26	-24403	-0.0000579	0.0003743	0.0035	2.96	25671.58	28569.78	28569.78	10.01	No	Si
SLU 42	4.83	2513.36	-35314	-0.0000805	0.0003743	0.0035	2.96	30391.49	36852.23	36852.23	14.66	No	Si
SLU 42	6.61	3204.58	-27960	-0.000067	0.0003743	0.0035	2.96	27669.04	31816.93	31816.93	9.93	No	Si
SLU 81	4.83	3136.8	-41151	-0.0000971	0.0003743	0.0035	2.96	31201.95	40533.94	40533.94	12.92	No	Si
SLU 81	6.61	3610.95	-32557	-0.0000789	0.0003743	0.0035	2.96	29593.2	35201.28	35201.28	9.75	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	4.83	4600.95	-29984	-0.0000743	0.0005615	0.0035	2.96		36681.49	36681.49	7.97		Si
SLV 13	6.61	3520.54	-26095	-0.0000622	0.0005615	0.0035	2.96		32867.95	32867.95	9.34		Si
SLV 10	4.83	3515.95	-29599	-0.0000692	0.0005615	0.0035	2.96		36348.52	36348.52	10.34		Si
SLV 10	6.61	5111.21	-27321	-0.0000709	0.0005615	0.0035	2.96		34289.14	34289.14	6.71		Si
SLV 5	4.83	2372.78	-28445	-0.0000624	0.0005615	0.0035	2.96		35356.26	35356.26	14.9		Si
SLV 5	6.61	4669.92	-25804	-0.0000661	0.0005615	0.0035	2.96		32529.3	32529.3	6.97		Si
SLD 10	4.83	2949.47	-28700	-0.0000652	0.0005615	0.0035	2.96		35574.49	35574.49	12.06		Si
SLD 10	6.61	3406.53	-24555	-0.0000587	0.0005615	0.0035	2.96		31084.74	31084.74	9.13		Si
SLV 16	4.83	4295.92	-29520	-0.0000722	0.0005615	0.0035	2.96		36280.6	36280.6	8.45		Si
SLV 16	6.61	1893.44	-23643	-0.000051	0.0005615	0.0035	2.96		30038.1	30038.1	15.86		Si
SLD 9	4.83	2960.57	-28656	-0.0000651	0.0005615	0.0035	2.96		35537.23	35537.23	12		Si
SLD 9	6.61	3385.07	-24541	-0.0000586	0.0005615	0.0035	2.96		31068.69	31068.69	9.18		Si
SLV 9	4.83	3541.32	-29499	-0.0000691	0.0005615	0.0035	2.96		36262.9	36262.9	10.24		Si
SLV 9	6.61	5062.16	-27289	-0.0000706	0.0005615	0.0035	2.96		34253.42	34253.42	6.77		Si
SLV 6	4.83	2347.41	-28544	-0.0000625	0.0005615	0.0035	2.96		35441.34	35441.34	15.1		Si
SLV 6	6.61	4718.97	-25836	-0.0000664	0.0005615	0.0035	2.96		32566.28	32566.28	6.9		Si
SLV 14	4.83	4562.02	-30136	-0.0000745	0.0005615	0.0035	2.96		36813.29	36813.29	8.07		Si
SLV 14	6.61	3595.82	-26144	-0.0000626	0.0005615	0.0035	2.96		32924.81	32924.81	9.16		Si
SLV 15	4.83	4334.85	-29368	-0.000072	0.0005615	0.0035	2.96		36149.28	36149.28	8.34		Si
SLV 15	6.61	1818.16	-23595	-0.0000506	0.0005615	0.0035	2.96		29982.13	29982.13	16.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	4.83	3272.76	-34373	-28623	3267	2.96	2.96	-34535	10833	8979	40441	24818	7548	32366	No	9.91	Si
SLU 49	6.61	2199.15	-27908	-23240	3460	2.96	2.96	-28040	10683	8854	40441	24818	7548	32366	No	9.36	Si
SLU 50	4.83	3232.82	-33977	-28294	3306	2.96	2.96	-34138	10833	8979	40441	24818	7548	32366	No	9.79	Si
SLU 50	6.61	2147.24	-27589	-22974	3509	2.96	2.96	-27719	10640	8819	40441	24818	7548	32366	No	9.22	Si
SLU 44	4.83	3133.1	-32511	-27072	3212	2.96	2.96	-32665	10833	8979	40441	24818	7548	32366	No	10.08	Si
SLU 44	6.61	2103.86	-26116	-21747	3380	2.96	2.96	-26240	10443	8655	40441	24818	7548	32366	No	9.58	Si
SLU 51	4.83	3226.61	-33971	-28288	3343	2.96	2.96	-34132	10833	8979	40441	24818	7548	32366	No	9.68	Si
SLU 51	6.61	2132.49	-27564	-22953	3539	2.96	2.96	-27694	10637	8816	40441	24818	7548	32366	No	9.15	Si
SLU 59	4.83	3053.39	-37503	-31230	2942	2.96	2.96	-37681	10833	8979	40441	24818	7548	32366	No	11	Si
SLU 59	6.61	2930.88	-30054	-25026	3461	2.96	2.96	-30196	10833	8979	40441	24818	7548	32366	No	9.35	Si
SLU 58	4.83	3059.6	-37509	-31235	2905	2.96	2.96	-37687	10833	8979	40441	24818	7548	32366	No	11.14	Si
SLU 58	6.61	2945.64	-30079	-25047	3430	2.96	2.96	-30221	10833	8979	40441	24818	7548	32366	No	9.43	Si
SLU 47	4.83	3177.79	-33239	-27679	3290	2.96	2.96	-33396	10833	8979	40441	24818	7548	32366	No	9.84	Si
SLU 47	6.61	2113.26	-26831	-22343	3470	2.96	2.96	-26958	10539	8735	40441	24818	7548	32366	No	9.33	Si
SLU 55	4.83	3004.56	-36771	-30620	2889	2.96	2.96	-36945	10833	8979	40441	24818	7548	32366	No	11.2	Si
SLU 55	6.61	2911.65	-29321	-24416	3391	2.96	2.96	-29460	10833	8979	40441	24818	7548	32366	No	9.54	Si
SLU 57	4.83	3099.54	-37905	-31564	2866	2.96	2.96	-38084	10833	8979	40441	24818	7548	32366	No	11.29	Si
SLU 57	6.61	2997.54	-30398	-25313	3381	2.96	2.96	-30542	10833	8979	40441	24818	7548	32366	No	9.57	Si
SLU 48	4.83	3278.98	-34379	-28628	3230	2.96	2.96	-34541	10833	8979	40441	24818	7548	32366	No	10.02	Si
SLU 48	6.61	2213.9	-27933	-23261	3429	2.96	2.96	-28065	10686	8857	40441	24818	7548	32366	No	9.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	4.83	439.7	-25854	-21529	6548	2.96	2.96	-25976	15612	12939	40441	37227	7548	44775		6.84	Si
SLV 3	6.61	510.7	-18645	-15526	5495	2.96	2.96	-18733	14163	11739	40441	37227	7548	44775		8.15	Si
SLV 7	4.83	1485.77	-26391	-21976	10307	2.96	2.96	-26516	15720	13029	40441	37227	7548	44775		4.34	Si
SLV 7	6.61	-1004.69	-17469	-14546	6901	2.96	2.96	-17551	13927	11543	40441	37227	7548	44775		6.49	Si
SLV 4	4.83	400.77	-26006	-21656	6551	2.96	2.96	-26129	15642	12964	40441	37227	7548	44775		6.83	Si
SLV 4	6.61	585.98	-18694	-15567	5468	2.96	2.96	-18782	14173	11747	40441	37227	7548	44775		8.19	Si
SLD 7	4.83	2052.25	-27290	-22725	5752	2.96	2.96	-27419	15901	13178	40441	37227	7548	44775		7.78	Si
SLD 7	6.61	699.99	-20234	-16849	4386	2.96	2.96	-20330	14483	12003	40441	37227	7548	44775		10.21	Si
SLD 8	4.83	2041.16	-27334	-22761	5753	2.96	2.96	-27463	15909	13186	40441	37227	7548	44775		7.78	Si
SLD 8	6.61	721.45	-20248	-16861	4378	2.96	2.96	-20344	14485	12006	40441	37227	7548	44775		10.23	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	4.83	1460.41	-26490	-22059	10309	2.96	2.96	-26616	15740	13045	40441	37227	7548	44775		4.34	Si
SLV 8	6.61	-955.64	-17500	-14573	6884	2.96	2.96	-17583	13933	11548	40441	37227	7548	44775		6.5	Si
SLV 10	4.83	3515.95	-29599	-24647	-5935	2.96	2.96	-29738	16250	13468	40441	37227	7548	44775		7.54	Si
SLV 10	6.61	5111.21	-27321	-22750	-2021	2.96	2.96	-27450	15907	13183	40441	37227	7548	44775		22.15	Si
SLV 9	4.83	3541.32	-29499	-24564	-5937	2.96	2.96	-29639	16250	13468	40441	37227	7548	44775		7.54	Si
SLV 9	6.61	5062.16	-27289	-22724	-2004	2.96	2.96	-27418	15900	13178	40441	37227	7548	44775		22.34	Si
SLV 12	4.83	2628.95	-27545	-22937	9039	2.96	2.96	-27675	15952	13221	40441	37227	7548	44775		4.95	Si
SLV 12	6.61	-563.4	-18985	-15809	5759	2.96	2.96	-19075	14232	11795	40441	37227	7548	44775		7.77	Si
SLV 11	4.83	2654.32	-27445	-22854	9037	2.96	2.96	-27575	15932	13204	40441	37227	7548	44775		4.95	Si
SLV 11	6.61	-612.45	-18953	-15783	5776	2.96	2.96	-19043	14225	11790	40441	37227	7548	44775		7.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 5.722 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.36	27093	-22454	291.62	2585.93	8.87	Si
SLV 8	179667	0.36	27181	-22528	291.62	2592.55	8.89	Si
SLV 3	179667	0.36	27410	-22717	291.62	2609.58	8.95	Si
SLV 4	179667	0.36	27546	-22830	291.62	2619.67	8.98	Si
SLV 11	179667	0.36	28488	-23611	291.62	2688.88	9.22	Si
SLV 12	179667	0.36	28576	-23684	291.62	2695.32	9.24	Si
SLV 1	179667	0.36	29097	-24115	291.62	2732.9	9.37	Si
SLV 2	179667	0.36	29233	-24228	291.62	2742.64	9.4	Si
SLV 15	179667	0.36	32060	-26571	291.62	2939.02	10.08	Si
SLV 16	179667	0.36	32196	-26684	291.62	2948.15	10.11	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 5.722 Wa = 0.05 Ta = 0.0734

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-27321	-29599	2	0.599	3191.1	0.962	9.04836	11.11252	No
SLV 9	-27289	-29499	2	0.599	3187.8	0.962	9.05776	11.11252	No
SLV 6	-25836	-28544	85	0.625	3040	0.96	9.46227	11.11252	No
SLV 5	-25804	-28445	85	0.626	3036.8	0.96	9.47265	11.11252	No
SLV 12	-18985	-27545	-106	0.81	2343.9	0.949	12.39134	11.11252	Si
SLV 11	-18953	-27445	-106	0.811	2340.7	0.949	12.40943	11.11252	Si
SLV 8	-17500	-26490	-24	0.87	2193.2	0.946	13.366	11.11252	Si
SLV 7	-17469	-26391	-24	0.872	2190	0.946	13.38707	11.11252	Si
SLV 14	-26144	-30136	-132	0.617	3071.4	0.96	9.33879	5.33667	Si
SLV 13	-26095	-29984	-132	0.618	3066.4	0.96	9.35411	5.33667	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.713	SLU 39	Si
V_SLU	9.145	SLU 51	Si
PF_SLV	6.709	SLV 10	Si
V_SLV	4.343	SLV 8	Si
PFFP_SLV	8.868	SLV 7	Si
R_SLV	0.814	SLV 10	No

Maschio 254

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.003	-0.354	-11.003	1.006	L5	L8	1.36	0.28	10.2	10.2	10.2			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	4.83	687.95	-20270	-0.0001049	0.0003743	0.0035	1.36	6577.16	12858.28	12858.28	18.69	No	Si
SLU 74	15.03	834.41	-1055	-0.0000561	0.0003743	0.0035	1.36	0	8274.5	8274.5	9.92	No	Si
SLU 67	4.83	516.91	-18482	-0.0000917	0.0003743	0.0035	1.36	6576.6	13002.03	13002.03	25.15	No	Si
SLU 67	15.03	769.54	-1118	-0.0000434	0.0003743	0.0035	1.36	0	8316.83	8316.83	10.81	No	Si
SLU 83	4.83	761.26	-20791	-0.0001094	0.0003743	0.0035	1.36	6556.25	12794.45	12794.45	16.81	No	Si
SLU 83	15.03	757.36	-929	-0.0000525	0.0003743	0.0035	1.36	0	8166.7	8166.7	10.78	No	Si
SLU 78	4.83	703.29	-20583	-0.000107	0.0003743	0.0035	1.36	6565.73	12819.42	12819.42	18.23	No	Si
SLU 78	15.03	813.94	-1094	-0.0000508	0.0003743	0.0035	1.36	0	8300.79	8300.79	10.2	No	Si
SLU 73	4.83	666.74	-19669	-0.0001012	0.0003743	0.0035	1.36	6589.49	12936.24	12936.24	19.4	No	Si
SLU 73	15.03	764.93	-902	-0.0000552	0.0003743	0.0035	1.36	0	8143.51	8143.51	10.65	No	Si
SLU 75	4.83	685.32	-20251	-0.0001048	0.0003743	0.0035	1.36	6577.74	12860.69	12860.69	18.77	No	Si
SLU 75	15.03	841.07	-1048	-0.0000574	0.0003743	0.0035	1.36	0	8270.23	8270.23	9.83	No	Si
SLU 77	4.83	705.92	-20602	-0.0001072	0.0003743	0.0035	1.36	6564.93	12817.13	12817.13	18.16	No	Si
SLU 77	15.03	807.28	-1100	-0.0000495	0.0003743	0.0035	1.36	0	8305.05	8305.05	10.29	No	Si
SLU 84	4.83	758.63	-20772	-0.0001093	0.0003743	0.0035	1.36	6557.17	12796.75	12796.75	16.87	No	Si
SLU 84	15.03	764.02	-922	-0.0000538	0.0003743	0.0035	1.36	0	8161.11	8161.11	10.68	No	Si
SLU 81	4.83	743.3	-20459	-0.0001072	0.0003743	0.0035	1.36	6570.67	12834.61	12834.61	17.27	No	Si
SLU 81	15.03	784.49	-883	-0.0000594	0.0003743	0.0035	1.36	0	8126.6	8126.6	10.36	No	Si
SLU 82	4.83	740.67	-20440	-0.000107	0.0003743	0.0035	1.36	6571.38	12836.95	12836.95	17.33	No	Si
SLU 82	15.03	791.15	-877	-0.0000608	0.0003743	0.0035	1.36	0	8120.99	8120.99	10.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	4.83	-391.33	-14743	-0.0000677	0.0005615	0.0035	1.36		14360.92	14360.92	36.7		Si
SLV 16	15.03	2113.45	590	0.0003884	0.0005615	0.0035	1.088		4507.53	4507.53	2.13		Si
SLV 11	4.83	-100.81	-10705	-0.0000449	0.0005615	0.0035	1.36		13187.78	13187.78	130.82		Si
SLV 11	15.03	1951.66	400	0.0000946	0.0005615	0.0035	1.088		6364	6364	3.26		Si
SLD 15	4.83	82.46	-14231	-0.0000597	0.0005615	0.0035	1.36		14213.14	14213.14	172.36		Si
SLD 15	15.03	1218.64	-153	-0.0002277	0.0005615	0.0035	1.36		7614.62	7614.62	6.25		Si
SLD 16	4.83	83.13	-14247	-0.0000598	0.0005615	0.0035	1.36		14217.55	14217.55	171.03		Si
SLD 16	15.03	1207.14	-161	-0.0002227	0.0005615	0.0035	1.36		7627.08	7627.08	6.32		Si
SLV 13	4.83	-201.15	-16970	-0.0000741	0.0005615	0.0035	1.36		14868.86	14868.86	73.92		Si
SLV 13	15.03	1520.74	134	-0.0003436	0.0005615	0.0035	1.36		7037.48	7037.48	4.63		Si
SLV 15	4.83	-392.88	-14706	-0.0000676	0.0005615	0.0035	1.36		14351.11	14351.11	36.53		Si
SLV 15	15.03	2140.23	611	0.0004135	0.0005615	0.0035	1.088		4287.05	4287.05	2		Si
SLV 12	4.83	-99.8	-10729	-0.000045	0.0005615	0.0035	1.36		13195.45	13195.45	132.22		Si
SLV 12	15.03	1934.22	386	0.0000736	0.0005615	0.0035	1.088		6398.57	6398.57	3.31		Si
SLV 8	4.83	342.04	-9559	-0.0000445	0.0005615	0.0035	1.36		12808.1	12808.1	37.45		Si
SLV 8	15.03	1157.09	-269	-0.0001881	0.0005615	0.0035	1.36		7776.62	7776.62	6.72		Si
SLV 14	4.83	-199.6	-17007	-0.0000742	0.0005615	0.0035	1.36		14876.75	14876.75	74.53		Si
SLV 14	15.03	1493.96	113	-0.0003521	0.0005615	0.0035	1.36		7088.91	7088.91	4.75		Si
SLV 7	4.83	341.03	-9535	-0.0000443	0.0005615	0.0035	1.36		12799.93	12799.93	37.53		Si
SLV 7	15.03	1174.54	-255	-0.0001945	0.0005615	0.0035	1.36		7757.91	7757.91	6.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	4.83	758.63	-20772	-17297	-15	1.36	1.36	-45422	10833	4125	10784	11403	3468	14871	No	991.33	Si
SLU 84	15.03	764.02	-922	-768	-1754	1.36	0	-9911	8621	0	10784	11403	3468	10784	No	6.15	Si
SLU 66	4.83	519.54	-18501	-15406	19	1.36	1.36	-40457	10833	4125	10784	11403	3468	14871	No	788.93	Si
SLU 66	15.03	762.89	-1124	-936	-1930	1.36	0.0039	-9362	8358	9	10784	11403	3468	10793	No	5.59	Si
SLU 78	4.83	703.29	-20583	-17140	7	1.36	1.36	-45009	10833	4125	10784	11403	3468	14871	No	2099.14	Si
SLU 78	15.03	813.94	-1094	-911	-1967	1.36	0	-10344	8585	0	10784	11403	3468	10784	No	5.48	Si
SLU 77	4.83	705.92	-20602	-17155	8	1.36	1.36	-45051	10833	4125	10784	11403	3468	14871	No	1873.45	Si
SLU 77	15.03	807.28	-1100	-916	-1959	1.36	0	-10217	8552	0	10784	11403	3468	10784	No	5.51	Si
SLU 67	4.83	516.91	-18482	-15390	18	1.36	1.36	-40415	10833	4125	10784	11403	3468	14871	No	826.34	Si
SLU 67	15.03	769.54	-1118	-931	-1938	1.36	0	-9507	8390	0	10784	11403	3468	10784	No	5.56	Si
SLU 76	4.83	684.7	-20001	-16655	8	1.36	1.36	-43736	10833	4125	10784	11403	3468	14871	No	1826.37	Si
SLU 76	15.03	737.81	-948	-789	-1749	1.36	0	-9488	8489	0	10784	11403	3468	10784	No	6.16	Si
SLU 69	4.83	537.5	-18833	-15682	63	1.36	1.36	-41182	10833	4125	10784	11403	3468	14871	No	235.05	Si
SLU 69	15.03	735.76	-1170	-974	-1935	1.36	0.1527	-8648	8206	351	10784	11403	3468	11135	No	5.75	Si
SLU 70	4.83	534.87	-18814	-15666	62	1.36	1.36	-41140	10833	4125	10784	11403	3468	14871	No	238.27	Si
SLU 70	15.03	742.42	-1163	-969	-1944	1.36	0.1252	-8807	8237	289	10784	11403	3468	11073	No	5.7	Si
SLU 74	4.83	687.95	-20270	-16879	-36	1.36	1.36	-44325	10833	4125	10784	11403	3468	14871	No	407.65	Si
SLU 74	15.03	834.41	-1055	-878	-1953	1.36	0	-10749	8712	0	10784	11403	3468	10784	No	5.52	Si
SLU 75	4.83	685.32	-20251	-16863	-37	1.36	1.36	-44284	10833	4125	10784	11403	3468	14871	No	398.33	Si
SLU 75	15.03	841.07	-1048	-873	-1962	1.36	0	-10858	8745	0	10784	11403	3468	10784	No	5.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	4.83	-100.81	-10705	-8914	880	1.36	1.36	-23409	15099	5750	10784	17104	3468	16534		18.79	Si
SLV 11	15.03	1951.66	400	333	-3335	1.088	0	0	0	0	10784	13683	2774	10784		3.23	Si
SLV 13	4.83	-201.15	-16970	-14131	-1371	1.36	1.36	-37109	16250	6188	10784	17104	3468	16972		12.38	Si
SLV 13	15.03	1520.74	134	111	-2526	1.36	0	0	9855	0	10784	17104	3468	10784		4.27	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 16	4.83	83.13	-14247	-11863	-240	1.36	1.36	-31154	16250	6188	10784	17104	3468	16972		70.68	Si
SLD 16	15.03	1207.14	-161	-134	-2191	1.36	0	0	0	0	10784	17104	3468	10784		4.92	Si
SLD 15	4.83	82.46	-14231	-11850	-245	1.36	1.36	-31119	16250	6188	10784	17104	3468	16972		69.27	Si
SLD 15	15.03	1218.64	-153	-127	-2208	1.36	0	0	0	0	10784	17104	3468	10784		4.88	Si
SLV 7	4.83	341.03	-9535	-7940	1542	1.36	1.36	-20850	14587	5555	10784	17104	3468	16339		10.59	Si
SLV 7	15.03	1174.54	-255	-212	-2314	1.36	0	0	16250	0	10784	17104	3468	10784		4.66	Si
SLV 14	4.83	-199.6	-17007	-14162	-1359	1.36	1.36	-37191	16250	6188	10784	17104	3468	16972		12.49	Si
SLV 14	15.03	1493.96	113	94	-2486	1.36	0	0	9718	0	10784	17104	3468	10784		4.34	Si
SLV 8	4.83	342.04	-9559	-7960	1550	1.36	1.36	-20903	14597	5559	10784	17104	3468	16343		10.54	Si
SLV 8	15.03	1157.09	-269	-224	-2288	1.36	0	0	16250	0	10784	17104	3468	10784		4.71	Si
SLV 12	4.83	-99.8	-10729	-8934	887	1.36	1.36	-23462	15109	5754	10784	17104	3468	16538		18.64	Si
SLV 12	15.03	1934.22	386	322	-3309	1.088	0	0	0	0	10784	13683	2774	10784		3.26	Si
SLV 16	4.83	-391.33	-14743	-12277	-678	1.36	1.36	-32239	16250	6188	10784	17104	3468	16972		25.02	Si
SLV 16	15.03	2113.45	590	491	-3413	1.088	0	0	0	0	10784	13683	2774	10784		3.16	Si
SLV 15	4.83	-392.88	-14706	-12246	-690	1.36	1.36	-32158	16250	6188	10784	17104	3468	16972		24.61	Si
SLV 15	15.03	2140.23	611	509	-3453	1.088	0	0	0	0	10784	13683	2774	10784		3.12	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 9.93 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.45	0	-5075	1407.48	0	0	No, e>t/2
SLV 11	179667	0.45	0	-8364	1407.48	0	0	No, e>t/2
SLV 2	179667	0.45	0	-6005	1407.48	0	0	No, e>t/2
SLV 1	179667	0.45	0	-5999	1407.48	0	0	No, e>t/2
SLV 5	179667	0.45	0	-9431	1407.48	0	0	No, e>t/2
SLV 7	179667	0.45	0	-6348	1407.48	0	0	No, e>t/2
SLV 6	179667	0.45	0	-9435	1407.48	0	0	No, e>t/2
SLV 4	179667	0.45	0	-5080	1407.48	0	0	No, e>t/2
SLV 12	179667	0.45	0	-8368	1407.48	0	0	No, e>t/2
SLV 8	179667	0.45	0	-6352	1407.48	0	0	No, e>t/2

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 9.93 Wa = 0.05 Ta = 0.6205

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-2070	-13106	-507	1.304	827.1	0.895	21.16002	10.72384	Si
SLV 1	-2049	-13068	-506	1.309	825.4	0.896	21.23599	10.72384	Si
SLV 4	-1593	-10841	-513	1.424	790.1	0.903	22.91369	10.72384	Si
SLV 3	-1572	-10804	-512	1.43	788.6	0.903	22.99927	10.72384	Si
SLV 14	113	-17007	486	2.107	712.7	1	30.62756	10.72384	Si, Trazione
SLV 13	134	-16970	487	2.113	712.7	1	30.71329	10.72384	Si, Trazione
SLV 16	590	-14743	480	2.264	712.7	1	32.90597	10.72384	Si, Trazione
SLV 15	611	-14706	481	2.271	712.7	1	33.00549	10.72384	Si, Trazione
SLV 6	-1859	-17107	-153	1.421	810.4	0.898	22.98693	2.39674	Si
SLV 5	-1846	-17082	-152	1.424	809.3	0.898	23.04158	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.833	SLU 75	Si
V_SLU	5.482	SLU 78	Si
PF_SLV	2.003	SLV 15	Si
V_SLV	3.123	SLV 15	Si
PFFP_SLV	0	SLV 1	No
R_SLV	1.973	SLV 2	Si

Maschio 261

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.333	-3.314	-11.003	-3.314	L4	L6	1.67	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

												εlim,conv / ε,CNR DT-200					CRM / Fibrenet?		
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	4.83	-351.22	-17222	-0.0000638	0.0003743	0.0035	1.67	9178.37	11187.49	11187.49	31.85	No	Si
SLU 41	6.93	-2322.16	-15954	-0.0000849	0.0003743	0.0035	1.67	8857.37	10685.46	10685.46	4.6	No	Si
SLU 42	4.83	-343.83	-17227	-0.0000637	0.0003743	0.0035	1.67	9179.63	11189.71	11189.71	32.54	No	Si
SLU 42	6.93	-2333.07	-15976	-0.0000852	0.0003743	0.0035	1.67	8863.48	10694.03	10694.03	4.58	No	Si
SLU 40	4.83	-330.11	-16833	-0.0000621	0.0003743	0.0035	1.67	9085.97	11030.79	11030.79	33.42	No	Si
SLU 40	6.93	-2303.42	-15568	-0.0000831	0.0003743	0.0035	1.67	8748.64	10538.12	10538.12	4.57	No	Si
SLU 75	4.83	-334.24	-19707	-0.0000733	0.0003743	0.0035	1.67	9643.83	12152.71	12152.71	36.36	No	Si
SLU 75	6.93	-2430.07	-18247	-0.0000959	0.0003743	0.0035	1.67	9396.68	11612.69	11612.69	4.78	No	Si
SLU 84	4.83	-386.6	-20330	-0.0000765	0.0003743	0.0035	1.67	9726.48	12317.02	12317.02	31.86	No	Si
SLU 84	6.93	-2601.44	-18745	-0.0001004	0.0003743	0.0035	1.67	9489.27	11825.07	11825.07	4.55	No	Si
SLU 82	4.83	-372.88	-19935	-0.0000747	0.0003743	0.0035	1.67	9675.71	12212.41	12212.41	32.75	No	Si
SLU 82	6.93	-2571.8	-18337	-0.0000982	0.0003743	0.0035	1.67	9414.01	11650.69	11650.69	4.53	No	Si
SLU 81	4.83	-380.27	-19930	-0.0000748	0.0003743	0.0035	1.67	9674.97	12210.97	12210.97	32.11	No	Si
SLU 81	6.93	-2560.89	-18315	-0.000098	0.0003743	0.0035	1.67	9409.74	11641.26	11641.26	4.55	No	Si
SLU 39	4.83	-337.5	-16828	-0.0000621	0.0003743	0.0035	1.67	9084.64	11028.61	11028.61	32.68	No	Si
SLU 39	6.93	-2292.52	-15546	-0.0000829	0.0003743	0.0035	1.67	8742.2	10529.7	10529.7	4.59	No	Si
SLU 73	4.83	-310.58	-19133	-0.0000707	0.0003743	0.0035	1.67	9555.58	11993.6	11993.6	38.62	No	Si
SLU 73	6.93	-2383.97	-17671	-0.0000928	0.0003743	0.0035	1.67	9278.4	11371.38	11371.38	4.77	No	Si
SLU 83	4.83	-393.99	-20324	-0.0000766	0.0003743	0.0035	1.67	9725.81	12315.56	12315.56	31.26	No	Si
SLU 83	6.93	-2590.53	-18722	-0.0001001	0.0003743	0.0035	1.67	9485.31	11815.49	11815.49	4.56	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	4.83	-5446.4	-17481	-0.0001283	0.0005615	0.0035	1.67		12639.94	12639.94	2.32		Si
SLV 15	6.93	4370.4	-7131	-0.0001227	0.0005615	0.0035	1.67		5666.17	5666.17	1.3		Si
SLV 16	4.83	-5076.29	-17328	-0.0001222	0.0005615	0.0035	1.67		12557.64	12557.64	2.47		Si
SLV 16	6.93	3889.26	-7673	-0.0000869	0.0005615	0.0035	1.67		6019.39	6019.39	1.55		Si
SLV 1	4.83	4709.76	-9496	-0.0001057	0.0005615	0.0035	1.67		7138.8	7138.8	1.52		Si
SLV 1	6.93	-6935.36	-17088	-0.0001565	0.0005615	0.0035	1.67		12426.75	12426.75	1.79		Si
SLD 4	4.83	2022.85	-12179	-0.0000642	0.0005615	0.0035	1.67		8831.51	8831.51	4.37		Si
SLD 4	6.93	-4130.28	-15177	-0.0001014	0.0005615	0.0035	1.67		11354.73	11354.73	2.75		Si
SLD 2	4.83	2063.26	-11674	-0.0000629	0.0005615	0.0035	1.67		8508.6	8508.6	4.12		Si
SLD 2	6.93	-4041.7	-14617	-0.0000981	0.0005615	0.0035	1.67		11023.81	11023.81	2.73		Si
SLV 4	4.83	4967.11	-10530	-0.0001097	0.0005615	0.0035	1.67		7784.55	7784.55	1.57		Si
SLV 4	6.93	-7617.91	-18902	-0.0001746	0.0005615	0.0035	1.67		13392.13	13392.13	1.76		Si
SLV 13	4.83	-5333.65	-16294	-0.0001227	0.0005615	0.0035	1.67		11983.64	11983.64	2.25		Si
SLV 13	6.93	4571.81	-5859	-0.0006152	0.0005615	0.0035	1.67		4746.95	4746.95	1.04		Si
SLV 3	4.83	4597.01	-10683	-0.0000991	0.0005615	0.0035	1.67		7880.81	7880.81	1.71		Si
SLV 3	6.93	-7136.78	-18360	-0.0001624	0.0005615	0.0035	1.67		13104.73	13104.73	1.84		Si
SLV 14	4.83	-4963.55	-16141	-0.0001164	0.0005615	0.0035	1.67		11897.53	11897.53	2.4		Si
SLV 14	6.93	4090.68	-6401	-0.0001252	0.0005615	0.0035	1.67		5141.11	5141.11	1.26		Si
SLV 2	4.83	5079.86	-9343	-0.0001226	0.0005615	0.0035	1.67		7043.88	7043.88	1.39		Si
SLV 2	6.93	-7416.5	-17630	-0.0001689	0.0005615	0.0035	1.67		12717.97	12717.97	1.71		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	4.83	-347.97	-20101	-16739	482	1.67	1.67	-35797	10833	5066	80882	14002	4259	18261	No	37.86	Si
SLU 78	6.93	-2459.71	-18655	-15534	3116	1.67	1.67	-33221	10833	5066	80882	14002	4259	18261	No	5.86	Si
SLU 66	4.83	-207.76	-17822	-14840	729	1.67	1.67	-31737	10833	5066	80882	14002	4259	18261	No	25.06	Si
SLU 66	6.93	-1963.93	-16635	-13852	3120	1.67	1.67	-29624	10833	5066	80882	14002	4259	18261	No	5.85	Si
SLU 77	4.83	-355.36	-20096	-16734	467	1.67	1.67	-35787	10833	5066	80882	14002	4259	18261	No	39.07	Si
SLU 77	6.93	-2448.8	-18633	-15516	3098	1.67	1.67	-33181	10833	5066	80882	14002	4259	18261	No	5.89	Si
SLU 80	4.83	-342.95	-19918	-16586	478	1.67	1.67	-35470	10833	5066	80882	14002	4259	18261	No	38.17	Si
SLU 80	6.93	-2435.99	-18471	-15381	3082	1.67	1.67	-32893	10833	5066	80882	14002	4259	18261	No	5.93	Si
SLU 72	4.83	-209.07	-18038	-15020	743	1.67	1.67	-32122	10833	5066	80882	14002	4259	18261	No	24.59	Si
SLU 72	6.93	-1980.76	-16881	-14057	3163	1.67	1.67	-30062	10833	5066	80882	14002	4259	18261	No	5.77	Si
SLU 68	4.83	-190.43	-17647	-14695	750	1.67	1.67	-31426	10833	5066	80882	14002	4259	18261	No	24.36	Si
SLU 68	6.93	-1958.38	-16488	-13730	3114	1.67	1.67	-29363	10833	5066	80882	14002	4259	18261	No	5.86	Si
SLU 71	4.83	-216.46	-18032	-15016	728	1.67	1.67	-32112	10833	5066	80882	14002	4259	18261	No	25.09	Si
SLU 71	6.93	-1969.85	-16859	-14039	3146	1.67	1.67	-30022	10833	5066	80882	14002	4259	18261	No	5.8	Si
SLU 67	4.83	-200.37	-17827	-14845	744	1.67	1.67	-31747	10833	5066	80882	14002	4259	18261	No	24.56	Si
SLU 67	6.93	-1974.84	-16658	-13871	3137	1.67	1.67	-29664	10833	5066	80882	14002	4259	18261	No	5.82	Si
SLU 69	4.83	-221.48	-18216	-15169	732	1.67	1.67	-32439	10833	5066	80882	14002	4259	18261	No	24.96	Si
SLU 69	6.93	-1993.57	-17043	-14192	3180	1.67	1.67	-30350	10833	5066	80882	14002	4259	18261	No	5.74	Si
SLU 70	4.83	-214.09	-18221	-15173	747	1.67	1.67	-32449	10833	5066	80882	14002	4259	18261	No	24.46	Si
SLU 70	6.93	-2004.48	-17065	-14210	3197	1.67	1.67	-30390	10833	5066	80882	14002	4259	18261	No	5.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	4.83	-4963.55	-16141	-13441	-8376	1.67	1.5825	-28745	16166	7163	80882	21003	4259	25262		3.02	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	6.93	4090.68	-6401	-5330	-5989	1.67	0.5877	-11398	12696	2089	80882	21003	4259	25262		4.22	Si
SLV 4	4.83	4967.11	-10530	-8768	9966	1.67	1.0898	-18751	14167	4323	80882	21003	4259	25262		2.53	Si
SLV 4	6.93	-7617.91	-18902	-15740	11055	1.67	1.296	-44498	16250	5897	80882	21003	4259	25262		2.29	Si
SLV 3	4.83	4597.01	-10683	-8896	9281	1.67	1.2141	-19024	14221	4834	80882	21003	4259	25262		2.72	Si
SLV 3	6.93	-7136.78	-18360	-15289	10385	1.67	1.3389	-41738	16250	6092	80882	21003	4259	25262		2.43	Si
SLD 4	4.83	2022.85	-12179	-10141	4521	1.67	1.67	-21688	14754	6899	80882	21003	4259	25262		5.59	Si
SLD 4	6.93	-4130.28	-15177	-12638	5989	1.67	1.67	-27027	15822	7399	80882	21003	4259	25262		4.22	Si
SLV 8	4.83	1255.91	-14320	-11925	3470	1.67	1.67	-25502	15517	7256	80882	21003	4259	25262		7.28	Si
SLV 8	6.93	-3741.57	-16362	-13625	5807	1.67	1.67	-29138	16244	7596	80882	21003	4259	25262		4.35	Si
SLV 13	4.83	-5333.65	-16294	-13569	-9061	1.67	1.523	-32377	16250	6930	80882	21003	4259	25262		2.79	Si
SLV 13	6.93	4571.81	-5859	-4879	-6659	1.67	0.1641	-111493	16250	746	80882	21003	4259	25262		3.79	Si
SLV 16	4.83	-5076.29	-17328	-14429	-8348	1.67	1.6262	-30858	16250	7399	80882	21003	4259	25262		3.03	Si
SLV 16	6.93	3889.26	-7673	-6390	-5439	1.67	0.9845	-13665	13150	3625	80882	21003	4259	25262		4.64	Si
SLV 15	4.83	-5446.4	-17481	-14557	-9033	1.67	1.5704	-33718	16250	7145	80882	21003	4259	25262		2.8	Si
SLV 15	6.93	4370.4	-7131	-5938	-6109	1.67	0.6665	-12700	12957	2418	80882	21003	4259	25262		4.14	Si
SLV 1	4.83	4709.76	-9496	-7907	9253	1.67	1.0171	-16910	13799	3930	80882	21003	4259	25262		2.73	Si
SLV 1	6.93	-6935.36	-17088	-14229	9835	1.67	1.2874	-40376	16250	5858	80882	21003	4259	25262		2.57	Si
SLV 2	4.83	5079.86	-9343	-7780	9939	1.67	0.8739	-16638	13744	3363	80882	21003	4259	25262		2.54	Si
SLV 2	6.93	-7416.5	-17630	-14680	10505	1.67	1.243	-43230	16250	5656	80882	21003	4259	25262		2.4	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 2	179667	0.35	19980	-9343	599.13	1136.87	1.9	Si
SLV 1	179667	0.35	20308	-9496	599.13	1152.65	1.92	Si
SLV 6	179667	0.35	22165	-10364	599.13	1240.43	2.07	Si
SLV 5	179667	0.35	22378	-10464	599.13	1250.31	2.09	Si
SLV 4	179667	0.35	22518	-10530	599.13	1256.78	2.1	Si
SLV 3	179667	0.35	22845	-10683	599.13	1271.84	2.12	Si
SLV 10	179667	0.35	26527	-12404	599.13	1434.92	2.4	Si
SLV 9	179667	0.35	26740	-12504	599.13	1444.01	2.41	Si
SLV 8	179667	0.35	30625	-14320	599.13	1602.8	2.68	Si
SLV 7	179667	0.35	30838	-14420	599.13	1611.14	2.69	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-11319	-19071	-53	0.679	1617.4	0.925	10.67752	15.32354	No
SLV 16	-11258	-18819	-52	0.682	1611.3	0.924	10.72572	15.32354	No
SLV 13	-10000	-18668	-196	0.736	1484.9	0.92	11.62635	15.32354	No
SLV 14	-9939	-18416	-195	0.739	1478.8	0.919	11.68431	15.32354	No
SLV 3	-7793	-7113	230	0.88	1264.4	0.91	14.05466	15.32354	No
SLV 4	-7732	-6861	231	0.885	1258.4	0.91	14.13655	15.32354	No
SLV 1	-6473	-6710	88	1.016	1133.8	0.903	16.34292	15.32354	Si
SLV 2	-6412	-6458	88	1.022	1127.8	0.903	16.45182	15.32354	Si
SLV 11	-11614	-15312	212	0.655	1647.1	0.926	10.28473	7.6122	Si
SLV 12	-11574	-15148	212	0.657	1643.1	0.926	10.31302	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.53	SLU 82	Si
V_SLU	5.711	SLU 70	Si
PF_SLV	1.038	SLV 13	Si
V_SLV	2.285	SLV 4	Si
PFFP_SLV	1.898	SLV 2	Si
R_SLV	0.697	SLV 15	No

Maschio 263

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-6.268	-3.314	-6.268	1.006	L4	L6	4.32	0.14	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	1.41	10889.68	-62607	-0.0001839	0.0004492	0.0035	4.32	20663.75	92949.25	92949.25	8.54	No	Si
SLU 84	8.35	1660.87	-25408	-0.000058	0.0004492	0.0035	4.32	36011.96	47778.48	47778.48	28.77	No	Si
SLU 75	1.41	10501.91	-60817	-0.0001772	0.0004492	0.0035	4.32	23254.92	91461.23	91461.23	8.71	No	Si
SLU 75	8.35	1672.37	-24850	-0.0000568	0.0004492	0.0035	4.32	35626.33	46913.17	46913.17	28.05	No	Si
SLU 79	1.41	10536.24	-61113	-0.0001781	0.0004492	0.0035	4.32	22839.69	91707.09	91707.09	8.7	No	Si
SLU 79	8.35	1657.76	-25062	-0.0000572	0.0004492	0.0035	4.32	35774.86	47241.63	47241.63	28.5	No	Si
SLU 80	1.41	10524.64	-61117	-0.0001781	0.0004492	0.0035	4.32	22833.59	91710.69	91710.69	8.71	No	Si
SLU 80	8.35	1630.86	-25062	-0.0000571	0.0004492	0.0035	4.32	35775.08	47242.13	47242.13	28.97	No	Si
SLU 74	1.41	10513.51	-60813	-0.0001772	0.0004492	0.0035	4.32	23260.95	91457.63	91457.63	8.7	No	Si
SLU 74	8.35	1699.27	-24850	-0.0000569	0.0004492	0.0035	4.32	35626.11	46912.66	46912.66	27.61	No	Si
SLU 81	1.41	10811.82	-61789	-0.0001812	0.0004492	0.0035	4.32	21870.52	92269.58	92269.58	8.53	No	Si
SLU 81	8.35	1670.89	-24816	-0.0000567	0.0004492	0.0035	4.32	35602.08	46860.06	46860.06	28.04	No	Si
SLU 83	1.41	10901.28	-62603	-0.0001839	0.0004492	0.0035	4.32	20670.23	92945.66	92945.66	8.53	No	Si
SLU 83	8.35	1687.76	-25408	-0.0000581	0.0004492	0.0035	4.32	36011.74	47777.98	47777.98	28.31	No	Si
SLU 78	1.41	10591.37	-61630	-0.0001799	0.0004492	0.0035	4.32	22100.85	92137.3	92137.3	8.7	No	Si
SLU 78	8.35	1689.24	-25442	-0.0000581	0.0004492	0.0035	4.32	36034.81	47831.08	47831.08	28.32	No	Si
SLU 82	1.41	10800.22	-61794	-0.0001812	0.0004492	0.0035	4.32	21864.25	92273.18	92273.18	8.54	No	Si
SLU 82	8.35	1644	-24816	-0.0000566	0.0004492	0.0035	4.32	35602.31	46860.57	46860.57	28.5	No	Si
SLU 77	1.41	10602.97	-61626	-0.0001799	0.0004492	0.0035	4.32	22107.09	92133.71	92133.71	8.69	No	Si
SLU 77	8.35	1716.13	-25442	-0.0000582	0.0004492	0.0035	4.32	36034.6	47830.58	47830.58	27.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	1.41	7171.61	-42336	-0.0001112	0.0006738	0.0035	4.32		75888.24	75888.24	10.58		Si
SLV 5	8.35	7349.61	-15386	-0.0000523	0.0006738	0.0035	4.32		32399.52	32399.52	4.41		Si
SLV 11	1.41	7571.95	-41091	-0.0001096	0.0006738	0.0035	4.32		73938.23	73938.23	9.76		Si
SLV 11	8.35	-5259.12	-18149	-0.000052	0.0006738	0.0035	4.32		46329.91	46329.91	8.81		Si
SLD 6	1.41	7123.82	-42279	-0.0001109	0.0006738	0.0035	4.32		75799.12	75799.12	10.64		Si
SLD 6	8.35	3980.96	-16156	-0.0000441	0.0006738	0.0035	4.32		33821.35	33821.35	8.5		Si
SLV 12	1.41	7319.53	-41511	-0.0001097	0.0006738	0.0035	4.32		74595.66	74595.66	10.19		Si
SLV 12	8.35	-5036.45	-18134	-0.0000514	0.0006738	0.0035	4.32		46301.57	46301.57	9.19		Si
SLV 1	1.41	7071.02	-39655	-0.0001047	0.0006738	0.0035	4.32		71687.25	71687.25	10.14		Si
SLV 1	8.35	4616	-13885	-0.0000412	0.0006738	0.0035	4.32		29591.38	29591.38	6.41		Si
SLV 9	1.41	7374.82	-43743	-0.0001151	0.0006738	0.0035	4.32		77722.72	77722.72	10.54		Si
SLV 9	8.35	6203.03	-17017	-0.0000524	0.0006738	0.0035	4.32		35405.56	35405.56	5.71		Si
SLD 5	1.41	7234.24	-42096	-0.0001108	0.0006738	0.0035	4.32		75511.52	75511.52	10.44		Si
SLD 5	8.35	3883.55	-16163	-0.0000439	0.0006738	0.0035	4.32		33833.96	33833.96	8.71		Si
SLV 6	1.41	6919.2	-42756	-0.0001113	0.0006738	0.0035	4.32		76515.71	76515.71	11.06		Si
SLV 6	8.35	7572.28	-15371	-0.0000529	0.0006738	0.0035	4.32		32370.7	32370.7	4.27		Si
SLV 2	1.41	6683.63	-40299	-0.000105	0.0006738	0.0035	4.32		72696.23	72696.23	10.88		Si
SLV 2	8.35	4957.73	-13861	-0.0000421	0.0006738	0.0035	4.32		29546.41	29546.41	5.96		Si
SLV 10	1.41	7122.4	-44163	-0.0001153	0.0006738	0.0035	4.32		78235.81	78235.81	10.98		Si
SLV 10	8.35	6425.7	-17001	-0.000053	0.0006738	0.0035	4.32		35377.22	35377.22	5.51		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 59	1.41	9574.46	-55491	-30767	142	4.32	4.32	-50871	10833	6552	231091	21735	22032	43767	No	307.6	Si
SLU 59	8.35	1449.83	-22562	-12509	2971	4.32	4.32	-20684	10833	6552	231091	21735	22032	43767	No	14.73	Si
SLU 46	1.41	8491.23	-49816	-27621	525	4.32	4.32	-45670	10833	6552	231091	21735	22032	43767	No	83.31	Si
SLU 46	8.35	1381.97	-20161	-11178	3075	4.32	4.32	-18483	10798	6530	231091	21735	22032	43767	No	14.23	Si
SLU 51	1.41	8513.96	-50116	-27787	567	4.32	4.32	-45945	10833	6552	231091	21735	22032	43767	No	77.14	Si
SLU 51	8.35	1340.46	-20373	-11296	3151	4.32	4.32	-18677	10824	6546	231091	21735	22032	43767	No	13.89	Si
SLU 50	1.41	8525.56	-50112	-27785	537	4.32	4.32	-45941	10833	6552	231091	21735	22032	43767	No	81.51	Si
SLU 50	8.35	1367.36	-20373	-11296	3130	4.32	4.32	-18677	10824	6546	231091	21735	22032	43767	No	13.98	Si
SLU 47	1.41	8416.77	-49306	-27338	586	4.32	4.32	-45202	10833	6552	231091	21735	22032	43767	No	74.63	Si
SLU 47	8.35	1305.67	-19782	-10968	3101	4.32	4.32	-18135	10751	6502	231091	21735	22032	43767	No	14.11	Si
SLU 49	1.41	8580.69	-50630	-28072	527	4.32	4.32	-46415	10833	6552	231091	21735	22032	43767	No	83.13	Si
SLU 49	8.35	1398.84	-20753	-11507	3139	4.32	4.32	-19026	10833	6552	231091	21735	22032	43767	No	13.94	Si
SLU 45	1.41	8502.83	-49812	-27619	495	4.32	4.32	-45666	10833	6552	231091	21735	22032	43767	No	88.42	Si
SLU 45	8.35	1408.87	-20161	-11178	3054	4.32	4.32	-18483	10798	6530	231091	21735	22032	43767	No	14.33	Si
SLU 43	1.41	8346.64	-48486	-26883	535	4.32	4.32	-44450	10833	6552	231091	21735	22032	43767	No	81.86	Si
SLU 43	8.35	1333.62	-19189	-10639	3002	4.32	4.32	-17592	10679	6459	231091	21735	22032	43767	No	14.58	Si
SLU 44	1.41	8327.31	-48493	-26887	585	4.32	4.32	-44456	10833	6552	231091	21735	22032	43767	No	74.77	Si
SLU 44	8.35	1288.8	-19190	-10640	3037	4.32	4.32	-17592	10679	6459	231091	21735	22032	43767	No	14.41	Si
SLU 48	1.41	8592.29	-50625	-28069	496	4.32	4.32	-46411	10833	6552	231091	21735	22032	43767	No	88.22	Si
SLU 48	8.35	1425.73	-20753	-11506	3118	4.32	4.32	-19025	10833	6552	231091	21735	22032	43767	No	14.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	1.41	7368.74	-39685	-22003	8169	4.32	4.32	-36381	16250	9828	231091	32602	22032	54634		6.69	Si
SLV 7	8.35	-4112.54	-16519	-9159	3975	4.32	4.32	-15144	15529	9392	231091	32602	22032	54634		13.74	Si
SLV 11	1.41	7571.95	-41091	-22783	9211	4.32	4.32	-37671	16250	9828	231091	32602	22032	54634		5.93	Si
SLV 11	8.35	-5259.12	-18149	-10063	5103	4.32	4.32	-16638	15828	9573	231091	32602	22032	54634		10.71	Si
SLV 6	1.41	6919.2	-42756	-23706	-9175	4.32	4.32	-39197	16250	9828	231091	32602	22032	54634		5.95	Si
SLV 6	8.35	7572.28	-15371	-8522	-831	4.32	4.32	-14091	15318	9264	231091	32602	22032	54634		65.71	Si
SLV 12	1.41	7319.53	-41511	-23016	8907	4.32	4.32	-38056	16250	9828	231091	32602	22032	54634		6.13	Si
SLV 12	8.35	-5036.45	-18134	-10054	4844	4.32	4.32	-16624	15825	9571	231091	32602	22032	54634		11.28	Si
SLV 5	1.41	7171.61	-42336	-23473	-8871	4.32	4.32	-38812	16250	9828	231091	32602	22032	54634		6.16	Si
SLV 5	8.35	7349.61	-15386	-8531	-573	4.32	4.32	-14105	15321	9266	231091	32602	22032	54634		95.31	Si
SLV 15	1.41	7807.51	-43549	-24146	4544	4.32	4.32	-39923	16250	9828	231091	32602	22032	54634		12.02	Si
SLV 15	8.35	-2644.58	-19659	-10900	4895	4.32	4.32	-18023	16105	9740	231091	32602	22032	54634		11.16	Si
SLV 2	1.41	6683.63	-40299	-22344	-4507	4.32	4.32	-36944	16250	9828	231091	32602	22032	54634		12.12	Si
SLV 2	8.35	4957.73	-13861	-7685	-624	4.32	4.32	-12707	15041	9097	231091	32602	22032	54634		87.57	Si
SLV 9	1.41	7374.82	-43743	-24253	-7829	4.32	4.32	-40102	16250	9828	231091	32602	22032	54634		6.98	Si
SLV 9	8.35	6203.03	-17017	-9435	554	4.32	4.32	-15600	15620	9447	231091	32602	22032	54634		98.59	Si
SLV 10	1.41	7122.4	-44163	-24486	-8133	4.32	4.32	-40486	16250	9828	231091	32602	22032	54634		6.72	Si
SLV 10	8.35	6425.7	-17001	-9426	296	4.32	4.32	-15586	15617	9445	231091	32602	22032	54634		184.63	Si
SLV 8	1.41	7116.33	-40104	-22236	7865	4.32	4.32	-36766	16250	9828	231091	32602	22032	54634		6.95	Si
SLV 8	8.35	-3889.87	-16503	-9150	3717	4.32	4.32	-15129	15526	9390	231091	32602	22032	54634		14.7	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 4.88 Ta 0.57 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-24481	0.35	828.98	1335.22	2332.87	1834.04	2.21	Si
SLV 2	-24689	0.35	828.98	1343.3	2349.51	1846.4	2.23	Si
SLV 3	-24720	0.35	828.98	1344.52	2352.04	1848.28	2.23	Si
SLV 4	-24928	0.35	828.98	1352.53	2368.69	1860.61	2.24	Si
SLV 5	-26188	0.35	828.98	1400.06	2469.87	1934.96	2.33	Si
SLV 6	-26323	0.35	828.98	1405.04	2480.72	1942.88	2.34	Si
SLV 7	-26984	0.35	828.98	1429.06	2533.84	1981.45	2.39	Si
SLV 8	-27119	0.35	828.98	1433.9	2544.7	1989.3	2.4	Si
SLV 9	-27858	0.35	828.98	1459.97	2604.1	2032.04	2.45	Si
SLV 10	-27993	0.35	828.98	1464.67	2614.96	2039.82	2.46	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.03 Ta = 0.5745

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-19659	-43549	357	1.032	2598.5	0.937	16.00989	10.73086	Si
SLV 16	-19635	-44193	357	1.033	2596.1	0.937	16.02695	10.73086	Si
SLV 13	-19319	-44344	396	1.045	2564.1	0.936	16.22896	10.73086	Si
SLV 14	-19295	-44988	396	1.046	2561.7	0.936	16.24652	10.73086	Si
SLV 3	-14224	-38859	-397	1.338	2050.2	0.923	21.0591	10.73086	Si
SLV 4	-14200	-39503	-397	1.34	2047.8	0.923	21.0885	10.73086	Si
SLV 1	-13885	-39655	-358	1.366	2016	0.922	21.51918	10.73086	Si
SLV 2	-13861	-40299	-358	1.368	2013.6	0.922	21.54981	10.73086	Si
SLV 11	-18149	-41091	47	1.116	2445.8	0.933	17.38067	2.39674	Si
SLV 12	-18134	-41511	47	1.117	2444.3	0.933	17.39359	2.39674	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.526	SLU 83	Si
V_SLU	13.891	SLU 51	Si
PF_SLV	4.275	SLV 6	Si
V_SLV	5.931	SLV 11	Si
PFFP_SLV	2.212	SLV 1	Si
R_SLV	1.492	SLV 15	Si

Maschio 264

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-7.463	-3.314	-8.433	-3.314	L4	L6	0.97	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 74	4.83	1275.23	-12227	-0.0001276	0.0003743	0.0035	0.97	3308.09	4095.66	4095.66	3.21	No	Si
SLU 74	6.93	-130.57	-12703	-0.0000828	0.0003743	0.0035	0.97	3330.8	4297.97	4297.97	32.92	No	Si
SLU 84	4.83	1304.59	-12587	-0.0001318	0.0003743	0.0035	0.97	3326.01	4173.02	4173.02	3.2	No	Si
SLU 84	6.93	-112.88	-13183	-0.0000855	0.0003743	0.0035	0.97	3345.67	4379.88	4379.88	38.8	No	Si
SLU 83	4.83	1299.91	-12573	-0.0001314	0.0003743	0.0035	0.97	3325.4	4170	4170	3.21	No	Si
SLU 83	6.93	-106.63	-13180	-0.0000852	0.0003743	0.0035	0.97	3345.6	4379.35	4379.35	41.07	No	Si
SLU 82	4.83	1282.19	-12349	-0.0001288	0.0003743	0.0035	0.97	3314.63	4121.58	4121.58	3.21	No	Si
SLU 82	6.93	-114.03	-12904	-0.0000835	0.0003743	0.0035	0.97	3338	4331.88	4331.88	37.99	No	Si
SLU 76	4.83	1268.74	-12117	-0.0001264	0.0003743	0.0035	0.97	3301.68	4072.13	4072.13	3.21	No	Si
SLU 76	6.93	-135.2	-12563	-0.000082	0.0003743	0.0035	0.97	3324.93	4274.57	4274.57	31.62	No	Si
SLU 80	4.83	1288.02	-12346	-0.0001291	0.0003743	0.0035	0.97	3314.52	4121.11	4121.11	3.2	No	Si
SLU 80	6.93	-129.89	-12840	-0.0000837	0.0003743	0.0035	0.97	3335.87	4321.06	4321.06	33.27	No	Si
SLU 75	4.83	1279.91	-12241	-0.0001279	0.0003743	0.0035	0.97	3308.87	4098.63	4098.63	3.2	No	Si
SLU 75	6.93	-136.82	-12706	-0.0000831	0.0003743	0.0035	0.97	3330.92	4298.49	4298.49	31.42	No	Si
SLU 79	4.83	1283.34	-12332	-0.0001288	0.0003743	0.0035	0.97	3313.79	4118.13	4118.13	3.21	No	Si
SLU 79	6.93	-123.64	-12837	-0.0000834	0.0003743	0.0035	0.97	3335.76	4320.53	4320.53	34.95	No	Si
SLU 78	4.83	1302.3	-12480	-0.0001308	0.0003743	0.0035	0.97	3321.15	4149.85	4149.85	3.19	No	Si
SLU 78	6.93	-135.68	-12985	-0.000085	0.0003743	0.0035	0.97	3340.52	4345.82	4345.82	32.03	No	Si
SLU 77	4.83	1297.62	-12466	-0.0001305	0.0003743	0.0035	0.97	3320.49	4146.85	4146.85	3.2	No	Si
SLU 77	6.93	-129.43	-12982	-0.0000847	0.0003743	0.0035	0.97	3340.43	4345.29	4345.29	33.57	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	4.83	-1544.49	-4640	-0.0001156	0.0005615	0.0035	0.776		2283.09	2283.09	1.48		Si
SLV 14	6.93	3718.34	-12939	-0.0002882	0.0005615	0.0035	0.97		4859.37	4859.37	1.31		Si
SLD 2	4.83	1955.06	-9606	-0.0001314	0.0005615	0.0035	0.97		3861.42	3861.42	1.98		Si
SLD 2	6.93	-1877.27	-5875	-0.0001371	0.0005615	0.0035	0.776		2770.8	2770.8	1.48		Si
SLD 4	4.83	1996.38	-10033	-0.0001355	0.0005615	0.0035	0.97		3986.27	3986.27	2		Si
SLD 4	6.93	-1881.33	-6386	-0.0001288	0.0005615	0.0035	0.776		2964.41	2964.41	1.58		Si
SLV 13	4.83	-1744.35	-4238	-0.0002298	0.0005615	0.0035	0.776		2119.48	2119.48	1.22		Si
SLV 13	6.93	4047.88	-13268	-0.0003405	0.0005615	0.0035	0.97		4961	4961	1.23		Si
SLV 1	4.83	3205.27	-10958	-0.0002401	0.0005615	0.0035	0.97		4260.18	4260.18	1.33		Si
SLV 1	6.93	-3923.11	-2778	-0.012151	0.0005615	0.0035	0.776		1500.99	1500.99	0.38		No
SLV 16	4.83	-1455.37	-5635	-0.0000928	0.0005615	0.0035	0.776		2680.64	2680.64	1.84		Si
SLV 16	6.93	3713.64	-14109	-0.0002773	0.0005615	0.0035	0.97		5178.94	5178.94	1.39		Si
SLV 4	4.83	3494.26	-12356	-0.000263	0.0005615	0.0035	0.97		4680.78	4680.78	1.34		Si
SLV 4	6.93	-4257.34	-3619	-0.0122946	0.0005615	0.0035	0.776		1863.39	1863.39	0.44		No
SLV 15	4.83	-1655.23	-5233	-0.0001179	0.0005615	0.0035	0.776		2520.32	2520.32	1.52		Si
SLV 15	6.93	4043.18	-14439	-0.0003188	0.0005615	0.0035	0.97		5246.35	5246.35	1.3		Si
SLV 3	4.83	3294.39	-11954	-0.000241	0.0005615	0.0035	0.97		4558.72	4558.72	1.38		Si
SLV 3	6.93	-3927.8	-3948	-0.0103554	0.0005615	0.0035	0.776		1999.96	1999.96	0.51		No
SLV 2	4.83	3405.14	-11360	-0.0002642	0.0005615	0.0035	0.97		4380.2	4380.2	1.29		Si
SLV 2	6.93	-4252.65	-2448	-0.0141296	0.0005615	0.0035	0.776		1357.57	1357.57	0.32		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	4.83	1304.59	-12587	-10482	936	0.97	0.97	-38592	10833	2942	80882	8133	2474	10607	No	11.33	Si
SLU 84	6.93	-112.88	-13183	-10977	-136	0.97	0.97	-40417	10833	2942	80882	8133	2474	10607	No	78.14	Si
SLU 75	4.83	1279.91	-12241	-10193	924	0.97	0.97	-37530	10833	2942	80882	8133	2474	10607	No	11.48	Si
SLU 75	6.93	-136.82	-12706	-10581	-78	0.97	0.97	-38955	10833	2942	80882	8133	2474	10607	No	136.17	Si
SLU 82	4.83	1282.19	-12349	-10283	922	0.97	0.97	-37859	10833	2942	80882	8133	2474	10607	No	11.51	Si
SLU 82	6.93	-114.03	-12904	-10745	-129	0.97	0.97	-39561	10833	2942	80882	8133	2474	10607	No	82.16	Si
SLU 80	4.83	1288.02	-12346	-10281	929	0.97	0.97	-37853	10833	2942	80882	8133	2474	10607	No	11.41	Si
SLU 80	6.93	-129.89	-12840	-10692	-91	0.97	0.97	-39366	10833	2942	80882	8133	2474	10607	No	116.8	Si
SLU 79	4.83	1283.34	-12332	-10269	924	0.97	0.97	-37810	10833	2942	80882	8133	2474	10607	No	11.47	Si
SLU 79	6.93	-123.64	-12837	-10689	-101	0.97	0.97	-39356	10833	2942	80882	8133	2474	10607	No	104.89	Si
SLU 78	4.83	1302.3	-12480	-10392	938	0.97	0.97	-38263	10833	2942	80882	8133	2474	10607	No	11.31	Si
SLU 78	6.93	-135.68	-12985	-10813	-85	0.97	0.97	-39811	10833	2942	80882	8133	2474	10607	No	125.48	Si
SLU 77	4.83	1297.62	-12466	-10381	933	0.97	0.97	-38220	10833	2942	80882	8133	2474	10607	No	11.36	Si
SLU 77	6.93	-129.43	-12982	-10810	-95	0.97	0.97	-39802	10833	2942	80882	8133	2474	10607	No	111.84	Si
SLU 76	4.83	1268.74	-12117	-10090	918	0.97	0.97	-37149	10833	2942	80882	8133	2474	10607	No	11.56	Si
SLU 76	6.93	-135.2	-12563	-10461	-77	0.97	0.97	-38516	10833	2942	80882	8133	2474	10607	No	137.21	Si
SLU 74	4.83	1275.23	-12227	-10182	919	0.97	0.97	-37488	10833	2942	80882	8133	2474	10607	No	11.54	Si
SLU 74	6.93	-130.57	-12703	-10578	-88	0.97	0.97	-38946	10833	2942	80882	8133	2474	10607	No	120.26	Si
SLU 83	4.83	1299.91	-12573	-10470	931	0.97	0.97	-38549	10833	2942	80882	8133	2474	10607	No	11.39	Si
SLU 83	6.93	-106.63	-13180	-10975	-146	0.97	0.97	-40407	10833	2942	80882	8133	2474	10607	No	72.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	4.83	1996.38	-10033	-8354	1826	0.97	0.8581	-30759	16250	3904	80882	12200	2474	14673		8.04	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 4	6.93	-1881.33	-6386	-5317	3045	0.776	0.5712	0	0	0	80882	9760	1979	11739		3.85	Si
SLV 1	4.83	3205.27	-10958	-9125	3048	0.97	0.5775	-33597	16250	2628	80882	12200	2474	14673		4.81	Si
SLV 1	6.93	-3923.11	-2778	-2313	6771	0.776	0	0	0	0	80882	9760	1979	11739		1.73	Si
SLV 14	4.83	-1544.49	-4640	-3864	-1948	0.776	0.4565	0	0	0	80882	9760	1979	11739		6.03	Si
SLV 14	6.93	3718.34	-12939	-10775	-6593	0.97	0.5929	-39670	16250	2698	80882	12200	2474	14673		2.23	Si
SLV 16	4.83	-1455.37	-5635	-4693	-1770	0.776	0.6803	0	0	0	80882	9760	1979	11739		6.63	Si
SLV 16	6.93	3713.64	-14109	-11749	-6818	0.97	0.6654	-43258	16250	3028	80882	12200	2474	14673		2.15	Si
SLV 4	4.83	3494.26	-12356	-10289	3413	0.97	0.6066	-37881	16250	2760	80882	12200	2474	14673		4.3	Si
SLV 4	6.93	-4257.34	-3619	-3013	7151	0.776	0	0	0	0	80882	9760	1979	11739		1.64	Si
SLV 3	4.83	3294.39	-11954	-9954	3226	0.97	0.6282	-36649	16250	2858	80882	12200	2474	14673		4.55	Si
SLV 3	6.93	-3927.8	-3948	-3288	6546	0.776	0	0	0	0	80882	9760	1979	11739		1.79	Si
SLD 2	4.83	1955.06	-9606	-7999	1749	0.97	0.8444	-29450	16250	3842	80882	12200	2474	14673		8.39	Si
SLD 2	6.93	-1877.27	-5875	-4892	3139	0.776	0.4964	0	0	0	80882	9760	1979	11739		3.74	Si
SLV 2	4.83	3405.14	-11360	-9460	3236	0.97	0.5558	-34830	16250	2529	80882	12200	2474	14673		4.53	Si
SLV 2	6.93	-4252.65	-2448	-2039	7375	0.776	0	0	0	0	80882	9760	1979	11739		1.59	Si
SLV 13	4.83	-1744.35	-4238	-3529	-2135	0.776	0.2203	0	0	0	80882	9760	1979	11739		5.5	Si
SLV 13	6.93	4047.88	-13268	-11049	-7198	0.97	0.5398	-40679	16250	2456	80882	12200	2474	14673		2.04	Si
SLV 15	4.83	-1655.23	-5233	-4358	-1957	0.776	0.5062	0	0	0	80882	9760	1979	11739		6	Si
SLV 15	6.93	4043.18	-14439	-12023	-7423	0.97	0.615	-44268	16250	2798	80882	12200	2474	14673		1.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.35	15604	-4238	348	532.71	1.53	Si
SLV 14	179667	0.35	17084	-4640	348	576.95	1.66	Si
SLV 15	179667	0.35	19268	-5233	348	640.23	1.84	Si
SLV 9	179667	0.35	20246	-5499	348	667.8	1.92	Si
SLV 16	179667	0.35	20749	-5635	348	681.77	1.96	Si
SLV 10	179667	0.35	21211	-5761	348	694.52	2	Si
SLV 5	179667	0.35	27669	-7515	348	861.5	2.48	Si
SLV 6	179667	0.35	28634	-7777	348	884.65	2.54	Si
SLV 11	179667	0.35	32461	-8817	348	971.97	2.79	Si
SLV 12	179667	0.35	33426	-9079	348	992.82	2.85	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-9406	-10964	63	0.508	1225.4	0.939	7.86632	15.32354	No
SLV 3	-9167	-10549	63	0.519	1201.1	0.938	8.04123	15.32354	No
SLV 2	-8353	-9684	102	0.556	1118.8	0.934	8.64131	15.32354	No
SLV 1	-8113	-9269	103	0.569	1094.6	0.933	8.85537	15.32354	No
SLV 16	-3772	-8660	-103	1.004	659.7	0.903	16.15319	15.32354	Si
SLV 15	-3532	-8245	-103	1.049	636.2	0.901	16.91868	15.32354	Si
SLV 8	-8622	-11579	-41	0.548	1146	0.936	8.50429	7.6122	Si
SLV 7	-8466	-11308	-41	0.556	1130.2	0.935	8.63718	7.6122	Si
SLV 14	-2718	-7380	-63	1.248	557	0.894	20.28014	15.32354	Si
SLV 12	-6931	-10888	-91	0.645	975.4	0.927	10.11611	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.187	SLU 78	Si
V_SLU	11.306	SLU 78	Si
PF_SLV	0.319	SLV 2	No
V_SLV	1.592	SLV 2	Si
PFFP_SLV	1.531	SLV 13	Si
R_SLV	0.513	SLV 4	No

Maschio 265

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-5.963	-3.314	-6.463	-3.314	L4	L6	0.5	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	6.83	56.7	-6867	-0.0000907	0.0003743	0.0035	0.5	889.66	1150.75	1150.75	20.3	No	Si
SLU 68	7.63	-389.36	-7026	-0.0001478	0.0003743	0.0035	0.5	890.67	1186.17	1186.17	3.05	No	Si
SLU 66	6.83	53.26	-6955	-0.0000914	0.0003743	0.0035	0.5	890.33	1159.98	1159.98	21.78	No	Si
SLU 66	7.63	-389.79	-7098	-0.0001491	0.0003743	0.0035	0.5	890.83	1192.96	1192.96	3.06	No	Si
SLU 70	6.83	52.99	-7132	-0.0000938	0.0003743	0.0035	0.5	890.85	1175.35	1175.35	22.18	No	Si
SLU 70	7.63	-398.86	-7278	-0.0001537	0.0003743	0.0035	0.5	890.45	1208.69	1208.69	3.03	No	Si
SLU 77	6.83	34.42	-7981	-0.0001032	0.0003743	0.0035	0.5	878.05	1219.27	1219.27	35.42	No	Si
SLU 77	7.63	-408.12	-8097	-0.0001699	0.0003743	0.0035	0.5	874.35	1250.76	1250.76	3.06	No	Si
SLU 71	6.83	52.71	-7032	-0.0000924	0.0003743	0.0035	0.5	890.69	1167.45	1167.45	22.15	No	Si
SLU 71	7.63	-392.87	-7177	-0.0001509	0.0003743	0.0035	0.5	890.8	1200.33	1200.33	3.06	No	Si
SLU 69	6.83	51.6	-7128	-0.0000936	0.0003743	0.0035	0.5	890.85	1175.13	1175.13	22.77	No	Si
SLU 69	7.63	-396.78	-7267	-0.0001532	0.0003743	0.0035	0.5	890.5	1207.84	1207.84	3.04	No	Si
SLU 72	6.83	54.1	-7037	-0.0000927	0.0003743	0.0035	0.5	890.7	1167.86	1167.86	21.59	No	Si
SLU 72	7.63	-394.96	-7187	-0.0001515	0.0003743	0.0035	0.5	890.78	1201.24	1201.24	3.04	No	Si
SLU 78	6.83	35.82	-7985	-0.0001035	0.0003743	0.0035	0.5	877.92	1219.5	1219.5	34.04	No	Si
SLU 78	7.63	-410.2	-8107	-0.0001705	0.0003743	0.0035	0.5	873.99	1251.25	1251.25	3.05	No	Si
SLU 65	6.83	58.35	-6695	-0.0000885	0.0003743	0.0035	0.5	887.57	1131.51	1131.51	19.39	No	Si
SLU 65	7.63	-382.38	-6857	-0.0001438	0.0003743	0.0035	0.5	889.57	1170.58	1170.58	3.06	No	Si
SLU 67	6.83	54.65	-6960	-0.0000917	0.0003743	0.0035	0.5	890.36	1160.42	1160.42	21.23	No	Si
SLU 67	7.63	-391.88	-7109	-0.0001496	0.0003743	0.0035	0.5	890.84	1193.95	1193.95	3.05	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	6.83	734.17	-933	-0.0555077	0.0005615	0.0035	0.4		239.03	239.03	0.33		No
SLV 1	7.63	-1036.81	-3441	-0.0060626	0.0005615	0.0035	0.4		818.41	818.41	0.79		No
SLV 5	6.83	266.95	-1915	-0.0000632	0.0005615	0.0035	0.5		459.72	459.72	1.72		Si
SLV 5	7.63	-427.57	-2656	-0.000113	0.0005615	0.0035	0.4		663.2	663.2	1.55		Si
SLD 1	6.83	335.99	-3368	-0.0000831	0.0005615	0.0035	0.5		737.95	737.95	2.2		Si
SLD 1	7.63	-606.55	-4504	-0.000153	0.0005615	0.0035	0.4		1012.28	1012.28	1.67		Si
SLD 2	6.83	368.48	-3220	-0.0000884	0.0005615	0.0035	0.5		709.35	709.35	1.93		Si
SLD 2	7.63	-643.43	-4465	-0.000167	0.0005615	0.0035	0.4		1005.58	1005.58	1.56		Si
SLD 4	6.83	359.68	-3821	-0.0000914	0.0005615	0.0035	0.5		826.2	826.2	2.3		Si
SLD 4	7.63	-663.73	-5080	-0.000169	0.0005615	0.0035	0.4		1110.32	1110.32	1.67		Si
SLV 3	6.83	712.67	-2297	-0.0201601	0.0005615	0.0035	0.4		534.88	534.88	0.75		No
SLV 3	7.63	-1082.14	-4834	-0.0032562	0.0005615	0.0035	0.4		1068.88	1068.88	0.99		No
SLD 3	6.83	327.19	-3970	-0.0000881	0.0005615	0.0035	0.5		855.49	855.49	2.61		Si
SLD 3	7.63	-626.85	-5119	-0.0001579	0.0005615	0.0035	0.5		1116.53	1116.53	1.78		Si
SLV 6	6.83	316.24	-1689	-0.0001011	0.0005615	0.0035	0.5		410.38	410.38	1.3		Si
SLV 6	7.63	-483.51	-2597	-0.000159	0.0005615	0.0035	0.4		650.98	650.98	1.35		Si
SLV 2	6.83	809.82	-588	-0.0735808	0.0005615	0.0035	0.4		157.64	157.64	0.19		No
SLV 2	7.63	-1122.67	-3351	-0.0077264	0.0005615	0.0035	0.4		800.8	800.8	0.71		No
SLV 4	6.83	788.32	-1951	-0.0359971	0.0005615	0.0035	0.4		467.52	467.52	0.59		No
SLV 4	7.63	-1168	-4743	-0.0056596	0.0005615	0.0035	0.4		1053.34	1053.34	0.9		No

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	6.83	31.23	-8083	-6731	119	0.5	0.5	-48078	10833	1517	80882	4192	1275	5467	No	46.04	Si
SLU 84	7.63	-404.18	-8203	-6831	883	0.5	0.5	-48794	10833	1517	80882	4192	1275	5467	No	6.19	Si
SLU 83	6.83	29.83	-8079	-6727	113	0.5	0.5	-48052	10833	1517	80882	4192	1275	5467	No	48.36	Si
SLU 83	7.63	-402.09	-8193	-6822	881	0.5	0.5	-48731	10833	1517	80882	4192	1275	5467	No	6.21	Si
SLU 79	6.83	35.53	-7886	-6566	140	0.5	0.5	-46903	10833	1517	80882	4192	1275	5467	No	39.18	Si
SLU 79	7.63	-404.22	-8006	-6667	867	0.5	0.5	-47620	10833	1517	80882	4192	1275	5467	No	6.3	Si
SLU 80	6.83	36.93	-7890	-6570	145	0.5	0.5	-46929	10833	1517	80882	4192	1275	5467	No	37.64	Si
SLU 80	7.63	-406.3	-8017	-6676	870	0.5	0.5	-47683	10833	1517	80882	4192	1275	5467	No	6.28	Si
SLU 81	6.83	31.49	-7906	-6584	117	0.5	0.5	-47026	10833	1517	80882	4192	1275	5467	No	46.8	Si
SLU 81	7.63	-395.11	-8024	-6682	867	0.5	0.5	-47727	10833	1517	80882	4192	1275	5467	No	6.3	Si
SLU 75	6.83	37.48	-7813	-6506	148	0.5	0.5	-46470	10833	1517	80882	4192	1275	5467	No	37.04	Si
SLU 75	7.63	-403.22	-7938	-6610	861	0.5	0.5	-47217	10833	1517	80882	4192	1275	5467	No	6.35	Si
SLU 78	6.83	35.82	-7985	-6650	144	0.5	0.5	-47496	10833	1517	80882	4192	1275	5467	No	38.02	Si
SLU 78	7.63	-410.2	-8107	-6751	874	0.5	0.5	-48221	10833	1517	80882	4192	1275	5467	No	6.25	Si
SLU 76	6.83	39.52	-7720	-6429	153	0.5	0.5	-45921	10833	1517	80882	4192	1275	5467	No	35.77	Si
SLU 76	7.63	-400.7	-7855	-6541	859	0.5	0.5	-46721	10833	1517	80882	4192	1275	5467	No	6.37	Si
SLU 77	6.83	34.42	-7981	-6646	138	0.5	0.5	-47470	10833	1517	80882	4192	1275	5467	No	39.59	Si
SLU 77	7.63	-408.12	-8097	-6742	872	0.5	0.5	-48158	10833	1517	80882	4192	1275	5467	No	6.27	Si
SLU 82	6.83	32.89	-7911	-6587	123	0.5	0.5	-47052	10833	1517	80882	4192	1275	5467	No	44.62	Si
SLU 82	7.63	-397.19	-8035	-6691	870	0.5	0.5	-47790	10833	1517	80882	4192	1275	5467	No	6.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 2	6.83	368.48	-3220	-2681	1569	0.5	0.4067	-19152	14247	1622	80882	6288	1275	7563		4.82	Si
SLD 2	7.63	-643.43	-4465	-3718	823	0.4	0.3177	0	0	0	80882	5031	1020	6051		7.35	Si
SLD 4	6.83	359.68	-3821	-3182	1504	0.5	0.4676	-22728	14962	1959	80882	6288	1275	7563		5.03	Si
SLD 4	7.63	-663.73	-5080	-4230	862	0.4	0.358	0	0	0	80882	5031	1020	6051		7.02	Si
SLV 14	6.83	-634.41	-8108	-6751	-2708	0.5	0.5	-48224	16250	2275	80882	6288	1275	7563		2.79	Si
SLV 14	7.63	509.66	-5794	-4825	85	0.5	0.4861	-34464	16250	2212	80882	6288	1275	7563		88.79	Si
SLV 1	6.83	734.17	-933	-777	3166	0.4	0	0	0	0	80882	5031	1020	6051		1.91	Si
SLV 1	7.63	-1036.81	-3441	-2866	1033	0.4	0	0	0	0	80882	5031	1020	6051		5.86	Si
SLV 3	6.83	712.67	-2297	-1913	3003	0.4	0	0	0	0	80882	5031	1020	6051		2.01	Si
SLV 3	7.63	-1082.14	-4834	-4025	1123	0.4	0.0784	0	0	0	80882	5031	1020	6051		5.39	Si
SLV 16	6.83	-655.91	-9471	-7887	-2871	0.5	0.5	-56333	16250	2275	80882	6288	1275	7563		2.63	Si
SLV 16	7.63	464.34	-7187	-5984	176	0.5	0.5	-42746	16250	2275	80882	6288	1275	7563		43.09	Si
SLV 2	6.83	809.82	-588	-489	3477	0.4	0	0	0	0	80882	5031	1020	6051		1.74	Si
SLV 2	7.63	-1122.67	-3351	-2790	1116	0.4	0	0	0	0	80882	5031	1020	6051		5.42	Si
SLV 4	6.83	788.32	-1951	-1625	3315	0.4	0	0	0	0	80882	5031	1020	6051		1.83	Si
SLV 4	7.63	-1168	-4743	-3950	1207	0.4	0.0112	0	0	0	80882	5031	1020	6051		5.01	Si
SLV 15	6.83	-731.56	-9817	-8175	-3183	0.5	0.5	-58389	16250	2275	80882	6288	1275	7563		2.38	Si
SLV 15	7.63	550.2	-7277	-6060	92	0.5	0.5	-43286	16250	2275	80882	6288	1275	7563		82.33	Si
SLV 13	6.83	-710.06	-8453	-7039	-3020	0.5	0.498	-50280	16250	2266	80882	6288	1275	7563		2.5	Si
SLV 13	7.63	595.53	-5885	-4901	2	0.5	0.4464	-35004	16250	2031	80882	6288	1275	7563		4998.26	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.35	19544	-2736	179.38	334.04	1.86	Si
SLV 6	179667	0.35	19847	-2779	179.38	338.45	1.89	Si
SLV 9	179667	0.35	20211	-2830	179.38	343.71	1.92	Si
SLV 10	179667	0.35	20514	-2872	179.38	348.06	1.94	Si
SLV 1	179667	0.35	24630	-3448	179.38	404.89	2.26	Si
SLV 2	179667	0.35	25094	-3513	179.38	411.03	2.29	Si
SLV 13	179667	0.35	26853	-3759	179.38	433.77	2.42	Si
SLV 14	179667	0.35	27317	-3824	179.38	439.64	2.45	Si
SLV 3	179667	0.35	29725	-4161	179.38	469.21	2.62	Si
SLV 4	179667	0.35	30189	-4227	179.38	474.74	2.65	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-4552	-4737	-7	0.54	601.7	0.937	8.37441	15.32354	No
SLV 16	-4426	-4969	-6	0.552	588.8	0.936	8.57893	15.32354	No
SLV 13	-3650	-5489	-2	0.644	510.5	0.928	10.09414	15.32354	No
SLV 14	-3523	-5721	-2	0.662	497.7	0.926	10.39393	15.32354	No
SLV 3	-2207	-5920	-14	0.933	366.1	0.908	14.93234	15.32354	No
SLV 4	-2080	-6152	-14	0.972	353.5	0.906	15.59782	15.32354	Si
SLV 11	-4763	-4315	-14	0.519	622.9	0.939	8.03792	7.6122	Si
SLV 12	-4680	-4466	-14	0.527	614.6	0.938	8.15966	7.6122	Si
SLV 7	-4059	-4670	-16	0.59	551.8	0.932	9.19575	7.6122	Si
SLV 8	-3976	-4821	-16	0.599	543.5	0.931	9.35635	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.03	SLU 70	Si
V_SLU	6.189	SLU 84	Si
PF_SLV	0.195	SLV 2	No
V_SLV	1.74	SLV 2	Si
PFFP_SLV	1.862	SLV 5	Si
R_SLV	0.547	SLV 15	No

Maschio 266

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.233	-3.314	-5.463	-3.314	L4	L6	2.23	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	6.83	2423.95	-27629	-0.0000914	0.0003743	0.0035	2.23	17417.04	21397.57	21397.57	8.83	No	Si
SLU 76	7.63	734.05	-24035	-0.0000676	0.0003743	0.0035	2.23	16666.69	19741.57	19741.57	26.89	No	Si
SLU 82	6.83	2451.11	-28178	-0.0000933	0.0003743	0.0035	2.23	17491.81	21657.4	21657.4	8.84	No	Si
SLU 82	7.63	786.09	-24559	-0.0000695	0.0003743	0.0035	2.23	16804.14	19978.36	19978.36	25.41	No	Si
SLU 75	6.83	2448.99	-27931	-0.0000925	0.0003743	0.0035	2.23	17459.55	21540.43	21540.43	8.8	No	Si
SLU 75	7.63	766.67	-24326	-0.0000687	0.0003743	0.0035	2.23	16744.13	19872.66	19872.66	25.92	No	Si
SLU 74	6.83	2444.03	-27889	-0.0000924	0.0003743	0.0035	2.23	17453.8	21520.41	21520.41	8.81	No	Si
SLU 74	7.63	775.53	-24292	-0.0000687	0.0003743	0.0035	2.23	16735.25	19857.33	19857.33	25.6	No	Si
SLU 80	6.83	2469.83	-28203	-0.0000936	0.0003743	0.0035	2.23	17494.95	21669.25	21669.25	8.77	No	Si
SLU 80	7.63	778.45	-24579	-0.0000696	0.0003743	0.0035	2.23	16809.21	19987.47	19987.47	25.68	No	Si
SLU 84	6.83	2500.3	-28780	-0.0000956	0.0003743	0.0035	2.23	17561.65	21945.24	21945.24	8.78	No	Si
SLU 84	7.63	824.59	-25125	-0.0000715	0.0003743	0.0035	2.23	16941.98	20236.97	20236.97	24.54	No	Si
SLU 83	6.83	2495.34	-28738	-0.0000955	0.0003743	0.0035	2.23	17557.16	21924.93	21924.93	8.79	No	Si
SLU 83	7.63	833.45	-25091	-0.0000715	0.0003743	0.0035	2.23	16934.04	20221.42	20221.42	24.26	No	Si
SLU 77	6.83	2493.21	-28491	-0.0000947	0.0003743	0.0035	2.23	17529.74	21806.81	21806.81	8.75	No	Si
SLU 77	7.63	814.03	-24858	-0.0000706	0.0003743	0.0035	2.23	16878.38	20114.7	20114.7	24.71	No	Si
SLU 79	6.83	2464.87	-28160	-0.0000934	0.0003743	0.0035	2.23	17489.61	21649.14	21649.14	8.78	No	Si
SLU 79	7.63	787.31	-24545	-0.0000695	0.0003743	0.0035	2.23	16800.63	19972.07	19972.07	25.37	No	Si
SLU 78	6.83	2498.17	-28533	-0.0000948	0.0003743	0.0035	2.23	17534.6	21827.04	21827.04	8.74	No	Si
SLU 78	7.63	805.17	-24892	-0.0000707	0.0003743	0.0035	2.23	16886.59	20130.18	20130.18	25	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	6.83	3504.72	-21626	-0.0000779	0.0005615	0.0035	2.23		20168.18	20168.18	5.75		Si
SLV 4	7.63	-4300.89	-16466	-0.0000695	0.0005615	0.0035	2.23		17284.15	17284.15	4.02		Si
SLV 15	6.83	84.94	-20354	-0.0000509	0.0005615	0.0035	2.23		19290.71	19290.71	227.1		Si
SLV 15	7.63	5551.89	-20017	-0.0000878	0.0005615	0.0035	2.23		19005.9	19005.9	3.42		Si
SLV 6	6.83	1829.72	-11464	-0.0000398	0.0005615	0.0035	2.23		11708.79	11708.79	6.4		Si
SLV 6	7.63	-1859.63	-8576	-0.0000327	0.0005615	0.0035	2.23		10197.3	10197.3	5.48		Si
SLV 16	6.83	242.43	-20645	-0.0000527	0.0005615	0.0035	2.23		19524.65	19524.65	80.54		Si
SLV 16	7.63	4938.18	-19968	-0.0000834	0.0005615	0.0035	2.23		18962.67	18962.67	3.84		Si
SLV 2	6.83	3271.29	-17118	-0.0000642	0.0005615	0.0035	2.23		16471.28	16471.28	5.04		Si
SLV 2	7.63	-4715.96	-12255	-0.0000611	0.0005615	0.0035	2.23		13621.14	13621.14	2.89		Si
SLV 3	6.83	3347.23	-21335	-0.000076	0.0005615	0.0035	2.23		19978.42	19978.42	5.97		Si
SLV 3	7.63	-3687.18	-16515	-0.0000654	0.0005615	0.0035	2.23		17323.96	17323.96	4.7		Si
SLV 13	6.83	-148.48	-15845	-0.0000397	0.0005615	0.0035	2.23		16768.3	16768.3	112.93		Si
SLV 13	7.63	5136.82	-15806	-0.0000734	0.0005615	0.0035	2.23		15344.96	15344.96	2.99		Si
SLV 1	6.83	3113.8	-16827	-0.0000623	0.0005615	0.0035	2.23		16220.32	16220.32	5.21		Si
SLV 1	7.63	-4102.25	-12304	-0.0000571	0.0005615	0.0035	2.23		13665.28	13665.28	3.33		Si
SLD 13	6.83	894.31	-17472	-0.0000489	0.0005615	0.0035	2.23		16777.81	16777.81	18.76		Si
SLD 13	7.63	2433.02	-15968	-0.0000554	0.0005615	0.0035	2.23		15483.12	15483.12	6.36		Si
SLV 14	6.83	9	-16136	-0.0000395	0.0005615	0.0035	2.23		15627.06	15627.06	1735.53		Si
SLV 14	7.63	4523.1	-15757	-0.0000691	0.0005615	0.0035	2.23		15303.26	15303.26	3.38		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	6.83	2464.87	-28160	-23449	5568	2.23	2.23	-37556	10833	6764	80882	18697	5686	24384	No	4.38	Si
SLU 79	7.63	787.31	-24545	-20439	3987	2.23	2.23	-32734	10833	6764	80882	18697	5686	24384	No	6.12	Si
SLU 78	6.83	2498.17	-28533	-23760	5628	2.23	2.23	-38053	10833	6764	80882	18697	5686	24384	No	4.33	Si
SLU 78	7.63	805.17	-24892	-20728	4028	2.23	2.23	-33196	10833	6764	80882	18697	5686	24384	No	6.05	Si
SLU 77	6.83	2493.21	-28491	-23725	5598	2.23	2.23	-37997	10833	6764	80882	18697	5686	24384	No	4.36	Si
SLU 77	7.63	814.03	-24858	-20699	4006	2.23	2.23	-33151	10833	6764	80882	18697	5686	24384	No	6.09	Si
SLU 84	6.83	2500.3	-28780	-23965	5627	2.23	2.23	-38382	10833	6764	80882	18697	5686	24384	No	4.33	Si
SLU 84	7.63	824.59	-25125	-20922	4024	2.23	2.23	-33507	10833	6764	80882	18697	5686	24384	No	6.06	Si
SLU 75	6.83	2448.99	-27931	-23259	5559	2.23	2.23	-37250	10833	6764	80882	18697	5686	24384	No	4.39	Si
SLU 75	7.63	766.67	-24326	-20256	3983	2.23	2.23	-32442	10833	6764	80882	18697	5686	24384	No	6.12	Si
SLU 80	6.83	2469.83	-28203	-23485	5598	2.23	2.23	-37612	10833	6764	80882	18697	5686	24384	No	4.36	Si
SLU 80	7.63	778.45	-24579	-20467	4010	2.23	2.23	-32779	10833	6764	80882	18697	5686	24384	No	6.08	Si
SLU 74	6.83	2444.03	-27889	-23223	5528	2.23	2.23	-37194	10833	6764	80882	18697	5686	24384	No	4.41	Si
SLU 74	7.63	775.53	-24292	-20228	3960	2.23	2.23	-32397	10833	6764	80882	18697	5686	24384	No	6.16	Si
SLU 82	6.83	2451.11	-28178	-23464	5557	2.23	2.23	-37579	10833	6764	80882	18697	5686	24384	No	4.39	Si
SLU 82	7.63	786.09	-24559	-20450	3978	2.23	2.23	-32752	10833	6764	80882	18697	5686	24384	No	6.13	Si
SLU 83	6.83	2495.34	-28738	-23930	5596	2.23	2.23	-38325	10833	6764	80882	18697	5686	24384	No	4.36	Si
SLU 83	7.63	833.45	-25091	-20893	4001	2.23	2.23	-33462	10833	6764	80882	18697	5686	24384	No	6.09	Si
SLU 76	6.83	2423.95	-27629	-23007	5549	2.23	2.23	-36847	10833	6764	80882	18697	5686	24384	No	4.39	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	7.63	734.05	-24035	-20015	3979	2.23	2.23	-32055	10833	6764	80882	18697	5686	24384	No	6.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLD 3	6.83	2394.28	-19874	-16549	8479	2.23	2.23	-26505	15718	9814	80882	28046	5686	33732		3.98	Si
SLD 3	7.63	-1333.49	-16325	-13594	6412	2.23	2.23	-21772	14771	9223	80882	28046	5686	33732		5.26	Si
SLD 4	6.83	2461.92	-19999	-16654	9120	2.23	2.23	-26672	15751	9835	80882	28046	5686	33732		3.7	Si
SLD 4	7.63	-1597.1	-16304	-13577	6909	2.23	2.23	-21744	14765	9219	80882	28046	5686	33732		4.88	Si
SLV 3	6.83	3347.23	-21335	-17766	14522	2.23	2.23	-28454	16107	10057	80882	28046	5686	33732		2.32	Si
SLV 3	7.63	-3687.18	-16515	-13752	11158	2.23	2.23	-22025	14822	9255	80882	28046	5686	33732		3.02	Si
SLD 1	6.83	2288.27	-17891	-14898	8525	2.23	2.23	-23860	15189	9484	80882	28046	5686	33732		3.96	Si
SLD 1	7.63	-1515.98	-14471	-12050	6467	2.23	2.23	-19298	14276	8914	80882	28046	5686	33732		5.22	Si
SLD 2	6.83	2355.92	-18016	-15002	9166	2.23	2.23	-24026	15222	9505	80882	28046	5686	33732		3.68	Si
SLD 2	7.63	-1779.58	-14450	-12032	6964	2.23	2.23	-19270	14271	8911	80882	28046	5686	33732		4.84	Si
SLV 13	6.83	-148.48	-15845	-13194	-8074	2.23	2.23	-21132	14643	9143	80882	28046	5686	33732		4.18	Si
SLV 13	7.63	5136.82	-15806	-13162	-6588	2.23	2.23	-21079	14633	9136	80882	28046	5686	33732		5.12	Si
SLV 2	6.83	3271.29	-17118	-14254	16124	2.23	2.23	-22829	14982	9355	80882	28046	5686	33732		2.09	Si
SLV 2	7.63	-4715.96	-12255	-10205	12464	2.23	2.1905	-16344	13685	8394	80882	28046	5686	33732		2.71	Si
SLV 4	6.83	3504.72	-21626	-18009	16015	2.23	2.23	-28842	16185	10106	80882	28046	5686	33732		2.11	Si
SLV 4	7.63	-4300.89	-16466	-13712	12315	2.23	2.23	-21960	14809	9246	80882	28046	5686	33732		2.74	Si
SLV 1	6.83	3113.8	-16827	-14012	14632	2.23	2.23	-22441	14905	9307	80882	28046	5686	33732		2.31	Si
SLV 1	7.63	-4102.25	-12304	-10246	11307	2.23	2.23	-16409	13698	8553	80882	28046	5686	33732		2.98	Si
SLV 15	6.83	84.94	-20354	-16949	-8184	2.23	2.23	-27144	15846	9894	80882	28046	5686	33732		4.12	Si
SLV 15	7.63	5551.89	-20017	-16669	-6737	2.23	2.23	-26696	15756	9838	80882	28046	5686	33732		5.01	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.35	15141	-9454	800.02	1192.36	1.49	Si
SLV 6	179667	0.35	15241	-9517	800.02	1199.36	1.5	Si
SLV 9	179667	0.35	17735	-11073	800.02	1370.24	1.71	Si
SLV 10	179667	0.35	17835	-11136	800.02	1376.95	1.72	Si
SLV 1	179667	0.35	18216	-11374	800.02	1402.39	1.75	Si
SLV 2	179667	0.35	18369	-11470	800.02	1412.59	1.77	Si
SLV 3	179667	0.35	23467	-14652	800.02	1736.13	2.17	Si
SLV 4	179667	0.35	23620	-14748	800.02	1745.41	2.18	Si
SLV 13	179667	0.35	26859	-16771	800.02	1934.97	2.42	Si
SLV 14	179667	0.35	27013	-16867	800.02	1943.66	2.43	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-16064	-21487	122	0.645	2255.4	0.927	10.11703	15.32354	No
SLV 16	-16002	-21494	122	0.647	2249.1	0.927	10.14922	15.32354	No
SLV 3	-13365	-9151	276	0.734	1984	0.92	11.60385	15.32354	No
SLV 4	-13303	-9158	276	0.737	1977.8	0.919	11.64682	15.32354	No
SLV 13	-12628	-18445	-280	0.766	1910.2	0.917	12.13414	15.32354	No
SLV 14	-12566	-18453	-279	0.769	1903.9	0.917	12.18146	15.32354	No
SLV 1	-9929	-6109	-125	0.923	1641	0.908	14.76566	15.32354	No
SLV 2	-9866	-6116	-125	0.927	1634.9	0.908	14.83469	15.32354	No
SLV 11	-19118	-20719	645	0.54	2563.5	0.934	8.39634	7.6122	Si
SLV 12	-19077	-20724	645	0.541	2559.4	0.934	8.41127	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.737	SLU 78	Si
V_SLU	4.333	SLU 78	Si
PF_SLV	2.888	SLV 2	Si
V_SLV	2.092	SLV 2	Si
PFFP_SLV	1.49	SLV 5	Si
R_SLV	0.66	SLV 15	No

Maschio 267

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-0.133	-3.314	-2.233	-3.314	L4	L6	2.1	0.28	6.94	6.94	6.94			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	2.31	51.24	-17122	-0.0000463	0.0003743	0.0035	2.1	12836.26	14257.74	14257.74	278.24	No	Si
SLU 40	4.21	730.9	-16938	-0.0000511	0.0003743	0.0035	2.1	12753.02	14139.2	14139.2	19.34	No	Si
SLU 37	2.31	81.07	-17192	-0.0000467	0.0003743	0.0035	2.1	12867.85	14303.27	14303.27	176.43	No	Si
SLU 37	4.21	713.32	-16939	-0.000051	0.0003743	0.0035	2.1	12753.57	14139.98	14139.98	19.82	No	Si
SLU 84	2.31	125.02	-20878	-0.0000579	0.0003743	0.0035	2.1	14276.74	16720.64	16720.64	133.75	No	Si
SLU 84	4.21	820.74	-20423	-0.0000623	0.0003743	0.0035	2.1	14128.63	16446.71	16446.71	20.04	No	Si
SLU 32	2.31	84.04	-17025	-0.0000462	0.0003743	0.0035	2.1	12792.42	14195.04	14195.04	168.92	No	Si
SLU 32	4.21	703.98	-16757	-0.0000504	0.0003743	0.0035	2.1	12669.91	14022.89	14022.89	19.92	No	Si
SLU 35	2.31	80.63	-17380	-0.0000472	0.0003743	0.0035	2.1	12951.11	14424.81	14424.81	178.91	No	Si
SLU 35	4.21	730.24	-17143	-0.0000517	0.0003743	0.0035	2.1	12845.91	14271.61	14271.61	19.54	No	Si
SLU 83	2.31	113.7	-20853	-0.0000577	0.0003743	0.0035	2.1	14268.74	16707.98	16707.98	146.95	No	Si
SLU 83	4.21	830.82	-20400	-0.0000623	0.0003743	0.0035	2.1	14120.86	16430.87	16430.87	19.78	No	Si
SLU 39	2.31	39.93	-17097	-0.0000461	0.0003743	0.0035	2.1	12824.95	14241.51	14241.51	356.67	No	Si
SLU 39	4.21	740.98	-16915	-0.0000512	0.0003743	0.0035	2.1	12742.42	14124.25	14124.25	19.06	No	Si
SLU 36	2.31	91.94	-17405	-0.0000474	0.0003743	0.0035	2.1	12962.17	14441.12	14441.12	157.07	No	Si
SLU 36	4.21	720.16	-17167	-0.0000517	0.0003743	0.0035	2.1	12856.33	14286.62	14286.62	19.84	No	Si
SLU 42	2.31	47.83	-17477	-0.0000473	0.0003743	0.0035	2.1	12993.75	14487.91	14487.91	302.87	No	Si
SLU 42	4.21	757.16	-17324	-0.0000525	0.0003743	0.0035	2.1	12926.57	14388.74	14388.74	19	No	Si
SLU 41	2.31	36.52	-17452	-0.0000471	0.0003743	0.0035	2.1	12982.75	14471.57	14471.57	396.26	No	Si
SLU 41	4.21	767.24	-17301	-0.0000525	0.0003743	0.0035	2.1	12916.28	14373.69	14373.69	18.73	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	2.31	675.95	-7865	-0.000025	0.0005615	0.0035	2.1		7934.58	7934.58	11.74		Si
SLV 6	4.21	-999.56	-1225	-0.0000182	0.0005615	0.0035	1.68		2551.16	2551.16	2.55		Si
SLD 4	2.31	3079.51	-12594	-0.0000556	0.0005615	0.0035	2.1		11763.29	11763.29	3.82		Si
SLD 4	4.21	-1552.07	-9428	-0.0000356	0.0005615	0.0035	2.1		10337.55	10337.55	6.66		Si
SLV 13	2.31	-6652.22	-18037	-0.0000994	0.0005615	0.0035	2.1		17352.6	17352.6	2.61		Si
SLV 13	4.21	5111.76	-23316	-0.0001028	0.0005615	0.0035	2.1		19706.52	19706.52	3.86		Si
SLV 14	2.31	-5900.84	-18722	-0.0000952	0.0005615	0.0035	2.1		17847.82	17847.82	3.02		Si
SLV 14	4.21	4513.49	-22608	-0.0000958	0.0005615	0.0035	2.1		19258.36	19258.36	4.27		Si
SLV 15	2.31	-5719.26	-20971	-0.0001006	0.0005615	0.0035	2.1		19453.97	19453.97	3.4		Si
SLV 15	4.21	5074.72	-28423	-0.0001184	0.0005615	0.0035	2.1		23010.98	23010.98	4.53		Si
SLV 9	2.31	-3411.85	-10795	-0.0000532	0.0005615	0.0035	2.1		11539.95	11539.95	3.38		Si
SLV 9	4.21	2002.79	-8863	-0.0000374	0.0005615	0.0035	2.1		8832.42	8832.42	4.41		Si
SLV 2	2.31	6093.22	-7468	-0.0001219	0.0005615	0.0035	2.1		7570.54	7570.54	1.24		Si
SLV 2	4.21	-4194.95	1313	0.1005737	0.0005615	0.0035	1.68		0	0	0		No
SLV 4	2.31	7026.17	-10402	-0.0001047	0.0005615	0.0035	2.1		10039.49	10039.49	1.43		Si
SLV 4	4.21	-4231.98	-3794	-0.0003219	0.0005615	0.0035	1.68		5106.28	5106.28	1.21		Si
SLV 1	2.31	5341.84	-6783	-0.0000968	0.0005615	0.0035	2.1		6936.51	6936.51	1.3		Si
SLV 1	4.21	-3596.68	604	0.0457006	0.0005615	0.0035	1.68		0	0	0		No
SLV 3	2.31	6274.8	-9717	-0.0000895	0.0005615	0.0035	2.1		9508.02	9508.02	1.52		Si
SLV 3	4.21	-3633.71	-4502	-0.0000669	0.0005615	0.0035	1.68		5787.64	5787.64	1.59		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	2.31	157.81	-20781	-17304	-1505	2.1	2.1	-29429	10833	6370	80882	17607	5355	22963	No	15.26	Si
SLU 77	4.21	793.82	-20242	-16856	-1524	2.1	2.1	-28666	10767	6331	80882	17607	5355	22963	No	15.06	Si
SLU 74	2.31	161.22	-20425	-17008	-1472	2.1	2.1	-28926	10801	6351	80882	17607	5355	22963	No	15.6	Si
SLU 74	4.21	767.56	-19855	-16534	-1491	2.1	2.1	-28119	10694	6288	80882	17607	5355	22963	No	15.4	Si
SLU 82	2.31	128.42	-20522	-17089	-1549	2.1	2.1	-29063	10820	6362	80882	17607	5355	22963	No	14.82	Si
SLU 82	4.21	794.48	-20036	-16685	-1569	2.1	2.1	-28375	10728	6308	80882	17607	5355	22963	No	14.63	Si
SLU 81	2.31	117.11	-20497	-17068	-1562	2.1	2.1	-29028	10815	6359	80882	17607	5355	22963	No	14.7	Si
SLU 81	4.21	804.56	-20013	-16665	-1582	2.1	2.1	-28342	10723	6305	80882	17607	5355	22963	No	14.52	Si
SLU 75	2.31	172.53	-20450	-17029	-1460	2.1	2.1	-28961	10806	6354	80882	17607	5355	22963	No	15.73	Si
SLU 75	4.21	757.48	-19879	-16553	-1479	2.1	2.1	-28151	10698	6290	80882	17607	5355	22963	No	15.52	Si
SLU 80	2.31	169.57	-20618	-17169	-1474	2.1	2.1	-29199	10833	6370	80882	17607	5355	22963	No	15.58	Si
SLU 80	4.21	766.81	-20061	-16705	-1494	2.1	2.1	-28410	10732	6311	80882	17607	5355	22963	No	15.37	Si
SLU 78	2.31	169.12	-20806	-17325	-1492	2.1	2.1	-29464	10833	6370	80882	17607	5355	22963	No	15.39	Si
SLU 78	4.21	783.74	-20265	-16875	-1512	2.1	2.1	-28699	10771	6333	80882	17607	5355	22963	No	15.19	Si
SLU 79	2.31	158.25	-20593	-17148	-1486	2.1	2.1	-29163	10833	6370	80882	17607	5355	22963	No	15.45	Si
SLU 79	4.21	776.89	-20038	-16686	-1506	2.1	2.1	-28377	10728	6308	80882	17607	5355	22963	No	15.25	Si
SLU 84	2.31	125.02	-20878	-17385	-1582	2.1	2.1	-29566	10833	6370	80882	17607	5355	22963	No	14.51	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	4.21	820.74	-20423	-17006	-1602	2.1	2.1	-28922	10801	6351	80882	17607	5355	22963	No	14.33	Si
SLU 83	2.31	113.7	-20853	-17364	-1594	2.1	2.1	-29531	10833	6370	80882	17607	5355	22963	No	14.4	Si
SLU 83	4.21	830.82	-20400	-16987	-1615	2.1	2.1	-28889	10796	6348	80882	17607	5355	22963	No	14.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	2.31	6274.8	-9717	-8091	6713	2.1	1.2128	-13761	13169	4472	80882	26411	5355	31766		4.73	Si
SLV 3	4.21	-3633.71	-4502	-3749	6457	1.68	0.7287	0	0	0	80882	21129	4284	25413		3.94	Si
SLV 13	2.31	-6652.22	-18037	-15020	-9976	2.1	2.0436	-26616	15740	9006	80882	26411	5355	31766		3.18	Si
SLV 13	4.21	5111.76	-23316	-19416	-9749	2.1	2.1	-33020	16250	9555	80882	26411	5355	31766		3.26	Si
SLV 14	2.31	-5900.84	-18722	-15590	-8497	2.1	2.1	-26513	15719	9243	80882	26411	5355	31766		3.74	Si
SLV 14	4.21	4513.49	-22608	-18826	-8268	2.1	2.1	-32017	16250	9555	80882	26411	5355	31766		3.84	Si
SLV 2	2.31	6093.22	-7468	-6219	9103	2.1	0.7024	-10576	12532	2465	80882	26411	5355	31766		3.49	Si
SLV 2	4.21	-4194.95	1313	1093	9085	1.68	0	0	0	0	80882	21129	4284	25413		2.8	Si
SLV 11	2.31	-302	-20574	-17132	-5533	2.1	2.1	-29136	16244	9551	80882	26411	5355	31766		5.74	Si
SLV 11	4.21	1879.34	-25885	-21554	-5903	2.1	2.1	-36657	16250	9555	80882	26411	5355	31766		5.38	Si
SLV 4	2.31	7026.17	-10402	-8662	8192	2.1	1.1236	-14731	13363	4204	80882	26411	5355	31766		3.88	Si
SLV 4	4.21	-4231.98	-3794	-3159	7937	1.68	0	0	0	0	80882	21129	4284	25413		3.2	Si
SLV 16	2.31	-4967.89	-21656	-18033	-9409	2.1	2.1	-30668	16250	9555	80882	26411	5355	31766		3.38	Si
SLV 16	4.21	4476.45	-27714	-23078	-9415	2.1	2.1	-39248	16250	9555	80882	26411	5355	31766		3.37	Si
SLV 15	2.31	-5719.26	-20971	-17463	-10888	2.1	2.1	-29698	16250	9555	80882	26411	5355	31766		2.92	Si
SLV 15	4.21	5074.72	-28423	-23668	-10896	2.1	2.1	-40251	16250	9555	80882	26411	5355	31766		2.92	Si
SLD 15	2.31	-2355.98	-17092	-14233	-5171	2.1	2.1	-24205	15258	8972	80882	26411	5355	31766		6.14	Si
SLD 15	4.21	2420.87	-19901	-16572	-5177	2.1	2.1	-28183	16053	9439	80882	26411	5355	31766		6.14	Si
SLV 1	2.31	5341.84	-6783	-5648	7624	2.1	0.7875	-9606	12338	2721	80882	26411	5355	31766		4.17	Si
SLV 1	4.21	-3596.68	604	503	7604	1.68	0	0	0	0	80882	21129	4284	25413		3.34	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 4.88 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.35	0	-1686	753.4	0	0	No, e>t/2
SLV 5	179667	0.35	0	-1927	753.4	0	0	No, e>t/2
SLV 2	179667	0.35	0	-2583	753.4	0	0	No, e>t/2
SLV 1	179667	0.35	0	-2953	753.4	0	0	No, e>t/2
SLV 10	179667	0.35	9966	-5860	753.4	766.88	1.02	Si
SLV 9	179667	0.35	10376	-6101	753.4	796.14	1.06	Si
SLV 4	179667	0.35	12891	-7580	753.4	971.65	1.29	Si
SLV 3	179667	0.35	13521	-7950	753.4	1014.48	1.35	Si
SLV 14	179667	0.35	28054	-16496	753.4	1885.16	2.5	Si
SLV 13	179667	0.35	28683	-16866	753.4	1917.72	2.55	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 4.88 Wa = 0.05 Ta = 0.2872

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-19473	-21508	341	0.518	2562.7	0.937	8.03511	15.32354	No
SLV 16	-18469	-22053	342	0.541	2461.2	0.935	8.4036	15.32354	No
SLV 13	-12569	-21002	192	0.739	1866.7	0.92	11.68285	15.32354	No
SLV 14	-11565	-21547	193	0.786	1766.2	0.916	12.4758	15.32354	No
SLV 11	-23923	-16890	325	0.439	3013.6	0.945	6.74079	7.6122	No
SLV 12	-23269	-17245	326	0.449	2947.2	0.944	6.90423	7.6122	No
SLV 3	-9675	-6356	-202	0.894	1577.7	0.909	14.29359	15.32354	No
SLV 7	-20984	-12345	162	0.495	2715.7	0.94	7.64983	7.6122	Si
SLV 4	-8672	-6901	-201	0.965	1478.2	0.905	15.49821	15.32354	Si
SLV 8	-20330	-12700	163	0.508	2649.4	0.939	7.85983	7.6122	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	18.734	SLU 41	Si
V_SLU	14.222	SLU 83	Si
PF_SLV	0	SLV 1	No
V_SLV	2.797	SLV 2	Si
PFFP_SLV	0	SLV 1	No
R_SLV	0.524	SLV 15	No

1.9 Verifiche travi di accoppiamento in muratura

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

X ini.: coordinata punto iniziale. [m]
Y ini.: coordinata punto iniziale. [m]
Z ini.inf.: coordinata punto iniziale. [m]

Z ini.sup.: *coordinata punto iniziale. [m]*
H ini.: *altezza della sezione iniziale. [m]*
X fin.: *coordinata punto finale. [m]*
Y fin.: *coordinata punto finale. [m]*
Z fin.inf.: *coordinata punto finale. [m]*
Z fin.sup: *coordinata punto finale. [m]*
H fin.: *altezza della sezione finale. [m]*
Luce: *lunghezza della trave. [m]*
Spessore: *spessore. [m]*
R. Trazione: *resistenza a trazione dell'elemento teso disposto orizzontalmente. [daN]*
fb_: *resistenza normalizzata a compressione in direzione orizzontale dei blocchi. [daN/m²]*
fhk: *resistenza caratteristica a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fhmedio: *resistenza media a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fvk,lim: *valore caratteristico massimo della resistenza a taglio che può essere impiegata nel calcolo (§11.10.3.3). [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*
tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*
γF,d: *fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
connettori: *presenza di connettori per la prevenzione del distacco del rinforzo.*
tipo di muratura: *tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
CRM / Fibrenet?: *dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
CRM: *stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
intonaco: *materiale intonaco FRCM ovvero CRM.*
spessore intonaco: *spessore intonaco. [m]*
tipo blocco fibrenet: *tipo blocco muratura per verifica a tglio tipo Fibrenet.*
Comb.: *combinazione.*
Sez.: *sezione di verifica.*
M: *momento flettente nel piano. [daN*m]*
N: *sforzo normale. [daN]*
εm: *deformazione della muratura.*
εm_: *deformazione elastica della muratura.*
εmu: *deformazione ultima della muratura.*
df: *distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
M0d: *momento resistente della sezione non rinforzata. [daN*m]*
M1d: *momento resistente della sezione rinforzata. [daN*m]*
MRd: *momento resistente della sezione. [daN*m]*
incremento > 50%: *incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
c.s.: *coefficiente di sicurezza.*
Verifica: *stato di verifica.*
V: *taglio nel piano. [daN]*
df: *distanza tra lembo compresso e baricentro dell'armatura tesa. [m]*
fvd: *resistenza a taglio di calcolo. [daN/m²]*
Vt: *resistenza a taglio della muratura non rinforzata. [daN]*
Vt,f: *resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]*
Vt,c: *resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]*

Vt,c int.: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]
Vt,R: resistenza a taglio della sezione rinforzata. [daN]
Stato limite: pF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche.
Coeff.s.: coefficiente di sicurezza.

Trave di accoppiamento 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.876	-1.56	0.44	2	-22.763	5.876	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	156.8	-4320	-0.0000156	0.0001872	0.0035	2		10722.86	10722.86	No	68.38	Si
SLU 75	fin.	4272.58	-5971	-0.0005272	0.0001872	0.0035	2		10722.86	10722.86	No	2.51	Si
SLU 81	ini.	208.8	-4225	-0.0000208	0.0001872	0.0035	2		10722.86	10722.86	No	51.36	Si
SLU 81	fin.	4330.02	-5838	-0.0005359	0.0001872	0.0035	2		10722.86	10722.86	No	2.48	Si
SLU 77	ini.	166.45	-4292	-0.0000166	0.0001872	0.0035	2		10722.86	10722.86	No	64.42	Si
SLU 77	fin.	4328.48	-5946	-0.0005356	0.0001872	0.0035	2		10722.86	10722.86	No	2.48	Si
SLU 74	ini.	167.37	-4216	-0.0000167	0.0001872	0.0035	2		10722.86	10722.86	No	64.07	Si
SLU 74	fin.	4271.79	-5846	-0.0005271	0.0001872	0.0035	2		10722.86	10722.86	No	2.51	Si
SLU 84	ini.	197.31	-4405	-0.0000197	0.0001872	0.0035	2		10722.86	10722.86	No	54.35	Si
SLU 84	fin.	4387.49	-6063	-0.0005446	0.0001872	0.0035	2		10722.86	10722.86	No	2.44	Si
SLU 80	ini.	153.43	-4371	-0.0000153	0.0001872	0.0035	2		10722.86	10722.86	No	69.89	Si
SLU 80	fin.	4308.71	-6035	-0.0005326	0.0001872	0.0035	2		10722.86	10722.86	No	2.49	Si
SLU 82	ini.	198.23	-4329	-0.0000198	0.0001872	0.0035	2		10722.86	10722.86	No	54.09	Si
SLU 82	fin.	4330.8	-5963	-0.000536	0.0001872	0.0035	2		10722.86	10722.86	No	2.48	Si
SLU 79	ini.	164	-4267	-0.0000163	0.0001872	0.0035	2		10722.86	10722.86	No	65.38	Si
SLU 79	fin.	4307.92	-5910	-0.0005325	0.0001872	0.0035	2		10722.86	10722.86	No	2.49	Si
SLU 78	ini.	155.88	-4396	-0.0000155	0.0001872	0.0035	2		10722.86	10722.86	No	68.79	Si
SLU 78	fin.	4329.27	-6071	-0.0005357	0.0001872	0.0035	2		10722.86	10722.86	No	2.48	Si
SLU 83	ini.	207.87	-4302	-0.0000207	0.0001872	0.0035	2		10722.86	10722.86	No	51.58	Si
SLU 83	fin.	4386.71	-5939	-0.0005444	0.0001872	0.0035	2		10722.86	10722.86	No	2.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	156.8	4639	2	0	1304	7930	13475	5100	9234	No	1.99	Si
SLU 75	fin.	4272.58	7288	2	0	1304	7930	13475	5100	9234	No	1.27	Si
SLU 79	ini.	164	4649	2	0	1304	7930	13475	5100	9234	No	1.99	Si
SLU 79	fin.	4307.92	7323	2	0	1304	7930	13475	5100	9234	No	1.26	Si
SLU 80	ini.	153.43	4685	2	0	1304	7930	13475	5100	9234	No	1.97	Si
SLU 80	fin.	4308.71	7352	2	0	1304	7930	13475	5100	9234	No	1.26	Si
SLU 81	ini.	208.8	4563	2	0	1304	7930	13475	5100	9234	No	2.02	Si
SLU 81	fin.	4330.02	7307	2	0	1304	7930	13475	5100	9234	No	1.26	Si
SLU 76	ini.	147.31	4646	2	0	1304	7930	13475	5100	9234	No	1.99	Si
SLU 76	fin.	4252.54	7263	2	0	1304	7930	13475	5100	9234	No	1.27	Si
SLU 83	ini.	207.87	4626	2	0	1304	7930	13475	5100	9234	No	2	Si
SLU 83	fin.	4386.71	7416	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 78	ini.	155.88	4702	2	0	1304	7930	13475	5100	9234	No	1.96	Si
SLU 78	fin.	4329.27	7396	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 84	ini.	197.31	4661	2	0	1304	7930	13475	5100	9234	No	1.98	Si
SLU 84	fin.	4387.49	7445	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 77	ini.	166.45	4666	2	0	1304	7930	13475	5100	9234	No	1.98	Si
SLU 77	fin.	4328.48	7367	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 82	ini.	198.23	4599	2	0	1304	7930	13475	5100	9234	No	2.01	Si
SLU 82	fin.	4330.8	7336	2	0	1304	7930	13475	5100	9234	No	1.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	415.71	-660	-0.0000416	0.0002807	0.0035	2		15635.95	15635.95		37.61	Si
SLV 14	fin.	5101.47	-4491	-0.0006167	0.0002807	0.0035	2		15635.95	15635.95		3.06	Si
SLV 15	ini.	27.45	-1786	-0.0000027	0.0002807	0.0035	2		15635.95	15635.95		569.61	Si
SLV 15	fin.	4585.32	-5341	-0.0005413	0.0002807	0.0035	2		15635.95	15635.95		3.41	Si
SLD 16	ini.	-109.92	-2750	-0.0000109	0.0002807	0.0035	2		15648.46	15648.46		142.37	Si
SLD 16	fin.	3779.96	-5181	-0.0004299	0.0002807	0.0035	2		15635.95	15635.95		4.14	Si
SLD 13	ini.	369.93	-1692	-0.000037	0.0002807	0.0035	2		15635.95	15635.95		42.27	Si
SLD 13	fin.	3796.11	-3792	-0.000432	0.0002807	0.0035	2		15635.95	15635.95		4.12	Si
SLV 13	ini.	771.55	-16	-0.0000781	0.0002807	0.0035	2		15635.95	15635.95		20.27	Si
SLV 13	fin.	4856.87	-3329	-0.0005806	0.0002807	0.0035	2		15635.95	15635.95		3.22	Si
SLV 16	ini.	-328.39	-2429	-0.0000328	0.0002807	0.0035	2		15648.46	15648.46		47.65	Si
SLV 16	fin.	4829.93	-6503	-0.0005767	0.0002807	0.0035	2		15635.95	15635.95		3.24	Si
SLD 15	ini.	42.92	-2474	-0.0000043	0.0002807	0.0035	2		15635.95	15635.95		364.28	Si
SLD 15	fin.	3674.9	-4682	-0.0004159	0.0002807	0.0035	2		15635.95	15635.95		4.25	Si
SLV 9	ini.	1464.59	712	-0.0001515	0.0002807	0.0035	2		15635.95	15635.95		10.68	Si
SLV 9	fin.	3925.21	-658	-0.0004494	0.0002807	0.0035	2		15635.95	15635.95		3.98	Si
SLV 10	ini.	1232.73	292	-0.0001266	0.0002807	0.0035	2		15635.95	15635.95		12.68	Si
SLV 10	fin.	4084.59	-1415	-0.0004712	0.0002807	0.0035	2		15635.95	15635.95		3.83	Si
SLD 14	ini.	217.09	-1968	-0.0000216	0.0002807	0.0035	2		15635.95	15635.95		72.03	Si
SLD 14	fin.	3901.18	-4291	-0.0004462	0.0002807	0.0035	2		15635.95	15635.95		4.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-1015.74	5279	2	0	1957	7930	20213	5100	9886		1.87	Si
SLV 11	fin.	3020.04	6243	2	0	1957	7930	20213	5100	9886		1.58	Si
SLV 15	ini.	27.45	6997	2	0	1957	7930	20213	5100	9886		1.41	Si
SLV 15	fin.	4585.32	7176	2	0	1957	7930	20213	5100	9886		1.38	Si
SLV 13	ini.	771.55	6343	2	0	1957	7930	20213	5100	9886		1.56	Si
SLV 13	fin.	4856.87	6709	2	0	1957	7930	20213	5100	9886		1.47	Si
SLD 12	ini.	-514.7	4525	2	0	1957	7930	20213	5100	9886		2.18	Si
SLD 12	fin.	3068.55	5933	2	0	1957	7930	20213	5100	9886		1.67	Si
SLV 12	ini.	-1247.6	5997	2	0	1957	7930	20213	5100	9886		1.65	Si
SLV 12	fin.	3179.42	7017	2	0	1957	7930	20213	5100	9886		1.41	Si
SLV 14	ini.	415.71	7444	2	0	1957	7930	20213	5100	9886		1.33	Si
SLV 14	fin.	5101.47	7897	2	0	1957	7930	20213	5100	9886		1.25	Si
SLV 16	ini.	-328.39	8099	2	0	1957	7930	20213	5100	9886		1.22	Si
SLV 16	fin.	4829.93	8364	2	0	1957	7930	20213	5100	9886		1.18	Si
SLD 15	ini.	42.92	4938	2	0	1957	7930	20213	5100	9886		2	Si
SLD 15	fin.	3674.9	6000	2	0	1957	7930	20213	5100	9886		1.65	Si
SLD 16	ini.	-109.92	5411	2	0	1957	7930	20213	5100	9886		1.83	Si
SLD 16	fin.	3779.96	6510	2	0	1957	7930	20213	5100	9886		1.52	Si
SLD 14	ini.	217.09	5124	2	0	1957	7930	20213	5100	9886		1.93	Si
SLD 14	fin.	3901.18	6315	2	0	1957	7930	20213	5100	9886		1.57	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.065	SLV 14	Si
V_SLV	1.182	SLV 16	Si
PF_SLU	2.444	SLU 84	Si
V_SLU	1.24	SLU 84	Si

Trave di accoppiamento 6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.284	-1.56	0.44	2	-22.543	-3.284	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-366.2	-2571	-0.0000367	0.0001872	0.0035	2		10737.13	10737.13	No	29.32	Si
SLU 81	fin.	2497.81	-4959	-0.000279	0.0001872	0.0035	2		10722.86	10722.86	No	4.29	Si
SLU 82	ini.	-357.42	-2551	-0.0000358	0.0001872	0.0035	2		10737.13	10737.13	No	30.04	Si
SLU 82	fin.	2499.62	-4935	-0.0002792	0.0001872	0.0035	2		10722.86	10722.86	No	4.29	Si
SLU 79	ini.	-367.84	-2542	-0.0000369	0.0001872	0.0035	2		10737.13	10737.13	No	29.19	Si
SLU 79	fin.	2479.33	-4937	-0.0002766	0.0001872	0.0035	2		10722.86	10722.86	No	4.32	Si
SLU 75	ini.	-359.78	-2503	-0.0000361	0.0001872	0.0035	2		10737.13	10737.13	No	29.84	Si
SLU 75	fin.	2470.17	-4886	-0.0002754	0.0001872	0.0035	2		10722.86	10722.86	No	4.34	Si
SLU 84	ini.	-360.57	-2595	-0.0000361	0.0001872	0.0035	2		10737.13	10737.13	No	29.78	Si
SLU 84	fin.	2528.64	-5007	-0.000283	0.0001872	0.0035	2		10722.86	10722.86	No	4.24	Si
SLU 74	ini.	-368.56	-2523	-0.000037	0.0001872	0.0035	2		10737.13	10737.13	No	29.13	Si
SLU 74	fin.	2468.35	-4910	-0.0002752	0.0001872	0.0035	2		10722.86	10722.86	No	4.34	Si
SLU 80	ini.	-359.06	-2523	-0.000036	0.0001872	0.0035	2		10737.13	10737.13	No	29.9	Si
SLU 80	fin.	2481.14	-4913	-0.0002769	0.0001872	0.0035	2		10722.86	10722.86	No	4.32	Si
SLU 78	ini.	-362.93	-2548	-0.0000364	0.0001872	0.0035	2		10737.13	10737.13	No	29.58	Si
SLU 78	fin.	2499.18	-4957	-0.0002792	0.0001872	0.0035	2		10722.86	10722.86	No	4.29	Si
SLU 77	ini.	-371.71	-2567	-0.0000373	0.0001872	0.0035	2		10737.13	10737.13	No	28.89	Si
SLU 77	fin.	2497.37	-4981	-0.0002789	0.0001872	0.0035	2		10722.86	10722.86	No	4.29	Si
SLU 83	ini.	-369.35	-2615	-0.000037	0.0001872	0.0035	2		10737.13	10737.13	No	29.07	Si
SLU 83	fin.	2526.82	-5031	-0.0002827	0.0001872	0.0035	2		10722.86	10722.86	No	4.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-360.57	381	2	0	1304	7930	13475	5100	9234	No	24.21	Si
SLU 84	fin.	2528.64	8233	2	0	1304	7930	13475	5100	9234	No	1.12	Si
SLU 79	ini.	-367.84	459	2	0	1304	7930	13475	5100	9234	No	20.13	Si
SLU 79	fin.	2479.33	8082	2	0	1304	7930	13475	5100	9234	No	1.14	Si
SLU 81	ini.	-366.2	395	2	0	1304	7930	13475	5100	9234	No	23.37	Si
SLU 81	fin.	2497.81	8143	2	0	1304	7930	13475	5100	9234	No	1.13	Si
SLU 77	ini.	-371.71	463	2	0	1304	7930	13475	5100	9234	No	19.94	Si
SLU 77	fin.	2497.37	8149	2	0	1304	7930	13475	5100	9234	No	1.13	Si
SLU 75	ini.	-359.78	460	2	0	1304	7930	13475	5100	9234	No	20.08	Si
SLU 75	fin.	2470.17	8030	2	0	1304	7930	13475	5100	9234	No	1.15	Si
SLU 74	ini.	-368.56	468	2	0	1304	7930	13475	5100	9234	No	19.71	Si
SLU 74	fin.	2468.35	8045	2	0	1304	7930	13475	5100	9234	No	1.15	Si
SLU 83	ini.	-369.35	390	2	0	1304	7930	13475	5100	9234	No	23.69	Si
SLU 83	fin.	2526.82	8247	2	0	1304	7930	13475	5100	9234	No	1.12	Si
SLU 80	ini.	-359.06	450	2	0	1304	7930	13475	5100	9234	No	20.51	Si
SLU 80	fin.	2481.14	8068	2	0	1304	7930	13475	5100	9234	No	1.14	Si
SLU 82	ini.	-357.42	387	2	0	1304	7930	13475	5100	9234	No	23.88	Si
SLU 82	fin.	2499.62	8129	2	0	1304	7930	13475	5100	9234	No	1.14	Si
SLU 78	ini.	-362.93	455	2	0	1304	7930	13475	5100	9234	No	20.31	Si
SLU 78	fin.	2499.18	8135	2	0	1304	7930	13475	5100	9234	No	1.14	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1247.73	1795	-0.000128	0.0002807	0.0035	2		15648.46	15648.46		12.54	Si
SLV 15	fin.	3314.33	-3533	-0.0003689	0.0002807	0.0035	2		15635.95	15635.95		4.72	Si
SLV 16	ini.	-932.31	2086	-0.0000947	0.0002807	0.0035	2		15648.46	15648.46		16.78	Si
SLV 16	fin.	3208.41	-2744	-0.0003554	0.0002807	0.0035	2		15635.95	15635.95		4.87	Si
SLV 13	ini.	-1868.86	449	-0.0001959	0.0002807	0.0035	2		15648.46	15648.46		8.37	Si
SLV 13	fin.	3174.38	-5305	-0.0003511	0.0002807	0.0035	2		15635.95	15635.95		4.93	Si
SLD 13	ini.	-954.11	-784	-0.000097	0.0002807	0.0035	2		15648.46	15648.46		16.4	Si
SLD 13	fin.	2346.32	-4218	-0.0002506	0.0002807	0.0035	2		15635.95	15635.95		6.66	Si
SLD 16	ini.	-550.91	-73	-0.0000553	0.0002807	0.0035	2		15648.46	15648.46		28.4	Si
SLD 16	fin.	2370.05	-3123	-0.0002534	0.0002807	0.0035	2		15635.95	15635.95		6.6	Si
SLV 12	ini.	531.34	1531	-0.0000534	0.0002807	0.0035	2		15635.95	15635.95		29.43	Si
SLV 12	fin.	2368.18	-378	-0.0002532	0.0002807	0.0035	2		15635.95	15635.95		6.6	Si
SLV 14	ini.	-1553.44	740	-0.0001611	0.0002807	0.0035	2		15648.46	15648.46		10.07	Si
SLV 14	fin.	3068.46	-4517	-0.0003378	0.0002807	0.0035	2		15635.95	15635.95		5.1	Si
SLD 15	ini.	-686.39	-198	-0.0000692	0.0002807	0.0035	2		15648.46	15648.46		22.8	Si
SLD 15	fin.	2415.55	-3462	-0.0002587	0.0002807	0.0035	2		15635.95	15635.95		6.47	Si
SLV 11	ini.	325.82	1341	-0.0000325	0.0002807	0.0035	2		15635.95	15635.95		47.99	Si
SLV 11	fin.	2437.19	-892	-0.0002613	0.0002807	0.0035	2		15635.95	15635.95		6.42	Si
SLD 14	ini.	-818.63	-659	-0.0000829	0.0002807	0.0035	2		15648.46	15648.46		19.12	Si
SLD 14	fin.	2300.83	-3880	-0.0002453	0.0002807	0.0035	2		15635.95	15635.95		6.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1868.86	8011	2	0	1957	7930	20213	5100	9886		1.23	Si
SLV 13	fin.	3174.38	9377	2	0	1957	7930	20213	5100	9886		1.05	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-1539.12	3422	2	0	1957	7930	20213	5100	9886		2.89	Si
SLV 10	fin.	1901.68	7538	2	0	1957	7930	20213	5100	9886		1.31	Si
SLD 14	ini.	-818.63	3333	2	0	1957	7930	20213	5100	9886		2.97	Si
SLD 14	fin.	2300.83	6775	2	0	1957	7930	20213	5100	9886		1.46	Si
SLD 15	ini.	-686.39	3386	2	0	1957	7930	20213	5100	9886		2.92	Si
SLD 15	fin.	2415.55	6852	2	0	1957	7930	20213	5100	9886		1.44	Si
SLV 4	ini.	1336.08	-7098	2	0	1957	7930	20213	5100	9886		1.39	Si
SLV 4	fin.	288.53	1804	2	0	1957	7930	20213	5100	9886		5.48	Si
SLV 15	ini.	-1247.73	7298	2	0	1957	7930	20213	5100	9886		1.35	Si
SLV 15	fin.	3314.33	8530	2	0	1957	7930	20213	5100	9886		1.16	Si
SLV 9	ini.	-1744.64	3947	2	0	1957	7930	20213	5100	9886		2.5	Si
SLV 9	fin.	1970.69	8186	2	0	1957	7930	20213	5100	9886		1.21	Si
SLV 16	ini.	-932.31	6492	2	0	1957	7930	20213	5100	9886		1.52	Si
SLV 16	fin.	3208.41	7535	2	0	1957	7930	20213	5100	9886		1.31	Si
SLV 14	ini.	-1553.44	7206	2	0	1957	7930	20213	5100	9886		1.37	Si
SLV 14	fin.	3068.46	8382	2	0	1957	7930	20213	5100	9886		1.18	Si
SLD 13	ini.	-954.11	3679	2	0	1957	7930	20213	5100	9886		2.69	Si
SLD 13	fin.	2346.32	7203	2	0	1957	7930	20213	5100	9886		1.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.718	SLV 15	Si
V_SLV	1.054	SLV 13	Si
PF_SLU	4.241	SLU 84	Si
V_SLU	1.12	SLU 83	Si

Trave di accoppiamento 8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.284	-1.56	0.44	2	-18.313	-3.284	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	ini.	538.99	-16561	-0.0000545	0.0001872	0.0035	2		10722.86	10722.86	No	19.89	Si
SLU 60	fin.	88.55	-11569	-0.0000088	0.0001872	0.0035	2		10722.86	10722.86	No	121.09	Si
SLU 82	ini.	559.51	-17969	-0.0000566	0.0001872	0.0035	2		10722.86	10722.86	No	19.16	Si
SLU 82	fin.	180.99	-12709	-0.000018	0.0001872	0.0035	2		10722.86	10722.86	No	59.25	Si
SLU 63	ini.	544.08	-16755	-0.000055	0.0001872	0.0035	2		10722.86	10722.86	No	19.71	Si
SLU 63	fin.	89.21	-11699	-0.0000089	0.0001872	0.0035	2		10722.86	10722.86	No	120.2	Si
SLU 40	ini.	509.07	-15073	-0.0000514	0.0001872	0.0035	2		10722.86	10722.86	No	21.06	Si
SLU 40	fin.	211.49	-10735	-0.0000211	0.0001872	0.0035	2		10722.86	10722.86	No	50.7	Si
SLU 81	ini.	549.86	-17961	-0.0000556	0.0001872	0.0035	2		10722.86	10722.86	No	19.5	Si
SLU 81	fin.	191.4	-12725	-0.0000191	0.0001872	0.0035	2		10722.86	10722.86	No	56.02	Si
SLU 61	ini.	548.64	-16570	-0.0000555	0.0001872	0.0035	2		10722.86	10722.86	No	19.54	Si
SLU 61	fin.	78.14	-11554	-0.0000078	0.0001872	0.0035	2		10722.86	10722.86	No	137.23	Si
SLU 62	ini.	534.43	-16747	-0.000054	0.0001872	0.0035	2		10722.86	10722.86	No	20.06	Si
SLU 62	fin.	99.62	-11714	-0.0000099	0.0001872	0.0035	2		10722.86	10722.86	No	107.63	Si
SLU 42	ini.	504.51	-15259	-0.0000509	0.0001872	0.0035	2		10722.86	10722.86	No	21.25	Si
SLU 42	fin.	222.56	-10880	-0.0000222	0.0001872	0.0035	2		10722.86	10722.86	No	48.18	Si
SLU 83	ini.	545.3	-18146	-0.0000551	0.0001872	0.0035	2		10722.86	10722.86	No	19.66	Si
SLU 83	fin.	202.48	-12870	-0.0000202	0.0001872	0.0035	2		10722.86	10722.86	No	52.96	Si
SLU 84	ini.	554.95	-18154	-0.0000561	0.0001872	0.0035	2		10722.86	10722.86	No	19.32	Si
SLU 84	fin.	192.06	-12854	-0.0000191	0.0001872	0.0035	2		10722.86	10722.86	No	55.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 63	ini.	544.08	-6144	2	0	1304	7930	13475	5100	9234	No	1.5	Si
SLU 63	fin.	89.21	-5212	2	0	1304	7930	13475	5100	9234	No	1.77	Si
SLU 82	ini.	559.51	-6370	2	0	1304	7930	13475	5100	9234	No	1.45	Si
SLU 82	fin.	180.99	-5270	2	0	1304	7930	13475	5100	9234	No	1.75	Si
SLU 76	ini.	468.99	-6108	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 76	fin.	154.17	-5075	2	0	1304	7930	13475	5100	9234	No	1.82	Si
SLU 83	ini.	545.3	-6370	2	0	1304	7930	13475	5100	9234	No	1.45	Si
SLU 83	fin.	202.48	-5240	2	0	1304	7930	13475	5100	9234	No	1.76	Si
SLU 77	ini.	452.07	-6108	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 77	fin.	190.15	-5029	2	0	1304	7930	13475	5100	9234	No	1.84	Si
SLU 80	ini.	457.99	-6122	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 80	fin.	172.19	-5059	2	0	1304	7930	13475	5100	9234	No	1.83	Si
SLU 81	ini.	549.86	-6328	2	0	1304	7930	13475	5100	9234	No	1.46	Si
SLU 81	fin.	191.4	-5227	2	0	1304	7930	13475	5100	9234	No	1.77	Si
SLU 84	ini.	554.95	-6412	2	0	1304	7930	13475	5100	9234	No	1.44	Si
SLU 84	fin.	192.06	-5284	2	0	1304	7930	13475	5100	9234	No	1.75	Si
SLU 78	ini.	461.72	-6150	2	0	1304	7930	13475	5100	9234	No	1.5	Si
SLU 78	fin.	179.74	-5073	2	0	1304	7930	13475	5100	9234	No	1.82	Si
SLU 75	ini.	466.28	-6109	2	0	1304	7930	13475	5100	9234	No	1.51	Si
SLU 75	fin.	168.67	-5059	2	0	1304	7930	13475	5100	9234	No	1.83	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-5112.22	-2908	-0.0006177	0.0002807	0.0035	2		15648.46	15648.46		3.06	Si
SLV 14	fin.	2680.64	-9448	-0.0002902	0.0002807	0.0035	2		15635.95	15635.95		5.83	Si
SLV 8	ini.	2876.4	-15422	-0.000314	0.0002807	0.0035	2		15635.95	15635.95		5.44	Si
SLV 8	fin.	-1783.77	-6795	-0.0001864	0.0002807	0.0035	2		15648.46	15648.46		8.77	Si
SLV 2	ini.	5418.46	-21670	-0.0006645	0.0002807	0.0035	2		15635.95	15635.95		2.89	Si
SLV 2	fin.	-2118.55	-7973	-0.0002241	0.0002807	0.0035	2		15648.46	15648.46		7.39	Si
SLV 15	ini.	-4927.93	-2600	-0.0005904	0.0002807	0.0035	2		15648.46	15648.46		3.18	Si
SLV 15	fin.	2250.36	-9168	-0.0002395	0.0002807	0.0035	2		15635.95	15635.95		6.95	Si
SLD 4	ini.	2694.88	-16286	-0.0002919	0.0002807	0.0035	2		15635.95	15635.95		5.8	Si
SLD 4	fin.	-1145.24	-7956	-0.0001171	0.0002807	0.0035	2		15648.46	15648.46		13.66	Si
SLV 13	ini.	-5485.82	-2413	-0.0006741	0.0002807	0.0035	2		15648.46	15648.46		2.85	Si
SLV 13	fin.	2887.76	-9993	-0.0003154	0.0002807	0.0035	2		15635.95	15635.95		5.41	Si
SLV 4	ini.	5976.35	-21857	-0.0007515	0.0002807	0.0035	2		15635.95	15635.95		2.62	Si
SLV 4	fin.	-2755.94	-7147	-0.000299	0.0002807	0.0035	2		15648.46	15648.46		5.68	Si
SLV 1	ini.	5044.86	-21174	-0.0006083	0.0002807	0.0035	2		15635.95	15635.95		3.1	Si
SLV 1	fin.	-1911.44	-8518	-0.0002007	0.0002807	0.0035	2		15648.46	15648.46		8.19	Si
SLV 16	ini.	-4554.33	-3095	-0.0005364	0.0002807	0.0035	2		15648.46	15648.46		3.44	Si
SLV 16	fin.	2043.25	-8622	-0.0002158	0.0002807	0.0035	2		15635.95	15635.95		7.65	Si
SLV 3	ini.	5602.75	-21361	-0.0006928	0.0002807	0.0035	2		15635.95	15635.95		2.79	Si
SLV 3	fin.	-2548.83	-7692	-0.0002742	0.0002807	0.0035	2		15648.46	15648.46		6.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	2694.88	-12528	2	0	1957	7930	20213	5100	9886		0.79	No
SLD 4	fin.	-1145.24	-11670	2	0	1957	7930	20213	5100	9886		0.85	No
SLV 13	ini.	-5485.82	15342	2	0	1957	7930	20213	5100	9886		0.64	No
SLV 13	fin.	2887.76	15405	2	0	1957	7930	20213	5100	9886		0.64	No
SLV 3	ini.	5602.75	-22103	2	0	1957	7930	20213	5100	9886		0.45	No
SLV 3	fin.	-2548.83	-20896	2	0	1957	7930	20213	5100	9886		0.47	No
SLV 8	ini.	2876.4	-13650	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 8	fin.	-1783.77	-12164	2	0	1957	7930	20213	5100	9886		0.81	No
SLV 1	ini.	5044.86	-19905	2	0	1957	7930	20213	5100	9886		0.5	No
SLV 1	fin.	-1911.44	-19157	2	0	1957	7930	20213	5100	9886		0.52	No
SLV 7	ini.	2632.97	-12610	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 7	fin.	-1648.82	-11110	2	0	1957	7930	20213	5100	9886		0.89	No
SLV 4	ini.	5976.35	-23700	2	0	1957	7930	20213	5100	9886		0.42	No
SLV 4	fin.	-2755.94	-22513	2	0	1957	7930	20213	5100	9886		0.44	No
SLV 2	ini.	5418.46	-21501	2	0	1957	7930	20213	5100	9886		0.46	No
SLV 2	fin.	-2118.55	-20774	2	0	1957	7930	20213	5100	9886		0.48	No
SLV 14	ini.	-5112.22	13746	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 14	fin.	2680.64	13788	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 15	ini.	-4927.93	13144	2	0	1957	7930	20213	5100	9886		0.75	No
SLV 15	fin.	2250.36	13665	2	0	1957	7930	20213	5100	9886		0.72	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.616	SLV 4	Si
V_SLV	0.417	SLV 4	No
PF_SLU	19.165	SLU 82	Si
V_SLU	1.44	SLU 84	Si

Trave di accoppiamento 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.223	-3.284	0.54	1.41	0.87	-16.523	-3.284	0.54	1.41	0.87	2.3	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-813.15	-1164	-0.0005297	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.6	Si
SLU 78	fin.	-425.73	-5296	-0.0002471	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.96	Si
SLU 77	ini.	-812.52	-1164	-0.0005292	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.6	Si
SLU 77	fin.	-425.65	-5298	-0.000247	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.96	Si
SLU 74	ini.	-805.67	-1145	-0.0005238	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.62	Si
SLU 74	fin.	-419.98	-5230	-0.0002433	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.03	Si
SLU 82	ini.	-824.88	-1104	-0.0005391	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.56	Si
SLU 82	fin.	-428.5	-5354	-0.0002489	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.93	Si
SLU 75	ini.	-806.3	-1145	-0.0005243	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.62	Si
SLU 75	fin.	-420.06	-5229	-0.0002434	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.03	Si
SLU 84	ini.	-831.73	-1123	-0.0005446	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.54	Si
SLU 84	fin.	-434.17	-5422	-0.0002527	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.87	Si
SLU 83	ini.	-831.1	-1123	-0.0005441	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.54	Si
SLU 83	fin.	-434.09	-5424	-0.0002526	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.87	Si
SLU 79	ini.	-809.29	-1157	-0.0005267	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.61	Si
SLU 79	fin.	-421.28	-5252	-0.0002442	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.01	Si
SLU 81	ini.	-824.26	-1104	-0.0005386	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.56	Si
SLU 81	fin.	-428.43	-5356	-0.0002489	0.0001872	0.0035	0.87		2112.5	2112.5	No	4.93	Si
SLU 80	ini.	-809.92	-1157	-0.0005272	0.0001872	0.0035	0.87		2112.5	2112.5	No	2.61	Si
SLU 80	fin.	-421.36	-5250	-0.0002442	0.0001872	0.0035	0.87		2112.5	2112.5	No	5.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-809.92	4193	0.87	0	378	6899	5862	2219	7277	No	1.74	Si
SLU 80	fin.	-421.36	-4858	0.87	0	378	6899	5862	2219	7277	No	1.5	Si
SLU 83	ini.	-831.1	4332	0.87	0	378	6899	5862	2219	7277	No	1.68	Si
SLU 83	fin.	-434.09	-5096	0.87	0	378	6899	5862	2219	7277	No	1.43	Si
SLU 79	ini.	-809.29	4190	0.87	0	378	6899	5862	2219	7277	No	1.74	Si
SLU 79	fin.	-421.28	-4856	0.87	0	378	6899	5862	2219	7277	No	1.5	Si
SLU 75	ini.	-806.3	4179	0.87	0	378	6899	5862	2219	7277	No	1.74	Si
SLU 75	fin.	-420.06	-4843	0.87	0	378	6899	5862	2219	7277	No	1.5	Si
SLU 82	ini.	-824.88	4302	0.87	0	378	6899	5862	2219	7277	No	1.69	Si
SLU 82	fin.	-428.5	-5052	0.87	0	378	6899	5862	2219	7277	No	1.44	Si
SLU 74	ini.	-805.67	4176	0.87	0	378	6899	5862	2219	7277	No	1.74	Si
SLU 74	fin.	-419.98	-4841	0.87	0	378	6899	5862	2219	7277	No	1.5	Si
SLU 84	ini.	-831.73	4335	0.87	0	378	6899	5862	2219	7277	No	1.68	Si
SLU 84	fin.	-434.17	-5097	0.87	0	378	6899	5862	2219	7277	No	1.43	Si
SLU 81	ini.	-824.26	4298	0.87	0	378	6899	5862	2219	7277	No	1.69	Si
SLU 81	fin.	-428.43	-5050	0.87	0	378	6899	5862	2219	7277	No	1.44	Si
SLU 78	ini.	-813.15	4213	0.87	0	378	6899	5862	2219	7277	No	1.73	Si
SLU 78	fin.	-425.73	-4889	0.87	0	378	6899	5862	2219	7277	No	1.49	Si
SLU 77	ini.	-812.52	4209	0.87	0	378	6899	5862	2219	7277	No	1.73	Si
SLU 77	fin.	-425.65	-4887	0.87	0	378	6899	5862	2219	7277	No	1.49	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-865.61	-2539	-0.0005386	0.0002807	0.0035	0.87		2977.34	2977.34		3.44	Si
SLD 14	fin.	-56.38	-2350	-0.0000297	0.0002807	0.0035	0.87		2977.34	2977.34		52.81	Si
SLD 16	ini.	-943.9	-2645	-0.0005986	0.0002807	0.0035	0.87		2977.34	2977.34		3.15	Si
SLD 16	fin.	-76.84	-2079	-0.0000406	0.0002807	0.0035	0.87		2977.34	2977.34		38.75	Si
SLV 15	ini.	-1497.83	-5308	-0.0010829	0.0002807	0.0035	0.87		2977.34	2977.34		1.99	Si
SLV 15	fin.	223.95	-51	-0.0001213	0.0002807	0.0035	0.87		2971.81	2971.81		13.27	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1117.97	-2422	-0.000739	0.0002807	0.0035	0.87		2977.34	2977.34		2.66	Si
SLV 12	fin.	-222.59	-1508	-0.0001203	0.0002807	0.0035	0.87		2977.34	2977.34		13.38	Si
SLV 14	ini.	-1268.27	-4819	-0.0008685	0.0002807	0.0035	0.87		2977.34	2977.34		2.35	Si
SLV 14	fin.	256.75	-742	-0.0001399	0.0002807	0.0035	0.87		2971.81	2971.81		11.57	Si
SLV 16	ini.	-1461.92	-5053	-0.0010479	0.0002807	0.0035	0.87		2977.34	2977.34		2.04	Si
SLV 16	fin.	204.58	-74	-0.0001105	0.0002807	0.0035	0.87		2971.81	2971.81		14.53	Si
SLD 15	ini.	-959.32	-2754	-0.0006106	0.0002807	0.0035	0.87		2977.34	2977.34		3.1	Si
SLD 15	fin.	-68.52	-2069	-0.0000361	0.0002807	0.0035	0.87		2977.34	2977.34		43.45	Si
SLD 13	ini.	-881.03	-2649	-0.0005503	0.0002807	0.0035	0.87		2977.34	2977.34		3.38	Si
SLD 13	fin.	-48.06	-2340	-0.0000253	0.0002807	0.0035	0.87		2977.34	2977.34		61.94	Si
SLV 13	ini.	-1304.18	-5073	-0.0009006	0.0002807	0.0035	0.87		2977.34	2977.34		2.28	Si
SLV 13	fin.	276.11	-719	-0.0001509	0.0002807	0.0035	0.87		2971.81	2971.81		10.76	Si
SLV 11	ini.	-1141.37	-2587	-0.0007586	0.0002807	0.0035	0.87		2977.34	2977.34		2.61	Si
SLV 11	fin.	-209.97	-1493	-0.0001133	0.0002807	0.0035	0.87		2977.34	2977.34		14.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1117.97	4933	0.87	0	567	6899	8792	2219	7466		1.51	Si
SLV 12	fin.	-222.59	-2882	0.87	0	567	6899	8792	2219	7466		2.59	Si
SLV 1	ini.	341.91	1197	0.87	0	567	6899	8792	2219	7466		6.24	Si
SLV 1	fin.	-780.14	-6605	0.87	0	567	6899	8792	2219	7466		1.13	Si
SLD 3	ini.	-254.4	2594	0.87	0	567	6899	8792	2219	7466		2.88	Si
SLD 3	fin.	-519.17	-4843	0.87	0	567	6899	8792	2219	7466		1.54	Si
SLD 4	ini.	-238.98	2590	0.87	0	567	6899	8792	2219	7466		2.88	Si
SLD 4	fin.	-527.49	-4910	0.87	0	567	6899	8792	2219	7466		1.52	Si
SLV 8	ini.	-624.14	4224	0.87	0	567	6899	8792	2219	7466		1.77	Si
SLV 8	fin.	-539.46	-5078	0.87	0	567	6899	8792	2219	7466		1.47	Si
SLV 11	ini.	-1141.37	4939	0.87	0	567	6899	8792	2219	7466		1.51	Si
SLV 11	fin.	-209.97	-2780	0.87	0	567	6899	8792	2219	7466		2.69	Si
SLV 7	ini.	-647.55	4231	0.87	0	567	6899	8792	2219	7466		1.76	Si
SLV 7	fin.	-526.84	-4976	0.87	0	567	6899	8792	2219	7466		1.5	Si
SLV 4	ini.	184.17	2206	0.87	0	567	6899	8792	2219	7466		3.38	Si
SLV 4	fin.	-851.67	-7180	0.87	0	567	6899	8792	2219	7466		1.04	Si
SLV 2	ini.	377.82	1186	0.87	0	567	6899	8792	2219	7466		6.3	Si
SLV 2	fin.	-799.51	-6762	0.87	0	567	6899	8792	2219	7466		1.1	Si
SLV 3	ini.	148.26	2216	0.87	0	567	6899	8792	2219	7466		3.37	Si
SLV 3	fin.	-832.3	-7023	0.87	0	567	6899	8792	2219	7466		1.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.988	SLV 15	Si
V_SLV	1.04	SLV 4	Si
PF_SLU	2.54	SLU 84	Si
V_SLU	1.428	SLU 84	Si

Trave di accoppiamento 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.576	-1.56	0.44	2	-16.768	6.576	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	4850.64	-7214	-0.0006162	0.0001872	0.0035	2		10722.86	10722.86	No	2.21	Si
SLU 84	fin.	-2249.49	-4858	-0.0002473	0.0001872	0.0035	2		10737.13	10737.13	No	4.77	Si
SLU 77	ini.	4768.36	-7111	-0.0006033	0.0001872	0.0035	2		10722.86	10722.86	No	2.25	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	fin.	-2226.36	-4790	-0.0002444	0.0001872	0.0035	2		10737.13	10737.13	No	4.82	Si
SLU 75	ini.	4714.88	-7006	-0.0005949	0.0001872	0.0035	2		10722.86	10722.86	No	2.27	Si
SLU 75	fin.	-2219.76	-4702	-0.0002436	0.0001872	0.0035	2		10737.13	10737.13	No	4.84	Si
SLU 80	ini.	4707.86	-7013	-0.0005938	0.0001872	0.0035	2		10722.86	10722.86	No	2.28	Si
SLU 80	fin.	-2229.94	-4714	-0.0002449	0.0001872	0.0035	2		10737.13	10737.13	No	4.81	Si
SLU 83	ini.	4869.04	-7252	-0.0006191	0.0001872	0.0035	2		10722.86	10722.86	No	2.2	Si
SLU 83	fin.	-2235.93	-4893	-0.0002456	0.0001872	0.0035	2		10737.13	10737.13	No	4.8	Si
SLU 78	ini.	4749.96	-7072	-0.0006004	0.0001872	0.0035	2		10722.86	10722.86	No	2.26	Si
SLU 78	fin.	-2239.92	-4755	-0.0002461	0.0001872	0.0035	2		10737.13	10737.13	No	4.79	Si
SLU 79	ini.	4726.26	-7051	-0.0005967	0.0001872	0.0035	2		10722.86	10722.86	No	2.27	Si
SLU 79	fin.	-2216.38	-4749	-0.0002432	0.0001872	0.0035	2		10737.13	10737.13	No	4.84	Si
SLU 81	ini.	4833.97	-7186	-0.0006136	0.0001872	0.0035	2		10722.86	10722.86	No	2.22	Si
SLU 81	fin.	-2215.78	-4840	-0.0002431	0.0001872	0.0035	2		10737.13	10737.13	No	4.85	Si
SLU 74	ini.	4733.29	-7045	-0.0005978	0.0001872	0.0035	2		10722.86	10722.86	No	2.27	Si
SLU 74	fin.	-2206.2	-4737	-0.0002419	0.0001872	0.0035	2		10737.13	10737.13	No	4.87	Si
SLU 82	ini.	4815.56	-7148	-0.0006107	0.0001872	0.0035	2		10722.86	10722.86	No	2.23	Si
SLU 82	fin.	-2229.33	-4805	-0.0002448	0.0001872	0.0035	2		10737.13	10737.13	No	4.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	4815.56	-10807	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 82	fin.	-2229.33	-8878	2	0	1304	7930	13475	5100	9234	No	1.04	Si
SLU 83	ini.	4869.04	-10899	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 83	fin.	-2235.93	-8942	2	0	1304	7930	13475	5100	9234	No	1.03	Si
SLU 79	ini.	4726.26	-10604	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 79	fin.	-2216.38	-8769	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 75	ini.	4714.88	-10601	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 75	fin.	-2219.76	-8762	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 81	ini.	4833.97	-10812	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 81	fin.	-2215.78	-8891	2	0	1304	7930	13475	5100	9234	No	1.04	Si
SLU 80	ini.	4707.86	-10599	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 80	fin.	-2229.94	-8756	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 78	ini.	4749.96	-10688	2	0	1304	7930	13475	5100	9234	No	0.86	No
SLU 78	fin.	-2239.92	-8814	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 77	ini.	4768.36	-10693	2	0	1304	7930	13475	5100	9234	No	0.86	No
SLU 77	fin.	-2226.36	-8827	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 74	ini.	4733.29	-10606	2	0	1304	7930	13475	5100	9234	No	0.87	No
SLU 74	fin.	-2206.2	-8775	2	0	1304	7930	13475	5100	9234	No	1.05	Si
SLU 84	ini.	4850.64	-10894	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 84	fin.	-2249.49	-8930	2	0	1304	7930	13475	5100	9234	No	1.03	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	4278.32	-714	-0.000498	0.0002807	0.0035	2		15635.95	15635.95		3.65	Si
SLV 16	fin.	-3736.22	3241	-0.0004236	0.0002807	0.0035	2		15648.46	15648.46		4.19	Si
SLV 10	ini.	4866.17	-2728	-0.000582	0.0002807	0.0035	2		15635.95	15635.95		3.21	Si
SLV 10	fin.	-2663.72	44	-0.0002879	0.0002807	0.0035	2		15648.46	15648.46		5.87	Si
SLD 14	ini.	4014.48	-2891	-0.0004616	0.0002807	0.0035	2		15635.95	15635.95		3.89	Si
SLD 14	fin.	-2607.53	-168	-0.0002812	0.0002807	0.0035	2		15648.46	15648.46		6	Si
SLV 14	ini.	4980.43	-237	-0.0005987	0.0002807	0.0035	2		15635.95	15635.95		3.14	Si
SLV 14	fin.	-3948.02	3936	-0.0004521	0.0002807	0.0035	2		15648.46	15648.46		3.96	Si
SLV 13	ini.	4950.69	-452	-0.0005944	0.0002807	0.0035	2		15635.95	15635.95		3.16	Si
SLV 13	fin.	-3743.32	3482	-0.0004246	0.0002807	0.0035	2		15648.46	15648.46		4.18	Si
SLV 6	ini.	4070.57	-5308	-0.0004692	0.0002807	0.0035	2		15635.95	15635.95		3.84	Si
SLV 6	fin.	-1381.65	-3919	-0.0001424	0.0002807	0.0035	2		15648.46	15648.46		11.33	Si
SLV 9	ini.	4846.8	-2869	-0.0005791	0.0002807	0.0035	2		15635.95	15635.95		3.23	Si
SLV 9	fin.	-2530.34	-252	-0.000272	0.0002807	0.0035	2		15648.46	15648.46		6.18	Si
SLD 13	ini.	4001.71	-2983	-0.0004598	0.0002807	0.0035	2		15635.95	15635.95		3.91	Si
SLD 13	fin.	-2519.6	-363	-0.0002707	0.0002807	0.0035	2		15648.46	15648.46		6.21	Si
SLV 5	ini.	4051.19	-5448	-0.0004666	0.0002807	0.0035	2		15635.95	15635.95		3.86	Si
SLV 5	fin.	-1248.27	-4215	-0.0001281	0.0002807	0.0035	2		15648.46	15648.46		12.54	Si
SLV 15	ini.	4248.58	-929	-0.0004938	0.0002807	0.0035	2		15635.95	15635.95		3.68	Si
SLV 15	fin.	-3531.51	2787	-0.0003967	0.0002807	0.0035	2		15648.46	15648.46		4.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	4014.48	-9608	2	0	1957	7930	20213	5100	9886		1.03	Si
SLD 14	fin.	-2607.53	-9129	2	0	1957	7930	20213	5100	9886		1.08	Si
SLV 14	ini.	4980.43	-12572	2	0	1957	7930	20213	5100	9886		0.79	No
SLV 14	fin.	-3948.02	-12920	2	0	1957	7930	20213	5100	9886		0.77	No
SLV 15	ini.	4248.58	-12104	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 15	fin.	-3531.51	-11523	2	0	1957	7930	20213	5100	9886		0.86	No
SLV 10	ini.	4866.17	-9141	2	0	1957	7930	20213	5100	9886		1.08	Si
SLV 10	fin.	-2663.72	-9797	2	0	1957	7930	20213	5100	9886		1.01	Si
SLV 9	ini.	4846.8	-8892	2	0	1957	7930	20213	5100	9886		1.11	Si
SLV 9	fin.	-2530.34	-9505	2	0	1957	7930	20213	5100	9886		1.04	Si
SLD 13	ini.	4001.71	-9444	2	0	1957	7930	20213	5100	9886		1.05	Si
SLD 13	fin.	-2519.6	-8936	2	0	1957	7930	20213	5100	9886		1.11	Si
SLD 16	ini.	3708.51	-9570	2	0	1957	7930	20213	5100	9886		1.03	Si
SLD 16	fin.	-2513.11	-8715	2	0	1957	7930	20213	5100	9886		1.13	Si
SLV 16	ini.	4278.32	-12486	2	0	1957	7930	20213	5100	9886		0.79	No
SLV 16	fin.	-3736.22	-11972	2	0	1957	7930	20213	5100	9886		0.83	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	3695.74	-9406	2	0	1957	7930	20213	5100	9886		1.05	Si
SLD 15	fin.	-2425.19	-8522	2	0	1957	7930	20213	5100	9886		1.16	Si
SLV 13	ini.	4950.69	-12190	2	0	1957	7930	20213	5100	9886		0.81	No
SLV 13	fin.	-3743.32	-12471	2	0	1957	7930	20213	5100	9886		0.79	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.139	SLV 14	Si
V_SLV	0.765	SLV 14	No
PF_SLU	2.202	SLU 83	Si
V_SLU	0.847	SLU 83	No

Trave di accoppiamento 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.046	0.54	1.41	0.87	-14.963	1.046	0.54	1.41	0.87	0.8	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	2081.14	-274	-0.0018457	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.01	Si
SLU 75	fin.	-1138.88	-6058	-0.0007837	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.85	Si
SLU 80	ini.	2087.64	-276	-0.0018557	0.0002246	0.0035	0.87		2095.51	2095.51	No	1	Si
SLU 80	fin.	-1139.75	-6078	-0.0007844	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.84	Si
SLU 78	ini.	2105.79	-275	-0.0018839	0.0002246	0.0035	0.87		2095.51	2095.51	No	1	No
SLU 78	fin.	-1146.84	-6125	-0.0007907	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.83	Si
SLU 79	ini.	2081.63	-280	-0.0018465	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.01	Si
SLU 79	fin.	-1128.64	-6064	-0.0007747	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.86	Si
SLU 82	ini.	2127.28	-280	-0.001918	0.0002246	0.0035	0.87		2095.51	2095.51	No	0.99	No
SLU 82	fin.	-1175.58	-6195	-0.0008161	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.79	Si
SLU 81	ini.	2121.27	-284	-0.0019084	0.0002246	0.0035	0.87		2095.51	2095.51	No	0.99	No
SLU 81	fin.	-1164.47	-6181	-0.0008062	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.81	Si
SLU 84	ini.	2151.93	-281	-0.001958	0.0002246	0.0035	0.87		2095.51	2095.51	No	0.97	No
SLU 84	fin.	-1183.53	-6262	-0.0008232	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.78	Si
SLU 77	ini.	2099.78	-279	-0.0018745	0.0002246	0.0035	0.87		2095.51	2095.51	No	1	No
SLU 77	fin.	-1135.72	-6111	-0.0007809	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.85	Si
SLU 83	ini.	2145.92	-285	-0.0019481	0.0002246	0.0035	0.87		2095.51	2095.51	No	0.98	No
SLU 83	fin.	-1172.42	-6248	-0.0008133	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.79	Si
SLU 74	ini.	2075.14	-278	-0.0018365	0.0002246	0.0035	0.87		2095.51	2095.51	No	1.01	Si
SLU 74	fin.	-1127.77	-6044	-0.0007739	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	2099.78	-6333	0.87	0	567	6344	7035	2219	6911	No	1.09	Si
SLU 77	fin.	-1135.72	-8092	0.87	0	567	6344	7035	2219	6911	No	0.85	No
SLU 78	ini.	2105.79	-6364	0.87	0	567	6344	7035	2219	6911	No	1.09	Si
SLU 78	fin.	-1146.84	-8123	0.87	0	567	6344	7035	2219	6911	No	0.85	No
SLU 63	ini.	2041.56	-6353	0.87	0	567	6344	7035	2219	6911	No	1.09	Si
SLU 63	fin.	-1232.45	-8023	0.87	0	567	6344	7035	2219	6911	No	0.86	No
SLU 84	ini.	2151.93	-6487	0.87	0	567	6344	7035	2219	6911	No	1.07	Si
SLU 84	fin.	-1183.53	-8349	0.87	0	567	6344	7035	2219	6911	No	0.83	No
SLU 80	ini.	2087.64	-6307	0.87	0	567	6344	7035	2219	6911	No	1.1	Si
SLU 80	fin.	-1139.75	-8065	0.87	0	567	6344	7035	2219	6911	No	0.86	No
SLU 83	ini.	2145.92	-6456	0.87	0	567	6344	7035	2219	6911	No	1.07	Si
SLU 83	fin.	-1172.42	-8318	0.87	0	567	6344	7035	2219	6911	No	0.83	No
SLU 82	ini.	2127.28	-6410	0.87	0	567	6344	7035	2219	6911	No	1.08	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-1175.58	-8273	0.87	0	567	6344	7035	2219	6911	No	0.84	No
SLU 79	ini.	2081.63	-6276	0.87	0	567	6344	7035	2219	6911	No	1.1	Si
SLU 79	fin.	-1128.64	-8034	0.87	0	567	6344	7035	2219	6911	No	0.86	No
SLU 75	ini.	2081.14	-6287	0.87	0	567	6344	7035	2219	6911	No	1.1	Si
SLU 75	fin.	-1138.88	-8046	0.87	0	567	6344	7035	2219	6911	No	0.86	No
SLU 81	ini.	2121.27	-6379	0.87	0	567	6344	7035	2219	6911	No	1.08	Si
SLU 81	fin.	-1164.47	-8242	0.87	0	567	6344	7035	2219	6911	No	0.84	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-48.06	4411	-0.0000252	0.0003369	0.0035	0.87		2471.01	2471.01		51.42	Si
SLV 15	fin.	4441.17	7130	-0.0064436	0.0003369	0.0035	0.87		2465.18	2465.18		0.56	No
SLV 4	ini.	3482.34	-4458	-0.0046237	0.0003369	0.0035	0.87		2465.18	2465.18		0.71	No
SLV 4	fin.	-6966.43	-16715	-0.0107758	0.0003369	0.0035	0.87		2471.01	2471.01		0.35	No
SLV 16	ini.	-43.42	4457	-0.0000228	0.0003369	0.0035	0.87		2471.01	2471.01		56.91	Si
SLV 16	fin.	4442.58	7184	-0.0064461	0.0003369	0.0035	0.87		2465.18	2465.18		0.55	No
SLV 2	ini.	2925.55	-4807	-0.0033977	0.0003369	0.0035	0.87		2465.18	2465.18		0.84	No
SLV 2	fin.	-6057.83	-15549	-0.009249	0.0003369	0.0035	0.87		2471.01	2471.01		0.41	No
SLV 1	ini.	2920.91	-4854	-0.0033862	0.0003369	0.0035	0.87		2465.18	2465.18		0.84	No
SLV 1	fin.	-6059.25	-15603	-0.0092514	0.0003369	0.0035	0.87		2471.01	2471.01		0.41	No
SLV 8	ini.	2897.11	-938	-0.003327	0.0003369	0.0035	0.87		2465.18	2465.18		0.85	No
SLV 8	fin.	-4033.55	-9719	-0.0056763	0.0003369	0.0035	0.87		2471.01	2471.01		0.61	No
SLV 7	ini.	2894.08	-968	-0.0033195	0.0003369	0.0035	0.87		2465.18	2465.18		0.85	No
SLV 7	fin.	-4034.47	-9755	-0.005678	0.0003369	0.0035	0.87		2471.01	2471.01		0.61	No
SLV 14	ini.	-600.21	4108	-0.0003443	0.0003369	0.0035	0.87		2471.01	2471.01		4.12	Si
SLV 14	fin.	5351.17	8350	-0.0080564	0.0003369	0.0035	0.87		2465.18	2465.18		0.46	No
SLV 13	ini.	-604.85	4062	-0.0003473	0.0003369	0.0035	0.87		2471.01	2471.01		4.09	Si
SLV 13	fin.	5349.76	8296	-0.0080539	0.0003369	0.0035	0.87		2465.18	2465.18		0.46	No
SLV 3	ini.	3477.7	-4504	-0.0046143	0.0003369	0.0035	0.87		2465.18	2465.18		0.71	No
SLV 3	fin.	-6967.84	-16769	-0.0107782	0.0003369	0.0035	0.87		2471.01	2471.01		0.35	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	3482.34	-19213	0.87	0	851	6344	10552	2219	7195		0.37	No
SLV 4	fin.	-6966.43	-20132	0.87	0	851	6344	10552	2219	7195		0.36	No
SLV 1	ini.	2920.91	-16317	0.87	0	851	6344	10552	2219	7195		0.44	No
SLV 1	fin.	-6059.25	-17222	0.87	0	851	6344	10552	2219	7195		0.42	No
SLV 8	ini.	2897.11	-13231	0.87	0	851	6344	10552	2219	7195		0.54	No
SLV 8	fin.	-4033.55	-14362	0.87	0	851	6344	10552	2219	7195		0.5	No
SLV 7	ini.	2894.08	-13231	0.87	0	851	6344	10552	2219	7195		0.54	No
SLV 7	fin.	-4034.47	-14362	0.87	0	851	6344	10552	2219	7195		0.5	No
SLD 4	ini.	2316.53	-10746	0.87	0	851	6344	10552	2219	7195		0.67	No
SLD 4	fin.	-3446.46	-11824	0.87	0	851	6344	10552	2219	7195		0.61	No
SLD 1	ini.	2067.8	-9467	0.87	0	851	6344	10552	2219	7195		0.76	No
SLD 1	fin.	-3045.43	-10538	0.87	0	851	6344	10552	2219	7195		0.68	No
SLD 2	ini.	2069.79	-9467	0.87	0	851	6344	10552	2219	7195		0.76	No
SLD 2	fin.	-3044.82	-10538	0.87	0	851	6344	10552	2219	7195		0.68	No
SLV 3	ini.	3477.7	-19213	0.87	0	851	6344	10552	2219	7195		0.37	No
SLV 3	fin.	-6967.84	-20132	0.87	0	851	6344	10552	2219	7195		0.36	No
SLD 3	ini.	2314.53	-10746	0.87	0	851	6344	10552	2219	7195		0.67	No
SLD 3	fin.	-3447.07	-11824	0.87	0	851	6344	10552	2219	7195		0.61	No
SLV 2	ini.	2925.55	-16316	0.87	0	851	6344	10552	2219	7195		0.44	No
SLV 2	fin.	-6057.83	-17222	0.87	0	851	6344	10552	2219	7195		0.42	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.355	SLV 3	No
V_SLV	0.357	SLV 3	No
PF_SLU	0.974	SLU 84	No
V_SLU	0.828	SLU 84	No

Trave di accoppiamento 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.613	1.046	0.6	1.41	0.81	-13.583	1.046	0.6	1.41	0.81	0.97	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	235.46	-2425	-0.0001498	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.01	Si
SLU 80	fin.	10.64	-601	-0.0000064	0.0002246	0.0035	0.81		1886.61	1886.61	No	177.3	Si
SLU 81	ini.	240.16	-2463	-0.000153	0.0002246	0.0035	0.81		1886.61	1886.61	No	7.86	Si
SLU 81	fin.	6.14	-627	-0.0000037	0.0002246	0.0035	0.81		1886.61	1886.61	No	307.12	Si
SLU 74	ini.	234.34	-2423	-0.0001491	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.05	Si
SLU 74	fin.	8.94	-608	-0.0000054	0.0002246	0.0035	0.81		1886.61	1886.61	No	210.99	Si
SLU 83	ini.	243.28	-2493	-0.0001551	0.0002246	0.0035	0.81		1886.61	1886.61	No	7.76	Si
SLU 83	fin.	9.01	-627	-0.0000054	0.0002246	0.0035	0.81		1886.61	1886.61	No	209.43	Si
SLU 78	ini.	237.85	-2446	-0.0001514	0.0002246	0.0035	0.81		1886.61	1886.61	No	7.93	Si
SLU 78	fin.	13.06	-600	-0.0000079	0.0002246	0.0035	0.81		1886.61	1886.61	No	144.4	Si
SLU 84	ini.	243.67	-2487	-0.0001554	0.0002246	0.0035	0.81		1886.61	1886.61	No	7.74	Si
SLU 84	fin.	10.27	-619	-0.0000062	0.0002246	0.0035	0.81		1886.61	1886.61	No	183.77	Si
SLU 82	ini.	240.55	-2458	-0.0001533	0.0002246	0.0035	0.81		1886.61	1886.61	No	7.84	Si
SLU 82	fin.	7.4	-618	-0.0000045	0.0002246	0.0035	0.81		1886.61	1886.61	No	254.93	Si
SLU 77	ini.	237.46	-2452	-0.0001512	0.0002246	0.0035	0.81		1886.61	1886.61	No	7.95	Si
SLU 77	fin.	11.81	-608	-0.0000071	0.0002246	0.0035	0.81		1886.61	1886.61	No	159.78	Si
SLU 75	ini.	234.73	-2417	-0.0001493	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.04	Si
SLU 75	fin.	10.2	-599	-0.0000062	0.0002246	0.0035	0.81		1886.61	1886.61	No	184.98	Si
SLU 79	ini.	235.06	-2431	-0.0001496	0.0002246	0.0035	0.81		1886.61	1886.61	No	8.03	Si
SLU 79	fin.	9.38	-610	-0.0000057	0.0002246	0.0035	0.81		1886.61	1886.61	No	201.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	234.73	7672	0.81	0	441	6423	6550	2066	6864	No	0.89	No
SLU 75	fin.	10.2	-3515	0.81	0	441	6423	6550	2066	6864	No	1.95	Si
SLU 79	ini.	235.06	7706	0.81	0	441	6423	6550	2066	6864	No	0.89	No
SLU 79	fin.	9.38	-3525	0.81	0	441	6423	6550	2066	6864	No	1.95	Si
SLU 77	ini.	237.46	7777	0.81	0	441	6423	6550	2066	6864	No	0.88	No
SLU 77	fin.	11.81	-3547	0.81	0	441	6423	6550	2066	6864	No	1.94	Si
SLU 84	ini.	243.67	7924	0.81	0	441	6423	6550	2066	6864	No	0.87	No
SLU 84	fin.	10.27	-3654	0.81	0	441	6423	6550	2066	6864	No	1.88	Si
SLU 78	ini.	237.85	7774	0.81	0	441	6423	6550	2066	6864	No	0.88	No
SLU 78	fin.	13.06	-3548	0.81	0	441	6423	6550	2066	6864	No	1.93	Si
SLU 83	ini.	243.28	7927	0.81	0	441	6423	6550	2066	6864	No	0.87	No
SLU 83	fin.	9.01	-3653	0.81	0	441	6423	6550	2066	6864	No	1.88	Si
SLU 80	ini.	235.46	7703	0.81	0	441	6423	6550	2066	6864	No	0.89	No
SLU 80	fin.	10.64	-3526	0.81	0	441	6423	6550	2066	6864	No	1.95	Si
SLU 81	ini.	240.16	7826	0.81	0	441	6423	6550	2066	6864	No	0.88	No
SLU 81	fin.	6.14	-3620	0.81	0	441	6423	6550	2066	6864	No	1.9	Si
SLU 74	ini.	234.34	7675	0.81	0	441	6423	6550	2066	6864	No	0.89	No
SLU 74	fin.	8.94	-3514	0.81	0	441	6423	6550	2066	6864	No	1.95	Si
SLU 82	ini.	240.55	7822	0.81	0	441	6423	6550	2066	6864	No	0.88	No
SLU 82	fin.	7.4	-3621	0.81	0	441	6423	6550	2066	6864	No	1.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	81.68	-3234	-0.0000499	0.0003369	0.0035	0.81		2160.1	2160.1		26.45	Si
SLV 5	fin.	-635.36	-3273	-0.0004327	0.0003369	0.0035	0.81		2165.48	2165.48		3.41	Si
SLV 16	ini.	554.64	72	-0.0003712	0.0003369	0.0035	0.81		2160.1	2160.1		3.89	Si
SLV 16	fin.	1301.75	3671	-0.0010577	0.0003369	0.0035	0.81		2160.1	2160.1		1.66	Si
SLV 14	ini.	581.18	-633	-0.0003915	0.0003369	0.0035	0.81		2160.1	2160.1		3.72	Si
SLV 14	fin.	1140.14	2597	-0.0008873	0.0003369	0.0035	0.81		2160.1	2160.1		1.89	Si
SLV 2	ini.	-233.53	-3382	-0.0001461	0.0003369	0.0035	0.81		2165.48	2165.48		9.27	Si
SLV 2	fin.	-1283.15	-4458	-0.0010345	0.0003369	0.0035	0.81		2165.48	2165.48		1.69	Si
SLV 13	ini.	580.08	-623	-0.0003906	0.0003369	0.0035	0.81		2160.1	2160.1		3.72	Si
SLV 13	fin.	1125.83	2558	-0.0008729	0.0003369	0.0035	0.81		2160.1	2160.1		1.92	Si
SLV 15	ini.	553.54	81	-0.0003704	0.0003369	0.0035	0.81		2160.1	2160.1		3.9	Si
SLV 15	fin.	1287.45	3631	-0.001042	0.0003369	0.0035	0.81		2160.1	2160.1		1.68	Si
SLV 4	ini.	-260.07	-2677	-0.0001635	0.0003369	0.0035	0.81		2165.48	2165.48		8.33	Si
SLV 4	fin.	-1121.54	-3384	-0.0008663	0.0003369	0.0035	0.81		2165.48	2165.48		1.93	Si
SLV 3	ini.	-261.17	-2668	-0.0001642	0.0003369	0.0035	0.81		2165.48	2165.48		8.29	Si
SLV 3	fin.	-1135.84	-3424	-0.0008807	0.0003369	0.0035	0.81		2165.48	2165.48		1.91	Si
SLV 1	ini.	-234.63	-3373	-0.0001469	0.0003369	0.0035	0.81		2165.48	2165.48		9.23	Si
SLV 1	fin.	-1297.45	-4497	-0.0010501	0.0003369	0.0035	0.81		2165.48	2165.48		1.67	Si
SLV 12	ini.	238.34	-67	-0.0001496	0.0003369	0.0035	0.81		2160.1	2160.1		9.06	Si
SLV 12	fin.	639.66	2447	-0.0004371	0.0003369	0.0035	0.81		2160.1	2160.1		3.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	581.18	9915	0.81	0	662	6423	9824	2066	7085		0.71	No
SLV 14	fin.	1140.14	979	0.81	0	662	6423	9824	2066	7085		7.24	Si
SLD 16	ini.	328.83	7070	0.81	0	662	6423	9824	2066	7085		1	Si
SLD 16	fin.	558.51	-1112	0.81	0	662	6423	9824	2066	7085		6.37	Si
SLV 9	ini.	326.09	7212	0.81	0	662	6423	9824	2066	7085		0.98	No
SLV 9	fin.	91.62	-952	0.81	0	662	6423	9824	2066	7085		7.44	Si
SLV 10	ini.	326.8	7240	0.81	0	662	6423	9824	2066	7085		0.98	No
SLV 10	fin.	100.94	-907	0.81	0	662	6423	9824	2066	7085		7.81	Si
SLV 13	ini.	580.08	9872	0.81	0	662	6423	9824	2066	7085		0.72	No
SLV 13	fin.	1125.83	910	0.81	0	662	6423	9824	2066	7085		7.79	Si
SLD 13	ini.	339.32	7222	0.81	0	662	6423	9824	2066	7085		0.98	No
SLD 13	fin.	481.59	-1003	0.81	0	662	6423	9824	2066	7085		7.06	Si
SLD 14	ini.	339.79	7241	0.81	0	662	6423	9824	2066	7085		0.98	No
SLD 14	fin.	487.73	-973	0.81	0	662	6423	9824	2066	7085		7.28	Si
SLV 15	ini.	553.54	9483	0.81	0	662	6423	9824	2066	7085		0.75	No
SLV 15	fin.	1287.45	587	0.81	0	662	6423	9824	2066	7085		12.08	Si
SLV 16	ini.	554.64	9526	0.81	0	662	6423	9824	2066	7085		0.74	No
SLV 16	fin.	1301.75	656	0.81	0	662	6423	9824	2066	7085		10.8	Si
SLD 15	ini.	328.36	7051	0.81	0	662	6423	9824	2066	7085		1	Si
SLD 15	fin.	552.37	-1141	0.81	0	662	6423	9824	2066	7085		6.21	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.659	SLV 16	Si
V_SLV	0.715	SLV 14	No
PF_SLU	7.742	SLU 84	Si
V_SLU	0.866	SLU 83	No

Trave di accoppiamento 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.238	1.046	0.6	1.41	0.81	-12.238	1.046	0.6	1.41	0.81	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-105.1	-3569	-0.0000647	0.0002246	0.0035	0.81		1892.63	1892.63	No	18.01	Si
SLU 82	fin.	-1224.02	-5705	-0.0010389	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.55	Si
SLU 80	ini.	-92.02	-3491	-0.0000565	0.0002246	0.0035	0.81		1892.63	1892.63	No	20.57	Si
SLU 80	fin.	-1211.49	-5627	-0.0010247	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.56	Si
SLU 84	ini.	-104.37	-3608	-0.0000643	0.0002246	0.0035	0.81		1892.63	1892.63	No	18.13	Si
SLU 84	fin.	-1238.96	-5774	-0.001056	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.53	Si
SLU 78	ini.	-92.9	-3521	-0.0000571	0.0002246	0.0035	0.81		1892.63	1892.63	No	20.37	Si
SLU 78	fin.	-1221.5	-5676	-0.001036	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.55	Si
SLU 77	ini.	-93.82	-3528	-0.0000576	0.0002246	0.0035	0.81		1892.63	1892.63	No	20.17	Si
SLU 77	fin.	-1223.76	-5686	-0.0010386	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.55	Si
SLU 83	ini.	-105.29	-3615	-0.0000649	0.0002246	0.0035	0.81		1892.63	1892.63	No	17.98	Si
SLU 83	fin.	-1241.22	-5785	-0.0010586	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.52	Si
SLU 74	ini.	-94.55	-3490	-0.0000581	0.0002246	0.0035	0.81		1892.63	1892.63	No	20.02	Si
SLU 74	fin.	-1208.81	-5616	-0.0010216	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.57	Si
SLU 75	ini.	-93.63	-3483	-0.0000575	0.0002246	0.0035	0.81		1892.63	1892.63	No	20.21	Si
SLU 75	fin.	-1206.55	-5606	-0.0010191	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.57	Si
SLU 79	ini.	-92.94	-3498	-0.0000571	0.0002246	0.0035	0.81		1892.63	1892.63	No	20.36	Si
SLU 79	fin.	-1213.75	-5637	-0.0010272	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.56	Si
SLU 81	ini.	-106.02	-3576	-0.0000653	0.0002246	0.0035	0.81		1892.63	1892.63	No	17.85	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-1226.28	-5715	-0.0010415	0.0002246	0.0035	0.81		1892.63	1892.63	No	1.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-94.55	-2063	0.81	0	428	6423	6550	2066	6851	No	3.32	Si
SLU 74	fin.	-1208.81	-2508	0.81	0	428	6423	6550	2066	6851	No	2.73	Si
SLU 79	ini.	-92.94	-2078	0.81	0	428	6423	6550	2066	6851	No	3.3	Si
SLU 79	fin.	-1213.75	-2519	0.81	0	428	6423	6550	2066	6851	No	2.72	Si
SLU 83	ini.	-105.29	-2089	0.81	0	428	6423	6550	2066	6851	No	3.28	Si
SLU 83	fin.	-1241.22	-2570	0.81	0	428	6423	6550	2066	6851	No	2.67	Si
SLU 81	ini.	-106.02	-2052	0.81	0	428	6423	6550	2066	6851	No	3.34	Si
SLU 81	fin.	-1226.28	-2542	0.81	0	428	6423	6550	2066	6851	No	2.69	Si
SLU 84	ini.	-104.37	-2086	0.81	0	428	6423	6550	2066	6851	No	3.28	Si
SLU 84	fin.	-1238.96	-2567	0.81	0	428	6423	6550	2066	6851	No	2.67	Si
SLU 78	ini.	-92.9	-2097	0.81	0	428	6423	6550	2066	6851	No	3.27	Si
SLU 78	fin.	-1221.5	-2533	0.81	0	428	6423	6550	2066	6851	No	2.71	Si
SLU 80	ini.	-92.02	-2075	0.81	0	428	6423	6550	2066	6851	No	3.3	Si
SLU 80	fin.	-1211.49	-2517	0.81	0	428	6423	6550	2066	6851	No	2.72	Si
SLU 77	ini.	-93.82	-2100	0.81	0	428	6423	6550	2066	6851	No	3.26	Si
SLU 77	fin.	-1223.76	-2535	0.81	0	428	6423	6550	2066	6851	No	2.7	Si
SLU 82	ini.	-105.1	-2049	0.81	0	428	6423	6550	2066	6851	No	3.34	Si
SLU 82	fin.	-1224.02	-2539	0.81	0	428	6423	6550	2066	6851	No	2.7	Si
SLU 75	ini.	-93.63	-2060	0.81	0	428	6423	6550	2066	6851	No	3.32	Si
SLU 75	fin.	-1206.55	-2505	0.81	0	428	6423	6550	2066	6851	No	2.73	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3918.04	5046	-0.0065951	0.0003369	0.0035	0.81		2160.1	2160.1		0.55	No
SLV 2	fin.	-3636.78	-4940	-0.0059837	0.0003369	0.0035	0.81		2165.48	2165.48		0.6	No
SLV 15	ini.	-4025.08	-9762	-0.006801	0.0003369	0.0035	0.81		2165.48	2165.48		0.54	No
SLV 15	fin.	1973.42	-2728	-0.0019961	0.0003369	0.0035	0.81		2160.1	2160.1		1.09	Si
SLV 14	ini.	-4289.64	-10496	-0.0073437	0.0003369	0.0035	0.81		2165.48	2165.48		0.5	No
SLV 14	fin.	1656.65	-3634	-0.0014913	0.0003369	0.0035	0.81		2160.1	2160.1		1.3	Si
SLV 6	ini.	757.7	-1208	-0.0005336	0.0003369	0.0035	0.81		2160.1	2160.1		2.85	Si
SLV 6	fin.	-2162.36	-5527	-0.0023783	0.0003369	0.0035	0.81		2165.48	2165.48		1	Si
SLV 4	ini.	4166.93	5748	-0.0071105	0.0003369	0.0035	0.81		2160.1	2160.1		0.52	No
SLV 4	fin.	-3313.52	-4044	-0.0052847	0.0003369	0.0035	0.81		2165.48	2165.48		0.65	No
SLV 16	ini.	-4040.74	-9794	-0.0068334	0.0003369	0.0035	0.81		2165.48	2165.48		0.54	No
SLV 16	fin.	1979.92	-2738	-0.0020083	0.0003369	0.0035	0.81		2160.1	2160.1		1.09	Si
SLV 1	ini.	3933.7	5078	-0.0066278	0.0003369	0.0035	0.81		2160.1	2160.1		0.55	No
SLV 1	fin.	-3643.28	-4930	-0.0059977	0.0003369	0.0035	0.81		2165.48	2165.48		0.59	No
SLV 3	ini.	4182.6	5780	-0.0071426	0.0003369	0.0035	0.81		2160.1	2160.1		0.52	No
SLV 3	fin.	-3320.01	-4034	-0.005299	0.0003369	0.0035	0.81		2165.48	2165.48		0.65	No
SLV 13	ini.	-4273.98	-10465	-0.0073118	0.0003369	0.0035	0.81		2165.48	2165.48		0.51	No
SLV 13	fin.	1650.16	-3624	-0.0014824	0.0003369	0.0035	0.81		2160.1	2160.1		1.31	Si
SLV 5	ini.	767.9	-1187	-0.0005422	0.0003369	0.0035	0.81		2160.1	2160.1		2.81	Si
SLV 5	fin.	-2166.59	-5520	-0.0023879	0.0003369	0.0035	0.81		2165.48	2165.48		1	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	1750.93	-5994	0.81	0	642	6423	9824	2066	7065		1.18	Si
SLD 4	fin.	-1891.07	-6479	0.81	0	642	6423	9824	2066	7065		1.09	Si
SLV 14	ini.	-4289.64	9286	0.81	0	642	6423	9824	2066	7065		0.76	No
SLV 14	fin.	1656.65	9317	0.81	0	642	6423	9824	2066	7065		0.76	No
SLV 13	ini.	-4273.98	9252	0.81	0	642	6423	9824	2066	7065		0.76	No
SLV 13	fin.	1650.16	9282	0.81	0	642	6423	9824	2066	7065		0.76	No
SLV 4	ini.	4166.93	-12112	0.81	0	642	6423	9824	2066	7065		0.58	No
SLV 4	fin.	-3313.52	-12804	0.81	0	642	6423	9824	2066	7065		0.55	No
SLV 3	ini.	4182.6	-12147	0.81	0	642	6423	9824	2066	7065		0.58	No
SLV 3	fin.	-3320.01	-12839	0.81	0	642	6423	9824	2066	7065		0.55	No
SLV 15	ini.	-4025.08	10193	0.81	0	642	6423	9824	2066	7065		0.69	No
SLV 15	fin.	1973.42	9113	0.81	0	642	6423	9824	2066	7065		0.78	No
SLV 1	ini.	3933.7	-13088	0.81	0	642	6423	9824	2066	7065		0.54	No
SLV 1	fin.	-3643.28	-12670	0.81	0	642	6423	9824	2066	7065		0.56	No
SLD 3	ini.	1757.66	-6009	0.81	0	642	6423	9824	2066	7065		1.18	Si
SLD 3	fin.	-1893.86	-6494	0.81	0	642	6423	9824	2066	7065		1.09	Si
SLV 16	ini.	-4040.74	10228	0.81	0	642	6423	9824	2066	7065		0.69	No
SLV 16	fin.	1979.92	9148	0.81	0	642	6423	9824	2066	7065		0.77	No
SLV 2	ini.	3918.04	-13053	0.81	0	642	6423	9824	2066	7065		0.54	No
SLV 2	fin.	-3636.78	-12635	0.81	0	642	6423	9824	2066	7065		0.56	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.505	SLV 14	No
V_SLV	0.54	SLV 1	No
PF_SLU	1.525	SLU 83	Si
V_SLU	2.666	SLU 83	Si

Trave di accoppiamento 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.528	1.046	0.54	1.41	0.87	-7.428	1.046	0.54	1.41	0.87	0.9	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-0.35	-4540	-0.0000002	0.0002246	0.0035	0.87		2102.07	2102.07	No	5940.95	Si
SLU 84	fin.	-2100.45	-8132	-0.0018694	0.0002246	0.0035	0.87		2102.07	2102.07	No	1	Si
SLU 82	ini.	-7.24	-4497	-0.0000038	0.0002246	0.0035	0.87		2102.07	2102.07	No	290.33	Si
SLU 82	fin.	-2070.91	-8030	-0.0018242	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.02	Si
SLU 83	ini.	-3.62	-4548	-0.0000019	0.0002246	0.0035	0.87		2102.07	2102.07	No	581.38	Si
SLU 83	fin.	-2098.8	-8132	-0.0018668	0.0002246	0.0035	0.87		2102.07	2102.07	No	1	Si
SLU 78	ini.	34.68	-4375	-0.0000182	0.0002246	0.0035	0.87		2095.51	2095.51	No	60.42	Si
SLU 78	fin.	-2078.8	-7970	-0.0018361	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.01	Si
SLU 74	ini.	24.54	-4339	-0.0000129	0.0002246	0.0035	0.87		2095.51	2095.51	No	85.4	Si
SLU 74	fin.	-2047.61	-7868	-0.0017895	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.03	Si
SLU 77	ini.	31.42	-4382	-0.0000165	0.0002246	0.0035	0.87		2095.51	2095.51	No	66.69	Si
SLU 77	fin.	-2077.15	-7970	-0.0018336	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.01	Si
SLU 81	ini.	-10.5	-4505	-0.0000055	0.0002246	0.0035	0.87		2102.07	2102.07	No	200.16	Si
SLU 81	fin.	-2069.26	-8030	-0.0018217	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.02	Si
SLU 79	ini.	29.61	-4357	-0.0000156	0.0002246	0.0035	0.87		2095.51	2095.51	No	70.78	Si
SLU 79	fin.	-2066.43	-7921	-0.0018175	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.02	Si
SLU 80	ini.	32.87	-4350	-0.0000173	0.0002246	0.0035	0.87		2095.51	2095.51	No	63.76	Si
SLU 80	fin.	-2068.08	-7921	-0.00182	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.02	Si
SLU 75	ini.	27.8	-4332	-0.0000146	0.0002246	0.0035	0.87		2095.51	2095.51	No	75.38	Si
SLU 75	fin.	-2049.26	-7868	-0.0017919	0.0002246	0.0035	0.87		2102.07	2102.07	No	1.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-10.5	-2913	0.87	0	548	6899	7035	2219	7447	No	2.56	Si
SLU 81	fin.	-2069.26	-5206	0.87	0	548	6899	7035	2219	7447	No	1.43	Si
SLU 74	ini.	24.54	-2996	0.87	0	548	6899	7035	2219	7447	No	2.49	Si
SLU 74	fin.	-2047.61	-5160	0.87	0	548	6899	7035	2219	7447	No	1.44	Si
SLU 82	ini.	-7.24	-2922	0.87	0	548	6899	7035	2219	7447	No	2.55	Si
SLU 82	fin.	-2070.91	-5215	0.87	0	548	6899	7035	2219	7447	No	1.43	Si
SLU 79	ini.	29.61	-3040	0.87	0	548	6899	7035	2219	7447	No	2.45	Si
SLU 79	fin.	-2066.43	-5204	0.87	0	548	6899	7035	2219	7447	No	1.43	Si
SLU 75	ini.	27.8	-3005	0.87	0	548	6899	7035	2219	7447	No	2.48	Si
SLU 75	fin.	-2049.26	-5169	0.87	0	548	6899	7035	2219	7447	No	1.44	Si
SLU 80	ini.	32.87	-3049	0.87	0	548	6899	7035	2219	7447	No	2.44	Si
SLU 80	fin.	-2068.08	-5213	0.87	0	548	6899	7035	2219	7447	No	1.43	Si
SLU 77	ini.	31.42	-3065	0.87	0	548	6899	7035	2219	7447	No	2.43	Si
SLU 77	fin.	-2077.15	-5229	0.87	0	548	6899	7035	2219	7447	No	1.42	Si
SLU 78	ini.	34.68	-3074	0.87	0	548	6899	7035	2219	7447	No	2.42	Si
SLU 78	fin.	-2078.8	-5238	0.87	0	548	6899	7035	2219	7447	No	1.42	Si
SLU 83	ini.	-3.62	-2982	0.87	0	548	6899	7035	2219	7447	No	2.5	Si
SLU 83	fin.	-2098.8	-5275	0.87	0	548	6899	7035	2219	7447	No	1.41	Si
SLU 84	ini.	-0.35	-2991	0.87	0	548	6899	7035	2219	7447	No	2.49	Si
SLU 84	fin.	-2100.45	-5284	0.87	0	548	6899	7035	2219	7447	No	1.41	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-3082.75	-5752	-0.0037571	0.0003369	0.0035	0.87		2471.01	2471.01		0.8	No
SLV 14	fin.	3679.54	2440	-0.0050155	0.0003369	0.0035	0.87		2465.18	2465.18		0.67	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2733.55	-1245	-0.0029142	0.0003369	0.0035	0.87		2465.18	2465.18		0.9	No
SLV 1	fin.	-6432.35	-13713	-0.0098815	0.0003369	0.0035	0.87		2471.01	2471.01		0.38	No
SLD 3	ini.	1379.55	-1709	-0.0009432	0.0003369	0.0035	0.87		2465.18	2465.18		1.79	Si
SLD 3	fin.	-3611.04	-8761	-0.0048675	0.0003369	0.0035	0.87		2471.01	2471.01		0.68	No
SLD 1	ini.	1189.24	-2215	-0.0007786	0.0003369	0.0035	0.87		2465.18	2465.18		2.07	Si
SLD 1	fin.	-3565.62	-8960	-0.0047775	0.0003369	0.0035	0.87		2471.01	2471.01		0.69	No
SLD 4	ini.	1341.99	-1789	-0.0009097	0.0003369	0.0035	0.87		2465.18	2465.18		1.84	Si
SLD 4	fin.	-3584.7	-8746	-0.0048154	0.0003369	0.0035	0.87		2471.01	2471.01		0.69	No
SLV 16	ini.	-2650.89	-4605	-0.0027057	0.0003369	0.0035	0.87		2471.01	2471.01		0.93	No
SLV 16	fin.	3578.27	2898	-0.0048161	0.0003369	0.0035	0.87		2465.18	2465.18		0.69	No
SLV 3	ini.	3165.41	-98	-0.0039559	0.0003369	0.0035	0.87		2465.18	2465.18		0.78	No
SLV 3	fin.	-6533.61	-13255	-0.0100517	0.0003369	0.0035	0.87		2471.01	2471.01		0.38	No
SLV 2	ini.	2646.12	-1431	-0.002706	0.0003369	0.0035	0.87		2465.18	2465.18		0.93	No
SLV 2	fin.	-6371.04	-13678	-0.0097783	0.0003369	0.0035	0.87		2471.01	2471.01		0.39	No
SLV 13	ini.	-2995.31	-5566	-0.0035533	0.0003369	0.0035	0.87		2471.01	2471.01		0.82	No
SLV 13	fin.	3618.23	2405	-0.0048952	0.0003369	0.0035	0.87		2465.18	2465.18		0.68	No
SLV 4	ini.	3077.97	-284	-0.0037594	0.0003369	0.0035	0.87		2465.18	2465.18		0.8	No
SLV 4	fin.	-6472.31	-13220	-0.0099487	0.0003369	0.0035	0.87		2471.01	2471.01		0.38	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-2650.89	10852	0.87	0	823	6899	10552	2219	7721		0.71	No
SLV 16	fin.	3578.27	9775	0.87	0	823	6899	10552	2219	7721		0.79	No
SLV 4	ini.	3077.97	-16432	0.87	0	823	6899	10552	2219	7721		0.47	No
SLV 4	fin.	-6472.31	-17648	0.87	0	823	6899	10552	2219	7721		0.44	No
SLV 3	ini.	3165.41	-16704	0.87	0	823	6899	10552	2219	7721		0.46	No
SLV 3	fin.	-6533.61	-17921	0.87	0	823	6899	10552	2219	7721		0.43	No
SLV 2	ini.	2646.12	-14893	0.87	0	823	6899	10552	2219	7721		0.52	No
SLV 2	fin.	-6371.04	-16745	0.87	0	823	6899	10552	2219	7721		0.46	No
SLV 13	ini.	-2995.31	12119	0.87	0	823	6899	10552	2219	7721		0.64	No
SLV 13	fin.	3618.23	10406	0.87	0	823	6899	10552	2219	7721		0.74	No
SLD 3	ini.	1379.55	-8383	0.87	0	823	6899	10552	2219	7721		0.92	No
SLD 3	fin.	-3611.04	-9739	0.87	0	823	6899	10552	2219	7721		0.79	No
SLV 14	ini.	-3082.75	12392	0.87	0	823	6899	10552	2219	7721		0.62	No
SLV 14	fin.	3679.54	10678	0.87	0	823	6899	10552	2219	7721		0.72	No
SLD 4	ini.	1341.99	-8266	0.87	0	823	6899	10552	2219	7721		0.93	No
SLD 4	fin.	-3584.7	-9623	0.87	0	823	6899	10552	2219	7721		0.8	No
SLV 1	ini.	2733.55	-15165	0.87	0	823	6899	10552	2219	7721		0.51	No
SLV 1	fin.	-6432.35	-17017	0.87	0	823	6899	10552	2219	7721		0.45	No
SLV 15	ini.	-2563.46	10580	0.87	0	823	6899	10552	2219	7721		0.73	No
SLV 15	fin.	3516.96	9503	0.87	0	823	6899	10552	2219	7721		0.81	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.378	SLV 3	No
V_SLV	0.431	SLV 3	No
PF_SLU	1.001	SLU 84	Si
V_SLU	1.409	SLU 84	Si

Trave di accoppiamento 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.576	-1.56	0.44	2	-11.888	6.576	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	1838.47	-9966	-0.0001976	0.0001872	0.0035	2		10722.86	10722.86	No	5.83	Si
SLU 75	fin.	737.69	-9411	-0.0000752	0.0001872	0.0035	2		10722.86	10722.86	No	14.54	Si
SLU 84	ini.	1911.85	-10255	-0.0002063	0.0001872	0.0035	2		10722.86	10722.86	No	5.61	Si
SLU 84	fin.	765.42	-9672	-0.0000781	0.0001872	0.0035	2		10722.86	10722.86	No	14.01	Si
SLU 79	ini.	1828.71	-10029	-0.0001964	0.0001872	0.0035	2		10722.86	10722.86	No	5.86	Si
SLU 79	fin.	771.74	-9504	-0.0000787	0.0001872	0.0035	2		10722.86	10722.86	No	13.89	Si
SLU 80	ini.	1823.72	-9989	-0.0001958	0.0001872	0.0035	2		10722.86	10722.86	No	5.88	Si
SLU 80	fin.	758.01	-9458	-0.0000773	0.0001872	0.0035	2		10722.86	10722.86	No	14.15	Si
SLU 82	ini.	1902	-10154	-0.0002051	0.0001872	0.0035	2		10722.86	10722.86	No	5.64	Si
SLU 82	fin.	743.59	-9560	-0.0000758	0.0001872	0.0035	2		10722.86	10722.86	No	14.42	Si
SLU 77	ini.	1853.31	-10108	-0.0001993	0.0001872	0.0035	2		10722.86	10722.86	No	5.79	Si
SLU 77	fin.	773.25	-9569	-0.0000789	0.0001872	0.0035	2		10722.86	10722.86	No	13.87	Si
SLU 83	ini.	1916.84	-10295	-0.0002069	0.0001872	0.0035	2		10722.86	10722.86	No	5.59	Si
SLU 83	fin.	779.15	-9718	-0.0000795	0.0001872	0.0035	2		10722.86	10722.86	No	13.76	Si
SLU 74	ini.	1843.46	-10006	-0.0001982	0.0001872	0.0035	2		10722.86	10722.86	No	5.82	Si
SLU 74	fin.	751.43	-9457	-0.0000766	0.0001872	0.0035	2		10722.86	10722.86	No	14.27	Si
SLU 78	ini.	1848.33	-10068	-0.0001987	0.0001872	0.0035	2		10722.86	10722.86	No	5.8	Si
SLU 78	fin.	759.52	-9522	-0.0000775	0.0001872	0.0035	2		10722.86	10722.86	No	14.12	Si
SLU 81	ini.	1906.99	-10194	-0.0002057	0.0001872	0.0035	2		10722.86	10722.86	No	5.62	Si
SLU 81	fin.	757.32	-9606	-0.0000772	0.0001872	0.0035	2		10722.86	10722.86	No	14.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1916.84	-2922	2	0	1304	7930	13475	5100	9234	No	3.16	Si
SLU 83	fin.	779.15	-596	2	0	1304	7930	13475	5100	9234	No	15.49	Si
SLU 74	ini.	1843.46	-2775	2	0	1304	7930	13475	5100	9234	No	3.33	Si
SLU 74	fin.	751.43	-592	2	0	1304	7930	13475	5100	9234	No	15.59	Si
SLU 77	ini.	1853.31	-2776	2	0	1304	7930	13475	5100	9234	No	3.33	Si
SLU 77	fin.	773.25	-549	2	0	1304	7930	13475	5100	9234	No	16.81	Si
SLU 78	ini.	1848.33	-2797	2	0	1304	7930	13475	5100	9234	No	3.3	Si
SLU 78	fin.	759.52	-558	2	0	1304	7930	13475	5100	9234	No	16.56	Si
SLU 82	ini.	1902	-2942	2	0	1304	7930	13475	5100	9234	No	3.14	Si
SLU 82	fin.	743.59	-648	2	0	1304	7930	13475	5100	9234	No	14.25	Si
SLU 75	ini.	1838.47	-2796	2	0	1304	7930	13475	5100	9234	No	3.3	Si
SLU 75	fin.	737.69	-601	2	0	1304	7930	13475	5100	9234	No	15.37	Si
SLU 84	ini.	1911.85	-2943	2	0	1304	7930	13475	5100	9234	No	3.14	Si
SLU 84	fin.	765.42	-605	2	0	1304	7930	13475	5100	9234	No	15.27	Si
SLU 73	ini.	1800.7	-2756	2	0	1304	7930	13475	5100	9234	No	3.35	Si
SLU 73	fin.	705.2	-629	2	0	1304	7930	13475	5100	9234	No	14.69	Si
SLU 81	ini.	1906.99	-2921	2	0	1304	7930	13475	5100	9234	No	3.16	Si
SLU 81	fin.	757.32	-639	2	0	1304	7930	13475	5100	9234	No	14.44	Si
SLU 76	ini.	1810.55	-2757	2	0	1304	7930	13475	5100	9234	No	3.35	Si
SLU 76	fin.	727.02	-586	2	0	1304	7930	13475	5100	9234	No	15.77	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-2926.89	-5706	-0.0003199	0.0002807	0.0035	2		15648.46	15648.46		5.35	Si
SLV 4	fin.	4719.46	-10392	-0.0005606	0.0002807	0.0035	2		15635.95	15635.95		3.31	Si
SLV 13	ini.	5398.31	-8196	-0.0006614	0.0002807	0.0035	2		15635.95	15635.95		2.9	Si
SLV 13	fin.	-3707.83	-2797	-0.0004199	0.0002807	0.0035	2		15648.46	15648.46		4.22	Si
SLD 16	ini.	3192.76	-7938	-0.0003535	0.0002807	0.0035	2		15635.95	15635.95		4.9	Si
SLD 16	fin.	-1411.5	-5200	-0.0001456	0.0002807	0.0035	2		15648.46	15648.46		11.09	Si
SLV 2	ini.	-3055.49	-4786	-0.0003359	0.0002807	0.0035	2		15648.46	15648.46		5.12	Si
SLV 2	fin.	4703.68	-9544	-0.0005583	0.0002807	0.0035	2		15635.95	15635.95		3.32	Si
SLV 15	ini.	5526.92	-9116	-0.0006811	0.0002807	0.0035	2		15635.95	15635.95		2.83	Si
SLV 15	fin.	-3692.05	-3646	-0.0004178	0.0002807	0.0035	2		15648.46	15648.46		4.24	Si
SLV 1	ini.	-3339.74	-4655	-0.0003718	0.0002807	0.0035	2		15648.46	15648.46		4.69	Si
SLV 1	fin.	4987.5	-9866	-0.0005998	0.0002807	0.0035	2		15635.95	15635.95		3.14	Si
SLD 14	ini.	3136.4	-7535	-0.0003463	0.0002807	0.0035	2		15635.95	15635.95		4.99	Si
SLD 14	fin.	-1416.71	-4828	-0.0001462	0.0002807	0.0035	2		15648.46	15648.46		11.05	Si
SLV 14	ini.	5682.56	-8328	-0.0007052	0.0002807	0.0035	2		15635.95	15635.95		2.75	Si
SLV 14	fin.	-3991.65	-2475	-0.000458	0.0002807	0.0035	2		15648.46	15648.46		3.92	Si
SLV 16	ini.	5811.16	-9248	-0.0007254	0.0002807	0.0035	2		15635.95	15635.95		2.69	Si
SLV 16	fin.	-3975.87	-3323	-0.0004559	0.0002807	0.0035	2		15648.46	15648.46		3.94	Si
SLV 3	ini.	-3211.14	-5575	-0.0003555	0.0002807	0.0035	2		15648.46	15648.46		4.87	Si
SLV 3	fin.	5003.27	-10715	-0.0006021	0.0002807	0.0035	2		15635.95	15635.95		3.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	3136.4	-7930	2	0	1957	7930	20213	5100	9886		1.25	Si
SLD 14	fin.	-1416.71	-6634	2	0	1957	7930	20213	5100	9886		1.49	Si
SLV 3	ini.	-3211.14	12593	2	0	1957	7930	20213	5100	9886		0.79	No
SLV 3	fin.	5003.27	14004	2	0	1957	7930	20213	5100	9886		0.71	No
SLV 14	ini.	5682.56	-16155	2	0	1957	7930	20213	5100	9886		0.61	No
SLV 14	fin.	-3991.65	-14905	2	0	1957	7930	20213	5100	9886		0.66	No
SLD 16	ini.	3192.76	-7939	2	0	1957	7930	20213	5100	9886		1.25	Si
SLD 16	fin.	-1411.5	-6545	2	0	1957	7930	20213	5100	9886		1.51	Si
SLV 16	ini.	5811.16	-16183	2	0	1957	7930	20213	5100	9886		0.61	No
SLV 16	fin.	-3975.87	-14702	2	0	1957	7930	20213	5100	9886		0.67	No
SLV 1	ini.	-3339.74	12620	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 1	fin.	4987.5	13801	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 4	ini.	-2926.89	11591	2	0	1957	7930	20213	5100	9886		0.85	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	4719.46	12991	2	0	1957	7930	20213	5100	9886		0.76	No
SLV 13	ini.	5398.31	-15154	2	0	1957	7930	20213	5100	9886		0.65	No
SLV 13	fin.	-3707.83	-13892	2	0	1957	7930	20213	5100	9886		0.71	No
SLV 15	ini.	5526.92	-15181	2	0	1957	7930	20213	5100	9886		0.65	No
SLV 15	fin.	-3692.05	-13689	2	0	1957	7930	20213	5100	9886		0.72	No
SLV 2	ini.	-3055.49	11619	2	0	1957	7930	20213	5100	9886		0.85	No
SLV 2	fin.	4703.68	12788	2	0	1957	7930	20213	5100	9886		0.77	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.691	SLV 16	Si
V_SLV	0.611	SLV 16	No
PF_SLU	5.594	SLU 83	Si
V_SLU	3.137	SLU 84	Si

Trave di accoppiamento 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.576	-1.56	0.44	2	-7.008	6.576	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-1990.06	-5776	-0.0002155	0.0001872	0.0035	2		10737.13	10737.13	No	5.4	Si
SLU 79	fin.	4234.87	-7601	-0.0005215	0.0001872	0.0035	2		10722.86	10722.86	No	2.53	Si
SLU 77	ini.	-2000.97	-5824	-0.0002168	0.0001872	0.0035	2		10737.13	10737.13	No	5.37	Si
SLU 77	fin.	4265.51	-7659	-0.0005261	0.0001872	0.0035	2		10722.86	10722.86	No	2.51	Si
SLU 82	ini.	-2019.9	-5837	-0.0002191	0.0001872	0.0035	2		10737.13	10737.13	No	5.32	Si
SLU 82	fin.	4278.44	-7667	-0.0005281	0.0001872	0.0035	2		10722.86	10722.86	No	2.51	Si
SLU 74	ini.	-1990.77	-5755	-0.0002156	0.0001872	0.0035	2		10737.13	10737.13	No	5.39	Si
SLU 74	fin.	4227.97	-7580	-0.0005205	0.0001872	0.0035	2		10722.86	10722.86	No	2.54	Si
SLU 81	ini.	-2007.93	-5875	-0.0002177	0.0001872	0.0035	2		10737.13	10737.13	No	5.35	Si
SLU 81	fin.	4300.46	-7721	-0.0005314	0.0001872	0.0035	2		10722.86	10722.86	No	2.49	Si
SLU 78	ini.	-2012.94	-5786	-0.0002183	0.0001872	0.0035	2		10737.13	10737.13	No	5.33	Si
SLU 78	fin.	4243.5	-7605	-0.0005228	0.0001872	0.0035	2		10722.86	10722.86	No	2.53	Si
SLU 80	ini.	-2002.03	-5738	-0.0002169	0.0001872	0.0035	2		10737.13	10737.13	No	5.36	Si
SLU 80	fin.	4212.85	-7547	-0.0005182	0.0001872	0.0035	2		10722.86	10722.86	No	2.55	Si
SLU 83	ini.	-2018.13	-5944	-0.0002189	0.0001872	0.0035	2		10737.13	10737.13	No	5.32	Si
SLU 83	fin.	4338	-7800	-0.0005371	0.0001872	0.0035	2		10722.86	10722.86	No	2.47	Si
SLU 84	ini.	-2030.1	-5906	-0.0002203	0.0001872	0.0035	2		10737.13	10737.13	No	5.29	Si
SLU 84	fin.	4315.99	-7747	-0.0005337	0.0001872	0.0035	2		10722.86	10722.86	No	2.48	Si
SLU 75	ini.	-2002.74	-5717	-0.000217	0.0001872	0.0035	2		10737.13	10737.13	No	5.36	Si
SLU 75	fin.	4205.95	-7526	-0.0005172	0.0001872	0.0035	2		10722.86	10722.86	No	2.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1990.77	7362	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 74	fin.	4227.97	9049	2	0	1304	7930	13475	5100	9234	No	1.02	Si
SLU 84	ini.	-2030.1	7444	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 84	fin.	4315.99	9261	2	0	1304	7930	13475	5100	9234	No	1	No
SLU 75	ini.	-2002.74	7332	2	0	1304	7930	13475	5100	9234	No	1.26	Si
SLU 75	fin.	4205.95	9027	2	0	1304	7930	13475	5100	9234	No	1.02	Si
SLU 77	ini.	-2000.97	7400	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 77	fin.	4265.51	9127	2	0	1304	7930	13475	5100	9234	No	1.01	Si
SLU 79	ini.	-1990.06	7362	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 79	fin.	4234.87	9061	2	0	1304	7930	13475	5100	9234	No	1.02	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-2007.93	7436	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 81	fin.	4300.46	9204	2	0	1304	7930	13475	5100	9234	No	1	Si
SLU 78	ini.	-2012.94	7370	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 78	fin.	4243.5	9106	2	0	1304	7930	13475	5100	9234	No	1.01	Si
SLU 82	ini.	-2019.9	7405	2	0	1304	7930	13475	5100	9234	No	1.25	Si
SLU 82	fin.	4278.44	9182	2	0	1304	7930	13475	5100	9234	No	1.01	Si
SLU 83	ini.	-2018.13	7474	2	0	1304	7930	13475	5100	9234	No	1.24	Si
SLU 83	fin.	4338	9282	2	0	1304	7930	13475	5100	9234	No	0.99	No
SLU 80	ini.	-2002.03	7332	2	0	1304	7930	13475	5100	9234	No	1.26	Si
SLU 80	fin.	4212.85	9040	2	0	1304	7930	13475	5100	9234	No	1.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-5000.06	1511	-0.000601	0.0002807	0.0035	2		15648.46	15648.46		3.13	Si
SLV 1	fin.	6667.34	-4771	-0.0008646	0.0002807	0.0035	2		15635.95	15635.95		2.35	Si
SLD 1	ini.	-2969.43	-1607	-0.0003252	0.0002807	0.0035	2		15648.46	15648.46		5.27	Si
SLD 1	fin.	4550.4	-5052	-0.0005363	0.0002807	0.0035	2		15635.95	15635.95		3.44	Si
SLV 4	ini.	-4525.14	193	-0.0005322	0.0002807	0.0035	2		15648.46	15648.46		3.46	Si
SLV 4	fin.	6230.49	-5445	-0.0007924	0.0002807	0.0035	2		15635.95	15635.95		2.51	Si
SLV 5	ini.	-2821.37	-679	-0.000307	0.0002807	0.0035	2		15648.46	15648.46		5.55	Si
SLV 5	fin.	4369.45	-3896	-0.0005107	0.0002807	0.0035	2		15635.95	15635.95		3.58	Si
SLV 6	ini.	-2619.81	-860	-0.0002827	0.0002807	0.0035	2		15648.46	15648.46		5.97	Si
SLV 6	fin.	4190.12	-3799	-0.0004857	0.0002807	0.0035	2		15635.95	15635.95		3.73	Si
SLD 3	ini.	-2896.99	-2063	-0.0003163	0.0002807	0.0035	2		15648.46	15648.46		5.4	Si
SLD 3	fin.	4478.12	-5411	-0.0005261	0.0002807	0.0035	2		15635.95	15635.95		3.49	Si
SLD 2	ini.	-2836.56	-1726	-0.0003089	0.0002807	0.0035	2		15648.46	15648.46		5.52	Si
SLD 2	fin.	4432.19	-4988	-0.0005196	0.0002807	0.0035	2		15635.95	15635.95		3.53	Si
SLD 4	ini.	-2764.12	-2182	-0.0003	0.0002807	0.0035	2		15648.46	15648.46		5.66	Si
SLD 4	fin.	4359.91	-5347	-0.0005094	0.0002807	0.0035	2		15635.95	15635.95		3.59	Si
SLV 2	ini.	-4690.72	1235	-0.0005559	0.0002807	0.0035	2		15648.46	15648.46		3.34	Si
SLV 2	fin.	6392.11	-4623	-0.0008188	0.0002807	0.0035	2		15635.95	15635.95		2.45	Si
SLV 3	ini.	-4834.48	470	-0.0005767	0.0002807	0.0035	2		15648.46	15648.46		3.24	Si
SLV 3	fin.	6505.72	-5594	-0.0008376	0.0002807	0.0035	2		15635.95	15635.95		2.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-4834.48	17079	2	0	1957	7930	20213	5100	9886		0.58	No
SLV 3	fin.	6505.72	17627	2	0	1957	7930	20213	5100	9886		0.56	No
SLV 2	ini.	-4690.72	16081	2	0	1957	7930	20213	5100	9886		0.61	No
SLV 2	fin.	6392.11	15886	2	0	1957	7930	20213	5100	9886		0.62	No
SLV 8	ini.	-2067.88	8462	2	0	1957	7930	20213	5100	9886		1.17	Si
SLV 8	fin.	3651.38	10442	2	0	1957	7930	20213	5100	9886		0.95	No
SLD 3	ini.	-2896.99	10363	2	0	1957	7930	20213	5100	9886		0.95	No
SLD 3	fin.	4478.12	11176	2	0	1957	7930	20213	5100	9886		0.88	No
SLD 4	ini.	-2764.12	9949	2	0	1957	7930	20213	5100	9886		0.99	No
SLD 4	fin.	4359.91	10759	2	0	1957	7930	20213	5100	9886		0.92	No
SLV 4	ini.	-4525.14	16114	2	0	1957	7930	20213	5100	9886		0.61	No
SLV 4	fin.	6230.49	16657	2	0	1957	7930	20213	5100	9886		0.59	No
SLD 1	ini.	-2969.43	10352	2	0	1957	7930	20213	5100	9886		0.95	No
SLD 1	fin.	4550.4	10844	2	0	1957	7930	20213	5100	9886		0.91	No
SLV 1	ini.	-5000.06	17046	2	0	1957	7930	20213	5100	9886		0.58	No
SLV 1	fin.	6667.34	16856	2	0	1957	7930	20213	5100	9886		0.59	No
SLD 2	ini.	-2836.56	9938	2	0	1957	7930	20213	5100	9886		0.99	No
SLD 2	fin.	4432.19	10427	2	0	1957	7930	20213	5100	9886		0.95	No
SLV 7	ini.	-2269.44	9091	2	0	1957	7930	20213	5100	9886		1.09	Si
SLV 7	fin.	3830.71	11074	2	0	1957	7930	20213	5100	9886		0.89	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.345	SLV 1	Si
V_SLV	0.561	SLV 3	No
PF_SLU	2.472	SLU 83	Si
V_SLU	0.995	SLU 83	No

Trave di accoppiamento 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-10.553	-3.284	0.49	1.41	0.92	-8.253	-3.284	0.49	1.41	0.92	2.3	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-788.12	-1323	-0.0004448	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.94	Si
SLU 74	fin.	-1668.9	-5599	-0.0011498	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.39	Si
SLU 80	ini.	-794.17	-1338	-0.0004489	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.92	Si
SLU 80	fin.	-1675.95	-5626	-0.0011564	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.38	Si
SLU 78	ini.	-793.99	-1336	-0.0004488	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.92	Si
SLU 78	fin.	-1688.33	-5672	-0.0011682	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.37	Si
SLU 81	ini.	-813.87	-1354	-0.0004624	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.85	Si
SLU 81	fin.	-1725.39	-5764	-0.0012037	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.34	Si
SLU 83	ini.	-817.79	-1360	-0.0004651	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.83	Si
SLU 83	fin.	-1747.68	-5843	-0.0012254	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.33	Si
SLU 75	ini.	-790.06	-1330	-0.0004461	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.93	Si
SLU 75	fin.	-1666.03	-5592	-0.0011471	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.39	Si
SLU 77	ini.	-792.05	-1329	-0.0004475	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.93	Si
SLU 77	fin.	-1691.2	-5678	-0.0011709	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.37	Si
SLU 79	ini.	-792.22	-1331	-0.0004476	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.92	Si
SLU 79	fin.	-1678.83	-5633	-0.0011591	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.38	Si
SLU 82	ini.	-815.81	-1362	-0.0004637	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.84	Si
SLU 82	fin.	-1722.51	-5757	-0.0012009	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.35	Si
SLU 84	ini.	-819.74	-1367	-0.0004664	0.0001872	0.0035	0.92		2316.83	2316.83	No	2.83	Si
SLU 84	fin.	-1744.81	-5837	-0.0012226	0.0001872	0.0035	0.92		2316.83	2316.83	No	1.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-792.22	5685	0.92	0	400	7295	6199	2346	7695	No	1.35	Si
SLU 79	fin.	-1678.83	-9252	0.92	0	400	7295	6199	2346	7695	No	0.83	No
SLU 78	ini.	-793.99	5710	0.92	0	400	7295	6199	2346	7695	No	1.35	Si
SLU 78	fin.	-1688.33	-9311	0.92	0	400	7295	6199	2346	7695	No	0.83	No
SLU 83	ini.	-817.79	5877	0.92	0	400	7295	6199	2346	7695	No	1.31	Si
SLU 83	fin.	-1747.68	-9604	0.92	0	400	7295	6199	2346	7695	No	0.8	No
SLU 81	ini.	-813.87	5823	0.92	0	400	7295	6199	2346	7695	No	1.32	Si
SLU 81	fin.	-1725.39	-9490	0.92	0	400	7295	6199	2346	7695	No	0.81	No
SLU 74	ini.	-788.12	5654	0.92	0	400	7295	6199	2346	7695	No	1.36	Si
SLU 74	fin.	-1668.9	-9202	0.92	0	400	7295	6199	2346	7695	No	0.84	No
SLU 80	ini.	-794.17	5686	0.92	0	400	7295	6199	2346	7695	No	1.35	Si
SLU 80	fin.	-1675.95	-9247	0.92	0	400	7295	6199	2346	7695	No	0.83	No
SLU 82	ini.	-815.81	5824	0.92	0	400	7295	6199	2346	7695	No	1.32	Si
SLU 82	fin.	-1722.51	-9485	0.92	0	400	7295	6199	2346	7695	No	0.81	No
SLU 77	ini.	-792.05	5709	0.92	0	400	7295	6199	2346	7695	No	1.35	Si
SLU 77	fin.	-1691.2	-9316	0.92	0	400	7295	6199	2346	7695	No	0.83	No
SLU 75	ini.	-790.06	5656	0.92	0	400	7295	6199	2346	7695	No	1.36	Si
SLU 75	fin.	-1666.03	-9197	0.92	0	400	7295	6199	2346	7695	No	0.84	No
SLU 84	ini.	-819.74	5879	0.92	0	400	7295	6199	2346	7695	No	1.31	Si
SLU 84	fin.	-1744.81	-9599	0.92	0	400	7295	6199	2346	7695	No	0.8	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	266.71	1916	-0.0001293	0.0002807	0.0035	0.92		3322.54	3322.54		12.46	Si
SLD 13	fin.	-2278.63	-6457	-0.0016976	0.0002807	0.0035	0.92		3328.52	3328.52		1.46	Si
SLV 2	ini.	-2229.47	-7168	-0.0016387	0.0002807	0.0035	0.92		3328.52	3328.52		1.49	Si
SLV 2	fin.	1398.74	2100	-0.0008537	0.0002807	0.0035	0.92		3322.54	3322.54		2.38	Si
SLV 13	ini.	1367.71	5749	-0.0008293	0.0002807	0.0035	0.92		3322.54	3322.54		2.43	Si
SLV 13	fin.	-3818.23	-10042	-0.0046261	0.0002807	0.0035	0.92		3328.52	3328.52		0.87	No
SLV 3	ini.	-2390.75	-7261	-0.0018406	0.0002807	0.0035	0.92		3328.52	3328.52		1.39	Si
SLV 3	fin.	1459.2	2319	-0.0009019	0.0002807	0.0035	0.92		3322.54	3322.54		2.28	Si
SLV 16	ini.	1049.68	4923	-0.0005949	0.0002807	0.0035	0.92		3322.54	3322.54		3.17	Si
SLV 16	fin.	-3546.24	-9501	-0.0041069	0.0002807	0.0035	0.92		3328.52	3328.52		0.94	No
SLV 15	ini.	1128.06	5290	-0.0006502	0.0002807	0.0035	0.92		3322.54	3322.54		2.95	Si
SLV 15	fin.	-3652	-9662	-0.004313	0.0002807	0.0035	0.92		3328.52	3328.52		0.91	No
SLV 4	ini.	-2469.13	-7628	-0.0019489	0.0002807	0.0035	0.92		3328.52	3328.52		1.35	Si
SLV 4	fin.	1564.96	2480	-0.0009891	0.0002807	0.0035	0.92		3322.54	3322.54		2.12	Si
SLD 14	ini.	233.04	1758	-0.0001124	0.0002807	0.0035	0.92		3322.54	3322.54		14.26	Si
SLD 14	fin.	-2233.2	-6388	-0.0016431	0.0002807	0.0035	0.92		3328.52	3328.52		1.49	Si
SLV 9	ini.	402.07	1829	-0.0001993	0.0002807	0.0035	0.92		3322.54	3322.54		8.26	Si
SLV 9	fin.	-2204.82	-6264	-0.00161	0.0002807	0.0035	0.92		3328.52	3328.52		1.51	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1289.33	5382	-0.000769	0.0002807	0.0035	0.92		3322.54	3322.54		2.58	Si
SLV 14	fin.	-3712.47	-9881	-0.0044282	0.0002807	0.0035	0.92		3328.52	3328.52		0.9	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	1049.68	2809	0.92	0	600	7295	9298	2346	7895		2.81	Si
SLV 16	fin.	-3546.24	-12041	0.92	0	600	7295	9298	2346	7895		0.66	No
SLD 15	ini.	169.06	3414	0.92	0	600	7295	9298	2346	7895		2.31	Si
SLD 15	fin.	-2204.64	-8818	0.92	0	600	7295	9298	2346	7895		0.9	No
SLV 15	ini.	1128.06	2783	0.92	0	600	7295	9298	2346	7895		2.84	Si
SLV 15	fin.	-3652	-12267	0.92	0	600	7295	9298	2346	7895		0.64	No
SLV 10	ini.	351	1981	0.92	0	600	7295	9298	2346	7895		3.98	Si
SLV 10	fin.	-2135.9	-9593	0.92	0	600	7295	9298	2346	7895		0.82	No
SLD 16	ini.	135.4	3425	0.92	0	600	7295	9298	2346	7895		2.31	Si
SLD 16	fin.	-2159.22	-8720	0.92	0	600	7295	9298	2346	7895		0.91	No
SLD 14	ini.	233.04	3069	0.92	0	600	7295	9298	2346	7895		2.57	Si
SLD 14	fin.	-2233.2	-9094	0.92	0	600	7295	9298	2346	7895		0.87	No
SLV 14	ini.	1289.33	1931	0.92	0	600	7295	9298	2346	7895		4.09	Si
SLV 14	fin.	-3712.47	-12954	0.92	0	600	7295	9298	2346	7895		0.61	No
SLV 13	ini.	1367.71	1905	0.92	0	600	7295	9298	2346	7895		4.14	Si
SLV 13	fin.	-3818.23	-13180	0.92	0	600	7295	9298	2346	7895		0.6	No
SLD 13	ini.	266.71	3058	0.92	0	600	7295	9298	2346	7895		2.58	Si
SLD 13	fin.	-2278.63	-9192	0.92	0	600	7295	9298	2346	7895		0.86	No
SLV 9	ini.	402.07	1964	0.92	0	600	7295	9298	2346	7895		4.02	Si
SLV 9	fin.	-2204.82	-9740	0.92	0	600	7295	9298	2346	7895		0.81	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.872	SLV 13	No
V_SLV	0.599	SLV 13	No
PF_SLU	1.326	SLU 83	Si
V_SLU	0.801	SLU 83	No

Trave di accoppiamento 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.463	-3.284	-1.56	0.44	2	-6.463	-3.284	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	812.2	-15478	-0.000083	0.0001872	0.0035	2		10722.86	10722.86	No	13.2	Si
SLU 82	fin.	166.84	-9770	-0.0000166	0.0001872	0.0035	2		10722.86	10722.86	No	64.27	Si
SLU 58	ini.	754.7	-14071	-0.0000769	0.0001872	0.0035	2		10722.86	10722.86	No	14.21	Si
SLU 58	fin.	41.64	-8703	-0.0000041	0.0001872	0.0035	2		10722.86	10722.86	No	257.51	Si
SLU 81	ini.	815.91	-15487	-0.0000834	0.0001872	0.0035	2		10722.86	10722.86	No	13.14	Si
SLU 81	fin.	168.35	-9770	-0.0000168	0.0001872	0.0035	2		10722.86	10722.86	No	63.69	Si
SLU 61	ini.	825.16	-14331	-0.0000844	0.0001872	0.0035	2		10722.86	10722.86	No	12.99	Si
SLU 61	fin.	47.59	-8855	-0.0000047	0.0001872	0.0035	2		10722.86	10722.86	No	225.3	Si
SLU 63	ini.	831.29	-14505	-0.000085	0.0001872	0.0035	2		10722.86	10722.86	No	12.9	Si
SLU 63	fin.	59.56	-8978	-0.0000059	0.0001872	0.0035	2		10722.86	10722.86	No	180.04	Si
SLU 83	ini.	822.04	-15660	-0.0000841	0.0001872	0.0035	2		10722.86	10722.86	No	13.04	Si
SLU 83	fin.	180.32	-9893	-0.000018	0.0001872	0.0035	2		10722.86	10722.86	No	59.47	Si
SLU 62	ini.	835	-14513	-0.0000854	0.0001872	0.0035	2		10722.86	10722.86	No	12.84	Si
SLU 62	fin.	61.08	-8978	-0.0000061	0.0001872	0.0035	2		10722.86	10722.86	No	175.57	Si
SLU 60	ini.	828.87	-14340	-0.0000848	0.0001872	0.0035	2		10722.86	10722.86	No	12.94	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	fin.	49.11	-8855	-0.0000049	0.0001872	0.0035	2		10722.86	10722.86	No	218.33	Si
SLU 56	ini.	755.17	-14164	-0.000077	0.0001872	0.0035	2		10722.86	10722.86	No	14.2	Si
SLU 56	fin.	52.64	-8776	-0.0000052	0.0001872	0.0035	2		10722.86	10722.86	No	203.69	Si
SLU 84	ini.	818.33	-15652	-0.0000837	0.0001872	0.0035	2		10722.86	10722.86	No	13.1	Si
SLU 84	fin.	178.8	-9893	-0.0000178	0.0001872	0.0035	2		10722.86	10722.86	No	59.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	812.2	-6579	2	0	1304	7930	13475	5100	9234	No	1.4	Si
SLU 82	fin.	166.84	-5543	2	0	1304	7930	13475	5100	9234	No	1.67	Si
SLU 83	ini.	822.04	-6648	2	0	1304	7930	13475	5100	9234	No	1.39	Si
SLU 83	fin.	180.32	-5581	2	0	1304	7930	13475	5100	9234	No	1.65	Si
SLU 62	ini.	835	-6461	2	0	1304	7930	13475	5100	9234	No	1.43	Si
SLU 62	fin.	61.08	-5594	2	0	1304	7930	13475	5100	9234	No	1.65	Si
SLU 63	ini.	831.29	-6449	2	0	1304	7930	13475	5100	9234	No	1.43	Si
SLU 63	fin.	59.56	-5584	2	0	1304	7930	13475	5100	9234	No	1.65	Si
SLU 78	ini.	738.51	-6395	2	0	1304	7930	13475	5100	9234	No	1.44	Si
SLU 78	fin.	170.37	-5383	2	0	1304	7930	13475	5100	9234	No	1.72	Si
SLU 84	ini.	818.33	-6636	2	0	1304	7930	13475	5100	9234	No	1.39	Si
SLU 84	fin.	178.8	-5571	2	0	1304	7930	13475	5100	9234	No	1.66	Si
SLU 81	ini.	815.91	-6591	2	0	1304	7930	13475	5100	9234	No	1.4	Si
SLU 81	fin.	168.35	-5554	2	0	1304	7930	13475	5100	9234	No	1.66	Si
SLU 61	ini.	825.16	-6393	2	0	1304	7930	13475	5100	9234	No	1.44	Si
SLU 61	fin.	47.59	-5556	2	0	1304	7930	13475	5100	9234	No	1.66	Si
SLU 60	ini.	828.87	-6404	2	0	1304	7930	13475	5100	9234	No	1.44	Si
SLU 60	fin.	49.11	-5566	2	0	1304	7930	13475	5100	9234	No	1.66	Si
SLU 77	ini.	742.21	-6407	2	0	1304	7930	13475	5100	9234	No	1.44	Si
SLU 77	fin.	171.89	-5394	2	0	1304	7930	13475	5100	9234	No	1.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	5535.41	-20319	-0.0006824	0.0002807	0.0035	2		15635.95	15635.95		2.82	Si
SLV 14	fin.	-2015.75	-6781	-0.0002124	0.0002807	0.0035	2		15648.46	15648.46		7.76	Si
SLV 15	ini.	6243.42	-20786	-0.0007945	0.0002807	0.0035	2		15635.95	15635.95		2.5	Si
SLV 15	fin.	-2675.97	-5375	-0.0002894	0.0002807	0.0035	2		15648.46	15648.46		5.85	Si
SLV 4	ini.	-4978.51	-189	-0.0005979	0.0002807	0.0035	2		15648.46	15648.46		3.14	Si
SLV 4	fin.	2358.44	-6760	-0.000252	0.0002807	0.0035	2		15635.95	15635.95		6.63	Si
SLD 13	ini.	2793.29	-14897	-0.0003039	0.0002807	0.0035	2		15635.95	15635.95		5.6	Si
SLD 13	fin.	-942.31	-6471	-0.0000958	0.0002807	0.0035	2		15648.46	15648.46		16.61	Si
SLV 3	ini.	-4602.45	-665	-0.0005432	0.0002807	0.0035	2		15648.46	15648.46		3.4	Si
SLV 3	fin.	2103.18	-6333	-0.0002226	0.0002807	0.0035	2		15635.95	15635.95		7.43	Si
SLV 2	ini.	-5310.46	-198	-0.0006474	0.0002807	0.0035	2		15648.46	15648.46		2.95	Si
SLV 2	fin.	2763.4	-7740	-0.0003002	0.0002807	0.0035	2		15635.95	15635.95		5.66	Si
SLV 13	ini.	5911.47	-20795	-0.0007412	0.0002807	0.0035	2		15635.95	15635.95		2.65	Si
SLV 13	fin.	-2271	-6355	-0.0002417	0.0002807	0.0035	2		15648.46	15648.46		6.89	Si
SLV 1	ini.	-4934.41	-674	-0.0005914	0.0002807	0.0035	2		15648.46	15648.46		3.17	Si
SLV 1	fin.	2508.15	-7313	-0.0002696	0.0002807	0.0035	2		15635.95	15635.95		6.23	Si
SLD 15	ini.	2938.16	-14892	-0.0003216	0.0002807	0.0035	2		15635.95	15635.95		5.32	Si
SLD 15	fin.	-1121.68	-6051	-0.0001146	0.0002807	0.0035	2		15648.46	15648.46		13.95	Si
SLV 16	ini.	5867.36	-20310	-0.0007342	0.0002807	0.0035	2		15635.95	15635.95		2.66	Si
SLV 16	fin.	-2420.71	-5801	-0.0002591	0.0002807	0.0035	2		15648.46	15648.46		6.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	5911.47	-22422	2	0	1957	7930	20213	5100	9886		0.44	No
SLV 13	fin.	-2271	-21905	2	0	1957	7930	20213	5100	9886		0.45	No
SLV 1	ini.	-4934.41	13848	2	0	1957	7930	20213	5100	9886		0.71	No
SLV 1	fin.	2508.15	13747	2	0	1957	7930	20213	5100	9886		0.72	No
SLD 15	ini.	2938.16	-12898	2	0	1957	7930	20213	5100	9886		0.77	No
SLD 15	fin.	-1121.68	-12056	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 2	ini.	-5310.46	15364	2	0	1957	7930	20213	5100	9886		0.64	No
SLV 2	fin.	2763.4	15275	2	0	1957	7930	20213	5100	9886		0.65	No
SLV 11	ini.	2769.13	-13392	2	0	1957	7930	20213	5100	9886		0.74	No
SLV 11	fin.	-1431.25	-11546	2	0	1957	7930	20213	5100	9886		0.86	No
SLV 4	ini.	-4978.51	13551	2	0	1957	7930	20213	5100	9886		0.73	No
SLV 4	fin.	2358.44	14174	2	0	1957	7930	20213	5100	9886		0.7	No
SLV 3	ini.	-4602.45	12035	2	0	1957	7930	20213	5100	9886		0.82	No
SLV 3	fin.	2103.18	12646	2	0	1957	7930	20213	5100	9886		0.78	No
SLV 14	ini.	5535.41	-20906	2	0	1957	7930	20213	5100	9886		0.47	No
SLV 14	fin.	-2015.75	-20377	2	0	1957	7930	20213	5100	9886		0.49	No
SLV 16	ini.	5867.36	-22719	2	0	1957	7930	20213	5100	9886		0.44	No
SLV 16	fin.	-2420.71	-21478	2	0	1957	7930	20213	5100	9886		0.46	No
SLV 15	ini.	6243.42	-24235	2	0	1957	7930	20213	5100	9886		0.41	No
SLV 15	fin.	-2675.97	-23006	2	0	1957	7930	20213	5100	9886		0.43	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.504	SLV 15	Si
V_SLV	0.408	SLV 15	No
PF_SLU	12.842	SLU 62	Si
V_SLU	1.389	SLU 83	Si

Trave di accoppiamento 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.233	-3.284	-1.56	0.44	2	-2.233	-3.284	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-109.53	-3023	-0.0000109	0.0001872	0.0035	2		10737.13	10737.13	No	98.03	Si
SLU 82	fin.	2098.51	-3988	-0.0002289	0.0001872	0.0035	2		10722.86	10722.86	No	5.11	Si
SLU 81	ini.	-105.83	-3030	-0.0000105	0.0001872	0.0035	2		10737.13	10737.13	No	101.45	Si
SLU 81	fin.	2092.1	-3987	-0.0002281	0.0001872	0.0035	2		10722.86	10722.86	No	5.13	Si
SLU 79	ini.	-130.42	-2990	-0.000013	0.0001872	0.0035	2		10737.13	10737.13	No	82.33	Si
SLU 79	fin.	2105.06	-3980	-0.0002297	0.0001872	0.0035	2		10722.86	10722.86	No	5.09	Si
SLU 75	ini.	-134.1	-2967	-0.0000133	0.0001872	0.0035	2		10737.13	10737.13	No	80.07	Si
SLU 75	fin.	2096.37	-3959	-0.0002286	0.0001872	0.0035	2		10722.86	10722.86	No	5.11	Si
SLU 78	ini.	-136.55	-3013	-0.0000136	0.0001872	0.0035	2		10737.13	10737.13	No	78.63	Si
SLU 78	fin.	2126.71	-4021	-0.0002324	0.0001872	0.0035	2		10722.86	10722.86	No	5.04	Si
SLU 80	ini.	-134.11	-2982	-0.0000133	0.0001872	0.0035	2		10737.13	10737.13	No	80.06	Si
SLU 80	fin.	2111.47	-3982	-0.0002305	0.0001872	0.0035	2		10722.86	10722.86	No	5.08	Si
SLU 77	ini.	-132.85	-3020	-0.0000132	0.0001872	0.0035	2		10737.13	10737.13	No	80.82	Si
SLU 77	fin.	2120.31	-4019	-0.0002316	0.0001872	0.0035	2		10722.86	10722.86	No	5.06	Si
SLU 83	ini.	-108.28	-3076	-0.0000107	0.0001872	0.0035	2		10737.13	10737.13	No	99.16	Si
SLU 83	fin.	2122.44	-4048	-0.0002318	0.0001872	0.0035	2		10722.86	10722.86	No	5.05	Si
SLU 74	ini.	-130.41	-2975	-0.000013	0.0001872	0.0035	2		10737.13	10737.13	No	82.34	Si
SLU 74	fin.	2089.96	-3958	-0.0002278	0.0001872	0.0035	2		10722.86	10722.86	No	5.13	Si
SLU 84	ini.	-111.97	-3068	-0.0000111	0.0001872	0.0035	2		10737.13	10737.13	No	95.89	Si
SLU 84	fin.	2128.85	-4050	-0.0002326	0.0001872	0.0035	2		10722.86	10722.86	No	5.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-108.28	529	2	0	1304	7930	13475	5100	9234	No	17.44	Si
SLU 83	fin.	2122.44	5122	2	0	1304	7930	13475	5100	9234	No	1.8	Si
SLU 75	ini.	-134.1	656	2	0	1304	7930	13475	5100	9234	No	14.08	Si
SLU 75	fin.	2096.37	5052	2	0	1304	7930	13475	5100	9234	No	1.83	Si
SLU 81	ini.	-105.83	522	2	0	1304	7930	13475	5100	9234	No	17.68	Si
SLU 81	fin.	2092.1	5039	2	0	1304	7930	13475	5100	9234	No	1.83	Si
SLU 80	ini.	-134.11	661	2	0	1304	7930	13475	5100	9234	No	13.98	Si
SLU 80	fin.	2111.47	5089	2	0	1304	7930	13475	5100	9234	No	1.81	Si
SLU 78	ini.	-136.55	663	2	0	1304	7930	13475	5100	9234	No	13.93	Si
SLU 78	fin.	2126.71	5136	2	0	1304	7930	13475	5100	9234	No	1.8	Si
SLU 77	ini.	-132.85	644	2	0	1304	7930	13475	5100	9234	No	14.34	Si
SLU 77	fin.	2120.31	5116	2	0	1304	7930	13475	5100	9234	No	1.8	Si
SLU 74	ini.	-130.41	637	2	0	1304	7930	13475	5100	9234	No	14.5	Si
SLU 74	fin.	2089.96	5033	2	0	1304	7930	13475	5100	9234	No	1.83	Si
SLU 84	ini.	-111.97	548	2	0	1304	7930	13475	5100	9234	No	16.84	Si
SLU 84	fin.	2128.85	5141	2	0	1304	7930	13475	5100	9234	No	1.8	Si
SLU 82	ini.	-109.53	541	2	0	1304	7930	13475	5100	9234	No	17.06	Si
SLU 82	fin.	2098.51	5058	2	0	1304	7930	13475	5100	9234	No	1.83	Si
SLU 79	ini.	-130.42	642	2	0	1304	7930	13475	5100	9234	No	14.39	Si
SLU 79	fin.	2105.06	5070	2	0	1304	7930	13475	5100	9234	No	1.82	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-31.81	793	-0.0000031	0.0002807	0.0035	2		15648.46	15648.46		491.91	Si
SLV 8	fin.	2164.91	-160	-0.0002296	0.0002807	0.0035	2		15635.95	15635.95		7.22	Si
SLV 3	ini.	-1445.68	1382	-0.0001493	0.0002807	0.0035	2		15648.46	15648.46		10.82	Si
SLV 3	fin.	2830.48	-679	-0.0003084	0.0002807	0.0035	2		15635.95	15635.95		5.52	Si
SLD 3	ini.	-686.67	-560	-0.0000692	0.0002807	0.0035	2		15648.46	15648.46		22.79	Si
SLD 3	fin.	2064.93	-1862	-0.0002182	0.0002807	0.0035	2		15635.95	15635.95		7.57	Si
SLD 2	ini.	-1046.81	-1265	-0.0001067	0.0002807	0.0035	2		15648.46	15648.46		14.95	Si
SLD 2	fin.	2073.13	-2791	-0.0002192	0.0002807	0.0035	2		15635.95	15635.95		7.54	Si
SLV 1	ini.	-1888.6	92	-0.0001981	0.0002807	0.0035	2		15648.46	15648.46		8.29	Si
SLV 1	fin.	2700.14	-2187	-0.0002926	0.0002807	0.0035	2		15635.95	15635.95		5.79	Si
SLD 4	ini.	-854.94	-711	-0.0000867	0.0002807	0.0035	2		15648.46	15648.46		18.3	Si
SLD 4	fin.	2136.8	-2155	-0.0002264	0.0002807	0.0035	2		15635.95	15635.95		7.32	Si
SLV 15	ini.	2041.86	-3772	-0.0002156	0.0002807	0.0035	2		15635.95	15635.95		7.66	Si
SLV 15	fin.	99.6	-2615	-0.0000099	0.0002807	0.0035	2		15635.95	15635.95		156.99	Si
SLV 4	ini.	-1837.44	1031	-0.0001924	0.0002807	0.0035	2		15648.46	15648.46		8.52	Si
SLV 4	fin.	2997.8	-1361	-0.000329	0.0002807	0.0035	2		15635.95	15635.95		5.22	Si
SLV 2	ini.	-2280.36	-260	-0.0002427	0.0002807	0.0035	2		15648.46	15648.46		6.86	Si
SLV 2	fin.	2867.46	-2869	-0.0003129	0.0002807	0.0035	2		15635.95	15635.95		5.45	Si
SLV 7	ini.	223.45	1022	-0.0000222	0.0002807	0.0035	2		15635.95	15635.95		69.98	Si
SLV 7	fin.	2055.88	284	-0.0002172	0.0002807	0.0035	2		15635.95	15635.95		7.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-1252.95	2821	2	0	1957	7930	20213	5100	9886		3.5	Si
SLV 5	fin.	1621.42	5178	2	0	1957	7930	20213	5100	9886		1.91	Si
SLV 2	ini.	-2280.36	6743	2	0	1957	7930	20213	5100	9886		1.47	Si
SLV 2	fin.	2867.46	6930	2	0	1957	7930	20213	5100	9886		1.43	Si
SLV 16	ini.	1650.11	-4693	2	0	1957	7930	20213	5100	9886		2.11	Si
SLV 16	fin.	266.92	1049	2	0	1957	7930	20213	5100	9886		9.43	Si
SLV 3	ini.	-1445.68	5432	2	0	1957	7930	20213	5100	9886		1.82	Si
SLV 3	fin.	2830.48	5257	2	0	1957	7930	20213	5100	9886		1.88	Si
SLV 1	ini.	-1888.6	5929	2	0	1957	7930	20213	5100	9886		1.67	Si
SLV 1	fin.	2700.14	5978	2	0	1957	7930	20213	5100	9886		1.65	Si
SLD 2	ini.	-1046.81	3228	2	0	1957	7930	20213	5100	9886		3.06	Si
SLD 2	fin.	2073.13	4966	2	0	1957	7930	20213	5100	9886		1.99	Si
SLV 6	ini.	-1508.21	3352	2	0	1957	7930	20213	5100	9886		2.95	Si
SLV 6	fin.	1730.44	5799	2	0	1957	7930	20213	5100	9886		1.7	Si
SLV 13	ini.	1598.94	-5011	2	0	1957	7930	20213	5100	9886		1.97	Si
SLV 13	fin.	-30.74	817	2	0	1957	7930	20213	5100	9886		12.1	Si
SLV 15	ini.	2041.86	-5508	2	0	1957	7930	20213	5100	9886		1.79	Si
SLV 15	fin.	99.6	96	2	0	1957	7930	20213	5100	9886		103.02	Si
SLV 4	ini.	-1837.44	6247	2	0	1957	7930	20213	5100	9886		1.58	Si
SLV 4	fin.	2997.8	6209	2	0	1957	7930	20213	5100	9886		1.59	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.216	SLV 4	Si
V_SLV	1.427	SLV 2	Si
PF_SLU	5.037	SLU 84	Si
V_SLU	1.796	SLU 84	Si

Trave di accoppiamento 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.158	1.471	0.54	1.41	0.87	-5.158	2.271	0.54	1.41	0.87	0.8	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-304.66	-2656	-0.0001688	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.31	Si
SLU 77	fin.	-623.43	-2724	-0.0003754	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.55	Si
SLU 75	ini.	-301.51	-2628	-0.0001669	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.4	Si
SLU 75	fin.	-625.37	-2726	-0.0003768	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.53	Si
SLU 84	ini.	-306.89	-2708	-0.0001701	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.24	Si
SLU 84	fin.	-659.39	-2861	-0.0004011	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.3	Si
SLU 83	ini.	-305.98	-2702	-0.0001695	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.27	Si
SLU 83	fin.	-652.62	-2836	-0.0003962	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.34	Si
SLU 80	ini.	-302.13	-2635	-0.0001673	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.38	Si
SLU 80	fin.	-622.29	-2716	-0.0003746	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.56	Si
SLU 74	ini.	-300.59	-2622	-0.0001664	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.43	Si
SLU 74	fin.	-618.59	-2700	-0.000372	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.58	Si
SLU 76	ini.	-298.68	-2605	-0.0001652	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.49	Si
SLU 76	fin.	-621.97	-2709	-0.0003744	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.56	Si
SLU 81	ini.	-301.91	-2668	-0.0001671	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.39	Si
SLU 81	fin.	-647.78	-2812	-0.0003928	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.38	Si
SLU 82	ini.	-302.83	-2674	-0.0001677	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.36	Si
SLU 82	fin.	-654.56	-2837	-0.0003976	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.33	Si
SLU 78	ini.	-305.58	-2662	-0.0001693	0.0002246	0.0035	0.87		2835.07	2835.07	No	9.28	Si
SLU 78	fin.	-630.2	-2750	-0.0003802	0.0002246	0.0035	0.87		2835.07	2835.07	No	4.5	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-301.21	1844	0.87	0	378	6344	4690	2219	6722	No	3.64	Si
SLU 79	fin.	-615.52	-3817	0.87	0	378	6344	4690	2219	6722	No	1.76	Si
SLU 81	ini.	-301.91	1856	0.87	0	378	6344	4690	2219	6722	No	3.62	Si
SLU 81	fin.	-647.78	-3952	0.87	0	378	6344	4690	2219	6722	No	1.7	Si
SLU 82	ini.	-302.83	1837	0.87	0	378	6344	4690	2219	6722	No	3.66	Si
SLU 82	fin.	-654.56	-3967	0.87	0	378	6344	4690	2219	6722	No	1.69	Si
SLU 75	ini.	-301.51	1803	0.87	0	378	6344	4690	2219	6722	No	3.73	Si
SLU 75	fin.	-625.37	-3824	0.87	0	378	6344	4690	2219	6722	No	1.76	Si
SLU 76	ini.	-298.68	1793	0.87	0	378	6344	4690	2219	6722	No	3.75	Si
SLU 76	fin.	-621.97	-3810	0.87	0	378	6344	4690	2219	6722	No	1.76	Si
SLU 78	ini.	-305.58	1822	0.87	0	378	6344	4690	2219	6722	No	3.69	Si
SLU 78	fin.	-630.2	-3856	0.87	0	378	6344	4690	2219	6722	No	1.74	Si
SLU 84	ini.	-306.89	1857	0.87	0	378	6344	4690	2219	6722	No	3.62	Si
SLU 84	fin.	-659.39	-4000	0.87	0	378	6344	4690	2219	6722	No	1.68	Si
SLU 80	ini.	-302.13	1825	0.87	0	378	6344	4690	2219	6722	No	3.68	Si
SLU 80	fin.	-622.29	-3832	0.87	0	378	6344	4690	2219	6722	No	1.75	Si
SLU 77	ini.	-304.66	1842	0.87	0	378	6344	4690	2219	6722	No	3.65	Si
SLU 77	fin.	-623.43	-3842	0.87	0	378	6344	4690	2219	6722	No	1.75	Si
SLU 83	ini.	-305.98	1876	0.87	0	378	6344	4690	2219	6722	No	3.58	Si
SLU 83	fin.	-652.62	-3985	0.87	0	378	6344	4690	2219	6722	No	1.69	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-11.49	80	-0.000006	0.0003369	0.0035	0.87		2796.22	2796.22		243.36	Si
SLV 5	fin.	1248.88	4143	-0.0008288	0.0003369	0.0035	0.87		2790.57	2790.57		2.23	Si
SLV 6	ini.	3.53	167	-0.0000018	0.0003369	0.0035	0.87		2790.57	2790.57		790.46	Si
SLV 6	fin.	1359.16	4546	-0.0009249	0.0003369	0.0035	0.87		2790.57	2790.57		2.05	Si
SLV 10	ini.	74.86	-792	-0.0000395	0.0003369	0.0035	0.87		2790.57	2790.57		37.28	Si
SLV 10	fin.	1129.24	3839	-0.0007293	0.0003369	0.0035	0.87		2790.57	2790.57		2.47	Si
SLV 15	ini.	-176.45	-3895	-0.0000943	0.0003369	0.0035	0.87		2796.22	2796.22		15.85	Si
SLV 15	fin.	-1348.48	-4994	-0.0009132	0.0003369	0.0035	0.87		2796.22	2796.22		2.07	Si
SLV 7	ini.	-496.86	-2804	-0.0002796	0.0003369	0.0035	0.87		2796.22	2796.22		5.63	Si
SLV 7	fin.	-1935.3	-7392	-0.0015135	0.0003369	0.0035	0.87		2796.22	2796.22		1.44	Si
SLD 11	ini.	-306.04	-2661	-0.0001668	0.0003369	0.0035	0.87		2796.22	2796.22		9.14	Si
SLD 11	fin.	-1177.81	-4559	-0.0007673	0.0003369	0.0035	0.87		2796.22	2796.22		2.37	Si
SLV 8	ini.	-481.84	-2717	-0.0002704	0.0003369	0.0035	0.87		2796.22	2796.22		5.8	Si
SLV 8	fin.	-1825.02	-6989	-0.0013856	0.0003369	0.0035	0.87		2796.22	2796.22		1.53	Si
SLV 12	ini.	-410.51	-3676	-0.0002276	0.0003369	0.0035	0.87		2796.22	2796.22		6.81	Si
SLV 12	fin.	-2054.94	-7696	-0.0016637	0.0003369	0.0035	0.87		2796.22	2796.22		1.36	Si
SLV 16	ini.	-153.4	-3761	-0.0000817	0.0003369	0.0035	0.87		2796.22	2796.22		18.23	Si
SLV 16	fin.	-1179.23	-4376	-0.0007684	0.0003369	0.0035	0.87		2796.22	2796.22		2.37	Si
SLV 11	ini.	-425.53	-3763	-0.0002365	0.0003369	0.0035	0.87		2796.22	2796.22		6.57	Si
SLV 11	fin.	-2165.22	-8099	-0.0018157	0.0003369	0.0035	0.87		2796.22	2796.22		1.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-425.53	-3346	0.87	0	567	6344	7035	2219	6911		2.07	Si
SLV 11	fin.	-2165.22	-6206	0.87	0	567	6344	7035	2219	6911		1.11	Si
SLV 15	ini.	-176.45	-599	0.87	0	567	6344	7035	2219	6911		11.53	Si
SLV 15	fin.	-1348.48	-4130	0.87	0	567	6344	7035	2219	6911		1.67	Si
SLV 10	ini.	74.86	5724	0.87	0	567	6344	7035	2219	6911		1.21	Si
SLV 10	fin.	1129.24	870	0.87	0	567	6344	7035	2219	6911		7.94	Si
SLV 5	ini.	-11.49	5635	0.87	0	567	6344	7035	2219	6911		1.23	Si
SLV 5	fin.	1248.88	797	0.87	0	567	6344	7035	2219	6911		8.67	Si
SLV 6	ini.	3.53	5934	0.87	0	567	6344	7035	2219	6911		1.16	Si
SLV 6	fin.	1359.16	1069	0.87	0	567	6344	7035	2219	6911		6.46	Si
SLV 12	ini.	-410.51	-3048	0.87	0	567	6344	7035	2219	6911		2.27	Si
SLV 12	fin.	-2054.94	-5934	0.87	0	567	6344	7035	2219	6911		1.16	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	59.84	5426	0.87	0	567	6344	7035	2219	6911		1.27	Si
SLV 9	fin.	1018.96	598	0.87	0	567	6344	7035	2219	6911		11.56	Si
SLD 11	ini.	-306.04	-749	0.87	0	567	6344	7035	2219	6911		9.22	Si
SLD 11	fin.	-1177.81	-4170	0.87	0	567	6344	7035	2219	6911		1.66	Si
SLV 7	ini.	-496.86	-3137	0.87	0	567	6344	7035	2219	6911		2.2	Si
SLV 7	fin.	-1935.3	-6007	0.87	0	567	6344	7035	2219	6911		1.15	Si
SLV 8	ini.	-481.84	-2839	0.87	0	567	6344	7035	2219	6911		2.43	Si
SLV 8	fin.	-1825.02	-5735	0.87	0	567	6344	7035	2219	6911		1.21	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.291	SLV 11	Si
V_SLV	1.114	SLV 11	Si
PF_SLU	4.3	SLU 84	Si
V_SLU	1.681	SLU 84	Si

Trave di accoppiamento 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-3.013	5.876	-1.56	0.44	2	-2.013	5.876	-1.56	0.44	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-2402.74	-3150	-0.0002666	0.0001872	0.0035	2		10737.13	10737.13	No	4.47	Si
SLU 74	fin.	2805.37	-4891	-0.0003191	0.0001872	0.0035	2		10722.86	10722.86	No	3.82	Si
SLU 81	ini.	-2402.39	-3175	-0.0002666	0.0001872	0.0035	2		10737.13	10737.13	No	4.47	Si
SLU 81	fin.	2838.85	-4904	-0.0003236	0.0001872	0.0035	2		10722.86	10722.86	No	3.78	Si
SLU 83	ini.	-2431.11	-3218	-0.0002702	0.0001872	0.0035	2		10737.13	10737.13	No	4.42	Si
SLU 83	fin.	2870.19	-4972	-0.0003278	0.0001872	0.0035	2		10722.86	10722.86	No	3.74	Si
SLU 84	ini.	-2423.86	-3287	-0.0002693	0.0001872	0.0035	2		10737.13	10737.13	No	4.43	Si
SLU 84	fin.	2873.35	-5049	-0.0003282	0.0001872	0.0035	2		10722.86	10722.86	No	3.73	Si
SLU 77	ini.	-2431.46	-3193	-0.0002702	0.0001872	0.0035	2		10737.13	10737.13	No	4.42	Si
SLU 77	fin.	2836.7	-4959	-0.0003233	0.0001872	0.0035	2		10722.86	10722.86	No	3.78	Si
SLU 79	ini.	-2414.12	-3166	-0.000268	0.0001872	0.0035	2		10737.13	10737.13	No	4.45	Si
SLU 79	fin.	2817.73	-4918	-0.0003208	0.0001872	0.0035	2		10722.86	10722.86	No	3.81	Si
SLU 80	ini.	-2406.87	-3235	-0.0002671	0.0001872	0.0035	2		10737.13	10737.13	No	4.46	Si
SLU 80	fin.	2820.9	-4996	-0.0003212	0.0001872	0.0035	2		10722.86	10722.86	No	3.8	Si
SLU 78	ini.	-2424.22	-3262	-0.0002693	0.0001872	0.0035	2		10737.13	10737.13	No	4.43	Si
SLU 78	fin.	2839.87	-5036	-0.0003237	0.0001872	0.0035	2		10722.86	10722.86	No	3.78	Si
SLU 82	ini.	-2395.14	-3244	-0.0002656	0.0001872	0.0035	2		10737.13	10737.13	No	4.48	Si
SLU 82	fin.	2842.02	-4982	-0.000324	0.0001872	0.0035	2		10722.86	10722.86	No	3.77	Si
SLU 75	ini.	-2395.49	-3219	-0.0002657	0.0001872	0.0035	2		10737.13	10737.13	No	4.48	Si
SLU 75	fin.	2808.54	-4968	-0.0003196	0.0001872	0.0035	2		10722.86	10722.86	No	3.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-2395.49	6379	2	0	1304	7930	13475	5100	9234	No	1.45	Si
SLU 75	fin.	2808.54	10833	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 83	ini.	-2431.11	6429	2	0	1304	7930	13475	5100	9234	No	1.44	Si
SLU 83	fin.	2870.19	11081	2	0	1304	7930	13475	5100	9234	No	0.83	No
SLU 79	ini.	-2414.12	6398	2	0	1304	7930	13475	5100	9234	No	1.44	Si
SLU 79	fin.	2817.73	10887	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 82	ini.	-2395.14	6368	2	0	1304	7930	13475	5100	9234	No	1.45	Si
SLU 82	fin.	2842.02	10947	2	0	1304	7930	13475	5100	9234	No	0.84	No
SLU 80	ini.	-2406.87	6407	2	0	1304	7930	13475	5100	9234	No	1.44	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	2820.9	10885	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 74	ini.	-2402.74	6370	2	0	1304	7930	13475	5100	9234	No	1.45	Si
SLU 74	fin.	2805.37	10835	2	0	1304	7930	13475	5100	9234	No	0.85	No
SLU 81	ini.	-2402.39	6359	2	0	1304	7930	13475	5100	9234	No	1.45	Si
SLU 81	fin.	2838.85	10949	2	0	1304	7930	13475	5100	9234	No	0.84	No
SLU 78	ini.	-2424.22	6448	2	0	1304	7930	13475	5100	9234	No	1.43	Si
SLU 78	fin.	2839.87	10965	2	0	1304	7930	13475	5100	9234	No	0.84	No
SLU 84	ini.	-2423.86	6438	2	0	1304	7930	13475	5100	9234	No	1.43	Si
SLU 84	fin.	2873.35	11079	2	0	1304	7930	13475	5100	9234	No	0.83	No
SLU 77	ini.	-2431.46	6439	2	0	1304	7930	13475	5100	9234	No	1.43	Si
SLU 77	fin.	2836.7	10967	2	0	1304	7930	13475	5100	9234	No	0.84	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-1333.47	216	-0.0001372	0.0002807	0.0035	2		15648.46	15648.46		11.74	Si
SLV 5	fin.	3032.41	-986	-0.0003333	0.0002807	0.0035	2		15635.95	15635.95		5.16	Si
SLV 4	ini.	-2858.33	-920	-0.0003115	0.0002807	0.0035	2		15648.46	15648.46		5.47	Si
SLV 4	fin.	3575.53	-3723	-0.0004028	0.0002807	0.0035	2		15635.95	15635.95		4.37	Si
SLD 1	ini.	-2214.46	-1285	-0.0002351	0.0002807	0.0035	2		15648.46	15648.46		7.07	Si
SLD 1	fin.	2869.45	-3235	-0.0003132	0.0002807	0.0035	2		15635.95	15635.95		5.45	Si
SLV 3	ini.	-3411.75	-1280	-0.0003811	0.0002807	0.0035	2		15648.46	15648.46		4.59	Si
SLV 3	fin.	3797.48	-4575	-0.0004322	0.0002807	0.0035	2		15635.95	15635.95		4.12	Si
SLV 7	ini.	-3173.12	-3836	-0.0003506	0.0002807	0.0035	2		15648.46	15648.46		4.93	Si
SLV 7	fin.	2174.06	-6427	-0.0002307	0.0002807	0.0035	2		15635.95	15635.95		7.19	Si
SLV 8	ini.	-2812.52	-3602	-0.0003059	0.0002807	0.0035	2		15648.46	15648.46		5.56	Si
SLV 8	fin.	2029.44	-5872	-0.0002142	0.0002807	0.0035	2		15635.95	15635.95		7.7	Si
SLD 2	ini.	-1976.76	-1130	-0.000208	0.0002807	0.0035	2		15648.46	15648.46		7.92	Si
SLD 2	fin.	2774.12	-2869	-0.0003015	0.0002807	0.0035	2		15635.95	15635.95		5.64	Si
SLV 6	ini.	-972.87	450	-0.000099	0.0002807	0.0035	2		15648.46	15648.46		16.08	Si
SLV 6	fin.	2887.78	-431	-0.0003154	0.0002807	0.0035	2		15635.95	15635.95		5.41	Si
SLV 2	ini.	-2306.43	295	-0.0002458	0.0002807	0.0035	2		15648.46	15648.46		6.78	Si
SLV 2	fin.	3833.03	-2091	-0.000437	0.0002807	0.0035	2		15635.95	15635.95		4.08	Si
SLV 1	ini.	-2859.85	-65	-0.0003117	0.0002807	0.0035	2		15648.46	15648.46		5.47	Si
SLV 1	fin.	4054.99	-2943	-0.0004671	0.0002807	0.0035	2		15635.95	15635.95		3.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-2858.33	8830	2	0	1957	7930	20213	5100	9886		1.12	Si
SLV 4	fin.	3575.53	9031	2	0	1957	7930	20213	5100	9886		1.09	Si
SLD 1	ini.	-2214.46	6754	2	0	1957	7930	20213	5100	9886		1.46	Si
SLD 1	fin.	2869.45	8815	2	0	1957	7930	20213	5100	9886		1.12	Si
SLV 2	ini.	-2306.43	8356	2	0	1957	7930	20213	5100	9886		1.18	Si
SLV 2	fin.	3833.03	9040	2	0	1957	7930	20213	5100	9886		1.09	Si
SLV 7	ini.	-3173.12	7202	2	0	1957	7930	20213	5100	9886		1.37	Si
SLV 7	fin.	2174.06	8687	2	0	1957	7930	20213	5100	9886		1.14	Si
SLV 5	ini.	-1333.47	5623	2	0	1957	7930	20213	5100	9886		1.76	Si
SLV 5	fin.	3032.41	8718	2	0	1957	7930	20213	5100	9886		1.13	Si
SLV 1	ini.	-2859.85	9581	2	0	1957	7930	20213	5100	9886		1.03	Si
SLV 1	fin.	4054.99	10406	2	0	1957	7930	20213	5100	9886		0.95	No
SLD 4	ini.	-2220.47	6434	2	0	1957	7930	20213	5100	9886		1.54	Si
SLD 4	fin.	2660.1	8227	2	0	1957	7930	20213	5100	9886		1.2	Si
SLD 2	ini.	-1976.76	6228	2	0	1957	7930	20213	5100	9886		1.59	Si
SLD 2	fin.	2774.12	8228	2	0	1957	7930	20213	5100	9886		1.2	Si
SLD 3	ini.	-2458.17	6960	2	0	1957	7930	20213	5100	9886		1.42	Si
SLD 3	fin.	2755.43	8814	2	0	1957	7930	20213	5100	9886		1.12	Si
SLV 3	ini.	-3411.75	10054	2	0	1957	7930	20213	5100	9886		0.98	No
SLV 3	fin.	3797.48	10397	2	0	1957	7930	20213	5100	9886		0.95	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.856	SLV 1	Si
V_SLV	0.95	SLV 1	No
PF_SLU	3.732	SLU 84	Si
V_SLU	0.833	SLU 83	No

Trave di accoppiamento 35

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.826	1.41	2.31	0.9	-22.763	5.826	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	2.25	-1650	-0.0000011	0.0001872	0.0035	0.9		2959	2959	No	1314.91	Si
SLU 82	fin.	761.21	-2824	-0.0004522	0.0001872	0.0035	0.9		2959	2959	No	3.89	Si
SLU 83	ini.	6.82	-1661	-0.0000033	0.0001872	0.0035	0.9		2959	2959	No	433.79	Si
SLU 83	fin.	766.75	-2836	-0.0004562	0.0001872	0.0035	0.9		2959	2959	No	3.86	Si
SLU 75	ini.	-5.56	-1627	-0.0000027	0.0001872	0.0035	0.9		2964.67	2964.67	No	533.03	Si
SLU 75	fin.	766.54	-2818	-0.000456	0.0001872	0.0035	0.9		2959	2959	No	3.86	Si
SLU 80	ini.	-3.61	-1643	-0.0000018	0.0001872	0.0035	0.9		2964.67	2964.67	No	821.96	Si
SLU 80	fin.	772.01	-2840	-0.0004599	0.0001872	0.0035	0.9		2959	2959	No	3.83	Si
SLU 84	ini.	6.27	-1682	-0.0000031	0.0001872	0.0035	0.9		2959	2959	No	471.62	Si
SLU 84	fin.	771.52	-2865	-0.0004596	0.0001872	0.0035	0.9		2959	2959	No	3.84	Si
SLU 79	ini.	-3.06	-1622	-0.0000015	0.0001872	0.0035	0.9		2964.67	2964.67	No	968.92	Si
SLU 79	fin.	767.24	-2811	-0.0004565	0.0001872	0.0035	0.9		2959	2959	No	3.86	Si
SLU 78	ini.	-1.54	-1659	-0.0000008	0.0001872	0.0035	0.9		2964.67	2964.67	No	1927.47	Si
SLU 78	fin.	776.85	-2860	-0.0004634	0.0001872	0.0035	0.9		2959	2959	No	3.81	Si
SLU 76	ini.	-8	-1626	-0.0000039	0.0001872	0.0035	0.9		2964.67	2964.67	No	370.8	Si
SLU 76	fin.	764.88	-2818	-0.0004548	0.0001872	0.0035	0.9		2959	2959	No	3.87	Si
SLU 74	ini.	-5.01	-1605	-0.0000025	0.0001872	0.0035	0.9		2964.67	2964.67	No	591.18	Si
SLU 74	fin.	761.76	-2789	-0.0004526	0.0001872	0.0035	0.9		2959	2959	No	3.88	Si
SLU 77	ini.	-0.99	-1637	-0.0000005	0.0001872	0.0035	0.9		2964.67	2964.67	No	2991.49	Si
SLU 77	fin.	772.08	-2831	-0.00046	0.0001872	0.0035	0.9		2959	2959	No	3.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	6.82	432	0.9	0	329	7137	3773	2295	6068	No	14.04	Si
SLU 83	fin.	766.75	2005	0.9	0	329	7137	3773	2295	6068	No	3.03	Si
SLU 84	ini.	6.27	492	0.9	0	329	7137	3773	2295	6068	No	12.33	Si
SLU 84	fin.	771.52	1960	0.9	0	329	7137	3773	2295	6068	No	3.1	Si
SLU 80	ini.	-3.61	517	0.9	0	329	7137	3773	2295	6068	No	11.73	Si
SLU 80	fin.	772.01	1971	0.9	0	329	7137	3773	2295	6068	No	3.08	Si
SLU 69	ini.	-33.44	541	0.9	0	329	7137	3773	2295	6068	No	11.22	Si
SLU 69	fin.	749.16	1982	0.9	0	329	7137	3773	2295	6068	No	3.06	Si
SLU 77	ini.	-0.99	451	0.9	0	329	7137	3773	2295	6068	No	13.44	Si
SLU 77	fin.	772.08	2030	0.9	0	329	7137	3773	2295	6068	No	2.99	Si
SLU 71	ini.	-35.5	547	0.9	0	329	7137	3773	2295	6068	No	11.1	Si
SLU 71	fin.	744.33	1967	0.9	0	329	7137	3773	2295	6068	No	3.08	Si
SLU 79	ini.	-3.06	457	0.9	0	329	7137	3773	2295	6068	No	13.27	Si
SLU 79	fin.	767.24	2016	0.9	0	329	7137	3773	2295	6068	No	3.01	Si
SLU 78	ini.	-1.54	511	0.9	0	329	7137	3773	2295	6068	No	11.87	Si
SLU 78	fin.	776.85	1986	0.9	0	329	7137	3773	2295	6068	No	3.06	Si
SLU 74	ini.	-5.01	465	0.9	0	329	7137	3773	2295	6068	No	13.06	Si
SLU 74	fin.	761.76	1998	0.9	0	329	7137	3773	2295	6068	No	3.04	Si
SLU 81	ini.	2.8	445	0.9	0	329	7137	3773	2295	6068	No	13.63	Si
SLU 81	fin.	756.43	1973	0.9	0	329	7137	3773	2295	6068	No	3.08	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	958.88	-2651	-0.0005639	0.0002807	0.0035	0.9		2989.59	2989.59		3.12	Si
SLV 3	fin.	-430.49	-607	-0.0002251	0.0002807	0.0035	0.9		2995.37	2995.37		6.96	Si
SLV 16	ini.	-1131.42	573	-0.0006901	0.0002807	0.0035	0.9		2995.37	2995.37		2.65	Si
SLV 16	fin.	1589.2	-3371	-0.001075	0.0002807	0.0035	0.9		2989.59	2989.59		1.88	Si
SLD 14	ini.	-454.35	-409	-0.0002386	0.0002807	0.0035	0.9		2995.37	2995.37		6.59	Si
SLD 14	fin.	978.29	-2570	-0.0005778	0.0002807	0.0035	0.9		2989.59	2989.59		3.06	Si
SLV 12	ini.	-559.44	-424	-0.0003	0.0002807	0.0035	0.9		2995.37	2995.37		5.35	Si
SLV 12	fin.	972.36	-2481	-0.0005735	0.0002807	0.0035	0.9		2989.59	2989.59		3.07	Si
SLD 15	ini.	-426.45	-463	-0.0002228	0.0002807	0.0035	0.9		2995.37	2995.37		7.02	Si
SLD 15	fin.	909.92	-2426	-0.0005291	0.0002807	0.0035	0.9		2989.59	2989.59		3.29	Si
SLV 13	ini.	-846.75	283	-0.0004843	0.0002807	0.0035	0.9		2995.37	2995.37		3.54	Si
SLV 13	fin.	1339.14	-3011	-0.0008571	0.0002807	0.0035	0.9		2989.59	2989.59		2.23	Si
SLV 14	ini.	-1020.83	491	-0.0006074	0.0002807	0.0035	0.9		2995.37	2995.37		2.93	Si
SLV 14	fin.	1542.68	-3356	-0.0010327	0.0002807	0.0035	0.9		2989.59	2989.59		1.94	Si
SLV 1	ini.	1069.47	-2733	-0.0006448	0.0002807	0.0035	0.9		2989.59	2989.59		2.8	Si
SLV 1	fin.	-477	-593	-0.0002516	0.0002807	0.0035	0.9		2995.37	2995.37		6.28	Si
SLD 16	ini.	-501.22	-373	-0.0002656	0.0002807	0.0035	0.9		2995.37	2995.37		5.98	Si
SLD 16	fin.	997.34	-2575	-0.0005916	0.0002807	0.0035	0.9		2989.59	2989.59		3	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-957.34	364	-0.0005615	0.0002807	0.0035	0.9		2995.37	2995.37		3.13	Si
SLV 15	fin.	1385.66	-3025	-0.000896	0.0002807	0.0035	0.9		2989.59	2989.59		2.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-559.44	4208	0.9	0	493	7137	5660	2295	7630		1.81	Si
SLV 12	fin.	972.36	6310	0.9	0	493	7137	5660	2295	7630		1.21	Si
SLV 1	ini.	1069.47	-3703	0.9	0	493	7137	5660	2295	7630		2.06	Si
SLV 1	fin.	-477	-3342	0.9	0	493	7137	5660	2295	7630		2.28	Si
SLD 16	ini.	-501.22	2212	0.9	0	493	7137	5660	2295	7630		3.45	Si
SLD 16	fin.	997.34	3525	0.9	0	493	7137	5660	2295	7630		2.16	Si
SLV 8	ini.	15.42	2378	0.9	0	493	7137	5660	2295	7630		3.21	Si
SLV 8	fin.	427.51	4281	0.9	0	493	7137	5660	2295	7630		1.78	Si
SLD 12	ini.	-256.72	2080	0.9	0	493	7137	5660	2295	7630		3.67	Si
SLD 12	fin.	733.26	3574	0.9	0	493	7137	5660	2295	7630		2.13	Si
SLV 7	ini.	128.85	2008	0.9	0	493	7137	5660	2295	7630		3.8	Si
SLV 7	fin.	294.89	3843	0.9	0	493	7137	5660	2295	7630		1.99	Si
SLV 14	ini.	-1020.83	2966	0.9	0	493	7137	5660	2295	7630		2.57	Si
SLV 14	fin.	1542.68	4093	0.9	0	493	7137	5660	2295	7630		1.86	Si
SLV 15	ini.	-957.34	4003	0.9	0	493	7137	5660	2295	7630		1.91	Si
SLV 15	fin.	1385.66	5591	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 11	ini.	-446.01	3838	0.9	0	493	7137	5660	2295	7630		1.99	Si
SLV 11	fin.	839.74	5872	0.9	0	493	7137	5660	2295	7630		1.3	Si
SLV 16	ini.	-1131.42	4571	0.9	0	493	7137	5660	2295	7630		1.67	Si
SLV 16	fin.	1589.2	6263	0.9	0	493	7137	5660	2295	7630		1.22	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.881	SLV 16	Si
V_SLV	1.209	SLV 12	Si
PF_SLU	3.809	SLU 78	Si
V_SLU	2.989	SLU 77	Si

Trave di accoppiamento 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.763	5.826	4.21	4.83	0.62	-22.763	5.826	4.21	4.83	0.62	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-591.15	-1396	-0.0008279	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.39	Si
SLU 75	fin.	-34.37	-596	-0.0000358	0.0001872	0.0035	0.62		1414.81	1414.81	No	41.16	Si
SLU 74	ini.	-590.7	-1385	-0.0008271	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.4	Si
SLU 74	fin.	-31.75	-581	-0.000033	0.0001872	0.0035	0.62		1414.81	1414.81	No	44.56	Si
SLU 77	ini.	-598.37	-1409	-0.0008409	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.36	Si
SLU 77	fin.	-35.8	-599	-0.0000373	0.0001872	0.0035	0.62		1414.81	1414.81	No	39.52	Si
SLU 78	ini.	-598.82	-1421	-0.0008418	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.36	Si
SLU 78	fin.	-38.42	-614	-0.00004	0.0001872	0.0035	0.62		1414.81	1414.81	No	36.83	Si
SLU 83	ini.	-596.67	-1405	-0.0008379	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.37	Si
SLU 83	fin.	-46.44	-612	-0.0000486	0.0001872	0.0035	0.62		1414.81	1414.81	No	30.46	Si
SLU 79	ini.	-594.83	-1398	-0.0008345	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.38	Si
SLU 79	fin.	-34.14	-591	-0.0000355	0.0001872	0.0035	0.62		1414.81	1414.81	No	41.44	Si
SLU 84	ini.	-597.12	-1417	-0.0008387	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.37	Si
SLU 84	fin.	-49.06	-627	-0.0000514	0.0001872	0.0035	0.62		1414.81	1414.81	No	28.84	Si
SLU 80	ini.	-595.28	-1409	-0.0008354	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.38	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-36.76	-606	-0.0000383	0.0001872	0.0035	0.62		1414.81	1414.81	No	38.49	Si
SLU 82	ini.	-589.45	-1392	-0.0008249	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.4	Si
SLU 82	fin.	-45.02	-609	-0.000047	0.0001872	0.0035	0.62		1414.81	1414.81	No	31.43	Si
SLU 81	ini.	-589	-1380	-0.0008241	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.4	Si
SLU 81	fin.	-42.4	-594	-0.0000443	0.0001872	0.0035	0.62		1414.81	1414.81	No	33.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-590.7	2226	0.62	0	168	4916	2599	1581	4180	No	1.88	Si
SLU 74	fin.	-31.75	-618	0.62	0	168	4916	2599	1581	4180	No	6.77	Si
SLU 79	ini.	-594.83	2243	0.62	0	168	4916	2599	1581	4180	No	1.86	Si
SLU 79	fin.	-34.14	-629	0.62	0	168	4916	2599	1581	4180	No	6.64	Si
SLU 84	ini.	-597.12	2258	0.62	0	168	4916	2599	1581	4180	No	1.85	Si
SLU 84	fin.	-49.06	-681	0.62	0	168	4916	2599	1581	4180	No	6.14	Si
SLU 81	ini.	-589	2234	0.62	0	168	4916	2599	1581	4180	No	1.87	Si
SLU 81	fin.	-42.4	-661	0.62	0	168	4916	2599	1581	4180	No	6.33	Si
SLU 82	ini.	-589.45	2228	0.62	0	168	4916	2599	1581	4180	No	1.88	Si
SLU 82	fin.	-45.02	-662	0.62	0	168	4916	2599	1581	4180	No	6.32	Si
SLU 75	ini.	-591.15	2221	0.62	0	168	4916	2599	1581	4180	No	1.88	Si
SLU 75	fin.	-34.37	-619	0.62	0	168	4916	2599	1581	4180	No	6.76	Si
SLU 80	ini.	-595.28	2237	0.62	0	168	4916	2599	1581	4180	No	1.87	Si
SLU 80	fin.	-36.76	-630	0.62	0	168	4916	2599	1581	4180	No	6.63	Si
SLU 78	ini.	-598.82	2251	0.62	0	168	4916	2599	1581	4180	No	1.86	Si
SLU 78	fin.	-38.42	-638	0.62	0	168	4916	2599	1581	4180	No	6.56	Si
SLU 77	ini.	-598.37	2256	0.62	0	168	4916	2599	1581	4180	No	1.85	Si
SLU 77	fin.	-35.8	-637	0.62	0	168	4916	2599	1581	4180	No	6.56	Si
SLU 83	ini.	-596.67	2264	0.62	0	168	4916	2599	1581	4180	No	1.85	Si
SLU 83	fin.	-46.44	-680	0.62	0	168	4916	2599	1581	4180	No	6.15	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1248.61	-1926	-0.0024019	0.0002807	0.0035	0.62		1424.12	1424.12		1.14	Si
SLV 14	fin.	876.41	932	-0.0013225	0.0002807	0.0035	0.62		1420.05	1420.05		1.62	Si
SLD 16	ini.	-805.64	-1500	-0.0011697	0.0002807	0.0035	0.62		1424.12	1424.12		1.77	Si
SLD 16	fin.	417.48	252	-0.0005069	0.0002807	0.0035	0.62		1420.05	1420.05		3.4	Si
SLV 1	ini.	452.44	227	-0.0005587	0.0002807	0.0035	0.62		1420.05	1420.05		3.14	Si
SLV 1	fin.	-954.81	-1794	-0.0014955	0.0002807	0.0035	0.62		1424.12	1424.12		1.49	Si
SLV 12	ini.	-814.71	-1789	-0.0011881	0.0002807	0.0035	0.62		1424.12	1424.12		1.75	Si
SLV 12	fin.	460.09	318	-0.0005702	0.0002807	0.0035	0.62		1420.05	1420.05		3.09	Si
SLV 2	ini.	291.69	-8	-0.0003335	0.0002807	0.0035	0.62		1420.05	1420.05		4.87	Si
SLV 2	fin.	-798.36	-1592	-0.0011551	0.0002807	0.0035	0.62		1424.12	1424.12		1.78	Si
SLD 14	ini.	-779.28	-1384	-0.0011173	0.0002807	0.0035	0.62		1424.12	1424.12		1.83	Si
SLD 14	fin.	378.03	192	-0.0004504	0.0002807	0.0035	0.62		1420.05	1420.05		3.76	Si
SLV 15	ini.	-1149.34	-1956	-0.0020393	0.0002807	0.0035	0.62		1424.12	1424.12		1.24	Si
SLV 15	fin.	810.93	871	-0.0011847	0.0002807	0.0035	0.62		1420.05	1420.05		1.75	Si
SLV 13	ini.	-1087.85	-1691	-0.0018468	0.0002807	0.0035	0.62		1424.12	1424.12		1.31	Si
SLV 13	fin.	719.96	730	-0.0010074	0.0002807	0.0035	0.62		1420.05	1420.05		1.97	Si
SLV 16	ini.	-1310.09	-2191	-0.0026632	0.0002807	0.0035	0.62		1424.12	1424.12		1.09	Si
SLV 16	fin.	967.38	1073	-0.0015319	0.0002807	0.0035	0.62		1420.05	1420.05		1.47	Si
SLV 3	ini.	390.96	-38	-0.0004687	0.0002807	0.0035	0.62		1420.05	1420.05		3.63	Si
SLV 3	fin.	-863.84	-1654	-0.0012904	0.0002807	0.0035	0.62		1424.12	1424.12		1.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	390.96	-920	0.62	0	252	4916	3899	1581	5168		5.62	Si
SLV 3	fin.	-863.84	-2810	0.62	0	252	4916	3899	1581	5168		1.84	Si
SLD 16	ini.	-805.64	2576	0.62	0	252	4916	3899	1581	5168		2.01	Si
SLD 16	fin.	417.48	856	0.62	0	252	4916	3899	1581	5168		6.04	Si
SLD 14	ini.	-779.28	2667	0.62	0	252	4916	3899	1581	5168		1.94	Si
SLD 14	fin.	378.03	711	0.62	0	252	4916	3899	1581	5168		7.27	Si
SLV 2	ini.	291.69	-258	0.62	0	252	4916	3899	1581	5168		20.04	Si
SLV 2	fin.	-798.36	-2689	0.62	0	252	4916	3899	1581	5168		1.92	Si
SLV 10	ini.	-609.77	2740	0.62	0	252	4916	3899	1581	5168		1.89	Si
SLV 10	fin.	156.85	-21	0.62	0	252	4916	3899	1581	5168		242.28	Si
SLV 15	ini.	-1149.34	3442	0.62	0	252	4916	3899	1581	5168		1.5	Si
SLV 15	fin.	810.93	2005	0.62	0	252	4916	3899	1581	5168		2.58	Si
SLV 14	ini.	-1248.61	4104	0.62	0	252	4916	3899	1581	5168		1.26	Si
SLV 14	fin.	876.41	2126	0.62	0	252	4916	3899	1581	5168		2.43	Si
SLV 13	ini.	-1087.85	3649	0.62	0	252	4916	3899	1581	5168		1.42	Si
SLV 13	fin.	719.96	1676	0.62	0	252	4916	3899	1581	5168		3.08	Si
SLV 1	ini.	452.44	-713	0.62	0	252	4916	3899	1581	5168		7.25	Si
SLV 1	fin.	-954.81	-3139	0.62	0	252	4916	3899	1581	5168		1.65	Si
SLV 16	ini.	-1310.09	3897	0.62	0	252	4916	3899	1581	5168		1.33	Si
SLV 16	fin.	967.38	2455	0.62	0	252	4916	3899	1581	5168		2.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.087	SLV 16	Si
V_SLV	1.259	SLV 14	Si
PF_SLU	2.363	SLU 78	Si
V_SLU	1.847	SLU 83	Si

Trave di accoppiamento 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.543	-3.314	1.41	2.31	0.9	-22.543	-3.314	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	244.1	-1771	-0.0001256	0.0001872	0.0035	0.9		2959	2959	No	12.12	Si
SLU 80	fin.	402.27	-1823	-0.0002156	0.0001872	0.0035	0.9		2959	2959	No	7.36	Si
SLU 82	ini.	246.34	-1772	-0.0001268	0.0001872	0.0035	0.9		2959	2959	No	12.01	Si
SLU 82	fin.	404.78	-1837	-0.0002171	0.0001872	0.0035	0.9		2959	2959	No	7.31	Si
SLU 78	ini.	246.58	-1789	-0.000127	0.0001872	0.0035	0.9		2959	2959	No	12	Si
SLU 78	fin.	404.79	-1836	-0.0002171	0.0001872	0.0035	0.9		2959	2959	No	7.31	Si
SLU 84	ini.	253.29	-1812	-0.0001306	0.0001872	0.0035	0.9		2959	2959	No	11.68	Si
SLU 84	fin.	405.92	-1852	-0.0002178	0.0001872	0.0035	0.9		2959	2959	No	7.29	Si
SLU 81	ini.	243.55	-1763	-0.0001253	0.0001872	0.0035	0.9		2959	2959	No	12.15	Si
SLU 81	fin.	408.3	-1845	-0.0002192	0.0001872	0.0035	0.9		2959	2959	No	7.25	Si
SLU 77	ini.	243.79	-1779	-0.0001254	0.0001872	0.0035	0.9		2959	2959	No	12.14	Si
SLU 77	fin.	408.31	-1844	-0.0002192	0.0001872	0.0035	0.9		2959	2959	No	7.25	Si
SLU 75	ini.	239.64	-1749	-0.0001232	0.0001872	0.0035	0.9		2959	2959	No	12.35	Si
SLU 75	fin.	403.65	-1821	-0.0002164	0.0001872	0.0035	0.9		2959	2959	No	7.33	Si
SLU 74	ini.	236.85	-1739	-0.0001217	0.0001872	0.0035	0.9		2959	2959	No	12.49	Si
SLU 74	fin.	407.17	-1829	-0.0002185	0.0001872	0.0035	0.9		2959	2959	No	7.27	Si
SLU 79	ini.	241.31	-1762	-0.0001241	0.0001872	0.0035	0.9		2959	2959	No	12.26	Si
SLU 79	fin.	405.79	-1831	-0.0002177	0.0001872	0.0035	0.9		2959	2959	No	7.29	Si
SLU 83	ini.	250.5	-1803	-0.0001291	0.0001872	0.0035	0.9		2959	2959	No	11.81	Si
SLU 83	fin.	409.44	-1860	-0.0002199	0.0001872	0.0035	0.9		2959	2959	No	7.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	243.79	-3047	0.9	0	329	7137	3773	2295	6068	No	1.99	Si
SLU 77	fin.	408.31	1949	0.9	0	329	7137	3773	2295	6068	No	3.11	Si
SLU 74	ini.	236.85	-2969	0.9	0	329	7137	3773	2295	6068	No	2.04	Si
SLU 74	fin.	407.17	1929	0.9	0	329	7137	3773	2295	6068	No	3.15	Si
SLU 82	ini.	246.34	-2991	0.9	0	329	7137	3773	2295	6068	No	2.03	Si
SLU 82	fin.	404.78	1902	0.9	0	329	7137	3773	2295	6068	No	3.19	Si
SLU 79	ini.	241.31	-3011	0.9	0	329	7137	3773	2295	6068	No	2.01	Si
SLU 79	fin.	405.79	1930	0.9	0	329	7137	3773	2295	6068	No	3.14	Si
SLU 78	ini.	246.58	-3062	0.9	0	329	7137	3773	2295	6068	No	1.98	Si
SLU 78	fin.	404.79	1935	0.9	0	329	7137	3773	2295	6068	No	3.14	Si
SLU 83	ini.	250.5	-3054	0.9	0	329	7137	3773	2295	6068	No	1.99	Si
SLU 83	fin.	409.44	1936	0.9	0	329	7137	3773	2295	6068	No	3.13	Si
SLU 80	ini.	244.1	-3026	0.9	0	329	7137	3773	2295	6068	No	2.01	Si
SLU 80	fin.	402.27	1916	0.9	0	329	7137	3773	2295	6068	No	3.17	Si
SLU 75	ini.	239.64	-2984	0.9	0	329	7137	3773	2295	6068	No	2.03	Si
SLU 75	fin.	403.65	1915	0.9	0	329	7137	3773	2295	6068	No	3.17	Si
SLU 81	ini.	243.55	-2977	0.9	0	329	7137	3773	2295	6068	No	2.04	Si
SLU 81	fin.	408.3	1916	0.9	0	329	7137	3773	2295	6068	No	3.17	Si
SLU 84	ini.	253.29	-3069	0.9	0	329	7137	3773	2295	6068	No	1.98	Si
SLU 84	fin.	405.92	1922	0.9	0	329	7137	3773	2295	6068	No	3.16	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-356.22	502	-0.0001838	0.0002807	0.0035	0.9		2995.37	2995.37		8.41	Si
SLD 15	fin.	951.52	-2763	-0.0005586	0.0002807	0.0035	0.9		2989.59	2989.59		3.14	Si
SLV 14	ini.	-906.82	3028	-0.0005258	0.0002807	0.0035	0.9		2995.37	2995.37		3.3	Si
SLV 14	fin.	1555.01	-3572	-0.0010438	0.0002807	0.0035	0.9		2989.59	2989.59		1.92	Si
SLV 1	ini.	1197.96	-4583	-0.0007432	0.0002807	0.0035	0.9		2989.59	2989.59		2.5	Si
SLV 1	fin.	-1035.65	1686	-0.0006183	0.0002807	0.0035	0.9		2995.37	2995.37		2.89	Si
SLV 2	ini.	1341.88	-5061	-0.0008593	0.0002807	0.0035	0.9		2989.59	2989.59		2.23	Si
SLV 2	fin.	-1237.16	2141	-0.0007724	0.0002807	0.0035	0.9		2995.37	2995.37		2.42	Si
SLV 15	ini.	-1039.48	2726	-0.0006211	0.0002807	0.0035	0.9		2995.37	2995.37		2.88	Si
SLV 15	fin.	1833.2	-4745	-0.0013119	0.0002807	0.0035	0.9		2989.59	2989.59		1.63	Si
SLV 13	ini.	-1050.75	3505	-0.0006294	0.0002807	0.0035	0.9		2995.37	2995.37		2.85	Si
SLV 13	fin.	1756.52	-4028	-0.0012344	0.0002807	0.0035	0.9		2989.59	2989.59		1.7	Si
SLV 3	ini.	1209.22	-5362	-0.0007521	0.0002807	0.0035	0.9		2989.59	2989.59		2.47	Si
SLV 3	fin.	-958.97	968	-0.0005627	0.0002807	0.0035	0.9		2995.37	2995.37		3.12	Si
SLV 16	ini.	-895.56	2249	-0.0005179	0.0002807	0.0035	0.9		2995.37	2995.37		3.34	Si
SLV 16	fin.	1631.68	-4290	-0.0011143	0.0002807	0.0035	0.9		2989.59	2989.59		1.83	Si
SLD 13	ini.	-362.83	824	-0.0001874	0.0002807	0.0035	0.9		2995.37	2995.37		8.26	Si
SLD 13	fin.	921.93	-2474	-0.0005376	0.0002807	0.0035	0.9		2989.59	2989.59		3.24	Si
SLV 4	ini.	1353.14	-5839	-0.0008687	0.0002807	0.0035	0.9		2989.59	2989.59		2.21	Si
SLV 4	fin.	-1160.48	1424	-0.0007124	0.0002807	0.0035	0.9		2995.37	2995.37		2.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-906.82	4835	0.9	0	493	7137	5660	2295	7630		1.58	Si
SLV 14	fin.	1555.01	5579	0.9	0	493	7137	5660	2295	7630		1.37	Si
SLV 8	ini.	554.16	-5825	0.9	0	493	7137	5660	2295	7630		1.31	Si
SLV 8	fin.	-58.66	876	0.9	0	493	7137	5660	2295	7630		8.71	Si
SLV 16	ini.	-895.56	3895	0.9	0	493	7137	5660	2295	7630		1.96	Si
SLV 16	fin.	1631.68	6318	0.9	0	493	7137	5660	2295	7630		1.21	Si
SLV 4	ini.	1353.14	-9565	0.9	0	493	7137	5660	2295	7630		0.8	No
SLV 4	fin.	-1160.48	-3592	0.9	0	493	7137	5660	2295	7630		2.12	Si
SLV 2	ini.	1341.88	-8625	0.9	0	493	7137	5660	2295	7630		0.88	No
SLV 2	fin.	-1237.16	-4330	0.9	0	493	7137	5660	2295	7630		1.76	Si
SLV 1	ini.	1197.96	-7904	0.9	0	493	7137	5660	2295	7630		0.97	No
SLV 1	fin.	-1035.65	-3534	0.9	0	493	7137	5660	2295	7630		2.16	Si
SLV 15	ini.	-1039.48	4617	0.9	0	493	7137	5660	2295	7630		1.65	Si
SLV 15	fin.	1833.2	7113	0.9	0	493	7137	5660	2295	7630		1.07	Si
SLV 13	ini.	-1050.75	5556	0.9	0	493	7137	5660	2295	7630		1.37	Si
SLV 13	fin.	1756.52	6375	0.9	0	493	7137	5660	2295	7630		1.2	Si
SLV 3	ini.	1209.22	-8844	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 3	fin.	-958.97	-2796	0.9	0	493	7137	5660	2295	7630		2.73	Si
SLV 7	ini.	460.39	-5355	0.9	0	493	7137	5660	2295	7630		1.42	Si
SLV 7	fin.	72.64	1395	0.9	0	493	7137	5660	2295	7630		5.47	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.631	SLV 15	Si
V_SLV	0.798	SLV 4	No
PF_SLU	7.227	SLU 83	Si
V_SLU	1.977	SLU 84	Si

Trave di accoppiamento 39

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.313	-3.314	1.41	2.31	0.9	-18.313	-3.314	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	571.92	-1772	-0.0003222	0.0001872	0.0035	0.9		2959	2959	No	5.17	Si
SLU 81	fin.	-648.42	-2722	-0.0003726	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.57	Si
SLU 79	ini.	541.34	-1729	-0.0003022	0.0001872	0.0035	0.9		2959	2959	No	5.47	Si
SLU 79	fin.	-628.17	-2779	-0.0003589	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.72	Si
SLU 80	ini.	545.74	-1737	-0.0003051	0.0001872	0.0035	0.9		2959	2959	No	5.42	Si
SLU 80	fin.	-631.51	-2769	-0.0003611	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.69	Si
SLU 77	ini.	546.56	-1746	-0.0003056	0.0001872	0.0035	0.9		2959	2959	No	5.41	Si
SLU 77	fin.	-632.56	-2809	-0.0003618	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.69	Si
SLU 75	ini.	546.28	-1733	-0.0003054	0.0001872	0.0035	0.9		2959	2959	No	5.42	Si
SLU 75	fin.	-629.08	-2743	-0.0003595	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.71	Si
SLU 82	ini.	576.32	-1780	-0.0003251	0.0001872	0.0035	0.9		2959	2959	No	5.13	Si
SLU 82	fin.	-651.75	-2713	-0.0003749	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.55	Si
SLU 84	ini.	581	-1802	-0.0003282	0.0001872	0.0035	0.9		2959	2959	No	5.09	Si
SLU 84	fin.	-658.57	-2769	-0.0003795	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.5	Si
SLU 78	ini.	550.96	-1755	-0.0003085	0.0001872	0.0035	0.9		2959	2959	No	5.37	Si
SLU 78	fin.	-635.89	-2800	-0.0003641	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.66	Si
SLU 76	ini.	544	-1721	-0.0003039	0.0001872	0.0035	0.9		2959	2959	No	5.44	Si
SLU 76	fin.	-626.92	-2706	-0.000358	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.73	Si
SLU 83	ini.	576.6	-1794	-0.0003253	0.0001872	0.0035	0.9		2959	2959	No	5.13	Si
SLU 83	fin.	-655.23	-2778	-0.0003772	0.0001872	0.0035	0.9		2964.67	2964.67	No	4.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	541.34	-4439	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 79	fin.	-628.17	5137	0.9	0	329	7137	3773	2295	6068	No	1.18	Si
SLU 75	ini.	546.28	-4434	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 75	fin.	-629.08	5072	0.9	0	329	7137	3773	2295	6068	No	1.2	Si
SLU 81	ini.	571.92	-4536	0.9	0	329	7137	3773	2295	6068	No	1.34	Si
SLU 81	fin.	-648.42	5043	0.9	0	329	7137	3773	2295	6068	No	1.2	Si
SLU 80	ini.	545.74	-4454	0.9	0	329	7137	3773	2295	6068	No	1.36	Si
SLU 80	fin.	-631.51	5121	0.9	0	329	7137	3773	2295	6068	No	1.18	Si
SLU 82	ini.	576.32	-4551	0.9	0	329	7137	3773	2295	6068	No	1.33	Si
SLU 82	fin.	-651.75	5028	0.9	0	329	7137	3773	2295	6068	No	1.21	Si
SLU 74	ini.	541.88	-4419	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 74	fin.	-625.74	5087	0.9	0	329	7137	3773	2295	6068	No	1.19	Si
SLU 84	ini.	581	-4614	0.9	0	329	7137	3773	2295	6068	No	1.32	Si
SLU 84	fin.	-658.57	5129	0.9	0	329	7137	3773	2295	6068	No	1.18	Si
SLU 78	ini.	550.96	-4497	0.9	0	329	7137	3773	2295	6068	No	1.35	Si
SLU 78	fin.	-635.89	5173	0.9	0	329	7137	3773	2295	6068	No	1.17	Si
SLU 83	ini.	576.6	-4599	0.9	0	329	7137	3773	2295	6068	No	1.32	Si
SLU 83	fin.	-655.23	5144	0.9	0	329	7137	3773	2295	6068	No	1.18	Si
SLU 77	ini.	546.56	-4482	0.9	0	329	7137	3773	2295	6068	No	1.35	Si
SLU 77	fin.	-632.56	5188	0.9	0	329	7137	3773	2295	6068	No	1.17	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	2780.76	-5020	-0.0027335	0.0002807	0.0035	0.9		2989.59	2989.59		1.08	Si
SLV 2	fin.	-2030.28	1720	-0.0015223	0.0002807	0.0035	0.9		2995.37	2995.37		1.48	Si
SLV 3	ini.	2728.78	-5198	-0.0026214	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si
SLV 3	fin.	-1945.97	2211	-0.0014278	0.0002807	0.0035	0.9		2995.37	2995.37		1.54	Si
SLV 15	ini.	-2064.07	2669	-0.0015617	0.0002807	0.0035	0.9		2995.37	2995.37		1.45	Si
SLV 15	fin.	1178.66	-5575	-0.0007281	0.0002807	0.0035	0.9		2989.59	2989.59		2.54	Si
SLV 8	ini.	1423.72	-3373	-0.0009283	0.0002807	0.0035	0.9		2989.59	2989.59		2.1	Si
SLV 8	fin.	-1043.51	1030	-0.0006241	0.0002807	0.0035	0.9		2995.37	2995.37		2.87	Si
SLV 13	ini.	-2229.46	3209	-0.0017688	0.0002807	0.0035	0.9		2995.37	2995.37		1.34	Si
SLV 13	fin.	1239.66	-6554	-0.0007762	0.0002807	0.0035	0.9		2989.59	2989.59		2.41	Si
SLV 4	ini.	2946.14	-5560	-0.0031242	0.0002807	0.0035	0.9		2989.59	2989.59		1.01	Si
SLV 4	fin.	-2091.28	2699	-0.001594	0.0002807	0.0035	0.9		2995.37	2995.37		1.43	Si
SLD 4	ini.	1464.6	-3051	-0.0009636	0.0002807	0.0035	0.9		2989.59	2989.59		2.04	Si
SLD 4	fin.	-1136.34	40	-0.0006938	0.0002807	0.0035	0.9		2995.37	2995.37		2.64	Si
SLV 1	ini.	2563.39	-4658	-0.0022975	0.0002807	0.0035	0.9		2989.59	2989.59		1.17	Si
SLV 1	fin.	-1884.97	1232	-0.0013623	0.0002807	0.0035	0.9		2995.37	2995.37		1.59	Si
SLV 14	ini.	-2012.09	2847	-0.0015015	0.0002807	0.0035	0.9		2995.37	2995.37		1.49	Si
SLV 14	fin.	1094.35	-6066	-0.0006635	0.0002807	0.0035	0.9		2989.59	2989.59		2.73	Si
SLV 16	ini.	-1846.71	2307	-0.0013224	0.0002807	0.0035	0.9		2995.37	2995.37		1.62	Si
SLV 16	fin.	1033.35	-5087	-0.000618	0.0002807	0.0035	0.9		2989.59	2989.59		2.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1846.71	4819	0.9	0	493	7137	5660	2295	7630		1.58	Si
SLV 16	fin.	1033.35	9662	0.9	0	493	7137	5660	2295	7630		0.79	No
SLV 9	ini.	-707.04	-945	0.9	0	493	7137	5660	2295	7630		8.07	Si
SLV 9	fin.	191.89	6705	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 4	ini.	2946.14	-11146	0.9	0	493	7137	5660	2295	7630		0.68	No
SLV 4	fin.	-2091.28	-3849	0.9	0	493	7137	5660	2295	7630		1.98	Si
SLV 1	ini.	2563.39	-10808	0.9	0	493	7137	5660	2295	7630		0.71	No
SLV 1	fin.	-1884.97	-2534	0.9	0	493	7137	5660	2295	7630		3.01	Si
SLV 14	ini.	-2012.09	4480	0.9	0	493	7137	5660	2295	7630		1.7	Si
SLV 14	fin.	1094.35	10173	0.9	0	493	7137	5660	2295	7630		0.75	No
SLD 13	ini.	-747.91	487	0.9	0	493	7137	5660	2295	7630		15.67	Si
SLD 13	fin.	284.72	6727	0.9	0	493	7137	5660	2295	7630		1.13	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-2229.46	5156	0.9	0	493	7137	5660	2295	7630		1.48	Si
SLV 13	fin.	1239.66	10977	0.9	0	493	7137	5660	2295	7630		0.7	No
SLV 2	ini.	2780.76	-11485	0.9	0	493	7137	5660	2295	7630		0.66	No
SLV 2	fin.	-2030.28	-3338	0.9	0	493	7137	5660	2295	7630		2.29	Si
SLV 15	ini.	-2064.07	5495	0.9	0	493	7137	5660	2295	7630		1.39	Si
SLV 15	fin.	1178.66	10466	0.9	0	493	7137	5660	2295	7630		0.73	No
SLV 3	ini.	2728.78	-10469	0.9	0	493	7137	5660	2295	7630		0.73	No
SLV 3	fin.	-1945.97	-3045	0.9	0	493	7137	5660	2295	7630		2.51	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.015	SLV 4	Si
V_SLV	0.664	SLV 2	No
PF_SLU	4.502	SLU 84	Si
V_SLU	1.17	SLU 77	Si

Trave di accoppiamento 40

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	3.51	4.83	1.32	-18.518	0.706	3.51	4.83	1.32	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	517.15	25	-0.0001224	0.0002246	0.0035	1.32		6596.09	6596.09	No	12.75	Si
SLU 44	fin.	-208.82	25	-0.0000481	0.0002246	0.0035	1.32		6604.39	6604.39	No	31.63	Si
SLU 50	ini.	540.29	3	-0.0001282	0.0002246	0.0035	1.32		6596.09	6596.09	No	12.21	Si
SLU 50	fin.	-206.19	3	-0.0000475	0.0002246	0.0035	1.32		6604.39	6604.39	No	32.03	Si
SLU 43	ini.	501.13	13	-0.0001184	0.0002246	0.0035	1.32		6596.09	6596.09	No	13.16	Si
SLU 43	fin.	-202.47	13	-0.0000466	0.0002246	0.0035	1.32		6604.39	6604.39	No	32.62	Si
SLU 46	ini.	521.98	7	-0.0001236	0.0002246	0.0035	1.32		6596.09	6596.09	No	12.64	Si
SLU 46	fin.	-204.91	7	-0.0000472	0.0002246	0.0035	1.32		6604.39	6604.39	No	32.23	Si
SLU 47	ini.	536.73	20	-0.0001273	0.0002246	0.0035	1.32		6596.09	6596.09	No	12.29	Si
SLU 47	fin.	-210.68	20	-0.0000485	0.0002246	0.0035	1.32		6604.39	6604.39	No	31.35	Si
SLU 45	ini.	512.37	-1	-0.0001212	0.0002246	0.0035	1.32		6596.09	6596.09	No	12.87	Si
SLU 45	fin.	-201.11	-1	-0.0000463	0.0002246	0.0035	1.32		6604.39	6604.39	No	32.84	Si
SLU 48	ini.	531.95	-5	-0.0001261	0.0002246	0.0035	1.32		6596.09	6596.09	No	12.4	Si
SLU 48	fin.	-202.96	-5	-0.0000467	0.0002246	0.0035	1.32		6604.39	6604.39	No	32.54	Si
SLU 51	ini.	549.9	10	-0.0001306	0.0002246	0.0035	1.32		6596.09	6596.09	No	12	Si
SLU 51	fin.	-210	10	-0.0000484	0.0002246	0.0035	1.32		6604.39	6604.39	No	31.45	Si
SLU 72	ini.	433.39	-94	-0.0001018	0.0002246	0.0035	1.32		6596.09	6596.09	No	15.22	Si
SLU 72	fin.	-181.26	-94	-0.0000416	0.0002246	0.0035	1.32		6604.39	6604.39	No	36.44	Si
SLU 49	ini.	541.56	2	-0.0001285	0.0002246	0.0035	1.32		6596.09	6596.09	No	12.18	Si
SLU 49	fin.	-206.77	2	-0.0000476	0.0002246	0.0035	1.32		6604.39	6604.39	No	31.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 45	ini.	512.37	-710	1.32	0	268	6344	3321	3366	6612	No	9.31	Si
SLU 45	fin.	-201.11	-1061	1.32	0	268	6344	3321	3366	6612	No	6.23	Si
SLU 44	ini.	517.15	-726	1.32	0	268	6344	3321	3366	6612	No	9.11	Si
SLU 44	fin.	-208.82	-1077	1.32	0	268	6344	3321	3366	6612	No	6.14	Si
SLU 47	ini.	536.73	-752	1.32	0	268	6344	3321	3366	6612	No	8.79	Si
SLU 47	fin.	-210.68	-1104	1.32	0	268	6344	3321	3366	6612	No	5.99	Si
SLU 48	ini.	531.95	-737	1.32	0	268	6344	3321	3366	6612	No	8.97	Si
SLU 48	fin.	-202.96	-1088	1.32	0	268	6344	3321	3366	6612	No	6.08	Si
SLU 49	ini.	541.56	-754	1.32	0	268	6344	3321	3366	6612	No	8.77	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	fin.	-206.77	-1105	1.32	0	268	6344	3321	3366	6612	No	5.98	Si
SLU 46	ini.	521.98	-727	1.32	0	268	6344	3321	3366	6612	No	9.1	Si
SLU 46	fin.	-204.91	-1078	1.32	0	268	6344	3321	3366	6612	No	6.13	Si
SLU 51	ini.	549.9	-768	1.32	0	268	6344	3321	3366	6612	No	8.61	Si
SLU 51	fin.	-210	-1119	1.32	0	268	6344	3321	3366	6612	No	5.91	Si
SLU 43	ini.	501.13	-698	1.32	0	268	6344	3321	3366	6612	No	9.48	Si
SLU 43	fin.	-202.47	-1049	1.32	0	268	6344	3321	3366	6612	No	6.3	Si
SLU 72	ini.	433.39	-582	1.32	0	268	6344	3321	3366	6612	No	11.37	Si
SLU 72	fin.	-181.26	-947	1.32	0	268	6344	3321	3366	6612	No	6.98	Si
SLU 50	ini.	540.29	-751	1.32	0	268	6344	3321	3366	6612	No	8.8	Si
SLU 50	fin.	-206.19	-1102	1.32	0	268	6344	3321	3366	6612	No	6	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	1437.42	1121	-0.0003603	0.0003369	0.0035	1.32		6754.02	6754.02		4.7	Si
SLV 11	fin.	-641.64	1342	-0.0001512	0.0003369	0.0035	1.32		6762.5	6762.5		10.54	Si
SLV 9	ini.	-1455.83	-1005	-0.000365	0.0003369	0.0035	1.32		6762.5	6762.5		4.65	Si
SLV 9	fin.	-15.81	-1384	-0.0000036	0.0003369	0.0035	1.32		6762.5	6762.5		427.83	Si
SLV 7	ini.	1961.12	809	-0.0005161	0.0003369	0.0035	1.32		6754.02	6754.02		3.44	Si
SLV 7	fin.	-218.88	1188	-0.0000502	0.0003369	0.0035	1.32		6762.5	6762.5		30.9	Si
SLV 13	ini.	-1069.44	94	-0.0002598	0.0003369	0.0035	1.32		6762.5	6762.5		6.32	Si
SLV 13	fin.	-722.09	-259	-0.0001711	0.0003369	0.0035	1.32		6762.5	6762.5		9.37	Si
SLV 12	ini.	1494.51	1157	-0.0003765	0.0003369	0.0035	1.32		6754.02	6754.02		4.52	Si
SLV 12	fin.	-663.96	1379	-0.0001567	0.0003369	0.0035	1.32		6762.5	6762.5		10.19	Si
SLV 4	ini.	1631.82	-253	-0.0004162	0.0003369	0.0035	1.32		6754.02	6754.02		4.14	Si
SLV 4	fin.	465.08	100	-0.0001085	0.0003369	0.0035	1.32		6754.02	6754.02		14.52	Si
SLV 8	ini.	2018.21	845	-0.0005341	0.0003369	0.0035	1.32		6754.02	6754.02		3.35	Si
SLV 8	fin.	-241.21	1224	-0.0000554	0.0003369	0.0035	1.32		6762.5	6762.5		28.04	Si
SLV 3	ini.	1544.19	-309	-0.0003907	0.0003369	0.0035	1.32		6754.02	6754.02		4.37	Si
SLV 3	fin.	499.34	44	-0.0001167	0.0003369	0.0035	1.32		6754.02	6754.02		13.53	Si
SLD 8	ini.	1029.02	342	-0.0002495	0.0003369	0.0035	1.32		6754.02	6754.02		6.56	Si
SLD 8	fin.	-181.24	491	-0.0000415	0.0003369	0.0035	1.32		6762.5	6762.5		37.31	Si
SLV 10	ini.	-1398.73	-968	-0.0003489	0.0003369	0.0035	1.32		6762.5	6762.5		4.83	Si
SLV 10	fin.	-38.13	-1347	-0.0000087	0.0003369	0.0035	1.32		6762.5	6762.5		177.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 11	ini.	791.88	-1437	1.32	0	402	6344	4981	3366	6745		4.69	Si
SLD 11	fin.	-342.27	-1827	1.32	0	402	6344	4981	3366	6745		3.69	Si
SLV 7	ini.	1961.12	-1930	1.32	0	402	6344	4981	3366	6745		3.5	Si
SLV 7	fin.	-218.88	-2824	1.32	0	402	6344	4981	3366	6745		2.39	Si
SLV 8	ini.	2018.21	-2029	1.32	0	402	6344	4981	3366	6745		3.32	Si
SLV 8	fin.	-241.21	-2923	1.32	0	402	6344	4981	3366	6745		2.31	Si
SLV 12	ini.	1494.51	-2918	1.32	0	402	6344	4981	3366	6745		2.31	Si
SLV 12	fin.	-663.96	-3506	1.32	0	402	6344	4981	3366	6745		1.92	Si
SLV 6	ini.	-875.04	2080	1.32	0	402	6344	4981	3366	6745		3.24	Si
SLV 6	fin.	384.62	2111	1.32	0	402	6344	4981	3366	6745		3.2	Si
SLV 11	ini.	1437.42	-2819	1.32	0	402	6344	4981	3366	6745		2.39	Si
SLV 11	fin.	-641.64	-3407	1.32	0	402	6344	4981	3366	6745		1.98	Si
SLV 16	ini.	-113.84	-2544	1.32	0	402	6344	4981	3366	6745		2.65	Si
SLV 16	fin.	-944.1	-2450	1.32	0	402	6344	4981	3366	6745		2.75	Si
SLV 15	ini.	-201.47	-2391	1.32	0	402	6344	4981	3366	6745		2.82	Si
SLV 15	fin.	-909.84	-2298	1.32	0	402	6344	4981	3366	6745		2.94	Si
SLV 5	ini.	-932.13	2179	1.32	0	402	6344	4981	3366	6745		3.1	Si
SLV 5	fin.	406.95	2210	1.32	0	402	6344	4981	3366	6745		3.05	Si
SLD 12	ini.	816.85	-1480	1.32	0	402	6344	4981	3366	6745		4.56	Si
SLD 12	fin.	-352.04	-1871	1.32	0	402	6344	4981	3366	6745		3.61	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.347	SLV 8	Si
V_SLV	1.924	SLV 12	Si
PF_SLU	11.995	SLU 51	Si
V_SLU	5.907	SLU 51	Si

Trave di accoppiamento 42

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.483	-3.314	3.51	4.83	1.32	-16.333	-3.314	3.51	4.83	1.32	0.85	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-204.54	-3151	-0.0000472	0.0001872	0.0035	1.32		6376.08	6376.08	No	31.17	Si
SLU 83	fin.	-912.6	-3151	-0.0002279	0.0001872	0.0035	1.32		6376.08	6376.08	No	6.99	Si
SLU 82	ini.	-178.79	-3106	-0.0000412	0.0001872	0.0035	1.32		6376.08	6376.08	No	35.66	Si
SLU 82	fin.	-910.49	-3106	-0.0002273	0.0001872	0.0035	1.32		6376.08	6376.08	No	7	Si
SLU 84	ini.	-196.62	-3154	-0.0000453	0.0001872	0.0035	1.32		6376.08	6376.08	No	32.43	Si
SLU 84	fin.	-917.12	-3154	-0.0002292	0.0001872	0.0035	1.32		6376.08	6376.08	No	6.95	Si
SLU 81	ini.	-186.72	-3104	-0.000043	0.0001872	0.0035	1.32		6376.08	6376.08	No	34.15	Si
SLU 81	fin.	-905.97	-3104	-0.000226	0.0001872	0.0035	1.32		6376.08	6376.08	No	7.04	Si
SLU 61	ini.	-104.81	-2813	-0.000024	0.0001872	0.0035	1.32		6376.08	6376.08	No	60.83	Si
SLU 61	fin.	-866.61	-2813	-0.0002151	0.0001872	0.0035	1.32		6376.08	6376.08	No	7.36	Si
SLU 62	ini.	-130.56	-2858	-0.0000299	0.0001872	0.0035	1.32		6376.08	6376.08	No	48.84	Si
SLU 62	fin.	-868.72	-2858	-0.0002157	0.0001872	0.0035	1.32		6376.08	6376.08	No	7.34	Si
SLU 77	ini.	-289.9	-3090	-0.0000674	0.0001872	0.0035	1.32		6376.08	6376.08	No	21.99	Si
SLU 77	fin.	-868.84	-3090	-0.0002157	0.0001872	0.0035	1.32		6376.08	6376.08	No	7.34	Si
SLU 78	ini.	-281.98	-3093	-0.0000655	0.0001872	0.0035	1.32		6376.08	6376.08	No	22.61	Si
SLU 78	fin.	-873.36	-3093	-0.000217	0.0001872	0.0035	1.32		6376.08	6376.08	No	7.3	Si
SLU 63	ini.	-122.64	-2860	-0.0000281	0.0001872	0.0035	1.32		6376.08	6376.08	No	51.99	Si
SLU 63	fin.	-873.24	-2860	-0.0002169	0.0001872	0.0035	1.32		6376.08	6376.08	No	7.3	Si
SLU 75	ini.	-264.15	-3045	-0.0000613	0.0001872	0.0035	1.32		6376.08	6376.08	No	24.14	Si
SLU 75	fin.	-866.72	-3045	-0.0002151	0.0001872	0.0035	1.32		6376.08	6376.08	No	7.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-204.54	-448	1.32	0	536	6740	5534	3366	7276	No	16.26	Si
SLU 83	fin.	-912.6	-1219	1.32	0	536	6740	5534	3366	7276	No	5.97	Si
SLU 52	ini.	-169.87	-368	1.32	0	536	6740	5534	3366	7276	No	19.79	Si
SLU 52	fin.	-808.01	-1135	1.32	0	536	6740	5534	3366	7276	No	6.41	Si
SLU 82	ini.	-178.79	-475	1.32	0	536	6740	5534	3366	7276	No	15.31	Si
SLU 82	fin.	-910.49	-1247	1.32	0	536	6740	5534	3366	7276	No	5.83	Si
SLU 54	ini.	-190.17	-361	1.32	0	536	6740	5534	3366	7276	No	20.14	Si
SLU 54	fin.	-822.85	-1128	1.32	0	536	6740	5534	3366	7276	No	6.45	Si
SLU 62	ini.	-130.56	-485	1.32	0	536	6740	5534	3366	7276	No	14.99	Si
SLU 62	fin.	-868.72	-1252	1.32	0	536	6740	5534	3366	7276	No	5.81	Si
SLU 61	ini.	-104.81	-513	1.32	0	536	6740	5534	3366	7276	No	14.18	Si
SLU 61	fin.	-866.61	-1280	1.32	0	536	6740	5534	3366	7276	No	5.68	Si
SLU 60	ini.	-112.74	-499	1.32	0	536	6740	5534	3366	7276	No	14.59	Si
SLU 60	fin.	-862.09	-1266	1.32	0	536	6740	5534	3366	7276	No	5.75	Si
SLU 84	ini.	-196.62	-462	1.32	0	536	6740	5534	3366	7276	No	15.74	Si
SLU 84	fin.	-917.12	-1234	1.32	0	536	6740	5534	3366	7276	No	5.9	Si
SLU 81	ini.	-186.72	-461	1.32	0	536	6740	5534	3366	7276	No	15.79	Si
SLU 81	fin.	-905.97	-1233	1.32	0	536	6740	5534	3366	7276	No	5.9	Si
SLU 63	ini.	-122.64	-500	1.32	0	536	6740	5534	3366	7276	No	14.55	Si
SLU 63	fin.	-873.24	-1267	1.32	0	536	6740	5534	3366	7276	No	5.74	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-3252.57	-2647	-0.0010004	0.0002807	0.0035	1.32		6372.4	6372.4		1.96	Si
SLD 15	fin.	1581.3	-2574	-0.0004095	0.0002807	0.0035	1.32		6363.53	6363.53		4.02	Si
SLV 4	ini.	6743.4	-1342	-0.0035596	0.0002807	0.0035	1.32		6363.53	6363.53		0.94	No
SLV 4	fin.	-5294.89	-1298	-0.0021059	0.0002807	0.0035	1.32		6372.4	6372.4		1.2	Si
SLV 2	ini.	6734.93	-690	-0.0035505	0.0002807	0.0035	1.32		6363.53	6363.53		0.94	No
SLV 2	fin.	-5606.16	-861	-0.0023589	0.0002807	0.0035	1.32		6372.4	6372.4		1.14	Si
SLD 13	ini.	-3255.13	-2372	-0.0010015	0.0002807	0.0035	1.32		6372.4	6372.4		1.96	Si
SLD 13	fin.	1450.83	-2390	-0.0003706	0.0002807	0.0035	1.32		6363.53	6363.53		4.39	Si
SLV 1	ini.	6183.54	-798	-0.0029333	0.0002807	0.0035	1.32		6363.53	6363.53		1.03	Si
SLV 1	fin.	-5244.69	-969	-0.0020682	0.0002807	0.0035	1.32		6372.4	6372.4		1.22	Si
SLV 14	ini.	-6713.69	-2675	-0.0035187	0.0002807	0.0035	1.32		6372.4	6372.4		0.95	No
SLV 14	fin.	3792.72	-2718	-0.0012368	0.0002807	0.0035	1.32		6363.53	6363.53		1.68	Si
SLV 3	ini.	6192.01	-1450	-0.0029427	0.0002807	0.0035	1.32		6363.53	6363.53		1.03	Si
SLV 3	fin.	-4933.41	-1406	-0.0018509	0.0002807	0.0035	1.32		6372.4	6372.4		1.29	Si
SLV 16	ini.	-6705.22	-3326	-0.0035096	0.0002807	0.0035	1.32		6372.4	6372.4		0.95	No
SLV 16	fin.	4104	-3155	-0.0013855	0.0002807	0.0035	1.32		6363.53	6363.53		1.55	Si
SLV 15	ini.	-7256.61	-3434	-0.0040704	0.0002807	0.0035	1.32		6372.4	6372.4		0.88	No
SLV 15	fin.	4465.48	-3263	-0.0015743	0.0002807	0.0035	1.32		6363.53	6363.53		1.43	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-7265.08	-2782	-0.0040786	0.0002807	0.0035	1.32		6372.4	6372.4		0.88	No
SLV 13	fin.	4154.2	-2826	-0.0014106	0.0002807	0.0035	1.32		6363.53	6363.53		1.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	2733.45	-6037	1.32	0	803	6740	8301	3366	7544		1.25	Si
SLD 4	fin.	-2591.51	-6641	1.32	0	803	6740	8301	3366	7544		1.14	Si
SLV 1	ini.	6183.54	-12962	1.32	0	803	6740	8301	3366	7544		0.58	No
SLV 1	fin.	-5244.69	-13595	1.32	0	803	6740	8301	3366	7544		0.55	No
SLV 13	ini.	-7265.08	13904	1.32	0	803	6740	8301	3366	7544		0.54	No
SLV 13	fin.	4154.2	13332	1.32	0	803	6740	8301	3366	7544		0.57	No
SLV 14	ini.	-6713.69	12830	1.32	0	803	6740	8301	3366	7544		0.59	No
SLV 14	fin.	3792.72	12258	1.32	0	803	6740	8301	3366	7544		0.62	No
SLV 2	ini.	6734.93	-14036	1.32	0	803	6740	8301	3366	7544		0.54	No
SLV 2	fin.	-5606.16	-14669	1.32	0	803	6740	8301	3366	7544		0.51	No
SLD 2	ini.	2730.89	-6045	1.32	0	803	6740	8301	3366	7544		1.25	Si
SLD 2	fin.	-2721.98	-6653	1.32	0	803	6740	8301	3366	7544		1.13	Si
SLV 16	ini.	-6705.22	12826	1.32	0	803	6740	8301	3366	7544		0.59	No
SLV 16	fin.	4104	12273	1.32	0	803	6740	8301	3366	7544		0.61	No
SLV 4	ini.	6743.4	-14040	1.32	0	803	6740	8301	3366	7544		0.54	No
SLV 4	fin.	-5294.89	-14654	1.32	0	803	6740	8301	3366	7544		0.51	No
SLV 3	ini.	6192.01	-12966	1.32	0	803	6740	8301	3366	7544		0.58	No
SLV 3	fin.	-4933.41	-13580	1.32	0	803	6740	8301	3366	7544		0.56	No
SLV 15	ini.	-7256.61	13900	1.32	0	803	6740	8301	3366	7544		0.54	No
SLV 15	fin.	4465.48	13347	1.32	0	803	6740	8301	3366	7544		0.57	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.877	SLV 13	No
V_SLV	0.514	SLV 2	No
PF_SLU	6.952	SLU 84	Si
V_SLU	5.683	SLU 61	Si

Trave di accoppiamento 44

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	1.41	2.31	0.9	-16.768	6.526	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1554.07	-4243	-0.0011144	0.0001872	0.0035	0.9		2959	2959	No	1.9	Si
SLU 83	fin.	-503.63	-1495	-0.0002775	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.89	Si
SLU 80	ini.	1488.53	-4058	-0.0010515	0.0001872	0.0035	0.9		2959	2959	No	1.99	Si
SLU 80	fin.	-479.92	-1432	-0.0002626	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.18	Si
SLU 79	ini.	1501.85	-4103	-0.0010641	0.0001872	0.0035	0.9		2959	2959	No	1.97	Si
SLU 79	fin.	-488.14	-1447	-0.0002677	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.07	Si
SLU 84	ini.	1540.75	-4198	-0.0011015	0.0001872	0.0035	0.9		2959	2959	No	1.92	Si
SLU 84	fin.	-495.4	-1480	-0.0002723	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.98	Si
SLU 74	ini.	1509.3	-4114	-0.0010712	0.0001872	0.0035	0.9		2959	2959	No	1.96	Si
SLU 74	fin.	-495.8	-1436	-0.0002725	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.98	Si
SLU 81	ini.	1545.8	-4211	-0.0011064	0.0001872	0.0035	0.9		2959	2959	No	1.91	Si
SLU 81	fin.	-507.05	-1468	-0.0002796	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.85	Si
SLU 82	ini.	1532.48	-4166	-0.0010935	0.0001872	0.0035	0.9		2959	2959	No	1.93	Si
SLU 82	fin.	-498.83	-1453	-0.0002744	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.94	Si
SLU 78	ini.	1504.25	-4101	-0.0010664	0.0001872	0.0035	0.9		2959	2959	No	1.97	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-484.15	-1448	-0.0002652	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.12	Si
SLU 77	ini.	1517.57	-4146	-0.0010791	0.0001872	0.0035	0.9		2959	2959	No	1.95	Si
SLU 77	fin.	-492.37	-1463	-0.0002704	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.02	Si
SLU 75	ini.	1495.98	-4069	-0.0010585	0.0001872	0.0035	0.9		2959	2959	No	1.98	Si
SLU 75	fin.	-487.57	-1420	-0.0002674	0.0001872	0.0035	0.9		2964.67	2964.67	No	6.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	1545.8	-4874	0.9	0	329	7137	3773	2295	6068	No	1.25	Si
SLU 81	fin.	-507.05	-1668	0.9	0	329	7137	3773	2295	6068	No	3.64	Si
SLU 84	ini.	1540.75	-4908	0.9	0	329	7137	3773	2295	6068	No	1.24	Si
SLU 84	fin.	-495.4	-1574	0.9	0	329	7137	3773	2295	6068	No	3.85	Si
SLU 78	ini.	1504.25	-4781	0.9	0	329	7137	3773	2295	6068	No	1.27	Si
SLU 78	fin.	-484.15	-1544	0.9	0	329	7137	3773	2295	6068	No	3.93	Si
SLU 74	ini.	1509.3	-4747	0.9	0	329	7137	3773	2295	6068	No	1.28	Si
SLU 74	fin.	-495.8	-1638	0.9	0	329	7137	3773	2295	6068	No	3.7	Si
SLU 82	ini.	1532.48	-4883	0.9	0	329	7137	3773	2295	6068	No	1.24	Si
SLU 82	fin.	-498.83	-1587	0.9	0	329	7137	3773	2295	6068	No	3.82	Si
SLU 83	ini.	1554.07	-4899	0.9	0	329	7137	3773	2295	6068	No	1.24	Si
SLU 83	fin.	-503.63	-1655	0.9	0	329	7137	3773	2295	6068	No	3.67	Si
SLU 79	ini.	1501.85	-4720	0.9	0	329	7137	3773	2295	6068	No	1.29	Si
SLU 79	fin.	-488.14	-1613	0.9	0	329	7137	3773	2295	6068	No	3.76	Si
SLU 80	ini.	1488.53	-4729	0.9	0	329	7137	3773	2295	6068	No	1.28	Si
SLU 80	fin.	-479.92	-1532	0.9	0	329	7137	3773	2295	6068	No	3.96	Si
SLU 77	ini.	1517.57	-4772	0.9	0	329	7137	3773	2295	6068	No	1.27	Si
SLU 77	fin.	-492.37	-1625	0.9	0	329	7137	3773	2295	6068	No	3.73	Si
SLU 75	ini.	1495.98	-4756	0.9	0	329	7137	3773	2295	6068	No	1.28	Si
SLU 75	fin.	-487.57	-1557	0.9	0	329	7137	3773	2295	6068	No	3.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1857.34	-3182	-0.0013369	0.0002807	0.0035	0.9		2989.59	2989.59		1.61	Si
SLV 15	fin.	-1511.57	1484	-0.0010025	0.0002807	0.0035	0.9		2995.37	2995.37		1.98	Si
SLD 16	ini.	1426.7	-3000	-0.0009309	0.0002807	0.0035	0.9		2989.59	2989.59		2.1	Si
SLD 16	fin.	-901.83	186	-0.0005223	0.0002807	0.0035	0.9		2995.37	2995.37		3.32	Si
SLV 14	ini.	2125.1	-3670	-0.0016399	0.0002807	0.0035	0.9		2989.59	2989.59		1.41	Si
SLV 14	fin.	-1805.28	1744	-0.00128	0.0002807	0.0035	0.9		2995.37	2995.37		1.66	Si
SLV 10	ini.	1660.69	-3737	-0.0011416	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLV 10	fin.	-1084.25	-35	-0.0006544	0.0002807	0.0035	0.9		2995.37	2995.37		2.76	Si
SLV 16	ini.	1941.46	-3242	-0.0014268	0.0002807	0.0035	0.9		2989.59	2989.59		1.54	Si
SLV 16	fin.	-1627.16	1700	-0.0011073	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si
SLD 13	ini.	1469.34	-3161	-0.0009677	0.0002807	0.0035	0.9		2989.59	2989.59		2.03	Si
SLD 13	fin.	-928.65	110	-0.0005411	0.0002807	0.0035	0.9		2995.37	2995.37		3.23	Si
SLD 14	ini.	1505.47	-3187	-0.0009995	0.0002807	0.0035	0.9		2989.59	2989.59		1.99	Si
SLD 14	fin.	-978.3	203	-0.0005765	0.0002807	0.0035	0.9		2995.37	2995.37		3.06	Si
SLV 9	ini.	1605.88	-3698	-0.0010903	0.0002807	0.0035	0.9		2989.59	2989.59		1.86	Si
SLV 9	fin.	-1008.94	-175	-0.0005987	0.0002807	0.0035	0.9		2995.37	2995.37		2.97	Si
SLD 15	ini.	1390.57	-2974	-0.0009001	0.0002807	0.0035	0.9		2989.59	2989.59		2.15	Si
SLD 15	fin.	-852.19	93	-0.000488	0.0002807	0.0035	0.9		2995.37	2995.37		3.51	Si
SLV 13	ini.	2040.99	-3610	-0.001539	0.0002807	0.0035	0.9		2989.59	2989.59		1.46	Si
SLV 13	fin.	-1689.69	1528	-0.0011663	0.0002807	0.0035	0.9		2995.37	2995.37		1.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	1469.34	-4685	0.9	0	493	7137	5660	2295	7630		1.63	Si
SLD 13	fin.	-928.65	-3137	0.9	0	493	7137	5660	2295	7630		2.43	Si
SLD 14	ini.	1505.47	-4796	0.9	0	493	7137	5660	2295	7630		1.59	Si
SLD 14	fin.	-978.3	-3295	0.9	0	493	7137	5660	2295	7630		2.32	Si
SLV 16	ini.	1941.46	-5883	0.9	0	493	7137	5660	2295	7630		1.3	Si
SLV 16	fin.	-1627.16	-5068	0.9	0	493	7137	5660	2295	7630		1.51	Si
SLV 13	ini.	2040.99	-6592	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 13	fin.	-1689.69	-5709	0.9	0	493	7137	5660	2295	7630		1.34	Si
SLV 15	ini.	1857.34	-5626	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 15	fin.	-1511.57	-4700	0.9	0	493	7137	5660	2295	7630		1.62	Si
SLV 14	ini.	2125.1	-6849	0.9	0	493	7137	5660	2295	7630		1.11	Si
SLV 14	fin.	-1805.28	-6077	0.9	0	493	7137	5660	2295	7630		1.26	Si
SLD 16	ini.	1426.7	-4374	0.9	0	493	7137	5660	2295	7630		1.74	Si
SLD 16	fin.	-901.83	-2856	0.9	0	493	7137	5660	2295	7630		2.67	Si
SLV 10	ini.	1660.69	-5844	0.9	0	493	7137	5660	2295	7630		1.31	Si
SLV 10	fin.	-1084.25	-4265	0.9	0	493	7137	5660	2295	7630		1.79	Si
SLV 9	ini.	1605.88	-5676	0.9	0	493	7137	5660	2295	7630		1.34	Si
SLV 9	fin.	-1008.94	-4025	0.9	0	493	7137	5660	2295	7630		1.9	Si
SLD 10	ini.	1307.52	-4376	0.9	0	493	7137	5660	2295	7630		1.74	Si
SLD 10	fin.	-670.68	-2531	0.9	0	493	7137	5660	2295	7630		3.01	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.407	SLV 14	Si
V_SLV	1.114	SLV 14	Si
PF_SLU	1.904	SLU 83	Si
V_SLU	1.236	SLU 84	Si

Trave di accoppiamento 45

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.768	6.526	4.21	4.83	0.62	-16.768	6.526	4.21	4.83	0.62	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	247.11	167	-0.0002883	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.71	Si
SLU 83	fin.	-1257.38	-3426	-0.0026778	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.13	Si
SLU 81	ini.	249.51	177	-0.0002916	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.65	Si
SLU 81	fin.	-1250.22	-3403	-0.0026443	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.13	Si
SLU 79	ini.	240.16	164	-0.000279	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.87	Si
SLU 79	fin.	-1209.65	-3301	-0.0024632	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.17	Si
SLU 77	ini.	242.4	163	-0.000282	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.82	Si
SLU 77	fin.	-1223.22	-3339	-0.0025222	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.16	Si
SLU 75	ini.	247.72	189	-0.0002892	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.7	Si
SLU 75	fin.	-1213.93	-3302	-0.0024816	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.17	Si
SLU 74	ini.	244.8	173	-0.0002852	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.76	Si
SLU 74	fin.	-1216.06	-3316	-0.0024909	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.16	Si
SLU 78	ini.	245.32	178	-0.0002859	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.75	Si
SLU 78	fin.	-1221.08	-3326	-0.0025128	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.16	Si
SLU 84	ini.	250.03	182	-0.0002923	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.64	Si
SLU 84	fin.	-1255.24	-3413	-0.0026678	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.13	Si
SLU 80	ini.	243.09	179	-0.000283	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.8	Si
SLU 80	fin.	-1207.52	-3287	-0.0024541	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.17	Si
SLU 82	ini.	252.44	193	-0.0002955	0.0001872	0.0035	0.62		1410.91	1410.91	No	5.59	Si
SLU 82	fin.	-1248.08	-3389	-0.0026344	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	242.4	-99	0.62	0	168	4916	2599	1581	4180	No	42.07	Si
SLU 77	fin.	-1223.22	-5159	0.62	0	168	4916	2599	1581	4180	No	0.81	No
SLU 75	ini.	247.72	-119	0.62	0	168	4916	2599	1581	4180	No	35.22	Si
SLU 75	fin.	-1213.93	-5123	0.62	0	168	4916	2599	1581	4180	No	0.82	No
SLU 74	ini.	244.8	-113	0.62	0	168	4916	2599	1581	4180	No	36.96	Si
SLU 74	fin.	-1216.06	-5126	0.62	0	168	4916	2599	1581	4180	No	0.82	No
SLU 80	ini.	243.09	-105	0.62	0	168	4916	2599	1581	4180	No	39.78	Si
SLU 80	fin.	-1207.52	-5099	0.62	0	168	4916	2599	1581	4180	No	0.82	No
SLU 81	ini.	249.51	-101	0.62	0	168	4916	2599	1581	4180	No	41.46	Si
SLU 81	fin.	-1250.22	-5277	0.62	0	168	4916	2599	1581	4180	No	0.79	No
SLU 79	ini.	240.16	-99	0.62	0	168	4916	2599	1581	4180	No	42.01	Si
SLU 79	fin.	-1209.65	-5102	0.62	0	168	4916	2599	1581	4180	No	0.82	No
SLU 82	ini.	252.44	-106	0.62	0	168	4916	2599	1581	4180	No	39.29	Si
SLU 82	fin.	-1248.08	-5273	0.62	0	168	4916	2599	1581	4180	No	0.79	No
SLU 84	ini.	250.03	-93	0.62	0	168	4916	2599	1581	4180	No	45.11	Si
SLU 84	fin.	-1255.24	-5305	0.62	0	168	4916	2599	1581	4180	No	0.79	No
SLU 78	ini.	245.32	-105	0.62	0	168	4916	2599	1581	4180	No	39.83	Si
SLU 78	fin.	-1221.08	-5155	0.62	0	168	4916	2599	1581	4180	No	0.81	No
SLU 83	ini.	247.11	-87	0.62	0	168	4916	2599	1581	4180	No	48	Si
SLU 83	fin.	-1257.38	-5309	0.62	0	168	4916	2599	1581	4180	No	0.79	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	541.4	1025	-0.0006973	0.0002807	0.0035	0.62		1420.05	1420.05		2.62	Si
SLV 9	fin.	-1107.45	-2833	-0.0019058	0.0002807	0.0035	0.62		1424.12	1424.12		1.29	Si
SLV 16	ini.	1044.04	2297	-0.0017301	0.0002807	0.0035	0.62		1420.05	1420.05		1.36	Si
SLV 16	fin.	-1442.84	-3576	-0.003322	0.0002807	0.0035	0.62		1424.12	1424.12		0.99	No
SLD 16	ini.	549.64	1070	-0.0007107	0.0002807	0.0035	0.62		1420.05	1420.05		2.58	Si
SLD 16	fin.	-1091.5	-2821	-0.0018577	0.0002807	0.0035	0.62		1424.12	1424.12		1.3	Si
SLD 15	ini.	516.08	987	-0.0006568	0.0002807	0.0035	0.62		1420.05	1420.05		2.75	Si
SLD 15	fin.	-1066.43	-2768	-0.0017848	0.0002807	0.0035	0.62		1424.12	1424.12		1.34	Si
SLD 13	ini.	549.17	1064	-0.0007099	0.0002807	0.0035	0.62		1420.05	1420.05		2.59	Si
SLD 13	fin.	-1095.36	-2824	-0.0018692	0.0002807	0.0035	0.62		1424.12	1424.12		1.3	Si
SLD 14	ini.	582.73	1146	-0.0007652	0.0002807	0.0035	0.62		1420.05	1420.05		2.44	Si
SLD 14	fin.	-1120.44	-2878	-0.001946	0.0002807	0.0035	0.62		1424.12	1424.12		1.27	Si
SLV 14	ini.	1120.48	2473	-0.0019556	0.0002807	0.0035	0.62		1420.05	1420.05		1.27	Si
SLV 14	fin.	-1509.84	-3708	-0.0036511	0.0002807	0.0035	0.62		1424.12	1424.12		0.94	No
SLV 15	ini.	965.9	2105	-0.0015283	0.0002807	0.0035	0.62		1420.05	1420.05		1.47	Si
SLV 15	fin.	-1384.47	-3453	-0.0030221	0.0002807	0.0035	0.62		1424.12	1424.12		1.03	Si
SLV 10	ini.	592.31	1150	-0.0007812	0.0002807	0.0035	0.62		1420.05	1420.05		2.4	Si
SLV 10	fin.	-1145.49	-2914	-0.0020266	0.0002807	0.0035	0.62		1424.12	1424.12		1.24	Si
SLV 13	ini.	1042.34	2281	-0.0017254	0.0002807	0.0035	0.62		1420.05	1420.05		1.36	Si
SLV 13	fin.	-1451.47	-3584	-0.0033657	0.0002807	0.0035	0.62		1424.12	1424.12		0.98	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	541.4	-1436	0.62	0	252	4916	3899	1581	5168		3.6	Si
SLV 9	fin.	-1107.45	-4525	0.62	0	252	4916	3899	1581	5168		1.14	Si
SLV 13	ini.	1042.34	-3357	0.62	0	252	4916	3899	1581	5168		1.54	Si
SLV 13	fin.	-1451.47	-5652	0.62	0	252	4916	3899	1581	5168		0.91	No
SLD 15	ini.	516.08	-1406	0.62	0	252	4916	3899	1581	5168		3.68	Si
SLD 15	fin.	-1066.43	-4291	0.62	0	252	4916	3899	1581	5168		1.2	Si
SLV 14	ini.	1120.48	-3647	0.62	0	252	4916	3899	1581	5168		1.42	Si
SLV 14	fin.	-1509.84	-5846	0.62	0	252	4916	3899	1581	5168		0.88	No
SLV 16	ini.	1044.04	-3394	0.62	0	252	4916	3899	1581	5168		1.52	Si
SLV 16	fin.	-1442.84	-5567	0.62	0	252	4916	3899	1581	5168		0.93	No
SLD 13	ini.	549.17	-1514	0.62	0	252	4916	3899	1581	5168		3.41	Si
SLD 13	fin.	-1095.36	-4412	0.62	0	252	4916	3899	1581	5168		1.17	Si
SLD 16	ini.	549.64	-1530	0.62	0	252	4916	3899	1581	5168		3.38	Si
SLD 16	fin.	-1091.5	-4374	0.62	0	252	4916	3899	1581	5168		1.18	Si
SLD 14	ini.	582.73	-1639	0.62	0	252	4916	3899	1581	5168		3.15	Si
SLD 14	fin.	-1120.44	-4495	0.62	0	252	4916	3899	1581	5168		1.15	Si
SLV 15	ini.	965.9	-3104	0.62	0	252	4916	3899	1581	5168		1.66	Si
SLV 15	fin.	-1384.47	-5372	0.62	0	252	4916	3899	1581	5168		0.96	No
SLV 10	ini.	592.31	-1625	0.62	0	252	4916	3899	1581	5168		3.18	Si
SLV 10	fin.	-1145.49	-4652	0.62	0	252	4916	3899	1581	5168		1.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.943	SLV 14	No
V_SLV	0.884	SLV 14	No
PF_SLU	1.125	SLU 83	Si
V_SLU	0.787	SLU 83	No

Trave di accoppiamento 46

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	1.41	2.31	0.9	-11.888	6.526	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	976.82	-4233	-0.000613	0.0001872	0.0035	0.9		2959	2959	No	3.03	Si
SLU 80	fin.	464.68	-3489	-0.0002536	0.0001872	0.0035	0.9		2959	2959	No	6.37	Si
SLU 77	ini.	985.54	-4283	-0.0006198	0.0001872	0.0035	0.9		2959	2959	No	3	Si
SLU 77	fin.	467.6	-3529	-0.0002554	0.0001872	0.0035	0.9		2959	2959	No	6.33	Si
SLU 82	ini.	1014.89	-4339	-0.0006428	0.0001872	0.0035	0.9		2959	2959	No	2.92	Si
SLU 82	fin.	453.51	-3521	-0.0002467	0.0001872	0.0035	0.9		2959	2959	No	6.52	Si
SLU 76	ini.	974.11	-4187	-0.0006109	0.0001872	0.0035	0.9		2959	2959	No	3.04	Si
SLU 76	fin.	450.17	-3426	-0.0002446	0.0001872	0.0035	0.9		2959	2959	No	6.57	Si
SLU 78	ini.	990.5	-4280	-0.0006237	0.0001872	0.0035	0.9		2959	2959	No	2.99	Si
SLU 78	fin.	465.71	-3517	-0.0002543	0.0001872	0.0035	0.9		2959	2959	No	6.35	Si
SLU 81	ini.	1009.93	-4341	-0.0006389	0.0001872	0.0035	0.9		2959	2959	No	2.93	Si
SLU 81	fin.	455.41	-3533	-0.0002479	0.0001872	0.0035	0.9		2959	2959	No	6.5	Si
SLU 74	ini.	979.52	-4239	-0.0006151	0.0001872	0.0035	0.9		2959	2959	No	3.02	Si
SLU 74	fin.	454.36	-3474	-0.0002472	0.0001872	0.0035	0.9		2959	2959	No	6.51	Si
SLU 83	ini.	1015.94	-4385	-0.0006436	0.0001872	0.0035	0.9		2959	2959	No	2.91	Si
SLU 83	fin.	468.65	-3588	-0.0002561	0.0001872	0.0035	0.9		2959	2959	No	6.31	Si
SLU 75	ini.	984.49	-4236	-0.000619	0.0001872	0.0035	0.9		2959	2959	No	3.01	Si
SLU 75	fin.	452.47	-3462	-0.0002461	0.0001872	0.0035	0.9		2959	2959	No	6.54	Si
SLU 84	ini.	1020.9	-4383	-0.0006475	0.0001872	0.0035	0.9		2959	2959	No	2.9	Si
SLU 84	fin.	466.75	-3576	-0.0002549	0.0001872	0.0035	0.9		2959	2959	No	6.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	976.82	-2634	0.9	0	329	7137	3773	2295	6068	No	2.3	Si
SLU 80	fin.	464.68	976	0.9	0	329	7137	3773	2295	6068	No	6.22	Si
SLU 76	ini.	974.11	-2663	0.9	0	329	7137	3773	2295	6068	No	2.28	Si
SLU 76	fin.	450.17	965	0.9	0	329	7137	3773	2295	6068	No	6.29	Si
SLU 84	ini.	1020.9	-2770	0.9	0	329	7137	3773	2295	6068	No	2.19	Si
SLU 84	fin.	466.75	971	0.9	0	329	7137	3773	2295	6068	No	6.25	Si
SLU 82	ini.	1014.89	-2758	0.9	0	329	7137	3773	2295	6068	No	2.2	Si
SLU 82	fin.	453.51	933	0.9	0	329	7137	3773	2295	6068	No	6.51	Si
SLU 75	ini.	984.49	-2663	0.9	0	329	7137	3773	2295	6068	No	2.28	Si
SLU 75	fin.	452.47	936	0.9	0	329	7137	3773	2295	6068	No	6.48	Si
SLU 77	ini.	985.54	-2613	0.9	0	329	7137	3773	2295	6068	No	2.32	Si
SLU 77	fin.	467.6	933	0.9	0	329	7137	3773	2295	6068	No	6.51	Si
SLU 73	ini.	968.1	-2651	0.9	0	329	7137	3773	2295	6068	No	2.29	Si
SLU 73	fin.	436.93	927	0.9	0	329	7137	3773	2295	6068	No	6.54	Si
SLU 83	ini.	1015.94	-2707	0.9	0	329	7137	3773	2295	6068	No	2.24	Si
SLU 83	fin.	468.65	929	0.9	0	329	7137	3773	2295	6068	No	6.53	Si
SLU 81	ini.	1009.93	-2695	0.9	0	329	7137	3773	2295	6068	No	2.25	Si
SLU 81	fin.	455.41	891	0.9	0	329	7137	3773	2295	6068	No	6.81	Si
SLU 78	ini.	990.5	-2676	0.9	0	329	7137	3773	2295	6068	No	2.27	Si
SLU 78	fin.	465.71	974	0.9	0	329	7137	3773	2295	6068	No	6.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1898.79	1050	-0.001377	0.0002807	0.0035	0.9		2995.37	2995.37		1.58	Si
SLV 4	fin.	2880.5	-6047	-0.002964	0.0002807	0.0035	0.9		2989.59	2989.59		1.04	Si
SLD 14	ini.	1842.45	-4684	-0.0013215	0.0002807	0.0035	0.9		2989.59	2989.59		1.62	Si
SLD 14	fin.	-881.15	-656	-0.0005079	0.0002807	0.0035	0.9		2995.37	2995.37		3.4	Si
SLV 3	ini.	-2110.23	1354	-0.0016169	0.0002807	0.0035	0.9		2995.37	2995.37		1.42	Si
SLV 3	fin.	3097.17	-6370	-0.0034895	0.0002807	0.0035	0.9		2989.59	2989.59		0.97	No
SLV 2	ini.	-1822.56	559	-0.0012976	0.0002807	0.0035	0.9		2995.37	2995.37		1.64	Si
SLV 2	fin.	2827.24	-6108	-0.0028384	0.0002807	0.0035	0.9		2989.59	2989.59		1.06	Si
SLV 15	ini.	3139.39	-6308	-0.0035872	0.0002807	0.0035	0.9		2989.59	2989.59		0.95	No
SLV 15	fin.	-2206.67	1374	-0.0017386	0.0002807	0.0035	0.9		2995.37	2995.37		1.36	Si
SLV 1	ini.	-2034.01	862	-0.0015266	0.0002807	0.0035	0.9		2995.37	2995.37		1.47	Si
SLV 1	fin.	3043.91	-6431	-0.003363	0.0002807	0.0035	0.9		2989.59	2989.59		0.98	No
SLD 16	ini.	1808.59	-4468	-0.0012867	0.0002807	0.0035	0.9		2989.59	2989.59		1.65	Si
SLD 16	fin.	-858.39	-629	-0.0004922	0.0002807	0.0035	0.9		2995.37	2995.37		3.49	Si
SLV 16	ini.	3350.84	-6611	-0.0040488	0.0002807	0.0035	0.9		2989.59	2989.59		0.89	No
SLV 16	fin.	-2423.34	1697	-0.0020516	0.0002807	0.0035	0.9		2995.37	2995.37		1.24	Si
SLV 13	ini.	3215.62	-6799	-0.0037584	0.0002807	0.0035	0.9		2989.59	2989.59		0.93	No
SLV 13	fin.	-2259.93	1312	-0.0018101	0.0002807	0.0035	0.9		2995.37	2995.37		1.33	Si
SLV 14	ini.	3427.07	-7103	-0.0042065	0.0002807	0.0035	0.9		2989.59	2989.59		0.87	No
SLV 14	fin.	-2476.6	1636	-0.0021384	0.0002807	0.0035	0.9		2995.37	2995.37		1.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1822.56	5728	0.9	0	493	7137	5660	2295	7630		1.33	Si
SLV 2	fin.	2827.24	8719	0.9	0	493	7137	5660	2295	7630		0.88	No
SLV 16	ini.	3350.84	-9875	0.9	0	493	7137	5660	2295	7630		0.77	No
SLV 16	fin.	-2423.34	-8247	0.9	0	493	7137	5660	2295	7630		0.93	No
SLV 14	ini.	3427.07	-11778	0.9	0	493	7137	5660	2295	7630		0.65	No
SLV 14	fin.	-2476.6	-8865	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 4	ini.	-1898.79	7631	0.9	0	493	7137	5660	2295	7630		1	No
SLV 4	fin.	2880.5	9337	0.9	0	493	7137	5660	2295	7630		0.82	No
SLV 3	ini.	-2110.23	8333	0.9	0	493	7137	5660	2295	7630		0.92	No
SLV 3	fin.	3097.17	10057	0.9	0	493	7137	5660	2295	7630		0.76	No
SLV 15	ini.	3139.39	-9172	0.9	0	493	7137	5660	2295	7630		0.83	No
SLV 15	fin.	-2206.67	-7527	0.9	0	493	7137	5660	2295	7630		1.01	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	3215.62	-11075	0.9	0	493	7137	5660	2295	7630		0.69	No
SLV 13	fin.	-2259.93	-8145	0.9	0	493	7137	5660	2295	7630		0.94	No
SLV 1	ini.	-2034.01	6430	0.9	0	493	7137	5660	2295	7630		1.19	Si
SLV 1	fin.	3043.91	9439	0.9	0	493	7137	5660	2295	7630		0.81	No
SLV 10	ini.	1641.79	-7749	0.9	0	493	7137	5660	2295	7630		0.98	No
SLV 10	fin.	-644.65	-3306	0.9	0	493	7137	5660	2295	7630		2.31	Si
SLV 9	ini.	1504.01	-7291	0.9	0	493	7137	5660	2295	7630		1.05	Si
SLV 9	fin.	-503.47	-2837	0.9	0	493	7137	5660	2295	7630		2.69	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.872	SLV 14	No
V_SLV	0.648	SLV 14	No
PF_SLU	2.898	SLU 84	Si
V_SLU	2.19	SLU 84	Si

Trave di accoppiamento 47

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.888	6.526	4.21	4.83	0.62	-11.888	6.526	4.21	4.83	0.62	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-482.28	-1923	-0.0006404	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.93	Si
SLU 81	fin.	-807.95	-2700	-0.0012563	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.75	Si
SLU 84	ini.	-488.38	-1945	-0.0006504	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.9	Si
SLU 84	fin.	-814.52	-2723	-0.0012707	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.74	Si
SLU 78	ini.	-480.03	-1911	-0.0006366	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.95	Si
SLU 78	fin.	-789.06	-2649	-0.0012154	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.79	Si
SLU 77	ini.	-483.35	-1922	-0.0006421	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.93	Si
SLU 77	fin.	-787.79	-2649	-0.0012127	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.8	Si
SLU 83	ini.	-491.7	-1956	-0.000656	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.88	Si
SLU 83	fin.	-813.25	-2724	-0.0012679	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.74	Si
SLU 74	ini.	-473.93	-1889	-0.0006266	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.99	Si
SLU 74	fin.	-782.49	-2625	-0.0012014	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.81	Si
SLU 79	ini.	-480.31	-1906	-0.0006371	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.95	Si
SLU 79	fin.	-777.09	-2615	-0.0011899	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.82	Si
SLU 75	ini.	-470.62	-1877	-0.0006212	0.0001872	0.0035	0.62		1414.81	1414.81	No	3.01	Si
SLU 75	fin.	-783.76	-2625	-0.0012041	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.81	Si
SLU 80	ini.	-476.99	-1894	-0.0006316	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.97	Si
SLU 80	fin.	-778.35	-2614	-0.0011926	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.82	Si
SLU 82	ini.	-478.97	-1911	-0.0006349	0.0001872	0.0035	0.62		1414.81	1414.81	No	2.95	Si
SLU 82	fin.	-809.22	-2699	-0.001259	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-480.03	2456	0.62	0	168	4916	2599	1581	4180	No	1.7	Si
SLU 78	fin.	-789.06	-3560	0.62	0	168	4916	2599	1581	4180	No	1.17	Si
SLU 74	ini.	-473.93	2426	0.62	0	168	4916	2599	1581	4180	No	1.72	Si
SLU 74	fin.	-782.49	-3528	0.62	0	168	4916	2599	1581	4180	No	1.18	Si
SLU 80	ini.	-476.99	2438	0.62	0	168	4916	2599	1581	4180	No	1.71	Si
SLU 80	fin.	-778.35	-3515	0.62	0	168	4916	2599	1581	4180	No	1.19	Si
SLU 81	ini.	-482.28	2481	0.62	0	168	4916	2599	1581	4180	No	1.68	Si
SLU 81	fin.	-807.95	-3644	0.62	0	168	4916	2599	1581	4180	No	1.15	Si
SLU 84	ini.	-488.38	2511	0.62	0	168	4916	2599	1581	4180	No	1.66	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-814.52	-3676	0.62	0	168	4916	2599	1581	4180	No	1.14	Si
SLU 83	ini.	-491.7	2521	0.62	0	168	4916	2599	1581	4180	No	1.66	Si
SLU 83	fin.	-813.25	-3669	0.62	0	168	4916	2599	1581	4180	No	1.14	Si
SLU 75	ini.	-470.62	2416	0.62	0	168	4916	2599	1581	4180	No	1.73	Si
SLU 75	fin.	-783.76	-3535	0.62	0	168	4916	2599	1581	4180	No	1.18	Si
SLU 82	ini.	-478.97	2472	0.62	0	168	4916	2599	1581	4180	No	1.69	Si
SLU 82	fin.	-809.22	-3651	0.62	0	168	4916	2599	1581	4180	No	1.14	Si
SLU 79	ini.	-480.31	2447	0.62	0	168	4916	2599	1581	4180	No	1.71	Si
SLU 79	fin.	-777.09	-3508	0.62	0	168	4916	2599	1581	4180	No	1.19	Si
SLU 77	ini.	-483.35	2465	0.62	0	168	4916	2599	1581	4180	No	1.7	Si
SLU 77	fin.	-787.79	-3553	0.62	0	168	4916	2599	1581	4180	No	1.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1563.28	3218	-0.0039164	0.0002807	0.0035	0.62		1420.05	1420.05		0.91	No
SLV 14	fin.	-2360.84	-6131	-0.0069855	0.0002807	0.0035	0.62		1424.12	1424.12		0.6	No
SLV 16	ini.	1517.79	3095	-0.0037074	0.0002807	0.0035	0.62		1420.05	1420.05		0.94	No
SLV 16	fin.	-2296.12	-5978	-0.0067527	0.0002807	0.0035	0.62		1424.12	1424.12		0.62	No
SLV 2	ini.	-2006.75	-5282	-0.005687	0.0002807	0.0035	0.62		1424.12	1424.12		0.71	No
SLV 2	fin.	1106.54	2122	-0.001912	0.0002807	0.0035	0.62		1420.05	1420.05		1.28	Si
SLD 14	ini.	485.85	648	-0.0006096	0.0002807	0.0035	0.62		1420.05	1420.05		2.92	Si
SLD 14	fin.	-1309.1	-3629	-0.0026588	0.0002807	0.0035	0.62		1424.12	1424.12		1.09	Si
SLV 3	ini.	-2201.67	-5762	-0.0064092	0.0002807	0.0035	0.62		1424.12	1424.12		0.65	No
SLV 3	fin.	1314.44	2613	-0.0026987	0.0002807	0.0035	0.62		1420.05	1420.05		1.08	Si
SLD 16	ini.	465.94	595	-0.0005791	0.0002807	0.0035	0.62		1420.05	1420.05		3.05	Si
SLD 16	fin.	-1280.71	-3562	-0.0025346	0.0002807	0.0035	0.62		1424.12	1424.12		1.11	Si
SLV 4	ini.	-2052.23	-5405	-0.0058568	0.0002807	0.0035	0.62		1424.12	1424.12		0.69	No
SLV 4	fin.	1171.26	2275	-0.0021244	0.0002807	0.0035	0.62		1420.05	1420.05		1.21	Si
SLV 13	ini.	1413.84	2861	-0.0031926	0.0002807	0.0035	0.62		1420.05	1420.05		1	Si
SLV 13	fin.	-2217.66	-5793	-0.0064677	0.0002807	0.0035	0.62		1424.12	1424.12		0.64	No
SLV 1	ini.	-2156.18	-5639	-0.006242	0.0002807	0.0035	0.62		1424.12	1424.12		0.66	No
SLV 1	fin.	1249.72	2460	-0.0024197	0.0002807	0.0035	0.62		1420.05	1420.05		1.14	Si
SLV 15	ini.	1368.35	2739	-0.0029587	0.0002807	0.0035	0.62		1420.05	1420.05		1.04	Si
SLV 15	fin.	-2152.94	-5640	-0.0062301	0.0002807	0.0035	0.62		1424.12	1424.12		0.66	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	485.85	-1259	0.62	0	252	4916	3899	1581	5168		4.11	Si
SLD 14	fin.	-1309.1	-5121	0.62	0	252	4916	3899	1581	5168		1.01	Si
SLD 16	ini.	465.94	-1191	0.62	0	252	4916	3899	1581	5168		4.34	Si
SLD 16	fin.	-1280.71	-5014	0.62	0	252	4916	3899	1581	5168		1.03	Si
SLV 4	ini.	-2052.23	7850	0.62	0	252	4916	3899	1581	5168		0.66	No
SLV 4	fin.	1171.26	3592	0.62	0	252	4916	3899	1581	5168		1.44	Si
SLV 14	ini.	1563.28	-5126	0.62	0	252	4916	3899	1581	5168		1.01	Si
SLV 14	fin.	-2360.84	-8814	0.62	0	252	4916	3899	1581	5168		0.59	No
SLV 13	ini.	1413.84	-4589	0.62	0	252	4916	3899	1581	5168		1.13	Si
SLV 13	fin.	-2217.66	-8312	0.62	0	252	4916	3899	1581	5168		0.62	No
SLV 3	ini.	-2201.67	8387	0.62	0	252	4916	3899	1581	5168		0.62	No
SLV 3	fin.	1314.44	4094	0.62	0	252	4916	3899	1581	5168		1.26	Si
SLV 15	ini.	1368.35	-4433	0.62	0	252	4916	3899	1581	5168		1.17	Si
SLV 15	fin.	-2152.94	-8071	0.62	0	252	4916	3899	1581	5168		0.64	No
SLV 1	ini.	-2156.18	8231	0.62	0	252	4916	3899	1581	5168		0.63	No
SLV 1	fin.	1249.72	3853	0.62	0	252	4916	3899	1581	5168		1.34	Si
SLV 2	ini.	-2006.75	7694	0.62	0	252	4916	3899	1581	5168		0.67	No
SLV 2	fin.	1106.54	3351	0.62	0	252	4916	3899	1581	5168		1.54	Si
SLV 16	ini.	1517.79	-4970	0.62	0	252	4916	3899	1581	5168		1.04	Si
SLV 16	fin.	-2296.12	-8572	0.62	0	252	4916	3899	1581	5168		0.6	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.603	SLV 14	No
V_SLV	0.586	SLV 14	No
PF_SLU	1.737	SLU 84	Si
V_SLU	1.137	SLU 84	Si

Trave di accoppiamento 48

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	1.41	2.31	0.9	-7.008	6.526	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-195.17	-2198	-0.0000991	0.0001872	0.0035	0.9		2964.67	2964.67	No	15.19	Si
SLU 80	fin.	1421.19	-4329	-0.0009886	0.0001872	0.0035	0.9		2959	2959	No	2.08	Si
SLU 83	ini.	-208.57	-2277	-0.0001062	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.21	Si
SLU 83	fin.	1477.05	-4500	-0.0010406	0.0001872	0.0035	0.9		2959	2959	No	2	Si
SLU 84	ini.	-195.65	-2269	-0.0000994	0.0001872	0.0035	0.9		2964.67	2964.67	No	15.15	Si
SLU 84	fin.	1459.95	-4451	-0.0010246	0.0001872	0.0035	0.9		2959	2959	No	2.03	Si
SLU 78	ini.	-194.85	-2224	-0.000099	0.0001872	0.0035	0.9		2964.67	2964.67	No	15.22	Si
SLU 78	fin.	1434.1	-4371	-0.0010005	0.0001872	0.0035	0.9		2959	2959	No	2.06	Si
SLU 81	ini.	-215.06	-2234	-0.0001097	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.79	Si
SLU 81	fin.	1465.64	-4452	-0.0010299	0.0001872	0.0035	0.9		2959	2959	No	2.02	Si
SLU 77	ini.	-207.77	-2232	-0.0001058	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.27	Si
SLU 77	fin.	1451.19	-4419	-0.0010164	0.0001872	0.0035	0.9		2959	2959	No	2.04	Si
SLU 82	ini.	-202.14	-2226	-0.0001028	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.67	Si
SLU 82	fin.	1448.55	-4404	-0.0010139	0.0001872	0.0035	0.9		2959	2959	No	2.04	Si
SLU 74	ini.	-214.25	-2189	-0.0001093	0.0001872	0.0035	0.9		2964.67	2964.67	No	13.84	Si
SLU 74	fin.	1439.79	-4371	-0.0010058	0.0001872	0.0035	0.9		2959	2959	No	2.06	Si
SLU 79	ini.	-208.09	-2207	-0.000106	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.25	Si
SLU 79	fin.	1438.29	-4377	-0.0010044	0.0001872	0.0035	0.9		2959	2959	No	2.06	Si
SLU 75	ini.	-201.33	-2180	-0.0001024	0.0001872	0.0035	0.9		2964.67	2964.67	No	14.73	Si
SLU 75	fin.	1422.7	-4323	-0.00099	0.0001872	0.0035	0.9		2959	2959	No	2.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-195.65	960	0.9	0	329	7137	3773	2295	6068	No	6.32	Si
SLU 84	fin.	1459.95	4225	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 82	ini.	-202.14	977	0.9	0	329	7137	3773	2295	6068	No	6.21	Si
SLU 82	fin.	1448.55	4195	0.9	0	329	7137	3773	2295	6068	No	1.45	Si
SLU 75	ini.	-201.33	975	0.9	0	329	7137	3773	2295	6068	No	6.22	Si
SLU 75	fin.	1422.7	4113	0.9	0	329	7137	3773	2295	6068	No	1.48	Si
SLU 83	ini.	-208.57	1059	0.9	0	329	7137	3773	2295	6068	No	5.73	Si
SLU 83	fin.	1477.05	4224	0.9	0	329	7137	3773	2295	6068	No	1.44	Si
SLU 79	ini.	-208.09	1055	0.9	0	329	7137	3773	2295	6068	No	5.75	Si
SLU 79	fin.	1438.29	4104	0.9	0	329	7137	3773	2295	6068	No	1.48	Si
SLU 77	ini.	-207.77	1057	0.9	0	329	7137	3773	2295	6068	No	5.74	Si
SLU 77	fin.	1451.19	4141	0.9	0	329	7137	3773	2295	6068	No	1.47	Si
SLU 81	ini.	-215.06	1077	0.9	0	329	7137	3773	2295	6068	No	5.64	Si
SLU 81	fin.	1465.64	4194	0.9	0	329	7137	3773	2295	6068	No	1.45	Si
SLU 78	ini.	-194.85	958	0.9	0	329	7137	3773	2295	6068	No	6.34	Si
SLU 78	fin.	1434.1	4143	0.9	0	329	7137	3773	2295	6068	No	1.46	Si
SLU 74	ini.	-214.25	1074	0.9	0	329	7137	3773	2295	6068	No	5.65	Si
SLU 74	fin.	1439.79	4111	0.9	0	329	7137	3773	2295	6068	No	1.48	Si
SLU 80	ini.	-195.17	955	0.9	0	329	7137	3773	2295	6068	No	6.35	Si
SLU 80	fin.	1421.19	4105	0.9	0	329	7137	3773	2295	6068	No	1.48	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-1262.63	616	-0.0007927	0.0002807	0.0035	0.9		2995.37	2995.37		2.37	Si
SLD 3	fin.	1825.98	-3626	-0.0013045	0.0002807	0.0035	0.9		2989.59	2989.59		1.64	Si
SLV 16	ini.	2172.94	-5764	-0.0017001	0.0002807	0.0035	0.9		2989.59	2989.59		1.38	Si
SLV 16	fin.	-708.63	-1680	-0.0003927	0.0002807	0.0035	0.9		2995.37	2995.37		4.23	Si
SLV 2	ini.	-2322.64	2506	-0.0018986	0.0002807	0.0035	0.9		2995.37	2995.37		1.29	Si
SLV 2	fin.	2555.91	-4194	-0.0022839	0.0002807	0.0035	0.9		2989.59	2989.59		1.17	Si
SLV 4	ini.	-2499.63	2992	-0.0021772	0.0002807	0.0035	0.9		2995.37	2995.37		1.2	Si
SLV 4	fin.	2759.01	-4301	-0.002686	0.0002807	0.0035	0.9		2989.59	2989.59		1.08	Si
SLV 15	ini.	1961.09	-5386	-0.0014484	0.0002807	0.0035	0.9		2989.59	2989.59		1.52	Si
SLV 15	fin.	-543.84	-1827	-0.0002907	0.0002807	0.0035	0.9		2995.37	2995.37		5.51	Si
SLV 14	ini.	2349.93	-6250	-0.0019451	0.0002807	0.0035	0.9		2989.59	2989.59		1.27	Si
SLV 14	fin.	-911.73	-1573	-0.0005292	0.0002807	0.0035	0.9		2995.37	2995.37		3.29	Si
SLV 3	ini.	-2711.49	3370	-0.002575	0.0002807	0.0035	0.9		2995.37	2995.37		1.1	Si
SLV 3	fin.	2923.81	-4449	-0.0030693	0.0002807	0.0035	0.9		2989.59	2989.59		1.02	Si
SLV 13	ini.	2138.08	-5872	-0.001656	0.0002807	0.0035	0.9		2989.59	2989.59		1.4	Si
SLV 13	fin.	-746.93	-1721	-0.0004175	0.0002807	0.0035	0.9		2995.37	2995.37		4.01	Si
SLV 1	ini.	-2534.5	2884	-0.0022375	0.0002807	0.0035	0.9		2995.37	2995.37		1.18	Si
SLV 1	fin.	2720.71	-4342	-0.0026044	0.0002807	0.0035	0.9		2989.59	2989.59		1.1	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-1245.67	806	-0.0007792	0.0002807	0.0035	0.9		2995.37	2995.37		2.4	Si
SLV 7	fin.	1918.37	-3630	-0.0014017	0.0002807	0.0035	0.9		2989.59	2989.59		1.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-1107.63	3095	0.9	0	493	7137	5660	2295	7630		2.47	Si
SLV 8	fin.	1810.99	6118	0.9	0	493	7137	5660	2295	7630		1.25	Si
SLV 13	ini.	2138.08	-5925	0.9	0	493	7137	5660	2295	7630		1.29	Si
SLV 13	fin.	-746.93	-3483	0.9	0	493	7137	5660	2295	7630		2.19	Si
SLD 3	ini.	-1262.63	4033	0.9	0	493	7137	5660	2295	7630		1.89	Si
SLD 3	fin.	1825.98	5826	0.9	0	493	7137	5660	2295	7630		1.31	Si
SLV 3	ini.	-2711.49	8283	0.9	0	493	7137	5660	2295	7630		0.92	No
SLV 3	fin.	2923.81	9791	0.9	0	493	7137	5660	2295	7630		0.78	No
SLV 4	ini.	-2499.63	7648	0.9	0	493	7137	5660	2295	7630		1	No
SLV 4	fin.	2759.01	9211	0.9	0	493	7137	5660	2295	7630		0.83	No
SLV 16	ini.	2172.94	-6356	0.9	0	493	7137	5660	2295	7630		1.2	Si
SLV 16	fin.	-708.63	-3106	0.9	0	493	7137	5660	2295	7630		2.46	Si
SLV 14	ini.	2349.93	-6560	0.9	0	493	7137	5660	2295	7630		1.16	Si
SLV 14	fin.	-911.73	-4064	0.9	0	493	7137	5660	2295	7630		1.88	Si
SLV 1	ini.	-2534.5	8080	0.9	0	493	7137	5660	2295	7630		0.94	No
SLV 1	fin.	2720.71	8834	0.9	0	493	7137	5660	2295	7630		0.86	No
SLV 2	ini.	-2322.64	7444	0.9	0	493	7137	5660	2295	7630		1.02	Si
SLV 2	fin.	2555.91	8253	0.9	0	493	7137	5660	2295	7630		0.92	No
SLV 7	ini.	-1245.67	3509	0.9	0	493	7137	5660	2295	7630		2.17	Si
SLV 7	fin.	1918.37	6497	0.9	0	493	7137	5660	2295	7630		1.17	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.022	SLV 3	Si
V_SLV	0.779	SLV 3	No
PF_SLU	2.003	SLU 83	Si
V_SLU	1.436	SLU 84	Si

Trave di accoppiamento 49

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.008	6.526	4.21	4.83	0.62	-7.008	6.526	4.21	4.83	0.62	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-1027.62	-3101	-0.0018098	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.38	Si
SLU 84	fin.	-124.88	-908	-0.0001354	0.0001872	0.0035	0.62		1414.81	1414.81	No	11.33	Si
SLU 81	ini.	-1023.89	-3089	-0.0017988	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.38	Si
SLU 81	fin.	-119.27	-893	-0.0001289	0.0001872	0.0035	0.62		1414.81	1414.81	No	11.86	Si
SLU 83	ini.	-1031.32	-3117	-0.0018209	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.37	Si
SLU 83	fin.	-125.61	-918	-0.0001362	0.0001872	0.0035	0.62		1414.81	1414.81	No	11.26	Si
SLU 80	ini.	-995.42	-3007	-0.0017167	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.42	Si
SLU 80	fin.	-115.17	-870	-0.0001243	0.0001872	0.0035	0.62		1414.81	1414.81	No	12.28	Si
SLU 82	ini.	-1020.19	-3072	-0.0017879	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.39	Si
SLU 82	fin.	-118.54	-883	-0.0001281	0.0001872	0.0035	0.62		1414.81	1414.81	No	11.94	Si
SLU 77	ini.	-1008.32	-3054	-0.0017534	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.4	Si
SLU 77	fin.	-119.32	-896	-0.000129	0.0001872	0.0035	0.62		1414.81	1414.81	No	11.86	Si
SLU 79	ini.	-999.11	-3023	-0.0017271	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.42	Si
SLU 79	fin.	-115.9	-879	-0.0001251	0.0001872	0.0035	0.62		1414.81	1414.81	No	12.21	Si
SLU 78	ini.	-1004.63	-3037	-0.0017428	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.41	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-118.59	-886	-0.0001282	0.0001872	0.0035	0.62		1414.81	1414.81	No	11.93	Si
SLU 74	ini.	-1000.9	-3025	-0.0017322	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.41	Si
SLU 74	fin.	-112.98	-870	-0.0001218	0.0001872	0.0035	0.62		1414.81	1414.81	No	12.52	Si
SLU 75	ini.	-997.2	-3009	-0.0017217	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.42	Si
SLU 75	fin.	-112.25	-861	-0.0001209	0.0001872	0.0035	0.62		1414.81	1414.81	No	12.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-1008.32	4329	0.62	0	168	4916	2599	1581	4180	No	0.97	No
SLU 77	fin.	-119.32	-1107	0.62	0	168	4916	2599	1581	4180	No	3.78	Si
SLU 82	ini.	-1020.19	4396	0.62	0	168	4916	2599	1581	4180	No	0.95	No
SLU 82	fin.	-118.54	-1129	0.62	0	168	4916	2599	1581	4180	No	3.7	Si
SLU 84	ini.	-1027.62	4429	0.62	0	168	4916	2599	1581	4180	No	0.94	No
SLU 84	fin.	-124.88	-1157	0.62	0	168	4916	2599	1581	4180	No	3.61	Si
SLU 75	ini.	-997.2	4288	0.62	0	168	4916	2599	1581	4180	No	0.97	No
SLU 75	fin.	-112.25	-1081	0.62	0	168	4916	2599	1581	4180	No	3.87	Si
SLU 81	ini.	-1023.89	4405	0.62	0	168	4916	2599	1581	4180	No	0.95	No
SLU 81	fin.	-119.27	-1126	0.62	0	168	4916	2599	1581	4180	No	3.71	Si
SLU 80	ini.	-995.42	4281	0.62	0	168	4916	2599	1581	4180	No	0.98	No
SLU 80	fin.	-115.17	-1091	0.62	0	168	4916	2599	1581	4180	No	3.83	Si
SLU 78	ini.	-1004.63	4321	0.62	0	168	4916	2599	1581	4180	No	0.97	No
SLU 78	fin.	-118.59	-1109	0.62	0	168	4916	2599	1581	4180	No	3.77	Si
SLU 79	ini.	-999.11	4290	0.62	0	168	4916	2599	1581	4180	No	0.97	No
SLU 79	fin.	-115.9	-1088	0.62	0	168	4916	2599	1581	4180	No	3.84	Si
SLU 74	ini.	-1000.9	4297	0.62	0	168	4916	2599	1581	4180	No	0.97	No
SLU 74	fin.	-112.98	-1079	0.62	0	168	4916	2599	1581	4180	No	3.87	Si
SLU 83	ini.	-1031.32	4438	0.62	0	168	4916	2599	1581	4180	No	0.94	No
SLU 83	fin.	-125.61	-1154	0.62	0	168	4916	2599	1581	4180	No	3.62	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	674.76	728	-0.0009246	0.0002807	0.0035	0.62		1420.05	1420.05		2.1	Si
SLV 16	fin.	-1805.48	-5098	-0.0049129	0.0002807	0.0035	0.62		1424.12	1424.12		0.79	No
SLV 1	ini.	-2059.24	-4888	-0.0058828	0.0002807	0.0035	0.62		1424.12	1424.12		0.69	No
SLV 1	fin.	1699.96	4036	-0.0045048	0.0002807	0.0035	0.62		1420.05	1420.05		0.84	No
SLV 15	ini.	547.56	463	-0.0007073	0.0002807	0.0035	0.62		1420.05	1420.05		2.59	Si
SLV 15	fin.	-1648.51	-4691	-0.0042704	0.0002807	0.0035	0.62		1424.12	1424.12		0.86	No
SLV 13	ini.	594	533	-0.000784	0.0002807	0.0035	0.62		1420.05	1420.05		2.39	Si
SLV 13	fin.	-1714.49	-4941	-0.004546	0.0002807	0.0035	0.62		1424.12	1424.12		0.83	No
SLV 4	ini.	-1978.48	-4693	-0.0055807	0.0002807	0.0035	0.62		1424.12	1424.12		0.72	No
SLV 4	fin.	1608.97	3879	-0.0041187	0.0002807	0.0035	0.62		1420.05	1420.05		0.88	No
SLV 14	ini.	721.2	797	-0.0010098	0.0002807	0.0035	0.62		1420.05	1420.05		1.97	Si
SLV 14	fin.	-1871.46	-5348	-0.0051715	0.0002807	0.0035	0.62		1424.12	1424.12		0.76	No
SLV 3	ini.	-2105.68	-4958	-0.0060548	0.0002807	0.0035	0.62		1424.12	1424.12		0.68	No
SLV 3	fin.	1765.94	4286	-0.004774	0.0002807	0.0035	0.62		1420.05	1420.05		0.8	No
SLD 1	ini.	-1276.44	-3280	-0.0025164	0.0002807	0.0035	0.62		1424.12	1424.12		1.12	Si
SLD 1	fin.	696.25	1421	-0.0009636	0.0002807	0.0035	0.62		1420.05	1420.05		2.04	Si
SLD 3	ini.	-1296.39	-3310	-0.0026023	0.0002807	0.0035	0.62		1424.12	1424.12		1.1	Si
SLD 3	fin.	724.65	1528	-0.0010162	0.0002807	0.0035	0.62		1420.05	1420.05		1.96	Si
SLV 2	ini.	-1932.04	-4623	-0.0054045	0.0002807	0.0035	0.62		1424.12	1424.12		0.74	No
SLV 2	fin.	1542.99	3629	-0.0038242	0.0002807	0.0035	0.62		1420.05	1420.05		0.92	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-1276.44	5043	0.62	0	252	4916	3899	1581	5168		1.02	Si
SLD 1	fin.	696.25	2015	0.62	0	252	4916	3899	1581	5168		2.57	Si
SLV 16	ini.	674.76	-1935	0.62	0	252	4916	3899	1581	5168		2.67	Si
SLV 16	fin.	-1805.48	-6850	0.62	0	252	4916	3899	1581	5168		0.75	No
SLV 1	ini.	-2059.24	7843	0.62	0	252	4916	3899	1581	5168		0.66	No
SLV 1	fin.	1699.96	5572	0.62	0	252	4916	3899	1581	5168		0.93	No
SLV 4	ini.	-1978.48	7568	0.62	0	252	4916	3899	1581	5168		0.68	No
SLV 4	fin.	1608.97	5220	0.62	0	252	4916	3899	1581	5168		0.99	No
SLV 15	ini.	547.56	-1480	0.62	0	252	4916	3899	1581	5168		3.49	Si
SLV 15	fin.	-1648.51	-6298	0.62	0	252	4916	3899	1581	5168		0.82	No
SLV 2	ini.	-1932.04	7388	0.62	0	252	4916	3899	1581	5168		0.7	No
SLV 2	fin.	1542.99	5019	0.62	0	252	4916	3899	1581	5168		1.03	Si
SLV 14	ini.	721.2	-2115	0.62	0	252	4916	3899	1581	5168		2.44	Si
SLV 14	fin.	-1871.46	-7051	0.62	0	252	4916	3899	1581	5168		0.73	No
SLV 13	ini.	594	-1660	0.62	0	252	4916	3899	1581	5168		3.11	Si
SLV 13	fin.	-1714.49	-6499	0.62	0	252	4916	3899	1581	5168		0.8	No
SLD 3	ini.	-1296.39	5121	0.62	0	252	4916	3899	1581	5168		1.01	Si
SLD 3	fin.	724.65	2102	0.62	0	252	4916	3899	1581	5168		2.46	Si
SLV 3	ini.	-2105.68	8023	0.62	0	252	4916	3899	1581	5168		0.64	No
SLV 3	fin.	1765.94	5773	0.62	0	252	4916	3899	1581	5168		0.9	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.676	SLV 3	No
V_SLV	0.644	SLV 3	No
PF_SLU	1.372	SLU 83	Si
V_SLU	0.942	SLU 83	No

Trave di accoppiamento 50

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	3.51	4.83	1.32	-19.443	1.006	3.51	4.83	1.32	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 65	ini.	-562.06	-5449	-0.0001334	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.6	Si
SLU 65	fin.	468.4	-4816	-0.0001104	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.9	Si
SLU 69	ini.	-572.25	-5687	-0.000136	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.39	Si
SLU 69	fin.	480.61	-5040	-0.0001134	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.55	Si
SLU 70	ini.	-571.83	-5689	-0.0001359	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.4	Si
SLU 70	fin.	479.46	-5043	-0.0001131	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.58	Si
SLU 66	ini.	-563.69	-5595	-0.0001338	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.56	Si
SLU 66	fin.	471.66	-4958	-0.0001112	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.8	Si
SLU 71	ini.	-579.86	-5631	-0.0001379	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.24	Si
SLU 71	fin.	488.22	-4975	-0.0001153	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.33	Si
SLU 67	ini.	-563.27	-5597	-0.0001337	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.57	Si
SLU 67	fin.	470.51	-4961	-0.0001109	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.84	Si
SLU 50	ini.	-555.13	-5046	-0.0001317	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.74	Si
SLU 50	fin.	470.79	-4416	-0.000111	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.83	Si
SLU 68	ini.	-570.61	-5541	-0.0001355	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.42	Si
SLU 68	fin.	477.35	-4898	-0.0001126	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.64	Si
SLU 64	ini.	-562.76	-5445	-0.0001336	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.58	Si
SLU 64	fin.	470.31	-4811	-0.0001109	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.84	Si
SLU 72	ini.	-579.44	-5633	-0.0001378	0.0002246	0.0035	1.32		6518.1	6518.1	No	11.25	Si
SLU 72	fin.	487.07	-4978	-0.000115	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-579.44	2559	1.32	0	536	6344	6641	3366	6879	No	2.69	Si
SLU 72	fin.	487.07	1282	1.32	0	536	6344	6641	3366	6879	No	5.37	Si
SLU 64	ini.	-562.76	2500	1.32	0	536	6344	6641	3366	6879	No	2.75	Si
SLU 64	fin.	470.31	1223	1.32	0	536	6344	6641	3366	6879	No	5.63	Si
SLU 66	ini.	-563.69	2505	1.32	0	536	6344	6641	3366	6879	No	2.75	Si
SLU 66	fin.	471.66	1228	1.32	0	536	6344	6641	3366	6879	No	5.6	Si
SLU 69	ini.	-572.25	2536	1.32	0	536	6344	6641	3366	6879	No	2.71	Si
SLU 69	fin.	480.61	1259	1.32	0	536	6344	6641	3366	6879	No	5.47	Si
SLU 67	ini.	-563.27	2502	1.32	0	536	6344	6641	3366	6879	No	2.75	Si
SLU 67	fin.	470.51	1225	1.32	0	536	6344	6641	3366	6879	No	5.62	Si
SLU 65	ini.	-562.06	2495	1.32	0	536	6344	6641	3366	6879	No	2.76	Si
SLU 65	fin.	468.4	1218	1.32	0	536	6344	6641	3366	6879	No	5.65	Si
SLU 79	ini.	-524.39	2454	1.32	0	536	6344	6641	3366	6879	No	2.8	Si
SLU 79	fin.	410.64	933	1.32	0	536	6344	6641	3366	6879	No	7.37	Si
SLU 71	ini.	-579.86	2562	1.32	0	536	6344	6641	3366	6879	No	2.69	Si
SLU 71	fin.	488.22	1285	1.32	0	536	6344	6641	3366	6879	No	5.35	Si
SLU 70	ini.	-571.83	2533	1.32	0	536	6344	6641	3366	6879	No	2.72	Si
SLU 70	fin.	479.46	1256	1.32	0	536	6344	6641	3366	6879	No	5.48	Si
SLU 68	ini.	-570.61	2526	1.32	0	536	6344	6641	3366	6879	No	2.72	Si
SLU 68	fin.	477.35	1249	1.32	0	536	6344	6641	3366	6879	No	5.51	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-5965.49	-6142	-0.0025713	0.0003369	0.0035	1.32		6330.51	6330.51		1.06	Si
SLV 15	fin.	6184.52	1115	-0.0027936	0.0003369	0.0035	1.32		6321.69	6321.69		1.02	Si
SLD 14	ini.	-2975	-5059	-0.0008635	0.0003369	0.0035	1.32		6330.51	6330.51		2.13	Si
SLD 14	fin.	3052.97	-1467	-0.0008945	0.0003369	0.0035	1.32		6321.69	6321.69		2.07	Si
SLV 3	ini.	5580.29	-2242	-0.0022431	0.0003369	0.0035	1.32		6321.69	6321.69		1.13	Si
SLV 3	fin.	-6015.24	-9103	-0.0026183	0.0003369	0.0035	1.32		6330.51	6330.51		1.05	Si
SLV 16	ini.	-5987.46	-6166	-0.0025919	0.0003369	0.0035	1.32		6330.51	6330.51		1.06	Si
SLV 16	fin.	6201.82	1117	-0.0028114	0.0003369	0.0035	1.32		6321.69	6321.69		1.02	Si
SLV 4	ini.	5558.31	-2267	-0.0022255	0.0003369	0.0035	1.32		6321.69	6321.69		1.14	Si
SLV 4	fin.	-5997.94	-9102	-0.0026018	0.0003369	0.0035	1.32		6330.51	6330.51		1.06	Si
SLD 13	ini.	-2965.56	-5049	-0.00086	0.0003369	0.0035	1.32		6330.51	6330.51		2.13	Si
SLD 13	fin.	3045.54	-1468	-0.0008917	0.0003369	0.0035	1.32		6321.69	6321.69		2.08	Si
SLV 13	ini.	-6381.52	-6162	-0.0029947	0.0003369	0.0035	1.32		6330.51	6330.51		0.99	No
SLV 13	fin.	6669.51	1593	-0.0033197	0.0003369	0.0035	1.32		6321.69	6321.69		0.95	No
SLV 2	ini.	5142.28	-2287	-0.0019209	0.0003369	0.0035	1.32		6321.69	6321.69		1.23	Si
SLV 2	fin.	-5512.95	-8624	-0.0021844	0.0003369	0.0035	1.32		6330.51	6330.51		1.15	Si
SLV 14	ini.	-6403.5	-6186	-0.0030188	0.0003369	0.0035	1.32		6330.51	6330.51		0.99	No
SLV 14	fin.	6686.81	1595	-0.0033384	0.0003369	0.0035	1.32		6321.69	6321.69		0.95	No
SLV 1	ini.	5164.25	-2262	-0.0019357	0.0003369	0.0035	1.32		6321.69	6321.69		1.22	Si
SLV 1	fin.	-5530.25	-8626	-0.0021979	0.0003369	0.0035	1.32		6330.51	6330.51		1.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-2965.56	10977	1.32	0	803	6344	9962	3366	7147		0.65	No
SLD 13	fin.	3045.54	9963	1.32	0	803	6344	9962	3366	7147		0.72	No
SLD 14	ini.	-2975	11008	1.32	0	803	6344	9962	3366	7147		0.65	No
SLD 14	fin.	3052.97	9994	1.32	0	803	6344	9962	3366	7147		0.72	No
SLV 2	ini.	5142.28	-17899	1.32	0	803	6344	9962	3366	7147		0.4	No
SLV 2	fin.	-5512.95	-18885	1.32	0	803	6344	9962	3366	7147		0.38	No
SLV 13	ini.	-6381.52	23186	1.32	0	803	6344	9962	3366	7147		0.31	No
SLV 13	fin.	6669.51	22151	1.32	0	803	6344	9962	3366	7147		0.32	No
SLV 3	ini.	5580.29	-19553	1.32	0	803	6344	9962	3366	7147		0.37	No
SLV 3	fin.	-6015.24	-20524	1.32	0	803	6344	9962	3366	7147		0.35	No
SLV 1	ini.	5164.25	-17970	1.32	0	803	6344	9962	3366	7147		0.4	No
SLV 1	fin.	-5530.25	-18956	1.32	0	803	6344	9962	3366	7147		0.38	No
SLV 14	ini.	-6403.5	23256	1.32	0	803	6344	9962	3366	7147		0.31	No
SLV 14	fin.	6686.81	22221	1.32	0	803	6344	9962	3366	7147		0.32	No
SLV 4	ini.	5558.31	-19483	1.32	0	803	6344	9962	3366	7147		0.37	No
SLV 4	fin.	-5997.94	-20454	1.32	0	803	6344	9962	3366	7147		0.35	No
SLV 16	ini.	-5987.46	21673	1.32	0	803	6344	9962	3366	7147		0.33	No
SLV 16	fin.	6201.82	20653	1.32	0	803	6344	9962	3366	7147		0.35	No
SLV 15	ini.	-5965.49	21602	1.32	0	803	6344	9962	3366	7147		0.33	No
SLV 15	fin.	6184.52	20582	1.32	0	803	6344	9962	3366	7147		0.35	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.945	SLV 14	No
V_SLV	0.307	SLV 14	No
PF_SLU	11.241	SLU 71	Si
V_SLU	2.686	SLU 71	Si

Trave di accoppiamento 51

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	3.51	4.83	1.32	-14.963	1.006	3.51	4.83	1.32	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 55	ini.	569.13	-4663	-0.0001354	0.0002246	0.0035	1.32		6509.86	6509.86	No	11.44	Si
SLU 55	fin.	-956.71	-5593	-0.0002363	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.81	Si
SLU 59	ini.	561.3	-4747	-0.0001334	0.0002246	0.0035	1.32		6509.86	6509.86	No	11.6	Si
SLU 59	fin.	-948.43	-5667	-0.0002341	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.87	Si
SLU 54	ini.	567.62	-4722	-0.000135	0.0002246	0.0035	1.32		6509.86	6509.86	No	11.47	Si
SLU 54	fin.	-954.64	-5650	-0.0002358	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.83	Si
SLU 60	ini.	588.78	-4841	-0.0001403	0.0002246	0.0035	1.32		6509.86	6509.86	No	11.06	Si
SLU 60	fin.	-1009.42	-5819	-0.0002508	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.46	Si
SLU 61	ini.	598.16	-4834	-0.0001426	0.0002246	0.0035	1.32		6509.86	6509.86	No	10.88	Si
SLU 61	fin.	-1019.15	-5824	-0.0002535	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.4	Si
SLU 82	ini.	471.99	-5471	-0.0001113	0.0002246	0.0035	1.32		6509.86	6509.86	No	13.79	Si
SLU 82	fin.	-947.59	-6360	-0.0002338	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.88	Si
SLU 62	ini.	587.2	-4920	-0.0001399	0.0002246	0.0035	1.32		6509.86	6509.86	No	11.09	Si
SLU 62	fin.	-1007.63	-5897	-0.0002503	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.47	Si
SLU 52	ini.	570.71	-4584	-0.0001357	0.0002246	0.0035	1.32		6509.86	6509.86	No	11.41	Si
SLU 52	fin.	-958.5	-5516	-0.0002368	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.8	Si
SLU 63	ini.	596.59	-4914	-0.0001422	0.0002246	0.0035	1.32		6509.86	6509.86	No	10.91	Si
SLU 63	fin.	-1017.36	-5901	-0.000253	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.41	Si
SLU 57	ini.	566.04	-4801	-0.0001346	0.0002246	0.0035	1.32		6509.86	6509.86	No	11.5	Si
SLU 57	fin.	-952.85	-5727	-0.0002353	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	470.41	-1668	1.32	0	536	6344	6641	3366	6879	No	4.12	Si
SLU 84	fin.	-945.8	-3340	1.32	0	536	6344	6641	3366	6879	No	2.06	Si
SLU 55	ini.	569.13	-2013	1.32	0	536	6344	6641	3366	6879	No	3.42	Si
SLU 55	fin.	-956.71	-3338	1.32	0	536	6344	6641	3366	6879	No	2.06	Si
SLU 52	ini.	570.71	-2019	1.32	0	536	6344	6641	3366	6879	No	3.41	Si
SLU 52	fin.	-958.5	-3344	1.32	0	536	6344	6641	3366	6879	No	2.06	Si
SLU 57	ini.	566.04	-2001	1.32	0	536	6344	6641	3366	6879	No	3.44	Si
SLU 57	fin.	-952.85	-3326	1.32	0	536	6344	6641	3366	6879	No	2.07	Si
SLU 54	ini.	567.62	-2008	1.32	0	536	6344	6641	3366	6879	No	3.43	Si
SLU 54	fin.	-954.64	-3332	1.32	0	536	6344	6641	3366	6879	No	2.06	Si
SLU 60	ini.	588.78	-2087	1.32	0	536	6344	6641	3366	6879	No	3.3	Si
SLU 60	fin.	-1009.42	-3526	1.32	0	536	6344	6641	3366	6879	No	1.95	Si
SLU 63	ini.	596.59	-2114	1.32	0	536	6344	6641	3366	6879	No	3.25	Si
SLU 63	fin.	-1017.36	-3552	1.32	0	536	6344	6641	3366	6879	No	1.94	Si
SLU 82	ini.	471.99	-1674	1.32	0	536	6344	6641	3366	6879	No	4.11	Si
SLU 82	fin.	-947.59	-3346	1.32	0	536	6344	6641	3366	6879	No	2.06	Si
SLU 62	ini.	587.2	-2081	1.32	0	536	6344	6641	3366	6879	No	3.31	Si
SLU 62	fin.	-1007.63	-3520	1.32	0	536	6344	6641	3366	6879	No	1.95	Si
SLU 61	ini.	598.16	-2120	1.32	0	536	6344	6641	3366	6879	No	3.24	Si
SLU 61	fin.	-1019.15	-3559	1.32	0	536	6344	6641	3366	6879	No	1.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-4512.02	-3155	-0.0015424	0.0003369	0.0035	1.32		6330.51	6330.51		1.4	Si
SLV 14	fin.	5691.98	2320	-0.0023349	0.0003369	0.0035	1.32		6321.69	6321.69		1.11	Si
SLV 4	ini.	5168.51	-4043	-0.0019386	0.0003369	0.0035	1.32		6321.69	6321.69		1.22	Si
SLV 4	fin.	-6927.06	-10685	-0.003583	0.0003369	0.0035	1.32		6330.51	6330.51		0.91	No
SLV 15	ini.	-3790	-2590	-0.0011946	0.0003369	0.0035	1.32		6330.51	6330.51		1.67	Si
SLV 15	fin.	4957.67	2103	-0.0018015	0.0003369	0.0035	1.32		6321.69	6321.69		1.28	Si
SLV 7	ini.	2887.31	-2864	-0.0008322	0.0003369	0.0035	1.32		6321.69	6321.69		2.19	Si
SLV 7	fin.	-3634.83	-6465	-0.0011274	0.0003369	0.0035	1.32		6330.51	6330.51		1.74	Si
SLV 13	ini.	-4529.26	-3170	-0.0015516	0.0003369	0.0035	1.32		6330.51	6330.51		1.4	Si
SLV 13	fin.	5707.51	2322	-0.002348	0.0003369	0.0035	1.32		6321.69	6321.69		1.11	Si
SLV 2	ini.	4429.25	-4623	-0.0015019	0.0003369	0.0035	1.32		6321.69	6321.69		1.43	Si
SLV 2	fin.	-6177.23	-10465	-0.0027782	0.0003369	0.0035	1.32		6330.51	6330.51		1.02	Si
SLV 3	ini.	5151.27	-4057	-0.0019269	0.0003369	0.0035	1.32		6321.69	6321.69		1.23	Si
SLV 3	fin.	-6911.53	-10683	-0.003567	0.0003369	0.0035	1.32		6330.51	6330.51		0.92	No
SLV 16	ini.	-3772.76	-2575	-0.001187	0.0003369	0.0035	1.32		6330.51	6330.51		1.68	Si
SLV 16	fin.	4942.14	2100	-0.0017918	0.0003369	0.0035	1.32		6321.69	6321.69		1.28	Si
SLV 1	ini.	4412.01	-4637	-0.001493	0.0003369	0.0035	1.32		6321.69	6321.69		1.43	Si
SLV 1	fin.	-6161.69	-10463	-0.0027624	0.0003369	0.0035	1.32		6330.51	6330.51		1.03	Si
SLV 8	ini.	2898.54	-2855	-0.0008364	0.0003369	0.0035	1.32		6321.69	6321.69		2.18	Si
SLV 8	fin.	-3644.95	-6467	-0.0011317	0.0003369	0.0035	1.32		6330.51	6330.51		1.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	2898.54	-10734	1.32	0	803	6344	9962	3366	7147		0.67	No
SLV 8	fin.	-3644.95	-11648	1.32	0	803	6344	9962	3366	7147		0.61	No
SLV 3	ini.	5151.27	-20024	1.32	0	803	6344	9962	3366	7147		0.36	No
SLV 3	fin.	-6911.53	-21011	1.32	0	803	6344	9962	3366	7147		0.34	No
SLV 7	ini.	2887.31	-10698	1.32	0	803	6344	9962	3366	7147		0.67	No
SLV 7	fin.	-3634.83	-11612	1.32	0	803	6344	9962	3366	7147		0.62	No
SLV 1	ini.	4412.01	-17445	1.32	0	803	6344	9962	3366	7147		0.41	No
SLV 1	fin.	-6161.69	-18495	1.32	0	803	6344	9962	3366	7147		0.39	No
SLV 2	ini.	4429.25	-17500	1.32	0	803	6344	9962	3366	7147		0.41	No
SLV 2	fin.	-6177.23	-18550	1.32	0	803	6344	9962	3366	7147		0.39	No
SLV 13	ini.	-4529.26	17822	1.32	0	803	6344	9962	3366	7147		0.4	No
SLV 13	fin.	5707.51	16772	1.32	0	803	6344	9962	3366	7147		0.43	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	5168.51	-20079	1.32	0	803	6344	9962	3366	7147		0.36	No
SLV 4	fin.	-6927.06	-21066	1.32	0	803	6344	9962	3366	7147		0.34	No
SLV 15	ini.	-3790	15244	1.32	0	803	6344	9962	3366	7147		0.47	No
SLV 15	fin.	4957.67	14256	1.32	0	803	6344	9962	3366	7147		0.5	No
SLV 14	ini.	-4512.02	17767	1.32	0	803	6344	9962	3366	7147		0.4	No
SLV 14	fin.	5691.98	16717	1.32	0	803	6344	9962	3366	7147		0.43	No
SLV 16	ini.	-3772.76	15189	1.32	0	803	6344	9962	3366	7147		0.47	No
SLV 16	fin.	4942.14	14201	1.32	0	803	6344	9962	3366	7147		0.5	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.914	SLV 4	No
V_SLV	0.339	SLV 4	No
PF_SLU	6.396	SLU 61	Si
V_SLU	1.933	SLU 61	Si

Trave di accoppiamento 52

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	3.91	4.83	0.92	-12.263	1.006	3.91	4.83	0.92	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-1182.46	-4497	-0.0007122	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.68	Si
SLU 75	fin.	284.17	-2421	-0.0001393	0.0002246	0.0035	0.92		3166.6	3166.6	No	11.14	Si
SLU 74	ini.	-1183.21	-4501	-0.0007128	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.68	Si
SLU 74	fin.	284.19	-2425	-0.0001393	0.0002246	0.0035	0.92		3166.6	3166.6	No	11.14	Si
SLU 83	ini.	-1237.1	-4645	-0.000754	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.56	Si
SLU 83	fin.	288.27	-2486	-0.0001414	0.0002246	0.0035	0.92		3166.6	3166.6	No	10.98	Si
SLU 78	ini.	-1199.39	-4568	-0.0007251	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.64	Si
SLU 78	fin.	292.2	-2457	-0.0001435	0.0002246	0.0035	0.92		3166.6	3166.6	No	10.84	Si
SLU 77	ini.	-1200.13	-4572	-0.0007256	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.64	Si
SLU 77	fin.	292.22	-2461	-0.0001435	0.0002246	0.0035	0.92		3166.6	3166.6	No	10.84	Si
SLU 84	ini.	-1236.36	-4641	-0.0007535	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.57	Si
SLU 84	fin.	288.24	-2482	-0.0001414	0.0002246	0.0035	0.92		3166.6	3166.6	No	10.99	Si
SLU 81	ini.	-1220.18	-4574	-0.000741	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.6	Si
SLU 81	fin.	280.23	-2450	-0.0001373	0.0002246	0.0035	0.92		3166.6	3166.6	No	11.3	Si
SLU 82	ini.	-1219.43	-4569	-0.0007404	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.6	Si
SLU 82	fin.	280.21	-2446	-0.0001372	0.0002246	0.0035	0.92		3166.6	3166.6	No	11.3	Si
SLU 80	ini.	-1187.85	-4518	-0.0007163	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.67	Si
SLU 80	fin.	286.46	-2431	-0.0001405	0.0002246	0.0035	0.92		3166.6	3166.6	No	11.05	Si
SLU 79	ini.	-1188.6	-4523	-0.0007169	0.0002246	0.0035	0.92		3172.34	3172.34	No	2.67	Si
SLU 79	fin.	286.49	-2435	-0.0001405	0.0002246	0.0035	0.92		3166.6	3166.6	No	11.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-1236.36	3594	0.92	0	307	7295	4629	2346	6975	No	1.94	Si
SLU 84	fin.	288.24	901	0.92	0	307	7295	4629	2346	6975	No	7.74	Si
SLU 83	ini.	-1237.1	3595	0.92	0	307	7295	4629	2346	6975	No	1.94	Si
SLU 83	fin.	288.27	902	0.92	0	307	7295	4629	2346	6975	No	7.73	Si
SLU 77	ini.	-1200.13	3412	0.92	0	307	7295	4629	2346	6975	No	2.04	Si
SLU 77	fin.	292.22	987	0.92	0	307	7295	4629	2346	6975	No	7.07	Si
SLU 78	ini.	-1199.39	3411	0.92	0	307	7295	4629	2346	6975	No	2.04	Si
SLU 78	fin.	292.2	986	0.92	0	307	7295	4629	2346	6975	No	7.08	Si
SLU 80	ini.	-1187.85	3386	0.92	0	307	7295	4629	2346	6975	No	2.06	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	286.46	960	0.92	0	307	7295	4629	2346	6975	No	7.26	Si
SLU 74	ini.	-1183.21	3375	0.92	0	307	7295	4629	2346	6975	No	2.07	Si
SLU 74	fin.	284.19	950	0.92	0	307	7295	4629	2346	6975	No	7.34	Si
SLU 75	ini.	-1182.46	3374	0.92	0	307	7295	4629	2346	6975	No	2.07	Si
SLU 75	fin.	284.17	949	0.92	0	307	7295	4629	2346	6975	No	7.35	Si
SLU 82	ini.	-1219.43	3557	0.92	0	307	7295	4629	2346	6975	No	1.96	Si
SLU 82	fin.	280.21	864	0.92	0	307	7295	4629	2346	6975	No	8.07	Si
SLU 81	ini.	-1220.18	3558	0.92	0	307	7295	4629	2346	6975	No	1.96	Si
SLU 81	fin.	280.23	865	0.92	0	307	7295	4629	2346	6975	No	8.06	Si
SLU 79	ini.	-1188.6	3387	0.92	0	307	7295	4629	2346	6975	No	2.06	Si
SLU 79	fin.	286.49	961	0.92	0	307	7295	4629	2346	6975	No	7.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	5031.36	6305	-0.0065387	0.0003369	0.0035	0.92		3132.95	3132.95		0.62	No
SLV 2	fin.	-5564	-9247	-0.0073728	0.0003369	0.0035	0.92		3139.28	3139.28		0.56	No
SLD 14	ini.	-3320.41	-7199	-0.0034822	0.0003369	0.0035	0.92		3139.28	3139.28		0.95	No
SLD 14	fin.	2652.37	1423	-0.0021478	0.0003369	0.0035	0.92		3132.95	3132.95		1.18	Si
SLV 1	ini.	5042.85	6314	-0.0065573	0.0003369	0.0035	0.92		3132.95	3132.95		0.62	No
SLV 1	fin.	-5581.34	-9282	-0.0074	0.0003369	0.0035	0.92		3139.28	3139.28		0.56	No
SLV 13	ini.	-6710.56	-12759	-0.0091401	0.0003369	0.0035	0.92		3139.28	3139.28		0.47	No
SLV 13	fin.	5931.14	5525	-0.0079624	0.0003369	0.0035	0.92		3132.95	3132.95		0.53	No
SLV 4	ini.	5149.64	6682	-0.0067295	0.0003369	0.0035	0.92		3132.95	3132.95		0.61	No
SLV 4	fin.	-5547.47	-8849	-0.0073468	0.0003369	0.0035	0.92		3139.28	3139.28		0.57	No
SLV 3	ini.	5161.13	6691	-0.006748	0.0003369	0.0035	0.92		3132.95	3132.95		0.61	No
SLV 3	fin.	-5564.81	-8884	-0.007374	0.0003369	0.0035	0.92		3139.28	3139.28		0.56	No
SLV 16	ini.	-6603.78	-12391	-0.0089779	0.0003369	0.0035	0.92		3139.28	3139.28		0.48	No
SLV 16	fin.	5965	5958	-0.0080149	0.0003369	0.0035	0.92		3132.95	3132.95		0.53	No
SLV 15	ini.	-6592.29	-12382	-0.0089604	0.0003369	0.0035	0.92		3139.28	3139.28		0.48	No
SLV 15	fin.	5947.66	5923	-0.007988	0.0003369	0.0035	0.92		3132.95	3132.95		0.53	No
SLV 14	ini.	-6722.05	-12768	-0.0091575	0.0003369	0.0035	0.92		3139.28	3139.28		0.47	No
SLV 14	fin.	5948.48	5560	-0.0079893	0.0003369	0.0035	0.92		3132.95	3132.95		0.53	No
SLD 13	ini.	-3315.48	-7195	-0.0034715	0.0003369	0.0035	0.92		3139.28	3139.28		0.95	No
SLD 13	fin.	2644.92	1408	-0.0021361	0.0003369	0.0035	0.92		3132.95	3132.95		1.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-6722.05	19566	0.92	0	460	7295	6943	2346	7755		0.4	No
SLV 14	fin.	5948.48	18033	0.92	0	460	7295	6943	2346	7755		0.43	No
SLV 13	ini.	-6710.56	19522	0.92	0	460	7295	6943	2346	7755		0.4	No
SLV 13	fin.	5931.14	17990	0.92	0	460	7295	6943	2346	7755		0.43	No
SLV 16	ini.	-6603.78	19439	0.92	0	460	7295	6943	2346	7755		0.4	No
SLV 16	fin.	5965	18021	0.92	0	460	7295	6943	2346	7755		0.43	No
SLD 14	ini.	-3320.41	9605	0.92	0	460	7295	6943	2346	7755		0.81	No
SLD 14	fin.	2652.37	8108	0.92	0	460	7295	6943	2346	7755		0.96	No
SLV 1	ini.	5042.85	-15101	0.92	0	460	7295	6943	2346	7755		0.51	No
SLV 1	fin.	-5581.34	-16626	0.92	0	460	7295	6943	2346	7755		0.47	No
SLV 3	ini.	5161.13	-15228	0.92	0	460	7295	6943	2346	7755		0.51	No
SLV 3	fin.	-5564.81	-16639	0.92	0	460	7295	6943	2346	7755		0.47	No
SLV 15	ini.	-6592.29	19395	0.92	0	460	7295	6943	2346	7755		0.4	No
SLV 15	fin.	5947.66	17977	0.92	0	460	7295	6943	2346	7755		0.43	No
SLV 4	ini.	5149.64	-15184	0.92	0	460	7295	6943	2346	7755		0.51	No
SLV 4	fin.	-5547.47	-16595	0.92	0	460	7295	6943	2346	7755		0.47	No
SLD 13	ini.	-3315.48	9586	0.92	0	460	7295	6943	2346	7755		0.81	No
SLD 13	fin.	2644.92	8089	0.92	0	460	7295	6943	2346	7755		0.96	No
SLV 2	ini.	5031.36	-15057	0.92	0	460	7295	6943	2346	7755		0.52	No
SLV 2	fin.	-5564	-16582	0.92	0	460	7295	6943	2346	7755		0.47	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.467	SLV 14	No
V_SLV	0.396	SLV 14	No
PF_SLU	2.564	SLU 83	Si
V_SLU	1.94	SLU 83	Si

Trave di accoppiamento 53

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	3.51	4.83	1.32	-7.463	1.006	3.51	4.83	1.32	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-1063.65	-7169	-0.000266	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.13	Si
SLU 82	fin.	-152.74	-6384	-0.000035	0.0002246	0.0035	1.32		6518.1	6518.1	No	42.68	Si
SLU 77	ini.	-1009.3	-7114	-0.0002508	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.46	Si
SLU 77	fin.	-202.33	-6420	-0.0000466	0.0002246	0.0035	1.32		6518.1	6518.1	No	32.21	Si
SLU 83	ini.	-1073.94	-7267	-0.0002689	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.07	Si
SLU 83	fin.	-154.26	-6475	-0.0000354	0.0002246	0.0035	1.32		6518.1	6518.1	No	42.26	Si
SLU 81	ini.	-1064.41	-7171	-0.0002662	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.12	Si
SLU 81	fin.	-151.71	-6385	-0.0000348	0.0002246	0.0035	1.32		6518.1	6518.1	No	42.97	Si
SLU 79	ini.	-995.98	-7041	-0.0002471	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.54	Si
SLU 79	fin.	-209.84	-6365	-0.0000483	0.0002246	0.0035	1.32		6518.1	6518.1	No	31.06	Si
SLU 75	ini.	-999.01	-7016	-0.0002479	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.52	Si
SLU 75	fin.	-200.81	-6329	-0.0000462	0.0002246	0.0035	1.32		6518.1	6518.1	No	32.46	Si
SLU 78	ini.	-1008.55	-7111	-0.0002506	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.46	Si
SLU 78	fin.	-203.36	-6419	-0.0000468	0.0002246	0.0035	1.32		6518.1	6518.1	No	32.05	Si
SLU 84	ini.	-1073.19	-7265	-0.0002686	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.07	Si
SLU 84	fin.	-155.28	-6474	-0.0000356	0.0002246	0.0035	1.32		6518.1	6518.1	No	41.98	Si
SLU 74	ini.	-999.77	-7018	-0.0002482	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.52	Si
SLU 74	fin.	-199.78	-6330	-0.000046	0.0002246	0.0035	1.32		6518.1	6518.1	No	32.63	Si
SLU 80	ini.	-995.22	-7039	-0.0002469	0.0002246	0.0035	1.32		6518.1	6518.1	No	6.55	Si
SLU 80	fin.	-210.87	-6364	-0.0000486	0.0002246	0.0035	1.32		6518.1	6518.1	No	30.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-1064.41	2596	1.32	0	536	7930	6641	3366	8465	No	3.26	Si
SLU 81	fin.	-151.71	236	1.32	0	536	7930	6641	3366	8465	No	35.82	Si
SLU 40	ini.	-933.5	2394	1.32	0	536	7930	6641	3366	8465	No	3.54	Si
SLU 40	fin.	-78	266	1.32	0	536	7930	6641	3366	8465	No	31.84	Si
SLU 78	ini.	-1008.55	2339	1.32	0	536	7930	6641	3366	8465	No	3.62	Si
SLU 78	fin.	-203.36	154	1.32	0	536	7930	6641	3366	8465	No	55.08	Si
SLU 82	ini.	-1063.65	2593	1.32	0	536	7930	6641	3366	8465	No	3.26	Si
SLU 82	fin.	-152.74	234	1.32	0	536	7930	6641	3366	8465	No	36.25	Si
SLU 77	ini.	-1009.3	2342	1.32	0	536	7930	6641	3366	8465	No	3.61	Si
SLU 77	fin.	-202.33	157	1.32	0	536	7930	6641	3366	8465	No	54.08	Si
SLU 84	ini.	-1073.19	2604	1.32	0	536	7930	6641	3366	8465	No	3.25	Si
SLU 84	fin.	-155.28	244	1.32	0	536	7930	6641	3366	8465	No	34.64	Si
SLU 42	ini.	-943.04	2405	1.32	0	536	7930	6641	3366	8465	No	3.52	Si
SLU 42	fin.	-80.55	277	1.32	0	536	7930	6641	3366	8465	No	30.59	Si
SLU 39	ini.	-934.26	2397	1.32	0	536	7930	6641	3366	8465	No	3.53	Si
SLU 39	fin.	-76.97	269	1.32	0	536	7930	6641	3366	8465	No	31.5	Si
SLU 41	ini.	-943.79	2408	1.32	0	536	7930	6641	3366	8465	No	3.52	Si
SLU 41	fin.	-79.52	280	1.32	0	536	7930	6641	3366	8465	No	30.28	Si
SLU 83	ini.	-1073.94	2607	1.32	0	536	7930	6641	3366	8465	No	3.25	Si
SLU 83	fin.	-154.26	247	1.32	0	536	7930	6641	3366	8465	No	34.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-5726.62	-7967	-0.0023582	0.0003369	0.0035	1.32		6330.51	6330.51		1.11	Si
SLV 15	fin.	5632.02	1910	-0.0022851	0.0003369	0.0035	1.32		6321.69	6321.69		1.12	Si
SLV 14	ini.	-6110.65	-8637	-0.0027112	0.0003369	0.0035	1.32		6330.51	6330.51		1.04	Si
SLV 14	fin.	5990.05	2054	-0.0026014	0.0003369	0.0035	1.32		6321.69	6321.69		1.06	Si
SLD 14	ini.	-2973.3	-6415	-0.0008629	0.0003369	0.0035	1.32		6330.51	6330.51		2.13	Si
SLD 14	fin.	2436.24	-1641	-0.0006717	0.0003369	0.0035	1.32		6321.69	6321.69		2.59	Si
SLD 13	ini.	-2954.89	-6395	-0.000856	0.0003369	0.0035	1.32		6330.51	6330.51		2.14	Si
SLD 13	fin.	2415.97	-1657	-0.0006648	0.0003369	0.0035	1.32		6321.69	6321.69		2.62	Si
SLV 3	ini.	4847.96	-873	-0.0017345	0.0003369	0.0035	1.32		6321.69	6321.69		1.3	Si
SLV 3	fin.	-6423.77	-10852	-0.003041	0.0003369	0.0035	1.32		6330.51	6330.51		0.99	No
SLV 16	ini.	-5769.46	-8014	-0.0023949	0.0003369	0.0035	1.32		6330.51	6330.51		1.1	Si
SLV 16	fin.	5679.21	1947	-0.0023242	0.0003369	0.0035	1.32		6321.69	6321.69		1.11	Si
SLV 2	ini.	4463.93	-1543	-0.00152	0.0003369	0.0035	1.32		6321.69	6321.69		1.42	Si
SLV 2	fin.	-6065.74	-10708	-0.002667	0.0003369	0.0035	1.32		6330.51	6330.51		1.04	Si
SLV 4	ini.	4805.12	-919	-0.0017091	0.0003369	0.0035	1.32		6321.69	6321.69		1.32	Si
SLV 4	fin.	-6376.58	-10815	-0.0029893	0.0003369	0.0035	1.32		6330.51	6330.51		0.99	No
SLV 1	ini.	4506.78	-1496	-0.0015426	0.0003369	0.0035	1.32		6321.69	6321.69		1.4	Si
SLV 1	fin.	-6112.93	-10745	-0.0027135	0.0003369	0.0035	1.32		6330.51	6330.51		1.04	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-6067.81	-8591	-0.0026691	0.0003369	0.0035	1.32		6330.51	6330.51		1.04	Si
SLV 13	fin.	5942.86	2017	-0.0025571	0.0003369	0.0035	1.32		6321.69	6321.69		1.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-2954.89	9083	1.32	0	803	7930	9962	3366	8733		0.96	No
SLD 13	fin.	2415.97	7765	1.32	0	803	7930	9962	3366	8733		1.12	Si
SLD 14	ini.	-2973.3	9145	1.32	0	803	7930	9962	3366	8733		0.95	No
SLD 14	fin.	2436.24	7827	1.32	0	803	7930	9962	3366	8733		1.12	Si
SLV 1	ini.	4506.78	-16132	1.32	0	803	7930	9962	3366	8733		0.54	No
SLV 1	fin.	-6112.93	-17337	1.32	0	803	7930	9962	3366	8733		0.5	No
SLV 16	ini.	-5769.46	18811	1.32	0	803	7930	9962	3366	8733		0.46	No
SLV 16	fin.	5679.21	17206	1.32	0	803	7930	9962	3366	8733		0.51	No
SLV 4	ini.	4805.12	-16775	1.32	0	803	7930	9962	3366	8733		0.52	No
SLV 4	fin.	-6376.58	-18381	1.32	0	803	7930	9962	3366	8733		0.48	No
SLV 3	ini.	4847.96	-16920	1.32	0	803	7930	9962	3366	8733		0.52	No
SLV 3	fin.	-6423.77	-18526	1.32	0	803	7930	9962	3366	8733		0.47	No
SLV 15	ini.	-5726.62	18666	1.32	0	803	7930	9962	3366	8733		0.47	No
SLV 15	fin.	5632.02	17061	1.32	0	803	7930	9962	3366	8733		0.51	No
SLV 13	ini.	-6067.81	19455	1.32	0	803	7930	9962	3366	8733		0.45	No
SLV 13	fin.	5942.86	18250	1.32	0	803	7930	9962	3366	8733		0.48	No
SLV 2	ini.	4463.93	-15987	1.32	0	803	7930	9962	3366	8733		0.55	No
SLV 2	fin.	-6065.74	-17192	1.32	0	803	7930	9962	3366	8733		0.51	No
SLV 14	ini.	-6110.65	19600	1.32	0	803	7930	9962	3366	8733		0.45	No
SLV 14	fin.	5990.05	18395	1.32	0	803	7930	9962	3366	8733		0.47	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.985	SLV 3	No
V_SLV	0.446	SLV 14	No
PF_SLU	6.069	SLU 83	Si
V_SLU	3.247	SLU 83	Si

Trave di accoppiamento 56

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	3.51	4.83	1.32	-9.333	-3.314	3.51	4.83	1.32	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	-168.7	-2740	-0.0000388	0.0001872	0.0035	1.32		6376.08	6376.08	No	37.8	Si
SLU 66	fin.	-771.69	-2740	-0.0001892	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.26	Si
SLU 67	ini.	-160.19	-2744	-0.0000368	0.0001872	0.0035	1.32		6376.08	6376.08	No	39.8	Si
SLU 67	fin.	-783.08	-2744	-0.0001923	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.14	Si
SLU 65	ini.	-147.1	-2674	-0.0000338	0.0001872	0.0035	1.32		6376.08	6376.08	No	43.34	Si
SLU 65	fin.	-772.65	-2674	-0.0001895	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.25	Si
SLU 64	ini.	-161.27	-2667	-0.0000371	0.0001872	0.0035	1.32		6376.08	6376.08	No	39.54	Si
SLU 64	fin.	-753.67	-2667	-0.0001844	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.46	Si
SLU 78	ini.	-259.38	-3086	-0.0000602	0.0001872	0.0035	1.32		6376.08	6376.08	No	24.58	Si
SLU 78	fin.	-688.41	-3086	-0.0001671	0.0001872	0.0035	1.32		6376.08	6376.08	No	9.26	Si
SLU 70	ini.	-166.43	-2793	-0.0000383	0.0001872	0.0035	1.32		6376.08	6376.08	No	38.31	Si
SLU 70	fin.	-790.97	-2793	-0.0001944	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.06	Si
SLU 72	ini.	-165.24	-2769	-0.000038	0.0001872	0.0035	1.32		6376.08	6376.08	No	38.59	Si
SLU 72	fin.	-780.86	-2769	-0.0001917	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.17	Si
SLU 69	ini.	-174.93	-2789	-0.0000403	0.0001872	0.0035	1.32		6376.08	6376.08	No	36.45	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	fin.	-779.58	-2789	-0.0001913	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.18	Si
SLU 71	ini.	-173.74	-2765	-0.00004	0.0001872	0.0035	1.32		6376.08	6376.08	No	36.7	Si
SLU 71	fin.	-769.47	-2765	-0.0001886	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.29	Si
SLU 68	ini.	-153.34	-2723	-0.0000352	0.0001872	0.0035	1.32		6376.08	6376.08	No	41.58	Si
SLU 68	fin.	-780.55	-2723	-0.0001916	0.0001872	0.0035	1.32		6376.08	6376.08	No	8.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 65	ini.	-147.1	-305	1.32	0	536	7137	5534	3366	7672	No	25.13	Si
SLU 65	fin.	-772.65	-1086	1.32	0	536	7137	5534	3366	7672	No	7.06	Si
SLU 67	ini.	-160.19	-302	1.32	0	536	7137	5534	3366	7672	No	25.38	Si
SLU 67	fin.	-783.08	-1083	1.32	0	536	7137	5534	3366	7672	No	7.08	Si
SLU 64	ini.	-161.27	-268	1.32	0	536	7137	5534	3366	7672	No	28.58	Si
SLU 64	fin.	-753.67	-1049	1.32	0	536	7137	5534	3366	7672	No	7.31	Si
SLU 69	ini.	-174.93	-282	1.32	0	536	7137	5534	3366	7672	No	27.2	Si
SLU 69	fin.	-779.58	-1063	1.32	0	536	7137	5534	3366	7672	No	7.22	Si
SLU 72	ini.	-165.24	-294	1.32	0	536	7137	5534	3366	7672	No	26.08	Si
SLU 72	fin.	-780.86	-1075	1.32	0	536	7137	5534	3366	7672	No	7.14	Si
SLU 71	ini.	-173.74	-272	1.32	0	536	7137	5534	3366	7672	No	28.19	Si
SLU 71	fin.	-769.47	-1053	1.32	0	536	7137	5534	3366	7672	No	7.29	Si
SLU 68	ini.	-153.34	-307	1.32	0	536	7137	5534	3366	7672	No	24.98	Si
SLU 68	fin.	-780.55	-1088	1.32	0	536	7137	5534	3366	7672	No	7.05	Si
SLU 66	ini.	-168.7	-280	1.32	0	536	7137	5534	3366	7672	No	27.38	Si
SLU 66	fin.	-771.69	-1061	1.32	0	536	7137	5534	3366	7672	No	7.23	Si
SLU 26	ini.	-102.13	-335	1.32	0	536	7137	5534	3366	7672	No	22.88	Si
SLU 26	fin.	-674.95	-940	1.32	0	536	7137	5534	3366	7672	No	8.16	Si
SLU 70	ini.	-166.43	-304	1.32	0	536	7137	5534	3366	7672	No	25.22	Si
SLU 70	fin.	-790.97	-1085	1.32	0	536	7137	5534	3366	7672	No	7.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	5204.71	-2558	-0.0020434	0.0002807	0.0035	1.32		6363.53	6363.53		1.22	Si
SLV 3	fin.	-7449	-2863	-0.0042539	0.0002807	0.0035	1.32		6372.4	6372.4		0.86	No
SLV 1	ini.	4849.49	-2381	-0.0018008	0.0002807	0.0035	1.32		6363.53	6363.53		1.31	Si
SLV 1	fin.	-7427.4	-2262	-0.0042335	0.0002807	0.0035	1.32		6372.4	6372.4		0.86	No
SLV 2	ini.	5244.56	-2456	-0.0020729	0.0002807	0.0035	1.32		6363.53	6363.53		1.21	Si
SLV 2	fin.	-7979.84	-2336	-0.0047386	0.0002807	0.0035	1.32		6372.4	6372.4		0.8	No
SLV 4	ini.	5599.77	-2633	-0.0023594	0.0002807	0.0035	1.32		6363.53	6363.53		1.14	Si
SLV 4	fin.	-8001.44	-2938	-0.0047578	0.0002807	0.0035	1.32		6372.4	6372.4		0.8	No
SLV 16	ini.	-5163.16	-1769	-0.0020085	0.0002807	0.0035	1.32		6372.4	6372.4		1.23	Si
SLV 16	fin.	6387.24	-1888	-0.0031636	0.0002807	0.0035	1.32		6363.53	6363.53		1	No
SLD 2	ini.	2154.56	-2237	-0.000593	0.0002807	0.0035	1.32		6363.53	6363.53		2.95	Si
SLD 2	fin.	-3707.38	-2188	-0.0011959	0.0002807	0.0035	1.32		6372.4	6372.4		1.72	Si
SLV 15	ini.	-5558.23	-1694	-0.0023178	0.0002807	0.0035	1.32		6372.4	6372.4		1.15	Si
SLV 15	fin.	6939.69	-1814	-0.0037645	0.0002807	0.0035	1.32		6363.53	6363.53		0.92	No
SLV 14	ini.	-5518.37	-1592	-0.0022842	0.0002807	0.0035	1.32		6372.4	6372.4		1.15	Si
SLV 14	fin.	6408.84	-1287	-0.0031882	0.0002807	0.0035	1.32		6363.53	6363.53		0.99	No
SLD 4	ini.	2302.16	-2315	-0.0006435	0.0002807	0.0035	1.32		6363.53	6363.53		2.76	Si
SLD 4	fin.	-3720.87	-2443	-0.0012019	0.0002807	0.0035	1.32		6372.4	6372.4		1.71	Si
SLV 13	ini.	-5913.44	-1517	-0.0026431	0.0002807	0.0035	1.32		6372.4	6372.4		1.08	Si
SLV 13	fin.	6961.28	-1212	-0.0037865	0.0002807	0.0035	1.32		6363.53	6363.53		0.91	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	4849.49	-13592	1.32	0	803	7137	8301	3366	7940		0.58	No
SLV 1	fin.	-7427.4	-14230	1.32	0	803	7137	8301	3366	7940		0.56	No
SLV 13	ini.	-5913.44	14401	1.32	0	803	7137	8301	3366	7940		0.55	No
SLV 13	fin.	6961.28	13754	1.32	0	803	7137	8301	3366	7940		0.58	No
SLV 3	ini.	5204.71	-13557	1.32	0	803	7137	8301	3366	7940		0.59	No
SLV 3	fin.	-7449	-14107	1.32	0	803	7137	8301	3366	7940		0.56	No
SLV 15	ini.	-5558.23	14436	1.32	0	803	7137	8301	3366	7940		0.55	No
SLV 15	fin.	6939.69	13876	1.32	0	803	7137	8301	3366	7940		0.57	No
SLD 4	ini.	2302.16	-6312	1.32	0	803	7137	8301	3366	7940		1.26	Si
SLD 4	fin.	-3720.87	-6893	1.32	0	803	7137	8301	3366	7940		1.15	Si
SLV 16	ini.	-5163.16	13383	1.32	0	803	7137	8301	3366	7940		0.59	No
SLV 16	fin.	6387.24	12824	1.32	0	803	7137	8301	3366	7940		0.62	No
SLD 2	ini.	2154.56	-6315	1.32	0	803	7137	8301	3366	7940		1.26	Si
SLD 2	fin.	-3707.38	-6928	1.32	0	803	7137	8301	3366	7940		1.15	Si
SLV 14	ini.	-5518.37	13348	1.32	0	803	7137	8301	3366	7940		0.59	No
SLV 14	fin.	6408.84	12701	1.32	0	803	7137	8301	3366	7940		0.63	No
SLV 2	ini.	5244.56	-14645	1.32	0	803	7137	8301	3366	7940		0.54	No
SLV 2	fin.	-7979.84	-15282	1.32	0	803	7137	8301	3366	7940		0.52	No
SLV 4	ini.	5599.77	-14610	1.32	0	803	7137	8301	3366	7940		0.54	No
SLV 4	fin.	-8001.44	-15160	1.32	0	803	7137	8301	3366	7940		0.52	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.796	SLV 4	No
V_SLV	0.52	SLV 2	No
PF_SLU	8.061	SLU 70	Si
V_SLU	7.053	SLU 68	Si

Trave di accoppiamento 58

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	3.51	4.83	1.32	-5.163	2.046	3.51	4.83	1.32	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	74.5	-562	-0.000017	0.0002246	0.0035	1.32		6596.09	6596.09	No	88.54	Si
SLU 75	fin.	-822.86	-1914	-0.0002004	0.0002246	0.0035	1.32		6604.39	6604.39	No	8.03	Si
SLU 42	ini.	41.39	-520	-0.0000094	0.0002246	0.0035	1.32		6596.09	6596.09	No	159.36	Si
SLU 42	fin.	-807.63	-1766	-0.0001963	0.0002246	0.0035	1.32		6604.39	6604.39	No	8.18	Si
SLU 77	ini.	76.47	-568	-0.0000175	0.0002246	0.0035	1.32		6596.09	6596.09	No	86.26	Si
SLU 77	fin.	-825.79	-1933	-0.0002011	0.0002246	0.0035	1.32		6604.39	6604.39	No	8	Si
SLU 84	ini.	66.18	-592	-0.0000151	0.0002246	0.0035	1.32		6596.09	6596.09	No	99.67	Si
SLU 84	fin.	-888.31	-2015	-0.0002178	0.0002246	0.0035	1.32		6604.39	6604.39	No	7.43	Si
SLU 83	ini.	66.21	-591	-0.0000151	0.0002246	0.0035	1.32		6596.09	6596.09	No	99.63	Si
SLU 83	fin.	-885.92	-2012	-0.0002171	0.0002246	0.0035	1.32		6604.39	6604.39	No	7.45	Si
SLU 81	ini.	64.26	-584	-0.0000147	0.0002246	0.0035	1.32		6596.09	6596.09	No	102.64	Si
SLU 81	fin.	-880.6	-1990	-0.0002157	0.0002246	0.0035	1.32		6604.39	6604.39	No	7.5	Si
SLU 80	ini.	78.3	-560	-0.0000179	0.0002246	0.0035	1.32		6596.09	6596.09	No	84.25	Si
SLU 80	fin.	-809.98	-1906	-0.000197	0.0002246	0.0035	1.32		6604.39	6604.39	No	8.15	Si
SLU 82	ini.	64.23	-585	-0.0000146	0.0002246	0.0035	1.32		6596.09	6596.09	No	102.69	Si
SLU 82	fin.	-882.99	-1993	-0.0002164	0.0002246	0.0035	1.32		6604.39	6604.39	No	7.48	Si
SLU 78	ini.	76.44	-569	-0.0000174	0.0002246	0.0035	1.32		6596.09	6596.09	No	86.29	Si
SLU 78	fin.	-828.18	-1936	-0.0002018	0.0002246	0.0035	1.32		6604.39	6604.39	No	7.97	Si
SLU 74	ini.	74.53	-561	-0.000017	0.0002246	0.0035	1.32		6596.09	6596.09	No	88.5	Si
SLU 74	fin.	-820.47	-1911	-0.0001997	0.0002246	0.0035	1.32		6604.39	6604.39	No	8.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	76.44	-2080	1.32	0	268	6344	3321	3366	6612	No	3.18	Si
SLU 78	fin.	-828.18	-2441	1.32	0	268	6344	3321	3366	6612	No	2.71	Si
SLU 75	ini.	74.5	-2058	1.32	0	268	6344	3321	3366	6612	No	3.21	Si
SLU 75	fin.	-822.86	-2420	1.32	0	268	6344	3321	3366	6612	No	2.73	Si
SLU 80	ini.	78.3	-2042	1.32	0	268	6344	3321	3366	6612	No	3.24	Si
SLU 80	fin.	-809.98	-2403	1.32	0	268	6344	3321	3366	6612	No	2.75	Si
SLU 82	ini.	64.23	-2167	1.32	0	268	6344	3321	3366	6612	No	3.05	Si
SLU 82	fin.	-882.99	-2528	1.32	0	268	6344	3321	3366	6612	No	2.62	Si
SLU 77	ini.	76.47	-2075	1.32	0	268	6344	3321	3366	6612	No	3.19	Si
SLU 77	fin.	-825.79	-2436	1.32	0	268	6344	3321	3366	6612	No	2.71	Si
SLU 74	ini.	74.53	-2054	1.32	0	268	6344	3321	3366	6612	No	3.22	Si
SLU 74	fin.	-820.47	-2415	1.32	0	268	6344	3321	3366	6612	No	2.74	Si
SLU 83	ini.	66.21	-2184	1.32	0	268	6344	3321	3366	6612	No	3.03	Si
SLU 83	fin.	-885.92	-2545	1.32	0	268	6344	3321	3366	6612	No	2.6	Si
SLU 84	ini.	66.18	-2188	1.32	0	268	6344	3321	3366	6612	No	3.02	Si
SLU 84	fin.	-888.31	-2549	1.32	0	268	6344	3321	3366	6612	No	2.59	Si
SLU 81	ini.	64.26	-2162	1.32	0	268	6344	3321	3366	6612	No	3.06	Si
SLU 81	fin.	-880.6	-2524	1.32	0	268	6344	3321	3366	6612	No	2.62	Si
SLU 79	ini.	78.32	-2037	1.32	0	268	6344	3321	3366	6612	No	3.25	Si
SLU 79	fin.	-807.58	-2398	1.32	0	268	6344	3321	3366	6612	No	2.76	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-157.46	-864	-0.000036	0.0003369	0.0035	1.32		6762.5	6762.5		42.95	Si
SLV 16	fin.	-1669.03	-2823	-0.0004266	0.0003369	0.0035	1.32		6762.5	6762.5		4.05	Si
SLV 11	ini.	-503.96	-1666	-0.0001177	0.0003369	0.0035	1.32		6762.5	6762.5		13.42	Si
SLV 11	fin.	-2410.77	-3970	-0.000662	0.0003369	0.0035	1.32		6762.5	6762.5		2.81	Si
SLV 12	ini.	-489.73	-1631	-0.0001143	0.0003369	0.0035	1.32		6762.5	6762.5		13.81	Si
SLV 12	fin.	-2317.33	-3848	-0.0006305	0.0003369	0.0035	1.32		6762.5	6762.5		2.92	Si
SLD 11	ini.	-183.56	-936	-0.000042	0.0003369	0.0035	1.32		6762.5	6762.5		36.84	Si
SLD 11	fin.	-1334.71	-2437	-0.0003312	0.0003369	0.0035	1.32		6762.5	6762.5		5.07	Si
SLV 15	ini.	-179.3	-919	-0.0000411	0.0003369	0.0035	1.32		6762.5	6762.5		37.72	Si
SLV 15	fin.	-1812.43	-3009	-0.0004695	0.0003369	0.0035	1.32		6762.5	6762.5		3.73	Si
SLV 6	ini.	643.33	942	-0.0001518	0.0003369	0.0035	1.32		6754.02	6754.02		10.5	Si
SLV 6	fin.	1425.17	1499	-0.0003568	0.0003369	0.0035	1.32		6754.02	6754.02		4.74	Si
SLV 5	ini.	629.1	907	-0.0001483	0.0003369	0.0035	1.32		6754.02	6754.02		10.74	Si
SLV 5	fin.	1331.73	1378	-0.0003308	0.0003369	0.0035	1.32		6754.02	6754.02		5.07	Si
SLV 8	ini.	-444.83	-1536	-0.0001035	0.0003369	0.0035	1.32		6762.5	6762.5		15.2	Si
SLV 8	fin.	-1864.66	-3269	-0.0004855	0.0003369	0.0035	1.32		6762.5	6762.5		3.63	Si
SLD 12	ini.	-177.33	-920	-0.0000406	0.0003369	0.0035	1.32		6762.5	6762.5		38.14	Si
SLD 12	fin.	-1293.84	-2384	-0.0003199	0.0003369	0.0035	1.32		6762.5	6762.5		5.23	Si
SLV 7	ini.	-459.06	-1572	-0.0001069	0.0003369	0.0035	1.32		6762.5	6762.5		14.73	Si
SLV 7	fin.	-1958.1	-3390	-0.0005144	0.0003369	0.0035	1.32		6762.5	6762.5		3.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-503.96	-3984	1.32	0	402	6344	4981	3366	6745		1.69	Si
SLV 11	fin.	-2410.77	-4530	1.32	16250	402	6344	4981	3366	6745		1.49	Si
SLD 12	ini.	-177.33	-2397	1.32	0	402	6344	4981	3366	6745		2.81	Si
SLD 12	fin.	-1293.84	-2789	1.32	0	402	6344	4981	3366	6745		2.42	Si
SLV 15	ini.	-179.3	-3376	1.32	0	402	6344	4981	3366	6745		2	Si
SLV 15	fin.	-1812.43	-3846	1.32	0	402	6344	4981	3366	6745		1.75	Si
SLD 15	ini.	-40.03	-2177	1.32	0	402	6344	4981	3366	6745		3.1	Si
SLD 15	fin.	-1056.08	-2532	1.32	0	402	6344	4981	3366	6745		2.66	Si
SLD 11	ini.	-183.56	-2471	1.32	0	402	6344	4981	3366	6745		2.73	Si
SLD 11	fin.	-1334.71	-2864	1.32	0	402	6344	4981	3366	6745		2.36	Si
SLV 12	ini.	-489.73	-3815	1.32	0	402	6344	4981	3366	6745		1.77	Si
SLV 12	fin.	-2317.33	-4360	1.32	16250	402	6344	4981	3366	6745		1.55	Si
SLV 16	ini.	-157.46	-3115	1.32	0	402	6344	4981	3366	6745		2.17	Si
SLV 16	fin.	-1669.03	-3585	1.32	0	402	6344	4981	3366	6745		1.88	Si
SLD 7	ini.	-163.79	-2149	1.32	0	402	6344	4981	3366	6745		3.14	Si
SLD 7	fin.	-1146.11	-2511	1.32	0	402	6344	4981	3366	6745		2.69	Si
SLV 7	ini.	-459.06	-3210	1.32	0	402	6344	4981	3366	6745		2.1	Si
SLV 7	fin.	-1958.1	-3681	1.32	0	402	6344	4981	3366	6745		1.83	Si
SLV 8	ini.	-444.83	-3041	1.32	0	402	6344	4981	3366	6745		2.22	Si
SLV 8	fin.	-1864.66	-3511	1.32	0	402	6344	4981	3366	6745		1.92	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.805	SLV 11	Si
V_SLV	1.489	SLV 11	Si
PF_SLU	7.435	SLU 84	Si
V_SLU	2.593	SLU 84	Si

Trave di accoppiamento 59

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	1.41	3.41	2	-5.093	6.506	1.41	3.41	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	1107.42	1443	-0.0001147	0.0001872	0.0035	2		14344.28	14344.28	No	12.95	Si
SLU 75	fin.	-245.56	-973	-0.0000245	0.0001872	0.0035	2		14357.01	14357.01	No	58.47	Si
SLU 78	ini.	1120.44	1459	-0.0001161	0.0001872	0.0035	2		14344.28	14344.28	No	12.8	Si
SLU 78	fin.	-250.15	-987	-0.000025	0.0001872	0.0035	2		14357.01	14357.01	No	57.39	Si
SLU 82	ini.	1119.83	1477	-0.000116	0.0001872	0.0035	2		14344.28	14344.28	No	12.81	Si
SLU 82	fin.	-244.89	-990	-0.0000244	0.0001872	0.0035	2		14357.01	14357.01	No	58.63	Si
SLU 79	ini.	1117.59	1298	-0.0001158	0.0001872	0.0035	2		14344.28	14344.28	No	12.83	Si
SLU 79	fin.	-263.7	-1094	-0.0000263	0.0001872	0.0035	2		14357.01	14357.01	No	54.44	Si
SLU 77	ini.	1124.77	1326	-0.0001166	0.0001872	0.0035	2		14344.28	14344.28	No	12.75	Si
SLU 77	fin.	-259.04	-1097	-0.0000259	0.0001872	0.0035	2		14357.01	14357.01	No	55.42	Si
SLU 83	ini.	1137.18	1360	-0.0001179	0.0001872	0.0035	2		14344.28	14344.28	No	12.61	Si
SLU 83	fin.	-258.37	-1115	-0.0000258	0.0001872	0.0035	2		14357.01	14357.01	No	55.57	Si
SLU 84	ini.	1132.85	1493	-0.0001175	0.0001872	0.0035	2		14344.28	14344.28	No	12.66	Si
SLU 84	fin.	-249.48	-1005	-0.0000249	0.0001872	0.0035	2		14357.01	14357.01	No	57.55	Si
SLU 74	ini.	1111.74	1310	-0.0001152	0.0001872	0.0035	2		14344.28	14344.28	No	12.9	Si
SLU 74	fin.	-254.45	-1082	-0.0000254	0.0001872	0.0035	2		14357.01	14357.01	No	56.42	Si
SLU 80	ini.	1113.27	1430	-0.0001153	0.0001872	0.0035	2		14344.28	14344.28	No	12.88	Si
SLU 80	fin.	-254.82	-985	-0.0000254	0.0001872	0.0035	2		14357.01	14357.01	No	56.34	Si
SLU 81	ini.	1124.15	1344	-0.0001165	0.0001872	0.0035	2		14344.28	14344.28	No	12.76	Si
SLU 81	fin.	-253.78	-1100	-0.0000253	0.0001872	0.0035	2		14357.01	14357.01	No	56.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1137.18	737	2	0	812	3965	8384	5100	4776	No	6.48	Si
SLU 83	fin.	-258.37	2219	2	0	812	3965	8384	5100	4776	No	2.15	Si
SLU 82	ini.	1119.83	805	2	0	812	3965	8384	5100	4776	No	5.93	Si
SLU 82	fin.	-244.89	2249	2	0	812	3965	8384	5100	4776	No	2.12	Si
SLU 42	ini.	939.16	811	2	0	812	3965	8384	5100	4776	No	5.89	Si
SLU 42	fin.	-192.74	2121	2	0	812	3965	8384	5100	4776	No	2.25	Si
SLU 76	ini.	1097.36	732	2	0	812	3965	8384	5100	4776	No	6.53	Si
SLU 76	fin.	-244.3	2147	2	0	812	3965	8384	5100	4776	No	2.22	Si
SLU 78	ini.	1120.44	714	2	0	812	3965	8384	5100	4776	No	6.69	Si
SLU 78	fin.	-250.15	2202	2	0	812	3965	8384	5100	4776	No	2.17	Si
SLU 75	ini.	1107.42	722	2	0	812	3965	8384	5100	4776	No	6.61	Si
SLU 75	fin.	-245.56	2168	2	0	812	3965	8384	5100	4776	No	2.2	Si
SLU 80	ini.	1113.27	684	2	0	812	3965	8384	5100	4776	No	6.98	Si
SLU 80	fin.	-254.82	2138	2	0	812	3965	8384	5100	4776	No	2.23	Si
SLU 81	ini.	1124.15	745	2	0	812	3965	8384	5100	4776	No	6.41	Si
SLU 81	fin.	-253.78	2185	2	0	812	3965	8384	5100	4776	No	2.19	Si
SLU 77	ini.	1124.77	654	2	0	812	3965	8384	5100	4776	No	7.3	Si
SLU 77	fin.	-259.04	2138	2	0	812	3965	8384	5100	4776	No	2.23	Si
SLU 84	ini.	1132.85	797	2	0	812	3965	8384	5100	4776	No	5.99	Si
SLU 84	fin.	-249.48	2283	2	0	812	3965	8384	5100	4776	No	2.09	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	445.91	9385	-0.0000447	0.0002807	0.0035	2		14202.07	14202.07		31.85	Si
SLV 16	fin.	3508.39	3136	-0.000394	0.0002807	0.0035	2		14202.07	14202.07		4.05	Si
SLV 3	ini.	845.31	-8649	-0.0000857	0.0002807	0.0035	2		14202.07	14202.07		16.8	Si
SLV 3	fin.	-4441.11	-4968	-0.0005203	0.0002807	0.0035	2		14215.41	14215.41		3.2	Si
SLV 14	ini.	724.28	10339	-0.0000732	0.0002807	0.0035	2		14202.07	14202.07		19.61	Si
SLV 14	fin.	4050	3448	-0.0004664	0.0002807	0.0035	2		14202.07	14202.07		3.51	Si
SLV 13	ini.	760.76	9415	-0.0000769	0.0002807	0.0035	2		14202.07	14202.07		18.67	Si
SLV 13	fin.	3617.96	2992	-0.0004084	0.0002807	0.0035	2		14202.07	14202.07		3.93	Si
SLV 4	ini.	808.83	-7726	-0.0000819	0.0002807	0.0035	2		14202.07	14202.07		17.56	Si
SLV 4	fin.	-4009.08	-4512	-0.0004604	0.0002807	0.0035	2		14215.41	14215.41		3.55	Si
SLV 8	ini.	363.39	-3010	-0.0000363	0.0002807	0.0035	2		14202.07	14202.07		39.08	Si
SLV 8	fin.	-2085.1	-2280	-0.0002203	0.0002807	0.0035	2		14215.41	14215.41		6.82	Si
SLV 1	ini.	1123.68	-7696	-0.000115	0.0002807	0.0035	2		14202.07	14202.07		12.64	Si
SLV 1	fin.	-3899.51	-4656	-0.0004455	0.0002807	0.0035	2		14215.41	14215.41		3.65	Si
SLV 7	ini.	387.17	-3612	-0.0000387	0.0002807	0.0035	2		14202.07	14202.07		36.68	Si
SLV 7	fin.	-2366.6	-2577	-0.0002528	0.0002807	0.0035	2		14215.41	14215.41		6.01	Si
SLV 2	ini.	1087.2	-6772	-0.0001111	0.0002807	0.0035	2		14202.07	14202.07		13.06	Si
SLV 2	fin.	-3467.48	-4199	-0.0003883	0.0002807	0.0035	2		14215.41	14215.41		4.1	Si
SLV 15	ini.	482.39	8462	-0.0000484	0.0002807	0.0035	2		14202.07	14202.07		29.44	Si
SLV 15	fin.	3076.36	2680	-0.0003388	0.0002807	0.0035	2		14202.07	14202.07		4.62	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	1206.2	7147	2	0	1217	3965	12577	5100	5182		0.73	No
SLV 9	fin.	1693.98	13579	2	0	1217	3965	12577	5100	5182		0.38	No
SLV 10	ini.	1182.43	8206	2	0	1217	3965	12577	5100	5182		0.63	No
SLV 10	fin.	1975.49	14830	2	0	1217	3965	12577	5100	5182		0.35	No
SLV 1	ini.	1123.68	-14004	2	0	1217	3965	12577	5100	5182		0.37	No
SLV 1	fin.	-3899.51	-15481	2	0	1217	3965	12577	5100	5182		0.33	No
SLV 14	ini.	724.28	16471	2	0	1217	3965	12577	5100	5182		0.31	No
SLV 14	fin.	4050	22507	2	0	1217	3965	12577	5100	5182		0.23	No
SLV 13	ini.	760.76	14845	2	0	1217	3965	12577	5100	5182		0.35	No
SLV 13	fin.	3617.96	20587	2	0	1217	3965	12577	5100	5182		0.25	No
SLV 16	ini.	445.91	14658	2	0	1217	3965	12577	5100	5182		0.35	No
SLV 16	fin.	3508.39	17981	2	0	1217	3965	12577	5100	5182		0.29	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	845.31	-15818	2	0	1217	3965	12577	5100	5182		0.33	No
SLV 3	fin.	-4441.11	-20007	2	0	1217	3965	12577	5100	5182		0.26	No
SLV 4	ini.	808.83	-14192	2	0	1217	3965	12577	5100	5182		0.37	No
SLV 4	fin.	-4009.08	-18087	2	0	1217	3965	12577	5100	5182		0.29	No
SLV 15	ini.	482.39	13031	2	0	1217	3965	12577	5100	5182		0.4	No
SLV 15	fin.	3076.36	16060	2	0	1217	3965	12577	5100	5182		0.32	No
SLV 2	ini.	1087.2	-12378	2	0	1217	3965	12577	5100	5182		0.42	No
SLV 2	fin.	-3467.48	-13560	2	0	1217	3965	12577	5100	5182		0.38	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.201	SLV 3	Si
V_SLV	0.23	SLV 14	No
PF_SLU	12.614	SLU 83	Si
V_SLU	2.092	SLU 84	Si

Trave di accoppiamento 60

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	4.21	4.83	0.62	-5.093	6.506	4.21	4.83	0.62	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-83.69	-254	-0.000089	0.0001872	0.0035	0.62		1414.81	1414.81	No	16.9	Si
SLU 79	fin.	87.45	-270	-0.0000934	0.0001872	0.0035	0.62		1410.91	1410.91	No	16.13	Si
SLU 83	ini.	-87.06	-270	-0.0000927	0.0001872	0.0035	0.62		1414.81	1414.81	No	16.25	Si
SLU 83	fin.	91.99	-287	-0.0000984	0.0001872	0.0035	0.62		1410.91	1410.91	No	15.34	Si
SLU 77	ini.	-84.47	-257	-0.0000898	0.0001872	0.0035	0.62		1414.81	1414.81	No	16.75	Si
SLU 77	fin.	88.86	-273	-0.0000949	0.0001872	0.0035	0.62		1410.91	1410.91	No	15.88	Si
SLU 78	ini.	-66.57	-184	-0.0000702	0.0001872	0.0035	0.62		1414.81	1414.81	No	21.25	Si
SLU 78	fin.	86.21	-242	-0.000092	0.0001872	0.0035	0.62		1410.91	1410.91	No	16.37	Si
SLU 74	ini.	-83.34	-255	-0.0000886	0.0001872	0.0035	0.62		1414.81	1414.81	No	16.98	Si
SLU 74	fin.	87.93	-271	-0.0000939	0.0001872	0.0035	0.62		1410.91	1410.91	No	16.05	Si
SLU 81	ini.	-85.93	-267	-0.0000914	0.0001872	0.0035	0.62		1414.81	1414.81	No	16.46	Si
SLU 81	fin.	91.06	-285	-0.0000974	0.0001872	0.0035	0.62		1410.91	1410.91	No	15.49	Si
SLU 75	ini.	-65.44	-182	-0.000069	0.0001872	0.0035	0.62		1414.81	1414.81	No	21.62	Si
SLU 75	fin.	85.27	-239	-0.000091	0.0001872	0.0035	0.62		1410.91	1410.91	No	16.55	Si
SLU 82	ini.	-68.03	-194	-0.0000718	0.0001872	0.0035	0.62		1414.81	1414.81	No	20.8	Si
SLU 82	fin.	88.41	-253	-0.0000944	0.0001872	0.0035	0.62		1410.91	1410.91	No	15.96	Si
SLU 80	ini.	-65.8	-180	-0.0000694	0.0001872	0.0035	0.62		1414.81	1414.81	No	21.5	Si
SLU 80	fin.	84.8	-238	-0.0000904	0.0001872	0.0035	0.62		1410.91	1410.91	No	16.64	Si
SLU 84	ini.	-69.16	-196	-0.000073	0.0001872	0.0035	0.62		1414.81	1414.81	No	20.46	Si
SLU 84	fin.	89.34	-256	-0.0000955	0.0001872	0.0035	0.62		1410.91	1410.91	No	15.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-83.69	2674	0.62	0	252	3965	2599	1581	4180	No	1.56	Si
SLU 79	fin.	87.45	-1409	0.62	0	252	3965	2599	1581	4180	No	2.97	Si
SLU 77	ini.	-84.47	2710	0.62	0	252	3965	2599	1581	4180	No	1.54	Si
SLU 77	fin.	88.86	-1428	0.62	0	252	3965	2599	1581	4180	No	2.93	Si
SLU 74	ini.	-83.34	2673	0.62	0	252	3965	2599	1581	4180	No	1.56	Si
SLU 74	fin.	87.93	-1409	0.62	0	252	3965	2599	1581	4180	No	2.97	Si
SLU 84	ini.	-69.16	2740	0.62	0	252	3965	2599	1581	4180	No	1.53	Si
SLU 84	fin.	89.34	-1518	0.62	0	252	3965	2599	1581	4180	No	2.75	Si
SLU 80	ini.	-65.8	2647	0.62	0	252	3965	2599	1581	4180	No	1.58	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	84.8	-1480	0.62	0	252	3965	2599	1581	4180	No	2.82	Si
SLU 78	ini.	-66.57	2683	0.62	0	252	3965	2599	1581	4180	No	1.56	Si
SLU 78	fin.	86.21	-1499	0.62	0	252	3965	2599	1581	4180	No	2.79	Si
SLU 75	ini.	-65.44	2646	0.62	0	252	3965	2599	1581	4180	No	1.58	Si
SLU 75	fin.	85.27	-1480	0.62	0	252	3965	2599	1581	4180	No	2.83	Si
SLU 83	ini.	-87.06	2767	0.62	0	252	3965	2599	1581	4180	No	1.51	Si
SLU 83	fin.	91.99	-1447	0.62	0	252	3965	2599	1581	4180	No	2.89	Si
SLU 81	ini.	-85.93	2730	0.62	0	252	3965	2599	1581	4180	No	1.53	Si
SLU 81	fin.	91.06	-1428	0.62	0	252	3965	2599	1581	4180	No	2.93	Si
SLU 82	ini.	-68.03	2704	0.62	0	252	3965	2599	1581	4180	No	1.55	Si
SLU 82	fin.	88.41	-1499	0.62	0	252	3965	2599	1581	4180	No	2.79	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	232.09	1603	-0.0002586	0.0002807	0.0035	0.62		1420.05	1420.05		6.12	Si
SLV 1	fin.	-265.06	744	-0.0002986	0.0002807	0.0035	0.62		1424.12	1424.12		5.37	Si
SLV 13	ini.	-198.12	-1276	-0.0002171	0.0002807	0.0035	0.62		1424.12	1424.12		7.19	Si
SLV 13	fin.	293.52	-891	-0.0003359	0.0002807	0.0035	0.62		1420.05	1420.05		4.84	Si
SLV 6	ini.	221.63	1114	-0.0002459	0.0002807	0.0035	0.62		1420.05	1420.05		6.41	Si
SLV 6	fin.	-116.11	245	-0.0001235	0.0002807	0.0035	0.62		1424.12	1424.12		12.27	Si
SLV 14	ini.	-212.37	-1399	-0.000234	0.0002807	0.0035	0.62		1424.12	1424.12		6.71	Si
SLV 14	fin.	320.19	-969	-0.000371	0.0002807	0.0035	0.62		1420.05	1420.05		4.44	Si
SLV 5	ini.	230.92	1194	-0.0002571	0.0002807	0.0035	0.62		1420.05	1420.05		6.15	Si
SLV 5	fin.	-133.48	296	-0.0001429	0.0002807	0.0035	0.62		1424.12	1424.12		10.67	Si
SLV 11	ini.	-332.11	-1440	-0.0003858	0.0002807	0.0035	0.62		1424.12	1424.12		4.29	Si
SLV 11	fin.	230	-587	-0.000256	0.0002807	0.0035	0.62		1420.05	1420.05		6.17	Si
SLV 16	ini.	-342.56	-1929	-0.0004	0.0002807	0.0035	0.62		1424.12	1424.12		4.16	Si
SLV 16	fin.	378.96	-1086	-0.0004517	0.0002807	0.0035	0.62		1420.05	1420.05		3.75	Si
SLV 15	ini.	-328.31	-1807	-0.0003807	0.0002807	0.0035	0.62		1424.12	1424.12		4.34	Si
SLV 15	fin.	352.29	-1009	-0.0004145	0.0002807	0.0035	0.62		1420.05	1420.05		4.03	Si
SLV 12	ini.	-341.39	-1520	-0.0003984	0.0002807	0.0035	0.62		1424.12	1424.12		4.17	Si
SLV 12	fin.	247.37	-638	-0.0002774	0.0002807	0.0035	0.62		1420.05	1420.05		5.74	Si
SLV 2	ini.	217.84	1481	-0.0002413	0.0002807	0.0035	0.62		1420.05	1420.05		6.52	Si
SLV 2	fin.	-238.4	667	-0.0002655	0.0002807	0.0035	0.62		1424.12	1424.12		5.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-115.29	3119	0.62	0	377	3965	3899	1581	4342		1.39	Si
SLD 13	fin.	157.58	-1103	0.62	0	377	3965	3899	1581	4342		3.94	Si
SLD 16	ini.	-177.36	3191	0.62	0	377	3965	3899	1581	4342		1.36	Si
SLD 16	fin.	194.55	-798	0.62	0	377	3965	3899	1581	4342		5.44	Si
SLD 14	ini.	-121.41	3243	0.62	0	377	3965	3899	1581	4342		1.34	Si
SLD 14	fin.	169.03	-1106	0.62	0	377	3965	3899	1581	4342		3.93	Si
SLV 10	ini.	92.57	3049	0.62	0	377	3965	3899	1581	4342		1.42	Si
SLV 10	fin.	51.47	-2142	0.62	0	377	3965	3899	1581	4342		2.03	Si
SLD 15	ini.	-171.24	3067	0.62	0	377	3965	3899	1581	4342		1.42	Si
SLD 15	fin.	183.09	-795	0.62	0	377	3965	3899	1581	4342		5.46	Si
SLV 9	ini.	101.86	2861	0.62	0	377	3965	3899	1581	4342		1.52	Si
SLV 9	fin.	34.1	-2138	0.62	0	377	3965	3899	1581	4342		2.03	Si
SLV 15	ini.	-328.31	4785	0.62	0	377	3965	3899	1581	4342		0.91	No
SLV 15	fin.	352.29	-570	0.62	0	377	3965	3899	1581	4342		7.61	Si
SLV 13	ini.	-198.12	4909	0.62	0	377	3965	3899	1581	4342		0.88	No
SLV 13	fin.	293.52	-1284	0.62	0	377	3965	3899	1581	4342		3.38	Si
SLV 14	ini.	-212.37	5197	0.62	0	377	3965	3899	1581	4342		0.84	No
SLV 14	fin.	320.19	-1291	0.62	0	377	3965	3899	1581	4342		3.36	Si
SLV 16	ini.	-342.56	5073	0.62	0	377	3965	3899	1581	4342		0.86	No
SLV 16	fin.	378.96	-577	0.62	0	377	3965	3899	1581	4342		7.52	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.747	SLV 16	Si
V_SLV	0.835	SLV 14	No
PF_SLU	15.337	SLU 83	Si
V_SLU	1.511	SLU 83	Si

Trave di accoppiamento 61

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	-3.314	1.41	2.31	0.9	-7.463	-3.314	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-304.11	-3064	-0.0001585	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.75	Si
SLU 79	fin.	684.61	-1865	-0.0003983	0.0001872	0.0035	0.9		2959	2959	No	4.32	Si
SLU 62	ini.	-316.3	-2755	-0.0001653	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.37	Si
SLU 62	fin.	683.86	-1832	-0.0003978	0.0001872	0.0035	0.9		2959	2959	No	4.33	Si
SLU 83	ini.	-322.23	-3077	-0.0001687	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.2	Si
SLU 83	fin.	712.86	-1929	-0.000418	0.0001872	0.0035	0.9		2959	2959	No	4.15	Si
SLU 81	ini.	-319.67	-3017	-0.0001672	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.27	Si
SLU 81	fin.	702.54	-1899	-0.0004108	0.0001872	0.0035	0.9		2959	2959	No	4.21	Si
SLU 63	ini.	-314.49	-2762	-0.0001643	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.43	Si
SLU 63	fin.	680.88	-1827	-0.0003957	0.0001872	0.0035	0.9		2959	2959	No	4.35	Si
SLU 77	ini.	-304.09	-3102	-0.0001584	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.75	Si
SLU 77	fin.	688.06	-1876	-0.0004007	0.0001872	0.0035	0.9		2959	2959	No	4.3	Si
SLU 78	ini.	-302.27	-3109	-0.0001574	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.81	Si
SLU 78	fin.	685.08	-1871	-0.0003986	0.0001872	0.0035	0.9		2959	2959	No	4.32	Si
SLU 82	ini.	-317.86	-3024	-0.0001662	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.33	Si
SLU 82	fin.	699.56	-1894	-0.0004087	0.0001872	0.0035	0.9		2959	2959	No	4.23	Si
SLU 80	ini.	-302.3	-3071	-0.0001574	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.81	Si
SLU 80	fin.	681.63	-1860	-0.0003962	0.0001872	0.0035	0.9		2959	2959	No	4.34	Si
SLU 84	ini.	-320.41	-3084	-0.0001676	0.0001872	0.0035	0.9		2964.67	2964.67	No	9.25	Si
SLU 84	fin.	709.87	-1923	-0.0004159	0.0001872	0.0035	0.9		2959	2959	No	4.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-302.27	-4460	0.9	0	329	7137	3773	2295	6068	No	1.36	Si
SLU 78	fin.	685.08	3392	0.9	0	329	7137	3773	2295	6068	No	1.79	Si
SLU 77	ini.	-304.09	-4448	0.9	0	329	7137	3773	2295	6068	No	1.36	Si
SLU 77	fin.	688.06	3402	0.9	0	329	7137	3773	2295	6068	No	1.78	Si
SLU 80	ini.	-302.3	-4403	0.9	0	329	7137	3773	2295	6068	No	1.38	Si
SLU 80	fin.	681.63	3368	0.9	0	329	7137	3773	2295	6068	No	1.8	Si
SLU 82	ini.	-317.86	-4331	0.9	0	329	7137	3773	2295	6068	No	1.4	Si
SLU 82	fin.	699.56	3431	0.9	0	329	7137	3773	2295	6068	No	1.77	Si
SLU 76	ini.	-298.54	-4327	0.9	0	329	7137	3773	2295	6068	No	1.4	Si
SLU 76	fin.	669.33	3305	0.9	0	329	7137	3773	2295	6068	No	1.84	Si
SLU 83	ini.	-322.23	-4403	0.9	0	329	7137	3773	2295	6068	No	1.38	Si
SLU 83	fin.	712.86	3497	0.9	0	329	7137	3773	2295	6068	No	1.74	Si
SLU 84	ini.	-320.41	-4415	0.9	0	329	7137	3773	2295	6068	No	1.37	Si
SLU 84	fin.	709.87	3487	0.9	0	329	7137	3773	2295	6068	No	1.74	Si
SLU 79	ini.	-304.11	-4391	0.9	0	329	7137	3773	2295	6068	No	1.38	Si
SLU 79	fin.	684.61	3377	0.9	0	329	7137	3773	2295	6068	No	1.8	Si
SLU 74	ini.	-301.53	-4363	0.9	0	329	7137	3773	2295	6068	No	1.39	Si
SLU 74	fin.	677.75	3345	0.9	0	329	7137	3773	2295	6068	No	1.81	Si
SLU 75	ini.	-299.72	-4375	0.9	0	329	7137	3773	2295	6068	No	1.39	Si
SLU 75	fin.	674.77	3336	0.9	0	329	7137	3773	2295	6068	No	1.82	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1372.15	-5754	-0.0008846	0.0002807	0.0035	0.9		2989.59	2989.59		2.18	Si
SLV 3	fin.	-2052.99	3352	-0.0015487	0.0002807	0.0035	0.9		2995.37	2995.37		1.46	Si
SLV 16	ini.	-1817.01	2410	-0.0012919	0.0002807	0.0035	0.9		2995.37	2995.37		1.65	Si
SLV 16	fin.	2810.3	-5348	-0.0027997	0.0002807	0.0035	0.9		2989.59	2989.59		1.06	Si
SLV 4	ini.	1524.58	-6264	-0.0010165	0.0002807	0.0035	0.9		2989.59	2989.59		1.96	Si
SLV 4	fin.	-2263.18	3731	-0.0018146	0.0002807	0.0035	0.9		2995.37	2995.37		1.32	Si
SLV 15	ini.	-1969.44	2919	-0.0014537	0.0002807	0.0035	0.9		2995.37	2995.37		1.52	Si
SLV 15	fin.	3020.48	-5726	-0.0033063	0.0002807	0.0035	0.9		2989.59	2989.59		0.99	No
SLV 9	ini.	-699.45	-2109	-0.0003868	0.0002807	0.0035	0.9		2995.37	2995.37		4.28	Si
SLV 9	fin.	1564.53	-3634	-0.0010525	0.0002807	0.0035	0.9		2989.59	2989.59		1.91	Si
SLV 1	ini.	1406.24	-6633	-0.0009134	0.0002807	0.0035	0.9		2989.59	2989.59		2.13	Si
SLV 1	fin.	-1888.51	2821	-0.0013661	0.0002807	0.0035	0.9		2995.37	2995.37		1.59	Si
SLD 13	ini.	-944.83	-325	-0.0005526	0.0002807	0.0035	0.9		2995.37	2995.37		3.17	Si
SLD 13	fin.	1622.98	-3389	-0.0011062	0.0002807	0.0035	0.9		2989.59	2989.59		1.84	Si
SLV 14	ini.	-1782.91	1531	-0.0012575	0.0002807	0.0035	0.9		2995.37	2995.37		1.68	Si
SLV 14	fin.	2974.78	-5880	-0.0031946	0.0002807	0.0035	0.9		2989.59	2989.59		1	Si
SLV 2	ini.	1558.68	-7142	-0.0010472	0.0002807	0.0035	0.9		2989.59	2989.59		1.92	Si
SLV 2	fin.	-2098.7	3199	-0.0016029	0.0002807	0.0035	0.9		2995.37	2995.37		1.43	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1935.35	2041	-0.0014163	0.0002807	0.0035	0.9		2995.37	2995.37		1.55	Si
SLV 13	fin.	3184.97	-6258	-0.0036903	0.0002807	0.0035	0.9		2989.59	2989.59		0.94	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1817.01	4051	0.9	0	493	7137	5660	2295	7630		1.88	Si
SLV 16	fin.	2810.3	10486	0.9	0	493	7137	5660	2295	7630		0.73	No
SLV 6	ini.	402.35	-6239	0.9	0	493	7137	5660	2295	7630		1.22	Si
SLV 6	fin.	-94.47	-270	0.9	0	493	7137	5660	2295	7630		28.31	Si
SLV 3	ini.	1372.15	-9664	0.9	0	493	7137	5660	2295	7630		0.79	No
SLV 3	fin.	-2052.99	-6119	0.9	0	493	7137	5660	2295	7630		1.25	Si
SLV 15	ini.	-1969.44	4852	0.9	0	493	7137	5660	2295	7630		1.57	Si
SLV 15	fin.	3020.48	11180	0.9	0	493	7137	5660	2295	7630		0.68	No
SLV 14	ini.	-1782.91	3592	0.9	0	493	7137	5660	2295	7630		2.12	Si
SLV 14	fin.	2974.78	10656	0.9	0	493	7137	5660	2295	7630		0.72	No
SLV 13	ini.	-1935.35	4394	0.9	0	493	7137	5660	2295	7630		1.74	Si
SLV 13	fin.	3184.97	11349	0.9	0	493	7137	5660	2295	7630		0.67	No
SLV 1	ini.	1406.24	-10123	0.9	0	493	7137	5660	2295	7630		0.75	No
SLV 1	fin.	-1888.51	-5949	0.9	0	493	7137	5660	2295	7630		1.28	Si
SLV 4	ini.	1524.58	-10465	0.9	0	493	7137	5660	2295	7630		0.73	No
SLV 4	fin.	-2263.18	-6813	0.9	0	493	7137	5660	2295	7630		1.12	Si
SLD 2	ini.	549.02	-6401	0.9	0	493	7137	5660	2295	7630		1.19	Si
SLD 2	fin.	-635.73	-1536	0.9	0	493	7137	5660	2295	7630		4.97	Si
SLV 2	ini.	1558.68	-10924	0.9	0	493	7137	5660	2295	7630		0.7	No
SLV 2	fin.	-2098.7	-6643	0.9	0	493	7137	5660	2295	7630		1.15	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.939	SLV 13	No
V_SLV	0.672	SLV 13	No
PF_SLU	4.151	SLU 83	Si
V_SLU	1.361	SLU 78	Si

Trave di accoppiamento 63

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.233	-3.314	1.41	2.31	0.9	-3.233	-3.314	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	335.14	-1686	-0.0001764	0.0001872	0.0035	0.9		2959	2959	No	8.83	Si
SLU 71	fin.	244.81	-1189	-0.000126	0.0001872	0.0035	0.9		2959	2959	No	12.09	Si
SLU 72	ini.	339.19	-1692	-0.0001787	0.0001872	0.0035	0.9		2959	2959	No	8.72	Si
SLU 72	fin.	242.05	-1184	-0.0001245	0.0001872	0.0035	0.9		2959	2959	No	12.22	Si
SLU 65	ini.	338.99	-1656	-0.0001786	0.0001872	0.0035	0.9		2959	2959	No	8.73	Si
SLU 65	fin.	224.58	-1131	-0.000115	0.0001872	0.0035	0.9		2959	2959	No	13.18	Si
SLU 69	ini.	335.47	-1697	-0.0001766	0.0001872	0.0035	0.9		2959	2959	No	8.82	Si
SLU 69	fin.	249.47	-1203	-0.0001285	0.0001872	0.0035	0.9		2959	2959	No	11.86	Si
SLU 67	ini.	338.08	-1683	-0.000178	0.0001872	0.0035	0.9		2959	2959	No	8.75	Si
SLU 67	fin.	238.9	-1174	-0.0001228	0.0001872	0.0035	0.9		2959	2959	No	12.39	Si
SLU 68	ini.	340.44	-1676	-0.0001794	0.0001872	0.0035	0.9		2959	2959	No	8.69	Si
SLU 68	fin.	232.4	-1156	-0.0001193	0.0001872	0.0035	0.9		2959	2959	No	12.73	Si
SLU 64	ini.	332.25	-1647	-0.0001747	0.0001872	0.0035	0.9		2959	2959	No	8.91	Si
SLU 64	fin.	229.17	-1140	-0.0001175	0.0001872	0.0035	0.9		2959	2959	No	12.91	Si
SLU 70	ini.	339.52	-1702	-0.0001789	0.0001872	0.0035	0.9		2959	2959	No	8.72	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	fin.	246.72	-1198	-0.000127	0.0001872	0.0035	0.9		2959	2959	No	11.99	Si
SLU 47	ini.	327.2	-1534	-0.0001718	0.0001872	0.0035	0.9		2959	2959	No	9.04	Si
SLU 47	fin.	195.76	-1016	-0.0000996	0.0001872	0.0035	0.9		2959	2959	No	15.12	Si
SLU 66	ini.	334.03	-1677	-0.0001757	0.0001872	0.0035	0.9		2959	2959	No	8.86	Si
SLU 66	fin.	241.66	-1178	-0.0001243	0.0001872	0.0035	0.9		2959	2959	No	12.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	311.83	-1073	0.9	0	329	7137	3773	2295	6068	No	5.66	Si
SLU 84	fin.	314.12	1651	0.9	0	329	7137	3773	2295	6068	No	3.68	Si
SLU 78	ini.	321.38	-1120	0.9	0	329	7137	3773	2295	6068	No	5.42	Si
SLU 78	fin.	302.64	1626	0.9	0	329	7137	3773	2295	6068	No	3.73	Si
SLU 77	ini.	317.34	-1108	0.9	0	329	7137	3773	2295	6068	No	5.48	Si
SLU 77	fin.	305.39	1636	0.9	0	329	7137	3773	2295	6068	No	3.71	Si
SLU 81	ini.	306.34	-1045	0.9	0	329	7137	3773	2295	6068	No	5.81	Si
SLU 81	fin.	309.05	1616	0.9	0	329	7137	3773	2295	6068	No	3.75	Si
SLU 75	ini.	319.94	-1105	0.9	0	329	7137	3773	2295	6068	No	5.49	Si
SLU 75	fin.	294.82	1582	0.9	0	329	7137	3773	2295	6068	No	3.84	Si
SLU 83	ini.	307.78	-1060	0.9	0	329	7137	3773	2295	6068	No	5.72	Si
SLU 83	fin.	316.87	1661	0.9	0	329	7137	3773	2295	6068	No	3.65	Si
SLU 80	ini.	321.05	-1113	0.9	0	329	7137	3773	2295	6068	No	5.45	Si
SLU 80	fin.	297.97	1600	0.9	0	329	7137	3773	2295	6068	No	3.79	Si
SLU 82	ini.	310.38	-1058	0.9	0	329	7137	3773	2295	6068	No	5.74	Si
SLU 82	fin.	306.3	1607	0.9	0	329	7137	3773	2295	6068	No	3.78	Si
SLU 79	ini.	317	-1100	0.9	0	329	7137	3773	2295	6068	No	5.51	Si
SLU 79	fin.	300.72	1610	0.9	0	329	7137	3773	2295	6068	No	3.77	Si
SLU 74	ini.	315.89	-1092	0.9	0	329	7137	3773	2295	6068	No	5.56	Si
SLU 74	fin.	297.57	1592	0.9	0	329	7137	3773	2295	6068	No	3.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	ini.	1108.36	-2365	-0.0006741	0.0002807	0.0035	0.9		2989.59	2989.59		2.7	Si
SLD 4	fin.	-489.9	304	-0.000259	0.0002807	0.0035	0.9		2995.37	2995.37		6.11	Si
SLV 14	ini.	-1511.31	988	-0.0010022	0.0002807	0.0035	0.9		2995.37	2995.37		1.98	Si
SLV 14	fin.	1565.83	-3326	-0.0010536	0.0002807	0.0035	0.9		2989.59	2989.59		1.91	Si
SLV 13	ini.	-1773.34	1338	-0.0012479	0.0002807	0.0035	0.9		2995.37	2995.37		1.69	Si
SLV 13	fin.	1761.68	-3687	-0.0012396	0.0002807	0.0035	0.9		2989.59	2989.59		1.7	Si
SLV 8	ini.	1083.75	-3449	-0.0006555	0.0002807	0.0035	0.9		2989.59	2989.59		2.76	Si
SLV 8	fin.	-184.39	-1289	-0.0000925	0.0002807	0.0035	0.9		2995.37	2995.37		16.24	Si
SLV 2	ini.	2147.02	-2979	-0.0016672	0.0002807	0.0035	0.9		2989.59	2989.59		1.39	Si
SLV 2	fin.	-1484.95	2750	-0.000979	0.0002807	0.0035	0.9		2995.37	2995.37		2.02	Si
SLV 3	ini.	2006.28	-3514	-0.0014991	0.0002807	0.0035	0.9		2989.59	2989.59		1.49	Si
SLV 3	fin.	-1197.4	1536	-0.0007411	0.0002807	0.0035	0.9		2995.37	2995.37		2.5	Si
SLV 4	ini.	2268.31	-3865	-0.0018274	0.0002807	0.0035	0.9		2989.59	2989.59		1.32	Si
SLV 4	fin.	-1393.26	1897	-0.0009002	0.0002807	0.0035	0.9		2995.37	2995.37		2.15	Si
SLV 1	ini.	1884.99	-2629	-0.001366	0.0002807	0.0035	0.9		2989.59	2989.59		1.59	Si
SLV 1	fin.	-1289.1	2389	-0.0008141	0.0002807	0.0035	0.9		2995.37	2995.37		2.32	Si
SLV 16	ini.	-1390.02	102	-0.0008975	0.0002807	0.0035	0.9		2995.37	2995.37		2.15	Si
SLV 16	fin.	1657.52	-4180	-0.0011386	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLV 15	ini.	-1652.05	452	-0.0011306	0.0002807	0.0035	0.9		2995.37	2995.37		1.81	Si
SLV 15	fin.	1853.38	-4541	-0.0013328	0.0002807	0.0035	0.9		2989.59	2989.59		1.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-564.93	1440	0.9	0	493	7137	5660	2295	7630		5.3	Si
SLD 15	fin.	898.03	3866	0.9	0	493	7137	5660	2295	7630		1.97	Si
SLV 13	ini.	-1773.34	5043	0.9	0	493	7137	5660	2295	7630		1.51	Si
SLV 13	fin.	1761.68	7005	0.9	0	493	7137	5660	2295	7630		1.09	Si
SLV 16	ini.	-1390.02	3692	0.9	0	493	7137	5660	2295	7630		2.07	Si
SLV 16	fin.	1657.52	6967	0.9	0	493	7137	5660	2295	7630		1.1	Si
SLV 3	ini.	2006.28	-5924	0.9	0	493	7137	5660	2295	7630		1.29	Si
SLV 3	fin.	-1197.4	-4248	0.9	0	493	7137	5660	2295	7630		1.8	Si
SLV 4	ini.	2268.31	-6721	0.9	0	493	7137	5660	2295	7630		1.14	Si
SLV 4	fin.	-1393.26	-4953	0.9	0	493	7137	5660	2295	7630		1.54	Si
SLV 14	ini.	-1511.31	4245	0.9	0	493	7137	5660	2295	7630		1.8	Si
SLV 14	fin.	1565.83	6300	0.9	0	493	7137	5660	2295	7630		1.21	Si
SLV 2	ini.	2147.02	-6167	0.9	0	493	7137	5660	2295	7630		1.24	Si
SLV 2	fin.	-1484.95	-5620	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 15	ini.	-1652.05	4489	0.9	0	493	7137	5660	2295	7630		1.7	Si
SLV 15	fin.	1853.38	7672	0.9	0	493	7137	5660	2295	7630		0.99	No
SLV 11	ini.	-184.48	60	0.9	0	493	7137	5660	2295	7630		126.19	Si
SLV 11	fin.	858.46	4155	0.9	0	493	7137	5660	2295	7630		1.84	Si
SLV 1	ini.	1884.99	-5370	0.9	0	493	7137	5660	2295	7630		1.42	Si
SLV 1	fin.	-1289.1	-4915	0.9	0	493	7137	5660	2295	7630		1.55	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.318	SLV 4	Si
V_SLV	0.995	SLV 15	No
PF_SLU	8.692	SLU 68	Si
V_SLU	3.654	SLU 83	Si

Trave di accoppiamento 64

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.013	5.826	1.41	2.31	0.9	-3.013	5.826	1.41	2.31	0.9	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1124.53	-2944	-0.000731	0.0001872	0.0035	0.9		2959	2959	No	2.63	Si
SLU 83	fin.	-359.92	-1755	-0.0001903	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.24	Si
SLU 74	ini.	1111.07	-2888	-0.0007199	0.0001872	0.0035	0.9		2959	2959	No	2.66	Si
SLU 74	fin.	-362.54	-1707	-0.0001918	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.18	Si
SLU 79	ini.	1114.06	-2904	-0.0007224	0.0001872	0.0035	0.9		2959	2959	No	2.66	Si
SLU 79	fin.	-359.74	-1723	-0.0001902	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.24	Si
SLU 75	ini.	1108.03	-2909	-0.0007175	0.0001872	0.0035	0.9		2959	2959	No	2.67	Si
SLU 75	fin.	-354.91	-1736	-0.0001874	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.35	Si
SLU 84	ini.	1121.5	-2965	-0.0007285	0.0001872	0.0035	0.9		2959	2959	No	2.64	Si
SLU 84	fin.	-352.29	-1783	-0.0001859	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.42	Si
SLU 78	ini.	1120.86	-2948	-0.000728	0.0001872	0.0035	0.9		2959	2959	No	2.64	Si
SLU 78	fin.	-355.67	-1764	-0.0001878	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.34	Si
SLU 80	ini.	1111.02	-2925	-0.0007199	0.0001872	0.0035	0.9		2959	2959	No	2.66	Si
SLU 80	fin.	-352.11	-1752	-0.0001858	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.42	Si
SLU 81	ini.	1111.7	-2905	-0.0007205	0.0001872	0.0035	0.9		2959	2959	No	2.66	Si
SLU 81	fin.	-359.16	-1727	-0.0001898	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.25	Si
SLU 82	ini.	1108.67	-2926	-0.000718	0.0001872	0.0035	0.9		2959	2959	No	2.67	Si
SLU 82	fin.	-351.53	-1756	-0.0001854	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.43	Si
SLU 77	ini.	1123.9	-2927	-0.0007304	0.0001872	0.0035	0.9		2959	2959	No	2.63	Si
SLU 77	fin.	-363.3	-1735	-0.0001922	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.16	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	1111.07	-2431	0.9	0	329	7137	3773	2295	6068	No	2.5	Si
SLU 74	fin.	-362.54	-1495	0.9	0	329	7137	3773	2295	6068	No	4.06	Si
SLU 81	ini.	1111.7	-2426	0.9	0	329	7137	3773	2295	6068	No	2.5	Si
SLU 81	fin.	-359.16	-1491	0.9	0	329	7137	3773	2295	6068	No	4.07	Si
SLU 82	ini.	1108.67	-2366	0.9	0	329	7137	3773	2295	6068	No	2.56	Si
SLU 82	fin.	-351.53	-1521	0.9	0	329	7137	3773	2295	6068	No	3.99	Si
SLU 79	ini.	1114.06	-2436	0.9	0	329	7137	3773	2295	6068	No	2.49	Si
SLU 79	fin.	-359.74	-1489	0.9	0	329	7137	3773	2295	6068	No	4.07	Si
SLU 75	ini.	1108.03	-2371	0.9	0	329	7137	3773	2295	6068	No	2.56	Si
SLU 75	fin.	-354.91	-1525	0.9	0	329	7137	3773	2295	6068	No	3.98	Si
SLU 84	ini.	1121.5	-2398	0.9	0	329	7137	3773	2295	6068	No	2.53	Si
SLU 84	fin.	-352.29	-1525	0.9	0	329	7137	3773	2295	6068	No	3.98	Si
SLU 77	ini.	1123.9	-2462	0.9	0	329	7137	3773	2295	6068	No	2.46	Si
SLU 77	fin.	-363.3	-1500	0.9	0	329	7137	3773	2295	6068	No	4.05	Si
SLU 83	ini.	1124.53	-2457	0.9	0	329	7137	3773	2295	6068	No	2.47	Si
SLU 83	fin.	-359.92	-1495	0.9	0	329	7137	3773	2295	6068	No	4.06	Si
SLU 78	ini.	1120.86	-2402	0.9	0	329	7137	3773	2295	6068	No	2.53	Si
SLU 78	fin.	-355.67	-1529	0.9	0	329	7137	3773	2295	6068	No	3.97	Si
SLU 80	ini.	1111.02	-2377	0.9	0	329	7137	3773	2295	6068	No	2.55	Si
SLU 80	fin.	-352.11	-1519	0.9	0	329	7137	3773	2295	6068	No	3.99	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	1719.27	-2580	-0.0011979	0.0002807	0.0035	0.9		2989.59	2989.59		1.74	Si
SLV 7	fin.	-1112.11	-735	-0.0006754	0.0002807	0.0035	0.9		2995.37	2995.37		2.69	Si
SLD 3	ini.	1573.97	-2804	-0.001061	0.0002807	0.0035	0.9		2989.59	2989.59		1.9	Si
SLD 3	fin.	-963.66	-811	-0.000566	0.0002807	0.0035	0.9		2995.37	2995.37		3.11	Si
SLV 8	ini.	1524.31	-2341	-0.0010163	0.0002807	0.0035	0.9		2989.59	2989.59		1.96	Si
SLV 8	fin.	-952.23	-788	-0.0005579	0.0002807	0.0035	0.9		2995.37	2995.37		3.15	Si
SLD 4	ini.	1445.45	-2647	-0.000947	0.0002807	0.0035	0.9		2989.59	2989.59		2.07	Si
SLD 4	fin.	-858.27	-846	-0.0004921	0.0002807	0.0035	0.9		2995.37	2995.37		3.49	Si
SLV 3	ini.	2609.1	-3824	-0.0023822	0.0002807	0.0035	0.9		2989.59	2989.59		1.15	Si
SLV 3	fin.	-1882.84	-318	-0.0013601	0.0002807	0.0035	0.9		2995.37	2995.37		1.59	Si
SLD 1	ini.	1480.76	-2820	-0.0009777	0.0002807	0.0035	0.9		2989.59	2989.59		2.02	Si
SLD 1	fin.	-875.16	-859	-0.0005038	0.0002807	0.0035	0.9		2995.37	2995.37		3.42	Si
SLV 4	ini.	2309.89	-3458	-0.0018863	0.0002807	0.0035	0.9		2989.59	2989.59		1.29	Si
SLV 4	fin.	-1637.46	-400	-0.0011169	0.0002807	0.0035	0.9		2995.37	2995.37		1.83	Si
SLD 2	ini.	1352.24	-2662	-0.000868	0.0002807	0.0035	0.9		2989.59	2989.59		2.21	Si
SLD 2	fin.	-769.76	-894	-0.0004325	0.0002807	0.0035	0.9		2995.37	2995.37		3.89	Si
SLV 2	ini.	2095.99	-3498	-0.0016043	0.0002807	0.0035	0.9		2989.59	2989.59		1.43	Si
SLV 2	fin.	-1432.6	-513	-0.0009337	0.0002807	0.0035	0.9		2995.37	2995.37		2.09	Si
SLV 1	ini.	2395.2	-3864	-0.0020142	0.0002807	0.0035	0.9		2989.59	2989.59		1.25	Si
SLV 1	fin.	-1677.98	-431	-0.0011551	0.0002807	0.0035	0.9		2995.37	2995.37		1.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	2095.99	-4640	0.9	0	493	7137	5660	2295	7630		1.64	Si
SLV 2	fin.	-1432.6	-3873	0.9	0	493	7137	5660	2295	7630		1.97	Si
SLV 4	ini.	2309.89	-6127	0.9	0	493	7137	5660	2295	7630		1.25	Si
SLV 4	fin.	-1637.46	-5618	0.9	0	493	7137	5660	2295	7630		1.36	Si
SLV 3	ini.	2609.1	-6897	0.9	0	493	7137	5660	2295	7630		1.11	Si
SLV 3	fin.	-1882.84	-6332	0.9	0	493	7137	5660	2295	7630		1.2	Si
SLD 4	ini.	1445.45	-3620	0.9	0	493	7137	5660	2295	7630		2.11	Si
SLD 4	fin.	-858.27	-3053	0.9	0	493	7137	5660	2295	7630		2.5	Si
SLD 3	ini.	1573.97	-3951	0.9	0	493	7137	5660	2295	7630		1.93	Si
SLD 3	fin.	-963.66	-3360	0.9	0	493	7137	5660	2295	7630		2.27	Si
SLV 8	ini.	1524.31	-5178	0.9	0	493	7137	5660	2295	7630		1.47	Si
SLV 8	fin.	-952.23	-4995	0.9	0	493	7137	5660	2295	7630		1.53	Si
SLV 14	ini.	-1010.44	3414	0.9	0	493	7137	5660	2295	7630		2.23	Si
SLV 14	fin.	1330.24	4077	0.9	0	493	7137	5660	2295	7630		1.87	Si
SLV 1	ini.	2395.2	-5410	0.9	0	493	7137	5660	2295	7630		1.41	Si
SLV 1	fin.	-1677.98	-4587	0.9	0	493	7137	5660	2295	7630		1.66	Si
SLV 7	ini.	1719.27	-5680	0.9	0	493	7137	5660	2295	7630		1.34	Si
SLV 7	fin.	-1112.11	-5460	0.9	0	493	7137	5660	2295	7630		1.4	Si
SLD 7	ini.	1196.46	-3443	0.9	0	493	7137	5660	2295	7630		2.22	Si
SLD 7	fin.	-635.9	-3007	0.9	0	493	7137	5660	2295	7630		2.54	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.146	SLV 3	Si
V_SLV	1.106	SLV 3	Si
PF_SLU	2.631	SLU 83	Si
V_SLU	2.465	SLU 77	Si

Trave di accoppiamento 65

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.013	5.826	4.21	4.83	0.62	-3.013	5.826	4.21	4.83	0.62	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	210.28	-508	-0.0002398	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.71	Si
SLU 83	fin.	-976.27	-2205	-0.0016639	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.45	Si
SLU 74	ini.	216.98	-482	-0.0002485	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.5	Si
SLU 74	fin.	-959.5	-2163	-0.0016189	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.47	Si
SLU 84	ini.	202.07	-532	-0.0002293	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.98	Si
SLU 84	fin.	-971.55	-2211	-0.0016511	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.46	Si
SLU 78	ini.	208.3	-521	-0.0002373	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.77	Si
SLU 78	fin.	-965.91	-2200	-0.0016359	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.46	Si
SLU 77	ini.	216.51	-497	-0.0002479	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.52	Si
SLU 77	fin.	-970.62	-2194	-0.0016486	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.46	Si
SLU 79	ini.	214.94	-491	-0.0002458	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.56	Si
SLU 79	fin.	-963.11	-2176	-0.0016285	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.47	Si
SLU 80	ini.	206.73	-516	-0.0002353	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.82	Si
SLU 80	fin.	-958.4	-2182	-0.001616	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.48	Si
SLU 81	ini.	210.75	-493	-0.0002404	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.69	Si
SLU 81	fin.	-965.15	-2175	-0.0016339	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.47	Si
SLU 82	ini.	202.54	-518	-0.0002299	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.97	Si
SLU 82	fin.	-960.43	-2181	-0.0016214	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.47	Si
SLU 75	ini.	208.77	-507	-0.0002379	0.0001872	0.0035	0.62		1410.91	1410.91	No	6.76	Si
SLU 75	fin.	-954.78	-2170	-0.0016065	0.0001872	0.0035	0.62		1414.81	1414.81	No	1.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	210.75	-116	0.62	0	168	4916	2599	1581	4180	No	35.93	Si
SLU 81	fin.	-965.15	-3259	0.62	0	168	4916	2599	1581	4180	No	1.28	Si
SLU 74	ini.	216.98	-147	0.62	0	168	4916	2599	1581	4180	No	28.37	Si
SLU 74	fin.	-959.5	-3229	0.62	0	168	4916	2599	1581	4180	No	1.29	Si
SLU 78	ini.	208.3	-125	0.62	0	168	4916	2599	1581	4180	No	33.56	Si
SLU 78	fin.	-965.91	-3246	0.62	0	168	4916	2599	1581	4180	No	1.29	Si
SLU 84	ini.	202.07	-94	0.62	0	168	4916	2599	1581	4180	No	44.66	Si
SLU 84	fin.	-971.55	-3276	0.62	0	168	4916	2599	1581	4180	No	1.28	Si
SLU 80	ini.	206.73	-123	0.62	0	168	4916	2599	1581	4180	No	33.91	Si
SLU 80	fin.	-958.4	-3221	0.62	0	168	4916	2599	1581	4180	No	1.3	Si
SLU 79	ini.	214.94	-139	0.62	0	168	4916	2599	1581	4180	No	30.08	Si
SLU 79	fin.	-963.11	-3242	0.62	0	168	4916	2599	1581	4180	No	1.29	Si
SLU 83	ini.	210.28	-109	0.62	0	168	4916	2599	1581	4180	No	38.25	Si
SLU 83	fin.	-976.27	-3297	0.62	0	168	4916	2599	1581	4180	No	1.27	Si
SLU 82	ini.	202.54	-101	0.62	0	168	4916	2599	1581	4180	No	41.53	Si
SLU 82	fin.	-960.43	-3238	0.62	0	168	4916	2599	1581	4180	No	1.29	Si
SLU 77	ini.	216.51	-140	0.62	0	168	4916	2599	1581	4180	No	29.8	Si
SLU 77	fin.	-970.62	-3267	0.62	0	168	4916	2599	1581	4180	No	1.28	Si
SLU 75	ini.	208.77	-132	0.62	0	168	4916	2599	1581	4180	No	31.76	Si
SLU 75	fin.	-954.78	-3208	0.62	0	168	4916	2599	1581	4180	No	1.3	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1536.73	1378	-0.0037955	0.0002807	0.0035	0.62		1420.05	1420.05		0.92	No
SLV 3	fin.	-2089.55	-3677	-0.0059949	0.0002807	0.0035	0.62		1424.12	1424.12		0.68	No
SLV 4	ini.	1341.44	1165	-0.0028256	0.0002807	0.0035	0.62		1420.05	1420.05		1.06	Si
SLV 4	fin.	-1870.83	-3318	-0.0051691	0.0002807	0.0035	0.62		1424.12	1424.12		0.76	No
SLD 4	ini.	674.09	325	-0.0009234	0.0002807	0.0035	0.62		1420.05	1420.05		2.11	Si
SLD 4	fin.	-1191.14	-2293	-0.0021837	0.0002807	0.0035	0.62		1424.12	1424.12		1.2	Si
SLD 2	ini.	616.08	214	-0.0008216	0.0002807	0.0035	0.62		1420.05	1420.05		2.3	Si
SLD 2	fin.	-1164.37	-2306	-0.0020899	0.0002807	0.0035	0.62		1424.12	1424.12		1.22	Si
SLV 1	ini.	1403.15	1118	-0.0031373	0.0002807	0.0035	0.62		1420.05	1420.05		1.01	Si
SLV 1	fin.	-2027.78	-3708	-0.0057657	0.0002807	0.0035	0.62		1424.12	1424.12		0.7	No
SLV 14	ini.	-1185.72	-1981	-0.0021644	0.0002807	0.0035	0.62		1424.12	1424.12		1.2	Si
SLV 14	fin.	721.73	620	-0.0010108	0.0002807	0.0035	0.62		1420.05	1420.05		1.97	Si
SLV 7	ini.	820.8	634	-0.0012049	0.0002807	0.0035	0.62		1420.05	1420.05		1.73	Si
SLV 7	fin.	-1237.75	-2188	-0.0023589	0.0002807	0.0035	0.62		1424.12	1424.12		1.15	Si
SLD 1	ini.	699.96	305	-0.0009704	0.0002807	0.0035	0.62		1420.05	1420.05		2.03	Si
SLD 1	fin.	-1258.32	-2460	-0.0024412	0.0002807	0.0035	0.62		1424.12	1424.12		1.13	Si
SLV 2	ini.	1207.86	905	-0.0022567	0.0002807	0.0035	0.62		1420.05	1420.05		1.18	Si
SLV 2	fin.	-1809.05	-3349	-0.0049271	0.0002807	0.0035	0.62		1424.12	1424.12		0.79	No
SLD 3	ini.	757.97	417	-0.0010797	0.0002807	0.0035	0.62		1420.05	1420.05		1.87	Si
SLD 3	fin.	-1285.09	-2447	-0.0025533	0.0002807	0.0035	0.62		1424.12	1424.12		1.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1403.15	-3781	0.62	0	252	4916	3899	1581	5168		1.37	Si
SLV 1	fin.	-2027.78	-5954	0.62	0	252	4916	3899	1581	5168		0.87	No
SLV 4	ini.	1341.44	-3627	0.62	0	252	4916	3899	1581	5168		1.42	Si
SLV 4	fin.	-1870.83	-5611	0.62	0	252	4916	3899	1581	5168		0.92	No
SLV 3	ini.	1536.73	-4199	0.62	0	252	4916	3899	1581	5168		1.23	Si
SLV 3	fin.	-2089.55	-6220	0.62	0	252	4916	3899	1581	5168		0.83	No
SLV 7	ini.	820.8	-2120	0.62	0	252	4916	3899	1581	5168		2.44	Si
SLV 7	fin.	-1237.75	-3976	0.62	0	252	4916	3899	1581	5168		1.3	Si
SLV 14	ini.	-1185.72	3837	0.62	0	252	4916	3899	1581	5168		1.35	Si
SLV 14	fin.	721.73	1650	0.62	0	252	4916	3899	1581	5168		3.13	Si
SLV 2	ini.	1207.86	-3209	0.62	0	252	4916	3899	1581	5168		1.61	Si
SLV 2	fin.	-1809.05	-5345	0.62	0	252	4916	3899	1581	5168		0.97	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	674.09	-1656	0.62	0	252	4916	3899	1581	5168		3.12	Si
SLD 4	fin.	-1191.14	-3708	0.62	0	252	4916	3899	1581	5168		1.39	Si
SLD 3	ini.	757.97	-1901	0.62	0	252	4916	3899	1581	5168		2.72	Si
SLD 3	fin.	-1285.09	-3969	0.62	0	252	4916	3899	1581	5168		1.3	Si
SLD 2	ini.	616.08	-1472	0.62	0	252	4916	3899	1581	5168		3.51	Si
SLD 2	fin.	-1164.37	-3590	0.62	0	252	4916	3899	1581	5168		1.44	Si
SLD 1	ini.	699.96	-1718	0.62	0	252	4916	3899	1581	5168		3.01	Si
SLD 1	fin.	-1258.32	-3852	0.62	0	252	4916	3899	1581	5168		1.34	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.682	SLV 3	No
V_SLV	0.831	SLV 3	No
PF_SLU	1.449	SLU 83	Si
V_SLU	1.268	SLU 83	Si

Trave di accoppiamento 66

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-24.633	1.266	6.93	8.35	1.42	-24.633	2.066	6.93	8.35	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-308.96	-2495	-0.0000618	0.0002246	0.0035	1.42		7545.1	7545.1	No	24.42	Si
SLU 71	fin.	385	-1560	-0.0000775	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.57	Si
SLU 46	ini.	-287.98	-2247	-0.0000575	0.0002246	0.0035	1.42		7545.1	7545.1	No	26.2	Si
SLU 46	fin.	374.98	-1346	-0.0000755	0.0002246	0.0035	1.42		7536.27	7536.27	No	20.1	Si
SLU 51	ini.	-300.26	-2297	-0.00006	0.0002246	0.0035	1.42		7545.1	7545.1	No	25.13	Si
SLU 51	fin.	386.17	-1366	-0.0000778	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.52	Si
SLU 50	ini.	-308.74	-2312	-0.0000618	0.0002246	0.0035	1.42		7545.1	7545.1	No	24.44	Si
SLU 50	fin.	401.58	-1353	-0.000081	0.0002246	0.0035	1.42		7536.27	7536.27	No	18.77	Si
SLU 48	ini.	-307.94	-2338	-0.0000616	0.0002246	0.0035	1.42		7545.1	7545.1	No	24.5	Si
SLU 48	fin.	399.74	-1381	-0.0000806	0.0002246	0.0035	1.42		7536.27	7536.27	No	18.85	Si
SLU 69	ini.	-308.17	-2521	-0.0000617	0.0002246	0.0035	1.42		7545.1	7545.1	No	24.48	Si
SLU 69	fin.	383.17	-1588	-0.0000772	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.67	Si
SLU 49	ini.	-299.47	-2323	-0.0000599	0.0002246	0.0035	1.42		7545.1	7545.1	No	25.2	Si
SLU 49	fin.	384.34	-1394	-0.0000774	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.61	Si
SLU 66	ini.	-296.68	-2446	-0.0000593	0.0002246	0.0035	1.42		7545.1	7545.1	No	25.43	Si
SLU 66	fin.	373.81	-1540	-0.0000752	0.0002246	0.0035	1.42		7536.27	7536.27	No	20.16	Si
SLU 45	ini.	-296.46	-2262	-0.0000593	0.0002246	0.0035	1.42		7545.1	7545.1	No	25.45	Si
SLU 45	fin.	390.39	-1332	-0.0000787	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.3	Si
SLU 43	ini.	-285.77	-2160	-0.0000571	0.0002246	0.0035	1.42		7545.1	7545.1	No	26.4	Si
SLU 43	fin.	382.86	-1256	-0.0000771	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-291.8	5181	1.42	0	576	6344	7144	3621	6920	No	1.34	Si
SLU 77	fin.	345.45	-700	1.42	0	576	6344	7144	3621	6920	No	9.88	Si
SLU 80	ini.	-284.12	5086	1.42	0	576	6344	7144	3621	6920	No	1.36	Si
SLU 80	fin.	331.88	-724	1.42	0	576	6344	7144	3621	6920	No	9.56	Si
SLU 69	ini.	-308.17	5056	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 69	fin.	383.17	-421	1.42	0	576	6344	7144	3621	6920	No	16.45	Si
SLU 70	ini.	-299.69	5002	1.42	0	576	6344	7144	3621	6920	No	1.38	Si
SLU 70	fin.	367.76	-475	1.42	0	576	6344	7144	3621	6920	No	14.56	Si
SLU 84	ini.	-265.62	5010	1.42	0	576	6344	7144	3621	6920	No	1.38	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	fin.	306.36	-849	1.42	0	576	6344	7144	3621	6920	No	8.15	Si
SLU 74	ini.	-280.32	5052	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 74	fin.	336.09	-706	1.42	0	576	6344	7144	3621	6920	No	9.81	Si
SLU 79	ini.	-292.59	5140	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 79	fin.	347.28	-669	1.42	0	576	6344	7144	3621	6920	No	10.34	Si
SLU 78	ini.	-283.32	5127	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 78	fin.	330.04	-755	1.42	0	576	6344	7144	3621	6920	No	9.17	Si
SLU 83	ini.	-274.1	5064	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 83	fin.	321.76	-794	1.42	0	576	6344	7144	3621	6920	No	8.71	Si
SLU 71	ini.	-308.96	5014	1.42	0	576	6344	7144	3621	6920	No	1.38	Si
SLU 71	fin.	385	-390	1.42	0	576	6344	7144	3621	6920	No	17.75	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-568.11	-2201	-0.0001146	0.0003369	0.0035	1.42		7279.66	7279.66		12.81	Si
SLV 15	fin.	930.05	-278	-0.0001919	0.0003369	0.0035	1.42		7270.13	7270.13		7.82	Si
SLV 13	ini.	-983.58	-2976	-0.0002033	0.0003369	0.0035	1.42		7279.66	7279.66		7.4	Si
SLV 13	fin.	1308.84	-253	-0.0002766	0.0003369	0.0035	1.42		7270.13	7270.13		5.55	Si
SLV 10	ini.	-978.96	-3136	-0.0002023	0.0003369	0.0035	1.42		7279.66	7279.66		7.44	Si
SLV 10	fin.	1007.94	-940	-0.0002089	0.0003369	0.0035	1.42		7270.13	7270.13		7.21	Si
SLV 9	ini.	-1111.71	-3395	-0.0002316	0.0003369	0.0035	1.42		7279.66	7279.66		6.55	Si
SLV 9	fin.	1215.36	-794	-0.0002553	0.0003369	0.0035	1.42		7270.13	7270.13		5.98	Si
SLV 4	ini.	553.04	-617	-0.0001116	0.0003369	0.0035	1.42		7270.13	7270.13		13.15	Si
SLV 4	fin.	-759.59	-2017	-0.0001549	0.0003369	0.0035	1.42		7279.66	7279.66		9.58	Si
SLD 13	ini.	-546.95	-2306	-0.0001102	0.0003369	0.0035	1.42		7279.66	7279.66		13.31	Si
SLD 13	fin.	719.8	-758	-0.0001467	0.0003369	0.0035	1.42		7270.13	7270.13		10.1	Si
SLV 14	ini.	-779.84	-2578	-0.0001593	0.0003369	0.0035	1.42		7279.66	7279.66		9.33	Si
SLV 14	fin.	990.52	-478	-0.0002051	0.0003369	0.0035	1.42		7270.13	7270.13		7.34	Si
SLV 5	ini.	-836.48	-3039	-0.0001714	0.0003369	0.0035	1.42		7279.66	7279.66		8.7	Si
SLV 5	fin.	803.96	-1249	-0.0001646	0.0003369	0.0035	1.42		7270.13	7270.13		9.04	Si
SLD 9	ini.	-609.02	-2498	-0.0001232	0.0003369	0.0035	1.42		7279.66	7279.66		11.95	Si
SLD 9	fin.	686.49	-988	-0.0001396	0.0003369	0.0035	1.42		7270.13	7270.13		10.59	Si
SLV 6	ini.	-703.73	-2780	-0.0001431	0.0003369	0.0035	1.42		7279.66	7279.66		10.34	Si
SLV 6	fin.	596.55	-1395	-0.0001207	0.0003369	0.0035	1.42		7270.13	7270.13		12.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-1111.71	7421	1.42	0	864	6344	10717	3621	7208		0.97	No
SLV 9	fin.	1215.36	3321	1.42	0	864	6344	10717	3621	7208		2.17	Si
SLV 6	ini.	-703.73	5167	1.42	0	864	6344	10717	3621	7208		1.39	Si
SLV 6	fin.	596.55	874	1.42	0	864	6344	10717	3621	7208		8.25	Si
SLV 15	ini.	-568.11	5889	1.42	0	864	6344	10717	3621	7208		1.22	Si
SLV 15	fin.	930.05	2299	1.42	0	864	6344	10717	3621	7208		3.13	Si
SLV 13	ini.	-983.58	7485	1.42	0	864	6344	10717	3621	7208		0.96	No
SLV 13	fin.	1308.84	3762	1.42	0	864	6344	10717	3621	7208		1.92	Si
SLV 5	ini.	-836.48	5950	1.42	0	864	6344	10717	3621	7208		1.21	Si
SLV 5	fin.	803.96	1660	1.42	0	864	6344	10717	3621	7208		4.34	Si
SLD 13	ini.	-546.95	5293	1.42	0	864	6344	10717	3621	7208		1.36	Si
SLD 13	fin.	719.8	1425	1.42	0	864	6344	10717	3621	7208		5.06	Si
SLV 10	ini.	-978.96	6638	1.42	0	864	6344	10717	3621	7208		1.09	Si
SLV 10	fin.	1007.94	2534	1.42	0	864	6344	10717	3621	7208		2.84	Si
SLD 10	ini.	-550.94	4951	1.42	0	864	6344	10717	3621	7208		1.46	Si
SLD 10	fin.	595.75	918	1.42	0	864	6344	10717	3621	7208		7.85	Si
SLD 9	ini.	-609.02	5293	1.42	0	864	6344	10717	3621	7208		1.36	Si
SLD 9	fin.	686.49	1262	1.42	0	864	6344	10717	3621	7208		5.71	Si
SLV 14	ini.	-779.84	6284	1.42	0	864	6344	10717	3621	7208		1.15	Si
SLV 14	fin.	990.52	2555	1.42	0	864	6344	10717	3621	7208		2.82	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.555	SLV 13	Si
V_SLV	0.963	SLV 13	No
PF_SLU	18.767	SLU 50	Si
V_SLU	1.336	SLU 77	Si

Trave di accoppiamento 67

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	4.83	5.73	0.9	-22.713	5.826	4.83	5.73	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	-171.97	-836	-0.0000869	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.24	Si
SLU 44	fin.	486.3	-1469	-0.0002671	0.0001872	0.0035	0.9		2959	2959	No	6.08	Si
SLU 46	ini.	-162.54	-889	-0.000082	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.24	Si
SLU 46	fin.	492.19	-1518	-0.0002708	0.0001872	0.0035	0.9		2959	2959	No	6.01	Si
SLU 49	ini.	-156.33	-924	-0.0000787	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.96	Si
SLU 49	fin.	496.55	-1551	-0.0002736	0.0001872	0.0035	0.9		2959	2959	No	5.96	Si
SLU 48	ini.	-154.82	-931	-0.0000779	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.15	Si
SLU 48	fin.	495.34	-1554	-0.0002728	0.0001872	0.0035	0.9		2959	2959	No	5.97	Si
SLU 50	ini.	-157.05	-916	-0.0000791	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.88	Si
SLU 50	fin.	493	-1540	-0.0002713	0.0001872	0.0035	0.9		2959	2959	No	6	Si
SLU 47	ini.	-165.77	-871	-0.0000837	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.88	Si
SLU 47	fin.	490.66	-1502	-0.0002699	0.0001872	0.0035	0.9		2959	2959	No	6.03	Si
SLU 69	ini.	-118.79	-1068	-0.0000594	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.96	Si
SLU 69	fin.	485.53	-1644	-0.0002666	0.0001872	0.0035	0.9		2959	2959	No	6.09	Si
SLU 51	ini.	-158.56	-910	-0.0000799	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.7	Si
SLU 51	fin.	494.21	-1536	-0.0002721	0.0001872	0.0035	0.9		2959	2959	No	5.99	Si
SLU 70	ini.	-120.29	-1062	-0.0000601	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.65	Si
SLU 70	fin.	486.74	-1641	-0.0002674	0.0001872	0.0035	0.9		2959	2959	No	6.08	Si
SLU 45	ini.	-161.03	-896	-0.0000812	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.41	Si
SLU 45	fin.	490.98	-1521	-0.0002701	0.0001872	0.0035	0.9		2959	2959	No	6.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-120.29	443	0.9	0	365	7137	3773	2295	6068	No	13.69	Si
SLU 70	fin.	486.74	1503	0.9	0	365	7137	3773	2295	6068	No	4.04	Si
SLU 44	ini.	-171.97	617	0.9	0	365	7137	3773	2295	6068	No	9.84	Si
SLU 44	fin.	486.3	1498	0.9	0	365	7137	3773	2295	6068	No	4.05	Si
SLU 48	ini.	-154.82	540	0.9	0	365	7137	3773	2295	6068	No	11.24	Si
SLU 48	fin.	495.34	1548	0.9	0	365	7137	3773	2295	6068	No	3.92	Si
SLU 51	ini.	-158.56	557	0.9	0	365	7137	3773	2295	6068	No	10.9	Si
SLU 51	fin.	494.21	1539	0.9	0	365	7137	3773	2295	6068	No	3.94	Si
SLU 47	ini.	-165.77	589	0.9	0	365	7137	3773	2295	6068	No	10.3	Si
SLU 47	fin.	490.66	1519	0.9	0	365	7137	3773	2295	6068	No	3.99	Si
SLU 45	ini.	-161.03	567	0.9	0	365	7137	3773	2295	6068	No	10.7	Si
SLU 45	fin.	490.98	1526	0.9	0	365	7137	3773	2295	6068	No	3.98	Si
SLU 50	ini.	-157.05	550	0.9	0	365	7137	3773	2295	6068	No	11.03	Si
SLU 50	fin.	493	1537	0.9	0	365	7137	3773	2295	6068	No	3.95	Si
SLU 49	ini.	-156.33	546	0.9	0	365	7137	3773	2295	6068	No	11.1	Si
SLU 49	fin.	496.55	1550	0.9	0	365	7137	3773	2295	6068	No	3.92	Si
SLU 46	ini.	-162.54	574	0.9	0	365	7137	3773	2295	6068	No	10.57	Si
SLU 46	fin.	492.19	1528	0.9	0	365	7137	3773	2295	6068	No	3.97	Si
SLU 69	ini.	-118.79	436	0.9	0	365	7137	3773	2295	6068	No	13.9	Si
SLU 69	fin.	485.53	1501	0.9	0	365	7137	3773	2295	6068	No	4.04	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-290.84	-663	-0.0001484	0.0002807	0.0035	0.9		2995.37	2995.37		10.3	Si
SLV 10	fin.	944.17	-2567	-0.0005533	0.0002807	0.0035	0.9		2989.59	2989.59		3.17	Si
SLV 1	ini.	1346.04	-2386	-0.0008628	0.0002807	0.0035	0.9		2989.59	2989.59		2.22	Si
SLV 1	fin.	-895.81	-422	-0.0005181	0.0002807	0.0035	0.9		2995.37	2995.37		3.34	Si
SLV 3	ini.	1189.29	-2147	-0.0007364	0.0002807	0.0035	0.9		2989.59	2989.59		2.51	Si
SLV 3	fin.	-986.4	180	-0.0005824	0.0002807	0.0035	0.9		2995.37	2995.37		3.04	Si
SLV 16	ini.	-1548.45	868	-0.0010353	0.0002807	0.0035	0.9		2995.37	2995.37		1.93	Si
SLV 16	fin.	1621.72	-1984	-0.001105	0.0002807	0.0035	0.9		2989.59	2989.59		1.84	Si
SLV 2	ini.	1117.21	-2144	-0.0006808	0.0002807	0.0035	0.9		2989.59	2989.59		2.68	Si
SLV 2	fin.	-673.87	-623	-0.0003705	0.0002807	0.0035	0.9		2995.37	2995.37		4.45	Si
SLV 15	ini.	-1319.61	626	-0.0008389	0.0002807	0.0035	0.9		2995.37	2995.37		2.27	Si
SLV 15	fin.	1399.77	-1784	-0.0009079	0.0002807	0.0035	0.9		2989.59	2989.59		2.14	Si
SLV 4	ini.	960.45	-1905	-0.000565	0.0002807	0.0035	0.9		2989.59	2989.59		3.11	Si
SLV 4	fin.	-764.46	-20	-0.000429	0.0002807	0.0035	0.9		2995.37	2995.37		3.92	Si
SLV 14	ini.	-1391.69	629	-0.0008989	0.0002807	0.0035	0.9		2995.37	2995.37		2.15	Si
SLV 14	fin.	1712.31	-2587	-0.0011911	0.0002807	0.0035	0.9		2989.59	2989.59		1.75	Si
SLV 13	ini.	-1162.86	387	-0.0007142	0.0002807	0.0035	0.9		2995.37	2995.37		2.58	Si
SLV 13	fin.	1490.36	-2386	-0.0009862	0.0002807	0.0035	0.9		2989.59	2989.59		2.01	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	-652.16	-167	-0.0003568	0.0002807	0.0035	0.9		2995.37	2995.37		4.59	Si
SLD 14	fin.	940.94	-1799	-0.000551	0.0002807	0.0035	0.9		2989.59	2989.59		3.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1189.29	-3935	0.9	0	548	7137	5660	2295	7684		1.95	Si
SLV 3	fin.	-986.4	-3237	0.9	0	548	7137	5660	2295	7684		2.37	Si
SLV 2	ini.	1117.21	-3421	0.9	0	548	7137	5660	2295	7684		2.25	Si
SLV 2	fin.	-673.87	-2235	0.9	0	548	7137	5660	2295	7684		3.44	Si
SLV 14	ini.	-1391.69	4706	0.9	0	548	7137	5660	2295	7684		1.63	Si
SLV 14	fin.	1712.31	5446	0.9	0	548	7137	5660	2295	7684		1.41	Si
SLV 10	ini.	-290.84	1497	0.9	0	548	7137	5660	2295	7684		5.13	Si
SLV 10	fin.	944.17	2955	0.9	0	548	7137	5660	2295	7684		2.6	Si
SLV 1	ini.	1346.04	-4141	0.9	0	548	7137	5660	2295	7684		1.86	Si
SLV 1	fin.	-895.81	-2960	0.9	0	548	7137	5660	2295	7684		2.6	Si
SLV 15	ini.	-1319.61	4191	0.9	0	548	7137	5660	2295	7684		1.83	Si
SLV 15	fin.	1399.77	4443	0.9	0	548	7137	5660	2295	7684		1.73	Si
SLV 16	ini.	-1548.45	4911	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 16	fin.	1621.72	5168	0.9	0	548	7137	5660	2295	7684		1.49	Si
SLV 4	ini.	960.45	-3215	0.9	0	548	7137	5660	2295	7684		2.39	Si
SLV 4	fin.	-764.46	-2513	0.9	0	548	7137	5660	2295	7684		3.06	Si
SLD 14	ini.	-652.16	2232	0.9	0	548	7137	5660	2295	7684		3.44	Si
SLD 14	fin.	940.94	2963	0.9	0	548	7137	5660	2295	7684		2.59	Si
SLV 13	ini.	-1162.86	3986	0.9	0	548	7137	5660	2295	7684		1.93	Si
SLV 13	fin.	1490.36	4721	0.9	0	548	7137	5660	2295	7684		1.63	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.746	SLV 14	Si
V_SLV	1.411	SLV 14	Si
PF_SLU	5.959	SLU 49	Si
V_SLU	3.916	SLU 49	Si

Trave di accoppiamento 68

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	7.53	8.35	0.82	-22.713	5.826	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-512.47	-1599	-0.0003516	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.8	Si
SLU 75	fin.	-71.48	-657	-0.0000427	0.0001872	0.0035	0.82		2460.51	2460.51	No	34.42	Si
SLU 83	ini.	-512.51	-1621	-0.0003516	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.8	Si
SLU 83	fin.	-82.59	-712	-0.0000495	0.0001872	0.0035	0.82		2460.51	2460.51	No	29.79	Si
SLU 78	ini.	-517.49	-1633	-0.0003557	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.75	Si
SLU 78	fin.	-79.28	-696	-0.0000475	0.0001872	0.0035	0.82		2460.51	2460.51	No	31.04	Si
SLU 80	ini.	-514.59	-1619	-0.0003533	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.78	Si
SLU 80	fin.	-76.84	-683	-0.000046	0.0001872	0.0035	0.82		2460.51	2460.51	No	32.02	Si
SLU 79	ini.	-514.91	-1621	-0.0003536	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.78	Si
SLU 79	fin.	-77.65	-687	-0.0000465	0.0001872	0.0035	0.82		2460.51	2460.51	No	31.69	Si
SLU 84	ini.	-512.19	-1619	-0.0003514	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.8	Si
SLU 84	fin.	-81.78	-708	-0.000049	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.09	Si
SLU 69	ini.	-511.68	-1555	-0.000351	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.81	Si
SLU 69	fin.	-50.38	-549	-0.00003	0.0001872	0.0035	0.82		2460.51	2460.51	No	48.84	Si
SLU 74	ini.	-512.79	-1601	-0.0003519	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.8	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	fin.	-72.29	-660	-0.0000432	0.0001872	0.0035	0.82		2460.51	2460.51	No	34.04	Si
SLU 77	ini.	-517.82	-1635	-0.0003559	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.75	Si
SLU 77	fin.	-80.08	-700	-0.000048	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.72	Si
SLU 70	ini.	-511.36	-1553	-0.0003507	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.81	Si
SLU 70	fin.	-49.57	-545	-0.0000295	0.0001872	0.0035	0.82		2460.51	2460.51	No	49.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-512.51	2699	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 83	fin.	-82.59	-1757	0.82	0	303	6502	3438	2091	5529	No	3.15	Si
SLU 84	ini.	-512.19	2691	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 84	fin.	-81.78	-1742	0.82	0	303	6502	3438	2091	5529	No	3.17	Si
SLU 78	ini.	-517.49	2702	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 78	fin.	-79.28	-1704	0.82	0	303	6502	3438	2091	5529	No	3.25	Si
SLU 81	ini.	-507.49	2660	0.82	0	303	6502	3438	2091	5529	No	2.08	Si
SLU 81	fin.	-74.79	-1684	0.82	0	303	6502	3438	2091	5529	No	3.28	Si
SLU 80	ini.	-514.59	2685	0.82	0	303	6502	3438	2091	5529	No	2.06	Si
SLU 80	fin.	-76.84	-1679	0.82	0	303	6502	3438	2091	5529	No	3.29	Si
SLU 82	ini.	-507.16	2653	0.82	0	303	6502	3438	2091	5529	No	2.08	Si
SLU 82	fin.	-73.99	-1669	0.82	0	303	6502	3438	2091	5529	No	3.31	Si
SLU 75	ini.	-512.47	2664	0.82	0	303	6502	3438	2091	5529	No	2.08	Si
SLU 75	fin.	-71.48	-1630	0.82	0	303	6502	3438	2091	5529	No	3.39	Si
SLU 74	ini.	-512.79	2671	0.82	0	303	6502	3438	2091	5529	No	2.07	Si
SLU 74	fin.	-72.29	-1646	0.82	0	303	6502	3438	2091	5529	No	3.36	Si
SLU 79	ini.	-514.91	2692	0.82	0	303	6502	3438	2091	5529	No	2.05	Si
SLU 79	fin.	-77.65	-1694	0.82	0	303	6502	3438	2091	5529	No	3.26	Si
SLU 77	ini.	-517.82	2709	0.82	0	303	6502	3438	2091	5529	No	2.04	Si
SLU 77	fin.	-80.08	-1719	0.82	0	303	6502	3438	2091	5529	No	3.22	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1139.21	-2386	-0.0008826	0.0002807	0.0035	0.82		2487.45	2487.45		2.18	Si
SLV 13	fin.	397.51	1116	-0.0002532	0.0002807	0.0035	0.82		2482.11	2482.11		6.24	Si
SLD 13	ini.	-707.86	-1674	-0.0004883	0.0002807	0.0035	0.82		2487.45	2487.45		3.51	Si
SLD 13	fin.	154.54	269	-0.0000936	0.0002807	0.0035	0.82		2482.11	2482.11		16.06	Si
SLV 16	ini.	-1154.18	-1948	-0.0008978	0.0002807	0.0035	0.82		2487.45	2487.45		2.16	Si
SLV 16	fin.	597.94	2037	-0.0004011	0.0002807	0.0035	0.82		2482.11	2482.11		4.15	Si
SLV 9	ini.	-796.16	-2432	-0.0005627	0.0002807	0.0035	0.82		2487.45	2487.45		3.12	Si
SLV 9	fin.	-51.1	-712	-0.0000303	0.0002807	0.0035	0.82		2487.45	2487.45		48.68	Si
SLD 16	ini.	-712.23	-1478	-0.0004919	0.0002807	0.0035	0.82		2487.45	2487.45		3.49	Si
SLD 16	fin.	241.59	670	-0.0001488	0.0002807	0.0035	0.82		2482.11	2482.11		10.27	Si
SLV 15	ini.	-998.6	-1756	-0.0007454	0.0002807	0.0035	0.82		2487.45	2487.45		2.49	Si
SLV 15	fin.	484.75	1589	-0.0003155	0.0002807	0.0035	0.82		2482.11	2482.11		5.12	Si
SLV 14	ini.	-1294.78	-2578	-0.0010455	0.0002807	0.0035	0.82		2487.45	2487.45		1.92	Si
SLV 14	fin.	510.69	1564	-0.0003346	0.0002807	0.0035	0.82		2482.11	2482.11		4.86	Si
SLV 10	ini.	-897.53	-2557	-0.0006521	0.0002807	0.0035	0.82		2487.45	2487.45		2.77	Si
SLV 10	fin.	22.65	-419	-0.0000134	0.0002807	0.0035	0.82		2482.11	2482.11		109.57	Si
SLD 14	ini.	-774.69	-1757	-0.0005444	0.0002807	0.0035	0.82		2487.45	2487.45		3.21	Si
SLD 14	fin.	203.16	462	-0.0001242	0.0002807	0.0035	0.82		2482.11	2482.11		12.22	Si
SLV 1	ini.	387.06	-321	-0.000246	0.0002807	0.0035	0.82		2482.11	2482.11		6.41	Si
SLV 1	fin.	-649.73	-2752	-0.0004411	0.0002807	0.0035	0.82		2487.45	2487.45		3.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	231.49	-102	0.82	0	455	6502	5156	2091	6957		67.97	Si
SLV 2	fin.	-536.55	-4038	0.82	0	455	6502	5156	2091	6957		1.72	Si
SLV 16	ini.	-1154.18	4514	0.82	0	455	6502	5156	2091	6957		1.54	Si
SLV 16	fin.	597.94	2800	0.82	0	455	6502	5156	2091	6957		2.48	Si
SLV 14	ini.	-1294.78	5143	0.82	0	455	6502	5156	2091	6957		1.35	Si
SLV 14	fin.	510.69	2021	0.82	0	455	6502	5156	2091	6957		3.44	Si
SLV 13	ini.	-1139.21	4601	0.82	0	455	6502	5156	2091	6957		1.51	Si
SLV 13	fin.	397.51	1337	0.82	0	455	6502	5156	2091	6957		5.2	Si
SLV 9	ini.	-796.16	3594	0.82	0	455	6502	5156	2091	6957		1.94	Si
SLV 9	fin.	-51.1	-1574	0.82	0	455	6502	5156	2091	6957		4.42	Si
SLV 15	ini.	-998.6	3971	0.82	0	455	6502	5156	2091	6957		1.75	Si
SLV 15	fin.	484.75	2116	0.82	0	455	6502	5156	2091	6957		3.29	Si
SLV 5	ini.	-338.28	2020	0.82	0	455	6502	5156	2091	6957		3.44	Si
SLV 5	fin.	-365.27	-3392	0.82	0	455	6502	5156	2091	6957		2.05	Si
SLV 10	ini.	-897.53	3947	0.82	0	455	6502	5156	2091	6957		1.76	Si
SLV 10	fin.	22.65	-1128	0.82	0	455	6502	5156	2091	6957		6.17	Si
SLV 1	ini.	387.06	-645	0.82	0	455	6502	5156	2091	6957		10.79	Si
SLV 1	fin.	-649.73	-4723	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLV 3	ini.	527.67	-1274	0.82	0	455	6502	5156	2091	6957		5.46	Si
SLV 3	fin.	-562.49	-3944	0.82	0	455	6502	5156	2091	6957		1.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.921	SLV 14	Si
V_SLV	1.353	SLV 14	Si
PF_SLU	4.752	SLU 77	Si
V_SLU	2.041	SLU 77	Si

Trave di accoppiamento 69

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	7.53	8.35	0.82	-22.493	-3.314	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-629.81	-2772	-0.0004494	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.91	Si
SLU 77	fin.	69.82	-421	-0.0000418	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.17	Si
SLU 84	ini.	-634.99	-2800	-0.0004538	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.87	Si
SLU 84	fin.	66.75	-432	-0.00004	0.0001872	0.0035	0.82		2455.37	2455.37	No	36.78	Si
SLU 83	ini.	-636.1	-2800	-0.0004548	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.87	Si
SLU 83	fin.	70.28	-422	-0.0000421	0.0001872	0.0035	0.82		2455.37	2455.37	No	34.94	Si
SLU 78	ini.	-628.7	-2771	-0.0004484	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.91	Si
SLU 78	fin.	66.29	-431	-0.0000397	0.0001872	0.0035	0.82		2455.37	2455.37	No	37.04	Si
SLU 75	ini.	-622.58	-2731	-0.0004432	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.95	Si
SLU 75	fin.	73.28	-403	-0.0000439	0.0001872	0.0035	0.82		2455.37	2455.37	No	33.51	Si
SLU 79	ini.	-624.1	-2744	-0.0004445	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.94	Si
SLU 79	fin.	70.91	-411	-0.0000425	0.0001872	0.0035	0.82		2455.37	2455.37	No	34.63	Si
SLU 74	ini.	-623.69	-2732	-0.0004441	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.95	Si
SLU 74	fin.	76.81	-394	-0.0000461	0.0001872	0.0035	0.82		2455.37	2455.37	No	31.97	Si
SLU 80	ini.	-622.99	-2743	-0.0004435	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.95	Si
SLU 80	fin.	67.38	-421	-0.0000403	0.0001872	0.0035	0.82		2455.37	2455.37	No	36.44	Si
SLU 81	ini.	-629.97	-2760	-0.0004495	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.91	Si
SLU 81	fin.	77.27	-395	-0.0000464	0.0001872	0.0035	0.82		2455.37	2455.37	No	31.78	Si
SLU 82	ini.	-628.86	-2760	-0.0004486	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.91	Si
SLU 82	fin.	73.74	-405	-0.0000442	0.0001872	0.0035	0.82		2455.37	2455.37	No	33.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-634.99	4872	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 84	fin.	66.75	-441	0.82	0	303	6502	3438	2091	5529	No	12.53	Si
SLU 83	ini.	-636.1	4876	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 83	fin.	70.28	-426	0.82	0	303	6502	3438	2091	5529	No	12.98	Si
SLU 80	ini.	-622.99	4764	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 80	fin.	67.38	-419	0.82	0	303	6502	3438	2091	5529	No	13.2	Si
SLU 81	ini.	-629.97	4813	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 81	fin.	77.27	-391	0.82	0	303	6502	3438	2091	5529	No	14.15	Si
SLU 74	ini.	-623.69	4748	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 74	fin.	76.81	-376	0.82	0	303	6502	3438	2091	5529	No	14.68	Si
SLU 77	ini.	-629.81	4811	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 77	fin.	69.82	-412	0.82	0	303	6502	3438	2091	5529	No	13.42	Si
SLU 79	ini.	-624.1	4767	0.82	0	303	6502	3438	2091	5529	No	1.16	Si
SLU 79	fin.	70.91	-404	0.82	0	303	6502	3438	2091	5529	No	13.7	Si
SLU 75	ini.	-622.58	4745	0.82	0	303	6502	3438	2091	5529	No	1.17	Si
SLU 75	fin.	73.28	-392	0.82	0	303	6502	3438	2091	5529	No	14.12	Si
SLU 82	ini.	-628.86	4809	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 82	fin.	73.74	-406	0.82	0	303	6502	3438	2091	5529	No	13.62	Si
SLU 78	ini.	-628.7	4807	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 78	fin.	66.29	-427	0.82	0	303	6502	3438	2091	5529	No	12.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1494.84	-4896	-0.0012754	0.0002807	0.0035	0.82		2487.45	2487.45		1.66	Si
SLV 16	fin.	1174.35	1970	-0.0009208	0.0002807	0.0035	0.82		2482.11	2482.11		2.11	Si
SLV 4	ini.	661.9	964	-0.0004519	0.0002807	0.0035	0.82		2482.11	2482.11		3.75	Si
SLV 4	fin.	-1330.74	-3163	-0.001085	0.0002807	0.0035	0.82		2487.45	2487.45		1.87	Si
SLV 3	ini.	497.73	518	-0.000325	0.0002807	0.0035	0.82		2482.11	2482.11		4.99	Si
SLV 3	fin.	-1134.02	-2751	-0.0008774	0.0002807	0.0035	0.82		2487.45	2487.45		2.19	Si
SLV 1	ini.	621.06	1137	-0.0004193	0.0002807	0.0035	0.82		2482.11	2482.11		4	Si
SLV 1	fin.	-1025.28	-2405	-0.0007708	0.0002807	0.0035	0.82		2487.45	2487.45		2.43	Si
SLV 14	ini.	-1371.5	-4276	-0.0011307	0.0002807	0.0035	0.82		2487.45	2487.45		1.81	Si
SLV 14	fin.	1283.09	2316	-0.0010357	0.0002807	0.0035	0.82		2482.11	2482.11		1.93	Si
SLV 15	ini.	-1659.01	-5342	-0.0014862	0.0002807	0.0035	0.82		2487.45	2487.45		1.5	Si
SLV 15	fin.	1371.07	2382	-0.0011333	0.0002807	0.0035	0.82		2482.11	2482.11		1.81	Si
SLV 13	ini.	-1535.68	-4723	-0.0013257	0.0002807	0.0035	0.82		2487.45	2487.45		1.62	Si
SLV 13	fin.	1479.82	2728	-0.0012608	0.0002807	0.0035	0.82		2482.11	2482.11		1.68	Si
SLD 15	ini.	-960.35	-3364	-0.0007096	0.0002807	0.0035	0.82		2487.45	2487.45		2.59	Si
SLD 15	fin.	628.41	892	-0.0004251	0.0002807	0.0035	0.82		2482.11	2482.11		3.95	Si
SLV 11	ini.	-1019.45	-3937	-0.0007652	0.0002807	0.0035	0.82		2487.45	2487.45		2.44	Si
SLV 11	fin.	333.15	110	-0.0002091	0.0002807	0.0035	0.82		2482.11	2482.11		7.45	Si
SLV 2	ini.	785.24	1584	-0.0005547	0.0002807	0.0035	0.82		2482.11	2482.11		3.16	Si
SLV 2	fin.	-1222	-2817	-0.0009678	0.0002807	0.0035	0.82		2487.45	2487.45		2.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-912.48	5698	0.82	0	455	6502	5156	2091	6957		1.22	Si
SLV 12	fin.	204.97	532	0.82	0	455	6502	5156	2091	6957		13.08	Si
SLV 4	ini.	661.9	-1852	0.82	0	455	6502	5156	2091	6957		3.76	Si
SLV 4	fin.	-1330.74	-5873	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLV 11	ini.	-1019.45	6213	0.82	0	455	6502	5156	2091	6957		1.12	Si
SLV 11	fin.	333.15	1056	0.82	0	455	6502	5156	2091	6957		6.59	Si
SLV 16	ini.	-1494.84	8300	0.82	0	455	6502	5156	2091	6957		0.84	No
SLV 16	fin.	1174.35	4378	0.82	0	455	6502	5156	2091	6957		1.59	Si
SLV 2	ini.	785.24	-2550	0.82	0	455	6502	5156	2091	6957		2.73	Si
SLV 2	fin.	-1222	-5531	0.82	0	455	6502	5156	2091	6957		1.26	Si
SLV 14	ini.	-1371.5	7602	0.82	0	455	6502	5156	2091	6957		0.92	No
SLV 14	fin.	1283.09	4720	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLD 15	ini.	-960.35	5763	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLD 15	fin.	628.41	2115	0.82	0	455	6502	5156	2091	6957		3.29	Si
SLV 13	ini.	-1535.68	8391	0.82	0	455	6502	5156	2091	6957		0.83	No
SLV 13	fin.	1479.82	5525	0.82	0	455	6502	5156	2091	6957		1.26	Si
SLD 13	ini.	-905.59	5453	0.82	0	455	6502	5156	2091	6957		1.28	Si
SLD 13	fin.	675.9	2264	0.82	0	455	6502	5156	2091	6957		3.07	Si
SLV 15	ini.	-1659.01	9089	0.82	0	455	6502	5156	2091	6957		0.77	No
SLV 15	fin.	1371.07	5183	0.82	0	455	6502	5156	2091	6957		1.34	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.499	SLV 15	Si
V_SLV	0.765	SLV 15	No
PF_SLU	3.868	SLU 83	Si
V_SLU	1.134	SLU 83	Si

Trave di accoppiamento 70

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	7.63	8.35	0.72	-19.313	-3.314	7.63	8.35	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-274.73	-1854	-0.0002311	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.92	Si
SLU 80	fin.	199.73	-1394	-0.0001631	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.5	Si
SLU 75	ini.	-275.42	-1855	-0.0002318	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.91	Si
SLU 75	fin.	199.43	-1390	-0.0001629	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.51	Si
SLU 81	ini.	-285.64	-1928	-0.0002415	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.66	Si
SLU 81	fin.	199.01	-1445	-0.0001625	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.53	Si
SLU 77	ini.	-277.24	-1871	-0.0002335	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.86	Si
SLU 77	fin.	201.69	-1408	-0.0001649	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.41	Si
SLU 82	ini.	-286.32	-1936	-0.0002421	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.64	Si
SLU 82	fin.	197.65	-1454	-0.0001613	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.6	Si
SLU 83	ini.	-288.14	-1951	-0.0002439	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.6	Si
SLU 83	fin.	199.91	-1471	-0.0001633	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.49	Si
SLU 84	ini.	-288.82	-1959	-0.0002445	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.58	Si
SLU 84	fin.	198.55	-1479	-0.0001621	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.56	Si
SLU 79	ini.	-274.05	-1846	-0.0002305	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.94	Si
SLU 79	fin.	201.09	-1386	-0.0001643	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.44	Si
SLU 74	ini.	-274.74	-1847	-0.0002311	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.92	Si
SLU 74	fin.	200.79	-1382	-0.0001641	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.45	Si
SLU 78	ini.	-277.92	-1879	-0.0002341	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.84	Si
SLU 78	fin.	200.33	-1416	-0.0001637	0.0001872	0.0035	0.72		1897.3	1897.3	No	9.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-274.05	4042	0.72	0	292	3965	3018	1836	4257	No	1.05	Si
SLU 79	fin.	201.09	381	0.72	0	292	3965	3018	1836	4257	No	11.18	Si
SLU 75	ini.	-275.42	4018	0.72	0	292	3965	3018	1836	4257	No	1.06	Si
SLU 75	fin.	199.43	392	0.72	0	292	3965	3018	1836	4257	No	10.85	Si
SLU 77	ini.	-277.24	4085	0.72	0	292	3965	3018	1836	4257	No	1.04	Si
SLU 77	fin.	201.69	382	0.72	0	292	3965	3018	1836	4257	No	11.15	Si
SLU 81	ini.	-285.64	4069	0.72	0	292	3965	3018	1836	4257	No	1.05	Si
SLU 81	fin.	199.01	419	0.72	0	292	3965	3018	1836	4257	No	10.16	Si
SLU 82	ini.	-286.32	4074	0.72	0	292	3965	3018	1836	4257	No	1.05	Si
SLU 82	fin.	197.65	416	0.72	0	292	3965	3018	1836	4257	No	10.24	Si
SLU 74	ini.	-274.74	4013	0.72	0	292	3965	3018	1836	4257	No	1.06	Si
SLU 74	fin.	200.79	396	0.72	0	292	3965	3018	1836	4257	No	10.75	Si
SLU 84	ini.	-288.82	4145	0.72	0	292	3965	3018	1836	4257	No	1.03	Si
SLU 84	fin.	198.55	401	0.72	0	292	3965	3018	1836	4257	No	10.6	Si
SLU 83	ini.	-288.14	4141	0.72	0	292	3965	3018	1836	4257	No	1.03	Si
SLU 83	fin.	199.91	405	0.72	0	292	3965	3018	1836	4257	No	10.51	Si
SLU 78	ini.	-277.92	4089	0.72	0	292	3965	3018	1836	4257	No	1.04	Si
SLU 78	fin.	200.33	378	0.72	0	292	3965	3018	1836	4257	No	11.26	Si
SLU 80	ini.	-274.73	4047	0.72	0	292	3965	3018	1836	4257	No	1.05	Si
SLU 80	fin.	199.73	377	0.72	0	292	3965	3018	1836	4257	No	11.29	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-352.54	-3941	-0.0002945	0.0002807	0.0035	0.72		1917.1	1917.1		5.44	Si
SLV 3	fin.	-793.01	-4441	-0.0007728	0.0002807	0.0035	0.72		1917.1	1917.1		2.42	Si
SLV 13	ini.	-6.02	1783	-0.0000046	0.0002807	0.0035	0.72		1917.1	1917.1		318.56	Si
SLV 13	fin.	1202.22	3051	-0.0013578	0.0002807	0.0035	0.72		1912.43	1912.43		1.59	Si
SLV 4	ini.	-358.44	-4171	-0.0003	0.0002807	0.0035	0.72		1917.1	1917.1		5.35	Si
SLV 4	fin.	-901.74	-4783	-0.0009122	0.0002807	0.0035	0.72		1917.1	1917.1		2.13	Si
SLV 1	ini.	-315.3	-3565	-0.0002603	0.0002807	0.0035	0.72		1917.1	1917.1		6.08	Si
SLV 1	fin.	-753.48	-4009	-0.0007244	0.0002807	0.0035	0.72		1917.1	1917.1		2.54	Si
SLD 15	ini.	-123.25	-83	-0.0000966	0.0002807	0.0035	0.72		1917.1	1917.1		15.55	Si
SLD 15	fin.	583.62	625	-0.0005301	0.0002807	0.0035	0.72		1912.43	1912.43		3.28	Si
SLV 15	ini.	-43.26	1407	-0.0000333	0.0002807	0.0035	0.72		1917.1	1917.1		44.32	Si
SLV 15	fin.	1162.69	2618	-0.0012938	0.0002807	0.0035	0.72		1912.43	1912.43		1.64	Si
SLD 13	ini.	-106.57	80	-0.0000832	0.0002807	0.0035	0.72		1917.1	1917.1		17.99	Si
SLD 13	fin.	599.46	808	-0.0005476	0.0002807	0.0035	0.72		1912.43	1912.43		3.19	Si
SLV 2	ini.	-321.2	-3795	-0.0002657	0.0002807	0.0035	0.72		1917.1	1917.1		5.97	Si
SLV 2	fin.	-862.21	-4350	-0.0008604	0.0002807	0.0035	0.72		1917.1	1917.1		2.22	Si
SLV 14	ini.	-11.91	1553	-0.0000091	0.0002807	0.0035	0.72		1917.1	1917.1		160.97	Si
SLV 14	fin.	1093.5	2709	-0.0011864	0.0002807	0.0035	0.72		1912.43	1912.43		1.75	Si
SLV 16	ini.	-49.15	1177	-0.0000379	0.0002807	0.0035	0.72		1917.1	1917.1		39.01	Si
SLV 16	fin.	1053.96	2277	-0.0011275	0.0002807	0.0035	0.72		1912.43	1912.43		1.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-11.91	4049	0.72	0	438	3965	4528	1836	4403		1.09	Si
SLV 14	fin.	1093.5	2631	0.72	0	438	3965	4528	1836	4403		1.67	Si
SLV 12	ini.	-199.82	4073	0.72	0	438	3965	4528	1836	4403		1.08	Si
SLV 12	fin.	342.29	802	0.72	0	438	3965	4528	1836	4403		5.49	Si
SLV 13	ini.	-6.02	4271	0.72	0	438	3965	4528	1836	4403		1.03	Si
SLV 13	fin.	1202.22	2930	0.72	0	438	3965	4528	1836	4403		1.5	Si
SLV 15	ini.	-43.26	4820	0.72	0	438	3965	4528	1836	4403		0.91	No
SLV 15	fin.	1162.69	2851	0.72	0	438	3965	4528	1836	4403		1.54	Si
SLD 15	ini.	-123.25	3619	0.72	0	438	3965	4528	1836	4403		1.22	Si
SLD 15	fin.	583.62	1391	0.72	0	438	3965	4528	1836	4403		3.17	Si
SLV 11	ini.	-195.98	4218	0.72	0	438	3965	4528	1836	4403		1.04	Si
SLV 11	fin.	413.13	997	0.72	0	438	3965	4528	1836	4403		4.42	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-49.15	4598	0.72	0	438	3965	4528	1836	4403		0.96	No
SLV 16	fin.	1053.96	2553	0.72	0	438	3965	4528	1836	4403		1.72	Si
SLD 16	ini.	-125.78	3523	0.72	0	438	3965	4528	1836	4403		1.25	Si
SLD 16	fin.	536.92	1263	0.72	0	438	3965	4528	1836	4403		3.49	Si
SLD 13	ini.	-106.57	3375	0.72	0	438	3965	4528	1836	4403		1.3	Si
SLD 13	fin.	599.46	1422	0.72	0	438	3965	4528	1836	4403		3.1	Si
SLD 11	ini.	-189.37	3372	0.72	0	438	3965	4528	1836	4403		1.31	Si
SLD 11	fin.	264.72	602	0.72	0	438	3965	4528	1836	4403		7.31	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.591	SLV 13	Si
V_SLV	0.913	SLV 15	No
PF_SLU	6.585	SLU 84	Si
V_SLU	1.027	SLU 84	Si

Trave di accoppiamento 71

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	7.53	8.35	0.82	-18.263	-3.314	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-164.86	-1037	-0.0001009	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.92	Si
SLU 81	fin.	-281.31	-1950	-0.0001782	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.75	Si
SLU 83	ini.	-170.79	-1066	-0.0001047	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.41	Si
SLU 83	fin.	-284.83	-1974	-0.0001806	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.64	Si
SLU 80	ini.	-177.52	-1068	-0.0001091	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.86	Si
SLU 80	fin.	-264.78	-1858	-0.0001668	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.29	Si
SLU 82	ini.	-163.78	-1036	-0.0001003	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.02	Si
SLU 82	fin.	-283.67	-1960	-0.0001798	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.67	Si
SLU 76	ini.	-170.87	-1038	-0.0001048	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.4	Si
SLU 76	fin.	-262.83	-1840	-0.0001655	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.36	Si
SLU 77	ini.	-179.75	-1081	-0.0001105	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.69	Si
SLU 77	fin.	-267.18	-1876	-0.0001685	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.21	Si
SLU 78	ini.	-178.67	-1079	-0.0001098	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.77	Si
SLU 78	fin.	-269.55	-1886	-0.0001701	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.13	Si
SLU 74	ini.	-173.82	-1052	-0.0001067	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.16	Si
SLU 74	fin.	-263.66	-1851	-0.0001661	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.33	Si
SLU 84	ini.	-169.71	-1065	-0.000104	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.5	Si
SLU 84	fin.	-287.2	-1985	-0.0001822	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.57	Si
SLU 75	ini.	-172.74	-1050	-0.000106	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.24	Si
SLU 75	fin.	-266.02	-1862	-0.0001677	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-177.52	2449	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 80	fin.	-264.78	-4024	0.82	0	303	6502	3438	2091	5529	No	1.37	Si
SLU 75	ini.	-172.74	2405	0.82	0	303	6502	3438	2091	5529	No	2.3	Si
SLU 75	fin.	-266.02	-4003	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 81	ini.	-164.86	2367	0.82	0	303	6502	3438	2091	5529	No	2.34	Si
SLU 81	fin.	-281.31	-4124	0.82	0	303	6502	3438	2091	5529	No	1.34	Si
SLU 77	ini.	-179.75	2476	0.82	0	303	6502	3438	2091	5529	No	2.23	Si
SLU 77	fin.	-267.18	-4060	0.82	0	303	6502	3438	2091	5529	No	1.36	Si
SLU 79	ini.	-178.6	2454	0.82	0	303	6502	3438	2091	5529	No	2.25	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-262.42	-4008	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 78	ini.	-178.67	2471	0.82	0	303	6502	3438	2091	5529	No	2.24	Si
SLU 78	fin.	-269.55	-4076	0.82	0	303	6502	3438	2091	5529	No	1.36	Si
SLU 74	ini.	-173.82	2410	0.82	0	303	6502	3438	2091	5529	No	2.29	Si
SLU 74	fin.	-263.66	-3987	0.82	0	303	6502	3438	2091	5529	No	1.39	Si
SLU 83	ini.	-170.79	2433	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 83	fin.	-284.83	-4197	0.82	0	303	6502	3438	2091	5529	No	1.32	Si
SLU 82	ini.	-163.78	2361	0.82	0	303	6502	3438	2091	5529	No	2.34	Si
SLU 82	fin.	-283.67	-4140	0.82	0	303	6502	3438	2091	5529	No	1.34	Si
SLU 84	ini.	-169.71	2427	0.82	0	303	6502	3438	2091	5529	No	2.28	Si
SLU 84	fin.	-287.2	-4214	0.82	0	303	6502	3438	2091	5529	No	1.31	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-780.54	-2155	-0.0005494	0.0002807	0.0035	0.82		2487.45	2487.45		3.19	Si
SLV 16	fin.	909.92	2942	-0.000665	0.0002807	0.0035	0.82		2482.11	2482.11		2.73	Si
SLV 15	ini.	-864.36	-2348	-0.0006224	0.0002807	0.0035	0.82		2487.45	2487.45		2.88	Si
SLV 15	fin.	1023.61	3365	-0.0007712	0.0002807	0.0035	0.82		2482.11	2482.11		2.42	Si
SLV 14	ini.	-871.35	-2048	-0.0006286	0.0002807	0.0035	0.82		2487.45	2487.45		2.85	Si
SLV 14	fin.	996.86	3345	-0.0007457	0.0002807	0.0035	0.82		2482.11	2482.11		2.49	Si
SLV 2	ini.	612.25	905	-0.0004123	0.0002807	0.0035	0.82		2482.11	2482.11		4.05	Si
SLV 2	fin.	-1346	-5699	-0.001102	0.0002807	0.0035	0.82		2487.45	2487.45		1.85	Si
SLV 4	ini.	703.05	799	-0.0004855	0.0002807	0.0035	0.82		2482.11	2482.11		3.53	Si
SLV 4	fin.	-1432.94	-6102	-0.0012015	0.0002807	0.0035	0.82		2487.45	2487.45		1.74	Si
SLD 4	ini.	227.98	-70	-0.00014	0.0002807	0.0035	0.82		2482.11	2482.11		10.89	Si
SLD 4	fin.	-704.88	-3278	-0.0004859	0.0002807	0.0035	0.82		2487.45	2487.45		3.53	Si
SLV 3	ini.	619.24	605	-0.0004178	0.0002807	0.0035	0.82		2482.11	2482.11		4.01	Si
SLV 3	fin.	-1319.25	-5679	-0.0010723	0.0002807	0.0035	0.82		2487.45	2487.45		1.89	Si
SLV 8	ini.	275.13	-393	-0.0001706	0.0002807	0.0035	0.82		2482.11	2482.11		9.02	Si
SLV 8	fin.	-694.56	-3333	-0.0004774	0.0002807	0.0035	0.82		2487.45	2487.45		3.58	Si
SLV 13	ini.	-955.16	-2242	-0.0007048	0.0002807	0.0035	0.82		2487.45	2487.45		2.6	Si
SLV 13	fin.	1110.55	3768	-0.0008562	0.0002807	0.0035	0.82		2482.11	2482.11		2.24	Si
SLV 1	ini.	528.43	711	-0.0003479	0.0002807	0.0035	0.82		2482.11	2482.11		4.7	Si
SLV 1	fin.	-1232.31	-5277	-0.0009786	0.0002807	0.0035	0.82		2487.45	2487.45		2.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	619.24	-2276	0.82	0	455	6502	5156	2091	6957		3.06	Si
SLV 3	fin.	-1319.25	-8445	0.82	0	455	6502	5156	2091	6957		0.82	No
SLV 2	ini.	612.25	-2932	0.82	0	455	6502	5156	2091	6957		2.37	Si
SLV 2	fin.	-1346	-8382	0.82	0	455	6502	5156	2091	6957		0.83	No
SLV 16	ini.	-780.54	5815	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 16	fin.	909.92	2655	0.82	0	455	6502	5156	2091	6957		2.62	Si
SLV 4	ini.	703.05	-2749	0.82	0	455	6502	5156	2091	6957		2.53	Si
SLV 4	fin.	-1432.94	-9022	0.82	0	455	6502	5156	2091	6957		0.77	No
SLV 14	ini.	-871.35	5632	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 14	fin.	996.86	3296	0.82	0	455	6502	5156	2091	6957		2.11	Si
SLV 13	ini.	-955.16	6105	0.82	0	455	6502	5156	2091	6957		1.14	Si
SLV 13	fin.	1110.55	3874	0.82	0	455	6502	5156	2091	6957		1.8	Si
SLV 1	ini.	528.43	-2459	0.82	0	455	6502	5156	2091	6957		2.83	Si
SLV 1	fin.	-1232.31	-7804	0.82	0	455	6502	5156	2091	6957		0.89	No
SLV 15	ini.	-864.36	6288	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLV 15	fin.	1023.61	3233	0.82	0	455	6502	5156	2091	6957		2.15	Si
SLV 8	ini.	275.13	544	0.82	0	455	6502	5156	2091	6957		12.78	Si
SLV 8	fin.	-694.56	-5583	0.82	0	455	6502	5156	2091	6957		1.25	Si
SLD 4	ini.	227.98	-216	0.82	0	455	6502	5156	2091	6957		32.23	Si
SLD 4	fin.	-704.88	-5334	0.82	0	455	6502	5156	2091	6957		1.3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.736	SLV 4	Si
V_SLV	0.771	SLV 4	No
PF_SLU	8.567	SLU 84	Si
V_SLU	1.312	SLU 84	Si

Trave di accoppiamento 72

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	6.93	8.35	1.42	-18.518	0.706	6.93	8.35	1.42	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 45	ini.	494.07	-208	-0.0001003	0.0002246	0.0035	1.42		7636.3	7636.3	No	15.46	Si
SLU 45	fin.	243.35	-371	-0.0000485	0.0002246	0.0035	1.42		7636.3	7636.3	No	31.38	Si
SLU 44	ini.	481.63	-182	-0.0000977	0.0002246	0.0035	1.42		7636.3	7636.3	No	15.86	Si
SLU 44	fin.	225.29	-345	-0.0000449	0.0002246	0.0035	1.42		7636.3	7636.3	No	33.9	Si
SLU 49	ini.	524.22	-194	-0.0001067	0.0002246	0.0035	1.42		7636.3	7636.3	No	14.57	Si
SLU 49	fin.	246.91	-369	-0.0000492	0.0002246	0.0035	1.42		7636.3	7636.3	No	30.93	Si
SLU 43	ini.	479.79	-185	-0.0000973	0.0002246	0.0035	1.42		7636.3	7636.3	No	15.92	Si
SLU 43	fin.	228.84	-346	-0.0000456	0.0002246	0.0035	1.42		7636.3	7636.3	No	33.37	Si
SLU 46	ini.	495.18	-206	-0.0001005	0.0002246	0.0035	1.42		7636.3	7636.3	No	15.42	Si
SLU 46	fin.	241.22	-370	-0.0000481	0.0002246	0.0035	1.42		7636.3	7636.3	No	31.66	Si
SLU 51	ini.	538.98	-159	-0.0001098	0.0002246	0.0035	1.42		7636.3	7636.3	No	14.17	Si
SLU 51	fin.	238.11	-344	-0.0000475	0.0002246	0.0035	1.42		7636.3	7636.3	No	32.07	Si
SLU 50	ini.	537.88	-160	-0.0001096	0.0002246	0.0035	1.42		7636.3	7636.3	No	14.2	Si
SLU 50	fin.	240.24	-345	-0.0000479	0.0002246	0.0035	1.42		7636.3	7636.3	No	31.79	Si
SLU 48	ini.	523.12	-196	-0.0001064	0.0002246	0.0035	1.42		7636.3	7636.3	No	14.6	Si
SLU 48	fin.	249.05	-370	-0.0000497	0.0002246	0.0035	1.42		7636.3	7636.3	No	30.66	Si
SLU 47	ini.	510.68	-170	-0.0001038	0.0002246	0.0035	1.42		7636.3	7636.3	No	14.95	Si
SLU 47	fin.	230.99	-344	-0.000046	0.0002246	0.0035	1.42		7636.3	7636.3	No	33.06	Si
SLU 83	ini.	127.62	-972	-0.0000252	0.0002246	0.0035	1.42		7636.3	7636.3	No	59.84	Si
SLU 83	fin.	415.24	-889	-0.0000838	0.0002246	0.0035	1.42		7636.3	7636.3	No	18.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 40	ini.	-47.11	821	1.42	0	288	6344	3572	3621	6632	No	8.08	Si
SLU 40	fin.	373.16	510	1.42	0	288	6344	3572	3621	6632	No	12.99	Si
SLU 39	ini.	-48.21	826	1.42	0	288	6344	3572	3621	6632	No	8.03	Si
SLU 39	fin.	375.3	516	1.42	0	288	6344	3572	3621	6632	No	12.86	Si
SLU 41	ini.	-19.16	787	1.42	0	288	6344	3572	3621	6632	No	8.43	Si
SLU 41	fin.	380.99	476	1.42	0	288	6344	3572	3621	6632	No	13.93	Si
SLU 42	ini.	-18.06	782	1.42	0	288	6344	3572	3621	6632	No	8.49	Si
SLU 42	fin.	378.86	471	1.42	0	288	6344	3572	3621	6632	No	14.08	Si
SLU 81	ini.	98.57	674	1.42	0	288	6344	3572	3621	6632	No	9.84	Si
SLU 81	fin.	409.54	280	1.42	0	288	6344	3572	3621	6632	No	23.67	Si
SLU 49	ini.	524.22	-306	1.42	0	288	6344	3572	3621	6632	No	21.64	Si
SLU 49	fin.	246.91	-684	1.42	0	288	6344	3572	3621	6632	No	9.69	Si
SLU 47	ini.	510.68	-309	1.42	0	288	6344	3572	3621	6632	No	21.46	Si
SLU 47	fin.	230.99	-687	1.42	0	288	6344	3572	3621	6632	No	9.65	Si
SLU 48	ini.	523.12	-301	1.42	0	288	6344	3572	3621	6632	No	22.01	Si
SLU 48	fin.	249.05	-679	1.42	0	288	6344	3572	3621	6632	No	9.76	Si
SLU 51	ini.	538.98	-345	1.42	0	288	6344	3572	3621	6632	No	19.22	Si
SLU 51	fin.	238.11	-723	1.42	0	288	6344	3572	3621	6632	No	9.17	Si
SLU 50	ini.	537.88	-340	1.42	0	288	6344	3572	3621	6632	No	19.51	Si
SLU 50	fin.	240.24	-718	1.42	0	288	6344	3572	3621	6632	No	9.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	634.87	-270	-0.0001287	0.0003369	0.0035	1.42		7815.69	7815.69		12.31	Si
SLV 14	fin.	-332.62	-300	-0.0000663	0.0003369	0.0035	1.42		7824.76	7824.76		23.52	Si
SLV 2	ini.	-105.71	-890	-0.0000208	0.0003369	0.0035	1.42		7824.76	7824.76		74.02	Si
SLV 2	fin.	637.96	-546	-0.0001294	0.0003369	0.0035	1.42		7815.69	7815.69		12.25	Si
SLV 15	ini.	595.8	71	-0.0001206	0.0003369	0.0035	1.42		7815.69	7815.69		13.12	Si
SLV 15	fin.	-164.41	-352	-0.0000325	0.0003369	0.0035	1.42		7824.76	7824.76		47.59	Si
SLV 4	ini.	-118.3	-511	-0.0000233	0.0003369	0.0035	1.42		7824.76	7824.76		66.14	Si
SLV 4	fin.	783.77	-579	-0.0001603	0.0003369	0.0035	1.42		7815.69	7815.69		9.97	Si
SLV 16	ini.	622.28	109	-0.0001261	0.0003369	0.0035	1.42		7815.69	7815.69		12.56	Si
SLV 16	fin.	-186.8	-333	-0.0000369	0.0003369	0.0035	1.42		7824.76	7824.76		41.89	Si
SLV 8	ini.	121.59	142	-0.000024	0.0003369	0.0035	1.42		7815.69	7815.69		64.28	Si
SLV 8	fin.	618.09	-535	-0.0001252	0.0003369	0.0035	1.42		7815.69	7815.69		12.64	Si
SLV 1	ini.	-132.19	-929	-0.0000261	0.0003369	0.0035	1.42		7824.76	7824.76		59.19	Si
SLV 1	fin.	660.35	-565	-0.0001341	0.0003369	0.0035	1.42		7815.69	7815.69		11.84	Si
SLV 13	ini.	608.39	-309	-0.0001232	0.0003369	0.0035	1.42		7815.69	7815.69		12.85	Si
SLV 13	fin.	-310.23	-319	-0.0000617	0.0003369	0.0035	1.42		7824.76	7824.76		25.22	Si
SLV 7	ini.	104.34	117	-0.0000206	0.0003369	0.0035	1.42		7815.69	7815.69		74.91	Si
SLV 7	fin.	632.68	-548	-0.0001283	0.0003369	0.0035	1.42		7815.69	7815.69		12.35	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-144.78	-550	-0.0000286	0.0003369	0.0035	1.42		7824.76	7824.76		54.04	Si
SLV 3	fin.	806.17	-598	-0.0001651	0.0003369	0.0035	1.42		7815.69	7815.69		9.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	634.87	-1344	1.42	0	432	6344	5358	3621	6776		5.04	Si
SLV 14	fin.	-332.62	-1499	1.42	0	432	6344	5358	3621	6776		4.52	Si
SLV 1	ini.	-132.19	1148	1.42	0	432	6344	5358	3621	6776		5.9	Si
SLV 1	fin.	660.35	672	1.42	0	432	6344	5358	3621	6776		10.08	Si
SLV 13	ini.	608.39	-1265	1.42	0	432	6344	5358	3621	6776		5.36	Si
SLV 13	fin.	-310.23	-1421	1.42	0	432	6344	5358	3621	6776		4.77	Si
SLV 7	ini.	104.34	1182	1.42	0	432	6344	5358	3621	6776		5.73	Si
SLV 7	fin.	632.68	889	1.42	0	432	6344	5358	3621	6776		7.62	Si
SLV 10	ini.	385.75	-966	1.42	0	432	6344	5358	3621	6776		7.02	Si
SLV 10	fin.	-159.14	-1272	1.42	0	432	6344	5358	3621	6776		5.33	Si
SLV 9	ini.	368.5	-915	1.42	0	432	6344	5358	3621	6776		7.41	Si
SLV 9	fin.	-144.55	-1220	1.42	0	432	6344	5358	3621	6776		5.55	Si
SLV 8	ini.	121.59	1131	1.42	0	432	6344	5358	3621	6776		5.99	Si
SLV 8	fin.	618.09	838	1.42	0	432	6344	5358	3621	6776		8.08	Si
SLV 3	ini.	-144.78	1560	1.42	0	432	6344	5358	3621	6776		4.34	Si
SLV 3	fin.	806.17	1117	1.42	0	432	6344	5358	3621	6776		6.07	Si
SLV 4	ini.	-118.3	1482	1.42	0	432	6344	5358	3621	6776		4.57	Si
SLV 4	fin.	783.77	1039	1.42	0	432	6344	5358	3621	6776		6.52	Si
SLV 2	ini.	-105.71	1070	1.42	0	432	6344	5358	3621	6776		6.33	Si
SLV 2	fin.	637.96	594	1.42	0	432	6344	5358	3621	6776		11.41	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.695	SLV 3	Si
V_SLV	4.343	SLV 3	Si
PF_SLU	14.168	SLU 51	Si
V_SLU	8.027	SLU 39	Si

Trave di accoppiamento 74

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	6.93	8.35	1.42	-16.333	-3.314	6.93	8.35	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	-526.89	-2980	-0.0001078	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.97	Si
SLU 66	fin.	323.83	-2496	-0.0000652	0.0001872	0.0035	1.42		7350.79	7350.79	No	22.7	Si
SLU 70	ini.	-542.45	-3073	-0.0001111	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.57	Si
SLU 70	fin.	334.45	-2573	-0.0000674	0.0001872	0.0035	1.42		7350.79	7350.79	No	21.98	Si
SLU 68	ini.	-518.9	-2942	-0.0001061	0.0001872	0.0035	1.42		7359.91	7359.91	No	14.18	Si
SLU 68	fin.	313.1	-2467	-0.0000629	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.48	Si
SLU 69	ini.	-547.2	-3071	-0.0001121	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.45	Si
SLU 69	fin.	340.58	-2567	-0.0000686	0.0001872	0.0035	1.42		7350.79	7350.79	No	21.58	Si
SLU 65	ini.	-498.59	-2851	-0.0001017	0.0001872	0.0035	1.42		7359.91	7359.91	No	14.76	Si
SLU 65	fin.	296.35	-2395	-0.0000595	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.8	Si
SLU 72	ini.	-542.38	-3033	-0.0001111	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.57	Si
SLU 72	fin.	333.95	-2535	-0.0000673	0.0001872	0.0035	1.42		7350.79	7350.79	No	22.01	Si
SLU 71	ini.	-547.13	-3031	-0.0001121	0.0001872	0.0035	1.42		7359.91	7359.91	No	13.45	Si
SLU 71	fin.	340.09	-2529	-0.0000685	0.0001872	0.0035	1.42		7350.79	7350.79	No	21.61	Si
SLU 67	ini.	-522.14	-2981	-0.0001067	0.0001872	0.0035	1.42		7359.91	7359.91	No	14.1	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	fin.	317.69	-2501	-0.0000639	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.14	Si
SLU 27	ini.	-472	-2591	-0.0000961	0.0001872	0.0035	1.42		7359.91	7359.91	No	15.59	Si
SLU 27	fin.	302.86	-2152	-0.0000608	0.0001872	0.0035	1.42		7350.79	7350.79	No	24.27	Si
SLU 64	ini.	-506.51	-2848	-0.0001034	0.0001872	0.0035	1.42		7359.91	7359.91	No	14.53	Si
SLU 64	fin.	306.58	-2386	-0.0000616	0.0001872	0.0035	1.42		7350.79	7350.79	No	23.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-542.45	2092	1.42	0	576	7137	5953	3621	7713	No	3.69	Si
SLU 70	fin.	334.45	643	1.42	0	576	7137	5953	3621	7713	No	12	Si
SLU 77	ini.	-441.83	2015	1.42	0	576	7137	5953	3621	7713	No	3.83	Si
SLU 77	fin.	271.74	291	1.42	0	576	7137	5953	3621	7713	No	26.53	Si
SLU 71	ini.	-547.13	2104	1.42	0	576	7137	5953	3621	7713	No	3.67	Si
SLU 71	fin.	340.09	655	1.42	0	576	7137	5953	3621	7713	No	11.77	Si
SLU 67	ini.	-522.14	2035	1.42	0	576	7137	5953	3621	7713	No	3.79	Si
SLU 67	fin.	317.69	586	1.42	0	576	7137	5953	3621	7713	No	13.17	Si
SLU 69	ini.	-547.2	2107	1.42	0	576	7137	5953	3621	7713	No	3.66	Si
SLU 69	fin.	340.58	658	1.42	0	576	7137	5953	3621	7713	No	11.73	Si
SLU 72	ini.	-542.38	2089	1.42	0	576	7137	5953	3621	7713	No	3.69	Si
SLU 72	fin.	333.95	640	1.42	0	576	7137	5953	3621	7713	No	12.05	Si
SLU 68	ini.	-518.9	2022	1.42	0	576	7137	5953	3621	7713	No	3.81	Si
SLU 68	fin.	313.1	573	1.42	0	576	7137	5953	3621	7713	No	13.45	Si
SLU 79	ini.	-441.76	2013	1.42	0	576	7137	5953	3621	7713	No	3.83	Si
SLU 79	fin.	271.24	288	1.42	0	576	7137	5953	3621	7713	No	26.76	Si
SLU 78	ini.	-437.08	2000	1.42	0	576	7137	5953	3621	7713	No	3.86	Si
SLU 78	fin.	265.6	276	1.42	0	576	7137	5953	3621	7713	No	27.99	Si
SLU 66	ini.	-526.89	2050	1.42	0	576	7137	5953	3621	7713	No	3.76	Si
SLU 66	fin.	323.83	601	1.42	0	576	7137	5953	3621	7713	No	12.83	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 15	ini.	-2217.33	-3529	-0.0005139	0.0002807	0.0035	1.42		7346.34	7346.34		3.31	Si
SLD 15	fin.	2043.91	-1591	-0.0004668	0.0002807	0.0035	1.42		7337.02	7337.02		3.59	Si
SLV 3	ini.	3911.96	915	-0.0010562	0.0002807	0.0035	1.42		7337.02	7337.02		1.88	Si
SLV 3	fin.	-3985.07	-2444	-0.0010813	0.0002807	0.0035	1.42		7346.34	7346.34		1.84	Si
SLV 1	ini.	3667.33	824	-0.0009688	0.0002807	0.0035	1.42		7337.02	7337.02		2	Si
SLV 1	fin.	-3737.57	-2321	-0.000992	0.0002807	0.0035	1.42		7346.34	7346.34		1.97	Si
SLD 13	ini.	-2321.75	-3562	-0.0005432	0.0002807	0.0035	1.42		7346.34	7346.34		3.16	Si
SLD 13	fin.	2151.52	-1535	-0.0004963	0.0002807	0.0035	1.42		7337.02	7337.02		3.41	Si
SLV 15	ini.	-4728.33	-5390	-0.0013754	0.0002807	0.0035	1.42		7346.34	7346.34		1.55	Si
SLV 15	fin.	4512.28	-1295	-0.0012875	0.0002807	0.0035	1.42		7337.02	7337.02		1.63	Si
SLV 16	ini.	-4349.31	-5089	-0.0012201	0.0002807	0.0035	1.42		7346.34	7346.34		1.69	Si
SLV 16	fin.	4140.53	-1296	-0.0011412	0.0002807	0.0035	1.42		7337.02	7337.02		1.77	Si
SLV 14	ini.	-4593.94	-5180	-0.0013189	0.0002807	0.0035	1.42		7346.34	7346.34		1.6	Si
SLV 14	fin.	4388.03	-1173	-0.0012374	0.0002807	0.0035	1.42		7337.02	7337.02		1.67	Si
SLV 2	ini.	4046.35	1125	-0.0011058	0.0002807	0.0035	1.42		7337.02	7337.02		1.81	Si
SLV 2	fin.	-4109.32	-2321	-0.0011276	0.0002807	0.0035	1.42		7346.34	7346.34		1.79	Si
SLV 4	ini.	4290.98	1217	-0.0011992	0.0002807	0.0035	1.42		7337.02	7337.02		1.71	Si
SLV 4	fin.	-4356.82	-2445	-0.0012231	0.0002807	0.0035	1.42		7346.34	7346.34		1.69	Si
SLV 13	ini.	-4972.95	-5482	-0.0014827	0.0002807	0.0035	1.42		7346.34	7346.34		1.48	Si
SLV 13	fin.	4759.78	-1172	-0.0013912	0.0002807	0.0035	1.42		7337.02	7337.02		1.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-4972.95	14381	1.42	0	864	7137	8929	3621	8001		0.56	No
SLV 13	fin.	4759.78	13261	1.42	0	864	7137	8929	3621	8001		0.6	No
SLV 1	ini.	3667.33	-10342	1.42	0	864	7137	8929	3621	8001		0.77	No
SLV 1	fin.	-3737.57	-11424	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 15	ini.	-4728.33	14269	1.42	0	864	7137	8929	3621	8001		0.56	No
SLV 15	fin.	4512.28	13070	1.42	0	864	7137	8929	3621	8001		0.61	No
SLD 15	ini.	-2217.33	6918	1.42	0	864	7137	8929	3621	8001		1.16	Si
SLD 15	fin.	2043.91	5755	1.42	0	864	7137	8929	3621	8001		1.39	Si
SLV 14	ini.	-4593.94	13308	1.42	0	864	7137	8929	3621	8001		0.6	No
SLV 14	fin.	4388.03	12188	1.42	0	864	7137	8929	3621	8001		0.66	No
SLV 16	ini.	-4349.31	13196	1.42	0	864	7137	8929	3621	8001		0.61	No
SLV 16	fin.	4140.53	11997	1.42	0	864	7137	8929	3621	8001		0.67	No
SLV 2	ini.	4046.35	-11415	1.42	0	864	7137	8929	3621	8001		0.7	No
SLV 2	fin.	-4109.32	-12497	1.42	0	864	7137	8929	3621	8001		0.64	No
SLD 13	ini.	-2321.75	6967	1.42	0	864	7137	8929	3621	8001		1.15	Si
SLD 13	fin.	2151.52	5833	1.42	0	864	7137	8929	3621	8001		1.37	Si
SLV 3	ini.	3911.96	-10455	1.42	0	864	7137	8929	3621	8001		0.77	No
SLV 3	fin.	-3985.07	-11614	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 4	ini.	4290.98	-11527	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 4	fin.	-4356.82	-12687	1.42	0	864	7137	8929	3621	8001		0.63	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.477	SLV 13	Si
V_SLV	0.556	SLV 13	No
PF_SLU	13.45	SLU 69	Si
V_SLU	3.661	SLU 69	Si

Trave di accoppiamento 76

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	4.83	5.73	0.9	-16.818	6.526	4.83	5.73	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	985.83	-3059	-0.00062	0.0001872	0.0035	0.9		2959	2959	No	3	Si
SLU 82	fin.	-376.32	-1568	-0.0001998	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.88	Si
SLU 75	ini.	961.32	-2992	-0.000601	0.0001872	0.0035	0.9		2959	2959	No	3.08	Si
SLU 75	fin.	-358.09	-1559	-0.0001892	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.28	Si
SLU 80	ini.	949.02	-2966	-0.0005915	0.0001872	0.0035	0.9		2959	2959	No	3.12	Si
SLU 80	fin.	-347.29	-1568	-0.000183	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.54	Si
SLU 84	ini.	986.61	-3076	-0.0006206	0.0001872	0.0035	0.9		2959	2959	No	3	Si
SLU 84	fin.	-368.43	-1603	-0.0001952	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.05	Si
SLU 79	ini.	950.37	-2968	-0.0005926	0.0001872	0.0035	0.9		2959	2959	No	3.11	Si
SLU 79	fin.	-348.11	-1567	-0.0001835	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.52	Si
SLU 74	ini.	962.67	-2993	-0.0006021	0.0001872	0.0035	0.9		2959	2959	No	3.07	Si
SLU 74	fin.	-358.91	-1558	-0.0001897	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.26	Si
SLU 77	ini.	963.45	-3010	-0.0006027	0.0001872	0.0035	0.9		2959	2959	No	3.07	Si
SLU 77	fin.	-351.02	-1594	-0.0001851	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.45	Si
SLU 83	ini.	987.95	-3077	-0.0006217	0.0001872	0.0035	0.9		2959	2959	No	3	Si
SLU 83	fin.	-369.25	-1602	-0.0001957	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.03	Si
SLU 78	ini.	962.1	-3008	-0.0006016	0.0001872	0.0035	0.9		2959	2959	No	3.08	Si
SLU 78	fin.	-350.2	-1594	-0.0001847	0.0001872	0.0035	0.9		2964.67	2964.67	No	8.47	Si
SLU 81	ini.	987.17	-3061	-0.0006211	0.0001872	0.0035	0.9		2959	2959	No	3	Si
SLU 81	fin.	-377.14	-1567	-0.0002003	0.0001872	0.0035	0.9		2964.67	2964.67	No	7.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	987.17	-3443	0.9	0	365	7137	3773	2295	6068	No	1.76	Si
SLU 81	fin.	-377.14	-812	0.9	0	365	7137	3773	2295	6068	No	7.47	Si
SLU 79	ini.	950.37	-3325	0.9	0	365	7137	3773	2295	6068	No	1.82	Si
SLU 79	fin.	-348.11	-694	0.9	0	365	7137	3773	2295	6068	No	8.75	Si
SLU 75	ini.	961.32	-3365	0.9	0	365	7137	3773	2295	6068	No	1.8	Si
SLU 75	fin.	-358.09	-732	0.9	0	365	7137	3773	2295	6068	No	8.29	Si
SLU 78	ini.	962.1	-3371	0.9	0	365	7137	3773	2295	6068	No	1.8	Si
SLU 78	fin.	-350.2	-692	0.9	0	365	7137	3773	2295	6068	No	8.77	Si
SLU 74	ini.	962.67	-3373	0.9	0	365	7137	3773	2295	6068	No	1.8	Si
SLU 74	fin.	-358.91	-731	0.9	0	365	7137	3773	2295	6068	No	8.3	Si
SLU 84	ini.	986.61	-3440	0.9	0	365	7137	3773	2295	6068	No	1.76	Si
SLU 84	fin.	-368.43	-773	0.9	0	365	7137	3773	2295	6068	No	7.85	Si
SLU 82	ini.	985.83	-3435	0.9	0	365	7137	3773	2295	6068	No	1.77	Si
SLU 82	fin.	-376.32	-813	0.9	0	365	7137	3773	2295	6068	No	7.46	Si
SLU 80	ini.	949.02	-3317	0.9	0	365	7137	3773	2295	6068	No	1.83	Si
SLU 80	fin.	-347.29	-695	0.9	0	365	7137	3773	2295	6068	No	8.73	Si
SLU 83	ini.	987.95	-3448	0.9	0	365	7137	3773	2295	6068	No	1.76	Si
SLU 83	fin.	-369.25	-771	0.9	0	365	7137	3773	2295	6068	No	7.87	Si
SLU 77	ini.	963.45	-3379	0.9	0	365	7137	3773	2295	6068	No	1.8	Si
SLU 77	fin.	-351.02	-690	0.9	0	365	7137	3773	2295	6068	No	8.79	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	1105.13	-2626	-0.0006717	0.0002807	0.0035	0.9		2989.59	2989.59		2.71	Si
SLD 13	fin.	-815.87	5	-0.0004633	0.0002807	0.0035	0.9		2995.37	2995.37		3.67	Si
SLV 15	ini.	1616.94	-3268	-0.0011006	0.0002807	0.0035	0.9		2989.59	2989.59		1.85	Si
SLV 15	fin.	-1486.46	1292	-0.0009803	0.0002807	0.0035	0.9		2995.37	2995.37		2.02	Si
SLV 10	ini.	1133.03	-2713	-0.0006929	0.0002807	0.0035	0.9		2989.59	2989.59		2.64	Si
SLV 10	fin.	-819.34	-49	-0.0004656	0.0002807	0.0035	0.9		2995.37	2995.37		3.66	Si
SLV 14	ini.	1787.13	-3529	-0.001265	0.0002807	0.0035	0.9		2989.59	2989.59		1.67	Si
SLV 14	fin.	-1679.96	1608	-0.001157	0.0002807	0.0035	0.9		2995.37	2995.37		1.78	Si
SLV 3	ini.	-452.68	-572	-0.0002376	0.0002807	0.0035	0.9		2995.37	2995.37		6.62	Si
SLV 3	fin.	1160.88	-3673	-0.0007143	0.0002807	0.0035	0.9		2989.59	2989.59		2.58	Si
SLD 14	ini.	1146.22	-2683	-0.000703	0.0002807	0.0035	0.9		2989.59	2989.59		2.61	Si
SLD 14	fin.	-867.06	97	-0.0004982	0.0002807	0.0035	0.9		2995.37	2995.37		3.45	Si
SLV 1	ini.	-378.16	-701	-0.0001958	0.0002807	0.0035	0.9		2995.37	2995.37		7.92	Si
SLV 1	fin.	1086.56	-3571	-0.0006576	0.0002807	0.0035	0.9		2989.59	2989.59		2.75	Si
SLV 13	ini.	1691.45	-3397	-0.001171	0.0002807	0.0035	0.9		2989.59	2989.59		1.77	Si
SLV 13	fin.	-1560.78	1393	-0.0010465	0.0002807	0.0035	0.9		2995.37	2995.37		1.92	Si
SLD 16	ini.	1114.23	-2627	-0.0006786	0.0002807	0.0035	0.9		2989.59	2989.59		2.68	Si
SLD 16	fin.	-835.22	54	-0.0004764	0.0002807	0.0035	0.9		2995.37	2995.37		3.59	Si
SLV 16	ini.	1712.62	-3400	-0.0011914	0.0002807	0.0035	0.9		2989.59	2989.59		1.75	Si
SLV 16	fin.	-1605.64	1507	-0.0010874	0.0002807	0.0035	0.9		2995.37	2995.37		1.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1787.13	-6480	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLV 14	fin.	-1679.96	-6066	0.9	0	548	7137	5660	2295	7684		1.27	Si
SLV 2	ini.	-282.49	1205	0.9	0	548	7137	5660	2295	7684		6.38	Si
SLV 2	fin.	967.38	4215	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 1	ini.	-378.16	1560	0.9	0	548	7137	5660	2295	7684		4.93	Si
SLV 1	fin.	1086.56	4666	0.9	0	548	7137	5660	2295	7684		1.65	Si
SLV 15	ini.	1616.94	-5886	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 15	fin.	-1486.46	-5303	0.9	0	548	7137	5660	2295	7684		1.45	Si
SLV 13	ini.	1691.45	-6124	0.9	0	548	7137	5660	2295	7684		1.25	Si
SLV 13	fin.	-1560.78	-5614	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLD 16	ini.	1114.23	-4008	0.9	0	548	7137	5660	2295	7684		1.92	Si
SLD 16	fin.	-835.22	-2772	0.9	0	548	7137	5660	2295	7684		2.77	Si
SLD 14	ini.	1146.22	-4111	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLD 14	fin.	-867.06	-2906	0.9	0	548	7137	5660	2295	7684		2.64	Si
SLV 4	ini.	-357	1443	0.9	0	548	7137	5660	2295	7684		5.32	Si
SLV 4	fin.	1041.7	4526	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLV 3	ini.	-452.68	1799	0.9	0	548	7137	5660	2295	7684		4.27	Si
SLV 3	fin.	1160.88	4978	0.9	0	548	7137	5660	2295	7684		1.54	Si
SLV 16	ini.	1712.62	-6241	0.9	0	548	7137	5660	2295	7684		1.23	Si
SLV 16	fin.	-1605.64	-5754	0.9	0	548	7137	5660	2295	7684		1.34	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.673	SLV 14	Si
V_SLV	1.186	SLV 14	Si
PF_SLU	2.995	SLU 83	Si
V_SLU	1.76	SLU 83	Si

Trave di accoppiamento 77

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	7.53	8.35	0.82	-16.818	6.526	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	68.88	-520	-0.0000412	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.65	Si
SLU 79	fin.	-928.84	-2567	-0.0007247	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.65	Si
SLU 82	ini.	82.99	-496	-0.0000499	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.59	Si
SLU 82	fin.	-969.37	-2649	-0.0007649	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.54	Si
SLU 80	ini.	68.23	-521	-0.0000409	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.98	Si
SLU 80	fin.	-927.74	-2565	-0.0007236	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.65	Si
SLU 75	ini.	75.34	-505	-0.0000452	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.59	Si
SLU 75	fin.	-942.55	-2592	-0.0007382	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.61	Si
SLU 81	ini.	83.64	-494	-0.0000503	0.0001872	0.0035	0.82		2455.37	2455.37	No	29.36	Si
SLU 81	fin.	-970.46	-2651	-0.000766	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.54	Si
SLU 83	ini.	76.43	-525	-0.0000459	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.13	Si
SLU 83	fin.	-970.13	-2669	-0.0007657	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.54	Si
SLU 77	ini.	68.77	-534	-0.0000412	0.0001872	0.0035	0.82		2455.37	2455.37	No	35.7	Si
SLU 77	fin.	-943.31	-2612	-0.000739	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.61	Si
SLU 78	ini.	68.13	-536	-0.0000408	0.0001872	0.0035	0.82		2455.37	2455.37	No	36.04	Si
SLU 78	fin.	-942.21	-2610	-0.0007379	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.61	Si
SLU 84	ini.	75.78	-527	-0.0000455	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.4	Si
SLU 84	fin.	-969.03	-2667	-0.0007646	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.54	Si
SLU 74	ini.	75.98	-503	-0.0000456	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.32	Si
SLU 74	fin.	-943.64	-2594	-0.0007393	0.0001872	0.0035	0.82		2460.51	2460.51	No	2.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	83.64	810	0.82	0	303	6502	3438	2091	5529	No	6.83	Si
SLU 81	fin.	-970.46	-4192	0.82	0	303	6502	3438	2091	5529	No	1.32	Si
SLU 78	ini.	68.13	855	0.82	0	303	6502	3438	2091	5529	No	6.47	Si
SLU 78	fin.	-942.21	-4080	0.82	0	303	6502	3438	2091	5529	No	1.36	Si
SLU 77	ini.	68.77	853	0.82	0	303	6502	3438	2091	5529	No	6.48	Si
SLU 77	fin.	-943.31	-4085	0.82	0	303	6502	3438	2091	5529	No	1.35	Si
SLU 79	ini.	68.88	833	0.82	0	303	6502	3438	2091	5529	No	6.64	Si
SLU 79	fin.	-928.84	-4024	0.82	0	303	6502	3438	2091	5529	No	1.37	Si
SLU 74	ini.	75.98	808	0.82	0	303	6502	3438	2091	5529	No	6.84	Si
SLU 74	fin.	-943.64	-4079	0.82	0	303	6502	3438	2091	5529	No	1.36	Si
SLU 82	ini.	82.99	811	0.82	0	303	6502	3438	2091	5529	No	6.81	Si
SLU 82	fin.	-969.37	-4187	0.82	0	303	6502	3438	2091	5529	No	1.32	Si
SLU 80	ini.	68.23	835	0.82	0	303	6502	3438	2091	5529	No	6.62	Si
SLU 80	fin.	-927.74	-4019	0.82	0	303	6502	3438	2091	5529	No	1.38	Si
SLU 84	ini.	75.78	856	0.82	0	303	6502	3438	2091	5529	No	6.46	Si
SLU 84	fin.	-969.03	-4194	0.82	0	303	6502	3438	2091	5529	No	1.32	Si
SLU 83	ini.	76.43	855	0.82	0	303	6502	3438	2091	5529	No	6.47	Si
SLU 83	fin.	-970.13	-4199	0.82	0	303	6502	3438	2091	5529	No	1.32	Si
SLU 75	ini.	75.34	810	0.82	0	303	6502	3438	2091	5529	No	6.83	Si
SLU 75	fin.	-942.55	-4074	0.82	0	303	6502	3438	2091	5529	No	1.36	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	807.69	1983	-0.0005741	0.0002807	0.0035	0.82		2482.11	2482.11		3.07	Si
SLV 14	fin.	-1598.23	-2879	-0.0014054	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLD 13	ini.	355.71	602	-0.0002244	0.0002807	0.0035	0.82		2482.11	2482.11		6.98	Si
SLD 13	fin.	-1018.32	-2187	-0.0007641	0.0002807	0.0035	0.82		2487.45	2487.45		2.44	Si
SLD 15	ini.	335.61	554	-0.0002108	0.0002807	0.0035	0.82		2482.11	2482.11		7.4	Si
SLD 15	fin.	-996.55	-2152	-0.0007435	0.0002807	0.0035	0.82		2487.45	2487.45		2.5	Si
SLD 14	ini.	382.56	683	-0.0002428	0.0002807	0.0035	0.82		2482.11	2482.11		6.49	Si
SLD 14	fin.	-1054.9	-2233	-0.0007993	0.0002807	0.0035	0.82		2487.45	2487.45		2.36	Si
SLV 16	ini.	761.12	1870	-0.0005341	0.0002807	0.0035	0.82		2482.11	2482.11		3.26	Si
SLV 16	fin.	-1547.55	-2799	-0.0013406	0.0002807	0.0035	0.82		2487.45	2487.45		1.61	Si
SLV 9	ini.	328.37	474	-0.0002059	0.0002807	0.0035	0.82		2482.11	2482.11		7.56	Si
SLV 9	fin.	-969.88	-2159	-0.0007184	0.0002807	0.0035	0.82		2487.45	2487.45		2.56	Si
SLV 15	ini.	698.61	1682	-0.0004819	0.0002807	0.0035	0.82		2482.11	2482.11		3.55	Si
SLV 15	fin.	-1462.37	-2691	-0.0012363	0.0002807	0.0035	0.82		2487.45	2487.45		1.7	Si
SLV 10	ini.	369.1	596	-0.0002336	0.0002807	0.0035	0.82		2482.11	2482.11		6.72	Si
SLV 10	fin.	-1025.38	-2230	-0.0007709	0.0002807	0.0035	0.82		2487.45	2487.45		2.43	Si
SLD 16	ini.	362.46	635	-0.000229	0.0002807	0.0035	0.82		2482.11	2482.11		6.85	Si
SLD 16	fin.	-1033.13	-2199	-0.0007783	0.0002807	0.0035	0.82		2487.45	2487.45		2.41	Si
SLV 13	ini.	745.18	1795	-0.0005207	0.0002807	0.0035	0.82		2482.11	2482.11		3.33	Si
SLV 13	fin.	-1513.05	-2771	-0.0012977	0.0002807	0.0035	0.82		2487.45	2487.45		1.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	761.12	-3116	0.82	0	455	6502	5156	2091	6957		2.23	Si
SLV 16	fin.	-1547.55	-5852	0.82	0	455	6502	5156	2091	6957		1.19	Si
SLV 3	ini.	-678.64	4356	0.82	0	455	6502	5156	2091	6957		1.6	Si
SLV 3	fin.	300.91	392	0.82	0	455	6502	5156	2091	6957		17.76	Si
SLV 14	ini.	807.69	-3438	0.82	0	455	6502	5156	2091	6957		2.02	Si
SLV 14	fin.	-1598.23	-5976	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLD 16	ini.	362.46	-1070	0.82	0	455	6502	5156	2091	6957		6.5	Si
SLD 16	fin.	-1033.13	-4101	0.82	0	455	6502	5156	2091	6957		1.7	Si
SLD 14	ini.	382.56	-1209	0.82	0	455	6502	5156	2091	6957		5.75	Si
SLD 14	fin.	-1054.9	-4155	0.82	0	455	6502	5156	2091	6957		1.67	Si
SLV 15	ini.	698.61	-2794	0.82	0	455	6502	5156	2091	6957		2.49	Si
SLV 15	fin.	-1462.37	-5562	0.82	0	455	6502	5156	2091	6957		1.25	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	355.71	-1071	0.82	0	455	6502	5156	2091	6957		6.5	Si
SLD 13	fin.	-1018.32	-4030	0.82	0	455	6502	5156	2091	6957		1.73	Si
SLV 1	ini.	-632.07	4034	0.82	0	455	6502	5156	2091	6957		1.72	Si
SLV 1	fin.	250.22	268	0.82	0	455	6502	5156	2091	6957		25.98	Si
SLV 4	ini.	-616.13	4034	0.82	0	455	6502	5156	2091	6957		1.72	Si
SLV 4	fin.	215.73	102	0.82	0	455	6502	5156	2091	6957		68.34	Si
SLV 13	ini.	745.18	-3116	0.82	0	455	6502	5156	2091	6957		2.23	Si
SLV 13	fin.	-1513.05	-5686	0.82	0	455	6502	5156	2091	6957		1.22	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.556	SLV 14	Si
V_SLV	1.164	SLV 14	Si
PF_SLU	2.535	SLU 81	Si
V_SLU	1.317	SLU 83	Si

Trave di accoppiamento 78

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	4.83	5.73	0.9	-11.938	6.526	4.83	5.73	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	750.94	-3747	-0.0004449	0.0001872	0.0035	0.9		2959	2959	No	3.94	Si
SLU 80	fin.	319.55	-3213	-0.0001675	0.0001872	0.0035	0.9		2959	2959	No	9.26	Si
SLU 78	ini.	765.65	-3807	-0.0004554	0.0001872	0.0035	0.9		2959	2959	No	3.86	Si
SLU 78	fin.	321.52	-3254	-0.0001686	0.0001872	0.0035	0.9		2959	2959	No	9.2	Si
SLU 74	ini.	760	-3769	-0.0004513	0.0001872	0.0035	0.9		2959	2959	No	3.89	Si
SLU 74	fin.	315.08	-3213	-0.000165	0.0001872	0.0035	0.9		2959	2959	No	9.39	Si
SLU 76	ini.	749.78	-3713	-0.000444	0.0001872	0.0035	0.9		2959	2959	No	3.95	Si
SLU 76	fin.	306.27	-3158	-0.00016	0.0001872	0.0035	0.9		2959	2959	No	9.66	Si
SLU 77	ini.	762.95	-3805	-0.0004534	0.0001872	0.0035	0.9		2959	2959	No	3.88	Si
SLU 77	fin.	325.62	-3263	-0.0001709	0.0001872	0.0035	0.9		2959	2959	No	9.09	Si
SLU 82	ini.	783.09	-3845	-0.0004679	0.0001872	0.0035	0.9		2959	2959	No	3.78	Si
SLU 82	fin.	305.71	-3240	-0.0001597	0.0001872	0.0035	0.9		2959	2959	No	9.68	Si
SLU 81	ini.	780.39	-3843	-0.000466	0.0001872	0.0035	0.9		2959	2959	No	3.79	Si
SLU 81	fin.	309.81	-3249	-0.000162	0.0001872	0.0035	0.9		2959	2959	No	9.55	Si
SLU 75	ini.	762.7	-3771	-0.0004533	0.0001872	0.0035	0.9		2959	2959	No	3.88	Si
SLU 75	fin.	310.97	-3205	-0.0001626	0.0001872	0.0035	0.9		2959	2959	No	9.52	Si
SLU 83	ini.	783.34	-3879	-0.0004681	0.0001872	0.0035	0.9		2959	2959	No	3.78	Si
SLU 83	fin.	320.35	-3298	-0.0001679	0.0001872	0.0035	0.9		2959	2959	No	9.24	Si
SLU 84	ini.	786.04	-3881	-0.00047	0.0001872	0.0035	0.9		2959	2959	No	3.76	Si
SLU 84	fin.	316.25	-3290	-0.0001656	0.0001872	0.0035	0.9		2959	2959	No	9.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	750.94	-2532	0.9	0	365	7137	3773	2295	6068	No	2.4	Si
SLU 80	fin.	319.55	1105	0.9	0	365	7137	3773	2295	6068	No	5.49	Si
SLU 82	ini.	783.09	-2615	0.9	0	365	7137	3773	2295	6068	No	2.32	Si
SLU 82	fin.	305.71	1017	0.9	0	365	7137	3773	2295	6068	No	5.96	Si
SLU 75	ini.	762.7	-2569	0.9	0	365	7137	3773	2295	6068	No	2.36	Si
SLU 75	fin.	310.97	1066	0.9	0	365	7137	3773	2295	6068	No	5.69	Si
SLU 77	ini.	762.95	-2575	0.9	0	365	7137	3773	2295	6068	No	2.36	Si
SLU 77	fin.	325.62	1127	0.9	0	365	7137	3773	2295	6068	No	5.38	Si
SLU 76	ini.	749.78	-2522	0.9	0	365	7137	3773	2295	6068	No	2.41	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	fin.	306.27	1048	0.9	0	365	7137	3773	2295	6068	No	5.79	Si
SLU 83	ini.	783.34	-2621	0.9	0	365	7137	3773	2295	6068	No	2.31	Si
SLU 83	fin.	320.35	1079	0.9	0	365	7137	3773	2295	6068	No	5.63	Si
SLU 81	ini.	780.39	-2604	0.9	0	365	7137	3773	2295	6068	No	2.33	Si
SLU 81	fin.	309.81	1031	0.9	0	365	7137	3773	2295	6068	No	5.89	Si
SLU 74	ini.	760	-2558	0.9	0	365	7137	3773	2295	6068	No	2.37	Si
SLU 74	fin.	315.08	1080	0.9	0	365	7137	3773	2295	6068	No	5.62	Si
SLU 78	ini.	765.65	-2587	0.9	0	365	7137	3773	2295	6068	No	2.35	Si
SLU 78	fin.	321.52	1114	0.9	0	365	7137	3773	2295	6068	No	5.45	Si
SLU 84	ini.	786.04	-2633	0.9	0	365	7137	3773	2295	6068	No	2.31	Si
SLU 84	fin.	316.25	1065	0.9	0	365	7137	3773	2295	6068	No	5.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	3284.61	-6523	-0.0039085	0.0002807	0.0035	0.9		2989.59	2989.59		0.91	No
SLV 14	fin.	-2596.18	2356	-0.0023491	0.0002807	0.0035	0.9		2995.37	2995.37		1.15	Si
SLV 3	ini.	-2262.39	1422	-0.0018135	0.0002807	0.0035	0.9		2995.37	2995.37		1.32	Si
SLV 3	fin.	3030.66	-6729	-0.003331	0.0002807	0.0035	0.9		2989.59	2989.59		0.99	No
SLV 4	ini.	-2044.51	1114	-0.0015388	0.0002807	0.0035	0.9		2995.37	2995.37		1.47	Si
SLV 4	fin.	2807.9	-6363	-0.0027943	0.0002807	0.0035	0.9		2989.59	2989.59		1.06	Si
SLV 16	ini.	3205.27	-6340	-0.0037356	0.0002807	0.0035	0.9		2989.59	2989.59		0.93	No
SLV 16	fin.	-2541.04	2333	-0.0022491	0.0002807	0.0035	0.9		2995.37	2995.37		1.18	Si
SLV 2	ini.	-1965.17	930	-0.0014489	0.0002807	0.0035	0.9		2995.37	2995.37		1.52	Si
SLV 2	fin.	2752.76	-6340	-0.0026725	0.0002807	0.0035	0.9		2989.59	2989.59		1.09	Si
SLV 13	ini.	3066.73	-6214	-0.0034176	0.0002807	0.0035	0.9		2989.59	2989.59		0.97	No
SLV 13	fin.	-2373.43	1990	-0.001974	0.0002807	0.0035	0.9		2995.37	2995.37		1.26	Si
SLD 16	ini.	1662.63	-4169	-0.0011434	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLD 16	fin.	-961.9	-254	-0.0005648	0.0002807	0.0035	0.9		2995.37	2995.37		3.11	Si
SLD 14	ini.	1697.41	-4250	-0.0011767	0.0002807	0.0035	0.9		2989.59	2989.59		1.76	Si
SLD 14	fin.	-985.88	-245	-0.000582	0.0002807	0.0035	0.9		2995.37	2995.37		3.04	Si
SLV 15	ini.	2987.4	-6031	-0.0032255	0.0002807	0.0035	0.9		2989.59	2989.59		1	Si
SLV 15	fin.	-2318.28	1967	-0.0018923	0.0002807	0.0035	0.9		2995.37	2995.37		1.29	Si
SLV 1	ini.	-2183.05	1239	-0.001708	0.0002807	0.0035	0.9		2995.37	2995.37		1.37	Si
SLV 1	fin.	2975.52	-6706	-0.0031964	0.0002807	0.0035	0.9		2989.59	2989.59		1	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	3284.61	-11918	0.9	0	548	7137	5660	2295	7684		0.64	No
SLV 14	fin.	-2596.18	-9653	0.9	0	548	7137	5660	2295	7684		0.8	No
SLV 13	ini.	3066.73	-11121	0.9	0	548	7137	5660	2295	7684		0.69	No
SLV 13	fin.	-2373.43	-8821	0.9	0	548	7137	5660	2295	7684		0.87	No
SLV 3	ini.	-2262.39	8466	0.9	0	548	7137	5660	2295	7684		0.91	No
SLV 3	fin.	3030.66	11166	0.9	0	548	7137	5660	2295	7684		0.69	No
SLV 15	ini.	2987.4	-10815	0.9	0	548	7137	5660	2295	7684		0.71	No
SLV 15	fin.	-2318.28	-8766	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 1	ini.	-2183.05	8160	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 1	fin.	2975.52	11112	0.9	0	548	7137	5660	2295	7684		0.69	No
SLD 14	ini.	1697.41	-6085	0.9	0	548	7137	5660	2295	7684		1.26	Si
SLD 14	fin.	-985.88	-3695	0.9	0	548	7137	5660	2295	7684		2.08	Si
SLV 2	ini.	-1965.17	7364	0.9	0	548	7137	5660	2295	7684		1.04	Si
SLV 2	fin.	2752.76	10280	0.9	0	548	7137	5660	2295	7684		0.75	No
SLD 16	ini.	1662.63	-5951	0.9	0	548	7137	5660	2295	7684		1.29	Si
SLD 16	fin.	-961.9	-3670	0.9	0	548	7137	5660	2295	7684		2.09	Si
SLV 16	ini.	3205.27	-11612	0.9	0	548	7137	5660	2295	7684		0.66	No
SLV 16	fin.	-2541.04	-9598	0.9	0	548	7137	5660	2295	7684		0.8	No
SLV 4	ini.	-2044.51	7669	0.9	0	548	7137	5660	2295	7684		1	Si
SLV 4	fin.	2807.9	10334	0.9	0	548	7137	5660	2295	7684		0.74	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.91	SLV 14	No
V_SLV	0.645	SLV 14	No
PF_SLU	3.764	SLU 84	Si
V_SLU	2.305	SLU 84	Si

Trave di accoppiamento 79

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	7.53	8.35	0.82	-11.938	6.526	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-437.68	-2374	-0.0002925	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.62	Si
SLU 77	fin.	-675.26	-2948	-0.0004888	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.64	Si
SLU 81	ini.	-428.84	-2350	-0.0002857	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.74	Si
SLU 81	fin.	-691.87	-2974	-0.0005035	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.56	Si
SLU 74	ini.	-427.36	-2328	-0.0002846	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.76	Si
SLU 74	fin.	-672.15	-2915	-0.0004861	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.66	Si
SLU 84	ini.	-436.44	-2386	-0.0002916	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.64	Si
SLU 84	fin.	-697.04	-3007	-0.000508	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.53	Si
SLU 75	ini.	-424.64	-2319	-0.0002825	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.79	Si
SLU 75	fin.	-674.22	-2916	-0.0004879	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.65	Si
SLU 80	ini.	-429.84	-2331	-0.0002865	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.72	Si
SLU 80	fin.	-663.91	-2896	-0.0004789	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.71	Si
SLU 82	ini.	-426.12	-2340	-0.0002836	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.77	Si
SLU 82	fin.	-693.93	-2975	-0.0005053	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.55	Si
SLU 83	ini.	-439.16	-2396	-0.0002937	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.6	Si
SLU 83	fin.	-694.97	-3007	-0.0005062	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.54	Si
SLU 78	ini.	-434.96	-2365	-0.0002904	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.66	Si
SLU 78	fin.	-677.33	-2949	-0.0004907	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.63	Si
SLU 76	ini.	-417.71	-2279	-0.0002772	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.89	Si
SLU 76	fin.	-662.18	-2864	-0.0004774	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-426.12	2892	0.82	0	303	6502	3438	2091	5529	No	1.91	Si
SLU 82	fin.	-693.93	-3225	0.82	0	303	6502	3438	2091	5529	No	1.71	Si
SLU 79	ini.	-432.56	2907	0.82	0	303	6502	3438	2091	5529	No	1.9	Si
SLU 79	fin.	-661.85	-3098	0.82	0	303	6502	3438	2091	5529	No	1.78	Si
SLU 83	ini.	-439.16	2970	0.82	0	303	6502	3438	2091	5529	No	1.86	Si
SLU 83	fin.	-694.97	-3239	0.82	0	303	6502	3438	2091	5529	No	1.71	Si
SLU 78	ini.	-434.96	2929	0.82	0	303	6502	3438	2091	5529	No	1.89	Si
SLU 78	fin.	-677.33	-3162	0.82	0	303	6502	3438	2091	5529	No	1.75	Si
SLU 74	ini.	-427.36	2878	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 74	fin.	-672.15	-3132	0.82	0	303	6502	3438	2091	5529	No	1.77	Si
SLU 75	ini.	-424.64	2865	0.82	0	303	6502	3438	2091	5529	No	1.93	Si
SLU 75	fin.	-674.22	-3140	0.82	0	303	6502	3438	2091	5529	No	1.76	Si
SLU 77	ini.	-437.68	2942	0.82	0	303	6502	3438	2091	5529	No	1.88	Si
SLU 77	fin.	-675.26	-3154	0.82	0	303	6502	3438	2091	5529	No	1.75	Si
SLU 80	ini.	-429.84	2893	0.82	0	303	6502	3438	2091	5529	No	1.91	Si
SLU 80	fin.	-663.91	-3106	0.82	0	303	6502	3438	2091	5529	No	1.78	Si
SLU 81	ini.	-428.84	2906	0.82	0	303	6502	3438	2091	5529	No	1.9	Si
SLU 81	fin.	-691.87	-3217	0.82	0	303	6502	3438	2091	5529	No	1.72	Si
SLU 84	ini.	-436.44	2956	0.82	0	303	6502	3438	2091	5529	No	1.87	Si
SLU 84	fin.	-697.04	-3247	0.82	0	303	6502	3438	2091	5529	No	1.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	448.17	704	-0.000289	0.0002807	0.0035	0.82		2482.11	2482.11		5.54	Si
SLD 14	fin.	-1450.56	-3386	-0.0012223	0.0002807	0.0035	0.82		2487.45	2487.45		1.71	Si
SLV 2	ini.	-1857.03	-6402	-0.001779	0.0002807	0.0035	0.82		2487.45	2487.45		1.34	Si
SLV 2	fin.	1642.69	1017	-0.0014685	0.0002807	0.0035	0.82		2482.11	2482.11		1.51	Si
SLV 13	ini.	1293.94	3306	-0.0010474	0.0002807	0.0035	0.82		2482.11	2482.11		1.92	Si
SLV 13	fin.	-2607.95	-5054	-0.0035793	0.0002807	0.0035	0.82		2487.45	2487.45		0.95	No
SLV 4	ini.	-1866.94	-6419	-0.0017952	0.0002807	0.0035	0.82		2487.45	2487.45		1.33	Si
SLV 4	fin.	1712.98	1169	-0.0015659	0.0002807	0.0035	0.82		2482.11	2482.11		1.45	Si
SLV 3	ini.	-2004.37	-6842	-0.0020377	0.0002807	0.0035	0.82		2487.45	2487.45		1.24	Si
SLV 3	fin.	1897.31	1431	-0.0018521	0.0002807	0.0035	0.82		2482.11	2482.11		1.31	Si
SLV 15	ini.	1284.03	3289	-0.0010367	0.0002807	0.0035	0.82		2482.11	2482.11		1.93	Si
SLV 15	fin.	-2537.66	-4902	-0.0033809	0.0002807	0.0035	0.82		2487.45	2487.45		0.98	No
SLV 1	ini.	-1994.46	-6826	-0.0020189	0.0002807	0.0035	0.82		2487.45	2487.45		1.25	Si
SLV 1	fin.	1827.01	1278	-0.0017368	0.0002807	0.0035	0.82		2482.11	2482.11		1.36	Si
SLV 14	ini.	1431.36	3730	-0.001203	0.0002807	0.0035	0.82		2482.11	2482.11		1.73	Si
SLV 14	fin.	-2792.28	-5316	-0.0040628	0.0002807	0.0035	0.82		2487.45	2487.45		0.89	No
SLV 16	ini.	1421.45	3713	-0.0011914	0.0002807	0.0035	0.82		2482.11	2482.11		1.75	Si
SLV 16	fin.	-2721.98	-5163	-0.0038835	0.0002807	0.0035	0.82		2487.45	2487.45		0.91	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	443.76	697	-0.0002858	0.0002807	0.0035	0.82		2482.11	2482.11		5.59	Si
SLD 16	fin.	-1419.76	-3319	-0.0011861	0.0002807	0.0035	0.82		2487.45	2487.45		1.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-1857.03	9862	0.82	0	455	6502	5156	2091	6957		0.71	No
SLV 2	fin.	1642.69	5400	0.82	0	455	6502	5156	2091	6957		1.29	Si
SLV 13	ini.	1293.94	-5957	0.82	0	455	6502	5156	2091	6957		1.17	Si
SLV 13	fin.	-2607.95	-9809	0.82	0	455	6502	5156	2091	6957		0.71	No
SLV 3	ini.	-2004.37	10487	0.82	0	455	6502	5156	2091	6957		0.66	No
SLV 3	fin.	1897.31	6291	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLV 16	ini.	1421.45	-6724	0.82	0	455	6502	5156	2091	6957		1.03	Si
SLV 16	fin.	-2721.98	-10239	0.82	0	455	6502	5156	2091	6957		0.68	No
SLD 1	ini.	-1016.77	5612	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLD 1	fin.	524.79	1394	0.82	0	455	6502	5156	2091	6957		4.99	Si
SLD 14	ini.	448.17	-1748	0.82	0	455	6502	5156	2091	6957		3.98	Si
SLD 14	fin.	-1450.56	-5675	0.82	0	455	6502	5156	2091	6957		1.23	Si
SLV 4	ini.	-1866.94	9791	0.82	0	455	6502	5156	2091	6957		0.71	No
SLV 4	fin.	1712.98	5630	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 14	ini.	1431.36	-6653	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 14	fin.	-2792.28	-10469	0.82	0	455	6502	5156	2091	6957		0.66	No
SLV 1	ini.	-1994.46	10558	0.82	0	455	6502	5156	2091	6957		0.66	No
SLV 1	fin.	1827.01	6061	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLV 15	ini.	1284.03	-6028	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLV 15	fin.	-2537.66	-9579	0.82	0	455	6502	5156	2091	6957		0.73	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.891	SLV 14	No
V_SLV	0.659	SLV 1	No
PF_SLU	3.53	SLU 84	Si
V_SLU	1.703	SLU 84	Si

Trave di accoppiamento 80

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	4.83	5.73	0.9	-7.058	6.526	4.83	5.73	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-11.38	-2145	-0.0000056	0.0001872	0.0035	0.9		2964.67	2964.67	No	260.58	Si
SLU 78	fin.	753.05	-3016	-0.0004464	0.0001872	0.0035	0.9		2959	2959	No	3.93	Si
SLU 79	ini.	-19.85	-2104	-0.0000097	0.0001872	0.0035	0.9		2964.67	2964.67	No	149.37	Si
SLU 79	fin.	751.54	-2989	-0.0004453	0.0001872	0.0035	0.9		2959	2959	No	3.94	Si
SLU 80	ini.	-15.74	-2108	-0.0000077	0.0001872	0.0035	0.9		2964.67	2964.67	No	188.4	Si
SLU 80	fin.	745.58	-2978	-0.0004411	0.0001872	0.0035	0.9		2959	2959	No	3.97	Si
SLU 74	ini.	-24.07	-2100	-0.0000118	0.0001872	0.0035	0.9		2964.67	2964.67	No	123.19	Si
SLU 74	fin.	757.27	-3001	-0.0004494	0.0001872	0.0035	0.9		2959	2959	No	3.91	Si
SLU 84	ini.	-14.74	-2172	-0.0000072	0.0001872	0.0035	0.9		2964.67	2964.67	No	201.17	Si
SLU 84	fin.	764.33	-3061	-0.0004544	0.0001872	0.0035	0.9		2959	2959	No	3.87	Si
SLU 83	ini.	-18.85	-2168	-0.0000092	0.0001872	0.0035	0.9		2964.67	2964.67	No	157.28	Si
SLU 83	fin.	770.29	-3072	-0.0004587	0.0001872	0.0035	0.9		2959	2959	No	3.84	Si
SLU 81	ini.	-27.43	-2127	-0.0000135	0.0001872	0.0035	0.9		2964.67	2964.67	No	108.1	Si
SLU 81	fin.	768.55	-3045	-0.0004575	0.0001872	0.0035	0.9		2959	2959	No	3.85	Si
SLU 82	ini.	-23.31	-2131	-0.0000114	0.0001872	0.0035	0.9		2964.67	2964.67	No	127.17	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	762.59	-3034	-0.0004532	0.0001872	0.0035	0.9		2959	2959	No	3.88	Si
SLU 77	ini.	-15.49	-2141	-0.0000076	0.0001872	0.0035	0.9		2964.67	2964.67	No	191.4	Si
SLU 77	fin.	759.01	-3028	-0.0004506	0.0001872	0.0035	0.9		2959	2959	No	3.9	Si
SLU 75	ini.	-19.95	-2105	-0.0000098	0.0001872	0.0035	0.9		2964.67	2964.67	No	148.58	Si
SLU 75	fin.	751.3	-2989	-0.0004451	0.0001872	0.0035	0.9		2959	2959	No	3.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-15.74	-315	0.9	0	365	7137	3773	2295	6068	No	19.24	Si
SLU 80	fin.	745.58	2731	0.9	0	365	7137	3773	2295	6068	No	2.22	Si
SLU 84	ini.	-14.74	-308	0.9	0	365	7137	3773	2295	6068	No	19.69	Si
SLU 84	fin.	764.33	2779	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 83	ini.	-18.85	-292	0.9	0	365	7137	3773	2295	6068	No	20.75	Si
SLU 83	fin.	770.29	2801	0.9	0	365	7137	3773	2295	6068	No	2.17	Si
SLU 81	ini.	-27.43	-247	0.9	0	365	7137	3773	2295	6068	No	24.54	Si
SLU 81	fin.	768.55	2785	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 78	ini.	-11.38	-341	0.9	0	365	7137	3773	2295	6068	No	17.78	Si
SLU 78	fin.	753.05	2764	0.9	0	365	7137	3773	2295	6068	No	2.2	Si
SLU 77	ini.	-15.49	-326	0.9	0	365	7137	3773	2295	6068	No	18.64	Si
SLU 77	fin.	759.01	2786	0.9	0	365	7137	3773	2295	6068	No	2.18	Si
SLU 74	ini.	-24.07	-280	0.9	0	365	7137	3773	2295	6068	No	21.64	Si
SLU 74	fin.	757.27	2770	0.9	0	365	7137	3773	2295	6068	No	2.19	Si
SLU 79	ini.	-19.85	-300	0.9	0	365	7137	3773	2295	6068	No	20.25	Si
SLU 79	fin.	751.54	2753	0.9	0	365	7137	3773	2295	6068	No	2.2	Si
SLU 75	ini.	-19.95	-296	0.9	0	365	7137	3773	2295	6068	No	20.5	Si
SLU 75	fin.	751.3	2748	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 82	ini.	-23.31	-263	0.9	0	365	7137	3773	2295	6068	No	23.08	Si
SLU 82	fin.	762.59	2763	0.9	0	365	7137	3773	2295	6068	No	2.2	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	2095.16	-5154	-0.0016033	0.0002807	0.0035	0.9		2989.59	2989.59		1.43	Si
SLV 13	fin.	-1397.95	256	-0.0009042	0.0002807	0.0035	0.9		2995.37	2995.37		2.14	Si
SLV 14	ini.	2295.31	-5498	-0.0018654	0.0002807	0.0035	0.9		2989.59	2989.59		1.3	Si
SLV 14	fin.	-1585.27	501	-0.0010687	0.0002807	0.0035	0.9		2995.37	2995.37		1.89	Si
SLV 16	ini.	2220.58	-5333	-0.0017624	0.0002807	0.0035	0.9		2989.59	2989.59		1.35	Si
SLV 16	fin.	-1603.51	770	-0.0010854	0.0002807	0.0035	0.9		2995.37	2995.37		1.87	Si
SLV 1	ini.	-2309.52	2571	-0.0018797	0.0002807	0.0035	0.9		2995.37	2995.37		1.3	Si
SLV 1	fin.	2686.02	-4921	-0.002533	0.0002807	0.0035	0.9		2989.59	2989.59		1.11	Si
SLV 15	ini.	2020.43	-4989	-0.0015153	0.0002807	0.0035	0.9		2989.59	2989.59		1.48	Si
SLV 15	fin.	-1416.19	525	-0.0009196	0.0002807	0.0035	0.9		2995.37	2995.37		2.12	Si
SLV 2	ini.	-2109.38	2227	-0.0016159	0.0002807	0.0035	0.9		2995.37	2995.37		1.42	Si
SLV 2	fin.	2498.7	-4676	-0.0021834	0.0002807	0.0035	0.9		2989.59	2989.59		1.2	Si
SLV 4	ini.	-2184.1	2392	-0.0017093	0.0002807	0.0035	0.9		2995.37	2995.37		1.37	Si
SLV 4	fin.	2480.46	-4407	-0.0021524	0.0002807	0.0035	0.9		2989.59	2989.59		1.21	Si
SLD 1	ini.	-1012.51	308	-0.0006013	0.0002807	0.0035	0.9		2995.37	2995.37		2.96	Si
SLD 1	fin.	1458.07	-3292	-0.0009579	0.0002807	0.0035	0.9		2989.59	2989.59		2.05	Si
SLV 3	ini.	-2384.25	2736	-0.0019905	0.0002807	0.0035	0.9		2995.37	2995.37		1.26	Si
SLV 3	fin.	2667.78	-4652	-0.0024963	0.0002807	0.0035	0.9		2989.59	2989.59		1.12	Si
SLD 3	ini.	-1044.9	380	-0.0006251	0.0002807	0.0035	0.9		2995.37	2995.37		2.87	Si
SLD 3	fin.	1450.25	-3177	-0.0009512	0.0002807	0.0035	0.9		2989.59	2989.59		2.06	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	2220.58	-8924	0.9	0	548	7137	5660	2295	7684		0.86	No
SLV 16	fin.	-1603.51	-5564	0.9	0	548	7137	5660	2295	7684		1.38	Si
SLD 1	ini.	-1012.51	3680	0.9	0	548	7137	5660	2295	7684		2.09	Si
SLD 1	fin.	1458.07	5211	0.9	0	548	7137	5660	2295	7684		1.47	Si
SLV 2	ini.	-2109.38	7975	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 2	fin.	2498.7	8868	0.9	0	548	7137	5660	2295	7684		0.87	No
SLV 15	ini.	2020.43	-8163	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 15	fin.	-1416.19	-4900	0.9	0	548	7137	5660	2295	7684		1.57	Si
SLV 4	ini.	-2184.1	8117	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 4	fin.	2480.46	8778	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 1	ini.	-2309.52	8736	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 1	fin.	2686.02	9532	0.9	0	548	7137	5660	2295	7684		0.81	No
SLV 3	ini.	-2384.25	8877	0.9	0	548	7137	5660	2295	7684		0.87	No
SLV 3	fin.	2667.78	9442	0.9	0	548	7137	5660	2295	7684		0.81	No
SLD 3	ini.	-1044.9	3742	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLD 3	fin.	1450.25	5172	0.9	0	548	7137	5660	2295	7684		1.49	Si
SLV 14	ini.	2295.31	-9065	0.9	0	548	7137	5660	2295	7684		0.85	No
SLV 14	fin.	-1585.27	-5473	0.9	0	548	7137	5660	2295	7684		1.4	Si
SLV 13	ini.	2095.16	-8305	0.9	0	548	7137	5660	2295	7684		0.93	No
SLV 13	fin.	-1397.95	-4810	0.9	0	548	7137	5660	2295	7684		1.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.113	SLV 1	Si
V_SLV	0.806	SLV 1	No
PF_SLU	3.841	SLU 83	Si
V_SLU	2.167	SLU 83	Si

Trave di accoppiamento 81

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	7.53	8.35	0.82	-7.058	6.526	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-710.15	-3000	-0.0005197	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.46	Si
SLU 80	fin.	-94.15	-1091	-0.0000566	0.0001872	0.0035	0.82		2460.51	2460.51	No	26.13	Si
SLU 75	ini.	-715.18	-3013	-0.0005242	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.44	Si
SLU 75	fin.	-90.03	-1085	-0.0000541	0.0001872	0.0035	0.82		2460.51	2460.51	No	27.33	Si
SLU 74	ini.	-717.69	-3020	-0.0005264	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.43	Si
SLU 74	fin.	-88.16	-1083	-0.0000529	0.0001872	0.0035	0.82		2460.51	2460.51	No	27.91	Si
SLU 77	ini.	-721.52	-3051	-0.0005299	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.41	Si
SLU 77	fin.	-96.99	-1115	-0.0000584	0.0001872	0.0035	0.82		2460.51	2460.51	No	25.37	Si
SLU 82	ini.	-727.13	-3059	-0.0005349	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.38	Si
SLU 82	fin.	-90.67	-1095	-0.0000545	0.0001872	0.0035	0.82		2460.51	2460.51	No	27.14	Si
SLU 78	ini.	-719.01	-3043	-0.0005276	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.42	Si
SLU 78	fin.	-98.86	-1117	-0.0000595	0.0001872	0.0035	0.82		2460.51	2460.51	No	24.89	Si
SLU 84	ini.	-730.97	-3090	-0.0005384	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.37	Si
SLU 84	fin.	-99.49	-1127	-0.0000599	0.0001872	0.0035	0.82		2460.51	2460.51	No	24.73	Si
SLU 81	ini.	-729.64	-3066	-0.0005372	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.37	Si
SLU 81	fin.	-88.79	-1092	-0.0000533	0.0001872	0.0035	0.82		2460.51	2460.51	No	27.71	Si
SLU 83	ini.	-733.48	-3097	-0.0005406	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.35	Si
SLU 83	fin.	-97.62	-1124	-0.0000588	0.0001872	0.0035	0.82		2460.51	2460.51	No	25.2	Si
SLU 79	ini.	-712.66	-3007	-0.0005219	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.45	Si
SLU 79	fin.	-92.28	-1089	-0.0000555	0.0001872	0.0035	0.82		2460.51	2460.51	No	26.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-729.64	4703	0.82	0	303	6502	3438	2091	5529	No	1.18	Si
SLU 81	fin.	-88.79	-990	0.82	0	303	6502	3438	2091	5529	No	5.59	Si
SLU 79	ini.	-712.66	4593	0.82	0	303	6502	3438	2091	5529	No	1.2	Si
SLU 79	fin.	-92.28	-987	0.82	0	303	6502	3438	2091	5529	No	5.6	Si
SLU 74	ini.	-717.69	4615	0.82	0	303	6502	3438	2091	5529	No	1.2	Si
SLU 74	fin.	-88.16	-970	0.82	0	303	6502	3438	2091	5529	No	5.7	Si
SLU 83	ini.	-733.48	4739	0.82	0	303	6502	3438	2091	5529	No	1.17	Si
SLU 83	fin.	-97.62	-1030	0.82	0	303	6502	3438	2091	5529	No	5.37	Si
SLU 75	ini.	-715.18	4604	0.82	0	303	6502	3438	2091	5529	No	1.2	Si
SLU 75	fin.	-90.03	-979	0.82	0	303	6502	3438	2091	5529	No	5.65	Si
SLU 80	ini.	-710.15	4582	0.82	0	303	6502	3438	2091	5529	No	1.21	Si
SLU 80	fin.	-94.15	-995	0.82	0	303	6502	3438	2091	5529	No	5.56	Si
SLU 77	ini.	-721.52	4651	0.82	0	303	6502	3438	2091	5529	No	1.19	Si
SLU 77	fin.	-96.99	-1011	0.82	0	303	6502	3438	2091	5529	No	5.47	Si
SLU 78	ini.	-719.01	4640	0.82	0	303	6502	3438	2091	5529	No	1.19	Si
SLU 78	fin.	-98.86	-1019	0.82	0	303	6502	3438	2091	5529	No	5.43	Si
SLU 82	ini.	-727.13	4692	0.82	0	303	6502	3438	2091	5529	No	1.18	Si
SLU 82	fin.	-90.67	-998	0.82	0	303	6502	3438	2091	5529	No	5.54	Si
SLU 84	ini.	-730.97	4728	0.82	0	303	6502	3438	2091	5529	No	1.17	Si
SLU 84	fin.	-99.49	-1038	0.82	0	303	6502	3438	2091	5529	No	5.33	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	967.06	1416	-0.0007177	0.0002807	0.0035	0.82		2482.11	2482.11		2.57	Si
SLV 16	fin.	-1598.75	-3721	-0.001406	0.0002807	0.0035	0.82		2487.45	2487.45		1.56	Si
SLV 3	ini.	-1939.57	-5352	-0.0019188	0.0002807	0.0035	0.82		2487.45	2487.45		1.28	Si
SLV 3	fin.	1583.58	2528	-0.0013905	0.0002807	0.0035	0.82		2482.11	2482.11		1.57	Si
SLV 1	ini.	-1969.37	-5548	-0.0019724	0.0002807	0.0035	0.82		2487.45	2487.45		1.26	Si
SLV 1	fin.	1530.56	2371	-0.0013232	0.0002807	0.0035	0.82		2482.11	2482.11		1.62	Si
SLV 15	ini.	836.31	1107	-0.0005991	0.0002807	0.0035	0.82		2482.11	2482.11		2.97	Si
SLV 15	fin.	-1458.17	-3451	-0.0012313	0.0002807	0.0035	0.82		2487.45	2487.45		1.71	Si
SLV 13	ini.	806.51	911	-0.0005731	0.0002807	0.0035	0.82		2482.11	2482.11		3.08	Si
SLV 13	fin.	-1511.18	-3607	-0.0012954	0.0002807	0.0035	0.82		2487.45	2487.45		1.65	Si
SLD 3	ini.	-1116	-3470	-0.0008594	0.0002807	0.0035	0.82		2487.45	2487.45		2.23	Si
SLD 3	fin.	657.65	695	-0.0004485	0.0002807	0.0035	0.82		2482.11	2482.11		3.77	Si
SLD 1	ini.	-1128.9	-3555	-0.0008723	0.0002807	0.0035	0.82		2487.45	2487.45		2.2	Si
SLD 1	fin.	634.69	627	-0.0004301	0.0002807	0.0035	0.82		2482.11	2482.11		3.91	Si
SLV 2	ini.	-1838.61	-5239	-0.0017494	0.0002807	0.0035	0.82		2487.45	2487.45		1.35	Si
SLV 2	fin.	1389.98	2101	-0.001155	0.0002807	0.0035	0.82		2482.11	2482.11		1.79	Si
SLV 14	ini.	937.26	1220	-0.00069	0.0002807	0.0035	0.82		2482.11	2482.11		2.65	Si
SLV 14	fin.	-1651.76	-3878	-0.0014763	0.0002807	0.0035	0.82		2487.45	2487.45		1.51	Si
SLV 4	ini.	-1808.82	-5043	-0.0017027	0.0002807	0.0035	0.82		2487.45	2487.45		1.38	Si
SLV 4	fin.	1443	2257	-0.0012168	0.0002807	0.0035	0.82		2482.11	2482.11		1.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-1939.57	9404	0.82	0	455	6502	5156	2091	6957		0.74	No
SLV 3	fin.	1583.58	5897	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLD 3	ini.	-1116	5838	0.82	0	455	6502	5156	2091	6957		1.19	Si
SLD 3	fin.	657.65	2200	0.82	0	455	6502	5156	2091	6957		3.16	Si
SLV 1	ini.	-1969.37	9536	0.82	0	455	6502	5156	2091	6957		0.73	No
SLV 1	fin.	1530.56	5736	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLV 13	ini.	806.51	-2474	0.82	0	455	6502	5156	2091	6957		2.81	Si
SLV 13	fin.	-1511.18	-6460	0.82	0	455	6502	5156	2091	6957		1.08	Si
SLV 14	ini.	937.26	-3050	0.82	0	455	6502	5156	2091	6957		2.28	Si
SLV 14	fin.	-1651.76	-7021	0.82	0	455	6502	5156	2091	6957		0.99	No
SLV 4	ini.	-1808.82	8828	0.82	0	455	6502	5156	2091	6957		0.79	No
SLV 4	fin.	1443	5337	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLD 1	ini.	-1128.9	5896	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLD 1	fin.	634.69	2130	0.82	0	455	6502	5156	2091	6957		3.27	Si
SLV 2	ini.	-1838.61	8960	0.82	0	455	6502	5156	2091	6957		0.78	No
SLV 2	fin.	1389.98	5176	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLV 16	ini.	967.06	-3183	0.82	0	455	6502	5156	2091	6957		2.19	Si
SLV 16	fin.	-1598.75	-6860	0.82	0	455	6502	5156	2091	6957		1.01	Si
SLV 15	ini.	836.31	-2606	0.82	0	455	6502	5156	2091	6957		2.67	Si
SLV 15	fin.	-1458.17	-6300	0.82	0	455	6502	5156	2091	6957		1.1	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.263	SLV 1	Si
V_SLV	0.73	SLV 1	No
PF_SLU	3.355	SLU 83	Si
V_SLU	1.167	SLU 83	Si

Trave di accoppiamento 82

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	6.93	8.35	1.42	-19.443	1.006	6.93	8.35	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-667.6	-5170	-0.0001372	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.3	Si
SLU 69	fin.	-90.36	-4846	-0.0000178	0.0002246	0.0035	1.42		7545.1	7545.1	No	83.5	Si
SLU 71	ini.	-676.66	-5094	-0.0001392	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.15	Si
SLU 71	fin.	-73.25	-4756	-0.0000144	0.0002246	0.0035	1.42		7545.1	7545.1	No	103.01	Si
SLU 65	ini.	-666.69	-4904	-0.000137	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.32	Si
SLU 65	fin.	-61.27	-4562	-0.0000121	0.0002246	0.0035	1.42		7545.1	7545.1	No	123.15	Si
SLU 51	ini.	-670.51	-4558	-0.0001378	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.25	Si
SLU 51	fin.	-0.5	-4186	-0.0000001	0.0002246	0.0035	1.42		7545.1	7545.1	No	14972.81	Si
SLU 72	ini.	-680.38	-5101	-0.00014	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.09	Si
SLU 72	fin.	-69.23	-4757	-0.0000136	0.0002246	0.0035	1.42		7545.1	7545.1	No	108.98	Si
SLU 70	ini.	-671.32	-5176	-0.000138	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.24	Si
SLU 70	fin.	-86.34	-4847	-0.000017	0.0002246	0.0035	1.42		7545.1	7545.1	No	87.38	Si
SLU 68	ini.	-674.78	-5004	-0.0001388	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.18	Si
SLU 68	fin.	-63.91	-4660	-0.0000126	0.0002246	0.0035	1.42		7545.1	7545.1	No	118.05	Si
SLU 50	ini.	-666.79	-4552	-0.000137	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.32	Si
SLU 50	fin.	-4.52	-4185	-0.0000009	0.0002246	0.0035	1.42		7545.1	7545.1	No	1669.99	Si
SLU 67	ini.	-663.24	-5076	-0.0001363	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.38	Si
SLU 67	fin.	-83.7	-4749	-0.0000165	0.0002246	0.0035	1.42		7545.1	7545.1	No	90.14	Si
SLU 47	ini.	-664.91	-4461	-0.0001366	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.35	Si
SLU 47	fin.	4.82	-4089	-0.0000009	0.0002246	0.0035	1.42		7536.27	7536.27	No	1564.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 47	ini.	-664.91	1843	1.42	0	576	6344	7144	3621	6920	No	3.75	Si
SLU 47	fin.	4.82	568	1.42	0	576	6344	7144	3621	6920	No	12.19	Si
SLU 71	ini.	-676.66	1914	1.42	0	576	6344	7144	3621	6920	No	3.62	Si
SLU 71	fin.	-73.25	271	1.42	0	576	6344	7144	3621	6920	No	25.57	Si
SLU 70	ini.	-671.32	1883	1.42	0	576	6344	7144	3621	6920	No	3.68	Si
SLU 70	fin.	-86.34	240	1.42	0	576	6344	7144	3621	6920	No	28.89	Si
SLU 67	ini.	-663.24	1874	1.42	0	576	6344	7144	3621	6920	No	3.69	Si
SLU 67	fin.	-83.7	230	1.42	0	576	6344	7144	3621	6920	No	30.03	Si
SLU 65	ini.	-666.69	1919	1.42	0	576	6344	7144	3621	6920	No	3.61	Si
SLU 65	fin.	-61.27	276	1.42	0	576	6344	7144	3621	6920	No	25.1	Si
SLU 72	ini.	-680.38	1928	1.42	0	576	6344	7144	3621	6920	No	3.59	Si
SLU 72	fin.	-69.23	285	1.42	0	576	6344	7144	3621	6920	No	24.32	Si
SLU 68	ini.	-674.78	1928	1.42	0	576	6344	7144	3621	6920	No	3.59	Si
SLU 68	fin.	-63.91	285	1.42	0	576	6344	7144	3621	6920	No	24.3	Si
SLU 66	ini.	-659.51	1860	1.42	0	576	6344	7144	3621	6920	No	3.72	Si
SLU 66	fin.	-87.71	217	1.42	0	576	6344	7144	3621	6920	No	31.96	Si
SLU 64	ini.	-660.49	1896	1.42	0	576	6344	7144	3621	6920	No	3.65	Si
SLU 64	fin.	-67.96	253	1.42	0	576	6344	7144	3621	6920	No	27.4	Si
SLU 69	ini.	-667.6	1869	1.42	0	576	6344	7144	3621	6920	No	3.7	Si
SLU 69	fin.	-90.36	226	1.42	0	576	6344	7144	3621	6920	No	30.67	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	4819.55	-2281	-0.0013708	0.0003369	0.0035	1.42		7270.13	7270.13		1.51	Si
SLV 2	fin.	-6001.96	-8143	-0.0019488	0.0003369	0.0035	1.42		7279.66	7279.66		1.21	Si
SLV 4	ini.	4922.13	-2573	-0.0014141	0.0003369	0.0035	1.42		7270.13	7270.13		1.48	Si
SLV 4	fin.	-5995.92	-8480	-0.0019452	0.0003369	0.0035	1.42		7279.66	7279.66		1.21	Si
SLD 14	ini.	-2831.45	-4330	-0.0006748	0.0003369	0.0035	1.42		7279.66	7279.66		2.57	Si
SLD 14	fin.	2478.83	-1439	-0.0005742	0.0003369	0.0035	1.42		7270.13	7270.13		2.93	Si
SLV 14	ini.	-5973.71	-5061	-0.0019322	0.0003369	0.0035	1.42		7279.66	7279.66		1.22	Si
SLV 14	fin.	5914.97	1399	-0.0019022	0.0003369	0.0035	1.42		7270.13	7270.13		1.23	Si
SLD 13	ini.	-2795.39	-4303	-0.0006642	0.0003369	0.0035	1.42		7279.66	7279.66		2.6	Si
SLD 13	fin.	2439.17	-1456	-0.0005631	0.0003369	0.0035	1.42		7270.13	7270.13		2.98	Si
SLV 16	ini.	-5871.12	-5352	-0.0018734	0.0003369	0.0035	1.42		7279.66	7279.66		1.24	Si
SLV 16	fin.	5921.01	1062	-0.0019057	0.0003369	0.0035	1.42		7270.13	7270.13		1.23	Si
SLV 13	ini.	-5889.75	-4999	-0.0018839	0.0003369	0.0035	1.42		7279.66	7279.66		1.24	Si
SLV 13	fin.	5822.63	1359	-0.0018501	0.0003369	0.0035	1.42		7270.13	7270.13		1.25	Si
SLV 15	ini.	-5787.17	-5290	-0.0018268	0.0003369	0.0035	1.42		7279.66	7279.66		1.26	Si
SLV 15	fin.	5828.67	1022	-0.0018534	0.0003369	0.0035	1.42		7270.13	7270.13		1.25	Si
SLV 1	ini.	4903.51	-2219	-0.0014062	0.0003369	0.0035	1.42		7270.13	7270.13		1.48	Si
SLV 1	fin.	-6094.29	-8183	-0.0020042	0.0003369	0.0035	1.42		7279.66	7279.66		1.19	Si
SLV 3	ini.	5006.09	-2511	-0.0014503	0.0003369	0.0035	1.42		7270.13	7270.13		1.45	Si
SLV 3	fin.	-6088.26	-8520	-0.0020005	0.0003369	0.0035	1.42		7279.66	7279.66		1.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-5973.71	21255	1.42	0	864	6344	10717	3621	7208		0.34	No
SLV 14	fin.	5914.97	19678	1.42	0	864	6344	10717	3621	7208		0.37	No
SLV 16	ini.	-5871.12	20872	1.42	0	864	6344	10717	3621	7208		0.35	No
SLV 16	fin.	5921.01	19858	1.42	0	864	6344	10717	3621	7208		0.36	No
SLV 4	ini.	4922.13	-18192	1.42	0	864	6344	10717	3621	7208		0.4	No
SLV 4	fin.	-5995.92	-19218	1.42	0	864	6344	10717	3621	7208		0.38	No
SLV 3	ini.	5006.09	-18503	1.42	0	864	6344	10717	3621	7208		0.39	No
SLV 3	fin.	-6088.26	-19529	1.42	0	864	6344	10717	3621	7208		0.37	No
SLV 13	ini.	-5889.75	20944	1.42	0	864	6344	10717	3621	7208		0.34	No
SLV 13	fin.	5822.63	19367	1.42	0	864	6344	10717	3621	7208		0.37	No
SLD 13	ini.	-2795.39	9743	1.42	0	864	6344	10717	3621	7208		0.74	No
SLD 13	fin.	2439.17	8320	1.42	0	864	6344	10717	3621	7208		0.87	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	4819.55	-17809	1.42	0	864	6344	10717	3621	7208		0.4	No
SLV 2	fin.	-6001.96	-19397	1.42	0	864	6344	10717	3621	7208		0.37	No
SLV 1	ini.	4903.51	-18120	1.42	0	864	6344	10717	3621	7208		0.4	No
SLV 1	fin.	-6094.29	-19709	1.42	0	864	6344	10717	3621	7208		0.37	No
SLV 15	ini.	-5787.17	20561	1.42	0	864	6344	10717	3621	7208		0.35	No
SLV 15	fin.	5828.67	19547	1.42	0	864	6344	10717	3621	7208		0.37	No
SLD 14	ini.	-2831.45	9877	1.42	0	864	6344	10717	3621	7208		0.73	No
SLD 14	fin.	2478.83	8454	1.42	0	864	6344	10717	3621	7208		0.85	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.195	SLV 1	Si
V_SLV	0.339	SLV 14	No
PF_SLU	11.089	SLU 72	Si
V_SLU	3.589	SLU 68	Si

Trave di accoppiamento 83

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	6.93	8.35	1.42	-14.963	1.006	6.93	8.35	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 53	ini.	90.98	-4264	-0.000018	0.0002246	0.0035	1.42		7536.27	7536.27	No	82.84	Si
SLU 53	fin.	-752.06	-4719	-0.0001556	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.03	Si
SLU 55	ini.	93.46	-4183	-0.0000184	0.0002246	0.0035	1.42		7536.27	7536.27	No	80.63	Si
SLU 55	fin.	-749.85	-4636	-0.0001552	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.06	Si
SLU 52	ini.	109.41	-4089	-0.0000216	0.0002246	0.0035	1.42		7536.27	7536.27	No	68.88	Si
SLU 52	fin.	-761.73	-4558	-0.0001578	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.91	Si
SLU 63	ini.	114.04	-4378	-0.0000225	0.0002246	0.0035	1.42		7536.27	7536.27	No	66.08	Si
SLU 63	fin.	-807.89	-4875	-0.000168	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.34	Si
SLU 54	ini.	93.26	-4261	-0.0000184	0.0002246	0.0035	1.42		7536.27	7536.27	No	80.81	Si
SLU 54	fin.	-754.79	-4718	-0.0001562	0.0002246	0.0035	1.42		7545.1	7545.1	No	10	Si
SLU 62	ini.	111.76	-4380	-0.0000221	0.0002246	0.0035	1.42		7536.27	7536.27	No	67.43	Si
SLU 62	fin.	-805.16	-4875	-0.0001674	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.37	Si
SLU 56	ini.	75.03	-4358	-0.0000148	0.0002246	0.0035	1.42		7536.27	7536.27	No	100.45	Si
SLU 56	fin.	-740.19	-4797	-0.000153	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.19	Si
SLU 60	ini.	127.71	-4286	-0.0000253	0.0002246	0.0035	1.42		7536.27	7536.27	No	59.01	Si
SLU 60	fin.	-817.04	-4797	-0.00017	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.23	Si
SLU 57	ini.	77.31	-4356	-0.0000152	0.0002246	0.0035	1.42		7536.27	7536.27	No	97.48	Si
SLU 57	fin.	-742.91	-4797	-0.0001536	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.16	Si
SLU 61	ini.	129.99	-4283	-0.0000257	0.0002246	0.0035	1.42		7536.27	7536.27	No	57.98	Si
SLU 61	fin.	-819.76	-4796	-0.0001706	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 53	ini.	90.98	-596	1.42	0	576	6344	7144	3621	6920	No	11.61	Si
SLU 53	fin.	-752.06	-2324	1.42	0	576	6344	7144	3621	6920	No	2.98	Si
SLU 63	ini.	114.04	-643	1.42	0	576	6344	7144	3621	6920	No	10.76	Si
SLU 63	fin.	-807.89	-2548	1.42	0	576	6344	7144	3621	6920	No	2.72	Si
SLU 61	ini.	129.99	-692	1.42	0	576	6344	7144	3621	6920	No	10	Si
SLU 61	fin.	-819.76	-2597	1.42	0	576	6344	7144	3621	6920	No	2.66	Si
SLU 62	ini.	111.76	-636	1.42	0	576	6344	7144	3621	6920	No	10.89	Si
SLU 62	fin.	-805.16	-2540	1.42	0	576	6344	7144	3621	6920	No	2.72	Si
SLU 55	ini.	93.46	-595	1.42	0	576	6344	7144	3621	6920	No	11.63	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 55	fin.	-749.85	-2323	1.42	0	576	6344	7144	3621	6920	No	2.98	Si
SLU 56	ini.	75.03	-547	1.42	0	576	6344	7144	3621	6920	No	12.65	Si
SLU 56	fin.	-740.19	-2275	1.42	0	576	6344	7144	3621	6920	No	3.04	Si
SLU 57	ini.	77.31	-555	1.42	0	576	6344	7144	3621	6920	No	12.47	Si
SLU 57	fin.	-742.91	-2283	1.42	0	576	6344	7144	3621	6920	No	3.03	Si
SLU 60	ini.	127.71	-685	1.42	0	576	6344	7144	3621	6920	No	10.11	Si
SLU 60	fin.	-817.04	-2589	1.42	0	576	6344	7144	3621	6920	No	2.67	Si
SLU 54	ini.	93.26	-604	1.42	0	576	6344	7144	3621	6920	No	11.46	Si
SLU 54	fin.	-754.79	-2332	1.42	0	576	6344	7144	3621	6920	No	2.97	Si
SLU 52	ini.	109.41	-644	1.42	0	576	6344	7144	3621	6920	No	10.75	Si
SLU 52	fin.	-761.73	-2372	1.42	0	576	6344	7144	3621	6920	No	2.92	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3699.05	-5193	-0.0009507	0.0003369	0.0035	1.42		7270.13	7270.13		1.97	Si
SLV 2	fin.	-6127.61	-9932	-0.0020246	0.0003369	0.0035	1.42		7279.66	7279.66		1.19	Si
SLV 3	ini.	3957.75	-5249	-0.0010403	0.0003369	0.0035	1.42		7270.13	7270.13		1.84	Si
SLV 3	fin.	-6336.42	-10255	-0.0021582	0.0003369	0.0035	1.42		7279.66	7279.66		1.15	Si
SLV 1	ini.	3705.18	-5184	-0.0009528	0.0003369	0.0035	1.42		7270.13	7270.13		1.96	Si
SLV 1	fin.	-6135.7	-9933	-0.0020296	0.0003369	0.0035	1.42		7279.66	7279.66		1.19	Si
SLV 14	ini.	-4049.74	-1221	-0.0010714	0.0003369	0.0035	1.42		7279.66	7279.66		1.8	Si
SLV 14	fin.	5443.69	3348	-0.0016523	0.0003369	0.0035	1.42		7270.13	7270.13		1.34	Si
SLD 3	ini.	1665.83	-4098	-0.0003611	0.0003369	0.0035	1.42		7270.13	7270.13		4.36	Si
SLD 3	fin.	-2964.29	-6364	-0.0007145	0.0003369	0.0035	1.42		7279.66	7279.66		2.46	Si
SLV 4	ini.	3951.62	-5258	-0.0010382	0.0003369	0.0035	1.42		7270.13	7270.13		1.84	Si
SLV 4	fin.	-6328.33	-10253	-0.0021529	0.0003369	0.0035	1.42		7279.66	7279.66		1.15	Si
SLV 16	ini.	-3797.17	-1286	-0.0009827	0.0003369	0.0035	1.42		7279.66	7279.66		1.92	Si
SLV 16	fin.	5242.96	3027	-0.0015567	0.0003369	0.0035	1.42		7270.13	7270.13		1.39	Si
SLV 15	ini.	-3791.05	-1277	-0.0009806	0.0003369	0.0035	1.42		7279.66	7279.66		1.92	Si
SLV 15	fin.	5234.87	3025	-0.001553	0.0003369	0.0035	1.42		7270.13	7270.13		1.39	Si
SLV 13	ini.	-4043.62	-1212	-0.0010692	0.0003369	0.0035	1.42		7279.66	7279.66		1.8	Si
SLV 13	fin.	5435.59	3347	-0.0016484	0.0003369	0.0035	1.42		7270.13	7270.13		1.34	Si
SLD 4	ini.	1663.2	-4102	-0.0003605	0.0003369	0.0035	1.42		7270.13	7270.13		4.37	Si
SLD 4	fin.	-2960.81	-6363	-0.0007134	0.0003369	0.0035	1.42		7279.66	7279.66		2.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	1665.83	-6845	1.42	0	864	6344	10717	3621	7208		1.05	Si
SLD 3	fin.	-2964.29	-8453	1.42	0	864	6344	10717	3621	7208		0.85	No
SLV 3	ini.	3957.75	-15988	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 3	fin.	-6336.42	-17951	1.42	0	864	6344	10717	3621	7208		0.4	No
SLD 4	ini.	1663.2	-6834	1.42	0	864	6344	10717	3621	7208		1.05	Si
SLD 4	fin.	-2960.81	-8441	1.42	0	864	6344	10717	3621	7208		0.85	No
SLV 2	ini.	3699.05	-16357	1.42	0	864	6344	10717	3621	7208		0.44	No
SLV 2	fin.	-6127.61	-17051	1.42	0	864	6344	10717	3621	7208		0.42	No
SLV 16	ini.	-3797.17	16319	1.42	0	864	6344	10717	3621	7208		0.44	No
SLV 16	fin.	5242.96	14359	1.42	0	864	6344	10717	3621	7208		0.5	No
SLV 14	ini.	-4049.74	15923	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 14	fin.	5443.69	15232	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 4	ini.	3951.62	-15961	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 4	fin.	-6328.33	-17924	1.42	0	864	6344	10717	3621	7208		0.4	No
SLV 1	ini.	3705.18	-16384	1.42	0	864	6344	10717	3621	7208		0.44	No
SLV 1	fin.	-6135.7	-17078	1.42	0	864	6344	10717	3621	7208		0.42	No
SLV 13	ini.	-4043.62	15896	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 13	fin.	5435.59	15205	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 15	ini.	-3791.05	16292	1.42	0	864	6344	10717	3621	7208		0.44	No
SLV 15	fin.	5234.87	14332	1.42	0	864	6344	10717	3621	7208		0.5	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.149	SLV 3	Si
V_SLV	0.402	SLV 3	No
PF_SLU	9.204	SLU 61	Si
V_SLU	2.665	SLU 61	Si

Trave di accoppiamento 84

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	7.33	8.35	1.02	-12.263	1.006	7.33	8.35	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-869.57	-3477	-0.0003819	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.49	Si
SLU 75	fin.	-77.76	-2679	-0.0000298	0.0002246	0.0035	1.02		3900.37	3900.37	No	50.16	Si
SLU 83	ini.	-904.63	-3558	-0.0004001	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.31	Si
SLU 83	fin.	-95.39	-2744	-0.0000367	0.0002246	0.0035	1.02		3900.37	3900.37	No	40.89	Si
SLU 81	ini.	-889.87	-3491	-0.0003924	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.38	Si
SLU 81	fin.	-99.29	-2697	-0.0000382	0.0002246	0.0035	1.02		3900.37	3900.37	No	39.28	Si
SLU 77	ini.	-885.35	-3549	-0.00039	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.41	Si
SLU 77	fin.	-73.42	-2730	-0.0000281	0.0002246	0.0035	1.02		3900.37	3900.37	No	53.13	Si
SLU 84	ini.	-903.6	-3552	-0.0003995	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.32	Si
SLU 84	fin.	-95.84	-2740	-0.0000368	0.0002246	0.0035	1.02		3900.37	3900.37	No	40.7	Si
SLU 80	ini.	-874.51	-3487	-0.0003844	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.46	Si
SLU 80	fin.	-75.67	-2680	-0.000029	0.0002246	0.0035	1.02		3900.37	3900.37	No	51.54	Si
SLU 79	ini.	-875.54	-3492	-0.000385	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.45	Si
SLU 79	fin.	-75.23	-2684	-0.0000288	0.0002246	0.0035	1.02		3900.37	3900.37	No	51.85	Si
SLU 74	ini.	-870.59	-3482	-0.0003824	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.48	Si
SLU 74	fin.	-77.31	-2683	-0.0000296	0.0002246	0.0035	1.02		3900.37	3900.37	No	50.45	Si
SLU 82	ini.	-888.85	-3486	-0.0003919	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.39	Si
SLU 82	fin.	-99.74	-2693	-0.0000383	0.0002246	0.0035	1.02		3900.37	3900.37	No	39.11	Si
SLU 78	ini.	-884.32	-3544	-0.0003895	0.0002246	0.0035	1.02		3900.37	3900.37	No	4.41	Si
SLU 78	fin.	-73.86	-2726	-0.0000283	0.0002246	0.0035	1.02		3900.37	3900.37	No	52.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-885.35	2368	1.02	0	377	8088	5132	2601	7733	No	3.27	Si
SLU 77	fin.	-73.42	-156	1.02	0	377	8088	5132	2601	7733	No	49.61	Si
SLU 78	ini.	-884.32	2366	1.02	0	377	8088	5132	2601	7733	No	3.27	Si
SLU 78	fin.	-73.86	-158	1.02	0	377	8088	5132	2601	7733	No	48.98	Si
SLU 84	ini.	-903.6	2499	1.02	0	377	8088	5132	2601	7733	No	3.09	Si
SLU 84	fin.	-95.84	-301	1.02	0	377	8088	5132	2601	7733	No	25.71	Si
SLU 82	ini.	-888.85	2473	1.02	0	377	8088	5132	2601	7733	No	3.13	Si
SLU 82	fin.	-99.74	-326	1.02	0	377	8088	5132	2601	7733	No	23.69	Si
SLU 75	ini.	-869.57	2340	1.02	0	377	8088	5132	2601	7733	No	3.3	Si
SLU 75	fin.	-77.76	-184	1.02	0	377	8088	5132	2601	7733	No	42.14	Si
SLU 79	ini.	-875.54	2352	1.02	0	377	8088	5132	2601	7733	No	3.29	Si
SLU 79	fin.	-75.23	-171	1.02	0	377	8088	5132	2601	7733	No	45.13	Si
SLU 74	ini.	-870.59	2342	1.02	0	377	8088	5132	2601	7733	No	3.3	Si
SLU 74	fin.	-77.31	-182	1.02	0	377	8088	5132	2601	7733	No	42.6	Si
SLU 83	ini.	-904.63	2501	1.02	0	377	8088	5132	2601	7733	No	3.09	Si
SLU 83	fin.	-95.39	-299	1.02	0	377	8088	5132	2601	7733	No	25.88	Si
SLU 81	ini.	-889.87	2475	1.02	0	377	8088	5132	2601	7733	No	3.12	Si
SLU 81	fin.	-99.29	-324	1.02	0	377	8088	5132	2601	7733	No	23.84	Si
SLU 80	ini.	-874.51	2350	1.02	0	377	8088	5132	2601	7733	No	3.29	Si
SLU 80	fin.	-75.67	-173	1.02	0	377	8088	5132	2601	7733	No	44.61	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-3723.92	-2893	-0.0028411	0.0003369	0.0035	1.02		3845.03	3845.03		1.03	Si
SLV 14	fin.	5623.2	9086	-0.0057937	0.0003369	0.0035	1.02		3838.12	3838.12		0.68	No
SLV 15	ini.	-3670.02	-2329	-0.0027484	0.0003369	0.0035	1.02		3845.03	3845.03		1.05	Si
SLV 15	fin.	5617.1	9547	-0.0057855	0.0003369	0.0035	1.02		3838.12	3838.12		0.68	No
SLV 4	ini.	2590.1	-1704	-0.0014564	0.0003369	0.0035	1.02		3838.12	3838.12		1.48	Si
SLV 4	fin.	-5683.15	-12599	-0.0058622	0.0003369	0.0035	1.02		3845.03	3845.03		0.68	No
SLV 1	ini.	2547.52	-2285	-0.0014206	0.0003369	0.0035	1.02		3838.12	3838.12		1.51	Si
SLV 1	fin.	-5713.74	-13142	-0.0059034	0.0003369	0.0035	1.02		3845.03	3845.03		0.67	No
SLV 3	ini.	2595.76	-1713	-0.0014612	0.0003369	0.0035	1.02		3838.12	3838.12		1.48	Si
SLV 3	fin.	-5701.5	-12640	-0.0058868	0.0003369	0.0035	1.02		3845.03	3845.03		0.67	No
SLV 2	ini.	2541.86	-2277	-0.0014159	0.0003369	0.0035	1.02		3838.12	3838.12		1.51	Si
SLV 2	fin.	-5695.4	-13101	-0.0058786	0.0003369	0.0035	1.02		3845.03	3845.03		0.68	No
SLD 3	ini.	786.77	-2048	-0.0003271	0.0003369	0.0035	1.02		3838.12	3838.12		4.88	Si
SLD 3	fin.	-2459.84	-6419	-0.001346	0.0003369	0.0035	1.02		3845.03	3845.03		1.56	Si
SLV 13	ini.	-3718.26	-2902	-0.0028312	0.0003369	0.0035	1.02		3845.03	3845.03		1.03	Si
SLV 13	fin.	5604.86	9045	-0.005769	0.0003369	0.0035	1.02		3838.12	3838.12		0.68	No
SLV 16	ini.	-3675.68	-2321	-0.002758	0.0003369	0.0035	1.02		3845.03	3845.03		1.05	Si
SLV 16	fin.	5635.44	9588	-0.0058103	0.0003369	0.0035	1.02		3838.12	3838.12		0.68	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 1	ini.	765.57	-2299	-0.0003174	0.0003369	0.0035	1.02		3838.12	3838.12		5.01	Si
SLD 1	fin.	-2464.6	-6637	-0.0013498	0.0003369	0.0035	1.02		3845.03	3845.03		1.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2595.76	-11559	1.02	0	565	8088	7698	2601	8654		0.75	No
SLV 3	fin.	-5701.5	-13102	1.02	0	565	8088	7698	2601	8654		0.66	No
SLV 13	ini.	-3718.26	14487	1.02	0	565	8088	7698	2601	8654		0.6	No
SLV 13	fin.	5604.86	12959	1.02	0	565	8088	7698	2601	8654		0.67	No
SLV 14	ini.	-3723.92	14523	1.02	0	565	8088	7698	2601	8654		0.6	No
SLV 14	fin.	5623.2	12995	1.02	0	565	8088	7698	2601	8654		0.67	No
SLD 13	ini.	-1912.5	7041	1.02	0	565	8088	7698	2601	8654		1.23	Si
SLD 13	fin.	2373.66	5509	1.02	0	565	8088	7698	2601	8654		1.57	Si
SLV 15	ini.	-3670.02	14398	1.02	0	565	8088	7698	2601	8654		0.6	No
SLV 15	fin.	5617.1	12885	1.02	0	565	8088	7698	2601	8654		0.67	No
SLV 1	ini.	2547.52	-11470	1.02	0	565	8088	7698	2601	8654		0.75	No
SLV 1	fin.	-5713.74	-13028	1.02	0	565	8088	7698	2601	8654		0.66	No
SLV 2	ini.	2541.86	-11434	1.02	0	565	8088	7698	2601	8654		0.76	No
SLV 2	fin.	-5695.4	-12992	1.02	0	565	8088	7698	2601	8654		0.67	No
SLD 14	ini.	-1914.93	7057	1.02	0	565	8088	7698	2601	8654		1.23	Si
SLD 14	fin.	2381.54	5525	1.02	0	565	8088	7698	2601	8654		1.57	Si
SLV 16	ini.	-3675.68	14434	1.02	0	565	8088	7698	2601	8654		0.6	No
SLV 16	fin.	5635.44	12921	1.02	0	565	8088	7698	2601	8654		0.67	No
SLV 4	ini.	2590.1	-11523	1.02	0	565	8088	7698	2601	8654		0.75	No
SLV 4	fin.	-5683.15	-13066	1.02	0	565	8088	7698	2601	8654		0.66	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.673	SLV 1	No
V_SLV	0.596	SLV 14	No
PF_SLU	4.312	SLU 83	Si
V_SLU	3.092	SLU 83	Si

Trave di accoppiamento 85

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	7.33	8.35	1.02	-10.478	1.006	7.33	8.35	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-124	-2651	-0.0000478	0.0002246	0.0035	1.02		3900.37	3900.37	No	31.45	Si
SLU 84	fin.	-700.55	-3573	-0.0002973	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.57	Si
SLU 77	ini.	-114.47	-2642	-0.0000441	0.0002246	0.0035	1.02		3900.37	3900.37	No	34.07	Si
SLU 77	fin.	-689.39	-3556	-0.0002919	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.66	Si
SLU 83	ini.	-123.85	-2654	-0.0000478	0.0002246	0.0035	1.02		3900.37	3900.37	No	31.49	Si
SLU 83	fin.	-701.31	-3577	-0.0002976	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.56	Si
SLU 79	ini.	-118.46	-2608	-0.0000457	0.0002246	0.0035	1.02		3900.37	3900.37	No	32.92	Si
SLU 79	fin.	-679.51	-3501	-0.0002871	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.74	Si
SLU 74	ini.	-114.04	-2591	-0.0000439	0.0002246	0.0035	1.02		3900.37	3900.37	No	34.2	Si
SLU 74	fin.	-678.74	-3490	-0.0002868	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.75	Si
SLU 80	ini.	-118.62	-2605	-0.0000457	0.0002246	0.0035	1.02		3900.37	3900.37	No	32.88	Si
SLU 80	fin.	-678.75	-3496	-0.0002868	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.75	Si
SLU 82	ini.	-123.57	-2600	-0.0000477	0.0002246	0.0035	1.02		3900.37	3900.37	No	31.56	Si
SLU 82	fin.	-689.89	-3506	-0.0002921	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.65	Si
SLU 78	ini.	-114.63	-2639	-0.0000442	0.0002246	0.0035	1.02		3900.37	3900.37	No	34.02	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-688.63	-3551	-0.0002915	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.66	Si
SLU 81	ini.	-123.41	-2603	-0.0000476	0.0002246	0.0035	1.02		3900.37	3900.37	No	31.6	Si
SLU 81	fin.	-690.65	-3511	-0.0002925	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.65	Si
SLU 75	ini.	-114.2	-2588	-0.000044	0.0002246	0.0035	1.02		3900.37	3900.37	No	34.15	Si
SLU 75	fin.	-677.98	-3485	-0.0002864	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 42	ini.	-55.99	205	1.02	0	391	8088	5132	2601	7733	No	37.71	Si
SLU 42	fin.	-655.04	-2189	1.02	0	391	8088	5132	2601	7733	No	3.53	Si
SLU 40	ini.	-55.56	222	1.02	0	391	8088	5132	2601	7733	No	34.87	Si
SLU 40	fin.	-644.38	-2172	1.02	0	391	8088	5132	2601	7733	No	3.56	Si
SLU 41	ini.	-55.83	203	1.02	0	391	8088	5132	2601	7733	No	38.04	Si
SLU 41	fin.	-655.79	-2190	1.02	0	391	8088	5132	2601	7733	No	3.53	Si
SLU 84	ini.	-124	358	1.02	0	391	8088	5132	2601	7733	No	21.59	Si
SLU 84	fin.	-700.55	-2257	1.02	0	391	8088	5132	2601	7733	No	3.43	Si
SLU 78	ini.	-114.63	258	1.02	0	391	8088	5132	2601	7733	No	30.02	Si
SLU 78	fin.	-688.63	-2142	1.02	0	391	8088	5132	2601	7733	No	3.61	Si
SLU 39	ini.	-55.4	220	1.02	0	391	8088	5132	2601	7733	No	35.16	Si
SLU 39	fin.	-645.14	-2174	1.02	0	391	8088	5132	2601	7733	No	3.56	Si
SLU 83	ini.	-123.85	356	1.02	0	391	8088	5132	2601	7733	No	21.7	Si
SLU 83	fin.	-701.31	-2258	1.02	0	391	8088	5132	2601	7733	No	3.42	Si
SLU 82	ini.	-123.57	375	1.02	0	391	8088	5132	2601	7733	No	20.63	Si
SLU 82	fin.	-689.89	-2240	1.02	0	391	8088	5132	2601	7733	No	3.45	Si
SLU 81	ini.	-123.41	373	1.02	0	391	8088	5132	2601	7733	No	20.73	Si
SLU 81	fin.	-690.65	-2242	1.02	0	391	8088	5132	2601	7733	No	3.45	Si
SLU 77	ini.	-114.47	256	1.02	0	391	8088	5132	2601	7733	No	30.23	Si
SLU 77	fin.	-689.39	-2144	1.02	0	391	8088	5132	2601	7733	No	3.61	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	-1696.88	-6079	-0.0008144	0.0003369	0.0035	1.02		3845.03	3845.03		2.27	Si
SLD 16	fin.	-69.89	-3846	-0.0000267	0.0003369	0.0035	1.02		3845.03	3845.03		55.02	Si
SLV 14	ini.	-3679.65	-11659	-0.0027648	0.0003369	0.0035	1.02		3845.03	3845.03		1.04	Si
SLV 14	fin.	346.83	-6453	-0.0001366	0.0003369	0.0035	1.02		3838.12	3838.12		11.07	Si
SLV 13	ini.	-3662.43	-11618	-0.0027356	0.0003369	0.0035	1.02		3845.03	3845.03		1.05	Si
SLV 13	fin.	336.67	-6453	-0.0001325	0.0003369	0.0035	1.02		3838.12	3838.12		11.4	Si
SLV 4	ini.	3455.52	8028	-0.0024196	0.0003369	0.0035	1.02		3838.12	3838.12		1.11	Si
SLV 4	fin.	-1197.04	1828	-0.0005292	0.0003369	0.0035	1.02		3845.03	3845.03		3.21	Si
SLV 2	ini.	3605.32	8186	-0.002651	0.0003369	0.0035	1.02		3838.12	3838.12		1.06	Si
SLV 2	fin.	-1261.92	1283	-0.0005639	0.0003369	0.0035	1.02		3845.03	3845.03		3.05	Si
SLV 3	ini.	3472.74	8069	-0.002445	0.0003369	0.0035	1.02		3838.12	3838.12		1.11	Si
SLV 3	fin.	-1207.21	1829	-0.0005346	0.0003369	0.0035	1.02		3845.03	3845.03		3.19	Si
SLD 15	ini.	-1689.48	-6061	-0.0008098	0.0003369	0.0035	1.02		3845.03	3845.03		2.28	Si
SLD 15	fin.	-74.26	-3846	-0.0000284	0.0003369	0.0035	1.02		3845.03	3845.03		51.78	Si
SLV 16	ini.	-3829.45	-11817	-0.0030313	0.0003369	0.0035	1.02		3845.03	3845.03		1	Si
SLV 16	fin.	411.71	-5908	-0.0001633	0.0003369	0.0035	1.02		3838.12	3838.12		9.32	Si
SLV 15	ini.	-3812.23	-11776	-0.0029997	0.0003369	0.0035	1.02		3845.03	3845.03		1.01	Si
SLV 15	fin.	401.55	-5907	-0.0001591	0.0003369	0.0035	1.02		3838.12	3838.12		9.56	Si
SLV 1	ini.	3622.54	8228	-0.0026791	0.0003369	0.0035	1.02		3838.12	3838.12		1.06	Si
SLV 1	fin.	-1272.08	1283	-0.0005693	0.0003369	0.0035	1.02		3845.03	3845.03		3.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	1489.97	-2773	1.02	0	586	8088	7698	2601	8675		3.13	Si
SLD 1	fin.	-790.48	-4263	1.02	0	586	8088	7698	2601	8675		2.04	Si
SLV 14	ini.	-3679.65	7117	1.02	0	586	8088	7698	2601	8675		1.22	Si
SLV 14	fin.	346.83	5541	1.02	0	586	8088	7698	2601	8675		1.57	Si
SLD 2	ini.	1482.57	-2753	1.02	0	586	8088	7698	2601	8675		3.15	Si
SLD 2	fin.	-786.12	-4243	1.02	0	586	8088	7698	2601	8675		2.04	Si
SLV 1	ini.	3622.54	-6780	1.02	0	586	8088	7698	2601	8675		1.28	Si
SLV 1	fin.	-1272.08	-8249	1.02	0	586	8088	7698	2601	8675		1.05	Si
SLV 13	ini.	-3662.43	7073	1.02	0	586	8088	7698	2601	8675		1.23	Si
SLV 13	fin.	336.67	5496	1.02	0	586	8088	7698	2601	8675		1.58	Si
SLV 15	ini.	-3812.23	7179	1.02	0	586	8088	7698	2601	8675		1.21	Si
SLV 15	fin.	401.55	5633	1.02	0	586	8088	7698	2601	8675		1.54	Si
SLV 3	ini.	3472.74	-6673	1.02	0	586	8088	7698	2601	8675		1.3	Si
SLV 3	fin.	-1207.21	-8112	1.02	0	586	8088	7698	2601	8675		1.07	Si
SLV 16	ini.	-3829.45	7224	1.02	0	586	8088	7698	2601	8675		1.2	Si
SLV 16	fin.	411.71	5678	1.02	0	586	8088	7698	2601	8675		1.53	Si
SLV 4	ini.	3455.52	-6629	1.02	0	586	8088	7698	2601	8675		1.31	Si
SLV 4	fin.	-1197.04	-8067	1.02	0	586	8088	7698	2601	8675		1.08	Si
SLV 2	ini.	3605.32	-6736	1.02	0	586	8088	7698	2601	8675		1.29	Si
SLV 2	fin.	-1261.92	-8204	1.02	0	586	8088	7698	2601	8675		1.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.004	SLV 16	Si
V_SLV	1.052	SLV 1	Si
PF_SLU	5.562	SLU 83	Si
V_SLU	3.424	SLU 83	Si

Trave di accoppiamento 86

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	6.93	8.35	1.42	-7.463	1.006	6.93	8.35	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	-39.13	-3961	-0.0000077	0.0002246	0.0035	1.42		7545.1	7545.1	No	192.81	Si
SLU 50	fin.	-822.08	-4511	-0.0001711	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.18	Si
SLU 65	ini.	-106.26	-4292	-0.000021	0.0002246	0.0035	1.42		7545.1	7545.1	No	71.01	Si
SLU 65	fin.	-819.19	-4762	-0.0001705	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.21	Si
SLU 67	ini.	-116.32	-4458	-0.000023	0.0002246	0.0035	1.42		7545.1	7545.1	No	64.86	Si
SLU 67	fin.	-819.28	-4918	-0.0001705	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.21	Si
SLU 66	ini.	-116.75	-4461	-0.0000231	0.0002246	0.0035	1.42		7545.1	7545.1	No	64.62	Si
SLU 66	fin.	-818.27	-4920	-0.0001703	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.22	Si
SLU 70	ini.	-114.6	-4543	-0.0000226	0.0002246	0.0035	1.42		7545.1	7545.1	No	65.84	Si
SLU 70	fin.	-828.01	-5011	-0.0001725	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.11	Si
SLU 69	ini.	-115.03	-4546	-0.0000227	0.0002246	0.0035	1.42		7545.1	7545.1	No	65.59	Si
SLU 69	fin.	-827	-5013	-0.0001722	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.12	Si
SLU 51	ini.	-38.7	-3958	-0.0000076	0.0002246	0.0035	1.42		7545.1	7545.1	No	194.97	Si
SLU 51	fin.	-823.1	-4509	-0.0001714	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.17	Si
SLU 68	ini.	-104.54	-4377	-0.0000206	0.0002246	0.0035	1.42		7545.1	7545.1	No	72.18	Si
SLU 68	fin.	-827.92	-4855	-0.0001724	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.11	Si
SLU 71	ini.	-103.54	-4468	-0.0000204	0.0002246	0.0035	1.42		7545.1	7545.1	No	72.87	Si
SLU 71	fin.	-834.97	-4951	-0.000174	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.04	Si
SLU 72	ini.	-103.1	-4464	-0.0000203	0.0002246	0.0035	1.42		7545.1	7545.1	No	73.18	Si
SLU 72	fin.	-835.98	-4949	-0.0001742	0.0002246	0.0035	1.42		7545.1	7545.1	No	9.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-103.1	130	1.42	0	576	7930	7144	3621	8506	No	65.62	Si
SLU 72	fin.	-835.98	-2344	1.42	0	576	7930	7144	3621	8506	No	3.63	Si
SLU 66	ini.	-116.75	179	1.42	0	576	7930	7144	3621	8506	No	47.49	Si
SLU 66	fin.	-818.27	-2294	1.42	0	576	7930	7144	3621	8506	No	3.71	Si
SLU 67	ini.	-116.32	177	1.42	0	576	7930	7144	3621	8506	No	48.06	Si
SLU 67	fin.	-819.28	-2296	1.42	0	576	7930	7144	3621	8506	No	3.7	Si
SLU 64	ini.	-106.98	163	1.42	0	576	7930	7144	3621	8506	No	52.11	Si
SLU 64	fin.	-817.5	-2310	1.42	0	576	7930	7144	3621	8506	No	3.68	Si
SLU 68	ini.	-104.54	144	1.42	0	576	7930	7144	3621	8506	No	59.08	Si
SLU 68	fin.	-827.92	-2329	1.42	0	576	7930	7144	3621	8506	No	3.65	Si
SLU 80	ini.	-296.68	952	1.42	0	576	7930	7144	3621	8506	No	8.93	Si
SLU 80	fin.	-733.21	-2210	1.42	0	576	7930	7144	3621	8506	No	3.85	Si
SLU 69	ini.	-115.03	163	1.42	0	576	7930	7144	3621	8506	No	52.07	Si
SLU 69	fin.	-827	-2310	1.42	0	576	7930	7144	3621	8506	No	3.68	Si
SLU 70	ini.	-114.6	161	1.42	0	576	7930	7144	3621	8506	No	52.75	Si
SLU 70	fin.	-828.01	-2312	1.42	0	576	7930	7144	3621	8506	No	3.68	Si
SLU 65	ini.	-106.26	160	1.42	0	576	7930	7144	3621	8506	No	53.26	Si
SLU 65	fin.	-819.19	-2314	1.42	0	576	7930	7144	3621	8506	No	3.68	Si
SLU 71	ini.	-103.54	132	1.42	0	576	7930	7144	3621	8506	No	64.56	Si
SLU 71	fin.	-834.97	-2342	1.42	0	576	7930	7144	3621	8506	No	3.63	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-4500.46	-7080	-0.0012399	0.0003369	0.0035	1.42		7279.66	7279.66		1.62	Si
SLV 16	fin.	3780.73	-819	-0.0009786	0.0003369	0.0035	1.42		7270.13	7270.13		1.92	Si
SLV 2	ini.	4216.09	291	-0.0011338	0.0003369	0.0035	1.42		7270.13	7270.13		1.72	Si
SLV 2	fin.	-4925.78	-6501	-0.0014132	0.0003369	0.0035	1.42		7279.66	7279.66		1.48	Si
SLV 13	ini.	-4414.29	-7345	-0.0012066	0.0003369	0.0035	1.42		7279.66	7279.66		1.65	Si
SLV 13	fin.	3678.97	-1215	-0.0009439	0.0003369	0.0035	1.42		7270.13	7270.13		1.98	Si
SLV 15	ini.	-4462.98	-7025	-0.0012253	0.0003369	0.0035	1.42		7279.66	7279.66		1.63	Si
SLV 15	fin.	3732.49	-837	-0.0009621	0.0003369	0.0035	1.42		7270.13	7270.13		1.95	Si
SLD 2	ini.	1732.52	-1805	-0.0003775	0.0003369	0.0035	1.42		7270.13	7270.13		4.2	Si
SLD 2	fin.	-2447.65	-4882	-0.0005647	0.0003369	0.0035	1.42		7279.66	7279.66		2.97	Si
SLV 1	ini.	4253.57	346	-0.0011478	0.0003369	0.0035	1.42		7270.13	7270.13		1.71	Si
SLV 1	fin.	-4974.02	-6519	-0.0014339	0.0003369	0.0035	1.42		7279.66	7279.66		1.46	Si
SLV 14	ini.	-4451.77	-7400	-0.001221	0.0003369	0.0035	1.42		7279.66	7279.66		1.64	Si
SLV 14	fin.	3727.21	-1196	-0.0009603	0.0003369	0.0035	1.42		7270.13	7270.13		1.95	Si
SLV 3	ini.	4204.88	666	-0.0011297	0.0003369	0.0035	1.42		7270.13	7270.13		1.73	Si
SLV 3	fin.	-4920.51	-6142	-0.001411	0.0003369	0.0035	1.42		7279.66	7279.66		1.48	Si
SLV 4	ini.	4167.4	611	-0.0011159	0.0003369	0.0035	1.42		7270.13	7270.13		1.74	Si
SLV 4	fin.	-4872.27	-6124	-0.0013905	0.0003369	0.0035	1.42		7279.66	7279.66		1.49	Si
SLD 1	ini.	1748.62	-1782	-0.0003815	0.0003369	0.0035	1.42		7270.13	7270.13		4.16	Si
SLD 1	fin.	-2468.37	-4890	-0.0005705	0.0003369	0.0035	1.42		7279.66	7279.66		2.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	1748.62	-5418	1.42	0	864	7930	10717	3621	8794		1.62	Si
SLD 1	fin.	-2468.37	-7396	1.42	0	864	7930	10717	3621	8794		1.19	Si
SLV 2	ini.	4216.09	-12896	1.42	0	864	7930	10717	3621	8794		0.68	No
SLV 2	fin.	-4925.78	-14891	1.42	0	864	7930	10717	3621	8794		0.59	No
SLV 16	ini.	-4500.46	13578	1.42	0	864	7930	10717	3621	8794		0.65	No
SLV 16	fin.	3780.73	11640	1.42	0	864	7930	10717	3621	8794		0.76	No
SLV 13	ini.	-4414.29	13308	1.42	0	864	7930	10717	3621	8794		0.66	No
SLV 13	fin.	3678.97	11298	1.42	0	864	7930	10717	3621	8794		0.78	No
SLV 1	ini.	4253.57	-13033	1.42	0	864	7930	10717	3621	8794		0.67	No
SLV 1	fin.	-4974.02	-15029	1.42	0	864	7930	10717	3621	8794		0.59	No
SLV 15	ini.	-4462.98	13440	1.42	0	864	7930	10717	3621	8794		0.65	No
SLV 15	fin.	3732.49	11502	1.42	0	864	7930	10717	3621	8794		0.76	No
SLV 3	ini.	4204.88	-12901	1.42	0	864	7930	10717	3621	8794		0.68	No
SLV 3	fin.	-4920.51	-14825	1.42	0	864	7930	10717	3621	8794		0.59	No
SLV 14	ini.	-4451.77	13446	1.42	0	864	7930	10717	3621	8794		0.65	No
SLV 14	fin.	3727.21	11436	1.42	0	864	7930	10717	3621	8794		0.77	No
SLV 4	ini.	4167.4	-12764	1.42	0	864	7930	10717	3621	8794		0.69	No
SLV 4	fin.	-4872.27	-14687	1.42	0	864	7930	10717	3621	8794		0.6	No
SLD 2	ini.	1732.52	-5359	1.42	0	864	7930	10717	3621	8794		1.64	Si
SLD 2	fin.	-2447.65	-7337	1.42	0	864	7930	10717	3621	8794		1.2	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.464	SLV 1	Si
V_SLV	0.585	SLV 1	No
PF_SLU	9.025	SLU 72	Si
V_SLU	3.629	SLU 72	Si

Trave di accoppiamento 87

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	6.93	8.35	1.42	-4.913	1.006	6.93	8.35	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	964.75	-4120	-0.0002036	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.81	Si
SLU 84	fin.	-1448.47	-5337	-0.0003203	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.21	Si
SLU 79	ini.	987.11	-3964	-0.0002088	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.63	Si
SLU 79	fin.	-1430.7	-5182	-0.0003158	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.27	Si
SLU 75	ini.	983.37	-3951	-0.0002079	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.66	Si
SLU 75	fin.	-1426.73	-5165	-0.0003148	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.29	Si
SLU 77	ini.	982.28	-4044	-0.0002076	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.67	Si
SLU 77	fin.	-1432.13	-5259	-0.0003162	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.27	Si
SLU 83	ini.	963.55	-4123	-0.0002033	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.82	Si
SLU 83	fin.	-1447.74	-5339	-0.0003201	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.21	Si
SLU 74	ini.	982.18	-3954	-0.0002076	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.67	Si
SLU 74	fin.	-1426	-5168	-0.0003146	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.29	Si
SLU 80	ini.	988.31	-3961	-0.000209	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.63	Si
SLU 80	fin.	-1431.43	-5179	-0.000316	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.27	Si
SLU 81	ini.	963.45	-4034	-0.0002033	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.82	Si
SLU 81	fin.	-1441.61	-5248	-0.0003186	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.23	Si
SLU 78	ini.	983.47	-4040	-0.0002079	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.66	Si
SLU 78	fin.	-1432.86	-5257	-0.0003164	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.27	Si
SLU 82	ini.	964.65	-4030	-0.0002036	0.0002246	0.0035	1.42		7536.27	7536.27	No	7.81	Si
SLU 82	fin.	-1442.34	-5245	-0.0003188	0.0002246	0.0035	1.42		7545.1	7545.1	No	5.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	964.75	-3006	1.42	0	576	6344	7144	3621	6920	No	2.3	Si
SLU 84	fin.	-1448.47	-5142	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 81	ini.	963.45	-2994	1.42	0	576	6344	7144	3621	6920	No	2.31	Si
SLU 81	fin.	-1441.61	-5129	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 75	ini.	983.37	-3083	1.42	0	576	6344	7144	3621	6920	No	2.24	Si
SLU 75	fin.	-1426.73	-5053	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 83	ini.	963.55	-3003	1.42	0	576	6344	7144	3621	6920	No	2.3	Si
SLU 83	fin.	-1447.74	-5138	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 77	ini.	982.28	-3089	1.42	0	576	6344	7144	3621	6920	No	2.24	Si
SLU 77	fin.	-1432.13	-5059	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 76	ini.	989.01	-3091	1.42	0	576	6344	7144	3621	6920	No	2.24	Si
SLU 76	fin.	-1425.78	-5061	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 82	ini.	964.65	-2997	1.42	0	576	6344	7144	3621	6920	No	2.31	Si
SLU 82	fin.	-1442.34	-5132	1.42	0	576	6344	7144	3621	6920	No	1.35	Si
SLU 79	ini.	987.11	-3095	1.42	0	576	6344	7144	3621	6920	No	2.24	Si
SLU 79	fin.	-1430.7	-5065	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 80	ini.	988.31	-3098	1.42	0	576	6344	7144	3621	6920	No	2.23	Si
SLU 80	fin.	-1431.43	-5069	1.42	0	576	6344	7144	3621	6920	No	1.37	Si
SLU 78	ini.	983.47	-3092	1.42	0	576	6344	7144	3621	6920	No	2.24	Si
SLU 78	fin.	-1432.86	-5063	1.42	0	576	6344	7144	3621	6920	No	1.37	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	5561.79	4282	-0.0017114	0.0003369	0.0035	1.42		7270.13	7270.13		1.31	Si
SLV 3	fin.	-3649.43	-239	-0.0009325	0.0003369	0.0035	1.42		7279.66	7279.66		1.99	Si
SLD 3	ini.	2824.73	387	-0.0006738	0.0003369	0.0035	1.42		7270.13	7270.13		2.57	Si
SLD 3	fin.	-2159.06	-2073	-0.0004862	0.0003369	0.0035	1.42		7279.66	7279.66		3.37	Si
SLV 14	ini.	-4004.48	-9333	-0.0010553	0.0003369	0.0035	1.42		7279.66	7279.66		1.82	Si
SLV 14	fin.	1560.11	-6652	-0.0003355	0.0003369	0.0035	1.42		7270.13	7270.13		4.66	Si
SLV 13	ini.	-3972.72	-9246	-0.001044	0.0003369	0.0035	1.42		7279.66	7279.66		1.83	Si
SLV 13	fin.	1556.39	-6588	-0.0003347	0.0003369	0.0035	1.42		7270.13	7270.13		4.67	Si
SLV 15	ini.	-3859.76	-8697	-0.0010044	0.0003369	0.0035	1.42		7279.66	7279.66		1.89	Si
SLV 15	fin.	1569.88	-6002	-0.0003379	0.0003369	0.0035	1.42		7270.13	7270.13		4.63	Si
SLV 4	ini.	5530.03	4196	-0.0016953	0.0003369	0.0035	1.42		7270.13	7270.13		1.31	Si
SLV 4	fin.	-3645.71	-303	-0.0009313	0.0003369	0.0035	1.42		7279.66	7279.66		2	Si
SLV 1	ini.	5448.83	3733	-0.0016549	0.0003369	0.0035	1.42		7270.13	7270.13		1.33	Si
SLV 1	fin.	-3662.92	-825	-0.0009371	0.0003369	0.0035	1.42		7279.66	7279.66		1.99	Si
SLV 2	ini.	5417.07	3647	-0.0016393	0.0003369	0.0035	1.42		7270.13	7270.13		1.34	Si
SLV 2	fin.	-3659.2	-889	-0.0009358	0.0003369	0.0035	1.42		7279.66	7279.66		1.99	Si
SLV 16	ini.	-3891.52	-8784	-0.0010154	0.0003369	0.0035	1.42		7279.66	7279.66		1.87	Si
SLV 16	fin.	1573.6	-6066	-0.0003388	0.0003369	0.0035	1.42		7270.13	7270.13		4.62	Si
SLD 4	ini.	2811.09	350	-0.0006698	0.0003369	0.0035	1.42		7270.13	7270.13		2.59	Si
SLD 4	fin.	-2157.46	-2100	-0.0004858	0.0003369	0.0035	1.42		7279.66	7279.66		3.37	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	2824.73	-7748	1.42	0	864	6344	10717	3621	7208		0.93	No
SLD 3	fin.	-2159.06	-8976	1.42	0	864	6344	10717	3621	7208		0.8	No
SLV 15	ini.	-3859.76	9668	1.42	0	864	6344	10717	3621	7208		0.75	No
SLV 15	fin.	1569.88	8462	1.42	0	864	6344	10717	3621	7208		0.85	No
SLD 4	ini.	2811.09	-7721	1.42	0	864	6344	10717	3621	7208		0.93	No
SLD 4	fin.	-2157.46	-8948	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 13	ini.	-3972.72	9874	1.42	0	864	6344	10717	3621	7208		0.73	No
SLV 13	fin.	1556.39	8549	1.42	0	864	6344	10717	3621	7208		0.84	No
SLV 2	ini.	5417.07	-14567	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 2	fin.	-3659.2	-15872	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 1	ini.	5448.83	-14632	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 1	fin.	-3662.92	-15936	1.42	0	864	6344	10717	3621	7208		0.45	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	5530.03	-14773	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 4	fin.	-3645.71	-15960	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 14	ini.	-4004.48	9938	1.42	0	864	6344	10717	3621	7208		0.73	No
SLV 14	fin.	1560.11	8613	1.42	0	864	6344	10717	3621	7208		0.84	No
SLV 3	ini.	5561.79	-14838	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 3	fin.	-3649.43	-16024	1.42	0	864	6344	10717	3621	7208		0.45	No
SLV 16	ini.	-3891.52	9732	1.42	0	864	6344	10717	3621	7208		0.74	No
SLV 16	fin.	1573.6	8526	1.42	0	864	6344	10717	3621	7208		0.85	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.307	SLV 3	Si
V_SLV	0.45	SLV 3	No
PF_SLU	5.209	SLU 84	Si
V_SLU	1.346	SLU 84	Si

Trave di accoppiamento 89

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	6.93	8.35	1.42	-9.333	-3.314	6.93	8.35	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	594.36	-2672	-0.0001225	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.37	Si
SLU 66	fin.	-980.93	-3510	-0.00021	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.5	Si
SLU 77	ini.	594.83	-2863	-0.0001226	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.36	Si
SLU 77	fin.	-975.29	-3746	-0.0002087	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.55	Si
SLU 75	ini.	591.97	-2790	-0.000122	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.42	Si
SLU 75	fin.	-969.12	-3666	-0.0002072	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.59	Si
SLU 71	ini.	591.62	-2714	-0.0001219	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.42	Si
SLU 71	fin.	-980.14	-3551	-0.0002098	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.51	Si
SLU 69	ini.	604.09	-2750	-0.0001246	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.17	Si
SLU 69	fin.	-995.31	-3601	-0.0002134	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.39	Si
SLU 72	ini.	598.5	-2718	-0.0001234	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.28	Si
SLU 72	fin.	-988.35	-3561	-0.0002118	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.45	Si
SLU 68	ini.	593.36	-2644	-0.0001223	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.39	Si
SLU 68	fin.	-979.44	-3477	-0.0002097	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.51	Si
SLU 78	ini.	601.71	-2867	-0.0001241	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.22	Si
SLU 78	fin.	-983.5	-3757	-0.0002106	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.48	Si
SLU 70	ini.	610.97	-2754	-0.0001261	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.03	Si
SLU 70	fin.	-1003.52	-3611	-0.0002154	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.33	Si
SLU 67	ini.	601.24	-2677	-0.000124	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.23	Si
SLU 67	fin.	-989.14	-3520	-0.000212	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	575.54	-1469	1.42	0	576	7137	5953	3621	7713	No	5.25	Si
SLU 84	fin.	-945.37	-3293	1.42	0	576	7137	5953	3621	7713	No	2.34	Si
SLU 76	ini.	584.09	-1545	1.42	0	576	7137	5953	3621	7713	No	4.99	Si
SLU 76	fin.	-959.42	-3252	1.42	0	576	7137	5953	3621	7713	No	2.37	Si
SLU 80	ini.	589.24	-1568	1.42	0	576	7137	5953	3621	7713	No	4.92	Si
SLU 80	fin.	-968.33	-3275	1.42	0	576	7137	5953	3621	7713	No	2.35	Si
SLU 75	ini.	591.97	-1572	1.42	0	576	7137	5953	3621	7713	No	4.91	Si
SLU 75	fin.	-969.12	-3280	1.42	0	576	7137	5953	3621	7713	No	2.35	Si
SLU 83	ini.	568.66	-1448	1.42	0	576	7137	5953	3621	7713	No	5.33	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-937.16	-3271	1.42	0	576	7137	5953	3621	7713	No	2.36	Si
SLU 79	ini.	582.36	-1546	1.42	0	576	7137	5953	3621	7713	No	4.99	Si
SLU 79	fin.	-960.12	-3254	1.42	0	576	7137	5953	3621	7713	No	2.37	Si
SLU 74	ini.	585.1	-1551	1.42	0	576	7137	5953	3621	7713	No	4.97	Si
SLU 74	fin.	-960.91	-3258	1.42	0	576	7137	5953	3621	7713	No	2.37	Si
SLU 77	ini.	594.83	-1588	1.42	0	576	7137	5953	3621	7713	No	4.86	Si
SLU 77	fin.	-975.29	-3296	1.42	0	576	7137	5953	3621	7713	No	2.34	Si
SLU 82	ini.	565.8	-1432	1.42	0	576	7137	5953	3621	7713	No	5.39	Si
SLU 82	fin.	-930.98	-3255	1.42	0	576	7137	5953	3621	7713	No	2.37	Si
SLU 78	ini.	601.71	-1610	1.42	0	576	7137	5953	3621	7713	No	4.79	Si
SLU 78	fin.	-983.5	-3318	1.42	0	576	7137	5953	3621	7713	No	2.32	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4301.8	-2518	-0.0012015	0.0002807	0.0035	1.42		7346.34	7346.34		1.71	Si
SLV 15	fin.	4146.52	1010	-0.0011435	0.0002807	0.0035	1.42		7337.02	7337.02		1.77	Si
SLV 2	ini.	5119.71	-1360	-0.001553	0.0002807	0.0035	1.42		7337.02	7337.02		1.43	Si
SLV 2	fin.	-5520.24	-6080	-0.0017496	0.0002807	0.0035	1.42		7346.34	7346.34		1.33	Si
SLV 4	ini.	5153.57	-1807	-0.001569	0.0002807	0.0035	1.42		7337.02	7337.02		1.42	Si
SLV 4	fin.	-5704.37	-6676	-0.0018504	0.0002807	0.0035	1.42		7346.34	7346.34		1.29	Si
SLV 14	ini.	-3970.99	-2079	-0.0010761	0.0002807	0.0035	1.42		7346.34	7346.34		1.85	Si
SLV 14	fin.	3957.67	1303	-0.0010729	0.0002807	0.0035	1.42		7337.02	7337.02		1.85	Si
SLD 4	ini.	2438.66	-1884	-0.0005775	0.0002807	0.0035	1.42		7337.02	7337.02		3.01	Si
SLD 4	fin.	-2833.46	-4307	-0.0006943	0.0002807	0.0035	1.42		7346.34	7346.34		2.59	Si
SLV 1	ini.	4755.05	-1352	-0.0013892	0.0002807	0.0035	1.42		7337.02	7337.02		1.54	Si
SLV 1	fin.	-5147.26	-5777	-0.0015632	0.0002807	0.0035	1.42		7346.34	7346.34		1.43	Si
SLV 16	ini.	-3937.13	-2527	-0.0010637	0.0002807	0.0035	1.42		7346.34	7346.34		1.87	Si
SLV 16	fin.	3773.54	707	-0.0010063	0.0002807	0.0035	1.42		7337.02	7337.02		1.94	Si
SLV 13	ini.	-4335.65	-2071	-0.0012147	0.0002807	0.0035	1.42		7346.34	7346.34		1.69	Si
SLV 13	fin.	4330.65	1606	-0.0012147	0.0002807	0.0035	1.42		7337.02	7337.02		1.69	Si
SLD 2	ini.	2422.29	-1691	-0.0005728	0.0002807	0.0035	1.42		7337.02	7337.02		3.03	Si
SLD 2	fin.	-2752.69	-4050	-0.0006696	0.0002807	0.0035	1.42		7346.34	7346.34		2.67	Si
SLV 3	ini.	4788.9	-1799	-0.0014038	0.0002807	0.0035	1.42		7337.02	7337.02		1.53	Si
SLV 3	fin.	-5331.38	-6374	-0.0016526	0.0002807	0.0035	1.42		7346.34	7346.34		1.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-4335.65	12889	1.42	0	864	7137	8929	3621	8001		0.62	No
SLV 13	fin.	4330.65	11798	1.42	0	864	7137	8929	3621	8001		0.68	No
SLV 2	ini.	5119.71	-14949	1.42	0	864	7137	8929	3621	8001		0.54	No
SLV 2	fin.	-5520.24	-16062	1.42	0	864	7137	8929	3621	8001		0.5	No
SLD 2	ini.	2422.29	-7030	1.42	0	864	7137	8929	3621	8001		1.14	Si
SLD 2	fin.	-2752.69	-8155	1.42	0	864	7137	8929	3621	8001		0.98	No
SLV 1	ini.	4755.05	-13898	1.42	0	864	7137	8929	3621	8001		0.58	No
SLV 1	fin.	-5147.26	-15010	1.42	0	864	7137	8929	3621	8001		0.53	No
SLV 3	ini.	4788.9	-14082	1.42	0	864	7137	8929	3621	8001		0.57	No
SLV 3	fin.	-5331.38	-15252	1.42	0	864	7137	8929	3621	8001		0.52	No
SLV 14	ini.	-3970.99	11837	1.42	0	864	7137	8929	3621	8001		0.68	No
SLV 14	fin.	3957.67	10746	1.42	0	864	7137	8929	3621	8001		0.74	No
SLV 16	ini.	-3937.13	11653	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 16	fin.	3773.54	10504	1.42	0	864	7137	8929	3621	8001		0.76	No
SLV 15	ini.	-4301.8	12705	1.42	0	864	7137	8929	3621	8001		0.63	No
SLV 15	fin.	4146.52	11556	1.42	0	864	7137	8929	3621	8001		0.69	No
SLD 4	ini.	2438.66	-7119	1.42	0	864	7137	8929	3621	8001		1.12	Si
SLD 4	fin.	-2833.46	-8264	1.42	0	864	7137	8929	3621	8001		0.97	No
SLV 4	ini.	5153.57	-15133	1.42	0	864	7137	8929	3621	8001		0.53	No
SLV 4	fin.	-5704.37	-16304	1.42	0	864	7137	8929	3621	8001		0.49	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.288	SLV 4	Si
V_SLV	0.491	SLV 4	No
PF_SLU	7.334	SLU 70	Si
V_SLU	2.325	SLU 78	Si

Trave di accoppiamento 91

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	6.93	8.35	1.42	-5.163	2.046	6.93	8.35	1.42	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	209.32	-422	-0.0000416	0.0002246	0.0035	1.42		7636.3	7636.3	No	36.48	Si
SLU 78	fin.	64.94	-498	-0.0000128	0.0002246	0.0035	1.42		7636.3	7636.3	No	117.59	Si
SLU 81	ini.	210.66	-428	-0.0000419	0.0002246	0.0035	1.42		7636.3	7636.3	No	36.25	Si
SLU 81	fin.	55.32	-505	-0.0000109	0.0002246	0.0035	1.42		7636.3	7636.3	No	138.04	Si
SLU 82	ini.	210.57	-427	-0.0000419	0.0002246	0.0035	1.42		7636.3	7636.3	No	36.27	Si
SLU 82	fin.	55.88	-504	-0.000011	0.0002246	0.0035	1.42		7636.3	7636.3	No	136.66	Si
SLU 79	ini.	205.53	-415	-0.0000409	0.0002246	0.0035	1.42		7636.3	7636.3	No	37.15	Si
SLU 79	fin.	65.81	-489	-0.000013	0.0002246	0.0035	1.42		7636.3	7636.3	No	116.03	Si
SLU 77	ini.	209.41	-422	-0.0000417	0.0002246	0.0035	1.42		7636.3	7636.3	No	36.47	Si
SLU 77	fin.	64.38	-499	-0.0000127	0.0002246	0.0035	1.42		7636.3	7636.3	No	118.61	Si
SLU 74	ini.	206.04	-416	-0.000041	0.0002246	0.0035	1.42		7636.3	7636.3	No	37.06	Si
SLU 74	fin.	60.86	-492	-0.000012	0.0002246	0.0035	1.42		7636.3	7636.3	No	125.47	Si
SLU 75	ini.	205.95	-415	-0.000041	0.0002246	0.0035	1.42		7636.3	7636.3	No	37.08	Si
SLU 75	fin.	61.42	-491	-0.0000121	0.0002246	0.0035	1.42		7636.3	7636.3	No	124.33	Si
SLU 80	ini.	205.43	-414	-0.0000409	0.0002246	0.0035	1.42		7636.3	7636.3	No	37.17	Si
SLU 80	fin.	66.37	-488	-0.0000131	0.0002246	0.0035	1.42		7636.3	7636.3	No	115.06	Si
SLU 83	ini.	214.03	-434	-0.0000426	0.0002246	0.0035	1.42		7636.3	7636.3	No	35.68	Si
SLU 83	fin.	58.84	-512	-0.0000116	0.0002246	0.0035	1.42		7636.3	7636.3	No	129.78	Si
SLU 84	ini.	213.94	-434	-0.0000426	0.0002246	0.0035	1.42		7636.3	7636.3	No	35.69	Si
SLU 84	fin.	59.4	-511	-0.0000117	0.0002246	0.0035	1.42		7636.3	7636.3	No	128.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	205.95	-66	1.42	0	288	6344	3572	3621	6632	No	100.6	Si
SLU 75	fin.	61.42	-451	1.42	0	288	6344	3572	3621	6632	No	14.71	Si
SLU 81	ini.	210.66	-81	1.42	0	288	6344	3572	3621	6632	No	81.72	Si
SLU 81	fin.	55.32	-466	1.42	0	288	6344	3572	3621	6632	No	14.23	Si
SLU 74	ini.	206.04	-67	1.42	0	288	6344	3572	3621	6632	No	98.6	Si
SLU 74	fin.	60.86	-452	1.42	0	288	6344	3572	3621	6632	No	14.66	Si
SLU 78	ini.	209.32	-66	1.42	0	288	6344	3572	3621	6632	No	100.22	Si
SLU 78	fin.	64.94	-451	1.42	0	288	6344	3572	3621	6632	No	14.7	Si
SLU 77	ini.	209.41	-68	1.42	0	288	6344	3572	3621	6632	No	98.23	Si
SLU 77	fin.	64.38	-453	1.42	0	288	6344	3572	3621	6632	No	14.65	Si
SLU 80	ini.	205.43	-58	1.42	0	288	6344	3572	3621	6632	No	114.71	Si
SLU 80	fin.	66.37	-443	1.42	0	288	6344	3572	3621	6632	No	14.98	Si
SLU 82	ini.	210.57	-80	1.42	0	288	6344	3572	3621	6632	No	83.1	Si
SLU 82	fin.	55.88	-465	1.42	0	288	6344	3572	3621	6632	No	14.27	Si
SLU 83	ini.	214.03	-81	1.42	0	288	6344	3572	3621	6632	No	81.48	Si
SLU 83	fin.	58.84	-466	1.42	0	288	6344	3572	3621	6632	No	14.22	Si
SLU 79	ini.	205.53	-59	1.42	0	288	6344	3572	3621	6632	No	112.11	Si
SLU 79	fin.	65.81	-444	1.42	0	288	6344	3572	3621	6632	No	14.93	Si
SLU 84	ini.	213.94	-80	1.42	0	288	6344	3572	3621	6632	No	82.84	Si
SLU 84	fin.	59.4	-465	1.42	0	288	6344	3572	3621	6632	No	14.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-270.58	-830	-0.0000537	0.0003369	0.0035	1.42		7824.76	7824.76		28.92	Si
SLV 8	fin.	-332.45	-1189	-0.0000662	0.0003369	0.0035	1.42		7824.76	7824.76		23.54	Si
SLD 9	ini.	312.73	-15	-0.0000623	0.0003369	0.0035	1.42		7815.69	7815.69		24.99	Si
SLD 9	fin.	217.84	66	-0.0000432	0.0003369	0.0035	1.42		7815.69	7815.69		35.88	Si
SLV 6	ini.	534.63	468	-0.0001078	0.0003369	0.0035	1.42		7815.69	7815.69		14.62	Si
SLV 6	fin.	501.69	746	-0.000101	0.0003369	0.0035	1.42		7815.69	7815.69		15.58	Si
SLD 5	ini.	312.97	53	-0.0000624	0.0003369	0.0035	1.42		7815.69	7815.69		24.97	Si
SLD 5	fin.	245.3	141	-0.0000487	0.0003369	0.0035	1.42		7815.69	7815.69		31.86	Si
SLV 9	ini.	539.41	293	-0.0001088	0.0003369	0.0035	1.42		7815.69	7815.69		14.49	Si
SLV 9	fin.	429.9	550	-0.0000862	0.0003369	0.0035	1.42		7815.69	7815.69		18.18	Si
SLV 5	ini.	542.78	455	-0.0001095	0.0003369	0.0035	1.42		7815.69	7815.69		14.4	Si
SLV 5	fin.	495.32	728	-0.0000997	0.0003369	0.0035	1.42		7815.69	7815.69		15.78	Si
SLV 11	ini.	-265.8	-1004	-0.0000528	0.0003369	0.0035	1.42		7824.76	7824.76		29.44	Si
SLV 11	fin.	-404.24	-1384	-0.0000809	0.0003369	0.0035	1.42		7824.76	7824.76		19.36	Si
SLV 7	ini.	-262.42	-842	-0.0000521	0.0003369	0.0035	1.42		7824.76	7824.76		29.82	Si
SLV 7	fin.	-338.82	-1206	-0.0000675	0.0003369	0.0035	1.42		7824.76	7824.76		23.09	Si
SLV 10	ini.	531.25	306	-0.0001071	0.0003369	0.0035	1.42		7815.69	7815.69		14.71	Si
SLV 10	fin.	436.28	568	-0.0000875	0.0003369	0.0035	1.42		7815.69	7815.69		17.91	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-273.95	-992	-0.0000544	0.0003369	0.0035	1.42		7824.76	7824.76		28.56	Si
SLV 12	fin.	-397.86	-1366	-0.0000796	0.0003369	0.0035	1.42		7824.76	7824.76		19.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	184.31	-110	1.42	0	432	6344	5358	3621	6776		61.59	Si
SLD 14	fin.	60.34	-406	1.42	0	432	6344	5358	3621	6776		16.7	Si
SLD 15	ini.	83.7	-168	1.42	0	432	6344	5358	3621	6776		40.37	Si
SLD 15	fin.	-54.41	-453	1.42	0	432	6344	5358	3621	6776		14.97	Si
SLV 16	ini.	1.75	-338	1.42	0	432	6344	5358	3621	6776		20.06	Si
SLV 16	fin.	-180.53	-612	1.42	0	432	6344	5358	3621	6776		11.08	Si
SLD 16	ini.	78.32	-153	1.42	0	432	6344	5358	3621	6776		44.39	Si
SLD 16	fin.	-50.21	-437	1.42	0	432	6344	5358	3621	6776		15.49	Si
SLV 12	ini.	-273.95	-252	1.42	0	432	6344	5358	3621	6776		26.85	Si
SLV 12	fin.	-397.86	-501	1.42	0	432	6344	5358	3621	6776		13.51	Si
SLV 15	ini.	14.27	-373	1.42	0	432	6344	5358	3621	6776		18.16	Si
SLV 15	fin.	-190.32	-647	1.42	0	432	6344	5358	3621	6776		10.47	Si
SLV 14	ini.	243.31	-241	1.42	0	432	6344	5358	3621	6776		28.13	Si
SLV 14	fin.	69.71	-540	1.42	0	432	6344	5358	3621	6776		12.55	Si
SLD 13	ini.	189.69	-125	1.42	0	432	6344	5358	3621	6776		54.11	Si
SLD 13	fin.	56.13	-421	1.42	0	432	6344	5358	3621	6776		16.1	Si
SLV 11	ini.	-265.8	-275	1.42	0	432	6344	5358	3621	6776		24.6	Si
SLV 11	fin.	-404.24	-525	1.42	0	432	6344	5358	3621	6776		12.92	Si
SLV 13	ini.	255.83	-276	1.42	0	432	6344	5358	3621	6776		24.52	Si
SLV 13	fin.	59.92	-575	1.42	0	432	6344	5358	3621	6776		11.78	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	14.399	SLV 5	Si
V_SLV	10.473	SLV 15	Si
PF_SLU	35.678	SLU 83	Si
V_SLU	14.218	SLU 83	Si

Trave di accoppiamento 92

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	4.83	6.83	2	-5.093	6.506	4.83	6.83	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	-372.9	-40	-0.0000374	0.0001872	0.0035	2		14357.01	14357.01	No	38.5	Si
SLU 73	fin.	-424.79	-277	-0.0000427	0.0001872	0.0035	2		14357.01	14357.01	No	33.8	Si
SLU 77	ini.	-328.43	-187	-0.0000329	0.0001872	0.0035	2		14357.01	14357.01	No	43.71	Si
SLU 77	fin.	-405.65	-406	-0.0000407	0.0001872	0.0035	2		14357.01	14357.01	No	35.39	Si
SLU 75	ini.	-359.37	-99	-0.000036	0.0001872	0.0035	2		14357.01	14357.01	No	39.95	Si
SLU 75	fin.	-421.61	-333	-0.0000424	0.0001872	0.0035	2		14357.01	14357.01	No	34.05	Si
SLU 83	ini.	-343.41	-171	-0.0000344	0.0001872	0.0035	2		14357.01	14357.01	No	41.81	Si
SLU 83	fin.	-405.13	-405	-0.0000407	0.0001872	0.0035	2		14357.01	14357.01	No	35.44	Si
SLU 80	ini.	-357.92	-104	-0.0000359	0.0001872	0.0035	2		14357.01	14357.01	No	40.11	Si
SLU 80	fin.	-423.14	-335	-0.0000425	0.0001872	0.0035	2		14357.01	14357.01	No	33.93	Si
SLU 76	ini.	-377.14	-44	-0.0000378	0.0001872	0.0035	2		14357.01	14357.01	No	38.07	Si
SLU 76	fin.	-431.53	-284	-0.0000434	0.0001872	0.0035	2		14357.01	14357.01	No	33.27	Si
SLU 78	ini.	-363.6	-103	-0.0000364	0.0001872	0.0035	2		14357.01	14357.01	No	39.49	Si
SLU 78	fin.	-428.35	-340	-0.000043	0.0001872	0.0035	2		14357.01	14357.01	No	33.52	Si
SLU 84	ini.	-378.58	-87	-0.000038	0.0001872	0.0035	2		14357.01	14357.01	No	37.92	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-427.84	-339	-0.000043	0.0001872	0.0035	2		14357.01	14357.01	No	33.56	Si
SLU 68	ini.	-319.04	-73	-0.0000319	0.0001872	0.0035	2		14357.01	14357.01	No	45	Si
SLU 68	fin.	-404.84	-260	-0.0000406	0.0001872	0.0035	2		14357.01	14357.01	No	35.46	Si
SLU 82	ini.	-374.35	-84	-0.0000375	0.0001872	0.0035	2		14357.01	14357.01	No	38.35	Si
SLU 82	fin.	-421.1	-332	-0.0000423	0.0001872	0.0035	2		14357.01	14357.01	No	34.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-378.58	-1696	2	0	812	3965	8384	5100	4776	No	2.82	Si
SLU 84	fin.	-427.84	1706	2	0	812	3965	8384	5100	4776	No	2.8	Si
SLU 75	ini.	-359.37	-1676	2	0	812	3965	8384	5100	4776	No	2.85	Si
SLU 75	fin.	-421.61	1594	2	0	812	3965	8384	5100	4776	No	3	Si
SLU 80	ini.	-357.92	-1689	2	0	812	3965	8384	5100	4776	No	2.83	Si
SLU 80	fin.	-423.14	1581	2	0	812	3965	8384	5100	4776	No	3.02	Si
SLU 82	ini.	-374.35	-1664	2	0	812	3965	8384	5100	4776	No	2.87	Si
SLU 82	fin.	-421.1	1682	2	0	812	3965	8384	5100	4776	No	2.84	Si
SLU 79	ini.	-322.74	-1708	2	0	812	3965	8384	5100	4776	No	2.8	Si
SLU 79	fin.	-400.43	1518	2	0	812	3965	8384	5100	4776	No	3.15	Si
SLU 81	ini.	-339.17	-1683	2	0	812	3965	8384	5100	4776	No	2.84	Si
SLU 81	fin.	-398.39	1619	2	0	812	3965	8384	5100	4776	No	2.95	Si
SLU 74	ini.	-324.19	-1695	2	0	812	3965	8384	5100	4776	No	2.82	Si
SLU 74	fin.	-398.91	1531	2	0	812	3965	8384	5100	4776	No	3.12	Si
SLU 77	ini.	-328.43	-1728	2	0	812	3965	8384	5100	4776	No	2.76	Si
SLU 77	fin.	-405.65	1554	2	0	812	3965	8384	5100	4776	No	3.07	Si
SLU 83	ini.	-343.41	-1715	2	0	812	3965	8384	5100	4776	No	2.78	Si
SLU 83	fin.	-405.13	1643	2	0	812	3965	8384	5100	4776	No	2.91	Si
SLU 78	ini.	-363.6	-1709	2	0	812	3965	8384	5100	4776	No	2.8	Si
SLU 78	fin.	-428.35	1617	2	0	812	3965	8384	5100	4776	No	2.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-919.29	272	-0.0000934	0.0002807	0.0035	2		14215.41	14215.41		15.46	Si
SLV 15	fin.	-486.38	-314	-0.0000488	0.0002807	0.0035	2		14215.41	14215.41		29.23	Si
SLV 1	ini.	581.83	-672	-0.0000585	0.0002807	0.0035	2		14202.07	14202.07		24.41	Si
SLV 1	fin.	-75.63	-252	-0.0000075	0.0002807	0.0035	2		14215.41	14215.41		187.97	Si
SLV 11	ini.	-528.45	-127	-0.000053	0.0002807	0.0035	2		14215.41	14215.41		26.9	Si
SLV 11	fin.	-699.59	-132	-0.0000706	0.0002807	0.0035	2		14215.41	14215.41		20.32	Si
SLD 16	ini.	-536.25	68	-0.0000538	0.0002807	0.0035	2		14215.41	14215.41		26.51	Si
SLD 16	fin.	-363.8	-291	-0.0000363	0.0002807	0.0035	2		14215.41	14215.41		39.07	Si
SLV 8	ini.	-145.65	-368	-0.0000145	0.0002807	0.0035	2		14215.41	14215.41		97.6	Si
SLV 8	fin.	-642.74	-78	-0.0000647	0.0002807	0.0035	2		14215.41	14215.41		22.12	Si
SLV 7	ini.	-102.44	-426	-0.0000102	0.0002807	0.0035	2		14215.41	14215.41		138.77	Si
SLV 7	fin.	-647.21	-82	-0.0000652	0.0002807	0.0035	2		14215.41	14215.41		21.96	Si
SLV 14	ini.	-904.51	416	-0.0000918	0.0002807	0.0035	2		14215.41	14215.41		15.72	Si
SLV 14	fin.	-243.35	-413	-0.0000242	0.0002807	0.0035	2		14215.41	14215.41		58.41	Si
SLV 16	ini.	-985.61	361	-0.0001003	0.0002807	0.0035	2		14215.41	14215.41		14.42	Si
SLV 16	fin.	-479.51	-308	-0.0000481	0.0002807	0.0035	2		14215.41	14215.41		29.65	Si
SLV 13	ini.	-838.19	327	-0.0000849	0.0002807	0.0035	2		14215.41	14215.41		16.96	Si
SLV 13	fin.	-250.22	-419	-0.0000249	0.0002807	0.0035	2		14215.41	14215.41		56.81	Si
SLV 12	ini.	-571.66	-69	-0.0000574	0.0002807	0.0035	2		14215.41	14215.41		24.87	Si
SLV 12	fin.	-695.12	-128	-0.0000701	0.0002807	0.0035	2		14215.41	14215.41		20.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-904.51	-166	2	0	1217	3965	12577	5100	5182		31.28	Si
SLV 14	fin.	-243.35	5825	2	0	1217	3965	12577	5100	5182		0.89	No
SLV 13	ini.	-838.19	-299	2	0	1217	3965	12577	5100	5182		17.36	Si
SLV 13	fin.	-250.22	5397	2	0	1217	3965	12577	5100	5182		0.96	No
SLV 9	ini.	-258.12	-380	2	0	1217	3965	12577	5100	5182		13.65	Si
SLV 9	fin.	87.6	3734	2	0	1217	3965	12577	5100	5182		1.39	Si
SLV 1	ini.	581.83	-1846	2	0	1217	3965	12577	5100	5182		2.81	Si
SLV 1	fin.	-75.63	-3001	2	0	1217	3965	12577	5100	5182		1.73	Si
SLV 15	ini.	-919.29	-673	2	0	1217	3965	12577	5100	5182		7.7	Si
SLV 15	fin.	-486.38	4367	2	0	1217	3965	12577	5100	5182		1.19	Si
SLD 14	ini.	-501.43	-755	2	0	1217	3965	12577	5100	5182		6.86	Si
SLD 14	fin.	-262.21	3006	2	0	1217	3965	12577	5100	5182		1.72	Si
SLV 16	ini.	-985.61	-540	2	0	1217	3965	12577	5100	5182		9.59	Si
SLV 16	fin.	-479.51	4795	2	0	1217	3965	12577	5100	5182		1.08	Si
SLV 4	ini.	434.41	-2088	2	0	1217	3965	12577	5100	5182		2.48	Si
SLV 4	fin.	-304.92	-3604	2	0	1217	3965	12577	5100	5182		1.44	Si
SLV 10	ini.	-301.33	-293	2	0	1217	3965	12577	5100	5182		17.68	Si
SLV 10	fin.	92.08	4013	2	0	1217	3965	12577	5100	5182		1.29	Si
SLV 3	ini.	500.74	-2221	2	0	1217	3965	12577	5100	5182		2.33	Si
SLV 3	fin.	-311.78	-4032	2	0	1217	3965	12577	5100	5182		1.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	14.423	SLV 16	Si
V_SLV	0.89	SLV 14	No
PF_SLU	33.27	SLU 76	Si
V_SLU	2.765	SLU 77	Si

Trave di accoppiamento 93

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	7.63	8.35	0.72	-5.093	6.506	7.63	8.35	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-25.04	-108	-0.0000192	0.0001872	0.0035	0.72		1901.86	1901.86	No	75.95	Si
SLU 77	fin.	95.59	-397	-0.0000752	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.85	Si
SLU 74	ini.	-24.74	-108	-0.000019	0.0001872	0.0035	0.72		1901.86	1901.86	No	76.87	Si
SLU 74	fin.	94.54	-392	-0.0000743	0.0001872	0.0035	0.72		1897.3	1897.3	No	20.07	Si
SLU 84	ini.	-14.47	-143	-0.0000111	0.0001872	0.0035	0.72		1901.86	1901.86	No	131.42	Si
SLU 84	fin.	101.12	-417	-0.0000797	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.76	Si
SLU 39	ini.	-31.67	-137	-0.0000244	0.0001872	0.0035	0.72		1901.86	1901.86	No	60.05	Si
SLU 39	fin.	97.83	-364	-0.000077	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.39	Si
SLU 42	ini.	-16.85	-153	-0.0000129	0.0001872	0.0035	0.72		1901.86	1901.86	No	112.88	Si
SLU 42	fin.	97.08	-375	-0.0000764	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.54	Si
SLU 40	ini.	-16.55	-152	-0.0000127	0.0001872	0.0035	0.72		1901.86	1901.86	No	114.93	Si
SLU 40	fin.	96.03	-370	-0.0000756	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.76	Si
SLU 82	ini.	-14.17	-142	-0.0000108	0.0001872	0.0035	0.72		1901.86	1901.86	No	134.21	Si
SLU 82	fin.	100.07	-412	-0.0000788	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.96	Si
SLU 81	ini.	-29.29	-127	-0.0000225	0.0001872	0.0035	0.72		1901.86	1901.86	No	64.92	Si
SLU 81	fin.	101.87	-406	-0.0000803	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.63	Si
SLU 83	ini.	-29.59	-128	-0.0000228	0.0001872	0.0035	0.72		1901.86	1901.86	No	64.27	Si
SLU 83	fin.	102.92	-411	-0.0000812	0.0001872	0.0035	0.72		1897.3	1897.3	No	18.43	Si
SLU 41	ini.	-31.97	-138	-0.0000246	0.0001872	0.0035	0.72		1901.86	1901.86	No	59.49	Si
SLU 41	fin.	98.88	-369	-0.0000779	0.0001872	0.0035	0.72		1897.3	1897.3	No	19.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-14.47	1802	0.72	0	292	3965	3018	1836	4257	No	2.36	Si
SLU 84	fin.	101.12	-1335	0.72	0	292	3965	3018	1836	4257	No	3.19	Si
SLU 81	ini.	-29.29	1793	0.72	0	292	3965	3018	1836	4257	No	2.37	Si
SLU 81	fin.	101.87	-1269	0.72	0	292	3965	3018	1836	4257	No	3.36	Si
SLU 82	ini.	-14.17	1769	0.72	0	292	3965	3018	1836	4257	No	2.41	Si
SLU 82	fin.	100.07	-1311	0.72	0	292	3965	3018	1836	4257	No	3.25	Si
SLU 79	ini.	-24.52	1791	0.72	0	292	3965	3018	1836	4257	No	2.38	Si
SLU 79	fin.	93.05	-1335	0.72	0	292	3965	3018	1836	4257	No	3.19	Si
SLU 80	ini.	-9.4	1767	0.72	0	292	3965	3018	1836	4257	No	2.41	Si
SLU 80	fin.	91.25	-1378	0.72	0	292	3965	3018	1836	4257	No	3.09	Si
SLU 83	ini.	-29.59	1826	0.72	0	292	3965	3018	1836	4257	No	2.33	Si
SLU 83	fin.	102.92	-1293	0.72	0	292	3965	3018	1836	4257	No	3.29	Si
SLU 77	ini.	-25.04	1821	0.72	0	292	3965	3018	1836	4257	No	2.34	Si
SLU 77	fin.	95.59	-1352	0.72	0	292	3965	3018	1836	4257	No	3.15	Si
SLU 78	ini.	-9.92	1797	0.72	0	292	3965	3018	1836	4257	No	2.37	Si
SLU 78	fin.	93.79	-1395	0.72	0	292	3965	3018	1836	4257	No	3.05	Si
SLU 74	ini.	-24.74	1788	0.72	0	292	3965	3018	1836	4257	No	2.38	Si
SLU 74	fin.	94.54	-1328	0.72	0	292	3965	3018	1836	4257	No	3.21	Si
SLU 75	ini.	-9.62	1764	0.72	0	292	3965	3018	1836	4257	No	2.41	Si
SLU 75	fin.	92.74	-1371	0.72	0	292	3965	3018	1836	4257	No	3.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	253.48	-197	-0.000206	0.0002807	0.0035	0.72		1912.43	1912.43		7.54	Si
SLV 10	fin.	370.35	-709	-0.000312	0.0002807	0.0035	0.72		1912.43	1912.43		5.16	Si
SLV 3	ini.	66.23	1117	-0.0000513	0.0002807	0.0035	0.72		1912.43	1912.43		28.88	Si
SLV 3	fin.	-484.92	776	-0.000424	0.0002807	0.0035	0.72		1917.1	1917.1		3.95	Si
SLV 11	ini.	-372.15	-602	-0.0003129	0.0002807	0.0035	0.72		1917.1	1917.1		5.15	Si
SLV 11	fin.	17.1	-343	-0.0000131	0.0002807	0.0035	0.72		1912.43	1912.43		111.86	Si
SLV 14	ini.	-86.46	-1207	-0.0000672	0.0002807	0.0035	0.72		1917.1	1917.1		22.17	Si
SLV 14	fin.	590.35	-1269	-0.0005375	0.0002807	0.0035	0.72		1912.43	1912.43		3.24	Si
SLV 12	ini.	-382.06	-667	-0.0003223	0.0002807	0.0035	0.72		1917.1	1917.1		5.02	Si
SLV 12	fin.	40.78	-399	-0.0000314	0.0002807	0.0035	0.72		1912.43	1912.43		46.9	Si
SLV 13	ini.	-71.25	-1106	-0.0000552	0.0002807	0.0035	0.72		1917.1	1917.1		26.91	Si
SLV 13	fin.	554.01	-1183	-0.0004979	0.0002807	0.0035	0.72		1912.43	1912.43		3.45	Si
SLV 1	ini.	256.89	1258	-0.000209	0.0002807	0.0035	0.72		1912.43	1912.43		7.44	Si
SLV 1	fin.	-386.05	683	-0.0003261	0.0002807	0.0035	0.72		1917.1	1917.1		4.97	Si
SLV 16	ini.	-277.12	-1348	-0.0002262	0.0002807	0.0035	0.72		1917.1	1917.1		6.92	Si
SLV 16	fin.	491.48	-1175	-0.0004319	0.0002807	0.0035	0.72		1912.43	1912.43		3.89	Si
SLV 15	ini.	-261.91	-1247	-0.0002129	0.0002807	0.0035	0.72		1917.1	1917.1		7.32	Si
SLV 15	fin.	455.13	-1090	-0.0003948	0.0002807	0.0035	0.72		1912.43	1912.43		4.2	Si
SLV 4	ini.	51.02	1017	-0.0000394	0.0002807	0.0035	0.72		1912.43	1912.43		37.48	Si
SLV 4	fin.	-448.57	690	-0.0003872	0.0002807	0.0035	0.72		1917.1	1917.1		4.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	66.23	201	0.72	0	438	3965	4528	1836	4403		21.89	Si
SLV 3	fin.	-484.92	-3164	0.72	0	438	3965	4528	1836	4403		1.39	Si
SLV 11	ini.	-372.15	3199	0.72	0	438	3965	4528	1836	4403		1.38	Si
SLV 11	fin.	17.1	-1041	0.72	0	438	3965	4528	1836	4403		4.23	Si
SLV 16	ini.	-277.12	3172	0.72	0	438	3965	4528	1836	4403		1.39	Si
SLV 16	fin.	491.48	828	0.72	0	438	3965	4528	1836	4403		5.32	Si
SLV 1	ini.	256.89	-753	0.72	0	438	3965	4528	1836	4403		5.85	Si
SLV 1	fin.	-386.05	-2846	0.72	0	438	3965	4528	1836	4403		1.55	Si
SLV 4	ini.	51.02	298	0.72	0	438	3965	4528	1836	4403		14.78	Si
SLV 4	fin.	-448.57	-2950	0.72	0	438	3965	4528	1836	4403		1.49	Si
SLV 15	ini.	-261.91	3075	0.72	0	438	3965	4528	1836	4403		1.43	Si
SLV 15	fin.	455.13	614	0.72	0	438	3965	4528	1836	4403		7.17	Si
SLV 7	ini.	-273.71	2337	0.72	0	438	3965	4528	1836	4403		1.88	Si
SLV 7	fin.	-264.92	-2175	0.72	0	438	3965	4528	1836	4403		2.02	Si
SLV 12	ini.	-382.06	3262	0.72	0	438	3965	4528	1836	4403		1.35	Si
SLV 12	fin.	40.78	-902	0.72	0	438	3965	4528	1836	4403		4.88	Si
SLV 2	ini.	241.68	-656	0.72	0	438	3965	4528	1836	4403		6.71	Si
SLV 2	fin.	-349.7	-2632	0.72	0	438	3965	4528	1836	4403		1.67	Si
SLV 8	ini.	-283.62	2400	0.72	0	438	3965	4528	1836	4403		1.83	Si
SLV 8	fin.	-241.24	-2035	0.72	0	438	3965	4528	1836	4403		2.16	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.239	SLV 14	Si
V_SLV	1.35	SLV 12	Si
PF_SLU	18.435	SLU 83	Si
V_SLU	2.332	SLU 83	Si

Trave di accoppiamento 94

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	7.53	8.35	0.82	-7.413	-3.314	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-191.56	-1590	-0.0001181	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.84	Si
SLU 75	fin.	-226.96	-1179	-0.0001414	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.84	Si
SLU 76	ini.	-189.18	-1576	-0.0001166	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.01	Si
SLU 76	fin.	-224.8	-1167	-0.00014	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.95	Si
SLU 70	ini.	-151.71	-1358	-0.0000926	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.22	Si
SLU 70	fin.	-226.57	-1140	-0.0001411	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.86	Si
SLU 78	ini.	-197.06	-1627	-0.0001217	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.49	Si
SLU 78	fin.	-232.4	-1209	-0.000145	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.59	Si
SLU 79	ini.	-197.54	-1621	-0.000122	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.46	Si
SLU 79	fin.	-227.43	-1189	-0.0001417	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.82	Si
SLU 74	ini.	-193.28	-1595	-0.0001193	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.73	Si
SLU 74	fin.	-225.28	-1174	-0.0001403	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.92	Si
SLU 84	ini.	-209.76	-1694	-0.00013	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.73	Si
SLU 84	fin.	-226.18	-1194	-0.0001409	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.88	Si
SLU 69	ini.	-153.43	-1363	-0.0000937	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.04	Si
SLU 69	fin.	-224.89	-1135	-0.00014	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.94	Si
SLU 80	ini.	-195.82	-1616	-0.0001209	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.56	Si
SLU 80	fin.	-229.12	-1194	-0.0001428	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.74	Si
SLU 77	ini.	-198.78	-1632	-0.0001228	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.38	Si
SLU 77	fin.	-230.72	-1205	-0.0001439	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-193.28	3720	0.82	0	303	6502	3438	2091	5529	No	1.49	Si
SLU 74	fin.	-225.28	-2759	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 75	ini.	-191.56	3716	0.82	0	303	6502	3438	2091	5529	No	1.49	Si
SLU 75	fin.	-226.96	-2770	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 82	ini.	-204.26	3831	0.82	0	303	6502	3438	2091	5529	No	1.44	Si
SLU 82	fin.	-220.74	-2749	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 78	ini.	-197.06	3797	0.82	0	303	6502	3438	2091	5529	No	1.46	Si
SLU 78	fin.	-232.4	-2829	0.82	0	303	6502	3438	2091	5529	No	1.95	Si
SLU 83	ini.	-211.48	3916	0.82	0	303	6502	3438	2091	5529	No	1.41	Si
SLU 83	fin.	-224.5	-2797	0.82	0	303	6502	3438	2091	5529	No	1.98	Si
SLU 79	ini.	-197.54	3764	0.82	0	303	6502	3438	2091	5529	No	1.47	Si
SLU 79	fin.	-227.43	-2781	0.82	0	303	6502	3438	2091	5529	No	1.99	Si
SLU 84	ini.	-209.76	3912	0.82	0	303	6502	3438	2091	5529	No	1.41	Si
SLU 84	fin.	-226.18	-2808	0.82	0	303	6502	3438	2091	5529	No	1.97	Si
SLU 77	ini.	-198.78	3801	0.82	0	303	6502	3438	2091	5529	No	1.45	Si
SLU 77	fin.	-230.72	-2818	0.82	0	303	6502	3438	2091	5529	No	1.96	Si
SLU 81	ini.	-205.98	3835	0.82	0	303	6502	3438	2091	5529	No	1.44	Si
SLU 81	fin.	-219.06	-2738	0.82	0	303	6502	3438	2091	5529	No	2.02	Si
SLU 80	ini.	-195.82	3759	0.82	0	303	6502	3438	2091	5529	No	1.47	Si
SLU 80	fin.	-229.12	-2791	0.82	0	303	6502	3438	2091	5529	No	1.98	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1464.58	-6130	-0.001239	0.0002807	0.0035	0.82		2487.45	2487.45		1.7	Si
SLV 15	fin.	703.84	868	-0.0004862	0.0002807	0.0035	0.82		2482.11	2482.11		3.53	Si
SLV 16	ini.	-1349.97	-5716	-0.0011064	0.0002807	0.0035	0.82		2487.45	2487.45		1.84	Si
SLV 16	fin.	619.69	669	-0.0004182	0.0002807	0.0035	0.82		2482.11	2482.11		4.01	Si
SLV 4	ini.	1173.44	3829	-0.0009199	0.0002807	0.0035	0.82		2482.11	2482.11		2.12	Si
SLV 4	fin.	-943.1	-2600	-0.0006936	0.0002807	0.0035	0.82		2487.45	2487.45		2.64	Si
SLV 1	ini.	1111.97	3652	-0.0008576	0.0002807	0.0035	0.82		2482.11	2482.11		2.23	Si
SLV 1	fin.	-934.59	-2279	-0.0006858	0.0002807	0.0035	0.82		2487.45	2487.45		2.66	Si
SLV 2	ini.	1226.58	4066	-0.0009752	0.0002807	0.0035	0.82		2482.11	2482.11		2.02	Si
SLV 2	fin.	-1018.74	-2478	-0.0007645	0.0002807	0.0035	0.82		2487.45	2487.45		2.44	Si
SLV 14	ini.	-1296.83	-5478	-0.0010478	0.0002807	0.0035	0.82		2487.45	2487.45		1.92	Si
SLV 14	fin.	544.05	791	-0.0003596	0.0002807	0.0035	0.82		2482.11	2482.11		4.56	Si
SLD 15	ini.	-694.03	-3212	-0.000477	0.0002807	0.0035	0.82		2487.45	2487.45		3.58	Si
SLD 15	fin.	210.5	-88	-0.0001288	0.0002807	0.0035	0.82		2482.11	2482.11		11.79	Si
SLV 3	ini.	1058.83	3415	-0.0008052	0.0002807	0.0035	0.82		2482.11	2482.11		2.34	Si
SLV 3	fin.	-858.95	-2401	-0.0006176	0.0002807	0.0035	0.82		2487.45	2487.45		2.9	Si
SLD 13	ini.	-671.91	-3110	-0.000459	0.0002807	0.0035	0.82		2487.45	2487.45		3.7	Si
SLD 13	fin.	178.53	-40	-0.0001086	0.0002807	0.0035	0.82		2482.11	2482.11		13.9	Si
SLV 13	ini.	-1411.44	-5892	-0.0011765	0.0002807	0.0035	0.82		2487.45	2487.45		1.76	Si
SLV 13	fin.	628.19	990	-0.0004249	0.0002807	0.0035	0.82		2482.11	2482.11		3.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1111.97	-3728	0.82	0	455	6502	5156	2091	6957		1.87	Si
SLV 1	fin.	-934.59	-6141	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 2	ini.	1226.58	-4319	0.82	0	455	6502	5156	2091	6957		1.61	Si
SLV 2	fin.	-1018.74	-6609	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 16	ini.	-1349.97	8575	0.82	0	455	6502	5156	2091	6957		0.81	No
SLV 16	fin.	619.69	2363	0.82	0	455	6502	5156	2091	6957		2.94	Si
SLV 13	ini.	-1411.44	8533	0.82	0	455	6502	5156	2091	6957		0.82	No
SLV 13	fin.	628.19	3231	0.82	0	455	6502	5156	2091	6957		2.15	Si
SLV 15	ini.	-1464.58	9166	0.82	0	455	6502	5156	2091	6957		0.76	No
SLV 15	fin.	703.84	2831	0.82	0	455	6502	5156	2091	6957		2.46	Si
SLV 11	ini.	-623.42	5511	0.82	0	455	6502	5156	2091	6957		1.26	Si
SLV 11	fin.	230.45	-998	0.82	0	455	6502	5156	2091	6957		6.97	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1173.44	-3686	0.82	0	455	6502	5156	2091	6957		1.89	Si
SLV 4	fin.	-943.1	-7009	0.82	0	455	6502	5156	2091	6957		0.99	No
SLV 14	ini.	-1296.83	7942	0.82	0	455	6502	5156	2091	6957		0.88	No
SLV 14	fin.	544.05	2763	0.82	0	455	6502	5156	2091	6957		2.52	Si
SLD 15	ini.	-694.03	5310	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLD 15	fin.	210.5	128	0.82	0	455	6502	5156	2091	6957		54.23	Si
SLV 3	ini.	1058.83	-3095	0.82	0	455	6502	5156	2091	6957		2.25	Si
SLV 3	fin.	-858.95	-6541	0.82	0	455	6502	5156	2091	6957		1.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.698	SLV 15	Si
V_SLV	0.759	SLV 15	No
PF_SLU	10.587	SLU 78	Si
V_SLU	1.412	SLU 83	Si

Trave di accoppiamento 95

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	7.63	8.35	0.72	-5.963	-3.314	7.63	8.35	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	325.54	-1282	-0.000281	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.83	Si
SLU 84	fin.	-291.04	-1847	-0.0002466	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.53	Si
SLU 70	ini.	323.4	-1010	-0.0002789	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.87	Si
SLU 70	fin.	-255.11	-1562	-0.0002127	0.0001872	0.0035	0.72		1901.86	1901.86	No	7.46	Si
SLU 76	ini.	324.8	-1185	-0.0002803	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.84	Si
SLU 76	fin.	-278.65	-1746	-0.0002348	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.83	Si
SLU 77	ini.	326.33	-1234	-0.0002818	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.81	Si
SLU 77	fin.	-284.19	-1796	-0.0002401	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.69	Si
SLU 80	ini.	327.04	-1218	-0.0002825	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.8	Si
SLU 80	fin.	-283.15	-1783	-0.0002391	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.72	Si
SLU 79	ini.	324.88	-1222	-0.0002804	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.84	Si
SLU 79	fin.	-282.81	-1784	-0.0002388	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.72	Si
SLU 78	ini.	328.48	-1230	-0.000284	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.78	Si
SLU 78	fin.	-284.52	-1795	-0.0002404	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.68	Si
SLU 83	ini.	323.39	-1286	-0.0002789	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.87	Si
SLU 83	fin.	-290.71	-1848	-0.0002463	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.54	Si
SLU 75	ini.	324.81	-1200	-0.0002803	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.84	Si
SLU 75	fin.	-279.81	-1759	-0.0002359	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.8	Si
SLU 74	ini.	322.65	-1204	-0.0002782	0.0001872	0.0035	0.72		1897.3	1897.3	No	5.88	Si
SLU 74	fin.	-279.48	-1760	-0.0002356	0.0001872	0.0035	0.72		1901.86	1901.86	No	6.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	321.87	-729	0.72	0	292	3965	3018	1836	4257	No	5.84	Si
SLU 82	fin.	-286.33	-4566	0.72	0	292	3965	3018	1836	4257	No	0.93	No
SLU 78	ini.	328.48	-732	0.72	0	292	3965	3018	1836	4257	No	5.82	Si
SLU 78	fin.	-284.52	-4617	0.72	0	292	3965	3018	1836	4257	No	0.92	No
SLU 75	ini.	324.81	-729	0.72	0	292	3965	3018	1836	4257	No	5.84	Si
SLU 75	fin.	-279.81	-4528	0.72	0	292	3965	3018	1836	4257	No	0.94	No
SLU 77	ini.	326.33	-726	0.72	0	292	3965	3018	1836	4257	No	5.86	Si
SLU 77	fin.	-284.19	-4606	0.72	0	292	3965	3018	1836	4257	No	0.92	No
SLU 79	ini.	324.88	-730	0.72	0	292	3965	3018	1836	4257	No	5.83	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-282.81	-4564	0.72	0	292	3965	3018	1836	4257	No	0.93	No
SLU 81	ini.	319.72	-723	0.72	0	292	3965	3018	1836	4257	No	5.89	Si
SLU 81	fin.	-285.99	-4556	0.72	0	292	3965	3018	1836	4257	No	0.93	No
SLU 74	ini.	322.65	-723	0.72	0	292	3965	3018	1836	4257	No	5.89	Si
SLU 74	fin.	-279.48	-4518	0.72	0	292	3965	3018	1836	4257	No	0.94	No
SLU 80	ini.	327.04	-736	0.72	0	292	3965	3018	1836	4257	No	5.78	Si
SLU 80	fin.	-283.15	-4574	0.72	0	292	3965	3018	1836	4257	No	0.93	No
SLU 84	ini.	325.54	-732	0.72	0	292	3965	3018	1836	4257	No	5.82	Si
SLU 84	fin.	-291.04	-4654	0.72	0	292	3965	3018	1836	4257	No	0.91	No
SLU 83	ini.	323.39	-726	0.72	0	292	3965	3018	1836	4257	No	5.86	Si
SLU 83	fin.	-290.71	-4644	0.72	0	292	3965	3018	1836	4257	No	0.92	No

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1148.84	2588	-0.0012718	0.0002807	0.0035	0.72		1912.43	1912.43		1.66	Si
SLV 3	fin.	-45.29	1522	-0.0000349	0.0002807	0.0035	0.72		1917.1	1917.1		42.33	Si
SLV 2	ini.	1284.11	3327	-0.0014977	0.0002807	0.0035	0.72		1912.43	1912.43		1.49	Si
SLV 2	fin.	-16.39	2038	-0.0000125	0.0002807	0.0035	0.72		1917.1	1917.1		116.96	Si
SLV 14	ini.	-674.81	-4107	-0.0006312	0.0002807	0.0035	0.72		1917.1	1917.1		2.84	Si
SLV 14	fin.	-338.14	-3869	-0.0002812	0.0002807	0.0035	0.72		1917.1	1917.1		5.67	Si
SLV 13	ini.	-782.5	-4449	-0.0007598	0.0002807	0.0035	0.72		1917.1	1917.1		2.45	Si
SLV 13	fin.	-342.02	-4094	-0.0002847	0.0002807	0.0035	0.72		1917.1	1917.1		5.61	Si
SLD 4	ini.	673.45	820	-0.0006314	0.0002807	0.0035	0.72		1912.43	1912.43		2.84	Si
SLD 4	fin.	-127.6	75	-0.0001001	0.0002807	0.0035	0.72		1917.1	1917.1		15.02	Si
SLV 16	ini.	-702.39	-4504	-0.0006634	0.0002807	0.0035	0.72		1917.1	1917.1		2.73	Si
SLV 16	fin.	-363.16	-4159	-0.0003044	0.0002807	0.0035	0.72		1917.1	1917.1		5.28	Si
SLD 2	ini.	684.11	986	-0.0006438	0.0002807	0.0035	0.72		1912.43	1912.43		2.8	Si
SLD 2	fin.	-116.38	200	-0.0000911	0.0002807	0.0035	0.72		1917.1	1917.1		16.47	Si
SLV 1	ini.	1176.42	2985	-0.0013158	0.0002807	0.0035	0.72		1912.43	1912.43		1.63	Si
SLV 1	fin.	-20.27	1813	-0.0000155	0.0002807	0.0035	0.72		1917.1	1917.1		94.58	Si
SLV 15	ini.	-810.08	-4846	-0.0007941	0.0002807	0.0035	0.72		1917.1	1917.1		2.37	Si
SLV 15	fin.	-367.04	-4385	-0.0003081	0.0002807	0.0035	0.72		1917.1	1917.1		5.22	Si
SLV 4	ini.	1256.53	2930	-0.0014494	0.0002807	0.0035	0.72		1912.43	1912.43		1.52	Si
SLV 4	fin.	-41.42	1748	-0.0000319	0.0002807	0.0035	0.72		1917.1	1917.1		46.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 8	ini.	360.18	-784	0.72	0	438	3965	4528	1836	4403		5.62	Si
SLD 8	fin.	-189.2	-3763	0.72	0	438	3965	4528	1836	4403		1.17	Si
SLD 4	ini.	673.45	-1579	0.72	0	438	3965	4528	1836	4403		2.79	Si
SLD 4	fin.	-127.6	-3888	0.72	0	438	3965	4528	1836	4403		1.13	Si
SLV 3	ini.	1148.84	-2639	0.72	0	438	3965	4528	1836	4403		1.67	Si
SLV 3	fin.	-45.29	-4741	0.72	0	438	3965	4528	1836	4403		0.93	No
SLD 3	ini.	627.19	-1446	0.72	0	438	3965	4528	1836	4403		3.04	Si
SLD 3	fin.	-129.27	-3800	0.72	0	438	3965	4528	1836	4403		1.16	Si
SLV 8	ini.	519.97	-1083	0.72	0	438	3965	4528	1836	4403		4.06	Si
SLV 8	fin.	-183.9	-4628	0.72	0	438	3965	4528	1836	4403		0.95	No
SLV 2	ini.	1284.11	-3108	0.72	0	438	3965	4528	1836	4403		1.42	Si
SLV 2	fin.	-16.39	-4323	0.72	0	438	3965	4528	1836	4403		1.02	Si
SLV 12	ini.	-67.71	307	0.72	0	438	3965	4528	1836	4403		14.35	Si
SLV 12	fin.	-280.42	-3762	0.72	0	438	3965	4528	1836	4403		1.17	Si
SLV 4	ini.	1256.53	-2947	0.72	0	438	3965	4528	1836	4403		1.49	Si
SLV 4	fin.	-41.42	-4946	0.72	0	438	3965	4528	1836	4403		0.89	No
SLV 1	ini.	1176.42	-2800	0.72	0	438	3965	4528	1836	4403		1.57	Si
SLV 1	fin.	-20.27	-4118	0.72	0	438	3965	4528	1836	4403		1.07	Si
SLV 7	ini.	449.81	-883	0.72	0	438	3965	4528	1836	4403		4.99	Si
SLV 7	fin.	-186.42	-4494	0.72	0	438	3965	4528	1836	4403		0.98	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.489	SLV 2	Si
V_SLV	0.89	SLV 4	No
PF_SLU	5.776	SLU 78	Si
V_SLU	0.915	SLU 84	No

Trave di accoppiamento 96

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	7.53	8.35	0.82	-3.183	-3.314	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	203.54	-648	-0.0001262	0.0001872	0.0035	0.82		2455.37	2455.37	No	12.06	Si
SLU 83	fin.	-702.21	-2994	-0.0005126	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.5	Si
SLU 77	ini.	208.97	-631	-0.0001298	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.75	Si
SLU 77	fin.	-700.91	-2985	-0.0005115	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.51	Si
SLU 78	ini.	212.04	-628	-0.0001318	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.58	Si
SLU 78	fin.	-704.38	-2998	-0.0005146	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.49	Si
SLU 84	ini.	206.6	-645	-0.0001282	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.88	Si
SLU 84	fin.	-705.68	-3007	-0.0005157	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.49	Si
SLU 75	ini.	214.05	-602	-0.0001331	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.47	Si
SLU 75	fin.	-693.81	-2948	-0.0005052	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.55	Si
SLU 82	ini.	208.62	-618	-0.0001296	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.77	Si
SLU 82	fin.	-695.11	-2957	-0.0005063	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.54	Si
SLU 81	ini.	205.55	-621	-0.0001275	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.95	Si
SLU 81	fin.	-691.64	-2944	-0.0005033	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.56	Si
SLU 80	ini.	214.05	-613	-0.0001331	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.47	Si
SLU 80	fin.	-699.46	-2974	-0.0005102	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.52	Si
SLU 76	ini.	218.11	-584	-0.0001358	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.26	Si
SLU 76	fin.	-691.21	-2932	-0.0005029	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.56	Si
SLU 79	ini.	210.99	-615	-0.0001311	0.0001872	0.0035	0.82		2455.37	2455.37	No	11.64	Si
SLU 79	fin.	-695.98	-2961	-0.0005071	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	205.55	114	0.82	0	303	6502	3438	2091	5529	No	48.59	Si
SLU 81	fin.	-691.64	-4841	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 77	ini.	208.97	94	0.82	0	303	6502	3438	2091	5529	No	59.01	Si
SLU 77	fin.	-700.91	-4885	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 74	ini.	210.98	72	0.82	0	303	6502	3438	2091	5529	No	77.25	Si
SLU 74	fin.	-690.34	-4806	0.82	0	303	6502	3438	2091	5529	No	1.15	Si
SLU 83	ini.	203.54	136	0.82	0	303	6502	3438	2091	5529	No	40.69	Si
SLU 83	fin.	-702.21	-4920	0.82	0	303	6502	3438	2091	5529	No	1.12	Si
SLU 80	ini.	214.05	68	0.82	0	303	6502	3438	2091	5529	No	81.67	Si
SLU 80	fin.	-699.46	-4865	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 78	ini.	212.04	83	0.82	0	303	6502	3438	2091	5529	No	66.83	Si
SLU 78	fin.	-704.38	-4904	0.82	0	303	6502	3438	2091	5529	No	1.13	Si
SLU 79	ini.	210.99	79	0.82	0	303	6502	3438	2091	5529	No	70.29	Si
SLU 79	fin.	-695.98	-4847	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 82	ini.	208.62	103	0.82	0	303	6502	3438	2091	5529	No	53.77	Si
SLU 82	fin.	-695.11	-4860	0.82	0	303	6502	3438	2091	5529	No	1.14	Si
SLU 84	ini.	206.6	125	0.82	0	303	6502	3438	2091	5529	No	44.25	Si
SLU 84	fin.	-705.68	-4939	0.82	0	303	6502	3438	2091	5529	No	1.12	Si
SLU 75	ini.	214.05	61	0.82	0	303	6502	3438	2091	5529	No	91.22	Si
SLU 75	fin.	-693.81	-4825	0.82	0	303	6502	3438	2091	5529	No	1.15	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	ini.	783.26	688	-0.000553	0.0002807	0.0035	0.82		2482.11	2482.11		3.17	Si
SLD 4	fin.	-957.75	-3659	-0.0007072	0.0002807	0.0035	0.82		2487.45	2487.45		2.6	Si
SLV 8	ini.	478.01	-329	-0.0003105	0.0002807	0.0035	0.82		2482.11	2482.11		5.19	Si
SLV 8	fin.	-989.13	-4058	-0.0007365	0.0002807	0.0035	0.82		2487.45	2487.45		2.51	Si
SLV 3	ini.	1377.51	1657	-0.0011407	0.0002807	0.0035	0.82		2482.11	2482.11		1.8	Si
SLV 3	fin.	-1437.18	-5317	-0.0012065	0.0002807	0.0035	0.82		2487.45	2487.45		1.73	Si
SLV 1	ini.	1485.24	2174	-0.0012674	0.0002807	0.0035	0.82		2482.11	2482.11		1.67	Si
SLV 1	fin.	-1340.95	-4792	-0.0010964	0.0002807	0.0035	0.82		2487.45	2487.45		1.85	Si
SLV 14	ini.	-1026.22	-2341	-0.0007717	0.0002807	0.0035	0.82		2487.45	2487.45		2.42	Si
SLV 14	fin.	463.6	1225	-0.0003001	0.0002807	0.0035	0.82		2482.11	2482.11		5.35	Si
SLV 2	ini.	1706.32	2592	-0.0015565	0.0002807	0.0035	0.82		2482.11	2482.11		1.45	Si
SLV 2	fin.	-1490.75	-5286	-0.0012704	0.0002807	0.0035	0.82		2487.45	2487.45		1.67	Si
SLV 15	ini.	-1355.03	-3277	-0.0011121	0.0002807	0.0035	0.82		2487.45	2487.45		1.84	Si
SLV 15	fin.	517.17	1194	-0.0003394	0.0002807	0.0035	0.82		2482.11	2482.11		4.8	Si
SLV 16	ini.	-1133.95	-2858	-0.0008773	0.0002807	0.0035	0.82		2487.45	2487.45		2.19	Si
SLV 16	fin.	367.37	700	-0.0002324	0.0002807	0.0035	0.82		2482.11	2482.11		6.76	Si
SLV 13	ini.	-1247.3	-2759	-0.0009945	0.0002807	0.0035	0.82		2487.45	2487.45		1.99	Si
SLV 13	fin.	613.4	1718	-0.0004132	0.0002807	0.0035	0.82		2482.11	2482.11		4.05	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1598.59	2075	-0.00141	0.0002807	0.0035	0.82		2482.11	2482.11		1.55	Si
SLV 4	fin.	-1586.98	-5811	-0.0013908	0.0002807	0.0035	0.82		2487.45	2487.45		1.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1598.59	-5612	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 4	fin.	-1586.98	-8953	0.82	0	455	6502	5156	2091	6957		0.78	No
SLD 4	ini.	783.26	-2444	0.82	0	455	6502	5156	2091	6957		2.85	Si
SLD 4	fin.	-957.75	-5739	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLV 2	ini.	1706.32	-6165	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 2	fin.	-1490.75	-8397	0.82	0	455	6502	5156	2091	6957		0.83	No
SLV 8	ini.	478.01	-1058	0.82	0	455	6502	5156	2091	6957		6.58	Si
SLV 8	fin.	-989.13	-6000	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 15	ini.	-1355.03	5997	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 15	fin.	517.17	1733	0.82	0	455	6502	5156	2091	6957		4.01	Si
SLD 2	ini.	831.02	-2689	0.82	0	455	6502	5156	2091	6957		2.59	Si
SLD 2	fin.	-915.37	-5494	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 13	ini.	-1247.3	5444	0.82	0	455	6502	5156	2091	6957		1.28	Si
SLV 13	fin.	613.4	2290	0.82	0	455	6502	5156	2091	6957		3.04	Si
SLV 7	ini.	333.95	-487	0.82	0	455	6502	5156	2091	6957		14.28	Si
SLV 7	fin.	-891.52	-5490	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 3	ini.	1377.51	-4736	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLV 3	fin.	-1437.18	-8170	0.82	0	455	6502	5156	2091	6957		0.85	No
SLV 1	ini.	1485.24	-5289	0.82	0	455	6502	5156	2091	6957		1.32	Si
SLV 1	fin.	-1340.95	-7613	0.82	0	455	6502	5156	2091	6957		0.91	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.455	SLV 2	Si
V_SLV	0.777	SLV 4	No
PF_SLU	3.487	SLU 84	Si
V_SLU	1.119	SLU 84	Si

Trave di accoppiamento 97

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	4.83	5.73	0.9	-2.963	5.826	4.83	5.73	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	832.41	-1865	-0.0005038	0.0001872	0.0035	0.9		2959	2959	No	3.55	Si
SLU 81	fin.	-510.07	-711	-0.0002816	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.81	Si
SLU 84	ini.	831.72	-1877	-0.0005033	0.0001872	0.0035	0.9		2959	2959	No	3.56	Si
SLU 84	fin.	-504.9	-727	-0.0002783	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.87	Si
SLU 82	ini.	824.6	-1848	-0.0004981	0.0001872	0.0035	0.9		2959	2959	No	3.59	Si
SLU 82	fin.	-505.66	-703	-0.0002788	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.86	Si
SLU 78	ini.	834.21	-1881	-0.0005052	0.0001872	0.0035	0.9		2959	2959	No	3.55	Si
SLU 78	fin.	-501.94	-731	-0.0002764	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.91	Si
SLU 75	ini.	827.09	-1852	-0.0004999	0.0001872	0.0035	0.9		2959	2959	No	3.58	Si
SLU 75	fin.	-502.7	-707	-0.0002769	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.9	Si
SLU 79	ini.	833.45	-1879	-0.0005046	0.0001872	0.0035	0.9		2959	2959	No	3.55	Si
SLU 79	fin.	-501.6	-731	-0.0002762	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.91	Si
SLU 74	ini.	834.9	-1870	-0.0005057	0.0001872	0.0035	0.9		2959	2959	No	3.54	Si
SLU 74	fin.	-507.1	-715	-0.0002797	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.85	Si
SLU 80	ini.	825.64	-1862	-0.0004989	0.0001872	0.0035	0.9		2959	2959	No	3.58	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-497.2	-723	-0.0002734	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.96	Si
SLU 77	ini.	842.02	-1898	-0.0005109	0.0001872	0.0035	0.9		2959	2959	No	3.51	Si
SLU 77	fin.	-506.34	-738	-0.0002792	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.86	Si
SLU 83	ini.	839.53	-1894	-0.0005091	0.0001872	0.0035	0.9		2959	2959	No	3.52	Si
SLU 83	fin.	-509.31	-734	-0.0002811	0.0001872	0.0035	0.9		2964.67	2964.67	No	5.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	824.6	-2660	0.9	0	365	7137	3773	2295	6068	No	2.28	Si
SLU 82	fin.	-505.66	-1465	0.9	0	365	7137	3773	2295	6068	No	4.14	Si
SLU 78	ini.	834.21	-2719	0.9	0	365	7137	3773	2295	6068	No	2.23	Si
SLU 78	fin.	-501.94	-1426	0.9	0	365	7137	3773	2295	6068	No	4.26	Si
SLU 74	ini.	834.9	-2708	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 74	fin.	-507.1	-1454	0.9	0	365	7137	3773	2295	6068	No	4.17	Si
SLU 80	ini.	825.64	-2687	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 80	fin.	-497.2	-1417	0.9	0	365	7137	3773	2295	6068	No	4.28	Si
SLU 77	ini.	842.02	-2740	0.9	0	365	7137	3773	2295	6068	No	2.21	Si
SLU 77	fin.	-506.34	-1441	0.9	0	365	7137	3773	2295	6068	No	4.21	Si
SLU 83	ini.	839.53	-2714	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 83	fin.	-509.31	-1469	0.9	0	365	7137	3773	2295	6068	No	4.13	Si
SLU 75	ini.	827.09	-2687	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 75	fin.	-502.7	-1438	0.9	0	365	7137	3773	2295	6068	No	4.22	Si
SLU 79	ini.	833.45	-2708	0.9	0	365	7137	3773	2295	6068	No	2.24	Si
SLU 79	fin.	-501.6	-1432	0.9	0	365	7137	3773	2295	6068	No	4.24	Si
SLU 84	ini.	831.72	-2692	0.9	0	365	7137	3773	2295	6068	No	2.25	Si
SLU 84	fin.	-504.9	-1453	0.9	0	365	7137	3773	2295	6068	No	4.18	Si
SLU 81	ini.	832.41	-2681	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 81	fin.	-510.07	-1481	0.9	0	365	7137	3773	2295	6068	No	4.1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2395.95	-2431	-0.0020154	0.0002807	0.0035	0.9		2989.59	2989.59		1.25	Si
SLV 3	fin.	-2370.24	1556	-0.0019692	0.0002807	0.0035	0.9		2995.37	2995.37		1.26	Si
SLV 16	ini.	-1261.42	314	-0.0007918	0.0002807	0.0035	0.9		2995.37	2995.37		2.37	Si
SLV 16	fin.	1457.7	-2185	-0.0009576	0.0002807	0.0035	0.9		2989.59	2989.59		2.05	Si
SLV 14	ini.	-1177.57	-222	-0.0007256	0.0002807	0.0035	0.9		2995.37	2995.37		2.54	Si
SLV 14	fin.	1614.07	-2509	-0.0010979	0.0002807	0.0035	0.9		2989.59	2989.59		1.85	Si
SLD 1	ini.	1410.02	-2032	-0.0009166	0.0002807	0.0035	0.9		2989.59	2989.59		2.12	Si
SLD 1	fin.	-1162.21	252	-0.0007137	0.0002807	0.0035	0.9		2995.37	2995.37		2.58	Si
SLV 13	ini.	-897.67	-445	-0.0005194	0.0002807	0.0035	0.9		2995.37	2995.37		3.34	Si
SLV 13	fin.	1325.12	-2234	-0.0008455	0.0002807	0.0035	0.9		2989.59	2989.59		2.26	Si
SLV 4	ini.	2116.05	-2207	-0.0016287	0.0002807	0.0035	0.9		2989.59	2989.59		1.41	Si
SLV 4	fin.	-2081.29	1281	-0.0015821	0.0002807	0.0035	0.9		2995.37	2995.37		1.44	Si
SLV 2	ini.	2199.9	-2744	-0.001735	0.0002807	0.0035	0.9		2989.59	2989.59		1.36	Si
SLV 2	fin.	-1924.92	958	-0.001405	0.0002807	0.0035	0.9		2995.37	2995.37		1.56	Si
SLD 3	ini.	1372.6	-1795	-0.000885	0.0002807	0.0035	0.9		2989.59	2989.59		2.18	Si
SLD 3	fin.	-1231.04	395	-0.0007675	0.0002807	0.0035	0.9		2995.37	2995.37		2.43	Si
SLV 5	ini.	1346.75	-2671	-0.0008634	0.0002807	0.0035	0.9		2989.59	2989.59		2.22	Si
SLV 5	fin.	-742.46	-406	-0.0004146	0.0002807	0.0035	0.9		2995.37	2995.37		4.03	Si
SLV 1	ini.	2479.8	-2967	-0.0021513	0.0002807	0.0035	0.9		2989.59	2989.59		1.21	Si
SLV 1	fin.	-2213.87	1233	-0.0017481	0.0002807	0.0035	0.9		2995.37	2995.37		1.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	1346.75	-4282	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 5	fin.	-742.46	-2680	0.9	0	548	7137	5660	2295	7684		2.87	Si
SLV 14	ini.	-1177.57	3711	0.9	0	548	7137	5660	2295	7684		2.07	Si
SLV 14	fin.	1614.07	4812	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLV 1	ini.	2479.8	-7899	0.9	0	548	7137	5660	2295	7684		0.97	No
SLV 1	fin.	-2213.87	-6811	0.9	0	548	7137	5660	2295	7684		1.13	Si
SLV 16	ini.	-1261.42	3958	0.9	0	548	7137	5660	2295	7684		1.94	Si
SLV 16	fin.	1457.7	4628	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 2	ini.	2199.9	-6998	0.9	0	548	7137	5660	2295	7684		1.1	Si
SLV 2	fin.	-1924.92	-5947	0.9	0	548	7137	5660	2295	7684		1.29	Si
SLV 4	ini.	2116.05	-6751	0.9	0	548	7137	5660	2295	7684		1.14	Si
SLV 4	fin.	-2081.29	-6131	0.9	0	548	7137	5660	2295	7684		1.25	Si
SLV 3	ini.	2395.95	-7652	0.9	0	548	7137	5660	2295	7684		1	Si
SLV 3	fin.	-2370.24	-6995	0.9	0	548	7137	5660	2295	7684		1.1	Si
SLD 2	ini.	1289.8	-4121	0.9	0	548	7137	5660	2295	7684		1.86	Si
SLD 2	fin.	-1038.1	-3166	0.9	0	548	7137	5660	2295	7684		2.43	Si
SLD 1	ini.	1410.02	-4508	0.9	0	548	7137	5660	2295	7684		1.7	Si
SLD 1	fin.	-1162.21	-3537	0.9	0	548	7137	5660	2295	7684		2.17	Si
SLD 3	ini.	1372.6	-4398	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLD 3	fin.	-1231.04	-3617	0.9	0	548	7137	5660	2295	7684		2.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.206	SLV 1	Si
V_SLV	0.973	SLV 1	No
PF_SLU	3.514	SLU 77	Si
V_SLU	2.214	SLU 77	Si

Trave di accoppiamento 98

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	7.53	8.35	0.82	-2.963	5.826	7.53	8.35	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	56.47	-333	-0.0000337	0.0001872	0.0035	0.82		2455.37	2455.37	No	43.48	Si
SLU 74	fin.	-642.87	-1799	-0.0004606	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.83	Si
SLU 75	ini.	53.85	-341	-0.0000321	0.0001872	0.0035	0.82		2455.37	2455.37	No	45.6	Si
SLU 75	fin.	-635.09	-1781	-0.0004539	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.87	Si
SLU 79	ini.	50.94	-359	-0.0000304	0.0001872	0.0035	0.82		2455.37	2455.37	No	48.2	Si
SLU 79	fin.	-641.05	-1807	-0.0004591	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.84	Si
SLU 83	ini.	51.33	-368	-0.0000306	0.0001872	0.0035	0.82		2455.37	2455.37	No	47.84	Si
SLU 83	fin.	-650.21	-1830	-0.000467	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.78	Si
SLU 82	ini.	54.07	-344	-0.0000323	0.0001872	0.0035	0.82		2455.37	2455.37	No	45.41	Si
SLU 82	fin.	-637.3	-1783	-0.0004558	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.86	Si
SLU 77	ini.	51.11	-365	-0.0000305	0.0001872	0.0035	0.82		2455.37	2455.37	No	48.04	Si
SLU 77	fin.	-647.99	-1829	-0.0004651	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.8	Si
SLU 78	ini.	48.49	-372	-0.0000289	0.0001872	0.0035	0.82		2455.37	2455.37	No	50.63	Si
SLU 78	fin.	-640.21	-1811	-0.0004583	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.84	Si
SLU 84	ini.	48.71	-376	-0.000029	0.0001872	0.0035	0.82		2455.37	2455.37	No	50.41	Si
SLU 84	fin.	-642.43	-1813	-0.0004603	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.83	Si
SLU 80	ini.	48.32	-366	-0.0000288	0.0001872	0.0035	0.82		2455.37	2455.37	No	50.81	Si
SLU 80	fin.	-633.27	-1789	-0.0004524	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.89	Si
SLU 81	ini.	56.68	-337	-0.0000338	0.0001872	0.0035	0.82		2455.37	2455.37	No	43.32	Si
SLU 81	fin.	-645.08	-1801	-0.0004625	0.0001872	0.0035	0.82		2460.51	2460.51	No	3.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	53.85	1319	0.82	0	303	6502	3438	2091	5529	No	4.19	Si
SLU 75	fin.	-635.09	-3279	0.82	0	303	6502	3438	2091	5529	No	1.69	Si
SLU 77	ini.	51.11	1366	0.82	0	303	6502	3438	2091	5529	No	4.05	Si
SLU 77	fin.	-647.99	-3345	0.82	0	303	6502	3438	2091	5529	No	1.65	Si
SLU 83	ini.	51.33	1396	0.82	0	303	6502	3438	2091	5529	No	3.96	Si
SLU 83	fin.	-650.21	-3366	0.82	0	303	6502	3438	2091	5529	No	1.64	Si
SLU 74	ini.	56.47	1304	0.82	0	303	6502	3438	2091	5529	No	4.24	Si
SLU 74	fin.	-642.87	-3307	0.82	0	303	6502	3438	2091	5529	No	1.67	Si
SLU 78	ini.	48.49	1381	0.82	0	303	6502	3438	2091	5529	No	4	Si
SLU 78	fin.	-640.21	-3316	0.82	0	303	6502	3438	2091	5529	No	1.67	Si
SLU 79	ini.	50.94	1349	0.82	0	303	6502	3438	2091	5529	No	4.1	Si
SLU 79	fin.	-641.05	-3310	0.82	0	303	6502	3438	2091	5529	No	1.67	Si
SLU 82	ini.	54.07	1349	0.82	0	303	6502	3438	2091	5529	No	4.1	Si
SLU 82	fin.	-637.3	-3301	0.82	0	303	6502	3438	2091	5529	No	1.67	Si
SLU 81	ini.	56.68	1334	0.82	0	303	6502	3438	2091	5529	No	4.14	Si
SLU 81	fin.	-645.08	-3329	0.82	0	303	6502	3438	2091	5529	No	1.66	Si
SLU 84	ini.	48.71	1411	0.82	0	303	6502	3438	2091	5529	No	3.92	Si
SLU 84	fin.	-642.43	-3338	0.82	0	303	6502	3438	2091	5529	No	1.66	Si
SLU 80	ini.	48.32	1364	0.82	0	303	6502	3438	2091	5529	No	4.05	Si
SLU 80	fin.	-633.27	-3281	0.82	0	303	6502	3438	2091	5529	No	1.68	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	809.82	2411	-0.0005759	0.0002807	0.0035	0.82		2482.11	2482.11		3.07	Si
SLV 1	fin.	-1571.88	-3035	-0.0013714	0.0002807	0.0035	0.82		2487.45	2487.45		1.58	Si
SLD 1	ini.	378.69	940	-0.0002402	0.0002807	0.0035	0.82		2482.11	2482.11		6.55	Si
SLD 1	fin.	-938.02	-2022	-0.0006889	0.0002807	0.0035	0.82		2487.45	2487.45		2.65	Si
SLD 2	ini.	323.25	730	-0.0002025	0.0002807	0.0035	0.82		2482.11	2482.11		7.68	Si
SLD 2	fin.	-865.1	-1926	-0.000623	0.0002807	0.0035	0.82		2487.45	2487.45		2.88	Si
SLV 6	ini.	134.75	-306	-0.0000813	0.0002807	0.0035	0.82		2482.11	2482.11		18.42	Si
SLV 6	fin.	-892.58	-2736	-0.0006476	0.0002807	0.0035	0.82		2487.45	2487.45		2.79	Si
SLV 2	ini.	680.74	1920	-0.0004672	0.0002807	0.0035	0.82		2482.11	2482.11		3.65	Si
SLV 2	fin.	-1402.11	-2811	-0.0011657	0.0002807	0.0035	0.82		2487.45	2487.45		1.77	Si
SLV 5	ini.	218.86	14	-0.0001342	0.0002807	0.0035	0.82		2482.11	2482.11		11.34	Si
SLV 5	fin.	-1003.19	-2882	-0.0007497	0.0002807	0.0035	0.82		2487.45	2487.45		2.48	Si
SLD 4	ini.	348.43	930	-0.0002195	0.0002807	0.0035	0.82		2482.11	2482.11		7.12	Si
SLD 4	fin.	-812.96	-1618	-0.0005773	0.0002807	0.0035	0.82		2487.45	2487.45		3.06	Si
SLD 3	ini.	403.87	1141	-0.0002576	0.0002807	0.0035	0.82		2482.11	2482.11		6.15	Si
SLD 3	fin.	-885.88	-1714	-0.0006416	0.0002807	0.0035	0.82		2487.45	2487.45		2.81	Si
SLV 4	ini.	737.91	2374	-0.0005145	0.0002807	0.0035	0.82		2482.11	2482.11		3.36	Si
SLV 4	fin.	-1284.67	-2117	-0.0010346	0.0002807	0.0035	0.82		2487.45	2487.45		1.94	Si
SLV 3	ini.	867	2865	-0.0006263	0.0002807	0.0035	0.82		2482.11	2482.11		2.86	Si
SLV 3	fin.	-1454.44	-2340	-0.0012269	0.0002807	0.0035	0.82		2487.45	2487.45		1.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	737.91	-3231	0.82	0	455	6502	5156	2091	6957		2.15	Si
SLV 4	fin.	-1284.67	-5174	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLV 2	ini.	680.74	-2618	0.82	0	455	6502	5156	2091	6957		2.66	Si
SLV 2	fin.	-1402.11	-5764	0.82	0	455	6502	5156	2091	6957		1.21	Si
SLV 16	ini.	-695.73	4879	0.82	0	455	6502	5156	2091	6957		1.43	Si
SLV 16	fin.	647.1	1717	0.82	0	455	6502	5156	2091	6957		4.05	Si
SLV 6	ini.	134.75	805	0.82	0	455	6502	5156	2091	6957		8.64	Si
SLV 6	fin.	-892.58	-4149	0.82	0	455	6502	5156	2091	6957		1.68	Si
SLV 15	ini.	-566.64	4128	0.82	0	455	6502	5156	2091	6957		1.69	Si
SLV 15	fin.	477.33	1092	0.82	0	455	6502	5156	2091	6957		6.37	Si
SLV 13	ini.	-623.82	4740	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLV 13	fin.	359.9	502	0.82	0	455	6502	5156	2091	6957		13.86	Si
SLV 5	ini.	218.86	315	0.82	0	455	6502	5156	2091	6957		22.05	Si
SLV 5	fin.	-1003.19	-4557	0.82	0	455	6502	5156	2091	6957		1.53	Si
SLV 14	ini.	-752.9	5491	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 14	fin.	529.66	1128	0.82	0	455	6502	5156	2091	6957		6.17	Si
SLV 1	ini.	809.82	-3369	0.82	0	455	6502	5156	2091	6957		2.07	Si
SLV 1	fin.	-1571.88	-6390	0.82	0	455	6502	5156	2091	6957		1.09	Si
SLV 3	ini.	867	-3982	0.82	0	455	6502	5156	2091	6957		1.75	Si
SLV 3	fin.	-1454.44	-5800	0.82	0	455	6502	5156	2091	6957		1.2	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.582	SLV 1	Si
V_SLV	1.089	SLV 1	Si
PF_SLU	3.784	SLU 83	Si
V_SLU	1.642	SLU 83	Si

Trave di accoppiamento 99

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-0.133	1.266	6.93	8.35	1.42	-0.133	2.066	6.93	8.35	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-241.2	-2298	-0.000048	0.0002246	0.0035	1.42		7545.1	7545.1	No	31.28	Si
SLU 70	fin.	189.82	-1625	-0.0000377	0.0002246	0.0035	1.42		7536.27	7536.27	No	39.7	Si
SLU 51	ini.	-255.63	-2113	-0.000051	0.0002246	0.0035	1.42		7545.1	7545.1	No	29.52	Si
SLU 51	fin.	234.13	-1356	-0.0000467	0.0002246	0.0035	1.42		7536.27	7536.27	No	32.19	Si
SLU 48	ini.	-253.01	-2136	-0.0000504	0.0002246	0.0035	1.42		7545.1	7545.1	No	29.82	Si
SLU 48	fin.	227.06	-1392	-0.0000452	0.0002246	0.0035	1.42		7536.27	7536.27	No	33.19	Si
SLU 49	ini.	-253.74	-2137	-0.0000506	0.0002246	0.0035	1.42		7545.1	7545.1	No	29.74	Si
SLU 49	fin.	229.36	-1389	-0.0000457	0.0002246	0.0035	1.42		7536.27	7536.27	No	32.86	Si
SLU 46	ini.	-244.41	-2068	-0.0000487	0.0002246	0.0035	1.42		7545.1	7545.1	No	30.87	Si
SLU 46	fin.	224.91	-1342	-0.0000448	0.0002246	0.0035	1.42		7536.27	7536.27	No	33.51	Si
SLU 45	ini.	-243.68	-2067	-0.0000485	0.0002246	0.0035	1.42		7545.1	7545.1	No	30.96	Si
SLU 45	fin.	222.61	-1345	-0.0000443	0.0002246	0.0035	1.42		7536.27	7536.27	No	33.85	Si
SLU 71	ini.	-242.36	-2271	-0.0000483	0.0002246	0.0035	1.42		7545.1	7545.1	No	31.13	Si
SLU 71	fin.	192.29	-1595	-0.0000382	0.0002246	0.0035	1.42		7536.27	7536.27	No	39.19	Si
SLU 72	ini.	-243.09	-2273	-0.0000484	0.0002246	0.0035	1.42		7545.1	7545.1	No	31.04	Si
SLU 72	fin.	194.59	-1592	-0.0000387	0.0002246	0.0035	1.42		7536.27	7536.27	No	38.73	Si
SLU 50	ini.	-254.9	-2111	-0.0000508	0.0002246	0.0035	1.42		7545.1	7545.1	No	29.6	Si
SLU 50	fin.	231.83	-1359	-0.0000462	0.0002246	0.0035	1.42		7536.27	7536.27	No	32.51	Si
SLU 47	ini.	-246.79	-2044	-0.0000492	0.0002246	0.0035	1.42		7545.1	7545.1	No	30.57	Si
SLU 47	fin.	231.21	-1306	-0.0000461	0.0002246	0.0035	1.42		7536.27	7536.27	No	32.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-206.34	4377	1.42	0	576	6344	7144	3621	6920	No	1.58	Si
SLU 80	fin.	124.33	-1894	1.42	0	576	6344	7144	3621	6920	No	3.65	Si
SLU 79	ini.	-205.61	4369	1.42	0	576	6344	7144	3621	6920	No	1.58	Si
SLU 79	fin.	122.03	-1903	1.42	0	576	6344	7144	3621	6920	No	3.64	Si
SLU 78	ini.	-204.45	4409	1.42	0	576	6344	7144	3621	6920	No	1.57	Si
SLU 78	fin.	119.56	-1945	1.42	0	576	6344	7144	3621	6920	No	3.56	Si
SLU 67	ini.	-231.87	4311	1.42	0	576	6344	7144	3621	6920	No	1.61	Si
SLU 67	fin.	185.37	-1464	1.42	0	576	6344	7144	3621	6920	No	4.73	Si
SLU 70	ini.	-241.2	4427	1.42	0	576	6344	7144	3621	6920	No	1.56	Si
SLU 70	fin.	189.82	-1486	1.42	0	576	6344	7144	3621	6920	No	4.66	Si
SLU 72	ini.	-243.09	4395	1.42	0	576	6344	7144	3621	6920	No	1.57	Si
SLU 72	fin.	194.59	-1435	1.42	0	576	6344	7144	3621	6920	No	4.82	Si
SLU 69	ini.	-240.46	4419	1.42	0	576	6344	7144	3621	6920	No	1.57	Si
SLU 69	fin.	187.52	-1494	1.42	0	576	6344	7144	3621	6920	No	4.63	Si
SLU 71	ini.	-242.36	4387	1.42	0	576	6344	7144	3621	6920	No	1.58	Si
SLU 71	fin.	192.29	-1443	1.42	0	576	6344	7144	3621	6920	No	4.79	Si
SLU 77	ini.	-203.72	4401	1.42	0	576	6344	7144	3621	6920	No	1.57	Si
SLU 77	fin.	117.26	-1953	1.42	0	576	6344	7144	3621	6920	No	3.54	Si
SLU 66	ini.	-231.13	4302	1.42	0	576	6344	7144	3621	6920	No	1.61	Si
SLU 66	fin.	183.07	-1473	1.42	0	576	6344	7144	3621	6920	No	4.7	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-398.74	-1875	-0.0000797	0.0003369	0.0035	1.42		7279.66	7279.66		18.26	Si
SLV 1	fin.	575.96	-467	-0.0001164	0.0003369	0.0035	1.42		7270.13	7270.13		12.62	Si
SLV 2	ini.	-623.68	-2287	-0.0001262	0.0003369	0.0035	1.42		7279.66	7279.66		11.67	Si
SLV 2	fin.	869.45	-172	-0.0001787	0.0003369	0.0035	1.42		7270.13	7270.13		8.36	Si
SLV 5	ini.	-842.72	-2795	-0.0001727	0.0003369	0.0035	1.42		7279.66	7279.66		8.64	Si
SLV 5	fin.	775.25	-779	-0.0001585	0.0003369	0.0035	1.42		7270.13	7270.13		9.38	Si
SLD 6	ini.	-528.29	-2262	-0.0001064	0.0003369	0.0035	1.42		7279.66	7279.66		13.78	Si
SLD 6	fin.	497.75	-916	-0.0001002	0.0003369	0.0035	1.42		7270.13	7270.13		14.61	Si
SLV 11	ini.	660.63	-194	-0.0001342	0.0003369	0.0035	1.42		7270.13	7270.13		11	Si
SLV 11	fin.	-707.12	-1754	-0.0001438	0.0003369	0.0035	1.42		7279.66	7279.66		10.29	Si
SLV 10	ini.	-909.26	-3022	-0.0001871	0.0003369	0.0035	1.42		7279.66	7279.66		8.01	Si
SLV 10	fin.	722.09	-1051	-0.0001472	0.0003369	0.0035	1.42		7270.13	7270.13		10.07	Si
SLV 15	ini.	295.02	-970	-0.0000587	0.0003369	0.0035	1.42		7270.13	7270.13		24.64	Si
SLV 15	fin.	-610.09	-2168	-0.0001234	0.0003369	0.0035	1.42		7279.66	7279.66		11.93	Si
SLV 9	ini.	-762.69	-2754	-0.0001556	0.0003369	0.0035	1.42		7279.66	7279.66		9.54	Si
SLV 9	fin.	530.85	-1243	-0.000107	0.0003369	0.0035	1.42		7270.13	7270.13		13.7	Si
SLV 7	ini.	580.6	-235	-0.0001174	0.0003369	0.0035	1.42		7270.13	7270.13		12.52	Si
SLV 7	fin.	-462.73	-1290	-0.0000928	0.0003369	0.0035	1.42		7279.66	7279.66		15.73	Si
SLV 6	ini.	-989.29	-3063	-0.0002046	0.0003369	0.0035	1.42		7279.66	7279.66		7.36	Si
SLV 6	fin.	966.49	-586	-0.0001998	0.0003369	0.0035	1.42		7270.13	7270.13		7.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 6	ini.	-528.29	4648	1.42	0	864	6344	10717	3621	7208		1.55	Si
SLD 6	fin.	497.75	429	1.42	0	864	6344	10717	3621	7208		16.78	Si
SLD 5	ini.	-464.17	4284	1.42	0	864	6344	10717	3621	7208		1.68	Si
SLD 5	fin.	414.09	65	1.42	0	864	6344	10717	3621	7208		110.55	Si
SLV 5	ini.	-842.72	5711	1.42	0	864	6344	10717	3621	7208		1.26	Si
SLV 5	fin.	775.25	1587	1.42	0	864	6344	10717	3621	7208		4.54	Si
SLV 2	ini.	-623.68	5032	1.42	0	864	6344	10717	3621	7208		1.43	Si
SLV 2	fin.	869.45	2039	1.42	0	864	6344	10717	3621	7208		3.53	Si
SLV 11	ini.	660.63	-242	1.42	0	864	6344	10717	3621	7208		29.82	Si
SLV 11	fin.	-707.12	-4680	1.42	0	864	6344	10717	3621	7208		1.54	Si
SLV 10	ini.	-909.26	6314	1.42	0	864	6344	10717	3621	7208		1.14	Si
SLV 10	fin.	722.09	1371	1.42	0	864	6344	10717	3621	7208		5.26	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-762.69	5481	1.42	0	864	6344	10717	3621	7208		1.32	Si
SLV 9	fin.	530.85	538	1.42	0	864	6344	10717	3621	7208		13.39	Si
SLV 15	ini.	295.02	1270	1.42	0	864	6344	10717	3621	7208		5.68	Si
SLV 15	fin.	-610.09	-4300	1.42	0	864	6344	10717	3621	7208		1.68	Si
SLD 10	ini.	-494.06	4549	1.42	0	864	6344	10717	3621	7208		1.58	Si
SLD 10	fin.	393.23	-19	1.42	0	864	6344	10717	3621	7208		372.98	Si
SLV 6	ini.	-989.29	6544	1.42	0	864	6344	10717	3621	7208		1.1	Si
SLV 6	fin.	966.49	2420	1.42	0	864	6344	10717	3621	7208		2.98	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.358	SLV 6	Si
V_SLV	1.102	SLV 6	Si
PF_SLU	29.516	SLU 51	Si
V_SLU	1.563	SLU 70	Si

Trave di accoppiamento 100

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-22.713	5.826	8.35	9.25	0.9	-21.813	5.826	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	274.02	-1287	-0.000142	0.0001872	0.0035	0.9		2959	2959	No	10.8	Si
SLU 69	fin.	-32.22	-757	-0.0000158	0.0001872	0.0035	0.9		2964.67	2964.67	No	92.03	Si
SLU 46	ini.	278.72	-1251	-0.0001446	0.0001872	0.0035	0.9		2959	2959	No	10.62	Si
SLU 46	fin.	-87.11	-583	-0.0000433	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.04	Si
SLU 47	ini.	274.95	-1228	-0.0001425	0.0001872	0.0035	0.9		2959	2959	No	10.76	Si
SLU 47	fin.	-91.07	-560	-0.0000453	0.0001872	0.0035	0.9		2964.67	2964.67	No	32.55	Si
SLU 45	ini.	282.48	-1271	-0.0001467	0.0001872	0.0035	0.9		2959	2959	No	10.48	Si
SLU 45	fin.	-85.82	-596	-0.0000426	0.0001872	0.0035	0.9		2964.67	2964.67	No	34.54	Si
SLU 51	ini.	278.07	-1261	-0.0001442	0.0001872	0.0035	0.9		2959	2959	No	10.64	Si
SLU 51	fin.	-76.46	-617	-0.0000379	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.78	Si
SLU 50	ini.	281.83	-1281	-0.0001463	0.0001872	0.0035	0.9		2959	2959	No	10.5	Si
SLU 50	fin.	-75.17	-630	-0.0000372	0.0001872	0.0035	0.9		2964.67	2964.67	No	39.44	Si
SLU 43	ini.	280.58	-1241	-0.0001456	0.0001872	0.0035	0.9		2959	2959	No	10.55	Si
SLU 43	fin.	-102.7	-534	-0.0000512	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.87	Si
SLU 49	ini.	279.34	-1272	-0.000145	0.0001872	0.0035	0.9		2959	2959	No	10.59	Si
SLU 49	fin.	-73.34	-631	-0.0000363	0.0001872	0.0035	0.9		2964.67	2964.67	No	40.42	Si
SLU 44	ini.	274.33	-1208	-0.0001422	0.0001872	0.0035	0.9		2959	2959	No	10.79	Si
SLU 44	fin.	-104.84	-512	-0.0000522	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.28	Si
SLU 48	ini.	283.1	-1291	-0.000147	0.0001872	0.0035	0.9		2959	2959	No	10.45	Si
SLU 48	fin.	-72.06	-644	-0.0000357	0.0001872	0.0035	0.9		2964.67	2964.67	No	41.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	270.27	-1926	0.9	0	365	7137	3773	2295	6068	No	3.15	Si
SLU 70	fin.	-33.5	96	0.9	0	365	7137	3773	2295	6068	No	63.36	Si
SLU 48	ini.	283.1	-2009	0.9	0	365	7137	3773	2295	6068	No	3.02	Si
SLU 48	fin.	-72.06	-47	0.9	0	365	7137	3773	2295	6068	No	129.74	Si
SLU 50	ini.	281.83	-1987	0.9	0	365	7137	3773	2295	6068	No	3.05	Si
SLU 50	fin.	-75.17	-67	0.9	0	365	7137	3773	2295	6068	No	90.71	Si
SLU 47	ini.	274.95	-1914	0.9	0	365	7137	3773	2295	6068	No	3.17	Si
SLU 47	fin.	-91.07	-144	0.9	0	365	7137	3773	2295	6068	No	42.22	Si
SLU 49	ini.	279.34	-1989	0.9	0	365	7137	3773	2295	6068	No	3.05	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	fin.	-73.34	-49	0.9	0	365	7137	3773	2295	6068	No	122.68	Si
SLU 69	ini.	274.02	-1946	0.9	0	365	7137	3773	2295	6068	No	3.12	Si
SLU 69	fin.	-32.22	98	0.9	0	365	7137	3773	2295	6068	No	61.63	Si
SLU 51	ini.	278.07	-1967	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 51	fin.	-76.46	-70	0.9	0	365	7137	3773	2295	6068	No	87.2	Si
SLU 45	ini.	282.48	-1970	0.9	0	365	7137	3773	2295	6068	No	3.08	Si
SLU 45	fin.	-85.82	-119	0.9	0	365	7137	3773	2295	6068	No	50.95	Si
SLU 71	ini.	272.75	-1924	0.9	0	365	7137	3773	2295	6068	No	3.15	Si
SLU 71	fin.	-35.33	78	0.9	0	365	7137	3773	2295	6068	No	77.46	Si
SLU 46	ini.	278.72	-1950	0.9	0	365	7137	3773	2295	6068	No	3.11	Si
SLU 46	fin.	-87.11	-122	0.9	0	365	7137	3773	2295	6068	No	49.82	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	628.6	-2757	-0.0003428	0.0002807	0.0035	0.9		2989.59	2989.59		4.76	Si
SLV 10	fin.	-296.75	-831	-0.0001515	0.0002807	0.0035	0.9		2995.37	2995.37		10.09	Si
SLV 16	ini.	541.59	-1753	-0.0002899	0.0002807	0.0035	0.9		2989.59	2989.59		5.52	Si
SLV 16	fin.	-746.58	809	-0.0004173	0.0002807	0.0035	0.9		2995.37	2995.37		4.01	Si
SLV 1	ini.	-125.48	-138	-0.0000624	0.0002807	0.0035	0.9		2995.37	2995.37		23.87	Si
SLV 1	fin.	649.53	-1799	-0.0003559	0.0002807	0.0035	0.9		2989.59	2989.59		4.6	Si
SLV 3	ini.	-295.01	708	-0.0001506	0.0002807	0.0035	0.9		2995.37	2995.37		10.15	Si
SLV 3	fin.	657.75	-1375	-0.0003611	0.0002807	0.0035	0.9		2989.59	2989.59		4.55	Si
SLV 4	ini.	-223.88	523	-0.000113	0.0002807	0.0035	0.9		2995.37	2995.37		13.38	Si
SLV 4	fin.	521.93	-1140	-0.0002783	0.0002807	0.0035	0.9		2989.59	2989.59		5.73	Si
SLV 9	ini.	582.25	-2637	-0.0003144	0.0002807	0.0035	0.9		2989.59	2989.59		5.13	Si
SLV 9	fin.	-208.25	-984	-0.0001048	0.0002807	0.0035	0.9		2995.37	2995.37		14.38	Si
SLV 13	ini.	639.99	-2414	-0.0003499	0.0002807	0.0035	0.9		2989.59	2989.59		4.67	Si
SLV 13	fin.	-618.97	151	-0.0003362	0.0002807	0.0035	0.9		2995.37	2995.37		4.84	Si
SLV 2	ini.	-54.35	-322	-0.0000267	0.0002807	0.0035	0.9		2995.37	2995.37		55.11	Si
SLV 2	fin.	513.7	-1564	-0.0002735	0.0002807	0.0035	0.9		2989.59	2989.59		5.82	Si
SLV 15	ini.	470.47	-1568	-0.0002483	0.0002807	0.0035	0.9		2989.59	2989.59		6.35	Si
SLV 15	fin.	-610.75	574	-0.0003311	0.0002807	0.0035	0.9		2995.37	2995.37		4.9	Si
SLV 14	ini.	711.12	-2599	-0.0003951	0.0002807	0.0035	0.9		2989.59	2989.59		4.2	Si
SLV 14	fin.	-754.8	386	-0.0004227	0.0002807	0.0035	0.9		2995.37	2995.37		3.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-125.48	122	0.9	0	548	7137	5660	2295	7684		63.04	Si
SLV 1	fin.	649.53	2595	0.9	0	548	7137	5660	2295	7684		2.96	Si
SLV 9	ini.	582.25	-4059	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLV 9	fin.	-208.25	-439	0.9	0	548	7137	5660	2295	7684		17.5	Si
SLD 14	ini.	424.73	-2623	0.9	0	548	7137	5660	2295	7684		2.93	Si
SLD 14	fin.	-351.07	-1151	0.9	0	548	7137	5660	2295	7684		6.68	Si
SLV 13	ini.	639.99	-3884	0.9	0	548	7137	5660	2295	7684		1.98	Si
SLV 13	fin.	-618.97	-2123	0.9	0	548	7137	5660	2295	7684		3.62	Si
SLV 5	ini.	352.61	-2857	0.9	0	548	7137	5660	2295	7684		2.69	Si
SLV 5	fin.	172.3	976	0.9	0	548	7137	5660	2295	7684		7.87	Si
SLD 10	ini.	392.57	-2670	0.9	0	548	7137	5660	2295	7684		2.88	Si
SLD 10	fin.	-155.85	-358	0.9	0	548	7137	5660	2295	7684		21.49	Si
SLV 16	ini.	541.59	-2929	0.9	0	548	7137	5660	2295	7684		2.62	Si
SLV 16	fin.	-746.58	-2712	0.9	0	548	7137	5660	2295	7684		2.83	Si
SLV 10	ini.	628.6	-4284	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 10	fin.	-296.75	-757	0.9	0	548	7137	5660	2295	7684		10.15	Si
SLV 6	ini.	398.95	-3083	0.9	0	548	7137	5660	2295	7684		2.49	Si
SLV 6	fin.	83.8	659	0.9	0	548	7137	5660	2295	7684		11.67	Si
SLV 14	ini.	711.12	-4229	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 14	fin.	-754.8	-2611	0.9	0	548	7137	5660	2295	7684		2.94	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.968	SLV 14	Si
V_SLV	1.794	SLV 10	Si
PF_SLU	10.452	SLU 48	Si
V_SLU	3.02	SLU 48	Si

Trave di accoppiamento 101

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-22.713	5.826	11.05	11.87	0.82	-21.813	5.826	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 51	ini.	-8.89	-256	-0.0000052	0.0001872	0.0035	0.82		2460.51	2460.51	No	276.78	Si
SLU 51	fin.	-219.46	-1007	-0.0001364	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.21	Si
SLU 46	ini.	6.27	-212	-0.0000037	0.0001872	0.0035	0.82		2455.37	2455.37	No	391.78	Si
SLU 46	fin.	-222.82	-998	-0.0001386	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.04	Si
SLU 45	ini.	4.6	-222	-0.0000027	0.0001872	0.0035	0.82		2455.37	2455.37	No	533.46	Si
SLU 45	fin.	-225.68	-1012	-0.0001405	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.9	Si
SLU 50	ini.	-10.55	-267	-0.0000062	0.0001872	0.0035	0.82		2460.51	2460.51	No	233.13	Si
SLU 50	fin.	-222.32	-1021	-0.0001383	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.07	Si
SLU 49	ini.	-12.38	-269	-0.0000073	0.0001872	0.0035	0.82		2460.51	2460.51	No	198.8	Si
SLU 49	fin.	-221.11	-1019	-0.0001375	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.13	Si
SLU 44	ini.	29.51	-134	-0.0000175	0.0001872	0.0035	0.82		2455.37	2455.37	No	83.21	Si
SLU 44	fin.	-220.97	-957	-0.0001374	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.14	Si
SLU 53	ini.	-31.04	-321	-0.0000184	0.0001872	0.0035	0.82		2460.51	2460.51	No	79.28	Si
SLU 53	fin.	-218.69	-1025	-0.0001359	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.25	Si
SLU 43	ini.	26.73	-152	-0.0000159	0.0001872	0.0035	0.82		2455.37	2455.37	No	91.85	Si
SLU 43	fin.	-225.74	-980	-0.0001406	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.9	Si
SLU 48	ini.	-14.04	-280	-0.0000083	0.0001872	0.0035	0.82		2460.51	2460.51	No	175.24	Si
SLU 48	fin.	-223.97	-1032	-0.0001394	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.99	Si
SLU 47	ini.	10.86	-192	-0.0000064	0.0001872	0.0035	0.82		2455.37	2455.37	No	226.01	Si
SLU 47	fin.	-219.26	-978	-0.0001363	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-88.34	1140	0.82	0	303	6502	3438	2091	5529	No	4.85	Si
SLU 84	fin.	-202.88	-2249	0.82	0	303	6502	3438	2091	5529	No	2.46	Si
SLU 80	ini.	-91.71	1145	0.82	0	303	6502	3438	2091	5529	No	4.83	Si
SLU 80	fin.	-204.17	-2255	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 75	ini.	-76.56	1070	0.82	0	303	6502	3438	2091	5529	No	5.17	Si
SLU 75	fin.	-207.52	-2241	0.82	0	303	6502	3438	2091	5529	No	2.47	Si
SLU 69	ini.	-61.23	955	0.82	0	303	6502	3438	2091	5529	No	5.79	Si
SLU 69	fin.	-215.67	-2220	0.82	0	303	6502	3438	2091	5529	No	2.49	Si
SLU 79	ini.	-93.38	1150	0.82	0	303	6502	3438	2091	5529	No	4.81	Si
SLU 79	fin.	-207.03	-2266	0.82	0	303	6502	3438	2091	5529	No	2.44	Si
SLU 83	ini.	-90.01	1144	0.82	0	303	6502	3438	2091	5529	No	4.83	Si
SLU 83	fin.	-205.74	-2259	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 74	ini.	-78.22	1075	0.82	0	303	6502	3438	2091	5529	No	5.15	Si
SLU 74	fin.	-210.39	-2252	0.82	0	303	6502	3438	2091	5529	No	2.45	Si
SLU 81	ini.	-71.37	1045	0.82	0	303	6502	3438	2091	5529	No	5.29	Si
SLU 81	fin.	-207.45	-2223	0.82	0	303	6502	3438	2091	5529	No	2.49	Si
SLU 77	ini.	-96.87	1174	0.82	0	303	6502	3438	2091	5529	No	4.71	Si
SLU 77	fin.	-208.68	-2288	0.82	0	303	6502	3438	2091	5529	No	2.42	Si
SLU 78	ini.	-95.2	1169	0.82	0	303	6502	3438	2091	5529	No	4.73	Si
SLU 78	fin.	-205.82	-2278	0.82	0	303	6502	3438	2091	5529	No	2.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-157.49	-920	-0.0000952	0.0002807	0.0035	0.82		2487.45	2487.45		15.79	Si
SLV 5	fin.	-348.34	-1610	-0.0002189	0.0002807	0.0035	0.82		2487.45	2487.45		7.14	Si
SLD 10	ini.	25.8	-297	-0.0000153	0.0002807	0.0035	0.82		2482.11	2482.11		96.22	Si
SLD 10	fin.	-320.67	-1334	-0.0002003	0.0002807	0.0035	0.82		2487.45	2487.45		7.76	Si
SLV 16	ini.	336.16	664	-0.0002112	0.0002807	0.0035	0.82		2482.11	2482.11		7.38	Si
SLV 16	fin.	-336.11	-1112	-0.0002107	0.0002807	0.0035	0.82		2487.45	2487.45		7.4	Si
SLV 6	ini.	-99.26	-773	-0.0000594	0.0002807	0.0035	0.82		2487.45	2487.45		25.06	Si
SLV 6	fin.	-382.92	-1692	-0.0002426	0.0002807	0.0035	0.82		2487.45	2487.45		6.5	Si
SLV 13	ini.	233.13	178	-0.0001433	0.0002807	0.0035	0.82		2482.11	2482.11		10.65	Si
SLV 13	fin.	-442.12	-1621	-0.000284	0.0002807	0.0035	0.82		2487.45	2487.45		5.63	Si
SLV 9	ini.	22.63	-536	-0.0000134	0.0002807	0.0035	0.82		2482.11	2482.11		109.7	Si
SLV 9	fin.	-481.56	-1967	-0.0003124	0.0002807	0.0035	0.82		2487.45	2487.45		5.17	Si
SLV 14	ini.	322.49	402	-0.000202	0.0002807	0.0035	0.82		2482.11	2482.11		7.7	Si
SLV 14	fin.	-495.2	-1748	-0.0003224	0.0002807	0.0035	0.82		2487.45	2487.45		5.02	Si
SLV 10	ini.	80.85	-390	-0.0000483	0.0002807	0.0035	0.82		2482.11	2482.11		30.7	Si
SLV 10	fin.	-516.14	-2050	-0.0003379	0.0002807	0.0035	0.82		2487.45	2487.45		4.82	Si
SLV 1	ini.	-367.25	-1101	-0.0002318	0.0002807	0.0035	0.82		2487.45	2487.45		6.77	Si
SLV 1	fin.	1.93	-429	-0.0000011	0.0002807	0.0035	0.82		2482.11	2482.11		1284.56	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-353.58	-839	-0.0002225	0.0002807	0.0035	0.82		2487.45	2487.45		7.03	Si
SLV 3	fin.	161.02	207	-0.0000976	0.0002807	0.0035	0.82		2482.11	2482.11		15.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	336.16	-802	0.82	0	455	6502	5156	2091	6957		8.67	Si
SLV 16	fin.	-336.11	-2382	0.82	0	455	6502	5156	2091	6957		2.92	Si
SLV 14	ini.	322.49	-785	0.82	0	455	6502	5156	2091	6957		8.86	Si
SLV 14	fin.	-495.2	-3277	0.82	0	455	6502	5156	2091	6957		2.12	Si
SLD 14	ini.	129.22	-14	0.82	0	455	6502	5156	2091	6957		508.35	Si
SLD 14	fin.	-308.86	-2345	0.82	0	455	6502	5156	2091	6957		2.97	Si
SLV 9	ini.	22.63	369	0.82	0	455	6502	5156	2091	6957		18.87	Si
SLV 9	fin.	-481.56	-3359	0.82	0	455	6502	5156	2091	6957		2.07	Si
SLD 9	ini.	0.32	481	0.82	0	455	6502	5156	2091	6957		14.46	Si
SLD 9	fin.	-305.54	-2395	0.82	0	455	6502	5156	2091	6957		2.9	Si
SLD 10	ini.	25.8	372	0.82	0	455	6502	5156	2091	6957		18.7	Si
SLD 10	fin.	-320.67	-2471	0.82	0	455	6502	5156	2091	6957		2.82	Si
SLV 5	ini.	-157.49	1069	0.82	0	455	6502	5156	2091	6957		6.51	Si
SLV 5	fin.	-348.34	-2722	0.82	0	455	6502	5156	2091	6957		2.56	Si
SLV 6	ini.	-99.26	820	0.82	0	455	6502	5156	2091	6957		8.49	Si
SLV 6	fin.	-382.92	-2895	0.82	0	455	6502	5156	2091	6957		2.4	Si
SLV 10	ini.	80.85	119	0.82	0	455	6502	5156	2091	6957		58.43	Si
SLV 10	fin.	-516.14	-3532	0.82	0	455	6502	5156	2091	6957		1.97	Si
SLV 13	ini.	233.13	-402	0.82	0	455	6502	5156	2091	6957		17.31	Si
SLV 13	fin.	-442.12	-3011	0.82	0	455	6502	5156	2091	6957		2.31	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.819	SLV 10	Si
V_SLV	1.97	SLV 10	Si
PF_SLU	10.9	SLU 43	Si
V_SLU	2.416	SLU 77	Si

Trave di accoppiamento 102

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	8.35	9.25	0.9	-22.493	-3.314	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	254.42	-1437	-0.0001312	0.0001872	0.0035	0.9		2959	2959	No	11.63	Si
SLU 75	fin.	245.11	-1408	-0.0001262	0.0001872	0.0035	0.9		2959	2959	No	12.07	Si
SLU 74	ini.	253.74	-1431	-0.0001309	0.0001872	0.0035	0.9		2959	2959	No	11.66	Si
SLU 74	fin.	243.32	-1399	-0.0001252	0.0001872	0.0035	0.9		2959	2959	No	12.16	Si
SLU 64	ini.	199.08	-1208	-0.0001014	0.0001872	0.0035	0.9		2959	2959	No	14.86	Si
SLU 64	fin.	250.52	-1303	-0.0001291	0.0001872	0.0035	0.9		2959	2959	No	11.81	Si
SLU 78	ini.	272.21	-1506	-0.000141	0.0001872	0.0035	0.9		2959	2959	No	10.87	Si
SLU 78	fin.	239.83	-1427	-0.0001233	0.0001872	0.0035	0.9		2959	2959	No	12.34	Si
SLU 84	ini.	262.62	-1466	-0.0001357	0.0001872	0.0035	0.9		2959	2959	No	11.27	Si
SLU 84	fin.	241.7	-1417	-0.0001243	0.0001872	0.0035	0.9		2959	2959	No	12.24	Si
SLU 80	ini.	266.89	-1481	-0.0001381	0.0001872	0.0035	0.9		2959	2959	No	11.09	Si
SLU 80	fin.	238.01	-1410	-0.0001223	0.0001872	0.0035	0.9		2959	2959	No	12.43	Si
SLU 77	ini.	271.53	-1501	-0.0001406	0.0001872	0.0035	0.9		2959	2959	No	10.9	Si
SLU 77	fin.	238.03	-1418	-0.0001223	0.0001872	0.0035	0.9		2959	2959	No	12.43	Si
SLU 83	ini.	261.94	-1461	-0.0001354	0.0001872	0.0035	0.9		2959	2959	No	11.3	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	fin.	239.91	-1408	-0.0001233	0.0001872	0.0035	0.9		2959	2959	No	12.33	Si
SLU 79	ini.	266.21	-1476	-0.0001377	0.0001872	0.0035	0.9		2959	2959	No	11.12	Si
SLU 79	fin.	236.22	-1401	-0.0001213	0.0001872	0.0035	0.9		2959	2959	No	12.53	Si
SLU 65	ini.	200.22	-1217	-0.000102	0.0001872	0.0035	0.9		2959	2959	No	14.78	Si
SLU 65	fin.	253.51	-1317	-0.0001307	0.0001872	0.0035	0.9		2959	2959	No	11.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	271.53	-1820	0.9	0	365	7137	3773	2295	6068	No	3.33	Si
SLU 77	fin.	238.03	976	0.9	0	365	7137	3773	2295	6068	No	6.22	Si
SLU 80	ini.	266.89	-1785	0.9	0	365	7137	3773	2295	6068	No	3.4	Si
SLU 80	fin.	238.01	970	0.9	0	365	7137	3773	2295	6068	No	6.25	Si
SLU 57	ini.	244.37	-1664	0.9	0	365	7137	3773	2295	6068	No	3.65	Si
SLU 57	fin.	223.94	920	0.9	0	365	7137	3773	2295	6068	No	6.59	Si
SLU 79	ini.	266.21	-1782	0.9	0	365	7137	3773	2295	6068	No	3.41	Si
SLU 79	fin.	236.22	962	0.9	0	365	7137	3773	2295	6068	No	6.31	Si
SLU 83	ini.	261.94	-1741	0.9	0	365	7137	3773	2295	6068	No	3.48	Si
SLU 83	fin.	239.91	964	0.9	0	365	7137	3773	2295	6068	No	6.29	Si
SLU 76	ini.	249.56	-1678	0.9	0	365	7137	3773	2295	6068	No	3.62	Si
SLU 76	fin.	244.5	986	0.9	0	365	7137	3773	2295	6068	No	6.15	Si
SLU 78	ini.	272.21	-1823	0.9	0	365	7137	3773	2295	6068	No	3.33	Si
SLU 78	fin.	239.83	984	0.9	0	365	7137	3773	2295	6068	No	6.17	Si
SLU 75	ini.	254.42	-1714	0.9	0	365	7137	3773	2295	6068	No	3.54	Si
SLU 75	fin.	245.11	995	0.9	0	365	7137	3773	2295	6068	No	6.1	Si
SLU 74	ini.	253.74	-1711	0.9	0	365	7137	3773	2295	6068	No	3.55	Si
SLU 74	fin.	243.32	987	0.9	0	365	7137	3773	2295	6068	No	6.15	Si
SLU 84	ini.	262.62	-1744	0.9	0	365	7137	3773	2295	6068	No	3.48	Si
SLU 84	fin.	241.7	973	0.9	0	365	7137	3773	2295	6068	No	6.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-571.1	800	-0.000307	0.0002807	0.0035	0.9		2995.37	2995.37		5.24	Si
SLV 16	fin.	1284.76	-2967	-0.0008125	0.0002807	0.0035	0.9		2989.59	2989.59		2.33	Si
SLV 14	ini.	-512.51	971	-0.0002722	0.0002807	0.0035	0.9		2995.37	2995.37		5.84	Si
SLV 14	fin.	1008.17	-2118	-0.0005995	0.0002807	0.0035	0.9		2989.59	2989.59		2.97	Si
SLV 3	ini.	824.58	-2842	-0.0004702	0.0002807	0.0035	0.9		2989.59	2989.59		3.63	Si
SLV 3	fin.	-631.87	131	-0.0003441	0.0002807	0.0035	0.9		2995.37	2995.37		4.74	Si
SLV 12	ini.	-131.28	-728	-0.0000653	0.0002807	0.0035	0.9		2995.37	2995.37		22.82	Si
SLV 12	fin.	913.34	-2840	-0.0005315	0.0002807	0.0035	0.9		2989.59	2989.59		3.27	Si
SLV 15	ini.	-683.05	1107	-0.0003763	0.0002807	0.0035	0.9		2995.37	2995.37		4.39	Si
SLV 15	fin.	1417.22	-3149	-0.0009228	0.0002807	0.0035	0.9		2989.59	2989.59		2.11	Si
SLV 4	ini.	936.53	-3149	-0.0005479	0.0002807	0.0035	0.9		2989.59	2989.59		3.19	Si
SLV 4	fin.	-764.33	313	-0.0004289	0.0002807	0.0035	0.9		2995.37	2995.37		3.92	Si
SLV 1	ini.	883.16	-2671	-0.0005104	0.0002807	0.0035	0.9		2989.59	2989.59		3.39	Si
SLV 1	fin.	-908.45	979	-0.0005269	0.0002807	0.0035	0.9		2995.37	2995.37		3.3	Si
SLV 13	ini.	-624.47	1278	-0.0003396	0.0002807	0.0035	0.9		2995.37	2995.37		4.8	Si
SLV 13	fin.	1140.63	-2301	-0.0006987	0.0002807	0.0035	0.9		2989.59	2989.59		2.62	Si
SLV 11	ini.	-204.23	-528	-0.0001027	0.0002807	0.0035	0.9		2995.37	2995.37		14.67	Si
SLV 11	fin.	999.65	-2959	-0.0005933	0.0002807	0.0035	0.9		2989.59	2989.59		2.99	Si
SLV 2	ini.	995.12	-2978	-0.00059	0.0002807	0.0035	0.9		2989.59	2989.59		3	Si
SLV 2	fin.	-1040.92	1162	-0.0006221	0.0002807	0.0035	0.9		2995.37	2995.37		2.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	936.53	-5137	0.9	0	548	7137	5660	2295	7684		1.5	Si
SLV 4	fin.	-764.33	-2665	0.9	0	548	7137	5660	2295	7684		2.88	Si
SLV 3	ini.	824.58	-4618	0.9	0	548	7137	5660	2295	7684		1.66	Si
SLV 3	fin.	-631.87	-2161	0.9	0	548	7137	5660	2295	7684		3.56	Si
SLV 14	ini.	-512.51	2437	0.9	0	548	7137	5660	2295	7684		3.15	Si
SLV 14	fin.	1008.17	3666	0.9	0	548	7137	5660	2295	7684		2.1	Si
SLV 2	ini.	995.12	-5225	0.9	0	548	7137	5660	2295	7684		1.47	Si
SLV 2	fin.	-1040.92	-3851	0.9	0	548	7137	5660	2295	7684		2	Si
SLV 1	ini.	883.16	-4706	0.9	0	548	7137	5660	2295	7684		1.63	Si
SLV 1	fin.	-908.45	-3348	0.9	0	548	7137	5660	2295	7684		2.3	Si
SLV 15	ini.	-683.05	3043	0.9	0	548	7137	5660	2295	7684		2.52	Si
SLV 15	fin.	1417.22	5356	0.9	0	548	7137	5660	2295	7684		1.43	Si
SLV 11	ini.	-204.23	374	0.9	0	548	7137	5660	2295	7684		20.55	Si
SLV 11	fin.	999.65	4021	0.9	0	548	7137	5660	2295	7684		1.91	Si
SLV 13	ini.	-624.47	2956	0.9	0	548	7137	5660	2295	7684		2.6	Si
SLV 13	fin.	1140.63	4169	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 12	ini.	-131.28	36	0.9	0	548	7137	5660	2295	7684		214.08	Si
SLV 12	fin.	913.34	3693	0.9	0	548	7137	5660	2295	7684		2.08	Si
SLV 16	ini.	-571.1	2525	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 16	fin.	1284.76	4852	0.9	0	548	7137	5660	2295	7684		1.58	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.109	SLV 15	Si
V_SLV	1.435	SLV 15	Si
PF_SLU	10.87	SLU 78	Si
V_SLU	3.328	SLU 78	Si

Trave di accoppiamento 103

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	11.05	11.87	0.82	-22.493	-3.314	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	-231.48	-1087	-0.0001444	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.63	Si
SLU 73	fin.	-164.92	-881	-0.000101	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.92	Si
SLU 78	ini.	-232.05	-1126	-0.0001448	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.6	Si
SLU 78	fin.	-208.2	-1016	-0.000129	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.82	Si
SLU 76	ini.	-230.84	-1100	-0.000144	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.66	Si
SLU 76	fin.	-184.01	-939	-0.0001133	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.37	Si
SLU 81	ini.	-229.14	-1089	-0.0001428	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.74	Si
SLU 81	fin.	-182.93	-928	-0.0001126	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.45	Si
SLU 74	ini.	-230.27	-1103	-0.0001436	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.69	Si
SLU 74	fin.	-190.1	-955	-0.0001172	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.94	Si
SLU 84	ini.	-230.92	-1112	-0.000144	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.66	Si
SLU 84	fin.	-201.04	-988	-0.0001243	0.0001872	0.0035	0.82		2460.51	2460.51	No	12.24	Si
SLU 75	ini.	-232.69	-1113	-0.0001452	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.57	Si
SLU 75	fin.	-189.11	-957	-0.0001166	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.01	Si
SLU 82	ini.	-231.56	-1098	-0.0001444	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.63	Si
SLU 82	fin.	-181.95	-930	-0.0001119	0.0001872	0.0035	0.82		2460.51	2460.51	No	13.52	Si
SLU 77	ini.	-229.63	-1117	-0.0001432	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.72	Si
SLU 77	fin.	-209.18	-1013	-0.0001297	0.0001872	0.0035	0.82		2460.51	2460.51	No	11.76	Si
SLU 67	ini.	-228.74	-1072	-0.0001426	0.0001872	0.0035	0.82		2460.51	2460.51	No	10.76	Si
SLU 67	fin.	-150.92	-839	-0.0000921	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-232.69	1902	0.82	0	303	6502	3438	2091	5529	No	2.91	Si
SLU 75	fin.	-189.11	-1331	0.82	0	303	6502	3438	2091	5529	No	4.15	Si
SLU 81	ini.	-229.14	1887	0.82	0	303	6502	3438	2091	5529	No	2.93	Si
SLU 81	fin.	-182.93	-1314	0.82	0	303	6502	3438	2091	5529	No	4.21	Si
SLU 80	ini.	-228.59	1889	0.82	0	303	6502	3438	2091	5529	No	2.93	Si
SLU 80	fin.	-203.75	-1390	0.82	0	303	6502	3438	2091	5529	No	3.98	Si
SLU 76	ini.	-230.84	1879	0.82	0	303	6502	3438	2091	5529	No	2.94	Si
SLU 76	fin.	-184.01	-1304	0.82	0	303	6502	3438	2091	5529	No	4.24	Si
SLU 82	ini.	-231.56	1898	0.82	0	303	6502	3438	2091	5529	No	2.91	Si
SLU 82	fin.	-181.95	-1310	0.82	0	303	6502	3438	2091	5529	No	4.22	Si
SLU 84	ini.	-230.92	1916	0.82	0	303	6502	3438	2091	5529	No	2.89	Si
SLU 84	fin.	-201.04	-1395	0.82	0	303	6502	3438	2091	5529	No	3.96	Si
SLU 83	ini.	-228.5	1904	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 83	fin.	-202.02	-1398	0.82	0	303	6502	3438	2091	5529	No	3.96	Si
SLU 77	ini.	-229.63	1908	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 77	fin.	-209.18	-1419	0.82	0	303	6502	3438	2091	5529	No	3.9	Si
SLU 78	ini.	-232.05	1919	0.82	0	303	6502	3438	2091	5529	No	2.88	Si
SLU 78	fin.	-208.2	-1416	0.82	0	303	6502	3438	2091	5529	No	3.91	Si
SLU 74	ini.	-230.27	1891	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 74	fin.	-190.1	-1335	0.82	0	303	6502	3438	2091	5529	No	4.14	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	432.91	1344	-0.0002781	0.0002807	0.0035	0.82		2482.11	2482.11		5.73	Si
SLV 6	fin.	-629.04	-1036	-0.0004246	0.0002807	0.0035	0.82		2487.45	2487.45		3.95	Si
SLV 12	ini.	-722.39	-2759	-0.0005004	0.0002807	0.0035	0.82		2487.45	2487.45		3.44	Si
SLV 12	fin.	349.51	-287	-0.0002202	0.0002807	0.0035	0.82		2482.11	2482.11		7.1	Si
SLV 1	ini.	495.37	1429	-0.0003233	0.0002807	0.0035	0.82		2482.11	2482.11		5.01	Si
SLV 1	fin.	-843.09	-1652	-0.0006036	0.0002807	0.0035	0.82		2487.45	2487.45		2.95	Si
SLV 15	ini.	-904.73	-3212	-0.0006586	0.0002807	0.0035	0.82		2487.45	2487.45		2.75	Si
SLV 15	fin.	747.32	689	-0.0005225	0.0002807	0.0035	0.82		2482.11	2482.11		3.32	Si
SLV 16	ini.	-832.14	-2990	-0.000594	0.0002807	0.0035	0.82		2487.45	2487.45		2.99	Si
SLV 16	fin.	636.06	471	-0.0004312	0.0002807	0.0035	0.82		2482.11	2482.11		3.9	Si
SLV 11	ini.	-769.69	-2904	-0.0005401	0.0002807	0.0035	0.82		2487.45	2487.45		3.23	Si
SLV 11	fin.	422.01	-145	-0.0002704	0.0002807	0.0035	0.82		2482.11	2482.11		5.88	Si
SLV 4	ini.	325.56	758	-0.000204	0.0002807	0.0035	0.82		2482.11	2482.11		7.62	Si
SLV 4	fin.	-789.05	-1855	-0.0005566	0.0002807	0.0035	0.82		2487.45	2487.45		3.15	Si
SLV 13	ini.	-662.33	-2318	-0.0004512	0.0002807	0.0035	0.82		2487.45	2487.45		3.76	Si
SLV 13	fin.	582.02	673	-0.0003887	0.0002807	0.0035	0.82		2482.11	2482.11		4.26	Si
SLV 3	ini.	252.97	535	-0.0001562	0.0002807	0.0035	0.82		2482.11	2482.11		9.81	Si
SLV 3	fin.	-677.78	-1637	-0.0004637	0.0002807	0.0035	0.82		2487.45	2487.45		3.67	Si
SLV 2	ini.	567.96	1651	-0.0003779	0.0002807	0.0035	0.82		2482.11	2482.11		4.37	Si
SLV 2	fin.	-954.35	-1870	-0.000704	0.0002807	0.0035	0.82		2487.45	2487.45		2.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	325.56	-1123	0.82	0	455	6502	5156	2091	6957		6.2	Si
SLV 4	fin.	-789.05	-3656	0.82	0	455	6502	5156	2091	6957		1.9	Si
SLV 13	ini.	-662.33	3773	0.82	0	455	6502	5156	2091	6957		1.84	Si
SLV 13	fin.	582.02	2046	0.82	0	455	6502	5156	2091	6957		3.4	Si
SLV 15	ini.	-904.73	4968	0.82	0	455	6502	5156	2091	6957		1.4	Si
SLV 15	fin.	747.32	2420	0.82	0	455	6502	5156	2091	6957		2.87	Si
SLV 3	ini.	252.97	-745	0.82	0	455	6502	5156	2091	6957		9.34	Si
SLV 3	fin.	-677.78	-3216	0.82	0	455	6502	5156	2091	6957		2.16	Si
SLV 16	ini.	-832.14	4591	0.82	0	455	6502	5156	2091	6957		1.52	Si
SLV 16	fin.	636.06	1981	0.82	0	455	6502	5156	2091	6957		3.51	Si
SLV 14	ini.	-589.75	3396	0.82	0	455	6502	5156	2091	6957		2.05	Si
SLV 14	fin.	470.75	1606	0.82	0	455	6502	5156	2091	6957		4.33	Si
SLV 2	ini.	567.96	-2318	0.82	0	455	6502	5156	2091	6957		3	Si
SLV 2	fin.	-954.35	-4030	0.82	0	455	6502	5156	2091	6957		1.73	Si
SLV 11	ini.	-769.69	4297	0.82	0	455	6502	5156	2091	6957		1.62	Si
SLV 11	fin.	422.01	808	0.82	0	455	6502	5156	2091	6957		8.61	Si
SLV 1	ini.	495.37	-1940	0.82	0	455	6502	5156	2091	6957		3.59	Si
SLV 1	fin.	-843.09	-3591	0.82	0	455	6502	5156	2091	6957		1.94	Si
SLV 12	ini.	-722.39	4051	0.82	0	455	6502	5156	2091	6957		1.72	Si
SLV 12	fin.	349.51	522	0.82	0	455	6502	5156	2091	6957		13.32	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.606	SLV 2	Si
V_SLV	1.4	SLV 15	Si
PF_SLU	10.574	SLU 75	Si
V_SLU	2.88	SLU 78	Si

Trave di accoppiamento 104

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	8.35	10.35	2	-19.313	-3.314	8.35	10.35	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	145.28	-2036	-0.0000145	0.0001872	0.0035	2		14344.28	14344.28	No	98.73	Si
SLU 84	fin.	112.03	-2529	-0.0000111	0.0001872	0.0035	2		14344.28	14344.28	No	128.04	Si
SLU 40	ini.	151.55	-1581	-0.0000151	0.0001872	0.0035	2		14344.28	14344.28	No	94.65	Si
SLU 40	fin.	108.05	-1997	-0.0000107	0.0001872	0.0035	2		14344.28	14344.28	No	132.75	Si
SLU 82	ini.	146.56	-1942	-0.0000146	0.0001872	0.0035	2		14344.28	14344.28	No	97.87	Si
SLU 82	fin.	128.21	-2433	-0.0000127	0.0001872	0.0035	2		14344.28	14344.28	No	111.88	Si
SLU 39	ini.	150.57	-1578	-0.000015	0.0001872	0.0035	2		14344.28	14344.28	No	95.27	Si
SLU 39	fin.	108.43	-1993	-0.0000108	0.0001872	0.0035	2		14344.28	14344.28	No	132.29	Si
SLU 41	ini.	149.29	-1672	-0.0000149	0.0001872	0.0035	2		14344.28	14344.28	No	96.08	Si
SLU 41	fin.	92.26	-2088	-0.0000092	0.0001872	0.0035	2		14344.28	14344.28	No	155.48	Si
SLU 83	ini.	144.3	-2033	-0.0000144	0.0001872	0.0035	2		14344.28	14344.28	No	99.41	Si
SLU 83	fin.	112.41	-2525	-0.0000112	0.0001872	0.0035	2		14344.28	14344.28	No	127.6	Si
SLU 18	ini.	133.61	-1388	-0.0000133	0.0001872	0.0035	2		14344.28	14344.28	No	107.36	Si
SLU 18	fin.	96.53	-1758	-0.0000096	0.0001872	0.0035	2		14344.28	14344.28	No	148.59	Si
SLU 19	ini.	134.59	-1391	-0.0000134	0.0001872	0.0035	2		14344.28	14344.28	No	106.57	Si
SLU 19	fin.	96.15	-1761	-0.0000095	0.0001872	0.0035	2		14344.28	14344.28	No	149.18	Si
SLU 42	ini.	150.27	-1675	-0.000015	0.0001872	0.0035	2		14344.28	14344.28	No	95.46	Si
SLU 42	fin.	91.88	-2092	-0.0000091	0.0001872	0.0035	2		14344.28	14344.28	No	156.12	Si
SLU 81	ini.	145.58	-1939	-0.0000145	0.0001872	0.0035	2		14344.28	14344.28	No	98.53	Si
SLU 81	fin.	128.59	-2429	-0.0000128	0.0001872	0.0035	2		14344.28	14344.28	No	111.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	ini.	20.74	-750	2	0	812	3965	8384	5100	4776	No	6.37	Si
SLU 66	fin.	100.48	1289	2	0	812	3965	8384	5100	4776	No	3.71	Si
SLU 68	ini.	15.08	-736	2	0	812	3965	8384	5100	4776	No	6.49	Si
SLU 68	fin.	96.03	1275	2	0	812	3965	8384	5100	4776	No	3.75	Si
SLU 71	ini.	12.16	-819	2	0	812	3965	8384	5100	4776	No	5.83	Si
SLU 71	fin.	80.49	1264	2	0	812	3965	8384	5100	4776	No	3.78	Si
SLU 67	ini.	21.72	-756	2	0	812	3965	8384	5100	4776	No	6.31	Si
SLU 67	fin.	100.1	1290	2	0	812	3965	8384	5100	4776	No	3.7	Si
SLU 65	ini.	16.36	-642	2	0	812	3965	8384	5100	4776	No	7.44	Si
SLU 65	fin.	112.2	1283	2	0	812	3965	8384	5100	4776	No	3.72	Si
SLU 69	ini.	19.46	-844	2	0	812	3965	8384	5100	4776	No	5.66	Si
SLU 69	fin.	84.31	1280	2	0	812	3965	8384	5100	4776	No	3.73	Si
SLU 72	ini.	13.14	-826	2	0	812	3965	8384	5100	4776	No	5.78	Si
SLU 72	fin.	80.11	1265	2	0	812	3965	8384	5100	4776	No	3.77	Si
SLU 64	ini.	14.72	-630	2	0	812	3965	8384	5100	4776	No	7.58	Si
SLU 64	fin.	112.84	1281	2	0	812	3965	8384	5100	4776	No	3.73	Si
SLU 75	ini.	113.32	-963	2	0	812	3965	8384	5100	4776	No	4.96	Si
SLU 75	fin.	111.13	1259	2	0	812	3965	8384	5100	4776	No	3.79	Si
SLU 70	ini.	20.44	-851	2	0	812	3965	8384	5100	4776	No	5.61	Si
SLU 70	fin.	83.93	1282	2	0	812	3965	8384	5100	4776	No	3.73	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1507.73	-4390	-0.0001561	0.0002807	0.0035	2		14215.41	14215.41		9.43	Si
SLV 16	fin.	1426.6	-5384	-0.0001474	0.0002807	0.0035	2		14202.07	14202.07		9.96	Si
SLV 3	ini.	1590.57	1043	-0.0001653	0.0002807	0.0035	2		14202.07	14202.07		8.93	Si
SLV 3	fin.	-1133.5	1142	-0.0001159	0.0002807	0.0035	2		14215.41	14215.41		12.54	Si
SLV 1	ini.	1575.26	1454	-0.0001636	0.0002807	0.0035	2		14202.07	14202.07		9.02	Si
SLV 1	fin.	-1251.94	1787	-0.0001285	0.0002807	0.0035	2		14215.41	14215.41		11.35	Si
SLV 2	ini.	1722.58	1709	-0.0001798	0.0002807	0.0035	2		14202.07	14202.07		8.24	Si
SLV 2	fin.	-1390.44	2097	-0.0001434	0.0002807	0.0035	2		14215.41	14215.41		10.22	Si
SLV 14	ini.	-1523.03	-3979	-0.0001577	0.0002807	0.0035	2		14215.41	14215.41		9.33	Si
SLV 14	fin.	1308.16	-4739	-0.0001346	0.0002807	0.0035	2		14202.07	14202.07		10.86	Si
SLD 2	ini.	756.01	-106	-0.0000765	0.0002807	0.0035	2		14202.07	14202.07		18.79	Si
SLD 2	fin.	-545.07	-128	-0.0000547	0.0002807	0.0035	2		14215.41	14215.41		26.08	Si
SLV 15	ini.	-1655.05	-4645	-0.0001722	0.0002807	0.0035	2		14215.41	14215.41		8.59	Si
SLV 15	fin.	1565.1	-5694	-0.0001625	0.0002807	0.0035	2		14202.07	14202.07		9.07	Si
SLV 4	ini.	1737.89	1297	-0.0001815	0.0002807	0.0035	2		14202.07	14202.07		8.17	Si
SLV 4	fin.	-1272	1452	-0.0001306	0.0002807	0.0035	2		14215.41	14215.41		11.18	Si
SLV 13	ini.	-1670.35	-4234	-0.0001739	0.0002807	0.0035	2		14215.41	14215.41		8.51	Si
SLV 13	fin.	1446.66	-5049	-0.0001496	0.0002807	0.0035	2		14202.07	14202.07		9.82	Si
SLD 4	ini.	762.45	-288	-0.0000771	0.0002807	0.0035	2		14202.07	14202.07		18.63	Si
SLD 4	fin.	-493.6	-411	-0.0000495	0.0002807	0.0035	2		14215.41	14215.41		28.8	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1670.35	7879	2	0	1217	3965	12577	5100	5182		0.66	No
SLV 13	fin.	1446.66	8153	2	0	1217	3965	12577	5100	5182		0.64	No
SLD 4	ini.	762.45	-4117	2	0	1217	3965	12577	5100	5182		1.26	Si
SLD 4	fin.	-493.6	-2129	2	0	1217	3965	12577	5100	5182		2.43	Si
SLV 16	ini.	-1507.73	7012	2	0	1217	3965	12577	5100	5182		0.74	No
SLV 16	fin.	1426.6	7949	2	0	1217	3965	12577	5100	5182		0.65	No
SLV 3	ini.	1590.57	-8178	2	0	1217	3965	12577	5100	5182		0.63	No
SLV 3	fin.	-1133.5	-5587	2	0	1217	3965	12577	5100	5182		0.93	No
SLV 15	ini.	-1655.05	7759	2	0	1217	3965	12577	5100	5182		0.67	No
SLV 15	fin.	1565.1	8619	2	0	1217	3965	12577	5100	5182		0.6	No
SLV 4	ini.	1737.89	-8925	2	0	1217	3965	12577	5100	5182		0.58	No
SLV 4	fin.	-1272	-6257	2	0	1217	3965	12577	5100	5182		0.83	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1523.03	7132	2	0	1217	3965	12577	5100	5182		0.73	No
SLV 14	fin.	1308.16	7482	2	0	1217	3965	12577	5100	5182		0.69	No
SLD 15	ini.	-688.47	3020	2	0	1217	3965	12577	5100	5182		1.72	Si
SLD 15	fin.	719.73	4234	2	0	1217	3965	12577	5100	5182		1.22	Si
SLV 1	ini.	1575.26	-8059	2	0	1217	3965	12577	5100	5182		0.64	No
SLV 1	fin.	-1251.94	-6053	2	0	1217	3965	12577	5100	5182		0.86	No
SLV 2	ini.	1722.58	-8806	2	0	1217	3965	12577	5100	5182		0.59	No
SLV 2	fin.	-1390.44	-6724	2	0	1217	3965	12577	5100	5182		0.77	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.172	SLV 4	Si
V_SLV	0.581	SLV 4	No
PF_SLU	94.648	SLU 40	Si
V_SLU	3.703	SLU 67	Si

Trave di accoppiamento 105

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	11.15	11.87	0.72	-19.313	-3.314	11.15	11.87	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-139.78	-1185	-0.0001114	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.61	Si
SLU 74	fin.	-26.49	-1127	-0.0000203	0.0001872	0.0035	0.72		1901.86	1901.86	No	71.81	Si
SLU 78	ini.	-140.92	-1211	-0.0001123	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.5	Si
SLU 78	fin.	-32.51	-1168	-0.000025	0.0001872	0.0035	0.72		1901.86	1901.86	No	58.5	Si
SLU 80	ini.	-136.73	-1175	-0.0001088	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.91	Si
SLU 80	fin.	-31.5	-1137	-0.0000242	0.0001872	0.0035	0.72		1901.86	1901.86	No	60.37	Si
SLU 77	ini.	-140.88	-1209	-0.0001123	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.5	Si
SLU 77	fin.	-31.61	-1165	-0.0000243	0.0001872	0.0035	0.72		1901.86	1901.86	No	60.17	Si
SLU 81	ini.	-144.28	-1215	-0.0001151	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.18	Si
SLU 81	fin.	-28.75	-1143	-0.0000221	0.0001872	0.0035	0.72		1901.86	1901.86	No	66.14	Si
SLU 82	ini.	-144.32	-1217	-0.0001152	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.18	Si
SLU 82	fin.	-29.66	-1146	-0.0000228	0.0001872	0.0035	0.72		1901.86	1901.86	No	64.13	Si
SLU 75	ini.	-139.83	-1187	-0.0001114	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.6	Si
SLU 75	fin.	-27.39	-1131	-0.000021	0.0001872	0.0035	0.72		1901.86	1901.86	No	69.44	Si
SLU 84	ini.	-145.42	-1240	-0.0001161	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.08	Si
SLU 84	fin.	-34.78	-1184	-0.0000268	0.0001872	0.0035	0.72		1901.86	1901.86	No	54.69	Si
SLU 83	ini.	-145.37	-1239	-0.0001161	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.08	Si
SLU 83	fin.	-33.88	-1180	-0.0000261	0.0001872	0.0035	0.72		1901.86	1901.86	No	56.14	Si
SLU 79	ini.	-136.69	-1174	-0.0001088	0.0001872	0.0035	0.72		1901.86	1901.86	No	13.91	Si
SLU 79	fin.	-30.6	-1133	-0.0000235	0.0001872	0.0035	0.72		1901.86	1901.86	No	62.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-145.42	1958	0.72	0	292	3965	3018	1836	4257	No	2.17	Si
SLU 84	fin.	-34.78	-311	0.72	0	292	3965	3018	1836	4257	No	13.7	Si
SLU 79	ini.	-136.69	1938	0.72	0	292	3965	3018	1836	4257	No	2.2	Si
SLU 79	fin.	-30.6	-332	0.72	0	292	3965	3018	1836	4257	No	12.83	Si
SLU 83	ini.	-145.37	1956	0.72	0	292	3965	3018	1836	4257	No	2.18	Si
SLU 83	fin.	-33.88	-306	0.72	0	292	3965	3018	1836	4257	No	13.9	Si
SLU 80	ini.	-136.73	1940	0.72	0	292	3965	3018	1836	4257	No	2.19	Si
SLU 80	fin.	-31.5	-336	0.72	0	292	3965	3018	1836	4257	No	12.67	Si
SLU 75	ini.	-139.83	1931	0.72	0	292	3965	3018	1836	4257	No	2.2	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	-27.39	-299	0.72	0	292	3965	3018	1836	4257	No	14.23	Si
SLU 82	ini.	-144.32	1906	0.72	0	292	3965	3018	1836	4257	No	2.23	Si
SLU 82	fin.	-29.66	-274	0.72	0	292	3965	3018	1836	4257	No	15.55	Si
SLU 77	ini.	-140.88	1981	0.72	0	292	3965	3018	1836	4257	No	2.15	Si
SLU 77	fin.	-31.61	-332	0.72	0	292	3965	3018	1836	4257	No	12.83	Si
SLU 81	ini.	-144.28	1904	0.72	0	292	3965	3018	1836	4257	No	2.24	Si
SLU 81	fin.	-28.75	-269	0.72	0	292	3965	3018	1836	4257	No	15.8	Si
SLU 74	ini.	-139.78	1929	0.72	0	292	3965	3018	1836	4257	No	2.21	Si
SLU 74	fin.	-26.49	-295	0.72	0	292	3965	3018	1836	4257	No	14.44	Si
SLU 78	ini.	-140.92	1982	0.72	0	292	3965	3018	1836	4257	No	2.15	Si
SLU 78	fin.	-32.51	-336	0.72	0	292	3965	3018	1836	4257	No	12.67	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	29.56	1272	-0.0000227	0.0002807	0.0035	0.72		1912.43	1912.43		64.69	Si
SLV 16	fin.	597.76	1655	-0.0005457	0.0002807	0.0035	0.72		1912.43	1912.43		3.2	Si
SLV 14	ini.	23	1301	-0.0000177	0.0002807	0.0035	0.72		1912.43	1912.43		83.14	Si
SLV 14	fin.	637.17	1767	-0.0005898	0.0002807	0.0035	0.72		1912.43	1912.43		3	Si
SLV 1	ini.	-208.54	-2752	-0.000167	0.0002807	0.0035	0.72		1917.1	1917.1		9.19	Si
SLV 1	fin.	-607.97	-3041	-0.0005555	0.0002807	0.0035	0.72		1917.1	1917.1		3.15	Si
SLD 13	ini.	-39.87	199	-0.0000307	0.0002807	0.0035	0.72		1917.1	1917.1		48.09	Si
SLD 13	fin.	299.56	457	-0.0002468	0.0002807	0.0035	0.72		1912.43	1912.43		6.38	Si
SLV 15	ini.	33.25	1427	-0.0000256	0.0002807	0.0035	0.72		1912.43	1912.43		57.52	Si
SLV 15	fin.	667.65	1882	-0.0006247	0.0002807	0.0035	0.72		1912.43	1912.43		2.86	Si
SLV 13	ini.	26.69	1456	-0.0000205	0.0002807	0.0035	0.72		1912.43	1912.43		71.66	Si
SLV 13	fin.	707.05	1994	-0.0006708	0.0002807	0.0035	0.72		1912.43	1912.43		2.7	Si
SLV 4	ini.	-205.66	-2936	-0.0001646	0.0002807	0.0035	0.72		1917.1	1917.1		9.32	Si
SLV 4	fin.	-717.26	-3380	-0.000681	0.0002807	0.0035	0.72		1917.1	1917.1		2.67	Si
SLV 3	ini.	-201.98	-2781	-0.0001615	0.0002807	0.0035	0.72		1917.1	1917.1		9.49	Si
SLV 3	fin.	-647.38	-3152	-0.0005998	0.0002807	0.0035	0.72		1917.1	1917.1		2.96	Si
SLV 2	ini.	-212.23	-2907	-0.0001701	0.0002807	0.0035	0.72		1917.1	1917.1		9.03	Si
SLV 2	fin.	-677.86	-3268	-0.0006348	0.0002807	0.0035	0.72		1917.1	1917.1		2.83	Si
SLD 4	ini.	-139.11	-1679	-0.0001095	0.0002807	0.0035	0.72		1917.1	1917.1		13.78	Si
SLD 4	fin.	-309.77	-1842	-0.0002553	0.0002807	0.0035	0.72		1917.1	1917.1		6.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	33.25	2272	0.72	0	438	3965	4528	1836	4403		1.94	Si
SLV 15	fin.	667.65	1314	0.72	0	438	3965	4528	1836	4403		3.35	Si
SLV 16	ini.	29.56	2155	0.72	0	438	3965	4528	1836	4403		2.04	Si
SLV 16	fin.	597.76	1114	0.72	0	438	3965	4528	1836	4403		3.95	Si
SLD 15	ini.	-36.95	1711	0.72	0	438	3965	4528	1836	4403		2.57	Si
SLD 15	fin.	282.59	459	0.72	0	438	3965	4528	1836	4403		9.59	Si
SLV 4	ini.	-205.66	396	0.72	0	438	3965	4528	1836	4403		11.13	Si
SLV 4	fin.	-717.26	-1911	0.72	0	438	3965	4528	1836	4403		2.3	Si
SLV 13	ini.	26.69	2185	0.72	0	438	3965	4528	1836	4403		2.01	Si
SLV 13	fin.	707.05	1556	0.72	0	438	3965	4528	1836	4403		2.83	Si
SLD 13	ini.	-39.87	1673	0.72	0	438	3965	4528	1836	4403		2.63	Si
SLD 13	fin.	299.56	566	0.72	0	438	3965	4528	1836	4403		7.79	Si
SLV 2	ini.	-212.23	309	0.72	0	438	3965	4528	1836	4403		14.24	Si
SLV 2	fin.	-677.86	-1669	0.72	0	438	3965	4528	1836	4403		2.64	Si
SLV 3	ini.	-201.98	513	0.72	0	438	3965	4528	1836	4403		8.59	Si
SLV 3	fin.	-647.38	-1711	0.72	0	438	3965	4528	1836	4403		2.57	Si
SLV 14	ini.	23	2068	0.72	0	438	3965	4528	1836	4403		2.13	Si
SLV 14	fin.	637.17	1356	0.72	0	438	3965	4528	1836	4403		3.25	Si
SLV 11	ini.	-42.07	1736	0.72	0	438	3965	4528	1836	4403		2.54	Si
SLV 11	fin.	149.24	-62	0.72	0	438	3965	4528	1836	4403		71.57	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.673	SLV 4	Si
V_SLV	1.938	SLV 15	Si
PF_SLU	13.079	SLU 84	Si
V_SLU	2.147	SLU 78	Si

Trave di accoppiamento 106

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	8.35	9.25	0.9	-18.263	-3.314	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 42	ini.	234.05	-1134	-0.0001202	0.0001872	0.0035	0.9		2959	2959	No	12.64	Si
SLU 42	fin.	50.78	-863	-0.0000251	0.0001872	0.0035	0.9		2959	2959	No	58.27	Si
SLU 60	ini.	241.15	-1183	-0.000124	0.0001872	0.0035	0.9		2959	2959	No	12.27	Si
SLU 60	fin.	56.05	-933	-0.0000277	0.0001872	0.0035	0.9		2959	2959	No	52.79	Si
SLU 82	ini.	258.35	-1286	-0.0001334	0.0001872	0.0035	0.9		2959	2959	No	11.45	Si
SLU 82	fin.	65.91	-1033	-0.0000327	0.0001872	0.0035	0.9		2959	2959	No	44.89	Si
SLU 40	ini.	233.36	-1108	-0.0001198	0.0001872	0.0035	0.9		2959	2959	No	12.68	Si
SLU 40	fin.	42.29	-804	-0.0000209	0.0001872	0.0035	0.9		2959	2959	No	69.97	Si
SLU 83	ini.	257.61	-1308	-0.000133	0.0001872	0.0035	0.9		2959	2959	No	11.49	Si
SLU 83	fin.	74.96	-1092	-0.0000372	0.0001872	0.0035	0.9		2959	2959	No	39.47	Si
SLU 62	ini.	241.85	-1210	-0.0001244	0.0001872	0.0035	0.9		2959	2959	No	12.24	Si
SLU 62	fin.	64.54	-992	-0.000032	0.0001872	0.0035	0.9		2959	2959	No	45.85	Si
SLU 63	ini.	243.27	-1214	-0.0001252	0.0001872	0.0035	0.9		2959	2959	No	12.16	Si
SLU 63	fin.	63.97	-992	-0.0000317	0.0001872	0.0035	0.9		2959	2959	No	46.25	Si
SLU 61	ini.	242.58	-1188	-0.0001248	0.0001872	0.0035	0.9		2959	2959	No	12.2	Si
SLU 61	fin.	55.49	-933	-0.0000274	0.0001872	0.0035	0.9		2959	2959	No	53.33	Si
SLU 81	ini.	256.92	-1282	-0.0001326	0.0001872	0.0035	0.9		2959	2959	No	11.52	Si
SLU 81	fin.	66.48	-1033	-0.0000329	0.0001872	0.0035	0.9		2959	2959	No	44.51	Si
SLU 84	ini.	259.04	-1312	-0.0001338	0.0001872	0.0035	0.9		2959	2959	No	11.42	Si
SLU 84	fin.	74.4	-1092	-0.0000369	0.0001872	0.0035	0.9		2959	2959	No	39.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	135.82	-1280	0.9	0	365	7137	3773	2295	6068	No	4.74	Si
SLU 49	fin.	130.43	2117	0.9	0	365	7137	3773	2295	6068	No	2.87	Si
SLU 70	ini.	151.58	-1413	0.9	0	365	7137	3773	2295	6068	No	4.29	Si
SLU 70	fin.	140.86	2286	0.9	0	365	7137	3773	2295	6068	No	2.65	Si
SLU 77	ini.	230.55	-1800	0.9	0	365	7137	3773	2295	6068	No	3.37	Si
SLU 77	fin.	100.65	2128	0.9	0	365	7137	3773	2295	6068	No	2.85	Si
SLU 69	ini.	150.16	-1405	0.9	0	365	7137	3773	2295	6068	No	4.32	Si
SLU 69	fin.	141.42	2283	0.9	0	365	7137	3773	2295	6068	No	2.66	Si
SLU 68	ini.	145.14	-1334	0.9	0	365	7137	3773	2295	6068	No	4.55	Si
SLU 68	fin.	132.26	2159	0.9	0	365	7137	3773	2295	6068	No	2.81	Si
SLU 72	ini.	144.88	-1364	0.9	0	365	7137	3773	2295	6068	No	4.45	Si
SLU 72	fin.	141.12	2261	0.9	0	365	7137	3773	2295	6068	No	2.68	Si
SLU 78	ini.	231.98	-1808	0.9	0	365	7137	3773	2295	6068	No	3.36	Si
SLU 78	fin.	100.09	2130	0.9	0	365	7137	3773	2295	6068	No	2.85	Si
SLU 66	ini.	149.47	-1369	0.9	0	365	7137	3773	2295	6068	No	4.43	Si
SLU 66	fin.	132.93	2180	0.9	0	365	7137	3773	2295	6068	No	2.78	Si
SLU 67	ini.	150.89	-1377	0.9	0	365	7137	3773	2295	6068	No	4.41	Si
SLU 67	fin.	132.37	2182	0.9	0	365	7137	3773	2295	6068	No	2.78	Si
SLU 71	ini.	143.45	-1356	0.9	0	365	7137	3773	2295	6068	No	4.47	Si
SLU 71	fin.	141.69	2258	0.9	0	365	7137	3773	2295	6068	No	2.69	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1775.29	-4468	-0.0012531	0.0002807	0.0035	0.9		2989.59	2989.59		1.68	Si
SLV 2	fin.	-1086.53	3482	-0.0006561	0.0002807	0.0035	0.9		2995.37	2995.37		2.76	Si
SLV 3	ini.	1673.33	-4249	-0.0011536	0.0002807	0.0035	0.9		2989.59	2989.59		1.79	Si
SLV 3	fin.	-918.12	2647	-0.0005337	0.0002807	0.0035	0.9		2995.37	2995.37		3.26	Si
SLD 4	ini.	846.34	-2397	-0.000485	0.0002807	0.0035	0.9		2989.59	2989.59		3.53	Si
SLD 4	fin.	-385.8	780	-0.0002001	0.0002807	0.0035	0.9		2995.37	2995.37		7.76	Si
SLV 13	ini.	-1549.35	2958	-0.0010362	0.0002807	0.0035	0.9		2995.37	2995.37		1.93	Si
SLV 13	fin.	1176.71	-4733	-0.0007266	0.0002807	0.0035	0.9		2989.59	2989.59		2.54	Si
SLV 4	ini.	1806.93	-4543	-0.001285	0.0002807	0.0035	0.9		2989.59	2989.59		1.65	Si
SLV 4	fin.	-1012.73	2993	-0.0006015	0.0002807	0.0035	0.9		2995.37	2995.37		2.96	Si
SLV 15	ini.	-1517.71	2883	-0.0010079	0.0002807	0.0035	0.9		2995.37	2995.37		1.97	Si
SLV 15	fin.	1250.51	-5222	-0.0007849	0.0002807	0.0035	0.9		2989.59	2989.59		2.39	Si
SLV 16	ini.	-1384.11	2588	-0.0008925	0.0002807	0.0035	0.9		2995.37	2995.37		2.16	Si
SLV 16	fin.	1155.9	-4876	-0.0007105	0.0002807	0.0035	0.9		2989.59	2989.59		2.59	Si
SLD 2	ini.	833.14	-2364	-0.000476	0.0002807	0.0035	0.9		2989.59	2989.59		3.59	Si
SLD 2	fin.	-418.08	994	-0.0002181	0.0002807	0.0035	0.9		2995.37	2995.37		7.16	Si
SLV 1	ini.	1641.7	-4174	-0.0011237	0.0002807	0.0035	0.9		2989.59	2989.59		1.82	Si
SLV 1	fin.	-991.92	3136	-0.0005864	0.0002807	0.0035	0.9		2995.37	2995.37		3.02	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1415.75	2664	-0.0009193	0.0002807	0.0035	0.9		2995.37	2995.37		2.12	Si
SLV 14	fin.	1082.1	-4387	-0.0006543	0.0002807	0.0035	0.9		2989.59	2989.59		2.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1775.29	-8575	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 2	fin.	-1086.53	-4857	0.9	0	548	7137	5660	2295	7684		1.58	Si
SLV 16	ini.	-1384.11	5831	0.9	0	548	7137	5660	2295	7684		1.32	Si
SLV 16	fin.	1155.9	7354	0.9	0	548	7137	5660	2295	7684		1.04	Si
SLV 1	ini.	1641.7	-7973	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 1	fin.	-991.92	-4361	0.9	0	548	7137	5660	2295	7684		1.76	Si
SLD 4	ini.	846.34	-4356	0.9	0	548	7137	5660	2295	7684		1.76	Si
SLD 4	fin.	-385.8	-909	0.9	0	548	7137	5660	2295	7684		8.45	Si
SLV 3	ini.	1673.33	-8151	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 3	fin.	-918.12	-3645	0.9	0	548	7137	5660	2295	7684		2.11	Si
SLV 4	ini.	1806.93	-8753	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 4	fin.	-1012.73	-4141	0.9	0	548	7137	5660	2295	7684		1.86	Si
SLV 11	ini.	-340.66	1015	0.9	0	548	7137	5660	2295	7684		7.57	Si
SLV 11	fin.	561.11	4576	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 15	ini.	-1517.71	6432	0.9	0	548	7137	5660	2295	7684		1.19	Si
SLV 15	fin.	1250.51	7850	0.9	0	548	7137	5660	2295	7684		0.98	No
SLV 14	ini.	-1415.75	6009	0.9	0	548	7137	5660	2295	7684		1.28	Si
SLV 14	fin.	1082.1	6637	0.9	0	548	7137	5660	2295	7684		1.16	Si
SLV 13	ini.	-1549.35	6610	0.9	0	548	7137	5660	2295	7684		1.16	Si
SLV 13	fin.	1176.71	7133	0.9	0	548	7137	5660	2295	7684		1.08	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.655	SLV 4	Si
V_SLV	0.878	SLV 4	No
PF_SLU	11.423	SLU 84	Si
V_SLU	2.655	SLU 70	Si

Trave di accoppiamento 107

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	11.05	11.87	0.82	-18.263	-3.314	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	27.63	-250	-0.0000164	0.0001872	0.0035	0.82		2455.37	2455.37	No	88.87	Si
SLU 79	fin.	-255.66	-1382	-0.0001606	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.62	Si
SLU 83	ini.	43.36	-208	-0.0000258	0.0001872	0.0035	0.82		2455.37	2455.37	No	56.63	Si
SLU 83	fin.	-273.26	-1464	-0.0001726	0.0001872	0.0035	0.82		2460.51	2460.51	No	9	Si
SLU 74	ini.	34.14	-228	-0.0000203	0.0001872	0.0035	0.82		2455.37	2455.37	No	71.93	Si
SLU 74	fin.	-258.03	-1392	-0.0001622	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.54	Si
SLU 80	ini.	27.04	-253	-0.000016	0.0001872	0.0035	0.82		2455.37	2455.37	No	90.8	Si
SLU 80	fin.	-256.28	-1384	-0.0001611	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.6	Si
SLU 81	ini.	44.87	-191	-0.0000267	0.0001872	0.0035	0.82		2455.37	2455.37	No	54.72	Si
SLU 81	fin.	-266.39	-1430	-0.0001679	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.24	Si
SLU 82	ini.	44.29	-194	-0.0000264	0.0001872	0.0035	0.82		2455.37	2455.37	No	55.44	Si
SLU 82	fin.	-267.01	-1433	-0.0001683	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.21	Si
SLU 75	ini.	33.55	-231	-0.0000199	0.0001872	0.0035	0.82		2455.37	2455.37	No	73.18	Si
SLU 75	fin.	-258.66	-1395	-0.0001627	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.51	Si
SLU 84	ini.	42.77	-211	-0.0000255	0.0001872	0.0035	0.82		2455.37	2455.37	No	57.41	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-273.88	-1466	-0.000173	0.0001872	0.0035	0.82		2460.51	2460.51	No	8.98	Si
SLU 77	ini.	32.62	-245	-0.0000194	0.0001872	0.0035	0.82		2455.37	2455.37	No	75.27	Si
SLU 77	fin.	-264.9	-1425	-0.0001669	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.29	Si
SLU 78	ini.	32.03	-248	-0.000019	0.0001872	0.0035	0.82		2455.37	2455.37	No	76.65	Si
SLU 78	fin.	-265.53	-1428	-0.0001673	0.0001872	0.0035	0.82		2460.51	2460.51	No	9.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	44.87	505	0.82	0	303	6502	3438	2091	5529	No	10.94	Si
SLU 81	fin.	-266.39	-2898	0.82	0	303	6502	3438	2091	5529	No	1.91	Si
SLU 78	ini.	32.03	637	0.82	0	303	6502	3438	2091	5529	No	8.69	Si
SLU 78	fin.	-265.53	-2967	0.82	0	303	6502	3438	2091	5529	No	1.86	Si
SLU 82	ini.	44.29	510	0.82	0	303	6502	3438	2091	5529	No	10.84	Si
SLU 82	fin.	-267.01	-2904	0.82	0	303	6502	3438	2091	5529	No	1.9	Si
SLU 75	ini.	33.55	604	0.82	0	303	6502	3438	2091	5529	No	9.15	Si
SLU 75	fin.	-258.66	-2879	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 74	ini.	34.14	600	0.82	0	303	6502	3438	2091	5529	No	9.22	Si
SLU 74	fin.	-258.03	-2873	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 77	ini.	32.62	632	0.82	0	303	6502	3438	2091	5529	No	8.75	Si
SLU 77	fin.	-264.9	-2961	0.82	0	303	6502	3438	2091	5529	No	1.87	Si
SLU 79	ini.	27.63	666	0.82	0	303	6502	3438	2091	5529	No	8.3	Si
SLU 79	fin.	-255.66	-2897	0.82	0	303	6502	3438	2091	5529	No	1.91	Si
SLU 84	ini.	42.77	542	0.82	0	303	6502	3438	2091	5529	No	10.2	Si
SLU 84	fin.	-273.88	-2992	0.82	0	303	6502	3438	2091	5529	No	1.85	Si
SLU 83	ini.	43.36	537	0.82	0	303	6502	3438	2091	5529	No	10.29	Si
SLU 83	fin.	-273.26	-2986	0.82	0	303	6502	3438	2091	5529	No	1.85	Si
SLU 80	ini.	27.04	671	0.82	0	303	6502	3438	2091	5529	No	8.24	Si
SLU 80	fin.	-256.28	-2903	0.82	0	303	6502	3438	2091	5529	No	1.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	600.95	817	-0.0004035	0.0002807	0.0035	0.82		2482.11	2482.11		4.13	Si
SLV 4	fin.	-1175.78	-4565	-0.0009198	0.0002807	0.0035	0.82		2487.45	2487.45		2.12	Si
SLV 14	ini.	-528.33	-1069	-0.000347	0.0002807	0.0035	0.82		2487.45	2487.45		4.71	Si
SLV 14	fin.	787.52	2573	-0.0005567	0.0002807	0.0035	0.82		2482.11	2482.11		3.15	Si
SLV 1	ini.	666.15	1169	-0.0004554	0.0002807	0.0035	0.82		2482.11	2482.11		3.73	Si
SLV 1	fin.	-1056.21	-4161	-0.0008005	0.0002807	0.0035	0.82		2487.45	2487.45		2.36	Si
SLD 4	ini.	260.41	239	-0.000161	0.0002807	0.0035	0.82		2482.11	2482.11		9.53	Si
SLD 4	fin.	-590.73	-2440	-0.0003946	0.0002807	0.0035	0.82		2487.45	2487.45		4.21	Si
SLV 15	ini.	-710.14	-1673	-0.0004902	0.0002807	0.0035	0.82		2487.45	2487.45		3.5	Si
SLV 15	fin.	830.01	2747	-0.0005936	0.0002807	0.0035	0.82		2482.11	2482.11		2.99	Si
SLV 13	ini.	-586.63	-1195	-0.0003914	0.0002807	0.0035	0.82		2487.45	2487.45		4.24	Si
SLV 13	fin.	868.55	2862	-0.0006277	0.0002807	0.0035	0.82		2482.11	2482.11		2.86	Si
SLD 2	ini.	314.66	449	-0.0001968	0.0002807	0.0035	0.82		2482.11	2482.11		7.89	Si
SLD 2	fin.	-574.43	-2390	-0.000382	0.0002807	0.0035	0.82		2487.45	2487.45		4.33	Si
SLV 3	ini.	542.64	691	-0.0003586	0.0002807	0.0035	0.82		2482.11	2482.11		4.57	Si
SLV 3	fin.	-1094.75	-4276	-0.0008383	0.0002807	0.0035	0.82		2487.45	2487.45		2.27	Si
SLV 16	ini.	-651.83	-1547	-0.0004428	0.0002807	0.0035	0.82		2487.45	2487.45		3.82	Si
SLV 16	fin.	748.98	2458	-0.0005239	0.0002807	0.0035	0.82		2482.11	2482.11		3.31	Si
SLV 2	ini.	724.45	1295	-0.0005033	0.0002807	0.0035	0.82		2482.11	2482.11		3.43	Si
SLV 2	fin.	-1137.24	-4450	-0.0008806	0.0002807	0.0035	0.82		2487.45	2487.45		2.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-528.33	5889	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLV 14	fin.	787.52	1369	0.82	0	455	6502	5156	2091	6957		5.08	Si
SLV 2	ini.	724.45	-5996	0.82	0	455	6502	5156	2091	6957		1.16	Si
SLV 2	fin.	-1137.24	-5296	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 1	ini.	666.15	-5520	0.82	0	455	6502	5156	2091	6957		1.26	Si
SLV 1	fin.	-1056.21	-4958	0.82	0	455	6502	5156	2091	6957		1.4	Si
SLV 15	ini.	-710.14	7096	0.82	0	455	6502	5156	2091	6957		0.98	No
SLV 15	fin.	830.01	1650	0.82	0	455	6502	5156	2091	6957		4.22	Si
SLV 12	ini.	-367.61	3395	0.82	0	455	6502	5156	2091	6957		2.05	Si
SLV 12	fin.	44.47	-1026	0.82	0	455	6502	5156	2091	6957		6.78	Si
SLV 4	ini.	600.95	-5265	0.82	0	455	6502	5156	2091	6957		1.32	Si
SLV 4	fin.	-1175.78	-5352	0.82	0	455	6502	5156	2091	6957		1.3	Si
SLV 16	ini.	-651.83	6620	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 16	fin.	748.98	1313	0.82	0	455	6502	5156	2091	6957		5.3	Si
SLV 3	ini.	542.64	-4790	0.82	0	455	6502	5156	2091	6957		1.45	Si
SLV 3	fin.	-1094.75	-5014	0.82	0	455	6502	5156	2091	6957		1.39	Si
SLV 11	ini.	-405.59	3705	0.82	0	455	6502	5156	2091	6957		1.88	Si
SLV 11	fin.	97.27	-806	0.82	0	455	6502	5156	2091	6957		8.63	Si
SLV 13	ini.	-586.63	6365	0.82	0	455	6502	5156	2091	6957		1.09	Si
SLV 13	fin.	868.55	1706	0.82	0	455	6502	5156	2091	6957		4.08	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.116	SLV 4	Si
V_SLV	0.98	SLV 15	No
PF_SLU	8.984	SLU 84	Si
V_SLU	1.848	SLU 84	Si

Trave di accoppiamento 108

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	10.45	11.87	1.42	-18.518	0.706	10.45	11.87	1.42	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	102.37	-139	-0.0000202	0.0002246	0.0035	1.42		7636.3	7636.3	No	74.6	Si
SLU 48	fin.	73.82	-113	-0.0000146	0.0002246	0.0035	1.42		7636.3	7636.3	No	103.45	Si
SLU 78	ini.	79.18	-210	-0.0000156	0.0002246	0.0035	1.42		7636.3	7636.3	No	96.44	Si
SLU 78	fin.	103.81	-165	-0.0000205	0.0002246	0.0035	1.42		7636.3	7636.3	No	73.56	Si
SLU 49	ini.	100.85	-140	-0.0000199	0.0002246	0.0035	1.42		7636.3	7636.3	No	75.72	Si
SLU 49	fin.	74.09	-113	-0.0000146	0.0002246	0.0035	1.42		7636.3	7636.3	No	103.07	Si
SLU 83	ini.	66.46	-210	-0.0000131	0.0002246	0.0035	1.42		7636.3	7636.3	No	114.9	Si
SLU 83	fin.	101.75	-164	-0.0000201	0.0002246	0.0035	1.42		7636.3	7636.3	No	75.05	Si
SLU 50	ini.	103.58	-133	-0.0000205	0.0002246	0.0035	1.42		7636.3	7636.3	No	73.72	Si
SLU 50	fin.	71.06	-108	-0.000014	0.0002246	0.0035	1.42		7636.3	7636.3	No	107.46	Si
SLU 79	ini.	81.9	-203	-0.0000162	0.0002246	0.0035	1.42		7636.3	7636.3	No	93.23	Si
SLU 79	fin.	100.78	-160	-0.0000199	0.0002246	0.0035	1.42		7636.3	7636.3	No	75.77	Si
SLU 77	ini.	80.69	-209	-0.0000159	0.0002246	0.0035	1.42		7636.3	7636.3	No	94.64	Si
SLU 77	fin.	103.53	-165	-0.0000204	0.0002246	0.0035	1.42		7636.3	7636.3	No	73.76	Si
SLU 80	ini.	80.39	-204	-0.0000159	0.0002246	0.0035	1.42		7636.3	7636.3	No	94.99	Si
SLU 80	fin.	101.06	-161	-0.00002	0.0002246	0.0035	1.42		7636.3	7636.3	No	75.57	Si
SLU 84	ini.	64.95	-211	-0.0000128	0.0002246	0.0035	1.42		7636.3	7636.3	No	117.58	Si
SLU 84	fin.	102.03	-165	-0.0000201	0.0002246	0.0035	1.42		7636.3	7636.3	No	74.84	Si
SLU 51	ini.	102.07	-134	-0.0000202	0.0002246	0.0035	1.42		7636.3	7636.3	No	74.82	Si
SLU 51	fin.	71.34	-109	-0.0000141	0.0002246	0.0035	1.42		7636.3	7636.3	No	107.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	64.95	288	1.42	0	288	6344	3572	3621	6632	No	23.01	Si
SLU 84	fin.	102.03	-105	1.42	0	288	6344	3572	3621	6632	No	62.92	Si
SLU 76	ini.	68.8	275	1.42	0	288	6344	3572	3621	6632	No	24.14	Si
SLU 76	fin.	96.73	-119	1.42	0	288	6344	3572	3621	6632	No	55.78	Si
SLU 83	ini.	66.46	285	1.42	0	288	6344	3572	3621	6632	No	23.25	Si
SLU 83	fin.	101.75	-108	1.42	0	288	6344	3572	3621	6632	No	61.17	Si
SLU 75	ini.	68.6	279	1.42	0	288	6344	3572	3621	6632	No	23.78	Si
SLU 75	fin.	99.31	-115	1.42	0	288	6344	3572	3621	6632	No	57.81	Si
SLU 77	ini.	80.69	269	1.42	0	288	6344	3572	3621	6632	No	24.68	Si
SLU 77	fin.	103.53	-125	1.42	0	288	6344	3572	3621	6632	No	53.11	Si
SLU 81	ini.	55.88	292	1.42	0	288	6344	3572	3621	6632	No	22.69	Si
SLU 81	fin.	97.25	-101	1.42	0	288	6344	3572	3621	6632	No	65.48	Si
SLU 78	ini.	79.18	272	1.42	0	288	6344	3572	3621	6632	No	24.4	Si
SLU 78	fin.	103.81	-122	1.42	0	288	6344	3572	3621	6632	No	54.42	Si
SLU 74	ini.	70.11	276	1.42	0	288	6344	3572	3621	6632	No	24.04	Si
SLU 74	fin.	99.03	-118	1.42	0	288	6344	3572	3621	6632	No	56.32	Si
SLU 73	ini.	58.22	282	1.42	0	288	6344	3572	3621	6632	No	23.53	Si
SLU 73	fin.	92.23	-112	1.42	0	288	6344	3572	3621	6632	No	59.34	Si
SLU 82	ini.	54.37	295	1.42	0	288	6344	3572	3621	6632	No	22.45	Si
SLU 82	fin.	97.52	-98	1.42	0	288	6344	3572	3621	6632	No	67.49	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	118.16	466	-0.0000233	0.0003369	0.0035	1.42		7815.69	7815.69		66.15	Si
SLV 7	fin.	548.5	149	-0.0001107	0.0003369	0.0035	1.42		7815.69	7815.69		14.25	Si
SLV 3	ini.	35.86	16	-0.000007	0.0003369	0.0035	1.42		7815.69	7815.69		217.93	Si
SLV 3	fin.	284.91	34	-0.0000567	0.0003369	0.0035	1.42		7815.69	7815.69		27.43	Si
SLV 6	ini.	-35.88	-738	-0.000007	0.0003369	0.0035	1.42		7824.76	7824.76		218.08	Si
SLV 6	fin.	-376.02	-305	-0.0000751	0.0003369	0.0035	1.42		7824.76	7824.76		20.81	Si
SLV 11	ini.	144.85	492	-0.0000286	0.0003369	0.0035	1.42		7815.69	7815.69		53.96	Si
SLV 11	fin.	497.4	112	-0.0001001	0.0003369	0.0035	1.42		7815.69	7815.69		15.71	Si
SLV 4	ini.	29.01	12	-0.0000057	0.0003369	0.0035	1.42		7815.69	7815.69		269.39	Si
SLV 4	fin.	283.98	33	-0.0000565	0.0003369	0.0035	1.42		7815.69	7815.69		27.52	Si
SLV 9	ini.	-4.73	-709	-0.0000009	0.0003369	0.0035	1.42		7824.76	7824.76		1655.45	Si
SLV 9	fin.	-426.52	-342	-0.0000854	0.0003369	0.0035	1.42		7824.76	7824.76		18.35	Si
SLV 12	ini.	140.39	490	-0.0000277	0.0003369	0.0035	1.42		7815.69	7815.69		55.67	Si
SLV 12	fin.	496.79	112	-0.0001	0.0003369	0.0035	1.42		7815.69	7815.69		15.73	Si
SLV 10	ini.	-9.19	-712	-0.0000018	0.0003369	0.0035	1.42		7824.76	7824.76		851.45	Si
SLV 10	fin.	-427.12	-342	-0.0000855	0.0003369	0.0035	1.42		7824.76	7824.76		18.32	Si
SLV 8	ini.	113.7	463	-0.0000224	0.0003369	0.0035	1.42		7815.69	7815.69		68.74	Si
SLV 8	fin.	547.9	149	-0.0001106	0.0003369	0.0035	1.42		7815.69	7815.69		14.26	Si
SLV 5	ini.	-31.42	-735	-0.0000062	0.0003369	0.0035	1.42		7824.76	7824.76		249.07	Si
SLV 5	fin.	-375.42	-305	-0.000075	0.0003369	0.0035	1.42		7824.76	7824.76		20.84	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-35.88	-417	1.42	0	432	6344	5358	3621	6776		16.25	Si
SLV 6	fin.	-376.02	-714	1.42	0	432	6344	5358	3621	6776		9.49	Si
SLV 9	ini.	-4.73	-544	1.42	0	432	6344	5358	3621	6776		12.45	Si
SLV 9	fin.	-426.52	-808	1.42	0	432	6344	5358	3621	6776		8.38	Si
SLV 11	ini.	144.85	786	1.42	0	432	6344	5358	3621	6776		8.62	Si
SLV 11	fin.	497.4	484	1.42	0	432	6344	5358	3621	6776		13.99	Si
SLV 4	ini.	29.01	590	1.42	0	432	6344	5358	3621	6776		11.49	Si
SLV 4	fin.	283.98	230	1.42	0	432	6344	5358	3621	6776		29.51	Si
SLV 12	ini.	140.39	793	1.42	0	432	6344	5358	3621	6776		8.54	Si
SLV 12	fin.	496.79	491	1.42	0	432	6344	5358	3621	6776		13.79	Si
SLV 5	ini.	-31.42	-424	1.42	0	432	6344	5358	3621	6776		15.98	Si
SLV 5	fin.	-375.42	-721	1.42	0	432	6344	5358	3621	6776		9.4	Si
SLV 3	ini.	35.86	579	1.42	0	432	6344	5358	3621	6776		11.71	Si
SLV 3	fin.	284.91	219	1.42	0	432	6344	5358	3621	6776		30.97	Si
SLV 7	ini.	118.16	906	1.42	0	432	6344	5358	3621	6776		7.48	Si
SLV 7	fin.	548.5	572	1.42	0	432	6344	5358	3621	6776		11.86	Si
SLV 8	ini.	113.7	913	1.42	0	432	6344	5358	3621	6776		7.42	Si
SLV 8	fin.	547.9	579	1.42	0	432	6344	5358	3621	6776		11.71	Si
SLV 10	ini.	-9.19	-537	1.42	0	432	6344	5358	3621	6776		12.62	Si
SLV 10	fin.	-427.12	-801	1.42	0	432	6344	5358	3621	6776		8.46	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	14.249	SLV 7	Si
V_SLV	7.421	SLV 8	Si
PF_SLU	73.56	SLU 78	Si
V_SLU	22.453	SLU 82	Si

Trave di accoppiamento 110

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	10.45	11.87	1.42	-16.333	-3.314	10.45	11.87	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 66	ini.	-928.02	-2452	-0.0001975	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.93	Si
SLU 66	fin.	582.35	-1582	-0.0001199	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.62	Si
SLU 72	ini.	-953.63	-2517	-0.0002036	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.72	Si
SLU 72	fin.	597.05	-1633	-0.0001231	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.31	Si
SLU 65	ini.	-875.34	-2295	-0.0001853	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.41	Si
SLU 65	fin.	529.24	-1484	-0.0001084	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.89	Si
SLU 71	ini.	-955.12	-2513	-0.0002039	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.71	Si
SLU 71	fin.	600.59	-1626	-0.0001238	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.24	Si
SLU 64	ini.	-877.81	-2287	-0.0001858	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.38	Si
SLU 64	fin.	535.14	-1472	-0.0001097	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.74	Si
SLU 70	ini.	-965.19	-2569	-0.0002063	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.63	Si
SLU 70	fin.	611.53	-1666	-0.0001262	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.02	Si
SLU 77	ini.	-843.38	-2510	-0.0001779	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.73	Si
SLU 77	fin.	571.01	-1584	-0.0001174	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.87	Si
SLU 67	ini.	-926.54	-2457	-0.0001972	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.94	Si
SLU 67	fin.	578.81	-1589	-0.0001191	0.0001872	0.0035	1.42		7350.79	7350.79	No	12.7	Si
SLU 68	ini.	-913.99	-2408	-0.0001942	0.0001872	0.0035	1.42		7359.91	7359.91	No	8.05	Si
SLU 68	fin.	561.97	-1561	-0.0001154	0.0001872	0.0035	1.42		7350.79	7350.79	No	13.08	Si
SLU 69	ini.	-966.67	-2565	-0.0002066	0.0001872	0.0035	1.42		7359.91	7359.91	No	7.61	Si
SLU 69	fin.	615.07	-1659	-0.000127	0.0001872	0.0035	1.42		7350.79	7350.79	No	11.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-955.12	3151	1.42	0	576	7137	5953	3621	7713	No	2.45	Si
SLU 71	fin.	600.59	1702	1.42	0	576	7137	5953	3621	7713	No	4.53	Si
SLU 66	ini.	-928.02	3087	1.42	0	576	7137	5953	3621	7713	No	2.5	Si
SLU 66	fin.	582.35	1638	1.42	0	576	7137	5953	3621	7713	No	4.71	Si
SLU 77	ini.	-843.38	3162	1.42	0	576	7137	5953	3621	7713	No	2.44	Si
SLU 77	fin.	571.01	1438	1.42	0	576	7137	5953	3621	7713	No	5.37	Si
SLU 67	ini.	-926.54	3080	1.42	0	576	7137	5953	3621	7713	No	2.5	Si
SLU 67	fin.	578.81	1631	1.42	0	576	7137	5953	3621	7713	No	4.73	Si
SLU 72	ini.	-953.63	3144	1.42	0	576	7137	5953	3621	7713	No	2.45	Si
SLU 72	fin.	597.05	1695	1.42	0	576	7137	5953	3621	7713	No	4.55	Si
SLU 69	ini.	-966.67	3195	1.42	0	576	7137	5953	3621	7713	No	2.41	Si
SLU 69	fin.	615.07	1746	1.42	0	576	7137	5953	3621	7713	No	4.42	Si
SLU 80	ini.	-830.34	3111	1.42	0	576	7137	5953	3621	7713	No	2.48	Si
SLU 80	fin.	552.99	1386	1.42	0	576	7137	5953	3621	7713	No	5.56	Si
SLU 70	ini.	-965.19	3188	1.42	0	576	7137	5953	3621	7713	No	2.42	Si
SLU 70	fin.	611.53	1739	1.42	0	576	7137	5953	3621	7713	No	4.44	Si
SLU 78	ini.	-841.9	3155	1.42	0	576	7137	5953	3621	7713	No	2.44	Si
SLU 78	fin.	567.47	1430	1.42	0	576	7137	5953	3621	7713	No	5.39	Si
SLU 79	ini.	-831.82	3118	1.42	0	576	7137	5953	3621	7713	No	2.47	Si
SLU 79	fin.	556.53	1393	1.42	0	576	7137	5953	3621	7713	No	5.54	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-3962.28	-4501	-0.0010729	0.0002807	0.0035	1.42		7346.34	7346.34		1.85	Si
SLV 15	fin.	3380.29	-1298	-0.0008706	0.0002807	0.0035	1.42		7337.02	7337.02		2.17	Si
SLV 13	ini.	-4136.63	-4374	-0.0011379	0.0002807	0.0035	1.42		7346.34	7346.34		1.78	Si
SLV 13	fin.	3583.3	-958	-0.0009396	0.0002807	0.0035	1.42		7337.02	7337.02		2.05	Si
SLD 13	ini.	-2120.5	-2833	-0.0004871	0.0002807	0.0035	1.42		7346.34	7346.34		3.46	Si
SLD 13	fin.	1750.84	-1024	-0.0003893	0.0002807	0.0035	1.42		7337.02	7337.02		4.19	Si
SLV 1	ini.	2471.13	914	-0.000587	0.0002807	0.0035	1.42		7337.02	7337.02		2.97	Si
SLV 1	fin.	-2379.23	-885	-0.0005596	0.0002807	0.0035	1.42		7346.34	7346.34		3.09	Si
SLV 3	ini.	2645.48	787	-0.0006384	0.0002807	0.0035	1.42		7337.02	7337.02		2.77	Si
SLV 3	fin.	-2582.23	-1224	-0.0006186	0.0002807	0.0035	1.42		7346.34	7346.34		2.84	Si
SLV 4	ini.	2912.02	1007	-0.0007196	0.0002807	0.0035	1.42		7337.02	7337.02		2.52	Si
SLV 4	fin.	-2823	-1197	-0.0006911	0.0002807	0.0035	1.42		7346.34	7346.34		2.6	Si
SLV 16	ini.	-3695.73	-4281	-0.0009773	0.0002807	0.0035	1.42		7346.34	7346.34		1.99	Si
SLV 16	fin.	3139.53	-1271	-0.0007916	0.0002807	0.0035	1.42		7337.02	7337.02		2.34	Si
SLD 15	ini.	-2044.37	-2890	-0.0004663	0.0002807	0.0035	1.42		7346.34	7346.34		3.59	Si
SLD 15	fin.	1662.55	-1174	-0.0003667	0.0002807	0.0035	1.42		7337.02	7337.02		4.41	Si
SLV 2	ini.	2737.67	1134	-0.0006661	0.0002807	0.0035	1.42		7337.02	7337.02		2.68	Si
SLV 2	fin.	-2619.99	-858	-0.0006298	0.0002807	0.0035	1.42		7346.34	7346.34		2.8	Si
SLV 14	ini.	-3870.08	-4154	-0.0010393	0.0002807	0.0035	1.42		7346.34	7346.34		1.9	Si
SLV 14	fin.	3342.54	-932	-0.000858	0.0002807	0.0035	1.42		7337.02	7337.02		2.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-3695.73	10463	1.42	0	864	7137	8929	3621	8001		0.76	No
SLV 16	fin.	3139.53	9299	1.42	0	864	7137	8929	3621	8001		0.86	No
SLV 1	ini.	2471.13	-6165	1.42	0	864	7137	8929	3621	8001		1.3	Si
SLV 1	fin.	-2379.23	-7281	1.42	0	864	7137	8929	3621	8001		1.1	Si
SLD 15	ini.	-2044.37	6009	1.42	0	864	7137	8929	3621	8001		1.33	Si
SLD 15	fin.	1662.55	4860	1.42	0	864	7137	8929	3621	8001		1.65	Si
SLV 2	ini.	2737.67	-6881	1.42	0	864	7137	8929	3621	8001		1.16	Si
SLV 2	fin.	-2619.99	-7998	1.42	0	864	7137	8929	3621	8001		1	Si
SLV 15	ini.	-3962.28	11179	1.42	0	864	7137	8929	3621	8001		0.72	No
SLV 15	fin.	3380.29	10016	1.42	0	864	7137	8929	3621	8001		0.8	No
SLD 13	ini.	-2120.5	6200	1.42	0	864	7137	8929	3621	8001		1.29	Si
SLD 13	fin.	1750.84	5069	1.42	0	864	7137	8929	3621	8001		1.58	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-3870.08	10898	1.42	0	864	7137	8929	3621	8001		0.73	No
SLV 14	fin.	3342.54	9782	1.42	0	864	7137	8929	3621	8001		0.82	No
SLV 13	ini.	-4136.63	11615	1.42	0	864	7137	8929	3621	8001		0.69	No
SLV 13	fin.	3583.3	10498	1.42	0	864	7137	8929	3621	8001		0.76	No
SLV 4	ini.	2912.02	-7316	1.42	0	864	7137	8929	3621	8001		1.09	Si
SLV 4	fin.	-2823	-8480	1.42	0	864	7137	8929	3621	8001		0.94	No
SLV 3	ini.	2645.48	-6600	1.42	0	864	7137	8929	3621	8001		1.21	Si
SLV 3	fin.	-2582.23	-7764	1.42	0	864	7137	8929	3621	8001		1.03	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.776	SLV 13	Si
V_SLV	0.689	SLV 13	No
PF_SLU	7.614	SLU 69	Si
V_SLU	2.414	SLU 69	Si

Trave di accoppiamento 112

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	8.35	9.25	0.9	-16.818	6.526	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	459.51	-2051	-0.0002504	0.0001872	0.0035	0.9		2959	2959	No	6.44	Si
SLU 73	fin.	-112.36	-1127	-0.0000561	0.0001872	0.0035	0.9		2964.67	2964.67	No	26.39	Si
SLU 76	ini.	455.55	-2054	-0.000248	0.0001872	0.0035	0.9		2959	2959	No	6.5	Si
SLU 76	fin.	-94.69	-1172	-0.0000471	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.31	Si
SLU 82	ini.	476.24	-2121	-0.0002608	0.0001872	0.0035	0.9		2959	2959	No	6.21	Si
SLU 82	fin.	-119.18	-1160	-0.0000596	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.88	Si
SLU 74	ini.	466.98	-2107	-0.000255	0.0001872	0.0035	0.9		2959	2959	No	6.34	Si
SLU 74	fin.	-95.12	-1204	-0.0000473	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.17	Si
SLU 83	ini.	473.23	-2127	-0.0002589	0.0001872	0.0035	0.9		2959	2959	No	6.25	Si
SLU 83	fin.	-102.42	-1205	-0.000051	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.94	Si
SLU 84	ini.	472.28	-2123	-0.0002583	0.0001872	0.0035	0.9		2959	2959	No	6.27	Si
SLU 84	fin.	-101.51	-1205	-0.0000505	0.0001872	0.0035	0.9		2964.67	2964.67	No	29.21	Si
SLU 78	ini.	462.06	-2106	-0.000252	0.0001872	0.0035	0.9		2959	2959	No	6.4	Si
SLU 78	fin.	-76.53	-1249	-0.0000379	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.74	Si
SLU 77	ini.	463.01	-2110	-0.0002526	0.0001872	0.0035	0.9		2959	2959	No	6.39	Si
SLU 77	fin.	-77.45	-1249	-0.0000384	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.28	Si
SLU 81	ini.	477.19	-2124	-0.0002614	0.0001872	0.0035	0.9		2959	2959	No	6.2	Si
SLU 81	fin.	-120.1	-1160	-0.00006	0.0001872	0.0035	0.9		2964.67	2964.67	No	24.69	Si
SLU 75	ini.	466.02	-2104	-0.0002544	0.0001872	0.0035	0.9		2959	2959	No	6.35	Si
SLU 75	fin.	-94.2	-1204	-0.0000468	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	463.01	-2646	0.9	0	365	7137	3773	2295	6068	No	2.29	Si
SLU 77	fin.	-77.45	-77	0.9	0	365	7137	3773	2295	6068	No	78.4	Si
SLU 83	ini.	473.23	-2666	0.9	0	365	7137	3773	2295	6068	No	2.28	Si
SLU 83	fin.	-102.42	-178	0.9	0	365	7137	3773	2295	6068	No	34	Si
SLU 78	ini.	462.06	-2640	0.9	0	365	7137	3773	2295	6068	No	2.3	Si
SLU 78	fin.	-76.53	-75	0.9	0	365	7137	3773	2295	6068	No	80.75	Si
SLU 81	ini.	477.19	-2680	0.9	0	365	7137	3773	2295	6068	No	2.26	Si
SLU 81	fin.	-120.1	-244	0.9	0	365	7137	3773	2295	6068	No	24.82	Si
SLU 75	ini.	466.02	-2655	0.9	0	365	7137	3773	2295	6068	No	2.29	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	-94.2	-141	0.9	0	365	7137	3773	2295	6068	No	43	Si
SLU 76	ini.	455.55	-2585	0.9	0	365	7137	3773	2295	6068	No	2.35	Si
SLU 76	fin.	-94.69	-153	0.9	0	365	7137	3773	2295	6068	No	39.61	Si
SLU 82	ini.	476.24	-2675	0.9	0	365	7137	3773	2295	6068	No	2.27	Si
SLU 82	fin.	-119.18	-242	0.9	0	365	7137	3773	2295	6068	No	25.05	Si
SLU 74	ini.	466.98	-2661	0.9	0	365	7137	3773	2295	6068	No	2.28	Si
SLU 74	fin.	-95.12	-143	0.9	0	365	7137	3773	2295	6068	No	42.32	Si
SLU 84	ini.	472.28	-2660	0.9	0	365	7137	3773	2295	6068	No	2.28	Si
SLU 84	fin.	-101.51	-176	0.9	0	365	7137	3773	2295	6068	No	34.44	Si
SLU 73	ini.	459.51	-2599	0.9	0	365	7137	3773	2295	6068	No	2.33	Si
SLU 73	fin.	-112.36	-219	0.9	0	365	7137	3773	2295	6068	No	27.69	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	850.02	-2908	-0.0004876	0.0002807	0.0035	0.9		2989.59	2989.59		3.52	Si
SLV 16	fin.	-892.61	284	-0.0005159	0.0002807	0.0035	0.9		2995.37	2995.37		3.36	Si
SLV 13	ini.	829.28	-2857	-0.0004734	0.0002807	0.0035	0.9		2989.59	2989.59		3.61	Si
SLV 13	fin.	-867.79	138	-0.0004987	0.0002807	0.0035	0.9		2995.37	2995.37		3.45	Si
SLD 16	ini.	551.79	-2085	-0.000296	0.0002807	0.0035	0.9		2989.59	2989.59		5.42	Si
SLD 16	fin.	-427.98	-339	-0.0002236	0.0002807	0.0035	0.9		2995.37	2995.37		7	Si
SLV 1	ini.	-192.47	-33	-0.0000967	0.0002807	0.0035	0.9		2995.37	2995.37		15.56	Si
SLV 1	fin.	731.72	-1893	-0.0004085	0.0002807	0.0035	0.9		2989.59	2989.59		4.09	Si
SLV 3	ini.	-212.44	38	-0.000107	0.0002807	0.0035	0.9		2995.37	2995.37		14.1	Si
SLV 3	fin.	765.05	-1815	-0.0004303	0.0002807	0.0035	0.9		2989.59	2989.59		3.91	Si
SLD 14	ini.	560.38	-2115	-0.0003012	0.0002807	0.0035	0.9		2989.59	2989.59		5.33	Si
SLD 14	fin.	-442.31	-373	-0.0002318	0.0002807	0.0035	0.9		2995.37	2995.37		6.77	Si
SLV 15	ini.	809.31	-2786	-0.0004599	0.0002807	0.0035	0.9		2989.59	2989.59		3.69	Si
SLV 15	fin.	-834.46	216	-0.0004759	0.0002807	0.0035	0.9		2995.37	2995.37		3.59	Si
SLV 14	ini.	869.99	-2978	-0.0005013	0.0002807	0.0035	0.9		2989.59	2989.59		3.44	Si
SLV 14	fin.	-925.94	205	-0.0005392	0.0002807	0.0035	0.9		2995.37	2995.37		3.23	Si
SLV 2	ini.	-151.76	-154	-0.0000757	0.0002807	0.0035	0.9		2995.37	2995.37		19.74	Si
SLV 2	fin.	673.57	-1826	-0.0003711	0.0002807	0.0035	0.9		2989.59	2989.59		4.44	Si
SLV 4	ini.	-171.73	-84	-0.000086	0.0002807	0.0035	0.9		2995.37	2995.37		17.44	Si
SLV 4	fin.	706.9	-1747	-0.0003924	0.0002807	0.0035	0.9		2989.59	2989.59		4.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	534.3	-2814	0.9	0	548	7137	5660	2295	7684		2.73	Si
SLD 15	fin.	-403.01	-1401	0.9	0	548	7137	5660	2295	7684		5.48	Si
SLV 15	ini.	809.31	-4053	0.9	0	548	7137	5660	2295	7684		1.9	Si
SLV 15	fin.	-834.46	-3075	0.9	0	548	7137	5660	2295	7684		2.5	Si
SLV 1	ini.	-192.47	459	0.9	0	548	7137	5660	2295	7684		16.75	Si
SLV 1	fin.	731.72	2991	0.9	0	548	7137	5660	2295	7684		2.57	Si
SLV 16	ini.	850.02	-4234	0.9	0	548	7137	5660	2295	7684		1.81	Si
SLV 16	fin.	-892.61	-3288	0.9	0	548	7137	5660	2295	7684		2.34	Si
SLV 3	ini.	-212.44	533	0.9	0	548	7137	5660	2295	7684		14.42	Si
SLV 3	fin.	765.05	2890	0.9	0	548	7137	5660	2295	7684		2.66	Si
SLD 14	ini.	560.38	-2924	0.9	0	548	7137	5660	2295	7684		2.63	Si
SLD 14	fin.	-442.31	-1448	0.9	0	548	7137	5660	2295	7684		5.31	Si
SLD 16	ini.	551.79	-2892	0.9	0	548	7137	5660	2295	7684		2.66	Si
SLD 16	fin.	-427.98	-1493	0.9	0	548	7137	5660	2295	7684		5.15	Si
SLV 13	ini.	829.28	-4127	0.9	0	548	7137	5660	2295	7684		1.86	Si
SLV 13	fin.	-867.79	-2974	0.9	0	548	7137	5660	2295	7684		2.58	Si
SLV 14	ini.	869.99	-4308	0.9	0	548	7137	5660	2295	7684		1.78	Si
SLV 14	fin.	-925.94	-3187	0.9	0	548	7137	5660	2295	7684		2.41	Si
SLD 13	ini.	542.89	-2846	0.9	0	548	7137	5660	2295	7684		2.7	Si
SLD 13	fin.	-417.33	-1357	0.9	0	548	7137	5660	2295	7684		5.66	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.235	SLV 14	Si
V_SLV	1.784	SLV 14	Si
PF_SLU	6.201	SLU 81	Si
V_SLU	2.264	SLU 81	Si

Trave di accoppiamento 113

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	11.05	11.87	0.82	-16.818	6.526	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	93.4	-454	-0.0000563	0.0001872	0.0035	0.82		2455.37	2455.37	No	26.29	Si
SLU 82	fin.	-502.06	-1749	-0.0003432	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.9	Si
SLU 76	ini.	75.19	-482	-0.0000451	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.65	Si
SLU 76	fin.	-477.74	-1682	-0.0003238	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.15	Si
SLU 78	ini.	60.54	-549	-0.0000362	0.0001872	0.0035	0.82		2455.37	2455.37	No	40.56	Si
SLU 78	fin.	-486.59	-1733	-0.0003309	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.06	Si
SLU 83	ini.	79.26	-498	-0.0000476	0.0001872	0.0035	0.82		2455.37	2455.37	No	30.98	Si
SLU 83	fin.	-498.62	-1752	-0.0003405	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.93	Si
SLU 81	ini.	94.26	-453	-0.0000568	0.0001872	0.0035	0.82		2455.37	2455.37	No	26.05	Si
SLU 81	fin.	-503.29	-1752	-0.0003442	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.89	Si
SLU 77	ini.	61.39	-548	-0.0000367	0.0001872	0.0035	0.82		2455.37	2455.37	No	40	Si
SLU 77	fin.	-487.82	-1737	-0.0003318	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.04	Si
SLU 73	ini.	90.19	-437	-0.0000543	0.0001872	0.0035	0.82		2455.37	2455.37	No	27.22	Si
SLU 73	fin.	-482.41	-1682	-0.0003275	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.1	Si
SLU 84	ini.	78.4	-499	-0.0000471	0.0001872	0.0035	0.82		2455.37	2455.37	No	31.32	Si
SLU 84	fin.	-497.4	-1749	-0.0003395	0.0001872	0.0035	0.82		2460.51	2460.51	No	4.95	Si
SLU 74	ini.	76.39	-504	-0.0000458	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.14	Si
SLU 74	fin.	-492.49	-1737	-0.0003356	0.0001872	0.0035	0.82		2460.51	2460.51	No	5	Si
SLU 75	ini.	75.53	-505	-0.0000453	0.0001872	0.0035	0.82		2455.37	2455.37	No	32.51	Si
SLU 75	fin.	-491.26	-1733	-0.0003346	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	75.19	465	0.82	0	303	6502	3438	2091	5529	No	11.88	Si
SLU 76	fin.	-477.74	-2745	0.82	0	303	6502	3438	2091	5529	No	2.01	Si
SLU 83	ini.	79.26	487	0.82	0	303	6502	3438	2091	5529	No	11.34	Si
SLU 83	fin.	-498.62	-2874	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 78	ini.	60.54	544	0.82	0	303	6502	3438	2091	5529	No	10.17	Si
SLU 78	fin.	-486.59	-2800	0.82	0	303	6502	3438	2091	5529	No	1.97	Si
SLU 82	ini.	93.4	427	0.82	0	303	6502	3438	2091	5529	No	12.94	Si
SLU 82	fin.	-502.06	-2884	0.82	0	303	6502	3438	2091	5529	No	1.92	Si
SLU 75	ini.	75.53	481	0.82	0	303	6502	3438	2091	5529	No	11.49	Si
SLU 75	fin.	-491.26	-2818	0.82	0	303	6502	3438	2091	5529	No	1.96	Si
SLU 81	ini.	94.26	425	0.82	0	303	6502	3438	2091	5529	No	13.01	Si
SLU 81	fin.	-503.29	-2891	0.82	0	303	6502	3438	2091	5529	No	1.91	Si
SLU 77	ini.	61.39	541	0.82	0	303	6502	3438	2091	5529	No	10.21	Si
SLU 77	fin.	-487.82	-2807	0.82	0	303	6502	3438	2091	5529	No	1.97	Si
SLU 73	ini.	90.19	403	0.82	0	303	6502	3438	2091	5529	No	13.72	Si
SLU 73	fin.	-482.41	-2762	0.82	0	303	6502	3438	2091	5529	No	2	Si
SLU 74	ini.	76.39	479	0.82	0	303	6502	3438	2091	5529	No	11.54	Si
SLU 74	fin.	-492.49	-2825	0.82	0	303	6502	3438	2091	5529	No	1.96	Si
SLU 84	ini.	78.4	490	0.82	0	303	6502	3438	2091	5529	No	11.29	Si
SLU 84	fin.	-497.4	-2867	0.82	0	303	6502	3438	2091	5529	No	1.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	223.38	-31	-0.0001371	0.0002807	0.0035	0.82		2482.11	2482.11		11.11	Si
SLD 13	fin.	-506.95	-1665	-0.0003311	0.0002807	0.0035	0.82		2487.45	2487.45		4.91	Si
SLD 14	ini.	233.62	-17	-0.0001437	0.0002807	0.0035	0.82		2482.11	2482.11		10.62	Si
SLD 14	fin.	-519.51	-1702	-0.0003404	0.0002807	0.0035	0.82		2487.45	2487.45		4.79	Si
SLD 15	ini.	233.32	31	-0.0001435	0.0002807	0.0035	0.82		2482.11	2482.11		10.64	Si
SLD 15	fin.	-497.15	-1632	-0.0003238	0.0002807	0.0035	0.82		2487.45	2487.45		5	Si
SLV 10	ini.	153.86	-314	-0.0000932	0.0002807	0.0035	0.82		2482.11	2482.11		16.13	Si
SLV 10	fin.	-506.42	-1681	-0.0003307	0.0002807	0.0035	0.82		2487.45	2487.45		4.91	Si
SLV 16	ini.	477.31	503	-0.00031	0.0002807	0.0035	0.82		2482.11	2482.11		5.2	Si
SLV 16	fin.	-733.38	-2305	-0.0005095	0.0002807	0.0035	0.82		2487.45	2487.45		3.39	Si
SLV 15	ini.	453.47	469	-0.0002928	0.0002807	0.0035	0.82		2482.11	2482.11		5.47	Si
SLV 15	fin.	-704.14	-2219	-0.0004853	0.0002807	0.0035	0.82		2487.45	2487.45		3.53	Si
SLD 16	ini.	243.56	46	-0.0001501	0.0002807	0.0035	0.82		2482.11	2482.11		10.19	Si
SLD 16	fin.	-509.71	-1669	-0.0003331	0.0002807	0.0035	0.82		2487.45	2487.45		4.88	Si
SLV 13	ini.	430.69	325	-0.0002765	0.0002807	0.0035	0.82		2482.11	2482.11		5.76	Si
SLV 13	fin.	-727.05	-2296	-0.0005042	0.0002807	0.0035	0.82		2487.45	2487.45		3.42	Si
SLV 9	ini.	138.33	-336	-0.0000835	0.0002807	0.0035	0.82		2482.11	2482.11		17.94	Si
SLV 9	fin.	-487.36	-1625	-0.0003167	0.0002807	0.0035	0.82		2487.45	2487.45		5.1	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	454.53	359	-0.0002935	0.0002807	0.0035	0.82		2482.11	2482.11		5.46	Si
SLV 14	fin.	-756.3	-2382	-0.0005288	0.0002807	0.0035	0.82		2487.45	2487.45		3.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	233.62	-417	0.82	0	455	6502	5156	2091	6957		16.7	Si
SLD 14	fin.	-519.51	-2735	0.82	0	455	6502	5156	2091	6957		2.54	Si
SLD 15	ini.	233.32	-433	0.82	0	455	6502	5156	2091	6957		16.08	Si
SLD 15	fin.	-497.15	-2631	0.82	0	455	6502	5156	2091	6957		2.64	Si
SLV 16	ini.	477.31	-1451	0.82	0	455	6502	5156	2091	6957		4.79	Si
SLV 16	fin.	-733.38	-3685	0.82	0	455	6502	5156	2091	6957		1.89	Si
SLV 14	ini.	454.53	-1316	0.82	0	455	6502	5156	2091	6957		5.28	Si
SLV 14	fin.	-756.3	-3791	0.82	0	455	6502	5156	2091	6957		1.83	Si
SLV 10	ini.	153.86	-29	0.82	0	455	6502	5156	2091	6957		244.04	Si
SLV 10	fin.	-506.42	-2683	0.82	0	455	6502	5156	2091	6957		2.59	Si
SLD 16	ini.	243.56	-476	0.82	0	455	6502	5156	2091	6957		14.62	Si
SLD 16	fin.	-509.71	-2689	0.82	0	455	6502	5156	2091	6957		2.59	Si
SLV 13	ini.	430.69	-1216	0.82	0	455	6502	5156	2091	6957		5.72	Si
SLV 13	fin.	-727.05	-3657	0.82	0	455	6502	5156	2091	6957		1.9	Si
SLV 9	ini.	138.33	37	0.82	0	455	6502	5156	2091	6957		190	Si
SLV 9	fin.	-487.36	-2595	0.82	0	455	6502	5156	2091	6957		2.68	Si
SLD 13	ini.	223.38	-374	0.82	0	455	6502	5156	2091	6957		18.62	Si
SLD 13	fin.	-506.95	-2677	0.82	0	455	6502	5156	2091	6957		2.6	Si
SLV 15	ini.	453.47	-1351	0.82	0	455	6502	5156	2091	6957		5.15	Si
SLV 15	fin.	-704.14	-3551	0.82	0	455	6502	5156	2091	6957		1.96	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.289	SLV 14	Si
V_SLV	1.835	SLV 14	Si
PF_SLU	4.889	SLU 81	Si
V_SLU	1.912	SLU 81	Si

Trave di accoppiamento 114

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	8.35	9.25	0.9	-11.938	6.526	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	491.64	-2467	-0.0002705	0.0001872	0.0035	0.9		2959	2959	No	6.02	Si
SLU 79	fin.	165.72	-1859	-0.0000838	0.0001872	0.0035	0.9		2959	2959	No	17.85	Si
SLU 84	ini.	508	-2520	-0.0002808	0.0001872	0.0035	0.9		2959	2959	No	5.82	Si
SLU 84	fin.	150.87	-1854	-0.000076	0.0001872	0.0035	0.9		2959	2959	No	19.61	Si
SLU 83	ini.	507.84	-2521	-0.0002807	0.0001872	0.0035	0.9		2959	2959	No	5.83	Si
SLU 83	fin.	152.23	-1858	-0.0000767	0.0001872	0.0035	0.9		2959	2959	No	19.44	Si
SLU 74	ini.	499.96	-2492	-0.0002757	0.0001872	0.0035	0.9		2959	2959	No	5.92	Si
SLU 74	fin.	157.53	-1851	-0.0000795	0.0001872	0.0035	0.9		2959	2959	No	18.78	Si
SLU 81	ini.	503.17	-2485	-0.0002778	0.0001872	0.0035	0.9		2959	2959	No	5.88	Si
SLU 81	fin.	141.28	-1811	-0.0000711	0.0001872	0.0035	0.9		2959	2959	No	20.94	Si
SLU 80	ini.	491.8	-2466	-0.0002706	0.0001872	0.0035	0.9		2959	2959	No	6.02	Si
SLU 80	fin.	164.36	-1855	-0.0000831	0.0001872	0.0035	0.9		2959	2959	No	18	Si
SLU 75	ini.	500.12	-2490	-0.0002758	0.0001872	0.0035	0.9		2959	2959	No	5.92	Si
SLU 75	fin.	156.17	-1848	-0.0000788	0.0001872	0.0035	0.9		2959	2959	No	18.95	Si
SLU 82	ini.	503.33	-2484	-0.0002779	0.0001872	0.0035	0.9		2959	2959	No	5.88	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	139.92	-1807	-0.0000704	0.0001872	0.0035	0.9		2959	2959	No	21.15	Si
SLU 77	ini.	504.63	-2527	-0.0002787	0.0001872	0.0035	0.9		2959	2959	No	5.86	Si
SLU 77	fin.	168.48	-1899	-0.0000852	0.0001872	0.0035	0.9		2959	2959	No	17.56	Si
SLU 78	ini.	504.79	-2526	-0.0002788	0.0001872	0.0035	0.9		2959	2959	No	5.86	Si
SLU 78	fin.	167.12	-1895	-0.0000845	0.0001872	0.0035	0.9		2959	2959	No	17.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	500.12	-2867	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 75	fin.	156.17	762	0.9	0	365	7137	3773	2295	6068	No	7.97	Si
SLU 82	ini.	503.33	-2856	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 82	fin.	139.92	687	0.9	0	365	7137	3773	2295	6068	No	8.83	Si
SLU 74	ini.	499.96	-2867	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 74	fin.	157.53	767	0.9	0	365	7137	3773	2295	6068	No	7.91	Si
SLU 81	ini.	503.17	-2857	0.9	0	365	7137	3773	2295	6068	No	2.12	Si
SLU 81	fin.	141.28	693	0.9	0	365	7137	3773	2295	6068	No	8.76	Si
SLU 77	ini.	504.63	-2904	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 77	fin.	168.48	816	0.9	0	365	7137	3773	2295	6068	No	7.44	Si
SLU 84	ini.	508	-2893	0.9	0	365	7137	3773	2295	6068	No	2.1	Si
SLU 84	fin.	150.87	736	0.9	0	365	7137	3773	2295	6068	No	8.24	Si
SLU 79	ini.	491.64	-2829	0.9	0	365	7137	3773	2295	6068	No	2.14	Si
SLU 79	fin.	165.72	799	0.9	0	365	7137	3773	2295	6068	No	7.59	Si
SLU 83	ini.	507.84	-2894	0.9	0	365	7137	3773	2295	6068	No	2.1	Si
SLU 83	fin.	152.23	742	0.9	0	365	7137	3773	2295	6068	No	8.18	Si
SLU 78	ini.	504.79	-2904	0.9	0	365	7137	3773	2295	6068	No	2.09	Si
SLU 78	fin.	167.12	811	0.9	0	365	7137	3773	2295	6068	No	7.48	Si
SLU 80	ini.	491.8	-2829	0.9	0	365	7137	3773	2295	6068	No	2.15	Si
SLU 80	fin.	164.36	794	0.9	0	365	7137	3773	2295	6068	No	7.64	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	927.32	-3129	-0.0005414	0.0002807	0.0035	0.9		2989.59	2989.59		3.22	Si
SLD 16	fin.	-691.5	-110	-0.0003817	0.0002807	0.0035	0.9		2995.37	2995.37		4.33	Si
SLV 1	ini.	-1041.94	1669	-0.0006229	0.0002807	0.0035	0.9		2995.37	2995.37		2.87	Si
SLV 1	fin.	1986.56	-3975	-0.0014768	0.0002807	0.0035	0.9		2989.59	2989.59		1.5	Si
SLV 2	ini.	-943.76	1428	-0.0005518	0.0002807	0.0035	0.9		2995.37	2995.37		3.17	Si
SLV 2	fin.	1852.61	-3781	-0.001332	0.0002807	0.0035	0.9		2989.59	2989.59		1.61	Si
SLD 14	ini.	948.83	-3206	-0.0005567	0.0002807	0.0035	0.9		2989.59	2989.59		3.15	Si
SLD 14	fin.	-702.39	-134	-0.0003886	0.0002807	0.0035	0.9		2995.37	2995.37		4.26	Si
SLV 16	ini.	1717.09	-5054	-0.0011957	0.0002807	0.0035	0.9		2989.59	2989.59		1.74	Si
SLV 16	fin.	-1765.14	1438	-0.0012398	0.0002807	0.0035	0.9		2995.37	2995.37		1.7	Si
SLV 3	ini.	-1090.89	1843	-0.0006594	0.0002807	0.0035	0.9		2995.37	2995.37		2.75	Si
SLV 3	fin.	2011.59	-3921	-0.0015052	0.0002807	0.0035	0.9		2989.59	2989.59		1.49	Si
SLV 14	ini.	1766.03	-5229	-0.0012439	0.0002807	0.0035	0.9		2989.59	2989.59		1.69	Si
SLV 14	fin.	-1790.17	1385	-0.0012648	0.0002807	0.0035	0.9		2995.37	2995.37		1.67	Si
SLV 13	ini.	1667.85	-4988	-0.0011484	0.0002807	0.0035	0.9		2989.59	2989.59		1.79	Si
SLV 13	fin.	-1656.22	1191	-0.0011345	0.0002807	0.0035	0.9		2995.37	2995.37		1.81	Si
SLV 15	ini.	1618.91	-4814	-0.0011024	0.0002807	0.0035	0.9		2989.59	2989.59		1.85	Si
SLV 15	fin.	-1631.18	1244	-0.0011111	0.0002807	0.0035	0.9		2995.37	2995.37		1.84	Si
SLV 4	ini.	-992.71	1603	-0.0005869	0.0002807	0.0035	0.9		2995.37	2995.37		3.02	Si
SLV 4	fin.	1877.64	-3727	-0.0013582	0.0002807	0.0035	0.9		2989.59	2989.59		1.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1766.03	-8614	0.9	0	548	7137	5660	2295	7684		0.89	No
SLV 14	fin.	-1790.17	-6328	0.9	0	548	7137	5660	2295	7684		1.21	Si
SLV 3	ini.	-1090.89	4708	0.9	0	548	7137	5660	2295	7684		1.63	Si
SLV 3	fin.	2011.59	7400	0.9	0	548	7137	5660	2295	7684		1.04	Si
SLV 2	ini.	-943.76	4013	0.9	0	548	7137	5660	2295	7684		1.91	Si
SLV 2	fin.	1852.61	6917	0.9	0	548	7137	5660	2295	7684		1.11	Si
SLV 4	ini.	-992.71	4259	0.9	0	548	7137	5660	2295	7684		1.8	Si
SLV 4	fin.	1877.64	6916	0.9	0	548	7137	5660	2295	7684		1.11	Si
SLD 16	ini.	927.32	-4695	0.9	0	548	7137	5660	2295	7684		1.64	Si
SLD 16	fin.	-691.5	-2400	0.9	0	548	7137	5660	2295	7684		3.2	Si
SLD 14	ini.	948.83	-4803	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLD 14	fin.	-702.39	-2400	0.9	0	548	7137	5660	2295	7684		3.2	Si
SLV 16	ini.	1717.09	-8368	0.9	0	548	7137	5660	2295	7684		0.92	No
SLV 16	fin.	-1765.14	-6329	0.9	0	548	7137	5660	2295	7684		1.21	Si
SLV 13	ini.	1667.85	-8165	0.9	0	548	7137	5660	2295	7684		0.94	No
SLV 13	fin.	-1656.22	-5844	0.9	0	548	7137	5660	2295	7684		1.31	Si
SLV 1	ini.	-1041.94	4462	0.9	0	548	7137	5660	2295	7684		1.72	Si
SLV 1	fin.	1986.56	7402	0.9	0	548	7137	5660	2295	7684		1.04	Si
SLV 15	ini.	1618.91	-7919	0.9	0	548	7137	5660	2295	7684		0.97	No
SLV 15	fin.	-1631.18	-5845	0.9	0	548	7137	5660	2295	7684		1.31	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.486	SLV 3	Si
V_SLV	0.892	SLV 14	No
PF_SLU	5.825	SLU 84	Si
V_SLU	2.089	SLU 77	Si

Trave di accoppiamento 115

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	11.05	11.87	0.82	-11.938	6.526	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-146.8	-1183	-0.0000895	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.76	Si
SLU 82	fin.	-436.64	-1585	-0.0002917	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.64	Si
SLU 81	ini.	-147.25	-1186	-0.0000897	0.0001872	0.0035	0.82		2460.51	2460.51	No	16.71	Si
SLU 81	fin.	-436.95	-1587	-0.0002919	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.63	Si
SLU 74	ini.	-157.92	-1240	-0.0000965	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.58	Si
SLU 74	fin.	-429.86	-1606	-0.0002865	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.72	Si
SLU 79	ini.	-162.11	-1258	-0.0000992	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.18	Si
SLU 79	fin.	-420.64	-1595	-0.0002794	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.85	Si
SLU 78	ini.	-165.87	-1289	-0.0001016	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.83	Si
SLU 78	fin.	-432.43	-1640	-0.0002885	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.69	Si
SLU 84	ini.	-155.21	-1235	-0.0000948	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.85	Si
SLU 84	fin.	-439.52	-1621	-0.0002939	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.6	Si
SLU 83	ini.	-155.66	-1238	-0.0000951	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.81	Si
SLU 83	fin.	-439.83	-1623	-0.0002942	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.59	Si
SLU 77	ini.	-166.32	-1292	-0.0001019	0.0001872	0.0035	0.82		2460.51	2460.51	No	14.79	Si
SLU 77	fin.	-432.74	-1642	-0.0002887	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.69	Si
SLU 80	ini.	-161.67	-1255	-0.0000989	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.22	Si
SLU 80	fin.	-420.33	-1593	-0.0002792	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.85	Si
SLU 75	ini.	-157.47	-1237	-0.0000962	0.0001872	0.0035	0.82		2460.51	2460.51	No	15.63	Si
SLU 75	fin.	-429.55	-1604	-0.0002863	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-162.11	2058	0.82	0	303	6502	3438	2091	5529	No	2.69	Si
SLU 79	fin.	-420.64	-1846	0.82	0	303	6502	3438	2091	5529	No	2.99	Si
SLU 75	ini.	-157.47	2018	0.82	0	303	6502	3438	2091	5529	No	2.74	Si
SLU 75	fin.	-429.55	-1869	0.82	0	303	6502	3438	2091	5529	No	2.96	Si
SLU 76	ini.	-152.96	1968	0.82	0	303	6502	3438	2091	5529	No	2.81	Si
SLU 76	fin.	-417.25	-1822	0.82	0	303	6502	3438	2091	5529	No	3.03	Si
SLU 78	ini.	-165.87	2101	0.82	0	303	6502	3438	2091	5529	No	2.63	Si
SLU 78	fin.	-432.43	-1891	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 74	ini.	-157.92	2023	0.82	0	303	6502	3438	2091	5529	No	2.73	Si
SLU 74	fin.	-429.86	-1871	0.82	0	303	6502	3438	2091	5529	No	2.96	Si
SLU 81	ini.	-147.25	1960	0.82	0	303	6502	3438	2091	5529	No	2.82	Si
SLU 81	fin.	-436.95	-1894	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 83	ini.	-155.66	2043	0.82	0	303	6502	3438	2091	5529	No	2.71	Si
SLU 83	fin.	-439.83	-1916	0.82	0	303	6502	3438	2091	5529	No	2.89	Si
SLU 77	ini.	-166.32	2105	0.82	0	303	6502	3438	2091	5529	No	2.63	Si
SLU 77	fin.	-432.74	-1892	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 84	ini.	-155.21	2038	0.82	0	303	6502	3438	2091	5529	No	2.71	Si
SLU 84	fin.	-439.52	-1914	0.82	0	303	6502	3438	2091	5529	No	2.89	Si
SLU 80	ini.	-161.67	2054	0.82	0	303	6502	3438	2091	5529	No	2.69	Si
SLU 80	fin.	-420.33	-1845	0.82	0	303	6502	3438	2091	5529	No	3	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 14	ini.	261.63	718	-0.0001618	0.0002807	0.0035	0.82		2482.11	2482.11		9.49	Si
SLD 14	fin.	-968.22	-1825	-0.0007169	0.0002807	0.0035	0.82		2487.45	2487.45		2.57	Si
SLV 15	ini.	673.18	2550	-0.0004611	0.0002807	0.0035	0.82		2482.11	2482.11		3.69	Si
SLV 15	fin.	-1722.15	-2620	-0.0015741	0.0002807	0.0035	0.82		2487.45	2487.45		1.44	Si
SLV 4	ini.	-910.33	-4179	-0.0006637	0.0002807	0.0035	0.82		2487.45	2487.45		2.73	Si
SLV 4	fin.	1211.9	611	-0.0009598	0.0002807	0.0035	0.82		2482.11	2482.11		2.05	Si
SLD 16	ini.	250.89	724	-0.0001548	0.0002807	0.0035	0.82		2482.11	2482.11		9.89	Si
SLD 16	fin.	-942.35	-1775	-0.0006929	0.0002807	0.0035	0.82		2487.45	2487.45		2.64	Si
SLV 2	ini.	-885.2	-4192	-0.000641	0.0002807	0.0035	0.82		2487.45	2487.45		2.81	Si
SLV 2	fin.	1152.64	496	-0.0008986	0.0002807	0.0035	0.82		2482.11	2482.11		2.15	Si
SLV 14	ini.	753.45	2777	-0.0005276	0.0002807	0.0035	0.82		2482.11	2482.11		3.29	Si
SLV 14	fin.	-1881.9	-2845	-0.0018199	0.0002807	0.0035	0.82		2487.45	2487.45		1.32	Si
SLV 3	ini.	-965.47	-4419	-0.0007143	0.0002807	0.0035	0.82		2487.45	2487.45		2.58	Si
SLV 3	fin.	1312.39	721	-0.0010677	0.0002807	0.0035	0.82		2482.11	2482.11		1.89	Si
SLV 1	ini.	-940.34	-4432	-0.0006911	0.0002807	0.0035	0.82		2487.45	2487.45		2.65	Si
SLV 1	fin.	1253.13	607	-0.0010034	0.0002807	0.0035	0.82		2482.11	2482.11		1.98	Si
SLV 16	ini.	728.32	2790	-0.0005065	0.0002807	0.0035	0.82		2482.11	2482.11		3.41	Si
SLV 16	fin.	-1822.64	-2730	-0.0017242	0.0002807	0.0035	0.82		2487.45	2487.45		1.36	Si
SLV 13	ini.	698.31	2537	-0.0004816	0.0002807	0.0035	0.82		2482.11	2482.11		3.55	Si
SLV 13	fin.	-1781.41	-2734	-0.0016609	0.0002807	0.0035	0.82		2487.45	2487.45		1.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	728.32	-3989	0.82	0	455	6502	5156	2091	6957		1.74	Si
SLV 16	fin.	-1822.64	-6230	0.82	0	455	6502	5156	2091	6957		1.12	Si
SLV 13	ini.	698.31	-3513	0.82	0	455	6502	5156	2091	6957		1.98	Si
SLV 13	fin.	-1781.41	-6066	0.82	0	455	6502	5156	2091	6957		1.15	Si
SLV 4	ini.	-910.33	6169	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 4	fin.	1211.9	3581	0.82	0	455	6502	5156	2091	6957		1.94	Si
SLD 1	ini.	-462.91	3603	0.82	0	455	6502	5156	2091	6957		1.93	Si
SLD 1	fin.	372.84	890	0.82	0	455	6502	5156	2091	6957		7.82	Si
SLV 3	ini.	-965.47	6531	0.82	0	455	6502	5156	2091	6957		1.07	Si
SLV 3	fin.	1312.39	3908	0.82	0	455	6502	5156	2091	6957		1.78	Si
SLV 14	ini.	753.45	-3875	0.82	0	455	6502	5156	2091	6957		1.8	Si
SLV 14	fin.	-1881.9	-6393	0.82	0	455	6502	5156	2091	6957		1.09	Si
SLV 15	ini.	673.18	-3628	0.82	0	455	6502	5156	2091	6957		1.92	Si
SLV 15	fin.	-1722.15	-5903	0.82	0	455	6502	5156	2091	6957		1.18	Si
SLV 2	ini.	-885.2	6284	0.82	0	455	6502	5156	2091	6957		1.11	Si
SLV 2	fin.	1152.64	3418	0.82	0	455	6502	5156	2091	6957		2.04	Si
SLV 1	ini.	-940.34	6645	0.82	0	455	6502	5156	2091	6957		1.05	Si
SLV 1	fin.	1253.13	3745	0.82	0	455	6502	5156	2091	6957		1.86	Si
SLD 3	ini.	-473.66	3554	0.82	0	455	6502	5156	2091	6957		1.96	Si
SLD 3	fin.	398.71	962	0.82	0	455	6502	5156	2091	6957		7.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.322	SLV 14	Si
V_SLV	1.047	SLV 1	Si
PF_SLU	5.594	SLU 83	Si
V_SLU	2.626	SLU 77	Si

Trave di accoppiamento 116

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	8.35	9.25	0.9	-7.058	6.526	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	144.29	-1427	-0.0000726	0.0001872	0.0035	0.9		2959	2959	No	20.51	Si
SLU 74	fin.	368.7	-1651	-0.0001958	0.0001872	0.0035	0.9		2959	2959	No	8.03	Si
SLU 81	ini.	134.53	-1391	-0.0000676	0.0001872	0.0035	0.9		2959	2959	No	22	Si
SLU 81	fin.	370.29	-1641	-0.0001967	0.0001872	0.0035	0.9		2959	2959	No	7.99	Si
SLU 75	ini.	144.52	-1427	-0.0000727	0.0001872	0.0035	0.9		2959	2959	No	20.47	Si
SLU 75	fin.	367.93	-1649	-0.0001953	0.0001872	0.0035	0.9		2959	2959	No	8.04	Si
SLU 77	ini.	157.14	-1481	-0.0000793	0.0001872	0.0035	0.9		2959	2959	No	18.83	Si
SLU 77	fin.	366.68	-1672	-0.0001946	0.0001872	0.0035	0.9		2959	2959	No	8.07	Si
SLU 73	ini.	125.15	-1335	-0.0000627	0.0001872	0.0035	0.9		2959	2959	No	23.64	Si
SLU 73	fin.	364.55	-1596	-0.0001933	0.0001872	0.0035	0.9		2959	2959	No	8.12	Si
SLU 78	ini.	157.37	-1480	-0.0000794	0.0001872	0.0035	0.9		2959	2959	No	18.8	Si
SLU 78	fin.	365.9	-1670	-0.0001941	0.0001872	0.0035	0.9		2959	2959	No	8.09	Si
SLU 76	ini.	138	-1388	-0.0000694	0.0001872	0.0035	0.9		2959	2959	No	21.44	Si
SLU 76	fin.	362.52	-1617	-0.0001922	0.0001872	0.0035	0.9		2959	2959	No	8.16	Si
SLU 84	ini.	147.61	-1444	-0.0000743	0.0001872	0.0035	0.9		2959	2959	No	20.05	Si
SLU 84	fin.	367.49	-1660	-0.0001951	0.0001872	0.0035	0.9		2959	2959	No	8.05	Si
SLU 83	ini.	147.38	-1444	-0.0000742	0.0001872	0.0035	0.9		2959	2959	No	20.08	Si
SLU 83	fin.	368.26	-1662	-0.0001955	0.0001872	0.0035	0.9		2959	2959	No	8.04	Si
SLU 82	ini.	134.76	-1391	-0.0000677	0.0001872	0.0035	0.9		2959	2959	No	21.96	Si
SLU 82	fin.	369.51	-1640	-0.0001962	0.0001872	0.0035	0.9		2959	2959	No	8.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	157.37	-1376	0.9	0	365	7137	3773	2295	6068	No	4.41	Si
SLU 78	fin.	365.9	1616	0.9	0	365	7137	3773	2295	6068	No	3.75	Si
SLU 81	ini.	134.53	-1227	0.9	0	365	7137	3773	2295	6068	No	4.95	Si
SLU 81	fin.	370.29	1603	0.9	0	365	7137	3773	2295	6068	No	3.78	Si
SLU 84	ini.	147.61	-1302	0.9	0	365	7137	3773	2295	6068	No	4.66	Si
SLU 84	fin.	367.49	1601	0.9	0	365	7137	3773	2295	6068	No	3.79	Si
SLU 82	ini.	134.76	-1227	0.9	0	365	7137	3773	2295	6068	No	4.95	Si
SLU 82	fin.	369.51	1600	0.9	0	365	7137	3773	2295	6068	No	3.79	Si
SLU 74	ini.	144.29	-1301	0.9	0	365	7137	3773	2295	6068	No	4.66	Si
SLU 74	fin.	368.7	1619	0.9	0	365	7137	3773	2295	6068	No	3.75	Si
SLU 77	ini.	157.14	-1376	0.9	0	365	7137	3773	2295	6068	No	4.41	Si
SLU 77	fin.	366.68	1619	0.9	0	365	7137	3773	2295	6068	No	3.75	Si
SLU 75	ini.	144.52	-1301	0.9	0	365	7137	3773	2295	6068	No	4.66	Si
SLU 75	fin.	367.93	1616	0.9	0	365	7137	3773	2295	6068	No	3.76	Si
SLU 79	ini.	150.47	-1325	0.9	0	365	7137	3773	2295	6068	No	4.58	Si
SLU 79	fin.	361.79	1589	0.9	0	365	7137	3773	2295	6068	No	3.82	Si
SLU 83	ini.	147.38	-1302	0.9	0	365	7137	3773	2295	6068	No	4.66	Si
SLU 83	fin.	368.26	1604	0.9	0	365	7137	3773	2295	6068	No	3.78	Si
SLU 80	ini.	150.7	-1325	0.9	0	365	7137	3773	2295	6068	No	4.58	Si
SLU 80	fin.	361.01	1586	0.9	0	365	7137	3773	2295	6068	No	3.83	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1030.86	1683	-0.0006147	0.0002807	0.0035	0.9		2995.37	2995.37		2.91	Si
SLV 4	fin.	1581.8	-2970	-0.0010682	0.0002807	0.0035	0.9		2989.59	2989.59		1.89	Si
SLV 16	ini.	1241.26	-3650	-0.0007775	0.0002807	0.0035	0.9		2989.59	2989.59		2.41	Si
SLV 16	fin.	-1153.61	1004	-0.0007071	0.0002807	0.0035	0.9		2995.37	2995.37		2.6	Si
SLV 13	ini.	1188.46	-3541	-0.0007358	0.0002807	0.0035	0.9		2989.59	2989.59		2.52	Si
SLV 13	fin.	-1035.31	657	-0.000618	0.0002807	0.0035	0.9		2995.37	2995.37		2.89	Si
SLV 14	ini.	1279.84	-3750	-0.0008085	0.0002807	0.0035	0.9		2989.59	2989.59		2.34	Si
SLV 14	fin.	-1148.43	829	-0.0007031	0.0002807	0.0035	0.9		2995.37	2995.37		2.61	Si
SLV 3	ini.	-1122.23	1893	-0.0006831	0.0002807	0.0035	0.9		2995.37	2995.37		2.67	Si
SLV 3	fin.	1694.92	-3141	-0.0011743	0.0002807	0.0035	0.9		2989.59	2989.59		1.76	Si
SLV 15	ini.	1149.89	-3441	-0.0007058	0.0002807	0.0035	0.9		2989.59	2989.59		2.6	Si
SLV 15	fin.	-1040.49	832	-0.0006218	0.0002807	0.0035	0.9		2995.37	2995.37		2.88	Si
SLD 1	ini.	-418.22	235	-0.0002182	0.0002807	0.0035	0.9		2995.37	2995.37		7.16	Si
SLD 1	fin.	883.46	-2080	-0.0005106	0.0002807	0.0035	0.9		2989.59	2989.59		3.38	Si
SLV 2	ini.	-992.28	1584	-0.0005866	0.0002807	0.0035	0.9		2995.37	2995.37		3.02	Si
SLV 2	fin.	1586.98	-3145	-0.0010729	0.0002807	0.0035	0.9		2989.59	2989.59		1.88	Si
SLV 1	ini.	-1083.66	1793	-0.0006539	0.0002807	0.0035	0.9		2995.37	2995.37		2.76	Si
SLV 1	fin.	1700.1	-3316	-0.0011793	0.0002807	0.0035	0.9		2989.59	2989.59		1.76	Si
SLD 3	ini.	-434.85	278	-0.0002275	0.0002807	0.0035	0.9		2995.37	2995.37		6.89	Si
SLD 3	fin.	881.06	-2004	-0.000509	0.0002807	0.0035	0.9		2989.59	2989.59		3.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1279.84	-6325	0.9	0	548	7137	5660	2295	7684		1.21	Si
SLV 14	fin.	-1148.43	-4058	0.9	0	548	7137	5660	2295	7684		1.89	Si
SLV 15	ini.	1149.89	-5792	0.9	0	548	7137	5660	2295	7684		1.33	Si
SLV 15	fin.	-1040.49	-3761	0.9	0	548	7137	5660	2295	7684		2.04	Si
SLV 1	ini.	-1083.66	4581	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 1	fin.	1700.1	6563	0.9	0	548	7137	5660	2295	7684		1.17	Si
SLV 2	ini.	-992.28	4174	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 2	fin.	1586.98	6140	0.9	0	548	7137	5660	2295	7684		1.25	Si
SLD 1	ini.	-418.22	1495	0.9	0	548	7137	5660	2295	7684		5.14	Si
SLD 1	fin.	883.46	3488	0.9	0	548	7137	5660	2295	7684		2.2	Si
SLV 3	ini.	-1122.23	4707	0.9	0	548	7137	5660	2295	7684		1.63	Si
SLV 3	fin.	1694.92	6438	0.9	0	548	7137	5660	2295	7684		1.19	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-434.85	1550	0.9	0	548	7137	5660	2295	7684		4.96	Si
SLD 3	fin.	881.06	3433	0.9	0	548	7137	5660	2295	7684		2.24	Si
SLV 16	ini.	1241.26	-6199	0.9	0	548	7137	5660	2295	7684		1.24	Si
SLV 16	fin.	-1153.61	-4184	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 13	ini.	1188.46	-5918	0.9	0	548	7137	5660	2295	7684		1.3	Si
SLV 13	fin.	-1035.31	-3635	0.9	0	548	7137	5660	2295	7684		2.11	Si
SLV 4	ini.	-1030.86	4300	0.9	0	548	7137	5660	2295	7684		1.79	Si
SLV 4	fin.	1581.8	6014	0.9	0	548	7137	5660	2295	7684		1.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.758	SLV 1	Si
V_SLV	1.171	SLV 1	Si
PF_SLU	7.991	SLU 81	Si
V_SLU	3.747	SLU 77	Si

Trave di accoppiamento 117

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	11.05	11.87	0.82	-7.058	6.526	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-420.54	-1297	-0.0002794	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.85	Si
SLU 83	fin.	-54.85	-528	-0.0000327	0.0001872	0.0035	0.82		2460.51	2460.51	No	44.86	Si
SLU 84	ini.	-420.84	-1296	-0.0002796	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.85	Si
SLU 84	fin.	-54.46	-526	-0.0000324	0.0001872	0.0035	0.82		2460.51	2460.51	No	45.18	Si
SLU 78	ini.	-418.82	-1316	-0.000278	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.87	Si
SLU 78	fin.	-61.39	-559	-0.0000366	0.0001872	0.0035	0.82		2460.51	2460.51	No	40.08	Si
SLU 74	ini.	-420.81	-1296	-0.0002796	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.85	Si
SLU 74	fin.	-52.18	-516	-0.0000311	0.0001872	0.0035	0.82		2460.51	2460.51	No	47.15	Si
SLU 81	ini.	-422.83	-1276	-0.0002811	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.82	Si
SLU 81	fin.	-45.25	-483	-0.0000269	0.0001872	0.0035	0.82		2460.51	2460.51	No	54.37	Si
SLU 82	ini.	-423.12	-1275	-0.0002813	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.82	Si
SLU 82	fin.	-44.86	-482	-0.0000267	0.0001872	0.0035	0.82		2460.51	2460.51	No	54.85	Si
SLU 73	ini.	-415.71	-1240	-0.0002757	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.92	Si
SLU 73	fin.	-38.41	-446	-0.0000228	0.0001872	0.0035	0.82		2460.51	2460.51	No	64.06	Si
SLU 77	ini.	-418.52	-1317	-0.0002778	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.88	Si
SLU 77	fin.	-61.78	-561	-0.0000369	0.0001872	0.0035	0.82		2460.51	2460.51	No	39.83	Si
SLU 76	ini.	-413.43	-1261	-0.0002739	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.95	Si
SLU 76	fin.	-48.01	-491	-0.0000286	0.0001872	0.0035	0.82		2460.51	2460.51	No	51.25	Si
SLU 75	ini.	-421.11	-1295	-0.0002798	0.0001872	0.0035	0.82		2460.51	2460.51	No	5.84	Si
SLU 75	fin.	-51.79	-515	-0.0000308	0.0001872	0.0035	0.82		2460.51	2460.51	No	47.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-410.64	2072	0.82	0	303	6502	3438	2091	5529	No	2.67	Si
SLU 79	fin.	-58.26	-1258	0.82	0	303	6502	3438	2091	5529	No	4.39	Si
SLU 77	ini.	-418.52	2112	0.82	0	303	6502	3438	2091	5529	No	2.62	Si
SLU 77	fin.	-61.78	-1299	0.82	0	303	6502	3438	2091	5529	No	4.26	Si
SLU 81	ini.	-422.83	2125	0.82	0	303	6502	3438	2091	5529	No	2.6	Si
SLU 81	fin.	-45.25	-1216	0.82	0	303	6502	3438	2091	5529	No	4.55	Si
SLU 74	ini.	-420.81	2110	0.82	0	303	6502	3438	2091	5529	No	2.62	Si
SLU 74	fin.	-52.18	-1235	0.82	0	303	6502	3438	2091	5529	No	4.48	Si
SLU 80	ini.	-410.94	2073	0.82	0	303	6502	3438	2091	5529	No	2.67	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-57.87	-1256	0.82	0	303	6502	3438	2091	5529	No	4.4	Si
SLU 84	ini.	-420.84	2127	0.82	0	303	6502	3438	2091	5529	No	2.6	Si
SLU 84	fin.	-54.46	-1277	0.82	0	303	6502	3438	2091	5529	No	4.33	Si
SLU 75	ini.	-421.11	2111	0.82	0	303	6502	3438	2091	5529	No	2.62	Si
SLU 75	fin.	-51.79	-1233	0.82	0	303	6502	3438	2091	5529	No	4.48	Si
SLU 82	ini.	-423.12	2125	0.82	0	303	6502	3438	2091	5529	No	2.6	Si
SLU 82	fin.	-44.86	-1214	0.82	0	303	6502	3438	2091	5529	No	4.55	Si
SLU 78	ini.	-418.82	2112	0.82	0	303	6502	3438	2091	5529	No	2.62	Si
SLU 78	fin.	-61.39	-1297	0.82	0	303	6502	3438	2091	5529	No	4.26	Si
SLU 83	ini.	-420.54	2126	0.82	0	303	6502	3438	2091	5529	No	2.6	Si
SLU 83	fin.	-54.85	-1279	0.82	0	303	6502	3438	2091	5529	No	4.32	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-1527.17	-2876	-0.0013151	0.0002807	0.0035	0.82		2487.45	2487.45		1.63	Si
SLV 1	fin.	613.69	1812	-0.0004135	0.0002807	0.0035	0.82		2482.11	2482.11		4.04	Si
SLV 4	ini.	-1409.9	-2542	-0.0011747	0.0002807	0.0035	0.82		2487.45	2487.45		1.76	Si
SLV 4	fin.	589.03	1758	-0.0003942	0.0002807	0.0035	0.82		2482.11	2482.11		4.21	Si
SLV 2	ini.	-1432.13	-2723	-0.0012006	0.0002807	0.0035	0.82		2487.45	2487.45		1.74	Si
SLV 2	fin.	564.71	1652	-0.0003754	0.0002807	0.0035	0.82		2482.11	2482.11		4.4	Si
SLD 3	ini.	-818.56	-1663	-0.0005821	0.0002807	0.0035	0.82		2487.45	2487.45		3.04	Si
SLD 3	fin.	261.92	657	-0.000162	0.0002807	0.0035	0.82		2482.11	2482.11		9.48	Si
SLV 3	ini.	-1504.94	-2695	-0.0012877	0.0002807	0.0035	0.82		2487.45	2487.45		1.65	Si
SLV 3	fin.	638.02	1918	-0.0004328	0.0002807	0.0035	0.82		2482.11	2482.11		3.89	Si
SLV 14	ini.	892.91	909	-0.0006496	0.0002807	0.0035	0.82		2482.11	2482.11		2.78	Si
SLV 14	fin.	-676.16	-2487	-0.0004624	0.0002807	0.0035	0.82		2487.45	2487.45		3.68	Si
SLV 15	ini.	820.09	937	-0.0005849	0.0002807	0.0035	0.82		2482.11	2482.11		3.03	Si
SLV 15	fin.	-602.85	-2221	-0.000404	0.0002807	0.0035	0.82		2487.45	2487.45		4.13	Si
SLV 16	ini.	915.14	1090	-0.0006697	0.0002807	0.0035	0.82		2482.11	2482.11		2.71	Si
SLV 16	fin.	-651.84	-2381	-0.0004428	0.0002807	0.0035	0.82		2487.45	2487.45		3.82	Si
SLD 1	ini.	-828.35	-1741	-0.0005907	0.0002807	0.0035	0.82		2487.45	2487.45		3	Si
SLD 1	fin.	251.5	612	-0.0001552	0.0002807	0.0035	0.82		2482.11	2482.11		9.87	Si
SLV 13	ini.	797.86	756	-0.0005656	0.0002807	0.0035	0.82		2482.11	2482.11		3.11	Si
SLV 13	fin.	-627.17	-2327	-0.0004231	0.0002807	0.0035	0.82		2487.45	2487.45		3.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	820.09	-2314	0.82	0	455	6502	5156	2091	6957		3.01	Si
SLV 15	fin.	-602.85	-3998	0.82	0	455	6502	5156	2091	6957		1.74	Si
SLD 3	ini.	-818.56	3207	0.82	0	455	6502	5156	2091	6957		2.17	Si
SLD 3	fin.	261.92	842	0.82	0	455	6502	5156	2091	6957		8.26	Si
SLD 1	ini.	-828.35	3266	0.82	0	455	6502	5156	2091	6957		2.13	Si
SLD 1	fin.	251.5	789	0.82	0	455	6502	5156	2091	6957		8.82	Si
SLV 14	ini.	892.91	-2502	0.82	0	455	6502	5156	2091	6957		2.78	Si
SLV 14	fin.	-676.16	-4396	0.82	0	455	6502	5156	2091	6957		1.58	Si
SLV 2	ini.	-1432.13	5309	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 2	fin.	564.71	2543	0.82	0	455	6502	5156	2091	6957		2.74	Si
SLV 13	ini.	797.86	-2179	0.82	0	455	6502	5156	2091	6957		3.19	Si
SLV 13	fin.	-627.17	-4121	0.82	0	455	6502	5156	2091	6957		1.69	Si
SLV 4	ini.	-1409.9	5173	0.82	0	455	6502	5156	2091	6957		1.34	Si
SLV 4	fin.	589.03	2666	0.82	0	455	6502	5156	2091	6957		2.61	Si
SLV 1	ini.	-1527.17	5632	0.82	0	455	6502	5156	2091	6957		1.24	Si
SLV 1	fin.	613.69	2818	0.82	0	455	6502	5156	2091	6957		2.47	Si
SLV 16	ini.	915.14	-2637	0.82	0	455	6502	5156	2091	6957		2.64	Si
SLV 16	fin.	-651.84	-4272	0.82	0	455	6502	5156	2091	6957		1.63	Si
SLV 3	ini.	-1504.94	5497	0.82	0	455	6502	5156	2091	6957		1.27	Si
SLV 3	fin.	638.02	2941	0.82	0	455	6502	5156	2091	6957		2.37	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.629	SLV 1	Si
V_SLV	1.235	SLV 1	Si
PF_SLU	5.815	SLU 82	Si
V_SLU	2.6	SLU 84	Si

Trave di accoppiamento 118

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	10.45	11.87	1.42	-19.443	1.006	10.45	11.87	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-446.38	-2624	-0.0000902	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.9	Si
SLU 43	fin.	-29.03	-2403	-0.0000057	0.0002246	0.0035	1.42		7545.1	7545.1	No	259.94	Si
SLU 44	ini.	-461.93	-2636	-0.0000935	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.33	Si
SLU 44	fin.	-10.52	-2395	-0.0000021	0.0002246	0.0035	1.42		7545.1	7545.1	No	716.91	Si
SLU 42	ini.	-37.87	-2564	-0.0000074	0.0002246	0.0035	1.42		7545.1	7545.1	No	199.25	Si
SLU 42	fin.	-466.77	-2806	-0.0000945	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.16	Si
SLU 51	ini.	-452.24	-2809	-0.0000914	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.68	Si
SLU 51	fin.	-41.26	-2593	-0.0000081	0.0002246	0.0035	1.42		7545.1	7545.1	No	182.88	Si
SLU 41	ini.	-28.54	-2557	-0.0000056	0.0002246	0.0035	1.42		7545.1	7545.1	No	264.4	Si
SLU 41	fin.	-477.87	-2811	-0.0000968	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.79	Si
SLU 83	ini.	-149.08	-3105	-0.0000295	0.0002246	0.0035	1.42		7545.1	7545.1	No	50.61	Si
SLU 83	fin.	-455.81	-3283	-0.0000922	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.55	Si
SLU 39	ini.	-30.28	-2468	-0.0000059	0.0002246	0.0035	1.42		7545.1	7545.1	No	249.22	Si
SLU 39	fin.	-466.2	-2714	-0.0000943	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.18	Si
SLU 40	ini.	-39.61	-2475	-0.0000078	0.0002246	0.0035	1.42		7545.1	7545.1	No	190.51	Si
SLU 40	fin.	-455.1	-2709	-0.000092	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.58	Si
SLU 84	ini.	-158.42	-3112	-0.0000314	0.0002246	0.0035	1.42		7545.1	7545.1	No	47.63	Si
SLU 84	fin.	-444.71	-3278	-0.0000899	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.97	Si
SLU 47	ini.	-460.19	-2725	-0.0000931	0.0002246	0.0035	1.42		7545.1	7545.1	No	16.4	Si
SLU 47	fin.	-22.19	-2492	-0.0000044	0.0002246	0.0035	1.42		7545.1	7545.1	No	340.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 35	ini.	-72.34	329	1.42	0	576	6344	7144	3621	6920	No	21.02	Si
SLU 35	fin.	-429.68	-1530	1.42	0	576	6344	7144	3621	6920	No	4.52	Si
SLU 41	ini.	-28.54	260	1.42	0	576	6344	7144	3621	6920	No	26.66	Si
SLU 41	fin.	-477.87	-1777	1.42	0	576	6344	7144	3621	6920	No	3.89	Si
SLU 42	ini.	-37.87	295	1.42	0	576	6344	7144	3621	6920	No	23.42	Si
SLU 42	fin.	-466.77	-1741	1.42	0	576	6344	7144	3621	6920	No	3.98	Si
SLU 81	ini.	-150.82	638	1.42	0	576	6344	7144	3621	6920	No	10.85	Si
SLU 81	fin.	-444.14	-1596	1.42	0	576	6344	7144	3621	6920	No	4.34	Si
SLU 39	ini.	-30.28	284	1.42	0	576	6344	7144	3621	6920	No	24.39	Si
SLU 39	fin.	-466.2	-1753	1.42	0	576	6344	7144	3621	6920	No	3.95	Si
SLU 40	ini.	-39.61	320	1.42	0	576	6344	7144	3621	6920	No	21.65	Si
SLU 40	fin.	-455.1	-1717	1.42	0	576	6344	7144	3621	6920	No	4.03	Si
SLU 32	ini.	-74.07	353	1.42	0	576	6344	7144	3621	6920	No	19.59	Si
SLU 32	fin.	-418.02	-1506	1.42	0	576	6344	7144	3621	6920	No	4.6	Si
SLU 83	ini.	-149.08	614	1.42	0	576	6344	7144	3621	6920	No	11.28	Si
SLU 83	fin.	-455.81	-1620	1.42	0	576	6344	7144	3621	6920	No	4.27	Si
SLU 82	ini.	-160.15	674	1.42	0	576	6344	7144	3621	6920	No	10.27	Si
SLU 82	fin.	-433.04	-1560	1.42	0	576	6344	7144	3621	6920	No	4.44	Si
SLU 84	ini.	-158.42	650	1.42	0	576	6344	7144	3621	6920	No	10.65	Si
SLU 84	fin.	-444.71	-1584	1.42	0	576	6344	7144	3621	6920	No	4.37	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	3614.29	-1056	-0.0009222	0.0003369	0.0035	1.42		7270.13	7270.13		2.01	Si
SLV 3	fin.	-4396.88	-5375	-0.0011999	0.0003369	0.0035	1.42		7279.66	7279.66		1.66	Si
SLV 5	ini.	1318.84	-1610	-0.0002789	0.0003369	0.0035	1.42		7270.13	7270.13		5.51	Si
SLV 5	fin.	-2088.61	-3534	-0.0004676	0.0003369	0.0035	1.42		7279.66	7279.66		3.49	Si
SLV 13	ini.	-3991.68	-3200	-0.0010507	0.0003369	0.0035	1.42		7279.66	7279.66		1.82	Si
SLV 13	fin.	3952.24	1065	-0.0010384	0.0003369	0.0035	1.42		7270.13	7270.13		1.84	Si
SLV 1	ini.	3829.98	-940	-0.0009956	0.0003369	0.0035	1.42		7270.13	7270.13		1.9	Si
SLV 1	fin.	-4749.94	-5610	-0.0013397	0.0003369	0.0035	1.42		7279.66	7279.66		1.53	Si
SLV 16	ini.	-4352.03	-3405	-0.0011829	0.0003369	0.0035	1.42		7279.66	7279.66		1.67	Si
SLV 16	fin.	4463.03	1380	-0.0012274	0.0003369	0.0035	1.42		7270.13	7270.13		1.63	Si
SLV 14	ini.	-4136.33	-3289	-0.0011027	0.0003369	0.0035	1.42		7279.66	7279.66		1.76	Si
SLV 14	fin.	4109.97	1145	-0.0010949	0.0003369	0.0035	1.42		7270.13	7270.13		1.77	Si
SLV 2	ini.	3685.33	-1028	-0.0009461	0.0003369	0.0035	1.42		7270.13	7270.13		1.97	Si
SLV 2	fin.	-4592.21	-5530	-0.001276	0.0003369	0.0035	1.42		7279.66	7279.66		1.59	Si
SLD 1	ini.	1490.16	-1644	-0.0003189	0.0003369	0.0035	1.42		7270.13	7270.13		4.88	Si
SLD 1	fin.	-2116.13	-3611	-0.0004748	0.0003369	0.0035	1.42		7279.66	7279.66		3.44	Si
SLV 15	ini.	-4207.37	-3317	-0.0011288	0.0003369	0.0035	1.42		7279.66	7279.66		1.73	Si
SLV 15	fin.	4305.3	1300	-0.0011671	0.0003369	0.0035	1.42		7270.13	7270.13		1.69	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	3469.63	-1145	-0.0008744	0.0003369	0.0035	1.42		7270.13	7270.13		2.1	Si
SLV 4	fin.	-4239.15	-5295	-0.0011405	0.0003369	0.0035	1.42		7279.66	7279.66		1.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-4136.33	14765	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 14	fin.	4109.97	13633	1.42	0	864	6344	10717	3621	7208		0.53	No
SLD 16	ini.	-2012.2	7259	1.42	0	864	6344	10717	3621	7208		0.99	No
SLD 16	fin.	1829.22	5881	1.42	0	864	6344	10717	3621	7208		1.23	Si
SLV 13	ini.	-3991.68	14238	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 13	fin.	3952.24	13106	1.42	0	864	6344	10717	3621	7208		0.55	No
SLV 2	ini.	3685.33	-13498	1.42	0	864	6344	10717	3621	7208		0.53	No
SLV 2	fin.	-4592.21	-14624	1.42	0	864	6344	10717	3621	7208		0.49	No
SLV 4	ini.	3469.63	-12482	1.42	0	864	6344	10717	3621	7208		0.58	No
SLV 4	fin.	-4239.15	-13953	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 1	ini.	3829.98	-14025	1.42	0	864	6344	10717	3621	7208		0.51	No
SLV 1	fin.	-4749.94	-15151	1.42	0	864	6344	10717	3621	7208		0.48	No
SLD 15	ini.	-1950.07	7032	1.42	0	864	6344	10717	3621	7208		1.02	Si
SLD 15	fin.	1761.47	5654	1.42	0	864	6344	10717	3621	7208		1.27	Si
SLV 16	ini.	-4352.03	15781	1.42	0	864	6344	10717	3621	7208		0.46	No
SLV 16	fin.	4463.03	14304	1.42	0	864	6344	10717	3621	7208		0.5	No
SLV 3	ini.	3614.29	-13009	1.42	0	864	6344	10717	3621	7208		0.55	No
SLV 3	fin.	-4396.88	-14481	1.42	0	864	6344	10717	3621	7208		0.5	No
SLV 15	ini.	-4207.37	15254	1.42	0	864	6344	10717	3621	7208		0.47	No
SLV 15	fin.	4305.3	13777	1.42	0	864	6344	10717	3621	7208		0.52	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.533	SLV 1	Si
V_SLV	0.457	SLV 16	No
PF_SLU	15.789	SLU 41	Si
V_SLU	3.895	SLU 41	Si

Trave di accoppiamento 119

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	10.45	11.87	1.42	-14.963	1.006	10.45	11.87	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 53	ini.	-24.15	-2728	-0.0000047	0.0002246	0.0035	1.42		7545.1	7545.1	No	312.47	Si
SLU 53	fin.	-529.34	-3055	-0.0001076	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.25	Si
SLU 57	ini.	-66.67	-2823	-0.0000131	0.0002246	0.0035	1.42		7545.1	7545.1	No	113.17	Si
SLU 57	fin.	-489.23	-3103	-0.0000992	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.42	Si
SLU 61	ini.	-9.7	-2640	-0.0000019	0.0002246	0.0035	1.42		7545.1	7545.1	No	777.58	Si
SLU 61	fin.	-562.82	-2999	-0.0001147	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.41	Si
SLU 55	ini.	-53.7	-2638	-0.0000106	0.0002246	0.0035	1.42		7545.1	7545.1	No	140.49	Si
SLU 55	fin.	-489.62	-2924	-0.0000993	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.41	Si
SLU 56	ini.	-55.76	-2820	-0.000011	0.0002246	0.0035	1.42		7545.1	7545.1	No	135.31	Si
SLU 56	fin.	-500.57	-3112	-0.0001016	0.0002246	0.0035	1.42		7545.1	7545.1	No	15.07	Si
SLU 54	ini.	-35.06	-2732	-0.0000069	0.0002246	0.0035	1.42		7545.1	7545.1	No	215.22	Si
SLU 54	fin.	-517.99	-3046	-0.0001052	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.57	Si
SLU 52	ini.	-22.09	-2547	-0.0000043	0.0002246	0.0035	1.42		7545.1	7545.1	No	341.57	Si
SLU 52	fin.	-518.38	-2867	-0.0001053	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.56	Si
SLU 60	ini.	1.21	-2636	-0.0000002	0.0002246	0.0035	1.42		7536.27	7536.27	No	6238.23	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	fin.	-574.16	-3009	-0.0001171	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.14	Si
SLU 62	ini.	-30.41	-2728	-0.000006	0.0002246	0.0035	1.42		7545.1	7545.1	No	248.14	Si
SLU 62	fin.	-545.4	-3066	-0.000111	0.0002246	0.0035	1.42		7545.1	7545.1	No	13.83	Si
SLU 63	ini.	-41.32	-2731	-0.0000081	0.0002246	0.0035	1.42		7545.1	7545.1	No	182.61	Si
SLU 63	fin.	-534.06	-3056	-0.0001086	0.0002246	0.0035	1.42		7545.1	7545.1	No	14.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 63	ini.	-41.32	96	1.42	0	576	6344	7144	3621	6920	No	72	Si
SLU 63	fin.	-534.06	-1910	1.42	0	576	6344	7144	3621	6920	No	3.62	Si
SLU 61	ini.	-9.7	-10	1.42	0	576	6344	7144	3621	6920	No	710.91	Si
SLU 61	fin.	-562.82	-2015	1.42	0	576	6344	7144	3621	6920	No	3.43	Si
SLU 56	ini.	-55.76	89	1.42	0	576	6344	7144	3621	6920	No	77.95	Si
SLU 56	fin.	-500.57	-1724	1.42	0	576	6344	7144	3621	6920	No	4.01	Si
SLU 53	ini.	-24.15	-17	1.42	0	576	6344	7144	3621	6920	No	405.39	Si
SLU 53	fin.	-529.34	-1830	1.42	0	576	6344	7144	3621	6920	No	3.78	Si
SLU 60	ini.	1.21	-49	1.42	0	576	6344	7144	3621	6920	No	141.43	Si
SLU 60	fin.	-574.16	-2055	1.42	0	576	6344	7144	3621	6920	No	3.37	Si
SLU 55	ini.	-53.7	106	1.42	0	576	6344	7144	3621	6920	No	65.51	Si
SLU 55	fin.	-489.62	-1707	1.42	0	576	6344	7144	3621	6920	No	4.05	Si
SLU 54	ini.	-35.06	22	1.42	0	576	6344	7144	3621	6920	No	312.77	Si
SLU 54	fin.	-517.99	-1791	1.42	0	576	6344	7144	3621	6920	No	3.86	Si
SLU 52	ini.	-22.09	0	1.42	0	576	6344	7144	3621	6920	No	32987.26	Si
SLU 52	fin.	-518.38	-1813	1.42	0	576	6344	7144	3621	6920	No	3.82	Si
SLU 62	ini.	-30.41	57	1.42	0	576	6344	7144	3621	6920	No	121.59	Si
SLU 62	fin.	-545.4	-1949	1.42	0	576	6344	7144	3621	6920	No	3.55	Si
SLU 57	ini.	-66.67	128	1.42	0	576	6344	7144	3621	6920	No	54.08	Si
SLU 57	fin.	-489.23	-1685	1.42	0	576	6344	7144	3621	6920	No	4.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	3012.15	-4250	-0.00073	0.0003369	0.0035	1.42		7270.13	7270.13		2.41	Si
SLV 1	fin.	-5225.43	-8143	-0.0015458	0.0003369	0.0035	1.42		7279.66	7279.66		1.39	Si
SLV 16	ini.	-3281.48	147	-0.0008126	0.0003369	0.0035	1.42		7279.66	7279.66		2.22	Si
SLV 16	fin.	4676	3799	-0.0013118	0.0003369	0.0035	1.42		7270.13	7270.13		1.55	Si
SLV 2	ini.	2966.1	-4279	-0.0007161	0.0003369	0.0035	1.42		7270.13	7270.13		2.45	Si
SLV 2	fin.	-5180.4	-8124	-0.0015253	0.0003369	0.0035	1.42		7279.66	7279.66		1.41	Si
SLV 6	ini.	2423.52	-2290	-0.0005588	0.0003369	0.0035	1.42		7270.13	7270.13		3	Si
SLV 6	fin.	-3475.81	-5428	-0.000875	0.0003369	0.0035	1.42		7279.66	7279.66		2.09	Si
SLV 3	ini.	1933.43	-4537	-0.000428	0.0003369	0.0035	1.42		7270.13	7270.13		3.76	Si
SLV 3	fin.	-4079.96	-7171	-0.0010823	0.0003369	0.0035	1.42		7279.66	7279.66		1.78	Si
SLV 4	ini.	1887.38	-4566	-0.0004163	0.0003369	0.0035	1.42		7270.13	7270.13		3.85	Si
SLV 4	fin.	-4034.93	-7152	-0.0010661	0.0003369	0.0035	1.42		7279.66	7279.66		1.8	Si
SLV 15	ini.	-3235.43	177	-0.000798	0.0003369	0.0035	1.42		7279.66	7279.66		2.25	Si
SLV 15	fin.	4630.98	3780	-0.0012936	0.0003369	0.0035	1.42		7270.13	7270.13		1.57	Si
SLV 13	ini.	-2156.71	464	-0.0004856	0.0003369	0.0035	1.42		7279.66	7279.66		3.38	Si
SLV 13	fin.	3485.5	2808	-0.0008796	0.0003369	0.0035	1.42		7270.13	7270.13		2.09	Si
SLV 14	ini.	-2202.77	434	-0.0004979	0.0003369	0.0035	1.42		7279.66	7279.66		3.3	Si
SLV 14	fin.	3530.53	2827	-0.0008944	0.0003369	0.0035	1.42		7270.13	7270.13		2.06	Si
SLV 5	ini.	2453.53	-2270	-0.0005671	0.0003369	0.0035	1.42		7270.13	7270.13		2.96	Si
SLV 5	fin.	-3505.14	-5441	-0.0008847	0.0003369	0.0035	1.42		7279.66	7279.66		2.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1933.43	-9178	1.42	0	864	6344	10717	3621	7208		0.79	No
SLV 3	fin.	-4079.96	-10573	1.42	0	864	6344	10717	3621	7208		0.68	No
SLV 11	ini.	-2692.85	10285	1.42	0	864	6344	10717	3621	7208		0.7	No
SLV 11	fin.	2926.38	8888	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 16	ini.	-3281.48	13894	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 16	fin.	4676	12502	1.42	0	864	6344	10717	3621	7208		0.58	No
SLV 6	ini.	2423.52	-9462	1.42	0	864	6344	10717	3621	7208		0.76	No
SLV 6	fin.	-3475.81	-10848	1.42	0	864	6344	10717	3621	7208		0.66	No
SLV 15	ini.	-3235.43	13737	1.42	0	864	6344	10717	3621	7208		0.52	No
SLV 15	fin.	4630.98	12345	1.42	0	864	6344	10717	3621	7208		0.58	No
SLV 5	ini.	2453.53	-9564	1.42	0	864	6344	10717	3621	7208		0.75	No
SLV 5	fin.	-3505.14	-10950	1.42	0	864	6344	10717	3621	7208		0.66	No
SLV 2	ini.	2966.1	-12913	1.42	0	864	6344	10717	3621	7208		0.56	No
SLV 2	fin.	-5180.4	-14305	1.42	0	864	6344	10717	3621	7208		0.5	No
SLV 4	ini.	1887.38	-9021	1.42	0	864	6344	10717	3621	7208		0.8	No
SLV 4	fin.	-4034.93	-10416	1.42	0	864	6344	10717	3621	7208		0.69	No
SLV 12	ini.	-2722.86	10387	1.42	0	864	6344	10717	3621	7208		0.69	No
SLV 12	fin.	2955.72	8990	1.42	0	864	6344	10717	3621	7208		0.8	No
SLV 1	ini.	3012.15	-13070	1.42	0	864	6344	10717	3621	7208		0.55	No
SLV 1	fin.	-5225.43	-14461	1.42	0	864	6344	10717	3621	7208		0.5	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.393	SLV 1	Si
V_SLV	0.498	SLV 1	No
PF_SLU	13.141	SLU 60	Si
V_SLU	3.368	SLU 60	Si

Trave di accoppiamento 120

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	10.85	11.87	1.02	-12.263	1.006	10.85	11.87	1.02	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-672.11	-2513	-0.0002836	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.8	Si
SLU 84	fin.	-210.31	-1962	-0.0000821	0.0002246	0.0035	1.02		3900.37	3900.37	No	18.55	Si
SLU 82	ini.	-653.21	-2432	-0.0002746	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.97	Si
SLU 82	fin.	-210.15	-1903	-0.000082	0.0002246	0.0035	1.02		3900.37	3900.37	No	18.56	Si
SLU 81	ini.	-652.62	-2431	-0.0002743	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.98	Si
SLU 81	fin.	-209.27	-1902	-0.0000817	0.0002246	0.0035	1.02		3900.37	3900.37	No	18.64	Si
SLU 78	ini.	-682.57	-2615	-0.0002886	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.71	Si
SLU 78	fin.	-177.16	-2011	-0.0000688	0.0002246	0.0035	1.02		3900.37	3900.37	No	22.02	Si
SLU 77	ini.	-681.97	-2614	-0.0002883	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.72	Si
SLU 77	fin.	-176.27	-2010	-0.0000685	0.0002246	0.0035	1.02		3900.37	3900.37	No	22.13	Si
SLU 80	ini.	-670.59	-2542	-0.0002829	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.82	Si
SLU 80	fin.	-180.23	-1953	-0.0000701	0.0002246	0.0035	1.02		3900.37	3900.37	No	21.64	Si
SLU 83	ini.	-671.51	-2512	-0.0002833	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.81	Si
SLU 83	fin.	-209.42	-1961	-0.0000817	0.0002246	0.0035	1.02		3900.37	3900.37	No	18.62	Si
SLU 75	ini.	-663.67	-2533	-0.0002796	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.88	Si
SLU 75	fin.	-177.01	-1952	-0.0000688	0.0002246	0.0035	1.02		3900.37	3900.37	No	22.03	Si
SLU 74	ini.	-663.08	-2532	-0.0002793	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.88	Si
SLU 74	fin.	-176.12	-1951	-0.0000684	0.0002246	0.0035	1.02		3900.37	3900.37	No	22.15	Si
SLU 79	ini.	-670	-2541	-0.0002826	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.82	Si
SLU 79	fin.	-179.35	-1952	-0.0000697	0.0002246	0.0035	1.02		3900.37	3900.37	No	21.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-663.08	1971	1.02	0	377	8088	5132	2601	7733	No	3.92	Si
SLU 74	fin.	-176.12	-570	1.02	0	377	8088	5132	2601	7733	No	13.56	Si
SLU 84	ini.	-672.11	2073	1.02	0	377	8088	5132	2601	7733	No	3.73	Si
SLU 84	fin.	-210.31	-744	1.02	0	377	8088	5132	2601	7733	No	10.39	Si
SLU 75	ini.	-663.67	1970	1.02	0	377	8088	5132	2601	7733	No	3.92	Si
SLU 75	fin.	-177.01	-571	1.02	0	377	8088	5132	2601	7733	No	13.55	Si
SLU 77	ini.	-681.97	1998	1.02	0	377	8088	5132	2601	7733	No	3.87	Si
SLU 77	fin.	-176.27	-543	1.02	0	377	8088	5132	2601	7733	No	14.23	Si
SLU 80	ini.	-670.59	1977	1.02	0	377	8088	5132	2601	7733	No	3.91	Si
SLU 80	fin.	-180.23	-564	1.02	0	377	8088	5132	2601	7733	No	13.71	Si
SLU 79	ini.	-670	1978	1.02	0	377	8088	5132	2601	7733	No	3.91	Si
SLU 79	fin.	-179.35	-563	1.02	0	377	8088	5132	2601	7733	No	13.72	Si
SLU 81	ini.	-652.62	2046	1.02	0	377	8088	5132	2601	7733	No	3.78	Si
SLU 81	fin.	-209.27	-771	1.02	0	377	8088	5132	2601	7733	No	10.03	Si
SLU 82	ini.	-653.21	2046	1.02	0	377	8088	5132	2601	7733	No	3.78	Si
SLU 82	fin.	-210.15	-771	1.02	0	377	8088	5132	2601	7733	No	10.02	Si
SLU 78	ini.	-682.57	1998	1.02	0	377	8088	5132	2601	7733	No	3.87	Si
SLU 78	fin.	-177.16	-544	1.02	0	377	8088	5132	2601	7733	No	14.22	Si
SLU 83	ini.	-671.51	2073	1.02	0	377	8088	5132	2601	7733	No	3.73	Si
SLU 83	fin.	-209.42	-744	1.02	0	377	8088	5132	2601	7733	No	10.39	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	658.72	-1862	-0.0002692	0.0003369	0.0035	1.02		3838.12	3838.12		5.83	Si
SLD 3	fin.	-2171.84	-5522	-0.0011288	0.0003369	0.0035	1.02		3845.03	3845.03		1.77	Si
SLV 1	ini.	2104.57	-2244	-0.0010837	0.0003369	0.0035	1.02		3838.12	3838.12		1.82	Si
SLV 1	fin.	-4822	-10925	-0.0046609	0.0003369	0.0035	1.02		3845.03	3845.03		0.8	No
SLV 14	ini.	-2989.14	-1203	-0.0018287	0.0003369	0.0035	1.02		3845.03	3845.03		1.29	Si
SLV 14	fin.	4771.54	8727	-0.0045981	0.0003369	0.0035	1.02		3838.12	3838.12		0.8	No
SLV 15	ini.	-2971.51	-1101	-0.0018101	0.0003369	0.0035	1.02		3845.03	3845.03		1.29	Si
SLV 15	fin.	4626.73	8389	-0.0043818	0.0003369	0.0035	1.02		3838.12	3838.12		0.83	No
SLV 4	ini.	2121.15	-2110	-0.0010953	0.0003369	0.0035	1.02		3838.12	3838.12		1.81	Si
SLV 4	fin.	-4944.19	-11203	-0.0048383	0.0003369	0.0035	1.02		3845.03	3845.03		0.78	No
SLV 13	ini.	-2988.61	-1219	-0.0018282	0.0003369	0.0035	1.02		3845.03	3845.03		1.29	Si
SLV 13	fin.	4760.23	8697	-0.0045814	0.0003369	0.0035	1.02		3838.12	3838.12		0.81	No
SLV 2	ini.	2104.05	-2228	-0.0010833	0.0003369	0.0035	1.02		3838.12	3838.12		1.82	Si
SLV 2	fin.	-4810.69	-10896	-0.0046443	0.0003369	0.0035	1.02		3845.03	3845.03		0.8	No
SLV 3	ini.	2121.67	-2126	-0.0010957	0.0003369	0.0035	1.02		3838.12	3838.12		1.81	Si
SLV 3	fin.	-4955.5	-11233	-0.0048546	0.0003369	0.0035	1.02		3845.03	3845.03		0.78	No
SLD 4	ini.	658.5	-1855	-0.0002691	0.0003369	0.0035	1.02		3838.12	3838.12		5.83	Si
SLD 4	fin.	-2166.98	-5509	-0.0011253	0.0003369	0.0035	1.02		3845.03	3845.03		1.77	Si
SLV 16	ini.	-2972.04	-1085	-0.0018107	0.0003369	0.0035	1.02		3845.03	3845.03		1.29	Si
SLV 16	fin.	4638.04	8419	-0.0043989	0.0003369	0.0035	1.02		3838.12	3838.12		0.83	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2104.57	-9402	1.02	0	565	8088	7698	2601	8654		0.92	No
SLV 1	fin.	-4822	-10966	1.02	0	565	8088	7698	2601	8654		0.79	No
SLV 14	ini.	-2989.14	12000	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 14	fin.	4771.54	10460	1.02	0	565	8088	7698	2601	8654		0.83	No
SLD 13	ini.	-1525.96	5849	1.02	0	565	8088	7698	2601	8654		1.48	Si
SLD 13	fin.	1983.02	4304	1.02	0	565	8088	7698	2601	8654		2.01	Si
SLV 15	ini.	-2971.51	11921	1.02	0	565	8088	7698	2601	8654		0.73	No
SLV 15	fin.	4626.73	10387	1.02	0	565	8088	7698	2601	8654		0.83	No
SLV 4	ini.	2121.15	-9447	1.02	0	565	8088	7698	2601	8654		0.92	No
SLV 4	fin.	-4944.19	-11005	1.02	0	565	8088	7698	2601	8654		0.79	No
SLD 14	ini.	-1526.19	5856	1.02	0	565	8088	7698	2601	8654		1.48	Si
SLD 14	fin.	1987.88	4311	1.02	0	565	8088	7698	2601	8654		2.01	Si
SLV 13	ini.	-2988.61	11983	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 13	fin.	4760.23	10443	1.02	0	565	8088	7698	2601	8654		0.83	No
SLV 3	ini.	2121.67	-9464	1.02	0	565	8088	7698	2601	8654		0.91	No
SLV 3	fin.	-4955.5	-11022	1.02	0	565	8088	7698	2601	8654		0.79	No
SLV 16	ini.	-2972.04	11938	1.02	0	565	8088	7698	2601	8654		0.72	No
SLV 16	fin.	4638.04	10404	1.02	0	565	8088	7698	2601	8654		0.83	No
SLV 2	ini.	2104.05	-9385	1.02	0	565	8088	7698	2601	8654		0.92	No
SLV 2	fin.	-4810.69	-10949	1.02	0	565	8088	7698	2601	8654		0.79	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.776	SLV 3	No
V_SLV	0.721	SLV 14	No
PF_SLU	5.714	SLU 78	Si
V_SLU	3.73	SLU 83	Si

Trave di accoppiamento 121

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	10.85	11.87	1.02	-10.478	1.006	10.85	11.87	1.02	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	159.42	-1142	-0.0000619	0.0002246	0.0035	1.02		3893.98	3893.98	No	24.43	Si
SLU 83	fin.	-724.09	-2263	-0.0003087	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.39	Si
SLU 82	ini.	143.85	-1109	-0.0000557	0.0002246	0.0035	1.02		3893.98	3893.98	No	27.07	Si
SLU 82	fin.	-700.36	-2182	-0.0002972	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.57	Si
SLU 80	ini.	174.49	-1161	-0.0000679	0.0002246	0.0035	1.02		3893.98	3893.98	No	22.32	Si
SLU 80	fin.	-724.5	-2297	-0.0003089	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.38	Si
SLU 74	ini.	162.22	-1175	-0.000063	0.0002246	0.0035	1.02		3893.98	3893.98	No	24	Si
SLU 74	fin.	-708.12	-2276	-0.000301	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.51	Si
SLU 76	ini.	158.45	-1130	-0.0000615	0.0002246	0.0035	1.02		3893.98	3893.98	No	24.58	Si
SLU 76	fin.	-700.46	-2217	-0.0002972	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.57	Si
SLU 77	ini.	179.22	-1204	-0.0000698	0.0002246	0.0035	1.02		3893.98	3893.98	No	21.73	Si
SLU 77	fin.	-732.78	-2355	-0.000313	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.32	Si
SLU 75	ini.	163.64	-1171	-0.0000636	0.0002246	0.0035	1.02		3893.98	3893.98	No	23.8	Si
SLU 75	fin.	-709.05	-2274	-0.0003014	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.5	Si
SLU 84	ini.	160.84	-1137	-0.0000625	0.0002246	0.0035	1.02		3893.98	3893.98	No	24.21	Si
SLU 84	fin.	-725.02	-2261	-0.0003092	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.38	Si
SLU 79	ini.	173.07	-1166	-0.0000673	0.0002246	0.0035	1.02		3893.98	3893.98	No	22.5	Si
SLU 79	fin.	-723.57	-2299	-0.0003085	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.39	Si
SLU 78	ini.	180.64	-1199	-0.0000703	0.0002246	0.0035	1.02		3893.98	3893.98	No	21.56	Si
SLU 78	fin.	-733.71	-2354	-0.0003134	0.0002246	0.0035	1.02		3900.37	3900.37	No	5.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	142.42	-100	1.02	0	391	8088	5132	2601	7733	No	77.56	Si
SLU 81	fin.	-699.43	-2472	1.02	0	391	8088	5132	2601	7733	No	3.13	Si
SLU 82	ini.	143.85	-103	1.02	0	391	8088	5132	2601	7733	No	74.88	Si
SLU 82	fin.	-700.36	-2476	1.02	0	391	8088	5132	2601	7733	No	3.12	Si
SLU 42	ini.	198.47	-258	1.02	0	391	8088	5132	2601	7733	No	29.97	Si
SLU 42	fin.	-678.86	-2424	1.02	0	391	8088	5132	2601	7733	No	3.19	Si
SLU 79	ini.	173.07	-275	1.02	0	391	8088	5132	2601	7733	No	28.08	Si
SLU 79	fin.	-723.57	-2457	1.02	0	391	8088	5132	2601	7733	No	3.15	Si
SLU 84	ini.	160.84	-166	1.02	0	391	8088	5132	2601	7733	No	46.67	Si
SLU 84	fin.	-725.02	-2538	1.02	0	391	8088	5132	2601	7733	No	3.05	Si
SLU 77	ini.	179.22	-298	1.02	0	391	8088	5132	2601	7733	No	25.93	Si
SLU 77	fin.	-732.78	-2480	1.02	0	391	8088	5132	2601	7733	No	3.12	Si
SLU 75	ini.	163.64	-239	1.02	0	391	8088	5132	2601	7733	No	32.3	Si
SLU 75	fin.	-709.05	-2421	1.02	0	391	8088	5132	2601	7733	No	3.19	Si
SLU 83	ini.	159.42	-162	1.02	0	391	8088	5132	2601	7733	No	47.7	Si
SLU 83	fin.	-724.09	-2535	1.02	0	391	8088	5132	2601	7733	No	3.05	Si
SLU 80	ini.	174.49	-279	1.02	0	391	8088	5132	2601	7733	No	27.72	Si
SLU 80	fin.	-724.5	-2461	1.02	0	391	8088	5132	2601	7733	No	3.14	Si
SLU 78	ini.	180.64	-302	1.02	0	391	8088	5132	2601	7733	No	25.62	Si
SLU 78	fin.	-733.71	-2483	1.02	0	391	8088	5132	2601	7733	No	3.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 4	ini.	1667.63	3097	-0.0007982	0.0003369	0.0035	1.02		3838.12	3838.12		2.3	Si
SLD 4	fin.	-960.93	-41	-0.0004092	0.0003369	0.0035	1.02		3845.03	3845.03		4	Si
SLV 2	ini.	3640.9	7638	-0.0027095	0.0003369	0.0035	1.02		3838.12	3838.12		1.05	Si
SLV 2	fin.	-1589.29	1615	-0.0007494	0.0003369	0.0035	1.02		3845.03	3845.03		2.42	Si
SLV 1	ini.	3668.22	7696	-0.0027554	0.0003369	0.0035	1.02		3838.12	3838.12		1.05	Si
SLV 1	fin.	-1607.04	1618	-0.0007599	0.0003369	0.0035	1.02		3845.03	3845.03		2.39	Si
SLD 3	ini.	1679.36	3122	-0.0008054	0.0003369	0.0035	1.02		3838.12	3838.12		2.29	Si
SLD 3	fin.	-968.55	-39	-0.0004129	0.0003369	0.0035	1.02		3845.03	3845.03		3.97	Si
SLV 14	ini.	-3681.24	-10179	-0.0027674	0.0003369	0.0035	1.02		3845.03	3845.03		1.04	Si
SLV 14	fin.	768.91	-4988	-0.0003189	0.0003369	0.0035	1.02		3838.12	3838.12		4.99	Si
SLV 13	ini.	-3653.92	-10121	-0.0027214	0.0003369	0.0035	1.02		3845.03	3845.03		1.05	Si
SLV 13	fin.	751.16	-4985	-0.0003108	0.0003369	0.0035	1.02		3838.12	3838.12		5.11	Si
SLV 16	ini.	-3522.18	-9427	-0.002511	0.0003369	0.0035	1.02		3845.03	3845.03		1.09	Si
SLV 16	fin.	711.76	-4663	-0.0002929	0.0003369	0.0035	1.02		3838.12	3838.12		5.39	Si
SLV 15	ini.	-3494.86	-9368	-0.0024696	0.0003369	0.0035	1.02		3845.03	3845.03		1.1	Si
SLV 15	fin.	694.01	-4660	-0.000285	0.0003369	0.0035	1.02		3838.12	3838.12		5.53	Si
SLV 3	ini.	3827.28	8449	-0.0030386	0.0003369	0.0035	1.02		3838.12	3838.12		1	Si
SLV 3	fin.	-1664.19	1943	-0.0007944	0.0003369	0.0035	1.02		3845.03	3845.03		2.31	Si
SLV 4	ini.	3799.96	8390	-0.0029885	0.0003369	0.0035	1.02		3838.12	3838.12		1.01	Si
SLV 4	fin.	-1646.44	1940	-0.0007836	0.0003369	0.0035	1.02		3845.03	3845.03		2.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 3	ini.	1679.36	-3220	1.02	0	586	8088	7698	2601	8675		2.69	Si
SLD 3	fin.	-968.55	-4607	1.02	0	586	8088	7698	2601	8675		1.88	Si
SLV 14	ini.	-3681.24	7173	1.02	0	586	8088	7698	2601	8675		1.21	Si
SLV 14	fin.	768.91	5818	1.02	0	586	8088	7698	2601	8675		1.49	Si
SLV 16	ini.	-3522.18	6725	1.02	0	586	8088	7698	2601	8675		1.29	Si
SLV 16	fin.	711.76	5324	1.02	0	586	8088	7698	2601	8675		1.63	Si
SLV 1	ini.	3668.22	-6934	1.02	0	586	8088	7698	2601	8675		1.25	Si
SLV 1	fin.	-1607.04	-8286	1.02	0	586	8088	7698	2601	8675		1.05	Si
SLV 15	ini.	-3494.86	6657	1.02	0	586	8088	7698	2601	8675		1.3	Si
SLV 15	fin.	694.01	5256	1.02	0	586	8088	7698	2601	8675		1.65	Si
SLD 4	ini.	1667.63	-3191	1.02	0	586	8088	7698	2601	8675		2.72	Si
SLD 4	fin.	-960.93	-4577	1.02	0	586	8088	7698	2601	8675		1.9	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	3640.9	-6866	1.02	0	586	8088	7698	2601	8675		1.26	Si
SLV 2	fin.	-1589.29	-8218	1.02	0	586	8088	7698	2601	8675		1.06	Si
SLV 3	ini.	3827.28	-7382	1.02	0	586	8088	7698	2601	8675		1.18	Si
SLV 3	fin.	-1664.19	-8780	1.02	0	586	8088	7698	2601	8675		0.99	No
SLV 13	ini.	-3653.92	7106	1.02	0	586	8088	7698	2601	8675		1.22	Si
SLV 13	fin.	751.16	5750	1.02	0	586	8088	7698	2601	8675		1.51	Si
SLV 4	ini.	3799.96	-7315	1.02	0	586	8088	7698	2601	8675		1.19	Si
SLV 4	fin.	-1646.44	-8712	1.02	0	586	8088	7698	2601	8675		1	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.003	SLV 3	Si
V_SLV	0.988	SLV 3	No
PF_SLU	5.316	SLU 78	Si
V_SLU	3.047	SLU 84	Si

Trave di accoppiamento 122

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	10.45	11.87	1.42	-7.463	1.006	10.45	11.87	1.42	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	ini.	114.42	-2097	-0.0000226	0.0002246	0.0035	1.42		7536.27	7536.27	No	65.86	Si
SLU 50	fin.	-618.84	-2587	-0.0001267	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.19	Si
SLU 48	ini.	95.68	-2189	-0.0000189	0.0002246	0.0035	1.42		7536.27	7536.27	No	78.76	Si
SLU 48	fin.	-601.63	-2647	-0.000123	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.54	Si
SLU 51	ini.	113.01	-2096	-0.0000223	0.0002246	0.0035	1.42		7536.27	7536.27	No	66.69	Si
SLU 51	fin.	-617.98	-2584	-0.0001265	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.21	Si
SLU 64	ini.	53.56	-2172	-0.0000105	0.0002246	0.0035	1.42		7536.27	7536.27	No	140.71	Si
SLU 64	fin.	-593.98	-2568	-0.0001214	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.7	Si
SLU 43	ini.	106.37	-1964	-0.000021	0.0002246	0.0035	1.42		7536.27	7536.27	No	70.85	Si
SLU 43	fin.	-623.63	-2457	-0.0001277	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.1	Si
SLU 45	ini.	91.65	-2122	-0.0000181	0.0002246	0.0035	1.42		7536.27	7536.27	No	82.22	Si
SLU 45	fin.	-604.03	-2582	-0.0001235	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.49	Si
SLU 49	ini.	94.26	-2188	-0.0000186	0.0002246	0.0035	1.42		7536.27	7536.27	No	79.95	Si
SLU 49	fin.	-600.77	-2644	-0.0001228	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.56	Si
SLU 47	ini.	108.03	-2029	-0.0000213	0.0002246	0.0035	1.42		7536.27	7536.27	No	69.76	Si
SLU 47	fin.	-619.8	-2517	-0.0001269	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.17	Si
SLU 44	ini.	104	-1963	-0.0000205	0.0002246	0.0035	1.42		7536.27	7536.27	No	72.46	Si
SLU 44	fin.	-622.19	-2452	-0.0001274	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.13	Si
SLU 46	ini.	90.24	-2122	-0.0000178	0.0002246	0.0035	1.42		7536.27	7536.27	No	83.52	Si
SLU 46	fin.	-603.16	-2579	-0.0001233	0.0002246	0.0035	1.42		7545.1	7545.1	No	12.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 68	ini.	55.22	283	1.42	0	576	7930	7144	3621	8506	No	30.02	Si
SLU 68	fin.	-590.14	-2198	1.42	0	576	7930	7144	3621	8506	No	3.87	Si
SLU 66	ini.	38.85	335	1.42	0	576	7930	7144	3621	8506	No	25.36	Si
SLU 66	fin.	-574.37	-2146	1.42	0	576	7930	7144	3621	8506	No	3.96	Si
SLU 67	ini.	37.43	339	1.42	0	576	7930	7144	3621	8506	No	25.07	Si
SLU 67	fin.	-573.51	-2142	1.42	0	576	7930	7144	3621	8506	No	3.97	Si
SLU 65	ini.	51.19	284	1.42	0	576	7930	7144	3621	8506	No	29.95	Si
SLU 65	fin.	-592.54	-2198	1.42	0	576	7930	7144	3621	8506	No	3.87	Si
SLU 71	ini.	61.62	276	1.42	0	576	7930	7144	3621	8506	No	30.79	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	fin.	-589.19	-2206	1.42	0	576	7930	7144	3621	8506	No	3.86	Si
SLU 69	ini.	42.88	335	1.42	0	576	7930	7144	3621	8506	No	25.4	Si
SLU 69	fin.	-571.98	-2147	1.42	0	576	7930	7144	3621	8506	No	3.96	Si
SLU 70	ini.	41.46	339	1.42	0	576	7930	7144	3621	8506	No	25.11	Si
SLU 70	fin.	-571.11	-2143	1.42	0	576	7930	7144	3621	8506	No	3.97	Si
SLU 50	ini.	114.42	-179	1.42	0	576	7930	7144	3621	8506	No	47.53	Si
SLU 50	fin.	-618.84	-2057	1.42	0	576	7930	7144	3621	8506	No	4.14	Si
SLU 64	ini.	53.56	277	1.42	0	576	7930	7144	3621	8506	No	30.66	Si
SLU 64	fin.	-593.98	-2204	1.42	0	576	7930	7144	3621	8506	No	3.86	Si
SLU 72	ini.	60.2	280	1.42	0	576	7930	7144	3621	8506	No	30.36	Si
SLU 72	fin.	-588.32	-2202	1.42	0	576	7930	7144	3621	8506	No	3.86	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-3125.91	-5126	-0.0007639	0.0003369	0.0035	1.42		7279.66	7279.66		2.33	Si
SLV 15	fin.	2175.12	-1249	-0.0004911	0.0003369	0.0035	1.42		7270.13	7270.13		3.34	Si
SLV 4	ini.	2839.22	1619	-0.0006781	0.0003369	0.0035	1.42		7270.13	7270.13		2.56	Si
SLV 4	fin.	-2789.72	-2272	-0.0006625	0.0003369	0.0035	1.42		7279.66	7279.66		2.61	Si
SLV 6	ini.	1384.77	-526	-0.0002942	0.0003369	0.0035	1.42		7270.13	7270.13		5.25	Si
SLV 6	fin.	-1558.44	-2744	-0.0003347	0.0003369	0.0035	1.42		7279.66	7279.66		4.67	Si
SLV 14	ini.	-2849.73	-5048	-0.0006802	0.0003369	0.0035	1.42		7279.66	7279.66		2.55	Si
SLV 14	fin.	1973.98	-1620	-0.0004384	0.0003369	0.0035	1.42		7270.13	7270.13		3.68	Si
SLV 2	ini.	3132.96	1721	-0.0007672	0.0003369	0.0035	1.42		7270.13	7270.13		2.32	Si
SLV 2	fin.	-3026.32	-2656	-0.0007333	0.0003369	0.0035	1.42		7279.66	7279.66		2.41	Si
SLV 3	ini.	2856.77	1643	-0.0006833	0.0003369	0.0035	1.42		7270.13	7270.13		2.54	Si
SLV 3	fin.	-2825.18	-2285	-0.000673	0.0003369	0.0035	1.42		7279.66	7279.66		2.58	Si
SLV 5	ini.	1396.21	-510	-0.0002968	0.0003369	0.0035	1.42		7270.13	7270.13		5.21	Si
SLV 5	fin.	-1581.55	-2752	-0.0003403	0.0003369	0.0035	1.42		7279.66	7279.66		4.6	Si
SLV 13	ini.	-2832.17	-5024	-0.000675	0.0003369	0.0035	1.42		7279.66	7279.66		2.57	Si
SLV 13	fin.	1938.51	-1633	-0.0004293	0.0003369	0.0035	1.42		7270.13	7270.13		3.75	Si
SLV 1	ini.	3150.51	1745	-0.0007727	0.0003369	0.0035	1.42		7270.13	7270.13		2.31	Si
SLV 1	fin.	-3061.79	-2669	-0.0007441	0.0003369	0.0035	1.42		7279.66	7279.66		2.38	Si
SLV 16	ini.	-3143.47	-5150	-0.0007693	0.0003369	0.0035	1.42		7279.66	7279.66		2.32	Si
SLV 16	fin.	2210.58	-1236	-0.0005006	0.0003369	0.0035	1.42		7270.13	7270.13		3.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	1343.7	-3273	1.42	0	864	7930	10717	3621	8794		2.69	Si
SLD 2	fin.	-1539.22	-5210	1.42	0	864	7930	10717	3621	8794		1.69	Si
SLV 4	ini.	2839.22	-7349	1.42	0	864	7930	10717	3621	8794		1.2	Si
SLV 4	fin.	-2789.72	-9368	1.42	0	864	7930	10717	3621	8794		0.94	No
SLV 15	ini.	-3125.91	8818	1.42	0	864	7930	10717	3621	8794		1	No
SLV 15	fin.	2175.12	6764	1.42	0	864	7930	10717	3621	8794		1.3	Si
SLV 13	ini.	-2832.17	8055	1.42	0	864	7930	10717	3621	8794		1.09	Si
SLV 13	fin.	1938.51	6128	1.42	0	864	7930	10717	3621	8794		1.44	Si
SLV 3	ini.	2856.77	-7428	1.42	0	864	7930	10717	3621	8794		1.18	Si
SLV 3	fin.	-2825.18	-9448	1.42	0	864	7930	10717	3621	8794		0.93	No
SLD 1	ini.	1351.24	-3307	1.42	0	864	7930	10717	3621	8794		2.66	Si
SLD 1	fin.	-1554.45	-5244	1.42	0	864	7930	10717	3621	8794		1.68	Si
SLV 16	ini.	-3143.47	8898	1.42	0	864	7930	10717	3621	8794		0.99	No
SLV 16	fin.	2210.58	6843	1.42	0	864	7930	10717	3621	8794		1.29	Si
SLV 2	ini.	3132.96	-8112	1.42	0	864	7930	10717	3621	8794		1.08	Si
SLV 2	fin.	-3026.32	-10004	1.42	0	864	7930	10717	3621	8794		0.88	No
SLV 1	ini.	3150.51	-8192	1.42	0	864	7930	10717	3621	8794		1.07	Si
SLV 1	fin.	-3061.79	-10084	1.42	0	864	7930	10717	3621	8794		0.87	No
SLV 14	ini.	-2849.73	8134	1.42	0	864	7930	10717	3621	8794		1.08	Si
SLV 14	fin.	1973.98	6207	1.42	0	864	7930	10717	3621	8794		1.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.308	SLV 1	Si
V_SLV	0.872	SLV 1	No
PF_SLU	12.099	SLU 43	Si
V_SLU	3.857	SLU 71	Si

Trave di accoppiamento 123

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	10.45	11.87	1.42	-4.913	1.006	10.45	11.87	1.42	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	ini.	530.54	-1837	-0.000108	0.0002246	0.0035	1.42		7536.27	7536.27	No	14.2	Si
SLU 68	fin.	-691.99	-2461	-0.0001425	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.9	Si
SLU 73	ini.	450.1	-2077	-0.0000911	0.0002246	0.0035	1.42		7536.27	7536.27	No	16.74	Si
SLU 73	fin.	-708.17	-2675	-0.000146	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.65	Si
SLU 64	ini.	546.44	-1746	-0.0001114	0.0002246	0.0035	1.42		7536.27	7536.27	No	13.79	Si
SLU 64	fin.	-702.57	-2385	-0.0001448	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.74	Si
SLU 83	ini.	381.78	-2325	-0.0000769	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.74	Si
SLU 83	fin.	-690.73	-2879	-0.0001422	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.92	Si
SLU 82	ini.	405.01	-2224	-0.0000817	0.0002246	0.0035	1.42		7536.27	7536.27	No	18.61	Si
SLU 82	fin.	-707.41	-2801	-0.0001459	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.67	Si
SLU 76	ini.	429.62	-2174	-0.0000868	0.0002246	0.0035	1.42		7536.27	7536.27	No	17.54	Si
SLU 76	fin.	-693.78	-2753	-0.0001429	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.88	Si
SLU 65	ini.	551.02	-1740	-0.0001124	0.0002246	0.0035	1.42		7536.27	7536.27	No	13.68	Si
SLU 65	fin.	-706.38	-2384	-0.0001456	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.68	Si
SLU 81	ini.	402.26	-2228	-0.0000811	0.0002246	0.0035	1.42		7536.27	7536.27	No	18.73	Si
SLU 81	fin.	-705.12	-2802	-0.0001454	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.7	Si
SLU 75	ini.	415.61	-2275	-0.0000839	0.0002246	0.0035	1.42		7536.27	7536.27	No	18.13	Si
SLU 75	fin.	-684.98	-2842	-0.000141	0.0002246	0.0035	1.42		7545.1	7545.1	No	11.02	Si
SLU 84	ini.	384.53	-2321	-0.0000774	0.0002246	0.0035	1.42		7536.27	7536.27	No	19.6	Si
SLU 84	fin.	-693.02	-2878	-0.0001427	0.0002246	0.0035	1.42		7545.1	7545.1	No	10.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 65	ini.	551.02	-1327	1.42	0	576	6344	7144	3621	6920	No	5.22	Si
SLU 65	fin.	-706.38	-2914	1.42	0	576	6344	7144	3621	6920	No	2.37	Si
SLU 84	ini.	384.53	-751	1.42	0	576	6344	7144	3621	6920	No	9.21	Si
SLU 84	fin.	-693.02	-2886	1.42	0	576	6344	7144	3621	6920	No	2.4	Si
SLU 81	ini.	402.26	-803	1.42	0	576	6344	7144	3621	6920	No	8.61	Si
SLU 81	fin.	-705.12	-2939	1.42	0	576	6344	7144	3621	6920	No	2.35	Si
SLU 73	ini.	450.1	-970	1.42	0	576	6344	7144	3621	6920	No	7.13	Si
SLU 73	fin.	-708.17	-2941	1.42	0	576	6344	7144	3621	6920	No	2.35	Si
SLU 82	ini.	405.01	-812	1.42	0	576	6344	7144	3621	6920	No	8.52	Si
SLU 82	fin.	-707.41	-2947	1.42	0	576	6344	7144	3621	6920	No	2.35	Si
SLU 75	ini.	415.61	-871	1.42	0	576	6344	7144	3621	6920	No	7.94	Si
SLU 75	fin.	-684.98	-2842	1.42	0	576	6344	7144	3621	6920	No	2.44	Si
SLU 68	ini.	530.54	-1266	1.42	0	576	6344	7144	3621	6920	No	5.47	Si
SLU 68	fin.	-691.99	-2853	1.42	0	576	6344	7144	3621	6920	No	2.43	Si
SLU 83	ini.	381.78	-742	1.42	0	576	6344	7144	3621	6920	No	9.32	Si
SLU 83	fin.	-690.73	-2878	1.42	0	576	6344	7144	3621	6920	No	2.4	Si
SLU 76	ini.	429.62	-909	1.42	0	576	6344	7144	3621	6920	No	7.61	Si
SLU 76	fin.	-693.78	-2880	1.42	0	576	6344	7144	3621	6920	No	2.4	Si
SLU 64	ini.	546.44	-1313	1.42	0	576	6344	7144	3621	6920	No	5.27	Si
SLU 64	fin.	-702.57	-2899	1.42	0	576	6344	7144	3621	6920	No	2.39	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-2482.6	-5518	-0.0005744	0.0003369	0.0035	1.42		7279.66	7279.66		2.93	Si
SLV 16	fin.	878.85	-3947	-0.0001807	0.0003369	0.0035	1.42		7270.13	7270.13		8.27	Si
SLV 4	ini.	3542.84	3083	-0.0008984	0.0003369	0.0035	1.42		7270.13	7270.13		2.05	Si
SLV 4	fin.	-2200.95	268	-0.0004974	0.0003369	0.0035	1.42		7279.66	7279.66		3.31	Si
SLV 2	ini.	3201.92	2658	-0.0007887	0.0003369	0.0035	1.42		7270.13	7270.13		2.27	Si
SLV 2	fin.	-1897.53	196	-0.0004183	0.0003369	0.0035	1.42		7279.66	7279.66		3.84	Si
SLV 7	ini.	1893.59	655	-0.0004178	0.0003369	0.0035	1.42		7270.13	7270.13		3.84	Si
SLV 7	fin.	-1519.37	-1091	-0.0003254	0.0003369	0.0035	1.42		7279.66	7279.66		4.79	Si
SLV 8	ini.	1844.74	587	-0.0004055	0.0003369	0.0035	1.42		7270.13	7270.13		3.94	Si
SLV 8	fin.	-1485.95	-1116	-0.0003175	0.0003369	0.0035	1.42		7279.66	7279.66		4.9	Si
SLV 3	ini.	3617.82	3188	-0.0009234	0.0003369	0.0035	1.42		7270.13	7270.13		2.01	Si
SLV 3	fin.	-2252.24	307	-0.0005111	0.0003369	0.0035	1.42		7279.66	7279.66		3.23	Si
SLV 15	ini.	-2407.62	-5413	-0.0005536	0.0003369	0.0035	1.42		7279.66	7279.66		3.02	Si
SLV 15	fin.	827.56	-3909	-0.0001697	0.0003369	0.0035	1.42		7270.13	7270.13		8.79	Si
SLV 14	ini.	-2823.52	-5943	-0.0006725	0.0003369	0.0035	1.42		7279.66	7279.66		2.58	Si
SLV 14	fin.	1182.27	-4020	-0.0002478	0.0003369	0.0035	1.42		7270.13	7270.13		6.15	Si
SLV 13	ini.	-2748.54	-5839	-0.0006505	0.0003369	0.0035	1.42		7279.66	7279.66		2.65	Si
SLV 13	fin.	1130.98	-3981	-0.0002362	0.0003369	0.0035	1.42		7270.13	7270.13		6.43	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	3276.9	2762	-0.0008123	0.0003369	0.0035	1.42		7270.13	7270.13		2.22	Si
SLV 1	fin.	-1948.82	234	-0.0004314	0.0003369	0.0035	1.42		7279.66	7279.66		3.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-2823.52	7226	1.42	0	864	6344	10717	3621	7208		1	No
SLV 14	fin.	1182.27	5847	1.42	0	864	6344	10717	3621	7208		1.23	Si
SLV 2	ini.	3201.92	-7767	1.42	0	864	6344	10717	3621	7208		0.93	No
SLV 2	fin.	-1897.53	-9089	1.42	0	864	6344	10717	3621	7208		0.79	No
SLV 16	ini.	-2482.6	6094	1.42	0	864	6344	10717	3621	7208		1.18	Si
SLV 16	fin.	878.85	4905	1.42	0	864	6344	10717	3621	7208		1.47	Si
SLV 1	ini.	3276.9	-7983	1.42	0	864	6344	10717	3621	7208		0.9	No
SLV 1	fin.	-1948.82	-9305	1.42	0	864	6344	10717	3621	7208		0.77	No
SLV 4	ini.	3542.84	-8899	1.42	0	864	6344	10717	3621	7208		0.81	No
SLV 4	fin.	-2200.95	-10030	1.42	0	864	6344	10717	3621	7208		0.72	No
SLV 7	ini.	1893.59	-5150	1.42	0	864	6344	10717	3621	7208		1.4	Si
SLV 7	fin.	-1519.37	-6080	1.42	0	864	6344	10717	3621	7208		1.19	Si
SLV 13	ini.	-2748.54	7010	1.42	0	864	6344	10717	3621	7208		1.03	Si
SLV 13	fin.	1130.98	5631	1.42	0	864	6344	10717	3621	7208		1.28	Si
SLV 15	ini.	-2407.62	5878	1.42	0	864	6344	10717	3621	7208		1.23	Si
SLV 15	fin.	827.56	4689	1.42	0	864	6344	10717	3621	7208		1.54	Si
SLV 3	ini.	3617.82	-9115	1.42	0	864	6344	10717	3621	7208		0.79	No
SLV 3	fin.	-2252.24	-10247	1.42	0	864	6344	10717	3621	7208		0.7	No
SLV 8	ini.	1844.74	-5010	1.42	0	864	6344	10717	3621	7208		1.44	Si
SLV 8	fin.	-1485.95	-5939	1.42	0	864	6344	10717	3621	7208		1.21	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.01	SLV 3	Si
V_SLV	0.703	SLV 3	No
PF_SLU	10.654	SLU 73	Si
V_SLU	2.348	SLU 82	Si

Trave di accoppiamento 125

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	10.45	11.87	1.42	-9.333	-3.314	10.45	11.87	1.42	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	910.86	-1779	-0.0001938	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.07	Si
SLU 71	fin.	-1403.16	-2996	-0.0003157	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.25	Si
SLU 75	ini.	956.31	-1685	-0.0002044	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.69	Si
SLU 75	fin.	-1399.82	-3015	-0.0003148	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.26	Si
SLU 70	ini.	943.28	-1820	-0.0002014	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.79	Si
SLU 70	fin.	-1441.46	-3073	-0.0003257	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.11	Si
SLU 66	ini.	915.61	-1733	-0.0001949	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.03	Si
SLU 66	fin.	-1401.97	-2950	-0.0003154	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.25	Si
SLU 69	ini.	938.94	-1816	-0.0002003	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.83	Si
SLU 69	fin.	-1435.83	-3065	-0.0003243	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.13	Si
SLU 80	ini.	951.56	-1730	-0.0002033	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.72	Si
SLU 80	fin.	-1401.02	-3060	-0.0003151	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.25	Si
SLU 72	ini.	915.2	-1783	-0.0001948	0.0001872	0.0035	1.42		7350.79	7350.79	No	8.03	Si
SLU 72	fin.	-1408.8	-3004	-0.0003171	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.22	Si
SLU 67	ini.	919.95	-1738	-0.0001959	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.99	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	fin.	-1407.6	-2958	-0.0003168	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.23	Si
SLU 77	ini.	975.3	-1763	-0.0002089	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.54	Si
SLU 77	fin.	-1428.05	-3121	-0.0003222	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.15	Si
SLU 78	ini.	979.64	-1767	-0.00021	0.0001872	0.0035	1.42		7350.79	7350.79	No	7.5	Si
SLU 78	fin.	-1433.68	-3130	-0.0003237	0.0001872	0.0035	1.42		7359.91	7359.91	No	5.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	920.48	-2624	1.42	0	576	7137	5953	3621	7713	No	2.94	Si
SLU 82	fin.	-1329.97	-4448	1.42	0	576	7137	5953	3621	7713	No	1.73	Si
SLU 77	ini.	975.3	-2889	1.42	0	576	7137	5953	3621	7713	No	2.67	Si
SLU 77	fin.	-1428.05	-4597	1.42	0	576	7137	5953	3621	7713	No	1.68	Si
SLU 84	ini.	943.81	-2713	1.42	0	576	7137	5953	3621	7713	No	2.84	Si
SLU 84	fin.	-1363.83	-4537	1.42	0	576	7137	5953	3621	7713	No	1.7	Si
SLU 83	ini.	939.47	-2700	1.42	0	576	7137	5953	3621	7713	No	2.86	Si
SLU 83	fin.	-1358.2	-4523	1.42	0	576	7137	5953	3621	7713	No	1.71	Si
SLU 76	ini.	931.12	-2730	1.42	0	576	7137	5953	3621	7713	No	2.83	Si
SLU 76	fin.	-1370.92	-4438	1.42	0	576	7137	5953	3621	7713	No	1.74	Si
SLU 80	ini.	951.56	-2810	1.42	0	576	7137	5953	3621	7713	No	2.74	Si
SLU 80	fin.	-1401.02	-4518	1.42	0	576	7137	5953	3621	7713	No	1.71	Si
SLU 79	ini.	947.22	-2796	1.42	0	576	7137	5953	3621	7713	No	2.76	Si
SLU 79	fin.	-1395.39	-4504	1.42	0	576	7137	5953	3621	7713	No	1.71	Si
SLU 75	ini.	956.31	-2814	1.42	0	576	7137	5953	3621	7713	No	2.74	Si
SLU 75	fin.	-1399.82	-4521	1.42	0	576	7137	5953	3621	7713	No	1.71	Si
SLU 78	ini.	979.64	-2903	1.42	0	576	7137	5953	3621	7713	No	2.66	Si
SLU 78	fin.	-1433.68	-4610	1.42	0	576	7137	5953	3621	7713	No	1.67	Si
SLU 74	ini.	951.96	-2800	1.42	0	576	7137	5953	3621	7713	No	2.75	Si
SLU 74	fin.	-1394.19	-4508	1.42	0	576	7137	5953	3621	7713	No	1.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-2803.03	-1644	-0.000685	0.0002807	0.0035	1.42		7346.34	7346.34		2.62	Si
SLV 16	fin.	2601.96	554	-0.0006254	0.0002807	0.0035	1.42		7337.02	7337.02		2.82	Si
SLD 4	ini.	2227.68	-1337	-0.0005175	0.0002807	0.0035	1.42		7337.02	7337.02		3.29	Si
SLD 4	fin.	-2703.51	-3585	-0.0006548	0.0002807	0.0035	1.42		7346.34	7346.34		2.72	Si
SLV 2	ini.	4317.76	-736	-0.0012097	0.0002807	0.0035	1.42		7337.02	7337.02		1.7	Si
SLV 2	fin.	-4792.73	-4863	-0.001403	0.0002807	0.0035	1.42		7346.34	7346.34		1.53	Si
SLD 2	ini.	2209.35	-992	-0.0005123	0.0002807	0.0035	1.42		7337.02	7337.02		3.32	Si
SLD 2	fin.	-2603.15	-3254	-0.0006248	0.0002807	0.0035	1.42		7346.34	7346.34		2.82	Si
SLV 1	ini.	4073.42	-736	-0.0011159	0.0002807	0.0035	1.42		7337.02	7337.02		1.8	Si
SLV 1	fin.	-4543.06	-4673	-0.0012979	0.0002807	0.0035	1.42		7346.34	7346.34		1.62	Si
SLV 3	ini.	4113.08	-1523	-0.0011308	0.0002807	0.0035	1.42		7337.02	7337.02		1.78	Si
SLV 3	fin.	-4768.47	-5426	-0.0013926	0.0002807	0.0035	1.42		7346.34	7346.34		1.54	Si
SLV 15	ini.	-3047.37	-1644	-0.000761	0.0002807	0.0035	1.42		7346.34	7346.34		2.41	Si
SLV 15	fin.	2851.64	744	-0.0007009	0.0002807	0.0035	1.42		7337.02	7337.02		2.57	Si
SLV 14	ini.	-2842.7	-857	-0.0006971	0.0002807	0.0035	1.42		7346.34	7346.34		2.58	Si
SLV 14	fin.	2827.38	1307	-0.0006934	0.0002807	0.0035	1.42		7337.02	7337.02		2.59	Si
SLV 13	ini.	-3087.04	-857	-0.0007736	0.0002807	0.0035	1.42		7346.34	7346.34		2.38	Si
SLV 13	fin.	3077.05	1497	-0.0007716	0.0002807	0.0035	1.42		7337.02	7337.02		2.38	Si
SLV 4	ini.	4357.42	-1524	-0.0012253	0.0002807	0.0035	1.42		7337.02	7337.02		1.68	Si
SLV 4	fin.	-5018.15	-5616	-0.0015032	0.0002807	0.0035	1.42		7346.34	7346.34		1.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-2842.7	8464	1.42	0	864	7137	8929	3621	8001		0.95	No
SLV 14	fin.	2827.38	7388	1.42	0	864	7137	8929	3621	8001		1.08	Si
SLV 13	ini.	-3087.04	9162	1.42	0	864	7137	8929	3621	8001		0.87	No
SLV 13	fin.	3077.05	8087	1.42	0	864	7137	8929	3621	8001		0.99	No
SLV 3	ini.	4113.08	-12273	1.42	0	864	7137	8929	3621	8001		0.65	No
SLV 3	fin.	-4768.47	-13459	1.42	0	864	7137	8929	3621	8001		0.59	No
SLD 2	ini.	2209.35	-6485	1.42	0	864	7137	8929	3621	8001		1.23	Si
SLD 2	fin.	-2603.15	-7591	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 16	ini.	-2803.03	8113	1.42	0	864	7137	8929	3621	8001		0.99	No
SLV 16	fin.	2601.96	6928	1.42	0	864	7137	8929	3621	8001		1.15	Si
SLV 2	ini.	4317.76	-12622	1.42	0	864	7137	8929	3621	8001		0.63	No
SLV 2	fin.	-4792.73	-13697	1.42	0	864	7137	8929	3621	8001		0.58	No
SLD 4	ini.	2227.68	-6641	1.42	0	864	7137	8929	3621	8001		1.2	Si
SLD 4	fin.	-2703.51	-7796	1.42	0	864	7137	8929	3621	8001		1.03	Si
SLV 4	ini.	4357.42	-12972	1.42	0	864	7137	8929	3621	8001		0.62	No
SLV 4	fin.	-5018.15	-14158	1.42	0	864	7137	8929	3621	8001		0.57	No
SLV 15	ini.	-3047.37	8812	1.42	0	864	7137	8929	3621	8001		0.91	No
SLV 15	fin.	2851.64	7627	1.42	0	864	7137	8929	3621	8001		1.05	Si
SLV 1	ini.	4073.42	-11923	1.42	0	864	7137	8929	3621	8001		0.67	No
SLV 1	fin.	-4543.06	-12998	1.42	0	864	7137	8929	3621	8001		0.62	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.464	SLV 4	Si
V_SLV	0.565	SLV 4	No
PF_SLU	5.106	SLU 70	Si
V_SLU	1.673	SLU 78	Si

Trave di accoppiamento 127

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	10.45	11.87	1.42	-5.163	2.046	10.45	11.87	1.42	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	172.64	-345	-0.0000343	0.0002246	0.0035	1.42		7636.3	7636.3	No	44.23	Si
SLU 79	fin.	-29.89	-415	-0.0000059	0.0002246	0.0035	1.42		7645.03	7645.03	No	255.73	Si
SLU 83	ini.	179.23	-361	-0.0000356	0.0002246	0.0035	1.42		7636.3	7636.3	No	42.61	Si
SLU 83	fin.	-33.52	-432	-0.0000066	0.0002246	0.0035	1.42		7645.03	7645.03	No	228.04	Si
SLU 78	ini.	177.52	-355	-0.0000352	0.0002246	0.0035	1.42		7636.3	7636.3	No	43.02	Si
SLU 78	fin.	-31.65	-426	-0.0000062	0.0002246	0.0035	1.42		7645.03	7645.03	No	241.52	Si
SLU 75	ini.	173.91	-347	-0.0000345	0.0002246	0.0035	1.42		7636.3	7636.3	No	43.91	Si
SLU 75	fin.	-34.1	-419	-0.0000067	0.0002246	0.0035	1.42		7645.03	7645.03	No	224.18	Si
SLU 82	ini.	174.75	-352	-0.0000347	0.0002246	0.0035	1.42		7636.3	7636.3	No	43.7	Si
SLU 82	fin.	-34.78	-422	-0.0000068	0.0002246	0.0035	1.42		7645.03	7645.03	No	219.79	Si
SLU 84	ini.	178.35	-359	-0.0000354	0.0002246	0.0035	1.42		7636.3	7636.3	No	42.82	Si
SLU 84	fin.	-32.34	-429	-0.0000063	0.0002246	0.0035	1.42		7645.03	7645.03	No	236.43	Si
SLU 74	ini.	174.79	-349	-0.0000347	0.0002246	0.0035	1.42		7636.3	7636.3	No	43.69	Si
SLU 74	fin.	-35.29	-422	-0.0000069	0.0002246	0.0035	1.42		7645.03	7645.03	No	216.63	Si
SLU 81	ini.	175.62	-354	-0.0000349	0.0002246	0.0035	1.42		7636.3	7636.3	No	43.48	Si
SLU 81	fin.	-35.97	-425	-0.0000071	0.0002246	0.0035	1.42		7645.03	7645.03	No	212.52	Si
SLU 77	ini.	178.39	-357	-0.0000354	0.0002246	0.0035	1.42		7636.3	7636.3	No	42.81	Si
SLU 77	fin.	-32.84	-429	-0.0000064	0.0002246	0.0035	1.42		7645.03	7645.03	No	232.78	Si
SLU 80	ini.	171.76	-343	-0.0000341	0.0002246	0.0035	1.42		7636.3	7636.3	No	44.46	Si
SLU 80	fin.	-28.71	-412	-0.0000056	0.0002246	0.0035	1.42		7645.03	7645.03	No	266.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	178.35	-144	1.42	0	288	6344	3572	3621	6632	No	46.13	Si
SLU 84	fin.	-32.34	-529	1.42	0	288	6344	3572	3621	6632	No	12.54	Si
SLU 78	ini.	177.52	-143	1.42	0	288	6344	3572	3621	6632	No	46.23	Si
SLU 78	fin.	-31.65	-528	1.42	0	288	6344	3572	3621	6632	No	12.55	Si
SLU 77	ini.	178.39	-147	1.42	0	288	6344	3572	3621	6632	No	45.19	Si
SLU 77	fin.	-32.84	-532	1.42	0	288	6344	3572	3621	6632	No	12.47	Si
SLU 74	ini.	174.79	-145	1.42	0	288	6344	3572	3621	6632	No	45.59	Si
SLU 74	fin.	-35.29	-531	1.42	0	288	6344	3572	3621	6632	No	12.5	Si
SLU 80	ini.	171.76	-130	1.42	0	288	6344	3572	3621	6632	No	51.04	Si
SLU 80	fin.	-28.71	-515	1.42	0	288	6344	3572	3621	6632	No	12.88	Si
SLU 82	ini.	174.75	-143	1.42	0	288	6344	3572	3621	6632	No	46.54	Si
SLU 82	fin.	-34.78	-528	1.42	0	288	6344	3572	3621	6632	No	12.57	Si
SLU 75	ini.	173.91	-142	1.42	0	288	6344	3572	3621	6632	No	46.64	Si
SLU 75	fin.	-34.1	-527	1.42	0	288	6344	3572	3621	6632	No	12.58	Si
SLU 83	ini.	179.23	-147	1.42	0	288	6344	3572	3621	6632	No	45.09	Si
SLU 83	fin.	-33.52	-532	1.42	0	288	6344	3572	3621	6632	No	12.46	Si
SLU 81	ini.	175.62	-146	1.42	0	288	6344	3572	3621	6632	No	45.49	Si
SLU 81	fin.	-35.97	-531	1.42	0	288	6344	3572	3621	6632	No	12.49	Si
SLU 79	ini.	172.64	-133	1.42	0	288	6344	3572	3621	6632	No	49.77	Si
SLU 79	fin.	-29.89	-518	1.42	0	288	6344	3572	3621	6632	No	12.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-509.64	-322	-0.0001025	0.0003369	0.0035	1.42		7824.76	7824.76		15.35	Si
SLV 8	fin.	-121.15	-602	-0.0000239	0.0003369	0.0035	1.42		7824.76	7824.76		64.59	Si
SLV 12	ini.	-492.06	-415	-0.0000989	0.0003369	0.0035	1.42		7824.76	7824.76		15.9	Si
SLV 12	fin.	-146.72	-749	-0.000029	0.0003369	0.0035	1.42		7824.76	7824.76		53.33	Si
SLV 5	ini.	715.21	-21	-0.0001457	0.0003369	0.0035	1.42		7815.69	7815.69		10.93	Si
SLV 5	fin.	96	209	-0.0000189	0.0003369	0.0035	1.42		7815.69	7815.69		81.42	Si
SLD 10	ini.	386.25	-173	-0.0000773	0.0003369	0.0035	1.42		7815.69	7815.69		20.23	Si
SLD 10	fin.	12.11	-132	-0.0000024	0.0003369	0.0035	1.42		7815.69	7815.69		645.13	Si
SLV 6	ini.	717.67	-28	-0.0001462	0.0003369	0.0035	1.42		7815.69	7815.69		10.89	Si
SLV 6	fin.	86.05	194	-0.000017	0.0003369	0.0035	1.42		7815.69	7815.69		90.82	Si
SLV 9	ini.	732.79	-114	-0.0001494	0.0003369	0.0035	1.42		7815.69	7815.69		10.67	Si
SLV 9	fin.	70.43	62	-0.0000139	0.0003369	0.0035	1.42		7815.69	7815.69		110.98	Si
SLD 9	ini.	385.18	-170	-0.0000771	0.0003369	0.0035	1.42		7815.69	7815.69		20.29	Si
SLD 9	fin.	16.46	-125	-0.0000032	0.0003369	0.0035	1.42		7815.69	7815.69		474.72	Si
SLV 11	ini.	-494.51	-408	-0.0000994	0.0003369	0.0035	1.42		7824.76	7824.76		15.82	Si
SLV 11	fin.	-136.78	-734	-0.000027	0.0003369	0.0035	1.42		7824.76	7824.76		57.21	Si
SLV 10	ini.	735.24	-121	-0.0001499	0.0003369	0.0035	1.42		7815.69	7815.69		10.63	Si
SLV 10	fin.	60.48	47	-0.0000119	0.0003369	0.0035	1.42		7815.69	7815.69		129.22	Si
SLV 7	ini.	-512.09	-315	-0.000103	0.0003369	0.0035	1.42		7824.76	7824.76		15.28	Si
SLV 7	fin.	-111.21	-587	-0.0000219	0.0003369	0.0035	1.42		7824.76	7824.76		70.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 10	ini.	386.25	-442	1.42	0	432	6344	5358	3621	6776		15.33	Si
SLD 10	fin.	12.11	-743	1.42	0	432	6344	5358	3621	6776		9.12	Si
SLV 7	ini.	-512.09	740	1.42	0	432	6344	5358	3621	6776		9.15	Si
SLV 7	fin.	-111.21	466	1.42	0	432	6344	5358	3621	6776		14.54	Si
SLV 10	ini.	735.24	-900	1.42	0	432	6344	5358	3621	6776		7.53	Si
SLV 10	fin.	60.48	-1211	1.42	0	432	6344	5358	3621	6776		5.59	Si
SLV 9	ini.	732.79	-877	1.42	0	432	6344	5358	3621	6776		7.73	Si
SLV 9	fin.	70.43	-1189	1.42	0	432	6344	5358	3621	6776		5.7	Si
SLD 9	ini.	385.18	-432	1.42	0	432	6344	5358	3621	6776		15.68	Si
SLD 9	fin.	16.46	-733	1.42	0	432	6344	5358	3621	6776		9.25	Si
SLV 8	ini.	-509.64	718	1.42	0	432	6344	5358	3621	6776		9.44	Si
SLV 8	fin.	-121.15	443	1.42	0	432	6344	5358	3621	6776		15.28	Si
SLV 6	ini.	717.67	-787	1.42	0	432	6344	5358	3621	6776		8.61	Si
SLV 6	fin.	86.05	-1091	1.42	0	432	6344	5358	3621	6776		6.21	Si
SLV 13	ini.	323.08	-476	1.42	0	432	6344	5358	3621	6776		14.24	Si
SLV 13	fin.	-29.27	-787	1.42	0	432	6344	5358	3621	6776		8.61	Si
SLV 5	ini.	715.21	-764	1.42	0	432	6344	5358	3621	6776		8.87	Si
SLV 5	fin.	96	-1068	1.42	0	432	6344	5358	3621	6776		6.35	Si
SLV 14	ini.	326.84	-511	1.42	0	432	6344	5358	3621	6776		13.26	Si
SLV 14	fin.	-44.53	-822	1.42	0	432	6344	5358	3621	6776		8.25	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.63	SLV 10	Si
V_SLV	5.593	SLV 10	Si
PF_SLU	42.607	SLU 83	Si
V_SLU	12.463	SLU 83	Si

Trave di accoppiamento 128

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	8.35	10.35	2	-5.093	6.506	8.35	10.35	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 46	ini.	22.77	-22	-0.0000023	0.0001872	0.0035	2		14344.28	14344.28	No	629.85	Si
SLU 46	fin.	6.35	-28	-0.0000006	0.0001872	0.0035	2		14344.28	14344.28	No	2257.39	Si
SLU 48	ini.	26.89	-27	-0.0000027	0.0001872	0.0035	2		14344.28	14344.28	No	533.37	Si
SLU 48	fin.	1.5	-37	-0.0000001	0.0001872	0.0035	2		14344.28	14344.28	No	9539.24	Si
SLU 8	ini.	20.83	-21	-0.0000021	0.0001872	0.0035	2		14344.28	14344.28	No	688.63	Si
SLU 8	fin.	1.67	-28	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	8607.6	Si
SLU 49	ini.	25.27	-26	-0.0000025	0.0001872	0.0035	2		14344.28	14344.28	No	567.66	Si
SLU 49	fin.	6.25	-29	-0.0000006	0.0001872	0.0035	2		14344.28	14344.28	No	2295.22	Si
SLU 47	ini.	22.59	-25	-0.0000022	0.0001872	0.0035	2		14344.28	14344.28	No	635.11	Si
SLU 47	fin.	9.59	-23	-0.0000009	0.0001872	0.0035	2		14344.28	14344.28	No	1495.42	Si
SLU 51	ini.	26.16	-30	-0.0000026	0.0001872	0.0035	2		14344.28	14344.28	No	548.26	Si
SLU 51	fin.	6.32	-30	-0.0000006	0.0001872	0.0035	2		14344.28	14344.28	No	2268.42	Si
SLU 43	ini.	22.8	-24	-0.0000023	0.0001872	0.0035	2		14344.28	14344.28	No	629.2	Si
SLU 43	fin.	1.79	-35	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	8027.01	Si
SLU 50	ini.	27.79	-32	-0.0000028	0.0001872	0.0035	2		14344.28	14344.28	No	516.21	Si
SLU 50	fin.	1.58	-38	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	9092.77	Si
SLU 71	ini.	21.35	-10	-0.0000021	0.0001872	0.0035	2		14344.28	14344.28	No	671.72	Si
SLU 71	fin.	3.48	-33	-0.0000003	0.0001872	0.0035	2		14344.28	14344.28	No	4123.9	Si
SLU 45	ini.	24.4	-23	-0.0000024	0.0001872	0.0035	2		14344.28	14344.28	No	587.92	Si
SLU 45	fin.	1.61	-36	-0.0000002	0.0001872	0.0035	2		14344.28	14344.28	No	8918.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	10.01	-1272	2	0	812	3965	8384	5100	4776	No	3.75	Si
SLU 80	fin.	11.13	914	2	0	812	3965	8384	5100	4776	No	5.23	Si
SLU 72	ini.	19.73	-1257	2	0	812	3965	8384	5100	4776	No	3.8	Si
SLU 72	fin.	8.22	814	2	0	812	3965	8384	5100	4776	No	5.87	Si
SLU 69	ini.	20.46	-1271	2	0	812	3965	8384	5100	4776	No	3.76	Si
SLU 69	fin.	3.4	827	2	0	812	3965	8384	5100	4776	No	5.77	Si
SLU 77	ini.	10.74	-1287	2	0	812	3965	8384	5100	4776	No	3.71	Si
SLU 77	fin.	6.31	927	2	0	812	3965	8384	5100	4776	No	5.15	Si
SLU 74	ini.	8.24	-1242	2	0	812	3965	8384	5100	4776	No	3.85	Si
SLU 74	fin.	6.41	915	2	0	812	3965	8384	5100	4776	No	5.22	Si
SLU 75	ini.	6.62	-1246	2	0	812	3965	8384	5100	4776	No	3.83	Si
SLU 75	fin.	11.16	931	2	0	812	3965	8384	5100	4776	No	5.13	Si
SLU 70	ini.	18.84	-1275	2	0	812	3965	8384	5100	4776	No	3.75	Si
SLU 70	fin.	8.15	843	2	0	812	3965	8384	5100	4776	No	5.67	Si
SLU 78	ini.	9.11	-1291	2	0	812	3965	8384	5100	4776	No	3.7	Si
SLU 78	fin.	11.06	943	2	0	812	3965	8384	5100	4776	No	5.07	Si
SLU 71	ini.	21.35	-1253	2	0	812	3965	8384	5100	4776	No	3.81	Si
SLU 71	fin.	3.48	799	2	0	812	3965	8384	5100	4776	No	5.98	Si
SLU 79	ini.	11.63	-1268	2	0	812	3965	8384	5100	4776	No	3.77	Si
SLU 79	fin.	6.38	899	2	0	812	3965	8384	5100	4776	No	5.31	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	349.6	-769	-0.0000349	0.0002807	0.0035	2		14202.07	14202.07		40.62	Si
SLV 5	fin.	-76.79	-409	-0.0000076	0.0002807	0.0035	2		14215.41	14215.41		185.12	Si
SLV 2	ini.	668.43	-1243	-0.0000674	0.0002807	0.0035	2		14202.07	14202.07		21.25	Si
SLV 2	fin.	-153	-400	-0.0000152	0.0002807	0.0035	2		14215.41	14215.41		92.91	Si
SLV 3	ini.	602.65	-1035	-0.0000607	0.0002807	0.0035	2		14202.07	14202.07		23.57	Si
SLV 3	fin.	-145.13	-241	-0.0000144	0.0002807	0.0035	2		14215.41	14215.41		97.95	Si
SLV 15	ini.	-645.99	1250	-0.0000651	0.0002807	0.0035	2		14215.41	14215.41		22.01	Si
SLV 15	fin.	159.5	355	-0.0000158	0.0002807	0.0035	2		14202.07	14202.07		89.04	Si
SLV 4	ini.	581.85	-993	-0.0000585	0.0002807	0.0035	2		14202.07	14202.07		24.41	Si
SLV 4	fin.	-134.47	-225	-0.0000133	0.0002807	0.0035	2		14215.41	14215.41		105.71	Si
SLV 14	ini.	-580.2	1041	-0.0000583	0.0002807	0.0035	2		14215.41	14215.41		24.5	Si
SLV 14	fin.	151.62	195	-0.0000151	0.0002807	0.0035	2		14202.07	14202.07		93.67	Si
SLV 13	ini.	-559.4	1000	-0.0000562	0.0002807	0.0035	2		14215.41	14215.41		25.41	Si
SLV 13	fin.	140.97	180	-0.000014	0.0002807	0.0035	2		14202.07	14202.07		100.74	Si
SLV 16	ini.	-666.79	1291	-0.0000672	0.0002807	0.0035	2		14215.41	14215.41		21.32	Si
SLV 16	fin.	170.15	371	-0.0000169	0.0002807	0.0035	2		14202.07	14202.07		83.47	Si
SLV 6	ini.	336.05	-742	-0.0000336	0.0002807	0.0035	2		14202.07	14202.07		42.26	Si
SLV 6	fin.	-69.85	-399	-0.0000069	0.0002807	0.0035	2		14215.41	14215.41		203.51	Si
SLV 1	ini.	689.23	-1284	-0.0000696	0.0002807	0.0035	2		14202.07	14202.07		20.61	Si
SLV 1	fin.	-163.65	-416	-0.0000163	0.0002807	0.0035	2		14215.41	14215.41		86.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	668.43	-2101	2	0	1217	3965	12577	5100	5182		2.47	Si
SLV 2	fin.	-153	-604	2	0	1217	3965	12577	5100	5182		8.58	Si
SLV 5	ini.	349.6	-1768	2	0	1217	3965	12577	5100	5182		2.93	Si
SLV 5	fin.	-76.79	71	2	0	1217	3965	12577	5100	5182		72.56	Si
SLV 13	ini.	-559.4	29	2	0	1217	3965	12577	5100	5182		175.76	Si
SLV 13	fin.	140.97	1699	2	0	1217	3965	12577	5100	5182		3.05	Si
SLV 16	ini.	-666.79	461	2	0	1217	3965	12577	5100	5182		11.24	Si
SLV 16	fin.	170.15	1820	2	0	1217	3965	12577	5100	5182		2.85	Si
SLV 1	ini.	689.23	-2232	2	0	1217	3965	12577	5100	5182		2.32	Si
SLV 1	fin.	-163.65	-618	2	0	1217	3965	12577	5100	5182		8.38	Si
SLV 15	ini.	-645.99	330	2	0	1217	3965	12577	5100	5182		15.72	Si
SLV 15	fin.	159.5	1806	2	0	1217	3965	12577	5100	5182		2.87	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-580.2	161	2	0	1217	3965	12577	5100	5182		32.21	Si
SLV 14	fin.	151.62	1714	2	0	1217	3965	12577	5100	5182		3.02	Si
SLV 3	ini.	602.65	-1932	2	0	1217	3965	12577	5100	5182		2.68	Si
SLV 3	fin.	-145.13	-512	2	0	1217	3965	12577	5100	5182		10.13	Si
SLV 4	ini.	581.85	-1801	2	0	1217	3965	12577	5100	5182		2.88	Si
SLV 4	fin.	-134.47	-497	2	0	1217	3965	12577	5100	5182		10.42	Si
SLV 6	ini.	336.05	-1682	2	0	1217	3965	12577	5100	5182		3.08	Si
SLV 6	fin.	-69.85	81	2	0	1217	3965	12577	5100	5182		64.09	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	20.606	SLV 1	Si
V_SLV	2.322	SLV 1	Si
PF_SLU	516.207	SLU 50	Si
V_SLU	3.701	SLU 78	Si

Trave di accoppiamento 129

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	11.15	11.87	0.72	-5.093	6.506	11.15	11.87	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-26.75	-57	-0.0000205	0.0001872	0.0035	0.72		1901.86	1901.86	No	71.1	Si
SLU 78	fin.	16.04	-65	-0.0000123	0.0001872	0.0035	0.72		1897.3	1897.3	No	118.32	Si
SLU 80	ini.	-26.2	-53	-0.0000201	0.0001872	0.0035	0.72		1901.86	1901.86	No	72.6	Si
SLU 80	fin.	15.2	-61	-0.0000117	0.0001872	0.0035	0.72		1897.3	1897.3	No	124.8	Si
SLU 77	ini.	-25.8	-61	-0.0000198	0.0001872	0.0035	0.72		1901.86	1901.86	No	73.73	Si
SLU 77	fin.	15.93	-68	-0.0000122	0.0001872	0.0035	0.72		1897.3	1897.3	No	119.13	Si
SLU 70	ini.	-24.93	-28	-0.0000191	0.0001872	0.0035	0.72		1901.86	1901.86	No	76.27	Si
SLU 70	fin.	10.13	-45	-0.0000078	0.0001872	0.0035	0.72		1897.3	1897.3	No	187.26	Si
SLU 36	ini.	-24.36	-59	-0.0000187	0.0001872	0.0035	0.72		1901.86	1901.86	No	78.07	Si
SLU 36	fin.	16.19	-62	-0.0000124	0.0001872	0.0035	0.72		1897.3	1897.3	No	117.22	Si
SLU 72	ini.	-24.38	-25	-0.0000187	0.0001872	0.0035	0.72		1901.86	1901.86	No	78	Si
SLU 72	fin.	9.3	-42	-0.0000071	0.0001872	0.0035	0.72		1897.3	1897.3	No	204.03	Si
SLU 79	ini.	-25.25	-57	-0.0000194	0.0001872	0.0035	0.72		1901.86	1901.86	No	75.33	Si
SLU 79	fin.	15.09	-65	-0.0000116	0.0001872	0.0035	0.72		1897.3	1897.3	No	125.71	Si
SLU 76	ini.	-24.42	-54	-0.0000187	0.0001872	0.0035	0.72		1901.86	1901.86	No	77.89	Si
SLU 76	fin.	15.52	-60	-0.0000119	0.0001872	0.0035	0.72		1897.3	1897.3	No	122.28	Si
SLU 84	ini.	-24.56	-69	-0.0000189	0.0001872	0.0035	0.72		1901.86	1901.86	No	77.44	Si
SLU 84	fin.	17.97	-70	-0.0000138	0.0001872	0.0035	0.72		1897.3	1897.3	No	105.56	Si
SLU 75	ini.	-24.33	-61	-0.0000187	0.0001872	0.0035	0.72		1901.86	1901.86	No	78.16	Si
SLU 75	fin.	16.28	-65	-0.0000125	0.0001872	0.0035	0.72		1897.3	1897.3	No	116.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-23.61	998	0.72	0	292	3965	3018	1836	4257	No	4.27	Si
SLU 83	fin.	17.86	-231	0.72	0	292	3965	3018	1836	4257	No	18.41	Si
SLU 78	ini.	-26.75	1038	0.72	0	292	3965	3018	1836	4257	No	4.1	Si
SLU 78	fin.	16.04	-245	0.72	0	292	3965	3018	1836	4257	No	17.36	Si
SLU 80	ini.	-26.2	1015	0.72	0	292	3965	3018	1836	4257	No	4.2	Si
SLU 80	fin.	15.2	-243	0.72	0	292	3965	3018	1836	4257	No	17.51	Si
SLU 84	ini.	-24.56	999	0.72	0	292	3965	3018	1836	4257	No	4.26	Si
SLU 84	fin.	17.97	-229	0.72	0	292	3965	3018	1836	4257	No	18.56	Si
SLU 75	ini.	-24.33	999	0.72	0	292	3965	3018	1836	4257	No	4.26	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	16.28	-237	0.72	0	292	3965	3018	1836	4257	No	17.93	Si
SLU 70	ini.	-24.93	982	0.72	0	292	3965	3018	1836	4257	No	4.34	Si
SLU 70	fin.	10.13	-259	0.72	0	292	3965	3018	1836	4257	No	16.42	Si
SLU 77	ini.	-25.8	1037	0.72	0	292	3965	3018	1836	4257	No	4.11	Si
SLU 77	fin.	15.93	-247	0.72	0	292	3965	3018	1836	4257	No	17.22	Si
SLU 79	ini.	-25.25	1013	0.72	0	292	3965	3018	1836	4257	No	4.2	Si
SLU 79	fin.	15.09	-245	0.72	0	292	3965	3018	1836	4257	No	17.37	Si
SLU 74	ini.	-23.38	997	0.72	0	292	3965	3018	1836	4257	No	4.27	Si
SLU 74	fin.	16.17	-239	0.72	0	292	3965	3018	1836	4257	No	17.78	Si
SLU 69	ini.	-23.98	980	0.72	0	292	3965	3018	1836	4257	No	4.34	Si
SLU 69	fin.	10.02	-261	0.72	0	292	3965	3018	1836	4257	No	16.3	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-36.77	-453	-0.0000283	0.0002807	0.0035	0.72		1917.1	1917.1		52.14	Si
SLV 12	fin.	95.91	-247	-0.0000749	0.0002807	0.0035	0.72		1912.43	1912.43		19.94	Si
SLV 11	ini.	-37.98	-427	-0.0000292	0.0002807	0.0035	0.72		1917.1	1917.1		50.47	Si
SLV 11	fin.	92.05	-236	-0.0000718	0.0002807	0.0035	0.72		1912.43	1912.43		20.78	Si
SLV 2	ini.	129.62	1005	-0.000102	0.0002807	0.0035	0.72		1912.43	1912.43		14.75	Si
SLV 2	fin.	-132.84	425	-0.0001044	0.0002807	0.0035	0.72		1917.1	1917.1		14.43	Si
SLV 13	ini.	-170.37	-1008	-0.0001351	0.0002807	0.0035	0.72		1917.1	1917.1		11.25	Si
SLV 13	fin.	120.79	-459	-0.0000948	0.0002807	0.0035	0.72		1912.43	1912.43		15.83	Si
SLV 16	ini.	-155.71	-1108	-0.000123	0.0002807	0.0035	0.72		1917.1	1917.1		12.31	Si
SLV 16	fin.	154.91	-518	-0.0001227	0.0002807	0.0035	0.72		1912.43	1912.43		12.35	Si
SLV 4	ini.	142.41	945	-0.0001124	0.0002807	0.0035	0.72		1912.43	1912.43		13.43	Si
SLV 4	fin.	-104.65	384	-0.0000817	0.0002807	0.0035	0.72		1917.1	1917.1		18.32	Si
SLV 15	ini.	-157.58	-1068	-0.0001246	0.0002807	0.0035	0.72		1917.1	1917.1		12.17	Si
SLV 15	fin.	148.98	-500	-0.0001178	0.0002807	0.0035	0.72		1912.43	1912.43		12.84	Si
SLV 3	ini.	140.55	984	-0.0001109	0.0002807	0.0035	0.72		1912.43	1912.43		13.61	Si
SLV 3	fin.	-110.59	402	-0.0000864	0.0002807	0.0035	0.72		1917.1	1917.1		17.34	Si
SLV 1	ini.	127.75	1045	-0.0001005	0.0002807	0.0035	0.72		1912.43	1912.43		14.97	Si
SLV 1	fin.	-138.77	443	-0.0001092	0.0002807	0.0035	0.72		1917.1	1917.1		13.81	Si
SLV 14	ini.	-168.51	-1047	-0.0001336	0.0002807	0.0035	0.72		1917.1	1917.1		11.38	Si
SLV 14	fin.	126.72	-477	-0.0000996	0.0002807	0.0035	0.72		1912.43	1912.43		15.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 2	ini.	44.75	937	0.72	0	438	3965	4528	1836	4403		4.7	Si
SLD 2	fin.	-50.29	-277	0.72	0	438	3965	4528	1836	4403		15.87	Si
SLD 1	ini.	43.95	960	0.72	0	438	3965	4528	1836	4403		4.59	Si
SLD 1	fin.	-52.84	-296	0.72	0	438	3965	4528	1836	4403		14.86	Si
SLV 4	ini.	142.41	1173	0.72	0	438	3965	4528	1836	4403		3.75	Si
SLV 4	fin.	-104.65	-237	0.72	0	438	3965	4528	1836	4403		18.57	Si
SLD 3	ini.	49.94	910	0.72	0	438	3965	4528	1836	4403		4.84	Si
SLD 3	fin.	-40.68	-218	0.72	0	438	3965	4528	1836	4403		20.15	Si
SLV 3	ini.	140.55	1225	0.72	0	438	3965	4528	1836	4403		3.59	Si
SLV 3	fin.	-110.59	-281	0.72	0	438	3965	4528	1836	4403		15.68	Si
SLV 6	ini.	10.02	1019	0.72	0	438	3965	4528	1836	4403		4.32	Si
SLV 6	fin.	-75.92	-517	0.72	0	438	3965	4528	1836	4403		8.51	Si
SLD 4	ini.	50.75	887	0.72	0	438	3965	4528	1836	4403		4.96	Si
SLD 4	fin.	-38.13	-200	0.72	0	438	3965	4528	1836	4403		22.05	Si
SLV 2	ini.	129.62	1287	0.72	0	438	3965	4528	1836	4403		3.42	Si
SLV 2	fin.	-132.84	-416	0.72	0	438	3965	4528	1836	4403		10.58	Si
SLV 1	ini.	127.75	1339	0.72	0	438	3965	4528	1836	4403		3.29	Si
SLV 1	fin.	-138.77	-460	0.72	0	438	3965	4528	1836	4403		9.57	Si
SLV 5	ini.	8.81	1053	0.72	0	438	3965	4528	1836	4403		4.18	Si
SLV 5	fin.	-79.78	-546	0.72	0	438	3965	4528	1836	4403		8.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	11.253	SLV 13	Si
V_SLV	3.288	SLV 1	Si
PF_SLU	71.104	SLU 78	Si
V_SLU	4.1	SLU 78	Si

Trave di accoppiamento 130

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	8.35	9.25	0.9	-7.413	-3.314	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	242.37	-1691	-0.0001247	0.0001872	0.0035	0.9		2959	2959	No	12.21	Si
SLU 71	fin.	-26.49	-646	-0.000013	0.0001872	0.0035	0.9		2964.67	2964.67	No	111.92	Si
SLU 70	ini.	249.89	-1735	-0.0001288	0.0001872	0.0035	0.9		2959	2959	No	11.84	Si
SLU 70	fin.	-31.14	-648	-0.0000153	0.0001872	0.0035	0.9		2964.67	2964.67	No	95.2	Si
SLU 77	ini.	234.1	-1716	-0.0001202	0.0001872	0.0035	0.9		2959	2959	No	12.64	Si
SLU 77	fin.	9.06	-768	-0.0000044	0.0001872	0.0035	0.9		2959	2959	No	326.52	Si
SLU 66	ini.	241.5	-1676	-0.0001242	0.0001872	0.0035	0.9		2959	2959	No	12.25	Si
SLU 66	fin.	-31.84	-622	-0.0000156	0.0001872	0.0035	0.9		2964.67	2964.67	No	93.1	Si
SLU 67	ini.	243.66	-1686	-0.0001254	0.0001872	0.0035	0.9		2959	2959	No	12.14	Si
SLU 67	fin.	-34.17	-618	-0.0000168	0.0001872	0.0035	0.9		2964.67	2964.67	No	86.76	Si
SLU 69	ini.	247.73	-1725	-0.0001276	0.0001872	0.0035	0.9		2959	2959	No	11.94	Si
SLU 69	fin.	-28.81	-652	-0.0000141	0.0001872	0.0035	0.9		2964.67	2964.67	No	102.89	Si
SLU 68	ini.	239.75	-1658	-0.0001232	0.0001872	0.0035	0.9		2959	2959	No	12.34	Si
SLU 68	fin.	-33.4	-609	-0.0000164	0.0001872	0.0035	0.9		2964.67	2964.67	No	88.76	Si
SLU 78	ini.	236.26	-1725	-0.0001213	0.0001872	0.0035	0.9		2959	2959	No	12.52	Si
SLU 78	fin.	6.73	-764	-0.0000033	0.0001872	0.0035	0.9		2959	2959	No	439.47	Si
SLU 65	ini.	233.52	-1609	-0.0001199	0.0001872	0.0035	0.9		2959	2959	No	12.67	Si
SLU 65	fin.	-36.43	-579	-0.0000179	0.0001872	0.0035	0.9		2964.67	2964.67	No	81.37	Si
SLU 72	ini.	244.54	-1701	-0.0001258	0.0001872	0.0035	0.9		2959	2959	No	12.1	Si
SLU 72	fin.	-28.82	-642	-0.0000141	0.0001872	0.0035	0.9		2964.67	2964.67	No	102.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	249.89	-3068	0.9	0	365	7137	3773	2295	6068	No	1.98	Si
SLU 70	fin.	-31.14	718	0.9	0	365	7137	3773	2295	6068	No	8.46	Si
SLU 71	ini.	242.37	-2988	0.9	0	365	7137	3773	2295	6068	No	2.03	Si
SLU 71	fin.	-26.49	716	0.9	0	365	7137	3773	2295	6068	No	8.48	Si
SLU 80	ini.	230.91	-3036	0.9	0	365	7137	3773	2295	6068	No	2	Si
SLU 80	fin.	9.06	923	0.9	0	365	7137	3773	2295	6068	No	6.58	Si
SLU 77	ini.	234.1	-3084	0.9	0	365	7137	3773	2295	6068	No	1.97	Si
SLU 77	fin.	9.06	943	0.9	0	365	7137	3773	2295	6068	No	6.44	Si
SLU 69	ini.	247.73	-3052	0.9	0	365	7137	3773	2295	6068	No	1.99	Si
SLU 69	fin.	-28.81	727	0.9	0	365	7137	3773	2295	6068	No	8.35	Si
SLU 78	ini.	236.26	-3099	0.9	0	365	7137	3773	2295	6068	No	1.96	Si
SLU 78	fin.	6.73	933	0.9	0	365	7137	3773	2295	6068	No	6.5	Si
SLU 79	ini.	228.74	-3020	0.9	0	365	7137	3773	2295	6068	No	2.01	Si
SLU 79	fin.	11.38	932	0.9	0	365	7137	3773	2295	6068	No	6.51	Si
SLU 74	ini.	227.86	-2993	0.9	0	365	7137	3773	2295	6068	No	2.03	Si
SLU 74	fin.	6.03	894	0.9	0	365	7137	3773	2295	6068	No	6.79	Si
SLU 75	ini.	230.03	-3008	0.9	0	365	7137	3773	2295	6068	No	2.02	Si
SLU 75	fin.	3.7	885	0.9	0	365	7137	3773	2295	6068	No	6.86	Si
SLU 72	ini.	244.54	-3004	0.9	0	365	7137	3773	2295	6068	No	2.02	Si
SLU 72	fin.	-28.82	707	0.9	0	365	7137	3773	2295	6068	No	8.59	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1141.41	3593	-0.0006977	0.0002807	0.0035	0.9		2995.37	2995.37		2.62	Si
SLV 13	fin.	1788.35	-4371	-0.0012662	0.0002807	0.0035	0.9		2989.59	2989.59		1.67	Si
SLV 15	ini.	-1021.84	2978	-0.0006081	0.0002807	0.0035	0.9		2995.37	2995.37		2.93	Si
SLV 15	fin.	1716.99	-4326	-0.0011956	0.0002807	0.0035	0.9		2989.59	2989.59		1.74	Si
SLV 4	ini.	1470.25	-5947	-0.0009685	0.0002807	0.0035	0.9		2989.59	2989.59		2.03	Si
SLV 4	fin.	-1805.04	3406	-0.0012798	0.0002807	0.0035	0.9		2995.37	2995.37		1.66	Si
SLD 13	ini.	-394.74	867	-0.000205	0.0002807	0.0035	0.9		2995.37	2995.37		7.59	Si
SLD 13	fin.	760.19	-2145	-0.0004271	0.0002807	0.0035	0.9		2989.59	2989.59		3.93	Si
SLV 14	ini.	-1050.03	3269	-0.0006289	0.0002807	0.0035	0.9		2995.37	2995.37		2.85	Si
SLV 14	fin.	1661.78	-4093	-0.0011426	0.0002807	0.0035	0.9		2989.59	2989.59		1.8	Si
SLV 2	ini.	1350.69	-5333	-0.0008667	0.0002807	0.0035	0.9		2989.59	2989.59		2.21	Si
SLV 2	fin.	-1733.68	3361	-0.0012088	0.0002807	0.0035	0.9		2995.37	2995.37		1.73	Si
SLV 1	ini.	1259.31	-5009	-0.0007919	0.0002807	0.0035	0.9		2989.59	2989.59		2.37	Si
SLV 1	fin.	-1607.11	3083	-0.0010887	0.0002807	0.0035	0.9		2995.37	2995.37		1.86	Si
SLV 3	ini.	1378.88	-5624	-0.0008902	0.0002807	0.0035	0.9		2989.59	2989.59		2.17	Si
SLV 3	fin.	-1678.47	3128	-0.0011556	0.0002807	0.0035	0.9		2995.37	2995.37		1.78	Si
SLD 4	ini.	723.59	-3221	-0.0004032	0.0002807	0.0035	0.9		2989.59	2989.59		4.13	Si
SLD 4	fin.	-776.88	1180	-0.0004372	0.0002807	0.0035	0.9		2995.37	2995.37		3.86	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-930.47	2654	-0.0005424	0.0002807	0.0035	0.9		2995.37	2995.37		3.22	Si
SLV 16	fin.	1590.42	-4049	-0.0010761	0.0002807	0.0035	0.9		2989.59	2989.59		1.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-930.47	3421	0.9	0	548	7137	5660	2295	7684		2.25	Si
SLV 16	fin.	1590.42	8006	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 1	ini.	1259.31	-7602	0.9	0	548	7137	5660	2295	7684		1.01	Si
SLV 1	fin.	-1607.11	-6913	0.9	0	548	7137	5660	2295	7684		1.11	Si
SLV 7	ini.	694.03	-5739	0.9	0	548	7137	5660	2295	7684		1.34	Si
SLV 7	fin.	-595.36	-1550	0.9	0	548	7137	5660	2295	7684		4.96	Si
SLV 4	ini.	1470.25	-9196	0.9	0	548	7137	5660	2295	7684		0.84	No
SLV 4	fin.	-1805.04	-7466	0.9	0	548	7137	5660	2295	7684		1.03	Si
SLV 3	ini.	1378.88	-8744	0.9	0	548	7137	5660	2295	7684		0.88	No
SLV 3	fin.	-1678.47	-6891	0.9	0	548	7137	5660	2295	7684		1.12	Si
SLV 14	ini.	-1050.03	4563	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 14	fin.	1661.78	7984	0.9	0	548	7137	5660	2295	7684		0.96	No
SLV 13	ini.	-1141.41	5015	0.9	0	548	7137	5660	2295	7684		1.53	Si
SLV 13	fin.	1788.35	8559	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 2	ini.	1350.69	-8054	0.9	0	548	7137	5660	2295	7684		0.95	No
SLV 2	fin.	-1733.68	-7488	0.9	0	548	7137	5660	2295	7684		1.03	Si
SLV 15	ini.	-1021.84	3873	0.9	0	548	7137	5660	2295	7684		1.98	Si
SLV 15	fin.	1716.99	8581	0.9	0	548	7137	5660	2295	7684		0.9	No
SLV 8	ini.	753.57	-6034	0.9	0	548	7137	5660	2295	7684		1.27	Si
SLV 8	fin.	-677.83	-1925	0.9	0	548	7137	5660	2295	7684		3.99	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.659	SLV 4	Si
V_SLV	0.836	SLV 4	No
PF_SLU	11.841	SLU 70	Si
V_SLU	1.958	SLU 78	Si

Trave di accoppiamento 131

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	11.05	11.87	0.82	-7.413	-3.314	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 56	ini.	-123.83	-858	-0.000075	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.87	Si
SLU 56	fin.	-64.69	-422	-0.0000386	0.0001872	0.0035	0.82		2460.51	2460.51	No	38.03	Si
SLU 57	ini.	-122.42	-852	-0.0000741	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.1	Si
SLU 57	fin.	-66.3	-427	-0.0000396	0.0001872	0.0035	0.82		2460.51	2460.51	No	37.11	Si
SLU 83	ini.	-122.95	-877	-0.0000745	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.01	Si
SLU 83	fin.	-71.59	-444	-0.0000428	0.0001872	0.0035	0.82		2460.51	2460.51	No	34.37	Si
SLU 84	ini.	-121.54	-872	-0.0000736	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.24	Si
SLU 84	fin.	-73.2	-449	-0.0000438	0.0001872	0.0035	0.82		2460.51	2460.51	No	33.61	Si
SLU 59	ini.	-119.73	-836	-0.0000725	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.55	Si
SLU 59	fin.	-66.89	-425	-0.00004	0.0001872	0.0035	0.82		2460.51	2460.51	No	36.78	Si
SLU 63	ini.	-124.61	-854	-0.0000755	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.75	Si
SLU 63	fin.	-59.32	-394	-0.0000354	0.0001872	0.0035	0.82		2460.51	2460.51	No	41.48	Si
SLU 78	ini.	-119.35	-869	-0.0000722	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.62	Si
SLU 78	fin.	-80.19	-482	-0.0000481	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.68	Si
SLU 62	ini.	-126.02	-860	-0.0000764	0.0001872	0.0035	0.82		2460.51	2460.51	No	19.52	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	fin.	-57.7	-389	-0.0000344	0.0001872	0.0035	0.82		2460.51	2460.51	No	42.64	Si
SLU 77	ini.	-120.76	-875	-0.0000731	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.38	Si
SLU 77	fin.	-78.58	-477	-0.0000471	0.0001872	0.0035	0.82		2460.51	2460.51	No	31.31	Si
SLU 58	ini.	-121.13	-842	-0.0000733	0.0001872	0.0035	0.82		2460.51	2460.51	No	20.31	Si
SLU 58	fin.	-65.28	-420	-0.000039	0.0001872	0.0035	0.82		2460.51	2460.51	No	37.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-118.06	2514	0.82	0	303	6502	3438	2091	5529	No	2.2	Si
SLU 79	fin.	-79.16	-1827	0.82	0	303	6502	3438	2091	5529	No	3.03	Si
SLU 74	ini.	-112.89	2464	0.82	0	303	6502	3438	2091	5529	No	2.24	Si
SLU 74	fin.	-77.04	-1803	0.82	0	303	6502	3438	2091	5529	No	3.07	Si
SLU 78	ini.	-119.35	2564	0.82	0	303	6502	3438	2091	5529	No	2.16	Si
SLU 78	fin.	-80.19	-1870	0.82	0	303	6502	3438	2091	5529	No	2.96	Si
SLU 83	ini.	-122.95	2555	0.82	0	303	6502	3438	2091	5529	No	2.16	Si
SLU 83	fin.	-71.59	-1783	0.82	0	303	6502	3438	2091	5529	No	3.1	Si
SLU 82	ini.	-113.68	2444	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 82	fin.	-71.66	-1737	0.82	0	303	6502	3438	2091	5529	No	3.18	Si
SLU 84	ini.	-121.54	2550	0.82	0	303	6502	3438	2091	5529	No	2.17	Si
SLU 84	fin.	-73.2	-1793	0.82	0	303	6502	3438	2091	5529	No	3.08	Si
SLU 81	ini.	-115.09	2449	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 81	fin.	-70.05	-1727	0.82	0	303	6502	3438	2091	5529	No	3.2	Si
SLU 77	ini.	-120.76	2570	0.82	0	303	6502	3438	2091	5529	No	2.15	Si
SLU 77	fin.	-78.58	-1859	0.82	0	303	6502	3438	2091	5529	No	2.97	Si
SLU 80	ini.	-116.65	2509	0.82	0	303	6502	3438	2091	5529	No	2.2	Si
SLU 80	fin.	-80.78	-1837	0.82	0	303	6502	3438	2091	5529	No	3.01	Si
SLU 75	ini.	-111.48	2458	0.82	0	303	6502	3438	2091	5529	No	2.25	Si
SLU 75	fin.	-78.65	-1813	0.82	0	303	6502	3438	2091	5529	No	3.05	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-505.75	-2218	-0.0003302	0.0002807	0.0035	0.82		2487.45	2487.45		4.92	Si
SLD 13	fin.	234.48	324	-0.0001442	0.0002807	0.0035	0.82		2482.11	2482.11		10.59	Si
SLV 1	ini.	829.64	2833	-0.0005932	0.0002807	0.0035	0.82		2482.11	2482.11		2.99	Si
SLV 1	fin.	-573.69	-1296	-0.0003814	0.0002807	0.0035	0.82		2487.45	2487.45		4.34	Si
SLV 15	ini.	-1032.38	-4123	-0.0007776	0.0002807	0.0035	0.82		2487.45	2487.45		2.41	Si
SLV 15	fin.	499.47	730	-0.0003263	0.0002807	0.0035	0.82		2482.11	2482.11		4.97	Si
SLV 3	ini.	891.69	3196	-0.0006484	0.0002807	0.0035	0.82		2482.11	2482.11		2.78	Si
SLV 3	fin.	-703.96	-1773	-0.0004851	0.0002807	0.0035	0.82		2487.45	2487.45		3.53	Si
SLV 4	ini.	964.41	3447	-0.0007152	0.0002807	0.0035	0.82		2482.11	2482.11		2.57	Si
SLV 4	fin.	-754.29	-1889	-0.0005271	0.0002807	0.0035	0.82		2487.45	2487.45		3.3	Si
SLV 13	ini.	-1094.43	-4486	-0.0008379	0.0002807	0.0035	0.82		2487.45	2487.45		2.27	Si
SLV 13	fin.	629.74	1208	-0.0004262	0.0002807	0.0035	0.82		2482.11	2482.11		3.94	Si
SLV 14	ini.	-1021.7	-4235	-0.0007673	0.0002807	0.0035	0.82		2487.45	2487.45		2.43	Si
SLV 14	fin.	579.42	1092	-0.0003867	0.0002807	0.0035	0.82		2482.11	2482.11		4.28	Si
SLV 16	ini.	-959.65	-3872	-0.0007089	0.0002807	0.0035	0.82		2487.45	2487.45		2.59	Si
SLV 16	fin.	449.14	614	-0.0002897	0.0002807	0.0035	0.82		2482.11	2482.11		5.53	Si
SLV 9	ini.	-480.72	-2303	-0.0003118	0.0002807	0.0035	0.82		2487.45	2487.45		5.17	Si
SLV 9	fin.	351.76	868	-0.0002217	0.0002807	0.0035	0.82		2482.11	2482.11		7.06	Si
SLV 2	ini.	902.36	3084	-0.0006581	0.0002807	0.0035	0.82		2482.11	2482.11		2.75	Si
SLV 2	fin.	-624.02	-1412	-0.0004206	0.0002807	0.0035	0.82		2487.45	2487.45		3.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	891.69	-2817	0.82	0	455	6502	5156	2091	6957		2.47	Si
SLV 3	fin.	-703.96	-5253	0.82	0	455	6502	5156	2091	6957		1.32	Si
SLV 14	ini.	-1021.7	5935	0.82	0	455	6502	5156	2091	6957		1.17	Si
SLV 14	fin.	579.42	2749	0.82	0	455	6502	5156	2091	6957		2.53	Si
SLV 13	ini.	-1094.43	6309	0.82	0	455	6502	5156	2091	6957		1.1	Si
SLV 13	fin.	629.74	3030	0.82	0	455	6502	5156	2091	6957		2.3	Si
SLV 15	ini.	-1032.38	6169	0.82	0	455	6502	5156	2091	6957		1.13	Si
SLV 15	fin.	499.47	2229	0.82	0	455	6502	5156	2091	6957		3.12	Si
SLV 7	ini.	303.32	98	0.82	0	455	6502	5156	2091	6957		70.96	Si
SLV 7	fin.	-443.51	-3617	0.82	0	455	6502	5156	2091	6957		1.92	Si
SLV 4	ini.	964.41	-3192	0.82	0	455	6502	5156	2091	6957		2.18	Si
SLV 4	fin.	-754.29	-5534	0.82	0	455	6502	5156	2091	6957		1.26	Si
SLV 2	ini.	902.36	-3051	0.82	0	455	6502	5156	2091	6957		2.28	Si
SLV 2	fin.	-624.02	-4733	0.82	0	455	6502	5156	2091	6957		1.47	Si
SLV 16	ini.	-959.65	5794	0.82	0	455	6502	5156	2091	6957		1.2	Si
SLV 16	fin.	449.14	1948	0.82	0	455	6502	5156	2091	6957		3.57	Si
SLV 1	ini.	829.64	-2677	0.82	0	455	6502	5156	2091	6957		2.6	Si
SLV 1	fin.	-573.69	-4452	0.82	0	455	6502	5156	2091	6957		1.56	Si
SLV 8	ini.	350.71	-146	0.82	0	455	6502	5156	2091	6957		47.61	Si
SLV 8	fin.	-476.3	-3800	0.82	0	455	6502	5156	2091	6957		1.83	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.273	SLV 13	Si
V_SLV	1.103	SLV 13	Si
PF_SLU	19.525	SLU 62	Si
V_SLU	2.151	SLU 77	Si

Trave di accoppiamento 132

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	8.35	10.35	2	-5.963	-3.314	8.35	10.35	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 65	ini.	247.34	-2831	-0.0000247	0.0001872	0.0035	2		14344.28	14344.28	No	57.99	Si
SLU 65	fin.	-195.83	-2296	-0.0000195	0.0001872	0.0035	2		14357.01	14357.01	No	73.31	Si
SLU 51	ini.	255.91	-2691	-0.0000256	0.0001872	0.0035	2		14344.28	14344.28	No	56.05	Si
SLU 51	fin.	-158.63	-2167	-0.0000158	0.0001872	0.0035	2		14357.01	14357.01	No	90.51	Si
SLU 46	ini.	250.9	-2652	-0.0000251	0.0001872	0.0035	2		14344.28	14344.28	No	57.17	Si
SLU 46	fin.	-161.68	-2137	-0.0000161	0.0001872	0.0035	2		14357.01	14357.01	No	88.8	Si
SLU 44	ini.	261.19	-2510	-0.0000261	0.0001872	0.0035	2		14344.28	14344.28	No	54.92	Si
SLU 44	fin.	-164.41	-2007	-0.0000164	0.0001872	0.0035	2		14357.01	14357.01	No	87.32	Si
SLU 48	ini.	248	-2735	-0.0000248	0.0001872	0.0035	2		14344.28	14344.28	No	57.84	Si
SLU 48	fin.	-156.82	-2211	-0.0000156	0.0001872	0.0035	2		14357.01	14357.01	No	91.55	Si
SLU 47	ini.	258.68	-2604	-0.0000258	0.0001872	0.0035	2		14344.28	14344.28	No	55.45	Si
SLU 47	fin.	-162.5	-2090	-0.0000162	0.0001872	0.0035	2		14357.01	14357.01	No	88.35	Si
SLU 45	ini.	250.51	-2642	-0.000025	0.0001872	0.0035	2		14344.28	14344.28	No	57.26	Si
SLU 45	fin.	-158.73	-2128	-0.0000158	0.0001872	0.0035	2		14357.01	14357.01	No	90.45	Si
SLU 43	ini.	260.53	-2493	-0.000026	0.0001872	0.0035	2		14344.28	14344.28	No	55.06	Si
SLU 43	fin.	-159.49	-1990	-0.0000159	0.0001872	0.0035	2		14357.01	14357.01	No	90.02	Si
SLU 49	ini.	248.39	-2746	-0.0000248	0.0001872	0.0035	2		14344.28	14344.28	No	57.75	Si
SLU 49	fin.	-159.78	-2221	-0.0000159	0.0001872	0.0035	2		14357.01	14357.01	No	89.86	Si
SLU 50	ini.	255.52	-2680	-0.0000255	0.0001872	0.0035	2		14344.28	14344.28	No	56.14	Si
SLU 50	fin.	-155.67	-2157	-0.0000155	0.0001872	0.0035	2		14357.01	14357.01	No	92.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 68	ini.	244.83	-2257	2	0	812	3965	8384	5100	4776	No	2.12	Si
SLU 68	fin.	-193.92	-83	2	0	812	3965	8384	5100	4776	No	57.38	Si
SLU 66	ini.	236.66	-2241	2	0	812	3965	8384	5100	4776	No	2.13	Si
SLU 66	fin.	-190.14	-28	2	0	812	3965	8384	5100	4776	No	167.97	Si
SLU 70	ini.	234.55	-2280	2	0	812	3965	8384	5100	4776	No	2.09	Si
SLU 70	fin.	-191.19	23	2	0	812	3965	8384	5100	4776	No	211.25	Si
SLU 72	ini.	242.06	-2280	2	0	812	3965	8384	5100	4776	No	2.09	Si
SLU 72	fin.	-190.04	-25	2	0	812	3965	8384	5100	4776	No	192.82	Si
SLU 65	ini.	247.34	-2227	2	0	812	3965	8384	5100	4776	No	2.14	Si
SLU 65	fin.	-195.83	-139	2	0	812	3965	8384	5100	4776	No	34.42	Si
SLU 67	ini.	237.05	-2250	2	0	812	3965	8384	5100	4776	No	2.12	Si
SLU 67	fin.	-193.1	-33	2	0	812	3965	8384	5100	4776	No	145.21	Si
SLU 64	ini.	246.69	-2212	2	0	812	3965	8384	5100	4776	No	2.16	Si
SLU 64	fin.	-190.9	-131	2	0	812	3965	8384	5100	4776	No	36.37	Si
SLU 80	ini.	209.56	-2202	2	0	812	3965	8384	5100	4776	No	2.17	Si
SLU 80	fin.	-148	252	2	0	812	3965	8384	5100	4776	No	18.94	Si
SLU 71	ini.	241.67	-2271	2	0	812	3965	8384	5100	4776	No	2.1	Si
SLU 71	fin.	-187.09	-20	2	0	812	3965	8384	5100	4776	No	235.14	Si
SLU 69	ini.	234.15	-2271	2	0	812	3965	8384	5100	4776	No	2.1	Si
SLU 69	fin.	-188.23	27	2	0	812	3965	8384	5100	4776	No	176.46	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1394.81	-6325	-0.000144	0.0002807	0.0035	2		14202.07	14202.07		10.18	Si
SLV 4	fin.	-2079.07	-5445	-0.0002196	0.0002807	0.0035	2		14215.41	14215.41		6.84	Si
SLV 14	ini.	-869.22	1790	-0.0000881	0.0002807	0.0035	2		14215.41	14215.41		16.35	Si
SLV 14	fin.	1679.49	1791	-0.000175	0.0002807	0.0035	2		14202.07	14202.07		8.46	Si
SLV 1	ini.	1467.44	-5228	-0.0001518	0.0002807	0.0035	2		14202.07	14202.07		9.68	Si
SLV 1	fin.	-1825.78	-4344	-0.0001911	0.0002807	0.0035	2		14215.41	14215.41		7.79	Si
SLV 16	ini.	-1100.41	980	-0.0001124	0.0002807	0.0035	2		14215.41	14215.41		12.92	Si
SLV 16	fin.	1569.92	912	-0.000163	0.0002807	0.0035	2		14202.07	14202.07		9.05	Si
SLV 6	ini.	994.77	-1962	-0.0001013	0.0002807	0.0035	2		14202.07	14202.07		14.28	Si
SLV 6	fin.	-539.48	-1279	-0.0000542	0.0002807	0.0035	2		14215.41	14215.41		26.35	Si
SLV 2	ini.	1626	-5514	-0.0001691	0.0002807	0.0035	2		14202.07	14202.07		8.73	Si
SLV 2	fin.	-1969.5	-4567	-0.0002072	0.0002807	0.0035	2		14215.41	14215.41		7.22	Si
SLD 4	ini.	700.63	-3927	-0.0000707	0.0002807	0.0035	2		14202.07	14202.07		20.27	Si
SLD 4	fin.	-963.23	-3317	-0.000098	0.0002807	0.0035	2		14215.41	14215.41		14.76	Si
SLV 13	ini.	-1027.78	2076	-0.0001047	0.0002807	0.0035	2		14215.41	14215.41		13.83	Si
SLV 13	fin.	1823.21	2014	-0.000191	0.0002807	0.0035	2		14202.07	14202.07		7.79	Si
SLV 15	ini.	-1258.97	1266	-0.0001292	0.0002807	0.0035	2		14215.41	14215.41		11.29	Si
SLV 15	fin.	1713.64	1136	-0.0001788	0.0002807	0.0035	2		14202.07	14202.07		8.29	Si
SLV 3	ini.	1236.25	-6038	-0.0001269	0.0002807	0.0035	2		14202.07	14202.07		11.49	Si
SLV 3	fin.	-1935.35	-5222	-0.0002034	0.0002807	0.0035	2		14215.41	14215.41		7.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1236.25	-8502	2	0	1217	3965	12577	5100	5182		0.61	No
SLV 3	fin.	-1935.35	-7362	2	0	1217	3965	12577	5100	5182		0.7	No
SLD 2	ini.	802.15	-4900	2	0	1217	3965	12577	5100	5182		1.06	Si
SLD 2	fin.	-913.56	-3866	2	0	1217	3965	12577	5100	5182		1.34	Si
SLV 2	ini.	1626	-9254	2	0	1217	3965	12577	5100	5182		0.56	No
SLV 2	fin.	-1969.5	-8969	2	0	1217	3965	12577	5100	5182		0.58	No
SLV 1	ini.	1467.44	-8541	2	0	1217	3965	12577	5100	5182		0.61	No
SLV 1	fin.	-1825.78	-8153	2	0	1217	3965	12577	5100	5182		0.64	No
SLV 14	ini.	-869.22	5209	2	0	1217	3965	12577	5100	5182		0.99	No
SLV 14	fin.	1679.49	7276	2	0	1217	3965	12577	5100	5182		0.71	No
SLV 15	ini.	-1258.97	5961	2	0	1217	3965	12577	5100	5182		0.87	No
SLV 15	fin.	1713.64	8883	2	0	1217	3965	12577	5100	5182		0.58	No
SLV 16	ini.	-1100.41	5247	2	0	1217	3965	12577	5100	5182		0.99	No
SLV 16	fin.	1569.92	8067	2	0	1217	3965	12577	5100	5182		0.64	No
SLD 4	ini.	700.63	-4885	2	0	1217	3965	12577	5100	5182		1.06	Si
SLD 4	fin.	-963.23	-3518	2	0	1217	3965	12577	5100	5182		1.47	Si
SLV 13	ini.	-1027.78	5923	2	0	1217	3965	12577	5100	5182		0.87	No
SLV 13	fin.	1823.21	8092	2	0	1217	3965	12577	5100	5182		0.64	No
SLV 4	ini.	1394.81	-9216	2	0	1217	3965	12577	5100	5182		0.56	No
SLV 4	fin.	-2079.07	-8178	2	0	1217	3965	12577	5100	5182		0.63	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.837	SLV 4	Si
V_SLV	0.56	SLV 2	No
PF_SLU	54.92	SLU 44	Si
V_SLU	2.095	SLU 72	Si

Trave di accoppiamento 133

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	11.15	11.87	0.72	-5.963	-3.314	11.15	11.87	0.72	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	61.12	-772	-0.0000476	0.0001872	0.0035	0.72		1897.3	1897.3	No	31.04	Si
SLU 62	fin.	-111.87	-842	-0.0000883	0.0001872	0.0035	0.72		1901.86	1901.86	No	17	Si
SLU 58	ini.	67.6	-755	-0.0000527	0.0001872	0.0035	0.72		1897.3	1897.3	No	28.07	Si
SLU 58	fin.	-112.18	-835	-0.0000885	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.95	Si
SLU 84	ini.	61.69	-823	-0.000048	0.0001872	0.0035	0.72		1897.3	1897.3	No	30.76	Si
SLU 84	fin.	-113.05	-864	-0.0000892	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.82	Si
SLU 78	ini.	66.12	-825	-0.0000515	0.0001872	0.0035	0.72		1897.3	1897.3	No	28.7	Si
SLU 78	fin.	-114.28	-869	-0.0000903	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.64	Si
SLU 57	ini.	65.82	-771	-0.0000513	0.0001872	0.0035	0.72		1897.3	1897.3	No	28.83	Si
SLU 57	fin.	-112.67	-843	-0.0000889	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.88	Si
SLU 80	ini.	68.17	-806	-0.0000532	0.0001872	0.0035	0.72		1897.3	1897.3	No	27.83	Si
SLU 80	fin.	-113.36	-857	-0.0000895	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.78	Si
SLU 77	ini.	65.84	-828	-0.0000513	0.0001872	0.0035	0.72		1897.3	1897.3	No	28.81	Si
SLU 77	fin.	-114.7	-873	-0.0000906	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.58	Si
SLU 79	ini.	67.9	-809	-0.0000529	0.0001872	0.0035	0.72		1897.3	1897.3	No	27.94	Si
SLU 79	fin.	-113.79	-861	-0.0000899	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.71	Si
SLU 56	ini.	65.55	-774	-0.0000511	0.0001872	0.0035	0.72		1897.3	1897.3	No	28.95	Si
SLU 56	fin.	-113.1	-847	-0.0000893	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.82	Si
SLU 83	ini.	61.42	-826	-0.0000478	0.0001872	0.0035	0.72		1897.3	1897.3	No	30.89	Si
SLU 83	fin.	-113.48	-868	-0.0000896	0.0001872	0.0035	0.72		1901.86	1901.86	No	16.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	61.69	189	0.72	0	292	3965	3018	1836	4257	No	22.55	Si
SLU 84	fin.	-113.05	-2151	0.72	0	292	3965	3018	1836	4257	No	1.98	Si
SLU 83	ini.	61.42	187	0.72	0	292	3965	3018	1836	4257	No	22.78	Si
SLU 83	fin.	-113.48	-2150	0.72	0	292	3965	3018	1836	4257	No	1.98	Si
SLU 75	ini.	67.94	168	0.72	0	292	3965	3018	1836	4257	No	25.4	Si
SLU 75	fin.	-110.36	-2131	0.72	0	292	3965	3018	1836	4257	No	2	Si
SLU 74	ini.	67.67	166	0.72	0	292	3965	3018	1836	4257	No	25.68	Si
SLU 74	fin.	-110.79	-2131	0.72	0	292	3965	3018	1836	4257	No	2	Si
SLU 79	ini.	67.9	166	0.72	0	292	3965	3018	1836	4257	No	25.6	Si
SLU 79	fin.	-113.79	-2173	0.72	0	292	3965	3018	1836	4257	No	1.96	Si
SLU 78	ini.	66.12	184	0.72	0	292	3965	3018	1836	4257	No	23.11	Si
SLU 78	fin.	-114.28	-2202	0.72	0	292	3965	3018	1836	4257	No	1.93	Si
SLU 70	ini.	85.51	97	0.72	0	292	3965	3018	1836	4257	No	43.68	Si
SLU 70	fin.	-105.85	-2090	0.72	0	292	3965	3018	1836	4257	No	2.04	Si
SLU 77	ini.	65.84	182	0.72	0	292	3965	3018	1836	4257	No	23.35	Si
SLU 77	fin.	-114.7	-2202	0.72	0	292	3965	3018	1836	4257	No	1.93	Si
SLU 76	ini.	70.18	153	0.72	0	292	3965	3018	1836	4257	No	27.85	Si
SLU 76	fin.	-109.15	-2103	0.72	0	292	3965	3018	1836	4257	No	2.02	Si
SLU 80	ini.	68.17	168	0.72	0	292	3965	3018	1836	4257	No	25.31	Si
SLU 80	fin.	-113.36	-2173	0.72	0	292	3965	3018	1836	4257	No	1.96	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	761.27	2147	-0.000736	0.0002807	0.0035	0.72		1912.43	1912.43		2.51	Si
SLV 1	fin.	41.22	1545	-0.0000318	0.0002807	0.0035	0.72		1912.43	1912.43		46.4	Si
SLV 6	ini.	433	369	-0.0003727	0.0002807	0.0035	0.72		1912.43	1912.43		4.42	Si
SLV 6	fin.	-133.7	-393	-0.0001051	0.0002807	0.0035	0.72		1917.1	1917.1		14.34	Si
SLV 14	ini.	-551.24	-3134	-0.0004936	0.0002807	0.0035	0.72		1917.1	1917.1		3.48	Si
SLV 14	fin.	-255.72	-2992	-0.0002075	0.0002807	0.0035	0.72		1917.1	1917.1		7.5	Si
SLD 2	ini.	395.53	739	-0.000336	0.0002807	0.0035	0.72		1912.43	1912.43		4.84	Si
SLD 2	fin.	-27.53	398	-0.0000211	0.0002807	0.0035	0.72		1917.1	1917.1		69.63	Si
SLV 3	ini.	679.94	2178	-0.000639	0.0002807	0.0035	0.72		1912.43	1912.43		2.81	Si
SLV 3	fin.	101.57	1896	-0.0000794	0.0002807	0.0035	0.72		1912.43	1912.43		18.83	Si
SLV 4	ini.	756.08	2401	-0.0007297	0.0002807	0.0035	0.72		1912.43	1912.43		2.53	Si
SLV 4	fin.	100.35	2021	-0.0000784	0.0002807	0.0035	0.72		1912.43	1912.43		19.06	Si
SLV 16	ini.	-632.57	-3103	-0.000583	0.0002807	0.0035	0.72		1917.1	1917.1		3.03	Si
SLV 16	fin.	-195.37	-2641	-0.0001559	0.0002807	0.0035	0.72		1917.1	1917.1		9.81	Si
SLV 15	ini.	-708.71	-3327	-0.0006708	0.0002807	0.0035	0.72		1917.1	1917.1		2.71	Si
SLV 15	fin.	-194.15	-2766	-0.0001549	0.0002807	0.0035	0.72		1917.1	1917.1		9.87	Si
SLV 2	ini.	837.41	2371	-0.0008311	0.0002807	0.0035	0.72		1912.43	1912.43		2.28	Si
SLV 2	fin.	40	1670	-0.0000308	0.0002807	0.0035	0.72		1912.43	1912.43		47.81	Si
SLV 13	ini.	-627.39	-3358	-0.0005772	0.0002807	0.0035	0.72		1917.1	1917.1		3.06	Si
SLV 13	fin.	-254.5	-3117	-0.0002064	0.0002807	0.0035	0.72		1917.1	1917.1		7.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	837.41	-1816	0.72	0	438	3965	4528	1836	4403		2.43	Si
SLV 2	fin.	40	-2499	0.72	0	438	3965	4528	1836	4403		1.76	Si
SLV 6	ini.	433	-1439	0.72	0	438	3965	4528	1836	4403		3.06	Si
SLV 6	fin.	-133.7	-2044	0.72	0	438	3965	4528	1836	4403		2.15	Si
SLV 4	ini.	756.08	-1233	0.72	0	438	3965	4528	1836	4403		3.57	Si
SLV 4	fin.	100.35	-2340	0.72	0	438	3965	4528	1836	4403		1.88	Si
SLV 1	ini.	761.27	-1574	0.72	0	438	3965	4528	1836	4403		2.8	Si
SLV 1	fin.	41.22	-2353	0.72	0	438	3965	4528	1836	4403		1.87	Si
SLD 2	ini.	395.53	-755	0.72	0	438	3965	4528	1836	4403		5.83	Si
SLD 2	fin.	-27.53	-1911	0.72	0	438	3965	4528	1836	4403		2.3	Si
SLV 5	ini.	383.38	-1281	0.72	0	438	3965	4528	1836	4403		3.44	Si
SLV 5	fin.	-132.91	-1949	0.72	0	438	3965	4528	1836	4403		2.26	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	359.86	-497	0.72	0	438	3965	4528	1836	4403		8.86	Si
SLD 4	fin.	-0.81	-1841	0.72	0	438	3965	4528	1836	4403		2.39	Si
SLD 1	ini.	362.83	-651	0.72	0	438	3965	4528	1836	4403		6.77	Si
SLD 1	fin.	-27.01	-1849	0.72	0	438	3965	4528	1836	4403		2.38	Si
SLV 3	ini.	679.94	-991	0.72	0	438	3965	4528	1836	4403		4.44	Si
SLV 3	fin.	101.57	-2195	0.72	0	438	3965	4528	1836	4403		2.01	Si
SLV 15	ini.	-708.71	1908	0.72	0	438	3965	4528	1836	4403		2.31	Si
SLV 15	fin.	-194.15	-440	0.72	0	438	3965	4528	1836	4403		10	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.284	SLV 2	Si
V_SLV	1.762	SLV 2	Si
PF_SLU	16.58	SLU 77	Si
V_SLU	1.933	SLU 78	Si

Trave di accoppiamento 134

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	8.35	9.25	0.9	-3.183	-3.314	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 64	ini.	358.85	-1532	-0.00019	0.0001872	0.0035	0.9		2959	2959	No	8.25	Si
SLU 64	fin.	120.82	-1057	-0.0000605	0.0001872	0.0035	0.9		2959	2959	No	24.49	Si
SLU 68	ini.	366.43	-1579	-0.0001944	0.0001872	0.0035	0.9		2959	2959	No	8.08	Si
SLU 68	fin.	131.39	-1113	-0.000066	0.0001872	0.0035	0.9		2959	2959	No	22.52	Si
SLU 70	ini.	364.28	-1616	-0.0001932	0.0001872	0.0035	0.9		2959	2959	No	8.12	Si
SLU 70	fin.	153.5	-1207	-0.0000774	0.0001872	0.0035	0.9		2959	2959	No	19.28	Si
SLU 66	ini.	359.11	-1576	-0.0001902	0.0001872	0.0035	0.9		2959	2959	No	8.24	Si
SLU 66	fin.	141.97	-1150	-0.0000714	0.0001872	0.0035	0.9		2959	2959	No	20.84	Si
SLU 65	ini.	364.89	-1548	-0.0001935	0.0001872	0.0035	0.9		2959	2959	No	8.11	Si
SLU 65	fin.	118.44	-1055	-0.0000593	0.0001872	0.0035	0.9		2959	2959	No	24.98	Si
SLU 69	ini.	360.66	-1607	-0.0001911	0.0001872	0.0035	0.9		2959	2959	No	8.2	Si
SLU 69	fin.	154.93	-1209	-0.0000782	0.0001872	0.0035	0.9		2959	2959	No	19.1	Si
SLU 72	ini.	365.56	-1604	-0.0001939	0.0001872	0.0035	0.9		2959	2959	No	8.09	Si
SLU 72	fin.	145.3	-1173	-0.0000731	0.0001872	0.0035	0.9		2959	2959	No	20.36	Si
SLU 71	ini.	361.94	-1595	-0.0001918	0.0001872	0.0035	0.9		2959	2959	No	8.18	Si
SLU 71	fin.	146.73	-1174	-0.0000739	0.0001872	0.0035	0.9		2959	2959	No	20.17	Si
SLU 47	ini.	351.13	-1458	-0.0001856	0.0001872	0.0035	0.9		2959	2959	No	8.43	Si
SLU 47	fin.	101.05	-957	-0.0000504	0.0001872	0.0035	0.9		2959	2959	No	29.28	Si
SLU 67	ini.	362.73	-1585	-0.0001923	0.0001872	0.0035	0.9		2959	2959	No	8.16	Si
SLU 67	fin.	140.54	-1149	-0.0000707	0.0001872	0.0035	0.9		2959	2959	No	21.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	360.66	-1455	0.9	0	365	7137	3773	2295	6068	No	4.17	Si
SLU 69	fin.	154.93	1145	0.9	0	365	7137	3773	2295	6068	No	5.3	Si
SLU 71	ini.	361.94	-1455	0.9	0	365	7137	3773	2295	6068	No	4.17	Si
SLU 71	fin.	146.73	1093	0.9	0	365	7137	3773	2295	6068	No	5.55	Si
SLU 66	ini.	359.11	-1439	0.9	0	365	7137	3773	2295	6068	No	4.22	Si
SLU 66	fin.	141.97	1061	0.9	0	365	7137	3773	2295	6068	No	5.72	Si
SLU 72	ini.	365.56	-1469	0.9	0	365	7137	3773	2295	6068	No	4.13	Si
SLU 72	fin.	145.3	1086	0.9	0	365	7137	3773	2295	6068	No	5.59	Si
SLU 49	ini.	348.97	-1413	0.9	0	365	7137	3773	2295	6068	No	4.29	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	fin.	123.15	975	0.9	0	365	7137	3773	2295	6068	No	6.23	Si
SLU 65	ini.	364.89	-1447	0.9	0	365	7137	3773	2295	6068	No	4.19	Si
SLU 65	fin.	118.44	913	0.9	0	365	7137	3773	2295	6068	No	6.65	Si
SLU 68	ini.	366.43	-1463	0.9	0	365	7137	3773	2295	6068	No	4.15	Si
SLU 68	fin.	131.39	997	0.9	0	365	7137	3773	2295	6068	No	6.08	Si
SLU 64	ini.	358.85	-1423	0.9	0	365	7137	3773	2295	6068	No	4.27	Si
SLU 64	fin.	120.82	924	0.9	0	365	7137	3773	2295	6068	No	6.57	Si
SLU 70	ini.	364.28	-1470	0.9	0	365	7137	3773	2295	6068	No	4.13	Si
SLU 70	fin.	153.5	1139	0.9	0	365	7137	3773	2295	6068	No	5.33	Si
SLU 67	ini.	362.73	-1454	0.9	0	365	7137	3773	2295	6068	No	4.17	Si
SLU 67	fin.	140.54	1054	0.9	0	365	7137	3773	2295	6068	No	5.76	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-613.93	215	-0.0003331	0.0002807	0.0035	0.9		2995.37	2995.37		4.88	Si
SLV 16	fin.	833.81	-2850	-0.0004765	0.0002807	0.0035	0.9		2989.59	2989.59		3.59	Si
SLV 14	ini.	-811.19	956	-0.0004602	0.0002807	0.0035	0.9		2995.37	2995.37		3.69	Si
SLV 14	fin.	805.47	-2443	-0.0004573	0.0002807	0.0035	0.9		2989.59	2989.59		3.71	Si
SLV 2	ini.	1287.09	-2747	-0.0008144	0.0002807	0.0035	0.9		2989.59	2989.59		2.32	Si
SLV 2	fin.	-757.34	1533	-0.0004243	0.0002807	0.0035	0.9		2995.37	2995.37		3.96	Si
SLV 13	ini.	-948.01	1159	-0.0005548	0.0002807	0.0035	0.9		2995.37	2995.37		3.16	Si
SLV 13	fin.	925.9	-2779	-0.0005404	0.0002807	0.0035	0.9		2989.59	2989.59		3.23	Si
SLV 1	ini.	1150.27	-2544	-0.0007061	0.0002807	0.0035	0.9		2989.59	2989.59		2.6	Si
SLV 1	fin.	-636.91	1197	-0.0003473	0.0002807	0.0035	0.9		2995.37	2995.37		4.7	Si
SLV 3	ini.	1347.54	-3284	-0.000864	0.0002807	0.0035	0.9		2989.59	2989.59		2.22	Si
SLV 3	fin.	-608.56	789	-0.0003298	0.0002807	0.0035	0.9		2995.37	2995.37		4.92	Si
SLV 7	ini.	867.12	-2888	-0.0004993	0.0002807	0.0035	0.9		2989.59	2989.59		3.45	Si
SLV 7	fin.	-49.49	-1019	-0.0000243	0.0002807	0.0035	0.9		2995.37	2995.37		60.52	Si
SLV 4	ini.	1484.36	-3487	-0.0009809	0.0002807	0.0035	0.9		2989.59	2989.59		2.01	Si
SLV 4	fin.	-728.99	1125	-0.0004058	0.0002807	0.0035	0.9		2995.37	2995.37		4.11	Si
SLV 15	ini.	-750.74	418	-0.00042	0.0002807	0.0035	0.9		2995.37	2995.37		3.99	Si
SLV 15	fin.	954.24	-3186	-0.0005605	0.0002807	0.0035	0.9		2989.59	2989.59		3.13	Si
SLV 8	ini.	956.27	-3020	-0.000562	0.0002807	0.0035	0.9		2989.59	2989.59		3.13	Si
SLV 8	fin.	-127.96	-800	-0.0000636	0.0002807	0.0035	0.9		2995.37	2995.37		23.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-613.93	2057	0.9	0	548	7137	5660	2295	7684		3.74	Si
SLV 16	fin.	833.81	4810	0.9	0	548	7137	5660	2295	7684		1.6	Si
SLV 14	ini.	-811.19	2919	0.9	0	548	7137	5660	2295	7684		2.63	Si
SLV 14	fin.	805.47	4581	0.9	0	548	7137	5660	2295	7684		1.68	Si
SLV 15	ini.	-750.74	2564	0.9	0	548	7137	5660	2295	7684		3	Si
SLV 15	fin.	954.24	5409	0.9	0	548	7137	5660	2295	7684		1.42	Si
SLV 1	ini.	1150.27	-4181	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 1	fin.	-636.91	-3339	0.9	0	548	7137	5660	2295	7684		2.3	Si
SLV 7	ini.	867.12	-3476	0.9	0	548	7137	5660	2295	7684		2.21	Si
SLV 7	fin.	-49.49	33	0.9	0	548	7137	5660	2295	7684		233.02	Si
SLV 3	ini.	1347.54	-5043	0.9	0	548	7137	5660	2295	7684		1.52	Si
SLV 3	fin.	-608.56	-3111	0.9	0	548	7137	5660	2295	7684		2.47	Si
SLV 4	ini.	1484.36	-5551	0.9	0	548	7137	5660	2295	7684		1.38	Si
SLV 4	fin.	-728.99	-3711	0.9	0	548	7137	5660	2295	7684		2.07	Si
SLV 8	ini.	956.27	-3806	0.9	0	548	7137	5660	2295	7684		2.02	Si
SLV 8	fin.	-127.96	-358	0.9	0	548	7137	5660	2295	7684		21.48	Si
SLV 2	ini.	1287.09	-4688	0.9	0	548	7137	5660	2295	7684		1.64	Si
SLV 2	fin.	-757.34	-3939	0.9	0	548	7137	5660	2295	7684		1.95	Si
SLV 13	ini.	-948.01	3427	0.9	0	548	7137	5660	2295	7684		2.24	Si
SLV 13	fin.	925.9	5181	0.9	0	548	7137	5660	2295	7684		1.48	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.014	SLV 4	Si
V_SLV	1.384	SLV 4	Si
PF_SLU	8.075	SLU 68	Si
V_SLU	4.128	SLU 70	Si

Trave di accoppiamento 135

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	11.05	11.87	0.82	-3.183	-3.314	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-39.32	-705	-0.0000233	0.0001872	0.0035	0.82		2460.51	2460.51	No	62.58	Si
SLU 70	fin.	-329.19	-1490	-0.0002118	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.47	Si
SLU 72	ini.	-31.17	-677	-0.0000185	0.0001872	0.0035	0.82		2460.51	2460.51	No	78.93	Si
SLU 72	fin.	-328.19	-1478	-0.0002111	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.5	Si
SLU 79	ini.	-82.37	-822	-0.0000494	0.0001872	0.0035	0.82		2460.51	2460.51	No	29.87	Si
SLU 79	fin.	-323.58	-1495	-0.0002078	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.6	Si
SLU 71	ini.	-33.14	-679	-0.0000196	0.0001872	0.0035	0.82		2460.51	2460.51	No	74.25	Si
SLU 71	fin.	-325.75	-1469	-0.0002093	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.55	Si
SLU 78	ini.	-88.55	-848	-0.0000532	0.0001872	0.0035	0.82		2460.51	2460.51	No	27.79	Si
SLU 78	fin.	-327.02	-1516	-0.0002102	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.52	Si
SLU 80	ini.	-80.4	-821	-0.0000482	0.0001872	0.0035	0.82		2460.51	2460.51	No	30.6	Si
SLU 80	fin.	-326.02	-1504	-0.0002095	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.55	Si
SLU 68	ini.	-17.34	-627	-0.0000102	0.0001872	0.0035	0.82		2460.51	2460.51	No	141.91	Si
SLU 68	fin.	-325.18	-1452	-0.0002089	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.57	Si
SLU 69	ini.	-41.29	-706	-0.0000245	0.0001872	0.0035	0.82		2460.51	2460.51	No	59.6	Si
SLU 69	fin.	-326.75	-1481	-0.00021	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.53	Si
SLU 67	ini.	-26.8	-656	-0.0000159	0.0001872	0.0035	0.82		2460.51	2460.51	No	91.82	Si
SLU 67	fin.	-324.56	-1457	-0.0002085	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.58	Si
SLU 77	ini.	-90.52	-849	-0.0000544	0.0001872	0.0035	0.82		2460.51	2460.51	No	27.18	Si
SLU 77	fin.	-324.58	-1506	-0.0002085	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-39.32	710	0.82	0	303	6502	3438	2091	5529	No	7.79	Si
SLU 70	fin.	-329.19	-2399	0.82	0	303	6502	3438	2091	5529	No	2.3	Si
SLU 76	ini.	-66.57	855	0.82	0	303	6502	3438	2091	5529	No	6.46	Si
SLU 76	fin.	-323.01	-2417	0.82	0	303	6502	3438	2091	5529	No	2.29	Si
SLU 84	ini.	-88.98	968	0.82	0	303	6502	3438	2091	5529	No	5.71	Si
SLU 84	fin.	-320.46	-2441	0.82	0	303	6502	3438	2091	5529	No	2.27	Si
SLU 74	ini.	-77.99	907	0.82	0	303	6502	3438	2091	5529	No	6.09	Si
SLU 74	fin.	-319.95	-2415	0.82	0	303	6502	3438	2091	5529	No	2.29	Si
SLU 83	ini.	-90.95	975	0.82	0	303	6502	3438	2091	5529	No	5.67	Si
SLU 83	fin.	-318.02	-2428	0.82	0	303	6502	3438	2091	5529	No	2.28	Si
SLU 75	ini.	-76.03	900	0.82	0	303	6502	3438	2091	5529	No	6.15	Si
SLU 75	fin.	-322.39	-2428	0.82	0	303	6502	3438	2091	5529	No	2.28	Si
SLU 78	ini.	-88.55	960	0.82	0	303	6502	3438	2091	5529	No	5.76	Si
SLU 78	fin.	-327.02	-2473	0.82	0	303	6502	3438	2091	5529	No	2.24	Si
SLU 79	ini.	-82.37	928	0.82	0	303	6502	3438	2091	5529	No	5.96	Si
SLU 79	fin.	-323.58	-2442	0.82	0	303	6502	3438	2091	5529	No	2.26	Si
SLU 77	ini.	-90.52	967	0.82	0	303	6502	3438	2091	5529	No	5.72	Si
SLU 77	fin.	-324.58	-2461	0.82	0	303	6502	3438	2091	5529	No	2.25	Si
SLU 80	ini.	-80.4	921	0.82	0	303	6502	3438	2091	5529	No	6.01	Si
SLU 80	fin.	-326.02	-2454	0.82	0	303	6502	3438	2091	5529	No	2.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	751.65	994	-0.0005261	0.0002807	0.0035	0.82		2482.11	2482.11		3.3	Si
SLV 2	fin.	-777.38	-2834	-0.0005466	0.0002807	0.0035	0.82		2487.45	2487.45		3.2	Si
SLV 7	ini.	288.17	-519	-0.0001792	0.0002807	0.0035	0.82		2482.11	2482.11		8.61	Si
SLV 7	fin.	-686.8	-2786	-0.0004711	0.0002807	0.0035	0.82		2487.45	2487.45		3.62	Si
SLV 15	ini.	-780.06	-1914	-0.0005489	0.0002807	0.0035	0.82		2487.45	2487.45		3.19	Si
SLV 15	fin.	301.75	713	-0.0001882	0.0002807	0.0035	0.82		2482.11	2482.11		8.23	Si
SLV 13	ini.	-851.79	-1706	-0.0006112	0.0002807	0.0035	0.82		2487.45	2487.45		2.92	Si
SLV 13	fin.	479.38	1432	-0.0003115	0.0002807	0.0035	0.82		2482.11	2482.11		5.18	Si
SLV 3	ini.	702.12	539	-0.0004848	0.0002807	0.0035	0.82		2482.11	2482.11		3.54	Si
SLV 3	fin.	-880.23	-3315	-0.0006365	0.0002807	0.0035	0.82		2487.45	2487.45		2.83	Si
SLV 8	ini.	367.18	-358	-0.0002323	0.0002807	0.0035	0.82		2482.11	2482.11		6.76	Si
SLV 8	fin.	-735.52	-2941	-0.0005113	0.0002807	0.0035	0.82		2487.45	2487.45		3.38	Si
SLV 14	ini.	-730.53	-1459	-0.0005071	0.0002807	0.0035	0.82		2487.45	2487.45		3.41	Si
SLV 14	fin.	404.6	1194	-0.0002582	0.0002807	0.0035	0.82		2482.11	2482.11		6.13	Si
SLV 16	ini.	-658.8	-1667	-0.0004484	0.0002807	0.0035	0.82		2487.45	2487.45		3.78	Si
SLV 16	fin.	226.97	475	-0.0001394	0.0002807	0.0035	0.82		2482.11	2482.11		10.94	Si
SLV 4	ini.	823.38	786	-0.0005878	0.0002807	0.0035	0.82		2482.11	2482.11		3.01	Si
SLV 4	fin.	-955.01	-3553	-0.0007046	0.0002807	0.0035	0.82		2487.45	2487.45		2.6	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	630.39	747	-0.0004267	0.0002807	0.0035	0.82		2482.11	2482.11		3.94	Si
SLV 1	fin.	-702.6	-2596	-0.000484	0.0002807	0.0035	0.82		2487.45	2487.45		3.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	751.65	-2629	0.82	0	455	6502	5156	2091	6957		2.65	Si
SLV 2	fin.	-777.38	-4448	0.82	0	455	6502	5156	2091	6957		1.56	Si
SLD 4	ini.	344.54	-939	0.82	0	455	6502	5156	2091	6957		7.41	Si
SLD 4	fin.	-545.97	-3275	0.82	0	455	6502	5156	2091	6957		2.12	Si
SLV 13	ini.	-851.79	3737	0.82	0	455	6502	5156	2091	6957		1.86	Si
SLV 13	fin.	479.38	1877	0.82	0	455	6502	5156	2091	6957		3.71	Si
SLV 7	ini.	288.17	-565	0.82	0	455	6502	5156	2091	6957		12.31	Si
SLV 7	fin.	-686.8	-3955	0.82	0	455	6502	5156	2091	6957		1.76	Si
SLV 14	ini.	-730.53	3256	0.82	0	455	6502	5156	2091	6957		2.14	Si
SLV 14	fin.	404.6	1477	0.82	0	455	6502	5156	2091	6957		4.71	Si
SLV 8	ini.	367.18	-879	0.82	0	455	6502	5156	2091	6957		7.92	Si
SLV 8	fin.	-735.52	-4216	0.82	0	455	6502	5156	2091	6957		1.65	Si
SLV 1	ini.	630.39	-2148	0.82	0	455	6502	5156	2091	6957		3.24	Si
SLV 1	fin.	-702.6	-4049	0.82	0	455	6502	5156	2091	6957		1.72	Si
SLV 4	ini.	823.38	-2810	0.82	0	455	6502	5156	2091	6957		2.48	Si
SLV 4	fin.	-955.01	-5330	0.82	0	455	6502	5156	2091	6957		1.31	Si
SLV 3	ini.	702.12	-2329	0.82	0	455	6502	5156	2091	6957		2.99	Si
SLV 3	fin.	-880.23	-4931	0.82	0	455	6502	5156	2091	6957		1.41	Si
SLV 15	ini.	-780.06	3556	0.82	0	455	6502	5156	2091	6957		1.96	Si
SLV 15	fin.	301.75	995	0.82	0	455	6502	5156	2091	6957		6.99	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.605	SLV 4	Si
V_SLV	1.305	SLV 4	Si
PF_SLU	7.474	SLU 70	Si
V_SLU	2.236	SLU 78	Si

Trave di accoppiamento 136

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	8.35	9.25	0.9	-2.963	5.826	8.35	9.25	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	370.07	-1685	-0.0001966	0.0001872	0.0035	0.9		2959	2959	No	8	Si
SLU 80	fin.	-40.25	-1033	-0.0000198	0.0001872	0.0035	0.9		2964.67	2964.67	No	73.66	Si
SLU 78	ini.	375.23	-1709	-0.0001996	0.0001872	0.0035	0.9		2959	2959	No	7.89	Si
SLU 78	fin.	-40.44	-1048	-0.0000199	0.0001872	0.0035	0.9		2964.67	2964.67	No	73.32	Si
SLU 81	ini.	374.68	-1674	-0.0001993	0.0001872	0.0035	0.9		2959	2959	No	7.9	Si
SLU 81	fin.	-61.83	-977	-0.0000305	0.0001872	0.0035	0.9		2964.67	2964.67	No	47.95	Si
SLU 77	ini.	377.9	-1719	-0.0002012	0.0001872	0.0035	0.9		2959	2959	No	7.83	Si
SLU 77	fin.	-44.81	-1042	-0.0000221	0.0001872	0.0035	0.9		2964.67	2964.67	No	66.15	Si
SLU 75	ini.	373.66	-1687	-0.0001987	0.0001872	0.0035	0.9		2959	2959	No	7.92	Si
SLU 75	fin.	-53.08	-1001	-0.0000262	0.0001872	0.0035	0.9		2964.67	2964.67	No	55.86	Si
SLU 82	ini.	372.01	-1664	-0.0001977	0.0001872	0.0035	0.9		2959	2959	No	7.95	Si
SLU 82	fin.	-57.45	-983	-0.0000284	0.0001872	0.0035	0.9		2964.67	2964.67	No	51.61	Si
SLU 84	ini.	373.59	-1686	-0.0001986	0.0001872	0.0035	0.9		2959	2959	No	7.92	Si
SLU 84	fin.	-44.81	-1029	-0.0000221	0.0001872	0.0035	0.9		2964.67	2964.67	No	66.16	Si
SLU 79	ini.	372.74	-1695	-0.0001981	0.0001872	0.0035	0.9		2959	2959	No	7.94	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-44.63	-1028	-0.000022	0.0001872	0.0035	0.9		2964.67	2964.67	No	66.43	Si
SLU 74	ini.	376.33	-1697	-0.0002002	0.0001872	0.0035	0.9		2959	2959	No	7.86	Si
SLU 74	fin.	-57.46	-996	-0.0000284	0.0001872	0.0035	0.9		2964.67	2964.67	No	51.6	Si
SLU 83	ini.	376.26	-1696	-0.0002002	0.0001872	0.0035	0.9		2959	2959	No	7.86	Si
SLU 83	fin.	-49.19	-1024	-0.0000242	0.0001872	0.0035	0.9		2964.67	2964.67	No	60.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 48	ini.	356.99	-2302	0.9	0	365	7137	3773	2295	6068	No	2.64	Si
SLU 48	fin.	-94.15	-147	0.9	0	365	7137	3773	2295	6068	No	41.32	Si
SLU 70	ini.	363.35	-2294	0.9	0	365	7137	3773	2295	6068	No	2.65	Si
SLU 70	fin.	-59.3	-29	0.9	0	365	7137	3773	2295	6068	No	206.01	Si
SLU 66	ini.	364.45	-2281	0.9	0	365	7137	3773	2295	6068	No	2.66	Si
SLU 66	fin.	-76.31	-102	0.9	0	365	7137	3773	2295	6068	No	59.37	Si
SLU 74	ini.	376.33	-2268	0.9	0	365	7137	3773	2295	6068	No	2.68	Si
SLU 74	fin.	-57.46	-59	0.9	0	365	7137	3773	2295	6068	No	102.29	Si
SLU 77	ini.	377.9	-2304	0.9	0	365	7137	3773	2295	6068	No	2.63	Si
SLU 77	fin.	-44.81	3	0.9	0	365	7137	3773	2295	6068	No	1796.44	Si
SLU 71	ini.	360.86	-2274	0.9	0	365	7137	3773	2295	6068	No	2.67	Si
SLU 71	fin.	-63.48	-48	0.9	0	365	7137	3773	2295	6068	No	125.34	Si
SLU 56	ini.	368.87	-2289	0.9	0	365	7137	3773	2295	6068	No	2.65	Si
SLU 56	fin.	-75.29	-104	0.9	0	365	7137	3773	2295	6068	No	58.37	Si
SLU 49	ini.	354.32	-2279	0.9	0	365	7137	3773	2295	6068	No	2.66	Si
SLU 49	fin.	-89.77	-137	0.9	0	365	7137	3773	2295	6068	No	44.36	Si
SLU 69	ini.	366.02	-2317	0.9	0	365	7137	3773	2295	6068	No	2.62	Si
SLU 69	fin.	-63.67	-40	0.9	0	365	7137	3773	2295	6068	No	153.6	Si
SLU 78	ini.	375.23	-2281	0.9	0	365	7137	3773	2295	6068	No	2.66	Si
SLU 78	fin.	-40.44	13	0.9	0	365	7137	3773	2295	6068	No	451.88	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-321.92	799	-0.0001651	0.0002807	0.0035	0.9		2995.37	2995.37		9.3	Si
SLV 15	fin.	717.34	-1471	-0.0003991	0.0002807	0.0035	0.9		2989.59	2989.59		4.17	Si
SLV 6	ini.	758.8	-3207	-0.0004262	0.0002807	0.0035	0.9		2989.59	2989.59		3.94	Si
SLV 6	fin.	-480.14	-713	-0.0002534	0.0002807	0.0035	0.9		2995.37	2995.37		6.24	Si
SLV 2	ini.	875.07	-3257	-0.0005048	0.0002807	0.0035	0.9		2989.59	2989.59		3.42	Si
SLV 2	fin.	-856.52	188	-0.0004909	0.0002807	0.0035	0.9		2995.37	2995.37		3.5	Si
SLV 14	ini.	-193.68	105	-0.0000973	0.0002807	0.0035	0.9		2995.37	2995.37		15.47	Si
SLV 14	fin.	719.65	-1851	-0.0004006	0.0002807	0.0035	0.9		2989.59	2989.59		4.15	Si
SLV 13	ini.	-113.01	-132	-0.0000561	0.0002807	0.0035	0.9		2995.37	2995.37		26.51	Si
SLV 13	fin.	586.92	-1660	-0.0003172	0.0002807	0.0035	0.9		2989.59	2989.59		5.09	Si
SLV 1	ini.	955.74	-3493	-0.0005616	0.0002807	0.0035	0.9		2989.59	2989.59		3.13	Si
SLV 1	fin.	-989.26	379	-0.0005844	0.0002807	0.0035	0.9		2995.37	2995.37		3.03	Si
SLV 3	ini.	746.82	-2563	-0.0004183	0.0002807	0.0035	0.9		2989.59	2989.59		4	Si
SLV 3	fin.	-858.84	567	-0.0004925	0.0002807	0.0035	0.9		2995.37	2995.37		3.49	Si
SLV 16	ini.	-402.59	1035	-0.0002094	0.0002807	0.0035	0.9		2995.37	2995.37		7.44	Si
SLV 16	fin.	850.07	-1662	-0.0004876	0.0002807	0.0035	0.9		2989.59	2989.59		3.52	Si
SLV 5	ini.	811.36	-3361	-0.0004613	0.0002807	0.0035	0.9		2989.59	2989.59		3.68	Si
SLV 5	fin.	-566.63	-589	-0.0003043	0.0002807	0.0035	0.9		2995.37	2995.37		5.29	Si
SLV 4	ini.	666.15	-2326	-0.0003664	0.0002807	0.0035	0.9		2989.59	2989.59		4.49	Si
SLV 4	fin.	-726.1	377	-0.0004039	0.0002807	0.0035	0.9		2995.37	2995.37		4.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	758.8	-4970	0.9	0	548	7137	5660	2295	7684		1.55	Si
SLV 6	fin.	-480.14	-1521	0.9	0	548	7137	5660	2295	7684		5.05	Si
SLV 3	ini.	746.82	-3592	0.9	0	548	7137	5660	2295	7684		2.14	Si
SLV 3	fin.	-858.84	-3170	0.9	0	548	7137	5660	2295	7684		2.42	Si
SLV 2	ini.	875.07	-4821	0.9	0	548	7137	5660	2295	7684		1.59	Si
SLV 2	fin.	-856.52	-3072	0.9	0	548	7137	5660	2295	7684		2.5	Si
SLV 10	ini.	438.17	-3458	0.9	0	548	7137	5660	2295	7684		2.22	Si
SLV 10	fin.	-7.29	265	0.9	0	548	7137	5660	2295	7684		29.01	Si
SLV 1	ini.	955.74	-5178	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLV 1	fin.	-989.26	-3554	0.9	0	548	7137	5660	2295	7684		2.16	Si
SLV 16	ini.	-402.59	1805	0.9	0	548	7137	5660	2295	7684		4.26	Si
SLV 16	fin.	850.07	3264	0.9	0	548	7137	5660	2295	7684		2.35	Si
SLV 5	ini.	811.36	-5203	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLV 5	fin.	-566.63	-1835	0.9	0	548	7137	5660	2295	7684		4.19	Si
SLV 4	ini.	666.15	-3235	0.9	0	548	7137	5660	2295	7684		2.38	Si
SLV 4	fin.	-726.1	-2688	0.9	0	548	7137	5660	2295	7684		2.86	Si
SLD 5	ini.	510.85	-3232	0.9	0	548	7137	5660	2295	7684		2.38	Si
SLD 5	fin.	-285.99	-880	0.9	0	548	7137	5660	2295	7684		8.73	Si
SLV 9	ini.	490.74	-3691	0.9	0	548	7137	5660	2295	7684		2.08	Si
SLV 9	fin.	-93.77	-49	0.9	0	548	7137	5660	2295	7684		155.32	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.028	SLV 1	Si
V_SLV	1.477	SLV 5	Si
PF_SLU	7.83	SLU 77	Si
V_SLU	2.619	SLU 69	Si

Trave di accoppiamento 137

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	11.05	11.87	0.82	-2.963	5.826	11.05	11.87	0.82	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	-1.22	-307	-0.0000007	0.0001872	0.0035	0.82		2460.51	2460.51	No	2010.13	Si
SLU 61	fin.	-342.77	-984	-0.0002215	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.18	Si
SLU 60	ini.	1.05	-299	-0.0000006	0.0001872	0.0035	0.82		2455.37	2455.37	No	2336.02	Si
SLU 60	fin.	-345.86	-988	-0.0002238	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.11	Si
SLU 53	ini.	-5.93	-327	-0.0000035	0.0001872	0.0035	0.82		2460.51	2460.51	No	415.04	Si
SLU 53	fin.	-340.96	-998	-0.0002202	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.22	Si
SLU 82	ini.	-29.58	-451	-0.0000175	0.0001872	0.0035	0.82		2460.51	2460.51	No	83.19	Si
SLU 82	fin.	-345.61	-1053	-0.0002236	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.12	Si
SLU 62	ini.	-12.19	-359	-0.0000072	0.0001872	0.0035	0.82		2460.51	2460.51	No	201.84	Si
SLU 62	fin.	-340.68	-1008	-0.00022	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.22	Si
SLU 83	ini.	-40.55	-503	-0.0000241	0.0001872	0.0035	0.82		2460.51	2460.51	No	60.69	Si
SLU 83	fin.	-343.52	-1077	-0.0002221	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.16	Si
SLU 84	ini.	-42.82	-511	-0.0000254	0.0001872	0.0035	0.82		2460.51	2460.51	No	57.46	Si
SLU 84	fin.	-340.42	-1073	-0.0002198	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.23	Si
SLU 74	ini.	-34.28	-471	-0.0000203	0.0001872	0.0035	0.82		2460.51	2460.51	No	71.77	Si
SLU 74	fin.	-343.8	-1067	-0.0002223	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.16	Si
SLU 81	ini.	-27.3	-443	-0.0000162	0.0001872	0.0035	0.82		2460.51	2460.51	No	90.12	Si
SLU 81	fin.	-348.7	-1058	-0.0002258	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.06	Si
SLU 75	ini.	-36.56	-479	-0.0000217	0.0001872	0.0035	0.82		2460.51	2460.51	No	67.3	Si
SLU 75	fin.	-340.71	-1063	-0.00022	0.0001872	0.0035	0.82		2460.51	2460.51	No	7.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-46.35	1306	0.82	0	303	6502	3438	2091	5529	No	4.23	Si
SLU 79	fin.	-333.03	-1872	0.82	0	303	6502	3438	2091	5529	No	2.95	Si
SLU 81	ini.	-27.3	1202	0.82	0	303	6502	3438	2091	5529	No	4.6	Si
SLU 81	fin.	-348.7	-1919	0.82	0	303	6502	3438	2091	5529	No	2.88	Si
SLU 77	ini.	-47.52	1332	0.82	0	303	6502	3438	2091	5529	No	4.15	Si
SLU 77	fin.	-338.62	-1903	0.82	0	303	6502	3438	2091	5529	No	2.91	Si
SLU 80	ini.	-48.63	1314	0.82	0	303	6502	3438	2091	5529	No	4.21	Si
SLU 80	fin.	-329.94	-1858	0.82	0	303	6502	3438	2091	5529	No	2.98	Si
SLU 84	ini.	-42.82	1308	0.82	0	303	6502	3438	2091	5529	No	4.23	Si
SLU 84	fin.	-340.42	-1903	0.82	0	303	6502	3438	2091	5529	No	2.91	Si
SLU 74	ini.	-34.28	1235	0.82	0	303	6502	3438	2091	5529	No	4.48	Si
SLU 74	fin.	-343.8	-1905	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 83	ini.	-40.55	1299	0.82	0	303	6502	3438	2091	5529	No	4.26	Si
SLU 83	fin.	-343.52	-1917	0.82	0	303	6502	3438	2091	5529	No	2.88	Si
SLU 75	ini.	-36.56	1244	0.82	0	303	6502	3438	2091	5529	No	4.45	Si
SLU 75	fin.	-340.71	-1891	0.82	0	303	6502	3438	2091	5529	No	2.92	Si
SLU 82	ini.	-29.58	1211	0.82	0	303	6502	3438	2091	5529	No	4.57	Si
SLU 82	fin.	-345.61	-1905	0.82	0	303	6502	3438	2091	5529	No	2.9	Si
SLU 78	ini.	-49.8	1340	0.82	0	303	6502	3438	2091	5529	No	4.12	Si
SLU 78	fin.	-335.52	-1889	0.82	0	303	6502	3438	2091	5529	No	2.93	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	362.85	957	-0.0002293	0.0002807	0.0035	0.82		2482.11	2482.11		6.84	Si
SLV 2	fin.	-829.62	-1684	-0.0005918	0.0002807	0.0035	0.82		2487.45	2487.45		3	Si
SLD 1	ini.	186.07	397	-0.0001134	0.0002807	0.0035	0.82		2482.11	2482.11		13.34	Si
SLD 1	fin.	-541.7	-1195	-0.0003571	0.0002807	0.0035	0.82		2487.45	2487.45		4.59	Si
SLV 4	ini.	274.98	752	-0.0001705	0.0002807	0.0035	0.82		2482.11	2482.11		9.03	Si
SLV 4	fin.	-573.88	-1129	-0.0003816	0.0002807	0.0035	0.82		2487.45	2487.45		4.33	Si
SLV 1	ini.	434.05	1229	-0.0002789	0.0002807	0.0035	0.82		2482.11	2482.11		5.72	Si
SLV 1	fin.	-916.95	-1792	-0.0006697	0.0002807	0.0035	0.82		2487.45	2487.45		2.71	Si
SLV 9	ini.	62.42	-163	-0.0000372	0.0002807	0.0035	0.82		2482.11	2482.11		39.76	Si
SLV 9	fin.	-565.86	-1485	-0.0003754	0.0002807	0.0035	0.82		2487.45	2487.45		4.4	Si
SLV 6	ini.	229.14	391	-0.0001408	0.0002807	0.0035	0.82		2482.11	2482.11		10.83	Si
SLV 6	fin.	-801.68	-1846	-0.0005675	0.0002807	0.0035	0.82		2487.45	2487.45		3.1	Si
SLV 10	ini.	16.03	-341	-0.0000095	0.0002807	0.0035	0.82		2482.11	2482.11		154.84	Si
SLV 10	fin.	-508.96	-1414	-0.0003326	0.0002807	0.0035	0.82		2487.45	2487.45		4.89	Si
SLD 5	ini.	119.97	118	-0.0000722	0.0002807	0.0035	0.82		2482.11	2482.11		20.69	Si
SLD 5	fin.	-521.32	-1258	-0.0003418	0.0002807	0.0035	0.82		2487.45	2487.45		4.77	Si
SLV 3	ini.	346.18	1024	-0.000218	0.0002807	0.0035	0.82		2482.11	2482.11		7.17	Si
SLV 3	fin.	-661.22	-1237	-0.0004503	0.0002807	0.0035	0.82		2487.45	2487.45		3.76	Si
SLV 5	ini.	275.53	568	-0.0001709	0.0002807	0.0035	0.82		2482.11	2482.11		9.01	Si
SLV 5	fin.	-858.59	-1916	-0.0006173	0.0002807	0.0035	0.82		2487.45	2487.45		2.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-364.19	2841	0.82	0	455	6502	5156	2091	6957		2.45	Si
SLV 15	fin.	314.53	515	0.82	0	455	6502	5156	2091	6957		13.51	Si
SLV 1	ini.	434.05	-1929	0.82	0	455	6502	5156	2091	6957		3.61	Si
SLV 1	fin.	-916.95	-3563	0.82	0	455	6502	5156	2091	6957		1.95	Si
SLV 6	ini.	229.14	-166	0.82	0	455	6502	5156	2091	6957		41.87	Si
SLV 6	fin.	-801.68	-3374	0.82	0	455	6502	5156	2091	6957		2.06	Si
SLV 3	ini.	346.18	-1734	0.82	0	455	6502	5156	2091	6957		4.01	Si
SLV 3	fin.	-661.22	-2588	0.82	0	455	6502	5156	2091	6957		2.69	Si
SLV 16	ini.	-435.39	3312	0.82	0	455	6502	5156	2091	6957		2.1	Si
SLV 16	fin.	401.87	806	0.82	0	455	6502	5156	2091	6957		8.63	Si
SLV 14	ini.	-347.52	3117	0.82	0	455	6502	5156	2091	6957		2.23	Si
SLV 14	fin.	146.13	-169	0.82	0	455	6502	5156	2091	6957		41.08	Si
SLV 13	ini.	-276.32	2646	0.82	0	455	6502	5156	2091	6957		2.63	Si
SLV 13	fin.	58.8	-460	0.82	0	455	6502	5156	2091	6957		15.11	Si
SLV 5	ini.	275.53	-473	0.82	0	455	6502	5156	2091	6957		14.7	Si
SLV 5	fin.	-858.59	-3564	0.82	0	455	6502	5156	2091	6957		1.95	Si
SLV 9	ini.	62.42	899	0.82	0	455	6502	5156	2091	6957		7.74	Si
SLV 9	fin.	-565.86	-2633	0.82	0	455	6502	5156	2091	6957		2.64	Si
SLV 2	ini.	362.85	-1458	0.82	0	455	6502	5156	2091	6957		4.77	Si
SLV 2	fin.	-829.62	-3272	0.82	0	455	6502	5156	2091	6957		2.13	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.713	SLV 1	Si
V_SLV	1.952	SLV 5	Si
PF_SLU	7.056	SLU 81	Si
V_SLU	2.881	SLU 81	Si

Trave di accoppiamento 138

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	11.87	12.77	0.9	-22.713	5.826	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	ini.	-12.06	-73	-0.0000059	0.0001872	0.0035	0.9		2964.67	2964.67	No	245.79	Si
SLU 60	fin.	131.91	-475	-0.0000662	0.0001872	0.0035	0.9		2959	2959	No	22.43	Si
SLU 65	ini.	1.65	-120	-0.0000008	0.0001872	0.0035	0.9		2959	2959	No	1793.67	Si
SLU 65	fin.	123.19	-468	-0.0000617	0.0001872	0.0035	0.9		2959	2959	No	24.02	Si
SLU 45	ini.	-11.99	-79	-0.0000059	0.0001872	0.0035	0.9		2964.67	2964.67	No	247.31	Si
SLU 45	fin.	139.33	-495	-0.0000701	0.0001872	0.0035	0.9		2959	2959	No	21.24	Si
SLU 47	ini.	-8.4	-93	-0.0000041	0.0001872	0.0035	0.9		2964.67	2964.67	No	352.85	Si
SLU 47	fin.	137.42	-493	-0.0000691	0.0001872	0.0035	0.9		2959	2959	No	21.53	Si
SLU 61	ini.	-9.61	-81	-0.0000047	0.0001872	0.0035	0.9		2964.67	2964.67	No	308.66	Si
SLU 61	fin.	130.47	-474	-0.0000655	0.0001872	0.0035	0.9		2959	2959	No	22.68	Si
SLU 52	ini.	-15.94	-64	-0.0000078	0.0001872	0.0035	0.9		2964.67	2964.67	No	186.04	Si
SLU 52	fin.	139.95	-492	-0.0000704	0.0001872	0.0035	0.9		2959	2959	No	21.14	Si
SLU 64	ini.	-2.44	-107	-0.0000012	0.0001872	0.0035	0.9		2964.67	2964.67	No	1212.73	Si
SLU 64	fin.	125.59	-470	-0.000063	0.0001872	0.0035	0.9		2959	2959	No	23.56	Si
SLU 44	ini.	-34.53	-11	-0.000017	0.0001872	0.0035	0.9		2964.67	2964.67	No	85.87	Si
SLU 44	fin.	164.3	-535	-0.000083	0.0001872	0.0035	0.9		2959	2959	No	18.01	Si
SLU 46	ini.	-9.53	-87	-0.0000047	0.0001872	0.0035	0.9		2964.67	2964.67	No	311.05	Si
SLU 46	fin.	137.89	-494	-0.0000693	0.0001872	0.0035	0.9		2959	2959	No	21.46	Si
SLU 43	ini.	-38.62	2	-0.000019	0.0001872	0.0035	0.9		2964.67	2964.67	No	76.76	Si
SLU 43	fin.	166.7	-537	-0.0000843	0.0001872	0.0035	0.9		2959	2959	No	17.75	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	16.59	-439	0.9	0	365	7137	3773	2295	6068	No	13.83	Si
SLU 49	fin.	111.01	631	0.9	0	365	7137	3773	2295	6068	No	9.61	Si
SLU 47	ini.	-8.4	-217	0.9	0	365	7137	3773	2295	6068	No	27.96	Si
SLU 47	fin.	137.42	661	0.9	0	365	7137	3773	2295	6068	No	9.18	Si
SLU 27	ini.	68.77	-624	0.9	0	365	7137	3773	2295	6068	No	9.73	Si
SLU 27	fin.	22.03	225	0.9	0	365	7137	3773	2295	6068	No	27	Si
SLU 50	ini.	13.63	-412	0.9	0	365	7137	3773	2295	6068	No	14.71	Si
SLU 50	fin.	112.94	626	0.9	0	365	7137	3773	2295	6068	No	9.69	Si
SLU 46	ini.	-9.53	-242	0.9	0	365	7137	3773	2295	6068	No	25.12	Si
SLU 46	fin.	137.89	693	0.9	0	365	7137	3773	2295	6068	No	8.76	Si
SLU 44	ini.	-34.53	-20	0.9	0	365	7137	3773	2295	6068	No	305.88	Si
SLU 44	fin.	164.3	723	0.9	0	365	7137	3773	2295	6068	No	8.39	Si
SLU 45	ini.	-11.99	-240	0.9	0	365	7137	3773	2295	6068	No	25.23	Si
SLU 45	fin.	139.33	709	0.9	0	365	7137	3773	2295	6068	No	8.56	Si
SLU 28	ini.	71.22	-625	0.9	0	365	7137	3773	2295	6068	No	9.71	Si
SLU 28	fin.	20.59	209	0.9	0	365	7137	3773	2295	6068	No	29.07	Si
SLU 48	ini.	14.14	-438	0.9	0	365	7137	3773	2295	6068	No	13.86	Si
SLU 48	fin.	112.45	647	0.9	0	365	7137	3773	2295	6068	No	9.38	Si
SLU 43	ini.	-38.62	-18	0.9	0	365	7137	3773	2295	6068	No	336.47	Si
SLU 43	fin.	166.7	750	0.9	0	365	7137	3773	2295	6068	No	8.09	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	62.44	62	-0.0000308	0.0002807	0.0035	0.9		2989.59	2989.59		47.88	Si
SLV 12	fin.	-243.34	680	-0.0001232	0.0002807	0.0035	0.9		2995.37	2995.37		12.31	Si
SLV 6	ini.	-95.08	-119	-0.0000471	0.0002807	0.0035	0.9		2995.37	2995.37		31.5	Si
SLV 6	fin.	453.61	-1403	-0.0002387	0.0002807	0.0035	0.9		2989.59	2989.59		6.59	Si
SLV 10	ini.	-184.15	200	-0.0000924	0.0002807	0.0035	0.9		2995.37	2995.37		16.27	Si
SLV 10	fin.	405.79	-1198	-0.0002116	0.0002807	0.0035	0.9		2989.59	2989.59		7.37	Si
SLV 1	ini.	125.06	-654	-0.0000623	0.0002807	0.0035	0.9		2989.59	2989.59		23.9	Si
SLV 1	fin.	265.87	-991	-0.0001353	0.0002807	0.0035	0.9		2989.59	2989.59		11.24	Si
SLV 11	ini.	86.04	-27	-0.0000426	0.0002807	0.0035	0.9		2989.59	2989.59		34.75	Si
SLV 11	fin.	-256.24	675	-0.00013	0.0002807	0.0035	0.9		2995.37	2995.37		11.69	Si
SLV 5	ini.	-71.48	-209	-0.0000353	0.0002807	0.0035	0.9		2995.37	2995.37		41.91	Si
SLV 5	fin.	440.71	-1408	-0.0002313	0.0002807	0.0035	0.9		2989.59	2989.59		6.78	Si
SLD 6	ini.	-45.37	-92	-0.0000223	0.0002807	0.0035	0.9		2995.37	2995.37		66.03	Si
SLD 6	fin.	255.45	-822	-0.0001298	0.0002807	0.0035	0.9		2989.59	2989.59		11.7	Si
SLD 5	ini.	-35.04	-131	-0.0000172	0.0002807	0.0035	0.9		2995.37	2995.37		85.48	Si
SLD 5	fin.	249.8	-825	-0.0001268	0.0002807	0.0035	0.9		2989.59	2989.59		11.97	Si
SLV 2	ini.	88.84	-516	-0.000044	0.0002807	0.0035	0.9		2989.59	2989.59		33.65	Si
SLV 2	fin.	285.67	-984	-0.0001459	0.0002807	0.0035	0.9		2989.59	2989.59		10.47	Si
SLV 9	ini.	-160.55	110	-0.0000802	0.0002807	0.0035	0.9		2995.37	2995.37		18.66	Si
SLV 9	fin.	392.88	-1203	-0.0002044	0.0002807	0.0035	0.9		2989.59	2989.59		7.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-71.48	-131	0.9	0	548	7137	5660	2295	7684		58.63	Si
SLV 5	fin.	440.71	2222	0.9	0	548	7137	5660	2295	7684		3.46	Si
SLV 2	ini.	88.84	-655	0.9	0	548	7137	5660	2295	7684		11.72	Si
SLV 2	fin.	285.67	1244	0.9	0	548	7137	5660	2295	7684		6.18	Si
SLV 6	ini.	-95.08	-14	0.9	0	548	7137	5660	2295	7684		548.77	Si
SLV 6	fin.	453.61	2263	0.9	0	548	7137	5660	2295	7684		3.4	Si
SLV 7	ini.	175.12	-611	0.9	0	548	7137	5660	2295	7684		12.58	Si
SLV 7	fin.	-208.41	-1265	0.9	0	548	7137	5660	2295	7684		6.08	Si
SLV 8	ini.	151.51	-494	0.9	0	548	7137	5660	2295	7684		15.56	Si
SLV 8	fin.	-195.51	-1224	0.9	0	548	7137	5660	2295	7684		6.28	Si
SLD 6	ini.	-45.37	-56	0.9	0	548	7137	5660	2295	7684		136.2	Si
SLD 6	fin.	255.45	1233	0.9	0	548	7137	5660	2295	7684		6.23	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	86.04	-178	0.9	0	548	7137	5660	2295	7684		43.12	Si
SLV 11	fin.	-256.24	-1428	0.9	0	548	7137	5660	2295	7684		5.38	Si
SLV 9	ini.	-160.55	302	0.9	0	548	7137	5660	2295	7684		25.48	Si
SLV 9	fin.	392.88	2058	0.9	0	548	7137	5660	2295	7684		3.73	Si
SLV 12	ini.	62.44	-61	0.9	0	548	7137	5660	2295	7684		125.68	Si
SLV 12	fin.	-243.34	-1388	0.9	0	548	7137	5660	2295	7684		5.54	Si
SLV 10	ini.	-184.15	419	0.9	0	548	7137	5660	2295	7684		18.35	Si
SLV 10	fin.	405.79	2099	0.9	0	548	7137	5660	2295	7684		3.66	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.591	SLV 6	Si
V_SLV	3.396	SLV 6	Si
PF_SLU	17.75	SLU 43	Si
V_SLU	8.093	SLU 43	Si

Trave di accoppiamento 139

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.813	5.826	14.57	15.03	0.46	-22.713	5.826	14.57	15.03	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 45	ini.	-128.17	-42	-0.0002682	0.0001872	0.0035	0.46		780.23	780.23	No	6.09	Si
SLU 45	fin.	-19.74	172	-0.0000373	0.0001872	0.0035	0.46		780.23	780.23	No	39.53	Si
SLU 43	ini.	-121.26	-67	-0.0002518	0.0001872	0.0035	0.46		780.23	780.23	No	6.43	Si
SLU 43	fin.	6.03	183	-0.0000113	0.0001872	0.0035	0.46		777.36	777.36	No	129	Si
SLU 51	ini.	-131.34	-19	-0.0002758	0.0001872	0.0035	0.46		780.23	780.23	No	5.94	Si
SLU 51	fin.	-41.01	161	-0.0000788	0.0001872	0.0035	0.46		780.23	780.23	No	19.03	Si
SLU 69	ini.	-121.15	16	-0.0002515	0.0001872	0.0035	0.46		780.23	780.23	No	6.44	Si
SLU 69	fin.	-72.93	115	-0.000144	0.0001872	0.0035	0.46		780.23	780.23	No	10.7	Si
SLU 50	ini.	-133.87	-19	-0.0002819	0.0001872	0.0035	0.46		780.23	780.23	No	5.83	Si
SLU 50	fin.	-39.03	170	-0.0000749	0.0001872	0.0035	0.46		780.23	780.23	No	19.99	Si
SLU 46	ini.	-125.65	-42	-0.0002622	0.0001872	0.0035	0.46		780.23	780.23	No	6.21	Si
SLU 46	fin.	-21.72	163	-0.0000411	0.0001872	0.0035	0.46		780.23	780.23	No	35.93	Si
SLU 71	ini.	-120.54	15	-0.0002501	0.0001872	0.0035	0.46		780.23	780.23	No	6.47	Si
SLU 71	fin.	-69.7	119	-0.0001372	0.0001872	0.0035	0.46		780.23	780.23	No	11.19	Si
SLU 49	ini.	-131.95	-18	-0.0002773	0.0001872	0.0035	0.46		780.23	780.23	No	5.91	Si
SLU 49	fin.	-44.24	157	-0.0000852	0.0001872	0.0035	0.46		780.23	780.23	No	17.63	Si
SLU 48	ini.	-134.48	-18	-0.0002834	0.0001872	0.0035	0.46		780.23	780.23	No	5.8	Si
SLU 48	fin.	-42.26	166	-0.0000813	0.0001872	0.0035	0.46		780.23	780.23	No	18.46	Si
SLU 47	ini.	-123.36	-44	-0.0002567	0.0001872	0.0035	0.46		780.23	780.23	No	6.32	Si
SLU 47	fin.	-19.8	161	-0.0000374	0.0001872	0.0035	0.46		780.23	780.23	No	39.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-118.62	611	0.46	0	124	3648	1928	1173	3101	No	5.08	Si
SLU 70	fin.	-74.91	-739	0.46	0	124	3648	1928	1173	3101	No	4.2	Si
SLU 79	ini.	-102.31	558	0.46	0	124	3648	1928	1173	3101	No	5.56	Si
SLU 79	fin.	-85.26	-763	0.46	0	124	3648	1928	1173	3101	No	4.07	Si
SLU 35	ini.	-71.42	437	0.46	0	124	3648	1928	1173	3101	No	7.1	Si
SLU 35	fin.	-97.97	-765	0.46	0	124	3648	1928	1173	3101	No	4.05	Si
SLU 69	ini.	-121.15	620	0.46	0	124	3648	1928	1173	3101	No	5.01	Si
SLU 69	fin.	-72.93	-734	0.46	0	124	3648	1928	1173	3101	No	4.22	Si
SLU 80	ini.	-99.79	550	0.46	0	124	3648	1928	1173	3101	No	5.64	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	fin.	-87.24	-767	0.46	0	124	3648	1928	1173	3101	No	4.04	Si
SLU 36	ini.	-68.9	428	0.46	0	124	3648	1928	1173	3101	No	7.24	Si
SLU 36	fin.	-99.96	-770	0.46	0	124	3648	1928	1173	3101	No	4.03	Si
SLU 77	ini.	-102.92	565	0.46	0	124	3648	1928	1173	3101	No	5.49	Si
SLU 77	fin.	-88.5	-786	0.46	0	124	3648	1928	1173	3101	No	3.95	Si
SLU 38	ini.	-68.29	421	0.46	0	124	3648	1928	1173	3101	No	7.36	Si
SLU 38	fin.	-96.72	-747	0.46	0	124	3648	1928	1173	3101	No	4.15	Si
SLU 78	ini.	-100.4	557	0.46	0	124	3648	1928	1173	3101	No	5.57	Si
SLU 78	fin.	-90.48	-790	0.46	0	124	3648	1928	1173	3101	No	3.93	Si
SLU 37	ini.	-70.81	430	0.46	0	124	3648	1928	1173	3101	No	7.21	Si
SLU 37	fin.	-94.74	-742	0.46	0	124	3648	1928	1173	3101	No	4.18	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-221.69	-215	-0.0004835	0.0002807	0.0035	0.46		788.4	788.4		3.56	Si
SLV 3	fin.	97.8	363	-0.0001938	0.0002807	0.0035	0.46		785.44	785.44		8.03	Si
SLV 1	ini.	-318.3	-343	-0.0007542	0.0002807	0.0035	0.46		788.4	788.4		2.48	Si
SLV 1	fin.	174.03	567	-0.0003656	0.0002807	0.0035	0.46		785.44	785.44		4.51	Si
SLV 11	ini.	140.62	262	-0.0002874	0.0002807	0.0035	0.46		785.44	785.44		5.59	Si
SLV 11	fin.	-193.83	-365	-0.0004126	0.0002807	0.0035	0.46		788.4	788.4		4.07	Si
SLV 2	ini.	-325.82	-345	-0.000777	0.0002807	0.0035	0.46		788.4	788.4		2.42	Si
SLV 2	fin.	183.18	597	-0.0003879	0.0002807	0.0035	0.46		785.44	785.44		4.29	Si
SLV 15	ini.	164.33	289	-0.0003424	0.0002807	0.0035	0.46		785.44	785.44		4.78	Si
SLV 15	fin.	-216.51	-400	-0.0004701	0.0002807	0.0035	0.46		788.4	788.4		3.64	Si
SLV 12	ini.	135.72	261	-0.0002764	0.0002807	0.0035	0.46		785.44	785.44		5.79	Si
SLV 12	fin.	-187.87	-345	-0.0003978	0.0002807	0.0035	0.46		788.4	788.4		4.2	Si
SLV 6	ini.	-302.12	-318	-0.0007062	0.0002807	0.0035	0.46		788.4	788.4		2.61	Si
SLV 6	fin.	160.51	562	-0.0003334	0.0002807	0.0035	0.46		785.44	785.44		4.89	Si
SLV 5	ini.	-297.22	-316	-0.0006919	0.0002807	0.0035	0.46		788.4	788.4		2.65	Si
SLV 5	fin.	154.54	542	-0.0003194	0.0002807	0.0035	0.46		785.44	785.44		5.08	Si
SLV 16	ini.	156.81	287	-0.0003247	0.0002807	0.0035	0.46		785.44	785.44		5.01	Si
SLV 16	fin.	-207.35	-369	-0.0004466	0.0002807	0.0035	0.46		788.4	788.4		3.8	Si
SLV 4	ini.	-229.21	-216	-0.0005032	0.0002807	0.0035	0.46		788.4	788.4		3.44	Si
SLV 4	fin.	106.96	394	-0.0002132	0.0002807	0.0035	0.46		785.44	785.44		7.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	135.72	-255	0.46	0	187	3648	2893	1173	3834		15.03	Si
SLV 12	fin.	-187.87	-891	0.46	0	187	3648	2893	1173	3834		4.3	Si
SLV 16	ini.	156.81	-347	0.46	0	187	3648	2893	1173	3834		11.05	Si
SLV 16	fin.	-207.35	-973	0.46	0	187	3648	2893	1173	3834		3.94	Si
SLV 3	ini.	-221.69	837	0.46	0	187	3648	2893	1173	3834		4.58	Si
SLV 3	fin.	97.8	111	0.46	0	187	3648	2893	1173	3834		34.63	Si
SLV 6	ini.	-302.12	1040	0.46	0	187	3648	2893	1173	3834		3.69	Si
SLV 6	fin.	160.51	310	0.46	0	187	3648	2893	1173	3834		12.37	Si
SLV 11	ini.	140.62	-270	0.46	0	187	3648	2893	1173	3834		14.2	Si
SLV 11	fin.	-193.83	-912	0.46	0	187	3648	2893	1173	3834		4.2	Si
SLV 4	ini.	-229.21	860	0.46	0	187	3648	2893	1173	3834		4.46	Si
SLV 4	fin.	106.96	143	0.46	0	187	3648	2893	1173	3834		26.8	Si
SLV 2	ini.	-325.82	1140	0.46	0	187	3648	2893	1173	3834		3.36	Si
SLV 2	fin.	183.18	403	0.46	0	187	3648	2893	1173	3834		9.51	Si
SLV 5	ini.	-297.22	1026	0.46	0	187	3648	2893	1173	3834		3.74	Si
SLV 5	fin.	154.54	289	0.46	0	187	3648	2893	1173	3834		13.27	Si
SLV 15	ini.	164.33	-370	0.46	0	187	3648	2893	1173	3834		10.37	Si
SLV 15	fin.	-216.51	-1005	0.46	0	187	3648	2893	1173	3834		3.81	Si
SLV 1	ini.	-318.3	1117	0.46	0	187	3648	2893	1173	3834		3.43	Si
SLV 1	fin.	174.03	371	0.46	0	187	3648	2893	1173	3834		10.35	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.42	SLV 2	Si
V_SLV	3.364	SLV 2	Si
PF_SLU	5.802	SLU 48	Si
V_SLU	3.925	SLU 78	Si

Trave di accoppiamento 140

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	11.87	12.77	0.9	-22.493	-3.314	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	179.29	-832	-0.0000909	0.0001872	0.0035	0.9		2959	2959	No	16.5	Si
SLU 74	fin.	-25.03	-364	-0.0000123	0.0001872	0.0035	0.9		2964.67	2964.67	No	118.44	Si
SLU 78	ini.	195.21	-890	-0.0000993	0.0001872	0.0035	0.9		2959	2959	No	15.16	Si
SLU 78	fin.	-41.56	-345	-0.0000205	0.0001872	0.0035	0.9		2964.67	2964.67	No	71.34	Si
SLU 57	ini.	178.7	-828	-0.0000906	0.0001872	0.0035	0.9		2959	2959	No	16.56	Si
SLU 57	fin.	-27.86	-346	-0.0000137	0.0001872	0.0035	0.9		2964.67	2964.67	No	106.42	Si
SLU 83	ini.	180.23	-820	-0.0000914	0.0001872	0.0035	0.9		2959	2959	No	16.42	Si
SLU 83	fin.	-34.96	-338	-0.0000172	0.0001872	0.0035	0.9		2964.67	2964.67	No	84.8	Si
SLU 56	ini.	181.52	-834	-0.0000921	0.0001872	0.0035	0.9		2959	2959	No	16.3	Si
SLU 56	fin.	-32.95	-335	-0.0000162	0.0001872	0.0035	0.9		2964.67	2964.67	No	89.98	Si
SLU 79	ini.	191.48	-865	-0.0000974	0.0001872	0.0035	0.9		2959	2959	No	15.45	Si
SLU 79	fin.	-46.24	-322	-0.0000228	0.0001872	0.0035	0.9		2964.67	2964.67	No	64.12	Si
SLU 69	ini.	180.56	-851	-0.0000916	0.0001872	0.0035	0.9		2959	2959	No	16.39	Si
SLU 69	fin.	-22.52	-367	-0.000011	0.0001872	0.0035	0.9		2964.67	2964.67	No	131.63	Si
SLU 80	ini.	188.67	-860	-0.0000959	0.0001872	0.0035	0.9		2959	2959	No	15.68	Si
SLU 80	fin.	-41.15	-333	-0.0000203	0.0001872	0.0035	0.9		2964.67	2964.67	No	72.05	Si
SLU 77	ini.	198.03	-896	-0.0001008	0.0001872	0.0035	0.9		2959	2959	No	14.94	Si
SLU 77	fin.	-46.64	-334	-0.000023	0.0001872	0.0035	0.9		2964.67	2964.67	No	63.56	Si
SLU 70	ini.	177.74	-846	-0.0000901	0.0001872	0.0035	0.9		2959	2959	No	16.65	Si
SLU 70	fin.	-17.43	-378	-0.0000085	0.0001872	0.0035	0.9		2964.67	2964.67	No	170.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	188.67	-1134	0.9	0	365	7137	3773	2295	6068	No	5.35	Si
SLU 80	fin.	-41.15	-209	0.9	0	365	7137	3773	2295	6068	No	29.02	Si
SLU 79	ini.	191.48	-1148	0.9	0	365	7137	3773	2295	6068	No	5.29	Si
SLU 79	fin.	-46.24	-230	0.9	0	365	7137	3773	2295	6068	No	26.35	Si
SLU 71	ini.	174.02	-1110	0.9	0	365	7137	3773	2295	6068	No	5.47	Si
SLU 71	fin.	-22.12	-108	0.9	0	365	7137	3773	2295	6068	No	56.4	Si
SLU 70	ini.	177.74	-1146	0.9	0	365	7137	3773	2295	6068	No	5.3	Si
SLU 70	fin.	-17.43	-80	0.9	0	365	7137	3773	2295	6068	No	76.15	Si
SLU 57	ini.	178.7	-1104	0.9	0	365	7137	3773	2295	6068	No	5.5	Si
SLU 57	fin.	-27.86	-145	0.9	0	365	7137	3773	2295	6068	No	41.94	Si
SLU 78	ini.	195.21	-1184	0.9	0	365	7137	3773	2295	6068	No	5.13	Si
SLU 78	fin.	-41.56	-202	0.9	0	365	7137	3773	2295	6068	No	29.98	Si
SLU 77	ini.	198.03	-1197	0.9	0	365	7137	3773	2295	6068	No	5.07	Si
SLU 77	fin.	-46.64	-224	0.9	0	365	7137	3773	2295	6068	No	27.14	Si
SLU 72	ini.	171.2	-1097	0.9	0	365	7137	3773	2295	6068	No	5.53	Si
SLU 72	fin.	-17.03	-86	0.9	0	365	7137	3773	2295	6068	No	70.24	Si
SLU 69	ini.	180.56	-1159	0.9	0	365	7137	3773	2295	6068	No	5.24	Si
SLU 69	fin.	-22.52	-101	0.9	0	365	7137	3773	2295	6068	No	60.15	Si
SLU 56	ini.	181.52	-1117	0.9	0	365	7137	3773	2295	6068	No	5.43	Si
SLU 56	fin.	-32.95	-166	0.9	0	365	7137	3773	2295	6068	No	36.59	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	501.86	-1403	-0.0002665	0.0002807	0.0035	0.9		2989.59	2989.59		5.96	Si
SLV 6	fin.	-687.96	1167	-0.0003794	0.0002807	0.0035	0.9		2995.37	2995.37		4.35	Si
SLV 2	ini.	450.52	-1405	-0.0002369	0.0002807	0.0035	0.9		2989.59	2989.59		6.64	Si
SLV 2	fin.	-550.94	776	-0.0002949	0.0002807	0.0035	0.9		2995.37	2995.37		5.44	Si
SLV 7	ini.	-150.11	-34	-0.0000749	0.0002807	0.0035	0.9		2995.37	2995.37		19.96	Si
SLV 7	fin.	489.75	-1376	-0.0002595	0.0002807	0.0035	0.9		2989.59	2989.59		6.1	Si
SLV 5	ini.	478.02	-1329	-0.0002527	0.0002807	0.0035	0.9		2989.59	2989.59		6.25	Si
SLV 5	fin.	-663.53	1140	-0.0003639	0.0002807	0.0035	0.9		2995.37	2995.37		4.51	Si
SLV 12	ini.	-265.25	264	-0.0001348	0.0002807	0.0035	0.9		2995.37	2995.37		11.29	Si
SLV 12	fin.	688.25	-1763	-0.0003804	0.0002807	0.0035	0.9		2989.59	2989.59		4.34	Si
SLV 1	ini.	413.94	-1291	-0.0002162	0.0002807	0.0035	0.9		2989.59	2989.59		7.22	Si
SLV 1	fin.	-513.44	735	-0.0002728	0.0002807	0.0035	0.9		2995.37	2995.37		5.83	Si
SLV 15	ini.	-237.75	341	-0.0001202	0.0002807	0.0035	0.9		2995.37	2995.37		12.6	Si
SLV 15	fin.	575.65	-1399	-0.0003104	0.0002807	0.0035	0.9		2989.59	2989.59		5.19	Si
SLV 16	ini.	-201.17	226	-0.0001012	0.0002807	0.0035	0.9		2995.37	2995.37		14.89	Si
SLV 16	fin.	538.16	-1358	-0.0002879	0.0002807	0.0035	0.9		2989.59	2989.59		5.56	Si
SLV 8	ini.	-126.27	-109	-0.0000628	0.0002807	0.0035	0.9		2995.37	2995.37		23.72	Si
SLV 8	fin.	465.31	-1349	-0.0002454	0.0002807	0.0035	0.9		2989.59	2989.59		6.42	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-289.08	339	-0.0001474	0.0002807	0.0035	0.9		2995.37	2995.37		10.36	Si
SLV 11	fin.	712.68	-1790	-0.0003961	0.0002807	0.0035	0.9		2989.59	2989.59		4.19	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-289.08	1233	0.9	0	548	7137	5660	2295	7684		6.23	Si
SLV 11	fin.	712.68	2849	0.9	0	548	7137	5660	2295	7684		2.7	Si
SLV 10	ini.	362.88	-1652	0.9	0	548	7137	5660	2295	7684		4.65	Si
SLV 10	fin.	-465.03	-2071	0.9	0	548	7137	5660	2295	7684		3.71	Si
SLV 6	ini.	501.86	-2460	0.9	0	548	7137	5660	2295	7684		3.12	Si
SLV 6	fin.	-687.96	-2905	0.9	0	548	7137	5660	2295	7684		2.65	Si
SLV 16	ini.	-201.17	1055	0.9	0	548	7137	5660	2295	7684		7.28	Si
SLV 16	fin.	538.16	2024	0.9	0	548	7137	5660	2295	7684		3.8	Si
SLV 1	ini.	413.94	-2282	0.9	0	548	7137	5660	2295	7684		3.37	Si
SLV 1	fin.	-513.44	-2080	0.9	0	548	7137	5660	2295	7684		3.69	Si
SLV 5	ini.	478.02	-2338	0.9	0	548	7137	5660	2295	7684		3.29	Si
SLV 5	fin.	-663.53	-2823	0.9	0	548	7137	5660	2295	7684		2.72	Si
SLV 2	ini.	450.52	-2470	0.9	0	548	7137	5660	2295	7684		3.11	Si
SLV 2	fin.	-550.94	-2206	0.9	0	548	7137	5660	2295	7684		3.48	Si
SLV 12	ini.	-265.25	1111	0.9	0	548	7137	5660	2295	7684		6.92	Si
SLV 12	fin.	688.25	2767	0.9	0	548	7137	5660	2295	7684		2.78	Si
SLV 7	ini.	-150.11	425	0.9	0	548	7137	5660	2295	7684		18.1	Si
SLV 7	fin.	489.75	2015	0.9	0	548	7137	5660	2295	7684		3.81	Si
SLV 15	ini.	-237.75	1243	0.9	0	548	7137	5660	2295	7684		6.18	Si
SLV 15	fin.	575.65	2150	0.9	0	548	7137	5660	2295	7684		3.57	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.195	SLV 11	Si
V_SLV	2.646	SLV 6	Si
PF_SLU	14.942	SLU 77	Si
V_SLU	5.071	SLU 77	Si

Trave di accoppiamento 141

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	14.57	15.03	0.46	-22.493	-3.314	14.57	15.03	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-81.01	-78	-0.0001612	0.0001872	0.0035	0.46		780.23	780.23	No	9.63	Si
SLU 70	fin.	-76.52	-452	-0.0001516	0.0001872	0.0035	0.46		780.23	780.23	No	10.2	Si
SLU 80	ini.	-62.34	-27	-0.0001219	0.0001872	0.0035	0.46		780.23	780.23	No	12.52	Si
SLU 80	fin.	-82.02	-507	-0.0001634	0.0001872	0.0035	0.46		780.23	780.23	No	9.51	Si
SLU 35	ini.	-49.84	-3	-0.0000965	0.0001872	0.0035	0.46		780.23	780.23	No	15.65	Si
SLU 35	fin.	-80.02	-500	-0.0001591	0.0001872	0.0035	0.46		780.23	780.23	No	9.75	Si
SLU 69	ini.	-78.68	-71	-0.0001562	0.0001872	0.0035	0.46		780.23	780.23	No	9.92	Si
SLU 69	fin.	-78.05	-465	-0.0001549	0.0001872	0.0035	0.46		780.23	780.23	No	10	Si
SLU 36	ini.	-52.16	-11	-0.0001012	0.0001872	0.0035	0.46		780.23	780.23	No	14.96	Si
SLU 36	fin.	-78.49	-488	-0.0001558	0.0001872	0.0035	0.46		780.23	780.23	No	9.94	Si
SLU 77	ini.	-63.56	-27	-0.0001245	0.0001872	0.0035	0.46		780.23	780.23	No	12.28	Si
SLU 77	fin.	-87.72	-541	-0.0001757	0.0001872	0.0035	0.46		780.23	780.23	No	8.89	Si
SLU 56	ini.	-60.79	-35	-0.0001188	0.0001872	0.0035	0.46		780.23	780.23	No	12.83	Si
SLU 56	fin.	-78.13	-477	-0.0001551	0.0001872	0.0035	0.46		780.23	780.23	No	9.99	Si
SLU 79	ini.	-60.01	-19	-0.0001172	0.0001872	0.0035	0.46		780.23	780.23	No	13	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	fin.	-83.55	-520	-0.0001667	0.0001872	0.0035	0.46		780.23	780.23	No	9.34	Si
SLU 49	ini.	-78.24	-86	-0.0001553	0.0001872	0.0035	0.46		780.23	780.23	No	9.97	Si
SLU 49	fin.	-66.93	-388	-0.0001315	0.0001872	0.0035	0.46		780.23	780.23	No	11.66	Si
SLU 78	ini.	-65.88	-35	-0.0001293	0.0001872	0.0035	0.46		780.23	780.23	No	11.84	Si
SLU 78	fin.	-86.19	-529	-0.0001724	0.0001872	0.0035	0.46		780.23	780.23	No	9.05	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-63.56	586	0.46	0	124	3648	1928	1173	3101	No	5.3	Si
SLU 77	fin.	-87.72	-1589	0.46	0	124	3648	1928	1173	3101	No	1.95	Si
SLU 80	ini.	-62.34	570	0.46	0	124	3648	1928	1173	3101	No	5.44	Si
SLU 80	fin.	-82.02	-1527	0.46	0	124	3648	1928	1173	3101	No	2.03	Si
SLU 70	ini.	-81.01	652	0.46	0	124	3648	1928	1173	3101	No	4.76	Si
SLU 70	fin.	-76.52	-1505	0.46	0	124	3648	1928	1173	3101	No	2.06	Si
SLU 79	ini.	-60.01	562	0.46	0	124	3648	1928	1173	3101	No	5.52	Si
SLU 79	fin.	-83.55	-1541	0.46	0	124	3648	1928	1173	3101	No	2.01	Si
SLU 71	ini.	-75.14	620	0.46	0	124	3648	1928	1173	3101	No	5	Si
SLU 71	fin.	-73.88	-1472	0.46	0	124	3648	1928	1173	3101	No	2.11	Si
SLU 36	ini.	-52.16	495	0.46	0	124	3648	1928	1173	3101	No	6.27	Si
SLU 36	fin.	-78.49	-1427	0.46	0	124	3648	1928	1173	3101	No	2.17	Si
SLU 69	ini.	-78.68	643	0.46	0	124	3648	1928	1173	3101	No	4.82	Si
SLU 69	fin.	-78.05	-1520	0.46	0	124	3648	1928	1173	3101	No	2.04	Si
SLU 72	ini.	-77.46	628	0.46	0	124	3648	1928	1173	3101	No	4.94	Si
SLU 72	fin.	-72.35	-1457	0.46	0	124	3648	1928	1173	3101	No	2.13	Si
SLU 78	ini.	-65.88	594	0.46	0	124	3648	1928	1173	3101	No	5.22	Si
SLU 78	fin.	-86.19	-1575	0.46	0	124	3648	1928	1173	3101	No	1.97	Si
SLU 35	ini.	-49.84	486	0.46	0	124	3648	1928	1173	3101	No	6.38	Si
SLU 35	fin.	-80.02	-1441	0.46	0	124	3648	1928	1173	3101	No	2.15	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-347.06	-980	-0.0008425	0.0002807	0.0035	0.46		788.4	788.4		2.27	Si
SLV 12	fin.	134.65	1149	-0.000274	0.0002807	0.0035	0.46		785.44	785.44		5.83	Si
SLV 15	ini.	-277.61	-717	-0.0006355	0.0002807	0.0035	0.46		788.4	788.4		2.84	Si
SLV 15	fin.	91.82	736	-0.0001812	0.0002807	0.0035	0.46		785.44	785.44		8.55	Si
SLV 8	ini.	-260.32	-747	-0.0005872	0.0002807	0.0035	0.46		788.4	788.4		3.03	Si
SLV 8	fin.	85.88	809	-0.0001688	0.0002807	0.0035	0.46		785.44	785.44		9.15	Si
SLV 6	ini.	267.46	898	-0.0006096	0.0002807	0.0035	0.46		785.44	785.44		2.94	Si
SLV 6	fin.	-226.47	-1701	-0.000496	0.0002807	0.0035	0.46		788.4	788.4		3.48	Si
SLV 5	ini.	256.36	866	-0.0005788	0.0002807	0.0035	0.46		785.44	785.44		3.06	Si
SLV 5	fin.	-218.91	-1647	-0.0004763	0.0002807	0.0035	0.46		788.4	788.4		3.6	Si
SLV 2	ini.	186.9	603	-0.0003971	0.0002807	0.0035	0.46		785.44	785.44		4.2	Si
SLV 2	fin.	-176.08	-1234	-0.0003691	0.0002807	0.0035	0.46		788.4	788.4		4.48	Si
SLV 11	ini.	-358.17	-1012	-0.0008776	0.0002807	0.0035	0.46		788.4	788.4		2.2	Si
SLV 11	fin.	142.21	1203	-0.000291	0.0002807	0.0035	0.46		785.44	785.44		5.52	Si
SLV 16	ini.	-260.58	-667	-0.0005879	0.0002807	0.0035	0.46		788.4	788.4		3.03	Si
SLV 16	fin.	80.22	654	-0.0001571	0.0002807	0.0035	0.46		785.44	785.44		9.79	Si
SLV 7	ini.	-271.42	-779	-0.0006181	0.0002807	0.0035	0.46		788.4	788.4		2.9	Si
SLV 7	fin.	93.43	863	-0.0001846	0.0002807	0.0035	0.46		785.44	785.44		8.41	Si
SLD 11	ini.	-183.18	-478	-0.0003863	0.0002807	0.0035	0.46		788.4	788.4		4.3	Si
SLD 11	fin.	39.12	391	-0.0000747	0.0002807	0.0035	0.46		785.44	785.44		20.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	169.61	-428	0.46	0	187	3648	2893	1173	3834		8.97	Si
SLV 9	fin.	-170.13	-1835	0.46	0	187	3648	2893	1173	3834		2.09	Si
SLV 10	ini.	180.71	-470	0.46	0	187	3648	2893	1173	3834		8.15	Si
SLV 10	fin.	-177.69	-1887	0.46	0	187	3648	2893	1173	3834		2.03	Si
SLV 6	ini.	267.46	-820	0.46	0	187	3648	2893	1173	3834		4.68	Si
SLV 6	fin.	-226.47	-2078	0.46	0	187	3648	2893	1173	3834		1.85	Si
SLD 5	ini.	87.62	-137	0.46	0	187	3648	2893	1173	3834		27.94	Si
SLD 5	fin.	-120.07	-1320	0.46	0	187	3648	2893	1173	3834		2.9	Si
SLV 2	ini.	186.9	-546	0.46	0	187	3648	2893	1173	3834		7.03	Si
SLV 2	fin.	-176.08	-1477	0.46	0	187	3648	2893	1173	3834		2.6	Si
SLD 6	ini.	92.47	-156	0.46	0	187	3648	2893	1173	3834		24.59	Si
SLD 6	fin.	-123.38	-1343	0.46	0	187	3648	2893	1173	3834		2.86	Si
SLV 1	ini.	169.87	-480	0.46	0	187	3648	2893	1173	3834		7.99	Si
SLV 1	fin.	-164.48	-1397	0.46	0	187	3648	2893	1173	3834		2.74	Si
SLV 5	ini.	256.36	-777	0.46	0	187	3648	2893	1173	3834		4.93	Si
SLV 5	fin.	-218.91	-2026	0.46	0	187	3648	2893	1173	3834		1.89	Si
SLV 12	ini.	-347.06	1511	0.46	0	187	3648	2893	1173	3834		2.54	Si
SLV 12	fin.	134.65	503	0.46	0	187	3648	2893	1173	3834		7.62	Si
SLV 11	ini.	-358.17	1553	0.46	0	187	3648	2893	1173	3834		2.47	Si
SLV 11	fin.	142.21	555	0.46	0	187	3648	2893	1173	3834		6.91	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.201	SLV 11	Si
V_SLV	1.845	SLV 6	Si
PF_SLU	8.895	SLU 77	Si
V_SLU	1.952	SLU 77	Si

Trave di accoppiamento 142

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	11.87	13.87	2	-19.313	-3.314	11.87	13.87	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 63	ini.	188.47	-910	-0.0000188	0.0001872	0.0035	2		14344.28	14344.28	No	76.11	Si
SLU 63	fin.	158.53	-1134	-0.0000158	0.0001872	0.0035	2		14344.28	14344.28	No	90.48	Si
SLU 74	ini.	185.09	-1071	-0.0000184	0.0001872	0.0035	2		14344.28	14344.28	No	77.5	Si
SLU 74	fin.	190.99	-1324	-0.000019	0.0001872	0.0035	2		14344.28	14344.28	No	75.11	Si
SLU 84	ini.	190.53	-961	-0.000019	0.0001872	0.0035	2		14344.28	14344.28	No	75.29	Si
SLU 84	fin.	173.92	-1205	-0.0000173	0.0001872	0.0035	2		14344.28	14344.28	No	82.48	Si
SLU 75	ini.	182.46	-1076	-0.0000182	0.0001872	0.0035	2		14344.28	14344.28	No	78.62	Si
SLU 75	fin.	188.88	-1328	-0.0000188	0.0001872	0.0035	2		14344.28	14344.28	No	75.94	Si
SLU 62	ini.	191.1	-905	-0.000019	0.0001872	0.0035	2		14344.28	14344.28	No	75.06	Si
SLU 62	fin.	160.63	-1130	-0.000016	0.0001872	0.0035	2		14344.28	14344.28	No	89.3	Si
SLU 83	ini.	193.17	-956	-0.0000193	0.0001872	0.0035	2		14344.28	14344.28	No	74.26	Si
SLU 83	fin.	176.03	-1201	-0.0000175	0.0001872	0.0035	2		14344.28	14344.28	No	81.49	Si
SLU 78	ini.	188.13	-1213	-0.0000187	0.0001872	0.0035	2		14344.28	14344.28	No	76.25	Si
SLU 78	fin.	190.53	-1465	-0.000019	0.0001872	0.0035	2		14344.28	14344.28	No	75.29	Si
SLU 56	ini.	188.7	-1157	-0.0000188	0.0001872	0.0035	2		14344.28	14344.28	No	76.02	Si
SLU 56	fin.	177.24	-1390	-0.0000177	0.0001872	0.0035	2		14344.28	14344.28	No	80.93	Si
SLU 77	ini.	190.76	-1208	-0.000019	0.0001872	0.0035	2		14344.28	14344.28	No	75.19	Si
SLU 77	fin.	192.64	-1461	-0.0000192	0.0001872	0.0035	2		14344.28	14344.28	No	74.46	Si
SLU 69	ini.	130.85	-1378	-0.000013	0.0001872	0.0035	2		14344.28	14344.28	No	109.62	Si
SLU 69	fin.	189.48	-1620	-0.0000189	0.0001872	0.0035	2		14344.28	14344.28	No	75.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	113.25	-291	2	0	812	3965	8384	5100	4776	No	16.4	Si
SLU 71	fin.	173.17	592	2	0	812	3965	8384	5100	4776	No	8.07	Si
SLU 68	ini.	103.19	-225	2	0	812	3965	8384	5100	4776	No	21.25	Si
SLU 68	fin.	168.02	580	2	0	812	3965	8384	5100	4776	No	8.23	Si
SLU 69	ini.	130.85	-304	2	0	812	3965	8384	5100	4776	No	15.7	Si
SLU 69	fin.	189.48	621	2	0	812	3965	8384	5100	4776	No	7.69	Si
SLU 70	ini.	128.22	-310	2	0	812	3965	8384	5100	4776	No	15.41	Si
SLU 70	fin.	187.38	622	2	0	812	3965	8384	5100	4776	No	7.68	Si
SLU 65	ini.	97.52	-149	2	0	812	3965	8384	5100	4776	No	32.07	Si
SLU 65	fin.	166.37	568	2	0	812	3965	8384	5100	4776	No	8.41	Si
SLU 66	ini.	125.19	-228	2	0	812	3965	8384	5100	4776	No	20.92	Si
SLU 66	fin.	187.84	609	2	0	812	3965	8384	5100	4776	No	7.84	Si
SLU 67	ini.	122.55	-234	2	0	812	3965	8384	5100	4776	No	20.41	Si
SLU 67	fin.	185.73	610	2	0	812	3965	8384	5100	4776	No	7.84	Si
SLU 64	ini.	101.92	-139	2	0	812	3965	8384	5100	4776	No	34.25	Si
SLU 64	fin.	169.88	567	2	0	812	3965	8384	5100	4776	No	8.42	Si
SLU 49	ini.	126.15	-329	2	0	812	3965	8384	5100	4776	No	14.5	Si
SLU 49	fin.	171.99	545	2	0	812	3965	8384	5100	4776	No	8.76	Si
SLU 72	ini.	110.62	-297	2	0	812	3965	8384	5100	4776	No	16.09	Si
SLU 72	fin.	171.07	592	2	0	812	3965	8384	5100	4776	No	8.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-931.35	-2367	-0.0000946	0.0002807	0.0035	2		14215.41	14215.41		15.26	Si
SLV 15	fin.	436.83	-2549	-0.0000438	0.0002807	0.0035	2		14202.07	14202.07		32.51	Si
SLV 13	ini.	-719.07	-1942	-0.0000726	0.0002807	0.0035	2		14215.41	14215.41		19.77	Si
SLV 13	fin.	650.13	-2252	-0.0000655	0.0002807	0.0035	2		14202.07	14202.07		21.85	Si
SLV 1	ini.	1048.46	782	-0.000107	0.0002807	0.0035	2		14202.07	14202.07		13.55	Si
SLV 1	fin.	-112.13	578	-0.0000111	0.0002807	0.0035	2		14215.41	14215.41		126.78	Si
SLV 3	ini.	836.18	357	-0.0000848	0.0002807	0.0035	2		14202.07	14202.07		16.98	Si
SLV 3	fin.	-325.43	281	-0.0000325	0.0002807	0.0035	2		14215.41	14215.41		43.68	Si
SLV 6	ini.	737.77	384	-0.0000746	0.0002807	0.0035	2		14202.07	14202.07		19.25	Si
SLV 6	fin.	347.1	23	-0.0000347	0.0002807	0.0035	2		14202.07	14202.07		40.92	Si
SLV 4	ini.	909.19	430	-0.0000924	0.0002807	0.0035	2		14202.07	14202.07		15.62	Si
SLV 4	fin.	-393.74	388	-0.0000394	0.0002807	0.0035	2		14215.41	14215.41		36.1	Si
SLV 2	ini.	1121.47	854	-0.0001147	0.0002807	0.0035	2		14202.07	14202.07		12.66	Si
SLV 2	fin.	-180.44	685	-0.0000179	0.0002807	0.0035	2		14215.41	14215.41		78.78	Si
SLV 5	ini.	690.2	337	-0.0000697	0.0002807	0.0035	2		14202.07	14202.07		20.58	Si
SLV 5	fin.	391.61	-47	-0.0000392	0.0002807	0.0035	2		14202.07	14202.07		36.27	Si
SLV 14	ini.	-646.06	-1870	-0.0000651	0.0002807	0.0035	2		14215.41	14215.41		22	Si
SLV 14	fin.	581.81	-2145	-0.0000585	0.0002807	0.0035	2		14202.07	14202.07		24.41	Si
SLV 16	ini.	-858.34	-2295	-0.000087	0.0002807	0.0035	2		14215.41	14215.41		16.56	Si
SLV 16	fin.	368.51	-2442	-0.0000368	0.0002807	0.0035	2		14202.07	14202.07		38.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1048.46	-3391	2	0	1217	3965	12577	5100	5182		1.53	Si
SLV 1	fin.	-112.13	-2524	2	0	1217	3965	12577	5100	5182		2.05	Si
SLV 3	ini.	836.18	-3798	2	0	1217	3965	12577	5100	5182		1.36	Si
SLV 3	fin.	-325.43	-2553	2	0	1217	3965	12577	5100	5182		2.03	Si
SLV 8	ini.	30.18	-2050	2	0	1217	3965	12577	5100	5182		2.53	Si
SLV 8	fin.	-363.9	-696	2	0	1217	3965	12577	5100	5182		7.44	Si
SLV 4	ini.	909.19	-4216	2	0	1217	3965	12577	5100	5182		1.23	Si
SLV 4	fin.	-393.74	-2889	2	0	1217	3965	12577	5100	5182		1.79	Si
SLV 16	ini.	-858.34	3119	2	0	1217	3965	12577	5100	5182		1.66	Si
SLV 16	fin.	368.51	3308	2	0	1217	3965	12577	5100	5182		1.57	Si
SLV 13	ini.	-719.07	3943	2	0	1217	3965	12577	5100	5182		1.31	Si
SLV 13	fin.	650.13	3673	2	0	1217	3965	12577	5100	5182		1.41	Si
SLV 14	ini.	-646.06	3525	2	0	1217	3965	12577	5100	5182		1.47	Si
SLV 14	fin.	581.81	3338	2	0	1217	3965	12577	5100	5182		1.55	Si
SLD 4	ini.	441.72	-1884	2	0	1217	3965	12577	5100	5182		2.75	Si
SLD 4	fin.	-96.52	-1012	2	0	1217	3965	12577	5100	5182		5.12	Si
SLV 2	ini.	1121.47	-3809	2	0	1217	3965	12577	5100	5182		1.36	Si
SLV 2	fin.	-180.44	-2859	2	0	1217	3965	12577	5100	5182		1.81	Si
SLV 15	ini.	-931.35	3537	2	0	1217	3965	12577	5100	5182		1.47	Si
SLV 15	fin.	436.83	3643	2	0	1217	3965	12577	5100	5182		1.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	12.664	SLV 2	Si
V_SLV	1.229	SLV 4	Si
PF_SLU	74.258	SLU 83	Si
V_SLU	7.681	SLU 70	Si

Trave di accoppiamento 143

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.813	-3.314	14.67	15.03	0.36	-19.313	-3.314	14.67	15.03	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-64.9	-485	-0.0002156	0.0001872	0.0035	0.36		482.14	482.14	No	7.43	Si
SLU 70	fin.	-21.87	-323	-0.0000681	0.0001872	0.0035	0.36		482.14	482.14	No	22.05	Si
SLU 75	ini.	-64.1	-500	-0.0002126	0.0001872	0.0035	0.36		482.14	482.14	No	7.52	Si
SLU 75	fin.	-19.59	-335	-0.0000608	0.0001872	0.0035	0.36		482.14	482.14	No	24.61	Si
SLU 80	ini.	-64.43	-501	-0.0002138	0.0001872	0.0035	0.36		482.14	482.14	No	7.48	Si
SLU 80	fin.	-22.36	-345	-0.0000697	0.0001872	0.0035	0.36		482.14	482.14	No	21.56	Si
SLU 57	ini.	-63.1	-501	-0.0002089	0.0001872	0.0035	0.36		482.14	482.14	No	7.64	Si
SLU 57	fin.	-23.02	-352	-0.0000718	0.0001872	0.0035	0.36		482.14	482.14	No	20.94	Si
SLU 69	ini.	-65.16	-487	-0.0002165	0.0001872	0.0035	0.36		482.14	482.14	No	7.4	Si
SLU 69	fin.	-21.76	-324	-0.0000677	0.0001872	0.0035	0.36		482.14	482.14	No	22.16	Si
SLU 78	ini.	-68.09	-531	-0.0002275	0.0001872	0.0035	0.36		482.14	482.14	No	7.08	Si
SLU 78	fin.	-23.94	-367	-0.0000747	0.0001872	0.0035	0.36		482.14	482.14	No	20.14	Si
SLU 56	ini.	-63.36	-503	-0.0002099	0.0001872	0.0035	0.36		482.14	482.14	No	7.61	Si
SLU 56	fin.	-22.91	-354	-0.0000714	0.0001872	0.0035	0.36		482.14	482.14	No	21.04	Si
SLU 74	ini.	-64.36	-502	-0.0002136	0.0001872	0.0035	0.36		482.14	482.14	No	7.49	Si
SLU 74	fin.	-19.48	-336	-0.0000605	0.0001872	0.0035	0.36		482.14	482.14	No	24.75	Si
SLU 79	ini.	-64.7	-504	-0.0002148	0.0001872	0.0035	0.36		482.14	482.14	No	7.45	Si
SLU 79	fin.	-22.26	-346	-0.0000693	0.0001872	0.0035	0.36		482.14	482.14	No	21.66	Si
SLU 77	ini.	-68.35	-534	-0.0002284	0.0001872	0.0035	0.36		482.14	482.14	No	7.05	Si
SLU 77	fin.	-23.84	-369	-0.0000744	0.0001872	0.0035	0.36		482.14	482.14	No	20.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-64.9	447	0.36	0	105	2855	1509	918	2427	No	5.43	Si
SLU 70	fin.	-21.87	-93	0.36	0	105	2855	1509	918	2427	No	26.02	Si
SLU 74	ini.	-64.36	423	0.36	0	105	2855	1509	918	2427	No	5.74	Si
SLU 74	fin.	-19.48	-67	0.36	0	105	2855	1509	918	2427	No	36.24	Si
SLU 69	ini.	-65.16	448	0.36	0	105	2855	1509	918	2427	No	5.42	Si
SLU 69	fin.	-21.76	-92	0.36	0	105	2855	1509	918	2427	No	26.39	Si
SLU 79	ini.	-64.7	426	0.36	0	105	2855	1509	918	2427	No	5.7	Si
SLU 79	fin.	-22.26	-83	0.36	0	105	2855	1509	918	2427	No	29.31	Si
SLU 75	ini.	-64.1	422	0.36	0	105	2855	1509	918	2427	No	5.75	Si
SLU 75	fin.	-19.59	-68	0.36	0	105	2855	1509	918	2427	No	35.54	Si
SLU 71	ini.	-61.5	425	0.36	0	105	2855	1509	918	2427	No	5.72	Si
SLU 71	fin.	-20.18	-87	0.36	0	105	2855	1509	918	2427	No	27.78	Si
SLU 78	ini.	-68.09	448	0.36	0	105	2855	1509	918	2427	No	5.41	Si
SLU 78	fin.	-23.94	-89	0.36	0	105	2855	1509	918	2427	No	27.35	Si
SLU 77	ini.	-68.35	449	0.36	0	105	2855	1509	918	2427	No	5.4	Si
SLU 77	fin.	-23.84	-87	0.36	0	105	2855	1509	918	2427	No	27.76	Si
SLU 80	ini.	-64.43	425	0.36	0	105	2855	1509	918	2427	No	5.71	Si
SLU 80	fin.	-22.36	-84	0.36	0	105	2855	1509	918	2427	No	28.85	Si
SLU 72	ini.	-61.24	424	0.36	0	105	2855	1509	918	2427	No	5.73	Si
SLU 72	fin.	-20.29	-89	0.36	0	105	2855	1509	918	2427	No	27.37	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-80.96	-1069	-0.0002664	0.0002807	0.0035	0.36		485.29	485.29		5.99	Si
SLV 2	fin.	-60.56	-1026	-0.0001946	0.0002807	0.0035	0.36		485.29	485.29		8.01	Si
SLV 4	ini.	-58.98	-856	-0.0001892	0.0002807	0.0035	0.36		485.29	485.29		8.23	Si
SLV 4	fin.	-82.96	-997	-0.0002737	0.0002807	0.0035	0.36		485.29	485.29		5.85	Si
SLV 10	ini.	-67.48	-479	-0.0002186	0.0002807	0.0035	0.36		485.29	485.29		7.19	Si
SLV 10	fin.	41.34	-33	-0.0001308	0.0002807	0.0035	0.36		482.94	482.94		11.68	Si
SLV 8	ini.	-12.52	-156	-0.0000384	0.0002807	0.0035	0.36		485.29	485.29		38.75	Si
SLV 8	fin.	-67.35	-403	-0.0002181	0.0002807	0.0035	0.36		485.29	485.29		7.21	Si
SLV 6	ini.	-85.77	-863	-0.000284	0.0002807	0.0035	0.36		485.29	485.29		5.66	Si
SLV 6	fin.	7.3	-501	-0.0000224	0.0002807	0.0035	0.36		482.94	482.94		66.15	Si
SLV 9	ini.	-69.44	-464	-0.0002254	0.0002807	0.0035	0.36		485.29	485.29		6.99	Si
SLV 9	fin.	48.92	20	-0.000156	0.0002807	0.0035	0.36		482.94	482.94		9.87	Si
SLV 5	ini.	-87.73	-848	-0.0002912	0.0002807	0.0035	0.36		485.29	485.29		5.53	Si
SLV 5	fin.	14.88	-448	-0.0000459	0.0002807	0.0035	0.36		482.94	482.94		32.45	Si
SLV 13	ini.	-22.98	237	-0.0000711	0.0002807	0.0035	0.36		485.29	485.29		21.12	Si
SLV 13	fin.	64.53	614	-0.0002093	0.0002807	0.0035	0.36		482.94	482.94		7.48	Si
SLV 3	ini.	-61.99	-833	-0.0001995	0.0002807	0.0035	0.36		485.29	485.29		7.83	Si
SLV 3	fin.	-71.32	-916	-0.000232	0.0002807	0.0035	0.36		485.29	485.29		6.8	Si
SLV 1	ini.	-83.96	-1045	-0.0002774	0.0002807	0.0035	0.36		485.29	485.29		5.78	Si
SLV 1	fin.	-48.93	-945	-0.0001553	0.0002807	0.0035	0.36		485.29	485.29		9.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 10	ini.	-52.86	350	0.36	0	158	2855	2264	918	3012		8.6	Si
SLD 10	fin.	12.68	53	0.36	0	158	2855	2264	918	3012		56.89	Si
SLV 6	ini.	-85.77	362	0.36	0	158	2855	2264	918	3012		8.32	Si
SLV 6	fin.	7.3	115	0.36	0	158	2855	2264	918	3012		26.14	Si
SLV 13	ini.	-22.98	479	0.36	0	158	2855	2264	918	3012		6.28	Si
SLV 13	fin.	64.53	126	0.36	0	158	2855	2264	918	3012		23.9	Si
SLD 13	ini.	-33.47	365	0.36	0	158	2855	2264	918	3012		8.26	Si
SLD 13	fin.	22.45	36	0.36	0	158	2855	2264	918	3012		84.68	Si
SLD 9	ini.	-53.72	364	0.36	0	158	2855	2264	918	3012		8.28	Si
SLD 9	fin.	16	66	0.36	0	158	2855	2264	918	3012		45.45	Si
SLV 10	ini.	-67.48	443	0.36	0	158	2855	2264	918	3012		6.8	Si
SLV 10	fin.	41.34	163	0.36	0	158	2855	2264	918	3012		18.46	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1	395	0.36	0	158	2855	2264	918	3012		7.62	Si
SLV 15	fin.	42.14	13	0.36	0	158	2855	2264	918	3012		227.74	Si
SLV 5	ini.	-87.73	393	0.36	0	158	2855	2264	918	3012		7.66	Si
SLV 5	fin.	14.88	146	0.36	0	158	2855	2264	918	3012		20.67	Si
SLV 14	ini.	-19.97	431	0.36	0	158	2855	2264	918	3012		6.98	Si
SLV 14	fin.	52.89	79	0.36	0	158	2855	2264	918	3012		37.99	Si
SLV 9	ini.	-69.44	475	0.36	0	158	2855	2264	918	3012		6.35	Si
SLV 9	fin.	48.92	194	0.36	0	158	2855	2264	918	3012		15.56	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.531	SLV 5	Si
V_SLV	6.284	SLV 13	Si
PF_SLU	7.054	SLU 77	Si
V_SLU	5.403	SLU 77	Si

Trave di accoppiamento 144

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	11.87	12.77	0.9	-18.263	-3.314	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	231.67	-743	-0.0001189	0.0001872	0.0035	0.9		2959	2959	No	12.77	Si
SLU 83	fin.	32.61	-463	-0.0000161	0.0001872	0.0035	0.9		2959	2959	No	90.74	Si
SLU 78	ini.	239.28	-825	-0.000123	0.0001872	0.0035	0.9		2959	2959	No	12.37	Si
SLU 78	fin.	66.94	-657	-0.0000332	0.0001872	0.0035	0.9		2959	2959	No	44.2	Si
SLU 80	ini.	228.45	-787	-0.0001171	0.0001872	0.0035	0.9		2959	2959	No	12.95	Si
SLU 80	fin.	65.87	-642	-0.0000326	0.0001872	0.0035	0.9		2959	2959	No	44.92	Si
SLU 84	ini.	231.06	-742	-0.0001185	0.0001872	0.0035	0.9		2959	2959	No	12.81	Si
SLU 84	fin.	33.52	-468	-0.0000165	0.0001872	0.0035	0.9		2959	2959	No	88.28	Si
SLU 57	ini.	223.47	-761	-0.0001144	0.0001872	0.0035	0.9		2959	2959	No	13.24	Si
SLU 57	fin.	61.55	-622	-0.0000305	0.0001872	0.0035	0.9		2959	2959	No	48.07	Si
SLU 74	ini.	225.39	-762	-0.0001155	0.0001872	0.0035	0.9		2959	2959	No	13.13	Si
SLU 74	fin.	51.01	-559	-0.0000252	0.0001872	0.0035	0.9		2959	2959	No	58.01	Si
SLU 75	ini.	224.78	-761	-0.0001151	0.0001872	0.0035	0.9		2959	2959	No	13.16	Si
SLU 75	fin.	51.92	-564	-0.0000256	0.0001872	0.0035	0.9		2959	2959	No	57	Si
SLU 79	ini.	229.07	-788	-0.0001175	0.0001872	0.0035	0.9		2959	2959	No	12.92	Si
SLU 79	fin.	64.97	-636	-0.0000322	0.0001872	0.0035	0.9		2959	2959	No	45.55	Si
SLU 77	ini.	239.9	-826	-0.0001233	0.0001872	0.0035	0.9		2959	2959	No	12.33	Si
SLU 77	fin.	66.04	-652	-0.0000327	0.0001872	0.0035	0.9		2959	2959	No	44.81	Si
SLU 56	ini.	224.08	-762	-0.0001148	0.0001872	0.0035	0.9		2959	2959	No	13.21	Si
SLU 56	fin.	60.65	-617	-0.00003	0.0001872	0.0035	0.9		2959	2959	No	48.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 46	ini.	169.03	-409	0.9	0	365	7137	3773	2295	6068	No	14.85	Si
SLU 46	fin.	86.96	751	0.9	0	365	7137	3773	2295	6068	No	8.08	Si
SLU 47	ini.	157.79	-383	0.9	0	365	7137	3773	2295	6068	No	15.83	Si
SLU 47	fin.	86.5	754	0.9	0	365	7137	3773	2295	6068	No	8.05	Si
SLU 70	ini.	199.35	-456	0.9	0	365	7137	3773	2295	6068	No	13.32	Si
SLU 70	fin.	107.38	827	0.9	0	365	7137	3773	2295	6068	No	7.34	Si
SLU 69	ini.	199.97	-456	0.9	0	365	7137	3773	2295	6068	No	13.31	Si
SLU 69	fin.	106.47	816	0.9	0	365	7137	3773	2295	6068	No	7.44	Si
SLU 49	ini.	183.54	-439	0.9	0	365	7137	3773	2295	6068	No	13.82	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	fin.	101.99	841	0.9	0	365	7137	3773	2295	6068	No	7.21	Si
SLU 51	ini.	172.7	-414	0.9	0	365	7137	3773	2295	6068	No	14.66	Si
SLU 51	fin.	100.92	836	0.9	0	365	7137	3773	2295	6068	No	7.25	Si
SLU 71	ini.	189.13	-431	0.9	0	365	7137	3773	2295	6068	No	14.09	Si
SLU 71	fin.	105.4	811	0.9	0	365	7137	3773	2295	6068	No	7.48	Si
SLU 48	ini.	184.15	-439	0.9	0	365	7137	3773	2295	6068	No	13.81	Si
SLU 48	fin.	101.08	830	0.9	0	365	7137	3773	2295	6068	No	7.31	Si
SLU 50	ini.	173.32	-414	0.9	0	365	7137	3773	2295	6068	No	14.65	Si
SLU 50	fin.	100.01	826	0.9	0	365	7137	3773	2295	6068	No	7.35	Si
SLU 72	ini.	188.52	-430	0.9	0	365	7137	3773	2295	6068	No	14.1	Si
SLU 72	fin.	106.31	822	0.9	0	365	7137	3773	2295	6068	No	7.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-394.27	653	-0.0002048	0.0002807	0.0035	0.9		2995.37	2995.37		7.6	Si
SLV 16	fin.	559.28	-2584	-0.0003005	0.0002807	0.0035	0.9		2989.59	2989.59		5.35	Si
SLV 3	ini.	597.98	-1513	-0.000324	0.0002807	0.0035	0.9		2989.59	2989.59		5	Si
SLV 3	fin.	-381.94	1286	-0.0001979	0.0002807	0.0035	0.9		2995.37	2995.37		7.84	Si
SLV 14	ini.	-335.78	566	-0.0001726	0.0002807	0.0035	0.9		2995.37	2995.37		8.92	Si
SLV 14	fin.	472.39	-2146	-0.0002494	0.0002807	0.0035	0.9		2989.59	2989.59		6.33	Si
SLV 2	ini.	689.09	-1668	-0.0003809	0.0002807	0.0035	0.9		2989.59	2989.59		4.34	Si
SLV 2	fin.	-504.37	1860	-0.0002674	0.0002807	0.0035	0.9		2995.37	2995.37		5.94	Si
SLV 4	ini.	630.59	-1581	-0.0003441	0.0002807	0.0035	0.9		2989.59	2989.59		4.74	Si
SLV 4	fin.	-417.47	1423	-0.0002177	0.0002807	0.0035	0.9		2995.37	2995.37		7.17	Si
SLV 5	ini.	371.7	-930	-0.0001926	0.0002807	0.0035	0.9		2989.59	2989.59		8.04	Si
SLV 5	fin.	-234.54	856	-0.0001186	0.0002807	0.0035	0.9		2995.37	2995.37		12.77	Si
SLV 6	ini.	392.95	-974	-0.0002044	0.0002807	0.0035	0.9		2989.59	2989.59		7.61	Si
SLV 6	fin.	-257.69	945	-0.0001308	0.0002807	0.0035	0.9		2995.37	2995.37		11.62	Si
SLV 13	ini.	-368.39	635	-0.0001904	0.0002807	0.0035	0.9		2995.37	2995.37		8.13	Si
SLV 13	fin.	507.92	-2283	-0.0002701	0.0002807	0.0035	0.9		2989.59	2989.59		5.89	Si
SLV 1	ini.	656.48	-1599	-0.0003603	0.0002807	0.0035	0.9		2989.59	2989.59		4.55	Si
SLV 1	fin.	-468.84	1724	-0.0002469	0.0002807	0.0035	0.9		2995.37	2995.37		6.39	Si
SLV 15	ini.	-426.88	721	-0.000223	0.0002807	0.0035	0.9		2995.37	2995.37		7.02	Si
SLV 15	fin.	594.81	-2721	-0.000322	0.0002807	0.0035	0.9		2989.59	2989.59		5.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	597.98	-818	0.9	0	548	7137	5660	2295	7684		9.4	Si
SLV 3	fin.	-381.94	-2379	0.9	0	548	7137	5660	2295	7684		3.23	Si
SLV 15	ini.	-426.88	439	0.9	0	548	7137	5660	2295	7684		17.5	Si
SLV 15	fin.	594.81	4105	0.9	0	548	7137	5660	2295	7684		1.87	Si
SLV 2	ini.	689.09	-1010	0.9	0	548	7137	5660	2295	7684		7.61	Si
SLV 2	fin.	-504.37	-3301	0.9	0	548	7137	5660	2295	7684		2.33	Si
SLV 16	ini.	-394.27	393	0.9	0	548	7137	5660	2295	7684		19.55	Si
SLV 16	fin.	559.28	3921	0.9	0	548	7137	5660	2295	7684		1.96	Si
SLV 11	ini.	-130.74	162	0.9	0	548	7137	5660	2295	7684		47.41	Si
SLV 11	fin.	348.13	2663	0.9	0	548	7137	5660	2295	7684		2.89	Si
SLV 14	ini.	-335.78	247	0.9	0	548	7137	5660	2295	7684		31.16	Si
SLV 14	fin.	472.39	3184	0.9	0	548	7137	5660	2295	7684		2.41	Si
SLV 4	ini.	630.59	-864	0.9	0	548	7137	5660	2295	7684		8.9	Si
SLV 4	fin.	-417.47	-2564	0.9	0	548	7137	5660	2295	7684		3	Si
SLV 12	ini.	-109.49	132	0.9	0	548	7137	5660	2295	7684		58.19	Si
SLV 12	fin.	324.98	2542	0.9	0	548	7137	5660	2295	7684		3.02	Si
SLV 13	ini.	-368.39	293	0.9	0	548	7137	5660	2295	7684		26.26	Si
SLV 13	fin.	507.92	3369	0.9	0	548	7137	5660	2295	7684		2.28	Si
SLV 1	ini.	656.48	-964	0.9	0	548	7137	5660	2295	7684		7.97	Si
SLV 1	fin.	-468.84	-3116	0.9	0	548	7137	5660	2295	7684		2.47	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.338	SLV 2	Si
V_SLV	1.872	SLV 15	Si
PF_SLU	12.334	SLU 77	Si
V_SLU	7.214	SLU 49	Si

Trave di accoppiamento 145

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	14.57	15.03	0.46	-18.263	-3.314	14.57	15.03	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-51.59	-530	-0.0001	0.0001872	0.0035	0.46		780.23	780.23	No	15.12	Si
SLU 80	fin.	-138.92	-1042	-0.0002942	0.0001872	0.0035	0.46		780.23	780.23	No	5.62	Si
SLU 56	ini.	-36.1	-438	-0.0000691	0.0001872	0.0035	0.46		780.23	780.23	No	21.61	Si
SLU 56	fin.	-140.23	-1045	-0.0002974	0.0001872	0.0035	0.46		780.23	780.23	No	5.56	Si
SLU 75	ini.	-46.18	-480	-0.0000891	0.0001872	0.0035	0.46		780.23	780.23	No	16.9	Si
SLU 75	fin.	-136.21	-1026	-0.0002876	0.0001872	0.0035	0.46		780.23	780.23	No	5.73	Si
SLU 77	ini.	-53.23	-544	-0.0001033	0.0001872	0.0035	0.46		780.23	780.23	No	14.66	Si
SLU 77	fin.	-147.53	-1107	-0.0003155	0.0001872	0.0035	0.46		780.23	780.23	No	5.29	Si
SLU 79	ini.	-50.81	-529	-0.0000984	0.0001872	0.0035	0.46		780.23	780.23	No	15.36	Si
SLU 79	fin.	-139.5	-1046	-0.0002957	0.0001872	0.0035	0.46		780.23	780.23	No	5.59	Si
SLU 84	ini.	-39.78	-461	-0.0000764	0.0001872	0.0035	0.46		780.23	780.23	No	19.61	Si
SLU 84	fin.	-134.92	-1012	-0.0002845	0.0001872	0.0035	0.46		780.23	780.23	No	5.78	Si
SLU 78	ini.	-54.02	-545	-0.0001049	0.0001872	0.0035	0.46		780.23	780.23	No	14.44	Si
SLU 78	fin.	-146.95	-1102	-0.0003141	0.0001872	0.0035	0.46		780.23	780.23	No	5.31	Si
SLU 83	ini.	-39	-459	-0.0000748	0.0001872	0.0035	0.46		780.23	780.23	No	20.01	Si
SLU 83	fin.	-135.5	-1016	-0.0002859	0.0001872	0.0035	0.46		780.23	780.23	No	5.76	Si
SLU 74	ini.	-45.39	-479	-0.0000875	0.0001872	0.0035	0.46		780.23	780.23	No	17.19	Si
SLU 74	fin.	-136.79	-1030	-0.000289	0.0001872	0.0035	0.46		780.23	780.23	No	5.7	Si
SLU 57	ini.	-36.89	-440	-0.0000706	0.0001872	0.0035	0.46		780.23	780.23	No	21.15	Si
SLU 57	fin.	-139.65	-1040	-0.000296	0.0001872	0.0035	0.46		780.23	780.23	No	5.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 57	ini.	-36.89	261	0.46	0	124	3648	1928	1173	3101	No	11.86	Si
SLU 57	fin.	-139.65	-1314	0.46	0	124	3648	1928	1173	3101	No	2.36	Si
SLU 79	ini.	-50.81	298	0.46	0	124	3648	1928	1173	3101	No	10.42	Si
SLU 79	fin.	-139.5	-1285	0.46	0	124	3648	1928	1173	3101	No	2.41	Si
SLU 69	ini.	-62.49	342	0.46	0	124	3648	1928	1173	3101	No	9.06	Si
SLU 69	fin.	-131.79	-1277	0.46	0	124	3648	1928	1173	3101	No	2.43	Si
SLU 74	ini.	-45.39	291	0.46	0	124	3648	1928	1173	3101	No	10.67	Si
SLU 74	fin.	-136.79	-1291	0.46	0	124	3648	1928	1173	3101	No	2.4	Si
SLU 56	ini.	-36.1	259	0.46	0	124	3648	1928	1173	3101	No	11.98	Si
SLU 56	fin.	-140.23	-1317	0.46	0	124	3648	1928	1173	3101	No	2.35	Si
SLU 78	ini.	-54.02	317	0.46	0	124	3648	1928	1173	3101	No	9.77	Si
SLU 78	fin.	-146.95	-1375	0.46	0	124	3648	1928	1173	3101	No	2.26	Si
SLU 77	ini.	-53.23	315	0.46	0	124	3648	1928	1173	3101	No	9.85	Si
SLU 77	fin.	-147.53	-1378	0.46	0	124	3648	1928	1173	3101	No	2.25	Si
SLU 75	ini.	-46.18	293	0.46	0	124	3648	1928	1173	3101	No	10.58	Si
SLU 75	fin.	-136.21	-1288	0.46	0	124	3648	1928	1173	3101	No	2.41	Si
SLU 80	ini.	-51.59	300	0.46	0	124	3648	1928	1173	3101	No	10.33	Si
SLU 80	fin.	-138.92	-1282	0.46	0	124	3648	1928	1173	3101	No	2.42	Si
SLU 70	ini.	-63.27	345	0.46	0	124	3648	1928	1173	3101	No	8.99	Si
SLU 70	fin.	-131.21	-1273	0.46	0	124	3648	1928	1173	3101	No	2.44	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-252.68	-584	-0.0005662	0.0002807	0.0035	0.46		788.4	788.4		3.12	Si
SLV 14	fin.	162.72	882	-0.0003386	0.0002807	0.0035	0.46		785.44	785.44		4.83	Si
SLV 3	ini.	197.21	7	-0.0004228	0.0002807	0.0035	0.46		785.44	785.44		3.98	Si
SLV 3	fin.	-325.84	-2123	-0.000777	0.0002807	0.0035	0.46		788.4	788.4		2.42	Si
SLV 5	ini.	131.02	-211	-0.0002658	0.0002807	0.0035	0.46		785.44	785.44		5.99	Si
SLV 5	fin.	-246.45	-1739	-0.0005493	0.0002807	0.0035	0.46		788.4	788.4		3.2	Si
SLV 6	ini.	146.88	-153	-0.0003017	0.0002807	0.0035	0.46		785.44	785.44		5.35	Si
SLV 6	fin.	-260	-1816	-0.0005863	0.0002807	0.0035	0.46		788.4	788.4		3.03	Si
SLV 1	ini.	249.81	9	-0.0005608	0.0002807	0.0035	0.46		785.44	785.44		3.14	Si
SLV 1	fin.	-378.28	-2502	-0.0009426	0.0002807	0.0035	0.46		788.4	788.4		2.08	Si
SLV 16	ini.	-305.28	-586	-0.0007155	0.0002807	0.0035	0.46		788.4	788.4		2.58	Si
SLV 16	fin.	215.15	1261	-0.0004686	0.0002807	0.0035	0.46		785.44	785.44		3.65	Si
SLV 13	ini.	-277.02	-673	-0.0006338	0.0002807	0.0035	0.46		788.4	788.4		2.85	Si
SLV 13	fin.	183.5	1001	-0.0003887	0.0002807	0.0035	0.46		785.44	785.44		4.28	Si
SLV 2	ini.	274.15	98	-0.0006285	0.0002807	0.0035	0.46		785.44	785.44		2.87	Si
SLV 2	fin.	-399.06	-2621	-0.001012	0.0002807	0.0035	0.46		788.4	788.4		1.98	Si
SLV 4	ini.	221.55	96	-0.0004852	0.0002807	0.0035	0.46		785.44	785.44		3.55	Si
SLV 4	fin.	-346.62	-2242	-0.0008411	0.0002807	0.0035	0.46		788.4	788.4		2.27	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-329.62	-675	-0.0007885	0.0002807	0.0035	0.46		788.4	788.4		2.39	Si
SLV 15	fin.	235.94	1380	-0.0005233	0.0002807	0.0035	0.46		785.44	785.44		3.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	131.02	-327	0.46	0	187	3648	2893	1173	3834		11.72	Si
SLV 5	fin.	-246.45	-1658	0.46	0	187	3648	2893	1173	3834		2.31	Si
SLV 3	ini.	197.21	-586	0.46	0	187	3648	2893	1173	3834		6.54	Si
SLV 3	fin.	-325.84	-1931	0.46	0	187	3648	2893	1173	3834		1.99	Si
SLD 4	ini.	78.62	-168	0.46	0	187	3648	2893	1173	3834		22.84	Si
SLD 4	fin.	-194.61	-1346	0.46	0	187	3648	2893	1173	3834		2.85	Si
SLV 1	ini.	249.81	-750	0.46	0	187	3648	2893	1173	3834		5.11	Si
SLV 1	fin.	-378.28	-2235	0.46	0	187	3648	2893	1173	3834		1.72	Si
SLD 2	ini.	101.62	-239	0.46	0	187	3648	2893	1173	3834		16.01	Si
SLD 2	fin.	-217.74	-1480	0.46	0	187	3648	2893	1173	3834		2.59	Si
SLD 1	ini.	91.16	-211	0.46	0	187	3648	2893	1173	3834		18.15	Si
SLD 1	fin.	-208.81	-1411	0.46	0	187	3648	2893	1173	3834		2.72	Si
SLV 2	ini.	274.15	-816	0.46	0	187	3648	2893	1173	3834		4.7	Si
SLV 2	fin.	-399.06	-2395	0.46	0	187	3648	2893	1173	3834		1.6	Si
SLV 4	ini.	221.55	-652	0.46	0	187	3648	2893	1173	3834		5.88	Si
SLV 4	fin.	-346.62	-2091	0.46	0	187	3648	2893	1173	3834		1.83	Si
SLV 6	ini.	146.88	-370	0.46	0	187	3648	2893	1173	3834		10.36	Si
SLV 6	fin.	-260	-1762	0.46	0	187	3648	2893	1173	3834		2.18	Si
SLD 3	ini.	68.16	-140	0.46	0	187	3648	2893	1173	3834		27.43	Si
SLD 3	fin.	-185.68	-1277	0.46	0	187	3648	2893	1173	3834		3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.976	SLV 2	Si
V_SLV	1.601	SLV 2	Si
PF_SLU	5.289	SLU 77	Si
V_SLU	2.25	SLU 77	Si

Trave di accoppiamento 146

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.518	-0.094	13.97	15.03	1.06	-18.518	0.706	13.97	15.03	1.06	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	75.5	28	-0.0000269	0.0002246	0.0035	1.06		4247.51	4247.51	No	56.26	Si
SLU 69	fin.	-15.15	-6	-0.0000053	0.0002246	0.0035	1.06		4254.05	4254.05	No	280.87	Si
SLU 70	ini.	73.16	26	-0.000026	0.0002246	0.0035	1.06		4247.51	4247.51	No	58.06	Si
SLU 70	fin.	-15.59	-6	-0.0000055	0.0002246	0.0035	1.06		4254.05	4254.05	No	272.85	Si
SLU 48	ini.	72.93	27	-0.0000259	0.0002246	0.0035	1.06		4247.51	4247.51	No	58.24	Si
SLU 48	fin.	-10.49	-5	-0.0000037	0.0002246	0.0035	1.06		4254.05	4254.05	No	405.48	Si
SLU 51	ini.	75.46	19	-0.0000268	0.0002246	0.0035	1.06		4247.51	4247.51	No	56.29	Si
SLU 51	fin.	-8.32	-5	-0.0000029	0.0002246	0.0035	1.06		4254.05	4254.05	No	511.6	Si
SLU 79	ini.	72.76	26	-0.0000259	0.0002246	0.0035	1.06		4247.51	4247.51	No	58.38	Si
SLU 79	fin.	-16.89	-6	-0.000006	0.0002246	0.0035	1.06		4254.05	4254.05	No	251.84	Si
SLU 30	ini.	71.53	19	-0.0000254	0.0002246	0.0035	1.06		4247.51	4247.51	No	59.38	Si
SLU 30	fin.	-12.33	-5	-0.0000043	0.0002246	0.0035	1.06		4254.05	4254.05	No	344.98	Si
SLU 29	ini.	73.87	21	-0.0000263	0.0002246	0.0035	1.06		4247.51	4247.51	No	57.5	Si
SLU 29	fin.	-11.89	-5	-0.0000042	0.0002246	0.0035	1.06		4254.05	4254.05	No	357.89	Si
SLU 50	ini.	77.8	21	-0.0000277	0.0002246	0.0035	1.06		4247.51	4247.51	No	54.6	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 50	fin.	-7.87	-5	-0.0000028	0.0002246	0.0035	1.06		4254.05	4254.05	No	540.51	Si
SLU 72	ini.	78.03	21	-0.0000278	0.0002246	0.0035	1.06		4247.51	4247.51	No	54.44	Si
SLU 72	fin.	-12.97	-6	-0.0000046	0.0002246	0.0035	1.06		4254.05	4254.05	No	327.99	Si
SLU 71	ini.	80.36	23	-0.0000286	0.0002246	0.0035	1.06		4247.51	4247.51	No	52.85	Si
SLU 71	fin.	-12.53	-6	-0.0000044	0.0002246	0.0035	1.06		4254.05	4254.05	No	339.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	77.8	47	1.06	0	215	6344	2667	2703	5370	No	115.11	Si
SLU 50	fin.	-7.87	-248	1.06	0	215	6344	2667	2703	5370	No	21.64	Si
SLU 69	ini.	75.5	40	1.06	0	215	6344	2667	2703	5370	No	132.71	Si
SLU 69	fin.	-15.15	-267	1.06	0	215	6344	2667	2703	5370	No	20.09	Si
SLU 70	ini.	73.16	44	1.06	0	215	6344	2667	2703	5370	No	121.33	Si
SLU 70	fin.	-15.59	-264	1.06	0	215	6344	2667	2703	5370	No	20.38	Si
SLU 80	ini.	70.42	47	1.06	0	215	6344	2667	2703	5370	No	114.44	Si
SLU 80	fin.	-17.34	-261	1.06	0	215	6344	2667	2703	5370	No	20.59	Si
SLU 77	ini.	67.89	42	1.06	0	215	6344	2667	2703	5370	No	126.63	Si
SLU 77	fin.	-19.51	-265	1.06	0	215	6344	2667	2703	5370	No	20.23	Si
SLU 71	ini.	80.36	41	1.06	0	215	6344	2667	2703	5370	No	130.38	Si
SLU 71	fin.	-12.53	-267	1.06	0	215	6344	2667	2703	5370	No	20.14	Si
SLU 78	ini.	65.55	46	1.06	0	215	6344	2667	2703	5370	No	116.23	Si
SLU 78	fin.	-19.96	-262	1.06	0	215	6344	2667	2703	5370	No	20.53	Si
SLU 79	ini.	72.76	43	1.06	0	215	6344	2667	2703	5370	No	124.51	Si
SLU 79	fin.	-16.89	-265	1.06	0	215	6344	2667	2703	5370	No	20.29	Si
SLU 48	ini.	72.93	46	1.06	0	215	6344	2667	2703	5370	No	116.92	Si
SLU 48	fin.	-10.49	-249	1.06	0	215	6344	2667	2703	5370	No	21.58	Si
SLU 72	ini.	78.03	45	1.06	0	215	6344	2667	2703	5370	No	119.38	Si
SLU 72	fin.	-12.97	-263	1.06	0	215	6344	2667	2703	5370	No	20.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-170.12	-921	-0.0000608	0.0003369	0.0035	1.06		4366.52	4366.52		25.67	Si
SLV 10	fin.	-143.87	-572	-0.0000513	0.0003369	0.0035	1.06		4366.52	4366.52		30.35	Si
SLV 8	ini.	205.34	927	-0.0000738	0.0003369	0.0035	1.06		4359.69	4359.69		21.23	Si
SLV 8	fin.	122.15	565	-0.0000435	0.0003369	0.0035	1.06		4359.69	4359.69		35.69	Si
SLV 12	ini.	190.43	869	-0.0000683	0.0003369	0.0035	1.06		4359.69	4359.69		22.89	Si
SLV 12	fin.	100.84	497	-0.0000359	0.0003369	0.0035	1.06		4359.69	4359.69		43.24	Si
SLD 7	ini.	108.08	416	-0.0000385	0.0003369	0.0035	1.06		4359.69	4359.69		40.34	Si
SLD 7	fin.	46.12	240	-0.0000163	0.0003369	0.0035	1.06		4359.69	4359.69		94.54	Si
SLV 6	ini.	-155.21	-863	-0.0000554	0.0003369	0.0035	1.06		4366.52	4366.52		28.13	Si
SLV 6	fin.	-122.56	-505	-0.0000436	0.0003369	0.0035	1.06		4366.52	4366.52		35.63	Si
SLV 9	ini.	-159.01	-910	-0.0000568	0.0003369	0.0035	1.06		4366.52	4366.52		27.46	Si
SLV 9	fin.	-142.2	-572	-0.0000507	0.0003369	0.0035	1.06		4366.52	4366.52		30.71	Si
SLV 7	ini.	216.44	938	-0.0000778	0.0003369	0.0035	1.06		4359.69	4359.69		20.14	Si
SLV 7	fin.	123.82	565	-0.0000441	0.0003369	0.0035	1.06		4359.69	4359.69		35.21	Si
SLV 11	ini.	201.53	880	-0.0000724	0.0003369	0.0035	1.06		4359.69	4359.69		21.63	Si
SLV 11	fin.	102.51	497	-0.0000365	0.0003369	0.0035	1.06		4359.69	4359.69		42.53	Si
SLV 5	ini.	-144.11	-852	-0.0000514	0.0003369	0.0035	1.06		4366.52	4366.52		30.3	Si
SLV 5	fin.	-120.89	-505	-0.000043	0.0003369	0.0035	1.06		4366.52	4366.52		36.12	Si
SLV 3	ini.	110.6	382	-0.0000394	0.0003369	0.0035	1.06		4359.69	4359.69		39.42	Si
SLV 3	fin.	63.48	270	-0.0000225	0.0003369	0.0035	1.06		4359.69	4359.69		68.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-144.11	-185	1.06	0	323	6344	4000	2703	6666		36.09	Si
SLV 5	fin.	-120.89	-560	1.06	0	323	6344	4000	2703	6666		11.91	Si
SLD 9	ini.	-56.9	-37	1.06	0	323	6344	4000	2703	6666		181.86	Si
SLD 9	fin.	-65.44	-335	1.06	0	323	6344	4000	2703	6666		19.9	Si
SLV 8	ini.	205.34	363	1.06	0	323	6344	4000	2703	6666		18.38	Si
SLV 8	fin.	122.15	273	1.06	0	323	6344	4000	2703	6666		24.43	Si
SLV 6	ini.	-155.21	-166	1.06	0	323	6344	4000	2703	6666		40.28	Si
SLV 6	fin.	-122.56	-540	1.06	0	323	6344	4000	2703	6666		12.34	Si
SLV 12	ini.	190.43	355	1.06	0	323	6344	4000	2703	6666		18.8	Si
SLV 12	fin.	100.84	262	1.06	0	323	6344	4000	2703	6666		25.48	Si
SLV 9	ini.	-159.01	-193	1.06	0	323	6344	4000	2703	6666		34.58	Si
SLV 9	fin.	-142.2	-571	1.06	0	323	6344	4000	2703	6666		11.68	Si
SLV 7	ini.	216.44	343	1.06	0	323	6344	4000	2703	6666		19.41	Si
SLV 7	fin.	123.82	254	1.06	0	323	6344	4000	2703	6666		26.28	Si
SLV 10	ini.	-170.12	-174	1.06	0	323	6344	4000	2703	6666		38.41	Si
SLV 10	fin.	-143.87	-552	1.06	0	323	6344	4000	2703	6666		12.09	Si
SLV 11	ini.	201.53	335	1.06	0	323	6344	4000	2703	6666		19.88	Si
SLV 11	fin.	102.51	242	1.06	0	323	6344	4000	2703	6666		27.5	Si
SLD 5	ini.	-50.65	-33	1.06	0	323	6344	4000	2703	6666		200.83	Si
SLD 5	fin.	-56.44	-330	1.06	0	323	6344	4000	2703	6666		20.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	20.143	SLV 7	Si
V_SLV	11.679	SLV 9	Si
PF_SLU	52.853	SLU 71	Si
V_SLU	20.088	SLU 69	Si

Trave di accoppiamento 147

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	11.87	12.77	0.9	-16.818	6.526	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 60	ini.	250.07	-900	-0.0001289	0.0001872	0.0035	0.9		2959	2959	No	11.83	Si
SLU 60	fin.	-74.86	-268	-0.0000371	0.0001872	0.0035	0.9		2964.67	2964.67	No	39.6	Si
SLU 82	ini.	246.32	-894	-0.0001268	0.0001872	0.0035	0.9		2959	2959	No	12.01	Si
SLU 82	fin.	-76.51	-273	-0.0000379	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.75	Si
SLU 52	ini.	241.73	-881	-0.0001243	0.0001872	0.0035	0.9		2959	2959	No	12.24	Si
SLU 52	fin.	-65.27	-287	-0.0000323	0.0001872	0.0035	0.9		2964.67	2964.67	No	45.42	Si
SLU 61	ini.	247.73	-893	-0.0001276	0.0001872	0.0035	0.9		2959	2959	No	11.94	Si
SLU 61	fin.	-74.05	-268	-0.0000367	0.0001872	0.0035	0.9		2964.67	2964.67	No	40.04	Si
SLU 43	ini.	235.28	-877	-0.0001208	0.0001872	0.0035	0.9		2959	2959	No	12.58	Si
SLU 43	fin.	-47.4	-332	-0.0000234	0.0001872	0.0035	0.9		2964.67	2964.67	No	62.55	Si
SLU 81	ini.	248.66	-901	-0.0001281	0.0001872	0.0035	0.9		2959	2959	No	11.9	Si
SLU 81	fin.	-77.32	-274	-0.0000383	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.34	Si
SLU 64	ini.	233.87	-878	-0.0001201	0.0001872	0.0035	0.9		2959	2959	No	12.65	Si
SLU 64	fin.	-49.85	-338	-0.0000246	0.0001872	0.0035	0.9		2964.67	2964.67	No	59.47	Si
SLU 65	ini.	229.96	-867	-0.0001179	0.0001872	0.0035	0.9		2959	2959	No	12.87	Si
SLU 65	fin.	-48.5	-337	-0.0000239	0.0001872	0.0035	0.9		2964.67	2964.67	No	61.13	Si
SLU 44	ini.	231.38	-865	-0.0001187	0.0001872	0.0035	0.9		2959	2959	No	12.79	Si
SLU 44	fin.	-46.04	-332	-0.0000227	0.0001872	0.0035	0.9		2964.67	2964.67	No	64.39	Si
SLU 73	ini.	240.32	-883	-0.0001235	0.0001872	0.0035	0.9		2959	2959	No	12.31	Si
SLU 73	fin.	-67.72	-292	-0.0000335	0.0001872	0.0035	0.9		2964.67	2964.67	No	43.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 46	ini.	216.47	-930	0.9	0	365	7137	3773	2295	6068	No	6.52	Si
SLU 46	fin.	-21.37	-28	0.9	0	365	7137	3773	2295	6068	No	213.22	Si
SLU 81	ini.	248.66	-930	0.9	0	365	7137	3773	2295	6068	No	6.53	Si
SLU 81	fin.	-77.32	-422	0.9	0	365	7137	3773	2295	6068	No	14.37	Si
SLU 60	ini.	250.07	-960	0.9	0	365	7137	3773	2295	6068	No	6.32	Si
SLU 60	fin.	-74.86	-393	0.9	0	365	7137	3773	2295	6068	No	15.46	Si
SLU 64	ini.	233.87	-940	0.9	0	365	7137	3773	2295	6068	No	6.45	Si
SLU 64	fin.	-49.85	-225	0.9	0	365	7137	3773	2295	6068	No	26.96	Si
SLU 43	ini.	235.28	-970	0.9	0	365	7137	3773	2295	6068	No	6.25	Si
SLU 43	fin.	-47.4	-195	0.9	0	365	7137	3773	2295	6068	No	31.07	Si
SLU 52	ini.	241.73	-948	0.9	0	365	7137	3773	2295	6068	No	6.4	Si
SLU 52	fin.	-65.27	-326	0.9	0	365	7137	3773	2295	6068	No	18.62	Si
SLU 44	ini.	231.38	-956	0.9	0	365	7137	3773	2295	6068	No	6.35	Si
SLU 44	fin.	-46.04	-188	0.9	0	365	7137	3773	2295	6068	No	32.31	Si
SLU 53	ini.	229.17	-932	0.9	0	365	7137	3773	2295	6068	No	6.51	Si
SLU 53	fin.	-41.41	-171	0.9	0	365	7137	3773	2295	6068	No	35.48	Si
SLU 45	ini.	218.81	-939	0.9	0	365	7137	3773	2295	6068	No	6.46	Si
SLU 45	fin.	-22.19	-33	0.9	0	365	7137	3773	2295	6068	No	184.08	Si
SLU 61	ini.	247.73	-951	0.9	0	365	7137	3773	2295	6068	No	6.38	Si
SLU 61	fin.	-74.05	-388	0.9	0	365	7137	3773	2295	6068	No	15.64	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	282.54	-937	-0.0001442	0.0002807	0.0035	0.9		2989.59	2989.59		10.58	Si
SLD 16	fin.	-135.67	-114	-0.0000675	0.0002807	0.0035	0.9		2995.37	2995.37		22.08	Si
SLV 13	ini.	436.16	-1407	-0.0002287	0.0002807	0.0035	0.9		2989.59	2989.59		6.85	Si
SLV 13	fin.	-215.79	-60	-0.0001088	0.0002807	0.0035	0.9		2995.37	2995.37		13.88	Si
SLV 15	ini.	420.27	-1261	-0.0002197	0.0002807	0.0035	0.9		2989.59	2989.59		7.11	Si
SLV 15	fin.	-280.22	130	-0.0001427	0.0002807	0.0035	0.9		2995.37	2995.37		10.69	Si
SLV 16	ini.	415.14	-1282	-0.0002169	0.0002807	0.0035	0.9		2989.59	2989.59		7.2	Si
SLV 16	fin.	-258.24	59	-0.000131	0.0002807	0.0035	0.9		2995.37	2995.37		11.6	Si
SLV 14	ini.	431.03	-1428	-0.0002258	0.0002807	0.0035	0.9		2989.59	2989.59		6.94	Si
SLV 14	fin.	-193.82	-131	-0.0000974	0.0002807	0.0035	0.9		2995.37	2995.37		15.45	Si
SLD 14	ini.	289.27	-1001	-0.0001478	0.0002807	0.0035	0.9		2989.59	2989.59		10.33	Si
SLD 14	fin.	-107.32	-198	-0.0000532	0.0002807	0.0035	0.9		2995.37	2995.37		27.91	Si
SLD 15	ini.	284.74	-928	-0.0001454	0.0002807	0.0035	0.9		2989.59	2989.59		10.5	Si
SLD 15	fin.	-145.11	-83	-0.0000724	0.0002807	0.0035	0.9		2995.37	2995.37		20.64	Si
SLD 13	ini.	291.48	-992	-0.000149	0.0002807	0.0035	0.9		2989.59	2989.59		10.26	Si
SLD 13	fin.	-116.75	-168	-0.000058	0.0002807	0.0035	0.9		2995.37	2995.37		25.66	Si
SLV 10	ini.	280.73	-1130	-0.0001433	0.0002807	0.0035	0.9		2989.59	2989.59		10.65	Si
SLV 10	fin.	13.12	-513	-0.0000064	0.0002807	0.0035	0.9		2989.59	2989.59		227.84	Si
SLV 9	ini.	284.07	-1116	-0.000145	0.0002807	0.0035	0.9		2989.59	2989.59		10.52	Si
SLV 9	fin.	-1.2	-466	-0.0000006	0.0002807	0.0035	0.9		2995.37	2995.37		2505.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	289.27	-1092	0.9	0	548	7137	5660	2295	7684		7.03	Si
SLD 14	fin.	-107.32	-518	0.9	0	548	7137	5660	2295	7684		14.84	Si
SLD 13	ini.	291.48	-1110	0.9	0	548	7137	5660	2295	7684		6.92	Si
SLD 13	fin.	-116.75	-550	0.9	0	548	7137	5660	2295	7684		13.96	Si
SLV 9	ini.	284.07	-1033	0.9	0	548	7137	5660	2295	7684		7.44	Si
SLV 9	fin.	-1.2	-103	0.9	0	548	7137	5660	2295	7684		74.34	Si
SLV 15	ini.	420.27	-1602	0.9	0	548	7137	5660	2295	7684		4.8	Si
SLV 15	fin.	-280.22	-1251	0.9	0	548	7137	5660	2295	7684		6.14	Si
SLD 16	ini.	282.54	-1085	0.9	0	548	7137	5660	2295	7684		7.08	Si
SLD 16	fin.	-135.67	-623	0.9	0	548	7137	5660	2295	7684		12.34	Si
SLV 13	ini.	436.16	-1622	0.9	0	548	7137	5660	2295	7684		4.74	Si
SLV 13	fin.	-215.79	-1015	0.9	0	548	7137	5660	2295	7684		7.57	Si
SLV 16	ini.	415.14	-1560	0.9	0	548	7137	5660	2295	7684		4.92	Si
SLV 16	fin.	-258.24	-1176	0.9	0	548	7137	5660	2295	7684		6.54	Si
SLV 14	ini.	431.03	-1580	0.9	0	548	7137	5660	2295	7684		4.86	Si
SLV 14	fin.	-193.82	-939	0.9	0	548	7137	5660	2295	7684		8.18	Si
SLV 10	ini.	280.73	-1006	0.9	0	548	7137	5660	2295	7684		7.64	Si
SLV 10	fin.	13.12	-54	0.9	0	548	7137	5660	2295	7684		141.86	Si
SLD 15	ini.	284.74	-1103	0.9	0	548	7137	5660	2295	7684		6.97	Si
SLD 15	fin.	-145.11	-655	0.9	0	548	7137	5660	2295	7684		11.73	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.854	SLV 13	Si
V_SLV	4.739	SLV 13	Si
PF_SLU	11.833	SLU 60	Si
V_SLU	6.253	SLU 43	Si

Trave di accoppiamento 148

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.718	6.526	14.57	15.03	0.46	-16.818	6.526	14.57	15.03	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	32.32	321	-0.0000619	0.0001872	0.0035	0.46		777.36	777.36	No	24.06	Si
SLU 77	fin.	-148.09	-528	-0.0003169	0.0001872	0.0035	0.46		780.23	780.23	No	5.27	Si
SLU 82	ini.	55.99	339	-0.0001093	0.0001872	0.0035	0.46		777.36	777.36	No	13.88	Si
SLU 82	fin.	-142.86	-561	-0.0003039	0.0001872	0.0035	0.46		780.23	780.23	No	5.46	Si
SLU 66	ini.	33.29	299	-0.0000638	0.0001872	0.0035	0.46		777.36	777.36	No	23.35	Si
SLU 66	fin.	-144.67	-532	-0.0003084	0.0001872	0.0035	0.46		780.23	780.23	No	5.39	Si
SLU 75	ini.	40.74	327	-0.0000785	0.0001872	0.0035	0.46		777.36	777.36	No	19.08	Si
SLU 75	fin.	-148.29	-549	-0.0003174	0.0001872	0.0035	0.46		780.23	780.23	No	5.26	Si
SLU 78	ini.	31.54	320	-0.0000604	0.0001872	0.0035	0.46		777.36	777.36	No	24.65	Si
SLU 78	fin.	-147.33	-523	-0.000315	0.0001872	0.0035	0.46		780.23	780.23	No	5.3	Si
SLU 70	ini.	23.31	292	-0.0000443	0.0001872	0.0035	0.46		777.36	777.36	No	33.35	Si
SLU 70	fin.	-142.96	-500	-0.0003042	0.0001872	0.0035	0.46		780.23	780.23	No	5.46	Si
SLU 74	ini.	41.52	327	-0.0000801	0.0001872	0.0035	0.46		777.36	777.36	No	18.72	Si
SLU 74	fin.	-149.05	-555	-0.0003193	0.0001872	0.0035	0.46		780.23	780.23	No	5.23	Si
SLU 81	ini.	56.77	340	-0.0001109	0.0001872	0.0035	0.46		777.36	777.36	No	13.69	Si
SLU 81	fin.	-143.62	-566	-0.0003058	0.0001872	0.0035	0.46		780.23	780.23	No	5.43	Si
SLU 69	ini.	24.09	293	-0.0000458	0.0001872	0.0035	0.46		777.36	777.36	No	32.27	Si
SLU 69	fin.	-143.71	-505	-0.000306	0.0001872	0.0035	0.46		780.23	780.23	No	5.43	Si
SLU 67	ini.	32.51	298	-0.0000623	0.0001872	0.0035	0.46		777.36	777.36	No	23.91	Si
SLU 67	fin.	-143.91	-527	-0.0003065	0.0001872	0.0035	0.46		780.23	780.23	No	5.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	24.09	100	0.46	0	124	3648	1928	1173	3101	No	31.17	Si
SLU 69	fin.	-143.71	-981	0.46	0	124	3648	1928	1173	3101	No	3.16	Si
SLU 77	ini.	32.32	66	0.46	0	124	3648	1928	1173	3101	No	47.34	Si
SLU 77	fin.	-148.09	-1002	0.46	0	124	3648	1928	1173	3101	No	3.1	Si
SLU 67	ini.	32.51	52	0.46	0	124	3648	1928	1173	3101	No	59.72	Si
SLU 67	fin.	-143.91	-965	0.46	0	124	3648	1928	1173	3101	No	3.21	Si
SLU 70	ini.	23.31	104	0.46	0	124	3648	1928	1173	3101	No	29.93	Si
SLU 70	fin.	-142.96	-978	0.46	0	124	3648	1928	1173	3101	No	3.17	Si
SLU 57	ini.	30.55	61	0.46	0	124	3648	1928	1173	3101	No	50.61	Si
SLU 57	fin.	-140.71	-949	0.46	0	124	3648	1928	1173	3101	No	3.27	Si
SLU 75	ini.	40.74	18	0.46	0	124	3648	1928	1173	3101	No	172.93	Si
SLU 75	fin.	-148.29	-987	0.46	0	124	3648	1928	1173	3101	No	3.14	Si
SLU 66	ini.	33.29	48	0.46	0	124	3648	1928	1173	3101	No	64.84	Si
SLU 66	fin.	-144.67	-968	0.46	0	124	3648	1928	1173	3101	No	3.2	Si
SLU 74	ini.	41.52	14	0.46	0	124	3648	1928	1173	3101	No	224.21	Si
SLU 74	fin.	-149.05	-989	0.46	0	124	3648	1928	1173	3101	No	3.14	Si
SLU 56	ini.	31.33	57	0.46	0	124	3648	1928	1173	3101	No	54.24	Si
SLU 56	fin.	-141.46	-952	0.46	0	124	3648	1928	1173	3101	No	3.26	Si
SLU 78	ini.	31.54	70	0.46	0	124	3648	1928	1173	3101	No	44.55	Si
SLU 78	fin.	-147.33	-999	0.46	0	124	3648	1928	1173	3101	No	3.1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 16	ini.	1.35	67	-0.0000025	0.0002807	0.0035	0.46		785.44	785.44		582.04	Si
SLD 16	fin.	-130.42	-549	-0.0002635	0.0002807	0.0035	0.46		788.4	788.4		6.05	Si
SLV 13	ini.	-57.94	-225	-0.0001115	0.0002807	0.0035	0.46		788.4	788.4		13.61	Si
SLV 13	fin.	-157.77	-727	-0.0003257	0.0002807	0.0035	0.46		788.4	788.4		5	Si
SLV 3	ini.	146.51	759	-0.0003009	0.0002807	0.0035	0.46		785.44	785.44		5.36	Si
SLV 3	fin.	-63.92	-143	-0.0001235	0.0002807	0.0035	0.46		788.4	788.4		12.33	Si
SLV 14	ini.	-72.99	-293	-0.0001418	0.0002807	0.0035	0.46		788.4	788.4		10.8	Si
SLV 14	fin.	-146.99	-684	-0.0003008	0.0002807	0.0035	0.46		788.4	788.4		5.36	Si
SLV 16	ini.	-46.6	-158	-0.0000891	0.0002807	0.0035	0.46		788.4	788.4		16.92	Si
SLV 16	fin.	-163.68	-730	-0.0003395	0.0002807	0.0035	0.46		788.4	788.4		4.82	Si
SLV 11	ini.	58.94	352	-0.0001139	0.0002807	0.0035	0.46		785.44	785.44		13.33	Si
SLV 11	fin.	-153.36	-598	-0.0003154	0.0002807	0.0035	0.46		788.4	788.4		5.14	Si
SLV 15	ini.	-31.55	-91	-0.0000598	0.0002807	0.0035	0.46		788.4	788.4		24.99	Si
SLV 15	fin.	-174.46	-772	-0.0003652	0.0002807	0.0035	0.46		788.4	788.4		4.52	Si
SLD 15	ini.	7.82	96	-0.0000147	0.0002807	0.0035	0.46		785.44	785.44		100.5	Si
SLD 15	fin.	-135.05	-567	-0.0002738	0.0002807	0.0035	0.46		788.4	788.4		5.84	Si
SLV 12	ini.	49.13	308	-0.0000944	0.0002807	0.0035	0.46		785.44	785.44		15.99	Si
SLV 12	fin.	-146.34	-571	-0.0002993	0.0002807	0.0035	0.46		788.4	788.4		5.39	Si
SLV 4	ini.	131.46	692	-0.0002668	0.0002807	0.0035	0.46		785.44	785.44		5.97	Si
SLV 4	fin.	-53.15	-101	-0.000102	0.0002807	0.0035	0.46		788.4	788.4		14.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	58.94	-122	0.46	0	187	3648	2893	1173	3834		31.34	Si
SLV 11	fin.	-153.36	-901	0.46	0	187	3648	2893	1173	3834		4.26	Si
SLD 15	ini.	7.82	74	0.46	0	187	3648	2893	1173	3834		51.72	Si
SLD 15	fin.	-135.05	-798	0.46	0	187	3648	2893	1173	3834		4.81	Si
SLV 16	ini.	-46.6	270	0.46	0	187	3648	2893	1173	3834		14.18	Si
SLV 16	fin.	-163.68	-886	0.46	0	187	3648	2893	1173	3834		4.33	Si
SLV 7	ini.	112.36	-318	0.46	0	187	3648	2893	1173	3834		12.06	Si
SLV 7	fin.	-120.2	-785	0.46	0	187	3648	2893	1173	3834		4.88	Si
SLV 13	ini.	-57.94	320	0.46	0	187	3648	2893	1173	3834		11.99	Si
SLV 13	fin.	-157.77	-867	0.46	0	187	3648	2893	1173	3834		4.42	Si
SLV 12	ini.	49.13	-87	0.46	0	187	3648	2893	1173	3834		43.91	Si
SLV 12	fin.	-146.34	-859	0.46	0	187	3648	2893	1173	3834		4.46	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-72.99	373	0.46	0	187	3648	2893	1173	3834		10.27	Si
SLV 14	fin.	-146.99	-803	0.46	0	187	3648	2893	1173	3834		4.78	Si
SLV 15	ini.	-31.55	217	0.46	0	187	3648	2893	1173	3834		17.7	Si
SLV 15	fin.	-174.46	-950	0.46	0	187	3648	2893	1173	3834		4.04	Si
SLD 16	ini.	1.35	97	0.46	0	187	3648	2893	1173	3834		39.43	Si
SLD 16	fin.	-130.42	-770	0.46	0	187	3648	2893	1173	3834		4.98	Si
SLD 11	ini.	46.98	-73	0.46	0	187	3648	2893	1173	3834		52.88	Si
SLD 11	fin.	-126.21	-778	0.46	0	187	3648	2893	1173	3834		4.93	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.519	SLV 15	Si
V_SLV	4.038	SLV 15	Si
PF_SLU	5.235	SLU 74	Si
V_SLU	3.096	SLU 77	Si

Trave di accoppiamento 149

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	11.87	12.77	0.9	-11.938	6.526	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	207.35	-1115	-0.0001058	0.0001872	0.0035	0.9		2959	2959	No	14.27	Si
SLU 84	fin.	-93.81	-509	-0.0000466	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.6	Si
SLU 82	ini.	203.77	-1083	-0.0001039	0.0001872	0.0035	0.9		2959	2959	No	14.52	Si
SLU 82	fin.	-102.81	-471	-0.0000512	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.84	Si
SLU 79	ini.	206.5	-1141	-0.0001053	0.0001872	0.0035	0.9		2959	2959	No	14.33	Si
SLU 79	fin.	-69.34	-571	-0.0000343	0.0001872	0.0035	0.9		2964.67	2964.67	No	42.76	Si
SLU 77	ini.	216.62	-1200	-0.0001108	0.0001872	0.0035	0.9		2959	2959	No	13.66	Si
SLU 77	fin.	-67.3	-608	-0.0000333	0.0001872	0.0035	0.9		2964.67	2964.67	No	44.05	Si
SLU 78	ini.	215.24	-1194	-0.00011	0.0001872	0.0035	0.9		2959	2959	No	13.75	Si
SLU 78	fin.	-66.38	-606	-0.0000328	0.0001872	0.0035	0.9		2964.67	2964.67	No	44.66	Si
SLU 80	ini.	205.12	-1134	-0.0001046	0.0001872	0.0035	0.9		2959	2959	No	14.43	Si
SLU 80	fin.	-68.42	-570	-0.0000338	0.0001872	0.0035	0.9		2964.67	2964.67	No	43.33	Si
SLU 75	ini.	211.66	-1162	-0.0001081	0.0001872	0.0035	0.9		2959	2959	No	13.98	Si
SLU 75	fin.	-75.37	-569	-0.0000373	0.0001872	0.0035	0.9		2964.67	2964.67	No	39.33	Si
SLU 81	ini.	205.15	-1090	-0.0001046	0.0001872	0.0035	0.9		2959	2959	No	14.42	Si
SLU 81	fin.	-103.73	-473	-0.0000517	0.0001872	0.0035	0.9		2964.67	2964.67	No	28.58	Si
SLU 83	ini.	208.73	-1121	-0.0001065	0.0001872	0.0035	0.9		2959	2959	No	14.18	Si
SLU 83	fin.	-94.73	-510	-0.0000471	0.0001872	0.0035	0.9		2964.67	2964.67	No	31.3	Si
SLU 74	ini.	213.04	-1169	-0.0001088	0.0001872	0.0035	0.9		2959	2959	No	13.89	Si
SLU 74	fin.	-76.29	-571	-0.0000378	0.0001872	0.0035	0.9		2964.67	2964.67	No	38.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	203.04	-1684	0.9	0	365	7137	3773	2295	6068	No	3.6	Si
SLU 69	fin.	-29.05	-98	0.9	0	365	7137	3773	2295	6068	No	61.78	Si
SLU 56	ini.	203.36	-1643	0.9	0	365	7137	3773	2295	6068	No	3.69	Si
SLU 56	fin.	-50.32	-181	0.9	0	365	7137	3773	2295	6068	No	33.62	Si
SLU 70	ini.	201.66	-1674	0.9	0	365	7137	3773	2295	6068	No	3.62	Si
SLU 70	fin.	-28.13	-95	0.9	0	365	7137	3773	2295	6068	No	63.85	Si
SLU 77	ini.	216.62	-1711	0.9	0	365	7137	3773	2295	6068	No	3.55	Si
SLU 77	fin.	-67.3	-237	0.9	0	365	7137	3773	2295	6068	No	25.6	Si
SLU 66	ini.	199.46	-1623	0.9	0	365	7137	3773	2295	6068	No	3.74	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	fin.	-38.04	-142	0.9	0	365	7137	3773	2295	6068	No	42.72	Si
SLU 74	ini.	213.04	-1651	0.9	0	365	7137	3773	2295	6068	No	3.68	Si
SLU 74	fin.	-76.29	-281	0.9	0	365	7137	3773	2295	6068	No	21.61	Si
SLU 57	ini.	201.97	-1633	0.9	0	365	7137	3773	2295	6068	No	3.71	Si
SLU 57	fin.	-49.4	-177	0.9	0	365	7137	3773	2295	6068	No	34.22	Si
SLU 79	ini.	206.5	-1629	0.9	0	365	7137	3773	2295	6068	No	3.72	Si
SLU 79	fin.	-69.34	-248	0.9	0	365	7137	3773	2295	6068	No	24.48	Si
SLU 78	ini.	215.24	-1702	0.9	0	365	7137	3773	2295	6068	No	3.57	Si
SLU 78	fin.	-66.38	-234	0.9	0	365	7137	3773	2295	6068	No	25.95	Si
SLU 75	ini.	211.66	-1642	0.9	0	365	7137	3773	2295	6068	No	3.7	Si
SLU 75	fin.	-75.37	-278	0.9	0	365	7137	3773	2295	6068	No	21.86	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-494.28	1508	-0.0002616	0.0002807	0.0035	0.9		2995.37	2995.37		6.06	Si
SLV 3	fin.	1059.51	-1392	-0.0006374	0.0002807	0.0035	0.9		2989.59	2989.59		2.82	Si
SLV 15	ini.	724.8	-2860	-0.0004039	0.0002807	0.0035	0.9		2989.59	2989.59		4.12	Si
SLV 15	fin.	-1118.85	724	-0.0006805	0.0002807	0.0035	0.9		2995.37	2995.37		2.68	Si
SLV 1	ini.	-454.12	1310	-0.0002385	0.0002807	0.0035	0.9		2995.37	2995.37		6.6	Si
SLV 1	fin.	1059.15	-1569	-0.0006371	0.0002807	0.0035	0.9		2989.59	2989.59		2.82	Si
SLD 16	ini.	399.45	-1707	-0.0002081	0.0002807	0.0035	0.9		2989.59	2989.59		7.48	Si
SLD 16	fin.	-517.34	88	-0.000275	0.0002807	0.0035	0.9		2995.37	2995.37		5.79	Si
SLV 2	ini.	-437.1	1252	-0.0002288	0.0002807	0.0035	0.9		2995.37	2995.37		6.85	Si
SLV 2	fin.	1028.94	-1542	-0.0006147	0.0002807	0.0035	0.9		2989.59	2989.59		2.91	Si
SLV 13	ini.	764.95	-3058	-0.0004303	0.0002807	0.0035	0.9		2989.59	2989.59		3.91	Si
SLV 13	fin.	-1119.21	548	-0.0006808	0.0002807	0.0035	0.9		2995.37	2995.37		2.68	Si
SLD 14	ini.	417.09	-1794	-0.0002179	0.0002807	0.0035	0.9		2989.59	2989.59		7.17	Si
SLD 14	fin.	-517.49	11	-0.0002751	0.0002807	0.0035	0.9		2995.37	2995.37		5.79	Si
SLV 14	ini.	781.98	-3116	-0.0004416	0.0002807	0.0035	0.9		2989.59	2989.59		3.82	Si
SLV 14	fin.	-1149.42	574	-0.0007038	0.0002807	0.0035	0.9		2995.37	2995.37		2.61	Si
SLV 16	ini.	741.82	-2918	-0.0004151	0.0002807	0.0035	0.9		2989.59	2989.59		4.03	Si
SLV 16	fin.	-1149.06	751	-0.0007036	0.0002807	0.0035	0.9		2995.37	2995.37		2.61	Si
SLV 4	ini.	-477.25	1450	-0.0002517	0.0002807	0.0035	0.9		2995.37	2995.37		6.28	Si
SLV 4	fin.	1029.3	-1366	-0.000615	0.0002807	0.0035	0.9		2989.59	2989.59		2.9	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	409.77	-2638	0.9	0	548	7137	5660	2295	7684		2.91	Si
SLD 13	fin.	-504.52	-1696	0.9	0	548	7137	5660	2295	7684		4.53	Si
SLV 15	ini.	724.8	-4429	0.9	0	548	7137	5660	2295	7684		1.74	Si
SLV 15	fin.	-1118.85	-3748	0.9	0	548	7137	5660	2295	7684		2.05	Si
SLV 3	ini.	-494.28	2451	0.9	0	548	7137	5660	2295	7684		3.14	Si
SLV 3	fin.	1059.51	3468	0.9	0	548	7137	5660	2295	7684		2.22	Si
SLV 4	ini.	-477.25	2385	0.9	0	548	7137	5660	2295	7684		3.22	Si
SLV 4	fin.	1029.3	3367	0.9	0	548	7137	5660	2295	7684		2.28	Si
SLV 16	ini.	741.82	-4494	0.9	0	548	7137	5660	2295	7684		1.71	Si
SLV 16	fin.	-1149.06	-3849	0.9	0	548	7137	5660	2295	7684		2	Si
SLV 1	ini.	-454.12	2231	0.9	0	548	7137	5660	2295	7684		3.44	Si
SLV 1	fin.	1059.15	3492	0.9	0	548	7137	5660	2295	7684		2.2	Si
SLV 13	ini.	764.95	-4649	0.9	0	548	7137	5660	2295	7684		1.65	Si
SLV 13	fin.	-1119.21	-3724	0.9	0	548	7137	5660	2295	7684		2.06	Si
SLV 14	ini.	781.98	-4714	0.9	0	548	7137	5660	2295	7684		1.63	Si
SLV 14	fin.	-1149.42	-3825	0.9	0	548	7137	5660	2295	7684		2.01	Si
SLV 2	ini.	-437.1	2165	0.9	0	548	7137	5660	2295	7684		3.55	Si
SLV 2	fin.	1028.94	3391	0.9	0	548	7137	5660	2295	7684		2.27	Si
SLD 14	ini.	417.09	-2666	0.9	0	548	7137	5660	2295	7684		2.88	Si
SLD 14	fin.	-517.49	-1739	0.9	0	548	7137	5660	2295	7684		4.42	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.606	SLV 14	Si
V_SLV	1.63	SLV 14	Si
PF_SLU	13.66	SLU 77	Si
V_SLU	3.546	SLU 77	Si

Trave di accoppiamento 150

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.838	6.526	14.57	15.03	0.46	-11.938	6.526	14.57	15.03	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-40.91	108	-0.0000786	0.0001872	0.0035	0.46		780.23	780.23	No	19.07	Si
SLU 80	fin.	-163.94	-293	-0.000357	0.0001872	0.0035	0.46		780.23	780.23	No	4.76	Si
SLU 78	ini.	-44.58	100	-0.0000859	0.0001872	0.0035	0.46		780.23	780.23	No	17.5	Si
SLU 78	fin.	-171.35	-313	-0.0003761	0.0001872	0.0035	0.46		780.23	780.23	No	4.55	Si
SLU 70	ini.	-54.77	42	-0.0001064	0.0001872	0.0035	0.46		780.23	780.23	No	14.25	Si
SLU 70	fin.	-161.35	-285	-0.0003504	0.0001872	0.0035	0.46		780.23	780.23	No	4.84	Si
SLU 74	ini.	-33.45	120	-0.0000639	0.0001872	0.0035	0.46		780.23	780.23	No	23.33	Si
SLU 74	fin.	-160.86	-314	-0.0003491	0.0001872	0.0035	0.46		780.23	780.23	No	4.85	Si
SLU 84	ini.	-25.78	150	-0.0000489	0.0001872	0.0035	0.46		780.23	780.23	No	30.26	Si
SLU 84	fin.	-156.74	-302	-0.0003386	0.0001872	0.0035	0.46		780.23	780.23	No	4.98	Si
SLU 79	ini.	-40.54	110	-0.0000779	0.0001872	0.0035	0.46		780.23	780.23	No	19.25	Si
SLU 79	fin.	-164.93	-296	-0.0003596	0.0001872	0.0035	0.46		780.23	780.23	No	4.73	Si
SLU 83	ini.	-25.41	152	-0.0000482	0.0001872	0.0035	0.46		780.23	780.23	No	30.71	Si
SLU 83	fin.	-157.74	-306	-0.0003412	0.0001872	0.0035	0.46		780.23	780.23	No	4.95	Si
SLU 75	ini.	-33.82	118	-0.0000646	0.0001872	0.0035	0.46		780.23	780.23	No	23.07	Si
SLU 75	fin.	-159.87	-310	-0.0003466	0.0001872	0.0035	0.46		780.23	780.23	No	4.88	Si
SLU 69	ini.	-54.39	44	-0.0001057	0.0001872	0.0035	0.46		780.23	780.23	No	14.34	Si
SLU 69	fin.	-162.34	-288	-0.0003529	0.0001872	0.0035	0.46		780.23	780.23	No	4.81	Si
SLU 77	ini.	-44.21	102	-0.0000852	0.0001872	0.0035	0.46		780.23	780.23	No	17.65	Si
SLU 77	fin.	-172.34	-316	-0.0003787	0.0001872	0.0035	0.46		780.23	780.23	No	4.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-44.58	553	0.46	0	124	3648	1928	1173	3101	No	5.61	Si
SLU 78	fin.	-171.35	-1000	0.46	0	124	3648	1928	1173	3101	No	3.1	Si
SLU 71	ini.	-50.72	566	0.46	0	124	3648	1928	1173	3101	No	5.48	Si
SLU 71	fin.	-154.94	-919	0.46	0	124	3648	1928	1173	3101	No	3.37	Si
SLU 70	ini.	-54.77	599	0.46	0	124	3648	1928	1173	3101	No	5.18	Si
SLU 70	fin.	-161.35	-954	0.46	0	124	3648	1928	1173	3101	No	3.25	Si
SLU 80	ini.	-40.91	522	0.46	0	124	3648	1928	1173	3101	No	5.94	Si
SLU 80	fin.	-163.94	-961	0.46	0	124	3648	1928	1173	3101	No	3.23	Si
SLU 72	ini.	-51.09	568	0.46	0	124	3648	1928	1173	3101	No	5.46	Si
SLU 72	fin.	-153.94	-915	0.46	0	124	3648	1928	1173	3101	No	3.39	Si
SLU 79	ini.	-40.54	520	0.46	0	124	3648	1928	1173	3101	No	5.96	Si
SLU 79	fin.	-164.93	-966	0.46	0	124	3648	1928	1173	3101	No	3.21	Si
SLU 74	ini.	-33.45	468	0.46	0	124	3648	1928	1173	3101	No	6.63	Si
SLU 74	fin.	-160.86	-929	0.46	0	124	3648	1928	1173	3101	No	3.34	Si
SLU 69	ini.	-54.39	597	0.46	0	124	3648	1928	1173	3101	No	5.19	Si
SLU 69	fin.	-162.34	-958	0.46	0	124	3648	1928	1173	3101	No	3.24	Si
SLU 75	ini.	-33.82	469	0.46	0	124	3648	1928	1173	3101	No	6.61	Si
SLU 75	fin.	-159.87	-925	0.46	0	124	3648	1928	1173	3101	No	3.35	Si
SLU 77	ini.	-44.21	551	0.46	0	124	3648	1928	1173	3101	No	5.62	Si
SLU 77	fin.	-172.34	-1005	0.46	0	124	3648	1928	1173	3101	No	3.09	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	-286.42	-1236	-0.0006606	0.0002807	0.0035	0.46		788.4	788.4		2.75	Si
SLV 2	fin.	204.15	952	-0.0004403	0.0002807	0.0035	0.46		785.44	785.44		3.85	Si
SLV 3	ini.	-280.35	-1183	-0.0006433	0.0002807	0.0035	0.46		788.4	788.4		2.81	Si
SLV 3	fin.	222.58	1059	-0.0004879	0.0002807	0.0035	0.46		785.44	785.44		3.53	Si
SLV 15	ini.	248.19	1394	-0.0005564	0.0002807	0.0035	0.46		785.44	785.44		3.16	Si
SLV 15	fin.	-405.99	-1364	-0.0010356	0.0002807	0.0035	0.46		788.4	788.4		1.94	Si
SLV 4	ini.	-277.06	-1169	-0.000634	0.0002807	0.0035	0.46		788.4	788.4		2.85	Si
SLV 4	fin.	218.13	1041	-0.0004763	0.0002807	0.0035	0.46		785.44	785.44		3.6	Si
SLD 13	ini.	91.27	613	-0.00018	0.0002807	0.0035	0.46		785.44	785.44		8.61	Si
SLD 13	fin.	-237.47	-740	-0.0005251	0.0002807	0.0035	0.46		788.4	788.4		3.32	Si
SLV 1	ini.	-289.71	-1251	-0.0006701	0.0002807	0.0035	0.46		788.4	788.4		2.72	Si
SLV 1	fin.	208.61	971	-0.0004517	0.0002807	0.0035	0.46		785.44	785.44		3.77	Si
SLV 13	ini.	238.83	1326	-0.000531	0.0002807	0.0035	0.46		785.44	785.44		3.29	Si
SLV 13	fin.	-419.97	-1452	-0.0010841	0.0002807	0.0035	0.46		788.4	788.4		1.88	Si
SLD 14	ini.	92.69	619	-0.000183	0.0002807	0.0035	0.46		785.44	785.44		8.47	Si
SLD 14	fin.	-239.39	-748	-0.0005302	0.0002807	0.0035	0.46		788.4	788.4		3.29	Si
SLV 16	ini.	251.49	1409	-0.0005654	0.0002807	0.0035	0.46		785.44	785.44		3.12	Si
SLV 16	fin.	-410.45	-1382	-0.0010509	0.0002807	0.0035	0.46		788.4	788.4		1.92	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	242.13	1341	-0.0005399	0.0002807	0.0035	0.46		785.44	785.44		3.24	Si
SLV 14	fin.	-424.43	-1471	-0.0010998	0.0002807	0.0035	0.46		788.4	788.4		1.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 14	ini.	92.69	-299	0.46	0	187	3648	2893	1173	3834		12.83	Si
SLD 14	fin.	-239.39	-1159	0.46	0	187	3648	2893	1173	3834		3.31	Si
SLV 15	ini.	248.19	-1005	0.46	0	187	3648	2893	1173	3834		3.81	Si
SLV 15	fin.	-405.99	-1849	0.46	0	187	3648	2893	1173	3834		2.07	Si
SLV 2	ini.	-286.42	1576	0.46	0	187	3648	2893	1173	3834		2.43	Si
SLV 2	fin.	204.15	680	0.46	0	187	3648	2893	1173	3834		5.64	Si
SLD 13	ini.	91.27	-291	0.46	0	187	3648	2893	1173	3834		13.16	Si
SLD 13	fin.	-237.47	-1151	0.46	0	187	3648	2893	1173	3834		3.33	Si
SLV 14	ini.	242.13	-1080	0.46	0	187	3648	2893	1173	3834		3.55	Si
SLV 14	fin.	-424.43	-1926	0.46	0	187	3648	2893	1173	3834		1.99	Si
SLV 3	ini.	-280.35	1650	0.46	0	187	3648	2893	1173	3834		2.32	Si
SLV 3	fin.	222.58	757	0.46	0	187	3648	2893	1173	3834		5.07	Si
SLV 13	ini.	238.83	-1062	0.46	0	187	3648	2893	1173	3834		3.61	Si
SLV 13	fin.	-419.97	-1908	0.46	0	187	3648	2893	1173	3834		2.01	Si
SLV 4	ini.	-277.06	1632	0.46	0	187	3648	2893	1173	3834		2.35	Si
SLV 4	fin.	218.13	739	0.46	0	187	3648	2893	1173	3834		5.19	Si
SLV 16	ini.	251.49	-1023	0.46	0	187	3648	2893	1173	3834		3.75	Si
SLV 16	fin.	-410.45	-1867	0.46	0	187	3648	2893	1173	3834		2.05	Si
SLV 1	ini.	-289.71	1594	0.46	0	187	3648	2893	1173	3834		2.41	Si
SLV 1	fin.	208.61	698	0.46	0	187	3648	2893	1173	3834		5.5	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.858	SLV 14	Si
V_SLV	1.991	SLV 14	Si
PF_SLU	4.527	SLU 77	Si
V_SLU	3.087	SLU 77	Si

Trave di accoppiamento 151

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	11.87	12.77	0.9	-7.058	6.526	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	-55.17	-401	-0.0000272	0.0001872	0.0035	0.9		2964.67	2964.67	No	53.74	Si
SLU 44	fin.	163.42	-800	-0.0000826	0.0001872	0.0035	0.9		2959	2959	No	18.11	Si
SLU 47	ini.	-31.92	-451	-0.0000157	0.0001872	0.0035	0.9		2964.67	2964.67	No	92.87	Si
SLU 47	fin.	155.56	-787	-0.0000785	0.0001872	0.0035	0.9		2959	2959	No	19.02	Si
SLU 46	ini.	-25.42	-479	-0.0000125	0.0001872	0.0035	0.9		2964.67	2964.67	No	116.61	Si
SLU 46	fin.	157.62	-806	-0.0000796	0.0001872	0.0035	0.9		2959	2959	No	18.77	Si
SLU 61	ini.	-54.94	-384	-0.0000271	0.0001872	0.0035	0.9		2964.67	2964.67	No	53.96	Si
SLU 61	fin.	148.72	-734	-0.0000749	0.0001872	0.0035	0.9		2959	2959	No	19.9	Si
SLU 49	ini.	-2.18	-529	-0.0000011	0.0001872	0.0035	0.9		2964.67	2964.67	No	1360.7	Si
SLU 49	fin.	149.76	-793	-0.0000755	0.0001872	0.0035	0.9		2959	2959	No	19.76	Si
SLU 52	ini.	-56.3	-387	-0.0000278	0.0001872	0.0035	0.9		2964.67	2964.67	No	52.66	Si
SLU 52	fin.	153.85	-756	-0.0000776	0.0001872	0.0035	0.9		2959	2959	No	19.23	Si
SLU 45	ini.	-22.66	-483	-0.0000111	0.0001872	0.0035	0.9		2964.67	2964.67	No	130.8	Si
SLU 45	fin.	156.07	-802	-0.0000787	0.0001872	0.0035	0.9		2959	2959	No	18.96	Si
SLU 64	ini.	-36.7	-441	-0.000018	0.0001872	0.0035	0.9		2964.67	2964.67	No	80.77	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 64	fin.	151.54	-767	-0.0000764	0.0001872	0.0035	0.9		2959	2959	No	19.53	Si
SLU 43	ini.	-50.57	-408	-0.0000249	0.0001872	0.0035	0.9		2964.67	2964.67	No	58.62	Si
SLU 43	fin.	160.84	-793	-0.0000812	0.0001872	0.0035	0.9		2959	2959	No	18.4	Si
SLU 65	ini.	-41.3	-433	-0.0000203	0.0001872	0.0035	0.9		2964.67	2964.67	No	71.78	Si
SLU 65	fin.	154.11	-774	-0.0000777	0.0001872	0.0035	0.9		2959	2959	No	19.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-50.57	160	0.9	0	365	7137	3773	2295	6068	No	37.88	Si
SLU 43	fin.	160.84	1065	0.9	0	365	7137	3773	2295	6068	No	5.7	Si
SLU 44	ini.	-55.17	177	0.9	0	365	7137	3773	2295	6068	No	34.33	Si
SLU 44	fin.	163.42	1080	0.9	0	365	7137	3773	2295	6068	No	5.62	Si
SLU 47	ini.	-31.92	85	0.9	0	365	7137	3773	2295	6068	No	71.61	Si
SLU 47	fin.	155.56	1053	0.9	0	365	7137	3773	2295	6068	No	5.77	Si
SLU 51	ini.	-6.84	-14	0.9	0	365	7137	3773	2295	6068	No	437.24	Si
SLU 51	fin.	146.67	1020	0.9	0	365	7137	3773	2295	6068	No	5.95	Si
SLU 50	ini.	-4.08	-24	0.9	0	365	7137	3773	2295	6068	No	254.84	Si
SLU 50	fin.	145.13	1011	0.9	0	365	7137	3773	2295	6068	No	6	Si
SLU 49	ini.	-2.18	-46	0.9	0	365	7137	3773	2295	6068	No	131.1	Si
SLU 49	fin.	149.76	1067	0.9	0	365	7137	3773	2295	6068	No	5.69	Si
SLU 67	ini.	-11.56	11	0.9	0	365	7137	3773	2295	6068	No	541.82	Si
SLU 67	fin.	148.31	1005	0.9	0	365	7137	3773	2295	6068	No	6.04	Si
SLU 46	ini.	-25.42	46	0.9	0	365	7137	3773	2295	6068	No	132.74	Si
SLU 46	fin.	157.62	1094	0.9	0	365	7137	3773	2295	6068	No	5.55	Si
SLU 48	ini.	0.58	-56	0.9	0	365	7137	3773	2295	6068	No	107.94	Si
SLU 48	fin.	148.22	1058	0.9	0	365	7137	3773	2295	6068	No	5.73	Si
SLU 45	ini.	-22.66	36	0.9	0	365	7137	3773	2295	6068	No	169.59	Si
SLU 45	fin.	156.07	1086	0.9	0	365	7137	3773	2295	6068	No	5.59	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-275.23	-389	-0.0001401	0.0002807	0.0035	0.9		2995.37	2995.37		10.88	Si
SLV 5	fin.	382.41	-1575	-0.0001986	0.0002807	0.0035	0.9		2989.59	2989.59		7.82	Si
SLV 3	ini.	-815.02	393	-0.0004627	0.0002807	0.0035	0.9		2995.37	2995.37		3.68	Si
SLV 3	fin.	732	-2744	-0.0004086	0.0002807	0.0035	0.9		2989.59	2989.59		4.08	Si
SLV 2	ini.	-782.33	233	-0.0004409	0.0002807	0.0035	0.9		2995.37	2995.37		3.83	Si
SLV 2	fin.	736.69	-2775	-0.0004117	0.0002807	0.0035	0.9		2989.59	2989.59		4.06	Si
SLV 1	ini.	-816.46	240	-0.0004637	0.0002807	0.0035	0.9		2995.37	2995.37		3.67	Si
SLV 1	fin.	773.41	-2919	-0.0004359	0.0002807	0.0035	0.9		2989.59	2989.59		3.87	Si
SLV 4	ini.	-780.89	386	-0.0004399	0.0002807	0.0035	0.9		2995.37	2995.37		3.84	Si
SLV 4	fin.	695.28	-2600	-0.0003849	0.0002807	0.0035	0.9		2989.59	2989.59		4.3	Si
SLV 14	ini.	751.81	-1049	-0.0004216	0.0002807	0.0035	0.9		2989.59	2989.59		3.98	Si
SLV 14	fin.	-500.24	1579	-0.000265	0.0002807	0.0035	0.9		2995.37	2995.37		5.99	Si
SLV 15	ini.	719.12	-889	-0.0004003	0.0002807	0.0035	0.9		2989.59	2989.59		4.16	Si
SLV 15	fin.	-504.94	1610	-0.0002678	0.0002807	0.0035	0.9		2995.37	2995.37		5.93	Si
SLV 13	ini.	717.69	-1042	-0.0003993	0.0002807	0.0035	0.9		2989.59	2989.59		4.17	Si
SLV 13	fin.	-463.52	1434	-0.0002438	0.0002807	0.0035	0.9		2995.37	2995.37		6.46	Si
SLD 1	ini.	-367.26	-85	-0.0001898	0.0002807	0.0035	0.9		2995.37	2995.37		8.16	Si
SLD 1	fin.	397.19	-1582	-0.0002068	0.0002807	0.0035	0.9		2989.59	2989.59		7.53	Si
SLV 16	ini.	753.25	-896	-0.0004225	0.0002807	0.0035	0.9		2989.59	2989.59		3.97	Si
SLV 16	fin.	-541.66	1754	-0.0002894	0.0002807	0.0035	0.9		2995.37	2995.37		5.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	753.25	-2821	0.9	0	548	7137	5660	2295	7684		2.72	Si
SLV 16	fin.	-541.66	-2712	0.9	0	548	7137	5660	2295	7684		2.83	Si
SLD 1	ini.	-367.26	1369	0.9	0	548	7137	5660	2295	7684		5.61	Si
SLD 1	fin.	397.19	2211	0.9	0	548	7137	5660	2295	7684		3.48	Si
SLV 13	ini.	717.69	-2685	0.9	0	548	7137	5660	2295	7684		2.86	Si
SLV 13	fin.	-463.52	-2309	0.9	0	548	7137	5660	2295	7684		3.33	Si
SLV 3	ini.	-815.02	3046	0.9	0	548	7137	5660	2295	7684		2.52	Si
SLV 3	fin.	732	3962	0.9	0	548	7137	5660	2295	7684		1.94	Si
SLV 1	ini.	-816.46	3049	0.9	0	548	7137	5660	2295	7684		2.52	Si
SLV 1	fin.	773.41	4184	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 14	ini.	751.81	-2818	0.9	0	548	7137	5660	2295	7684		2.73	Si
SLV 14	fin.	-500.24	-2491	0.9	0	548	7137	5660	2295	7684		3.09	Si
SLV 4	ini.	-780.89	2912	0.9	0	548	7137	5660	2295	7684		2.64	Si
SLV 4	fin.	695.28	3780	0.9	0	548	7137	5660	2295	7684		2.03	Si
SLV 15	ini.	719.12	-2687	0.9	0	548	7137	5660	2295	7684		2.86	Si
SLV 15	fin.	-504.94	-2530	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 2	ini.	-782.33	2915	0.9	0	548	7137	5660	2295	7684		2.64	Si
SLV 2	fin.	736.69	4002	0.9	0	548	7137	5660	2295	7684		1.92	Si
SLV 5	ini.	-275.23	1022	0.9	0	548	7137	5660	2295	7684		7.52	Si
SLV 5	fin.	382.41	2138	0.9	0	548	7137	5660	2295	7684		3.59	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.669	SLV 1	Si
V_SLV	1.837	SLV 1	Si
PF_SLU	18.107	SLU 44	Si
V_SLU	5.545	SLU 46	Si

Trave di accoppiamento 152

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-7.958	6.526	14.57	15.03	0.46	-7.058	6.526	14.57	15.03	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	ini.	-100.21	-506	-0.0002033	0.0001872	0.0035	0.46		780.23	780.23	No	7.79	Si
SLU 67	fin.	-0.2	154	-0.0000004	0.0001872	0.0035	0.46		780.23	780.23	No	3911.63	Si
SLU 45	ini.	-100.23	-514	-0.0002034	0.0001872	0.0035	0.46		780.23	780.23	No	7.78	Si
SLU 45	fin.	4.59	157	-0.0000086	0.0001872	0.0035	0.46		777.36	777.36	No	169.38	Si
SLU 70	ini.	-99.77	-499	-0.0002023	0.0001872	0.0035	0.46		780.23	780.23	No	7.82	Si
SLU 70	fin.	-7.97	131	-0.0000149	0.0001872	0.0035	0.46		780.23	780.23	No	97.84	Si
SLU 57	ini.	-96.1	-481	-0.0001941	0.0001872	0.0035	0.46		780.23	780.23	No	8.12	Si
SLU 57	fin.	-2.96	144	-0.0000055	0.0001872	0.0035	0.46		780.23	780.23	No	263.94	Si
SLU 66	ini.	-99.5	-502	-0.0002017	0.0001872	0.0035	0.46		780.23	780.23	No	7.84	Si
SLU 66	fin.	-0.82	150	-0.0000015	0.0001872	0.0035	0.46		780.23	780.23	No	949.3	Si
SLU 54	ini.	-96.53	-488	-0.0001951	0.0001872	0.0035	0.46		780.23	780.23	No	8.08	Si
SLU 54	fin.	4.82	166	-0.000009	0.0001872	0.0035	0.46		777.36	777.36	No	161.32	Si
SLU 48	ini.	-99.79	-508	-0.0002024	0.0001872	0.0035	0.46		780.23	780.23	No	7.82	Si
SLU 48	fin.	-3.19	135	-0.0000059	0.0001872	0.0035	0.46		780.23	780.23	No	244.93	Si
SLU 46	ini.	-100.94	-518	-0.000205	0.0001872	0.0035	0.46		780.23	780.23	No	7.73	Si
SLU 46	fin.	5.21	160	-0.0000098	0.0001872	0.0035	0.46		777.36	777.36	No	149.15	Si
SLU 49	ini.	-100.5	-512	-0.000204	0.0001872	0.0035	0.46		780.23	780.23	No	7.76	Si
SLU 49	fin.	-2.56	138	-0.0000048	0.0001872	0.0035	0.46		780.23	780.23	No	304.4	Si
SLU 69	ini.	-99.06	-496	-0.0002008	0.0001872	0.0035	0.46		780.23	780.23	No	7.88	Si
SLU 69	fin.	-8.6	128	-0.0000161	0.0001872	0.0035	0.46		780.23	780.23	No	90.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	-100.5	1089	0.46	0	124	3648	1928	1173	3101	No	2.85	Si
SLU 49	fin.	-2.56	-318	0.46	0	124	3648	1928	1173	3101	No	9.75	Si
SLU 48	ini.	-99.79	1084	0.46	0	124	3648	1928	1173	3101	No	2.86	Si
SLU 48	fin.	-3.19	-320	0.46	0	124	3648	1928	1173	3101	No	9.68	Si
SLU 75	ini.	-95.81	1075	0.46	0	124	3648	1928	1173	3101	No	2.89	Si
SLU 75	fin.	-0.59	-317	0.46	0	124	3648	1928	1173	3101	No	9.78	Si
SLU 66	ini.	-99.5	1090	0.46	0	124	3648	1928	1173	3101	No	2.85	Si
SLU 66	fin.	-0.82	-313	0.46	0	124	3648	1928	1173	3101	No	9.91	Si
SLU 70	ini.	-99.77	1121	0.46	0	124	3648	1928	1173	3101	No	2.77	Si
SLU 70	fin.	-7.97	-368	0.46	0	124	3648	1928	1173	3101	No	8.43	Si
SLU 78	ini.	-95.37	1101	0.46	0	124	3648	1928	1173	3101	No	2.82	Si
SLU 78	fin.	-8.37	-374	0.46	0	124	3648	1928	1173	3101	No	8.28	Si
SLU 74	ini.	-95.1	1070	0.46	0	124	3648	1928	1173	3101	No	2.9	Si
SLU 74	fin.	-1.21	-319	0.46	0	124	3648	1928	1173	3101	No	9.71	Si
SLU 67	ini.	-100.21	1095	0.46	0	124	3648	1928	1173	3101	No	2.83	Si
SLU 67	fin.	-0.2	-311	0.46	0	124	3648	1928	1173	3101	No	9.98	Si
SLU 77	ini.	-94.66	1096	0.46	0	124	3648	1928	1173	3101	No	2.83	Si
SLU 77	fin.	-8.99	-377	0.46	0	124	3648	1928	1173	3101	No	8.24	Si
SLU 69	ini.	-99.06	1116	0.46	0	124	3648	1928	1173	3101	No	2.78	Si
SLU 69	fin.	-8.6	-370	0.46	0	124	3648	1928	1173	3101	No	8.37	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 3	ini.	-157.78	-871	-0.0003257	0.0002807	0.0035	0.46		788.4	788.4		5	Si
SLD 3	fin.	70.38	378	-0.000137	0.0002807	0.0035	0.46		785.44	785.44		11.16	Si
SLD 4	ini.	-154.24	-848	-0.0003174	0.0002807	0.0035	0.46		788.4	788.4		5.11	Si
SLD 4	fin.	68.84	377	-0.0001339	0.0002807	0.0035	0.46		785.44	785.44		11.41	Si
SLV 1	ini.	-288.82	-1658	-0.0006675	0.0002807	0.0035	0.46		788.4	788.4		2.73	Si
SLV 1	fin.	149.85	669	-0.0003085	0.0002807	0.0035	0.46		785.44	785.44		5.24	Si
SLD 2	ini.	-160.57	-893	-0.0003322	0.0002807	0.0035	0.46		788.4	788.4		4.91	Si
SLD 2	fin.	67.34	362	-0.0001308	0.0002807	0.0035	0.46		785.44	785.44		11.66	Si
SLD 1	ini.	-164.12	-916	-0.0003405	0.0002807	0.0035	0.46		788.4	788.4		4.8	Si
SLD 1	fin.	68.88	363	-0.0001339	0.0002807	0.0035	0.46		785.44	785.44		11.4	Si
SLV 3	ini.	-274.35	-1555	-0.0006263	0.0002807	0.0035	0.46		788.4	788.4		2.87	Si
SLV 3	fin.	153.36	704	-0.0003167	0.0002807	0.0035	0.46		785.44	785.44		5.12	Si
SLV 4	ini.	-266.09	-1501	-0.0006032	0.0002807	0.0035	0.46		788.4	788.4		2.96	Si
SLV 4	fin.	149.79	702	-0.0003084	0.0002807	0.0035	0.46		785.44	785.44		5.24	Si
SLV 5	ini.	-159.62	-916	-0.00033	0.0002807	0.0035	0.46		788.4	788.4		4.94	Si
SLV 5	fin.	46.1	243	-0.0000884	0.0002807	0.0035	0.46		785.44	785.44		17.04	Si
SLV 2	ini.	-280.56	-1605	-0.0006439	0.0002807	0.0035	0.46		788.4	788.4		2.81	Si
SLV 2	fin.	146.27	667	-0.0003003	0.0002807	0.0035	0.46		785.44	785.44		5.37	Si
SLV 6	ini.	-154.24	-881	-0.0003174	0.0002807	0.0035	0.46		788.4	788.4		5.11	Si
SLV 6	fin.	43.77	242	-0.0000838	0.0002807	0.0035	0.46		785.44	785.44		17.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 1	ini.	-164.12	1246	0.46	0	187	3648	2893	1173	3834		3.08	Si
SLD 1	fin.	68.88	154	0.46	0	187	3648	2893	1173	3834		24.96	Si
SLV 5	ini.	-159.62	1149	0.46	0	187	3648	2893	1173	3834		3.34	Si
SLV 5	fin.	46.1	102	0.46	0	187	3648	2893	1173	3834		37.5	Si
SLV 6	ini.	-154.24	1127	0.46	0	187	3648	2893	1173	3834		3.4	Si
SLV 6	fin.	43.77	83	0.46	0	187	3648	2893	1173	3834		45.93	Si
SLV 4	ini.	-266.09	1854	0.46	0	187	3648	2893	1173	3834		2.07	Si
SLV 4	fin.	149.79	519	0.46	0	187	3648	2893	1173	3834		7.38	Si
SLV 1	ini.	-288.82	1919	0.46	0	187	3648	2893	1173	3834		2	Si
SLV 1	fin.	149.85	572	0.46	0	187	3648	2893	1173	3834		6.7	Si
SLD 4	ini.	-154.24	1218	0.46	0	187	3648	2893	1173	3834		3.15	Si
SLD 4	fin.	68.84	131	0.46	0	187	3648	2893	1173	3834		29.32	Si
SLV 3	ini.	-274.35	1888	0.46	0	187	3648	2893	1173	3834		2.03	Si
SLV 3	fin.	153.36	548	0.46	0	187	3648	2893	1173	3834		7	Si
SLD 2	ini.	-160.57	1232	0.46	0	187	3648	2893	1173	3834		3.11	Si
SLD 2	fin.	67.34	141	0.46	0	187	3648	2893	1173	3834		27.15	Si
SLD 3	ini.	-157.78	1233	0.46	0	187	3648	2893	1173	3834		3.11	Si
SLD 3	fin.	70.38	143	0.46	0	187	3648	2893	1173	3834		26.78	Si
SLV 2	ini.	-280.56	1886	0.46	0	187	3648	2893	1173	3834		2.03	Si
SLV 2	fin.	146.27	544	0.46	0	187	3648	2893	1173	3834		7.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.73	SLV 1	Si
V_SLV	1.998	SLV 1	Si
PF_SLU	7.73	SLU 46	Si
V_SLU	2.766	SLU 70	Si

Trave di accoppiamento 153

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.643	1.006	13.97	15.03	1.06	-19.443	1.006	13.97	15.03	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 35	ini.	-5.23	-745	-0.0000018	0.0002246	0.0035	1.06		4210.93	4210.93	No	805.08	Si
SLU 35	fin.	-247.91	-1060	-0.00009	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.99	Si
SLU 36	ini.	-10.4	-756	-0.0000037	0.0002246	0.0035	1.06		4210.93	4210.93	No	404.89	Si
SLU 36	fin.	-241.81	-1049	-0.0000877	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.41	Si
SLU 84	ini.	-28.66	-791	-0.0000101	0.0002246	0.0035	1.06		4210.93	4210.93	No	146.94	Si
SLU 84	fin.	-229.04	-1037	-0.0000829	0.0002246	0.0035	1.06		4210.93	4210.93	No	18.39	Si
SLU 32	ini.	0.59	-670	-0.0000002	0.0002246	0.0035	1.06		4204.29	4204.29	No	7100.61	Si
SLU 32	fin.	-232.03	-994	-0.0000841	0.0002246	0.0035	1.06		4210.93	4210.93	No	18.15	Si
SLU 41	ini.	22.93	-545	-0.0000081	0.0002246	0.0035	1.06		4204.29	4204.29	No	183.35	Si
SLU 41	fin.	-230.29	-914	-0.0000834	0.0002246	0.0035	1.06		4210.93	4210.93	No	18.29	Si
SLU 75	ini.	-51	-917	-0.0000181	0.0002246	0.0035	1.06		4210.93	4210.93	No	82.57	Si
SLU 75	fin.	-230.78	-1117	-0.0000836	0.0002246	0.0035	1.06		4210.93	4210.93	No	18.25	Si
SLU 78	ini.	-56.82	-992	-0.0000201	0.0002246	0.0035	1.06		4210.93	4210.93	No	74.11	Si
SLU 78	fin.	-246.67	-1183	-0.0000895	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.07	Si
SLU 74	ini.	-45.83	-906	-0.0000162	0.0002246	0.0035	1.06		4210.93	4210.93	No	91.89	Si
SLU 74	fin.	-236.88	-1128	-0.0000859	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.78	Si
SLU 83	ini.	-23.49	-781	-0.0000083	0.0002246	0.0035	1.06		4210.93	4210.93	No	179.28	Si
SLU 83	fin.	-235.14	-1048	-0.0000852	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.91	Si
SLU 77	ini.	-51.65	-981	-0.0000183	0.0002246	0.0035	1.06		4210.93	4210.93	No	81.53	Si
SLU 77	fin.	-252.76	-1194	-0.0000918	0.0002246	0.0035	1.06		4210.93	4210.93	No	16.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-51	1125	1.06	0	430	6344	5333	2703	6774	No	6.02	Si
SLU 75	fin.	-230.78	-1991	1.06	0	430	6344	5333	2703	6774	No	3.4	Si
SLU 36	ini.	-10.4	798	1.06	0	430	6344	5333	2703	6774	No	8.49	Si
SLU 36	fin.	-241.81	-2015	1.06	0	430	6344	5333	2703	6774	No	3.36	Si
SLU 80	ini.	-67.81	1140	1.06	0	430	6344	5333	2703	6774	No	5.94	Si
SLU 80	fin.	-213.33	-1939	1.06	0	430	6344	5333	2703	6774	No	3.49	Si
SLU 79	ini.	-62.64	1112	1.06	0	430	6344	5333	2703	6774	No	6.09	Si
SLU 79	fin.	-219.43	-1970	1.06	0	430	6344	5333	2703	6774	No	3.44	Si
SLU 84	ini.	-28.66	924	1.06	0	430	6344	5333	2703	6774	No	7.33	Si
SLU 84	fin.	-229.04	-1938	1.06	0	430	6344	5333	2703	6774	No	3.5	Si
SLU 78	ini.	-56.82	1173	1.06	0	430	6344	5333	2703	6774	No	5.78	Si
SLU 78	fin.	-246.67	-2153	1.06	0	430	6344	5333	2703	6774	No	3.15	Si
SLU 35	ini.	-5.23	771	1.06	0	430	6344	5333	2703	6774	No	8.79	Si
SLU 35	fin.	-247.91	-2046	1.06	0	430	6344	5333	2703	6774	No	3.31	Si
SLU 77	ini.	-51.65	1145	1.06	0	430	6344	5333	2703	6774	No	5.92	Si
SLU 77	fin.	-252.76	-2184	1.06	0	430	6344	5333	2703	6774	No	3.1	Si
SLU 83	ini.	-23.49	896	1.06	0	430	6344	5333	2703	6774	No	7.56	Si
SLU 83	fin.	-235.14	-1969	1.06	0	430	6344	5333	2703	6774	No	3.44	Si
SLU 74	ini.	-45.83	1097	1.06	0	430	6344	5333	2703	6774	No	6.17	Si
SLU 74	fin.	-236.88	-2022	1.06	0	430	6344	5333	2703	6774	No	3.35	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	500.02	395	-0.0001851	0.0003369	0.0035	1.06		4163.27	4163.27		8.33	Si
SLV 5	fin.	-855.49	-2230	-0.0003296	0.0003369	0.0035	1.06		4170.47	4170.47		4.87	Si
SLV 14	ini.	-1171.76	-2845	-0.000472	0.0003369	0.0035	1.06		4170.47	4170.47		3.56	Si
SLV 14	fin.	1184.26	1868	-0.0004788	0.0003369	0.0035	1.06		4163.27	4163.27		3.52	Si
SLV 3	ini.	1003.25	1455	-0.000395	0.0003369	0.0035	1.06		4163.27	4163.27		4.15	Si
SLV 3	fin.	-1382.63	-3135	-0.0005749	0.0003369	0.0035	1.06		4170.47	4170.47		3.02	Si
SLV 15	ini.	-1239.57	-2938	-0.0005044	0.0003369	0.0035	1.06		4170.47	4170.47		3.36	Si
SLV 15	fin.	1304.31	2166	-0.0005369	0.0003369	0.0035	1.06		4163.27	4163.27		3.19	Si
SLV 6	ini.	455.93	304	-0.0001679	0.0003369	0.0035	1.06		4163.27	4163.27		9.13	Si
SLV 6	fin.	-805.4	-2131	-0.0003083	0.0003369	0.0035	1.06		4170.47	4170.47		5.18	Si
SLV 4	ini.	935.57	1316	-0.0003649	0.0003369	0.0035	1.06		4163.27	4163.27		4.45	Si
SLV 4	fin.	-1305.75	-2983	-0.0005366	0.0003369	0.0035	1.06		4170.47	4170.47		3.19	Si
SLV 13	ini.	-1104.08	-2707	-0.0004403	0.0003369	0.0035	1.06		4170.47	4170.47		3.78	Si
SLV 13	fin.	1107.38	1715	-0.0004426	0.0003369	0.0035	1.06		4163.27	4163.27		3.76	Si
SLV 1	ini.	1138.73	1686	-0.0004572	0.0003369	0.0035	1.06		4163.27	4163.27		3.66	Si
SLV 1	fin.	-1579.56	-3586	-0.0006767	0.0003369	0.0035	1.06		4170.47	4170.47		2.64	Si
SLV 2	ini.	1071.05	1548	-0.0004258	0.0003369	0.0035	1.06		4163.27	4163.27		3.89	Si
SLV 2	fin.	-1502.68	-3434	-0.0006363	0.0003369	0.0035	1.06		4170.47	4170.47		2.78	Si
SLV 16	ini.	-1307.24	-3076	-0.0005373	0.0003369	0.0035	1.06		4170.47	4170.47		3.19	Si
SLV 16	fin.	1381.19	2319	-0.0005752	0.0003369	0.0035	1.06		4163.27	4163.27		3.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 3	ini.	1003.25	-4913	1.06	0	645	6344	8000	2703	6989		1.42	Si
SLV 3	fin.	-1382.63	-6987	1.06	0	645	6344	8000	2703	6989		1	Si
SLV 2	ini.	1071.05	-5406	1.06	0	645	6344	8000	2703	6989		1.29	Si
SLV 2	fin.	-1502.68	-7481	1.06	0	645	6344	8000	2703	6989		0.93	No
SLV 16	ini.	-1307.24	7766	1.06	0	645	6344	8000	2703	6989		0.9	No
SLV 16	fin.	1381.19	5829	1.06	0	645	6344	8000	2703	6989		1.2	Si
SLV 13	ini.	-1104.08	6531	1.06	0	645	6344	8000	2703	6989		1.07	Si
SLV 13	fin.	1107.38	4573	1.06	0	645	6344	8000	2703	6989		1.53	Si
SLV 5	ini.	500.02	-2413	1.06	0	645	6344	8000	2703	6989		2.9	Si
SLV 5	fin.	-855.49	-4465	1.06	0	645	6344	8000	2703	6989		1.57	Si
SLV 15	ini.	-1239.57	7395	1.06	0	645	6344	8000	2703	6989		0.95	No
SLV 15	fin.	1304.31	5448	1.06	0	645	6344	8000	2703	6989		1.28	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1138.73	-5777	1.06	0	645	6344	8000	2703	6989		1.21	Si
SLV 1	fin.	-1579.56	-7862	1.06	0	645	6344	8000	2703	6989		0.89	No
SLV 14	ini.	-1171.76	6902	1.06	0	645	6344	8000	2703	6989		1.01	Si
SLV 14	fin.	1184.26	4954	1.06	0	645	6344	8000	2703	6989		1.41	Si
SLV 4	ini.	935.57	-4543	1.06	0	645	6344	8000	2703	6989		1.54	Si
SLV 4	fin.	-1305.75	-6606	1.06	0	645	6344	8000	2703	6989		1.06	Si
SLV 12	ini.	-668.54	4401	1.06	0	645	6344	8000	2703	6989		1.59	Si
SLV 12	fin.	657.12	2431	1.06	0	645	6344	8000	2703	6989		2.87	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.64	SLV 1	Si
V_SLV	0.889	SLV 1	No
PF_SLU	16.659	SLU 77	Si
V_SLU	3.102	SLU 77	Si

Trave di accoppiamento 154

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.163	1.006	13.97	15.03	1.06	-14.963	1.006	13.97	15.03	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 28	ini.	-361.44	-1223	-0.0001333	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.65	Si
SLU 28	fin.	-53	-945	-0.0000188	0.0002246	0.0035	1.06		4210.93	4210.93	No	79.45	Si
SLU 72	ini.	-343.39	-1279	-0.0001263	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.26	Si
SLU 72	fin.	-115.33	-1060	-0.0000412	0.0002246	0.0035	1.06		4210.93	4210.93	No	36.51	Si
SLU 30	ini.	-354.22	-1068	-0.0001305	0.0002246	0.0035	1.06		4210.93	4210.93	No	11.89	Si
SLU 30	fin.	-9.24	-770	-0.0000033	0.0002246	0.0035	1.06		4210.93	4210.93	No	455.97	Si
SLU 27	ini.	-350.74	-1215	-0.0001291	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.01	Si
SLU 27	fin.	-65.51	-954	-0.0000232	0.0002246	0.0035	1.06		4210.93	4210.93	No	64.28	Si
SLU 69	ini.	-339.92	-1425	-0.000125	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.39	Si
SLU 69	fin.	-171.61	-1243	-0.0000617	0.0002246	0.0035	1.06		4210.93	4210.93	No	24.54	Si
SLU 53	ini.	-133.25	-1210	-0.0000477	0.0002246	0.0035	1.06		4210.93	4210.93	No	31.6	Si
SLU 53	fin.	-341.54	-1312	-0.0001256	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.33	Si
SLU 29	ini.	-343.51	-1060	-0.0001263	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.26	Si
SLU 29	fin.	-21.74	-779	-0.0000077	0.0002246	0.0035	1.06		4210.93	4210.93	No	193.67	Si
SLU 36	ini.	-334.64	-1178	-0.0001229	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.58	Si
SLU 36	fin.	-66.18	-926	-0.0000235	0.0002246	0.0035	1.06		4210.93	4210.93	No	63.63	Si
SLU 71	ini.	-332.69	-1270	-0.0001222	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.66	Si
SLU 71	fin.	-127.84	-1069	-0.0000457	0.0002246	0.0035	1.06		4210.93	4210.93	No	32.94	Si
SLU 70	ini.	-350.62	-1434	-0.0001291	0.0002246	0.0035	1.06		4210.93	4210.93	No	12.01	Si
SLU 70	fin.	-159.1	-1234	-0.0000571	0.0002246	0.0035	1.06		4210.93	4210.93	No	26.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 27	ini.	-350.74	1525	1.06	0	430	6344	5333	2703	6774	No	4.44	Si
SLU 27	fin.	-65.51	-377	1.06	0	430	6344	5333	2703	6774	No	17.95	Si
SLU 70	ini.	-350.62	1550	1.06	0	430	6344	5333	2703	6774	No	4.37	Si
SLU 70	fin.	-159.1	-707	1.06	0	430	6344	5333	2703	6774	No	9.58	Si
SLU 30	ini.	-354.22	1551	1.06	0	430	6344	5333	2703	6774	No	4.37	Si
SLU 30	fin.	-9.24	-214	1.06	0	430	6344	5333	2703	6774	No	31.6	Si
SLU 28	ini.	-361.44	1557	1.06	0	430	6344	5333	2703	6774	No	4.35	Si
SLU 28	fin.	-53	-330	1.06	0	430	6344	5333	2703	6774	No	20.55	Si
SLU 72	ini.	-343.39	1543	1.06	0	430	6344	5333	2703	6774	No	4.39	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	fin.	-115.33	-592	1.06	0	430	6344	5333	2703	6774	No	11.44	Si
SLU 29	ini.	-343.51	1518	1.06	0	430	6344	5333	2703	6774	No	4.46	Si
SLU 29	fin.	-21.74	-262	1.06	0	430	6344	5333	2703	6774	No	25.84	Si
SLU 71	ini.	-332.69	1510	1.06	0	430	6344	5333	2703	6774	No	4.48	Si
SLU 71	fin.	-127.84	-640	1.06	0	430	6344	5333	2703	6774	No	10.59	Si
SLU 36	ini.	-334.64	1488	1.06	0	430	6344	5333	2703	6774	No	4.55	Si
SLU 36	fin.	-66.18	-396	1.06	0	430	6344	5333	2703	6774	No	17.1	Si
SLU 69	ini.	-339.92	1517	1.06	0	430	6344	5333	2703	6774	No	4.46	Si
SLU 69	fin.	-171.61	-755	1.06	0	430	6344	5333	2703	6774	No	8.97	Si
SLU 38	ini.	-327.41	1482	1.06	0	430	6344	5333	2703	6774	No	4.57	Si
SLU 38	fin.	-22.41	-281	1.06	0	430	6344	5333	2703	6774	No	24.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	610.28	-1582	-0.0002286	0.0003369	0.0035	1.06		4163.27	4163.27		6.82	Si
SLV 3	fin.	-1565.3	-2940	-0.0006691	0.0003369	0.0035	1.06		4170.47	4170.47		2.66	Si
SLV 15	ini.	-1806.92	-623	-0.0008014	0.0003369	0.0035	1.06		4170.47	4170.47		2.31	Si
SLV 15	fin.	2147.28	2156	-0.0010058	0.0003369	0.0035	1.06		4163.27	4163.27		1.94	Si
SLV 1	ini.	1533.38	-1074	-0.0006536	0.0003369	0.0035	1.06		4163.27	4163.27		2.72	Si
SLV 1	fin.	-2532.9	-3864	-0.0012596	0.0003369	0.0035	1.06		4170.47	4170.47		1.65	Si
SLV 12	ini.	-2067.87	-1580	-0.0009547	0.0003369	0.0035	1.06		4170.47	4170.47		2.02	Si
SLV 12	fin.	2008.9	1469	-0.000921	0.0003369	0.0035	1.06		4163.27	4163.27		2.07	Si
SLV 6	ini.	1734.3	-174	-0.0007622	0.0003369	0.0035	1.06		4163.27	4163.27		2.4	Si
SLV 6	fin.	-2330.19	-3140	-0.0011211	0.0003369	0.0035	1.06		4170.47	4170.47		1.79	Si
SLV 4	ini.	573.93	-1617	-0.0002141	0.0003369	0.0035	1.06		4163.27	4163.27		7.25	Si
SLV 4	fin.	-1526.35	-2918	-0.0006486	0.0003369	0.0035	1.06		4170.47	4170.47		2.73	Si
SLV 5	ini.	1757.98	-152	-0.0007755	0.0003369	0.0035	1.06		4163.27	4163.27		2.37	Si
SLV 5	fin.	-2355.57	-3154	-0.0011379	0.0003369	0.0035	1.06		4170.47	4170.47		1.77	Si
SLV 16	ini.	-1843.27	-658	-0.0008221	0.0003369	0.0035	1.06		4170.47	4170.47		2.26	Si
SLV 16	fin.	2186.23	2179	-0.0010303	0.0003369	0.0035	1.06		4163.27	4163.27		1.9	Si
SLV 11	ini.	-2044.18	-1557	-0.0009403	0.0003369	0.0035	1.06		4170.47	4170.47		2.04	Si
SLV 11	fin.	1983.52	1454	-0.0009058	0.0003369	0.0035	1.06		4163.27	4163.27		2.1	Si
SLV 2	ini.	1497.03	-1109	-0.0006345	0.0003369	0.0035	1.06		4163.27	4163.27		2.78	Si
SLV 2	fin.	-2493.94	-3842	-0.0012322	0.0003369	0.0035	1.06		4170.47	4170.47		1.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 5	ini.	1757.98	-6494	1.06	0	645	6344	8000	2703	6989		1.08	Si
SLV 5	fin.	-2355.57	-7749	1.06	0	645	6344	8000	2703	6989		0.9	No
SLV 7	ini.	-1319.03	4942	1.06	0	645	6344	8000	2703	6989		1.41	Si
SLV 7	fin.	869.75	2993	1.06	0	645	6344	8000	2703	6989		2.34	Si
SLV 16	ini.	-1843.27	7434	1.06	0	645	6344	8000	2703	6989		0.94	No
SLV 16	fin.	2186.23	6420	1.06	0	645	6344	8000	2703	6989		1.09	Si
SLV 12	ini.	-2067.87	7969	1.06	0	645	6344	8000	2703	6989		0.88	No
SLV 12	fin.	2008.9	6350	1.06	0	645	6344	8000	2703	6989		1.1	Si
SLV 11	ini.	-2044.18	7897	1.06	0	645	6344	8000	2703	6989		0.88	No
SLV 11	fin.	1983.52	6252	1.06	0	645	6344	8000	2703	6989		1.12	Si
SLV 15	ini.	-1806.92	7324	1.06	0	645	6344	8000	2703	6989		0.95	No
SLV 15	fin.	2147.28	6269	1.06	0	645	6344	8000	2703	6989		1.11	Si
SLV 1	ini.	1533.38	-5959	1.06	0	645	6344	8000	2703	6989		1.17	Si
SLV 1	fin.	-2532.9	-7818	1.06	0	645	6344	8000	2703	6989		0.89	No
SLV 8	ini.	-1342.71	5013	1.06	0	645	6344	8000	2703	6989		1.39	Si
SLV 8	fin.	895.13	3091	1.06	0	645	6344	8000	2703	6989		2.26	Si
SLV 6	ini.	1734.3	-6423	1.06	0	645	6344	8000	2703	6989		1.09	Si
SLV 6	fin.	-2330.19	-7651	1.06	0	645	6344	8000	2703	6989		0.91	No
SLV 2	ini.	1497.03	-5849	1.06	0	645	6344	8000	2703	6989		1.19	Si
SLV 2	fin.	-2493.94	-7668	1.06	0	645	6344	8000	2703	6989		0.91	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.647	SLV 1	Si
V_SLV	0.877	SLV 12	No
PF_SLU	11.65	SLU 28	Si
V_SLU	4.349	SLU 28	Si

Trave di accoppiamento 155

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.143	1.006	14.37	15.03	0.66	-12.263	1.006	14.37	15.03	0.66	1.12	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-431.02	-1248	-0.0004676	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.79	Si
SLU 75	fin.	-148.41	137	-0.0001416	0.0002246	0.0035	0.66		1634.45	1634.45	No	11.01	Si
SLU 70	ini.	-470.81	-1421	-0.0005202	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.47	Si
SLU 70	fin.	-126.3	119	-0.0001195	0.0002246	0.0035	0.66		1634.45	1634.45	No	12.94	Si
SLU 48	ini.	-428.01	-1178	-0.0004637	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.82	Si
SLU 48	fin.	-107.75	246	-0.0001013	0.0002246	0.0035	0.66		1634.45	1634.45	No	15.17	Si
SLU 67	ini.	-452.89	-1314	-0.0004963	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.61	Si
SLU 67	fin.	-122.59	189	-0.0001159	0.0002246	0.0035	0.66		1634.45	1634.45	No	13.33	Si
SLU 74	ini.	-431.02	-1246	-0.0004676	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.79	Si
SLU 74	fin.	-147.97	139	-0.0001411	0.0002246	0.0035	0.66		1634.45	1634.45	No	11.05	Si
SLU 77	ini.	-448.95	-1354	-0.0004911	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.64	Si
SLU 77	fin.	-151.69	69	-0.0001449	0.0002246	0.0035	0.66		1634.45	1634.45	No	10.78	Si
SLU 49	ini.	-428.01	-1181	-0.0004637	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.82	Si
SLU 49	fin.	-108.19	243	-0.0001017	0.0002246	0.0035	0.66		1634.45	1634.45	No	15.11	Si
SLU 66	ini.	-452.89	-1311	-0.0004963	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.61	Si
SLU 66	fin.	-122.14	191	-0.0001154	0.0002246	0.0035	0.66		1634.45	1634.45	No	13.38	Si
SLU 78	ini.	-448.95	-1356	-0.0004911	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.64	Si
SLU 78	fin.	-152.13	67	-0.0001453	0.0002246	0.0035	0.66		1634.45	1634.45	No	10.74	Si
SLU 69	ini.	-470.81	-1419	-0.0005202	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.47	Si
SLU 69	fin.	-125.86	121	-0.0001191	0.0002246	0.0035	0.66		1634.45	1634.45	No	12.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-470.81	3189	0.66	0	179	5234	3321	1683	5004	No	1.57	Si
SLU 70	fin.	-126.3	-1156	0.66	0	179	5234	3321	1683	5004	No	4.33	Si
SLU 77	ini.	-448.95	3113	0.66	0	179	5234	3321	1683	5004	No	1.61	Si
SLU 77	fin.	-151.69	-1233	0.66	0	179	5234	3321	1683	5004	No	4.06	Si
SLU 48	ini.	-428.01	3024	0.66	0	179	5234	3321	1683	5004	No	1.65	Si
SLU 48	fin.	-107.75	-1127	0.66	0	179	5234	3321	1683	5004	No	4.44	Si
SLU 78	ini.	-448.95	3112	0.66	0	179	5234	3321	1683	5004	No	1.61	Si
SLU 78	fin.	-152.13	-1233	0.66	0	179	5234	3321	1683	5004	No	4.06	Si
SLU 69	ini.	-470.81	3190	0.66	0	179	5234	3321	1683	5004	No	1.57	Si
SLU 69	fin.	-125.86	-1155	0.66	0	179	5234	3321	1683	5004	No	4.33	Si
SLU 66	ini.	-452.89	3166	0.66	0	179	5234	3321	1683	5004	No	1.58	Si
SLU 66	fin.	-122.14	-1179	0.66	0	179	5234	3321	1683	5004	No	4.24	Si
SLU 49	ini.	-428.01	3024	0.66	0	179	5234	3321	1683	5004	No	1.65	Si
SLU 49	fin.	-108.19	-1127	0.66	0	179	5234	3321	1683	5004	No	4.44	Si
SLU 75	ini.	-431.02	3088	0.66	0	179	5234	3321	1683	5004	No	1.62	Si
SLU 75	fin.	-148.41	-1257	0.66	0	179	5234	3321	1683	5004	No	3.98	Si
SLU 74	ini.	-431.02	3089	0.66	0	179	5234	3321	1683	5004	No	1.62	Si
SLU 74	fin.	-147.97	-1256	0.66	0	179	5234	3321	1683	5004	No	3.98	Si
SLU 67	ini.	-452.89	3165	0.66	0	179	5234	3321	1683	5004	No	1.58	Si
SLU 67	fin.	-122.59	-1180	0.66	0	179	5234	3321	1683	5004	No	4.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	410.54	-126	-0.0004208	0.0003369	0.0035	0.66		1610.37	1610.37		3.92	Si
SLV 4	fin.	-2033.53	-6134	-0.004723	0.0003369	0.0035	0.66		1614.71	1614.71		0.79	No
SLD 3	ini.	12.25	-515	-0.0000112	0.0003369	0.0035	0.66		1610.37	1610.37		131.44	Si
SLD 3	fin.	-918.98	-2543	-0.0011478	0.0003369	0.0035	0.66		1614.71	1614.71		1.76	Si
SLV 13	ini.	-978.74	-1453	-0.0012537	0.0003369	0.0035	0.66		1614.71	1614.71		1.65	Si
SLV 13	fin.	1862.12	6433	-0.0041229	0.0003369	0.0035	0.66		1610.37	1610.37		0.86	No
SLV 3	ini.	409.76	-139	-0.0004198	0.0003369	0.0035	0.66		1610.37	1610.37		3.93	Si
SLV 3	fin.	-2033.28	-6138	-0.0047221	0.0003369	0.0035	0.66		1614.71	1614.71		0.79	No
SLV 2	ini.	436.77	288	-0.0004521	0.0003369	0.0035	0.66		1610.37	1610.37		3.69	Si
SLV 2	fin.	-1931.93	-5624	-0.0043626	0.0003369	0.0035	0.66		1614.71	1614.71		0.84	No
SLV 16	ini.	-1004.18	-1853	-0.0013005	0.0003369	0.0035	0.66		1614.71	1614.71		1.61	Si
SLV 16	fin.	1760.26	5927	-0.003729	0.0003369	0.0035	0.66		1610.37	1610.37		0.91	No
SLD 4	ini.	12.59	-509	-0.0000115	0.0003369	0.0035	0.66		1610.37	1610.37		127.91	Si
SLD 4	fin.	-919.09	-2541	-0.001148	0.0003369	0.0035	0.66		1614.71	1614.71		1.76	Si
SLV 1	ini.	435.98	274	-0.0004511	0.0003369	0.0035	0.66		1610.37	1610.37		3.69	Si
SLV 1	fin.	-1931.68	-5628	-0.0043617	0.0003369	0.0035	0.66		1614.71	1614.71		0.84	No
SLV 15	ini.	-1004.97	-1866	-0.001302	0.0003369	0.0035	0.66		1614.71	1614.71		1.61	Si
SLV 15	fin.	1760.52	5923	-0.00373	0.0003369	0.0035	0.66		1610.37	1610.37		0.91	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-977.95	-1439	-0.0012522	0.0003369	0.0035	0.66		1614.71	1614.71		1.65	Si
SLV 14	fin.	1861.86	6437	-0.0041219	0.0003369	0.0035	0.66		1610.37	1610.37		0.86	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	410.54	-2576	0.66	0	268	5234	4981	1683	5501		2.14	Si
SLV 4	fin.	-2033.53	-5313	0.66	0	268	5234	4981	1683	5501		1.04	Si
SLV 3	ini.	409.76	-2572	0.66	0	268	5234	4981	1683	5501		2.14	Si
SLV 3	fin.	-2033.28	-5309	0.66	0	268	5234	4981	1683	5501		1.04	Si
SLV 16	ini.	-1004.18	6574	0.66	0	268	5234	4981	1683	5501		0.84	No
SLV 16	fin.	1760.26	3535	0.66	0	268	5234	4981	1683	5501		1.56	Si
SLV 2	ini.	436.77	-2460	0.66	0	268	5234	4981	1683	5501		2.24	Si
SLV 2	fin.	-1931.93	-5173	0.66	0	268	5234	4981	1683	5501		1.06	Si
SLV 1	ini.	435.98	-2456	0.66	0	268	5234	4981	1683	5501		2.24	Si
SLV 1	fin.	-1931.68	-5169	0.66	0	268	5234	4981	1683	5501		1.06	Si
SLV 14	ini.	-977.95	6690	0.66	0	268	5234	4981	1683	5501		0.82	No
SLV 14	fin.	1861.86	3675	0.66	0	268	5234	4981	1683	5501		1.5	Si
SLV 15	ini.	-1004.97	6577	0.66	0	268	5234	4981	1683	5501		0.84	No
SLV 15	fin.	1760.52	3538	0.66	0	268	5234	4981	1683	5501		1.55	Si
SLD 14	ini.	-580.45	4039	0.66	0	268	5234	4981	1683	5501		1.36	Si
SLD 14	fin.	747.56	1103	0.66	0	268	5234	4981	1683	5501		4.99	Si
SLD 13	ini.	-580.78	4041	0.66	0	268	5234	4981	1683	5501		1.36	Si
SLD 13	fin.	747.67	1105	0.66	0	268	5234	4981	1683	5501		4.98	Si
SLV 13	ini.	-978.74	6693	0.66	0	268	5234	4981	1683	5501		0.82	No
SLV 13	fin.	1862.12	3678	0.66	0	268	5234	4981	1683	5501		1.5	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.794	SLV 4	No
V_SLV	0.822	SLV 13	No
PF_SLU	3.472	SLU 70	Si
V_SLU	1.569	SLU 69	Si

Trave di accoppiamento 156

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.398	1.006	14.37	15.03	0.66	-10.478	1.006	14.37	15.03	0.66	1.08	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-90.17	-134	-0.0000843	0.0002246	0.0035	0.66		1634.45	1634.45	No	18.13	Si
SLU 69	fin.	-495.06	-1374	-0.0005531	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.3	Si
SLU 77	ini.	-72.65	-49	-0.0000675	0.0002246	0.0035	0.66		1634.45	1634.45	No	22.5	Si
SLU 77	fin.	-487.86	-1327	-0.0005433	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.35	Si
SLU 80	ini.	-61.11	42	-0.0000566	0.0002246	0.0035	0.66		1634.45	1634.45	No	26.75	Si
SLU 80	fin.	-458.67	-1183	-0.000504	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.56	Si
SLU 66	ini.	-84.71	-210	-0.000079	0.0002246	0.0035	0.66		1634.45	1634.45	No	19.29	Si
SLU 66	fin.	-463.4	-1367	-0.0005103	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.53	Si
SLU 70	ini.	-87.46	-132	-0.0000817	0.0002246	0.0035	0.66		1634.45	1634.45	No	18.69	Si
SLU 70	fin.	-495.26	-1379	-0.0005534	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.3	Si
SLU 78	ini.	-69.95	-46	-0.0000649	0.0002246	0.0035	0.66		1634.45	1634.45	No	23.37	Si
SLU 78	fin.	-488.05	-1332	-0.0005435	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.35	Si
SLU 71	ini.	-81.32	-46	-0.0000758	0.0002246	0.0035	0.66		1634.45	1634.45	No	20.1	Si
SLU 71	fin.	-465.69	-1225	-0.0005134	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.51	Si
SLU 67	ini.	-82.01	-207	-0.0000764	0.0002246	0.0035	0.66		1634.45	1634.45	No	19.93	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 67	fin.	-463.59	-1372	-0.0005106	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.53	Si
SLU 79	ini.	-63.81	39	-0.0000591	0.0002246	0.0035	0.66		1634.45	1634.45	No	25.62	Si
SLU 79	fin.	-458.48	-1178	-0.0005037	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.56	Si
SLU 72	ini.	-78.62	-44	-0.0000732	0.0002246	0.0035	0.66		1634.45	1634.45	No	20.79	Si
SLU 72	fin.	-465.88	-1230	-0.0005136	0.0002246	0.0035	0.66		1634.45	1634.45	No	3.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-72.65	433	0.66	0	179	5234	3321	1683	5004	No	11.56	Si
SLU 77	fin.	-487.86	-2078	0.66	0	179	5234	3321	1683	5004	No	2.41	Si
SLU 79	ini.	-63.81	441	0.66	0	179	5234	3321	1683	5004	No	11.36	Si
SLU 79	fin.	-458.48	-2004	0.66	0	179	5234	3321	1683	5004	No	2.5	Si
SLU 67	ini.	-82.01	390	0.66	0	179	5234	3321	1683	5004	No	12.82	Si
SLU 67	fin.	-463.59	-1904	0.66	0	179	5234	3321	1683	5004	No	2.63	Si
SLU 71	ini.	-81.32	516	0.66	0	179	5234	3321	1683	5004	No	9.7	Si
SLU 71	fin.	-465.69	-2034	0.66	0	179	5234	3321	1683	5004	No	2.46	Si
SLU 78	ini.	-69.95	421	0.66	0	179	5234	3321	1683	5004	No	11.88	Si
SLU 78	fin.	-488.05	-2072	0.66	0	179	5234	3321	1683	5004	No	2.41	Si
SLU 72	ini.	-78.62	505	0.66	0	179	5234	3321	1683	5004	No	9.91	Si
SLU 72	fin.	-465.88	-2028	0.66	0	179	5234	3321	1683	5004	No	2.47	Si
SLU 69	ini.	-90.17	508	0.66	0	179	5234	3321	1683	5004	No	9.85	Si
SLU 69	fin.	-495.06	-2108	0.66	0	179	5234	3321	1683	5004	No	2.37	Si
SLU 70	ini.	-87.46	497	0.66	0	179	5234	3321	1683	5004	No	10.07	Si
SLU 70	fin.	-495.26	-2102	0.66	0	179	5234	3321	1683	5004	No	2.38	Si
SLU 66	ini.	-84.71	402	0.66	0	179	5234	3321	1683	5004	No	12.46	Si
SLU 66	fin.	-463.4	-1910	0.66	0	179	5234	3321	1683	5004	No	2.62	Si
SLU 80	ini.	-61.11	429	0.66	0	179	5234	3321	1683	5004	No	11.66	Si
SLU 80	fin.	-458.67	-1998	0.66	0	179	5234	3321	1683	5004	No	2.5	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1355.52	5264	-0.0021325	0.0003369	0.0035	0.66		1610.37	1610.37		1.19	Si
SLV 4	fin.	-745.99	447	-0.0008689	0.0003369	0.0035	0.66		1614.71	1614.71		2.16	Si
SLV 14	ini.	-1493.89	-5641	-0.0025909	0.0003369	0.0035	0.66		1614.71	1614.71		1.08	Si
SLV 14	fin.	173.73	-2200	-0.0001651	0.0003369	0.0035	0.66		1610.37	1610.37		9.27	Si
SLV 3	ini.	1368.53	5295	-0.0021725	0.0003369	0.0035	0.66		1610.37	1610.37		1.18	Si
SLV 3	fin.	-752.67	434	-0.000879	0.0003369	0.0035	0.66		1614.71	1614.71		2.15	Si
SLV 9	ini.	-712.09	-2297	-0.0008184	0.0003369	0.0035	0.66		1614.71	1614.71		2.27	Si
SLV 9	fin.	-41.21	-1075	-0.0000378	0.0003369	0.0035	0.66		1614.71	1614.71		39.19	Si
SLV 2	ini.	1206.35	4937	-0.0017299	0.0003369	0.0035	0.66		1610.37	1610.37		1.33	Si
SLV 2	fin.	-671.83	585	-0.00076	0.0003369	0.0035	0.66		1614.71	1614.71		2.4	Si
SLV 13	ini.	-1480.88	-5611	-0.0025422	0.0003369	0.0035	0.66		1614.71	1614.71		1.09	Si
SLV 13	fin.	167.05	-2213	-0.0001585	0.0003369	0.0035	0.66		1610.37	1610.37		9.64	Si
SLV 16	ini.	-1344.72	-5313	-0.00209	0.0003369	0.0035	0.66		1614.71	1614.71		1.2	Si
SLV 16	fin.	99.57	-2338	-0.0000928	0.0003369	0.0035	0.66		1610.37	1610.37		16.17	Si
SLV 15	ini.	-1331.71	-5283	-0.0020518	0.0003369	0.0035	0.66		1614.71	1614.71		1.21	Si
SLV 15	fin.	92.89	-2351	-0.0000864	0.0003369	0.0035	0.66		1610.37	1610.37		17.34	Si
SLV 1	ini.	1219.36	4967	-0.0017613	0.0003369	0.0035	0.66		1610.37	1610.37		1.32	Si
SLV 1	fin.	-678.51	572	-0.0007696	0.0003369	0.0035	0.66		1614.71	1614.71		2.38	Si
SLV 10	ini.	-720.57	-2317	-0.0008309	0.0003369	0.0035	0.66		1614.71	1614.71		2.24	Si
SLV 10	fin.	-36.85	-1067	-0.0000338	0.0003369	0.0035	0.66		1614.71	1614.71		43.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1331.71	2836	0.66	0	268	5234	4981	1683	5501		1.94	Si
SLV 15	fin.	92.89	1772	0.66	0	268	5234	4981	1683	5501		3.11	Si
SLD 2	ini.	478.66	-857	0.66	0	268	5234	4981	1683	5501		6.42	Si
SLD 2	fin.	-452.4	-2437	0.66	0	268	5234	4981	1683	5501		2.26	Si
SLV 14	ini.	-1493.89	3280	0.66	0	268	5234	4981	1683	5501		1.68	Si
SLV 14	fin.	173.73	1642	0.66	0	268	5234	4981	1683	5501		3.35	Si
SLV 1	ini.	1219.36	-2385	0.66	0	268	5234	4981	1683	5501		2.31	Si
SLV 1	fin.	-678.51	-4146	0.66	0	268	5234	4981	1683	5501		1.33	Si
SLV 4	ini.	1355.52	-2744	0.66	0	268	5234	4981	1683	5501		2	Si
SLV 4	fin.	-745.99	-3970	0.66	0	268	5234	4981	1683	5501		1.39	Si
SLV 13	ini.	-1480.88	3238	0.66	0	268	5234	4981	1683	5501		1.7	Si
SLV 13	fin.	167.05	1619	0.66	0	268	5234	4981	1683	5501		3.4	Si
SLV 3	ini.	1368.53	-2786	0.66	0	268	5234	4981	1683	5501		1.97	Si
SLV 3	fin.	-752.67	-3993	0.66	0	268	5234	4981	1683	5501		1.38	Si
SLD 1	ini.	484.25	-875	0.66	0	268	5234	4981	1683	5501		6.29	Si
SLD 1	fin.	-455.27	-2447	0.66	0	268	5234	4981	1683	5501		2.25	Si
SLV 2	ini.	1206.35	-2343	0.66	0	268	5234	4981	1683	5501		2.35	Si
SLV 2	fin.	-671.83	-4123	0.66	0	268	5234	4981	1683	5501		1.33	Si
SLV 16	ini.	-1344.72	2878	0.66	0	268	5234	4981	1683	5501		1.91	Si
SLV 16	fin.	99.57	1795	0.66	0	268	5234	4981	1683	5501		3.06	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.081	SLV 14	Si
V_SLV	1.327	SLV 1	Si
PF_SLU	3.3	SLU 70	Si
V_SLU	2.374	SLU 69	Si

Trave di accoppiamento 157

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.463	1.006	13.97	15.03	1.06	-7.463	1.006	13.97	15.03	1.06	1	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 45	ini.	-19.92	-719	-0.000007	0.0002246	0.0035	1.06		4210.93	4210.93	No	211.36	Si
SLU 45	fin.	-194.21	-964	-0.00007	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.68	Si
SLU 48	ini.	-35.65	-801	-0.0000126	0.0002246	0.0035	1.06		4210.93	4210.93	No	118.13	Si
SLU 48	fin.	-172.21	-963	-0.0000619	0.0002246	0.0035	1.06		4210.93	4210.93	No	24.45	Si
SLU 64	ini.	7.3	-571	-0.0000026	0.0002246	0.0035	1.06		4204.29	4204.29	No	575.84	Si
SLU 64	fin.	-193.57	-848	-0.0000698	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.75	Si
SLU 51	ini.	-20.17	-699	-0.0000071	0.0002246	0.0035	1.06		4210.93	4210.93	No	208.75	Si
SLU 51	fin.	-177.08	-929	-0.0000637	0.0002246	0.0035	1.06		4210.93	4210.93	No	23.78	Si
SLU 43	ini.	12.15	-531	-0.0000043	0.0002246	0.0035	1.06		4204.29	4204.29	No	345.91	Si
SLU 43	fin.	-221.38	-933	-0.0000801	0.0002246	0.0035	1.06		4210.93	4210.93	No	19.02	Si
SLU 46	ini.	-20.8	-722	-0.0000073	0.0002246	0.0035	1.06		4210.93	4210.93	No	202.41	Si
SLU 46	fin.	-193.9	-962	-0.0000699	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.72	Si
SLU 65	ini.	5.83	-577	-0.0000021	0.0002246	0.0035	1.06		4204.29	4204.29	No	720.93	Si
SLU 65	fin.	-193.05	-845	-0.0000696	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.81	Si
SLU 44	ini.	10.68	-537	-0.0000038	0.0002246	0.0035	1.06		4204.29	4204.29	No	393.48	Si
SLU 44	fin.	-220.86	-930	-0.0000799	0.0002246	0.0035	1.06		4210.93	4210.93	No	19.07	Si
SLU 47	ini.	-5.04	-619	-0.0000018	0.0002246	0.0035	1.06		4210.93	4210.93	No	835.9	Si
SLU 47	fin.	-198.86	-929	-0.0000717	0.0002246	0.0035	1.06		4210.93	4210.93	No	21.18	Si
SLU 50	ini.	-19.29	-696	-0.0000068	0.0002246	0.0035	1.06		4210.93	4210.93	No	218.29	Si
SLU 50	fin.	-177.39	-930	-0.0000638	0.0002246	0.0035	1.06		4210.93	4210.93	No	23.74	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	-19.29	1392	1.06	0	430	7930	5333	2703	8036	No	5.77	Si
SLU 50	fin.	-177.39	-2668	1.06	0	430	7930	5333	2703	8036	No	3.01	Si
SLU 70	ini.	-41.38	1855	1.06	0	430	7930	5333	2703	8036	No	4.33	Si
SLU 70	fin.	-144.09	-2861	1.06	0	430	7930	5333	2703	8036	No	2.81	Si
SLU 67	ini.	-25.66	1667	1.06	0	430	7930	5333	2703	8036	No	4.82	Si
SLU 67	fin.	-166.08	-2634	1.06	0	430	7930	5333	2703	8036	No	3.05	Si
SLU 72	ini.	-25.03	1615	1.06	0	430	7930	5333	2703	8036	No	4.97	Si
SLU 72	fin.	-149.26	-2778	1.06	0	430	7930	5333	2703	8036	No	2.89	Si
SLU 71	ini.	-24.14	1612	1.06	0	430	7930	5333	2703	8036	No	4.98	Si
SLU 71	fin.	-149.58	-2785	1.06	0	430	7930	5333	2703	8036	No	2.89	Si
SLU 49	ini.	-36.53	1635	1.06	0	430	7930	5333	2703	8036	No	4.92	Si
SLU 49	fin.	-171.9	-2744	1.06	0	430	7930	5333	2703	8036	No	2.93	Si
SLU 48	ini.	-35.65	1632	1.06	0	430	7930	5333	2703	8036	No	4.92	Si
SLU 48	fin.	-172.21	-2750	1.06	0	430	7930	5333	2703	8036	No	2.92	Si
SLU 69	ini.	-40.5	1852	1.06	0	430	7930	5333	2703	8036	No	4.34	Si
SLU 69	fin.	-144.4	-2868	1.06	0	430	7930	5333	2703	8036	No	2.8	Si
SLU 66	ini.	-24.78	1664	1.06	0	430	7930	5333	2703	8036	No	4.83	Si
SLU 66	fin.	-166.4	-2640	1.06	0	430	7930	5333	2703	8036	No	3.04	Si
SLU 51	ini.	-20.17	1395	1.06	0	430	7930	5333	2703	8036	No	5.76	Si
SLU 51	fin.	-177.08	-2661	1.06	0	430	7930	5333	2703	8036	No	3.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	730.12	1332	-0.0002774	0.0003369	0.0035	1.06		4163.27	4163.27		5.7	Si
SLV 4	fin.	-821.92	-1854	-0.0003153	0.0003369	0.0035	1.06		4170.47	4170.47		5.07	Si
SLV 3	ini.	730.74	1315	-0.0002776	0.0003369	0.0035	1.06		4163.27	4163.27		5.7	Si
SLV 3	fin.	-836.43	-1888	-0.0003215	0.0003369	0.0035	1.06		4170.47	4170.47		4.99	Si
SLV 5	ini.	492.72	1103	-0.0001822	0.0003369	0.0035	1.06		4163.27	4163.27		8.45	Si
SLV 5	fin.	-561.99	-1586	-0.0002091	0.0003369	0.0035	1.06		4170.47	4170.47		7.42	Si
SLV 16	ini.	-886.31	-2770	-0.0003428	0.0003369	0.0035	1.06		4170.47	4170.47		4.71	Si
SLV 16	fin.	676.7	989	-0.0002555	0.0003369	0.0035	1.06		4163.27	4163.27		6.15	Si
SLV 6	ini.	492.31	1115	-0.000182	0.0003369	0.0035	1.06		4163.27	4163.27		8.46	Si
SLV 6	fin.	-552.54	-1564	-0.0002053	0.0003369	0.0035	1.06		4170.47	4170.47		7.55	Si
SLV 15	ini.	-885.68	-2788	-0.0003426	0.0003369	0.0035	1.06		4170.47	4170.47		4.71	Si
SLV 15	fin.	662.19	956	-0.0002496	0.0003369	0.0035	1.06		4163.27	4163.27		6.29	Si
SLV 14	ini.	-735	-2207	-0.0002789	0.0003369	0.0035	1.06		4170.47	4170.47		5.67	Si
SLV 14	fin.	560.11	666	-0.0002087	0.0003369	0.0035	1.06		4163.27	4163.27		7.43	Si
SLV 2	ini.	881.43	1896	-0.0003413	0.0003369	0.0035	1.06		4163.27	4163.27		4.72	Si
SLV 2	fin.	-938.51	-2177	-0.0003656	0.0003369	0.0035	1.06		4170.47	4170.47		4.44	Si
SLV 1	ini.	882.05	1879	-0.0003416	0.0003369	0.0035	1.06		4163.27	4163.27		4.72	Si
SLV 1	fin.	-953.02	-2210	-0.000372	0.0003369	0.0035	1.06		4170.47	4170.47		4.38	Si
SLV 13	ini.	-734.38	-2224	-0.0002787	0.0003369	0.0035	1.06		4170.47	4170.47		5.68	Si
SLV 13	fin.	545.61	633	-0.0002029	0.0003369	0.0035	1.06		4163.27	4163.27		7.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	881.43	-2686	1.06	0	645	7930	8000	2703	8575		3.19	Si
SLV 2	fin.	-938.51	-5228	1.06	0	645	7930	8000	2703	8575		1.64	Si
SLV 6	ini.	492.31	-1265	1.06	0	645	7930	8000	2703	8575		6.78	Si
SLV 6	fin.	-552.54	-3817	1.06	0	645	7930	8000	2703	8575		2.25	Si
SLV 16	ini.	-886.31	4653	1.06	0	645	7930	8000	2703	8575		1.84	Si
SLV 16	fin.	676.7	1838	1.06	0	645	7930	8000	2703	8575		4.67	Si
SLV 5	ini.	492.72	-1291	1.06	0	645	7930	8000	2703	8575		6.64	Si
SLV 5	fin.	-561.99	-3807	1.06	0	645	7930	8000	2703	8575		2.25	Si
SLV 14	ini.	-735	3901	1.06	0	645	7930	8000	2703	8575		2.2	Si
SLV 14	fin.	560.11	1136	1.06	0	645	7930	8000	2703	8575		7.55	Si
SLV 4	ini.	730.12	-1934	1.06	0	645	7930	8000	2703	8575		4.43	Si
SLV 4	fin.	-821.92	-4526	1.06	0	645	7930	8000	2703	8575		1.89	Si
SLV 13	ini.	-734.38	3860	1.06	0	645	7930	8000	2703	8575		2.22	Si
SLV 13	fin.	545.61	1151	1.06	0	645	7930	8000	2703	8575		7.45	Si
SLV 3	ini.	730.74	-1975	1.06	0	645	7930	8000	2703	8575		4.34	Si
SLV 3	fin.	-836.43	-4510	1.06	0	645	7930	8000	2703	8575		1.9	Si
SLV 15	ini.	-885.68	4612	1.06	0	645	7930	8000	2703	8575		1.86	Si
SLV 15	fin.	662.19	1853	1.06	0	645	7930	8000	2703	8575		4.63	Si
SLV 1	ini.	882.05	-2726	1.06	0	645	7930	8000	2703	8575		3.15	Si
SLV 1	fin.	-953.02	-5212	1.06	0	645	7930	8000	2703	8575		1.65	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.376	SLV 1	Si
V_SLV	1.64	SLV 2	Si
PF_SLU	19.021	SLU 43	Si
V_SLU	2.802	SLU 69	Si

Trave di accoppiamento 158

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-4.113	1.006	13.97	15.03	1.06	-4.913	1.006	13.97	15.03	1.06	0.8	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 64	ini.	112.54	-294	-0.0000402	0.0002246	0.0035	1.06		4204.29	4204.29	No	37.36	Si
SLU 64	fin.	-231.45	-926	-0.0000838	0.0002246	0.0035	1.06		4210.93	4210.93	No	18.19	Si
SLU 69	ini.	32.38	-609	-0.0000115	0.0002246	0.0035	1.06		4204.29	4204.29	No	129.84	Si
SLU 69	fin.	-237.85	-1136	-0.0000862	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.7	Si
SLU 65	ini.	114.91	-291	-0.0000411	0.0002246	0.0035	1.06		4204.29	4204.29	No	36.59	Si
SLU 65	fin.	-232.13	-927	-0.0000841	0.0002246	0.0035	1.06		4210.93	4210.93	No	18.14	Si
SLU 45	ini.	87.67	-406	-0.0000312	0.0002246	0.0035	1.06		4204.29	4204.29	No	47.96	Si
SLU 45	fin.	-237.62	-1009	-0.0000861	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.72	Si
SLU 67	ini.	66.43	-494	-0.0000236	0.0002246	0.0035	1.06		4204.29	4204.29	No	63.29	Si
SLU 67	fin.	-239.83	-1078	-0.000087	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.56	Si
SLU 49	ini.	56.47	-517	-0.00002	0.0002246	0.0035	1.06		4204.29	4204.29	No	74.45	Si
SLU 49	fin.	-236.45	-1069	-0.0000857	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.81	Si
SLU 46	ini.	89.1	-404	-0.0000317	0.0002246	0.0035	1.06		4204.29	4204.29	No	47.19	Si
SLU 46	fin.	-238.02	-1009	-0.0000863	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.69	Si
SLU 70	ini.	33.81	-607	-0.000012	0.0002246	0.0035	1.06		4204.29	4204.29	No	124.36	Si
SLU 70	fin.	-238.26	-1137	-0.0000864	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.67	Si
SLU 48	ini.	55.05	-519	-0.0000195	0.0002246	0.0035	1.06		4204.29	4204.29	No	76.37	Si
SLU 48	fin.	-236.04	-1068	-0.0000856	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.84	Si
SLU 66	ini.	65	-496	-0.0000231	0.0002246	0.0035	1.06		4204.29	4204.29	No	64.68	Si
SLU 66	fin.	-239.42	-1077	-0.0000868	0.0002246	0.0035	1.06		4210.93	4210.93	No	17.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	56.47	470	1.06	0	430	6344	5333	2703	6774	No	14.42	Si
SLU 49	fin.	-236.45	-2076	1.06	0	430	6344	5333	2703	6774	No	3.26	Si
SLU 46	ini.	89.1	378	1.06	0	430	6344	5333	2703	6774	No	17.93	Si
SLU 46	fin.	-238.02	-2114	1.06	0	430	6344	5333	2703	6774	No	3.2	Si
SLU 69	ini.	32.38	553	1.06	0	430	6344	5333	2703	6774	No	12.25	Si
SLU 69	fin.	-237.85	-2059	1.06	0	430	6344	5333	2703	6774	No	3.29	Si
SLU 44	ini.	137.58	167	1.06	0	430	6344	5333	2703	6774	No	40.56	Si
SLU 44	fin.	-230.32	-2053	1.06	0	430	6344	5333	2703	6774	No	3.3	Si
SLU 45	ini.	87.67	378	1.06	0	430	6344	5333	2703	6774	No	17.91	Si
SLU 45	fin.	-237.62	-2098	1.06	0	430	6344	5333	2703	6774	No	3.23	Si
SLU 66	ini.	65	461	1.06	0	430	6344	5333	2703	6774	No	14.7	Si
SLU 66	fin.	-239.42	-2098	1.06	0	430	6344	5333	2703	6774	No	3.23	Si
SLU 67	ini.	66.43	460	1.06	0	430	6344	5333	2703	6774	No	14.72	Si
SLU 67	fin.	-239.83	-2113	1.06	0	430	6344	5333	2703	6774	No	3.21	Si
SLU 70	ini.	33.81	552	1.06	0	430	6344	5333	2703	6774	No	12.27	Si
SLU 70	fin.	-238.26	-2075	1.06	0	430	6344	5333	2703	6774	No	3.26	Si
SLU 65	ini.	114.91	250	1.06	0	430	6344	5333	2703	6774	No	27.14	Si
SLU 65	fin.	-232.13	-2052	1.06	0	430	6344	5333	2703	6774	No	3.3	Si
SLU 48	ini.	55.05	470	1.06	0	430	6344	5333	2703	6774	No	14.41	Si
SLU 48	fin.	-236.04	-2060	1.06	0	430	6344	5333	2703	6774	No	3.29	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	648.91	791	-0.0002442	0.0003369	0.0035	1.06		4163.27	4163.27		6.42	Si
SLV 8	fin.	-526.56	-1285	-0.0001951	0.0003369	0.0035	1.06		4170.47	4170.47		7.92	Si
SLV 15	ini.	-633.81	-1993	-0.0002377	0.0003369	0.0035	1.06		4170.47	4170.47		6.58	Si
SLV 15	fin.	3.72	-1234	-0.0000013	0.0003369	0.0035	1.06		4163.27	4163.27		1118.76	Si
SLV 7	ini.	676.86	845	-0.0002555	0.0003369	0.0035	1.06		4163.27	4163.27		6.15	Si
SLV 7	fin.	-542.14	-1306	-0.0002012	0.0003369	0.0035	1.06		4170.47	4170.47		7.69	Si
SLV 1	ini.	837.97	1615	-0.0003227	0.0003369	0.0035	1.06		4163.27	4163.27		4.97	Si
SLV 1	fin.	-373.78	-200	-0.0001363	0.0003369	0.0035	1.06		4170.47	4170.47		11.16	Si
SLV 2	ini.	795.08	1532	-0.0003045	0.0003369	0.0035	1.06		4163.27	4163.27		5.24	Si
SLV 2	fin.	-349.86	-168	-0.0001273	0.0003369	0.0035	1.06		4170.47	4170.47		11.92	Si
SLV 4	ini.	994.06	1811	-0.0003909	0.0003369	0.0035	1.06		4163.27	4163.27		4.19	Si
SLV 4	fin.	-517.56	-580	-0.0001916	0.0003369	0.0035	1.06		4170.47	4170.47		8.06	Si
SLV 3	ini.	1036.95	1894	-0.0004103	0.0003369	0.0035	1.06		4163.27	4163.27		4.01	Si
SLV 3	fin.	-541.48	-613	-0.000201	0.0003369	0.0035	1.06		4170.47	4170.47		7.7	Si
SLV 13	ini.	-832.79	-2273	-0.0003199	0.0003369	0.0035	1.06		4170.47	4170.47		5.01	Si
SLV 13	fin.	171.42	-822	-0.0000614	0.0003369	0.0035	1.06		4163.27	4163.27		24.29	Si
SLV 16	ini.	-676.69	-2076	-0.000255	0.0003369	0.0035	1.06		4170.47	4170.47		6.16	Si
SLV 16	fin.	27.64	-1202	-0.0000098	0.0003369	0.0035	1.06		4163.27	4163.27		150.63	Si
SLV 14	ini.	-875.68	-2355	-0.0003383	0.0003369	0.0035	1.06		4170.47	4170.47		4.76	Si
SLV 14	fin.	195.34	-789	-0.0000701	0.0003369	0.0035	1.06		4163.27	4163.27		21.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	994.06	-2454	1.06	0	645	6344	8000	2703	6989		2.85	Si
SLV 4	fin.	-517.56	-4508	1.06	0	645	6344	8000	2703	6989		1.55	Si
SLV 2	ini.	795.08	-1569	1.06	0	645	6344	8000	2703	6989		4.46	Si
SLV 2	fin.	-349.86	-3489	1.06	0	645	6344	8000	2703	6989		2	Si
SLV 3	ini.	1036.95	-2608	1.06	0	645	6344	8000	2703	6989		2.68	Si
SLV 3	fin.	-541.48	-4689	1.06	0	645	6344	8000	2703	6989		1.49	Si
SLV 14	ini.	-875.68	3015	1.06	0	645	6344	8000	2703	6989		2.32	Si
SLV 14	fin.	195.34	1660	1.06	0	645	6344	8000	2703	6989		4.21	Si
SLD 3	ini.	491.29	-1006	1.06	0	645	6344	8000	2703	6989		6.94	Si
SLD 3	fin.	-332.07	-2881	1.06	0	645	6344	8000	2703	6989		2.43	Si
SLV 7	ini.	676.86	-2010	1.06	0	645	6344	8000	2703	6989		3.48	Si
SLV 7	fin.	-542.14	-4045	1.06	0	645	6344	8000	2703	6989		1.73	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 4	ini.	472.87	-940	1.06	0	645	6344	8000	2703	6989		7.43	Si
SLD 4	fin.	-321.79	-2803	1.06	0	645	6344	8000	2703	6989		2.49	Si
SLV 8	ini.	648.91	-1910	1.06	0	645	6344	8000	2703	6989		3.66	Si
SLV 8	fin.	-526.56	-3927	1.06	0	645	6344	8000	2703	6989		1.78	Si
SLV 1	ini.	837.97	-1722	1.06	0	645	6344	8000	2703	6989		4.06	Si
SLV 1	fin.	-373.78	-3669	1.06	0	645	6344	8000	2703	6989		1.9	Si
SLV 13	ini.	-832.79	2861	1.06	0	645	6344	8000	2703	6989		2.44	Si
SLV 13	fin.	171.42	1480	1.06	0	645	6344	8000	2703	6989		4.72	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.015	SLV 3	Si
V_SLV	1.491	SLV 3	Si
PF_SLU	17.558	SLU 67	Si
V_SLU	3.204	SLU 46	Si

Trave di accoppiamento 159

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.163	1.246	13.97	15.03	1.06	-5.163	2.046	13.97	15.03	1.06	0.8	0.14	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-72.13	-4	-0.0000256	0.0002246	0.0035	1.06		4254.05	4254.05	No	58.98	Si
SLU 79	fin.	-212.35	-136	-0.0000767	0.0002246	0.0035	1.06		4254.05	4254.05	No	20.03	Si
SLU 78	ini.	-76.1	-4	-0.000027	0.0002246	0.0035	1.06		4254.05	4254.05	No	55.9	Si
SLU 78	fin.	-219.72	-135	-0.0000795	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.36	Si
SLU 81	ini.	-72.02	1	-0.0000256	0.0002246	0.0035	1.06		4254.05	4254.05	No	59.07	Si
SLU 81	fin.	-216.31	-137	-0.0000782	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.67	Si
SLU 83	ini.	-74.36	-1	-0.0000264	0.0002246	0.0035	1.06		4254.05	4254.05	No	57.21	Si
SLU 83	fin.	-220.81	-140	-0.0000799	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.27	Si
SLU 77	ini.	-76.63	-4	-0.0000272	0.0002246	0.0035	1.06		4254.05	4254.05	No	55.52	Si
SLU 77	fin.	-221.8	-137	-0.0000802	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.18	Si
SLU 82	ini.	-71.49	1	-0.0000254	0.0002246	0.0035	1.06		4254.05	4254.05	No	59.51	Si
SLU 82	fin.	-214.23	-136	-0.0000774	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.86	Si
SLU 75	ini.	-73.76	-1	-0.0000262	0.0002246	0.0035	1.06		4254.05	4254.05	No	57.68	Si
SLU 75	fin.	-215.22	-133	-0.0000778	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.77	Si
SLU 84	ini.	-73.83	-1	-0.0000262	0.0002246	0.0035	1.06		4254.05	4254.05	No	57.62	Si
SLU 84	fin.	-218.72	-138	-0.0000791	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.45	Si
SLU 74	ini.	-74.29	-1	-0.0000264	0.0002246	0.0035	1.06		4254.05	4254.05	No	57.27	Si
SLU 74	fin.	-217.3	-134	-0.0000786	0.0002246	0.0035	1.06		4254.05	4254.05	No	19.58	Si
SLU 80	ini.	-71.6	-4	-0.0000254	0.0002246	0.0035	1.06		4254.05	4254.05	No	59.42	Si
SLU 80	fin.	-210.27	-134	-0.000076	0.0002246	0.0035	1.06		4254.05	4254.05	No	20.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-72.02	-150	1.06	0	215	6344	2667	2703	5370	No	35.8	Si
SLU 81	fin.	-216.31	-446	1.06	0	215	6344	2667	2703	5370	No	12.04	Si
SLU 84	ini.	-73.83	-150	1.06	0	215	6344	2667	2703	5370	No	35.88	Si
SLU 84	fin.	-218.72	-446	1.06	0	215	6344	2667	2703	5370	No	12.05	Si
SLU 83	ini.	-74.36	-153	1.06	0	215	6344	2667	2703	5370	No	35.17	Si
SLU 83	fin.	-220.81	-449	1.06	0	215	6344	2667	2703	5370	No	11.97	Si
SLU 78	ini.	-76.1	-145	1.06	0	215	6344	2667	2703	5370	No	37.16	Si
SLU 78	fin.	-219.72	-440	1.06	0	215	6344	2667	2703	5370	No	12.19	Si
SLU 74	ini.	-74.29	-145	1.06	0	215	6344	2667	2703	5370	No	37.07	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	fin.	-217.3	-441	1.06	0	215	6344	2667	2703	5370	No	12.18	Si
SLU 79	ini.	-72.13	-140	1.06	0	215	6344	2667	2703	5370	No	38.36	Si
SLU 79	fin.	-212.35	-436	1.06	0	215	6344	2667	2703	5370	No	12.32	Si
SLU 82	ini.	-71.49	-147	1.06	0	215	6344	2667	2703	5370	No	36.53	Si
SLU 82	fin.	-214.23	-443	1.06	0	215	6344	2667	2703	5370	No	12.12	Si
SLU 75	ini.	-73.76	-142	1.06	0	215	6344	2667	2703	5370	No	37.85	Si
SLU 75	fin.	-215.22	-438	1.06	0	215	6344	2667	2703	5370	No	12.27	Si
SLU 77	ini.	-76.63	-148	1.06	0	215	6344	2667	2703	5370	No	36.4	Si
SLU 77	fin.	-221.8	-443	1.06	0	215	6344	2667	2703	5370	No	12.11	Si
SLU 80	ini.	-71.6	-137	1.06	0	215	6344	2667	2703	5370	No	39.21	Si
SLU 80	fin.	-210.27	-433	1.06	0	215	6344	2667	2703	5370	No	12.4	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-155.2	-258	-0.0000554	0.0003369	0.0035	1.06		4366.52	4366.52		28.14	Si
SLV 7	fin.	-236.66	-969	-0.0000851	0.0003369	0.0035	1.06		4366.52	4366.52		18.45	Si
SLV 14	ini.	-89.38	-29	-0.0000317	0.0003369	0.0035	1.06		4366.52	4366.52		48.85	Si
SLV 14	fin.	-215.23	82	-0.0000773	0.0003369	0.0035	1.06		4366.52	4366.52		20.29	Si
SLD 12	ini.	-115.11	-139	-0.0000409	0.0003369	0.0035	1.06		4366.52	4366.52		37.93	Si
SLD 12	fin.	-215.65	-506	-0.0000774	0.0003369	0.0035	1.06		4366.52	4366.52		20.25	Si
SLV 16	ini.	-171.58	-206	-0.0000613	0.0003369	0.0035	1.06		4366.52	4366.52		25.45	Si
SLV 16	fin.	-299.98	-467	-0.0001086	0.0003369	0.0035	1.06		4366.52	4366.52		14.56	Si
SLD 11	ini.	-113.62	-139	-0.0000404	0.0003369	0.0035	1.06		4366.52	4366.52		38.43	Si
SLD 11	fin.	-208.05	-499	-0.0000746	0.0003369	0.0035	1.06		4366.52	4366.52		20.99	Si
SLV 12	ini.	-208.43	-329	-0.0000748	0.0003369	0.0035	1.06		4366.52	4366.52		20.95	Si
SLV 12	fin.	-318.73	-1040	-0.0001156	0.0003369	0.0035	1.06		4366.52	4366.52		13.7	Si
SLV 15	ini.	-166.35	-205	-0.0000594	0.0003369	0.0035	1.06		4366.52	4366.52		26.25	Si
SLV 15	fin.	-273.3	-443	-0.0000987	0.0003369	0.0035	1.06		4366.52	4366.52		15.98	Si
SLV 11	ini.	-205.02	-328	-0.0000735	0.0003369	0.0035	1.06		4366.52	4366.52		21.3	Si
SLV 11	fin.	-301.35	-1024	-0.0001091	0.0003369	0.0035	1.06		4366.52	4366.52		14.49	Si
SLV 8	ini.	-158.6	-258	-0.0000566	0.0003369	0.0035	1.06		4366.52	4366.52		27.53	Si
SLV 8	fin.	-254.04	-985	-0.0000915	0.0003369	0.0035	1.06		4366.52	4366.52		17.19	Si
SLD 16	ini.	-97.53	-84	-0.0000346	0.0003369	0.0035	1.06		4366.52	4366.52		44.77	Si
SLD 16	fin.	-206.12	-253	-0.0000739	0.0003369	0.0035	1.06		4366.52	4366.52		21.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-89.38	-389	1.06	0	323	6344	4000	2703	6666		17.15	Si
SLV 14	fin.	-215.23	-655	1.06	0	323	6344	4000	2703	6666		10.17	Si
SLD 5	ini.	25.48	-304	1.06	0	323	6344	4000	2703	6666		21.93	Si
SLD 5	fin.	-57.24	-541	1.06	0	323	6344	4000	2703	6666		12.33	Si
SLD 9	ini.	5.22	-335	1.06	0	323	6344	4000	2703	6666		19.91	Si
SLD 9	fin.	-84.49	-579	1.06	0	323	6344	4000	2703	6666		11.51	Si
SLV 6	ini.	115.39	-610	1.06	0	323	6344	4000	2703	6666		10.93	Si
SLV 6	fin.	28.45	-862	1.06	0	323	6344	4000	2703	6666		7.73	Si
SLD 10	ini.	3.73	-347	1.06	0	323	6344	4000	2703	6666		19.22	Si
SLD 10	fin.	-92.09	-591	1.06	0	323	6344	4000	2703	6666		11.28	Si
SLV 5	ini.	118.79	-582	1.06	0	323	6344	4000	2703	6666		11.45	Si
SLV 5	fin.	45.83	-835	1.06	0	323	6344	4000	2703	6666		7.98	Si
SLD 6	ini.	23.99	-316	1.06	0	323	6344	4000	2703	6666		21.1	Si
SLD 6	fin.	-64.85	-553	1.06	0	323	6344	4000	2703	6666		12.06	Si
SLV 13	ini.	-84.15	-347	1.06	0	323	6344	4000	2703	6666		19.23	Si
SLV 13	fin.	-188.56	-613	1.06	0	323	6344	4000	2703	6666		10.87	Si
SLV 10	ini.	65.56	-682	1.06	0	323	6344	4000	2703	6666		9.77	Si
SLV 10	fin.	-36.24	-953	1.06	0	323	6344	4000	2703	6666		6.99	Si
SLV 9	ini.	68.97	-655	1.06	0	323	6344	4000	2703	6666		10.18	Si
SLV 9	fin.	-18.86	-926	1.06	0	323	6344	4000	2703	6666		7.2	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	13.7	SLV 12	Si
V_SLV	6.993	SLV 10	Si
PF_SLU	19.18	SLU 77	Si
V_SLU	11.97	SLU 83	Si

Trave di accoppiamento 160

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	11.87	13.87	2	-5.093	6.506	11.87	13.87	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 46	ini.	23.98	-43	-0.0000024	0.0001872	0.0035	2		14344.28	14344.28	No	598.12	Si
SLU 46	fin.	-59.49	-81	-0.0000059	0.0001872	0.0035	2		14357.01	14357.01	No	241.32	Si
SLU 43	ini.	17.06	-33	-0.0000017	0.0001872	0.0035	2		14344.28	14344.28	No	840.73	Si
SLU 43	fin.	-60.51	-80	-0.000006	0.0001872	0.0035	2		14357.01	14357.01	No	237.27	Si
SLU 51	ini.	37.28	-57	-0.0000037	0.0001872	0.0035	2		14344.28	14344.28	No	384.77	Si
SLU 51	fin.	-69.95	-92	-0.0000069	0.0001872	0.0035	2		14357.01	14357.01	No	205.26	Si
SLU 48	ini.	37.33	-47	-0.0000037	0.0001872	0.0035	2		14344.28	14344.28	No	384.23	Si
SLU 48	fin.	-72.5	-92	-0.0000072	0.0001872	0.0035	2		14357.01	14357.01	No	198.02	Si
SLU 47	ini.	24.65	-51	-0.0000024	0.0001872	0.0035	2		14344.28	14344.28	No	581.92	Si
SLU 47	fin.	-58.78	-81	-0.0000058	0.0001872	0.0035	2		14357.01	14357.01	No	244.25	Si
SLU 45	ini.	26.14	-37	-0.0000026	0.0001872	0.0035	2		14344.28	14344.28	No	548.69	Si
SLU 45	fin.	-65.02	-85	-0.0000064	0.0001872	0.0035	2		14357.01	14357.01	No	220.8	Si
SLU 49	ini.	35.17	-52	-0.0000035	0.0001872	0.0035	2		14344.28	14344.28	No	407.84	Si
SLU 49	fin.	-66.98	-89	-0.0000066	0.0001872	0.0035	2		14357.01	14357.01	No	214.36	Si
SLU 71	ini.	31.98	-26	-0.0000032	0.0001872	0.0035	2		14344.28	14344.28	No	448.57	Si
SLU 71	fin.	-53.21	-72	-0.0000053	0.0001872	0.0035	2		14357.01	14357.01	No	269.81	Si
SLU 50	ini.	39.44	-52	-0.0000039	0.0001872	0.0035	2		14344.28	14344.28	No	363.69	Si
SLU 50	fin.	-75.47	-95	-0.0000075	0.0001872	0.0035	2		14357.01	14357.01	No	190.22	Si
SLU 8	ini.	33.54	-37	-0.0000033	0.0001872	0.0035	2		14344.28	14344.28	No	427.74	Si
SLU 8	fin.	-55.64	-71	-0.0000055	0.0001872	0.0035	2		14357.01	14357.01	No	258.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 49	ini.	35.17	-615	2	0	812	3965	8384	5100	4776	No	7.77	Si
SLU 49	fin.	-66.98	-225	2	0	812	3965	8384	5100	4776	No	21.23	Si
SLU 69	ini.	29.87	-602	2	0	812	3965	8384	5100	4776	No	7.93	Si
SLU 69	fin.	-50.24	-149	2	0	812	3965	8384	5100	4776	No	31.95	Si
SLU 48	ini.	37.33	-612	2	0	812	3965	8384	5100	4776	No	7.81	Si
SLU 48	fin.	-72.5	-221	2	0	812	3965	8384	5100	4776	No	21.59	Si
SLU 70	ini.	27.71	-605	2	0	812	3965	8384	5100	4776	No	7.89	Si
SLU 70	fin.	-44.71	-153	2	0	812	3965	8384	5100	4776	No	31.18	Si
SLU 50	ini.	39.44	-605	2	0	812	3965	8384	5100	4776	No	7.89	Si
SLU 50	fin.	-75.47	-241	2	0	812	3965	8384	5100	4776	No	19.85	Si
SLU 51	ini.	37.28	-608	2	0	812	3965	8384	5100	4776	No	7.85	Si
SLU 51	fin.	-69.95	-244	2	0	812	3965	8384	5100	4776	No	19.55	Si
SLU 56	ini.	20.3	-539	2	0	812	3965	8384	5100	4776	No	8.87	Si
SLU 56	fin.	-37.17	-106	2	0	812	3965	8384	5100	4776	No	45.25	Si
SLU 71	ini.	31.98	-595	2	0	812	3965	8384	5100	4776	No	8.02	Si
SLU 71	fin.	-53.21	-169	2	0	812	3965	8384	5100	4776	No	28.3	Si
SLU 72	ini.	29.82	-599	2	0	812	3965	8384	5100	4776	No	7.98	Si
SLU 72	fin.	-47.68	-172	2	0	812	3965	8384	5100	4776	No	27.69	Si
SLU 57	ini.	18.13	-542	2	0	812	3965	8384	5100	4776	No	8.81	Si
SLU 57	fin.	-31.65	-109	2	0	812	3965	8384	5100	4776	No	43.72	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	642.41	-647	-0.0000647	0.0002807	0.0035	2		14202.07	14202.07		22.11	Si
SLV 1	fin.	-1288.29	-1383	-0.0001324	0.0002807	0.0035	2		14215.41	14215.41		11.03	Si
SLV 3	ini.	511.04	-411	-0.0000513	0.0002807	0.0035	2		14202.07	14202.07		27.79	Si
SLV 3	fin.	-1170.15	-1196	-0.0001198	0.0002807	0.0035	2		14215.41	14215.41		12.15	Si
SLV 15	ini.	-597.03	591	-0.00006	0.0002807	0.0035	2		14215.41	14215.41		23.81	Si
SLV 15	fin.	1188.9	1253	-0.0001219	0.0002807	0.0035	2		14202.07	14202.07		11.95	Si
SLV 13	ini.	-465.66	355	-0.0000466	0.0002807	0.0035	2		14215.41	14215.41		30.53	Si
SLV 13	fin.	1070.76	1066	-0.0001094	0.0002807	0.0035	2		14202.07	14202.07		13.26	Si
SLV 4	ini.	473.97	-356	-0.0000475	0.0002807	0.0035	2		14202.07	14202.07		29.96	Si
SLV 4	fin.	-1119.2	-1141	-0.0001144	0.0002807	0.0035	2		14215.41	14215.41		12.7	Si
SLD 1	ini.	277.68	-278	-0.0000277	0.0002807	0.0035	2		14202.07	14202.07		51.15	Si
SLD 1	fin.	-564.01	-612	-0.0000567	0.0002807	0.0035	2		14215.41	14215.41		25.2	Si
SLV 14	ini.	-502.73	410	-0.0000504	0.0002807	0.0035	2		14215.41	14215.41		28.28	Si
SLV 14	fin.	1121.71	1120	-0.0001147	0.0002807	0.0035	2		14202.07	14202.07		12.66	Si
SLV 2	ini.	605.34	-592	-0.0000609	0.0002807	0.0035	2		14202.07	14202.07		23.46	Si
SLV 2	fin.	-1237.34	-1328	-0.0001269	0.0002807	0.0035	2		14215.41	14215.41		11.49	Si
SLV 16	ini.	-634.09	646	-0.0000638	0.0002807	0.0035	2		14215.41	14215.41		22.42	Si
SLV 16	fin.	1239.85	1307	-0.0001273	0.0002807	0.0035	2		14202.07	14202.07		11.45	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	401.39	-562	-0.0000402	0.0002807	0.0035	2		14202.07	14202.07		35.38	Si
SLV 5	fin.	-591.57	-734	-0.0000595	0.0002807	0.0035	2		14215.41	14215.41		24.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-465.66	3388	2	0	1217	3965	12577	5100	5182		1.53	Si
SLV 13	fin.	1070.76	2782	2	0	1217	3965	12577	5100	5182		1.86	Si
SLV 3	ini.	511.04	-4280	2	0	1217	3965	12577	5100	5182		1.21	Si
SLV 3	fin.	-1170.15	-3070	2	0	1217	3965	12577	5100	5182		1.69	Si
SLV 5	ini.	401.39	-2457	2	0	1217	3965	12577	5100	5182		2.11	Si
SLV 5	fin.	-591.57	-1611	2	0	1217	3965	12577	5100	5182		3.22	Si
SLV 16	ini.	-634.09	4141	2	0	1217	3965	12577	5100	5182		1.25	Si
SLV 16	fin.	1239.85	3279	2	0	1217	3965	12577	5100	5182		1.58	Si
SLV 15	ini.	-597.03	3887	2	0	1217	3965	12577	5100	5182		1.33	Si
SLV 15	fin.	1188.9	3121	2	0	1217	3965	12577	5100	5182		1.66	Si
SLV 1	ini.	642.41	-4778	2	0	1217	3965	12577	5100	5182		1.08	Si
SLV 1	fin.	-1288.29	-3409	2	0	1217	3965	12577	5100	5182		1.52	Si
SLV 4	ini.	473.97	-4026	2	0	1217	3965	12577	5100	5182		1.29	Si
SLV 4	fin.	-1119.2	-2912	2	0	1217	3965	12577	5100	5182		1.78	Si
SLV 6	ini.	377.24	-2292	2	0	1217	3965	12577	5100	5182		2.26	Si
SLV 6	fin.	-558.37	-1508	2	0	1217	3965	12577	5100	5182		3.44	Si
SLV 2	ini.	605.34	-4524	2	0	1217	3965	12577	5100	5182		1.15	Si
SLV 2	fin.	-1237.34	-3251	2	0	1217	3965	12577	5100	5182		1.59	Si
SLV 14	ini.	-502.73	3642	2	0	1217	3965	12577	5100	5182		1.42	Si
SLV 14	fin.	1121.71	2939	2	0	1217	3965	12577	5100	5182		1.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	11.034	SLV 1	Si
V_SLV	1.085	SLV 1	Si
PF_SLU	190.224	SLU 50	Si
V_SLU	7.766	SLU 49	Si

Trave di accoppiamento 161

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.093	6.006	14.67	15.03	0.36	-5.093	6.506	14.67	15.03	0.36	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 39	ini.	-36.56	31	-0.0001161	0.0001872	0.0035	0.36		482.14	482.14	No	13.19	Si
SLU 39	fin.	27	-143	-0.000085	0.0001872	0.0035	0.36		479.9	479.9	No	17.77	Si
SLU 81	ini.	-38.79	34	-0.0001236	0.0001872	0.0035	0.36		482.14	482.14	No	12.43	Si
SLU 81	fin.	30.24	-158	-0.0000956	0.0001872	0.0035	0.36		479.9	479.9	No	15.87	Si
SLU 83	ini.	-35.21	35	-0.0001116	0.0001872	0.0035	0.36		482.14	482.14	No	13.69	Si
SLU 83	fin.	25.87	-136	-0.0000814	0.0001872	0.0035	0.36		479.9	479.9	No	18.55	Si
SLU 41	ini.	-32.98	31	-0.0001042	0.0001872	0.0035	0.36		482.14	482.14	No	14.62	Si
SLU 41	fin.	22.63	-121	-0.0000709	0.0001872	0.0035	0.36		479.9	479.9	No	21.2	Si
SLU 40	ini.	-36.11	31	-0.0001146	0.0001872	0.0035	0.36		482.14	482.14	No	13.35	Si
SLU 40	fin.	26.3	-139	-0.0000827	0.0001872	0.0035	0.36		479.9	479.9	No	18.25	Si
SLU 73	ini.	-33.63	32	-0.0001064	0.0001872	0.0035	0.36		482.14	482.14	No	14.34	Si
SLU 73	fin.	26.24	-136	-0.0000826	0.0001872	0.0035	0.36		479.9	479.9	No	18.29	Si
SLU 42	ini.	-32.54	32	-0.0001027	0.0001872	0.0035	0.36		482.14	482.14	No	14.82	Si
SLU 42	fin.	21.93	-116	-0.0000686	0.0001872	0.0035	0.36		479.9	479.9	No	21.88	Si
SLU 74	ini.	-32.82	31	-0.0001037	0.0001872	0.0035	0.36		482.14	482.14	No	14.69	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	fin.	23.71	-130	-0.0000743	0.0001872	0.0035	0.36		479.9	479.9	No	20.24	Si
SLU 82	ini.	-38.34	35	-0.0001221	0.0001872	0.0035	0.36		482.14	482.14	No	12.57	Si
SLU 82	fin.	29.54	-154	-0.0000933	0.0001872	0.0035	0.36		479.9	479.9	No	16.25	Si
SLU 84	ini.	-34.76	35	-0.0001101	0.0001872	0.0035	0.36		482.14	482.14	No	13.87	Si
SLU 84	fin.	25.17	-132	-0.0000791	0.0001872	0.0035	0.36		479.9	479.9	No	19.07	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-35.21	221	0.36	0	105	2855	1509	918	2427	No	11	Si
SLU 83	fin.	25.87	-277	0.36	0	105	2855	1509	918	2427	No	8.75	Si
SLU 78	ini.	-28.8	206	0.36	0	105	2855	1509	918	2427	No	11.78	Si
SLU 78	fin.	18.64	-284	0.36	0	105	2855	1509	918	2427	No	8.54	Si
SLU 82	ini.	-38.34	229	0.36	0	105	2855	1509	918	2427	No	10.59	Si
SLU 82	fin.	29.54	-282	0.36	0	105	2855	1509	918	2427	No	8.61	Si
SLU 75	ini.	-32.38	216	0.36	0	105	2855	1509	918	2427	No	11.22	Si
SLU 75	fin.	23.01	-289	0.36	0	105	2855	1509	918	2427	No	8.4	Si
SLU 53	ini.	-26.1	189	0.36	0	105	2855	1509	918	2427	No	12.85	Si
SLU 53	fin.	20.54	-266	0.36	0	105	2855	1509	918	2427	No	9.12	Si
SLU 74	ini.	-32.82	218	0.36	0	105	2855	1509	918	2427	No	11.14	Si
SLU 74	fin.	23.71	-289	0.36	0	105	2855	1509	918	2427	No	8.39	Si
SLU 84	ini.	-34.76	219	0.36	0	105	2855	1509	918	2427	No	11.09	Si
SLU 84	fin.	25.17	-277	0.36	0	105	2855	1509	918	2427	No	8.76	Si
SLU 77	ini.	-29.24	208	0.36	0	105	2855	1509	918	2427	No	11.69	Si
SLU 77	fin.	19.34	-284	0.36	0	105	2855	1509	918	2427	No	8.53	Si
SLU 73	ini.	-33.63	212	0.36	0	105	2855	1509	918	2427	No	11.47	Si
SLU 73	fin.	26.24	-271	0.36	0	105	2855	1509	918	2427	No	8.97	Si
SLU 81	ini.	-38.79	231	0.36	0	105	2855	1509	918	2427	No	10.51	Si
SLU 81	fin.	30.24	-282	0.36	0	105	2855	1509	918	2427	No	8.6	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-289.5	224	-0.001272	0.0002807	0.0035	0.36		485.29	485.29		1.68	Si
SLV 16	fin.	239.12	-916	-0.0009847	0.0002807	0.0035	0.36		482.94	482.94		2.02	Si
SLV 13	ini.	-234.31	199	-0.0009527	0.0002807	0.0035	0.36		485.29	485.29		2.07	Si
SLV 13	fin.	193.75	-780	-0.0007497	0.0002807	0.0035	0.36		482.94	482.94		2.49	Si
SLV 2	ini.	232.25	-177	-0.0009474	0.0002807	0.0035	0.36		482.94	482.94		2.08	Si
SLV 2	fin.	-190.76	683	-0.0007308	0.0002807	0.0035	0.36		485.29	485.29		2.54	Si
SLV 12	ini.	-161.37	110	-0.0005935	0.0002807	0.0035	0.36		485.29	485.29		3.01	Si
SLV 12	fin.	133.88	-467	-0.0004762	0.0002807	0.0035	0.36		482.94	482.94		3.61	Si
SLV 15	ini.	-272.22	217	-0.0011666	0.0002807	0.0035	0.36		485.29	485.29		1.78	Si
SLV 15	fin.	225.16	-860	-0.0009096	0.0002807	0.0035	0.36		482.94	482.94		2.14	Si
SLV 1	ini.	249.53	-184	-0.0010424	0.0002807	0.0035	0.36		482.94	482.94		1.94	Si
SLV 1	fin.	-204.72	739	-0.0007994	0.0002807	0.0035	0.36		485.29	485.29		2.37	Si
SLV 14	ini.	-251.59	206	-0.0010475	0.0002807	0.0035	0.36		485.29	485.29		1.93	Si
SLV 14	fin.	207.71	-836	-0.0008192	0.0002807	0.0035	0.36		482.94	482.94		2.33	Si
SLV 3	ini.	211.63	-166	-0.0008392	0.0002807	0.0035	0.36		482.94	482.94		2.28	Si
SLV 3	fin.	-173.31	659	-0.0006482	0.0002807	0.0035	0.36		485.29	485.29		2.8	Si
SLV 4	ini.	194.35	-159	-0.0007526	0.0002807	0.0035	0.36		482.94	482.94		2.48	Si
SLV 4	fin.	-159.35	603	-0.0005844	0.0002807	0.0035	0.36		485.29	485.29		3.05	Si
SLV 11	ini.	-150.11	105	-0.0005434	0.0002807	0.0035	0.36		485.29	485.29		3.23	Si
SLV 11	fin.	124.78	-431	-0.0004381	0.0002807	0.0035	0.36		482.94	482.94		3.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-272.22	423	0.36	0	158	2855	2264	918	3012		7.12	Si
SLV 15	fin.	225.16	652	0.36	0	158	2855	2264	918	3012		4.62	Si
SLV 14	ini.	-251.59	412	0.36	0	158	2855	2264	918	3012		7.32	Si
SLV 14	fin.	207.71	618	0.36	0	158	2855	2264	918	3012		4.88	Si
SLV 16	ini.	-289.5	473	0.36	0	158	2855	2264	918	3012		6.37	Si
SLV 16	fin.	239.12	674	0.36	0	158	2855	2264	918	3012		4.47	Si
SLV 13	ini.	-234.31	362	0.36	0	158	2855	2264	918	3012		8.32	Si
SLV 13	fin.	193.75	595	0.36	0	158	2855	2264	918	3012		5.06	Si
SLV 1	ini.	249.53	-193	0.36	0	158	2855	2264	918	3012		15.63	Si
SLV 1	fin.	-204.72	-1055	0.36	0	158	2855	2264	918	3012		2.85	Si
SLD 2	ini.	86.65	19	0.36	0	158	2855	2264	918	3012		154.71	Si
SLD 2	fin.	-71.77	-549	0.36	0	158	2855	2264	918	3012		5.48	Si
SLV 3	ini.	211.63	-132	0.36	0	158	2855	2264	918	3012		22.85	Si
SLV 3	fin.	-173.31	-999	0.36	0	158	2855	2264	918	3012		3.01	Si
SLV 4	ini.	194.35	-82	0.36	0	158	2855	2264	918	3012		36.57	Si
SLV 4	fin.	-159.35	-977	0.36	0	158	2855	2264	918	3012		3.08	Si
SLV 2	ini.	232.25	-143	0.36	0	158	2855	2264	918	3012		21.02	Si
SLV 2	fin.	-190.76	-1033	0.36	0	158	2855	2264	918	3012		2.92	Si
SLD 1	ini.	94.07	-2	0.36	0	158	2855	2264	918	3012		1704.46	Si
SLD 1	fin.	-77.76	-559	0.36	0	158	2855	2264	918	3012		5.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.676	SLV 16	Si
V_SLV	2.854	SLV 1	Si
PF_SLU	12.431	SLU 81	Si
V_SLU	8.387	SLU 74	Si

Trave di accoppiamento 162

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	11.87	12.77	0.9	-2.963	5.826	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 61	ini.	122.91	-488	-0.0000616	0.0001872	0.0035	0.9		2959	2959	No	24.08	Si
SLU 61	fin.	-166.76	5	-0.0000842	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.78	Si
SLU 44	ini.	131.4	-527	-0.000066	0.0001872	0.0035	0.9		2959	2959	No	22.52	Si
SLU 44	fin.	-181.61	33	-0.000092	0.0001872	0.0035	0.9		2964.67	2964.67	No	16.32	Si
SLU 60	ini.	124.05	-493	-0.0000622	0.0001872	0.0035	0.9		2959	2959	No	23.85	Si
SLU 60	fin.	-168.29	6	-0.000085	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.62	Si
SLU 46	ini.	112.81	-456	-0.0000564	0.0001872	0.0035	0.9		2959	2959	No	26.23	Si
SLU 46	fin.	-166.13	23	-0.0000838	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.85	Si
SLU 47	ini.	108.96	-440	-0.0000544	0.0001872	0.0035	0.9		2959	2959	No	27.16	Si
SLU 47	fin.	-163.24	28	-0.0000823	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.16	Si
SLU 45	ini.	113.95	-460	-0.000057	0.0001872	0.0035	0.9		2959	2959	No	25.97	Si
SLU 45	fin.	-167.66	24	-0.0000846	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.68	Si
SLU 53	ini.	107.47	-431	-0.0000537	0.0001872	0.0035	0.9		2959	2959	No	27.53	Si
SLU 53	fin.	-156.55	4	-0.0000788	0.0001872	0.0035	0.9		2964.67	2964.67	No	18.94	Si
SLU 54	ini.	106.33	-427	-0.0000531	0.0001872	0.0035	0.9		2959	2959	No	27.83	Si
SLU 54	fin.	-155.02	3	-0.0000781	0.0001872	0.0035	0.9		2964.67	2964.67	No	19.12	Si
SLU 43	ini.	133.3	-534	-0.0000669	0.0001872	0.0035	0.9		2959	2959	No	22.2	Si
SLU 43	fin.	-184.17	34	-0.0000933	0.0001872	0.0035	0.9		2964.67	2964.67	No	16.1	Si
SLU 52	ini.	124.92	-498	-0.0000626	0.0001872	0.0035	0.9		2959	2959	No	23.69	Si
SLU 52	fin.	-170.5	13	-0.0000861	0.0001872	0.0035	0.9		2964.67	2964.67	No	17.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	88.41	-1108	0.9	0	365	7137	3773	2295	6068	No	5.48	Si
SLU 50	fin.	-147.43	-178	0.9	0	365	7137	3773	2295	6068	No	34.03	Si
SLU 48	ini.	91.5	-1153	0.9	0	365	7137	3773	2295	6068	No	5.26	Si
SLU 48	fin.	-149.29	-166	0.9	0	365	7137	3773	2295	6068	No	36.47	Si
SLU 45	ini.	113.95	-1187	0.9	0	365	7137	3773	2295	6068	No	5.11	Si
SLU 45	fin.	-167.66	-294	0.9	0	365	7137	3773	2295	6068	No	20.61	Si
SLU 44	ini.	131.4	-1161	0.9	0	365	7137	3773	2295	6068	No	5.23	Si
SLU 44	fin.	-181.61	-429	0.9	0	365	7137	3773	2295	6068	No	14.14	Si
SLU 46	ini.	112.81	-1178	0.9	0	365	7137	3773	2295	6068	No	5.15	Si
SLU 46	fin.	-166.13	-291	0.9	0	365	7137	3773	2295	6068	No	20.83	Si
SLU 49	ini.	90.36	-1144	0.9	0	365	7137	3773	2295	6068	No	5.3	Si
SLU 49	fin.	-147.76	-163	0.9	0	365	7137	3773	2295	6068	No	37.18	Si
SLU 43	ini.	133.3	-1175	0.9	0	365	7137	3773	2295	6068	No	5.16	Si
SLU 43	fin.	-184.17	-434	0.9	0	365	7137	3773	2295	6068	No	13.97	Si
SLU 53	ini.	107.47	-1060	0.9	0	365	7137	3773	2295	6068	No	5.72	Si
SLU 53	fin.	-156.55	-301	0.9	0	365	7137	3773	2295	6068	No	20.15	Si
SLU 47	ini.	108.96	-1128	0.9	0	365	7137	3773	2295	6068	No	5.38	Si
SLU 47	fin.	-163.24	-301	0.9	0	365	7137	3773	2295	6068	No	20.15	Si
SLU 51	ini.	87.27	-1100	0.9	0	365	7137	3773	2295	6068	No	5.52	Si
SLU 51	fin.	-145.89	-175	0.9	0	365	7137	3773	2295	6068	No	34.65	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-365.35	1382	-0.0001888	0.0002807	0.0035	0.9		2995.37	2995.37		8.2	Si
SLV 12	fin.	633.7	-936	-0.000346	0.0002807	0.0035	0.9		2989.59	2989.59		4.72	Si
SLV 2	ini.	313.32	-1042	-0.0001608	0.0002807	0.0035	0.9		2989.59	2989.59		9.54	Si
SLV 2	fin.	-850.08	1472	-0.0004865	0.0002807	0.0035	0.9		2995.37	2995.37		3.52	Si
SLV 6	ini.	538.93	-2118	-0.0002884	0.0002807	0.0035	0.9		2989.59	2989.59		5.55	Si
SLV 6	fin.	-822.49	790	-0.0004678	0.0002807	0.0035	0.9		2995.37	2995.37		3.64	Si
SLV 5	ini.	542.36	-2096	-0.0002904	0.0002807	0.0035	0.9		2989.59	2989.59		5.51	Si
SLV 5	fin.	-876.96	930	-0.000505	0.0002807	0.0035	0.9		2995.37	2995.37		3.42	Si
SLV 4	ini.	60.2	-21	-0.0000297	0.0002807	0.0035	0.9		2989.59	2989.59		49.66	Si
SLV 4	fin.	-522.38	1216	-0.000278	0.0002807	0.0035	0.9		2995.37	2995.37		5.73	Si
SLV 11	ini.	-361.93	1405	-0.0001869	0.0002807	0.0035	0.9		2995.37	2995.37		8.28	Si
SLV 11	fin.	579.23	-796	-0.0003125	0.0002807	0.0035	0.9		2989.59	2989.59		5.16	Si
SLV 1	ini.	318.58	-1008	-0.0001636	0.0002807	0.0035	0.9		2989.59	2989.59		9.38	Si
SLV 1	fin.	-933.68	1687	-0.0005447	0.0002807	0.0035	0.9		2995.37	2995.37		3.21	Si
SLV 16	ini.	-141.58	295	-0.0000706	0.0002807	0.0035	0.9		2995.37	2995.37		21.16	Si
SLV 16	fin.	690.42	-1693	-0.0003818	0.0002807	0.0035	0.9		2989.59	2989.59		4.33	Si
SLV 15	ini.	-136.32	329	-0.0000679	0.0002807	0.0035	0.9		2995.37	2995.37		21.97	Si
SLV 15	fin.	606.82	-1478	-0.0003294	0.0002807	0.0035	0.9		2989.59	2989.59		4.93	Si
SLV 3	ini.	65.46	13	-0.0000323	0.0002807	0.0035	0.9		2989.59	2989.59		45.67	Si
SLV 3	fin.	-605.98	1431	-0.0003282	0.0002807	0.0035	0.9		2995.37	2995.37		4.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	478.4	-3297	0.9	0	548	7137	5660	2295	7684		2.33	Si
SLV 10	fin.	-458.65	-1363	0.9	0	548	7137	5660	2295	7684		5.64	Si
SLV 2	ini.	313.32	-2806	0.9	0	548	7137	5660	2295	7684		2.74	Si
SLV 2	fin.	-850.08	-2490	0.9	0	548	7137	5660	2295	7684		3.09	Si
SLD 5	ini.	288.97	-2229	0.9	0	548	7137	5660	2295	7684		3.45	Si
SLD 5	fin.	-453.12	-1304	0.9	0	548	7137	5660	2295	7684		5.89	Si
SLV 12	ini.	-365.35	2465	0.9	0	548	7137	5660	2295	7684		3.12	Si
SLV 12	fin.	633.7	2070	0.9	0	548	7137	5660	2295	7684		3.71	Si
SLV 11	ini.	-361.93	2421	0.9	0	548	7137	5660	2295	7684		3.17	Si
SLV 11	fin.	579.23	1909	0.9	0	548	7137	5660	2295	7684		4.03	Si
SLV 9	ini.	481.82	-3340	0.9	0	548	7137	5660	2295	7684		2.3	Si
SLV 9	fin.	-513.12	-1525	0.9	0	548	7137	5660	2295	7684		5.04	Si
SLV 1	ini.	318.58	-2873	0.9	0	548	7137	5660	2295	7684		2.67	Si
SLV 1	fin.	-933.68	-2737	0.9	0	548	7137	5660	2295	7684		2.81	Si
SLV 5	ini.	542.36	-4050	0.9	0	548	7137	5660	2295	7684		1.9	Si
SLV 5	fin.	-876.96	-2619	0.9	0	548	7137	5660	2295	7684		2.93	Si
SLD 6	ini.	287.47	-2210	0.9	0	548	7137	5660	2295	7684		3.48	Si
SLD 6	fin.	-429.3	-1233	0.9	0	548	7137	5660	2295	7684		6.23	Si
SLV 6	ini.	538.93	-4006	0.9	0	548	7137	5660	2295	7684		1.92	Si
SLV 6	fin.	-822.49	-2458	0.9	0	548	7137	5660	2295	7684		3.13	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.208	SLV 1	Si
V_SLV	1.897	SLV 5	Si
PF_SLU	16.098	SLU 43	Si
V_SLU	5.113	SLU 45	Si

Trave di accoppiamento 163

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.063	5.826	14.57	15.03	0.46	-2.963	5.826	14.57	15.03	0.46	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-19.97	110	-0.0000377	0.0001872	0.0035	0.46		780.23	780.23	No	39.07	Si
SLU 43	fin.	-86.34	-104	-0.0001727	0.0001872	0.0035	0.46		780.23	780.23	No	9.04	Si
SLU 78	ini.	-88.01	-189	-0.0001764	0.0001872	0.0035	0.46		780.23	780.23	No	8.86	Si
SLU 78	fin.	-70.59	70	-0.0001391	0.0001872	0.0035	0.46		780.23	780.23	No	11.05	Si
SLU 45	ini.	-41.59	37	-0.0000799	0.0001872	0.0035	0.46		780.23	780.23	No	18.76	Si
SLU 45	fin.	-90.7	-68	-0.0001822	0.0001872	0.0035	0.46		780.23	780.23	No	8.6	Si
SLU 48	ini.	-59.25	-27	-0.0001156	0.0001872	0.0035	0.46		780.23	780.23	No	13.17	Si
SLU 48	fin.	-90.15	-24	-0.000181	0.0001872	0.0035	0.46		780.23	780.23	No	8.65	Si
SLU 36	ini.	-88.91	-242	-0.0001783	0.0001872	0.0035	0.46		780.23	780.23	No	8.78	Si
SLU 36	fin.	-48.36	109	-0.0000935	0.0001872	0.0035	0.46		780.23	780.23	No	16.13	Si
SLU 35	ini.	-87.96	-234	-0.0001762	0.0001872	0.0035	0.46		780.23	780.23	No	8.87	Si
SLU 35	fin.	-50.01	104	-0.0000968	0.0001872	0.0035	0.46		780.23	780.23	No	15.6	Si
SLU 50	ini.	-55.3	-18	-0.0001075	0.0001872	0.0035	0.46		780.23	780.23	No	14.11	Si
SLU 50	fin.	-85.25	-15	-0.0001704	0.0001872	0.0035	0.46		780.23	780.23	No	9.15	Si
SLU 77	ini.	-87.06	-181	-0.0001743	0.0001872	0.0035	0.46		780.23	780.23	No	8.96	Si
SLU 77	fin.	-72.23	64	-0.0001426	0.0001872	0.0035	0.46		780.23	780.23	No	10.8	Si
SLU 46	ini.	-42.54	29	-0.0000818	0.0001872	0.0035	0.46		780.23	780.23	No	18.34	Si
SLU 46	fin.	-89.06	-63	-0.0001786	0.0001872	0.0035	0.46		780.23	780.23	No	8.76	Si
SLU 49	ini.	-60.21	-35	-0.0001176	0.0001872	0.0035	0.46		780.23	780.23	No	12.96	Si
SLU 49	fin.	-88.51	-19	-0.0001774	0.0001872	0.0035	0.46		780.23	780.23	No	8.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-87.06	1356	0.46	0	124	3648	1928	1173	3101	No	2.29	Si
SLU 77	fin.	-72.23	-832	0.46	0	124	3648	1928	1173	3101	No	3.73	Si
SLU 70	ini.	-81.1	1317	0.46	0	124	3648	1928	1173	3101	No	2.36	Si
SLU 70	fin.	-79.8	-865	0.46	0	124	3648	1928	1173	3101	No	3.59	Si
SLU 71	ini.	-76.19	1268	0.46	0	124	3648	1928	1173	3101	No	2.45	Si
SLU 71	fin.	-76.54	-836	0.46	0	124	3648	1928	1173	3101	No	3.71	Si
SLU 35	ini.	-87.96	1276	0.46	0	124	3648	1928	1173	3101	No	2.43	Si
SLU 35	fin.	-50.01	-669	0.46	0	124	3648	1928	1173	3101	No	4.63	Si
SLU 69	ini.	-80.14	1312	0.46	0	124	3648	1928	1173	3101	No	2.36	Si
SLU 69	fin.	-81.44	-872	0.46	0	124	3648	1928	1173	3101	No	3.56	Si
SLU 36	ini.	-88.91	1280	0.46	0	124	3648	1928	1173	3101	No	2.42	Si
SLU 36	fin.	-48.36	-662	0.46	0	124	3648	1928	1173	3101	No	4.69	Si
SLU 72	ini.	-77.14	1272	0.46	0	124	3648	1928	1173	3101	No	2.44	Si
SLU 72	fin.	-74.9	-829	0.46	0	124	3648	1928	1173	3101	No	3.74	Si
SLU 78	ini.	-88.01	1360	0.46	0	124	3648	1928	1173	3101	No	2.28	Si
SLU 78	fin.	-70.59	-825	0.46	0	124	3648	1928	1173	3101	No	3.76	Si
SLU 80	ini.	-84.06	1316	0.46	0	124	3648	1928	1173	3101	No	2.36	Si
SLU 80	fin.	-65.68	-788	0.46	0	124	3648	1928	1173	3101	No	3.93	Si
SLU 79	ini.	-83.11	1311	0.46	0	124	3648	1928	1173	3101	No	2.37	Si
SLU 79	fin.	-67.33	-796	0.46	0	124	3648	1928	1173	3101	No	3.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-228.69	-1345	-0.0005018	0.0002807	0.0035	0.46		788.4	788.4		3.45	Si
SLV 12	fin.	173.16	700	-0.0003635	0.0002807	0.0035	0.46		785.44	785.44		4.54	Si
SLV 14	ini.	-22.78	239	-0.000043	0.0002807	0.0035	0.46		788.4	788.4		34.61	Si
SLV 14	fin.	-259.99	-1000	-0.0005863	0.0002807	0.0035	0.46		788.4	788.4		3.03	Si
SLV 9	ini.	143.92	1288	-0.0002949	0.0002807	0.0035	0.46		785.44	785.44		5.46	Si
SLV 9	fin.	-361.54	-1169	-0.0008883	0.0002807	0.0035	0.46		788.4	788.4		2.18	Si
SLV 5	ini.	171.05	1371	-0.0003585	0.0002807	0.0035	0.46		785.44	785.44		4.59	Si
SLV 5	fin.	-291.16	-779	-0.0006743	0.0002807	0.0035	0.46		788.4	788.4		2.71	Si
SLV 13	ini.	-15.03	290	-0.0000282	0.0002807	0.0035	0.46		788.4	788.4		52.45	Si
SLV 13	fin.	-254.15	-951	-0.0005702	0.0002807	0.0035	0.46		788.4	788.4		3.1	Si
SLV 11	ini.	-223.64	-1312	-0.0004886	0.0002807	0.0035	0.46		788.4	788.4		3.53	Si
SLV 11	fin.	176.96	732	-0.0003728	0.0002807	0.0035	0.46		785.44	785.44		4.44	Si
SLV 8	ini.	-201.55	-1262	-0.0004319	0.0002807	0.0035	0.46		788.4	788.4		3.91	Si
SLV 8	fin.	243.54	1091	-0.0005437	0.0002807	0.0035	0.46		785.44	785.44		3.23	Si
SLV 10	ini.	138.87	1255	-0.0002835	0.0002807	0.0035	0.46		785.44	785.44		5.66	Si
SLV 10	fin.	-365.34	-1201	-0.0009005	0.0002807	0.0035	0.46		788.4	788.4		2.16	Si
SLV 6	ini.	166.01	1338	-0.0003464	0.0002807	0.0035	0.46		785.44	785.44		4.73	Si
SLV 6	fin.	-294.96	-811	-0.0006853	0.0002807	0.0035	0.46		788.4	788.4		2.67	Si
SLV 7	ini.	-196.51	-1229	-0.0004193	0.0002807	0.0035	0.46		788.4	788.4		4.01	Si
SLV 7	fin.	247.34	1123	-0.0005541	0.0002807	0.0035	0.46		785.44	785.44		3.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	-196.51	1873	0.46	0	187	3648	2893	1173	3834		2.05	Si
SLV 7	fin.	247.34	809	0.46	0	187	3648	2893	1173	3834		4.74	Si
SLV 14	ini.	-22.78	-184	0.46	0	187	3648	2893	1173	3834		20.83	Si
SLV 14	fin.	-259.99	-1582	0.46	0	187	3648	2893	1173	3834		2.42	Si
SLV 12	ini.	-228.69	1631	0.46	0	187	3648	2893	1173	3834		2.35	Si
SLV 12	fin.	173.16	387	0.46	0	187	3648	2893	1173	3834		9.92	Si
SLV 5	ini.	171.05	-462	0.46	0	187	3648	2893	1173	3834		8.29	Si
SLV 5	fin.	-291.16	-1466	0.46	0	187	3648	2893	1173	3834		2.62	Si
SLV 8	ini.	-201.55	1889	0.46	0	187	3648	2893	1173	3834		2.03	Si
SLV 8	fin.	243.54	805	0.46	0	187	3648	2893	1173	3834		4.76	Si
SLV 11	ini.	-223.64	1615	0.46	0	187	3648	2893	1173	3834		2.37	Si
SLV 11	fin.	176.96	391	0.46	0	187	3648	2893	1173	3834		9.81	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	138.87	-705	0.46	0	187	3648	2893	1173	3834		5.44	Si
SLV 10	fin.	-365.34	-1889	0.46	0	187	3648	2893	1173	3834		2.03	Si
SLV 13	ini.	-15.03	-208	0.46	0	187	3648	2893	1173	3834		18.43	Si
SLV 13	fin.	-254.15	-1575	0.46	0	187	3648	2893	1173	3834		2.43	Si
SLV 9	ini.	143.92	-720	0.46	0	187	3648	2893	1173	3834		5.32	Si
SLV 9	fin.	-361.54	-1885	0.46	0	187	3648	2893	1173	3834		2.03	Si
SLV 6	ini.	166.01	-447	0.46	0	187	3648	2893	1173	3834		8.58	Si
SLV 6	fin.	-294.96	-1470	0.46	0	187	3648	2893	1173	3834		2.61	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.158	SLV 10	Si
V_SLV	2.03	SLV 10	Si
PF_SLU	8.602	SLU 45	Si
V_SLU	2.281	SLU 78	Si

Trave di accoppiamento 165

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.433	-3.314	13.97	15.093	1.123	-16.333	-3.314	13.97	15.094	1.124	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-361.51	-1528	-0.0001188	0.0001872	0.0035	1.123		4629.75	4629.75	No	12.81	Si
SLU 71	fin.	694.6	-1526	-0.0002416	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.65	Si
SLU 70	ini.	-360.63	-1555	-0.0001185	0.0001872	0.0035	1.123		4629.75	4629.75	No	12.84	Si
SLU 70	fin.	718.97	-1553	-0.0002513	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.43	Si
SLU 78	ini.	-329.19	-1551	-0.0001077	0.0001872	0.0035	1.123		4629.75	4629.75	No	14.06	Si
SLU 78	fin.	700.3	-1549	-0.0002439	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.6	Si
SLU 79	ini.	-330.07	-1523	-0.000108	0.0001872	0.0035	1.123		4629.75	4629.75	No	14.03	Si
SLU 79	fin.	675.93	-1522	-0.0002343	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.84	Si
SLU 77	ini.	-328.31	-1551	-0.0001074	0.0001872	0.0035	1.123		4629.75	4629.75	No	14.1	Si
SLU 77	fin.	700.49	-1549	-0.0002439	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.6	Si
SLU 66	ini.	-358.23	-1391	-0.0001177	0.0001872	0.0035	1.123		4629.75	4629.75	No	12.92	Si
SLU 66	fin.	670.86	-1389	-0.0002323	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.89	Si
SLU 80	ini.	-330.94	-1523	-0.0001083	0.0001872	0.0035	1.123		4629.75	4629.75	No	13.99	Si
SLU 80	fin.	675.74	-1521	-0.0002342	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.84	Si
SLU 67	ini.	-359.1	-1390	-0.000118	0.0001872	0.0035	1.123		4629.75	4629.75	No	12.89	Si
SLU 67	fin.	670.66	-1389	-0.0002323	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.89	Si
SLU 72	ini.	-362.38	-1528	-0.0001191	0.0001872	0.0035	1.123		4629.75	4629.75	No	12.78	Si
SLU 72	fin.	694.41	-1526	-0.0002416	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.65	Si
SLU 69	ini.	-359.75	-1555	-0.0001182	0.0001872	0.0035	1.123		4629.75	4629.75	No	12.87	Si
SLU 69	fin.	719.16	-1553	-0.0002513	0.0001872	0.0035	1.1238		4621.23	4621.23	No	6.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 72	ini.	-362.38	3002	1.123	0	456	7137	4708	2864	7571	No	2.52	Si
SLU 72	fin.	694.41	-119	1.1238	0	456	7137	4711	2866	7577	No	63.63	Si
SLU 80	ini.	-330.94	2947	1.123	0	456	7137	4708	2864	7571	No	2.57	Si
SLU 80	fin.	675.74	-176	1.1238	0	456	7137	4711	2866	7577	No	43.08	Si
SLU 79	ini.	-330.07	2946	1.123	0	456	7137	4708	2864	7571	No	2.57	Si
SLU 79	fin.	675.93	-177	1.1238	0	456	7137	4711	2866	7577	No	42.9	Si
SLU 67	ini.	-359.1	2882	1.123	0	456	7137	4708	2864	7571	No	2.63	Si
SLU 67	fin.	670.66	-194	1.1238	0	456	7137	4711	2866	7577	No	39.12	Si
SLU 78	ini.	-329.19	3066	1.123	0	456	7137	4708	2864	7571	No	2.47	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	700.3	-257	1.1238	0	456	7137	4711	2866	7577	No	29.5	Si
SLU 77	ini.	-328.31	3066	1.123	0	456	7137	4708	2864	7571	No	2.47	Si
SLU 77	fin.	700.49	-258	1.1238	0	456	7137	4711	2866	7577	No	29.42	Si
SLU 66	ini.	-358.23	2881	1.123	0	456	7137	4708	2864	7571	No	2.63	Si
SLU 66	fin.	670.86	-194	1.1238	0	456	7137	4711	2866	7577	No	38.97	Si
SLU 69	ini.	-359.75	3121	1.123	0	456	7137	4708	2864	7571	No	2.43	Si
SLU 69	fin.	719.16	-201	1.1238	0	456	7137	4711	2866	7577	No	37.74	Si
SLU 70	ini.	-360.63	3122	1.123	0	456	7137	4708	2864	7571	No	2.43	Si
SLU 70	fin.	718.97	-200	1.1238	0	456	7137	4711	2866	7577	No	37.88	Si
SLU 71	ini.	-361.51	3001	1.123	0	456	7137	4708	2864	7571	No	2.52	Si
SLU 71	fin.	694.6	-120	1.1238	0	456	7137	4711	2866	7577	No	63.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	910.22	214	-0.0003154	0.0002807	0.0035	1.123		4654.6	4654.6		5.11	Si
SLV 1	fin.	-496.25	-537	-0.0001631	0.0002807	0.0035	1.1238		4682.2	4682.2		9.44	Si
SLV 13	ini.	-1547.91	-2430	-0.0005874	0.0002807	0.0035	1.123		4662.08	4662.08		3.01	Si
SLV 13	fin.	1548.87	-1685	-0.0005884	0.0002807	0.0035	1.1238		4674.7	4674.7		3.02	Si
SLV 4	ini.	1034.35	672	-0.0003647	0.0002807	0.0035	1.123		4654.6	4654.6		4.5	Si
SLV 4	fin.	-676.9	-72	-0.0002271	0.0002807	0.0035	1.1238		4682.2	4682.2		6.92	Si
SLD 13	ini.	-809.01	-1544	-0.0002761	0.0002807	0.0035	1.123		4662.08	4662.08		5.76	Si
SLD 13	fin.	912.33	-1226	-0.0003159	0.0002807	0.0035	1.1238		4674.7	4674.7		5.12	Si
SLV 2	ini.	992.43	323	-0.0003478	0.0002807	0.0035	1.123		4654.6	4654.6		4.69	Si
SLV 2	fin.	-583.17	-426	-0.0001935	0.0002807	0.0035	1.1238		4682.2	4682.2		8.03	Si
SLV 15	ini.	-1505.98	-2081	-0.000568	0.0002807	0.0035	1.123		4662.08	4662.08		3.1	Si
SLV 15	fin.	1455.14	-1331	-0.0005453	0.0002807	0.0035	1.1238		4674.7	4674.7		3.21	Si
SLV 3	ini.	952.15	563	-0.0003318	0.0002807	0.0035	1.123		4654.6	4654.6		4.89	Si
SLV 3	fin.	-589.99	-184	-0.0001959	0.0002807	0.0035	1.1238		4682.2	4682.2		7.94	Si
SLV 9	ini.	-722.15	-1893	-0.0002438	0.0002807	0.0035	1.123		4662.08	4662.08		6.46	Si
SLV 9	fin.	927.29	-1676	-0.0003218	0.0002807	0.0035	1.1238		4674.7	4674.7		5.04	Si
SLV 16	ini.	-1423.78	-1971	-0.0005306	0.0002807	0.0035	1.123		4662.08	4662.08		3.27	Si
SLV 16	fin.	1368.23	-1220	-0.0005062	0.0002807	0.0035	1.1238		4674.7	4674.7		3.42	Si
SLV 14	ini.	-1465.7	-2321	-0.0005496	0.0002807	0.0035	1.123		4662.08	4662.08		3.18	Si
SLV 14	fin.	1461.96	-1573	-0.0005484	0.0002807	0.0035	1.1238		4674.7	4674.7		3.2	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-809.01	3113	1.123	0	684	7137	7062	2864	7820		2.51	Si
SLD 13	fin.	912.33	1172	1.1238	0	684	7137	7067	2866	7821		6.68	Si
SLV 16	ini.	-1423.78	4591	1.123	0	684	7137	7062	2864	7820		1.7	Si
SLV 16	fin.	1368.23	2552	1.1238	0	684	7137	7067	2866	7821		3.06	Si
SLD 16	ini.	-755.88	3027	1.123	0	684	7137	7062	2864	7820		2.58	Si
SLD 16	fin.	834.21	1026	1.1238	0	684	7137	7067	2866	7821		7.62	Si
SLV 13	ini.	-1547.91	4792	1.123	0	684	7137	7062	2864	7820		1.63	Si
SLV 13	fin.	1548.87	2889	1.1238	0	684	7137	7067	2866	7821		2.71	Si
SLV 2	ini.	992.43	-1062	1.123	0	684	7137	7062	2864	7820		7.36	Si
SLV 2	fin.	-583.17	-2965	1.1238	0	684	7137	7067	2866	7821		2.64	Si
SLD 14	ini.	-773.7	3032	1.123	0	684	7137	7062	2864	7820		2.58	Si
SLD 14	fin.	875	1091	1.1238	0	684	7137	7067	2866	7821		7.17	Si
SLV 14	ini.	-1465.7	4604	1.123	0	684	7137	7062	2864	7820		1.7	Si
SLV 14	fin.	1461.96	2702	1.1238	0	684	7137	7067	2866	7821		2.89	Si
SLD 15	ini.	-791.19	3108	1.123	0	684	7137	7062	2864	7820		2.52	Si
SLD 15	fin.	871.54	1107	1.1238	0	684	7137	7067	2866	7821		7.07	Si
SLV 4	ini.	1034.35	-1075	1.123	0	684	7137	7062	2864	7820		7.27	Si
SLV 4	fin.	-676.9	-3115	1.1238	0	684	7137	7067	2866	7821		2.51	Si
SLV 15	ini.	-1505.98	4778	1.123	0	684	7137	7062	2864	7820		1.64	Si
SLV 15	fin.	1455.14	2739	1.1238	0	684	7137	7067	2866	7821		2.86	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.012	SLV 13	Si
V_SLV	1.632	SLV 13	Si
PF_SLU	6.426	SLU 69	Si
V_SLU	2.426	SLU 70	Si

Trave di accoppiamento 168

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.433	-3.314	13.97	15.087	1.117	-9.333	-3.314	13.97	15.088	1.118	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	880.63	-1793	-0.0003217	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.19	Si
SLU 75	fin.	-683.81	-1812	-0.0002392	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.73	Si
SLU 84	ini.	861.72	-1765	-0.0003136	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.3	Si
SLU 84	fin.	-682.52	-1785	-0.0002387	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.75	Si
SLU 79	ini.	864.5	-1802	-0.0003148	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.28	Si
SLU 79	fin.	-692.61	-1824	-0.0002427	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.65	Si
SLU 78	ini.	900.93	-1876	-0.0003303	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.07	Si
SLU 78	fin.	-703.43	-1898	-0.000247	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.55	Si
SLU 69	ini.	862.27	-1770	-0.0003139	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.3	Si
SLU 69	fin.	-683.85	-1790	-0.0002392	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.73	Si
SLU 80	ini.	866.15	-1804	-0.0003155	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.27	Si
SLU 80	fin.	-694.58	-1825	-0.0002434	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.63	Si
SLU 74	ini.	878.98	-1791	-0.000321	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.2	Si
SLU 74	fin.	-681.84	-1810	-0.0002384	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.75	Si
SLU 83	ini.	860.07	-1764	-0.0003129	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.31	Si
SLU 83	fin.	-680.54	-1783	-0.0002379	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.77	Si
SLU 70	ini.	863.92	-1771	-0.0003146	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.29	Si
SLU 70	fin.	-685.82	-1791	-0.00024	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.71	Si
SLU 77	ini.	899.28	-1874	-0.0003296	0.0001872	0.0035	1.1171		4568.53	4568.53	No	5.08	Si
SLU 77	fin.	-701.45	-1896	-0.0002462	0.0001872	0.0035	1.1179		4605.28	4605.28	No	6.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	ini.	827.5	-48	1.1171	0	453	7137	4683	2849	7532	No	157.81	Si
SLU 71	fin.	-675.01	-3050	1.1179	0	454	7137	4687	2851	7537	No	2.47	Si
SLU 72	ini.	829.15	-52	1.1171	0	453	7137	4683	2849	7532	No	145.4	Si
SLU 72	fin.	-676.98	-3055	1.1179	0	454	7137	4687	2851	7537	No	2.47	Si
SLU 74	ini.	878.98	-78	1.1171	0	453	7137	4683	2849	7532	No	96.24	Si
SLU 74	fin.	-681.84	-3029	1.1179	0	454	7137	4687	2851	7537	No	2.49	Si
SLU 79	ini.	864.5	-108	1.1171	0	453	7137	4683	2849	7532	No	69.76	Si
SLU 79	fin.	-692.61	-3113	1.1179	0	454	7137	4687	2851	7537	No	2.42	Si
SLU 80	ini.	866.15	-112	1.1171	0	453	7137	4683	2849	7532	No	67.23	Si
SLU 80	fin.	-694.58	-3117	1.1179	0	454	7137	4687	2851	7537	No	2.42	Si
SLU 75	ini.	880.63	-82	1.1171	0	453	7137	4683	2849	7532	No	91.48	Si
SLU 75	fin.	-683.81	-3033	1.1179	0	454	7137	4687	2851	7537	No	2.49	Si
SLU 77	ini.	899.28	-18	1.1171	0	453	7137	4683	2849	7532	No	422.1	Si
SLU 77	fin.	-701.45	-3216	1.1179	0	454	7137	4687	2851	7537	No	2.34	Si
SLU 69	ini.	862.27	42	1.1171	0	453	7137	4683	2849	7532	No	177.69	Si
SLU 69	fin.	-683.85	-3154	1.1179	0	454	7137	4687	2851	7537	No	2.39	Si
SLU 70	ini.	863.92	38	1.1171	0	453	7137	4683	2849	7532	No	196.58	Si
SLU 70	fin.	-685.82	-3158	1.1179	0	454	7137	4687	2851	7537	No	2.39	Si
SLU 78	ini.	900.93	-22	1.1171	0	453	7137	4683	2849	7532	No	343.66	Si
SLU 78	fin.	-703.43	-3220	1.1179	0	454	7137	4687	2851	7537	No	2.34	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	1503.81	-1426	-0.0005756	0.0002807	0.0035	1.1171		4616.67	4616.67		3.07	Si
SLV 8	fin.	-1213.72	-1972	-0.0004424	0.0002807	0.0035	1.1179		4603.77	4603.77		3.79	Si
SLV 3	ini.	2382.61	-1919	-0.001035	0.0002807	0.0035	1.1171		4616.67	4616.67		1.94	Si
SLV 3	fin.	-2040.31	-2704	-0.0008384	0.0002807	0.0035	1.1179		4603.77	4603.77		2.26	Si
SLV 4	ini.	2491.03	-2024	-0.0010993	0.0002807	0.0035	1.1171		4616.67	4616.67		1.85	Si
SLV 4	fin.	-2110.7	-2807	-0.0008761	0.0002807	0.0035	1.1179		4603.77	4603.77		2.18	Si
SLV 7	ini.	1433.17	-1358	-0.0005429	0.0002807	0.0035	1.1171		4616.67	4616.67		3.22	Si
SLV 7	fin.	-1167.85	-1905	-0.0004228	0.0002807	0.0035	1.1179		4603.77	4603.77		3.94	Si
SLD 2	ini.	1304.12	-1527	-0.0004847	0.0002807	0.0035	1.1171		4616.67	4616.67		3.54	Si
SLD 2	fin.	-1102.2	-1781	-0.0003952	0.0002807	0.0035	1.1179		4603.77	4603.77		4.18	Si
SLV 13	ini.	-1325.91	-281	-0.0004935	0.0002807	0.0035	1.1171		4624.12	4624.12		3.49	Si
SLV 13	fin.	1173.17	479	-0.0004258	0.0002807	0.0035	1.1179		4596.34	4596.34		3.92	Si
SLD 3	ini.	1353.77	-1480	-0.0005068	0.0002807	0.0035	1.1171		4616.67	4616.67		3.41	Si
SLD 3	fin.	-1141.86	-1824	-0.0004118	0.0002807	0.0035	1.1179		4603.77	4603.77		4.03	Si
SLD 4	ini.	1400.33	-1525	-0.0005279	0.0002807	0.0035	1.1171		4616.67	4616.67		3.3	Si
SLD 4	fin.	-1172.09	-1868	-0.0004246	0.0002807	0.0035	1.1179		4603.77	4603.77		3.93	Si
SLV 1	ini.	2165.26	-1923	-0.0009117	0.0002807	0.0035	1.1171		4616.67	4616.67		2.13	Si
SLV 1	fin.	-1882.07	-2508	-0.0007562	0.0002807	0.0035	1.1179		4603.77	4603.77		2.45	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	2273.67	-2028	-0.0009723	0.0002807	0.0035	1.1171		4616.67	4616.67		2.03	Si
SLV 2	fin.	-1952.46	-2611	-0.0007924	0.0002807	0.0035	1.1179		4603.77	4603.77		2.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	2273.67	-4167	1.1171	0	680	7137	7025	2849	7817		1.88	Si
SLV 2	fin.	-1952.46	-5809	1.1179	0	680	7137	7030	2851	7817		1.35	Si
SLV 1	ini.	2165.26	-3970	1.1171	0	680	7137	7025	2849	7817		1.97	Si
SLV 1	fin.	-1882.07	-5612	1.1179	0	680	7137	7030	2851	7817		1.39	Si
SLV 8	ini.	1503.81	-1327	1.1171	0	680	7137	7025	2849	7817		5.89	Si
SLV 8	fin.	-1213.72	-3991	1.1179	0	680	7137	7030	2851	7817		1.96	Si
SLV 3	ini.	2382.61	-3951	1.1171	0	680	7137	7025	2849	7817		1.98	Si
SLV 3	fin.	-2040.31	-6065	1.1179	0	680	7137	7030	2851	7817		1.29	Si
SLV 4	ini.	2491.03	-4149	1.1171	0	680	7137	7025	2849	7817		1.88	Si
SLV 4	fin.	-2110.7	-6262	1.1179	0	680	7137	7030	2851	7817		1.25	Si
SLD 4	ini.	1400.33	-1836	1.1171	0	680	7137	7025	2849	7817		4.26	Si
SLD 4	fin.	-1172.09	-3818	1.1179	0	680	7137	7030	2851	7817		2.05	Si
SLV 15	ini.	-1108.55	3952	1.1171	0	680	7137	7025	2849	7817		1.98	Si
SLV 15	fin.	1014.93	1837	1.1179	0	680	7137	7030	2851	7817		4.25	Si
SLV 7	ini.	1433.17	-1198	1.1171	0	680	7137	7025	2849	7817		6.53	Si
SLV 7	fin.	-1167.85	-3862	1.1179	0	680	7137	7030	2851	7817		2.02	Si
SLV 16	ini.	-1000.14	3754	1.1171	0	680	7137	7025	2849	7817		2.08	Si
SLV 16	fin.	944.54	1640	1.1179	0	680	7137	7030	2851	7817		4.77	Si
SLV 13	ini.	-1325.91	3934	1.1171	0	680	7137	7025	2849	7817		1.99	Si
SLV 13	fin.	1173.17	2291	1.1179	0	680	7137	7030	2851	7817		3.41	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.853	SLV 4	Si
V_SLV	1.248	SLV 4	Si
PF_SLU	5.071	SLU 78	Si
V_SLU	2.341	SLU 78	Si

Trave di accoppiamento 170

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	11.87	12.77	0.9	-7.413	-3.314	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	ini.	190.62	-1187	-0.0000969	0.0001872	0.0035	0.9		2959	2959	No	15.52	Si
SLU 72	fin.	57.08	-692	-0.0000282	0.0001872	0.0035	0.9		2959	2959	No	51.84	Si
SLU 70	ini.	194.22	-1218	-0.0000988	0.0001872	0.0035	0.9		2959	2959	No	15.24	Si
SLU 70	fin.	66.46	-737	-0.0000329	0.0001872	0.0035	0.9		2959	2959	No	44.52	Si
SLU 69	ini.	192.51	-1211	-0.0000979	0.0001872	0.0035	0.9		2959	2959	No	15.37	Si
SLU 69	fin.	67.87	-740	-0.0000336	0.0001872	0.0035	0.9		2959	2959	No	43.6	Si
SLU 71	ini.	188.91	-1180	-0.000096	0.0001872	0.0035	0.9		2959	2959	No	15.66	Si
SLU 71	fin.	58.48	-694	-0.0000289	0.0001872	0.0035	0.9		2959	2959	No	50.6	Si
SLU 67	ini.	187.43	-1156	-0.0000952	0.0001872	0.0035	0.9		2959	2959	No	15.79	Si
SLU 67	fin.	51.25	-664	-0.0000253	0.0001872	0.0035	0.9		2959	2959	No	57.73	Si
SLU 66	ini.	185.72	-1149	-0.0000943	0.0001872	0.0035	0.9		2959	2959	No	15.93	Si
SLU 66	fin.	52.66	-666	-0.000026	0.0001872	0.0035	0.9		2959	2959	No	56.19	Si
SLU 65	ini.	178.18	-1068	-0.0000903	0.0001872	0.0035	0.9		2959	2959	No	16.61	Si
SLU 65	fin.	25.72	-543	-0.0000126	0.0001872	0.0035	0.9		2959	2959	No	115.07	Si
SLU 68	ini.	184.97	-1130	-0.0000939	0.0001872	0.0035	0.9		2959	2959	No	16	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	fin.	40.93	-617	-0.0000202	0.0001872	0.0035	0.9		2959	2959	No	72.3	Si
SLU 77	ini.	178.52	-1137	-0.0000905	0.0001872	0.0035	0.9		2959	2959	No	16.58	Si
SLU 77	fin.	98.13	-764	-0.0000489	0.0001872	0.0035	0.9		2959	2959	No	30.15	Si
SLU 78	ini.	180.23	-1144	-0.0000914	0.0001872	0.0035	0.9		2959	2959	No	16.42	Si
SLU 78	fin.	96.72	-762	-0.0000482	0.0001872	0.0035	0.9		2959	2959	No	30.59	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 66	ini.	185.72	-1406	0.9	0	365	7137	3773	2295	6068	No	4.32	Si
SLU 66	fin.	52.66	369	0.9	0	365	7137	3773	2295	6068	No	16.44	Si
SLU 49	ini.	155.74	-1329	0.9	0	365	7137	3773	2295	6068	No	4.57	Si
SLU 49	fin.	82.36	574	0.9	0	365	7137	3773	2295	6068	No	10.57	Si
SLU 67	ini.	187.43	-1417	0.9	0	365	7137	3773	2295	6068	No	4.28	Si
SLU 67	fin.	51.25	363	0.9	0	365	7137	3773	2295	6068	No	16.71	Si
SLU 68	ini.	184.97	-1392	0.9	0	365	7137	3773	2295	6068	No	4.36	Si
SLU 68	fin.	40.93	303	0.9	0	365	7137	3773	2295	6068	No	20.03	Si
SLU 71	ini.	188.91	-1446	0.9	0	365	7137	3773	2295	6068	No	4.2	Si
SLU 71	fin.	58.48	403	0.9	0	365	7137	3773	2295	6068	No	15.04	Si
SLU 69	ini.	192.51	-1478	0.9	0	365	7137	3773	2295	6068	No	4.11	Si
SLU 69	fin.	67.87	460	0.9	0	365	7137	3773	2295	6068	No	13.2	Si
SLU 72	ini.	190.62	-1457	0.9	0	365	7137	3773	2295	6068	No	4.17	Si
SLU 72	fin.	57.08	397	0.9	0	365	7137	3773	2295	6068	No	15.27	Si
SLU 78	ini.	180.23	-1346	0.9	0	365	7137	3773	2295	6068	No	4.51	Si
SLU 78	fin.	96.72	495	0.9	0	365	7137	3773	2295	6068	No	12.25	Si
SLU 70	ini.	194.22	-1489	0.9	0	365	7137	3773	2295	6068	No	4.08	Si
SLU 70	fin.	66.46	454	0.9	0	365	7137	3773	2295	6068	No	13.38	Si
SLU 77	ini.	178.52	-1335	0.9	0	365	7137	3773	2295	6068	No	4.54	Si
SLU 77	fin.	98.13	501	0.9	0	365	7137	3773	2295	6068	No	12.11	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	871.32	-3410	-0.0005022	0.0002807	0.0035	0.9		2989.59	2989.59		3.43	Si
SLV 1	fin.	-843.99	1372	-0.0004824	0.0002807	0.0035	0.9		2995.37	2995.37		3.55	Si
SLV 2	ini.	918.45	-3570	-0.0005351	0.0002807	0.0035	0.9		2989.59	2989.59		3.26	Si
SLV 2	fin.	-894.16	1472	-0.000517	0.0002807	0.0035	0.9		2995.37	2995.37		3.35	Si
SLV 7	ini.	705.57	-3122	-0.0003915	0.0002807	0.0035	0.9		2989.59	2989.59		4.24	Si
SLV 7	fin.	-535.86	659	-0.000286	0.0002807	0.0035	0.9		2995.37	2995.37		5.59	Si
SLV 3	ini.	1073.21	-4290	-0.0006476	0.0002807	0.0035	0.9		2989.59	2989.59		2.79	Si
SLV 3	fin.	-1017.43	1682	-0.0006049	0.0002807	0.0035	0.9		2995.37	2995.37		2.94	Si
SLV 14	ini.	-828.38	2780	-0.0004718	0.0002807	0.0035	0.9		2995.37	2995.37		3.62	Si
SLV 14	fin.	1084.88	-2533	-0.0006564	0.0002807	0.0035	0.9		2989.59	2989.59		2.76	Si
SLV 4	ini.	1120.34	-4450	-0.0006832	0.0002807	0.0035	0.9		2989.59	2989.59		2.67	Si
SLV 4	fin.	-1067.61	1781	-0.0006419	0.0002807	0.0035	0.9		2995.37	2995.37		2.81	Si
SLV 13	ini.	-875.52	2940	-0.000504	0.0002807	0.0035	0.9		2995.37	2995.37		3.42	Si
SLV 13	fin.	1135.05	-2633	-0.0006945	0.0002807	0.0035	0.9		2989.59	2989.59		2.63	Si
SLV 16	ini.	-626.49	1899	-0.0003408	0.0002807	0.0035	0.9		2995.37	2995.37		4.78	Si
SLV 16	fin.	911.44	-2223	-0.0005302	0.0002807	0.0035	0.9		2989.59	2989.59		3.28	Si
SLV 8	ini.	736.28	-3227	-0.0004114	0.0002807	0.0035	0.9		2989.59	2989.59		4.06	Si
SLV 8	fin.	-568.55	724	-0.0003055	0.0002807	0.0035	0.9		2995.37	2995.37		5.27	Si
SLV 15	ini.	-673.62	2059	-0.0003703	0.0002807	0.0035	0.9		2995.37	2995.37		4.45	Si
SLV 15	fin.	961.61	-2323	-0.0005658	0.0002807	0.0035	0.9		2989.59	2989.59		3.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	705.57	-4168	0.9	0	548	7137	5660	2295	7684		1.84	Si
SLV 7	fin.	-535.86	-2323	0.9	0	548	7137	5660	2295	7684		3.31	Si
SLV 16	ini.	-626.49	2530	0.9	0	548	7137	5660	2295	7684		3.04	Si
SLV 16	fin.	911.44	4650	0.9	0	548	7137	5660	2295	7684		1.65	Si
SLV 3	ini.	1073.21	-5612	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 3	fin.	-1017.43	-4916	0.9	0	548	7137	5660	2295	7684		1.56	Si
SLV 13	ini.	-875.52	3927	0.9	0	548	7137	5660	2295	7684		1.96	Si
SLV 13	fin.	1135.05	5596	0.9	0	548	7137	5660	2295	7684		1.37	Si
SLV 1	ini.	871.32	-4382	0.9	0	548	7137	5660	2295	7684		1.75	Si
SLV 1	fin.	-843.99	-4231	0.9	0	548	7137	5660	2295	7684		1.82	Si
SLV 4	ini.	1120.34	-5779	0.9	0	548	7137	5660	2295	7684		1.33	Si
SLV 4	fin.	-1067.61	-5177	0.9	0	548	7137	5660	2295	7684		1.48	Si
SLV 8	ini.	736.28	-4277	0.9	0	548	7137	5660	2295	7684		1.8	Si
SLV 8	fin.	-568.55	-2493	0.9	0	548	7137	5660	2295	7684		3.08	Si
SLV 14	ini.	-828.38	3760	0.9	0	548	7137	5660	2295	7684		2.04	Si
SLV 14	fin.	1084.88	5335	0.9	0	548	7137	5660	2295	7684		1.44	Si
SLV 15	ini.	-673.62	2697	0.9	0	548	7137	5660	2295	7684		2.85	Si
SLV 15	fin.	961.61	4910	0.9	0	548	7137	5660	2295	7684		1.57	Si
SLV 2	ini.	918.45	-4549	0.9	0	548	7137	5660	2295	7684		1.69	Si
SLV 2	fin.	-894.16	-4491	0.9	0	548	7137	5660	2295	7684		1.71	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.634	SLV 13	Si
V_SLV	1.33	SLV 4	Si
PF_SLU	15.235	SLU 70	Si
V_SLU	4.076	SLU 70	Si

Trave di accoppiamento 171

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	14.57	15.085	0.515	-7.413	-3.314	14.57	15.086	0.516	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-119.46	-554	-0.0001925	0.0001872	0.0035	0.5154		975.69	975.69	No	8.17	Si
SLU 77	fin.	-65.7	-912	-0.0001009	0.0001872	0.0035	0.5162		988.93	988.93	No	15.05	Si
SLU 50	ini.	-114.77	-498	-0.0001843	0.0001872	0.0035	0.5154		975.69	975.69	No	8.5	Si
SLU 50	fin.	-41.73	-647	-0.0000631	0.0001872	0.0035	0.5162		988.93	988.93	No	23.7	Si
SLU 49	ini.	-122.83	-526	-0.0001985	0.0001872	0.0035	0.5154		975.69	975.69	No	7.94	Si
SLU 49	fin.	-45.32	-679	-0.0000687	0.0001872	0.0035	0.5162		988.93	988.93	No	21.82	Si
SLU 48	ini.	-123.66	-529	-0.0002	0.0001872	0.0035	0.5154		975.69	975.69	No	7.89	Si
SLU 48	fin.	-44.66	-675	-0.0000677	0.0001872	0.0035	0.5162		988.93	988.93	No	22.14	Si
SLU 56	ini.	-128.7	-549	-0.0002091	0.0001872	0.0035	0.5154		975.69	975.69	No	7.58	Si
SLU 56	fin.	-45.08	-707	-0.0000683	0.0001872	0.0035	0.5162		988.93	988.93	No	21.94	Si
SLU 78	ini.	-118.63	-551	-0.0001911	0.0001872	0.0035	0.5154		975.69	975.69	No	8.22	Si
SLU 78	fin.	-66.36	-916	-0.000102	0.0001872	0.0035	0.5162		988.93	988.93	No	14.9	Si
SLU 69	ini.	-114.41	-535	-0.0001837	0.0001872	0.0035	0.5154		975.69	975.69	No	8.53	Si
SLU 69	fin.	-65.28	-880	-0.0001002	0.0001872	0.0035	0.5162		988.93	988.93	No	15.15	Si
SLU 57	ini.	-127.88	-546	-0.0002076	0.0001872	0.0035	0.5154		975.69	975.69	No	7.63	Si
SLU 57	fin.	-45.75	-711	-0.0000694	0.0001872	0.0035	0.5162		988.93	988.93	No	21.62	Si
SLU 59	ini.	-118.99	-514	-0.0001917	0.0001872	0.0035	0.5154		975.69	975.69	No	8.2	Si
SLU 59	fin.	-42.82	-682	-0.0000648	0.0001872	0.0035	0.5162		988.93	988.93	No	23.09	Si
SLU 58	ini.	-119.81	-518	-0.0001932	0.0001872	0.0035	0.5154		975.69	975.69	No	8.14	Si
SLU 58	fin.	-42.16	-678	-0.0000638	0.0001872	0.0035	0.5162		988.93	988.93	No	23.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-114.41	614	0.5154	0	139	4090	2161	1314	3475	No	5.66	Si
SLU 69	fin.	-65.28	-923	0.5162	0	140	4090	2164	1316	3480	No	3.77	Si
SLU 75	ini.	-102.58	562	0.5154	0	139	4090	2161	1314	3475	No	6.19	Si
SLU 75	fin.	-65.9	-887	0.5162	0	140	4090	2164	1316	3480	No	3.92	Si
SLU 66	ini.	-98.36	547	0.5154	0	139	4090	2161	1314	3475	No	6.36	Si
SLU 66	fin.	-64.81	-889	0.5162	0	140	4090	2164	1316	3480	No	3.91	Si
SLU 70	ini.	-113.59	611	0.5154	0	139	4090	2161	1314	3475	No	5.68	Si
SLU 70	fin.	-65.94	-928	0.5162	0	140	4090	2164	1316	3480	No	3.75	Si
SLU 72	ini.	-104.69	564	0.5154	0	139	4090	2161	1314	3475	No	6.16	Si
SLU 72	fin.	-63.01	-893	0.5162	0	140	4090	2164	1316	3480	No	3.9	Si
SLU 80	ini.	-109.74	582	0.5154	0	139	4090	2161	1314	3475	No	5.97	Si
SLU 80	fin.	-63.44	-886	0.5162	0	140	4090	2164	1316	3480	No	3.93	Si
SLU 77	ini.	-119.46	632	0.5154	0	139	4090	2161	1314	3475	No	5.49	Si
SLU 77	fin.	-65.7	-916	0.5162	0	140	4090	2164	1316	3480	No	3.8	Si
SLU 78	ini.	-118.63	629	0.5154	0	139	4090	2161	1314	3475	No	5.52	Si
SLU 78	fin.	-66.36	-921	0.5162	0	140	4090	2164	1316	3480	No	3.78	Si
SLU 67	ini.	-97.54	544	0.5154	0	139	4090	2161	1314	3475	No	6.39	Si
SLU 67	fin.	-65.47	-894	0.5162	0	140	4090	2164	1316	3480	No	3.89	Si
SLU 71	ini.	-105.52	567	0.5154	0	139	4090	2161	1314	3475	No	6.13	Si
SLU 71	fin.	-62.35	-889	0.5162	0	140	4090	2164	1316	3480	No	3.92	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-455.79	-1489	-0.0008959	0.0002807	0.0035	0.5154		987.2	987.2		2.17	Si
SLV 15	fin.	238.32	1328	-0.0004016	0.0002807	0.0035	0.5162		989.52	989.52		4.15	Si
SLV 9	ini.	-407.36	-1347	-0.0007752	0.0002807	0.0035	0.5154		987.2	987.2		2.42	Si
SLV 9	fin.	188.43	1107	-0.0003071	0.0002807	0.0035	0.5162		989.52	989.52		5.25	Si
SLV 2	ini.	335.89	899	-0.0006114	0.0002807	0.0035	0.5154		983.87	983.87		2.93	Si
SLV 2	fin.	-323.99	-2512	-0.0005771	0.0002807	0.0035	0.5162		992.88	992.88		3.06	Si
SLV 13	ini.	-578.85	-1867	-0.0012376	0.0002807	0.0035	0.5154		987.2	987.2		1.71	Si
SLV 13	fin.	317.17	1928	-0.0005645	0.0002807	0.0035	0.5162		989.52	989.52		3.12	Si
SLV 4	ini.	458.94	1276	-0.0009078	0.0002807	0.0035	0.5154		983.87	983.87		2.14	Si
SLV 4	fin.	-402.84	-3112	-0.0007568	0.0002807	0.0035	0.5162		992.88	992.88		2.46	Si
SLV 14	ini.	-549.82	-1824	-0.0011519	0.0002807	0.0035	0.5154		987.2	987.2		1.8	Si
SLV 14	fin.	296.22	1746	-0.0005197	0.0002807	0.0035	0.5162		989.52	989.52		3.34	Si
SLV 3	ini.	429.92	1233	-0.000834	0.0002807	0.0035	0.5154		983.87	983.87		2.29	Si
SLV 3	fin.	-381.89	-2930	-0.0007075	0.0002807	0.0035	0.5162		992.88	992.88		2.6	Si
SLV 10	ini.	-388.44	-1319	-0.0007299	0.0002807	0.0035	0.5154		987.2	987.2		2.54	Si
SLV 10	fin.	174.78	988	-0.0002824	0.0002807	0.0035	0.5162		989.52	989.52		5.66	Si
SLV 16	ini.	-426.77	-1446	-0.0008227	0.0002807	0.0035	0.5154		987.2	987.2		2.31	Si
SLV 16	fin.	217.37	1146	-0.0003611	0.0002807	0.0035	0.5162		989.52	989.52		4.55	Si
SLV 1	ini.	306.86	856	-0.0005474	0.0002807	0.0035	0.5154		983.87	983.87		3.21	Si
SLV 1	fin.	-303.04	-2330	-0.0005321	0.0002807	0.0035	0.5162		992.88	992.88		3.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-549.82	2226	0.5154	0	209	4090	3241	1314	4299		1.93	Si
SLV 14	fin.	296.22	1837	0.5162	0	209	4090	3246	1316	4300		2.34	Si
SLV 2	ini.	335.89	-1165	0.5154	0	209	4090	3241	1314	4299		3.69	Si
SLV 2	fin.	-323.99	-2518	0.5162	0	209	4090	3246	1316	4300		1.71	Si
SLV 8	ini.	287.45	-1061	0.5154	0	209	4090	3241	1314	4299		4.05	Si
SLV 8	fin.	-274.1	-2296	0.5162	0	209	4090	3246	1316	4300		1.87	Si
SLV 13	ini.	-578.85	2369	0.5154	0	209	4090	3241	1314	4299		1.81	Si
SLV 13	fin.	317.17	1931	0.5162	0	209	4090	3246	1316	4300		2.23	Si
SLV 9	ini.	-407.36	1754	0.5154	0	209	4090	3241	1314	4299		2.45	Si
SLV 9	fin.	188.43	1101	0.5162	0	209	4090	3246	1316	4300		3.91	Si
SLV 15	ini.	-455.79	1858	0.5154	0	209	4090	3241	1314	4299		2.31	Si
SLV 15	fin.	238.32	1323	0.5162	0	209	4090	3246	1316	4300		3.25	Si
SLV 1	ini.	306.86	-1021	0.5154	0	209	4090	3241	1314	4299		4.21	Si
SLV 1	fin.	-303.04	-2424	0.5162	0	209	4090	3246	1316	4300		1.77	Si
SLV 3	ini.	429.92	-1533	0.5154	0	209	4090	3241	1314	4299		2.81	Si
SLV 3	fin.	-381.89	-3033	0.5162	0	209	4090	3246	1316	4300		1.42	Si
SLV 7	ini.	268.54	-967	0.5154	0	209	4090	3241	1314	4299		4.44	Si
SLV 7	fin.	-260.45	-2235	0.5162	0	209	4090	3246	1316	4300		1.92	Si
SLV 4	ini.	458.94	-1676	0.5154	0	209	4090	3241	1314	4299		2.56	Si
SLV 4	fin.	-402.84	-3127	0.5162	0	209	4090	3246	1316	4300		1.38	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.705	SLV 13	Si
V_SLV	1.375	SLV 4	Si
PF_SLU	7.581	SLU 56	Si
V_SLU	3.75	SLU 70	Si

Trave di accoppiamento 172

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	11.87	13.87	2	-5.963	-3.314	11.87	13.87	2	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 69	ini.	245.61	-1928	-0.0000245	0.0001872	0.0035	2		14344.28	14344.28	No	58.4	Si
SLU 69	fin.	-58.92	-1640	-0.0000058	0.0001872	0.0035	2		14357.01	14357.01	No	243.67	Si
SLU 51	ini.	261.86	-1710	-0.0000262	0.0001872	0.0035	2		14344.28	14344.28	No	54.78	Si
SLU 51	fin.	-27.8	-1422	-0.0000028	0.0001872	0.0035	2		14357.01	14357.01	No	516.52	Si
SLU 47	ini.	243.84	-1595	-0.0000243	0.0001872	0.0035	2		14344.28	14344.28	No	58.83	Si
SLU 47	fin.	-41.18	-1322	-0.0000041	0.0001872	0.0035	2		14357.01	14357.01	No	348.61	Si
SLU 46	ini.	245.79	-1649	-0.0000245	0.0001872	0.0035	2		14344.28	14344.28	No	58.36	Si
SLU 46	fin.	-30.69	-1372	-0.000003	0.0001872	0.0035	2		14357.01	14357.01	No	467.82	Si
SLU 49	ini.	260.14	-1768	-0.000026	0.0001872	0.0035	2		14344.28	14344.28	No	55.14	Si
SLU 49	fin.	-18.57	-1478	-0.0000018	0.0001872	0.0035	2		14357.01	14357.01	No	773.14	Si
SLU 48	ini.	265.64	-1763	-0.0000265	0.0001872	0.0035	2		14344.28	14344.28	No	54	Si
SLU 48	fin.	-16.67	-1469	-0.0000016	0.0001872	0.0035	2		14357.01	14357.01	No	861.4	Si
SLU 45	ini.	251.3	-1644	-0.0000251	0.0001872	0.0035	2		14344.28	14344.28	No	57.08	Si
SLU 45	fin.	-28.79	-1364	-0.0000028	0.0001872	0.0035	2		14357.01	14357.01	No	498.75	Si
SLU 72	ini.	241.82	-1875	-0.0000241	0.0001872	0.0035	2		14344.28	14344.28	No	59.32	Si
SLU 72	fin.	-70.05	-1592	-0.0000069	0.0001872	0.0035	2		14357.01	14357.01	No	204.95	Si
SLU 50	ini.	267.36	-1705	-0.0000267	0.0001872	0.0035	2		14344.28	14344.28	No	53.65	Si
SLU 50	fin.	-25.89	-1413	-0.0000026	0.0001872	0.0035	2		14357.01	14357.01	No	554.47	Si
SLU 71	ini.	247.33	-1871	-0.0000247	0.0001872	0.0035	2		14344.28	14344.28	No	58	Si
SLU 71	fin.	-68.15	-1583	-0.0000068	0.0001872	0.0035	2		14357.01	14357.01	No	210.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	245.61	-1100	2	0	812	3965	8384	5100	4776	No	4.34	Si
SLU 69	fin.	-58.92	-187	2	0	812	3965	8384	5100	4776	No	25.51	Si
SLU 48	ini.	265.64	-1053	2	0	812	3965	8384	5100	4776	No	4.54	Si
SLU 48	fin.	-16.67	-207	2	0	812	3965	8384	5100	4776	No	23.12	Si
SLU 70	ini.	240.1	-1087	2	0	812	3965	8384	5100	4776	No	4.4	Si
SLU 70	fin.	-60.82	-171	2	0	812	3965	8384	5100	4776	No	27.95	Si
SLU 51	ini.	261.86	-1050	2	0	812	3965	8384	5100	4776	No	4.55	Si
SLU 51	fin.	-27.8	-245	2	0	812	3965	8384	5100	4776	No	19.47	Si
SLU 71	ini.	247.33	-1111	2	0	812	3965	8384	5100	4776	No	4.3	Si
SLU 71	fin.	-68.15	-242	2	0	812	3965	8384	5100	4776	No	19.71	Si
SLU 72	ini.	241.82	-1097	2	0	812	3965	8384	5100	4776	No	4.35	Si
SLU 72	fin.	-70.05	-226	2	0	812	3965	8384	5100	4776	No	21.13	Si
SLU 50	ini.	267.36	-1063	2	0	812	3965	8384	5100	4776	No	4.49	Si
SLU 50	fin.	-25.89	-262	2	0	812	3965	8384	5100	4776	No	18.25	Si
SLU 66	ini.	231.26	-1053	2	0	812	3965	8384	5100	4776	No	4.54	Si
SLU 66	fin.	-71.04	-227	2	0	812	3965	8384	5100	4776	No	21.06	Si
SLU 49	ini.	260.14	-1039	2	0	812	3965	8384	5100	4776	No	4.6	Si
SLU 49	fin.	-18.57	-190	2	0	812	3965	8384	5100	4776	No	25.11	Si
SLU 68	ini.	223.81	-1040	2	0	812	3965	8384	5100	4776	No	4.59	Si
SLU 68	fin.	-83.44	-255	2	0	812	3965	8384	5100	4776	No	18.76	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	249.71	1633	-0.0000249	0.0002807	0.0035	2		14202.07	14202.07		56.87	Si
SLV 14	fin.	1223.14	1907	-0.0001255	0.0002807	0.0035	2		14202.07	14202.07		11.61	Si
SLV 10	ini.	1033.03	438	-0.0001054	0.0002807	0.0035	2		14202.07	14202.07		13.75	Si
SLV 10	fin.	827.82	1250	-0.0000839	0.0002807	0.0035	2		14202.07	14202.07		17.16	Si
SLV 5	ini.	1101.13	-1052	-0.0001126	0.0002807	0.0035	2		14202.07	14202.07		12.9	Si
SLV 5	fin.	187.67	-190	-0.0000187	0.0002807	0.0035	2		14202.07	14202.07		75.67	Si
SLV 8	ini.	-642.38	-2918	-0.0000647	0.0002807	0.0035	2		14215.41	14215.41		22.13	Si
SLV 8	fin.	-987.63	-3304	-0.0001005	0.0002807	0.0035	2		14215.41	14215.41		14.39	Si
SLV 6	ini.	1176.09	-1140	-0.0001205	0.0002807	0.0035	2		14202.07	14202.07		12.08	Si
SLV 6	fin.	139.78	-244	-0.0000139	0.0002807	0.0035	2		14202.07	14202.07		101.6	Si
SLV 13	ini.	134.66	1768	-0.0000134	0.0002807	0.0035	2		14202.07	14202.07		105.46	Si
SLV 13	fin.	1296.64	1990	-0.0001334	0.0002807	0.0035	2		14202.07	14202.07		10.95	Si
SLV 3	ini.	65.98	-4024	-0.0000065	0.0002807	0.0035	2		14202.07	14202.07		215.26	Si
SLV 3	fin.	-1335.05	-3907	-0.0001374	0.0002807	0.0035	2		14215.41	14215.41		10.65	Si
SLV 1	ini.	611.52	-3491	-0.0000616	0.0002807	0.0035	2		14202.07	14202.07		23.22	Si
SLV 1	fin.	-996.83	-2989	-0.0001015	0.0002807	0.0035	2		14215.41	14215.41		14.26	Si
SLV 4	ini.	181.02	-4160	-0.000018	0.0002807	0.0035	2		14202.07	14202.07		78.45	Si
SLV 4	fin.	-1408.55	-3990	-0.0001453	0.0002807	0.0035	2		14215.41	14215.41		10.09	Si
SLV 2	ini.	726.57	-3627	-0.0000734	0.0002807	0.0035	2		14202.07	14202.07		19.55	Si
SLV 2	fin.	-1070.33	-3072	-0.0001092	0.0002807	0.0035	2		14215.41	14215.41		13.28	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-860.4	1987	2	0	1217	3965	12577	5100	5182		2.61	Si
SLV 11	fin.	-251.69	3388	2	0	1217	3965	12577	5100	5182		1.53	Si
SLV 5	ini.	1101.13	-3118	2	0	1217	3965	12577	5100	5182		1.66	Si
SLV 5	fin.	187.67	-3417	2	0	1217	3965	12577	5100	5182		1.52	Si
SLV 2	ini.	726.57	-4488	2	0	1217	3965	12577	5100	5182		1.15	Si
SLV 2	fin.	-1070.33	-4985	2	0	1217	3965	12577	5100	5182		1.04	Si
SLV 13	ini.	134.66	2072	2	0	1217	3965	12577	5100	5182		2.5	Si
SLV 13	fin.	1296.64	3238	2	0	1217	3965	12577	5100	5182		1.6	Si
SLV 15	ini.	-410.88	3055	2	0	1217	3965	12577	5100	5182		1.7	Si
SLV 15	fin.	958.42	4590	2	0	1217	3965	12577	5100	5182		1.13	Si
SLV 16	ini.	-295.83	2589	2	0	1217	3965	12577	5100	5182		2	Si
SLV 16	fin.	884.91	4029	2	0	1217	3965	12577	5100	5182		1.29	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	611.52	-4023	2	0	1217	3965	12577	5100	5182		1.29	Si
SLV 1	fin.	-996.83	-4424	2	0	1217	3965	12577	5100	5182		1.17	Si
SLV 6	ini.	1176.09	-3421	2	0	1217	3965	12577	5100	5182		1.51	Si
SLV 6	fin.	139.78	-3783	2	0	1217	3965	12577	5100	5182		1.37	Si
SLV 4	ini.	181.02	-3505	2	0	1217	3965	12577	5100	5182		1.48	Si
SLV 4	fin.	-1408.55	-3633	2	0	1217	3965	12577	5100	5182		1.43	Si
SLV 3	ini.	65.98	-3040	2	0	1217	3965	12577	5100	5182		1.7	Si
SLV 3	fin.	-1335.05	-3072	2	0	1217	3965	12577	5100	5182		1.69	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	10.092	SLV 4	Si
V_SLV	1.04	SLV 2	Si
PF_SLU	53.651	SLU 50	Si
V_SLU	4.3	SLU 71	Si

Trave di accoppiamento 173

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-5.463	-3.314	14.67	15.084	0.414	-5.963	-3.314	14.67	15.085	0.415	0.5	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-24.59	-186	-0.0000576	0.0001872	0.0035	0.4145		637.25	637.25	No	25.91	Si
SLU 70	fin.	-67.09	-401	-0.0001641	0.0001872	0.0035	0.4149		636.41	636.41	No	9.49	Si
SLU 50	ini.	-19.73	-144	-0.000046	0.0001872	0.0035	0.4145		637.25	637.25	No	32.3	Si
SLU 50	fin.	-71.07	-389	-0.0001747	0.0001872	0.0035	0.4149		636.41	636.41	No	8.96	Si
SLU 46	ini.	-18.74	-138	-0.0000436	0.0001872	0.0035	0.4145		637.25	637.25	No	34	Si
SLU 46	fin.	-64.52	-361	-0.0001574	0.0001872	0.0035	0.4149		636.41	636.41	No	9.86	Si
SLU 71	ini.	-19.72	-154	-0.000046	0.0001872	0.0035	0.4145		637.25	637.25	No	32.31	Si
SLU 71	fin.	-68.62	-378	-0.0001682	0.0001872	0.0035	0.4149		636.41	636.41	No	9.27	Si
SLU 49	ini.	-24.6	-177	-0.0000576	0.0001872	0.0035	0.4145		637.25	637.25	No	25.91	Si
SLU 49	fin.	-69.53	-412	-0.0001706	0.0001872	0.0035	0.4149		636.41	636.41	No	9.15	Si
SLU 72	ini.	-20.01	-156	-0.0000466	0.0001872	0.0035	0.4145		637.25	637.25	No	31.85	Si
SLU 72	fin.	-67.44	-376	-0.0001651	0.0001872	0.0035	0.4149		636.41	636.41	No	9.44	Si
SLU 51	ini.	-20.01	-147	-0.0000467	0.0001872	0.0035	0.4145		637.25	637.25	No	31.84	Si
SLU 51	fin.	-69.88	-387	-0.0001716	0.0001872	0.0035	0.4149		636.41	636.41	No	9.11	Si
SLU 69	ini.	-24.31	-184	-0.0000569	0.0001872	0.0035	0.4145		637.25	637.25	No	26.21	Si
SLU 69	fin.	-68.27	-404	-0.0001673	0.0001872	0.0035	0.4149		636.41	636.41	No	9.32	Si
SLU 48	ini.	-24.32	-174	-0.0000569	0.0001872	0.0035	0.4145		637.25	637.25	No	26.21	Si
SLU 48	fin.	-70.71	-415	-0.0001738	0.0001872	0.0035	0.4149		636.41	636.41	No	9	Si
SLU 45	ini.	-18.46	-135	-0.000043	0.0001872	0.0035	0.4145		637.25	637.25	No	34.52	Si
SLU 45	fin.	-65.7	-364	-0.0001605	0.0001872	0.0035	0.4149		636.41	636.41	No	9.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-24.59	417	0.4145	0	139	3288	1738	1057	2794	No	6.71	Si
SLU 70	fin.	-67.09	-423	0.4149	0	140	3288	1739	1058	2797	No	6.62	Si
SLU 48	ini.	-24.32	344	0.4145	0	139	3288	1738	1057	2794	No	8.11	Si
SLU 48	fin.	-70.71	-422	0.4149	0	140	3288	1739	1058	2797	No	6.64	Si
SLU 71	ini.	-19.72	364	0.4145	0	139	3288	1738	1057	2794	No	7.68	Si
SLU 71	fin.	-68.62	-426	0.4149	0	140	3288	1739	1058	2797	No	6.56	Si
SLU 50	ini.	-19.73	297	0.4145	0	139	3288	1738	1057	2794	No	9.42	Si
SLU 50	fin.	-71.07	-420	0.4149	0	140	3288	1739	1058	2797	No	6.66	Si
SLU 35	ini.	-28.3	433	0.4145	0	139	3288	1738	1057	2794	No	6.45	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 35	fin.	-45.78	-305	0.4149	0	140	3288	1739	1058	2797	No	9.18	Si
SLU 36	ini.	-28.59	438	0.4145	0	139	3288	1738	1057	2794	No	6.38	Si
SLU 36	fin.	-44.6	-300	0.4149	0	140	3288	1739	1058	2797	No	9.33	Si
SLU 78	ini.	-30.44	464	0.4145	0	139	3288	1738	1057	2794	No	6.02	Si
SLU 78	fin.	-59.33	-385	0.4149	0	140	3288	1739	1058	2797	No	7.27	Si
SLU 69	ini.	-24.31	412	0.4145	0	139	3288	1738	1057	2794	No	6.78	Si
SLU 69	fin.	-68.27	-428	0.4149	0	140	3288	1739	1058	2797	No	6.54	Si
SLU 77	ini.	-30.15	459	0.4145	0	139	3288	1738	1057	2794	No	6.09	Si
SLU 77	fin.	-60.51	-390	0.4149	0	140	3288	1739	1058	2797	No	7.18	Si
SLU 72	ini.	-20.01	369	0.4145	0	139	3288	1738	1057	2794	No	7.58	Si
SLU 72	fin.	-67.44	-421	0.4149	0	140	3288	1739	1058	2797	No	6.64	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-161.98	-899	-0.0004258	0.0002807	0.0035	0.4145		641.69	641.69		3.96	Si
SLV 16	fin.	-32.65	-1027	-0.0000763	0.0002807	0.0035	0.4149		641.84	641.84		19.66	Si
SLV 10	ini.	-20.98	-13	-0.0000487	0.0002807	0.0035	0.4145		641.69	641.69		30.58	Si
SLV 10	fin.	-229.09	-1051	-0.0006459	0.0002807	0.0035	0.4149		641.84	641.84		2.8	Si
SLV 6	ini.	72.62	477	-0.0001759	0.0002807	0.0035	0.4145		638.93	638.93		8.8	Si
SLV 6	fin.	-210.6	-452	-0.0005824	0.0002807	0.0035	0.4149		641.84	641.84		3.05	Si
SLV 13	ini.	-165.68	-869	-0.0004372	0.0002807	0.0035	0.4145		641.69	641.69		3.87	Si
SLV 13	fin.	-115.76	-1404	-0.0002897	0.0002807	0.0035	0.4149		641.84	641.84		5.54	Si
SLV 5	ini.	59.6	395	-0.0001429	0.0002807	0.0035	0.4145		638.93	638.93		10.72	Si
SLV 5	fin.	-198.2	-482	-0.0005409	0.0002807	0.0035	0.4149		641.84	641.84		3.24	Si
SLV 15	ini.	-181.96	-1025	-0.0004886	0.0002807	0.0035	0.4145		641.69	641.69		3.53	Si
SLV 15	fin.	-13.61	-1074	-0.0000314	0.0002807	0.0035	0.4149		641.84	641.84		47.15	Si
SLV 2	ini.	166.3	889	-0.0004412	0.0002807	0.0035	0.4145		638.93	638.93		3.84	Si
SLV 2	fin.	-73.18	641	-0.0001764	0.0002807	0.0035	0.4149		641.84	641.84		8.77	Si
SLV 4	ini.	150.01	734	-0.0003911	0.0002807	0.0035	0.4145		638.93	638.93		4.26	Si
SLV 4	fin.	28.97	972	-0.0000678	0.0002807	0.0035	0.4149		639.15	639.15		22.06	Si
SLV 9	ini.	-34	-95	-0.0000797	0.0002807	0.0035	0.4145		641.69	641.69		18.87	Si
SLV 9	fin.	-216.69	-1082	-0.0006031	0.0002807	0.0035	0.4149		641.84	641.84		2.96	Si
SLV 1	ini.	146.32	763	-0.0003799	0.0002807	0.0035	0.4145		638.93	638.93		4.37	Si
SLV 1	fin.	-54.15	594	-0.0001286	0.0002807	0.0035	0.4149		641.84	641.84		11.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-75.27	949	0.4145	0	209	3288	2606	1057	3498		3.69	Si
SLV 12	fin.	111.41	362	0.4149	0	210	3288	2609	1058	3498		9.67	Si
SLV 2	ini.	166.3	-273	0.4145	0	209	3288	2606	1057	3498		12.81	Si
SLV 2	fin.	-73.18	-709	0.4149	0	210	3288	2609	1058	3498		4.93	Si
SLV 7	ini.	5.32	912	0.4145	0	209	3288	2606	1057	3498		3.84	Si
SLV 7	fin.	142.29	315	0.4149	0	210	3288	2609	1058	3498		11.1	Si
SLV 8	ini.	18.33	835	0.4145	0	209	3288	2606	1057	3498		4.19	Si
SLV 8	fin.	129.89	247	0.4149	0	210	3288	2609	1058	3498		14.14	Si
SLV 11	ini.	-88.28	1025	0.4145	0	209	3288	2606	1057	3498		3.41	Si
SLV 11	fin.	123.81	430	0.4149	0	210	3288	2609	1058	3498		8.14	Si
SLV 5	ini.	59.6	-557	0.4145	0	209	3288	2606	1057	3498		6.28	Si
SLV 5	fin.	-198.2	-923	0.4149	0	210	3288	2609	1058	3498		3.79	Si
SLV 6	ini.	72.62	-634	0.4145	0	209	3288	2606	1057	3498		5.52	Si
SLV 6	fin.	-210.6	-991	0.4149	0	210	3288	2609	1058	3498		3.53	Si
SLV 15	ini.	-181.96	664	0.4145	0	209	3288	2606	1057	3498		5.27	Si
SLV 15	fin.	-13.61	148	0.4149	0	210	3288	2609	1058	3498		23.62	Si
SLV 10	ini.	-20.98	-520	0.4145	0	209	3288	2606	1057	3498		6.72	Si
SLV 10	fin.	-229.09	-876	0.4149	0	210	3288	2609	1058	3498		3.99	Si
SLV 9	ini.	-34	-444	0.4145	0	209	3288	2606	1057	3498		7.88	Si
SLV 9	fin.	-216.69	-808	0.4149	0	210	3288	2609	1058	3498		4.33	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.802	SLV 10	Si
V_SLV	3.411	SLV 11	Si
PF_SLU	8.955	SLU 50	Si
V_SLU	6.024	SLU 78	Si

Trave di accoppiamento 174

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	11.87	12.77	0.9	-3.183	-3.314	11.87	12.77	0.9	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 64	ini.	132.42	-633	-0.0000665	0.0001872	0.0035	0.9		2959	2959	No	22.35	Si
SLU 64	fin.	52.93	-531	-0.0000262	0.0001872	0.0035	0.9		2959	2959	No	55.91	Si
SLU 44	ini.	149.05	-636	-0.0000751	0.0001872	0.0035	0.9		2959	2959	No	19.85	Si
SLU 44	fin.	32.06	-451	-0.0000158	0.0001872	0.0035	0.9		2959	2959	No	92.29	Si
SLU 65	ini.	135.5	-641	-0.0000681	0.0001872	0.0035	0.9		2959	2959	No	21.84	Si
SLU 65	fin.	51.29	-529	-0.0000253	0.0001872	0.0035	0.9		2959	2959	No	57.69	Si
SLU 46	ini.	127.72	-619	-0.0000641	0.0001872	0.0035	0.9		2959	2959	No	23.17	Si
SLU 46	fin.	56.04	-546	-0.0000277	0.0001872	0.0035	0.9		2959	2959	No	52.8	Si
SLU 50	ini.	119.39	-601	-0.0000598	0.0001872	0.0035	0.9		2959	2959	No	24.79	Si
SLU 50	fin.	59.32	-557	-0.0000293	0.0001872	0.0035	0.9		2959	2959	No	49.89	Si
SLU 43	ini.	145.96	-629	-0.0000735	0.0001872	0.0035	0.9		2959	2959	No	20.27	Si
SLU 43	fin.	33.7	-453	-0.0000166	0.0001872	0.0035	0.9		2959	2959	No	87.82	Si
SLU 47	ini.	135.76	-622	-0.0000682	0.0001872	0.0035	0.9		2959	2959	No	21.8	Si
SLU 47	fin.	44.87	-502	-0.0000221	0.0001872	0.0035	0.9		2959	2959	No	65.94	Si
SLU 45	ini.	125.87	-615	-0.0000631	0.0001872	0.0035	0.9		2959	2959	No	23.51	Si
SLU 45	fin.	57.02	-547	-0.0000282	0.0001872	0.0035	0.9		2959	2959	No	51.9	Si
SLU 68	ini.	122.22	-627	-0.0000612	0.0001872	0.0035	0.9		2959	2959	No	24.21	Si
SLU 68	fin.	64.1	-580	-0.0000317	0.0001872	0.0035	0.9		2959	2959	No	46.16	Si
SLU 51	ini.	121.24	-605	-0.0000607	0.0001872	0.0035	0.9		2959	2959	No	24.41	Si
SLU 51	fin.	58.34	-555	-0.0000289	0.0001872	0.0035	0.9		2959	2959	No	50.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 57	ini.	79.21	-276	0.9	0	365	7137	3773	2295	6068	No	21.96	Si
SLU 57	fin.	97.32	683	0.9	0	365	7137	3773	2295	6068	No	8.89	Si
SLU 78	ini.	65.67	-216	0.9	0	365	7137	3773	2295	6068	No	28.07	Si
SLU 78	fin.	116.55	778	0.9	0	365	7137	3773	2295	6068	No	7.8	Si
SLU 70	ini.	100.9	-383	0.9	0	365	7137	3773	2295	6068	No	15.84	Si
SLU 70	fin.	88.08	682	0.9	0	365	7137	3773	2295	6068	No	8.9	Si
SLU 35	ini.	26.56	-80	0.9	0	365	7137	3773	2295	6068	No	76.15	Si
SLU 35	fin.	114.83	744	0.9	0	365	7137	3773	2295	6068	No	8.15	Si
SLU 77	ini.	63.82	-208	0.9	0	365	7137	3773	2295	6068	No	29.16	Si
SLU 77	fin.	117.53	781	0.9	0	365	7137	3773	2295	6068	No	7.77	Si
SLU 36	ini.	28.42	-88	0.9	0	365	7137	3773	2295	6068	No	69.13	Si
SLU 36	fin.	113.85	741	0.9	0	365	7137	3773	2295	6068	No	8.19	Si
SLU 80	ini.	72.47	-233	0.9	0	365	7137	3773	2295	6068	No	26.09	Si
SLU 80	fin.	106.04	704	0.9	0	365	7137	3773	2295	6068	No	8.62	Si
SLU 79	ini.	70.62	-224	0.9	0	365	7137	3773	2295	6068	No	27.03	Si
SLU 79	fin.	107.02	707	0.9	0	365	7137	3773	2295	6068	No	8.58	Si
SLU 56	ini.	77.36	-268	0.9	0	365	7137	3773	2295	6068	No	22.62	Si
SLU 56	fin.	98.3	686	0.9	0	365	7137	3773	2295	6068	No	8.85	Si
SLU 69	ini.	99.04	-375	0.9	0	365	7137	3773	2295	6068	No	16.18	Si
SLU 69	fin.	89.06	686	0.9	0	365	7137	3773	2295	6068	No	8.85	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-415.85	748	-0.0002168	0.0002807	0.0035	0.9		2995.37	2995.37		7.2	Si
SLV 10	fin.	287.16	-767	-0.0001467	0.0002807	0.0035	0.9		2989.59	2989.59		10.41	Si
SLV 8	ini.	635.95	-1729	-0.0003474	0.0002807	0.0035	0.9		2989.59	2989.59		4.7	Si
SLV 8	fin.	-227.14	29	-0.0001147	0.0002807	0.0035	0.9		2995.37	2995.37		13.19	Si
SLV 14	ini.	-408.31	613	-0.0002126	0.0002807	0.0035	0.9		2995.37	2995.37		7.34	Si
SLV 14	fin.	304.35	-982	-0.0001559	0.0002807	0.0035	0.9		2989.59	2989.59		9.82	Si
SLV 2	ini.	402.15	-1016	-0.0002096	0.0002807	0.0035	0.9		2989.59	2989.59		7.43	Si
SLV 2	fin.	-146.23	157	-0.0000729	0.0002807	0.0035	0.9		2995.37	2995.37		20.48	Si
SLV 12	ini.	392.81	-1240	-0.0002044	0.0002807	0.0035	0.9		2989.59	2989.59		7.61	Si
SLV 12	fin.	-91.97	-312	-0.0000455	0.0002807	0.0035	0.9		2995.37	2995.37		32.57	Si
SLV 9	ini.	-446.4	785	-0.0002341	0.0002807	0.0035	0.9		2995.37	2995.37		6.71	Si
SLV 9	fin.	316.38	-857	-0.0001624	0.0002807	0.0035	0.9		2989.59	2989.59		9.45	Si
SLV 3	ini.	597.85	-1557	-0.0003239	0.0002807	0.0035	0.9		2989.59	2989.59		5	Si
SLV 3	fin.	-215.1	154	-0.0001084	0.0002807	0.0035	0.9		2995.37	2995.37		13.93	Si
SLV 13	ini.	-455.2	668	-0.0002391	0.0002807	0.0035	0.9		2995.37	2995.37		6.58	Si
SLV 13	fin.	349.21	-1120	-0.0001803	0.0002807	0.0035	0.9		2989.59	2989.59		8.56	Si
SLV 4	ini.	644.75	-1612	-0.0003529	0.0002807	0.0035	0.9		2989.59	2989.59		4.64	Si
SLV 4	fin.	-259.96	293	-0.000132	0.0002807	0.0035	0.9		2995.37	2995.37		11.52	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	605.39	-1692	-0.0003285	0.0002807	0.0035	0.9		2989.59	2989.59		4.94	Si
SLV 7	fin.	-197.91	-61	-0.0000995	0.0002807	0.0035	0.9		2995.37	2995.37		15.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-212.61	741	0.9	0	548	7137	5660	2295	7684		10.36	Si
SLV 15	fin.	235.47	1732	0.9	0	548	7137	5660	2295	7684		4.44	Si
SLV 7	ini.	605.39	-2451	0.9	0	548	7137	5660	2295	7684		3.13	Si
SLV 7	fin.	-197.91	-703	0.9	0	548	7137	5660	2295	7684		10.93	Si
SLV 4	ini.	644.75	-2388	0.9	0	548	7137	5660	2295	7684		3.22	Si
SLV 4	fin.	-259.96	-1527	0.9	0	548	7137	5660	2295	7684		5.03	Si
SLV 10	ini.	-415.85	1862	0.9	0	548	7137	5660	2295	7684		4.13	Si
SLV 10	fin.	287.16	1277	0.9	0	548	7137	5660	2295	7684		6.02	Si
SLV 9	ini.	-446.4	1965	0.9	0	548	7137	5660	2295	7684		3.91	Si
SLV 9	fin.	316.38	1432	0.9	0	548	7137	5660	2295	7684		5.37	Si
SLV 8	ini.	635.95	-2554	0.9	0	548	7137	5660	2295	7684		3.01	Si
SLV 8	fin.	-227.14	-858	0.9	0	548	7137	5660	2295	7684		8.95	Si
SLV 3	ini.	597.85	-2231	0.9	0	548	7137	5660	2295	7684		3.44	Si
SLV 3	fin.	-215.1	-1288	0.9	0	548	7137	5660	2295	7684		5.96	Si
SLV 13	ini.	-455.2	1799	0.9	0	548	7137	5660	2295	7684		4.27	Si
SLV 13	fin.	349.21	2101	0.9	0	548	7137	5660	2295	7684		3.66	Si
SLV 14	ini.	-408.31	1642	0.9	0	548	7137	5660	2295	7684		4.68	Si
SLV 14	fin.	304.35	1862	0.9	0	548	7137	5660	2295	7684		4.13	Si
SLV 12	ini.	392.81	-1662	0.9	0	548	7137	5660	2295	7684		4.62	Si
SLV 12	fin.	-91.97	48	0.9	0	548	7137	5660	2295	7684		160.81	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.637	SLV 4	Si
V_SLV	3.009	SLV 8	Si
PF_SLU	19.853	SLU 44	Si
V_SLU	7.768	SLU 77	Si

Trave di accoppiamento 175

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	14.57	15.082	0.512	-3.183	-3.314	14.57	15.082	0.512	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 70	ini.	-44.06	-31	-0.0000682	0.0001872	0.0035	0.5116		963.49	963.49	No	21.87	Si
SLU 70	fin.	-76.05	-534	-0.0001201	0.0001872	0.0035	0.5124		963.77	963.77	No	12.67	Si
SLU 69	ini.	-44.92	-33	-0.0000696	0.0001872	0.0035	0.5116		963.49	963.49	No	21.45	Si
SLU 69	fin.	-75.58	-531	-0.0001193	0.0001872	0.0035	0.5124		963.77	963.77	No	12.75	Si
SLU 48	ini.	-29.67	0	-0.0000455	0.0001872	0.0035	0.5116		963.49	963.49	No	32.48	Si
SLU 48	fin.	-75.75	-529	-0.0001196	0.0001872	0.0035	0.5124		963.77	963.77	No	12.72	Si
SLU 71	ini.	-36.64	-12	-0.0000565	0.0001872	0.0035	0.5116		963.49	963.49	No	26.3	Si
SLU 71	fin.	-74.97	-529	-0.0001183	0.0001872	0.0035	0.5124		963.77	963.77	No	12.85	Si
SLU 46	ini.	-17.46	15	-0.0000266	0.0001872	0.0035	0.5116		963.49	963.49	No	55.18	Si
SLU 46	fin.	-74.53	-516	-0.0001176	0.0001872	0.0035	0.5124		963.77	963.77	No	12.93	Si
SLU 51	ini.	-20.54	23	-0.0000313	0.0001872	0.0035	0.5116		963.49	963.49	No	46.91	Si
SLU 51	fin.	-75.61	-530	-0.0001194	0.0001872	0.0035	0.5124		963.77	963.77	No	12.75	Si
SLU 49	ini.	-28.81	3	-0.0000442	0.0001872	0.0035	0.5116		963.49	963.49	No	33.44	Si
SLU 49	fin.	-76.21	-532	-0.0001204	0.0001872	0.0035	0.5124		963.77	963.77	No	12.65	Si
SLU 72	ini.	-35.79	-10	-0.0000551	0.0001872	0.0035	0.5116		963.49	963.49	No	26.92	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 72	fin.	-75.44	-532	-0.0001191	0.0001872	0.0035	0.5124		963.77	963.77	No	12.78	Si
SLU 67	ini.	-32.71	-18	-0.0000503	0.0001872	0.0035	0.5116		963.49	963.49	No	29.45	Si
SLU 67	fin.	-74.36	-518	-0.0001173	0.0001872	0.0035	0.5124		963.77	963.77	No	12.96	Si
SLU 50	ini.	-21.39	21	-0.0000327	0.0001872	0.0035	0.5116		963.49	963.49	No	45.05	Si
SLU 50	fin.	-75.14	-527	-0.0001186	0.0001872	0.0035	0.5124		963.77	963.77	No	12.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 69	ini.	-44.92	537	0.5116	0	138	4060	2145	1305	3450	No	6.42	Si
SLU 69	fin.	-75.58	-1369	0.5124	0	139	4060	2148	1307	3455	No	2.52	Si
SLU 77	ini.	-68.45	624	0.5116	0	138	4060	2145	1305	3450	No	5.53	Si
SLU 77	fin.	-62.41	-1277	0.5124	0	139	4060	2148	1307	3455	No	2.71	Si
SLU 48	ini.	-29.67	454	0.5116	0	138	4060	2145	1305	3450	No	7.61	Si
SLU 48	fin.	-75.75	-1286	0.5124	0	139	4060	2148	1307	3455	No	2.69	Si
SLU 70	ini.	-44.06	534	0.5116	0	138	4060	2145	1305	3450	No	6.46	Si
SLU 70	fin.	-76.05	-1372	0.5124	0	139	4060	2148	1307	3455	No	2.52	Si
SLU 72	ini.	-35.79	491	0.5116	0	138	4060	2145	1305	3450	No	7.02	Si
SLU 72	fin.	-75.44	-1343	0.5124	0	139	4060	2148	1307	3455	No	2.57	Si
SLU 50	ini.	-21.39	411	0.5116	0	138	4060	2145	1305	3450	No	8.39	Si
SLU 50	fin.	-75.14	-1257	0.5124	0	139	4060	2148	1307	3455	No	2.75	Si
SLU 51	ini.	-20.54	408	0.5116	0	138	4060	2145	1305	3450	No	8.46	Si
SLU 51	fin.	-75.61	-1260	0.5124	0	139	4060	2148	1307	3455	No	2.74	Si
SLU 78	ini.	-67.6	621	0.5116	0	138	4060	2145	1305	3450	No	5.56	Si
SLU 78	fin.	-62.88	-1279	0.5124	0	139	4060	2148	1307	3455	No	2.7	Si
SLU 71	ini.	-36.64	495	0.5116	0	138	4060	2145	1305	3450	No	6.97	Si
SLU 71	fin.	-74.97	-1341	0.5124	0	139	4060	2148	1307	3455	No	2.58	Si
SLU 49	ini.	-28.81	450	0.5116	0	138	4060	2145	1305	3450	No	7.66	Si
SLU 49	fin.	-76.21	-1289	0.5124	0	139	4060	2148	1307	3455	No	2.68	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-177.9	-395	-0.0002939	0.0002807	0.0035	0.5116		973.5	973.5		5.47	Si
SLV 5	fin.	50.16	296	-0.0000775	0.0002807	0.0035	0.5124		971.98	971.98		19.38	Si
SLV 13	ini.	-210.74	-464	-0.0003558	0.0002807	0.0035	0.5116		973.5	973.5		4.62	Si
SLV 13	fin.	93.87	624	-0.0001481	0.0002807	0.0035	0.5124		971.98	971.98		10.35	Si
SLV 7	ini.	209.38	526	-0.0003545	0.0002807	0.0035	0.5116		970.11	970.11		4.63	Si
SLV 7	fin.	-203.46	-1352	-0.0003412	0.0002807	0.0035	0.5124		975.28	975.28		4.79	Si
SLV 3	ini.	157.89	396	-0.0002585	0.0002807	0.0035	0.5116		970.11	970.11		6.14	Si
SLV 3	fin.	-182.16	-1236	-0.0003012	0.0002807	0.0035	0.5124		975.28	975.28		5.35	Si
SLV 9	ini.	-253.63	-570	-0.0004413	0.0002807	0.0035	0.5116		973.5	973.5		3.84	Si
SLV 9	fin.	110.14	705	-0.0001752	0.0002807	0.0035	0.5124		971.98	971.98		8.82	Si
SLV 4	ini.	182.56	462	-0.0003036	0.0002807	0.0035	0.5116		970.11	970.11		5.31	Si
SLV 4	fin.	-196.57	-1337	-0.0003281	0.0002807	0.0035	0.5124		975.28	975.28		4.96	Si
SLV 6	ini.	-161.82	-352	-0.0002647	0.0002807	0.0035	0.5116		973.5	973.5		6.02	Si
SLV 6	fin.	40.77	230	-0.0000627	0.0002807	0.0035	0.5124		971.98	971.98		23.84	Si
SLV 14	ini.	-186.07	-397	-0.000309	0.0002807	0.0035	0.5116		973.5	973.5		5.23	Si
SLV 14	fin.	79.46	523	-0.0001244	0.0002807	0.0035	0.5124		971.98	971.98		12.23	Si
SLV 10	ini.	-237.56	-527	-0.0004087	0.0002807	0.0035	0.5116		973.5	973.5		4.1	Si
SLV 10	fin.	100.76	639	-0.0001595	0.0002807	0.0035	0.5124		971.98	971.98		9.65	Si
SLV 8	ini.	225.45	569	-0.000386	0.0002807	0.0035	0.5116		970.11	970.11		4.3	Si
SLV 8	fin.	-212.84	-1418	-0.0003593	0.0002807	0.0035	0.5124		975.28	975.28		4.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	133.64	-311	0.5116	0	208	4060	3217	1305	4268		13.73	Si
SLV 11	fin.	-143.48	-1314	0.5124	0	208	4060	3222	1307	4268		3.25	Si
SLD 8	ini.	91.49	-147	0.5116	0	208	4060	3217	1305	4268		29.05	Si
SLD 8	fin.	-122.44	-1241	0.5124	0	208	4060	3222	1307	4268		3.44	Si
SLV 3	ini.	157.89	-409	0.5116	0	208	4060	3217	1305	4268		10.44	Si
SLV 3	fin.	-182.16	-1713	0.5124	0	208	4060	3222	1307	4268		2.49	Si
SLV 8	ini.	225.45	-666	0.5116	0	208	4060	3217	1305	4268		6.41	Si
SLV 8	fin.	-212.84	-1831	0.5124	0	208	4060	3222	1307	4268		2.33	Si
SLV 4	ini.	182.56	-501	0.5116	0	208	4060	3217	1305	4268		8.52	Si
SLV 4	fin.	-196.57	-1816	0.5124	0	208	4060	3222	1307	4268		2.35	Si
SLD 4	ini.	71.06	-68	0.5116	0	208	4060	3217	1305	4268		62.5	Si
SLD 4	fin.	-114.13	-1226	0.5124	0	208	4060	3222	1307	4268		3.48	Si
SLV 12	ini.	149.72	-371	0.5116	0	208	4060	3217	1305	4268		11.51	Si
SLV 12	fin.	-152.86	-1382	0.5124	0	208	4060	3222	1307	4268		3.09	Si
SLV 7	ini.	209.38	-606	0.5116	0	208	4060	3217	1305	4268		7.04	Si
SLV 7	fin.	-203.46	-1763	0.5124	0	208	4060	3222	1307	4268		2.42	Si
SLV 1	ini.	41.71	41	0.5116	0	208	4060	3217	1305	4268		103.16	Si
SLV 1	fin.	-106.08	-1236	0.5124	0	208	4060	3222	1307	4268		3.45	Si
SLV 2	ini.	66.38	-51	0.5116	0	208	4060	3217	1305	4268		84.19	Si
SLV 2	fin.	-120.48	-1340	0.5124	0	208	4060	3222	1307	4268		3.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.838	SLV 9	Si
V_SLV	2.331	SLV 8	Si
PF_SLU	12.646	SLU 49	Si
V_SLU	2.518	SLU 70	Si

Trave di accoppiamento 176

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	13.04	14.258	1.218	-11.933	-4.824	13.04	14.257	1.217	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	41.74	153	-0.0000112	0.0001872	0.0035	1.2178		5371.64	5371.64	No	128.68	Si
SLU 78	fin.	-233.85	-99	-0.0000639	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.05	Si
SLU 75	ini.	44.4	196	-0.0000119	0.0001872	0.0035	1.2178		5371.64	5371.64	No	120.98	Si
SLU 75	fin.	-229.72	-64	-0.0000627	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.46	Si
SLU 84	ini.	50.01	225	-0.0000134	0.0001872	0.0035	1.2178		5371.64	5371.64	No	107.4	Si
SLU 84	fin.	-228.26	-39	-0.0000623	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.61	Si
SLU 74	ini.	43.8	196	-0.0000117	0.0001872	0.0035	1.2178		5371.64	5371.64	No	122.63	Si
SLU 74	fin.	-228.19	-61	-0.0000623	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.62	Si
SLU 81	ini.	52.07	269	-0.000014	0.0001872	0.0035	1.2178		5371.64	5371.64	No	103.15	Si
SLU 81	fin.	-222.6	0	-0.0000607	0.0001872	0.0035	1.2169		5389.58	5389.58	No	24.21	Si
SLU 82	ini.	52.67	268	-0.0000141	0.0001872	0.0035	1.2178		5371.64	5371.64	No	101.98	Si
SLU 82	fin.	-224.13	-4	-0.0000611	0.0001872	0.0035	1.2169		5389.58	5389.58	No	24.05	Si
SLU 83	ini.	49.42	226	-0.0000132	0.0001872	0.0035	1.2178		5371.64	5371.64	No	108.7	Si
SLU 83	fin.	-226.73	-36	-0.0000619	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.77	Si
SLU 80	ini.	36.74	150	-0.0000098	0.0001872	0.0035	1.2178		5371.64	5371.64	No	146.21	Si
SLU 80	fin.	-224.78	-84	-0.0000613	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.98	Si
SLU 77	ini.	41.15	153	-0.000011	0.0001872	0.0035	1.2178		5371.64	5371.64	No	130.55	Si
SLU 77	fin.	-232.32	-96	-0.0000634	0.0001872	0.0035	1.2169		5389.58	5389.58	No	23.2	Si
SLU 79	ini.	36.14	150	-0.0000097	0.0001872	0.0035	1.2178		5371.64	5371.64	No	148.63	Si
SLU 79	fin.	-223.25	-81	-0.0000609	0.0001872	0.0035	1.2169		5389.58	5389.58	No	24.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	49.42	543	1.2178	0	529	7930	5470	3105	8459	No	15.58	Si
SLU 83	fin.	-226.73	-1326	1.2169	0	529	7930	5466	3103	8459	No	6.38	Si
SLU 79	ini.	36.14	739	1.2178	0	529	7930	5470	3105	8459	No	11.45	Si
SLU 79	fin.	-223.25	-1434	1.2169	0	529	7930	5466	3103	8459	No	5.9	Si
SLU 72	ini.	11.96	803	1.2178	0	529	7930	5470	3105	8459	No	10.53	Si
SLU 72	fin.	-207.03	-1362	1.2169	0	529	7930	5466	3103	8459	No	6.21	Si
SLU 84	ini.	50.01	540	1.2178	0	529	7930	5470	3105	8459	No	15.67	Si
SLU 84	fin.	-228.26	-1331	1.2169	0	529	7930	5466	3103	8459	No	6.36	Si
SLU 69	ini.	16.37	756	1.2178	0	529	7930	5470	3105	8459	No	11.19	Si
SLU 69	fin.	-214.57	-1360	1.2169	0	529	7930	5466	3103	8459	No	6.22	Si
SLU 80	ini.	36.74	736	1.2178	0	529	7930	5470	3105	8459	No	11.5	Si
SLU 80	fin.	-224.78	-1438	1.2169	0	529	7930	5466	3103	8459	No	5.88	Si
SLU 70	ini.	16.97	753	1.2178	0	529	7930	5470	3105	8459	No	11.23	Si
SLU 70	fin.	-216.1	-1364	1.2169	0	529	7930	5466	3103	8459	No	6.2	Si
SLU 77	ini.	41.15	688	1.2178	0	529	7930	5470	3105	8459	No	12.29	Si
SLU 77	fin.	-232.32	-1435	1.2169	0	529	7930	5466	3103	8459	No	5.89	Si
SLU 71	ini.	11.37	806	1.2178	0	529	7930	5470	3105	8459	No	10.49	Si
SLU 71	fin.	-205.5	-1358	1.2169	0	529	7930	5466	3103	8459	No	6.23	Si
SLU 78	ini.	41.74	686	1.2178	0	529	7930	5470	3105	8459	No	12.34	Si
SLU 78	fin.	-233.85	-1440	1.2169	0	529	7930	5466	3103	8459	No	5.88	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-1520.39	-1889	-0.0004721	0.0002807	0.0035	1.2178		5440.59	5440.59		3.58	Si
SLV 4	fin.	1741.89	1534	-0.0005574	0.0002807	0.0035	1.2169		5393.51	5393.51		3.1	Si
SLV 13	ini.	1550.39	2163	-0.000484	0.0002807	0.0035	1.2178		5432.34	5432.34		3.5	Si
SLV 13	fin.	-2044.27	-1568	-0.0006778	0.0002807	0.0035	1.2169		5401.76	5401.76		2.64	Si
SLD 15	ini.	701.54	973	-0.0001985	0.0002807	0.0035	1.2178		5432.34	5432.34		7.74	Si
SLD 15	fin.	-997.76	-821	-0.000291	0.0002807	0.0035	1.2169		5401.76	5401.76		5.41	Si
SLV 1	ini.	-1540.82	-1758	-0.0004797	0.0002807	0.0035	1.2178		5440.59	5440.59		3.53	Si
SLV 1	fin.	1764.17	1806	-0.0005661	0.0002807	0.0035	1.2169		5393.51	5393.51		3.06	Si
SLV 2	ini.	-1589.68	-1821	-0.0004979	0.0002807	0.0035	1.2178		5440.59	5440.59		3.42	Si
SLV 2	fin.	1826.93	1859	-0.0005908	0.0002807	0.0035	1.2169		5393.51	5393.51		2.95	Si
SLV 3	ini.	-1471.53	-1826	-0.0004541	0.0002807	0.0035	1.2178		5440.59	5440.59		3.7	Si
SLV 3	fin.	1679.14	1481	-0.0005332	0.0002807	0.0035	1.2169		5393.51	5393.51		3.21	Si
SLV 15	ini.	1619.69	2095	-0.00051	0.0002807	0.0035	1.2178		5432.34	5432.34		3.35	Si
SLV 15	fin.	-2129.3	-1893	-0.0007133	0.0002807	0.0035	1.2169		5401.76	5401.76		2.54	Si
SLD 16	ini.	680.55	946	-0.0001922	0.0002807	0.0035	1.2178		5432.34	5432.34		7.98	Si
SLD 16	fin.	-970.81	-799	-0.0002823	0.0002807	0.0035	1.2169		5401.76	5401.76		5.56	Si
SLV 14	ini.	1501.53	2100	-0.0004659	0.0002807	0.0035	1.2178		5432.34	5432.34		3.62	Si
SLV 14	fin.	-1981.51	-1514	-0.000652	0.0002807	0.0035	1.2169		5401.76	5401.76		2.73	Si
SLV 16	ini.	1570.83	2031	-0.0004916	0.0002807	0.0035	1.2178		5432.34	5432.34		3.46	Si
SLV 16	fin.	-2066.55	-1840	-0.000687	0.0002807	0.0035	1.2169		5401.76	5401.76		2.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	1501.53	-4892	1.2178	0	794	7930	8205	3105	8724		1.78	Si
SLV 14	fin.	-1981.51	-6043	1.2169	0	794	7930	8199	3103	8723		1.44	Si
SLV 1	ini.	-1540.82	5798	1.2178	0	794	7930	8205	3105	8724		1.5	Si
SLV 1	fin.	1764.17	4704	1.2169	0	794	7930	8199	3103	8723		1.85	Si
SLV 15	ini.	1619.69	-5300	1.2178	0	794	7930	8205	3105	8724		1.65	Si
SLV 15	fin.	-2129.3	-6513	1.2169	0	794	7930	8199	3103	8723		1.34	Si
SLV 4	ini.	-1520.39	5746	1.2178	0	794	7930	8205	3105	8724		1.52	Si
SLV 4	fin.	1741.89	4593	1.2169	0	794	7930	8199	3103	8723		1.9	Si
SLV 13	ini.	1550.39	-5070	1.2178	0	794	7930	8205	3105	8724		1.72	Si
SLV 13	fin.	-2044.27	-6223	1.2169	0	794	7930	8199	3103	8723		1.4	Si
SLD 16	ini.	680.55	-1998	1.2178	0	794	7930	8205	3105	8724		4.37	Si
SLD 16	fin.	-970.81	-3177	1.2169	0	794	7930	8199	3103	8723		2.75	Si
SLV 2	ini.	-1589.68	5976	1.2178	0	794	7930	8205	3105	8724		1.46	Si
SLV 2	fin.	1826.93	4884	1.2169	0	794	7930	8199	3103	8723		1.79	Si
SLV 3	ini.	-1471.53	5568	1.2178	0	794	7930	8205	3105	8724		1.57	Si
SLV 3	fin.	1679.14	4414	1.2169	0	794	7930	8199	3103	8723		1.98	Si
SLD 15	ini.	701.54	-2075	1.2178	0	794	7930	8205	3105	8724		4.21	Si
SLD 15	fin.	-997.76	-3254	1.2169	0	794	7930	8199	3103	8723		2.68	Si
SLV 16	ini.	1570.83	-5122	1.2178	0	794	7930	8205	3105	8724		1.7	Si
SLV 16	fin.	-2066.55	-6334	1.2169	0	794	7930	8199	3103	8723		1.38	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.537	SLV 15	Si
V_SLV	1.339	SLV 15	Si
PF_SLU	23.047	SLU 78	Si
V_SLU	5.875	SLU 78	Si

Trave di accoppiamento 178

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-21.593	-3.314	4.21	5.73	1.52	-22.493	-3.314	4.21	5.73	1.52	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-1222.05	-2938	-0.0002308	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.89	Si
SLU 80	fin.	1021.31	-2938	-0.0001893	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.23	Si
SLU 84	ini.	-1235.45	-2999	-0.0002336	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.81	Si
SLU 84	fin.	1025.6	-2999	-0.0001902	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.2	Si
SLU 75	ini.	-1230.17	-2921	-0.0002325	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.84	Si
SLU 75	fin.	1029.08	-2921	-0.0001909	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.17	Si
SLU 82	ini.	-1236.28	-2954	-0.0002338	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.81	Si
SLU 82	fin.	1026.23	-2954	-0.0001903	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.19	Si
SLU 83	ini.	-1247.63	-2994	-0.0002362	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.75	Si
SLU 83	fin.	1036.07	-2994	-0.0001923	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.11	Si
SLU 74	ini.	-1242.35	-2916	-0.0002351	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.77	Si
SLU 74	fin.	1039.55	-2916	-0.000193	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.09	Si
SLU 79	ini.	-1234.23	-2933	-0.0002333	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.82	Si
SLU 79	fin.	1031.77	-2933	-0.0001914	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.15	Si
SLU 81	ini.	-1248.46	-2949	-0.0002364	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.74	Si
SLU 81	fin.	1036.7	-2949	-0.0001924	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.11	Si
SLU 77	ini.	-1241.52	-2961	-0.0002349	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.78	Si
SLU 77	fin.	1038.92	-2961	-0.0001929	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.09	Si
SLU 78	ini.	-1229.34	-2966	-0.0002323	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.85	Si
SLU 78	fin.	1028.45	-2966	-0.0001908	0.0001872	0.0035	1.52		8406.65	8406.65	No	8.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1242.35	3046	1.52	0	617	7137	6372	3876	7753	No	2.55	Si
SLU 74	fin.	1039.55	2035	1.52	0	617	7137	6372	3876	7753	No	3.81	Si
SLU 75	ini.	-1230.17	3021	1.52	0	617	7137	6372	3876	7753	No	2.57	Si
SLU 75	fin.	1029.08	2009	1.52	0	617	7137	6372	3876	7753	No	3.86	Si
SLU 78	ini.	-1229.34	3020	1.52	0	617	7137	6372	3876	7753	No	2.57	Si
SLU 78	fin.	1028.45	2008	1.52	0	617	7137	6372	3876	7753	No	3.86	Si
SLU 82	ini.	-1236.28	3025	1.52	0	617	7137	6372	3876	7753	No	2.56	Si
SLU 82	fin.	1026.23	2013	1.52	0	617	7137	6372	3876	7753	No	3.85	Si
SLU 77	ini.	-1241.52	3045	1.52	0	617	7137	6372	3876	7753	No	2.55	Si
SLU 77	fin.	1038.92	2033	1.52	0	617	7137	6372	3876	7753	No	3.81	Si
SLU 79	ini.	-1234.23	3029	1.52	0	617	7137	6372	3876	7753	No	2.56	Si
SLU 79	fin.	1031.77	2017	1.52	0	617	7137	6372	3876	7753	No	3.84	Si
SLU 66	ini.	-1213.02	3004	1.52	0	617	7137	6372	3876	7753	No	2.58	Si
SLU 66	fin.	1031	1992	1.52	0	617	7137	6372	3876	7753	No	3.89	Si
SLU 84	ini.	-1235.45	3023	1.52	0	617	7137	6372	3876	7753	No	2.56	Si
SLU 84	fin.	1025.6	2011	1.52	0	617	7137	6372	3876	7753	No	3.85	Si
SLU 81	ini.	-1248.46	3050	1.52	0	617	7137	6372	3876	7753	No	2.54	Si
SLU 81	fin.	1036.7	2038	1.52	0	617	7137	6372	3876	7753	No	3.8	Si
SLU 83	ini.	-1247.63	3048	1.52	0	617	7137	6372	3876	7753	No	2.54	Si
SLU 83	fin.	1036.07	2037	1.52	0	617	7137	6372	3876	7753	No	3.81	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-3144.36	-1730	-0.0006676	0.0002807	0.0035	1.52		8370.95	8370.95		2.66	Si
SLD 13	fin.	3042.93	-1663	-0.0006418	0.0002807	0.0035	1.52		8360.94	8360.94		2.75	Si
SLV 2	ini.	4264.05	-1877	-0.0009885	0.0002807	0.0035	1.52		8360.94	8360.94		1.96	Si
SLV 2	fin.	-4570.19	-1974	-0.0010835	0.0002807	0.0035	1.52		8370.95	8370.95		1.83	Si
SLV 4	ini.	4298.76	-2661	-0.0009993	0.0002807	0.0035	1.52		8360.94	8360.94		1.94	Si
SLV 4	fin.	-4540.48	-2814	-0.001074	0.0002807	0.0035	1.52		8370.95	8370.95		1.84	Si
SLV 1	ini.	3556.18	-1875	-0.0007806	0.0002807	0.0035	1.52		8360.94	8360.94		2.35	Si
SLV 1	fin.	-3865.4	-1972	-0.0008677	0.0002807	0.0035	1.52		8370.95	8370.95		2.17	Si
SLV 3	ini.	3590.89	-2659	-0.0007904	0.0002807	0.0035	1.52		8360.94	8360.94		2.33	Si
SLV 3	fin.	-3835.7	-2812	-0.0008591	0.0002807	0.0035	1.52		8370.95	8370.95		2.18	Si
SLV 14	ini.	-5421.86	-1362	-0.0013781	0.0002807	0.0035	1.52		8370.95	8370.95		1.54	Si
SLV 14	fin.	5382.45	-1209	-0.0013656	0.0002807	0.0035	1.52		8360.94	8360.94		1.55	Si
SLV 13	ini.	-6129.73	-1360	-0.0016634	0.0002807	0.0035	1.52		8370.95	8370.95		1.37	Si
SLV 13	fin.	6087.23	-1207	-0.0016477	0.0002807	0.0035	1.52		8360.94	8360.94		1.37	Si
SLV 16	ini.	-5387.14	-2146	-0.0013652	0.0002807	0.0035	1.52		8370.95	8370.95		1.55	Si
SLV 16	fin.	5412.15	-2048	-0.0013767	0.0002807	0.0035	1.52		8360.94	8360.94		1.54	Si
SLV 15	ini.	-6095.01	-2144	-0.0016482	0.0002807	0.0035	1.52		8370.95	8370.95		1.37	Si
SLV 15	fin.	6116.94	-2047	-0.0016607	0.0002807	0.0035	1.52		8360.94	8360.94		1.37	Si
SLD 15	ini.	-3128.89	-2075	-0.0006635	0.0002807	0.0035	1.52		8370.95	8370.95		2.68	Si
SLD 15	fin.	3057.46	-2033	-0.0006456	0.0002807	0.0035	1.52		8360.94	8360.94		2.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-6095.01	14093	1.52	0	925	7137	9558	3876	8062		0.57	No
SLV 15	fin.	6116.94	13232	1.52	0	925	7137	9558	3876	8062		0.61	No
SLV 4	ini.	4298.76	-9618	1.52	0	925	7137	9558	3876	8062		0.84	No
SLV 4	fin.	-4540.48	-10339	1.52	0	925	7137	9558	3876	8062		0.78	No
SLV 2	ini.	4264.05	-9555	1.52	0	925	7137	9558	3876	8062		0.84	No
SLV 2	fin.	-4570.19	-10247	1.52	0	925	7137	9558	3876	8062		0.79	No
SLV 13	ini.	-6129.73	14155	1.52	0	925	7137	9558	3876	8062		0.57	No
SLV 13	fin.	6087.23	13324	1.52	0	925	7137	9558	3876	8062		0.61	No
SLD 13	ini.	-3144.36	7347	1.52	0	925	7137	9558	3876	8062		1.1	Si
SLD 13	fin.	3042.93	6547	1.52	0	925	7137	9558	3876	8062		1.23	Si
SLV 16	ini.	-5387.14	12523	1.52	0	925	7137	9558	3876	8062		0.64	No
SLV 16	fin.	5412.15	11662	1.52	0	925	7137	9558	3876	8062		0.69	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	3556.18	-7986	1.52	0	925	7137	9558	3876	8062		1.01	Si
SLV 1	fin.	-3865.4	-8678	1.52	0	925	7137	9558	3876	8062		0.93	No
SLV 3	ini.	3590.89	-8049	1.52	0	925	7137	9558	3876	8062		1	Si
SLV 3	fin.	-3835.7	-8770	1.52	0	925	7137	9558	3876	8062		0.92	No
SLV 14	ini.	-5421.86	12586	1.52	0	925	7137	9558	3876	8062		0.64	No
SLV 14	fin.	5382.45	11754	1.52	0	925	7137	9558	3876	8062		0.69	No
SLD 15	ini.	-3128.89	7317	1.52	0	925	7137	9558	3876	8062		1.1	Si
SLD 15	fin.	3057.46	6508	1.52	0	925	7137	9558	3876	8062		1.24	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.366	SLV 13	Si
V_SLV	0.57	SLV 13	No
PF_SLU	6.741	SLU 81	Si
V_SLU	2.542	SLU 81	Si

Trave di accoppiamento 182

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.363	-3.314	4.21	5.73	1.52	-18.263	-3.314	4.21	5.73	1.52	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	702.38	-1452	-0.0001266	0.0001872	0.0035	1.52		8406.65	8406.65	No	11.97	Si
SLU 83	fin.	-307.73	-1452	-0.0000538	0.0001872	0.0035	1.52		8416.46	8416.46	No	27.35	Si
SLU 84	ini.	711.99	-1456	-0.0001284	0.0001872	0.0035	1.52		8406.65	8406.65	No	11.81	Si
SLU 84	fin.	-318.82	-1456	-0.0000557	0.0001872	0.0035	1.52		8416.46	8416.46	No	26.4	Si
SLU 60	ini.	661.61	-1269	-0.0001189	0.0001872	0.0035	1.52		8406.65	8406.65	No	12.71	Si
SLU 60	fin.	-344.72	-1269	-0.0000604	0.0001872	0.0035	1.52		8416.46	8416.46	No	24.42	Si
SLU 81	ini.	698.73	-1432	-0.0001259	0.0001872	0.0035	1.52		8406.65	8406.65	No	12.03	Si
SLU 81	fin.	-317.68	-1432	-0.0000555	0.0001872	0.0035	1.52		8416.46	8416.46	No	26.49	Si
SLU 63	ini.	674.87	-1293	-0.0001214	0.0001872	0.0035	1.52		8406.65	8406.65	No	12.46	Si
SLU 63	fin.	-345.85	-1293	-0.0000606	0.0001872	0.0035	1.52		8416.46	8416.46	No	24.34	Si
SLU 75	ini.	650.49	-1386	-0.0001168	0.0001872	0.0035	1.52		8406.65	8406.65	No	12.92	Si
SLU 75	fin.	-257.7	-1386	-0.0000449	0.0001872	0.0035	1.52		8416.46	8416.46	No	32.66	Si
SLU 78	ini.	654.14	-1405	-0.0001174	0.0001872	0.0035	1.52		8406.65	8406.65	No	12.85	Si
SLU 78	fin.	-247.75	-1405	-0.0000431	0.0001872	0.0035	1.52		8416.46	8416.46	No	33.97	Si
SLU 61	ini.	671.22	-1274	-0.0001207	0.0001872	0.0035	1.52		8406.65	8406.65	No	12.52	Si
SLU 61	fin.	-355.8	-1274	-0.0000624	0.0001872	0.0035	1.52		8416.46	8416.46	No	23.65	Si
SLU 82	ini.	708.34	-1437	-0.0001277	0.0001872	0.0035	1.52		8406.65	8406.65	No	11.87	Si
SLU 82	fin.	-328.77	-1437	-0.0000575	0.0001872	0.0035	1.52		8416.46	8416.46	No	25.6	Si
SLU 62	ini.	665.26	-1289	-0.0001195	0.0001872	0.0035	1.52		8406.65	8406.65	No	12.64	Si
SLU 62	fin.	-334.77	-1289	-0.0000586	0.0001872	0.0035	1.52		8416.46	8416.46	No	25.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	698.73	-657	1.52	0	617	7137	6372	3876	7753	No	11.81	Si
SLU 81	fin.	-317.68	-1551	1.52	0	617	7137	6372	3876	7753	No	5	Si
SLU 60	ini.	661.61	-650	1.52	0	617	7137	6372	3876	7753	No	11.92	Si
SLU 60	fin.	-344.72	-1535	1.52	0	617	7137	6372	3876	7753	No	5.05	Si
SLU 76	ini.	647.78	-538	1.52	0	617	7137	6372	3876	7753	No	14.41	Si
SLU 76	fin.	-261.91	-1433	1.52	0	617	7137	6372	3876	7753	No	5.41	Si
SLU 83	ini.	702.38	-650	1.52	0	617	7137	6372	3876	7753	No	11.93	Si
SLU 83	fin.	-307.73	-1544	1.52	0	617	7137	6372	3876	7753	No	5.02	Si
SLU 73	ini.	644.13	-545	1.52	0	617	7137	6372	3876	7753	No	14.22	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 73	fin.	-271.86	-1440	1.52	0	617	7137	6372	3876	7753	No	5.38	Si
SLU 61	ini.	671.22	-673	1.52	0	617	7137	6372	3876	7753	No	11.51	Si
SLU 61	fin.	-355.8	-1558	1.52	0	617	7137	6372	3876	7753	No	4.98	Si
SLU 82	ini.	708.34	-680	1.52	0	617	7137	6372	3876	7753	No	11.41	Si
SLU 82	fin.	-328.77	-1574	1.52	0	617	7137	6372	3876	7753	No	4.92	Si
SLU 63	ini.	674.87	-666	1.52	0	617	7137	6372	3876	7753	No	11.63	Si
SLU 63	fin.	-345.85	-1551	1.52	0	617	7137	6372	3876	7753	No	5	Si
SLU 62	ini.	665.26	-643	1.52	0	617	7137	6372	3876	7753	No	12.05	Si
SLU 62	fin.	-334.77	-1528	1.52	0	617	7137	6372	3876	7753	No	5.08	Si
SLU 84	ini.	711.99	-673	1.52	0	617	7137	6372	3876	7753	No	11.53	Si
SLU 84	fin.	-318.82	-1567	1.52	0	617	7137	6372	3876	7753	No	4.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-4297.65	-378	-0.0009975	0.0002807	0.0035	1.52		8370.95	8370.95		1.95	Si
SLV 14	fin.	5410.48	-546	-0.001376	0.0002807	0.0035	1.52		8360.94	8360.94		1.55	Si
SLV 2	ini.	5590.08	-555	-0.0014442	0.0002807	0.0035	1.52		8360.94	8360.94		1.5	Si
SLV 2	fin.	-5734.55	-677	-0.0014985	0.0002807	0.0035	1.52		8370.95	8370.95		1.46	Si
SLV 3	ini.	5088.3	-1417	-0.0012595	0.0002807	0.0035	1.52		8360.94	8360.94		1.64	Si
SLV 3	fin.	-5667.1	-1249	-0.0014719	0.0002807	0.0035	1.52		8370.95	8370.95		1.48	Si
SLD 4	ini.	2617.22	-1116	-0.0005337	0.0002807	0.0035	1.52		8360.94	8360.94		3.19	Si
SLD 4	fin.	-2727.85	-1049	-0.0005604	0.0002807	0.0035	1.52		8370.95	8370.95		3.07	Si
SLV 13	ini.	-4792.5	-374	-0.0011564	0.0002807	0.0035	1.52		8370.95	8370.95		1.75	Si
SLV 13	fin.	5954.4	-542	-0.0015909	0.0002807	0.0035	1.52		8360.94	8360.94		1.4	Si
SLV 8	ini.	2028.16	-2369	-0.0003945	0.0002807	0.0035	1.52		8360.94	8360.94		4.12	Si
SLV 8	fin.	-2771.4	-1879	-0.0005714	0.0002807	0.0035	1.52		8370.95	8370.95		3.02	Si
SLV 15	ini.	-4799.43	-1240	-0.0011587	0.0002807	0.0035	1.52		8370.95	8370.95		1.74	Si
SLV 15	fin.	5477.93	-1118	-0.0014014	0.0002807	0.0035	1.52		8360.94	8360.94		1.53	Si
SLV 4	ini.	5583.15	-1421	-0.0014416	0.0002807	0.0035	1.52		8360.94	8360.94		1.5	Si
SLV 4	fin.	-6211.03	-1253	-0.0016994	0.0002807	0.0035	1.52		8370.95	8370.95		1.35	Si
SLV 1	ini.	5095.22	-551	-0.0012619	0.0002807	0.0035	1.52		8360.94	8360.94		1.64	Si
SLV 1	fin.	-5190.62	-673	-0.0012938	0.0002807	0.0035	1.52		8370.95	8370.95		1.61	Si
SLV 16	ini.	-4304.57	-1244	-0.0009996	0.0002807	0.0035	1.52		8370.95	8370.95		1.94	Si
SLV 16	fin.	4934	-1122	-0.001206	0.0002807	0.0035	1.52		8360.94	8360.94		1.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-4799.43	11698	1.52	0	925	7137	9558	3876	8062		0.69	No
SLV 15	fin.	5477.93	10791	1.52	0	925	7137	9558	3876	8062		0.75	No
SLV 8	ini.	2028.16	-5534	1.52	0	925	7137	9558	3876	8062		1.46	Si
SLV 8	fin.	-2771.4	-6957	1.52	0	925	7137	9558	3876	8062		1.16	Si
SLD 4	ini.	2617.22	-5674	1.52	0	925	7137	9558	3876	8062		1.42	Si
SLD 4	fin.	-2727.85	-6460	1.52	0	925	7137	9558	3876	8062		1.25	Si
SLV 14	ini.	-4297.65	11390	1.52	0	925	7137	9558	3876	8062		0.71	No
SLV 14	fin.	5410.48	10925	1.52	0	925	7137	9558	3876	8062		0.74	No
SLV 1	ini.	5095.22	-10983	1.52	0	925	7137	9558	3876	8062		0.73	No
SLV 1	fin.	-5190.62	-11447	1.52	0	925	7137	9558	3876	8062		0.7	No
SLV 4	ini.	5583.15	-12983	1.52	0	925	7137	9558	3876	8062		0.62	No
SLV 4	fin.	-6211.03	-13890	1.52	0	925	7137	9558	3876	8062		0.58	No
SLV 13	ini.	-4792.5	12544	1.52	0	925	7137	9558	3876	8062		0.64	No
SLV 13	fin.	5954.4	12079	1.52	0	925	7137	9558	3876	8062		0.67	No
SLV 3	ini.	5088.3	-11829	1.52	0	925	7137	9558	3876	8062		0.68	No
SLV 3	fin.	-5667.1	-12735	1.52	0	925	7137	9558	3876	8062		0.63	No
SLV 2	ini.	5590.08	-12137	1.52	0	925	7137	9558	3876	8062		0.66	No
SLV 2	fin.	-5734.55	-12601	1.52	0	925	7137	9558	3876	8062		0.64	No
SLV 16	ini.	-4304.57	10544	1.52	0	925	7137	9558	3876	8062		0.76	No
SLV 16	fin.	4934	9637	1.52	0	925	7137	9558	3876	8062		0.84	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.348	SLV 4	Si
V_SLV	0.58	SLV 4	No
PF_SLU	11.807	SLU 84	Si
V_SLU	4.925	SLU 82	Si

Trave di accoppiamento 186

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	2.92	4.07	1.15	-11.933	-4.824	2.92	4.07	1.15	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	784.5	-435	-0.0002626	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.13	Si
SLU 78	fin.	-294.36	-435	-0.000091	0.0001872	0.0035	1.15		4818.72	4818.72	No	16.37	Si
SLU 79	ini.	778.39	-430	-0.0002603	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.18	Si
SLU 79	fin.	-292.89	-430	-0.0000906	0.0001872	0.0035	1.15		4818.72	4818.72	No	16.45	Si
SLU 83	ini.	803.24	-455	-0.0002698	0.0001872	0.0035	1.15		4811.48	4811.48	No	5.99	Si
SLU 83	fin.	-309.82	-455	-0.000096	0.0001872	0.0035	1.15		4818.72	4818.72	No	15.55	Si
SLU 82	ini.	788.21	-448	-0.000264	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.1	Si
SLU 82	fin.	-300.3	-448	-0.0000929	0.0001872	0.0035	1.15		4818.72	4818.72	No	16.05	Si
SLU 77	ini.	790.53	-437	-0.0002649	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.09	Si
SLU 77	fin.	-301.83	-437	-0.0000934	0.0001872	0.0035	1.15		4818.72	4818.72	No	15.97	Si
SLU 84	ini.	797.21	-454	-0.0002675	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.04	Si
SLU 84	fin.	-302.36	-454	-0.0000936	0.0001872	0.0035	1.15		4818.72	4818.72	No	15.94	Si
SLU 75	ini.	775.5	-429	-0.0002592	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.2	Si
SLU 75	fin.	-292.3	-429	-0.0000904	0.0001872	0.0035	1.15		4818.72	4818.72	No	16.49	Si
SLU 74	ini.	781.54	-431	-0.0002615	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.16	Si
SLU 74	fin.	-299.77	-431	-0.0000928	0.0001872	0.0035	1.15		4818.72	4818.72	No	16.07	Si
SLU 80	ini.	772.36	-428	-0.000258	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.23	Si
SLU 80	fin.	-285.43	-428	-0.0000882	0.0001872	0.0035	1.15		4818.72	4818.72	No	16.88	Si
SLU 81	ini.	794.25	-450	-0.0002664	0.0001872	0.0035	1.15		4811.48	4811.48	No	6.06	Si
SLU 81	fin.	-307.76	-450	-0.0000954	0.0001872	0.0035	1.15		4818.72	4818.72	No	15.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	778.39	-562	1.15	0	500	7930	5165	2933	8098	No	14.41	Si
SLU 79	fin.	-292.89	-1586	1.15	0	500	7930	5165	2933	8098	No	5.11	Si
SLU 83	ini.	803.24	-604	1.15	0	500	7930	5165	2933	8098	No	13.41	Si
SLU 83	fin.	-309.82	-1627	1.15	0	500	7930	5165	2933	8098	No	4.98	Si
SLU 74	ini.	781.54	-572	1.15	0	500	7930	5165	2933	8098	No	14.16	Si
SLU 74	fin.	-299.77	-1596	1.15	0	500	7930	5165	2933	8098	No	5.07	Si
SLU 81	ini.	794.25	-593	1.15	0	500	7930	5165	2933	8098	No	13.66	Si
SLU 81	fin.	-307.76	-1616	1.15	0	500	7930	5165	2933	8098	No	5.01	Si
SLU 80	ini.	772.36	-549	1.15	0	500	7930	5165	2933	8098	No	14.76	Si
SLU 80	fin.	-285.43	-1572	1.15	0	500	7930	5165	2933	8098	No	5.15	Si
SLU 75	ini.	775.5	-559	1.15	0	500	7930	5165	2933	8098	No	14.5	Si
SLU 75	fin.	-292.3	-1582	1.15	0	500	7930	5165	2933	8098	No	5.12	Si
SLU 77	ini.	790.53	-583	1.15	0	500	7930	5165	2933	8098	No	13.89	Si
SLU 77	fin.	-301.83	-1607	1.15	0	500	7930	5165	2933	8098	No	5.04	Si
SLU 78	ini.	784.5	-570	1.15	0	500	7930	5165	2933	8098	No	14.22	Si
SLU 78	fin.	-294.36	-1593	1.15	0	500	7930	5165	2933	8098	No	5.08	Si
SLU 82	ini.	788.21	-579	1.15	0	500	7930	5165	2933	8098	No	13.98	Si
SLU 82	fin.	-300.3	-1603	1.15	0	500	7930	5165	2933	8098	No	5.05	Si
SLU 84	ini.	797.21	-590	1.15	0	500	7930	5165	2933	8098	No	13.72	Si
SLU 84	fin.	-302.36	-1614	1.15	0	500	7930	5165	2933	8098	No	5.02	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	6303.67	-957	-0.0050299	0.0002807	0.0035	1.15		4849.69	4849.69		0.77	No
SLV 13	fin.	-6856.43	-984	-0.0056362	0.0002807	0.0035	1.15		4857.47	4857.47		0.71	No
SLV 3	ini.	-4822.74	372	-0.0031122	0.0002807	0.0035	1.15		4857.47	4857.47		1.01	Si
SLV 3	fin.	5993.84	399	-0.0046703	0.0002807	0.0035	1.15		4849.69	4849.69		0.81	No
SLV 15	ini.	6571.69	-660	-0.0053323	0.0002807	0.0035	1.15		4849.69	4849.69		0.74	No
SLV 15	fin.	-7015.65	-838	-0.0058094	0.0002807	0.0035	1.15		4857.47	4857.47		0.69	No
SLD 15	ini.	3113.62	-440	-0.0013837	0.0002807	0.0035	1.15		4849.69	4849.69		1.56	Si
SLD 15	fin.	-3108.41	-517	-0.0013774	0.0002807	0.0035	1.15		4857.47	4857.47		1.56	Si
SLV 14	ini.	5879.14	-928	-0.0045339	0.0002807	0.0035	1.15		4849.69	4849.69		0.82	No
SLV 14	fin.	-6372.41	-955	-0.0050978	0.0002807	0.0035	1.15		4857.47	4857.47		0.76	No
SLV 1	ini.	-5090.76	75	-0.0035071	0.0002807	0.0035	1.15		4857.47	4857.47		0.95	No
SLV 1	fin.	6153.06	253	-0.0048566	0.0002807	0.0035	1.15		4849.69	4849.69		0.79	No
SLV 16	ini.	6147.16	-631	-0.0048497	0.0002807	0.0035	1.15		4849.69	4849.69		0.79	No
SLV 16	fin.	-6531.63	-809	-0.0052771	0.0002807	0.0035	1.15		4857.47	4857.47		0.74	No
SLD 13	ini.	2995.88	-569	-0.0013083	0.0002807	0.0035	1.15		4849.69	4849.69		1.62	Si
SLD 13	fin.	-3039.16	-580	-0.0013329	0.0002807	0.0035	1.15		4857.47	4857.47		1.6	Si
SLV 2	ini.	-5515.29	105	-0.0040756	0.0002807	0.0035	1.15		4857.47	4857.47		0.88	No
SLV 2	fin.	6637.08	283	-0.0054051	0.0002807	0.0035	1.15		4849.69	4849.69		0.73	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-5247.27	402	-0.0037242	0.0002807	0.0035	1.15		4857.47	4857.47		0.93	No
SLV 4	fin.	6477.86	429	-0.0052272	0.0002807	0.0035	1.15		4849.69	4849.69		0.75	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	5879.14	-11768	1.15	0	750	7930	7748	2933	8680		0.74	No
SLV 14	fin.	-6372.41	-12454	1.15	0	750	7930	7748	2933	8680		0.7	No
SLV 1	ini.	-5090.76	11384	1.15	0	750	7930	7748	2933	8680		0.76	No
SLV 1	fin.	6153.06	10536	1.15	0	750	7930	7748	2933	8680		0.82	No
SLV 2	ini.	-5515.29	12293	1.15	0	750	7930	7748	2933	8680		0.71	No
SLV 2	fin.	6637.08	11445	1.15	0	750	7930	7748	2933	8680		0.76	No
SLV 3	ini.	-4822.74	11115	1.15	0	750	7930	7748	2933	8680		0.78	No
SLV 3	fin.	5993.84	10229	1.15	0	750	7930	7748	2933	8680		0.85	No
SLV 4	ini.	-5247.27	12023	1.15	0	750	7930	7748	2933	8680		0.72	No
SLV 4	fin.	6477.86	11138	1.15	0	750	7930	7748	2933	8680		0.78	No
SLD 13	ini.	2995.88	-5604	1.15	0	750	7930	7748	2933	8680		1.55	Si
SLD 13	fin.	-3039.16	-6347	1.15	0	750	7930	7748	2933	8680		1.37	Si
SLV 15	ini.	6571.69	-12946	1.15	0	750	7930	7748	2933	8680		0.67	No
SLV 15	fin.	-7015.65	-13669	1.15	0	750	7930	7748	2933	8680		0.63	No
SLD 15	ini.	3113.62	-5725	1.15	0	750	7930	7748	2933	8680		1.52	Si
SLD 15	fin.	-3108.41	-6484	1.15	0	750	7930	7748	2933	8680		1.34	Si
SLV 13	ini.	6303.67	-12677	1.15	0	750	7930	7748	2933	8680		0.68	No
SLV 13	fin.	-6856.43	-13363	1.15	0	750	7930	7748	2933	8680		0.65	No
SLV 16	ini.	6147.16	-12038	1.15	0	750	7930	7748	2933	8680		0.72	No
SLV 16	fin.	-6531.63	-12761	1.15	0	750	7930	7748	2933	8680		0.68	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.692	SLV 15	No
V_SLV	0.635	SLV 15	No
PF_SLU	5.99	SLU 83	Si
V_SLU	4.976	SLU 83	Si

Trave di accoppiamento 187

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	6.07	7.52	1.45	-11.933	-4.824	6.07	7.52	1.45	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1059.74	-1074	-0.000219	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.12	Si
SLU 83	fin.	-146.46	-1214	-0.0000278	0.0001872	0.0035	1.45		7555.42	7555.42	No	51.59	Si
SLU 80	ini.	1018.08	-1052	-0.0002094	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.41	Si
SLU 80	fin.	-123.78	-1188	-0.0000235	0.0001872	0.0035	1.45		7555.42	7555.42	No	61.04	Si
SLU 77	ini.	1035.12	-1049	-0.0002133	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.29	Si
SLU 77	fin.	-145.96	-1186	-0.0000277	0.0001872	0.0035	1.45		7555.42	7555.42	No	51.76	Si
SLU 75	ini.	1019.61	-1039	-0.0002098	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.4	Si
SLU 75	fin.	-138.34	-1174	-0.0000263	0.0001872	0.0035	1.45		7555.42	7555.42	No	54.61	Si
SLU 78	ini.	1030	-1054	-0.0002121	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.33	Si
SLU 78	fin.	-137.25	-1191	-0.0000261	0.0001872	0.0035	1.45		7555.42	7555.42	No	55.05	Si
SLU 84	ini.	1054.62	-1079	-0.0002178	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.16	Si
SLU 84	fin.	-137.75	-1219	-0.0000262	0.0001872	0.0035	1.45		7555.42	7555.42	No	54.85	Si
SLU 74	ini.	1024.73	-1034	-0.0002109	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.36	Si
SLU 74	fin.	-147.05	-1169	-0.000028	0.0001872	0.0035	1.45		7555.42	7555.42	No	51.38	Si
SLU 81	ini.	1049.35	-1059	-0.0002166	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.19	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	-147.55	-1197	-0.0000281	0.0001872	0.0035	1.45		7555.42	7555.42	No	51.21	Si
SLU 79	ini.	1023.2	-1048	-0.0002106	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.37	Si
SLU 79	fin.	-132.49	-1183	-0.0000252	0.0001872	0.0035	1.45		7555.42	7555.42	No	57.03	Si
SLU 82	ini.	1044.23	-1064	-0.0002154	0.0001872	0.0035	1.45		7546.08	7546.08	No	7.23	Si
SLU 82	fin.	-138.84	-1202	-0.0000264	0.0001872	0.0035	1.45		7555.42	7555.42	No	54.42	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	1049.35	-292	1.45	0	630	7930	6513	3698	8560	No	29.31	Si
SLU 81	fin.	-147.55	-1793	1.45	0	630	7930	6513	3698	8560	No	4.77	Si
SLU 80	ini.	1018.08	-235	1.45	0	630	7930	6513	3698	8560	No	36.36	Si
SLU 80	fin.	-123.78	-1736	1.45	0	630	7930	6513	3698	8560	No	4.93	Si
SLU 83	ini.	1059.74	-293	1.45	0	630	7930	6513	3698	8560	No	29.25	Si
SLU 83	fin.	-146.46	-1804	1.45	0	630	7930	6513	3698	8560	No	4.75	Si
SLU 77	ini.	1035.12	-270	1.45	0	630	7930	6513	3698	8560	No	31.68	Si
SLU 77	fin.	-145.96	-1776	1.45	0	630	7930	6513	3698	8560	No	4.82	Si
SLU 74	ini.	1024.73	-270	1.45	0	630	7930	6513	3698	8560	No	31.75	Si
SLU 74	fin.	-147.05	-1766	1.45	0	630	7930	6513	3698	8560	No	4.85	Si
SLU 78	ini.	1030	-255	1.45	0	630	7930	6513	3698	8560	No	33.51	Si
SLU 78	fin.	-137.25	-1763	1.45	0	630	7930	6513	3698	8560	No	4.86	Si
SLU 75	ini.	1019.61	-255	1.45	0	630	7930	6513	3698	8560	No	33.59	Si
SLU 75	fin.	-138.34	-1752	1.45	0	630	7930	6513	3698	8560	No	4.89	Si
SLU 84	ini.	1054.62	-278	1.45	0	630	7930	6513	3698	8560	No	30.81	Si
SLU 84	fin.	-137.75	-1790	1.45	0	630	7930	6513	3698	8560	No	4.78	Si
SLU 82	ini.	1044.23	-277	1.45	0	630	7930	6513	3698	8560	No	30.88	Si
SLU 82	fin.	-138.84	-1779	1.45	0	630	7930	6513	3698	8560	No	4.81	Si
SLU 79	ini.	1023.2	-250	1.45	0	630	7930	6513	3698	8560	No	34.21	Si
SLU 79	fin.	-132.49	-1750	1.45	0	630	7930	6513	3698	8560	No	4.89	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	5875.28	-196	-0.0018177	0.0002807	0.0035	1.45		7650.82	7650.82		1.3	Si
SLV 16	fin.	-5759.12	-897	-0.0017538	0.0002807	0.0035	1.45		7660.66	7660.66		1.33	Si
SLV 1	ini.	-4491.12	-1229	-0.001205	0.0002807	0.0035	1.45		7660.66	7660.66		1.71	Si
SLV 1	fin.	5595.04	-708	-0.0016753	0.0002807	0.0035	1.45		7650.82	7650.82		1.37	Si
SLV 2	ini.	-4968.08	-1282	-0.0013926	0.0002807	0.0035	1.45		7660.66	7660.66		1.54	Si
SLV 2	fin.	6124.85	-726	-0.0019562	0.0002807	0.0035	1.45		7650.82	7650.82		1.25	Si
SLV 15	ini.	6352.24	-143	-0.0020934	0.0002807	0.0035	1.45		7650.82	7650.82		1.2	Si
SLV 15	fin.	-6288.93	-879	-0.0020498	0.0002807	0.0035	1.45		7660.66	7660.66		1.22	Si
SLV 4	ini.	-4695.72	-1614	-0.0012833	0.0002807	0.0035	1.45		7660.66	7660.66		1.63	Si
SLV 4	fin.	6051.6	-1242	-0.0019143	0.0002807	0.0035	1.45		7650.82	7650.82		1.26	Si
SLV 14	ini.	5602.92	135	-0.0016791	0.0002807	0.0035	1.45		7650.82	7650.82		1.37	Si
SLV 14	fin.	-5685.87	-381	-0.0017168	0.0002807	0.0035	1.45		7660.66	7660.66		1.35	Si
SLD 13	ini.	2994.28	-324	-0.0007078	0.0002807	0.0035	1.45		7650.82	7650.82		2.56	Si
SLD 13	fin.	-2703.52	-612	-0.0006224	0.0002807	0.0035	1.45		7660.66	7660.66		2.83	Si
SLV 3	ini.	-4218.76	-1561	-0.0011052	0.0002807	0.0035	1.45		7660.66	7660.66		1.82	Si
SLV 3	fin.	5521.79	-1224	-0.0016401	0.0002807	0.0035	1.45		7650.82	7650.82		1.39	Si
SLD 15	ini.	3113.06	-472	-0.0007434	0.0002807	0.0035	1.45		7650.82	7650.82		2.46	Si
SLD 15	fin.	-2736.55	-839	-0.0006318	0.0002807	0.0035	1.45		7660.66	7660.66		2.8	Si
SLV 13	ini.	6079.89	189	-0.0019304	0.0002807	0.0035	1.45		7650.82	7650.82		1.26	Si
SLV 13	fin.	-6215.68	-363	-0.0020055	0.0002807	0.0035	1.45		7660.66	7660.66		1.23	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 15	ini.	3113.06	-4903	1.45	0	946	7930	9769	3698	8875		1.81	Si
SLD 15	fin.	-2736.55	-6407	1.45	0	946	7930	9769	3698	8875		1.39	Si
SLV 2	ini.	-4968.08	11065	1.45	0	946	7930	9769	3698	8875		0.8	No
SLV 2	fin.	6124.85	10900	1.45	0	946	7930	9769	3698	8875		0.81	No
SLV 16	ini.	5875.28	-10348	1.45	0	946	7930	9769	3698	8875		0.86	No
SLV 16	fin.	-5759.12	-12317	1.45	0	946	7930	9769	3698	8875		0.72	No
SLD 13	ini.	2994.28	-4859	1.45	0	946	7930	9769	3698	8875		1.83	Si
SLD 13	fin.	-2703.52	-6276	1.45	0	946	7930	9769	3698	8875		1.41	Si
SLV 1	ini.	-4491.12	10108	1.45	0	946	7930	9769	3698	8875		0.88	No
SLV 1	fin.	5595.04	9873	1.45	0	946	7930	9769	3698	8875		0.9	No
SLV 13	ini.	6079.89	-11206	1.45	0	946	7930	9769	3698	8875		0.79	No
SLV 13	fin.	-6215.68	-13050	1.45	0	946	7930	9769	3698	8875		0.68	No
SLV 4	ini.	-4695.72	10966	1.45	0	946	7930	9769	3698	8875		0.81	No
SLV 4	fin.	6051.6	10606	1.45	0	946	7930	9769	3698	8875		0.84	No
SLV 3	ini.	-4218.76	10009	1.45	0	946	7930	9769	3698	8875		0.89	No
SLV 3	fin.	5521.79	9579	1.45	0	946	7930	9769	3698	8875		0.93	No
SLV 14	ini.	5602.92	-10249	1.45	0	946	7930	9769	3698	8875		0.87	No
SLV 14	fin.	-5685.87	-12023	1.45	0	946	7930	9769	3698	8875		0.74	No
SLV 15	ini.	6352.24	-11306	1.45	0	946	7930	9769	3698	8875		0.79	No
SLV 15	fin.	-6288.93	-13344	1.45	0	946	7930	9769	3698	8875		0.67	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.204	SLV 15	Si
V_SLV	0.665	SLV 15	No
PF_SLU	7.121	SLU 83	Si
V_SLU	4.746	SLU 83	Si

Trave di accoppiamento 188

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.933	-4.824	9.52	11.04	1.52	-11.933	-4.824	9.52	11.04	1.52	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	716.49	-1030	-0.0001293	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.58	Si
SLU 75	fin.	-339.29	-1030	-0.0000594	0.0001872	0.0035	1.52		8306.86	8306.86	No	24.48	Si
SLU 84	ini.	734.94	-1079	-0.0001328	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.29	Si
SLU 84	fin.	-346.58	-1079	-0.0000607	0.0001872	0.0035	1.52		8306.86	8306.86	No	23.97	Si
SLU 83	ini.	736.57	-1075	-0.0001331	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.26	Si
SLU 83	fin.	-346.67	-1075	-0.0000607	0.0001872	0.0035	1.52		8306.86	8306.86	No	23.96	Si
SLU 79	ini.	713.99	-1041	-0.0001288	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.62	Si
SLU 79	fin.	-302.68	-1041	-0.0000529	0.0001872	0.0035	1.52		8306.86	8306.86	No	27.44	Si
SLU 81	ini.	730.6	-1060	-0.000132	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.36	Si
SLU 81	fin.	-353.77	-1060	-0.000062	0.0001872	0.0035	1.52		8306.86	8306.86	No	23.48	Si
SLU 82	ini.	728.97	-1064	-0.0001317	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.38	Si
SLU 82	fin.	-353.68	-1064	-0.000062	0.0001872	0.0035	1.52		8306.86	8306.86	No	23.49	Si
SLU 77	ini.	724.08	-1042	-0.0001307	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.46	Si
SLU 77	fin.	-332.28	-1042	-0.0000582	0.0001872	0.0035	1.52		8306.86	8306.86	No	25	Si
SLU 74	ini.	718.11	-1026	-0.0001296	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.55	Si
SLU 74	fin.	-339.38	-1026	-0.0000594	0.0001872	0.0035	1.52		8306.86	8306.86	No	24.48	Si
SLU 80	ini.	712.37	-1045	-0.0001285	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.65	Si
SLU 80	fin.	-302.6	-1045	-0.0000528	0.0001872	0.0035	1.52		8306.86	8306.86	No	27.45	Si
SLU 78	ini.	722.46	-1046	-0.0001304	0.0001872	0.0035	1.52		8297.04	8297.04	No	11.48	Si
SLU 78	fin.	-332.19	-1046	-0.0000581	0.0001872	0.0035	1.52		8306.86	8306.86	No	25.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 74	ini.	718.11	-418	1.52	0	661	7930	6827	3876	8590	No	20.56	Si
SLU 74	fin.	-339.38	-1606	1.52	0	661	7930	6827	3876	8590	No	5.35	Si
SLU 75	ini.	716.49	-416	1.52	0	661	7930	6827	3876	8590	No	20.64	Si
SLU 75	fin.	-339.29	-1604	1.52	0	661	7930	6827	3876	8590	No	5.36	Si
SLU 81	ini.	730.6	-445	1.52	0	661	7930	6827	3876	8590	No	19.31	Si
SLU 81	fin.	-353.77	-1632	1.52	0	661	7930	6827	3876	8590	No	5.26	Si
SLU 82	ini.	728.97	-443	1.52	0	661	7930	6827	3876	8590	No	19.39	Si
SLU 82	fin.	-353.68	-1631	1.52	0	661	7930	6827	3876	8590	No	5.27	Si
SLU 84	ini.	734.94	-442	1.52	0	661	7930	6827	3876	8590	No	19.44	Si
SLU 84	fin.	-346.58	-1630	1.52	0	661	7930	6827	3876	8590	No	5.27	Si
SLU 83	ini.	736.57	-444	1.52	0	661	7930	6827	3876	8590	No	19.36	Si
SLU 83	fin.	-346.67	-1631	1.52	0	661	7930	6827	3876	8590	No	5.27	Si
SLU 77	ini.	724.08	-417	1.52	0	661	7930	6827	3876	8590	No	20.61	Si
SLU 77	fin.	-332.28	-1604	1.52	0	661	7930	6827	3876	8590	No	5.35	Si
SLU 79	ini.	713.99	-377	1.52	0	661	7930	6827	3876	8590	No	22.78	Si
SLU 79	fin.	-302.68	-1565	1.52	0	661	7930	6827	3876	8590	No	5.49	Si
SLU 73	ini.	699.35	-377	1.52	0	661	7930	6827	3876	8590	No	22.82	Si
SLU 73	fin.	-316.73	-1564	1.52	0	661	7930	6827	3876	8590	No	5.49	Si
SLU 78	ini.	722.46	-415	1.52	0	661	7930	6827	3876	8590	No	20.7	Si
SLU 78	fin.	-332.19	-1603	1.52	0	661	7930	6827	3876	8590	No	5.36	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	5389.37	321	-0.0013682	0.0002807	0.0035	1.52		8347.35	8347.35		1.55	Si
SLV 14	fin.	-5639.33	121	-0.001461	0.0002807	0.0035	1.52		8357.44	8357.44		1.48	Si
SLV 4	ini.	-4728.51	-1760	-0.0011352	0.0002807	0.0035	1.52		8357.44	8357.44		1.77	Si
SLV 4	fin.	5644.58	-1560	-0.0014654	0.0002807	0.0035	1.52		8347.35	8347.35		1.48	Si
SLV 11	ini.	2280.16	-999	-0.0004525	0.0002807	0.0035	1.52		8347.35	8347.35		3.66	Si
SLV 11	fin.	-2968.8	-1031	-0.0006217	0.0002807	0.0035	1.52		8357.44	8357.44		2.82	Si
SLD 15	ini.	2761.5	-389	-0.0005696	0.0002807	0.0035	1.52		8347.35	8347.35		3.02	Si
SLD 15	fin.	-2909.78	-468	-0.0006065	0.0002807	0.0035	1.52		8357.44	8357.44		2.87	Si
SLV 13	ini.	5707.65	372	-0.0014903	0.0002807	0.0035	1.52		8347.35	8347.35		1.46	Si
SLV 13	fin.	-6014.5	173	-0.0016136	0.0002807	0.0035	1.52		8357.44	8357.44		1.39	Si
SLV 15	ini.	5800.79	23	-0.0015276	0.0002807	0.0035	1.52		8347.35	8347.35		1.44	Si
SLV 15	fin.	-6547.91	-161	-0.0018582	0.0002807	0.0035	1.52		8357.44	8357.44		1.28	Si
SLV 3	ini.	-4410.24	-1708	-0.0010326	0.0002807	0.0035	1.52		8357.44	8357.44		1.9	Si
SLV 3	fin.	5269.4	-1509	-0.0013242	0.0002807	0.0035	1.52		8347.35	8347.35		1.58	Si
SLV 1	ini.	-4503.38	-1359	-0.0010621	0.0002807	0.0035	1.52		8357.44	8357.44		1.86	Si
SLV 1	fin.	5802.81	-1175	-0.0015284	0.0002807	0.0035	1.52		8347.35	8347.35		1.44	Si
SLV 2	ini.	-4821.66	-1411	-0.0011662	0.0002807	0.0035	1.52		8357.44	8357.44		1.73	Si
SLV 2	fin.	6177.99	-1227	-0.0016876	0.0002807	0.0035	1.52		8347.35	8347.35		1.35	Si
SLV 16	ini.	5482.51	-28	-0.0014031	0.0002807	0.0035	1.52		8347.35	8347.35		1.52	Si
SLV 16	fin.	-6172.74	-212	-0.0016823	0.0002807	0.0035	1.52		8357.44	8357.44		1.35	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	5389.37	-10526	1.52	0	991	7930	10241	3876	8921		0.85	No
SLV 14	fin.	-5639.33	-11435	1.52	0	991	7930	10241	3876	8921		0.78	No
SLV 3	ini.	-4410.24	10159	1.52	0	991	7930	10241	3876	8921		0.88	No
SLV 3	fin.	5269.4	9244	1.52	0	991	7930	10241	3876	8921		0.97	No
SLV 2	ini.	-4821.66	11510	1.52	0	991	7930	10241	3876	8921		0.78	No
SLV 2	fin.	6177.99	10597	1.52	0	991	7930	10241	3876	8921		0.84	No
SLV 4	ini.	-4728.51	10852	1.52	0	991	7930	10241	3876	8921		0.82	No
SLV 4	fin.	5644.58	9938	1.52	0	991	7930	10241	3876	8921		0.9	No
SLV 15	ini.	5800.79	-11877	1.52	0	991	7930	10241	3876	8921		0.75	No
SLV 15	fin.	-6547.91	-12788	1.52	0	991	7930	10241	3876	8921		0.7	No
SLD 15	ini.	2761.5	-5189	1.52	0	991	7930	10241	3876	8921		1.72	Si
SLD 15	fin.	-2909.78	-6100	1.52	0	991	7930	10241	3876	8921		1.46	Si
SLV 13	ini.	5707.65	-11220	1.52	0	991	7930	10241	3876	8921		0.8	No
SLV 13	fin.	-6014.5	-12128	1.52	0	991	7930	10241	3876	8921		0.74	No
SLV 16	ini.	5482.51	-11183	1.52	0	991	7930	10241	3876	8921		0.8	No
SLV 16	fin.	-6172.74	-12094	1.52	0	991	7930	10241	3876	8921		0.74	No
SLD 13	ini.	2719.74	-4897	1.52	0	991	7930	10241	3876	8921		1.82	Si
SLD 13	fin.	-2673.29	-5807	1.52	0	991	7930	10241	3876	8921		1.54	Si
SLV 1	ini.	-4503.38	10816	1.52	0	991	7930	10241	3876	8921		0.82	No
SLV 1	fin.	5802.81	9904	1.52	0	991	7930	10241	3876	8921		0.9	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.276	SLV 15	Si
V_SLV	0.698	SLV 15	No
PF_SLU	11.264	SLU 83	Si
V_SLU	5.262	SLU 81	Si

Trave di accoppiamento 191

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-6.513	-3.314	4.21	5.73	1.52	-7.413	-3.314	4.21	5.73	1.52	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 62	ini.	-404.5	-1735	-0.0000712	0.0001872	0.0035	1.52		8416.46	8416.46	No	20.81	Si
SLU 62	fin.	336.16	-1735	-0.0000589	0.0001872	0.0035	1.52		8406.65	8406.65	No	25.01	Si
SLU 60	ini.	-403.64	-1699	-0.000071	0.0001872	0.0035	1.52		8416.46	8416.46	No	20.85	Si
SLU 60	fin.	329.86	-1699	-0.0000578	0.0001872	0.0035	1.52		8406.65	8406.65	No	25.49	Si
SLU 56	ini.	-347.77	-1704	-0.0000609	0.0001872	0.0035	1.52		8416.46	8416.46	No	24.2	Si
SLU 56	fin.	291.49	-1704	-0.0000509	0.0001872	0.0035	1.52		8406.65	8406.65	No	28.84	Si
SLU 81	ini.	-346.7	-1863	-0.0000607	0.0001872	0.0035	1.52		8416.46	8416.46	No	24.28	Si
SLU 81	fin.	302.77	-1863	-0.0000529	0.0001872	0.0035	1.52		8406.65	8406.65	No	27.77	Si
SLU 63	ini.	-396.69	-1738	-0.0000698	0.0001872	0.0035	1.52		8416.46	8416.46	No	21.22	Si
SLU 63	fin.	328.09	-1738	-0.0000575	0.0001872	0.0035	1.52		8406.65	8406.65	No	25.62	Si
SLU 61	ini.	-395.83	-1702	-0.0000696	0.0001872	0.0035	1.52		8416.46	8416.46	No	21.26	Si
SLU 61	fin.	321.78	-1702	-0.0000563	0.0001872	0.0035	1.52		8406.65	8406.65	No	26.13	Si
SLU 53	ini.	-346.91	-1668	-0.0000608	0.0001872	0.0035	1.52		8416.46	8416.46	No	24.26	Si
SLU 53	fin.	285.18	-1668	-0.0000498	0.0001872	0.0035	1.52		8406.65	8406.65	No	29.48	Si
SLU 58	ini.	-354.33	-1692	-0.0000621	0.0001872	0.0035	1.52		8416.46	8416.46	No	23.75	Si
SLU 58	fin.	294.77	-1692	-0.0000515	0.0001872	0.0035	1.52		8406.65	8406.65	No	28.52	Si
SLU 83	ini.	-347.56	-1899	-0.0000609	0.0001872	0.0035	1.52		8416.46	8416.46	No	24.22	Si
SLU 83	fin.	309.08	-1899	-0.0000541	0.0001872	0.0035	1.52		8406.65	8406.65	No	27.2	Si
SLU 59	ini.	-346.52	-1695	-0.0000607	0.0001872	0.0035	1.52		8416.46	8416.46	No	24.29	Si
SLU 59	fin.	286.69	-1695	-0.0000501	0.0001872	0.0035	1.52		8406.65	8406.65	No	29.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 63	ini.	-396.69	1217	1.52	0	617	7137	6372	3876	7753	No	6.37	Si
SLU 63	fin.	328.09	371	1.52	0	617	7137	6372	3876	7753	No	20.89	Si
SLU 84	ini.	-339.75	1129	1.52	0	617	7137	6372	3876	7753	No	6.87	Si
SLU 84	fin.	301	273	1.52	0	617	7137	6372	3876	7753	No	28.45	Si
SLU 83	ini.	-347.56	1147	1.52	0	617	7137	6372	3876	7753	No	6.76	Si
SLU 83	fin.	309.08	290	1.52	0	617	7137	6372	3876	7753	No	26.72	Si
SLU 58	ini.	-354.33	1133	1.52	0	617	7137	6372	3876	7753	No	6.85	Si
SLU 58	fin.	294.77	287	1.52	0	617	7137	6372	3876	7753	No	27.01	Si
SLU 81	ini.	-346.7	1139	1.52	0	617	7137	6372	3876	7753	No	6.81	Si
SLU 81	fin.	302.77	282	1.52	0	617	7137	6372	3876	7753	No	27.47	Si
SLU 62	ini.	-404.5	1234	1.52	0	617	7137	6372	3876	7753	No	6.28	Si
SLU 62	fin.	336.16	389	1.52	0	617	7137	6372	3876	7753	No	19.94	Si
SLU 61	ini.	-395.83	1209	1.52	0	617	7137	6372	3876	7753	No	6.41	Si
SLU 61	fin.	321.78	363	1.52	0	617	7137	6372	3876	7753	No	21.35	Si
SLU 56	ini.	-347.77	1122	1.52	0	617	7137	6372	3876	7753	No	6.91	Si
SLU 56	fin.	291.49	276	1.52	0	617	7137	6372	3876	7753	No	28.08	Si
SLU 82	ini.	-338.89	1121	1.52	0	617	7137	6372	3876	7753	No	6.92	Si
SLU 82	fin.	294.7	265	1.52	0	617	7137	6372	3876	7753	No	29.3	Si
SLU 60	ini.	-403.64	1226	1.52	0	617	7137	6372	3876	7753	No	6.32	Si
SLU 60	fin.	329.86	381	1.52	0	617	7137	6372	3876	7753	No	20.36	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	5439.38	-1173	-0.0013869	0.0002807	0.0035	1.52		8360.94	8360.94		1.54	Si
SLV 3	fin.	-4951.21	-1235	-0.0012101	0.0002807	0.0035	1.52		8370.95	8370.95		1.69	Si
SLV 13	ini.	-6349.97	-1308	-0.001763	0.0002807	0.0035	1.52		8370.95	8370.95		1.32	Si
SLV 13	fin.	5762.77	-1247	-0.0015123	0.0002807	0.0035	1.52		8360.94	8360.94		1.45	Si
SLD 15	ini.	-2979.89	-1459	-0.0006246	0.0002807	0.0035	1.52		8370.95	8370.95		2.81	Si
SLD 15	fin.	2634.31	-1384	-0.0005379	0.0002807	0.0035	1.52		8360.94	8360.94		3.17	Si
SLV 1	ini.	5817.97	-739	-0.0015346	0.0002807	0.0035	1.52		8360.94	8360.94		1.44	Si
SLV 1	fin.	-5155.2	-913	-0.0012812	0.0002807	0.0035	1.52		8370.95	8370.95		1.62	Si
SLV 4	ini.	5985.2	-1190	-0.0016039	0.0002807	0.0035	1.52		8360.94	8360.94		1.4	Si
SLV 4	fin.	-5466.09	-1251	-0.0013947	0.0002807	0.0035	1.52		8370.95	8370.95		1.53	Si
SLV 14	ini.	-5804.15	-1325	-0.0015264	0.0002807	0.0035	1.52		8370.95	8370.95		1.44	Si
SLV 14	fin.	5247.89	-1263	-0.0013164	0.0002807	0.0035	1.52		8360.94	8360.94		1.59	Si
SLV 2	ini.	6363.79	-755	-0.0017727	0.0002807	0.0035	1.52		8360.94	8360.94		1.31	Si
SLV 2	fin.	-5670.07	-929	-0.001473	0.0002807	0.0035	1.52		8370.95	8370.95		1.48	Si
SLV 16	ini.	-6182.74	-1759	-0.0016868	0.0002807	0.0035	1.52		8370.95	8370.95		1.35	Si
SLV 16	fin.	5451.88	-1585	-0.0013916	0.0002807	0.0035	1.52		8360.94	8360.94		1.53	Si
SLD 13	ini.	-2820.84	-1276	-0.0005838	0.0002807	0.0035	1.52		8370.95	8370.95		2.97	Si
SLD 13	fin.	2550.89	-1250	-0.0005174	0.0002807	0.0035	1.52		8360.94	8360.94		3.28	Si
SLV 15	ini.	-6728.57	-1743	-0.0019503	0.0002807	0.0035	1.52		8370.95	8370.95		1.24	Si
SLV 15	fin.	5966.75	-1569	-0.0015961	0.0002807	0.0035	1.52		8360.94	8360.94		1.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLD 13	ini.	-2820.84	6294	1.52	0	925	7137	9558	3876	8062		1.28	Si
SLD 13	fin.	2550.89	5626	1.52	0	925	7137	9558	3876	8062		1.43	Si
SLV 15	ini.	-6728.57	14404	1.52	0	925	7137	9558	3876	8062		0.56	No
SLV 15	fin.	5966.75	13784	1.52	0	925	7137	9558	3876	8062		0.58	No
SLV 3	ini.	5439.38	-11255	1.52	0	925	7137	9558	3876	8062		0.72	No
SLV 3	fin.	-4951.21	-11873	1.52	0	925	7137	9558	3876	8062		0.68	No
SLD 15	ini.	-2979.89	6555	1.52	0	925	7137	9558	3876	8062		1.23	Si
SLD 15	fin.	2634.31	5909	1.52	0	925	7137	9558	3876	8062		1.36	Si
SLV 13	ini.	-6349.97	13808	1.52	0	925	7137	9558	3876	8062		0.58	No
SLV 13	fin.	5762.77	13113	1.52	0	925	7137	9558	3876	8062		0.61	No
SLV 14	ini.	-5804.15	12629	1.52	0	925	7137	9558	3876	8062		0.64	No
SLV 14	fin.	5247.89	11934	1.52	0	925	7137	9558	3876	8062		0.68	No

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	5817.97	-11851	1.52	0	925	7137	9558	3876	8062		0.68	No
SLV 1	fin.	-5155.2	-12544	1.52	0	925	7137	9558	3876	8062		0.64	No
SLV 4	ini.	5985.2	-12434	1.52	0	925	7137	9558	3876	8062		0.65	No
SLV 4	fin.	-5466.09	-13052	1.52	0	925	7137	9558	3876	8062		0.62	No
SLV 16	ini.	-6182.74	13225	1.52	0	925	7137	9558	3876	8062		0.61	No
SLV 16	fin.	5451.88	12605	1.52	0	925	7137	9558	3876	8062		0.64	No
SLV 2	ini.	6363.79	-13029	1.52	0	925	7137	9558	3876	8062		0.62	No
SLV 2	fin.	-5670.07	-13722	1.52	0	925	7137	9558	3876	8062		0.59	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.244	SLV 15	Si
V_SLV	0.56	SLV 15	No
PF_SLU	20.807	SLU 62	Si
V_SLU	6.281	SLU 62	Si

Trave di accoppiamento 195

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-2.283	-3.314	4.21	5.73	1.52	-3.183	-3.314	4.21	5.73	1.52	0.9	0.28	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 68	ini.	1175.83	-2764	-0.0002213	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.15	Si
SLU 68	fin.	-1210.61	-2764	-0.0002283	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.95	Si
SLU 76	ini.	1145.05	-3004	-0.0002148	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.34	Si
SLU 76	fin.	-1187.76	-3004	-0.0002235	0.0001872	0.0035	1.52		8416.46	8416.46	No	7.09	Si
SLU 65	ini.	1166.68	-2713	-0.0002193	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.21	Si
SLU 65	fin.	-1204.29	-2713	-0.000227	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.99	Si
SLU 69	ini.	1167.56	-2831	-0.0002195	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.2	Si
SLU 69	fin.	-1200.08	-2831	-0.0002261	0.0001872	0.0035	1.52		8416.46	8416.46	No	7.01	Si
SLU 78	ini.	1149.16	-3077	-0.0002157	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.32	Si
SLU 78	fin.	-1188.36	-3077	-0.0002236	0.0001872	0.0035	1.52		8416.46	8416.46	No	7.08	Si
SLU 66	ini.	1158.41	-2780	-0.0002176	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.26	Si
SLU 66	fin.	-1193.76	-2780	-0.0002248	0.0001872	0.0035	1.52		8416.46	8416.46	No	7.05	Si
SLU 67	ini.	1170.79	-2786	-0.0002202	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.18	Si
SLU 67	fin.	-1204.89	-2786	-0.0002271	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.99	Si
SLU 71	ini.	1164.36	-2806	-0.0002189	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.22	Si
SLU 71	fin.	-1198.39	-2806	-0.0002257	0.0001872	0.0035	1.52		8416.46	8416.46	No	7.02	Si
SLU 70	ini.	1179.94	-2837	-0.0002221	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.12	Si
SLU 70	fin.	-1211.21	-2837	-0.0002285	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.95	Si
SLU 72	ini.	1176.73	-2812	-0.0002215	0.0001872	0.0035	1.52		8406.65	8406.65	No	7.14	Si
SLU 72	fin.	-1209.51	-2812	-0.0002281	0.0001872	0.0035	1.52		8416.46	8416.46	No	6.96	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	1179.94	-2187	1.52	0	617	7137	6372	3876	7753	No	3.55	Si
SLU 70	fin.	-1211.21	-3143	1.52	0	617	7137	6372	3876	7753	No	2.47	Si
SLU 76	ini.	1145.05	-2122	1.52	0	617	7137	6372	3876	7753	No	3.65	Si
SLU 76	fin.	-1187.76	-3078	1.52	0	617	7137	6372	3876	7753	No	2.52	Si
SLU 69	ini.	1167.56	-2161	1.52	0	617	7137	6372	3876	7753	No	3.59	Si
SLU 69	fin.	-1200.08	-3117	1.52	0	617	7137	6372	3876	7753	No	2.49	Si
SLU 65	ini.	1166.68	-2165	1.52	0	617	7137	6372	3876	7753	No	3.58	Si
SLU 65	fin.	-1204.29	-3120	1.52	0	617	7137	6372	3876	7753	No	2.48	Si
SLU 71	ini.	1164.36	-2155	1.52	0	617	7137	6372	3876	7753	No	3.6	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 71	fin.	-1198.39	-3111	1.52	0	617	7137	6372	3876	7753	No	2.49	Si
SLU 66	ini.	1158.41	-2144	1.52	0	617	7137	6372	3876	7753	No	3.62	Si
SLU 66	fin.	-1193.76	-3099	1.52	0	617	7137	6372	3876	7753	No	2.5	Si
SLU 78	ini.	1149.16	-2127	1.52	0	617	7137	6372	3876	7753	No	3.64	Si
SLU 78	fin.	-1188.36	-3083	1.52	0	617	7137	6372	3876	7753	No	2.51	Si
SLU 72	ini.	1176.73	-2182	1.52	0	617	7137	6372	3876	7753	No	3.55	Si
SLU 72	fin.	-1209.51	-3137	1.52	0	617	7137	6372	3876	7753	No	2.47	Si
SLU 67	ini.	1170.79	-2170	1.52	0	617	7137	6372	3876	7753	No	3.57	Si
SLU 67	fin.	-1204.89	-3125	1.52	0	617	7137	6372	3876	7753	No	2.48	Si
SLU 68	ini.	1175.83	-2182	1.52	0	617	7137	6372	3876	7753	No	3.55	Si
SLU 68	fin.	-1210.61	-3137	1.52	0	617	7137	6372	3876	7753	No	2.47	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-3683.59	-2026	-0.0008154	0.0002807	0.0035	1.52		8370.95	8370.95		2.27	Si
SLV 14	fin.	3454.08	-1905	-0.0007523	0.0002807	0.0035	1.52		8360.94	8360.94		2.42	Si
SLV 6	ini.	3188.65	-1296	-0.0006803	0.0002807	0.0035	1.52		8360.94	8360.94		2.62	Si
SLV 6	fin.	-3278.97	-1169	-0.0007035	0.0002807	0.0035	1.52		8370.95	8370.95		2.55	Si
SLD 2	ini.	3258.51	-1930	-0.000699	0.0002807	0.0035	1.52		8360.94	8360.94		2.57	Si
SLD 2	fin.	-3238.26	-1943	-0.0006926	0.0002807	0.0035	1.52		8370.95	8370.95		2.59	Si
SLV 1	ini.	5745.17	-1704	-0.0015052	0.0002807	0.0035	1.52		8360.94	8360.94		1.46	Si
SLV 1	fin.	-5641.91	-1734	-0.001462	0.0002807	0.0035	1.52		8370.95	8370.95		1.48	Si
SLV 3	ini.	5403.89	-2158	-0.0013736	0.0002807	0.0035	1.52		8360.94	8360.94		1.55	Si
SLV 3	fin.	-5238.5	-2278	-0.0013109	0.0002807	0.0035	1.52		8370.95	8370.95		1.6	Si
SLV 16	ini.	-4024.86	-2479	-0.0009147	0.0002807	0.0035	1.52		8370.95	8370.95		2.08	Si
SLV 16	fin.	3857.5	-2449	-0.0008667	0.0002807	0.0035	1.52		8360.94	8360.94		2.17	Si
SLV 13	ini.	-4409.52	-2007	-0.0010324	0.0002807	0.0035	1.52		8370.95	8370.95		1.9	Si
SLV 13	fin.	4189.71	-1886	-0.0009657	0.0002807	0.0035	1.52		8360.94	8360.94		2	Si
SLV 4	ini.	6129.82	-2176	-0.0016663	0.0002807	0.0035	1.52		8360.94	8360.94		1.36	Si
SLV 4	fin.	-5974.12	-2297	-0.0015965	0.0002807	0.0035	1.52		8370.95	8370.95		1.4	Si
SLV 15	ini.	-4750.79	-2461	-0.0011425	0.0002807	0.0035	1.52		8370.95	8370.95		1.76	Si
SLV 15	fin.	4593.12	-2430	-0.0010925	0.0002807	0.0035	1.52		8360.94	8360.94		1.82	Si
SLV 2	ini.	6471.1	-1723	-0.0018239	0.0002807	0.0035	1.52		8360.94	8360.94		1.29	Si
SLV 2	fin.	-6377.54	-1753	-0.0017759	0.0002807	0.0035	1.52		8370.95	8370.95		1.31	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-4409.52	10215	1.52	0	925	7137	9558	3876	8062		0.79	No
SLV 13	fin.	4189.71	9644	1.52	0	925	7137	9558	3876	8062		0.84	No
SLD 4	ini.	3110.26	-6625	1.52	0	925	7137	9558	3876	8062		1.22	Si
SLD 4	fin.	-3062.55	-7422	1.52	0	925	7137	9558	3876	8062		1.09	Si
SLV 1	ini.	5745.17	-12098	1.52	0	925	7137	9558	3876	8062		0.67	No
SLV 1	fin.	-5641.91	-12884	1.52	0	925	7137	9558	3876	8062		0.63	No
SLV 14	ini.	-3683.59	8591	1.52	0	925	7137	9558	3876	8062		0.94	No
SLV 14	fin.	3454.08	8020	1.52	0	925	7137	9558	3876	8062		1.01	Si
SLV 4	ini.	6129.82	-13388	1.52	0	925	7137	9558	3876	8062		0.6	No
SLV 4	fin.	-5974.12	-14284	1.52	0	925	7137	9558	3876	8062		0.56	No
SLD 2	ini.	3258.51	-6775	1.52	0	925	7137	9558	3876	8062		1.19	Si
SLD 2	fin.	-3238.26	-7530	1.52	0	925	7137	9558	3876	8062		1.07	Si
SLV 15	ini.	-4750.79	10548	1.52	0	925	7137	9558	3876	8062		0.76	No
SLV 15	fin.	4593.12	9868	1.52	0	925	7137	9558	3876	8062		0.82	No
SLV 16	ini.	-4024.86	8924	1.52	0	925	7137	9558	3876	8062		0.9	No
SLV 16	fin.	3857.5	8244	1.52	0	925	7137	9558	3876	8062		0.98	No
SLV 2	ini.	6471.1	-13721	1.52	0	925	7137	9558	3876	8062		0.59	No
SLV 2	fin.	-6377.54	-14508	1.52	0	925	7137	9558	3876	8062		0.56	No
SLV 3	ini.	5403.89	-11764	1.52	0	925	7137	9558	3876	8062		0.69	No
SLV 3	fin.	-5238.5	-12660	1.52	0	925	7137	9558	3876	8062		0.64	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.292	SLV 2	Si
V_SLV	0.556	SLV 2	No
PF_SLU	6.949	SLU 70	Si
V_SLU	2.467	SLU 70	Si